Southco Fasteners

Handbook 39

Assembly and Design Fasteners

from industry's broadest line

SOUTHCO®
fasteners

Southco, Inc., 210 N. Brinton
Lake Road, Concordville, PA 19331
Phone (215)459-4000 Telex 83-1485
FAX (215)459-4012 TWX 710-760-1715

fasteners file

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SOUTHCO®
fasteners

Protection against Corrosion . . . you get it when you specify a Southco fastener.

A DACROMET finish is supplied on most Southco parts to give you:

- corrosion resistance up to 280° C.
- no possibility of hydrogen embrittlement caused by electroplating.

Southco's DACROTIZED† parts (See page N-1) are routinely subjected to a *240 hour* salt spray test per ASTM B-117. If required, Southco can supply DACROTIZED coatings that withstand even longer periods of salt spray testing.

†Registered tradename of Metal Coatings International, Inc.

SATIN SILVER COATED and MATTE BLACK COATED products have powder coated finishes which are:

- durable
- decorative and
- fade resistant.

The finish is produced by electrostatically applied epoxy or polyester based particles being cured according to precise time and temperature requirements.

Southco's powder coated products provide consistent *500 hour* protection in salt spray tests conducted according to ASTM B-117.

FEDERAL SUPPLY CODE FOR MANUFACTURERS — 94222

SOUTHCO, INC., CONCORDVILLE, PA. 19331
Phone (215) 459-4000
Telex 83-1485
FAX (215) 459-4012 TWX 710-760-1715

Southco manufactures

all the products you'll find in this Handbook. Our plants (in three states: Pennsylvania, New York and New Jersey) perform every major metalworking, casting, and injection molding operation, giving us a degree of control and flexibility that enables us to respond quickly to a customer need.

When you've selected a fastener from the pages that follow, be sure to ask for a sample for testing and evaluation. There's no substitute for the assurance that you've picked the right component for use on your product and there's no charge or obligation.

Need something you couldn't find in the Handbook? Look for something that comes close. Perhaps we can modify it for your individual requirements. We do it all the time.

Or maybe we can design and manufacture something for you. We do that all the time too.

How soon do you need the part?

When you're ready to specify fasteners, look for Southco's delivery symbols:

■ ● □

They appear after many part numbers throughout the Handbook. They'll help you select parts most likely to be in stock or to determine what lead time to allow.

your SOUTHCO fasteners REPRESENTATIVE

FEDERAL SUPPLY CODE FOR MANUFACTURERS — 94222

Arizona, Phoenix
Southco, Inc.
(714) 533-4110*

California, Anaheim
Southco, Inc.
(714) 533-4110*

California 94545, Hayward
Dean Lewis Associates
21650 Cloud Way
(415) 785-9650
FAX (415) 786-3180

Colorado 80112, Englewood
Romtech, Inc.
7006 South Alton Way
(303) 779-0291
FAX (303) 779-0730

Georgia, Atlanta
Southco, Inc.
(404) 233-4340*

Illinois, Chicago
Southco, Inc.
(312) 337-2532*

Indiana, Indianapolis
Southco, Inc.
(317) 547-1292*

Iowa 52406, Cedar Rapids
Clancey Company
P.O. Box 641
(319) 365-7141

Iowa 50310, Des Moines
Clancey Company
4612 40th Ave.
(515) 278-1331

Maryland, Baltimore
Southco, Inc.
(215) 459-4000*

Massachusetts, Boston
Southco, Inc.
(617) 367-4728*

Michigan 48084, Troy
Lamparter Associates, Inc.
575 Robbins Drive
(313) 588-6700
FAX (313) 588-0586

Minnesota, Minneapolis
Southco, Inc.
(612) 854-1031*

Missouri, Kansas City
Clancey Company
5812 Maple
Mission, Kansas 66202
(913) 432-4550
FAX (913) 432-4551

Missouri, St. Louis
Southco, Inc.
(317) 547-1292*
(Toll call, Indianapolis)

New York, New York
Southco, Inc.
(215) 459-4000*

New York, Rochester
Southco, Inc.
(716) 624-2545*

New Jersey
Southco, Inc.
(215) 459-4000*

North Carolina, Greensboro
Southco, Inc.
(919) 275-6090*

Ohio, Columbus
Southco, Inc.
(614) 262-0101*

Oregon, Portland
Southco, Inc.
(206) 628-8976*

Pennsylvania 19331, Philadelphia
Southco, Inc.
Concordville, Pennsylvania
(215) 459-4000
Telex #83-1485
TWX 710-760-1715
FAX (215) 459-4012

Tennessee, Memphis
Southco, Inc.
(901) 272-3846*

Texas, Dallas
Southco, Inc.
(214) 363-5072*

Washington, Seattle
Southco, Inc.
(206) 628-8976*

TELEPHONE SERVICE

If you need information about price and delivery or are entering or expediting an order, you will get quickest results by phoning (215)459-4000, our office near Philadelphia.

*Phone numbers listed above under the captions "Southco, Inc." are for the answering services of our field salesmen (who are usually on the road). Please leave a message if you need help.

Inquiries for our salesmen in Baltimore, New York City, and New Jersey will be relayed through our Philadelphia number, (215)459-4000.

your SOUTHCO fasteners REPRESENTATIVE

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Steeves Agencies
8 Sage Court
Sherwood Park, Alberta
T8A-1S2
Tel. (403) 467-0606

Manitoba
Steeves Agencies
48-360 Keewatin Street
Winnipeg, Manitoba
R2X 2Y3
Tel. (204) 633-2452
Telex: 075-87687 DJMEDIA
Fax (204) 633-4546

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MW Fasteners Co.
45 Brisbane Road, Unit 23
Downsview, Ontario
M3J 2K1
Tel. (416) 663-9323
Fax: (416) 663-7310

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MW Fasteners Co.
730 Deslauriers St.
St. Laurent, Quebec
H4N 1W5
Tel. (514) 335-9433
Fax: (514) 331-4178

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Fax: 02/452 37 50

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49240 Avrillé, France
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or 54.22
Telex: LGC 720984 F
Fax: (0) 41.34.25.99

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Fax: (020) 90 42 46

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10 Wilson Street
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20090 Segrate
Milano 2 Residenza
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Fax: 2807877

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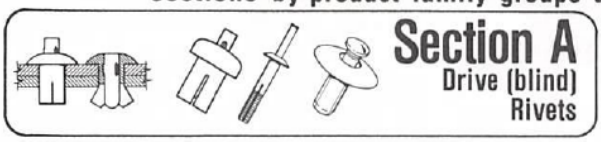
GEFO GmbH
Postfach 14 66
Kimbernweg 5
D-7910 New Ulm/Gerlenhofen
Federal Republic of Germany
Tel. 07307/6636 or 07307/4001
Telex: 7255567
Fax: 07307/337 81

Panzer Industrievertretung GmbH
Postfach 33 26
Oestertaler Strasse 39
D-5970 Plettenberg
Federal Republic of Germany
Tel. 02391/7404
Fax: 02391/6870

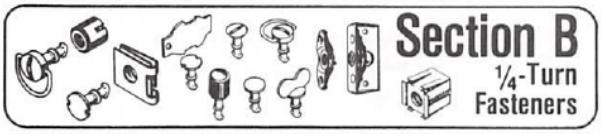
SOLTEC GmbH
Ing. Buro fur
Verbindungstechnik
Solitudeallee 14
D-7000 Stuttgart
Federal Republic of Germany
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Ing. H. Wolfram Industrievertretung
Albert—Florath—Steig 1
D-2106 Bendesdorf
Federal Republic of Germany
Tel. 04183/6737

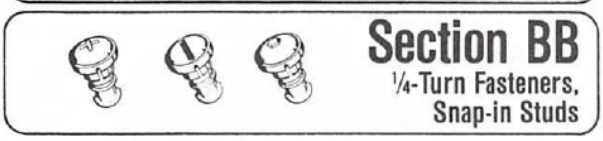
INDEX No. 1 Divides the handbook into its twenty-three sections by product family groups and subjects.



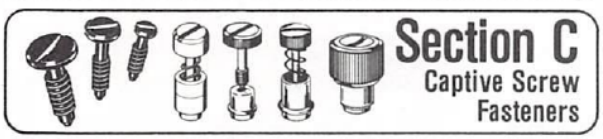
Section A
Drive (blind) Rivets



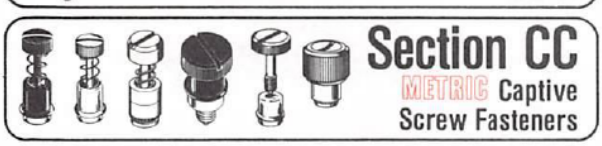
Section B
¼-Turn Fasteners



Section BB
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Captive Screw Fasteners



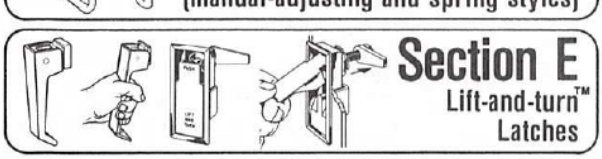
Section CC
METRIC Captive Screw Fasteners



Section D
Adjustable-grip Latches (self-adjusting styles)



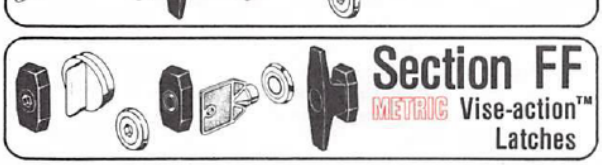
Section DD
Adjustable-grip Latches (manual-adjusting and spring styles)



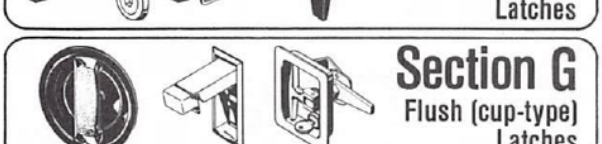
Section E
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Section F
Vise-action™ Latches



Section FF
METRIC Vise-action™ Latches



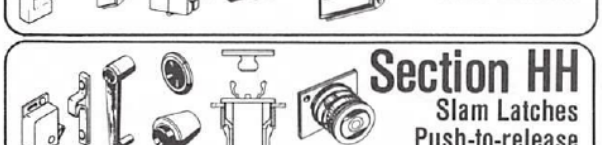
Section G
Flush (cup-type) Latches



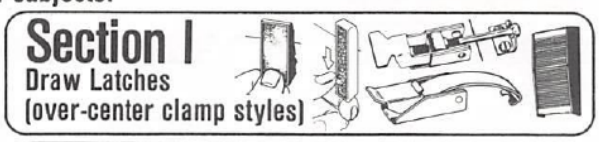
Section GG
Flush Slam Latches



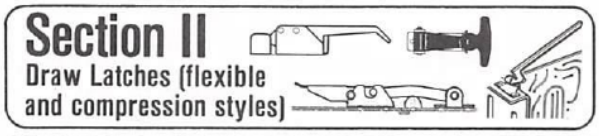
Section H
Slam Latches



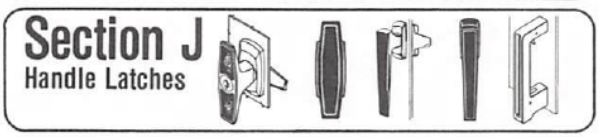
Section HH
Slam Latches Push-to-release



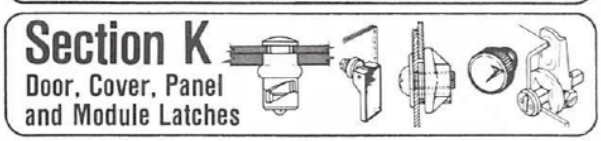
Section I
Draw Latches (over-center clamp styles)



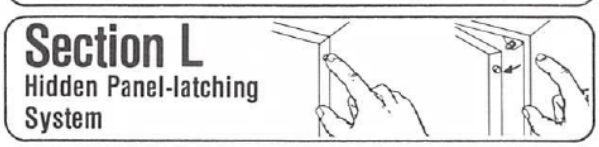
Section II
Draw Latches (flexible and compression styles)



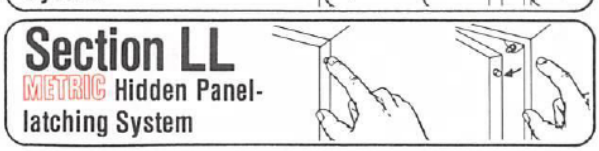
Section J
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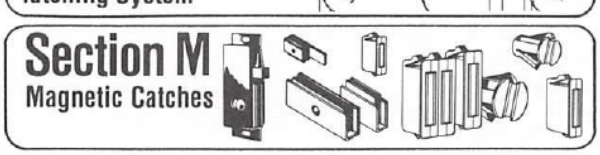
Section K
Door, Cover, Panel and Module Latches



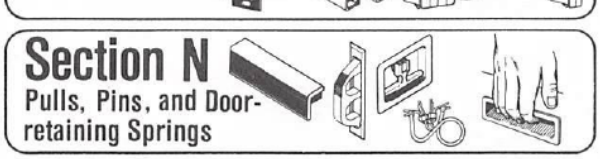
Section L
Hidden Panel-latching System



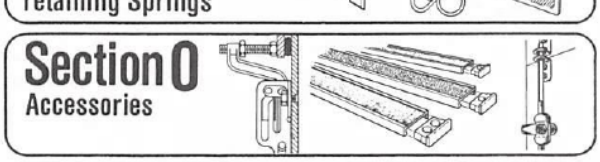
Section LL
METRIC Hidden Panel-latching System



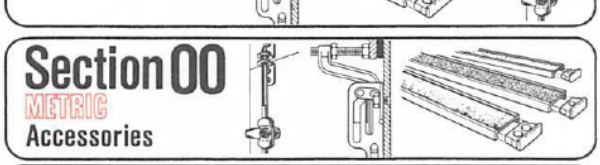
Section M
Magnetic Catches



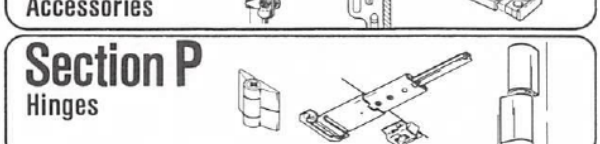
Section N
Pulls, Pins, and Door-retaining Springs



Section O
Accessories



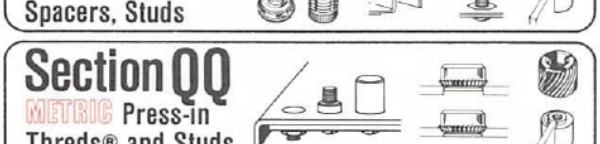
Section OO
METRIC Accessories



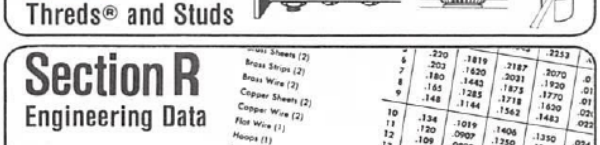
Section P
Hinges



Section Q
Press-in Threds®, Spacers, Studs



Section QQ
METRIC Press-in Threds® and Studs



Section R
Engineering Data

INDEX No. 2

Use this alphabetically arranged, cross-referenced index of fastener types to quickly find the Southco product you need.

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Sectin GG ... HH-6 & HH-7

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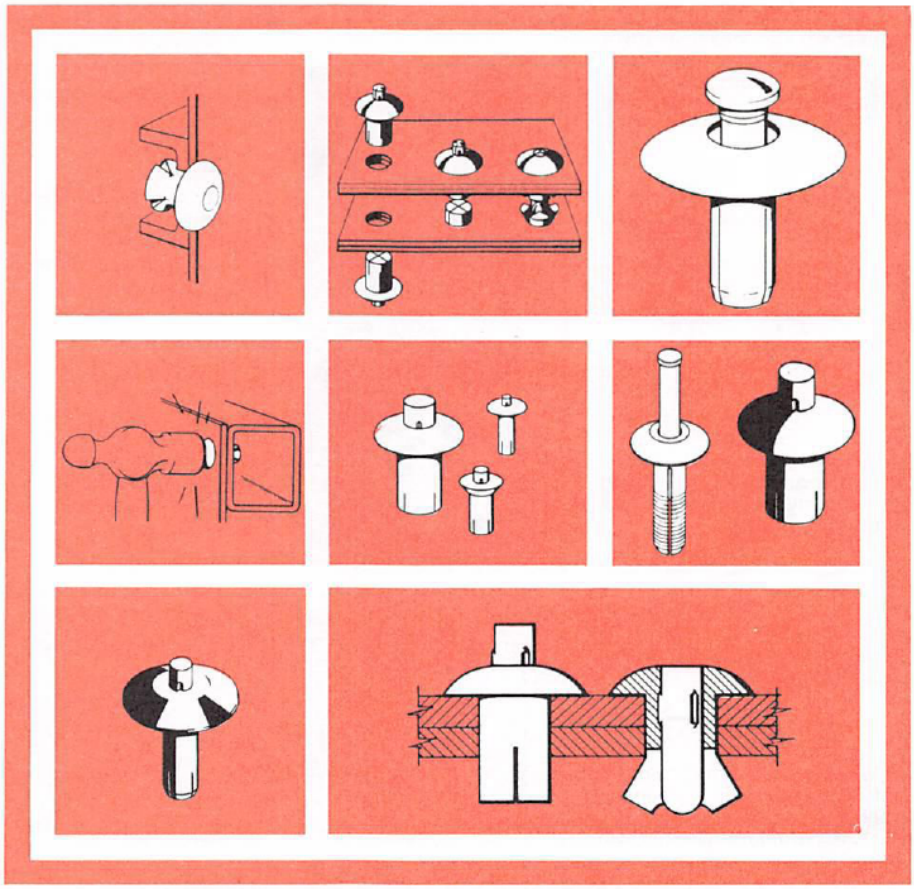
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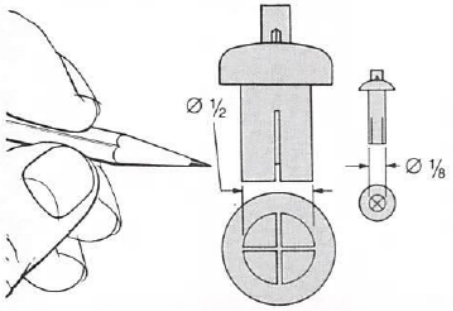


IF YOU CAN'T SEE *BOTH* SIDES

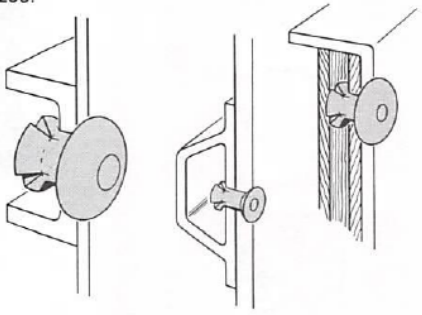
Southco
DRIVE RIVETS

These unique blind Drive Rivets can save you money. You set them with ordinary shop tools...a hammer or light pneumatic gun. You save the cost and maintenance of expensive, single-purpose tools. You save manpower...one man does the job. No secondary operations.

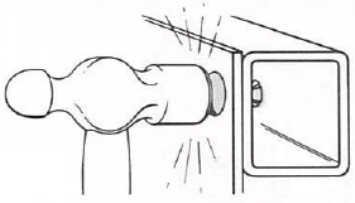
USE SOUTHCO EASY-TO-INSTALL DRIVE RIVETS FOR BIG JOBS-LITTLE JOBS *and everything in between*



1. Need the biggest (or the smallest) drive rivets made? Southco has them on the shelf. Plus plenty in between...from ⅛", to ½" diameter. Only Southco stocks all of these sizes.

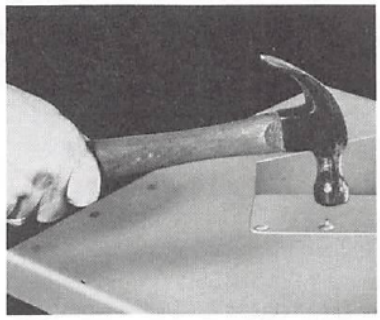


2. Southco's selection enables your to cope with numerous fastening problems involving tubes, extrusions, odd-shaped housings, and wood panels—thick and thin.



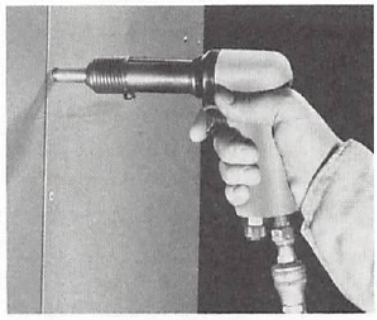
3. Drive riveting is fast—so fast that it's often used in place of nuts and bolts. No special tools or power needed. Not even for 5/16", 3/8", and ½" diameters. An ordinary hammer will drive a Southco rivet home.

DRIVE RIVETING IS AS EASY AS NAILING



With a hammer...

Just insert the rivet, hit the pin. One man, working from one side of the job sets rivets easily and quickly in blind or open applications. Once you drive the pin, the job is done. Sheets are pulled tightly together, and you get a smooth finished head without secondary operations.

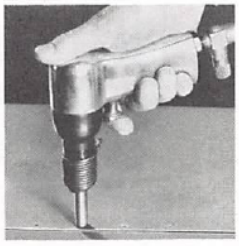


With standard pneumatic tools

Any small, lightweight pneumatic riveting hammer can be used in production line installation of Southco Drive Rivets. Two or three blows of the set are enough to drive the pin easily and quickly. Blind riveting in high production becomes a comparatively effortless operation.

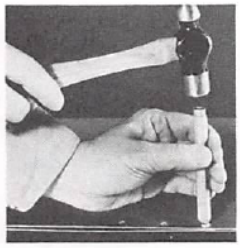
DRIVE RIVETING IN VERY THIN SHEETS

Since the clinching and pull-up action is built into the rivet, most thin sheets give adequate support for driving the pin. If there is a structural member at one end of a lap joint, start there and work away from it to build support as you rivet.



Any lightweight, pneumatic riveting hammer* may be used effectively when riveting thin sheets as well as other applications. The riveting hammer is especially useful when riveting overhead.

*Adjusted to light impact.

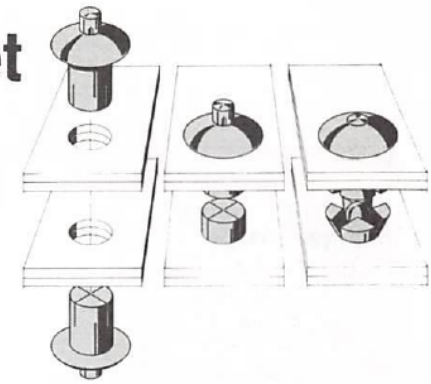


In riveting unsupported 16, 18 or 20 gauge sheets, press a 6" long bar against the pin, and hit the bar with short, snapping blows. Use an 8 oz. hammer (or lighter) and don't follow through.

CAUTION: When using pneumatic tools...

1. Use a small air hammer—the type used to set Ø 3/16" or smaller, aluminum solid rivets.
2. Use proper line pressure—approximately 60 p.s.i. is sufficient to drive a Southco rivet.
3. DO NOT OVERDRIVE...once the pin is driven flush with the rivet head the job is done—excessive driving could mar your work.
4. **OBSERVE ALL OF THE SAFETY PRECAUTIONS PROVIDED BY THE MANUFACTURER OF THE AIR HAMMER YOU ARE USING.**

. . . you need a Southco Drive Rivet



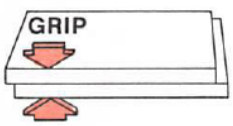
Southco Drive Rivets can be used for fastening a wide variety of materials: as a through fastener, clinching behind metal sheets, or fastening blind into wood and other materials of low density. Another plus; you'll set rivets as small as ⌀ 1/8" , or as big as ⌀ 1/2" with the same hand tool.

TIPS ON INSTALLATION

BEFORE YOU START THE JOB

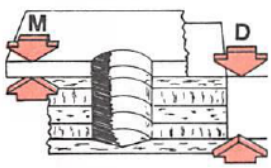
Measure your *total material thickness.* Select the correct grip length rivet from tables on following pages by comparing your sheet thickness with the *min.* and *max.* values in columns headed GRIP.

IN METAL



GRIP = total thickness of sheets to be fastened.

IN WOOD



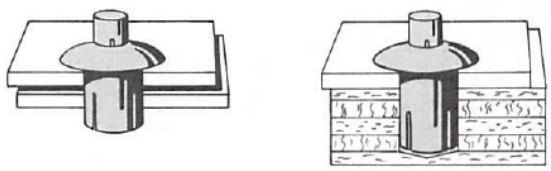
Use L dimension (length under head) instead of grip. Select rivet with L dimension equal to M (thickness of metal) + D (hole depth in wood.)

DRILL A HOLE

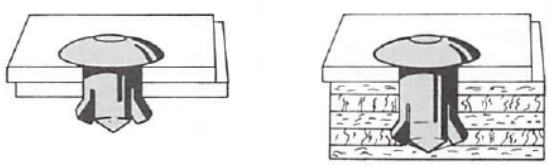
RIVET DIA.	JIG DRILLING						
	1/8	5/32	3/16	1/4	5/16	3/8	1/2
DRILL SIZE	30	20	11	F	P	W	.515
HOLE DIA.	.128	.161	.191	.257	.323	.386	

IN METAL **IN WOOD**

INSERT A RIVET Seat head firmly against outer surface.



HIT THE PIN Drive pin flush with rivet head.



Expanding prongs clinch sheets tightly, eliminating gaps.

Metal and wood pulled tightly together. Nothing protrudes through wood.

OPTIONAL TOOLS

FOR RIVET DIA.	PART NUMBERS	
	RIVET SET TOOLS	100° COUNTERSINKS
1/8	29-1-504-10 ■	29-13-101-11 ■
5/32	29-1-505-10 ■	
3/16	29-1-506-10 ■	29-13-102-11 ■
1/4	29-1-508-10 ■	

■ From stock, subject to prior sale.

DRIVE RIVET REMOVAL

Southco Drive Rivets are comparatively tamper-resistant since the average person doesn't know how to remove them.

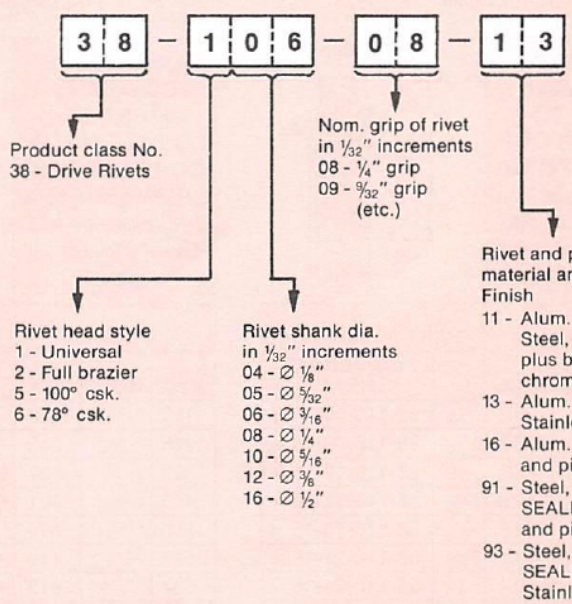
However, you can do it easily. First drive the pin on through with a nail or punch, then,

1. Remove the rivet by prying under the head with a screwdriver, or
2. Drill the head off, or
3. Shear the head off.

Or, you can remove the pin with Southco Tool No. 10-0-7614-11 and your lightweight, pneumatic riveting gun.

Southco Drive Rivet Part Numbering System

Applies only to aluminum and steel Drive Rivets having part number prefix of "38-" (does not apply to Dome Rivets, or TIR Rivets).



†Registered tradename of Metal Coatings International, Inc.

DELIVERY SYMBOLS
(see part numbers)

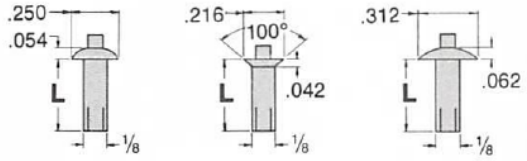
■ From stock, subject to prior sale. □ Up to 8 weeks. Minimum order required.



ALUMINUM

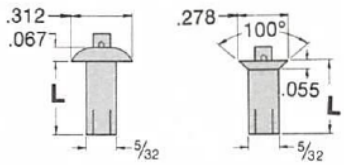
USE THESE COLUMNS FIRST TO LOCATE YOUR CORRECT GRIP. GRIP equals total thickness of ALL sheets fastened together.

∅ 1/8" RIVET: 2117 aluminum, natural.
PIN: 18-9LW stainless steel, natural.



GRIP MIN.	GRIP NOM.	GRIP MAX.	L	PART NUMBERS UNIVERSAL HEAD	PART NUMBERS 100° CSK HEAD	PART NUMBERS FULL BRAZIER HEAD
.015	1/32	.046	5/32	38-104-01-13 ■		
.046	1/16	.078	5/32	38-104-02-13 ■		
.078	3/32	.109	3/16	38-104-03-13 ■	38-504-03-13 ■	38-204-03-13 ■
.109	1/8	.140	7/32	38-104-04-13 ■	38-504-04-13 ■	38-204-04-13 ■
.140	5/32	.171	1/4	38-104-05-13 ■	38-504-05-13 ■	38-204-05-13 ■
.171	3/16	.203	9/32	38-104-06-13 ■	38-504-06-13 ■	38-204-06-13 ■
.203	7/32	.234	5/16	38-104-07-13 ■	38-504-07-13 ■	38-204-07-13 ■
.234	1/4	.265	11/32	38-104-08-13 ■	38-504-08-13 ■	38-204-08-13 ■
.265	9/32	.296	3/8	38-104-09-13 ■	38-504-09-13 ■	38-204-09-13 ■
.296	5/16	.328	13/32	38-104-10-13 ■	38-504-10-13 ■	
.328	11/32	.359	7/16	38-104-11-13 ■	38-504-11-13 ■	
.359	3/8	.390	15/32	38-104-12-13 ■	38-504-12-13 ■	38-204-12-13 ■
.390	13/32	.421	1/2	38-104-13-13 ■	38-504-13-13 ■	
.421	7/16	.453	17/32	38-104-14-13 ■		
.453	15/32	.484				
.484	1/2	.515				
.515	17/32	.546				
.546	9/16	.578				
.578	19/32	.609				
.609	5/8	.640				

∅ 5/32" RIVET: 2117 aluminum, natural.
PIN: 18-9LW stainless steel, natural.

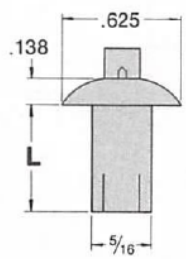


L	PART NUMBERS UNIVERSAL HEAD	PART NUMBERS 100° CSK HEAD
3/16	38-105-01-13 ■	
3/16	38-105-02-13 ■	
7/32	38-105-03-13 ■	
1/4	38-105-04-13 ■	38-505-04-13 ■
9/32	38-105-05-13 ■	38-505-05-13 ■
5/16	38-105-06-13 ■	38-505-06-13 ■
11/32	38-105-07-13 ■	38-505-07-13 ■
3/8	38-105-08-13 ■	38-505-08-13 ■
13/32	38-105-09-13 ■	38-505-09-13 □
7/16	38-105-10-13 ■	38-505-10-13 □
15/32	38-105-11-13 ■	38-505-11-13 □
1/2	38-105-12-13 ■	38-505-12-13 □
17/32	38-105-13-13 ■	38-505-13-13 □
9/16	38-105-14-13 ■	38-505-14-13 □
19/32	38-105-15-13 ■	38-505-15-13 □
5/8	38-105-16-13 ■	38-505-16-13 □
21/32	38-105-17-13 □	38-505-17-13 □
11/16	38-105-18-13 □	38-505-18-13 □
23/32	38-105-19-13 □	38-505-19-13 □
3/4	38-105-20-13 □	38-505-20-13 □

Large diameter aluminum Drive Rivets including ∅ 1/2" pan head.

∅ 5/16" RIVET: 2117 aluminum, natural.
PIN: 7075 aluminum, natural.

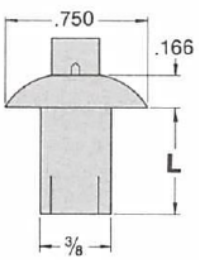
USE THESE COLUMNS FIRST TO LOCATE YOUR CORRECT GRIP. GRIP equals total thickness of ALL sheets fastened together.



GRIP MIN.	GRIP NOM.	GRIP MAX.	L	PART NUMBERS UNIVERSAL HEAD
.132	3/16	.242	7/16	38-110-06-16 ■
.226	9/32	.336	17/32	38-110-09-16 ■
.320	3/8	.430	5/8	38-110-12-16 ■
.414	15/32	.523	23/32	38-110-15-16 ■
.508	9/16	.617	13/16	38-110-18-16 ■
.601	21/32	.711	29/32	38-110-21-16 ■
.695	3/4	.804	1	38-110-24-16 ■
.789	27/32	.898	1 3/32	38-110-27-16 ■
.882	15/16	.992	1 3/16	38-110-30-16 ■
.976	1 1/32	1.086	1 9/32	38-110-33-16 ■

∅ 3/8" RIVET: 2117 aluminum, natural.
PIN: 7075 aluminum, natural.

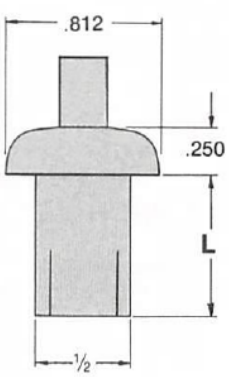
USE THESE COLUMNS FIRST TO LOCATE YOUR CORRECT GRIP. GRIP equals total thickness of ALL sheets fastened together.



GRIP MIN.	GRIP NOM.	GRIP MAX.	L	PART NUMBERS UNIVERSAL HEAD
.125	3/16	.250	1/2	38-112-06-16 ■
.218	9/32	.343	19/32	38-112-09-16 ■
.312	3/8	.437	11/16	38-112-12-16 ■
.406	15/32	.531	25/32	38-112-15-16 ■
.500	9/16	.625	7/8	38-112-18-16 □
.593	21/32	.718	31/32	38-112-21-16 □
.687	3/4	.813	1 1/16	38-112-24-16 □
.781	27/32	.906	1 5/32	38-112-27-16 □
.875	15/16	1.000	1 1/4	38-112-30-16 □
.968	1 1/32	1.093	1 11/32	38-112-33-16 □

∅ 1/2" RIVET: 2117 aluminum, natural.
PIN: 1212 steel, zinc plated plus bright chromate dip.

USE THESE COLUMNS FIRST TO LOCATE YOUR CORRECT GRIP. GRIP equals total thickness of ALL sheets fastened together.



GRIP MIN.	GRIP NOM.	GRIP MAX.	L	PART NUMBERS PAN HEAD
.188	1/4	.312	11/16	38-116-08-11 □
.312	3/8	.438	47/64	38-116-12-11 □
.438	1/2	.562	25/32	38-116-16-11 □
.562	5/8	.688	29/32	38-116-20-11 □
.688	3/4	.812	1 1/32	38-116-24-11 □
.812	7/8	.938	1 5/32	38-116-28-11 □
.938	1"	1.062	1 9/32	38-116-32-11 □

†Registered tradename of Metal Coatings International, Inc.

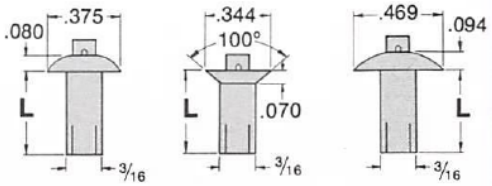
DRIVE RIVETS

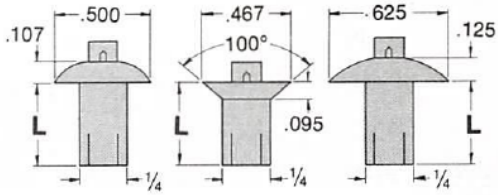
DELIVERY SYMBOLS
(see part numbers)
■ From stock, subject to prior sale. □ Up to 8 weeks. Minimum order required.

∅ 3/16" RIVET: 2117 aluminum, natural.
PIN: 302 stainless steel, natural.

∅ 1/4" RIVET: 2117 aluminum, natural.
PIN: 302 stainless steel, natural.

USE THESE COLUMNS FIRST TO LOCATE YOUR CORRECT GRIP. GRIP equals total thickness of ALL sheets fastened together.





GRIP MIN.	GRIP NOM.	GRIP MAX.	L	PART NUMBERS UNIVERSAL HEAD	PART NUMBERS 100° CSK HEAD	PART NUMBERS FULL BRAZIER HEAD
.047	3/32	.140	1/4	38-106-02-13 ■		38-206-02-13 ■
.078	1/8	.171	9/32	38-106-04-13 ■		38-206-04-13 ■
.140	3/16	.234	11/32	38-106-06-13 ■	38-506-06-13 ■	38-206-06-13 ■
.203	1/4	.296	13/32	38-106-08-13 ■	38-506-08-13 ■	38-206-08-13 ■
.265	5/16	.359	15/32	38-106-10-13 ■	38-506-10-13 ■	38-206-10-13 ■
.328	3/8	.421	17/32	38-106-12-13 ■	38-506-12-13 ■	38-206-12-13 ■
.390	7/16	.484	19/32	38-106-14-13 ■	38-506-14-13 ■	38-206-14-13 ■
.453	1/2	.546	21/32	38-106-16-13 ■	38-506-16-13 ■	38-206-16-13 ■
.515	9/16	.609	23/32	38-106-18-13 ■	38-506-18-13 ■	38-206-18-13 ■
.578	5/8	.671	25/32	38-106-20-13 ■	38-506-20-13 ■	38-206-20-13 ■
.640	11/16	.734	27/32	38-106-22-13 ■	38-506-22-13 □	38-206-22-13 ■
.703	3/4	.796	29/32	38-106-24-13 ■	38-506-24-13 □	38-206-24-13 ■
.765	13/16	.859	31/32	38-106-26-13 ■	38-506-26-13 □	38-206-26-13 ■
.828	7/8	.921	1 1/32	38-106-28-13 ■	38-506-28-13 □	38-206-28-13 ■
.890	15/16	.984	1 3/32	38-106-30-13 ■	38-506-30-13 □	38-206-30-13 ■
.953	1	1.047	1 5/32	38-106-32-13 ■	38-506-32-13 □	38-206-32-13 ■

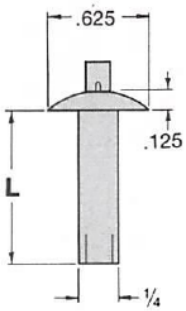
L	PART NUMBERS UNIVERSAL HEAD	PART NUMBERS 100° CSK HEAD	PART NUMBERS FULL BRAZIER HEAD
1/4	38-108-02-13 ■		38-208-02-13 ■
9/32	38-108-04-13 ■		38-208-04-13 ■
11/32	38-108-06-13 ■	38-508-06-13 ■	38-208-06-13 ■
13/32	38-108-08-13 ■	38-508-08-13 ■	38-208-08-13 ■
15/32	38-108-10-13 ■	38-508-10-13 ■	38-208-10-13 ■
17/32	38-108-12-13 ■	38-508-12-13 ■	38-208-12-13 ■
19/32	38-108-14-13 ■	38-508-14-13 ■	38-208-14-13 ■
21/32	38-108-16-13 ■	38-508-16-13 ■	38-208-16-13 ■
23/32	38-108-18-13 ■	38-508-18-13 ■	38-208-18-13 ■
25/32	38-108-20-13 ■	38-508-20-13 ■	38-208-20-13 ■
27/32	38-108-22-13 ■	38-508-22-13 ■	38-208-22-13 ■
29/32	38-108-24-13 ■	38-508-24-13 ■	38-208-24-13 ■
31/32	38-108-26-13 ■	38-508-26-13 ■	38-208-26-13 ■
1 1/32	38-108-28-13 ■	38-508-28-13 ■	38-208-28-13 ■
1 3/32	38-108-30-13 ■	38-508-30-13 ■	38-208-30-13 ■
1 5/32	38-108-32-13 ■	38-508-32-13 ■	38-208-32-13 ■

EXTRA LONG ALUMINUM DRIVE RIVETS

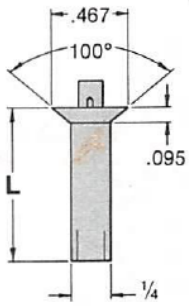
USE THESE COLUMNS FIRST TO LOCATE YOUR CORRECT GRIP. GRIP equals total thickness of ALL sheets fastened together.

∅ 1/4" RIVET: 2117 aluminum, natural.
PIN: 302 stainless steel, natural.

∅ 1/4" FULL BRAZIER HEAD



∅ 1/4" 100° CSK. HEAD



GRIP MIN.	GRIP NOM.	GRIP MAX.	length under head L	PART NUMBERS ∅ 1/4" FULL BRAZIER HEAD	PART NUMBERS ∅ 1/4" 100° CSK. HEAD
1.078	1 1/8	1.171	1 9/32	38-208-36-13 ■	
1.140	1 3/16	1.234	1 11/32	38-208-38-13 ■	
1.203	1 1/4	1.296	1 13/32	38-208-40-13 ■	
1.265	1 5/16	1.359	1 15/32	38-208-42-13 ■	
1.328	1 3/8	1.421	1 17/32	38-208-44-13 ■	38-508-44-13 □
1.390	1 7/16	1.484	1 19/32	38-208-46-13 ■	
1.453	1 1/2	1.546	1 21/32	38-208-48-13 ■	
1.578	1 5/8	1.671	1 25/32	38-208-52-13 ■	38-508-52-13 □

DELIVERY SYMBOLS (see part numbers)
■ From stock, subject to prior sale.
□ Up to 8 weeks. Minimum order required.

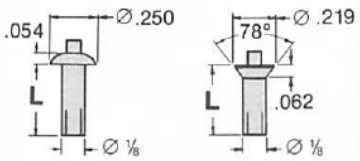



STEEL

USE THESE COLUMNS FIRST TO LOCATE YOUR CORRECT GRIP. GRIP equals total thickness of ALL sheets fastened together.

∅ 1/8"

RIVET: 1008 steel, DACROSEALED†.
PIN: 18-9LW stainless steel, natural.

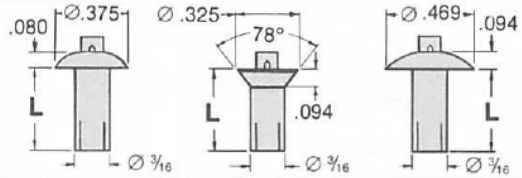


GRIP				PART NUMBERS	
MIN.	NOM.	MAX.	L	UNIVERSAL HEAD	78° CSK HEAD
.015	1/32	.046	5/32	38-104-01-93 □	
.046	1/16	.078	5/32	38-104-02-93 ■	
.078	3/32	.109	3/16	38-104-03-93 ■	38-604-03-93‡ ■
.109	1/8	.140	7/32	38-104-04-93 ■	38-604-04-93 ■
.140	5/32	.171	1/4	38-104-05-93 ■	38-604-05-93 ■
.171	3/16	.203	9/32	38-104-06-93 ■	38-604-06-93 ■
.203	7/32	.234	5/16	38-104-07-93 ■	38-604-07-93 ■
.234	1/4	.265	11/32	38-104-08-93 ■	38-604-08-93 □
.265	9/32	.296	3/8	38-104-09-93 ■	38-604-09-93 □
.296	5/16	.328	13/32	38-104-10-93 □	38-604-10-93 □
.328	11/32	.359	7/16	38-104-11-93 □	38-604-11-93 □
.359	3/8	.390	15/32	38-104-12-93 □	38-604-12-93 □
.390	13/32	.421	1/2	38-104-13-93 □	38-604-13-93 □
.421	7/16	.453	17/32	38-104-14-93 □	
.453	15/32	.484			
.484	1/2	.515			
.515	17/32	.546			
.546	9/16	.578			
.578	19/32	.609			
.609	5/8	.640			

‡ L = 7/32"

∅ 3/16"

RIVET: 1006 steel, DACROSEALED†.
PIN: 1008 steel, case hardened and DACROSEALED†.

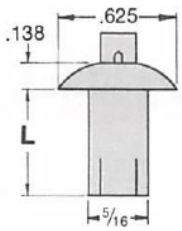


PART NUMBERS			
L	UNIVERSAL HEAD	78° CSK HEAD	FULL BRAZIER HEAD
7/32			38-206-02-91 □
7/32	38-106-03-91 ■		38-206-03-91 □
1/4	38-106-04-91 ■		38-206-04-91 ■
9/32	38-106-05-91 ■		38-206-05-91 ■
5/16	38-106-06-91 ■	38-606-06-91 □	38-206-06-91 ■
11/32	38-106-07-91 ■	38-606-07-91 □	38-206-07-91 ■
3/8	38-106-08-91 ■	38-606-08-91 □	38-206-08-91 ■
13/32	38-106-09-91 ■	38-606-09-91 □	38-206-09-91 ■
7/16	38-106-10-91 ■	38-606-10-91 □	38-206-10-91 ■
15/32	38-106-11-91 ■	38-606-11-91 □	
1/2	38-106-12-91 ■	38-606-12-91 □	
17/32	38-106-13-91 □	38-606-13-91 □	38-206-13-91 □
9/16	38-106-14-91 □	38-606-14-91 □	38-206-14-91 □
19/32	38-106-15-91 □	38-606-15-91 □	
5/8	38-106-16-91 □	38-606-16-91 □	38-206-16-91 □
21/32	38-106-17-91 □	38-606-17-91 □	
11/16	38-106-18-91 □	38-606-18-91 □	
23/32	38-106-19-91 □	38-606-19-91 □	
3/4	38-106-20-91 □	38-606-20-91 □	38-206-20-91 □

∅ 5/16"

RIVET: 1006 steel, DACROSEALED†.
PIN: 1008 steel, DACROSEALED†.

USE THESE COLUMNS FIRST TO LOCATE YOUR CORRECT GRIP. GRIP equals total thickness of ALL sheets fastened together.



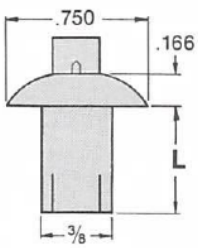
GRIP			PART NUMBERS	
MIN.	NOM.	MAX.	L	UNIVERSAL HEAD
.094	1/8	.156	5/16	38-110-04-91 ■
.157	3/16	.218	3/8	38-110-06-91 ■
.219	1/4	.281	7/16	38-110-08-91 ■
.282	5/16	.343	1/2	38-110-10-91 ■
.344	3/8	.406	9/16	38-110-12-91 ■
.407	7/16	.468	5/8	38-110-14-91 ■
.469	1/2	.531	11/16	38-110-16-91 ■
.532	9/16	.593	3/4	38-110-18-91 ■
.594	5/8	.656	13/16	38-110-20-91 ■
.657	11/16	.718	7/8	38-110-22-91 ■
.719	3/4	.781	15/16	38-110-24-91 ■
.782	13/16	.843	1	38-110-26-91 ■
.844	7/8	.906	1 1/16	38-110-28-91 ■
.907	15/16	.968	1 1/8	38-110-30-91 ■
.969	1	1.031	1 3/16	38-110-32-91 ■

Large diameter steel Drive Rivets including ∅ 1/2" pan head.

∅ 3/8"

RIVET: 1006 steel, DACROSEALED†.
PIN: 1008 steel, DACROSEALED†.

USE THESE COLUMNS FIRST TO LOCATE YOUR CORRECT GRIP. GRIP equals total thickness of ALL sheets fastened together.

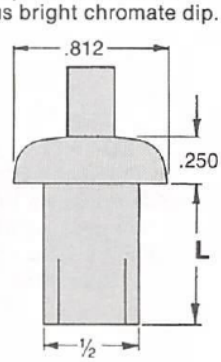


GRIP			PART NUMBERS	
MIN.	NOM.	MAX.	L	UNIVERSAL HEAD
.125	3/16	.250	1/2	38-112-06-91 ■
.218	9/32	.343	19/32	38-112-09-91 ■
.312	3/8	.437	11/16	38-112-12-91 ■
.406	15/32	.531	25/32	38-112-15-91 ■
.500	9/16	.625	7/8	38-112-18-91 ■
.593	21/32	.718	31/32	38-112-21-91 ■
.687	3/4	.813	1 1/16	38-112-24-91 ■
.781	27/32	.906	1 5/32	38-112-27-91 ■
.907	15/16	.968	1 3/16	38-112-30-91 ■
.969	1"	1.031	1 1/4	38-112-32-91 ■

∅ 1/2"

RIVET: 1008 steel. PIN: 1212 steel.
These components are zinc plated plus bright chromate dip.

USE THESE COLUMNS FIRST TO LOCATE YOUR CORRECT GRIP. GRIP equals total thickness of ALL sheets fastened together.



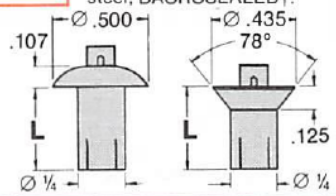
GRIP			PART NUMBERS	
MIN.	NOM.	MAX.	L	PAN HEAD
.188	1/4	.312	23/32	38-116-08-91 □
.312	3/8	.438	49/64	38-116-12-91 □
.438	1/2	.562	13/16	38-116-16-91 □
.562	5/8	.688	29/32	38-116-20-91 □
.688	3/4	.812	1 1/32	38-116-24-91 □
.812	7/8	.938	1 5/32	38-116-28-91 □
.938	1"	1.062	1 9/32	38-116-32-91 □

†Registered tradename of Metal Coatings International, Inc.

DRIVE RIVETS

USE THESE COLUMNS FIRST TO LOCATE YOUR CORRECT GRIP. GRIP equals total thickness of ALL sheets fastened together.

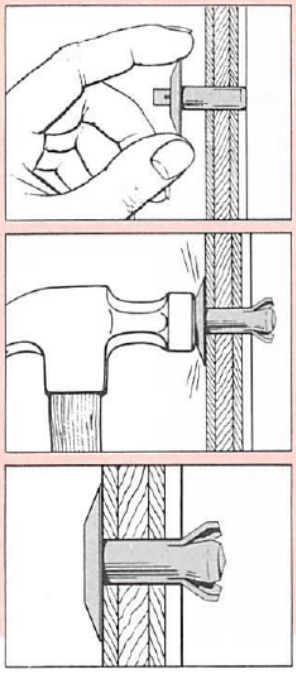
Ø 1/4" RIVET and PIN (PIN is case hardened): 1008 steel, †DACROSEALED†.



GRIP MIN.	GRIP NOM.	GRIP MAX.	L	PART NUMBERS UNIVERSAL HEAD	PART NUMBERS 78° CSK HEAD
.015	1/32	.046			
.046	1/16	.078			
.078	3/32	.109	7/32	38-108-03-91 ■	
.109	1/8	.140	1/4	38-108-04-91 ■	
.140	5/32	.171	9/32	38-108-05-91 ■	
.171	3/16	.203	5/16	38-108-06-91 ■	38-608-06-91 □
.203	7/32	.234	11/32	38-108-07-91 ■	38-608-07-91 □
.234	1/4	.265	3/8	38-108-08-91 ■	38-608-08-91 ■
.265	9/32	.296	13/32	38-108-09-91 ■	38-608-09-91 ■
.296	5/16	.328	7/16	38-108-10-91 ■	38-608-10-91 ■
.328	11/32	.359	15/32	38-108-11-91 ■	38-608-11-91 ■
.359	3/8	.390	1/2	38-108-12-91 ■	38-608-12-91 ■
.390	13/32	.421	17/32	38-108-13-91 ■	38-608-13-91 □
.421	7/16	.453	9/16	38-108-14-91 ■	38-608-14-91 □
.453	15/32	.484	19/32	38-108-15-91 ■	38-608-15-91 □
.484	1/2	.515	5/8	38-108-16-91 ■	38-608-16-91 □
.515	17/32	.546	21/32	38-108-17-91 ■	38-608-17-91 □
.546	9/16	.578	11/16	38-108-18-91 ■	38-608-18-91 □
.578	19/32	.609	23/32	38-108-19-91 ■	38-608-19-91 □
.609	5/8	.640	3/4	38-108-20-91 ■	38-608-20-91 □

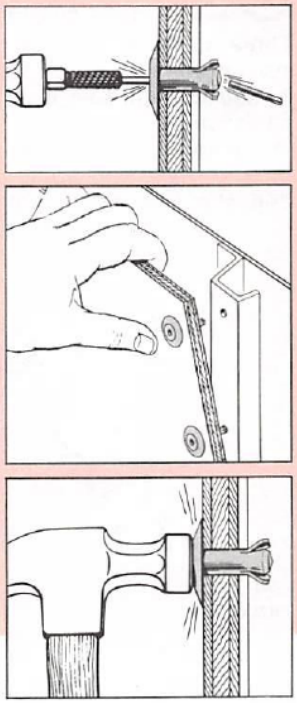
Southco Drive Rivets

To line a truck or trailer:



Insert the rivet. Hit the pin. The liner is fastened. Rivets stay put under vibration. Low profile heads won't snag cargo.

To reline:



Drive out the center pin. Strip off the old liner. Reline the body.

MASONRY RIVETS

TAMPER-RESISTANT DRIVE RIVETS

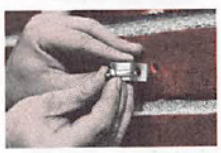
MATERIAL and FINISH
RIVET: 2117 aluminum, natural.
PIN: 302 stainless steel, natural.

INSTALL with only a drill and a hammer

Use a carbide tipped spiral masonry drill, same diameter as rivet (1/4" or 3/16"). Drill to any depth, deep enough to permit full insertion of rivet. You can't drill too deep.



Insert rivet through material to be attached and into wall. No other parts to apply—rivet works like a nail.



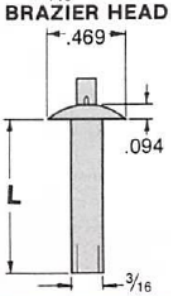
Drive the pin just flush with rivet head, using ordinary hammer: don't batter head. Rivet prongs expand deep in masonry where it is strongest.



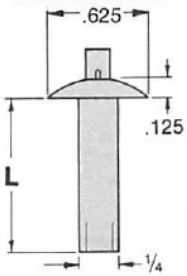
That's all. Attachment is complete. To remove, drill head off or, if hole is deep enough, drive pin through and pull rivet out.



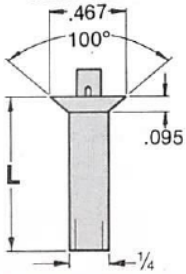
Ø 3/16" FULL BRAZIER HEAD



Ø 1/4" FULL BRAZIER HEAD



Ø 1/4" 100° CSK. HEAD



length under head L	Ø 3/16" FULL BRAZIER HEAD	Ø 1/4" FULL BRAZIER HEAD	Ø 1/4" 100° CSK. HEAD
1 5/32	38-206-32-13 ■	38-208-32-13 ■	38-508-32-13 ■
1 9/32		38-208-36-13 ■	
1 11/32		38-208-38-13 ■	
1 13/32		38-208-40-13 ■	
1 15/32		38-208-42-13 ■	
1 17/32		38-208-44-13 ■	38-508-44-13 □
1 19/32		38-208-46-13 ■	
1 21/32		38-208-48-13 ■	
1 25/32		38-208-52-13 ■	38-508-52-13 □

†Registered tradename of Metal Coatings International, Inc.

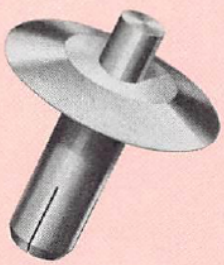
3G LINER

3G* The Drive Rivet that brings speed and economy to truck and trailer lining.

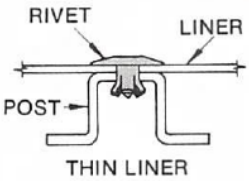
Three times the grip range...only 9 sizes cover all grips through $15/16$".

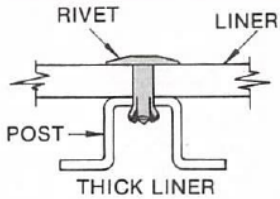
to install...drill hole, insert the rivet and hit the pin.

to remove...drive pin all the way through rivet with a nail or punch and drill, shear or pry head off.



*TRIPLEGRIP®





TYPICAL LINER APPLICATIONS

Enter table with your liner thickness. Read across to column headed with your post thickness to find correct rivet part number for your application.

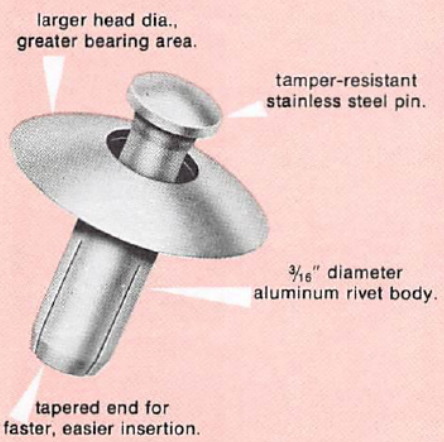
your LINER thickness	your POST thickness					
	1/16	3/32	1/8	5/32	3/16	1/4
1/16	10-11-706-13	10-11-706-13	10-12-706-13	10-12-706-13	10-12-706-13	10-13-706-13
3/32	10-11-706-13	10-12-706-13	10-12-706-13	10-12-706-13	10-13-706-13	10-13-706-13
1/8	10-12-706-13	10-12-706-13	10-12-706-13	10-13-706-13	10-13-706-13	10-13-706-13
5/32	10-12-706-13	10-12-706-13	10-13-706-13	10-13-706-13	10-13-706-13	10-14-706-13
3/16	10-12-706-13	10-13-706-13	10-13-706-13	10-13-706-13	10-13-706-13	10-14-706-13
1/4	10-13-706-13	10-13-706-13	10-13-706-13	10-14-706-13	10-14-706-13	10-15-706-13
5/16	10-13-706-13	10-14-706-13	10-14-706-13	10-14-706-13	10-15-706-13	10-15-706-13
3/8	10-14-706-13	10-14-706-13	10-15-706-13	10-15-706-13	10-15-706-13	10-16-706-13
1/2	10-15-706-13	10-16-706-13	10-16-706-13	10-16-706-13	10-17-706-13	10-17-706-13
5/8	10-17-706-13	10-17-706-13	10-17-706-13	10-18-706-13	10-18-706-13	10-18-706-13
3/4	10-18-706-13	10-18-706-13	10-18-706-13	10-19-706-13	10-19-706-13	—

NOTE: When fastening liners to wood furring strips, use rivet part No. 38-99-368-20 only. Maximum liner thickness for this application = 3/8".

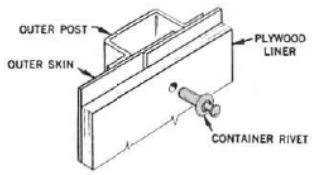
SOUTHCO TAMPER-RESISTANT T.I.R. CONTAINER RIVET



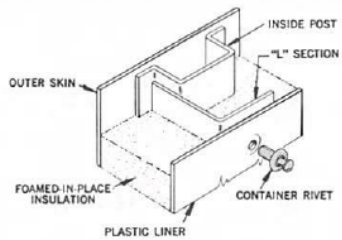
The special configuration of the Drive Rivet pin makes removal of these rivets a difficult and time consuming job. Seated smoothly in a recess in the rivet head, the stainless steel pin has an enlarged and rounded top that resists being driven through or drilled out.



T.I.R. CONTAINER



DRY CARGO CONTAINER LINER INSTALLATION



F.I.P. REEFER LINER INSTALLATION

TYPICAL LINER APPLICATIONS

Enter table with your liner thickness. Read across to column headed with your post thickness to find correct rivet part number for your application.

your LINER thickness	your POST thickness					
	1/16	3/32	1/8	5/32	3/16	1/4
1/16	10-99-108-11	10-99-108-11	10-99-108-12	10-99-108-12	10-99-108-12	10-99-108-13
3/32	10-99-108-11	10-99-108-12	10-99-108-12	10-99-108-12	10-99-108-13	10-99-108-13
1/8	10-99-108-12	10-99-108-12	10-99-108-12	10-99-108-13	10-99-108-13	10-99-108-13
5/32	10-99-108-12	10-99-108-12	10-99-108-13	10-99-108-13	10-99-108-13	10-99-108-14
3/16	10-99-108-12	10-99-108-13	10-99-108-13	10-99-108-13	10-99-108-13	10-99-108-14
1/4	10-99-108-13	10-99-108-13	10-99-108-13	10-99-108-14	10-99-108-14	10-99-108-15
5/16	10-99-108-13	10-99-108-14	10-99-108-14	10-99-108-14	10-99-108-15	10-99-108-15
3/8	10-99-108-14	10-99-108-14	10-99-108-15	10-99-108-15	10-99-108-15	10-99-108-16
1/2	10-99-108-15	10-99-108-16	10-99-108-16	10-99-108-16	10-99-108-17	10-99-108-17
5/8	10-99-108-17	10-99-108-17	10-99-108-17	10-99-108-18	10-99-108-18	10-99-108-18
3/4	10-99-108-18	10-99-108-18	10-99-108-18	10-99-108-19	10-99-108-19	—

NOTE: Part numbers shown are for rivets with .615 dia. head. For rivets with .468 dia. head, change third unit of part from "108" to "106" (see part number table above). Example: 10-99-108-11 becomes 10-99-106-11

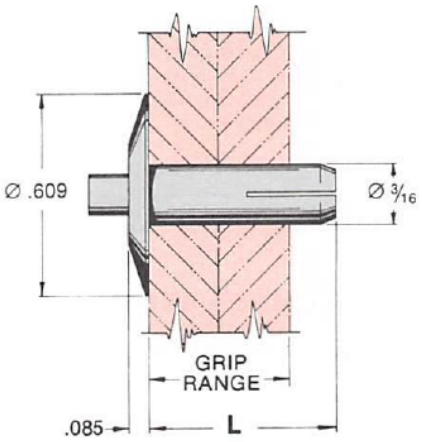
RIVETS



For quickest, trouble-free blind fastening of plywood, metal or plastic liners to trailer or truck bodies.



MATERIAL
RIVET: 2117 aluminum, natural.
PIN: 7075 aluminum, natural.

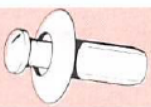


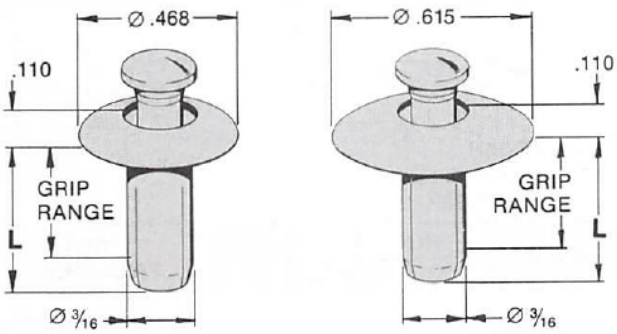
grip range	L	part number
.076-.175	9/32	10-11-706-13 ■
.176-.275	25/64	10-12-706-13 ■
.276-.375	31/64	10-13-706-13 ■
.376-.475	37/64	10-14-706-13 ■
.476-.575	11/16	10-15-706-13 ■
.576-.675	25/32	10-16-706-13 ■
.676-.775	7/8	10-17-706-13 ■
.776-.875	63/64	10-18-706-13 ■
.876-.975	1 5/64	10-19-706-13 ■
for expansion in wood only ▶	3/4*	38-99-368-20 ■

*chamfer on end omitted

TO INSTALL — Use Ø3/16 drill...insert rivet...hit the pin — THAT'S ALL

RIVETS





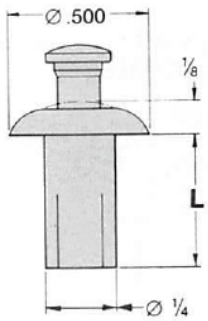
grip range	L	PART NUMBERS	
		Ø .468 head	Larger Ø .615 head
.076-.175	9/32	10-99-106-11 ■	10-99-108-11 ■
.176-.275	25/64	10-99-106-12 ■	10-99-108-12 ■
.276-.375	31/64	10-99-106-13 ■	10-99-108-13 ■
.376-.475	37/64	10-99-106-14 ■	10-99-108-14 ■
.476-.575	11/16	10-99-106-15 □	10-99-108-15 ■
.576-.675	25/32	10-99-106-16 □	10-99-108-16 ■
.676-.775	7/8	10-99-106-17 □	10-99-108-17 ■
.776-.875	63/64	10-99-106-18 □	10-99-108-18 ■
.876-.975	1 5/64	———	10-99-108-19 ■

MATERIAL and FINISH
RIVET: 2117 aluminum, natural.
PIN: 302 stainless steel, passivated.

TO INSTALL
Use Ø3/16 drill...
insert rivet...hit the pin

Ø1/4"
Tamper-resistant Rivets

Tamper-resistant Drive Rivets can be used to discourage disassembly of parts and theft of contents. They meet specifications for use in the installations of liners in T.I.R. containers.



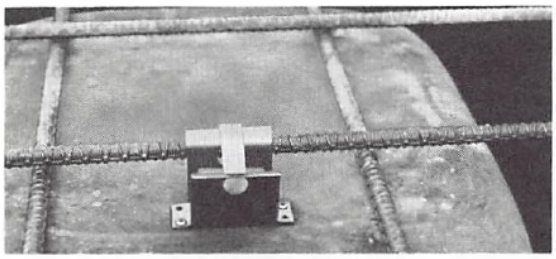
GRIP RANGE	L	PART NUMBERS
.047-.140	1/4	38-99-545-02 □
.078-.171	9/32	38-99-545-04 ■
.140-.234	11/32	38-99-545-06 ■
.203-.296	13/32	38-99-545-08 ■
.265-.359	15/32	38-99-545-10 □
.328-.421	17/32	38-99-545-12 □
.390-.484	19/32	38-99-545-14 □
.453-.546	21/32	38-99-545-16 □
.515-.609	23/32	38-99-545-18 □
.578-.671	25/32	38-99-545-20 □

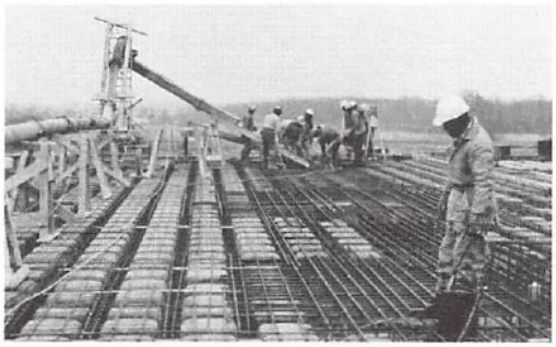
MATERIAL
RIVET: 2117 aluminum, natural.
PIN: 302 stainless steel, passivated.

DELIVERY SYMBOLS
(see part numbers)
■ From stock, subject to prior sale.
□ Up to 8 weeks. Minimum order required.

DOME RIVETS

The Southco DOME RIVET is the one fastener specified by dome manufacturers for attaching pipe sleeves, inserts, pipe plugs, junction boxes, etc., to reuseable concrete forms. Southco DOME RIVETS are quick, easy to install—quick, easy to release, from the underside, without dimpling or damaging the forms.

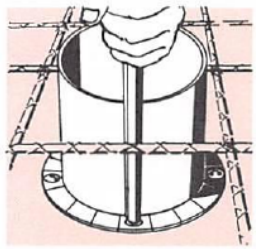






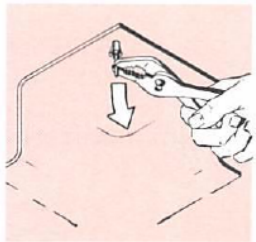
EASY TO INSTALL

Position insert (item to be attached) on form and drill Ø.161 holes (No. 20 drill). Use only enough rivets to hold insert securely during pouring of concrete. Place rivets in holes and drive pins flush with rivet heads. Rivets expand on underside of dome, anchoring insert firmly.



FOR LIMITED ACCESS

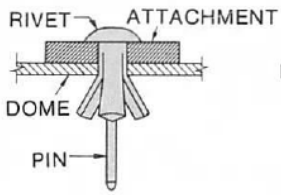
For areas of limited access, Southco tool, Part No. 38-0-7613-11 is available (see below). Tool will reach past reinforcement rods, into depressions, etc. to drive pins.



QUICK-EASY TO RELEASE

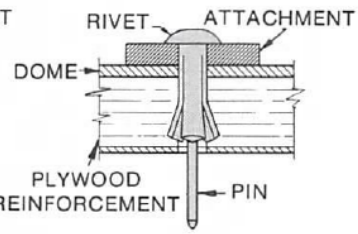
Rivets are released from the underside of the dome. Pliers, claw hammer or diagonal cutters are used to pull the extra long pin down through the rivet. The expanded rivet prongs are then free to collapse as the forms are stripped away, undamaged.

METAL OR FIBERGLASS DOMES

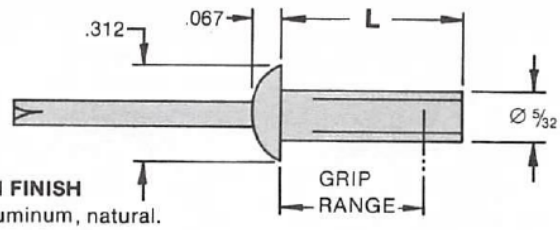


Rivet prongs expand on underside of dome. Long pin extends well below prongs to permit easy removal.

PLYWOOD REINFORCED FIBERGLASS DOMES



Rivet expands inside plywood reinforcement. Extra long pin extends well below reinforcement permitting easy removal.



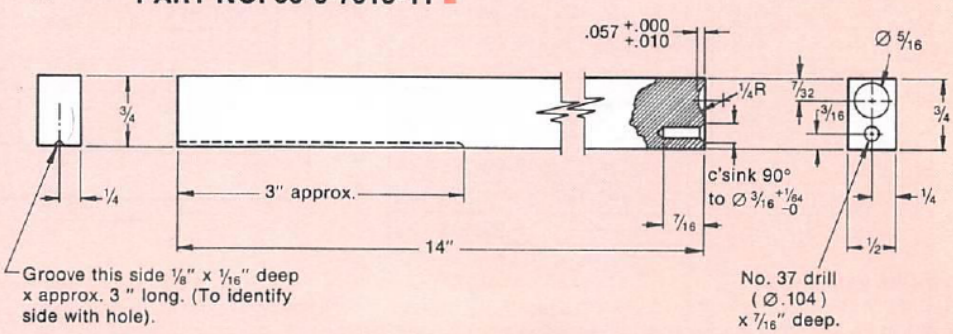
MATERIAL and FINISH
RIVET: 2117 aluminum, natural.
PIN: 1008 steel, DACROSEALED†.

For use with:	GRIP RANGE MIN.	GRIP RANGE MAX.	L	PART NUMBER
Metal or fiberglass domes	3/32	3/8	1/2	38-99-381-10 ■
Fiberglass domes plywood reinforced	1 1/32	5/8	3/4	38-99-473-20 ■

■ From stock, subject to prior sale.

DOME RIVET PIN-SETTING TOOL
PART NO. 38-0-7613-11 ■

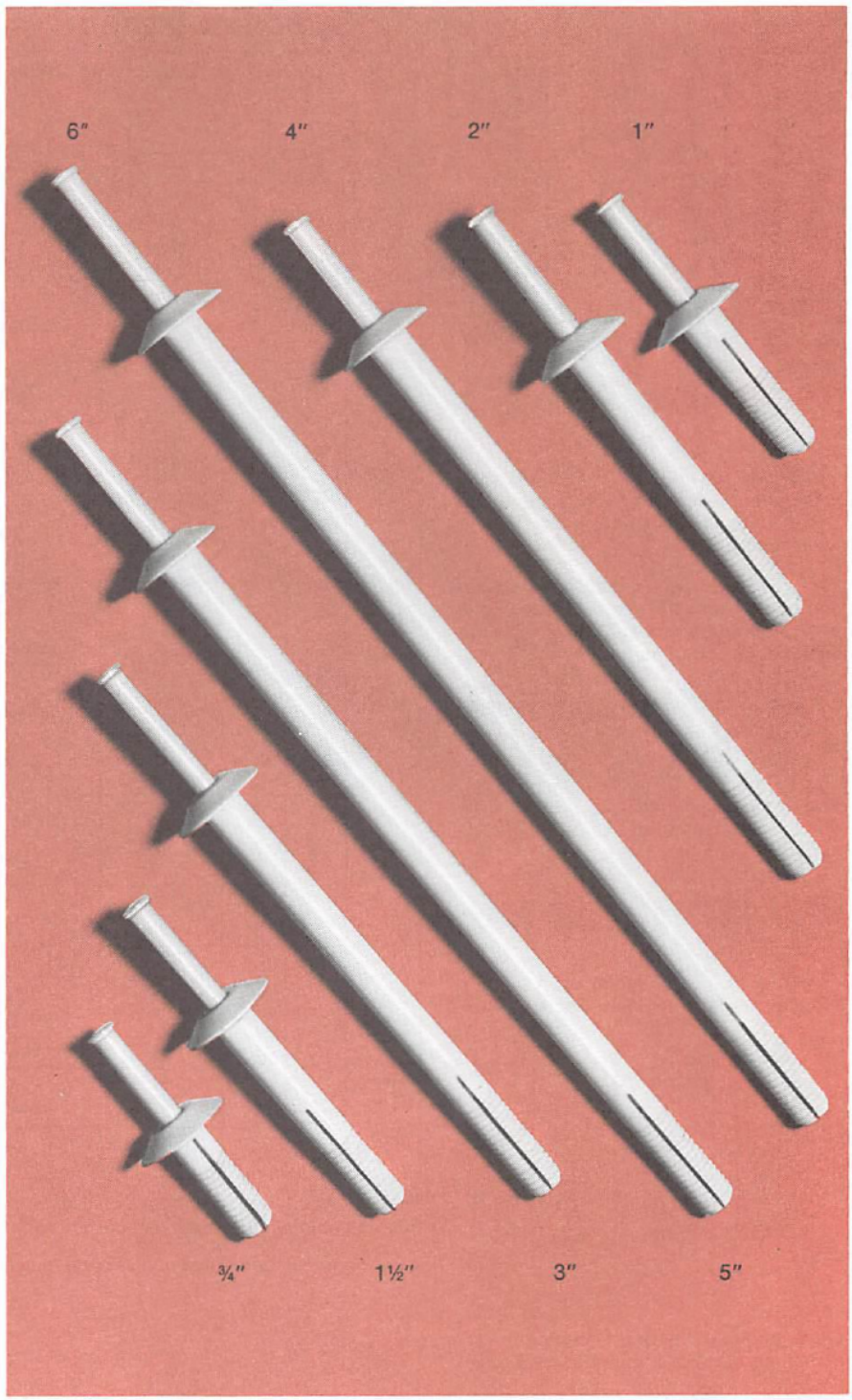
MATERIAL—Hot rolled, flat bar—Rycut 50 steel (Alternate: 4130 or 4140 steel)
HEAT TREAT—Harden and draw to RC 38 to 42 (Option: harden and draw 2" of each end to RC 38 to 42)
FINISH—Zinc plate.



†Registered tradename of Metal Coatings International, Inc.

SOUTHCO...your source for Insulating Drive Rivets as insulation materials get thicker ...and thicker ...and thicker ...and thicker ...and thicker

In COLORS — from stock!
¾" long truss head rivets are stocked in eight colors.
(see page A-12)



Check these features...



Head of pin mates with recess in rivet head for smooth, clean head contour. No slots or depressions to collect dirt.

Available in two head styles—truss and countersunk.

Rivet head shape seats tightly against panel, won't snag.

High-impact nylon rivet body and pin.

High-impact opaque white nylon rivet is non-corrosive, easily cleaned, inconspicuous on light panels.

Barbed shank for extra holding power.

Rivet provides full, uniform expansion.

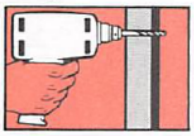
Tapered shank end simplifies insertion.

Here's the ideal fastener for installing insulating wall paneling in all kinds of applications. Southco's wide grip range and controlled expansion design let you fasten a full range of panel thicknesses to most construction materials. Rivet expands *into* solid furring strips, studs, substrates of brick block, concrete—expands *behind* metal angles, channels, posts, and sheets. Southco's extra-long 5" and 6" lengths easily fasten the thicker insulation materials now being used for increased energy savings.

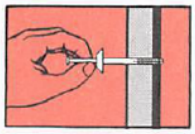
Southco's Insulating Drive Rivets are made of high-impact nylon. The complete line includes truss heads and some countersunk heads for flush applications. All lengths and styles are factory-assembled (pin in rivet) to simplify installation.

High-impact Nylon Insulating Drive Rivets

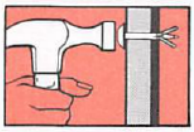
Easy to use



DRILL a hole.



INSERT a rivet.

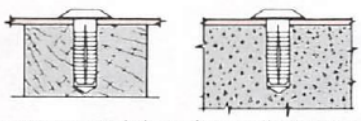


HIT the pin. The shank end expands into or behind material for a tight, secure grip.

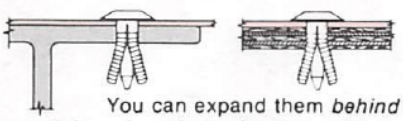
Install in .257 dia. hole ("F" drill).

Use .261 dia. hole ("G" drill) for blind fastening into solid materials and in applications where expansion may be restricted.

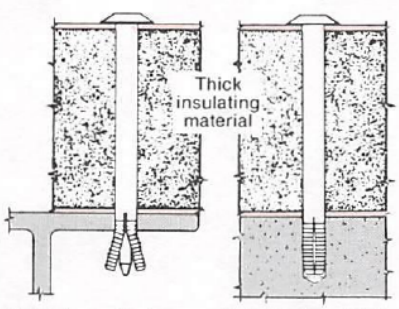
Each rivet size has a wide grip range and controlled expansion for secure fastening of a full range of material thicknesses to most construction materials.



You can expand them *into* solid furring, strips, studs, substrates of brick, block, concrete.

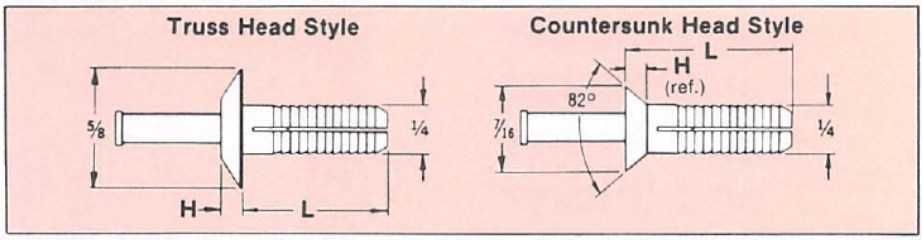


You can expand them *behind* metal angles, channels, posts, sheets.



Extra long rivets permit fastening thick insulation materials to any of the above.

Specifications



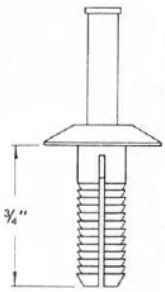
Head Style	H	L	Grip Min.	Grip Max.	Pin Material	Pin Color	Nylon Rivet Color	Part Numbers
Truss Head	.109"	3/4"	1/16"	1/2"	2117 aluminum	Natural	Natural	30-20-542-25
							Black	30-20-542-26
					nylon, mineral filled	Natural	Natural	30-20-542-27
						Black	Black	30-20-542-28
					acetal	Opaque White	Opaque White	30-20-542-30
						Customer's color	Color to match Customer's Color	*
	.109"	1"	1/4"	3/4"	2117 aluminum	Natural	Natural	30-20-545-25
					nylon, mineral filled	Natural	Natural	30-20-545-27
					acetal	Opaque White	Opaque White	30-20-545-30
						Customer's color	Color to match Customer's Color	*
	.109"	1 1/2"	3/4"	1 1/4"				30-20-546-30
	.131"	2"	1 5/16"	1 7/8"				30-20-547-30
		3"	2 5/16"	2 7/8"	acetal	Opaque White	Opaque White	30-20-549-30
		4"	3 5/16"	3 7/8"				30-20-541-30
		5"	4 5/16"	4 7/8"				30-20-543-30
		6"	5 5/16"	5 7/8"				30-20-544-30
Countersunk Head	.111"	3/4"	3/16"	1/2"	2117 aluminum	Natural	Natural	30-20-642-25
					nylon, mineral filled	Natural	Natural	30-20-642-27
							Opaque White	30-20-642-30
		1"	1/4"	3/4"	2117 aluminum	Natural	Natural	30-20-645-25
					nylon, mineral filled	Natural	Natural	30-20-645-27
							Opaque White	30-20-645-30
		1 1/2"	3/4"	1 1/2"	nylon mineral filled	Natural	Opaque White	30-20-646-30

*Nylon rivets can be purchased on special order to match customer's sample color (or choose from our standard colors below). Call for details.

■ Rivet part numbers listed on this page represent stock items subject to prior sale.

COLORS—from stock!

Truss head style, 3/4" long Insulating Drive Rivets—the industry standard for installing frp wall and ceiling panels—are in stock for quick delivery in *eight colors.*

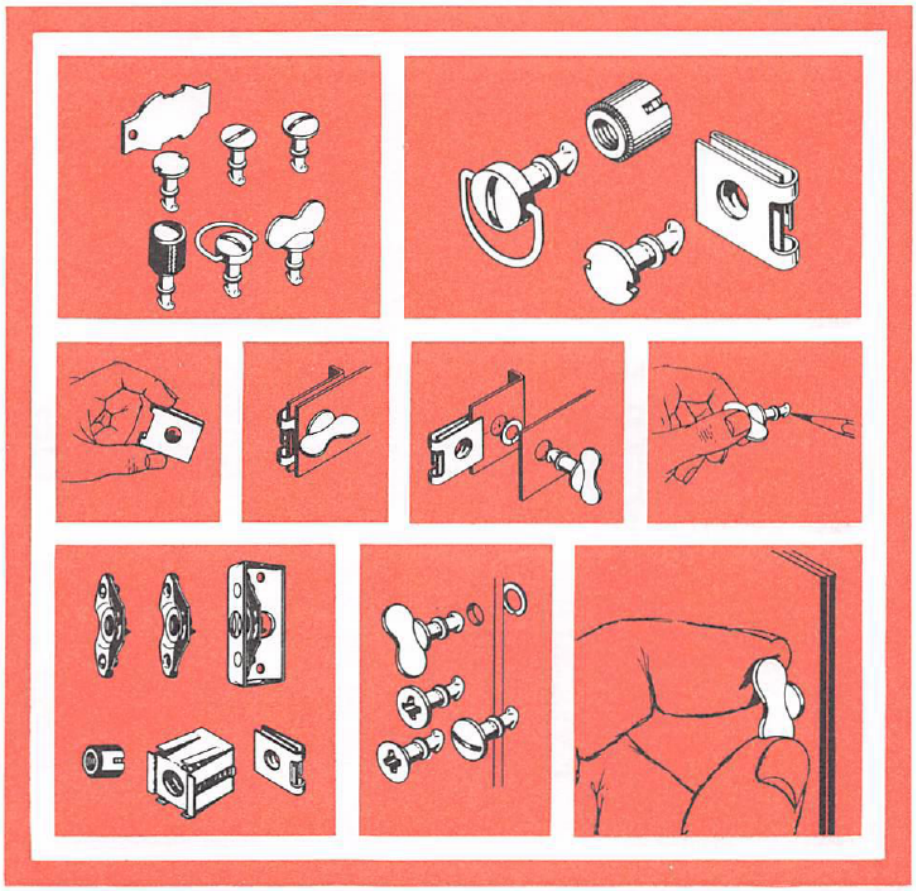


Color	Part Number
Beige	30-99-142-01
Pumpkin	30-99-142-06
Sunshine Yellow	30-99-142-07
Antique Gold	30-99-142-08
Mint Green	30-99-142-09
Pale Blue	30-99-142-10
Soft Beige	30-99-142-11
Colonial White	30-99-142-12

RIVET Material: nylon
PIN Material: acetal

Section B
1/4-Turn Fasteners

contents guide	page
No. 81 ¼-turn Fasteners	B-1 to B-6
Receptacles for Ultrasonic Installation	B4
No. 82 ¼-turn Fasteners	B-7 to B-18
Receptacles for Ultrasonic Installation	B-11
No. 82 Fully-rectracting Stud Assemblies	B-19 to B-22
No. 85 ¼-turn Fasteners	B-23 to B-32
No. 87 ¼-turn Fasteners	B-33 & B-34



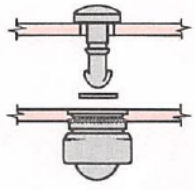
Section B
1/4-Turn Fasteners

contents guide | **page**

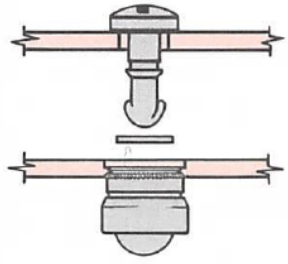
No. 81 ¼-turn Fasteners	B-1 to B-6
Receptacles for Ultrasonic Installation	B4
No. 82 ¼-turn Fasteners	B-7 to B-18
Receptacles for Ultrasonic Installation	B-11
No. 82 Fully-rectracting Stud Assemblies	B-19 to B-22
No. 85 ¼-turn Fasteners	B-23 to B-32
No. 87 ¼-turn Fasteners	B-33 & B-34

Southco ¼-turn Fasteners are covered by U.S. Patents. Other patents are pending.

No. 81

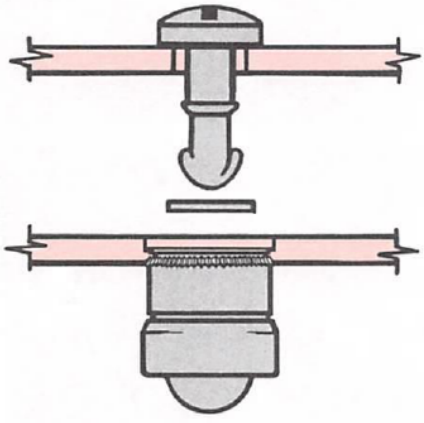


No. 82

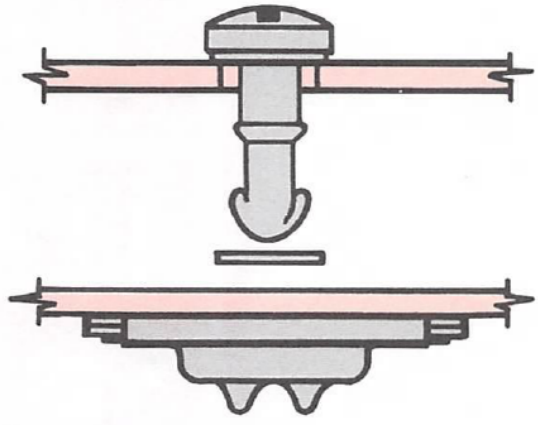


SHOWN APPROXIMATELY ACTUAL SIZE.

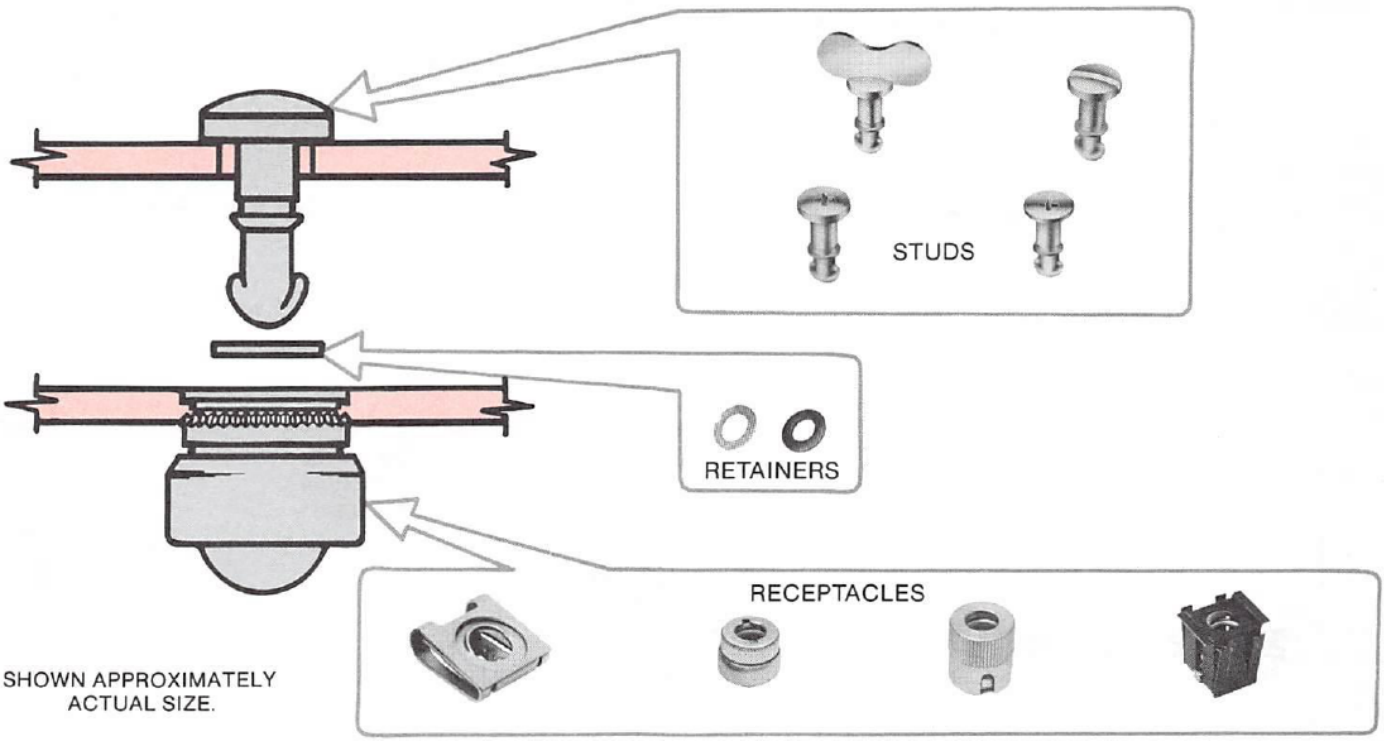
No. 85



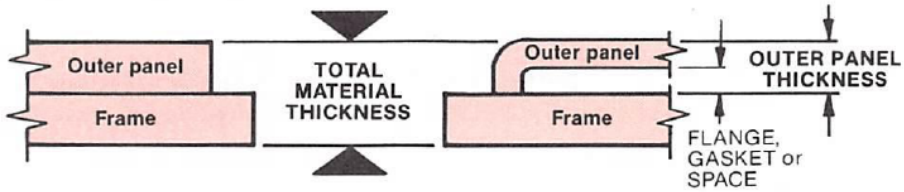
No. 87



¼-turn fasteners
No. 81 size

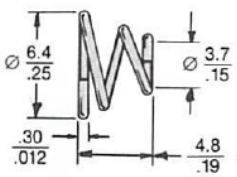


To select correct fastener:



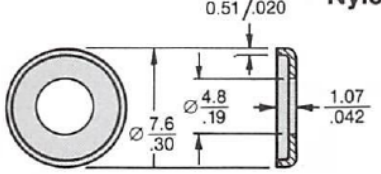
1. Choose a receptacle. (Note any frame thickness limitations.)
2. To select a stud,
   a) measure your Outer Panel Thickness or Total Material Thickness (note under receptacle part number will tell you which to use).
   b) if adjustment formula is shown under receptacle part number apply this formula to your measurement.
   c) use measurement (or adjusted measurement) to find part number in table, pg. B-5 under stud head style you want.
3. Choose a retainer
4. Order each component and tool (if required) separately by part number.

Stud Ejector



Ejector Spring

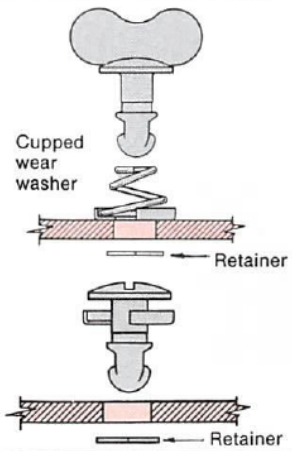
Part Number
81-41-102-24 ■
302 stainless steel, passivated



Nylon Wear Washer

Part Number
81-46-101-41 ■
Black

Part Number
81-46-101-39 ■
Natural



Adjustment Formula
When using a stud ejector (ejector spring and wear washer), add .81/.032 to your Outer Panel Thickness or Total Material Thickness.

Adjustment Formula
When using a wear washer, add 0.51/.020 to your Outer Panel Thickness or Total Material Thickness.

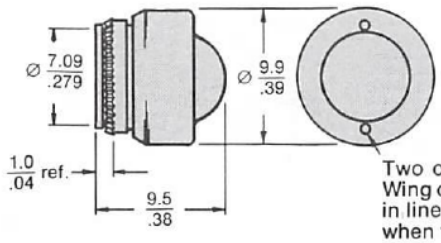
■ From stock, subject to prior sale

¼-turn fasteners
No. 81 receptacles

Shielded press-in for sheet metal • Provides RFI-EMI shielding

Part Number 81-35-311-55 ■

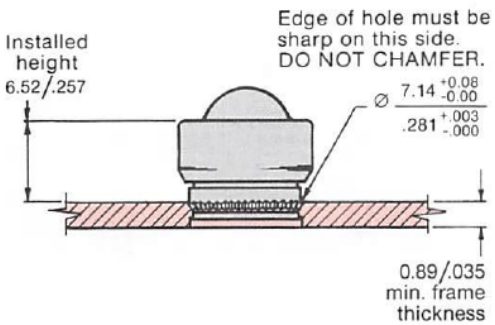
RECEPTACLE: 1010 steel, DACROTIZED†.
SHELL: low carbon steel, DACROTIZED†.
SPRING: 302 stainless steel, DACROTIZED†
CAP: 305 stainless steel, DACROTIZED†

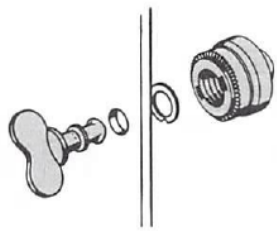


Adjustment Formula

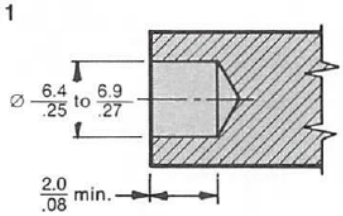
To enter Stud Selection Table determine your Total Material Thickness.

Substitute 1.27/.050 (constant) for frame thickness if frame thickness is less than 1.27/.050.





Installation Tool Part Number 54-0-5466-11

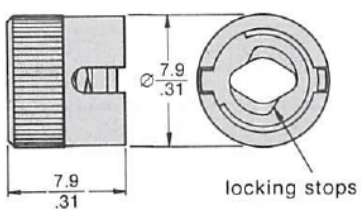


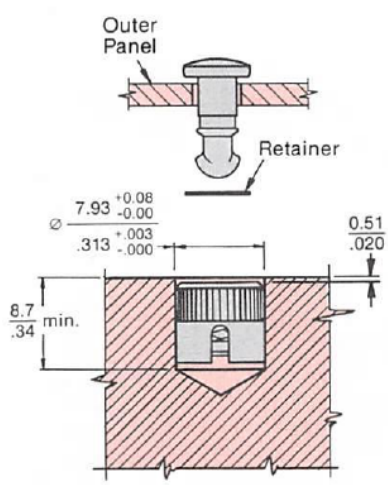
Press-in for blind applications and solid materials

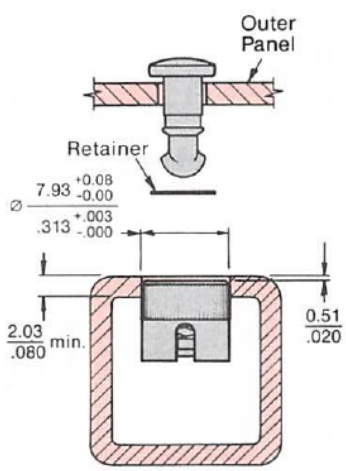
Part Number 81-35-308-55 ■

RECEPTACLE: 1010 steel, hardened and DACROTIZED†.
SHELL: low carbon steel, hardened and DACROTIZED†.
RETAINER and SPRING: 302 stainless steel, DACROTIZED†

To enter Stud Selection Table determine your Outer Panel Thickness.





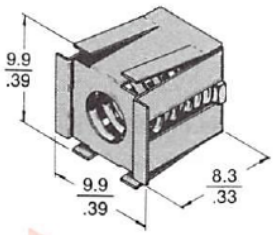


MILLIMETER/INCH
MILLIMETER
INCH

†Registered tradename of Metal Coatings International, Inc.
■ From stock. Subject to prior sale.

¼-turn fasteners
No. 81 receptacles

Snap-in

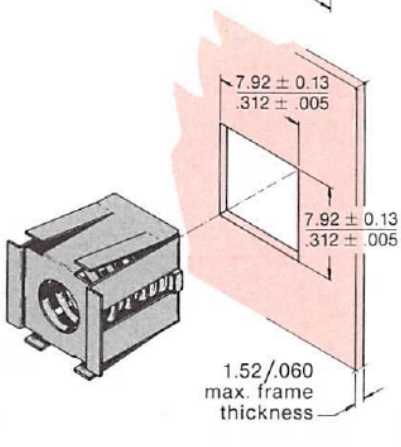


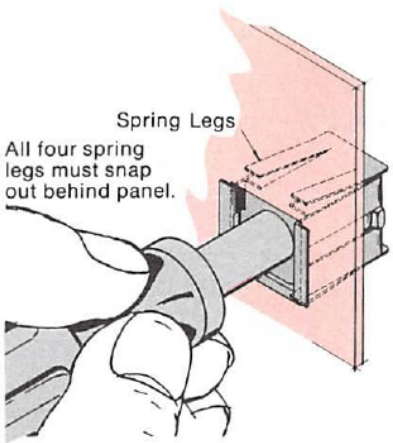
Part Number 81-35-309-56■

HOUSING and RETAINER: 301 stainless steel, natural.
RECEPTACLE: 1010 steel, DACROTIZED†.
SPRING: 302 stainless steel, passivated.

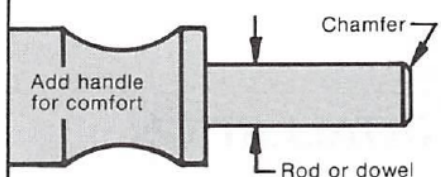
Adjustment Formula

To enter Stud Selection Table calculate:
Outer Panel Thickness + 1.52/.060
but use Total Material Thickness column.

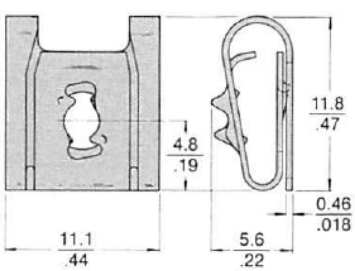


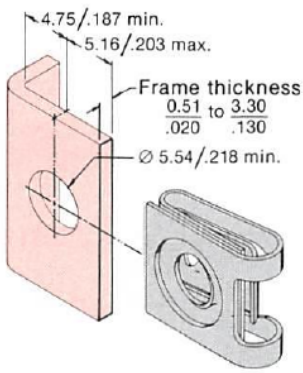


Make tool for speed of installation.



Clip-on





Part Number 81-47-101-15■

1064 steel, DACROTIZED†.

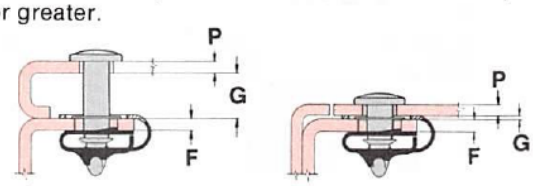
Part Number 81-47-101-20■

17-7PH stainless steel, passivated.

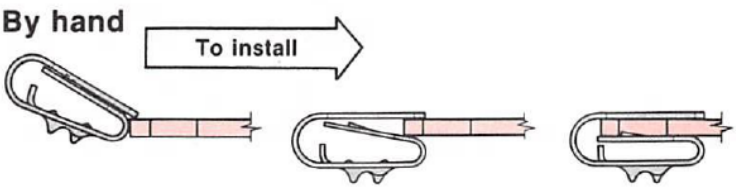
Adjustment Formula

To enter Stud Selection Table determine your Total Material Thickness by calculating:

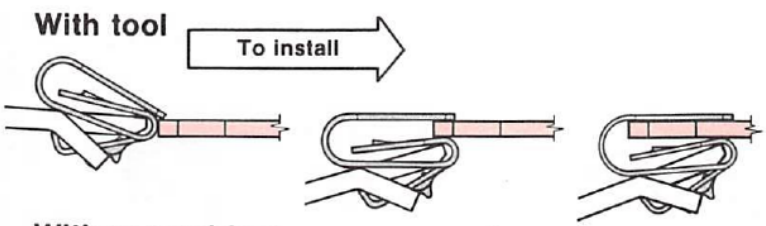
P + **F** - 1.07/.042 (constant) when **G** is 0.46/.018.
P + **F** + **G** - 1.52/.060 (constant) when **G** is 0.47/.019 or greater.



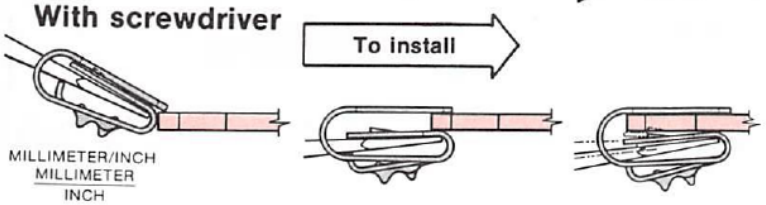
By hand



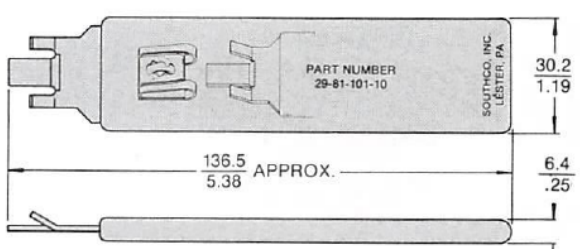
With tool



With screwdriver



Installation Tool Part Number 29-81-101-10■

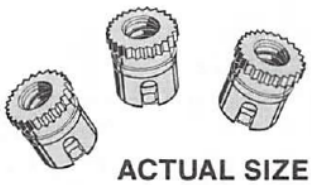


†Registered tradename of Metal Coatings International, Inc.

■ From stock, subject to prior sale.

No. 81 ¼-turn Fastener Receptacle

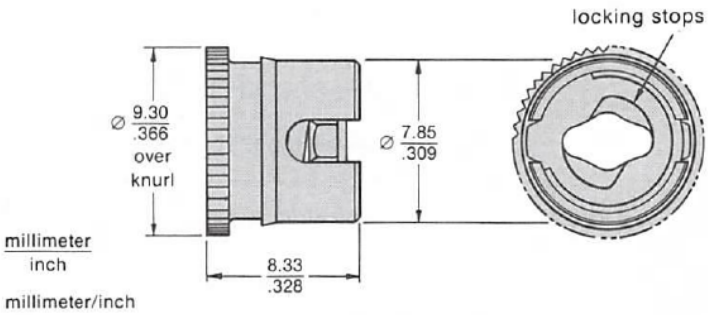
for ultrasonic installation in thermoplastics



ACTUAL SIZE

PART NUMBER
81-35-310-55 ■

■ From stock, subject to prior sale.

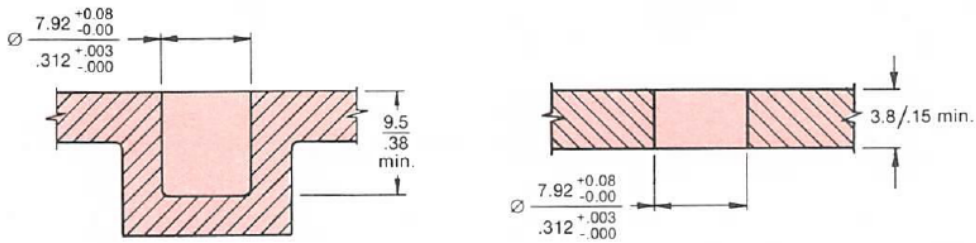


- **Minimize residual stress**
- **Increased pull-out resistance**
- **Increased torque-out resistance**

MATERIAL and FINISH
RECEPTACLE: 1010 steel, case hardened and DACROTIZED†.
SHELL: low carbon steel, DACROTIZED†.
SPRING : 302 stainless steel, DACROTIZED†.
RETAINER: 302 stainless steel, passivated.
†Registered tradename of Metal Coatings International, Inc.

INSTALLATION

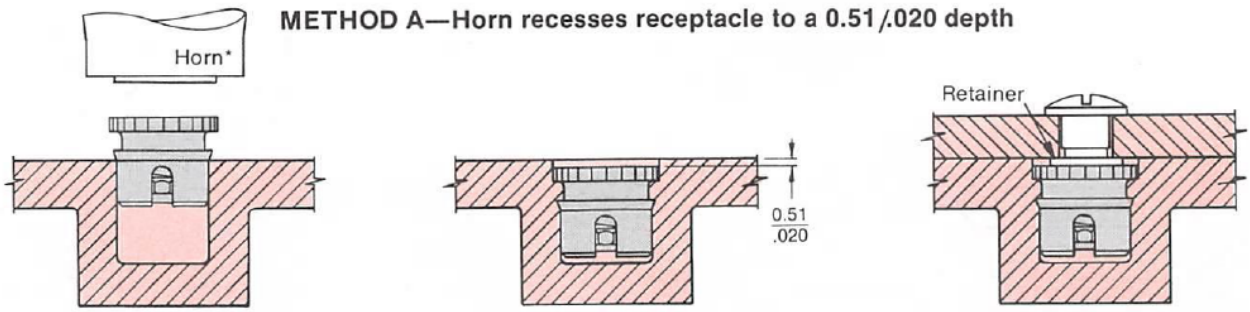
1. Prepare hole.



2. Use one of the methods shown.

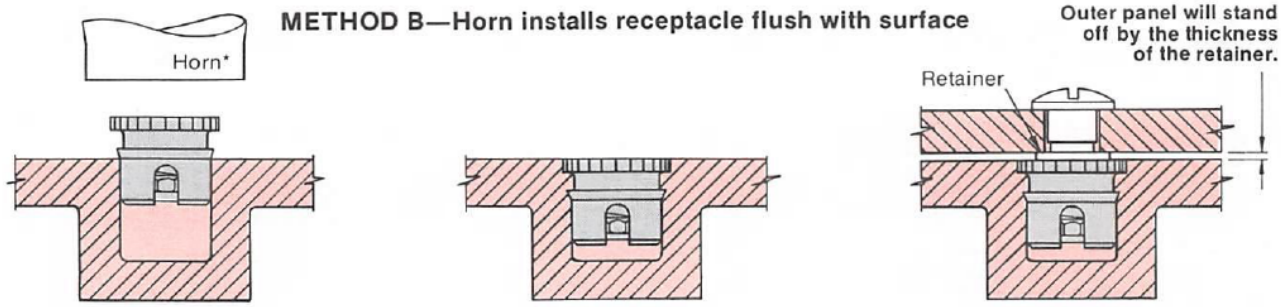
Enter the No. 81 Stud Selection Table with your Outer Panel Thickness using column for Part Number 81-35-308-55.

METHOD A—Horn recesses receptacle to a 0.51/.020 depth



METHOD B—Horn installs receptacle flush with surface

Outer panel will stand off by the thickness of the retainer.



*Horn design may vary with material and application.

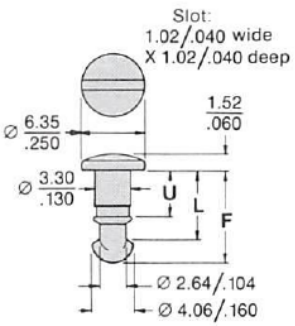
Test these receptacles in your materials; we'll supply samples.

1/4-turn fasteners
No. 81 stud selection

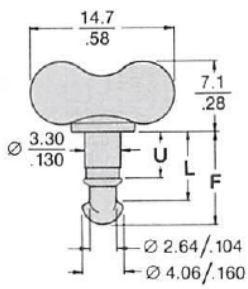
MATERIALS:
WING HEAD STUD: 1008 steel. WING: 1010 steel.
OTHERS: 1008 steel.
See table for finishes.

DELIVERY SYMBOLS
(see part numbers)
- ■ From stock, subject to prior sale.
- ● Up to 4 weeks. Minimum order required.

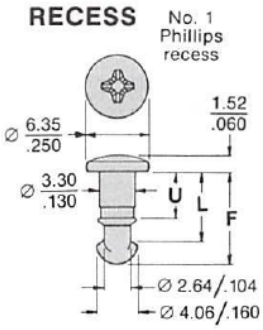
OVAL SLOTTED



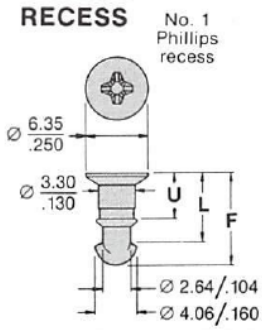
WING HEAD



OVAL PHILLIPS RECESS



FLUSH PHILLIPS RECESS



FOR: Press-in Part No. 81-35-308-55 and Ultrasonic Part No. 81-35-310-55		FOR: ALL OTHER RECEPTACLES		STUD PART NUMBERS				DIMENSIONS		
				Case hardened and DACROTIZED† plus bright metallic organic coating.		Case hardened and zinc plated plus bright chromate dip.				
Outer Panel Thickness		Total Material Thickness		OVAL SLOTTED	WING HEAD	OVAL PHILLIPS RECESS	FLUSH PHILLIPS RECESS	U	L	F
MIN.	MAX.	MIN.	MAX.							
—	—	0.76/.030	1.26/.049	81-11-040-16 ●	81-12-040-16 ●	81-18-040-16 ●	81-19-040-16 ●	3.38/.133	5.72/.225	8.26/.325
0.00/.000	0.49/.019	1.27/.050	1.77/.069	81-11-060-16 ■	81-12-060-16 ●	81-18-060-16 ●	81-19-060-16 ●	3.89/.153	6.22/.245	8.76/.345
0.50/.020	1.00/.039	1.78/.070	2.27/.089	81-11-080-16 ■	81-12-080-16 ■	81-18-080-16 ●	81-19-080-16 ●	4.39/.173	6.73/.265	9.27/.365
1.01/.040	1.51/.059	2.28/.090	2.78/.109	81-11-100-16 ■	81-12-100-16 ■	81-18-100-16 ●	81-19-100-16 ●	4.90/.193	7.24/.285	9.78/.385
1.52/.060	2.01/.079	2.79/.110	3.29/.129	81-11-120-16 ■	81-12-120-16 ■	81-18-120-16 ■	81-19-120-16 ■	5.41/.213	7.75/.305	10.29/.405
2.02/.080	2.52/.099	3.30/.130	3.80/.149	81-11-140-16 ■	81-12-140-16 ■	81-18-140-16 ■	81-19-140-16 ■	5.92/.233	8.26/.325	10.80/.425
2.53/.100	3.03/.119	3.81/.150	4.31/.169	81-11-160-16 ■	81-12-160-16 ■	81-18-160-16 ■	81-19-160-16 ■	6.43/.253	8.76/.345	11.30/.445
3.04/.120	3.54/.139	4.32/.170	4.81/.189	81-11-180-16 ■	81-12-180-16 ■	81-18-180-16 ■	81-19-180-16 ■	6.93/.273	9.27/.365	11.81/.465
3.55/.140	4.05/.159	4.82/.190	5.32/.209	81-11-200-16 ■	81-12-200-16 ●	81-18-200-16 ■	81-19-200-16 ●	7.44/.293	9.78/.385	12.32/.485
4.06/.160	4.55/.179	5.33/.210	5.83/.229	81-11-220-16 ■	81-12-220-16 ●	81-18-220-16 ■	81-19-220-16 ●	7.95/.313	10.29/.405	12.83/.505
4.56/.180	5.06/.199	5.84/.230	6.34/.249	81-11-240-16 ■	81-12-240-16 ●	81-18-240-16 ●	81-19-240-16 ●	8.46/.333	10.80/.425	13.34/.525
5.07/.200	5.57/.219	6.35/.250	6.85/.269	81-11-260-16 ●	81-12-260-16 ●	81-18-260-16 ●	81-19-260-16 ●	8.97/.353	11.30/.445	13.84/.545
5.58/.220	6.08/.239	6.86/.270	7.35/.289	81-11-280-16 ●	81-12-280-16 ●	81-18-280-16 ●	81-19-280-16 ●	9.47/.373	11.81/.465	14.35/.565
6.09/.240	6.59/.259	7.36/.290	7.86/.309	81-11-300-16 ●	81-12-300-16 ●	81-18-300-16 ●	81-19-300-16 ●	9.98/.393	12.32/.485	14.86/.585
6.60/.260	7.09/.279	7.87/.310	8.36/.329	81-11-320-16 ●	81-12-320-16 ●	81-18-320-16 ●	81-19-320-16 ●	10.49/.413	12.83/.505	15.37/.605

MILLIMETER/INCH
MILLIMETER
INCH

†Registered tradename of Metal Coatings International, Inc.

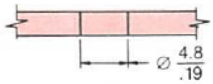
¼-turn fasteners
No. 81 stud installation

FOR:

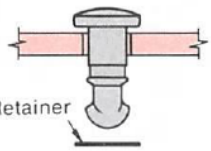


Above-surface styles

1. **Drill.**



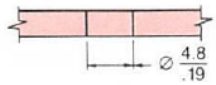
2. **Insert stud and add retainer.**



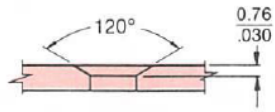
FOR: Flush head style



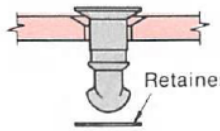
1. **Drill.**



2. **Countersink.**

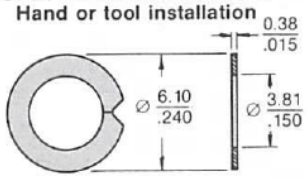


3. **Insert stud and add retainer.**



RETAINERS:

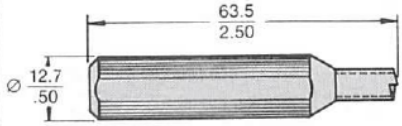
SPLIT-RING RETAINER
Hand or tool installation



PART NUMBER
81-32-101-20■

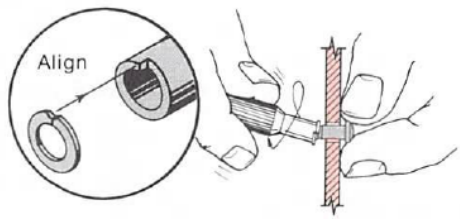
MATERIAL
302 stainless steel, passivated.

SPLIT-RING RETAINER INSTALLATION TOOL

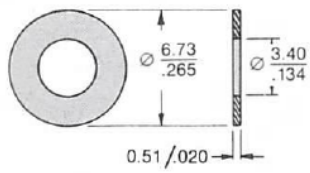


PART NUMBER
81-0-15129-11■

MATERIAL
Steel, zinc plated



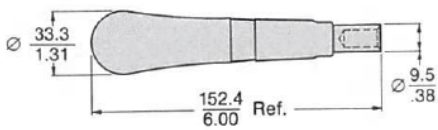
PUSH-ON RETAINER
Tool installation



PART NUMBER
81-32-301-12■

MATERIAL
nylon, black.

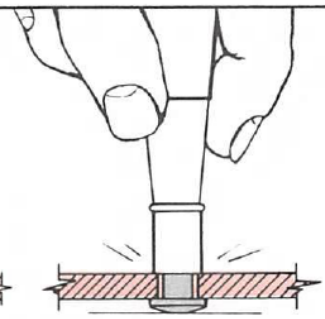
PUSH-ON RETAINER INSTALLATION TOOL



PART NUMBER
81-0-18173-11■

MATERIAL
low carbon steel, zinc plated.

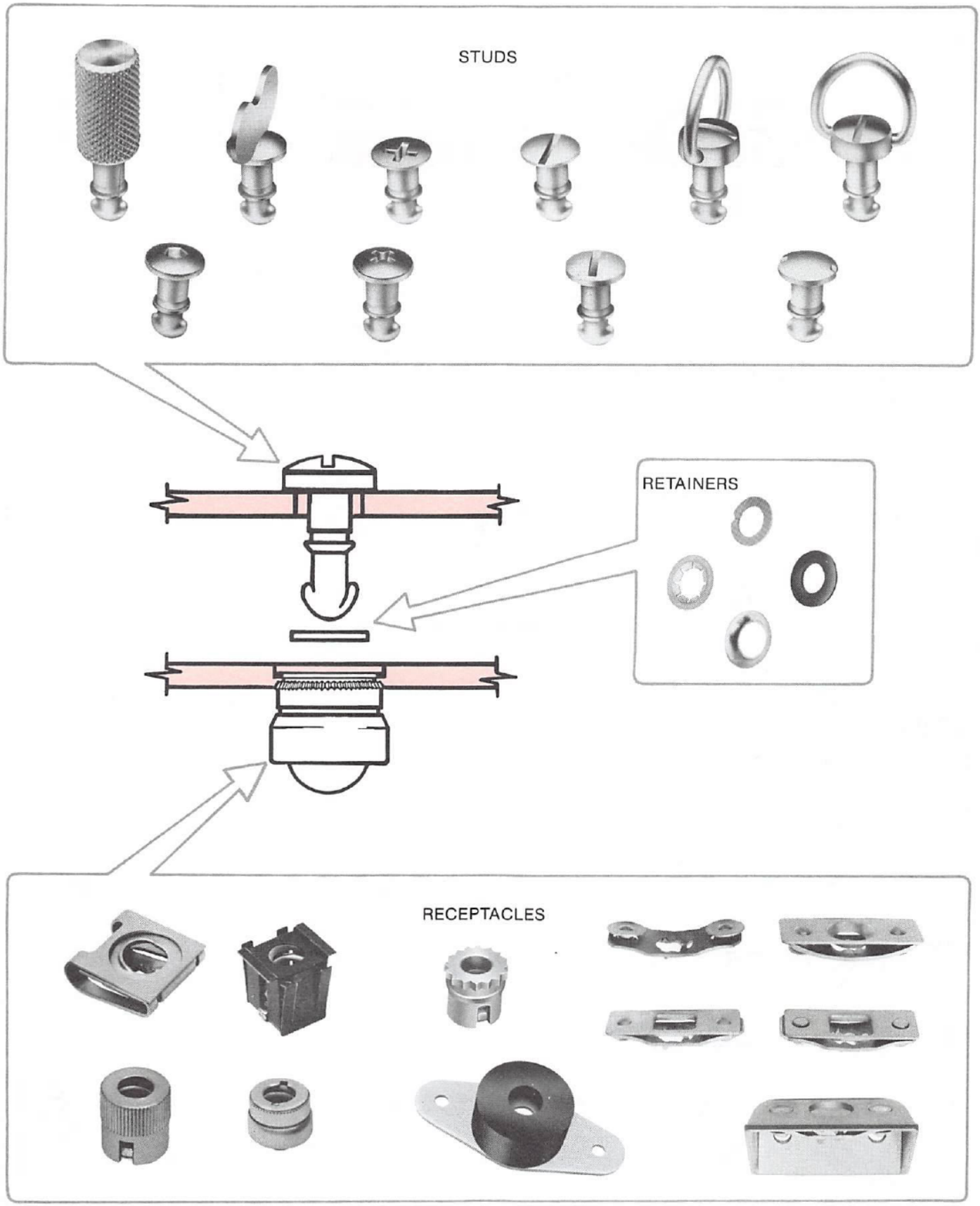




DELIVERY SYMBOLS
(see part numbers)
■ From stock, subject to prior sale.

MILLIMETER/INCH
MILLIMETER
INCH

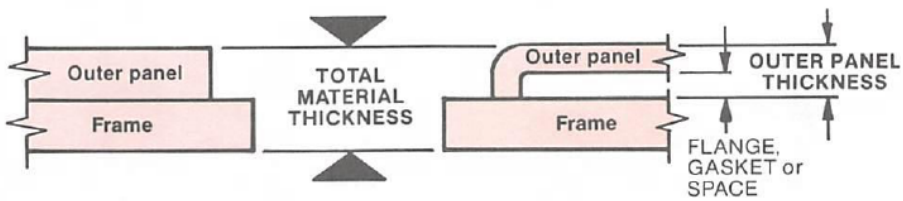
1/4-turn fasteners
No. 82 size



SHOWN APPROXIMATELY ACTUAL SIZE.

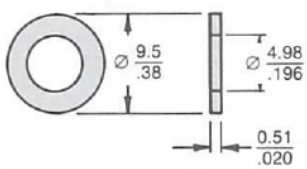
1/4-turn fasteners
No. 82 fastener selection

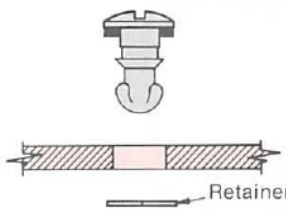
To select correct fastener:



1. Choose a receptacle. (Note any frame thickness limitations.)
2. To select a stud,
   a) measure your Outer Panel Thickness or Total Material Thickness (note under receptacle part number will tell you which to use).
   b) if adjustment formula is shown under receptacle part number apply this formula to your measurement.
   c) if sealing washers, stud ejector springs or wear washers will be used, apply proper adjustment formulas to your measurement.
   d) use measurement (or adjusted measurement) to find part number in table (see pages B-14 to B-17) under stud head style you want.
3. Choose a retainer.
4. Review the stud installation procedure.
5. Order each component and tool (if required) separately by part number.

Sealing Washer

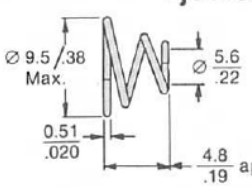




Part Number 82-43-201-38 ■
nitrile fibre core rubber, black
Adjustment Formula
Add 0.51/.020 to your Outer Panel Thickness or Total Material Thickness.

Stud Ejector

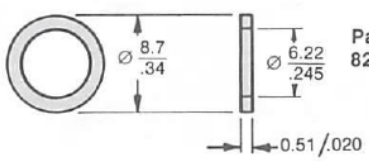
Ejector Spring



Part Number 43-13-1-24 ■
302 stainless steel, passivated

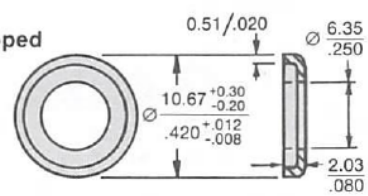
Nylon Wear Washers

Flat



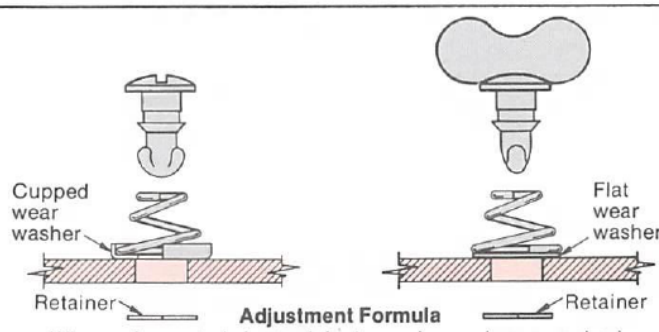
Part Number 82-46-103-39 ■
Natural

Cupped

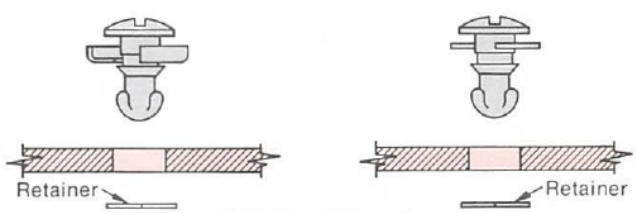


Part Number 82-46-101-41 ■
Black

Part Number 82-46-101-39 ■
Natural



Adjustment Formula
When using a stud ejector (ejector spring and wear washer), add 1.02/.040 to your Outer Panel Thickness or Total Material Thickness.



Adjustment Formula
When using a wear washer, add 0.51/.020 to your Outer Panel Thickness or Total Material Thickness.

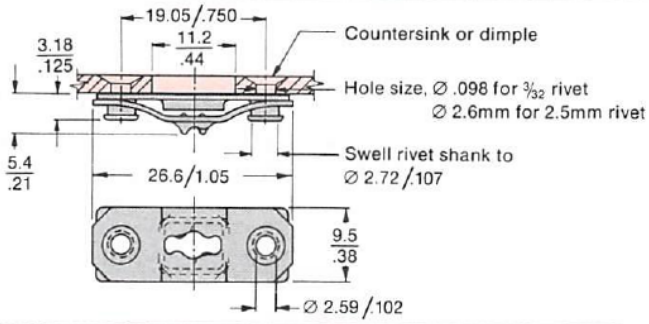
MILLIMETER/INCH MILLIMETER / INCH

■ From stock, subject to prior sale.

¼-turn fasteners
No. 82 receptacles

MILLIMETER/INCH
MILLIMETER
INCH

LEAF SPRING RECEPTACLES



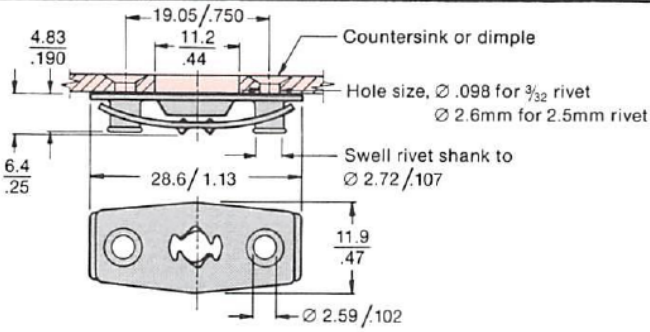
For riveting — with base

Part Number 82-35-302-15 ■

SPRING: 1064 steel, DACROTIZED†.
BASE: 1010 steel, DACROTIZED†.

To enter Stud Selection Table determine your Total Material Thickness.

SPRING MUST FLOAT FREELY AS BEFORE RIVETING.



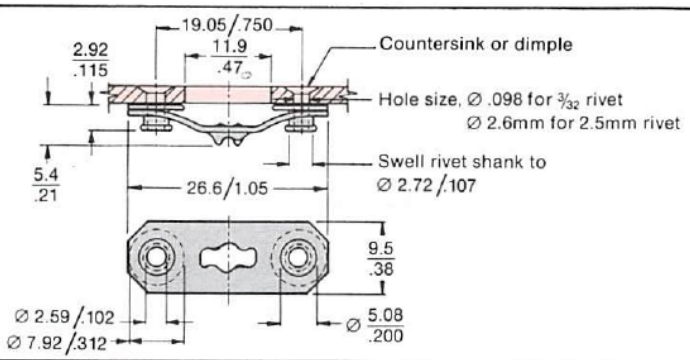
Heavy duty

Part Number 82-35-402-15 ■

SPRING: 1064 steel, DACROTIZED†.
BASE: 1010 steel, DACROTIZED†.

To enter Stud Selection Table determine your Total Material Thickness.

SPRING MUST FLOAT FREELY AS BEFORE RIVETING.



For riveting — without base

Part Number 82-35-295-15 ■

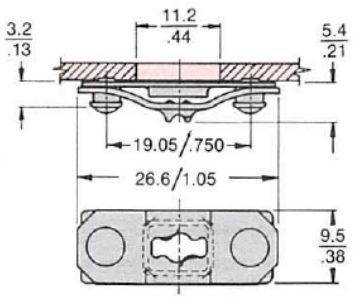
SPRING: 1064 steel, DACROTIZED†.
EYELET: steel, DACROTIZED†.

Part Number 82-35-295-20 ■

SPRING: 17-7PH stainless steel, passivated.
EYELET: 302/305 stainless steel, passivated.

To enter Stud Selection Table determine your Total Material Thickness.

SPRING MUST FLOAT FREELY AS BEFORE RIVETING.



RIVET MUST NOT MELT OVER ONTO SPRING.

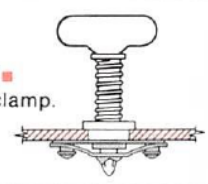
For welding

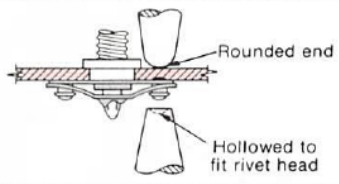
Part Number 82-35-303-15 ■

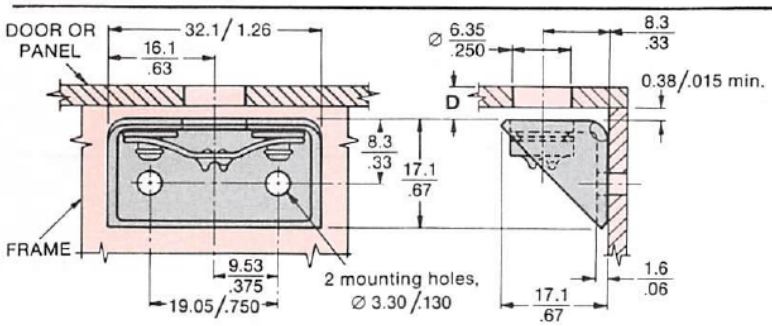
SPRING: 1064 steel, DACROTIZED†.
BASE: 1010 steel, DACROTIZED†.
WELDING STUDS: steel, copper plate.

To enter Stud Selection Table determine your Total Material Thickness.

Use Part No. 82-0-6948-11 ■ or any pilot clamp.







Side mount

Part Number 82-45-101-15 ■

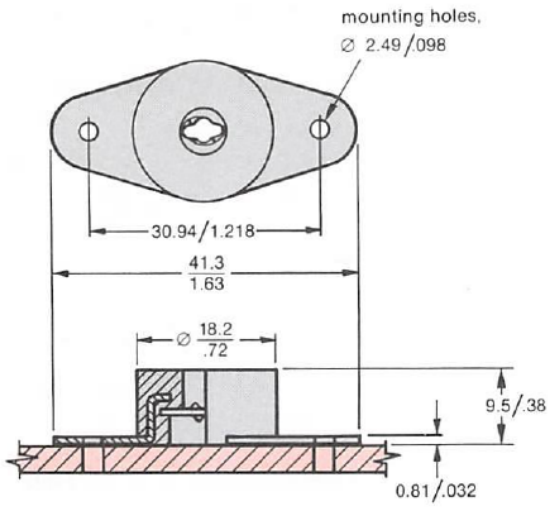
SPRING: 1064 steel, DACROTIZED†.
ANGLE BRACKET: 1010 steel, DACROTIZED†.
EYELET: steel, DACROTIZED†.

Adjustment Formula

To enter Stud Selection Table calculate:
D + 1.52/.060
and use Total Material Thickness column.

†Registered tradename of Metal Coatings International, Inc.
■ From stock, subject to prior sale.

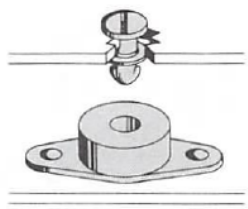
¼-turn fasteners
No. 82 receptacles

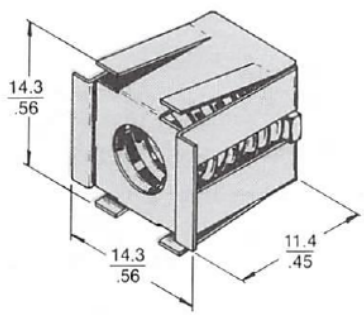


Vibration isolating
Part Number 82-35-306-10 ▪

RECEPTACLE: 1050-1070 steel, DACROTIZED†.
PLATE: 6061 aluminum, zinc chromate.
BOSS: neoprene, black.

To enter Stud Selection Table determine your Outer Panel Thickness.



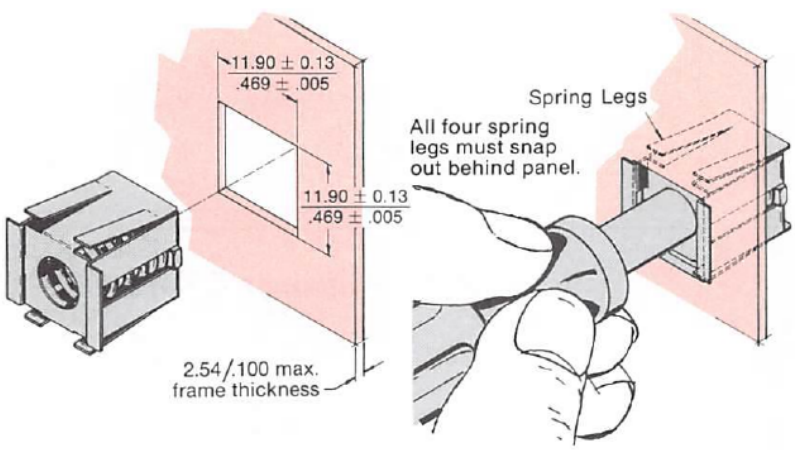


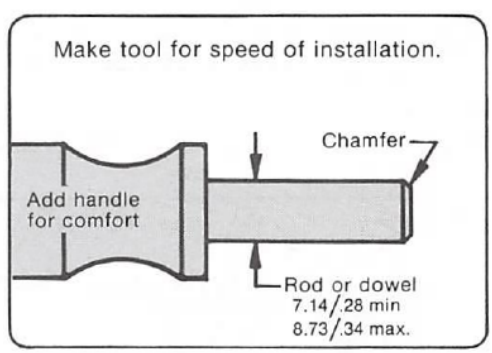
Snap-in
Part Number 82-35-309-56 ▪

HOUSING: 301 stainless steel, natural.
RECEPTACLE: 1010 steel, case hardened and DACROTIZED†.
SPRING: 302 stainless steel, passivated.
RETAINER: 301 stainless steel, natural.

Adjustment Formula

To enter Stud Selection Table calculate:
Outer Panel Thickness + 5.08/.200
but use Total Material Thickness column.





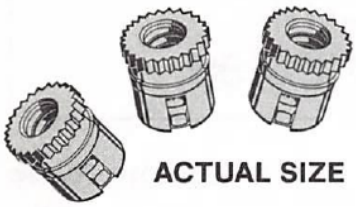
MILLIMETER/INCH

MILLIMETER
INCH

▪ From stock, subject to prior sale.

No. 82 ¼-turn Fastener Receptacle

for ultrasonic installation in thermoplastics

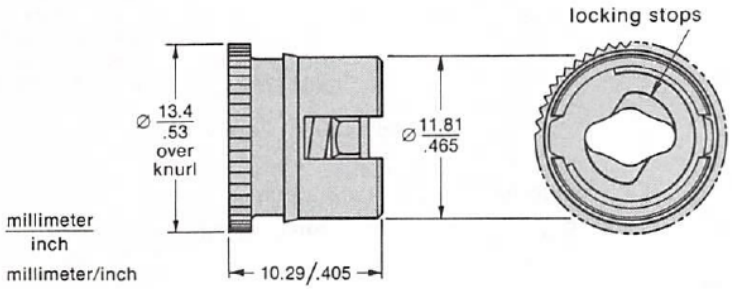


ACTUAL SIZE

PART NUMBER
82-35-310-55 ■

■ From stock, subject to prior sale.

- **Minimize residual stress**
- **Increased pull-out resistance**
- **Increased torque-out resistance**



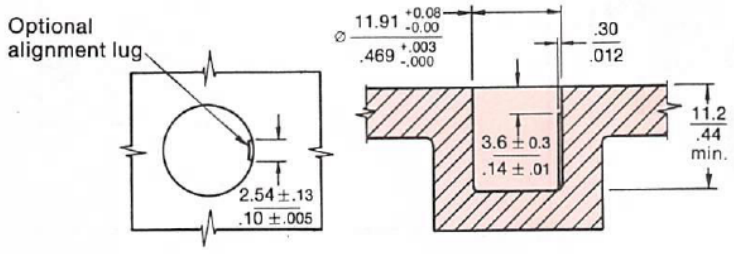
MATERIAL and FINISH

RECEPTACLE: 1010 steel, case hardened and DACROTIZED†.
SHELL: low carbon steel, DACROTIZED†.
SPRING and RETAINER: 302 stainless steel, DACROTIZED†
†Registered tradename of Metal Coatings International, Inc.

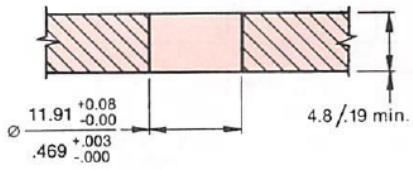
INSTALLATION

1. Prepare hole.

BLIND HOLE APPLICATION



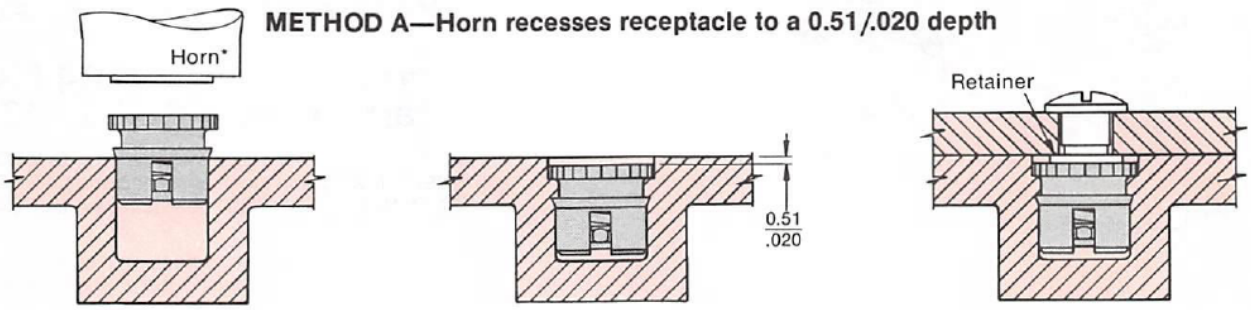
THROUGH HOLE APPLICATION



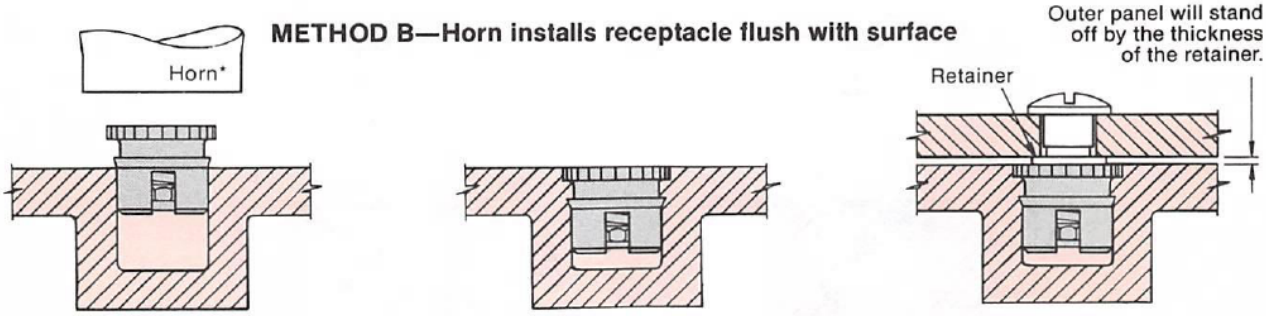
2. Use one of the methods shown.

Enter the No. 82 Stud Selection Table with your Outer Panel Thickness using column for Part Numbers 82-35-308-55 and 82-35-313-55.

METHOD A—Horn recesses receptacle to a 0.51/.020 depth



METHOD B—Horn installs receptacle flush with surface



*Horn design may vary with material and application.

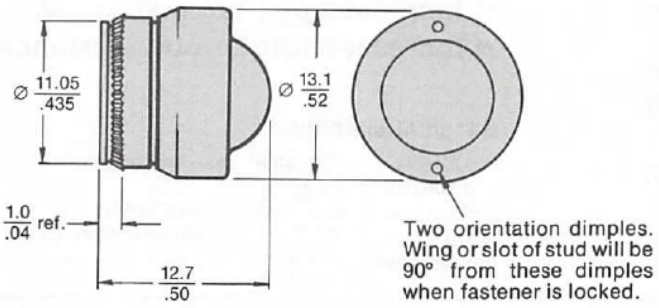
Test these receptacles in your materials; we'll supply samples.

¼-turn fasteners
No. 82 receptacles

Shielded press-in for sheet metal • Provides RFI-EMI shielding

Part Number 82-35-311-55 ■

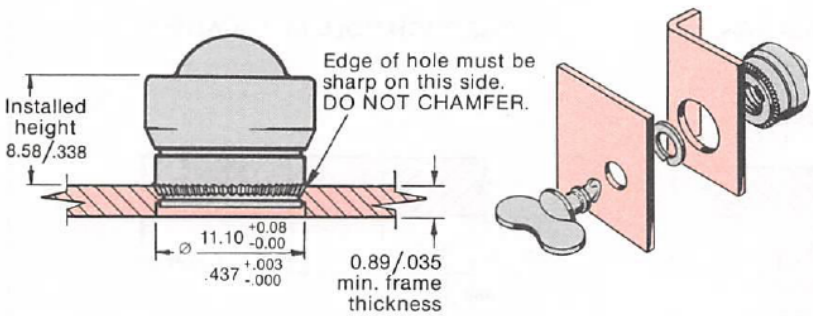
RECEPTACLE: 1010 steel, hardened and DACROTIZED†.
SHELL: low carbon steel, hardened and DACROTIZED†.
SPRING: 302 stainless steel, DACROTIZED†
CAP: 305 stainless steel, DACROTIZED†



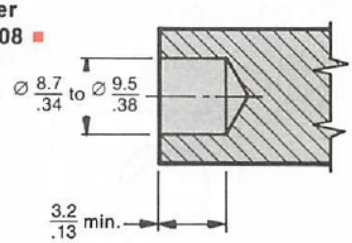
Adjustment Formula

To enter Stud Selection Table determine your Total Material Thickness.

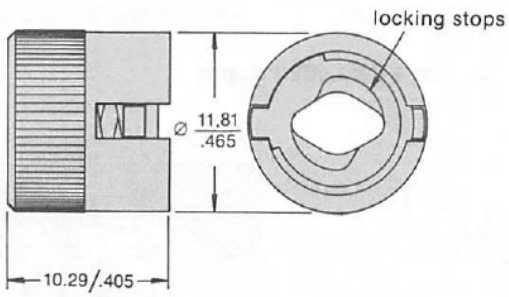
Substitute 1.27/.050 (constant) for frame thickness if frame thickness is less than 1.27/.050.



Installation Tool Part Number 73-0-11771-08 ■



Press-in for blind applications and solid materials

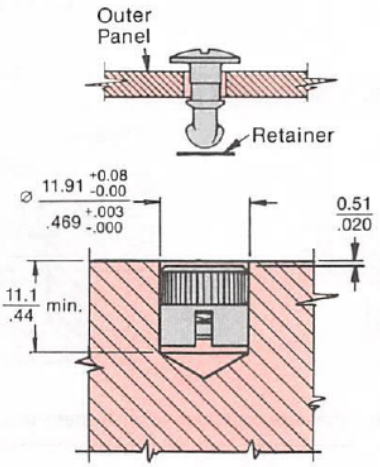


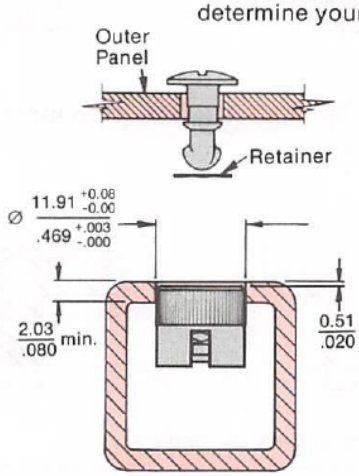
with 90° locking stops Part Number 82-35-308-55 ■

without 90° locking stops Part Number 82-35-313-55 ■

RECEPTACLE: 1010 steel, hardened and DACROTIZED†.
SHELL: low carbon steel, hardened and DACROTIZED†.
RETAINER and SPRING: 302 stainless steel, DACROTIZED†

To enter Stud Selection Table determine your Outer Panel Thickness.

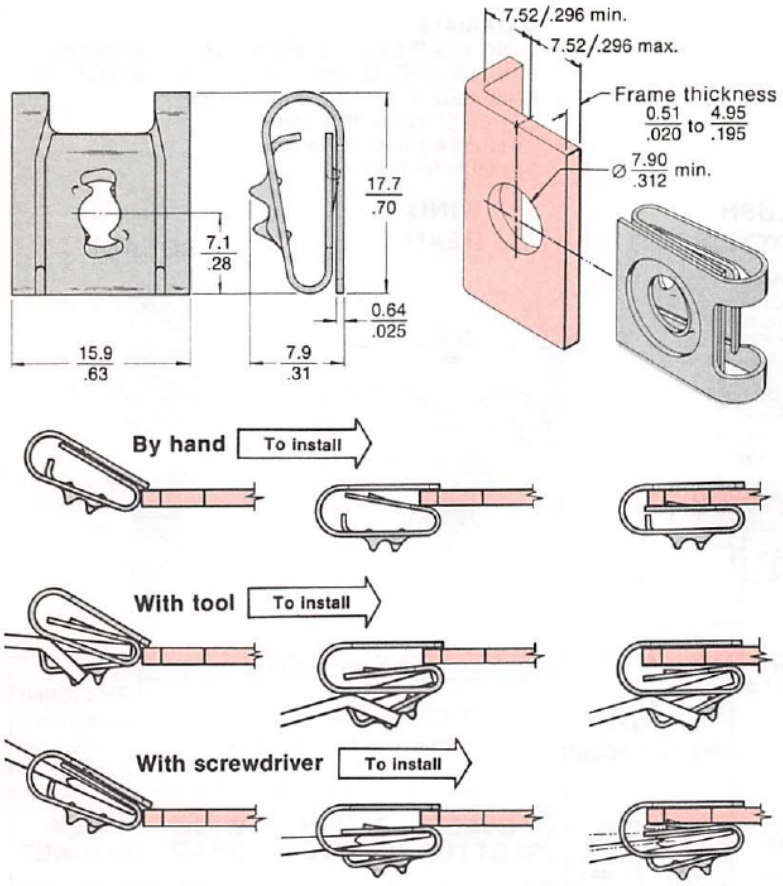




MILLIMETER/INCH
MILLIMETER
INCH

†Registered tradename of Metal Coatings International, Inc.
■ From stock, subject to prior sale.

¼-turn fasteners
No. 82 receptacles



Clip-on

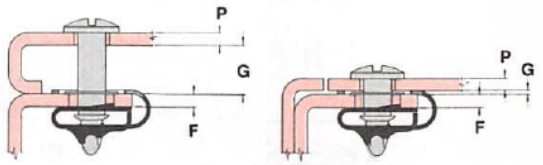
Part Number 82-47-113-15 ■
1064 steel, DACROTIZED†.

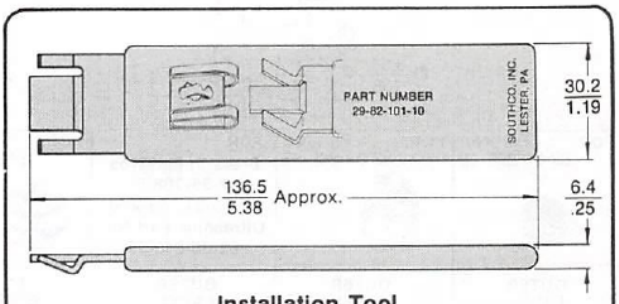
Part Number 82-47-113-20 ■
17-7PH stainless steel, passivated.

Adjustment Formula

To enter Stud Selection Table determine your Total Material Thickness by calculating:

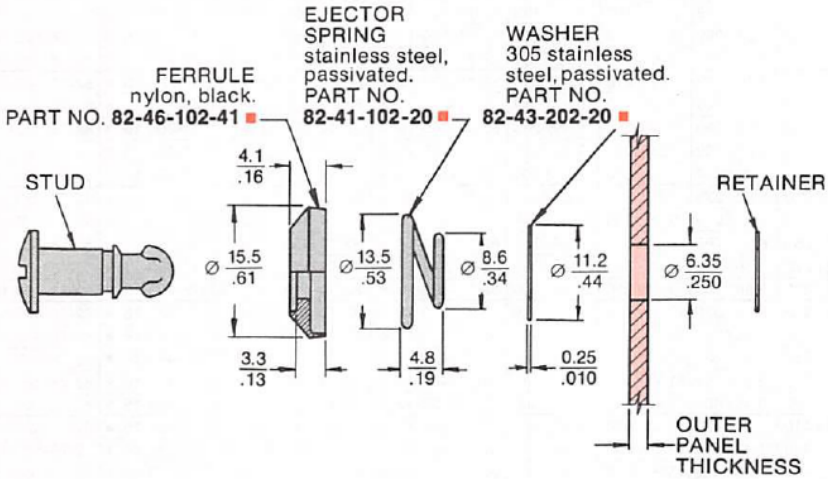
P + F + 1.40/.055 (constant) when **G** is 0.64/.025.
P + F + G + 0.76/.030 (constant) when **G** is 0.65/.026 or greater.





Installation Tool
Part Number 29-82-101-10 ■

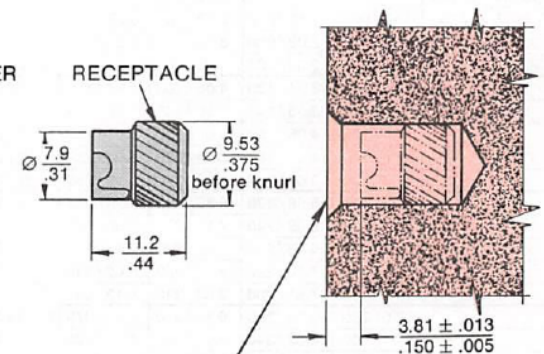
NOTE: When ordering this receptacle be sure to order each component by part number.



Press-in for heavy cast sections

Part Number 82-99-205-15 ■
41L40 steel, hardened and DACROTIZED†.

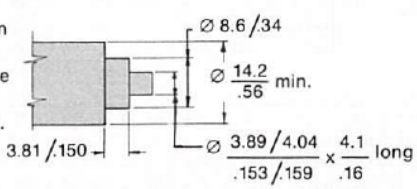
To enter Stud Selection Table find your Outer Panel Thickness.



Ø 9.45/9.58 / .372/.377 for Aluminum
Ø 9.58/9.70 / .377/.382 for Steel
Drill 15.1/.59 deep and countersink to Ø 12.7/.5

If your material is of higher or lower density, hole dia. may have to be adjusted.

Suggested configuration for punch that may be used to install receptacle at proper depth of 3.81/.150 below surface.



MILLIMETER/INCH
MILLIMETER
INCH

†Registered tradename of Metal Coatings International, Inc.
■ From stock, subject to prior sale.

¼-turn fasteners
No. 82 stud selection

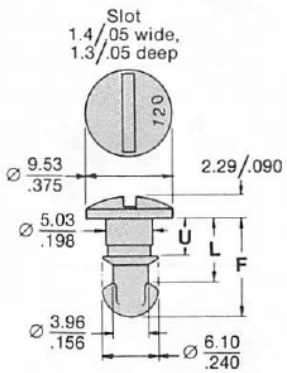
STEEL

DELIVERY SYMBOLS
(see part numbers)

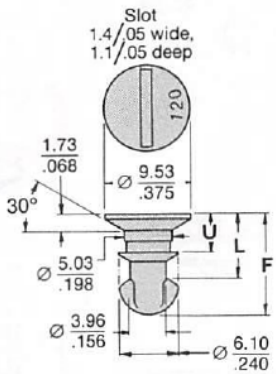
■ From stock, subject to prior sale.
□ Up to 8 weeks. Minimum order required.
• Up to 4 weeks. Minimum order required.

MATERIALS
WING HEAD STUD: 1008 steel. WING: 1010 steel.
BAIL HEAD STUD: 1008 steel. BAIL: 1008 or 1010 steel.
KNURLED HEAD STUD: 11L17 steel.
OTHER STYLES: 1008 steel.
All studs are case hardened.
See table for finishes.

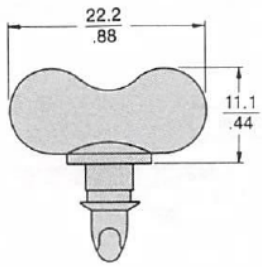
OVAL SLOTTED



FLUSH SLOTTED



WING HEAD



HEX SOCKET



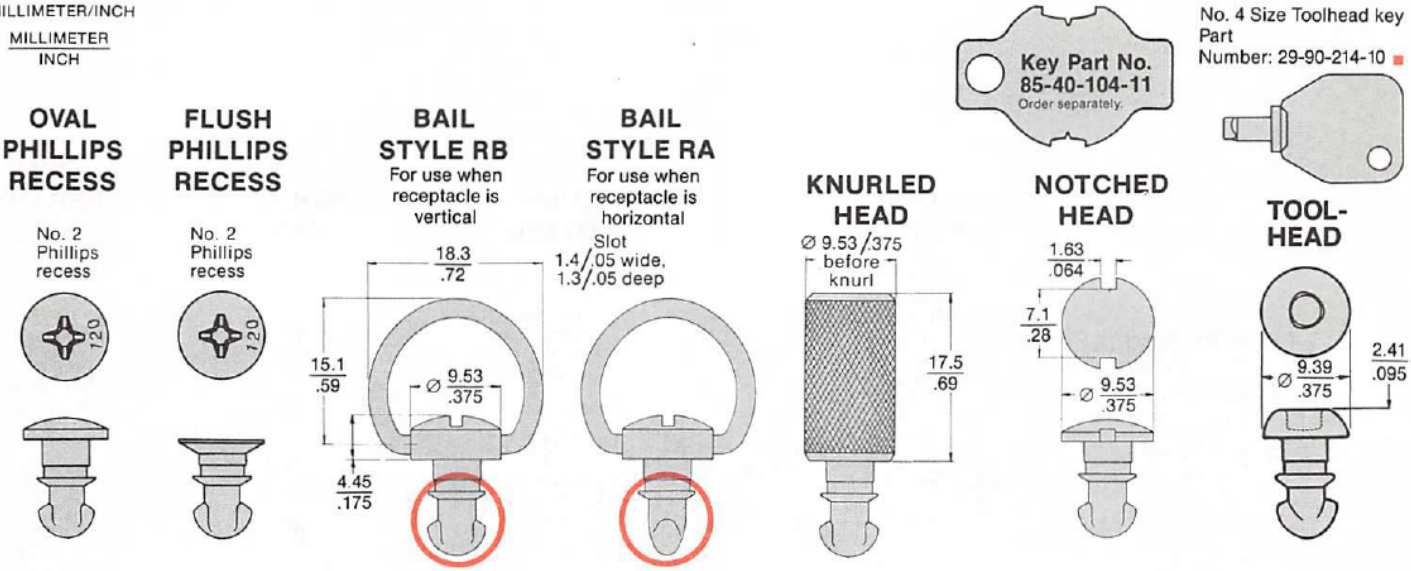
FOR: Part No. 82-35-306-10		FOR: Part No. 82-99-205-15		FOR: Press-in Part Nos. 82-35-308-55 82-35-313-55 and Ultrasonic Part No. 82-35-310-55		FOR: Part No. 82-35-311-55		FOR: ALL OTHER RECEPTACLES		STUD PART NUMBERS DACROTIZED† plus bright metallic organic coating.			Zinc plated plus bright chromate dip.
OUTER PANEL THICKNESS		OUTER PANEL THICKNESS		OUTER PANEL THICKNESS		TOTAL MATERIAL THICKNESS		TOTAL MATERIAL THICKNESS		OVAL SLOTTED	FLUSH SLOTTED	WING HEAD	HEX SOCKET
MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.				
0.00/.000	0.64/.025							1.78/.070	2.28/.089	82-11-080-16 ■	—	82-12-080-16 ■	82-78-080-16 □
0.65/.026	1.15/.045							2.29/.090	2.78/.109	82-11-100-16 ■	82-14-100-16 ■	82-12-100-16 ■	82-78-100-16 □
1.16/.046	1.66/.065							2.79/.110	3.29/.129	82-11-120-16 ■	82-14-120-16 ■	82-12-120-16 ■	82-78-120-16 ■
1.67/.066	2.16/.085							3.30/.130	3.80/.149	82-11-140-16 ■	82-14-140-16 ■	82-12-140-16 ■	82-78-140-16 ■
2.17/.086	2.67/.105			0.00/.000	0.49/.019	1.27/.050	1.77/.069	3.81/.150	4.31/.169	82-11-160-16 ■	82-14-160-16 ■	82-12-160-16 ■	82-78-160-16 ■
2.68/.106	3.18/.125			0.50/.020	1.00/.039	1,78/.070	2.28/.089	4.32/.170	4.81/.189	82-11-180-16 ■	82-14-180-16 ■	82-12-180-16 ■	82-78-180-16 ■
3.19/.126	3.69/.145			1.01/.040	1.51/.059	2.29/.090	2.78/.109	4.82/.190	5.32/.209	82-11-200-16 ■	82-14-200-16 ■	82-12-200-16 ■	82-78-200-16 ■
3.70/.146	4.20/.165			1.52/.060	2.01/.079	2.79/.110	3.29/.129	5.33/.210	5.83/.229	82-11-220-16 ■	82-14-220-16 ■	82-12-220-16 ■	82-78-220-16 ■
4.21/.166	4.70/.185			2.02/.080	2.52/.099	3.30/.130	3.80/.149	5.84/.230	6.34/.249	82-11-240-16 ■	82-14-240-16 ■	82-12-240-16 ■	82-78-240-16 ■
4.71/.186	5.21/.205	0.50/.020	1.52/.060	2.53/.100	3.03/.119	3.81/.150	4.31/.169	6.35/.250	6.85/.269	82-11-260-16 ■	82-14-260-16 ■	82-12-260-16 ■	82-78-260-16 ■
5.22/.206	5.72/.225	1.01/.040	2.02/.080	3.04/.120	3.54/.139	4.32/.170	4.81/.189	6.86/.270	7.36/.289	82-11-280-16 ■	82-14-280-16 ■	82-12-280-16 ■	82-78-280-16 ■
5.73/.226	6.23/.245	1.52/.060	2.53/.100	3.55/.140	4.05/.159	4.82/.190	5.32/.209	7.37/.290	7.86/.309	82-11-300-16 ■	82-14-300-16 ■	82-12-300-16 ■	82-78-300-16 ■
		2.02/.080	3.04/.120	4.06/.160	4.55/.179	5.33/.210	5.83/.229	7.87/.310	8.37/.329	82-11-320-16 ■	82-14-320-16 ■	82-12-320-16 ■	82-78-320-16 □
		2.53/.100	3.55/.140	4.56/.180	5.06/.199	5.84/.230	6.34/.249	8.38/.330	8.88/.349	82-11-340-16 ■	82-14-340-16 ■	82-12-340-16 ■	82-78-340-16 □
		3.04/.120	4.06/.160	5.07/.200	5.57/.219	6.35/.250	6.85/.269	8.89/.350	9.39/.369	82-11-360-16 ■	82-14-360-16 ■	82-12-360-16 ■	82-78-360-16 □
		3.55/.140	4.56/.180	5.58/.220	6.08/.239	6.86/.270	7.36/.289	9.40/.370	9.90/.389	82-11-380-16 ■	82-14-380-16 □	82-12-380-16 ■	82-78-380-16 □
		4.06/.160	5.07/.200	6.09/.240	6.59/.259	7.37/.290	7.86/.309	9.91/.390	10.40/.409	82-11-400-16 ■	82-14-400-16 □	82-12-400-16 •	82-78-400-16 □
		4.56/.180	5.58/.220	6.60/.260	7.09/.279	7.87/.310	8.37/.329	10.41/.410	10.91/.429	82-11-420-16 ■	82-14-420-16 □	82-12-420-16 •	82-78-420-16 □
		5.07/.200	6.09/.240	7.10/.280	7.60/.299	8.38/.330	8.88/.349	10.92/.430	11.42/.449	82-11-440-16 ■	82-14-440-16 □	82-12-440-16 •	82-78-440-16 □
		5.58/.220	6.60/.260	7.61/.300	8.11/.319	8.89/.350	9.39/.369	11.43/.450	11.93/.469	82-11-460-16 ■	82-14-460-16 □	82-12-460-16 •	82-78-460-16 □
		6.09/.240	7.10/.280	8.12/.320	8.62/.339	9.40/.370	9.90/.389	11.94/.470	12.44/.489	82-11-480-16 ■	82-14-480-16 □	82-12-480-16 •	82-78-480-16 □
		6.60/.260	7.61/.300	8.63/.340	9.13/.359	9.91/.390	10.40/.409	12.45/.490	12.94/.509	82-11-500-16 ■	82-14-500-16 □	82-12-500-16 •	82-78-500-16 □
		7.10/.280	8.12/.320	9.14/.360	9.63/.379	10.41/.410	10.91/.429	12.95/.510	13.45/.529	82-11-520-16 ■	82-14-520-16 □	82-12-520-16 •	82-78-520-16 □
		7.61/.300	8.63/.340	9.64/.380	10.14/.399	10.92/.430	11.42/.449	13.46/.530	13.96/.549	82-11-540-16 ■	82-14-540-16 □	82-12-540-16 •	82-78-540-16 □
		8.12/.320	9.14/.360	10.15/.400	10.65/.419	11.43/.450	11.93/.469	13.97/.550	14.47/.569	82-11-560-16 ■	82-14-560-16 □	82-12-560-16 •	82-78-560-16 □
		8.63/.340	9.64/.380	10.66/.420	11.16/.439	11.94/.470	12.44/.489	14.48/.570	14.98/.589	82-11-580-16 ■	82-14-580-16 □	82-12-580-16 •	82-78-580-16 □
		9.14/.360	10.15/.400	11.17/.440	11.67/.459	12.45/.490	12.94/.509	14.99/.590	15.48/.609	82-11-600-16 •	82-14-600-16 □	82-12-600-16 •	82-78-600-16 □
				11.68/.460	12.17/.479	12.95/.510	13.45/.529	15.49/.610	15.99/.629	82-11-620-16 •	82-14-620-16 □	82-12-620-16 •	82-78-620-16 □
				12.18/.480	12.68/.499	13.46/.530	13.96/.549	16.00/.630	16.50/.649	82-11-640-16 •	82-14-640-16 □	82-12-640-16 •	82-78-640-16 □
				12.69/.500	13.19/.519	13.97/.550	14.47/.569	16.51/.650	17.01/.669	82-11-660-16 •	82-14-660-16 □	82-12-660-16 •	82-78-660-16 □
				13.20/.520	13.70/.539	14.48/.570	14.98/.589	17.02/.670	17.52/.689	82-11-680-16 •	82-14-680-16 □	82-12-680-16 •	82-78-680-16 □
				13.71/.540	14.21/.559	14.99/.590	15.48/.609	17.53/.690	18.02/.709	82-11-700-16 •	82-14-700-16 □	82-12-700-16 •	82-78-700-16 □
				14.22/.560	14.71/.579	15.49/.610	15.99/.629	18.03/.710	18.53/.729	82-11-720-16 •	82-14-720-16 □	82-12-720-16 •	82-78-720-16 □
				14.72/.580	15.22/.599	16.00/.630	16.50/.649	18.54/.730	19.04/.749	82-11-740-16 •	82-14-740-16 □	82-12-740-16 •	82-78-740-16 □
				15.23/.600	15.73/.619	16.51/.650	17.01/.669	19.05/.750	19.55/.769	82-11-760-16 •	82-14-760-16 □	82-12-760-16 •	82-78-760-16 □
				15.74/.620	16.24/.639	17.02/.670	17.52/.689	19.56/.770	20.06/.789	82-11-780-16 •	82-14-780-16 □	82-12-780-16 •	82-78-780-16 □
				16.25/.640	16.75/.659	17.53/.690	18.02/.709	20.07/.790	20.56/.809	82-11-800-16 •	82-14-800-16 □	82-12-800-16 •	82-78-800-16 □

†Registered tradename of Metal Coatings International, Inc.

STEEL

¼-turn fasteners
No. 82 stud selection

MILLIMETER/INCH
MILLIMETER
INCH



STUD PART NUMBERS							DIMENSIONS		
Zinc plated plus bright chromate dip.		DACROTIZED† plus bright metallic organic coating.				Case hardened steel, zinc plated	U	L	F REF.
OVAL PHILLIPS RECESS	FLUSH PHILLIPS RECESS	BAIL STYLE RB	BAIL STYLE RA	KNURLED HEAD	NOTCHED HEAD	TOOL-HEAD			
82-19-080-16 ■	—	82-16-080-16 □	82-15-080-16 □	82-13-080-16 □	82-17-080-16 □	82-T-080 □	2.72/.107	5.72/.225	9.53/.375
82-19-100-16 ■	82-28-100-16 ■	82-16-100-16 □	82-15-100-16 □	82-13-100-16 □	82-17-100-16 □	82-T-100 □	3.23/.127	6.22/.245	10.03/.395
82-19-120-16 ■	82-28-120-16 ■	82-16-120-16 ■	82-15-120-16 ■	82-13-120-16 □	82-17-120-16 □	82-T-120 □	3.73/.147	6.73/.265	10.54/.415
82-19-140-16 ■	82-28-140-16 ■	82-16-140-16 ■	82-15-140-16 ■	82-13-140-16 ■	82-17-140-16 □	82-T-140 □	4.24/.167	7.24/.285	11.05/.435
82-19-160-16 ■	82-28-160-16 ■	82-16-160-16 ■	82-15-160-16 ■	82-13-160-16 ■	82-17-160-16 □	82-T-160 ■	4.75/.187	7.75/.305	11.56/.455
82-19-180-16 ■	82-28-180-16 ■	82-16-180-16 ■	82-15-180-16 ■	82-13-180-16 ■	82-17-180-16 □	82-T-180 ■	5.26/.207	8.26/.325	12.07/.475
82-19-200-16 ■	82-28-200-16 ■	82-16-200-16 ■	82-15-200-16 ■	82-13-200-16 ■	82-17-200-16 □	82-T-200 ■	5.77/.227	8.76/.345	12.57/.495
82-19-220-16 ■	82-28-220-16 ■	82-16-220-16 ■	82-15-220-16 ■	82-13-220-16 ■	82-17-220-16 □	82-T-220 □	6.27/.247	9.27/.365	13.08/.515
82-19-240-16 ■	82-28-240-16 ■	82-16-240-16 ■	82-15-240-16 ■	82-13-240-16 ■	82-17-240-16 □	82-T-240 ■	6.78/.267	9.78/.385	13.59/.535
82-19-260-16 ■	82-28-260-16 ■	82-16-260-16 ■	82-15-260-16 ■	82-13-260-16 ■	82-17-260-16 □	82-T-260 ■	7.29/.287	10.29/.405	14.10/.555
82-19-280-16 ■	82-28-280-16 ■	82-16-280-16 ■	82-15-280-16 ■	82-13-280-16 ■	82-17-280-16 □	82-T-280 □	7.80/.307	10.80/.425	14.61/.575
82-19-300-16 ■	82-28-300-16 ■	82-16-300-16 ■	82-15-300-16 ■	82-13-300-16 ■	82-17-300-16 □	82-T-300 □	8.31/.327	11.30/.445	15.11/.595
82-19-320-16 ■	82-28-320-16 □	82-16-320-16 ■	82-15-320-16 ■	82-13-320-16 □	82-17-320-16 □	82-T-320 □	8.81/.347	11.81/.465	15.62/.615
82-19-340-16 ■	82-28-340-16 □	82-16-340-16 ■	82-15-340-16 ■	82-13-340-16 □	82-17-340-16 □	82-T-340 □	9.32/.367	12.32/.485	16.13/.635
82-19-360-16 ■	82-28-360-16 □	82-16-360-16 ■	82-15-360-16 ■	82-13-360-16 □	82-17-360-16 □	82-T-360 □	9.83/.387	12.83/.505	16.64/.655
82-19-380-16 ■	82-28-380-16 □	82-16-380-16 ■	82-15-380-16 ■	82-13-380-16 □	82-17-380-16 □	82-T-380 □	10.34/.407	13.34/.525	17.15/.675
82-19-400-16 ■	82-28-400-16 □	82-16-400-16 □	82-15-400-16 □	82-13-400-16 □	82-17-400-16 □	82-T-400 □	10.85/.427	13.84/.545	17.65/.695
82-19-420-16 ■	82-28-420-16 □	82-16-420-16 □	82-15-420-16 □	82-13-420-16 □	82-17-420-16 □	82-T-420 □	11.35/.447	14.35/.565	18.16/.715
82-19-440-16 ■	82-28-440-16 □	82-16-440-16 □	82-15-440-16 □	82-13-440-16 □	82-17-440-16 □	82-T-440 □	11.86/.467	14.86/.585	18.67/.735
82-19-460-16 ■	82-28-460-16 □	82-16-460-16 □	82-15-460-16 □	82-13-460-16 □	82-17-460-16 □	82-T-460 □	12.37/.487	15.37/.605	19.18/.755
82-19-480-16 ■	82-28-480-16 □	82-16-480-16 □	82-15-480-16 □	82-13-480-16 □	82-17-480-16 □	82-T-480 □	12.88/.507	15.88/.625	19.69/.775
82-19-500-16 ■	82-28-500-16 □	82-16-500-16 □	82-15-500-16 □	82-13-500-16 □	82-17-500-16 □	82-T-500 □	13.39/.527	16.38/.645	20.19/.795
82-19-520-16 ■	82-28-520-16 □	82-16-520-16 □	82-15-520-16 □	82-13-520-16 □	82-17-520-16 □	82-T-520 □	13.89/.547	16.89/.665	20.70/.815
82-19-540-16 ■	82-28-540-16 □	82-16-540-16 □	82-15-540-16 □	82-13-540-16 □	82-17-540-16 □	82-T-540 □	14.40/.567	17.40/.685	21.21/.835
82-19-560-16 ■	82-28-560-16 □	82-16-560-16 □	82-15-560-16 □	82-13-560-16 □	82-17-560-16 □	82-T-560 □	14.91/.587	17.91/.705	21.72/.855
82-19-580-16 ■	82-28-580-16 □	82-16-580-16 □	82-15-580-16 □	82-13-580-16 □	82-17-580-16 □	82-T-580 □	15.42/.607	18.42/.725	22.23/.875
82-19-600-16 •	82-28-600-16 □	82-16-600-16 □	82-15-600-16 □	82-13-600-16 □	82-17-600-16 □	82-T-600 □	15.93/.627	18.92/.745	22.73/.895
82-19-620-16 •	82-28-620-16 □	82-16-620-16 □	82-15-620-16 □	82-13-620-16 □	82-17-620-16 □	82-T-620 □	16.43/.647	19.43/.765	23.24/.915
82-19-640-16 •	82-28-640-16 □	82-16-640-16 □	82-15-640-16 □	82-13-640-16 □	82-17-640-16 □	82-T-640 □	16.94/.667	19.94/.785	23.75/.935
82-19-660-16 •	82-28-660-16 □	82-16-660-16 □	82-15-660-16 □	82-13-660-16 □	82-17-660-16 □	82-T-660 □	17.45/.687	20.45/.805	24.26/.955
82-19-680-16 •	82-28-680-16 □	82-16-680-16 □	82-15-680-16 □	82-13-680-16 □	82-17-680-16 □	82-T-680 □	17.96/.707	20.96/.825	24.77/.975
82-19-700-16 •	82-28-700-16 □	82-16-700-16 □	82-15-700-16 □	82-13-700-16 □	82-17-700-16 □	82-T-700 □	18.47/.727	21.46/.845	25.27/.995
82-19-720-16 •	82-28-720-16 □	82-16-720-16 □	82-15-720-16 □	82-13-720-16 □	82-17-720-16 □	82-T-720 □	18.97/.747	21.97/.865	25.78/1.015
82-19-740-16 •	82-28-740-16 □	82-16-740-16 □	82-15-740-16 □	82-13-740-16 □	82-17-740-16 □	82-T-740 □	19.48/.767	22.48/.885	26.29/1.035
82-19-760-16 •	82-28-760-16 □	82-16-760-16 □	82-15-760-16 □	82-13-760-16 □	82-17-760-16 □	82-T-760 □	19.99/.787	22.99/.905	26.80/1.055
82-19-780-16 •	82-28-780-16 □	82-16-780-16 □	82-15-780-16 □	82-13-780-16 □	82-17-780-16 □	82-T-780 □	20.50/.807	23.50/.925	27.31/1.075
82-19-800-16 •	82-28-800-16 □	82-16-800-16 □	82-15-800-16 □	82-13-800-16 □	82-17-800-16 □	82-T-800 □	21.01/.827	24.00/.945	27.81/1.095

†Registered tradename of Metal Coatings International, Inc.

¼-turn fasteners
No. 82 stud selection

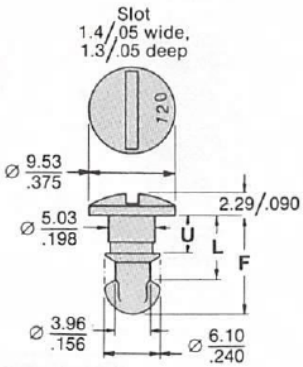
STAINLESS

DELIVERY SYMBOLS
(see part numbers)

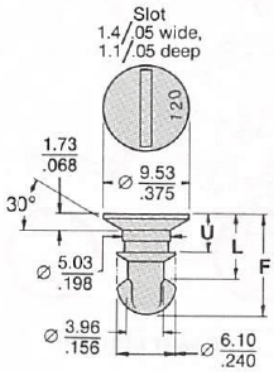
- ■ From stock, subject to prior sale
- □ Up to 8 weeks. Minimum order required.

MILLIMETER/INCH
MILLIMETER
INCH

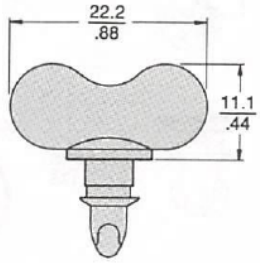
OVAL SLOTTED



FLUSH SLOTTED



WING HEAD



OVAL PHILLIPS RECESS

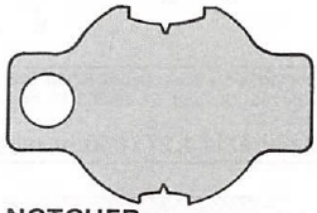


FOR: Part No. 82-35-306-10		FOR: Part No. 82-99-205-15		FOR: Press-in Part Nos. 82-35-308-55 82-35-313-55 and Ultrasonic Part No. 82-35-310-55		FOR: Part No. 82-35-311-55		FOR: ALL OTHER RECEPTACLES		STUD PART NUMBERS 302 stainless steel, passivated.		
OUTER PANEL THICKNESS		OUTER PANEL THICKNESS		OUTER PANEL THICKNESS		TOTAL MATERIAL THICKNESS		TOTAL MATERIAL THICKNESS		OVAL SLOTTED	FLUSH SLOTTED	WING HEAD
MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.			
0.00/.000	0.64/.025							1.78/.070	2.28/.089	82-11-080-20 □	—	82-12-080-20 □
0.65/.026	1.15/.045							2.29/.090	2.78/.109	82-11-100-20 ■	82-14-100-20 □	82-12-100-20 □
1.16/.046	1.66/.065							2.79/.110	3.29/.129	82-11-120-20 ■	82-14-120-20 □	82-12-120-20 □
1.67/.066	2.16/.085							3.30/.130	3.80/.149	82-11-140-20 ■	82-14-140-20 □	82-12-140-20 ■
2.17/.086	2.67/.105			0.00/.000	0.49/.019	1.27/.050	1.77/.069	3.81/.150	4.31/.169	82-11-160-20 ■	82-14-160-20 □	82-12-160-20 ■
2.68/.106	3.18/.125			0.50/.020	1.00/.039	1.78/.070	2.28/.089	4.32/.170	4.81/.189	82-11-180-20 ■	82-14-180-20 □	82-12-180-20 ■
3.19/.126	3.69/.145			1.01/.040	1.51/.059	2.29/.090	2.78/.109	4.82/.190	5.32/.209	82-11-200-20 ■	82-14-200-20 □	82-12-200-20 ■
3.70/.146	4.20/.165			1.52/.060	2.01/.079	2.79/.110	3.29/.129	5.33/.210	5.83/.229	82-11-220-20 ■	82-14-220-20 □	82-12-220-20 ■
4.21/.166	4.70/.185			2.02/.080	2.52/.099	3.30/.130	3.80/.149	5.84/.230	6.34/.249	82-11-240-20 ■	82-14-240-20 □	82-12-240-20 ■
4.71/.186	5.21/.205	0.50/.020	1.52/.060	2.53/.100	3.03/.119	3.31/.150	4.31/.169	6.35/.250	6.85/.269	82-11-260-20 ■	82-14-260-20 □	82-12-260-20 ■
5.22/.206	5.72/.225	1.01/.040	2.02/.080	3.04/.120	3.54/.139	4.32/.170	4.81/.189	6.86/.270	7.36/.289	82-11-280-20 ■	82-14-280-20 □	82-12-280-20 □
5.73/.226	6.23/.245	1.52/.060	2.53/.100	3.55/.140	4.05/.159	4.82/.190	5.32/.209	7.37/.290	7.86/.309	82-11-300-20 ■	82-14-300-20 □	82-12-300-20 □
		2.02/.080	3.04/.120	4.06/.160	4.55/.179	5.33/.210	5.83/.229	7.87/.310	8.37/.329	82-11-320-20 ■	82-14-320-20 □	82-12-320-20 □
		2.53/.100	3.55/.140	4.56/.180	5.06/.199	5.84/.230	6.34/.249	8.38/.330	8.88/.349	82-11-340-20 ■	82-14-340-20 □	82-12-340-20 □
		3.04/.120	4.06/.160	5.07/.200	5.57/.219	6.35/.250	6.85/.269	8.89/.350	9.39/.369	82-11-360-20 ■	82-14-360-20 □	82-12-360-20 □
		3.55/.140	4.56/.180	5.58/.220	6.08/.239	6.86/.270	7.36/.289	9.40/.370	9.90/.389	82-11-380-20 ■	82-14-380-20 □	82-12-380-20 □
		4.06/.160	5.07/.200	6.09/.240	6.59/.259	7.37/.290	7.86/.309	9.91/.390	10.40/.409	82-11-400-20 ■	82-14-400-20 □	82-12-400-20 □
		4.56/.180	5.58/.220	6.60/.260	7.09/.279	7.87/.310	8.37/.329	10.41/.410	10.91/.429	82-11-420-20 ■	82-14-420-20 □	82-12-420-20 □
		5.07/.200	6.09/.240	7.10/.280	7.60/.299	8.38/.330	8.88/.349	10.92/.430	11.42/.449	82-11-440-20 □	82-14-440-20 □	82-12-440-20 □
		5.58/.220	6.60/.260	7.61/.300	8.11/.319	8.89/.350	9.39/.369	11.43/.450	11.93/.469	82-11-460-20 □	82-14-460-20 □	82-12-460-20 □
		6.09/.240	7.10/.280	8.12/.320	8.62/.339	9.40/.370	9.90/.389	11.94/.470	12.44/.489	82-11-480-20 □	82-14-480-20 □	82-12-480-20 □
		6.60/.260	7.61/.300	8.63/.340	9.13/.359	9.91/.390	10.40/.409	12.45/.490	12.94/.509	82-11-500-20 □	82-14-500-20 □	82-12-500-20 □
		7.10/.280	8.12/.320	9.14/.360	9.63/.379	10.41/.410	10.91/.429	12.95/.510	13.45/.529	82-11-520-20 □	82-14-520-20 □	82-12-520-20 □
		7.61/.300	8.63/.340	9.64/.380	10.14/.399	10.92/.430	11.42/.449	13.46/.530	13.96/.549	82-11-540-20 □	82-14-540-20 □	82-12-540-20 □
		8.12/.320	9.14/.360	10.15/.400	10.65/.419	11.43/.450	11.93/.469	13.97/.550	14.47/.569	82-11-560-20 □	82-14-560-20 □	82-12-560-20 □
		8.63/.340	9.64/.380	10.66/.420	11.16/.439	11.94/.470	12.44/.489	14.48/.570	14.98/.589	82-11-580-20 □	82-14-580-20 □	82-12-580-20 □
		9.14/.360	10.15/.400	11.17/.440	11.67/.459	12.45/.490	12.94/.509	14.99/.590	15.48/.609	82-11-600-20 □	82-14-600-20 □	82-12-600-20 □
				11.68/.460	12.17/.479	12.95/.510	13.45/.529	15.49/.610	15.99/.629	82-11-620-20 □	82-14-620-20 □	82-12-620-20 □
				12.18/.480	12.68/.499	13.46/.530	13.96/.549	16.00/.630	16.50/.649	82-11-640-20 □	82-14-640-20 □	82-12-640-20 □
				12.69/.500	13.19/.519	13.97/.550	14.47/.569	16.51/.650	17.01/.669	82-11-660-20 □	82-14-660-20 □	82-12-660-20 □
				13.20/.520	13.70/.539	14.48/.570	14.98/.589	17.02/.670	17.52/.689	82-11-680-20 □	82-14-680-20 □	82-12-680-20 □
				13.71/.540	14.21/.559	14.99/.590	15.48/.609	17.53/.690	18.02/.709	82-11-700-20 □	82-14-700-20 □	82-12-700-20 □
				14.22/.560	14.71/.579	15.49/.610	15.99/.629	18.03/.710	18.53/.729	82-11-720-20 □	82-14-720-20 □	82-12-720-20 □
				14.72/.580	15.22/.599	16.00/.630	16.50/.649	18.54/.730	19.04/.749	82-11-740-20 □	82-14-740-20 □	82-12-740-20 □
				15.23/.600	15.73/.619	16.51/.650	17.01/.669	19.05/.750	19.55/.769	82-11-760-20 □	82-14-760-20 □	82-12-760-20 □
				15.74/.620	16.24/.639	17.02/.670	17.52/.689	19.56/.770	20.06/.789	82-11-780-20 □	82-14-780-20 □	82-12-780-20 □
				16.25/.640	16.75/.659	17.53/.690	18.02/.709	20.07/.790	20.56/.809	82-11-800-20 □	82-14-800-20 □	82-12-800-20 □

STEEL

¼-turn fasteners
No. 82 stud selection

Key Part No.
85-40-104-11 ▪
Order separately.



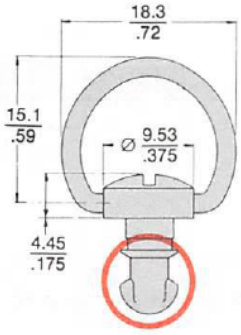
FLUSH PHILLIPS RECESS

No. 2 Phillips recess



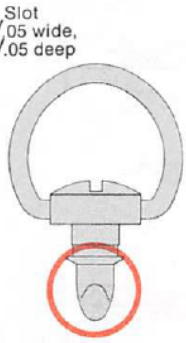
BAIL STYLE RB

For use when receptacle is vertical.

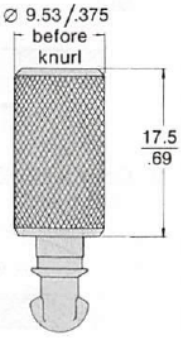


BAIL STYLE RA

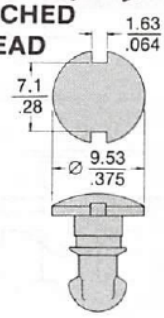
For use when receptacle is horizontal.



KNURLED HEAD

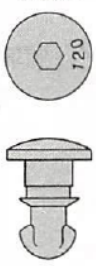


NOTCHED HEAD



HEX SOCKET

3mm hex socket



STUD PART NUMBERS							DIMENSIONS		
302 stainless steel, passivated.							U	L	F
OVAL PHILLIPS RECESS	FLUSH PHILLIPS RECESS	BAIL STYLE RB	BAIL STYLE RA	KNURLED HEAD	NOTCHED HEAD	HEX SOCKET			
82-19-080-20 □	—	82-16-080-20 □	82-15-080-20 □	82-13-080-20 □	82-17-080-20 □	82-78-080-20 □	2.72/.107	5.72/.225	9.53/.375
82-19-100-20 □	82-28-100-20 □	82-16-100-20 □	82-15-100-20 □	82-13-100-20 □	82-17-100-20 □	82-78-100-20 □	3.23/.127	6.22/.245	10.03/.395
82-19-120-20 □	82-28-120-20 □	82-16-120-20 □	82-15-120-20 □	82-13-120-20 □	82-17-120-20 □	82-78-120-20 □	3.73/.147	6.73/.265	10.54/.415
82-19-140-20 □	82-28-140-20 □	82-16-140-20 □	82-15-140-20 □	82-13-140-20 □	82-17-140-20 □	82-78-140-20 □	4.24/.167	7.24/.285	11.05/.435
82-19-160-20 □	82-28-160-20 □	82-16-160-20 □	82-15-160-20 □	82-13-160-20 □	82-17-160-20 □	82-78-160-20 □	4.75/.187	7.75/.305	11.56/.455
82-19-180-20 □	82-28-180-20 □	82-16-180-20 □	82-15-180-20 □	82-13-180-20 □	82-17-180-20 □	82-78-180-20 □	5.26/.207	8.26/.325	12.07/.475
82-19-200-20 □	82-28-200-20 □	82-16-200-20 □	82-15-200-20 □	82-13-200-20 □	82-17-200-20 □	82-78-200-20 □	5.77/.227	8.76/.345	12.57/.495
82-19-220-20 □	82-28-220-20 □	82-16-220-20 □	82-15-220-20 □	82-13-220-20 □	82-17-220-20 □	82-78-220-20 □	6.27/.247	9.27/.365	13.08/.515
82-19-240-20 □	82-28-240-20 □	82-16-240-20 □	82-15-240-20 □	82-13-240-20 □	82-17-240-20 □	82-78-240-20 □	6.78/.267	9.78/.385	13.59/.535
82-19-260-20 □	82-28-260-20 □	82-16-260-20 □	82-15-260-20 □	82-13-260-20 □	82-17-260-20 □	82-78-260-20 □	7.29/.287	10.29/.405	14.10/.555
82-19-280-20 □	82-28-280-20 □	82-16-280-20 □	82-15-280-20 □	82-13-280-20 □	82-17-280-20 □	82-78-280-20 □	7.80/.307	10.80/.425	14.61/.575
82-19-300-20 □	82-28-300-20 □	82-16-300-20 □	82-15-300-20 □	82-13-300-20 □	82-17-300-20 □	82-78-300-20 □	8.31/.327	11.30/.445	15.11/.595
82-19-320-20 □	82-28-320-20 □	82-16-320-20 □	82-15-320-20 □	82-13-320-20 □	82-17-320-20 □	82-78-320-20 □	8.81/.347	11.81/.465	15.62/.615
82-19-340-20 □	82-28-340-20 □	82-16-340-20 □	82-15-340-20 □	82-13-340-20 □	82-17-340-20 □	82-78-340-20 □	9.32/.367	12.32/.485	16.13/.635
82-19-360-20 □	82-28-360-20 □	82-16-360-20 □	82-15-360-20 □	82-13-360-20 □	82-17-360-20 □	82-78-360-20 □	9.83/.387	12.83/.505	16.64/.655
82-19-380-20 □	82-28-380-20 □	82-16-380-20 □	82-15-380-20 □	82-13-380-20 □	82-17-380-20 □	82-78-380-20 □	10.34/.407	13.34/.525	17.15/.675
82-19-400-20 □	82-28-400-20 □	82-16-400-20 □	82-15-400-20 □	82-13-400-20 □	82-17-400-20 □	82-78-400-20 □	10.85/.427	13.84/.545	17.65/.695
82-19-420-20 □	82-28-420-20 □	82-16-420-20 □	82-15-420-20 □	82-13-420-20 □	82-17-420-20 □	82-78-420-20 □	11.35/.447	14.35/.565	18.16/.715
82-19-440-20 □	82-28-440-20 □	82-16-440-20 □	82-15-440-20 □	82-13-440-20 □	82-17-440-20 □	82-78-440-20 □	11.86/.467	14.86/.585	18.67/.735
82-19-460-20 □	82-28-460-20 □	82-16-460-20 □	82-15-460-20 □	82-13-460-20 □	82-17-460-20 □	82-78-460-20 □	12.37/.487	15.37/.605	19.18/.755
82-19-480-20 □	82-28-480-20 □	82-16-480-20 □	82-15-480-20 □	82-13-480-20 □	82-17-480-20 □	82-78-480-20 □	12.88/.507	15.88/.625	19.69/.775
82-19-500-20 □	82-28-500-20 □	82-16-500-20 □	82-15-500-20 □	82-13-500-20 □	82-17-500-20 □	82-78-500-20 □	13.39/.527	16.38/.645	20.19/.795
82-19-520-20 □	82-28-520-20 □	82-16-520-20 □	82-15-520-20 □	82-13-520-20 □	82-17-520-20 □	82-78-520-20 □	13.89/.547	16.89/.665	20.70/.815
82-19-540-20 □	82-28-540-20 □	82-16-540-20 □	82-15-540-20 □	82-13-540-20 □	82-17-540-20 □	82-78-540-20 □	14.40/.567	17.40/.685	21.21/.835
82-19-560-20 □	82-28-560-20 □	82-16-560-20 □	82-15-560-20 □	82-13-560-20 □	82-17-560-20 □	82-78-560-20 □	14.91/.587	17.91/.705	21.72/.855
82-19-580-20 □	82-28-580-20 □	82-16-580-20 □	82-15-580-20 □	82-13-580-20 □	82-17-580-20 □	82-78-580-20 □	15.42/.607	18.42/.725	22.23/.875
82-19-600-20 □	82-28-600-20 □	82-16-600-20 □	82-15-600-20 □	82-13-600-20 □	82-17-600-20 □	82-78-600-20 □	15.93/.627	18.92/.745	22.73/.895
82-19-620-20 □	82-28-620-20 □	82-16-620-20 □	82-15-620-20 □	82-13-620-20 □	82-17-620-20 □	82-78-620-20 □	16.43/.647	19.43/.765	23.24/.915
82-19-640-20 □	82-28-640-20 □	82-16-640-20 □	82-15-640-20 □	82-13-640-20 □	82-17-640-20 □	82-78-640-20 □	16.94/.667	19.94/.785	23.75/.935
82-19-660-20 □	82-28-660-20 □	82-16-660-20 □	82-15-660-20 □	82-13-660-20 □	82-17-660-20 □	82-78-660-20 □	17.45/.687	20.45/.805	24.26/.955
82-19-680-20 □	82-28-680-20 □	82-16-680-20 □	82-15-680-20 □	82-13-680-20 □	82-17-680-20 □	82-78-680-20 □	17.96/.707	20.96/.825	24.77/.975
82-19-700-20 □	82-28-700-20 □	82-16-700-20 □	82-15-700-20 □	82-13-700-20 □	82-17-700-20 □	82-78-700-20 □	18.47/.727	21.46/.845	25.27/.995
82-19-720-20 □	82-28-720-20 □	82-16-720-20 □	82-15-720-20 □	82-13-720-20 □	82-17-720-20 □	82-78-720-20 □	18.97/.747	21.97/.865	25.78/1.015
82-19-740-20 □	82-28-740-20 □	82-16-740-20 □	82-15-740-20 □	82-13-740-20 □	82-17-740-20 □	82-78-740-20 □	19.48/.767	22.48/.885	26.29/1.035
82-19-760-20 □	82-28-760-20 □	82-16-760-20 □	82-15-760-20 □	82-13-760-20 □	82-17-760-20 □	82-78-760-20 □	19.99/.787	22.99/.905	26.80/1.055
82-19-780-20 □	82-28-780-20 □	82-16-780-20 □	82-15-780-20 □	82-13-780-20 □	82-17-780-20 □	82-78-780-20 □	20.50/.807	23.50/.925	27.31/1.075
82-19-800-20 □	82-28-800-20 □	82-16-800-20 □	82-15-800-20 □	82-13-800-20 □	82-17-800-20 □	82-78-800-20 □	21.01/.827	24.00/.945	27.81/1.095

¼-turn fasteners
No. 82 stud installation

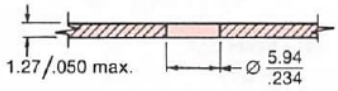
FOR: Flush head styles



When panel is dimpled, only receptacles 82-35-302-15, 82-35-402-15, 82-35-295-XX, and 82-35-303-15 can be used.

When outer panel is 1.27/.050 or less.

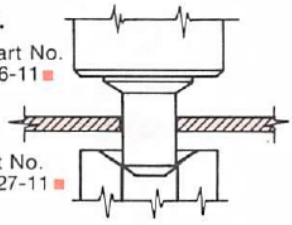
1. Drill.



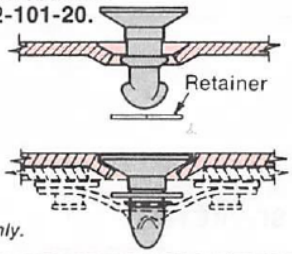
2. Dimple panel.

Punch Part No. 82-0-6626-11 ■

Die Part No. 82-0-6627-11 ■



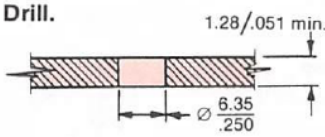
3. Insert stud, add retainer Part No. 82-32-101-20.



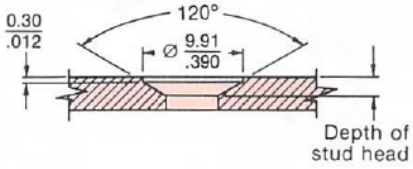
Use receptacles
82-35-302-15
82-35-402-15
82-35-295-XX
or 82-35-303-15 *only*.

When outer panel is 1.28/.051 or greater.

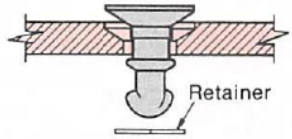
1. Drill.



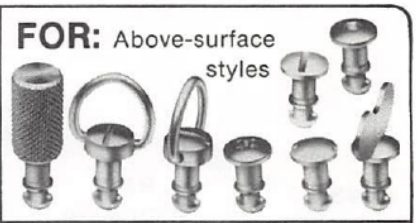
2. Countersink to depth of stud head.



3. Insert stud and add retainer.

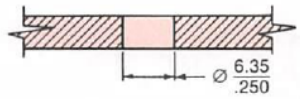


FOR: Above-surface styles

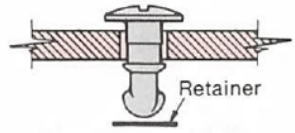


For any panel thickness.

1. Drill.



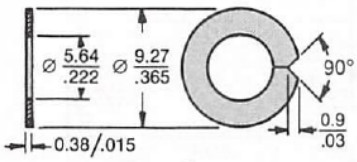
2. Insert stud and add retainer.



RETAINERS:

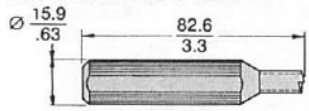
MILLIMETER/INCH MILLIMETER INCH

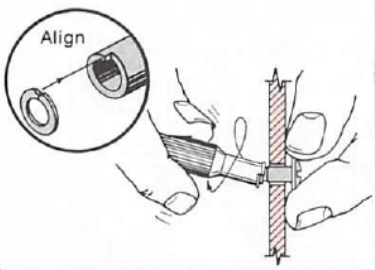
SPLIT-RING RETAINER
Hand or tool installation



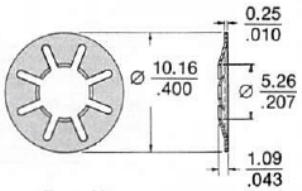
Part No. 82-32-101-20 ■
302 stainless steel, passivated.

To install, use tool Part Number 82-0-7595-11 ■

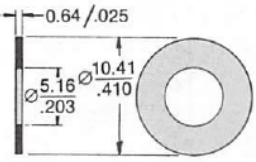




PUSH-ON RETAINERS
Tool installation

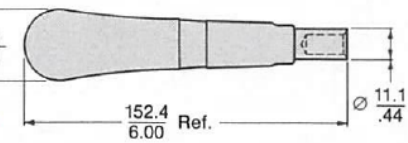


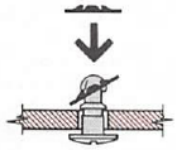
Part No. 82-32-201-20 ■
302 stainless steel, passivated.

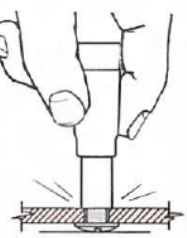


Part No. 82-32-301-12 ■
nylon, black.

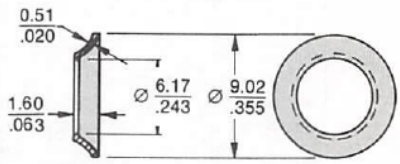
To install, use tool Part Number **82-0-22542-11** ■







GO or GOS RETAINER
Tool installation



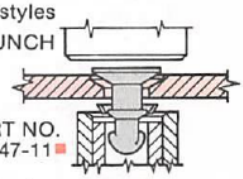
Part No. 82-31-293-15 ■ 1010 steel, zinc plated plus yellow chromate dip.

Part No. 82-31-293-18 ■ 5052 aluminum.

To install

For flush head styles

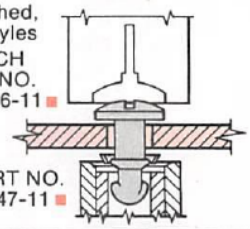
FLAT PUNCH



DIE PART NO. 82-0-3147-11 ■

For wing, notched, or oval head styles

PUNCH PART NO. 82-0-3146-11 ■



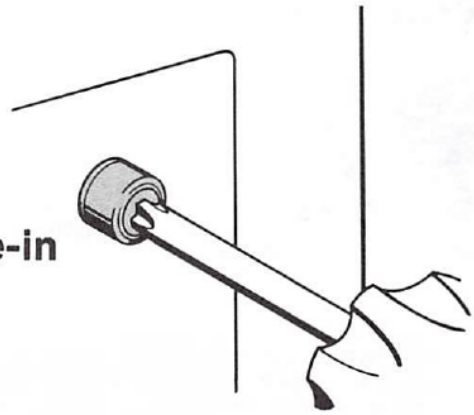
DIE PART NO. 82-0-3147-11 ■

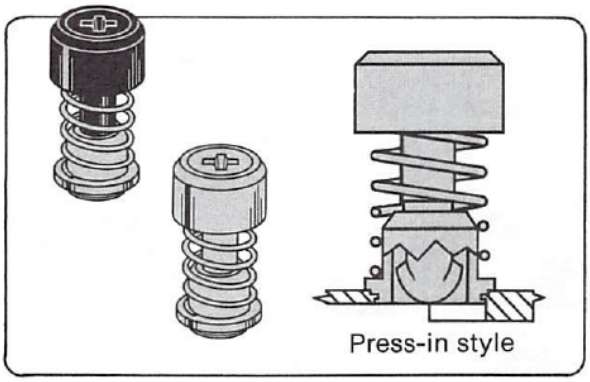
■ From stock, subject to prior sale.

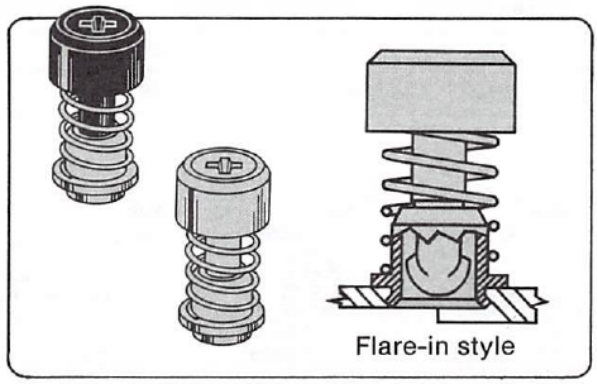
¼-turn fasteners

No. 82 Fully-retracting Stud Assemblies

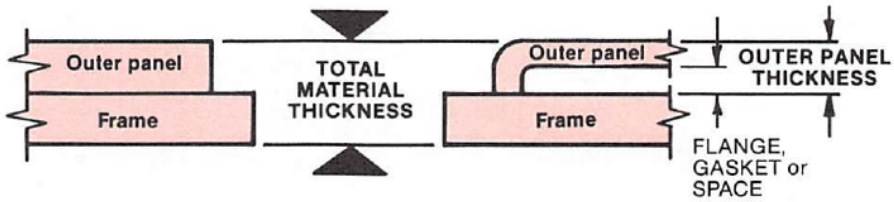
- Permits sliding applications
- Full stud retraction assists in panel-to-frame alignment
- Pre-assembled to speed installation
- Installation options—Press-in or Flare-in
- Black or bright finish
- Tool operated







To select correct fastener:



1. Choose a receptacle. (Note any panel or frame thickness limitations.)
2. Select one of the following stud assemblies:

Press-in

a) Use your Outer Panel Thickness or measure your Total Material Thickness, as required by your choice of receptacle.
b) If an adjustment formula is shown under the receptacle part number, apply this formula to your measurement.
c) Use measurement (or adjusted measurement) to find stud part number in the table on page B-22.

Flare-in

Measure your Outer Panel Thickness and use Table A to determine which column (I or II) you will need in Table B.

Follow steps a) and b) at left and use your measurement (or adjusted measurement) to find stud part number in Table B on pages B-20 and B-21.

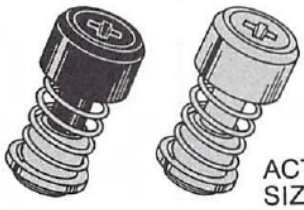
3. Review the stud installation procedure. Order each fastener component and installation tool (if required) separately by part number.

SOUTHCO® fasteners

¼-turn fasteners

No. 82 Fully-retracting Stud Assemblies

Flare-in style



ACTUAL SIZE

Material and Finish

CAP and STUD: low carbon steel, case hardened and zinc plated plus bright chromate dip or with black organic coating.
SPRING: 302 stainless steel, natural.
FERRULE: 6061 aluminum, natural.

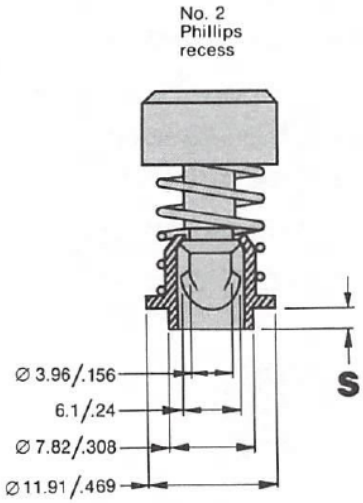


Table A

OUTER PANEL THICKNESS		S	B ±.13/±.005 (See next page.)	Select stud from column:
Min.	Max.			
1.22/.048	2.39/.094	1.47/.058	0.40/.016	I
2.41/.095	3.96/.156	2.64/.104	0.79/.031	II

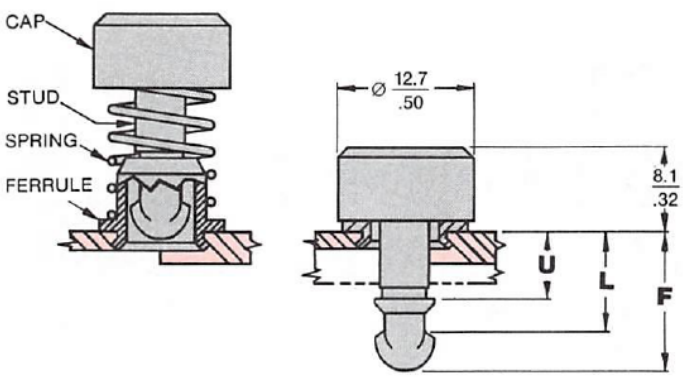
Table B

FOR: Part No. 82-35-306-10		FOR: Part No. 82-99-205-15		FOR: Press-in Part Nos. 82-35-308-55 82-35-313-55 and Ultrasonic Part No. 82-35-310-55		FOR: Part No. 82-35-311-55		FOR: ALL OTHER RECEPTACLES		Flare-in style stud assembly PART NUMBERS Bright	
OUTER PANEL THICKNESS		OUTER PANEL THICKNESS		OUTER PANEL THICKNESS		TOTAL MATERIAL THICKNESS		TOTAL MATERIAL THICKNESS		I	II
MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.		
								1.78/.070	2.28/.089	82-56-**081**-60 □	—
								2.29/.090	2.78/.109	82-56-**101**-60 □	82-56-**102**-60 □
1.22/.048	1.66/.065							2.79/.110	3.29/.129	82-56-**121**-60 ■	82-56-**122**-60 ■
1.67/.066	2.16/.085							3.30/.130	3.80/.149	82-56-**141**-60 ■	82-56-**142**-60 ■
2.17/.086	2.67/.105					1.27/.050	1.77/.069	3.81/.150	4.31/.169	82-56-**161**-60 ■	82-56-**162**-60 ■
2.68/.106	3.18/.125					1.78/.070	2.28/.089	4.32/.170	4.81/.189	82-56-**181**-60 ■	82-56-**182**-60 ■
3.19/.126	3.69/.145			1.22/.048	1.51/.059	2.29/.090	2.78/.109	4.82/.190	5.32/.209	82-56-**201**-60 ■	82-56-**202**-60 ■
3.70/.146	3.96/.156			1.52/.060	2.01/.079	2.79/.110	3.29/.129	5.33/.210	5.83/.229	82-56-**221**-60 ■	82-56-**222**-60 ■
				2.02/.080	2.52/.099	3.30/.130	3.80/.149	5.84/.230	6.34/.249	82-56-**241**-60 ■	82-56-**242**-60 ■
				2.53/.100	3.03/.119	3.81/.150	4.31/.169	6.35/.250	6.85/.269	82-56-**261**-60 ■	82-56-**262**-60 ■
		1.22/.048	2.02/.080	3.04/.120	3.54/.139	4.32/.170	4.81/.189	6.86/.270	7.36/.289	82-56-**281**-60 □	82-56-**282**-60 □
		1.52/.060	2.53/.100	3.55/.140	3.96/.156	4.82/.190	5.32/.209	7.37/.290	7.86/.309	82-56-**301**-60 □	82-56-**302**-60 □
		2.02/.080	3.04/.120			5.33/.210	5.83/.229	7.87/.310	8.37/.329	82-56-**321**-60 □	82-56-**322**-60 □
		2.53/.100	3.55/.140			5.84/.230	6.34/.249	8.38/.330	8.88/.349	82-56-**341**-60 □	82-56-**342**-60 □
		3.04/.120	3.96/.156			6.35/.250	6.85/.269	8.89/.350	9.39/.369	82-56-**361**-60 □	82-56-**362**-60 □
						6.86/.270	7.36/.289	9.40/.370	9.90/.389	82-56-**381**-60 □	82-56-**382**-60 □
						7.37/.290	7.86/.309	9.91/.390	10.40/.409	82-56-**401**-60 □	82-56-**402**-60 □
						7.87/.310	8.37/.329	10.41/.410	10.91/.429	82-56-**421**-60 □	82-56-**422**-60 □
						8.38/.330	8.88/.349	10.92/.430	11.42/.449	82-56-**441**-60 □	82-56-**442**-60 □
						8.89/.350	9.39/.369	11.43/.450	11.93/.469	82-56-**461**-60 □	82-56-**462**-60 □
						9.40/.370	9.90/.389	11.94/.470	12.44/.489	82-56-**481**-60 □	82-56-**482**-60 □
						9.91/.390	10.40/.409	12.45/.490	12.94/.509	82-56-**501**-60 □	82-56-**502**-60 □
						10.41/.410	10.91/.429	12.95/.510	13.45/.529	82-56-**521**-60 □	82-56-**522**-60 □
						10.92/.430	11.42/.449	13.46/.530	13.96/.549	82-56-**541**-60 □	82-56-**542**-60 □
						11.43/.450	11.93/.469	13.97/.550	14.47/.569	82-56-**561**-60 □	82-56-**562**-60 □
						11.94/.470	12.44/.489	14.48/.570	14.98/.589	82-56-**581**-60 □	82-56-**582**-60 □
						12.45/.490	12.94/.509	14.99/.590	15.48/.609	82-56-**601**-60 □	82-56-**602**-60 □
						12.95/.510	13.45/.529	15.49/.610	15.99/.629	82-56-**621**-60 □	82-56-**622**-60 □
						13.46/.530	13.96/.549	16.00/.630	16.50/.649	82-56-**641**-60 □	82-56-**642**-60 □
						13.97/.550	14.47/.569	16.51/.650	17.01/.669	82-56-**661**-60 □	82-56-**662**-60 □
						14.48/.570	14.98/.589	17.02/.670	17.52/.689	82-56-**681**-60 □	82-56-**682**-60 □
						14.99/.590	15.48/.609	17.53/.690	18.02/.709	82-56-**701**-60 □	82-56-**702**-60 □
						15.49/.610	15.99/.629	18.03/.710	18.53/.729	82-56-**721**-60 □	82-56-**722**-60 □
						16.00/.630	16.50/.649	18.54/.730	19.04/.749	82-56-**741**-60 □	82-56-**742**-60 □
						16.51/.650	17.01/.669	19.05/.750	19.55/.769	82-56-**761**-60 □	82-56-**762**-60 □
						17.02/.670	17.52/.689	19.56/.770	20.06/.789	82-56-**781**-60 □	82-56-**782**-60 □
						17.53/.690	18.02/.709	20.07/.790	20.56/.809	82-56-**801**-60 □	82-56-**802**-60 □

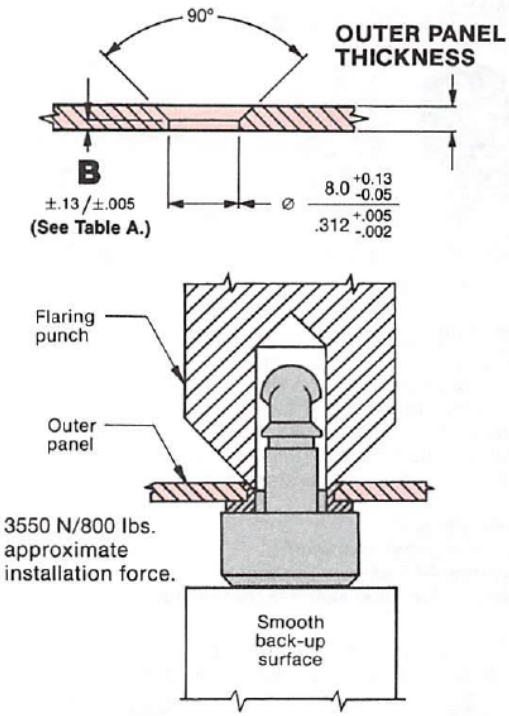
¼-turn fasteners

No. 82 Fully-retracting Stud Assemblies

NOTE: Stud will float
1.0/.040 total movement.



Flare-in installation



Flare-in style stud assembly PART NUMBERS		DIMENSIONS		
Black				
I	II	U	L	F
82-56-**081**-50 □	—	2.72/.107	5.72/.225	9.53/.375
82-56-**101**-50 □	82-56-**102**-50 □	3.23/.127	6.22/.245	10.03/.395
82-56-**121**-50	82-56-**122**-50	3.73/.147	6.73/.265	10.54/.415
82-56-**141**-50	82-56-**142**-50	4.24/.167	7.24/.285	11.05/.435
82-56-**161**-50	82-56-**162**-50	4.75/.187	7.75/.305	11.56/.455
82-56-**181**-50	82-56-**182**-50	5.26/.207	8.26/.325	12.07/.475
82-56-**201**-50	82-56-**202**-50	5.77/.227	8.76/.345	12.57/.495
82-56-**221**-50	82-56-**222**-50	6.27/.247	9.27/.365	13.08/.515
82-56-**241**-50	82-56-**242**-50	6.78/.267	9.78/.385	13.59/.535
82-56-**261**-50	82-56-**262**-50	7.29/.287	10.29/.405	14.10/.555
82-56-**281**-50 □	82-56-**282**-50 □	7.80/.307	10.80/.425	14.61/.575
82-56-**301**-50 □	82-56-**302**-50 □	8.31/.327	11.30/.445	15.11/.595
82-56-**321**-50 □	82-56-**322**-50 □	8.81/.347	11.81/.465	15.62/.615
82-56-**341**-50 □	82-56-**342**-50 □	9.32/.367	12.32/.485	16.13/.635
82-56-**361**-50 □	82-56-**362**-50 □	9.83/.387	12.83/.505	16.64/.655
82-56-**381**-50 □	82-56-**382**-50 □	10.34/.407	13.34/.525	17.15/.675
82-56-**401**-50 □	82-56-**402**-50 □	10.85/.427	13.84/.545	17.65/.695
82-56-**421**-50 □	82-56-**422**-50 □	11.35/.447	14.35/.565	18.16/.715
82-56-**441**-50 □	82-56-**442**-50 □	11.86/.467	14.86/.585	18.67/.735
82-56-**461**-50 □	82-56-**462**-50 □	12.37/.487	15.37/.605	19.18/.755
82-56-**481**-50 □	82-56-**482**-50 □	12.88/.507	15.88/.625	19.69/.775
82-56-**501**-50 □	82-56-**502**-50 □	13.39/.527	16.38/.645	20.19/.795
82-56-**521**-50 □	82-56-**522**-50 □	13.89/.547	16.89/.665	20.70/.815
82-56-**541**-50 □	82-56-**542**-50 □	14.40/.567	17.40/.685	21.21/.835
82-56-**561**-50 □	82-56-**562**-50 □	14.91/.587	17.91/.705	21.72/.855
82-56-**581**-50 □	82-56-**582**-50 □	15.42/.607	18.42/.725	22.23/.875
82-56-**601**-50 □	82-56-**602**-50 □	15.93/.627	18.92/.745	22.73/.895
82-56-**621**-50 □	82-56-**622**-50 □	16.43/.647	19.43/.765	23.24/.915
82-56-**641**-50 □	82-56-**642**-50 □	16.94/.667	19.94/.785	23.75/.935
82-56-**661**-50 □	82-56-**662**-50 □	17.45/.687	20.45/.805	24.26/.955
82-56-**681**-50 □	82-56-**682**-50 □	17.96/.707	20.96/.825	24.77/.975
82-56-**701**-50 □	82-56-**702**-50 □	18.47/.727	21.46/.845	25.27/.995
82-56-**721**-50 □	82-56-**722**-50 □	18.97/.747	21.97/.865	25.78/1.015
82-56-**741**-50 □	82-56-**742**-50 □	19.48/.767	22.48/.885	26.29/1.035
82-56-**761**-50 □	82-56-**762**-50 □	19.99/.787	22.99/.905	26.80/1.055
82-56-**781**-50 □	82-56-**782**-50 □	20.50/.807	23.50/.925	27.31/1.075
82-56-**801**-50 □	82-56-**802**-50 □	21.01/.827	24.00/.945	27.81/1.095

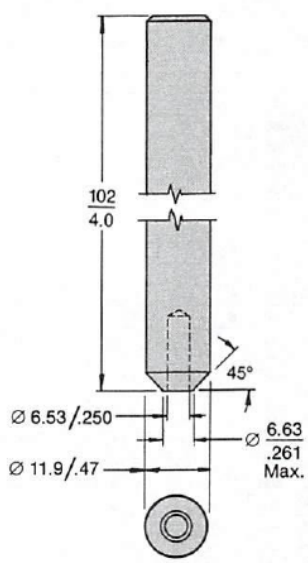
Flaring punch

Part Number
47-0-13749-06 ■

Order separately.

Approximately 2225 N/500 lbs. of force is required to flare ferrule.

Material
303 stainless steel, passivated.



DELIVERY SYMBOLS
(see part numbers)

- ■ From stock, subject to prior sale.
- □ Up to 8 weeks. Minimum order required.

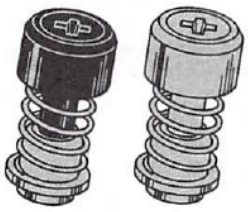
millimeter
inch

millimeter/inch

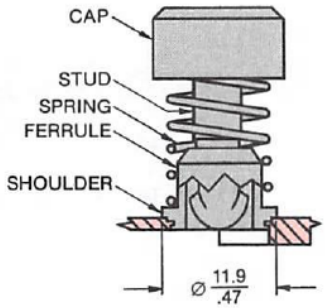
¼-turn fasteners

No. 82 Fully-retracting Stud Assemblies

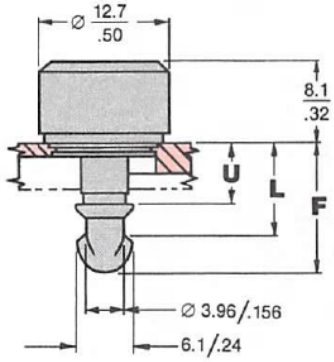
Press-in style



ACTUAL SIZE



NOTE: Stud will float 1.0/.040 total movement.

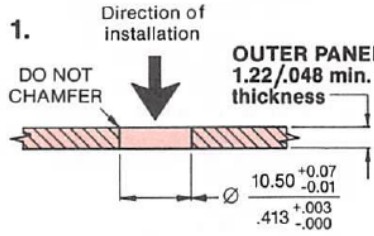


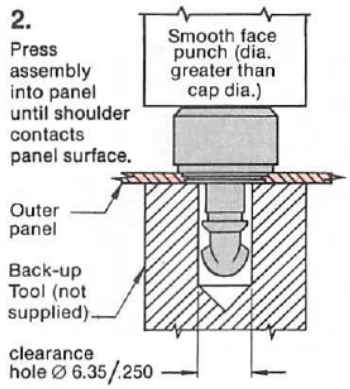
MATERIAL and FINISH
CAP and STUD: low carbon steel, case hardened and zinc plated plus bright chromate dip or with black organic coating.
SPRING: 302 stainless steel, natural.
FERRULE: 303 stainless steel, passivated.

A general guide:
For use in most aluminums, mild steel (RB 55 max.) or softer materials. Request samples for testing.

DELIVERY SYMBOLS
(see part numbers)
■ From stock, subject to prior sale.
□ Up to 8 weeks. Minimum order required.

INSTALLATION

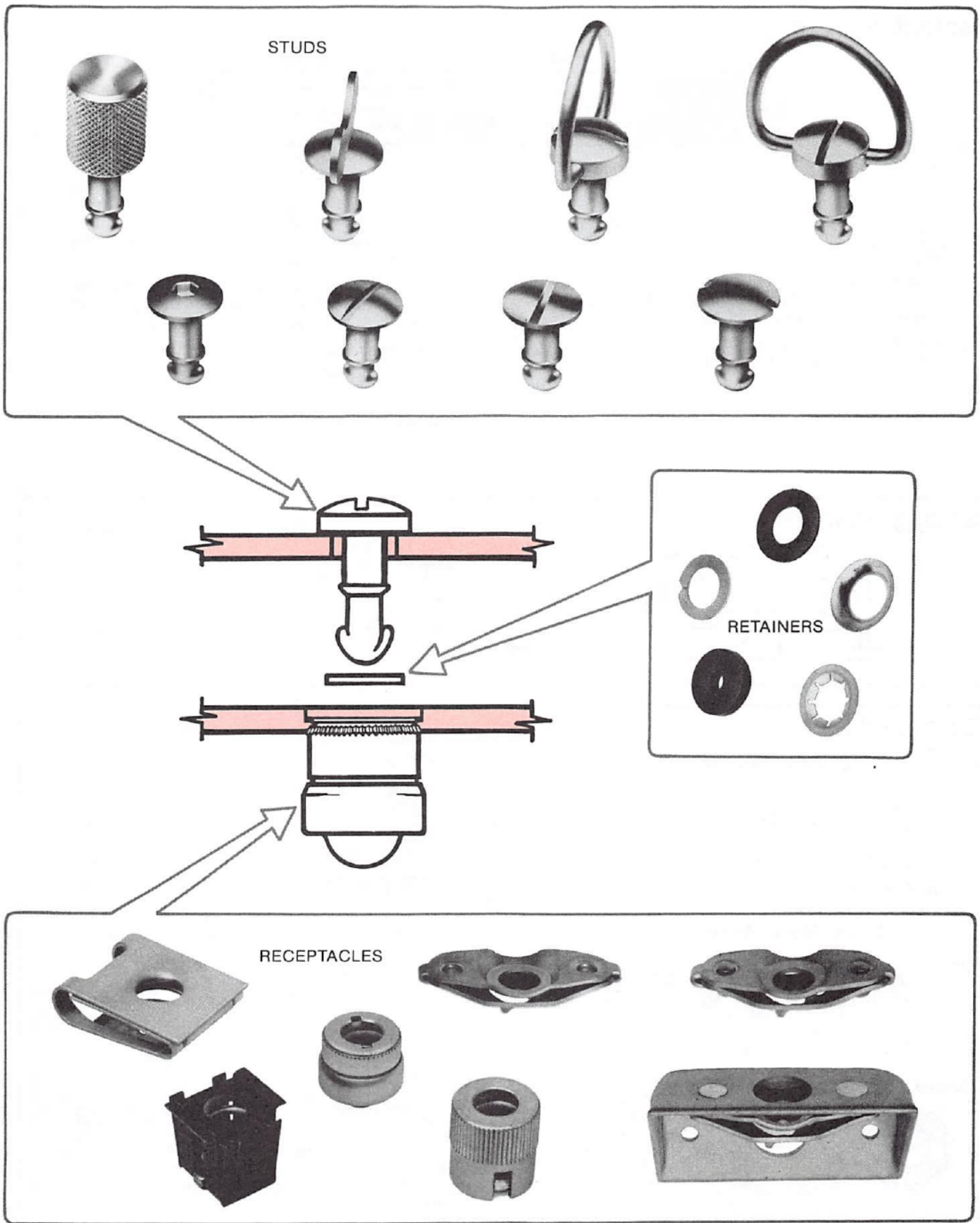




To insure proper installation, punch surface and back-up tool surface must remain parallel during installation.

FOR: Part No. 82-35-306-10		FOR: Part No. 82-99-205-15		FOR: Press-in Part Nos. 82-35308-55 82-35-313-55 and Ultrasonic Part No. 82-35-310-55		FOR: Part No. 82-35-311-55		FOR: ALL OTHER RECEPTACLES		Press-in style stud assembly PART NUMBERS		DIMENSIONS		
OUTER PANEL THICKNESS		OUTER PANEL THICKNESS		OUTER PANEL THICKNESS		TOTAL MATERIAL THICKNESS		TOTAL MATERIAL THICKNESS		Bright	Black	U	L	F
MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.					
								1.78/.070	2.28/.089	82-56-085-60 □	82-56-085-50 □	2.72/.107	5.72/.225	9.53/.375
								2.29/.090	2.78/.109	82-56-105-60 □	82-56-105-50 □	3.23/.127	6.22/.245	10.03/.395
1.22/.048	1.66/.065							2.79/.110	3.29/.129	82-56-125-60 ■	82-56-125-50 ■	3.73/.147	6.73/.265	10.54/.415
1.67/.066	2.16/.085							3.30/.130	3.80/.149	82-56-145-60 ■	82-56-145-50 ■	4.24/.167	7.24/.285	11.05/.435
2.17/.086	2.67/.105					1.27/.050	1.77/.069	3.81/.150	4.31/.169	82-56-165-60 ■	82-56-165-50 ■	4.75/.187	7.75/.305	11.56/.455
2.68/.106	3.18/.125					1.78/.070	2.28/.089	4.32/.170	4.81/.189	82-56-185-60 ■	82-56-185-50 ■	5.26/.207	8.26/.325	12.07/.475
3.19/.126	3.69/.145			1.22/.048	1.51/.059	2.29/.090	2.78/.109	4.82/.190	5.32/.209	82-56-205-60 ■	82-56-205-50 ■	5.77/.227	8.76/.345	12.57/.495
3.70/.146	4.20/.165			1.52/.060	2.01/.079	2.79/.110	3.29/.129	5.33/.210	5.83/.229	82-56-225-60 ■	82-56-225-50 ■	6.27/.247	9.27/.365	13.08/.515
4.21/.166	4.70/.185			2.02/.080	2.52/.099	3.30/.130	3.80/.149	5.84/.230	6.34/.249	82-56-245-60 ■	82-56-245-50 ■	6.78/.267	9.78/.385	13.59/.535
4.71/.186	5.21/.205	1.22/.048	1.52/.060	2.53/.100	3.03/.119	3.81/.150	4.31/.169	6.35/.250	6.85/.269	82-56-265-60 ■	82-56-265-50 ■	7.29/.287	10.29/.405	14.10/.555
5.22/.206	5.72/.225	1.22/.048	2.02/.080	3.04/.120	3.54/.139	4.32/.170	4.81/.189	6.86/.270	7.36/.289	82-56-285-60 □	82-56-285-50 □	7.80/.307	10.80/.425	14.61/.575
5.73/.226	6.23/.245	1.52/.060	2.53/.100	3.55/.140	4.05/.159	4.82/.190	5.32/.209	7.37/.290	7.86/.309	82-56-305-60 □	82-56-305-50 □	8.31/.327	11.30/.445	15.11/.595
6.25/.246	6.73/.265	2.02/.080	3.04/.120	4.06/.160	4.55/.179	5.33/.210	5.83/.229	7.87/.310	8.37/.329	82-56-325-60 □	82-56-325-50 □	8.81/.347	11.81/.465	15.62/.615
6.76/.266	7.24/.285	2.53/.100	3.55/.140	4.56/.180	5.06/.199	5.84/.230	6.34/.249	8.38/.330	8.88/.349	82-56-345-60 □	82-56-345-50 □	9.32/.367	12.32/.485	16.13/.635
7.27/.286	7.75/.305	3.04/.120	4.06/.160	5.07/.200	5.57/.219	6.35/.250	6.85/.269	8.89/.350	9.39/.369	82-56-365-60 □	82-56-365-50 □	9.83/.387	12.83/.505	16.64/.655
7.77/.306	8.26/.325	3.55/.140	4.56/.180	5.58/.220	6.08/.239	6.86/.270	7.36/.289	9.40/.370	9.90/.389	82-56-385-60 □	82-56-385-50 □	10.34/.407	13.34/.525	17.15/.675
8.28/.326	8.76/.345	4.06/.160	5.07/.200	6.09/.240	6.59/.259	7.37/.290	7.86/.309	9.91/.390	10.40/.409	82-56-405-60 □	82-56-405-50 □	10.85/.427	13.84/.545	17.65/.695
8.79/.346	9.27/.365	4.56/.180	5.58/.220	6.60/.260	7.09/.279	7.87/.310	8.37/.329	10.41/.410	10.91/.429	82-56-425-60 □	82-56-425-50 □	11.35/.447	14.35/.565	18.16/.715
9.30/.366	9.78/.385	5.07/.200	6.09/.240	7.10/.280	7.60/.299	8.38/.330	8.88/.349	10.92/.430	11.42/.449	82-56-445-60 □	82-56-445-50 □	11.86/.467	14.86/.585	18.67/.735
9.80/.386	10.29/.405	5.58/.220	6.60/.260	7.61/.300	8.11/.319	8.89/.350	9.39/.369	11.43/.450	11.93/.469	82-56-465-60 □	82-56-465-50 □	12.37/.487	15.37/.605	19.18/.755
10.31/.406	10.80/.425	6.09/.240	7.10/.280	8.12/.320	8.62/.339	9.40/.370	9.90/.389	11.94/.470	12.44/.489	82-56-485-60 □	82-56-485-50 □	12.88/.507	15.88/.625	19.69/.775
10.82/.426	11.30/.445	6.60/.260	7.61/.300	8.63/.340	9.13/.359	9.91/.390	10.40/.409	12.45/.490	12.94/.509	82-56-505-60 □	82-56-505-50 □	13.39/.527	16.38/.645	20.19/.795
11.33/.446	11.81/.465	7.10/.280	8.12/.320	9.14/.360	9.63/.379	10.41/.410	10.91/.429	12.95/.510	13.45/.529	82-56-525-60 □	82-56-525-50 □	13.89/.547	16.89/.665	20.70/.815
11.84/.466	12.32/.485	7.61/.300	8.63/.340	9.64/.380	10.14/.399	10.92/.430	11.42/.449	13.46/.530	13.96/.549	82-56-545-60 □	82-56-545-50 □	14.40/.567	17.40/.685	21.21/.835
12.34/.486	12.83/.505	8.12/.320	9.14/.360	10.15/.400	10.65/.419	11.43/.450	11.93/.469	13.97/.550	14.47/.569	82-56-565-60 □	82-56-565-50 □	14.91/.587	17.91/.705	21.72/.855
12.85/.506	13.34/.525	8.63/.340	9.64/.380	10.66/.420	11.16/.439	11.94/.470	12.44/.489	14.48/.570	14.98/.589	82-56-585-60 □	82-56-585-50 □	15.42/.607	18.42/.725	22.23/.875
13.36/.526	13.84/.545	9.14/.360	10.15/.400	11.17/.440	11.67/.459	12.45/.490	12.94/.509	14.99/.590	15.48/.609	82-56-605-60 □	82-56-605-50 □	15.93/.627	18.92/.745	22.73/.895
13.87/.546	14.35/.565	9.64/.380	10.66/.420	11.68/.460	12.17/.479	12.95/.510	13.45/.529	15.49/.610	15.99/.629	82-56-625-60 □	82-56-625-50 □	16.43/.647	19.43/.765	23.24/.915
14.38/.566	14.86/.585	10.15/.400	11.18/.440	12.18/.480	12.68/.499	13.46/.530	13.96/.549	16.00/.630	16.50/.649	82-56-645-60 □	82-56-645-50 □	16.94/.667	19.94/.785	23.75/.935
14.88/.586	15.37/.605	10.66/.420	11.68/.460	12.69/.500	13.19/.519	13.97/.550	14.47/.569	16.51/.650	17.01/.669	82-56-665-60 □	82-56-665-50 □	17.45/.687	20.45/.805	24.26/.955
15.39/.606	15.88/.625	11.18/.440	12.19/.480	13.20/.520	13.70/.539	14.48/.570	14.98/.589	17.02/.670	17.52/.689	82-56-685-60 □	82-56-685-50 □	17.96/.707	20.96/.825	24.77/.975
15.90/.626	16.38/.645	11.68/.460	12.70/.500	13.71/.540	14.21/.559	14.99/.590	15.48/.609	17.53/.690	18.02/.709	82-56-705-60 □	82-56-705-50 □	18.47/.727	21.46/.845	25.27/.995
16.41/.646	16.89/.665	12.19/.480	13.20/.520	14.22/.560	14.71/.579	15.49/.610	15.99/.629	18.03/.710	18.53/.729	82-56-725-60 □	82-56-725-50 □	18.97/.747	21.97/.865	25.78/1.015
16.92/.666	17.40/.685	12.70/.500	13.72/.540	14.72/.580	15.22/.599	16.00/.630	16.50/.649	18.54/.730	19.04/.749	82-56-745-60 □	82-56-745-50 □	19.48/.767	22.48/.885	26.29/1.035
17.42/.686	17.91/.705	13.20/.520	14.22/.560	15.23/.600	15.73/.619	16.51/.650	17.01/.669	19.05/.750	19.55/.769	82-56-765-60 □	82-56-765-50 □	19.99/.787	22.99/.905	26.80/1.055
17.93/.706	18.42/.725	13.72/.540	14.73/.580	15.74/.620	16.24/.639	17.02/.670	17.52/.689	19.56/.770	20.06/.789	82-56-785-60 □	82-56-785-50 □	20.50/.807	23.50/.925	27.31/1.075
18.44/.726	18.92/.745	14.22/.560	15.24/.600	16.25/.640	16.75/.659	17.53/.690	18.02/.709	20.07/.790	20.56/.809	82-56-805-60 □	82-56-805-50 □	21.01/.827	24.00/.945	27.81/1.095

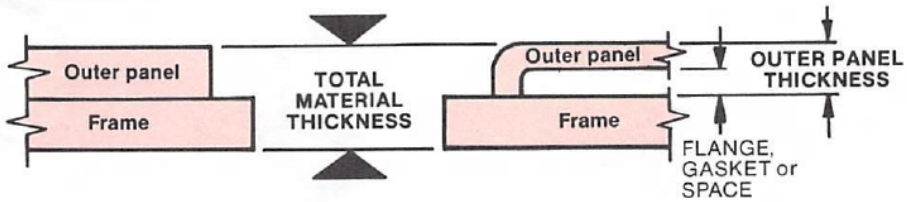
¼-turn fasteners
No. 85 size



SHOWN APPROXIMATELY ACTUAL SIZE.

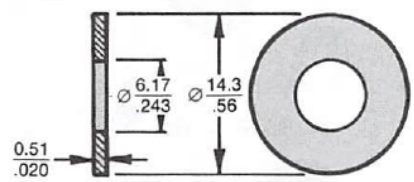
¼-turn fasteners
No. 85 fastener selection

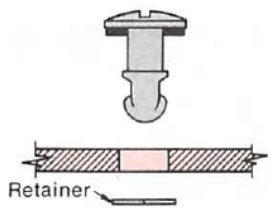
To select correct fastener:



1. Choose a receptacle. (Note any frame thickness limitations.)
2. To select a stud,
   a) measure your Outer Panel Thickness or Total Material Thickness (note under receptacle part number will tell you which to use).
   b) if adjustment formula is shown under receptacle part number apply this formula to your measurement.
   c) if sealing washers, stud ejector springs or wear washers will be used, apply proper adjustment formulas to your measurement.
   d) use measurement (or adjusted measurement) to find part number in table, see pages B-30 to B-33, under stud head style you want.
3. Choose a retainer.
4. Review the stud installation procedure.
5. Order each component and tool (if required) separately by part number.

Sealing Washer



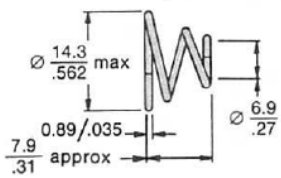


Part Number 85-43-201-38 ■
nitrile fibre core rubber, black.

Adjustment Formula
Add 0.51/.020 to your Outer Panel Thickness or Total Material Thickness.

Stud Ejector

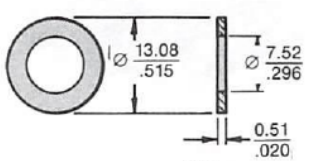
Ejector Spring



Part Number 14-18-150-24 ■
302 stainless steel, passivated.

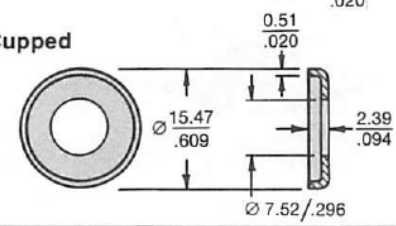
Nylon Wear Washers

Flat



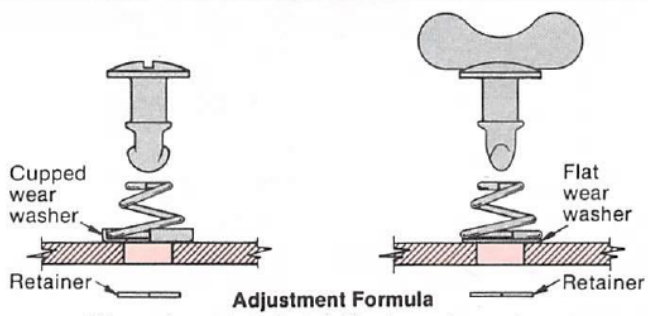
Part Number 85-46-103-39 ■
Natural

Cupped

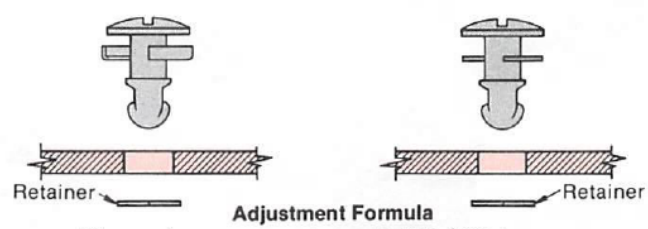


Part Number 85-46-101-41 ■
Black

Part Number 85-46-101-39 ■
Natural



Adjustment Formula
When using a stud ejector (ejector spring and wear washer), add 1.52/.060 to your Outer Panel Thickness or Total Material Thickness.

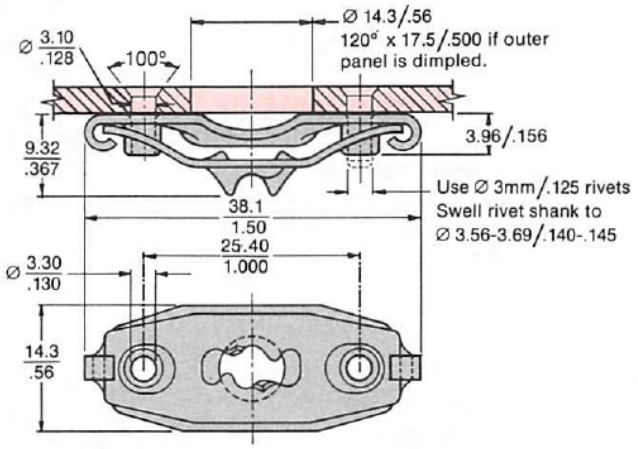


Adjustment Formula
When using a wear washer, add 0.51/.020 to your Outer Panel Thickness or Total Material Thickness.

■ From stock, subject to prior sale.

¼-turn fasteners
No. 85 receptacles

LEAF SPRING RECEPTACLES



SPRING MUST FLOAT FREELY AS BEFORE RIVETING.

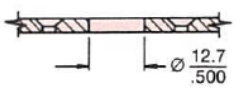
For riveting

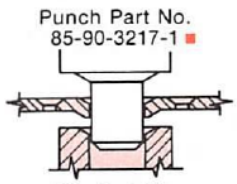
Part Number 85-35-295-15 ■
RECEPTACLE SPRING: 1064 steel, DACROTIZED†.
BASE: 1010 steel, DACROTIZED†.

Part Number 85-35-295-20 ■
RECEPTACLE SPRING: 17-7PH stainless steel, passivated.
BASE: 305 stainless steel, passivated.

To enter Stud Selection Table
determine your Total Material Thickness.

FOR DIMPLING INNER PANEL:

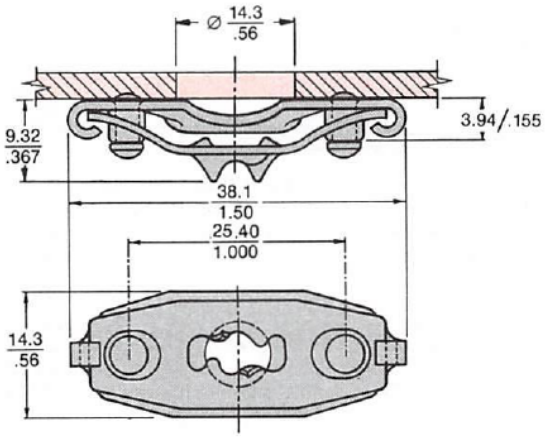




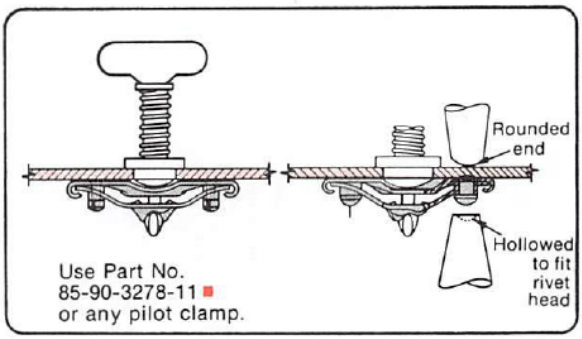
For welding

Part Number 85-35-296-15 ■
SPRING: 1064 steel, DACROTIZED†.
BASE: 1010 steel, DACROTIZED†.
RIVET: steel, copper plated.

To enter Stud Selection Table
determine your Total Material Thickness.

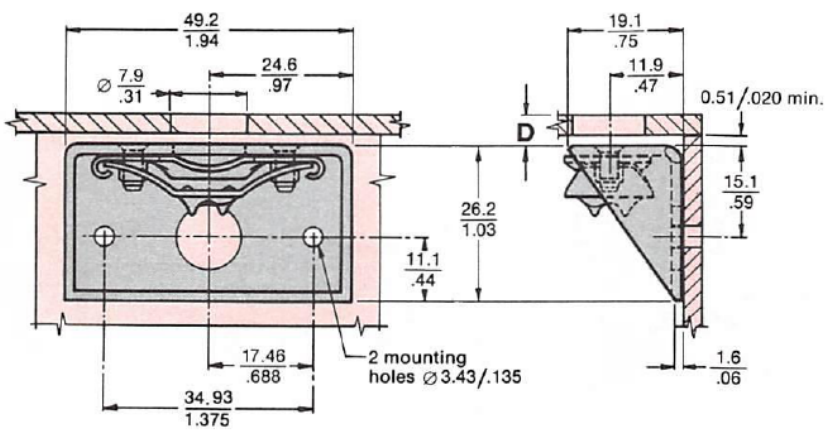


RIVET MUST NOT MELT OVER ONTO SPRING.



Side mount

Part Number 85-45-101-15 ■
ANGLE BRACKET: 1010 steel, DACROTIZED†.
SPRING: 1064 steel, DACROTIZED†.
BASE: 1010 steel, DACROTIZED†.
RIVET: 2117 aluminum, natural.

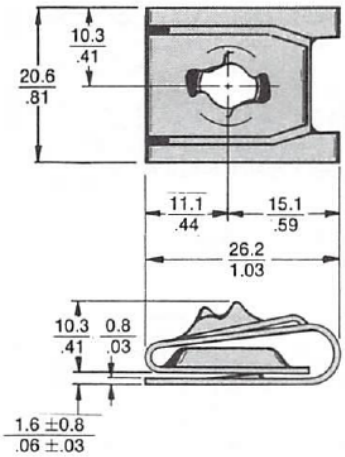


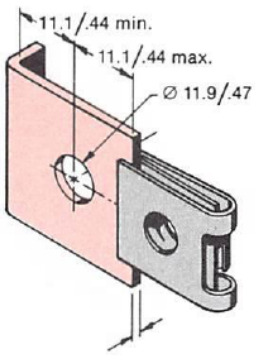
Adjustment Formula
To enter Stud Selection Table calculate:
D + 1.59/.062
and use Total Material Thickness column.

MILLIMETER/INCH
MILLIMETER
INCH

†Registered tradename of Metal Coatings International, Inc.
■ From stock, subject to prior sale.

1/4-turn fasteners
No. 85 receptacles





FRAME THICKNESS RANGE
1.6 to 4.8/.062 to .187 recommended
0.8 to 5.5/.032 to .218 extreme

Clip-on

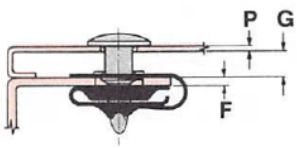
Part Number 85-47-101-15 ■
1064 steel, DACROTIZED†.

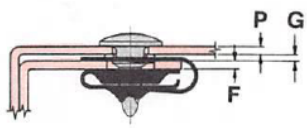
Part Number 85-47-101-20 ■
17-7 PH stainless steel, passivated.

Adjustment Formula

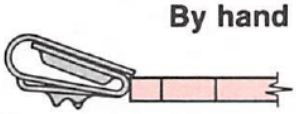
To enter Stud Selection Table determine your Total Material Thickness by calculating:

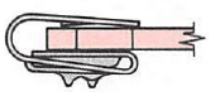
P + **F** + 0.94/.037 (constant) when **G** is 1.32/.052 .
P + **F** + **G** - 0.38/.015 (constant) when **G** is 1.33/.053 or greater.

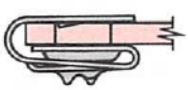




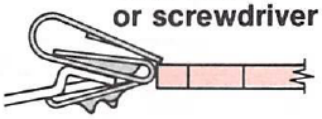
By hand

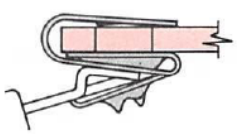


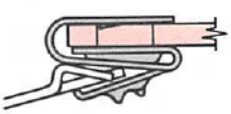


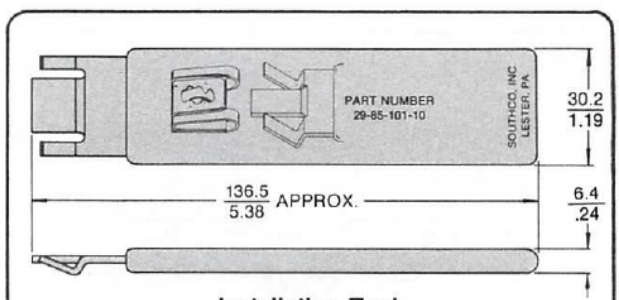


With tool or screwdriver





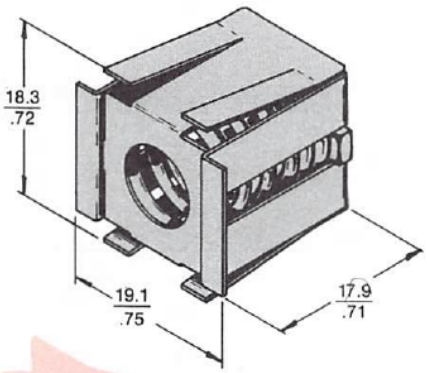




Installation Tool
Part Number 29-85-101-10 ■

Snap-in

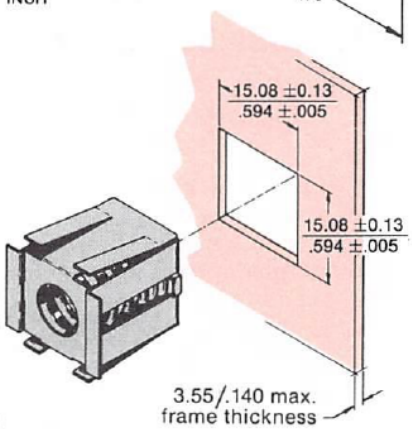
Part Number 85-35-309-56 ■
RETAINER and HOUSING: 301 stainless steel, natural.
RECEPTACLE: 1010 steel, hardened and DACROTIZED†.
SPRING: 302 stainless steel, passivated.

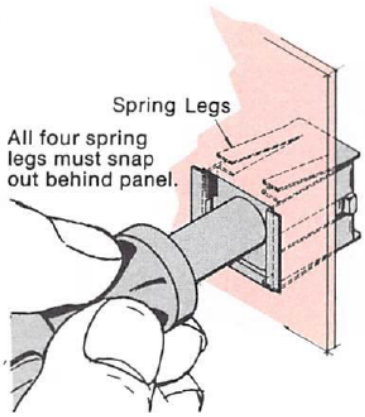


MILLIMETER/INCH
MILLIMETER
INCH

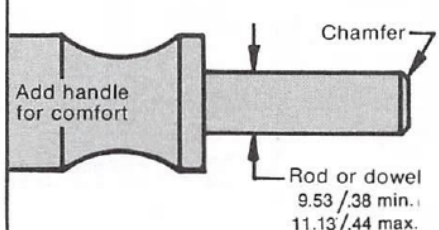
Adjustment Formula

To enter Stud Selection Table calculate:
Outer Panel Thickness + 8.38/.330
but use Total Material Thickness column.





Make tool for speed of installation.



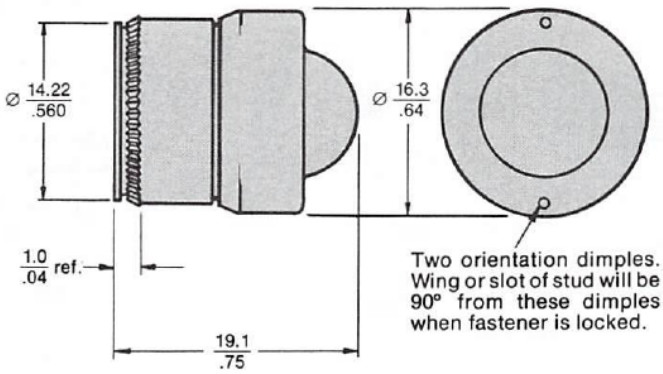
†Registered tradename of Metal Coatings International, Inc.
■ From stock, subject to prior sale.

¼-turn fasteners
No. 85 receptacles

Shielded press-in for sheet metal • Provides RFI-EMI shielding

Part Number 85-35-311-55 ■

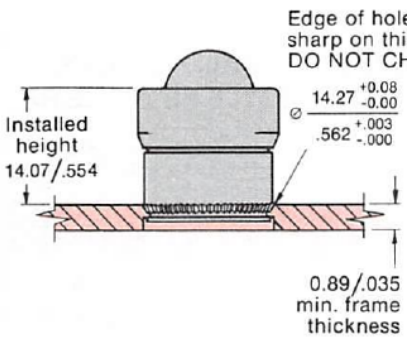
RECEPTACLE: 1010 steel, hardened and DACROTIZED†.
SHELL: low carbon steel, hardened and DACROTIZED†.
SPRING: 302 stainless steel, DACROTIZED†
CAP: 305 stainless steel, DACROTIZED†

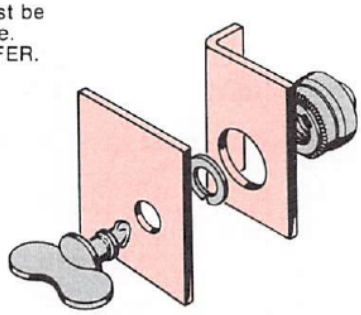


Adjustment Formula

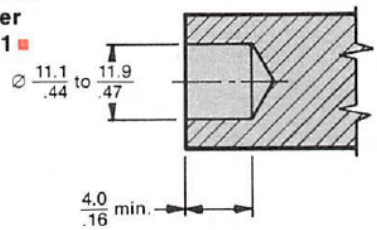
To enter Stud Selection Table determine your Total Material Thickness.

Substitute 1.40/.055 (constant) for frame thickness if frame thickness is less than 1.40/.055.

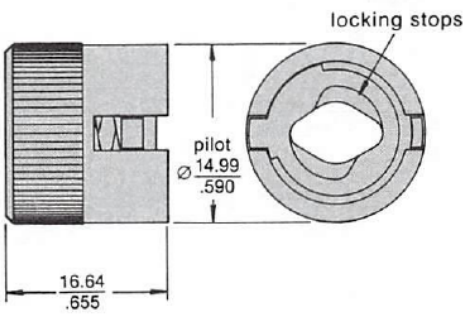




Installation Tool Part Number 90-2825-11 ■



Press-in for blind applications and solid materials

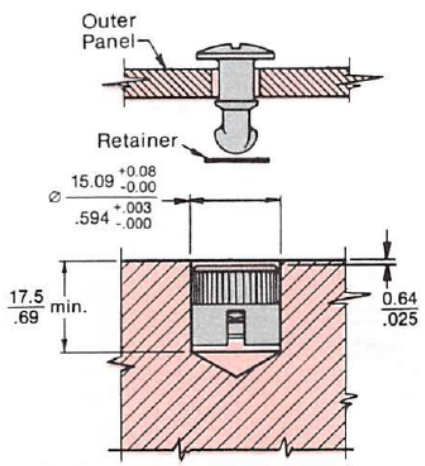


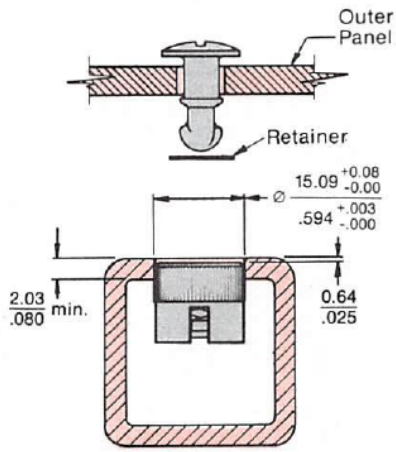
with 90° locking stops
Part Number 85-35-308-55 ■

without 90° locking stops
Part Number 85-35-313-55 ■

RECEPTACLE: 1010 steel, hardened and DACROTIZED†.
SHELL: low carbon steel, hardened and DACROTIZED†.
SPRING and RETAINER: 302 stainless steel, passivated.

To enter Stud Selection Table determine your Outer Panel Thickness.





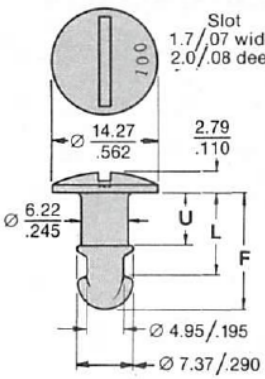
MILLIMETER/INCH
MILLIMETER
INCH

†Registered tradename of Metal Coatings International, Inc.
■ From stock, subject to prior sale.

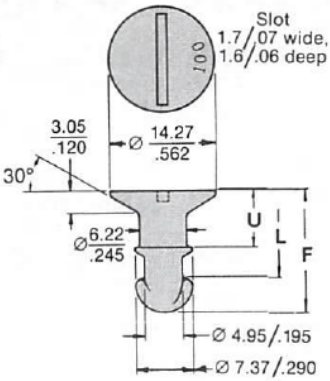
¼-turn fasteners
No. 85 stud selection

MATERIALS:
WING HEAD STUD: 1008 steel. WING: 1010 steel.
BAIL HEAD STUD: 1008 steel. BAIL: 1008/1010 steel
KNURLED HEAD: low carbon steel. OTHERS: 1008 steel.

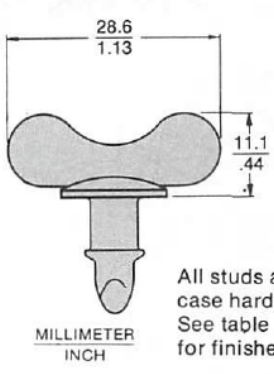
OVAL SLOTTED



FLUSH SLOTTED

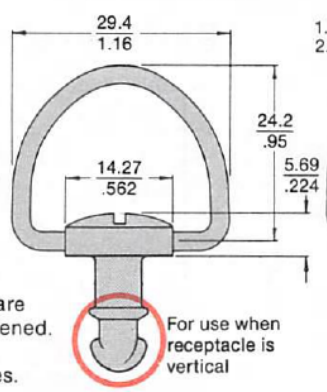


WING HEAD

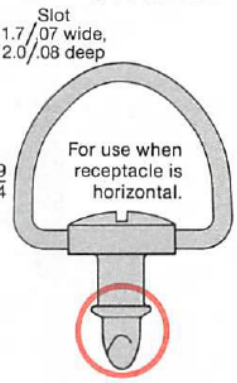


All studs are case hardened. See table for finishes.

BAIL STYLE RB



BAIL STYLE RA



FOR: Part Nos. 85-35-308-55 85-35-313-55		FOR: Part Nos. 85-35-311-55		FOR: ALL OTHER RECEPTACLES		STUD PART NUMBERS DACROTIZED† plus bright metallic organic coating				
OUTER PANEL THICKNESS		TOTAL MATERIAL THICKNESS		TOTAL MATERIAL THICKNESS		OVAL SLOTTED	FLUSH SLOTTED	WING HEAD	BAIL STYLE RB	BAIL STYLE RA
MIN.	MAX.	MIN.	MAX.	MIN.	MAX.					
				1.27/.050	1.77/.069	85-11-060-16 •	85-14-060-16 □	85-12-060-16 •	85-16-060-16 □	85-15-060-20 □
				1.78/.070	2.28/.089	85-11-080-16 •	85-14-080-16 □	85-12-080-16 •	85-16-080-16 □	85-15-080-20 □
				2.29/.090	2.78/.109	85-11-100-16 ■	85-14-100-16 □	85-12-100-16 •	85-16-100-16 □	85-15-100-20 □
				2.79/.110	3.29/.129	85-11-120-16 ■	85-14-120-16 □	85-12-120-16 ■	85-16-120-16 ■	85-15-120-20 □
				3.30/.130	3.80/.149	85-11-140-16 ■	85-14-140-16 □	85-12-140-16 ■	85-16-140-16 ■	85-15-140-20 □
				3.81/.150	4.31/.169	85-11-160-16 ■	85-14-160-16 ■	85-12-160-16 ■	85-16-160-16 ■	85-15-160-20 □
				4.32/.170	4.81/.189	85-11-180-16 ■	85-14-180-16 ■	85-12-180-16 ■	85-16-180-16 ■	85-15-180-20 □
				4.83/.190	5.32/.209	85-11-200-16 ■	85-14-200-16 ■	85-12-200-16 ■	85-16-200-16 ■	85-15-200-20 □
				5.33/.210	5.83/.229	85-11-220-16 ■	85-14-220-16 ■	85-12-220-16 ■	85-16-220-16 ■	85-15-220-20 □
		1.27/.050	1.77/.069	5.84/.230	6.34/.209	85-11-240-16 ■	85-14-240-16 ■	85-12-240-16 ■	85-16-240-16 ■	85-15-240-20 □
0.38/.015	0.88/.034	1.78/.070	2.28/.089	6.35/.250	6.85/.269	85-11-260-16 ■	85-14-260-16 ■	85-12-260-16 ■	85-16-260-16 ■	85-15-260-20 □
0.89/.035	1.39/.054	2.29/.090	2.78/.109	6.86/.270	7.36/.289	85-11-280-16 ■	85-14-280-16 ■	85-12-280-16 ■	85-16-280-16 ■	85-15-280-20 □
1.40/.055	1.89/.074	2.79/.110	3.29/.129	7.37/.290	7.86/.309	85-11-300-16 ■	85-14-300-16 ■	85-12-300-16 ■	85-16-300-16 ■	85-15-300-20 □
1.90/.075	2.40/.094	3.30/.130	3.80/.149	7.87/.310	8.37/.329	85-11-320-16 ■	85-14-320-16 ■	85-12-320-16 ■	85-16-320-16 ■	85-15-320-20 □
2.41/.095	2.91/.114	3.81/.150	4.31/.169	8.38/.330	8.88/.349	85-11-340-16 ■	85-14-340-16 ■	85-12-340-16 ■	85-16-340-16 ■	85-15-340-20 □
2.92/.115	3.42/.134	4.32/.170	4.81/.189	8.89/.350	9.39/.369	85-11-360-16 ■	85-14-360-16 ■	85-12-360-16 ■	85-16-360-16 ■	85-15-360-20 □
3.43/.135	3.93/.154	4.83/.190	5.32/.209	9.40/.370	9.90/.389	85-11-380-16 ■	85-14-380-16 ■	85-12-380-16 ■	85-16-380-16 ■	85-15-380-20 □
3.94/.155	4.43/.174	5.33/.210	5.83/.229	9.91/.390	10.40/.409	85-11-400-16 ■	85-14-400-16 ■	85-12-400-16 ■	85-16-400-16 □	85-15-400-20 □
4.44/.175	4.94/.194	5.84/.230	6.34/.249	10.41/.410	10.91/.429	85-11-420-16 ■	85-14-420-16 □	85-12-420-16 ■	85-16-420-16 □	85-15-420-20 □
4.95/.195	5.45/.214	6.35/.250	6.85/.269	10.92/.430	11.42/.449	85-11-440-16 ■	85-14-440-16 □	85-12-440-16 ■	85-16-440-16 □	85-15-440-20 □
5.46/.215	5.96/.234	6.86/.270	7.36/.289	11.43/.450	11.93/.469	85-11-460-16 ■	85-14-460-16 □	85-12-460-16 •	85-16-460-16 □	85-15-460-20 □
5.97/.235	6.47/.254	7.37/.290	7.86/.309	11.94/.470	12.44/.489	85-11-480-16 ■	85-14-480-16 □	85-12-480-16 •	85-16-480-16 □	85-15-480-20 □
6.48/.255	6.97/.274	7.87/.310	8.37/.329	12.45/.490	12.94/.509	85-11-500-16 ■	85-14-500-16 □	85-12-500-16 •	85-16-500-16 □	85-15-500-20 □
6.98/.275	7.49/.294	8.38/.330	8.88/.349	12.95/.510	13.45/.529	85-11-520-16 ■	85-14-520-16 □	85-12-520-16 •	85-16-520-16 □	85-15-520-20 □
7.49/.295	7.99/.314	8.89/.350	9.39/.369	13.46/.530	13.96/.549	85-11-540-16 ■	85-14-540-16 □	85-12-540-16 •	85-16-540-16 □	85-15-540-20 □
8.00/.315	8.50/.334	9.40/.370	9.90/.389	13.97/.550	14.47/.569	85-11-560-16 ■	85-14-560-16 □	85-12-560-16 •	85-16-560-16 □	85-15-560-20 □
8.51/.335	9.01/.354	9.91/.390	10.40/.409	14.48/.570	14.98/.589	85-11-580-16 ■	85-14-580-16 □	85-12-580-16 •	85-16-580-16 □	85-15-580-20 □
9.02/.355	9.51/.374	10.41/.410	10.91/.429	14.99/.590	15.48/.609	85-11-600-16 ■	85-14-600-16 □	85-12-600-16 •	85-16-600-16 □	85-15-600-20 □
9.52/.375	10.02/.394	10.92/.430	11.42/.449	15.49/.610	15.99/.629	85-11-620-16 ■	85-14-620-16 □	85-12-620-16 •	85-16-620-16 □	85-15-620-20 □
10.03/.395	10.53/.414	11.43/.450	11.93/.469	16.00/.630	16.50/.649	85-11-640-16 •	85-14-640-16 □	85-12-640-16 •	85-16-640-16 □	85-15-640-20 □
10.54/.415	11.04/.434	11.94/.470	12.44/.489	16.51/.650	17.01/.669	85-11-660-16 •	85-14-660-16 □	85-12-660-16 •	85-16-660-16 □	85-15-660-20 □
11.05/.435	11.55/.454	12.45/.490	12.94/.509	17.02/.670	17.52/.689	85-11-680-16 •	85-14-680-16 □	85-12-680-16 •	85-16-680-16 □	85-15-680-20 □
11.56/.455	12.05/.474	12.95/.510	13.45/.529	17.53/.690	18.02/.709	85-11-700-16 •	85-14-700-16 □	85-12-700-16 •	85-16-700-16 □	85-15-700-20 □
12.06/.475	12.56/.494	13.46/.530	13.96/.549	18.03/.710	18.53/.729	85-11-720-16 •	85-14-720-16 □	85-12-720-16 •	85-16-720-16 □	85-15-720-20 □
12.57/.495	13.07/.514	13.97/.550	14.47/.569	18.54/.730	19.04/.749	85-11-740-16 •	85-14-740-16 □	85-12-740-16 •	85-16-740-16 □	85-15-740-20 □
13.08/.515	13.58/.534	14.48/.570	14.98/.589	19.05/.750	19.55/.769	85-11-760-16 •	85-14-760-16 □	85-12-760-16 •	85-16-760-16 □	85-15-760-20 □
13.59/.535	14.09/.554	14.99/.590	15.48/.609	19.56/.770	20.06/.789	85-11-780-16 •	85-14-780-16 □	85-12-780-16 •	85-16-780-16 □	85-15-780-20 □
14.10/.555	14.59/.574	15.49/.610	15.99/.629	20.07/.790	20.56/.809	85-11-800-16 •	85-14-800-16 □	85-12-800-16 •	85-16-800-16 □	85-15-800-20 □
14.60/.575	15.10/.594	16.00/.630	16.50/.649	20.57/.810	21.07/.829	85-11-820-16 •	85-14-820-16 □	85-12-820-16 •	85-16-820-16 □	85-15-820-20 □
15.11/.595	15.61/.614	16.51/.650	17.01/.669	21.08/.830	21.58/.849	85-11-840-16 •	85-14-840-16 □	85-12-840-16 •	85-16-840-16 □	85-15-840-20 □
15.62/.615	16.12/.634	17.02/.670	17.52/.689	21.59/.850	22.09/.869	85-11-860-16 •	85-14-860-16 □	85-12-860-16 •	85-16-860-16 □	85-15-860-20 □
16.13/.635	16.63/.654	17.53/.690	18.02/.709	22.10/.870	22.60/.889	85-11-880-16 •	85-14-880-16 □	85-12-880-16 •	85-16-880-16 □	85-15-880-20 □
16.64/.655	17.13/.674	18.03/.710	18.53/.729	22.61/.890	23.10/.909	85-11-900-16 •	85-14-900-16 □	85-12-900-16 •	85-16-900-16 □	85-15-900-20 □
17.14/.675	17.64/.694	18.54/.730	19.04/.749	23.11/.910	23.61/.929	85-11-920-16 •	85-14-920-16 □	85-12-920-16 •	85-16-920-16 □	85-15-920-20 □
17.65/.695	18.15/.714	19.05/.750	19.55/.769	23.62/.930	24.12/.949	85-11-940-16 •	85-14-940-16 □	85-12-940-16 •	85-16-940-16 □	85-15-940-20 □
18.16/.715	18.66/.734	19.56/.770	20.06/.789	24.13/.950	24.63/.969	85-11-960-16 •	85-14-960-16 □	85-12-960-16 •	85-16-960-16 □	85-15-960-20 □
18.67/.735	19.17/.754	20.07/.790	20.56/.809	24.64/.970	25.14/.989	85-11-980-16 •	85-14-980-16 □	85-12-980-16 •	85-16-980-16 □	85-15-980-20 □
19.18/.755	19.68/.774	20.57/.810	21.07/.829	25.15/.990	25.64/1.009	85-11-1000-16 •	85-14-1000-16 □	85-12-1000-16 •	85-16-1000-16 □	85-15-1000-20 □

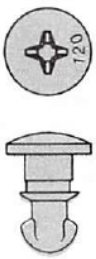
■ From stock, subject to prior sale. ● Up to 4 weeks.

STEEL

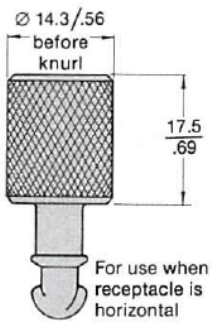
¼-turn fasteners
No. 85 stud selection

PHILLIPS RECESS

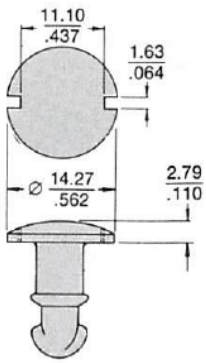
No. 2 Phillips recess

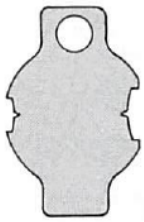


KNURLED HEAD



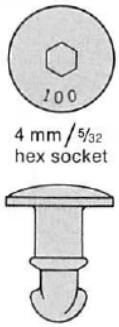
NOTCHED HEAD



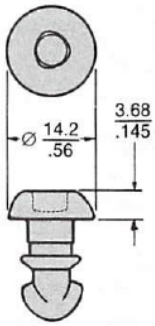


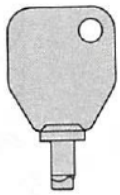
Key Part No. 85-40-104-11■
Order separately

HEX SOCKET



TOOL-HEAD





No. 5 Size Toolhead Key Part number 29-90-215-10 ■

STUD PART NUMBERS					DIMENSIONS		
Zinc plated plus bright chromate dip.	DACROTIZED† plus bright metallic organic coating		Zinc plated plus bright chromate dip	Case hardened steel, zinc plated	U	L	F
PHILLIPS RECESS	KNURLED HEAD	NOTCHED HEAD	HEX SOCKET	TOOL-HEAD			
85-P-060 ■	85-13-060-16 □	85-17-060-16 □	85-78-060-16 □	85-T-060 ■	4.19/.165	8.13/.320	12.83/.505
85-P-080 ■	85-13-080-16 □	85-17-080-16 □	85-78-080-16 □	85-T-080 ■	4.70/.185	8.64/.340	13.34/.525
85-P-100 ■	85-13-100-16 □	85-17-100-16 □	85-78-100-16 □	85-T-100 ■	5.21/.205	9.14/.360	13.84/.545
85-P-120 ■	85-13-120-16 ■	85-17-120-16 □	85-78-120-16 □	85-T-120 ■	5.72/.225	9.65/.380	14.35/.565
85-P-140 ■	85-13-140-16 ■	85-17-140-16 □	85-78-140-16 ■	85-T-140 ■	6.22/.245	10.16/.400	14.86/.585
85-P-160 ■	85-13-160-16 ■	85-17-160-16 □	85-78-160-16 ■	85-T-160 ■	6.73/.265	10.67/.420	15.37/.605
85-P-180 ■	85-13-180-16 ■	85-17-180-16 □	85-78-180-16 ■	85-T-180 ■	7.24/.285	11.18/.440	15.88/.625
85-P-200 ■	85-13-200-16 ■	85-17-200-16 □	85-78-200-16 ■	85-T-200 ■	7.75/.305	11.68/.460	16.38/.645
85-P-220 ■	85-13-220-16 ■	85-17-220-16 □	85-78-220-16 ■	85-T-220 ■	8.26/.325	12.19/.480	16.89/.665
85-P-240 ■	85-13-240-16 ■	85-17-240-16 □	85-78-240-16 ■	85-T-240 ■	8.76/.345	12.70/.500	17.40/.685
85-P-260 ■	85-13-260-16 ■	85-17-260-16 □	85-78-260-16 ■	85-T-260 ■	9.27/.365	13.21/.520	17.91/.705
85-P-280 ■	85-13-280-16 ■	85-17-280-16 □	85-78-280-16 ■	85-T-280 ■	9.78/.385	13.72/.540	18.42/.725
85-P-300 ■	85-13-300-16 ■	85-17-300-16 □	85-78-300-16 □	85-T-300 ■	10.29/.405	14.22/.560	18.92/.745
85-P-320 ■	85-13-320-16 ■	85-17-320-16 □	85-78-320-16 □	85-T-320 ■	10.80/.425	14.73/.580	19.43/.765
85-P-340 ■	85-13-340-16 ■	85-17-340-16 □	85-78-340-16 □	85-T-340 ■	11.30/.445	15.24/.600	19.94/.785
85-P-360 ■	85-13-360-16 ■	85-17-360-16 □	85-78-360-16 □	85-T-360 ■	11.81/.465	15.75/.620	20.45/.805
85-P-380 ■	85-13-380-16 ■	85-17-380-16 □	85-78-380-16 □	85-T-380 ■	12.32/.485	16.26/.640	20.96/.825
85-P-400 ■	85-13-400-16 ■	85-17-400-16 □	85-78-400-16 □	85-T-400 ■	12.83/.505	16.76/.660	21.46/.845
85-P-420 ■	85-13-420-16 ■	85-17-420-16 □	85-78-420-16 □	85-T-420 ■	13.34/.525	17.27/.680	21.97/.865
85-P-440 ■	85-13-440-16 ■	85-17-440-16 □	85-78-440-16 □	85-T-440 ■	13.84/.545	17.78/.700	22.48/.885
85-P-460 ■	85-13-460-16 ■	85-17-460-16 □	85-78-460-16 □	85-T-460 ■	14.35/.565	18.29/.720	22.99/.905
85-P-480 ■	85-13-480-16 ■	85-17-480-16 □	85-78-480-16 □	85-T-480 ■	14.86/.585	18.80/.740	23.50/.925
85-P-500 ■	85-13-500-16 □	85-17-500-16 □	85-78-500-16 □	85-T-500 ■	15.37/.605	19.30/.760	24.00/.945
85-P-520 ■	85-13-520-16 □	85-17-520-16 □	85-78-520-16 □	85-T-520 ■	15.88/.625	19.81/.780	24.51/.965
85-P-540 ■	85-13-540-16 □	85-17-540-16 □	85-78-540-16 □	85-T-540 ■	16.38/.645	20.32/.800	25.02/.985
85-P-560 ■	85-13-560-16 □	85-17-560-16 □	85-78-560-16 □	85-T-560 ■	16.89/.665	20.83/.820	25.53/1.005
85-P-580 ■	85-13-580-16 □	85-17-580-16 □	85-78-580-16 □	85-T-580 ■	17.40/.685	21.34/.840	26.04/1.025
85-P-600 ■	85-13-600-16 □	85-17-600-16 □	85-78-600-16 □	85-T-600 ■	17.91/.705	21.84/.860	26.54/1.045
85-P-620 ■	85-13-620-16 □	85-17-620-16 □	85-78-620-16 □	85-T-620 ■	18.42/.725	22.35/.880	27.05/1.065
85-P-640 ■	85-13-640-16 □	85-17-640-16 □	85-78-640-16 □	85-T-640 ■	18.92/.745	22.86/.900	27.56/1.085
85-P-660 ■	85-13-660-16 □	85-17-660-16 □	85-78-660-16 □	85-T-660 ■	19.43/.765	23.37/.920	28.07/1.105
85-P-680 ■	85-13-680-16 □	85-17-680-16 □	85-78-680-16 □	85-T-680 ■	19.94/.785	23.88/.940	28.58/1.125
85-P-700 ■	85-13-700-16 □	85-17-700-16 □	85-78-700-16 □	85-T-700 ■	20.45/.805	24.38/.960	29.08/1.145
85-P-720 ■	85-13-720-16 □	85-17-720-16 □	85-78-720-16 □	85-T-720 ■	20.96/.825	24.89/.980	29.59/1.165
85-P-740 ■	85-13-740-16 □	85-17-740-16 □	85-78-740-16 □	85-T-740 ■	21.46/.845	25.40/1.000	30.10/1.185
85-P-760 ■	85-13-760-16 □	85-17-760-16 □	85-78-760-16 □	85-T-760 ■	21.97/.865	25.91/1.020	30.61/1.205
85-P-780 ■	85-13-780-16 □	85-17-780-16 □	85-78-780-16 □	85-T-780 ■	22.48/.885	26.42/1.040	31.12/1.225
85-P-800 ■	85-13-800-16 □	85-17-800-16 □	85-78-800-16 □	85-T-800 ■	22.99/.905	26.92/1.060	31.62/1.245
85-P-820 ■	85-13-820-16 □	85-17-820-16 □	85-78-820-16 □	85-T-820 ■	23.50/.925	27.43/1.080	32.13/1.265
85-P-840 ■	85-13-840-16 □	85-17-840-16 □	85-78-840-16 □	85-T-840 ■	24.00/.945	27.94/1.100	32.64/1.285
85-P-860 ■	85-13-860-16 □	85-17-860-16 □	85-78-860-16 □	85-T-860 ■	24.51/.965	28.45/1.120	33.15/1.305
85-P-880 ■	85-13-880-16 □	85-17-880-16 □	85-78-880-16 □	85-T-880 ■	25.02/.985	28.96/1.140	33.66/1.325
85-P-900 ■	85-13-900-16 □	85-17-900-16 □	85-78-900-16 □	85-T-900 ■	25.53/1.005	29.46/1.160	34.46/1.345
85-P-920 ■	85-13-920-16 □	85-17-920-16 □	85-78-920-16 □	85-T-920 ■	26.04/1.025	29.97/1.180	34.67/1.365
85-P-940 ■	85-13-940-16 □	85-17-940-16 □	85-78-940-16 □	85-T-940 ■	26.54/1.045	30.48/1.200	35.18/1.385
85-P-960 ■	85-13-960-16 □	85-17-960-16 □	85-78-960-16 □	85-T-960 ■	27.05/1.065	30.99/1.220	35.69/1.405
85-P-980 ■	85-13-980-16 □	85-17-980-16 □	85-78-980-16 □	85-T-980 ■	27.56/1.085	31.55/1.240	36.20/1.425
85-P-1000 ■	85-13-1000-16 □	85-17-1000-16 □	85-78-1000-16 □	85-T-1000 ■	28.07/1.105	32.00/1.260	36.70/1.445

DELIVERY SYMBOLS
(see part numbers)

■ From stock, subject to prior sale.

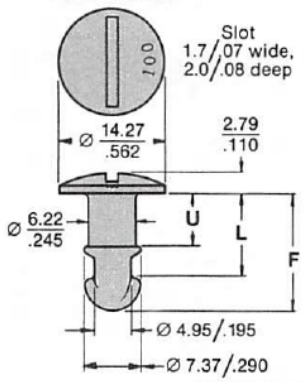
□ Up to 8 weeks. Minimum order required.

†Registered tradename of Metal Coatings International, Inc.

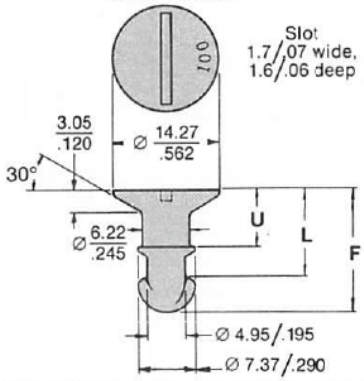
STEEL

¼-turn fasteners
No. 85 stud selection

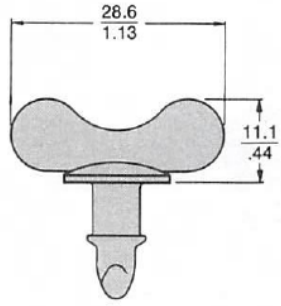
OVAL SLOTTED



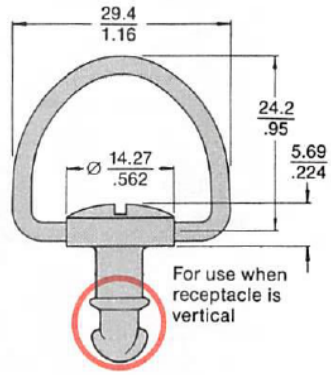
FLUSH SLOTTED



WING HEAD



BAIL STYLE RB



DELIVERY SYMBOLS
(see part numbers)

- ■ From stock, subject to prior sale.
- □ Up to 8 weeks. Minimum order required.

STAINLESS STEEL

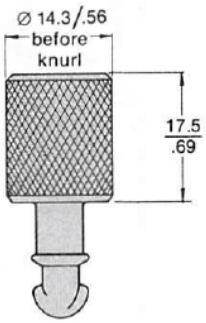
FOR:  Part Nos. 85-35-308-55 85-35-313-55		FOR:  Part No. 85-35-311-55		FOR: ALL OTHER RECEPTACLES		STUD PART NUMBERS 302 stainless steel, passivated.			
OUTER PANEL THICKNESS		TOTAL MATERIAL THICKNESS		TOTAL MATERIAL THICKNESS		OVAL SLOTTED	FLUSH SLOTTED	WING HEAD	BAIL STYLE RB
MIN.	MAX.	MIN.	MAX.	MIN.	MAX.				
				1.27/.050	1.77/.069	85-11-060-20 □	85-14-060-20 □	85-12-060-20 □	85-16-060-20 □
				1.78/.070	2.28/.089	85-11-080-20 □	85-14-080-20 □	85-12-080-20 □	85-16-080-20 □
				2.29/.090	2.78/.109	85-11-100-20 □	85-14-100-20 □	85-12-100-20 □	85-16-100-20 □
				2.79/.110	3.29/.129	85-11-120-20 ■	85-14-120-20 □	85-12-120-20 □	85-16-120-20 □
				3.30/.130	3.80/.149	85-11-140-20 ■	85-14-140-20 □	85-12-140-20 □	85-16-140-20 □
				3.81/.150	4.31/.169	85-11-160-20 ■	85-14-160-20 □	85-12-160-20 ■	85-16-160-20 □
				4.32/.170	4.81/.189	85-11-180-20 ■	85-14-180-20 □	85-12-180-20 ■	85-16-180-20 □
				4.83/.190	5.32/.209	85-11-200-20 ■	85-14-200-20 □	85-12-200-20 ■	85-16-200-20 □
				5.33/.210	5.83/.229	85-11-220-20 ■	85-14-220-20 □	85-12-220-20 ■	85-16-220-20 □
		1.27/.050	1.77/.069	5.84/.230	6.34/.249	85-11-240-20 ■	85-14-240-20 □	85-12-240-20 ■	85-16-240-20 □
0.38/.015	0.88/.034	1.78/.070	2.28/.089	6.35/.250	6.85/.269	85-11-260-20 ■	85-14-260-20 □	85-12-260-20 ■	85-16-260-20 □
0.89/.035	1.39/.054	2.29/.090	2.78/.109	6.86/.270	7.36/.289	85-11-280-20 ■	85-14-280-20 □	85-12-280-20 ■	85-16-280-20 □
1.40/.055	1.89/.074	2.79/.110	3.29/.129	7.37/.290	7.86/.309	85-11-300-20 ■	85-14-300-20 □	85-12-300-20 □	85-16-300-20 □
1.90/.075	2.40/.094	3.30/.130	3.80/.149	7.87/.310	8.37/.329	85-11-320-20 ■	85-14-320-20 □	85-12-320-20 □	85-16-320-20 □
2.41/.095	2.91/.114	3.81/.150	4.31/.169	8.38/.330	8.88/.349	85-11-340-20 ■	85-14-340-20 □	85-12-340-20 □	85-16-340-20 □
2.92/.115	3.42/.134	4.32/.170	4.81/.189	8.89/.350	9.39/.369	85-11-360-20 ■	85-14-360-20 □	85-12-360-20 □	85-16-360-20 □
3.43/.135	3.93/.154	4.83/.190	5.32/.209	9.40/.370	9.90/.389	85-11-380-20 ■	85-14-380-20 □	85-12-380-20 □	85-16-380-20 □
3.94/.155	4.43/.174	5.33/.210	5.83/.229	9.91/.390	10.40/.409	85-11-400-20 ■	85-14-400-20 □	85-12-400-20 □	85-16-400-20 □
4.44/.175	4.94/.194	5.84/.230	6.34/.249	10.41/.410	10.91/.429	85-11-420-20 ■	85-14-420-20 □	85-12-420-20 □	85-16-420-20 □
4.95/.195	5.45/.214	6.35/.250	6.85/.269	10.92/.430	11.42/.449	85-11-440-20 ■	85-14-440-20 □	85-12-440-20 □	85-16-440-20 □
5.46/.215	5.96/.234	6.86/.270	7.36/.289	11.43/.450	11.93/.469	85-11-460-20 ■	85-14-460-20 □	85-12-460-20 □	85-16-460-20 □
5.97/.235	6.47/.254	7.37/.290	7.86/.309	11.94/.470	12.44/.489	85-11-480-20 ■	85-14-480-20 □	85-12-480-20 □	85-16-480-20 □
6.48/.255	6.97/.274	7.87/.310	8.37/.329	12.45/.490	12.94/.509	85-11-500-20 ■	85-14-500-20 □	85-12-500-20 □	85-16-500-20 □
6.98/.275	7.49/.294	8.38/.330	8.88/.349	12.95/.510	13.45/.529	85-11-520-20 □	85-14-520-20 □	85-12-520-20 □	85-16-520-20 □
7.49/.295	7.99/.314	8.89/.350	9.39/.369	13.46/.530	13.96/.549	85-11-540-20 □	85-14-540-20 □	85-12-540-20 □	85-16-540-20 □
8.00/.315	8.50/.334	9.40/.370	9.90/.389	13.97/.550	14.47/.569	85-11-560-20 □	85-14-560-20 □	85-12-560-20 □	85-16-560-20 □
8.51/.335	9.01/.354	9.91/.390	10.40/.409	14.48/.570	14.98/.589	85-11-580-20 □	85-14-580-20 □	85-12-580-20 □	85-16-580-20 □
9.02/.355	9.51/.374	10.41/.410	10.91/.429	14.99/.590	15.48/.609	85-11-600-20 □	85-14-600-20 □	85-12-600-20 □	85-16-600-20 □
9.52/.375	10.02/.394	10.92/.430	11.42/.449	15.49/.610	15.99/.629	85-11-620-20 □	85-14-620-20 □	85-12-620-20 □	85-16-620-20 □
10.03/.395	10.53/.414	11.43/.450	11.93/.469	16.00/.630	16.50/.649	85-11-640-20 □	85-14-640-20 □	85-12-640-20 □	85-16-640-20 □
10.54/.415	11.04/.434	11.94/.470	12.44/.489	16.51/.650	17.01/.669	85-11-660-20 □	85-14-660-20 □	85-12-660-20 □	85-16-660-20 □
11.05/.435	11.55/.454	12.45/.490	12.94/.509	17.02/.670	17.52/.689	85-11-680-20 □	85-14-680-20 □	85-12-680-20 □	85-16-680-20 □
11.56/.455	12.05/.474	12.95/.510	13.45/.529	17.53/.690	18.02/.709	85-11-700-20 □	85-14-700-20 □	85-12-700-20 □	85-16-700-20 □
12.06/.475	12.56/.494	13.46/.530	13.96/.549	18.03/.710	18.53/.729	85-11-720-20 □	85-14-720-20 □	85-12-720-20 □	85-16-720-20 □
12.57/.495	13.07/.514	13.97/.550	14.47/.569	18.54/.730	19.04/.749	85-11-740-20 □	85-14-740-20 □	85-12-740-20 □	85-16-740-20 □
13.08/.515	13.58/.534	14.48/.570	14.98/.589	19.05/.750	19.55/.769	85-11-760-20 □	85-14-760-20 □	85-12-760-20 □	85-16-760-20 □
13.59/.535	14.09/.554	14.99/.590	15.48/.609	19.56/.770	20.06/.789	85-11-780-20 □	85-14-780-20 □	85-12-780-20 □	85-16-780-20 □
14.10/.555	14.59/.574	15.49/.610	15.99/.629	20.07/.790	20.56/.809	85-11-800-20 □	85-14-800-20 □	85-12-800-20 □	85-16-800-20 □
14.60/.575	15.10/.594	16.00/.630	16.50/.649	20.57/.810	21.07/.829	85-11-820-20 □	85-14-820-20 □	85-12-820-20 □	85-16-820-20 □
15.11/.595	15.61/.614	16.51/.650	17.01/.669	21.08/.830	21.58/.849	85-11-840-20 □	85-14-840-20 □	85-12-840-20 □	85-16-840-20 □
15.62/.615	16.12/.634	17.02/.670	17.52/.689	21.59/.850	22.09/.869	85-11-860-20 □	85-14-860-20 □	85-12-860-20 □	85-16-860-20 □
16.13/.635	16.63/.654	17.53/.690	18.02/.709	22.10/.870	22.60/.889	85-11-880-20 □	85-14-880-20 □	85-12-880-20 □	85-16-880-20 □
16.64/.655	17.13/.674	18.03/.710	18.53/.729	22.61/.890	23.10/.909	85-11-900-20 □	85-14-900-20 □	85-12-900-20 □	85-16-900-20 □
17.14/.675	17.64/.694	18.54/.730	19.04/.749	23.11/.910	23.61/.929	85-11-920-20 □	85-14-920-20 □	85-12-920-20 □	85-16-920-20 □
17.65/.695	18.15/.714	19.05/.750	19.55/.769	23.62/.930	24.12/.949	85-11-940-20 □	85-14-940-20 □	85-12-940-20 □	85-16-940-20 □
18.16/.715	18.66/.734	19.56/.770	20.06/.789	24.13/.950	24.63/.969	85-11-960-20 □	85-14-960-20 □	85-12-960-20 □	85-16-960-20 □
18.67/.735	19.17/.754	20.07/.790	20.56/.809	24.64/.970	25.14/.989	85-11-980-20 □	85-14-980-20 □	85-12-980-20 □	85-16-980-20 □
19.18/.755	19.68/.774	20.57/.810	21.07/.829	25.15/.990	25.64/1.009	85-11-1000-20 □	85-14-1000-20 □	85-12-1000-20 □	85-16-1000-20 □

¼-turn fasteners
No. 85 stud selection

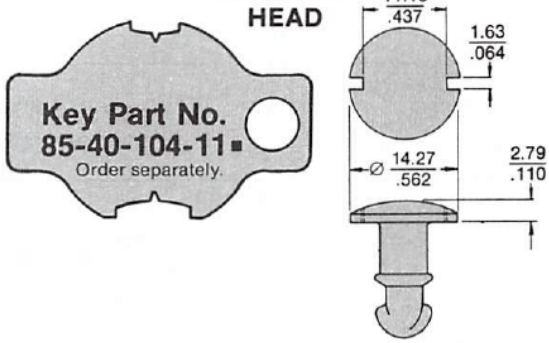
BAIL STYLE RA



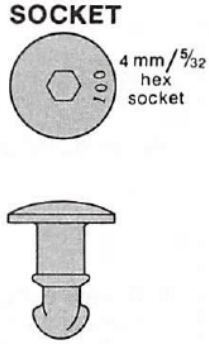
KNURLED HEAD



NOTCHED HEAD



HEX SOCKET



STUD PART NUMBERS				DIMENSIONS		
302 stainless steel, passivated.						
BAIL STYLE RA	KNURLED HEAD	NOTCHED HEAD	HEX SOCKET	U	L	F
85-15-060-20 □	85-13-060-20 □	85-17-060-20 □	85-78-060-20 □	4.19/.165	8.13/.320	12.83/.505
85-15-080-20 □	85-13-080-20 □	85-17-080-20 □	85-78-080-20 □	4.70/.185	8.64/.340	13.34/.525
85-15-100-20 □	85-13-100-20 □	85-17-100-20 □	85-78-100-20 □	5.21/.205	9.14/.360	13.84/.545
85-15-120-20 □	85-13-120-20 □	85-17-120-20 □	85-78-120-20 □	5.72/.225	9.65/.380	14.35/.565
85-15-140-20 □	85-13-140-20 □	85-17-140-20 □	85-78-140-20 □	6.22/.245	10.16/.400	14.86/.585
85-15-160-20 □	85-13-160-20 □	85-17-160-20 □	85-78-160-20 □	6.73/.265	10.67/.420	15.37/.605
85-15-180-20 □	85-13-180-20 □	85-17-180-20 □	85-78-180-20 □	7.24/.285	11.18/.440	15.88/.625
85-15-200-20 □	85-13-200-20 □	85-17-200-20 □	85-78-200-20 □	7.75/.305	11.68/.460	16.38/.645
85-15-220-20 □	85-13-220-20 □	85-17-220-20 □	85-78-220-20 □	8.26/.325	12.19/.480	16.89/.665
85-15-240-20 □	85-13-240-20 □	85-17-240-20 □	85-78-240-20 □	8.76/.345	12.70/.500	17.40/.685
85-15-260-20 □	85-13-260-20 □	85-17-260-20 □	85-78-260-20 □	9.27/.365	13.21/.520	17.91/.705
85-15-280-20 □	85-13-280-20 □	85-17-280-20 □	85-78-280-20 □	9.78/.385	13.72/.540	18.42/.725
85-15-300-20 □	85-13-300-20 □	85-17-300-20 □	85-78-300-20 □	10.29/.405	14.22/.560	18.92/.745
85-15-320-20 □	85-13-320-20 □	85-17-320-20 □	85-78-320-20 □	10.80/.425	14.73/.580	19.43/.765
85-15-340-20 □	85-13-340-20 □	85-17-340-20 □	85-78-340-20 □	11.30/.445	15.24/.600	19.94/.785
85-15-360-20 □	85-13-360-20 □	85-17-360-20 □	85-78-360-20 □	11.81/.465	15.75/.620	20.45/.805
85-15-380-20 □	85-13-380-20 □	85-17-380-20 □	85-78-380-20 □	12.32/.485	16.26/.640	20.96/.825
85-15-400-20 □	85-13-400-20 □	85-17-400-20 □	85-78-400-20 □	12.83/.505	16.76/.660	21.46/.845
85-15-420-20 □	85-13-420-20 □	85-17-420-20 □	85-78-420-20 □	13.34/.525	17.27/.680	21.97/.865
85-15-440-20 □	85-13-440-20 □	85-17-440-20 □	85-78-440-20 □	13.84/.545	17.78/.700	22.48/.885
85-15-460-20 □	85-13-460-20 □	85-17-460-20 □	85-78-460-20 □	14.35/.565	18.29/.720	22.99/.905
85-15-480-20 □	85-13-480-20 □	85-17-480-20 □	85-78-480-20 □	14.86/.585	18.80/.740	23.50/.925
85-15-500-20 □	85-13-500-20 □	85-17-500-20 □	85-78-500-20 □	15.37/.605	19.30/.760	24.00/.945
85-15-520-20 □	85-13-520-20 □	85-17-520-20 □	85-78-520-20 □	15.88/.625	19.81/.780	24.51/.965
85-15-540-20 □	85-13-540-20 □	85-17-540-20 □	85-78-540-20 □	16.38/.645	20.32/.800	25.02/.985
85-15-560-20 □	85-13-560-20 □	85-17-560-20 □	85-78-560-20 □	16.89/.665	20.83/.820	25.53/1.005
85-15-580-20 □	85-13-580-20 □	85-17-580-20 □	85-78-580-20 □	17.40/.685	21.34/.840	26.04/1.025
85-15-600-20 □	85-13-600-20 □	85-17-600-20 □	85-78-600-20 □	17.91/.705	21.84/.860	26.54/1.045
85-15-620-20 □	85-13-620-20 □	85-17-620-20 □	85-78-620-20 □	18.42/.725	22.35/.880	27.05/1.065
85-15-640-20 □	85-13-640-20 □	85-17-640-20 □	85-78-640-20 □	18.92/.745	22.86/.900	27.56/1.085
85-15-660-20 □	85-13-660-20 □	85-17-660-20 □	85-78-660-20 □	19.43/.765	23.37/.920	28.07/1.105
85-15-680-20 □	85-13-680-20 □	85-17-680-20 □	85-78-680-20 □	19.94/.785	23.88/.940	28.58/1.125
85-15-700-20 □	85-13-700-20 □	85-17-700-20 □	85-78-700-20 □	20.45/.805	24.38/.960	29.08/1.145
85-15-720-20 □	85-13-720-20 □	85-17-720-20 □	85-78-720-20 □	20.96/.825	24.89/.980	29.59/1.165
85-15-740-20 □	85-13-740-20 □	85-17-740-20 □	85-78-740-20 □	21.46/.845	25.40/1.000	30.10/1.185
85-15-760-20 □	85-13-760-20 □	85-17-760-20 □	85-78-760-20 □	21.97/.865	25.91/1.020	30.61/1.205
85-15-780-20 □	85-13-780-20 □	85-17-780-20 □	85-78-780-20 □	22.48/.885	26.42/1.040	31.12/1.225
85-15-800-20 □	85-13-800-20 □	85-17-800-20 □	85-78-800-20 □	22.99/.905	26.92/1.060	31.62/1.245
85-15-820-20 □	85-13-820-20 □	85-17-820-20 □	85-78-820-20 □	23.50/.925	27.43/1.080	32.13/1.265
85-15-840-20 □	85-13-840-20 □	85-17-840-20 □	85-78-840-20 □	24.00/.945	27.94/1.100	32.64/1.285
85-15-860-20 □	85-13-860-20 □	85-17-860-20 □	85-78-860-20 □	24.51/.965	28.45/1.120	33.15/1.305
85-15-880-20 □	85-13-880-20 □	85-17-880-20 □	85-78-880-20 □	25.02/.985	28.96/1.140	33.66/1.325
85-15-900-20 □	85-13-900-20 □	85-17-900-20 □	85-78-900-20 □	25.53/1.005	29.46/1.160	34.16/1.345
85-15-920-20 □	85-13-920-20 □	85-17-920-20 □	85-78-920-20 □	26.04/1.025	29.97/1.180	34.67/1.365
85-15-940-20 □	85-13-940-20 □	85-17-940-20 □	85-78-940-20 □	26.54/1.045	30.48 /1.200	35.18/1.385
85-15-960-20 □	85-13-960-20 □	85-17-960-20 □	85-78-960-20 □	27.05/1.065	30.99/1.220	35.69/1.405
85-15-980-20 □	85-13-980-20 □	85-17-980-20 □	85-78-980-20 □	27.56/1.085	31.55/1.240	36.20/1.425
85-15-1000-20 □	85-13-1000-20 □	85-17-1000-20 □	85-78-1000-20 □	28.07/1.105	32.00/1.260	36.70/1.445

DELIVERY SYMBOLS
(see part numbers)

- ■ From stock, subject to prior sale.
- □ Up to 8 weeks. Minimum order required.

STAINLESS STEEL

MILLIMETER
INCH

MILLIMETER/INCH

¼-turn fasteners
No. 85 stud installation

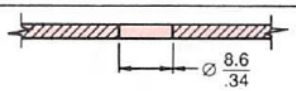
FOR: Flush head style



When panel is dimpled, only Receptacles 85-35-295-15, 85-35-295-20, and 85-35-296-15 can be used.

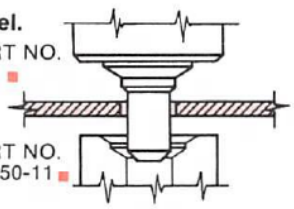
When outer panel is 2.39/.094 or less.

1. Drill.



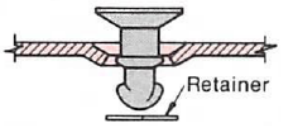
2. Dimple panel.

PUNCH PART NO. 85-0-6780-11 ■



DIE PART NO. 85-90-3150-11 ■

3. Insert stud and add retainer.

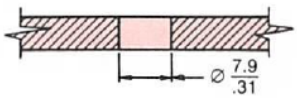


Use receptacles 85-35-295-15, 85-35-295-20, or 85-35-296-15 *only.*

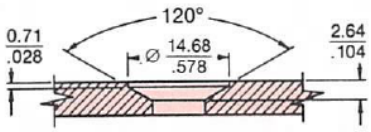


When outer panel is 2.40/.095 or greater.

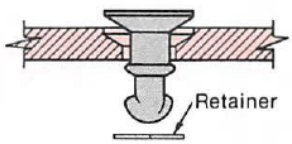
1. Drill.



2. Countersink to depth of stud head.



3. Insert stud and add retainer.

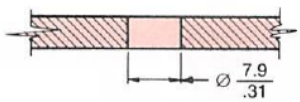


FOR: Above-surface styles

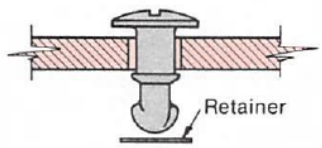


For any panel thickness.

1. Drill.



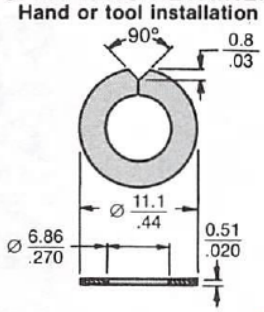
2. Insert stud and add retainer.



RETAINERS:

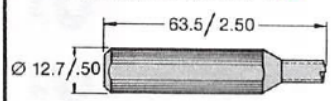
MILLIMETER/INCH MILLIMETER / INCH

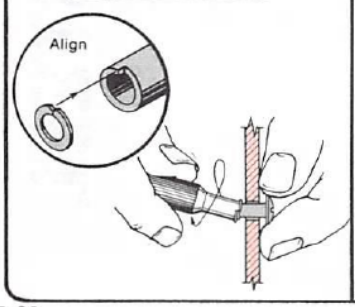
SPLIT-RING RETAINER
Hand or tool installation



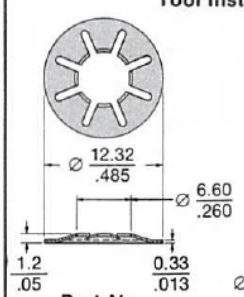
Part No. 85-34-101-20 ■
302 stainless steel, passivated.

To install use tool Part No. **85-0-5520-11** ■

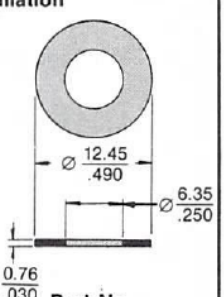




PUSH-ON RETAINERS
Tool installation

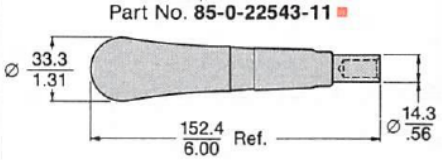


Part No. 85-34-201-20 ■
302 stainless steel, passivated.

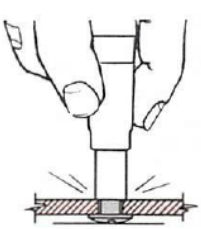


Part No. 85-34-301-12 ■
nylon, black.

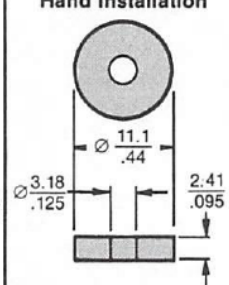
To install, use tool Part No. **85-0-22543-11** ■





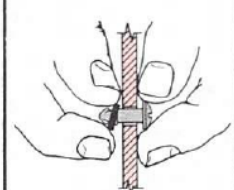


GR RETAINER
Hand installation



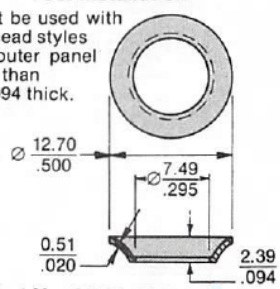
Part No. 85-33-101-27 ■
neoprene, black.

To install



GO or GOS RETAINER
Tool installation

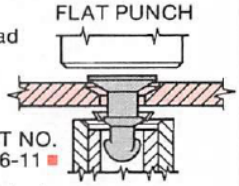
Cannot be used with flush head styles when outer panel is less than 2.39/.094 thick.



Part No. 85-31-093-18 ■
5052 aluminum, natural.

Part No. 85-31-093-15 ■ 1010 steel, zinc plated plus yellow chromate dip.

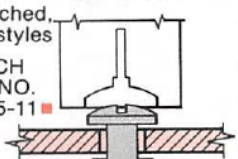
To install
For flush head styles
FLAT PUNCH



DIE PART NO. 85-0-3166-11 ■

For wing, notched, or oval head styles

PUNCH PART NO. 85-90-3165-11 ■

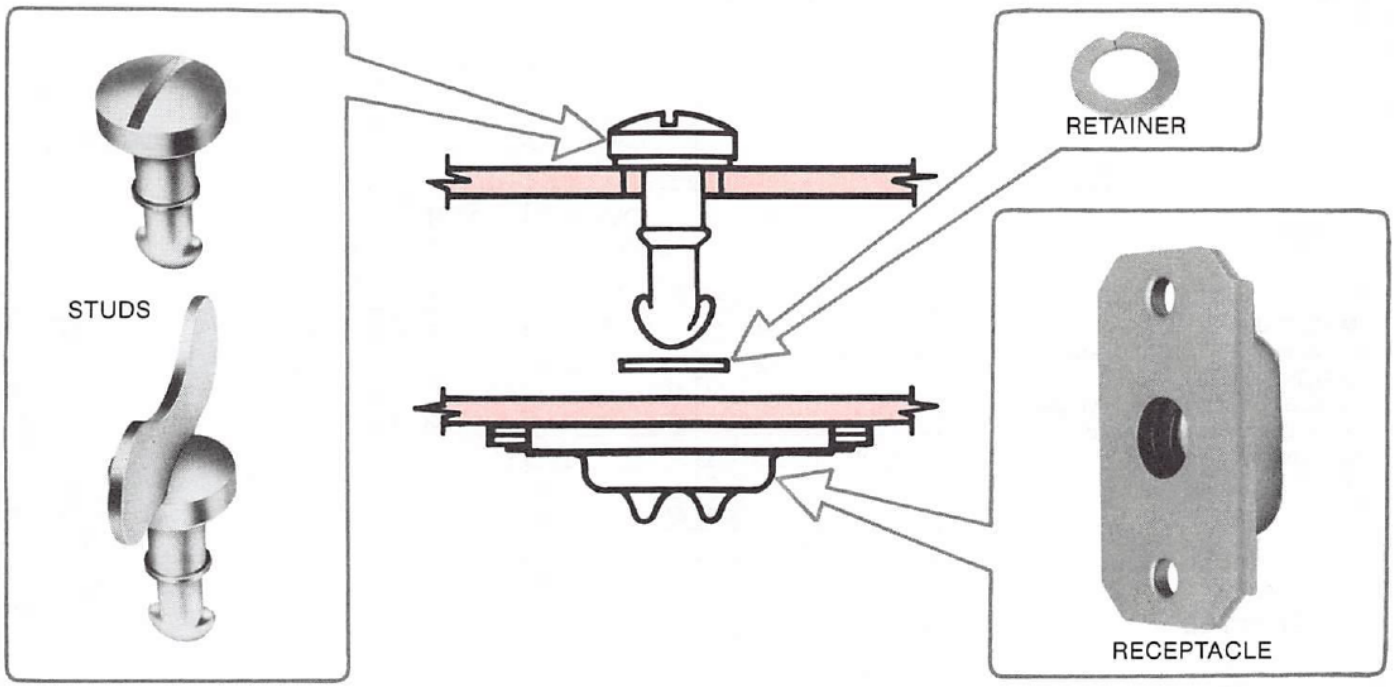


DIE PART NO. 85-0-3166-11 ■

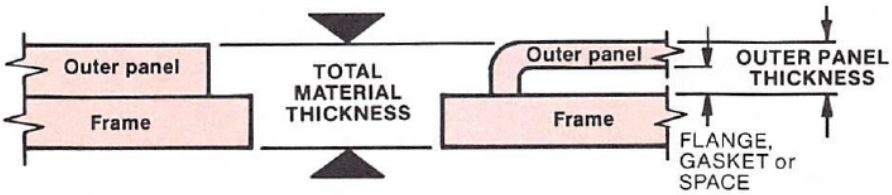
■ From stock, subject to prior sale.

¼-turn fasteners
No. 87 size

SHOWN APPROXIMATELY ACTUAL SIZE.



To select correct fastener:

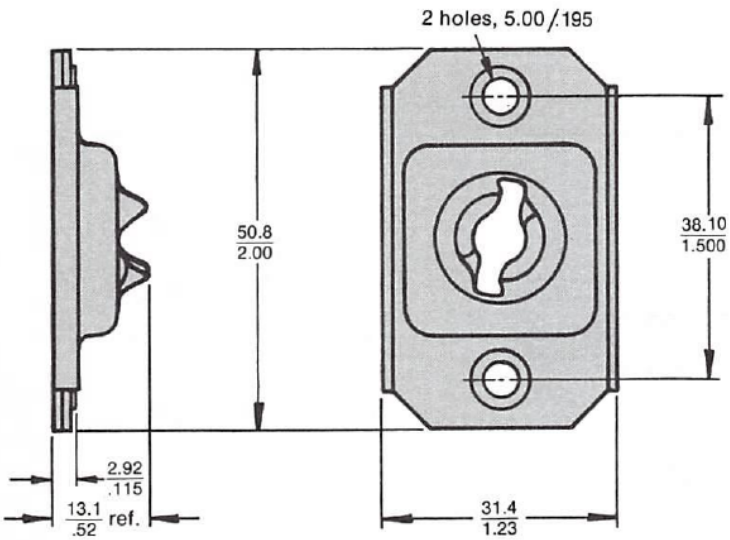


1. Determine your Total Material Thickness.
2. To select stud part number, locate your Total Material Thickness (table, next page). Read across to the column of the head style you want.
3. Order stud, receptacle, retainer, and tool (if required) separately by part number.

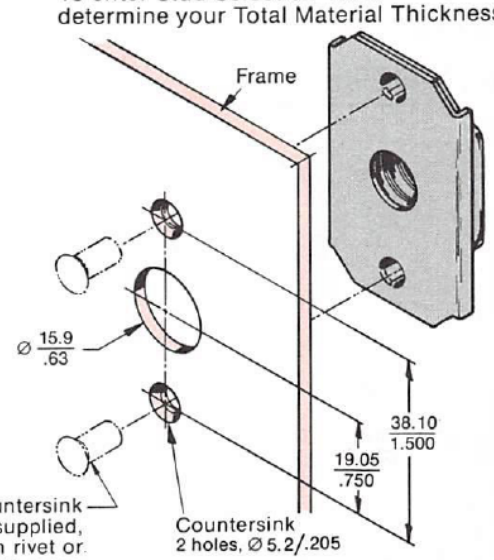
receptacle

Part Number 87-35-102-15 ■

BASE, COVER and RECEPTACLE: 1010 steel, case hardened and zinc plated plus yellow chromate dip. SPRING WASHER: spring steel, DACROTIZED†.



To enter Stud Selection Table determine your Total Material Thickness.



■ From stock, subject to prior sale.

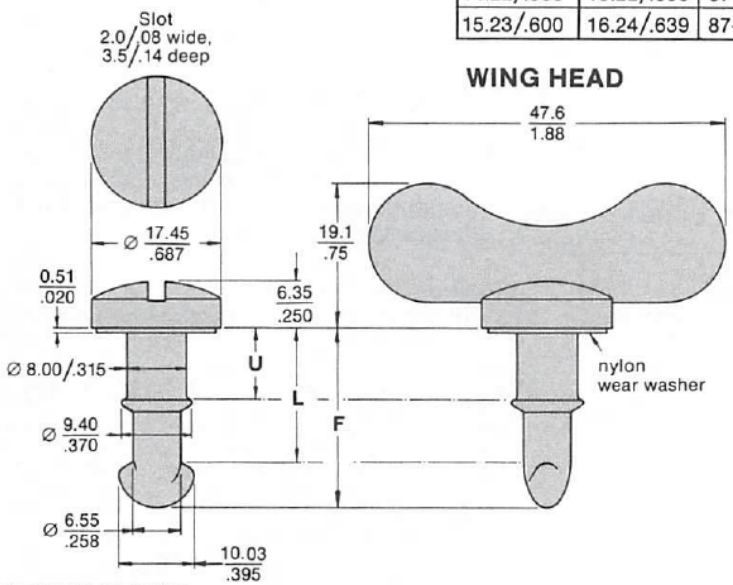
¼-turn fasteners
No. 87 stud installation

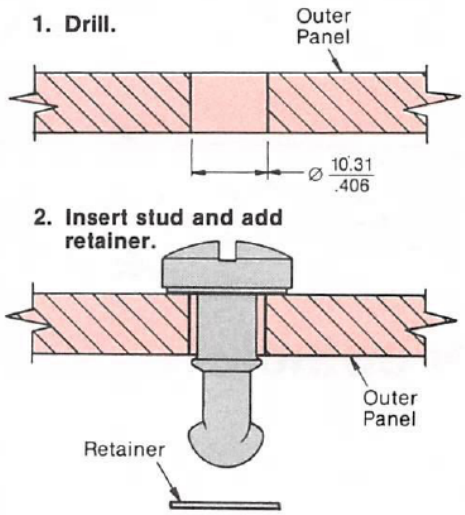
DELIVERY SYMBOLS
(see part numbers)
■ From stock, subject to prior sale.

TOTAL MATERIAL THICKNESS		PART NUMBERS		DIMENSIONS		
		DACROTIZED† plus bright metallic organic coating		U	L	F
MIN.	MAX.	OVAL SLOTTED	WING HEAD			
3.04/.120	4.05/.159	87-11-140-16 ■	87-12-140-16 ■	5.41/.213	13.79/.543	19.69/.775
4.06/.160	5.06/.199	87-11-180-16 ■	87-12-180-16 ■	6.43/.253	14.81/.583	20.70/.815
5.07/.200	6.08/.239	87-11-220-16 ■	87-12-220-16 ■	7.44/.293	15.82/.623	21.72/.855
6.09/.240	7.09/.279	87-11-260-16 ■	87-12-260-16 ■	8.46/.333	16.84/.663	22.73/.895
7.10/.280	8.11/.319	87-11-300-16 ■	87-12-300-16 ■	9.47/.373	17.86/.703	23.75/.935
8.12/.320	9.13/.359	87-11-340-16 ■	87-12-340-16 ■	10.49/.413	18.87/.743	24.77/.975
9.14/.360	10.14/.399	87-11-380-16 ■	87-12-380-16 ■	11.51/.453	19.89/.783	25.78/1.015
10.15/.400	11.16/.439	87-11-420-16 ■	87-12-420-16 ■	12.52/.493	20.90/.823	26.80/1.055
11.17/.440	12.17/.479	87-11-460-16 ■	87-12-460-16 ■	13.54/.533	21.92/.863	27.81/1.095
12.18/.480	13.19/.519	87-11-500-16 ■	87-12-500-16 ■	14.55/.573	22.94/.903	28.83/1.135
13.20/.520	14.21/.559	87-11-540-16 ■	87-12-540-16 ■	15.57/.613	23.95/.943	29.85/1.175
14.22/.560	15.22/.599	87-11-580-16 ■	87-12-580-16 ■	16.59/.653	24.97/.983	30.86/1.215
15.23/.600	16.24/.639	87-11-620-16 ■	87-12-620-16 ■	17.60/.693	25.98/1.023	31.88/1.255

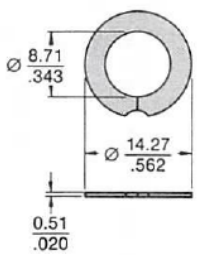
MATERIALS:
WING HEAD STUD: low carbon steel.
WING: 1010 steel.
OVAL SLOTTED: low carbon steel.
All studs are case hardened.
See table for finishes.

OVAL SLOTTED

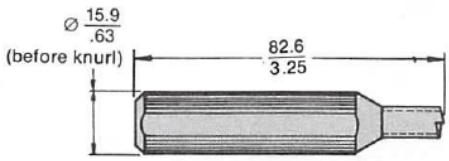




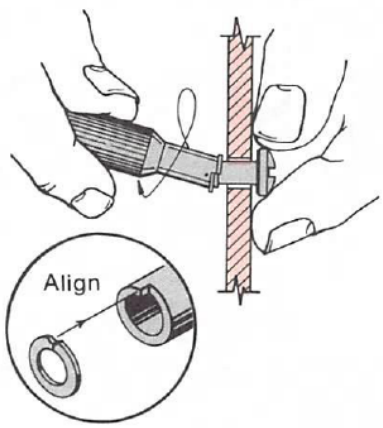
RETAINER:



Part Number 87-32-101-20 ■
302 stainless steel,
passivated.



To install use tool
Part Number 87-0-16292-11 ■



MILLIMETER/INCH
MILLIMETER
INCH

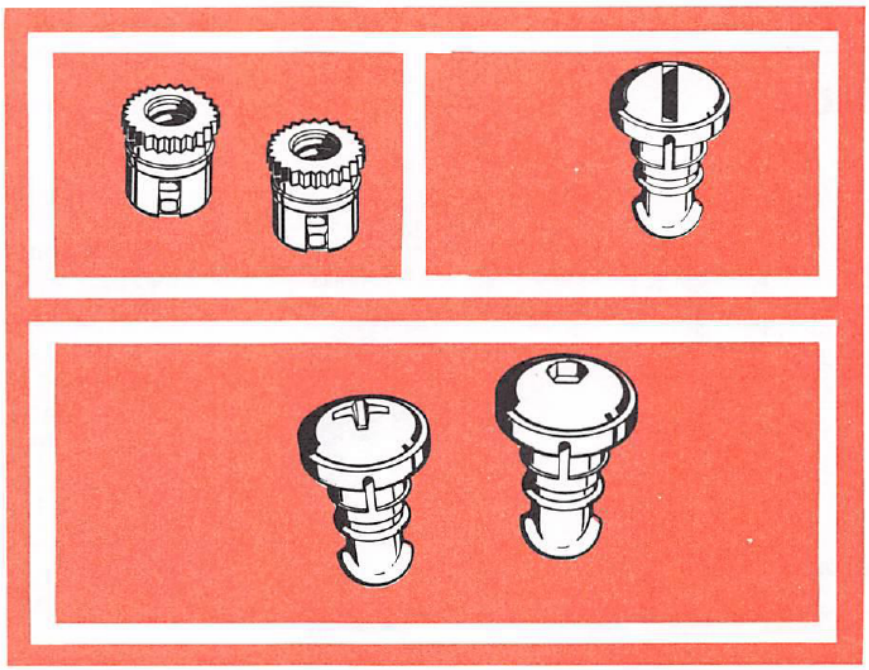
†Registered tradename of Metal Coatings International, Inc.

Section BB

¼-turn Fasteners
Snap-in Studs

contents guide | **page**

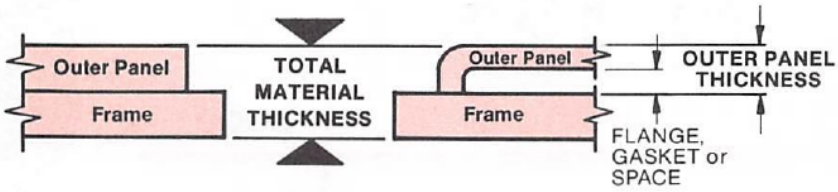
No. 82 Snap-in Stud Selection	BB-2
No. 82 Receptacles for Snap-in Studs	BB-3 to BB-5
No. 82 Snap-in Stud selection and Installation	BB-6 to BB-7



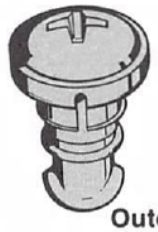
¼-turn fasteners
No. 82 Snap-in Stud Assemblies

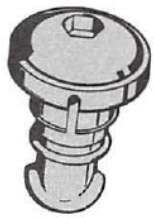
- Quick installation
- Self captivating
- Panel protection

To select correct fastener:







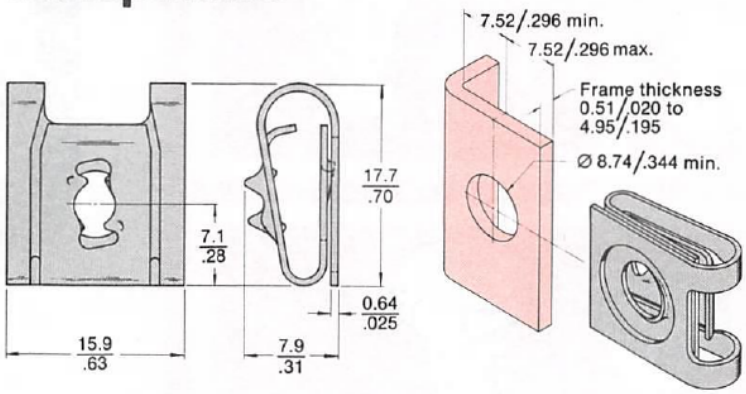


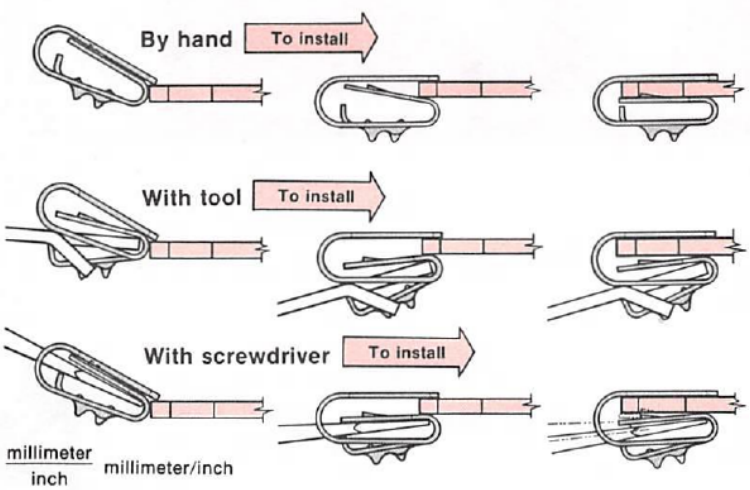
Outer Panel Thickness for Snap-in Studs
1.52/.060 min.
3.18/.125 max.

1. Choose a receptacle. (Note any panel or frame thickness limitations.)
2. To select a stud,
   a) measure your Outer Panel Thickness or Total Material Thickness, as required by your choice of receptacle.
   b) if adjustment formula is shown under receptacle part number, apply this formula to your measurement.
   c) use measurement (or adjusted measurement) to find part number in table, see pages B-23 & B-24.
3. Review the stud installation procedure.

Order each component and installation tool (if required) separately by part number.

Receptacles





Clip-on

Part Number 82-47-113-15 ■
1064 steel, DACROTIZED†.

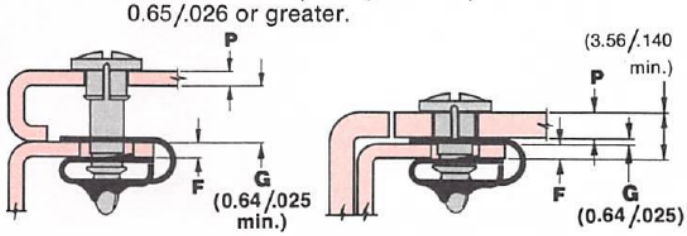
Part Number 82-47-113-20 ■
17-7 PH stainless steel, passivated.

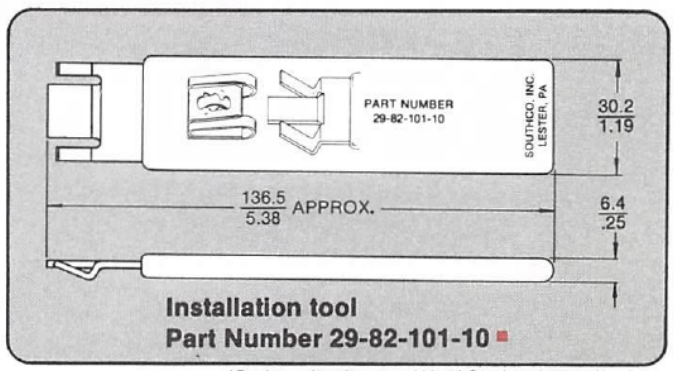
Adjustment Formula

To enter Snap-in Stud Selection Table determine your Total Material Thickness by calculating:

P + F + 1.91/.075 (constant) when **G** is 0.64/.025.

P + F + G + 1.27/.050 (constant) when **G** is 0.65/.026 or greater.



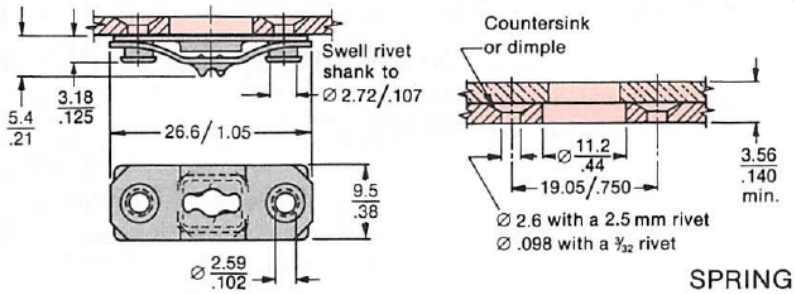


Installation tool
Part Number 29-82-101-10 ■

†Registered tradename of Metal Coatings International, Inc.

■ From stock, subject to prior sale.

¼-turn fasteners
No. 82 Receptacles for Snap-in Studs
LEAF SPRING RECEPTACLES

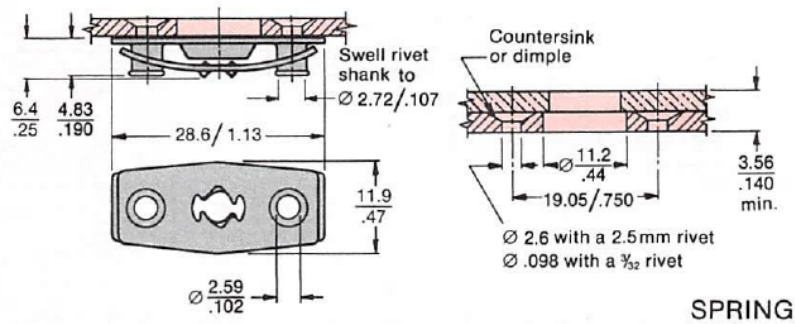


For riveting— With base
Part Number 82-35-302-15 ■

SPRING: 1064 steel, DACROTIZED†.
BASE: 1010 steel, DACROTIZED†.

To enter Snap-in Stud Selection Table determine your Total Material Thickness + 0.51/.020.

SPRING MUST FLOAT FREELY AS BEFORE RIVETING.

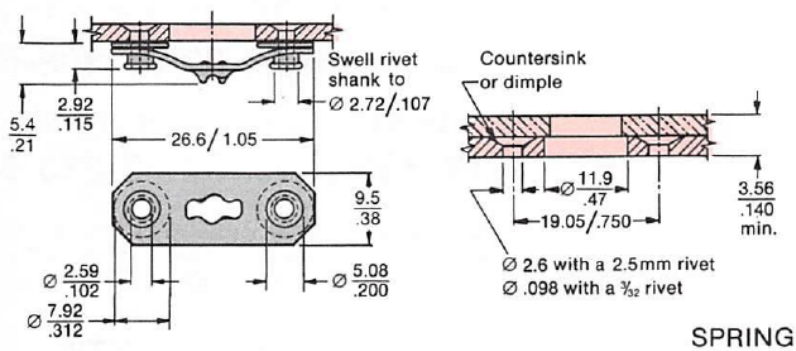


Heavy duty
Part Number 82-35-402-15 ■

SPRING: 1064 steel, DACROTIZED†.
BASE: 1010 steel, DACROTIZED†.

To enter Snap-in Stud Selection Table determine your Total Material Thickness + 0.51/.020.

SPRING MUST FLOAT FREELY AS BEFORE RIVETING.



For riveting— Without base
Part Number 82-35-295-15 ■

SPRING: 1064 steel, DACROTIZED†.
EYELET: steel, DACROTIZED†.

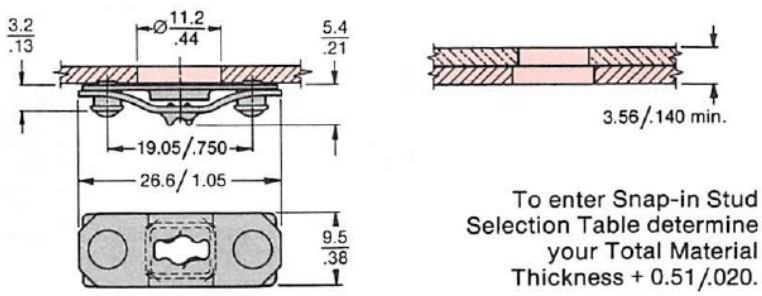
Part Number 82-35-295-20 ■

SPRING: 17-7 PH stainless steel, passivated.
EYELET: 302 or 305 stainless steel, passivated.

To enter Snap-in Stud Selection Table determine your Total Material Thickness + 0.51/.020.

SPRING MUST FLOAT FREELY AS BEFORE RIVETING.

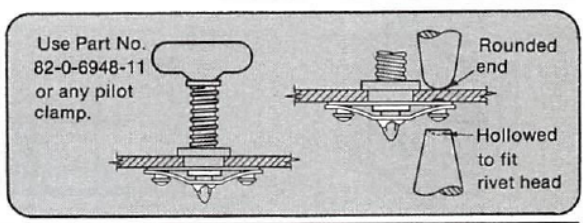
RIVET MUST NOT MELT OVER ONTO SPRING.



To enter Snap-in Stud Selection Table determine your Total Material Thickness + 0.51/.020.

For welding
Part Number 82-35-303-15 ■

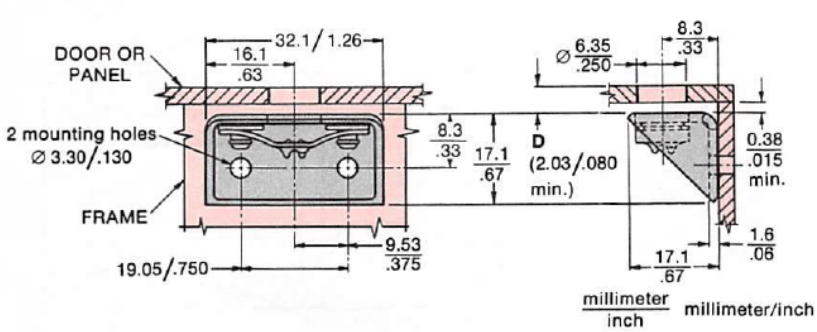
SPRING: 1064 steel, DACROTIZED†.
BASE: 1010 steel, DACROTIZED†.
WELDING STUDS: steel, copper plate.



Side mount
Part Number 82-45-101-15 ■

SPRING: 1064 steel, DACROTIZED†.
ANGLE BRACKET: 1010 steel, DACROTIZED†.
EYELET: steel, DACROTIZED†.

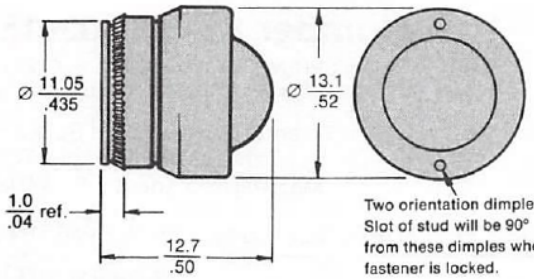
To enter Snap-in Stud Selection Table calculate **D** + 2.03/.080 and use Total Material Thickness column.



†Registered tradename of Metal Coatings International, Inc.
■ From stock, subject to prior sale.

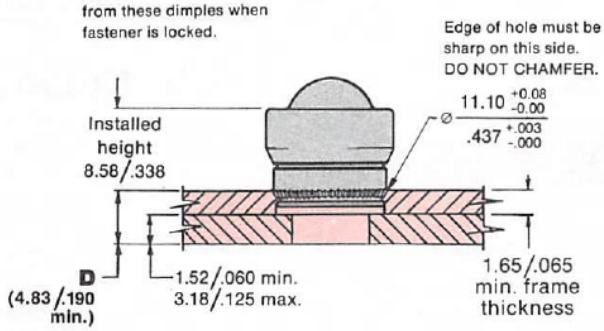
¼-turn fasteners
No. 82 Receptacles for Snap-in Studs

Shielded press-in for sheet metal • Provides RFI-EMI shielding



Part Number 82-35-311-55 ■

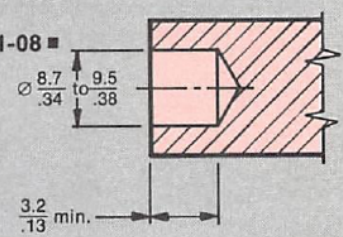
RECEPTACLE: 1010 steel, hardened and DACROTIZED†.
SHELL: low carbon steel, hardened and DACROTIZED†.
SPRING: 302 stainless steel, DACROTIZED†.
CAP: 305 stainless steel DACROTIZED†.



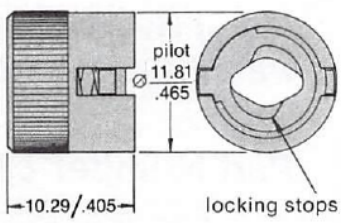
Adjustment Formula

To enter Snap-in Stud Selection Table determine your Total Material Thickness, **D** + 0.51/.020.

Installation Tool Part No. 73-0-11771-08 ■



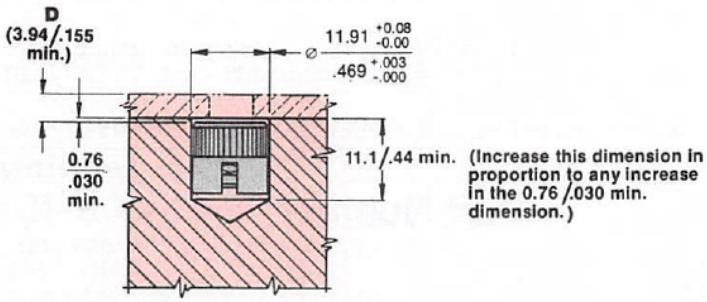
Press-in for blind applications and solid plastics



with 90° locking stops
Part Number 82-35-308-55 ■

without 90° locking stops
Part Number 82-35-313-55 ■

RECEPTACLE: 1010 steel, hardened and DACROTIZED†.
SHELL: low carbon steel, hardened and DACROTIZED†.
RETAINER and SPRING: 302 stainless steel, DACROTIZED†.



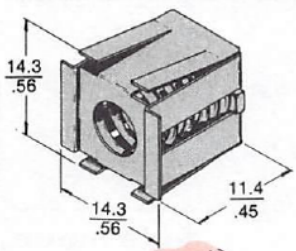
Adjustment Formula

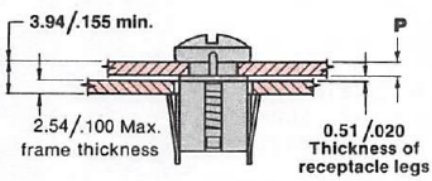
Use your dimension **D** to enter Outer Panel Thickness column of the Snap-in Stud Selection Table.

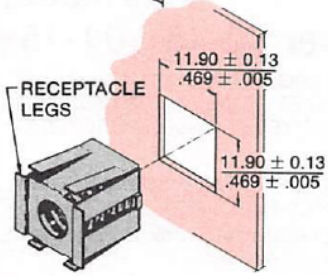
Snap-in

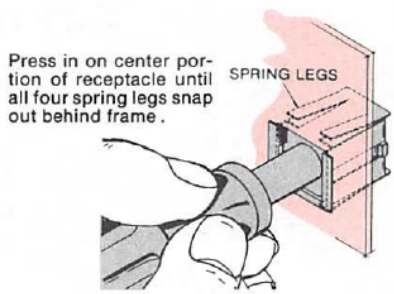
Part Number 82-35-309-56 ■

HOUSING: 301 stainless steel, natural.
RECEPTACLE: 1010 steel, case hardened and DACROTIZED†.
SPRING: 302 stainless steel, passivated.
RETAINER: 301 stainless steel, natural.



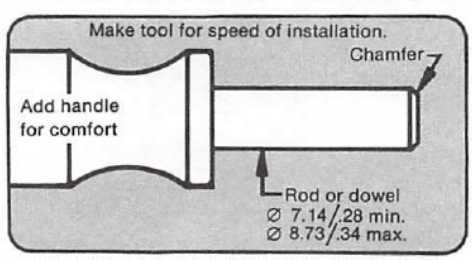






Adjustment Formula

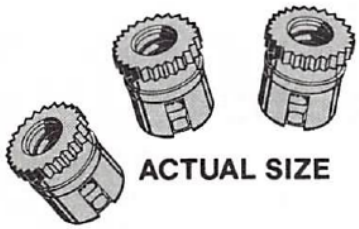
To enter Snap-in Stud Selection Table calculate: **P** + 5.59/.220 (constant) and use the Total Material Thickness column.



†Registered tradename of Metal Coatings International, Inc.
■ From stock, subject to prior sale.

No. 82 ¼-turn Fastener Receptacle when using **snap-in** studs

for ultrasonic installation in thermoplastics

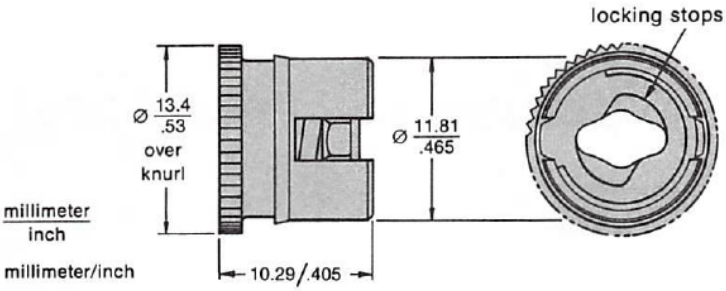


ACTUAL SIZE

PART NUMBER
82-35-310-55 ■

■ From stock, subject to prior sale.

- **Minimize residual stress**
- **Increased pull-out resistance**
- **Increased torque-out resistance**



MATERIAL and FINISH

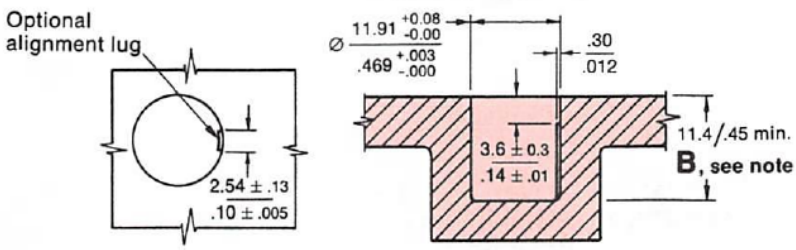
RECEPTACLE: 1010 steel, case hardened and DACROTIZED†.
SHELL: low carbon steel, DACROTIZED†.
SPRING and RETAINER: 302 stainless steel, passivated.

†Registered tradename of Metal Coatings International, Inc.

INSTALLATION

Note: When **A** dimension is increased, **B** dimension must increase by the same amount.

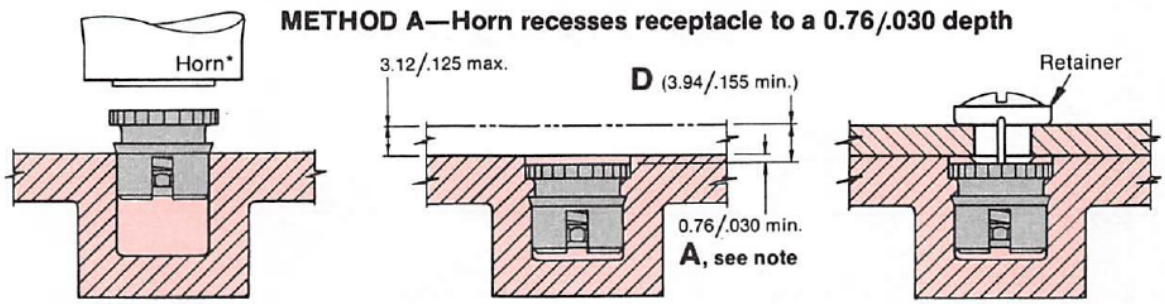
1. Prepare hole.



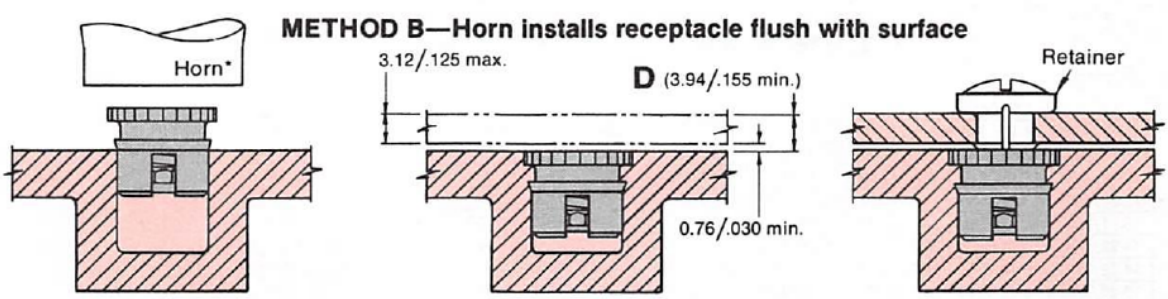
2. Use one of the methods shown.

With your dimension **D** enter the No. 82 **Snap-in** Stud Selection Table using the Outer Panel Thickness column for Part Numbers 82-35-308-55 and 82-35-313-55.

METHOD A—Horn recesses receptacle to a 0.76/.030 depth



METHOD B—Horn installs receptacle flush with surface



*Horn design may vary with material and application.

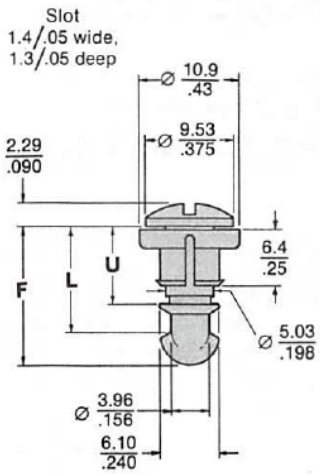
Test these receptacles in your materials; we'll supply samples.

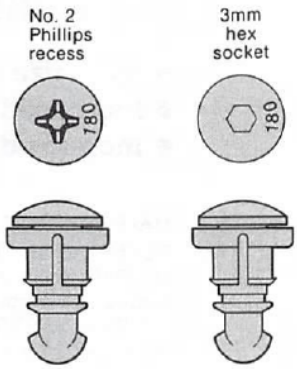
¼-turn fasteners
No. 82 Snap-in Stud Selection

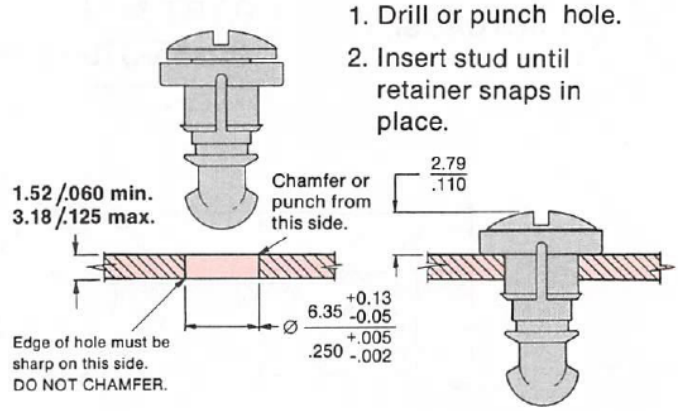
STEEL

INSTALLATION

1. Drill or punch hole.
2. Insert stud until retainer snaps in place.







DELIVERY SYMBOLS
(see part numbers)

- ■ From stock, subject to prior sale.
- ● Up to 4 weeks.
- □ Up to 8 weeks. Minimum order required; setup charge may apply.

millimeter / inch millimeter/inch

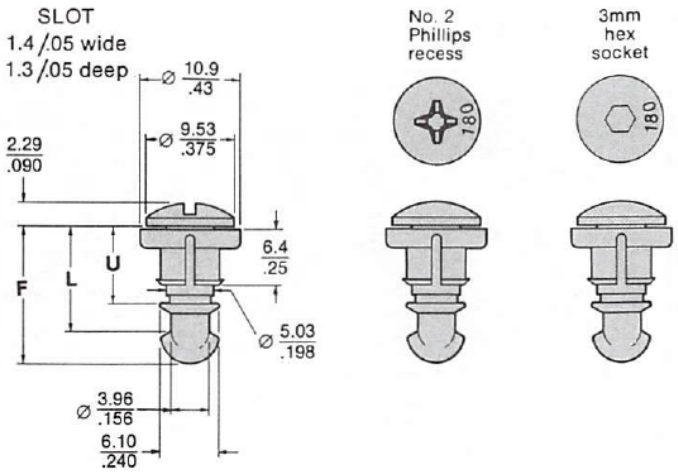
MATERIAL and FINISH

RETAINER: nylon, black.
OVAL SLOTTED STUDS: 1008 steel, case hardened and DACROTIZED† plus bright metallic organic coating.
PHILLIPS RECESS and HEX SOCKET STUDS: 1008 steel, zinc plated plus bright chromate dip.

†Registered tradename of Metal Coatings International, Inc.

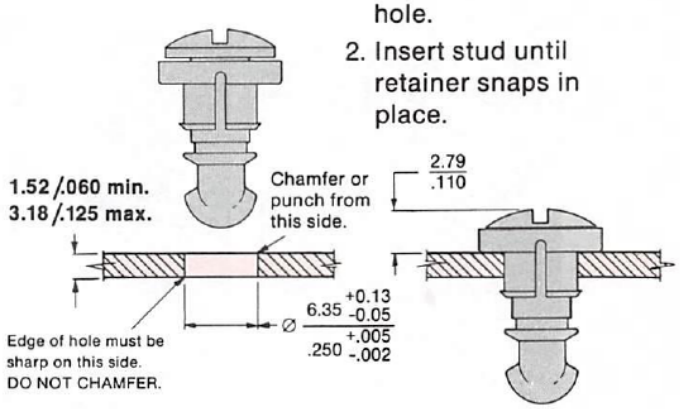
OUTER PANEL THICKNESS FOR Press-in Part Nos. 82-35-308-55 82-35-313-55 and Ultrasonic Part No. 82-35-310-55		TOTAL MATERIAL THICKNESS FOR Part No. 82-35-311-55		TOTAL MATERIAL THICKNESS when using Leaf Spring, Clip-on and Snap-in receptacles		PART NUMBERS			DIMENSIONS		
MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	OVAL SLOTTED	OVAL PHILLIP RECESS	HEX SOCKET	U	L	F approx.
				4.32/.170	4.81/.189	82-11-180-16-1■	82-19-180-16-1■	82-78-180-16-1■	5.26/.207	8.26/.325	12.07/.475
				4.82/.190	5.32/.209	82-11-200-16-1■	82-19-200-16-1■	82-78-200-16-1■	5.77/.227	8.76/.345	12.57/.495
				5.33/.210	5.83/.229	82-11-220-16-1■	82-19-220-16-1■	82-78-220-16-1■	6.27/.247	9.27/.365	13.08/.515
				5.84/.230	6.34/.249	82-11-240-16-1■	82-19-240-16-1■	82-78-240-16-1■	6.78/.267	9.78/.385	13.59/.535
				6.35/.250	6.85/.269	82-11-260-16-1■	82-19-260-16-1■	82-78-260-16-1■	7.29/.287	10.29/.405	14.10/.555
				6.86/.270	7.36/.289	82-11-280-16-1■	82-19-280-16-1■	82-78-280-16-1■	7.80/.307	10.80/.425	14.61/.575
3.94/.155	4.05/.159			7.37/.290	7.86/.309	82-11-300-16-1■	82-19-300-16-1■	82-78-300-16-1■	8.31/.327	11.30/.445	15.11/.595
4.06/.160	4.55/.179	5.33/.210	5.83/.229	7.87/.310	8.37/.329	82-11-320-16-1■	82-19-320-16-1■	82-78-320-16-1□	8.81/.347	11.81/.465	15.62/.615
4.56/.180	5.06/.199	5.84/.230	6.34/.249	8.38/.330	8.88/.349	82-11-340-16-1■	82-19-340-16-1■	82-78-340-16-1□	9.32/.367	12.32/.485	16.13/.635
5.07/.200	5.57/.219	6.35/.250	6.85/.269	8.89/.350	9.39/.369	82-11-360-16-1■	82-19-360-16-1■	82-78-360-16-1□	9.83/.387	12.83/.505	16.64/.655
5.58/.220	6.08/.239	6.86/.270	7.36/.289	9.40/.370	9.90/.389	82-11-380-16-1■	82-19-380-16-1■	82-78-380-16-1□	10.34/.407	13.34/.525	17.15/.675
6.09/.240	6.59/.259	7.37/.290	7.86/.309	9.91/.390	10.40/.409	82-11-400-16-1■	82-19-400-16-1■	82-78-400-16-1□	10.85/.427	13.84/.545	17.65/.695
6.60/.260	7.09/.279	7.87/.310	8.37/.329	10.41/.410	10.91/.429	82-11-420-16-1■	82-19-420-16-1■	82-78-420-16-1□	11.35/.447	14.35/.565	18.16/.715
7.10/.280	7.60/.299	8.38/.330	8.88/.349	10.92/.430	11.42/.449	82-11-440-16-1■	82-19-440-16-1■	82-78-440-16-1□	11.86/.467	14.86/.585	18.67/.735
7.61/.300	8.11/.319	8.89/.350	9.39/.369	11.43/.450	11.93/.469	82-11-460-16-1■	82-19-460-16-1■	82-78-460-16-1□	12.37/.487	15.37/.605	19.18/.755
8.12/.320	8.62/.339	9.40/.370	9.90/.389	11.94/.470	12.44/.489	82-11-480-16-1■	82-19-480-16-1■	82-78-480-16-1□	12.88/.507	15.88/.625	19.69/.775
8.63/.340	9.13/.359	9.91/.390	10.40/.409	12.45/.490	12.94/.509	82-11-500-16-1■	82-19-500-16-1■	82-78-500-16-1□	13.39/.527	16.38/.645	20.19/.795
9.14/.360	9.63/.379	10.41/.410	10.91/.429	12.95/.510	13.45/.529	82-11-520-16-1■	82-19-520-16-1■	82-78-520-16-1□	13.89/.547	16.89/.665	20.70/.815
9.64/.380	10.14/.399	10.92/.430	11.42/.449	13.46/.530	13.96/.549	82-11-540-16-1■	82-19-540-16-1■	82-78-540-16-1□	14.40/.567	17.40/.685	21.21/.835
10.15/.400	10.65/.419	11.43/.450	11.93/.469	13.97/.550	14.47/.569	82-11-560-16-1■	82-19-560-16-1■	82-78-560-16-1□	14.91/.587	17.91/.705	21.72/.855
10.66/.420	11.16/.439	11.94/.470	12.44/.489	14.48/.570	14.98/.589	82-11-580-16-1■	82-19-580-16-1■	82-78-580-16-1□	15.42/.607	18.42/.725	22.23/.875
11.17/.440	11.67/.459	12.45/.490	12.94/.509	14.99/.590	15.48/.609	82-11-600-16-1●	82-19-600-16-1●	82-78-600-16-1□	15.93/.627	18.92/.745	22.73/.895
11.68/.460	12.17/.479	12.95/.510	13.45/.529	15.49/.610	15.99/.629	82-11-620-16-1●	82-19-620-16-1●	82-78-620-16-1□	16.43/.647	19.43/.765	23.24/.915
12.18/.480	12.68/.499	13.46/.530	13.96/.549	16.00/.630	16.50/.649	82-11-640-16-1●	82-19-640-16-1●	82-78-640-16-1□	16.94/.667	19.94/.785	23.75/.935
12.69/.500	13.19/.519	13.97/.550	14.47/.569	16.51/.650	17.01/.669	82-11-660-16-1●	82-19-660-16-1●	82-78-660-16-1□	17.45/.687	20.45/.805	24.26/.955
13.20/.520	13.70/.539	14.48/.570	14.98/.589	17.02/.670	17.52/.689	82-11-680-16-1●	82-19-680-16-1●	82-78-680-16-1□	17.96/.707	20.96/.825	24.77/.975
13.71/.540	14.21/.559	14.99/.590	15.48/.609	17.53/.690	18.02/.709	82-11-700-16-1●	82-19-700-16-1●	82-78-700-16-1□	18.47/.727	21.46/.845	25.27/.995
14.22/.560	14.71/.579	15.49/.610	15.99/.629	18.03/.710	18.53/.729	82-11-720-16-1●	82-19-720-16-1●	82-78-720-16-1□	18.97/.747	21.97/.865	25.78/1.015
14.72/.580	15.22/.599	16.00/.630	16.50/.649	18.54/.730	19.04/.749	82-11-740-16-1●	82-19-740-16-1●	82-78-740-16-1□	19.48/.767	22.48/.885	26.29/1.035
15.23/.600	15.73/.619	16.51/.650	17.01/.669	19.05/.750	19.55/.769	82-11-760-16-1●	82-19-760-16-1●	82-78-760-16-1□	19.99/.787	22.99/.905	26.80/1.055
15.74/.620	16.24/.639	17.02/.670	17.52/.689	19.56/.770	20.06/.789	82-11-780-16-1●	82-19-780-16-1●	82-78-780-16-1□	20.50/.807	23.50/.925	27.31/1.075
16.25/.640	16.75/.659	17.53/.690	18.02/.709	20.07/.790	20.56/.809	82-11-800-16-1●	82-19-800-16-1●	82-78-800-16-1□	21.01/.827	24.00/.945	27.81/1.095

¼-turn fasteners
No. 82 Snap-in Stud Selection



INSTALLATION

1. Drill or punch hole.
2. Insert stud until retainer snaps in place.



MATERIAL and FINISH

STUDS: 302 or 303 stainless steel, passivated.
RETAINER: nylon, black.

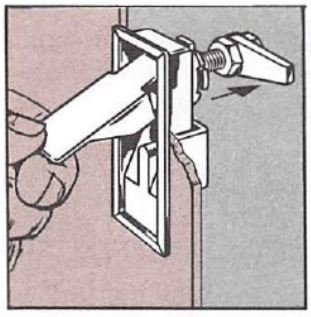
DELIVERY SYMBOLS
(see part numbers)
- ■ From stock, subject to prior sale.
- □ Up to 8 weeks. Minimum order required; setup charge may apply.

millimeter / inch millimeter/inch

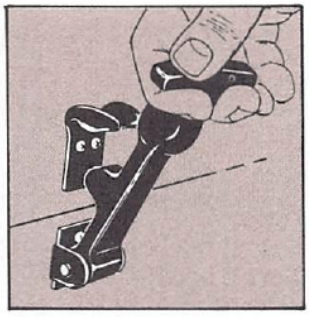
OUTER PANEL THICKNESS FOR Press-in Part Nos. 82-35-308-55 82-35-313-55 and Ultrasonic Part No. 82-35-310-55		TOTAL MATERIAL THICKNESS FOR Part No. 82-35-311-55		TOTAL MATERIAL THICKNESS when using Leaf Spring, Clip-on and Snap-in receptacles		PART NUMBERS			DIMENSIONS		
						OVAL SLOTTED	OVAL PHILLIPS RECESS	HEX SOCKET	U	L	F approx.
MIN.	MAX.	MIN.	MAX.	MIN.	MAX.						
				4.32/.170	4.81/.189	82-11-180-20-1 ■	82-19-180-20-1 □	82-78-180-20-1 □	5.26/.207	8.26/.325	12.07/.475
				4.82/.190	5.32/.209	82-11-200-20-1 ■	82-19-200-20-1 □	82-78-200-20-1 □	5.77/.227	8.76/.345	12.57/.495
				5.33/.210	5.83/.229	82-11-220-20-1 ■	82-19-220-20-1 □	82-78-220-20-1 □	6.27/.247	9.27/.365	13.08/.515
				5.84/.230	6.34/.249	82-11-240-20-1 ■	82-19-240-20-1 □	82-78-240-20-1 □	6.78/.267	9.78/.385	13.59/.535
				6.35/.250	6.85/.269	82-11-260-20-1 ■	82-19-260-20-1 □	82-78-260-20-1 □	7.29/.287	10.29/.405	14.10/.555
				6.86/.270	7.36/.289	82-11-280-20-1 ■	82-19-280-20-1 □	82-78-280-20-1 □	7.80/.307	10.80/.425	14.61/.575
3.94/.155	4.05/.159			7.37/.290	7.86/.309	82-11-300-20-1 ■	82-19-300-20-1 □	82-78-300-20-1 □	8.31/.327	11.30/.445	15.11/.595
4.06/.160	4.55/.179	5.33/.210	5.83/.229	7.87/.310	8.37/.329	82-11-320-20-1 ■	82-19-320-20-1 □	82-78-320-20-1 □	8.81/.347	11.81/.465	15.62/.615
4.56/.180	5.06/.199	5.84/.230	6.34/.249	8.38/.330	8.88/.349	82-11-340-20-1 ■	82-19-340-20-1 □	82-78-340-20-1 □	9.32/.367	12.32/.485	16.13/.635
5.07/.200	5.57/.219	6.35/.250	6.85/.269	8.89/.350	9.39/.369	82-11-360-20-1 ■	82-19-360-20-1 □	82-78-360-20-1 □	9.83/.387	12.83/.505	16.64/.655
5.58/.220	6.08/.239	6.86/.270	7.36/.289	9.40/.370	9.90/.389	82-11-380-20-1 ■	82-19-380-20-1 □	82-78-380-20-1 □	10.34/.407	13.34/.525	17.15/.675
6.09/.240	6.59/.259	7.37/.290	7.86/.309	9.91/.390	10.40/.409	82-11-400-20-1 ■	82-19-400-20-1 □	82-78-400-20-1 □	10.85/.427	13.84/.545	17.65/.695
6.60/.260	7.09/.279	7.87/.310	8.37/.329	10.41/.410	10.91/.429	82-11-420-20-1 ■	82-19-420-20-1 □	82-78-420-20-1 □	11.35/.447	14.35/.565	18.16/.715
7.10/.280	7.60/.299	8.38/.330	8.88/.349	10.92/.430	11.42/.449	82-11-440-20-1 □	82-19-440-20-1 □	82-78-440-20-1 □	11.86/.467	14.86/.585	18.67/.735
7.61/.300	8.11/.319	8.89/.350	9.39/.369	11.43/.450	11.93/.469	82-11-460-20-1 □	82-19-460-20-1 □	82-78-460-20-1 □	12.37/.487	15.37/.605	19.18/.755
8.12/.320	8.62/.339	9.40/.370	9.90/.389	11.94/.470	12.44/.489	82-11-480-20-1 □	82-19-480-20-1 □	82-78-480-20-1 □	12.88/.507	15.88/.625	19.69/.775
8.63/.340	9.13/.359	9.91/.390	10.40/.409	12.45/.490	12.94/.509	82-11-500-20-1 □	82-19-500-20-1 □	82-78-500-20-1 □	13.39/.527	16.38/.645	20.19/.795
9.14/.360	9.63/.379	10.41/.410	10.91/.429	12.95/.510	13.45/.529	82-11-520-20-1 □	82-19-520-20-1 □	82-78-520-20-1 □	13.89/.547	16.89/.665	20.70/.815
9.64/.380	10.14/.399	10.92/.430	11.42/.449	13.46/.530	13.96/.549	82-11-540-20-1 □	82-19-540-20-1 □	82-78-540-20-1 □	14.40/.567	17.40/.685	21.21/.835
10.15/.400	10.65/.419	11.43/.450	11.93/.469	13.97/.550	14.47/.569	82-11-560-20-1 □	82-19-560-20-1 □	82-78-560-20-1 □	14.91/.587	17.91/.705	21.72/.855
10.66/.420	11.16/.439	11.94/.470	12.44/.489	14.48/.570	14.98/.589	82-11-580-20-1 □	82-19-580-20-1 □	82-78-580-20-1 □	15.42/.607	18.42/.725	22.23/.875
11.17/.440	11.67/.459	12.45/.490	12.94/.509	14.99/.590	15.48/.609	82-11-600-20-1 □	82-19-600-20-1 □	82-78-600-20-1 □	15.93/.627	18.92/.745	22.73/.895
11.68/.460	12.17/.479	12.95/.510	13.45/.529	15.49/.610	15.99/.629	82-11-620-20-1 □	82-19-620-20-1 □	82-78-620-20-1 □	16.43/.647	19.43/.765	23.24/.915
12.18/.480	12.68/.499	13.46/.530	13.96/.549	16.00/.630	16.50/.649	82-11-640-20-1 □	82-19-640-20-1 □	82-78-640-20-1 □	16.94/.667	19.94/.785	23.75/.935
12.69/.500	13.19/.519	13.97/.550	14.47/.569	16.51/.650	17.01/.669	82-11-660-20-1 □	82-19-660-20-1 □	82-78-660-20-1 □	17.45/.687	20.45/.805	24.26/.955
13.20/.520	13.70/.539	14.48/.570	14.98/.589	17.02/.670	17.52/.689	82-11-680-20-1 □	82-19-680-20-1 □	82-78-680-20-1 □	17.96/.707	20.96/.825	24.77/.975
13.71/.540	14.21/.559	14.99/.590	15.48/.609	17.53/.690	18.02/.709	82-11-700-20-1 □	82-19-700-20-1 □	82-78-700-20-1 □	18.47/.727	21.46/.845	25.27/.995
14.22/.560	14.71/.579	15.49/.610	15.99/.629	18.03/.710	18.53/.729	82-11-720-20-1 □	82-19-720-20-1 □	82-78-720-20-1 □	18.97/.747	21.97/.865	25.78/1.015
14.72/.580	15.22/.599	16.00/.630	16.50/.649	18.54/.730	19.04/.749	82-11-740-20-1 □	82-19-740-20-1 □	82-78-740-20-1 □	19.48/.767	22.48/.885	26.29/1.035
15.23/.600	15.73/.619	16.51/.650	17.01/.669	19.05/.750	19.55/.769	82-11-760-20-1 □	82-19-760-20-1 □	82-78-760-20-1 □	19.99/.787	22.99/.905	26.80/1.055
15.74/.620	16.24/.639	17.02/.670	17.52/.689	19.56/.770	20.06/.789	82-11-780-20-1 □	82-19-780-20-1 □	82-78-780-20-1 □	20.50/.807	23.50/.925	27.31/1.075
16.25/.640	16.75/.659	17.53/.690	18.02/.709	20.07/.790	20.56/.809	82-11-800-20-1 □	82-19-800-20-1 □	82-78-800-20-1 □	21.01/.827	24.00/.945	27.81/1.095

Latches for Machine Guards, Access Doors, Enclosures–SOUTHCO is THE SOURCE

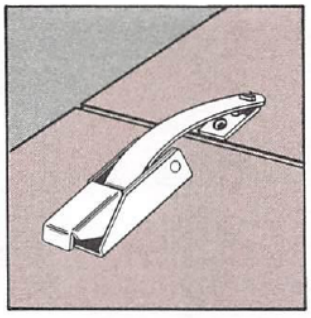
Safety, noise regulations, and esthetics demand protective enclosures for machinery — both new and existing. SOUTHCO has a quick-access fastener for almost every application. Here are a few of the many available.



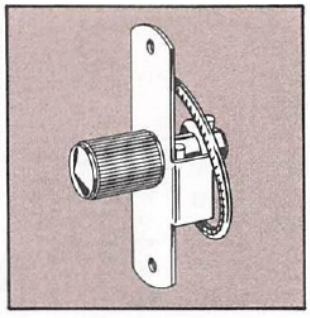
No. 62 Lift & Turn Flush Latches. Compress with a twist and press. Hinged doors don't rattle, even on a compressor. Three handsome sizes. Five more sizes in hand-grip style.



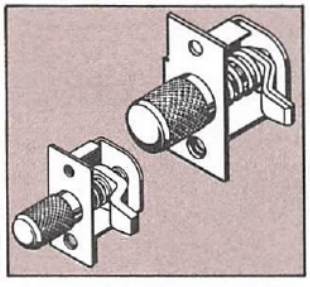
No. 37 Flexible Draw Latches. Great for vibrating hoods and covers. Synthetic rubber arm picks up misaligned parts. Nine sizes.



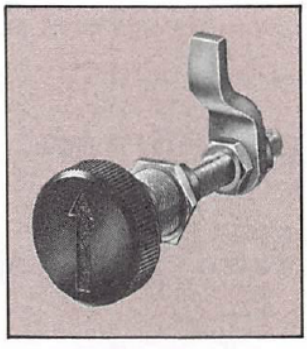
No. 97 Draw Latches. Tough steel spring latches into keeper or cover. Heavy compression... flips down to latch, up to open. Four basic sizes, hundreds of variations.



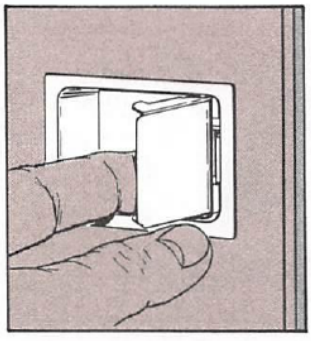
No. 57 Spring Latch. Tough, simple. Heavy spring rotates to pull door tightly shut, compensate for gasket wear. Five sizes; many styles of operation.



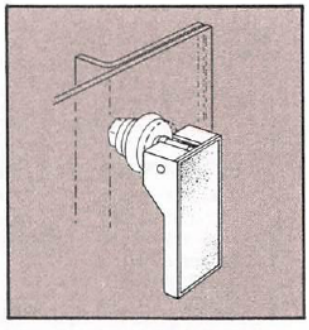
Nos. 44 and 14 Adjustable Grip Latches. Quarter turn latches. Extra turns increase compression. Hold most door-to-frame combinations. Three sizes; many styles of operation.



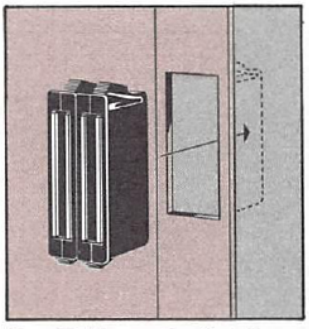
No. 69 Arrowhead Latches. Adjustable knob height and grip range. Quarter turn operation — click into latched or unlatched position. Five sizes — fingertip to full hand grip.



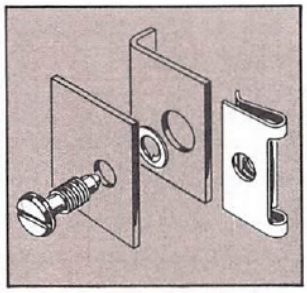
No. 64 Paddle Latch. Flush, handsome, installed with one mounting screw. Four sizes; largest has optional keylock.



No. 19 Swell Latch. Lower or raise the door pull; rubber sleeve swells or contracts to latch or unlatch in any frame material — even brittle ceramic. Cushions! Seals! Three sizes.



No. 02 Magnetic Catch. Snaps into slot in door frame; holds door shut without knobs or handles. Four sizes. Round-hole, adhesive mounted, and push-release styles too.



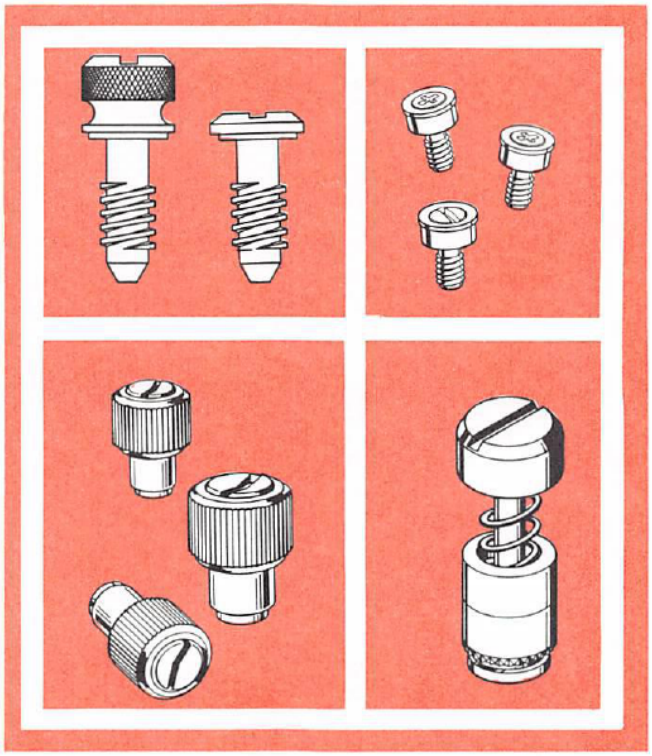
No. 17 Screw Fastener. Great for use where material thicknesses vary. Turn to apply tension required. Three sizes with choice of receptacles and stud head styles.

SOUTHCO®
fasteners

Section C
Captive Screw Fasteners

contents guide | **page**

No. F5 Press-in Captive Panel Screws	C-1
No. 09 Screw Fastener — Quick-opening	C-2 to C-5
No. 12 Screw Fastener — Quick-opening	C-6 to C-9
No. 17 Screw Fastener — Quick-opening	C-1 to C-13
No. 47 Spring-loaded Fastener	C-22 to C-28
No. 51 Screw-Assembly	C-14 to C-16
No. 52 Mini Captive Panel Screws	C-20
No. 53 Spring-ejected Screw Assemblies	C-17 to C-19

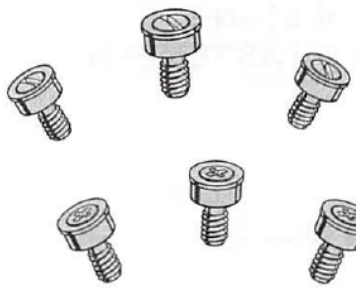


Section C
Captive Screw Fasteners

contents guide | **page**

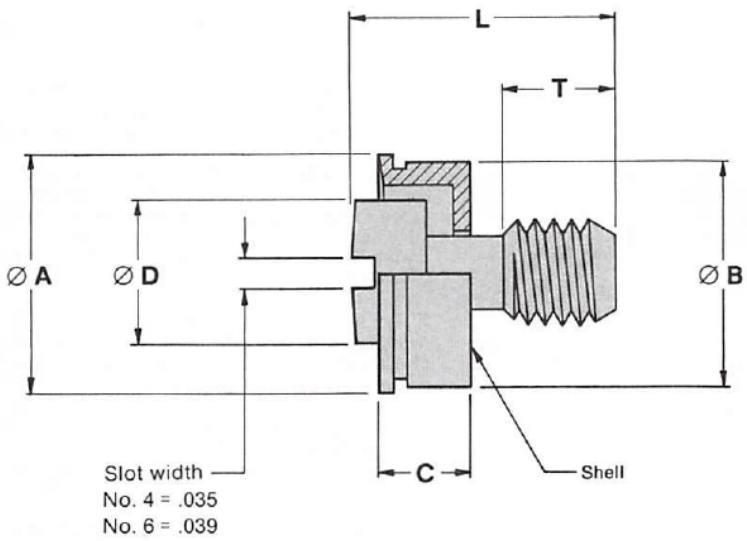
No. F5 Press-in Captive Panel Screws	C-1
No. 09 Screw Fastener — Quick-opening	C-2 to C-5
No. 12 Screw Fastener — Quick-opening	C-6 to C-9
No. 17 Screw Fastener — Quick-opening	C-1 to C-13
No. 47 Spring-loaded Fastener	C-22 to C-28
No. 51 Screw Assembly	C-14 to C-16
No. 52 Mini Captive Panel Screws	C-20
No. 53 Spring-ejected Screw Assemblies	C-17 to C-19

Miniature flush-mounted press-in captive screws



ACTUAL SIZE

Cross Recess assemblies are operated by #0 or #1 phillips drivers.



A general guide:
For use in most aluminums or in low-carbon steels that are ¼ hard or softer. Ask for samples for testing.

MATERIAL and FINISH

SCREW: 303 stainless steel, passivated.
SHELL: 304 stainless steel, passivated.

Shipped assembled.
Protectively Packaged.

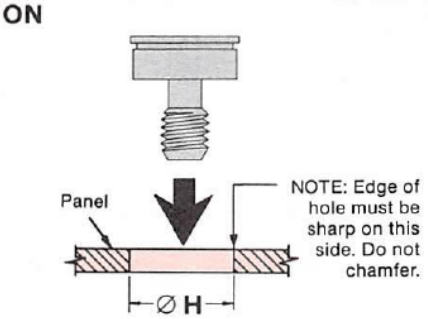
All dimensions are in inches.

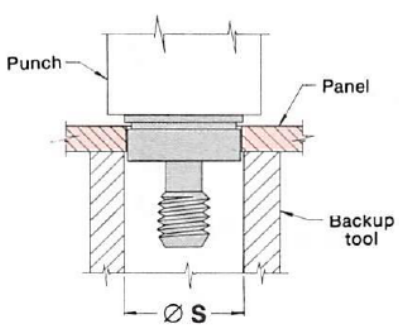
Thread size	Dimensions (part)					Screw length L	Part Number	
	∅ A	∅ B	C	∅ D	T		Slotted	Cross Recess
UNC 4-40	.28	.254	.065	.16	.15	.23	F5-60-402-20 ■	——
						.31	F5-60-406-20 ■	——
UNC 6-32	.32	.293	.080	.19	.15	.25	F5-60-602-20 ■	——
						.33	F5-60-606-20 ■	——
						.37	F5-60-608-20 ■	——
UNC 8-32	.40	.373	.090	.25	.20	.35	F5-832-14 ■	F5-832-94 ■
						.39	F5-832-16 ■	F5-832-96 ■
						.43	F5-832-18 ■	F5-832-98 ■

Dimensions (installation)					
∅ H	M	F	P-1	P-2	∅ S
$.257^{+.003}_{-.001}$	.050	.070	.15	.16	$.257^{+.004}_{-.000}$
				.24	
$.295^{+.003}_{-.000}$	.055	.085	.15	.17	$.297^{+.004}_{-.000}$
				.25	
				.29	
$.375^{+.003}_{-.000}$	.060	.095	.20	.26	$.377^{+004}_{-000}$
				.30	
				.34	

■ From stock, subject to prior sale.

INSTALLATION

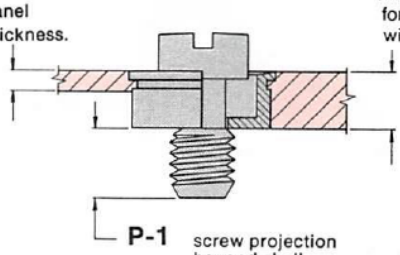




Screw Retracted

M minimum panel thickness.

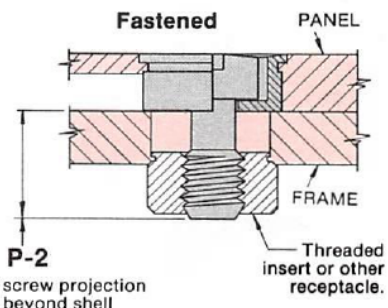
F minimum thickness for shell to be flush with back of panel.



P-1 screw projection beyond shell when retracted.

NOTE:
4-40, 6-32 and 8-32 screws will float .02 total movement.

Fastened

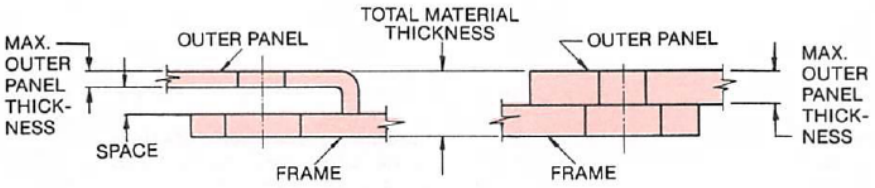


P-2 screw projection beyond shell when fastened.

NO. 09 QUICK-OPENING CAPTIVE SCREW FASTENERS

1. Select receptacle best suited to your application.

   • **Flat** • **Clip-on** • **Saddle** • **Press-In**



2. Determine your total material thickness (or total material thickness range if using the same length screw in several applications) by measuring the distance between the outer surface of the OUTER PANEL and the inner surface of the FRAME including spaces created by gaskets, flanges, etc.

3. Select retainer.

   • The nylon push-on retainer requires a minimum space between the frame and outer panel of 1.09/.043 which must be included in your total material thickness.

   • The aluminum retainer requires a minimum space between frame and outer panel only with some receptacles. See receptacle installation.

4. See receptacle installation to adjust total material thickness before entering Screw Section Table on page C-3.

5. Enter column I of the Screw Assembly Selection Table. Find the range that most closely brackets your thickness requirement.

6. Check column II. Your outer panel thickness must not exceed the maximum listed because screw selected must have sufficient throat length for captivation in panel. The screw will work perfectly in any thinner panel.

7. For screw to fully retract from the receptacle without lifting the door or panel, check COL. III. Your R value must be equal to or greater than the value listed.

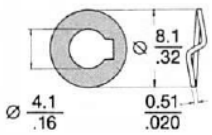
8. Use table below to complete your part number by selecting finish and head style. (Other head styles are available on special order.)

9. Order all 4 parts — SCREW ASSEMBLY, RETAINER, RECEPTACLE, and TOOL by part number.

Retainers:

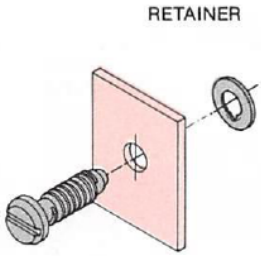
Aluminum Retainer

(dimensions after flattening)

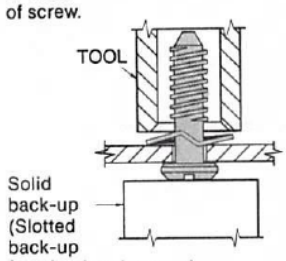


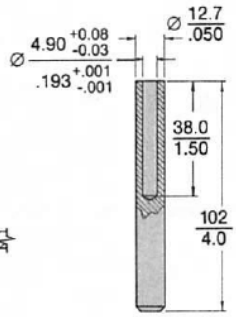
millimeter / inch

millimeter/inch



To flatten washer, sharply strike tool or head of screw.





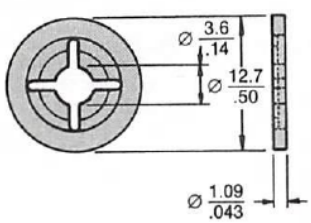
PART NUMBER
09-49-101-12 ■

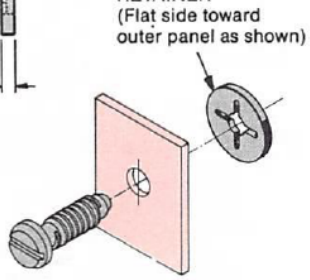
5052 aluminum, natural

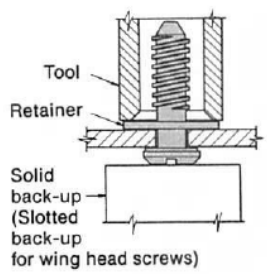
TOOL PART NUMBER
09-50-101-11 ■

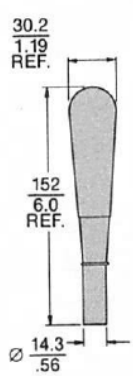
Hardened steel, zinc plated.

Nylon Push-on Retainer









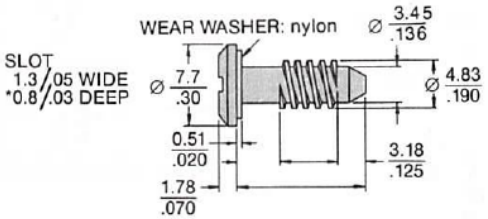
PART NUMBER
09-49-102-42 ■

nylon, black

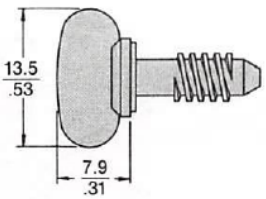
TOOL PART NUMBER

12-0-20980-11 ■

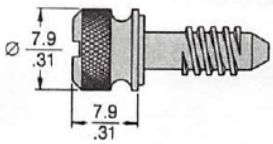
SLOTTED HEAD



WING HEAD



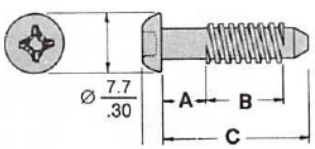
KNURLED HEAD



DIMENSIONS			SCREW ASSEMBLY PART NUMBERS								
			low carbon steel, case hardened and DACROTIZED†			303 stainless steel, passivated (wing is 302 stainless, passivated)			low carbon steel, case hardened chromium plated		
A	B	C	SLOTTED	WING	KNURL	SLOTTED	WING	KNURL	SLOTTED	WING	KNURL
2.54/.100	5.00/.197	10.72/.422	09-11-102-11 ■	09-12-102-11 □	09-13-102-11 ■	09-11-102-26 ■	09-12-102-26 □	09-13-102-26 □	09-11-102-14 □	09-12-102-14 □	09-13-102-14 □
3.81/.150	3.73/.147		09-11-103-11 ■	09-12-103-11 □	09-13-103-11 ■	09-11-103-26 ■	09-12-103-26 □	09-13-103-26 □	09-11-103-14 □	09-12-103-14 □	09-13-103-14 □
2.54/.100	8.18/.322	13.89/.547	09-11-202-11 ■	09-12-202-11 □	09-13-202-11 ■	09-11-202-26 ■	09-12-202-26 □	09-13-202-26 □	09-11-202-14 □	09-12-202-14 □	09-13-202-14 □
3.81/.150	6.91/.272		09-11-203-11 ■	09-12-203-11 □	09-13-203-11 ■	09-11-203-26 ■	09-12-203-26 □	09-13-203-26 □	09-11-203-14 □	09-12-203-14 □	09-13-203-14 □
5.08/.200	5.63/.222		09-11-204-11 ■	09-12-204-11 □	09-13-204-11 ■	09-11-204-26 ■	09-12-204-26 □	09-13-204-26 □	09-11-204-14 □	09-12-204-14 □	09-13-204-14 □
6.35/.250	4.37/.172		09-11-205-11 ■	09-12-205-11 □	09-13-205-11 □	09-11-205-26 ■	09-12-205-26 □	09-13-205-26 □	09-11-205-14 □	09-12-205-14 □	09-13-205-14 □
2.54/.100	11.35/.447	17.07/.672	09-11-302-11 ■	09-12-302-11 □	09-13-302-11 □	09-11-302-26 ■	09-12-302-26 □	09-13-302-26 □	09-11-302-14 □	09-12-302-14 □	09-13-302-14 □
3.81/.150	10.08/.397		09-11-303-11 ■	09-12-303-11 □	09-13-303-11 □	09-11-303-26 ■	09-12-303-26 □	09-13-303-26 □	09-11-303-14 □	09-12-303-14 □	09-13-303-14 □
5.08/.200	8.81/.347		09-11-304-11 ■	09-12-304-11 □	09-13-304-11 □	09-11-304-26 ■	09-12-304-26 □	09-13-304-26 □	09-11-304-14 □	09-12-304-14 □	09-13-304-14 □
6.35/.250	7.34/.297		09-11-305-11 ■	09-12-305-11 □	09-13-305-11 □	09-11-305-26 ■	09-12-305-26 □	09-13-305-26 □	09-11-305-14 □	09-12-305-14 □	09-13-305-14 □
8.89/.350	5.00/.197		09-11-307-11 ■	09-12-307-11 □	09-13-307-11 □	09-11-307-26 ■	09-12-307-26 □	09-13-307-26 □	09-11-307-14 □	09-12-307-14 □	09-13-307-14 □
2.54/.100	14.53/.572	20.24/.797	09-11-402-11 □	09-12-402-11 □	09-13-402-11 □	09-11-402-26 □	09-12-402-26 □	09-13-402-26 □	09-11-402-14 □	09-12-402-14 □	09-13-402-14 □
3.81/.150	13.26/.522		09-11-403-11 □	09-12-403-11 □	09-13-403-11 □	09-11-403-26 □	09-12-403-26 □	09-13-403-26 □	09-11-403-14 □	09-12-403-14 □	09-13-403-14 □
5.08/.200	11.99/.472		09-11-404-11 □	09-12-404-11 □	09-13-404-11 □	09-11-404-26 □	09-12-404-26 □	09-13-404-26 □	09-11-404-14 □	09-12-404-14 □	09-13-404-14 □
6.35/.250	10.72/.422		09-11-405-11 □	09-12-405-11 □	09-13-405-11 □	09-11-405-26 □	09-12-405-26 □	09-13-405-26 □	09-11-405-14 □	09-12-405-14 □	09-13-405-14 □
8.89/.350	8.19/.322		09-11-407-11 □	09-12-407-11 □	09-13-407-11 □	09-11-407-26 □	09-12-407-26 □	09-13-407-26 □	09-11-407-14 □	09-12-407-14 □	09-13-407-14 □
11.43/.450	5.64/.222		09-11-409-11 □	09-12-409-11 □	09-13-409-11 □	09-11-409-26 □	09-12-409-26 □	09-13-409-26 □	09-11-409-14 □	09-12-409-14 □	09-13-409-14 □

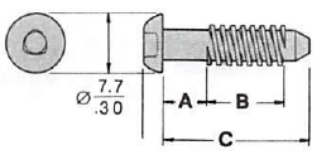
No. 09 PHILLIPS RECESS

Material and Finish
Case hardened low carbon steel, zinc plated with bright chromate dip.



No. 09 TOOLHEAD SCREW

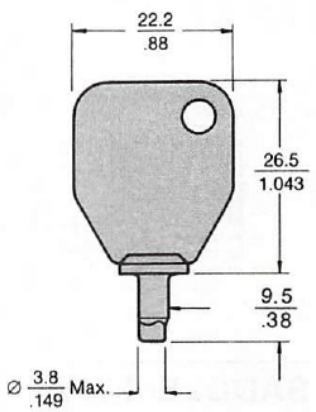
Material and Finish
Case hardened low carbon steel, zinc plated with bright chromate dip.



No. 4 Size TOOLHEAD KEY

PART NUMBER 29-90-214-10 ■

Material and Finish
Case hardened steel with bright nickel plate.



PART NUMBERS		DIMENSIONS		
TOOLHEAD	PHILLIPS	A	B	C
09-T-102 ■	09-P-102 ■	2.54/.100	5.00/.197	10.72/.422
09-T-103 ■	09-P-103 ■	3.81/.150	3.73/.147	
09-T-202 ■	09-P-202 ■	2.54/.100	8.18/.322	13.89/.547
09-T-203 ■	09-P-203 ■	3.81/.150	6.91/.272	
09-T-204 ■	09-P-204 ■	5.08/.200	5.64/.222	
09-T-205 ■	09-P-205 ■	6.35/.250	4.37/.172	
09-T-302 ■	09-P-302 ■	2.54/.100	11.35/.447	17.07/.672
09-T-303 ■	09-P-303 ■	3.81/.150	10.08/.397	
09-T-304 ■	09-P-304 ■	5.08/.200	8.81/.347	
09-T-305 ■	09-P-305 ■	6.35/.250	7.34/.297	
09-T-307 ■	09-P-307 ■	8.89/.350	5.00/.197	
09-T-402 ■	09-P-402 ■	2.54/.100	14.53/.572	20.24/.797
09-T-403 ■	09-P-403 ■	3.81/.150	13.26/.522	
09-T-404 ■	09-P-404 ■	5.08/.200	11.99/.472	
09-T-405 ■	09-P-405 ■	6.35/.250	10.72/.422	
09-T-407 ■	09-P-407 ■	8.89/.350	8.18/.322	
09-T-409 ■	09-P-409 ■	11.43/.450	5.64/.222	

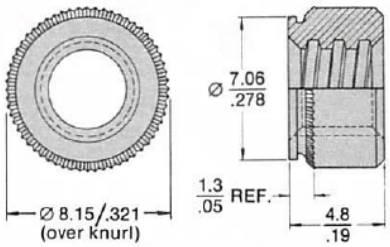
ACTUAL SIZE

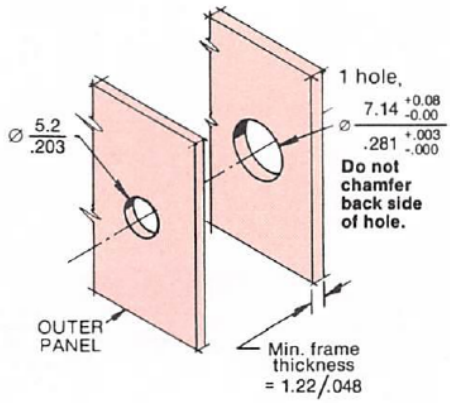
■ From stock, subject to prior sale.
□ Up to 8 weeks. Minimum order required.
† Registered tradename of Metal Coatings International, Inc.

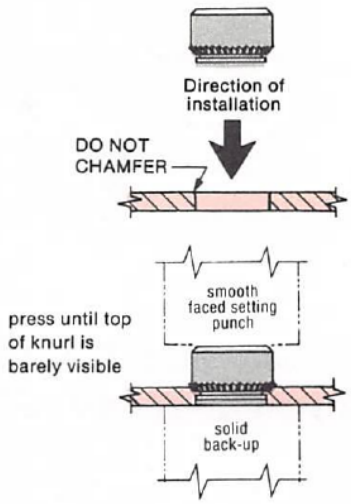
NO. 09 QUICK-OPENING CAPTIVE SCREW FASTENERS

RECEPTACLES:

PRESS-IN TYPE

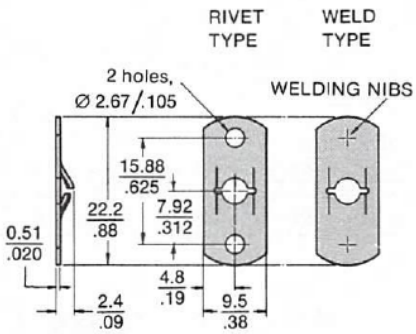






PART NUMBER 09-44-101-11 ■
low carbon steel,
case hardened and zinc plated.

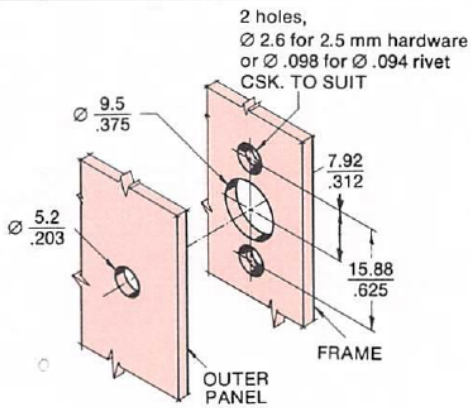
FLAT TYPE



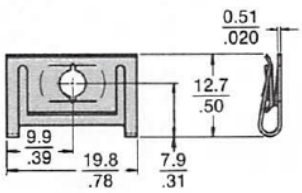
MATERIAL	FINISH	PART NUMBER
RIVET		
spring steel	DACROTIZED†	09-41-101-**11** ■
302 stainless steel	passivated	09-41-101-**24** ■
WELD		
302 stainless steel	passivated	09-41-103-**24** ■

millimeter
inch

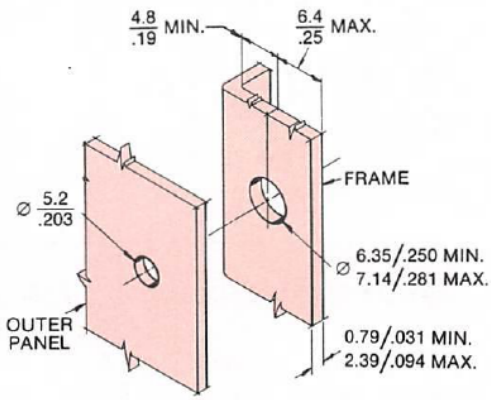
millimeter/inch



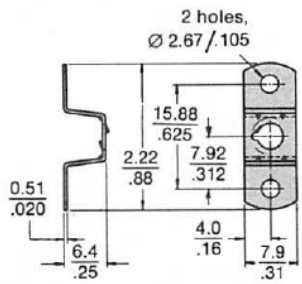
CLIP-ON TYPE



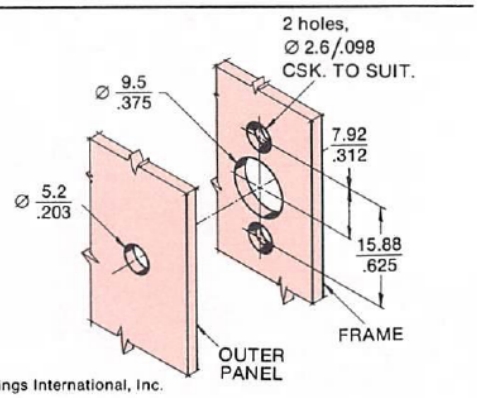
MATERIAL	FINISH	PART NUMBER
spring steel	DACROTIZED†	09-43-101-**11** ■
17-7PH stainless steel	passivated	09-43-101-**24** ■



SADDLE-TYPE



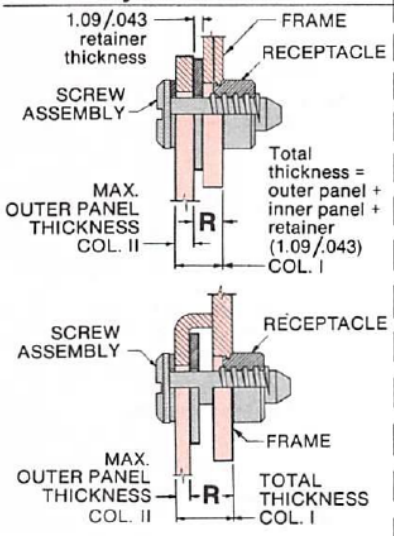
MATERIAL	FINISH	PART NUMBER
spring steel	DACROTIZED†	09-42-101-**11** ■
17-7PH stainless steel	passivated	09-42-101-**24** ■

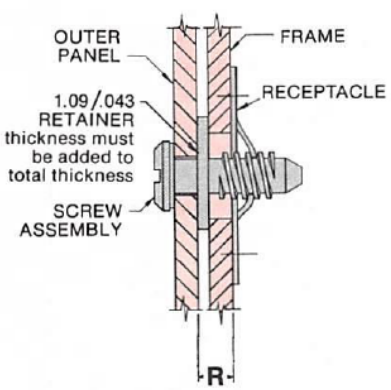


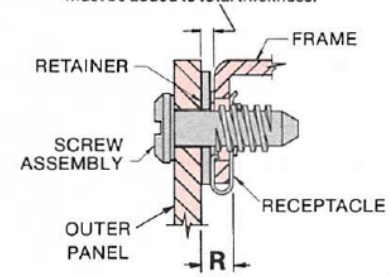
■ From stock, subject to prior sale.

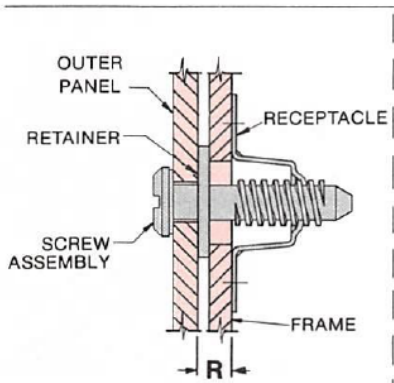
†Registered tradename of Metal Coatings International, Inc.

when using Nylon Retainer:

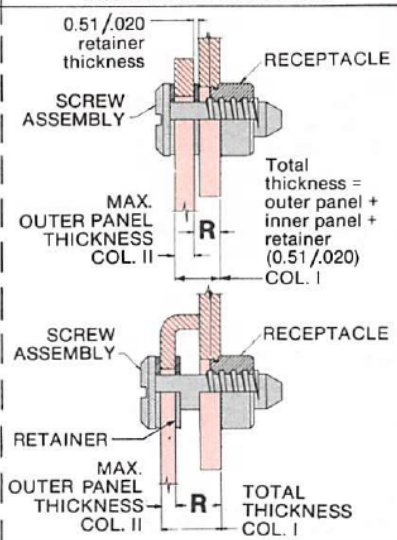


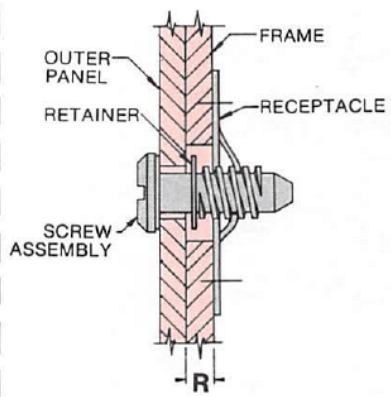


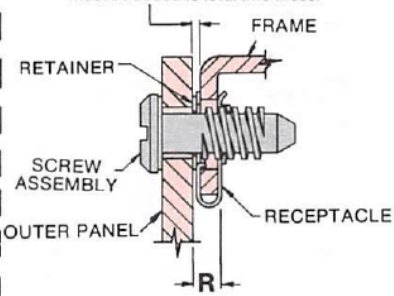


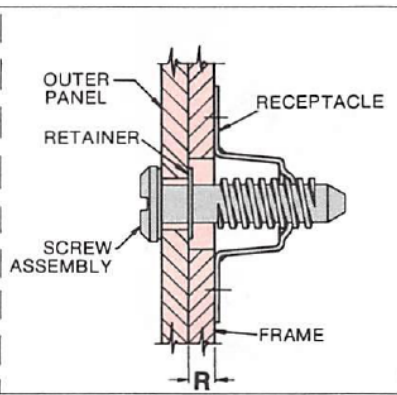


when using Aluminum Retainer:









SCREW ASSEMBLY SELECTION TABLE

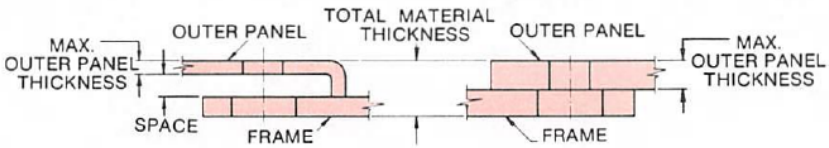
COL. I TOTAL THICKNESS MIN.	COL. I TOTAL THICKNESS MAX.	COL. II MAX. OUTER PANEL THICKNESS	COL. III R MIN. FOR FULL SCREW RETRACTION	THESE PART NUMBERS APPLY TO ALL HEAD STYLES
1.22/.048	4.75/.187	1.27/.050	THESE SCREWS WILL NOT RETRACT FULLY	09-XX-102-XX
	7.92/.312			09-XX-202-XX
	11.10/.437			09-XX-302-XX
	14.27/.562			09-XX-402-XX
1.37/.054	4.75/.187	2.54/.100	3.43/.135	09-XX-103-XX
	7.92/.312		6.60/.260	09-XX-203-XX
	11.10/.437		9.78/.385	09-XX-303-XX
	14.27/.562		12.95/.510	09-XX-403-XX
2.64/.104	7.92/.312	3.81/.150	5.33/.210	09-XX-204-XX
	11.10/.437		8.51/.335	09-XX-304-XX
	14.27/.562		11.68/.460	09-XX-404-XX
3.91/.154	7.92/.312	5.08/.200	4.06/.160	09-XX-205-XX
	11.10/.437		7.24/.285	09-XX-305-XX
	14.27/.562		10.41/.410	09-XX-405-XX
6.45/.254	11.10/.437	7.62/.300	4.70/.185	09-XX-307-XX
	14.27/.562		7.87/.310	09-XX-407-XX
8.99/.354	14.27/.562	10.16/.400	5.33/.210	09-XX-409-XX
1.27/.050	3.18/.125	1.27/.050	THESE SCREWS WILL NOT RETRACT FULLY	09-XX-102-XX
	6.35/.250			09-XX-202-XX
	9.53/.375			09-XX-302-XX
	12.70/.500			09-XX-402-XX
2.54/.100	3.18/.125	2.54/.100	2.79/.110	09-XX-103-XX
	6.35/.250		5.97/.235	09-XX-203-XX
	9.53/.375		9.14/.360	09-XX-303-XX
	12.70/.500		12.32/.485	09-XX-403-XX
3.81/.150	6.35/.250	3.81/.150	4.70/.185	09-XX-204-XX
	9.53/.375		7.87/.310	09-XX-304-XX
	12.70/.500		11.05/.435	09-XX-404-XX
5.08/.200	6.35/.250	5.08/.200	3.43/.135	09-XX-205-XX
	9.53/.375		6.60/.260	09-XX-305-XX
	12.70/.500		9.78/.385	09-XX-405-XX
7.62/.300	9.53/.375	7.62/.300	4.06/.160	09-XX-307-XX
	12.70/.500		7.24/.285	09-XX-407-XX
10.16/.400	12.70/.500	10.16/.400	4.70/.185	09-XX-409-XX
1.27/.050	3.18/.125	1.27/.050	THESE SCREWS WILL NOT RETRACT FULLY	09-XX-102-XX
	6.35/.250			09-XX-202-XX
	9.53/.375			09-XX-302-XX
	12.70/.500			09-XX-402-XX
2.54/.100	3.18/.125	2.54/.100	2.79/.110	09-XX-103-XX
	6.35/.250		5.97/.235	09-XX-203-XX
	9.53/.375		9.14/.360	09-XX-303-XX
	12.70/.500		12.32/.485	09-XX-403-XX
3.81/.150	6.35/.250	3.81/.150	4.70/.185	09-XX-204-XX
	9.53/.375		7.87/.310	09-XX-304-XX
	12.70/.500		11.05/.435	09-XX-404-XX
5.08/.200	6.35/.250	5.08/.200	3.43/.135	09-XX-205-XX
	9.53/.375		6.60/.260	09-XX-305-XX
	12.70/.500		9.78/.385	09-XX-405-XX
7.62/.300	9.53/.375	7.62/.300	4.06/.160	09-XX-307-XX
	12.70/.500		7.24/.285	09-XX-407-XX
10.16/.400	12.70/.500	10.16/.400	4.70/.185	09-XX-409-XX
0.00/.000	2.16/.085	1.27/.050	THESE SCREWS WILL NOT RETRACT FULLY	09-XX-202-XX
	5.33/.210			09-XX-302-XX
	8.51/.335			09-XX-402-XX
0.00/.000	2.16/.085	2.54/.100	1.78/.070	09-XX-203-XX
	5.33/.210		4.95/.195	09-XX-303-XX
	8.51/.335		8.13/.320	09-XX-403-XX
0.00/.000	2.16/.085	3.81/.150	0.51/.020	09-XX-204-XX
	5.33/.210		3.68/.145	09-XX-304-XX
	8.51/.335		6.86/.270	09-XX-404-XX
0.89/.035	2.16/.085	5.08/.200	0.00/.000	09-XX-205-XX
	5.33/.210		2.41/.095	09-XX-305-XX
	8.51/.335		5.59/.220	09-XX-405-XX
3.43/.135	5.33/.210	7.62/.300	0.00/.000	09-XX-307-XX
	8.51/.335		3.05/.120	09-XX-407-XX
5.97/.235	8.51/.335	8.51/.335	0.51/.020	09-XX-409-XX

millimeter/inch

NO. 12 QUICK-OPENING CAPTIVE SCREW FASTENERS

1. Select receptacle best suited to your application.

- **J Type Clip-on**
- **U Type Clip-on**
- **Narrow Flange Clip-on**
- **Flat**
- **Saddle**
- **Side Mount**



2. Determine your total material thickness (or total material thickness range if using same length screw in several applications) by measuring the distance between the outer surface of the OUTER PANEL and the inner surface of the FRAME including spaces created by gaskets, flanges, etc.

3. Select retainer.

- The nylon push-on retainer requires a minimum space between the frame and outer panel of 1.37/.054 which must be included in your total material thickness.
- The metal retainer requires a minimum space between frame and outer panel only with some receptacles. See receptacle installation.

4. See receptacle installation to adjust total material thickness before entering Screw Assembly Selection Table on pgs. C-6 & C-7.

5. Enter column I of the Screw Assembly Selection Table. Find the range that most closely brackets your thickness requirement.

6. Check column II. Your outer panel thickness plus 1.30/.051 must not exceed the maximum listed because screw selected must have sufficient throat length for captivation in panel. The screw will work perfectly in any thinner panel.

7. Choose finish and head style. (Other head styles are available on special order.)

8. Order all 4 parts — SCREW ASSEMBLY, RETAINER, RECEPTACLE, and TOOL by part number.

EXAMPLE A: When using FLAT TYPE receptacle

Your total material thickness = 6.35/.250. This dimension is closely bracketed in Col. I by 5.08/.200 to 6.35/.250. Use screw assembly part No. 12-11-205-11.

EXAMPLE B: When using CLIP-ON TYPE receptacle

Your total material thickness = 6.35/.250. A constant of 1.40/.055 MUST be added to allow for thickness of clip-on receptacle and metal retainer. 6.35/.250 plus 1.40/.055 = 7.75/.305. 7.75/.305 is most closely bracketed in Col. I by 7.62/.300 to 9.53/.375. Use screw assembly part No. 12-11-307-11.

	COL. I		COL. II		
	Range of total thickness to be fastened		MAX. thick. of outer panel	CARBON ST ZINC** PLA	
	MIN.	MAX.		SLOTTED	WING
A	1.27/.050	3.18/.125	1.27/.050	12-11-102-11	12-12-102-
	2.54/.100	3.18/.125	2.54/.100	12-11-103-11	12-12-103-
	1.27/.050	6.35/.250	1.27/.050	12-11-202-11	12-12-202-
	2.54/.100	6.35/.250	2.54/.100	12-11-203-11	12-12-203-
	3.81/.150	6.35/.250	3.81/.150	12-11-204-11	12-12-204-
	5.08/.200	6.35/.250	5.08/.200	12-11-205-11	12-12-205-
B	1.27/.050	9.53/.375	1.27/.050	12-11-302-11	12-12-302-
	2.54/.100	9.53/.375	2.54/.100	12-11-303-11	12-12-303-
	3.81/.150	9.53/.375	3.81/.150	12-11-304-11	12-12-304-
	5.08/.200	9.53/.375	5.08/.200	12-11-305-11	12-12-305-
	7.62/.300	9.53/.375	7.62/.300	12-11-307-11	12-12-307-
D	1.27/.050	12.70/.500	1.27/.050	12-11-402-11	12-12-402-
	2.54/.100	12.70/.500	2.54/.100	12-11-403-11	12-12-403-
	3.81/.150	12.70/.500	3.81/.150	12-11-404-11	12-12-404-
	5.08/.200	12.70/.500	5.08/.200	12-11-405-11	12-12-405-
	7.62/.300	12.70/.500	7.62/.300	12-11-407-11	12-12-407-
C	10.16/.400	12.70/.500	10.16/.400	12-11-409-11	12-12-409-
	1.27/.050	15.88/.625	1.27/.050	12-11-502-11	12-12-502-
	2.54/.100	15.88/.625	2.54/.100	12-11-503-11	12-12-503-
	3.81/.150	15.88/.625	3.81/.150	12-11-504-11	12-12-504-

EXAMPLE C: When using SADDLE TYPE receptacle

Your total material thickness = 6.35/.250. A constant of 3.96/.156 MUST be added whenever saddle type receptacle is used. 6.35/.250 plus 3.96/.156 = 10.31/.406. 10.31/.406 is most closely bracketed in Col. I by 10.16/.400 to 12.70/.500. Use screw assembly part No. 12-11-409-11.

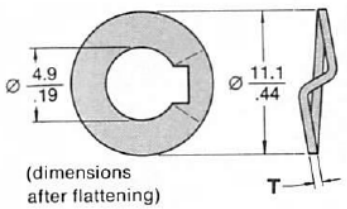
EXAMPLE D: When using SAME GRIP fastener in several different applications.

Your total material thicknesses vary from 6.35/.250 to 12.45/.490 (max. outer panel = 5.08/.200). These dimensions are most closely bracketed in Col. I by 5.08/.200 to 12.70/.500. Screw assembly part No. 12-11-405-11 will operate in all of these applications.

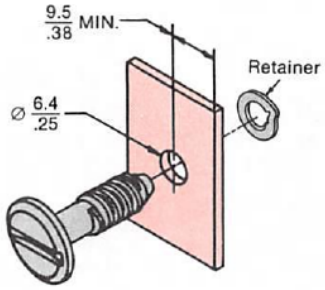
millimeter/inch $\frac{\text{millimeter}}{\text{inch}}$

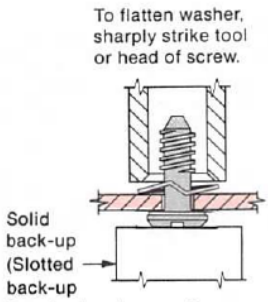
Retainers:

Metal

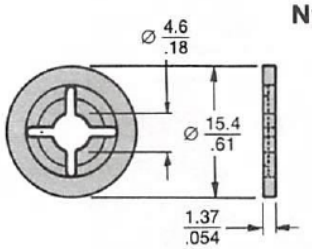


PART NUMBERS	T
5052 aluminum, natural. **12-11014-12** ■	0.51 .020
302 stainless steel, passivated. **12-11014-26** ■	0.43 .017



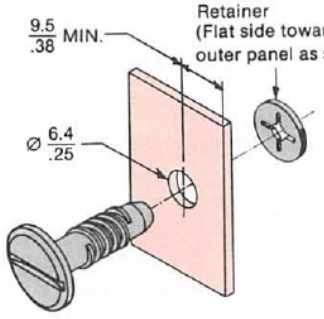


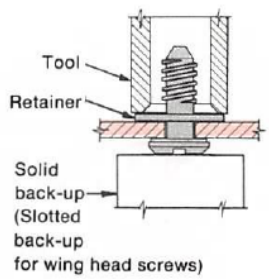
Nylon



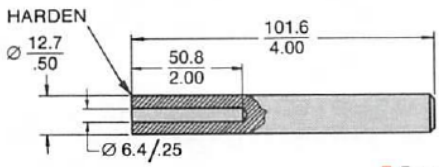
PART NUMBER
12-11064-42 ■

nylon, black.

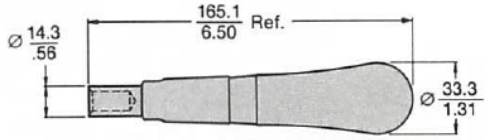




TOOL PART NUMBER
12-11019-11 ■



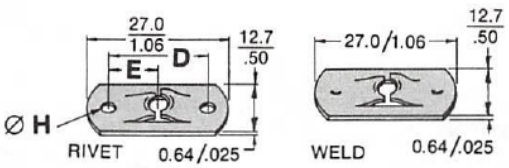
TOOL PART NUMBER
12-0-20980-11 ■



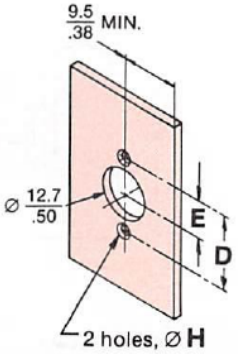
■ From stock, subject to prior sale.

millimeter/inch millimeter / inch

FLAT TYPE

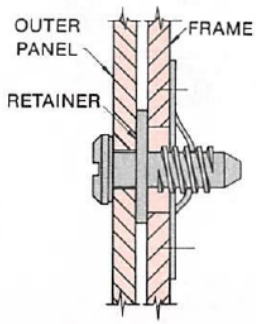


TYPE	MATERIAL AND FINISH	D	E	⌀ H	PART NUMBERS
RIVET	1064 steel, DACROTIZED†	19.05/.750	9.53/.375	2.67/.105	12-11015-13 ■
		19.05/.750	9.53/.375	3.43/.135	12-11020-11 ■
	302 stainless steel, passivated	19.05/.750	9.53/.375	2.67/.105	12-11015-14 ■
		19.05/.750	9.53/.375	3.43/.135	12-11020-13 ■
		17.45/.687	8.71/.343	3.66/.144	12-11021-12 ■
WELD		—	—	—	12-11016-11 ■



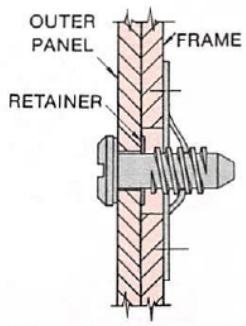
Nylon Retainer

To enter Screw Selection Table use: Total Material Thickness + 1.37/.054 (constant)

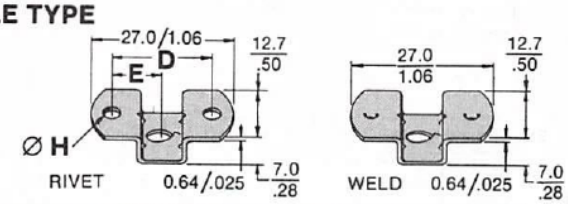


Metal Retainer

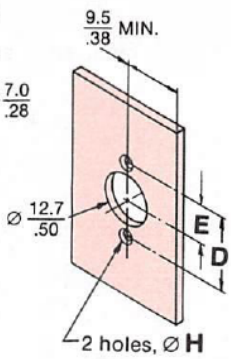
(No adjustment required to enter Screw Selection Table.)



SADDLE TYPE

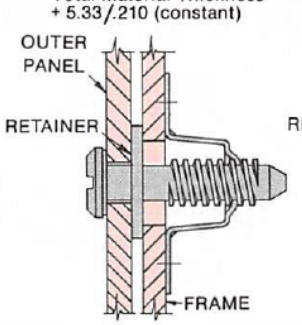


TYPE	MATERIAL AND FINISH	D	E	⌀ H	PART NUMBERS
RIVET	1070 steel, DACROTIZED†	19.05/.750	9.53/.375	2.67/.105	12-11042-11 ■
		19.05/.750	9.53/.375	3.43/.135	12-11043-11 ■
	302 stainless steel, passivated	19.05/.750	9.53/.375	2.67/.105	12-11042-12 ■
		19.05/.750	9.53/.375	3.43/.135	12-11043-12 ■
WELD		—	—	—	12-11044-12 ■



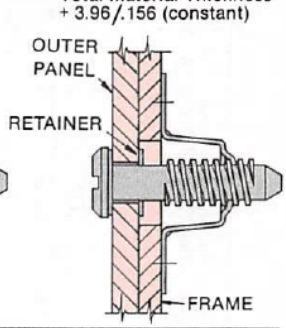
Nylon Retainer

To enter Screw Selection Table use: Total Material Thickness + 5.33/.210 (constant)

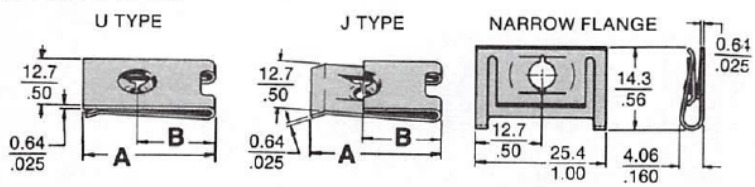


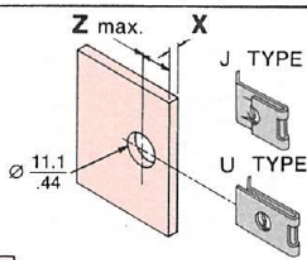
Metal Retainer

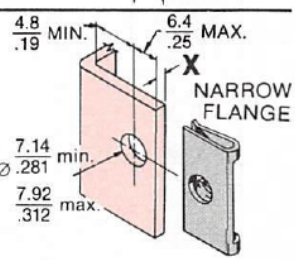
To enter Screw Selection Table use: Total Material Thickness + 3.96/.156 (constant)



CLIP-ON TYPES



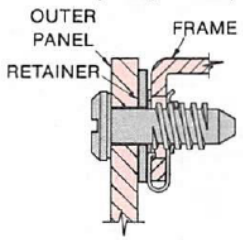




TYPE	MATERIAL AND FINISH	X	A	B	Z max.	PART NUMBERS
J	1064 steel, DACROTIZED†	0.79/.031—2.77/.109	24.8/.98	14.9/.59	12.7/.50	12-11025-11 ■
U		0.79/.031—2.77/.109	25.9/1.02	14.9/.59	12.7/.50	12-11017-11 ■
		2.77/.109—4.09/.161	25.9/1.02	14.9/.59	11.9/.47	12-11027-11 ■
		4.09/.161—5.49/.213	24.8/.98	14.1/.56	11.1/.44	12-11029-11 ■
		5.41/.213—6.73/.265	24.5/.97	13.4/.53	11.1/.44	12-11031-11 ■
	17-7 PH Stainless Steel, PASSIVATED.	0.79/.031—2.77/.109	25.9/1.02	14.9/.59	12.7/.50	12-11017-12 ■
		2.77/.109—4.09/.166	25.9/1.02	15.5/.61	11.9/.47	12-11027-12 ■
Narrow flange	1064 steel, DACROTIZED†	0.79/.031—2.77/.109	—	—	6.4/.25	12-11050-27 ■

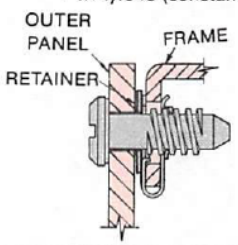
Thermoplastic Retainer

To enter Screw Selection Table use: Total Material Thickness + 2.01/.079 (constant)

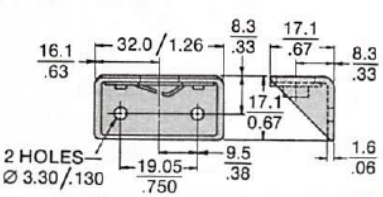


Metal Retainer

To enter Screw Selection Table use: Total Material Thickness + 1.14/.045 (constant)

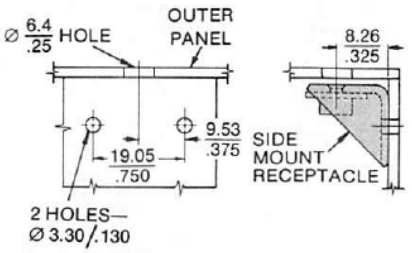


SIDE MOUNT TYPE



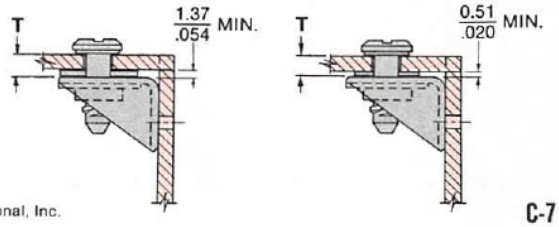
PART NUMBER 12-90-101-10 ■

RECEPTACLE: 1064 steel, DACROTIZED†.
BRACKET: 1010 steel, DACROTIZED†.
RIVET: aluminum.



Thermoplastic Retainer Metal Retainer

To enter Screw Selection Table when using either retainer use: T + 1.52/.060 (constant)



†Registered tradename of Metal Coatings International, Inc.

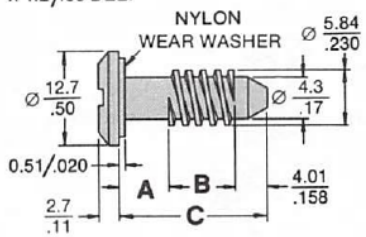
■ From stock, subject to prior sale.

NO. 12 SCREW ASSEMBLIES

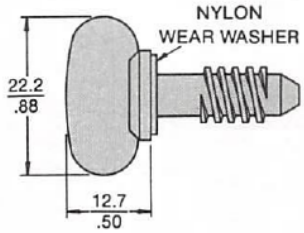
Shown approx actual size

SLOTTED HEAD

SLOT, 2.0/.08 WIDE
x 1.2/.05 DEEP

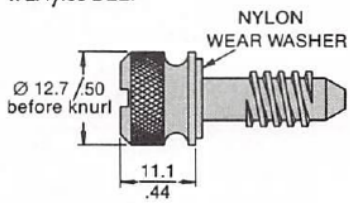


WING HEAD



KNURLED HEAD

SLOT, 2.0/.08 WIDE
x 2.4/.09 DEEP



COL. I		COL. II	SCREW ASSEMBLY PART NUMBERS						DIMENSIONS		
Range of total thickness to be fastened		MAX. thick. of outer panel	Low carbon steel, case hardened and DACROTIZED†. (wing is 1010 steel)		1018 steel, case hardened, DACRO-TIZED†.	Low carbon steel, case hardened and chromium plated. (wing is 1010 steel)		1018 steel, case hardened, chromium plated.	A	B	C
MIN.	MAX.		SLOTTED	WING	KNURLED	SLOTTED	WING	KNURLED			
1.27/.050	3.18/.125	1.27/.050	12-11-102-11 ■	12-12-102-11 □	12-13-102-11 □	12-11-102-14 □	12-12-102-14 □	12-13-102-14 □	2.54/.100	5.79/.228	12.34/.486
2.54/.100	3.18/.125	2.54/.100	12-11-103-11 ■	12-12-103-11 □	12-13-103-11 □	12-11-103-14 □	12-12-103-14 □	12-13-103-14 □	3.81/.150	4.52/.178	
1.27/.050	6.35/.250	1.27/.050	12-11-202-11 ■	12-12-202-11 ■	12-13-202-11 ■	12-11-202-14 □	12-12-202-14 □	12-13-202-14 □	2.54/.100	8.97/.353	15.52/.611
2.54/.100	6.35/.250	2.54/.100	12-11-203-11 ■	12-12-203-11 ■	12-13-203-11 ■	12-11-203-14 □	12-12-203-14 □	12-13-203-14 □	3.81/.150	7.70/.303	
3.81/.150	6.35/.250	3.81/.150	12-11-204-11 ■	12-12-204-11 ■	12-13-204-11 ■	12-11-204-14 □	12-12-204-14 □	12-13-204-14 □	5.08/.200	6.43/.253	
5.08/.200	6.35/.250	5.08/.200	12-11-205-11 ■	12-12-205-11 ■	12-13-205-11 ■	12-11-205-14 □	12-12-205-14 □	12-13-205-14 □	6.35/.250	5.16/.203	
1.27/.050	9.53/.375	1.27/.050	12-11-302-11 ■	12-12-302-11 ■	12-13-302-11 ■	12-11-302-14 □	12-12-302-14 □	12-13-302-14 □	2.54/.100	12.14/.478	18.69/.736
2.54/.100	9.53/.375	2.54/.100	12-11-303-11 ■	12-12-303-11 ■	12-13-303-11 ■	12-11-303-14 □	12-12-303-14 □	12-13-303-14 □	3.81/.150	10.87/.428	
3.81/.150	9.53/.375	3.81/.150	12-11-304-11 ■	12-12-304-11 ■	12-13-304-11 ■	12-11-304-14 □	12-12-304-14 □	12-13-304-14 □	5.08/.200	9.60/.378	
5.08/.200	9.53/.375	5.08/.200	12-11-305-11 ■	12-12-305-11 ■	12-13-305-11 ■	12-11-305-14 □	12-12-305-14 □	12-13-305-14 □	6.35/.250	8.33/.328	
7.62/.300	9.53/.375	7.62/.300	12-11-307-11 ■	12-12-307-11 ■	12-13-307-11 ■	12-11-307-14 □	12-12-307-14 □	12-13-307-14 □	8.89/.350	5.79/.228	
2.54/.100	12.70/.500	2.54/.100	12-11-403-11 ■	12-12-403-11 ■	12-13-403-11 ■	12-11-403-14 □	12-12-403-14 □	12-13-403-14 □	3.81/.150	14.05/.553	21.87/.861
3.81/.150	12.70/.500	3.81/.150	12-11-404-11 ■	12-12-404-11 ■	12-13-404-11 ■	12-11-404-14 □	12-12-404-14 □	12-13-404-14 □	5.08/.200	12.78/.503	
5.08/.200	12.70/.500	5.08/.200	12-11-405-11 ■	12-12-405-11 □	12-13-405-11 ■	12-11-405-14 □	12-12-405-14 □	12-13-405-14 □	6.35/.250	11.51/.453	
7.62/.300	12.70/.500	7.62/.300	12-11-407-11 ■	12-12-407-11 □	12-13-407-11 □	12-11-407-14 □	12-12-407-14 □	12-13-407-14 □	8.89/.350	8.97/.353	
10.16/.400	12.70/.500	10.16/.400	12-11-409-11 ■	12-12-409-11 □	12-13-409-11 □	12-11-409-14 □	12-12-409-14 □	12-13-409-14 □	11.43/.450	6.43/.253	
2.54/.100	15.88/.625	2.54/.100	12-11-503-11 ■	12-12-503-11 □	12-13-503-11 □	12-11-503-14 □	12-12-503-14 □	12-13-503-14 □	3.81/.150	17.22/.678	25.04/.986
3.81/.150	15.88/.625	3.81/.150	12-11-504-11 ■	12-12-504-11 □	12-13-504-11 □	12-11-504-14 □	12-12-504-14 □	12-13-504-14 □	5.08/.200	15.95/.628	
5.08/.200	15.88/.625	5.08/.200	12-11-505-11 ■	12-12-505-11 □	12-13-505-11 □	12-11-505-14 □	12-12-505-14 □	12-13-505-14 □	6.35/.250	14.68/.578	
7.62/.300	15.88/.625	7.62/.300	12-11-507-11 ■	12-12-507-11 □	12-13-507-11 □	12-11-507-14 □	12-12-507-14 □	12-13-507-14 □	8.89/.350	12.14/.478	
10.16/.400	15.88/.625	10.16/.400	12-11-509-11 ■	12-12-509-11 □	12-13-509-11 □	12-11-509-14 □	12-12-509-14 □	12-13-509-14 □	11.43/.450	9.60/.378	
12.70/.500	15.88/.625	12.70/.500	12-11-511-11 ■	12-12-511-11 □	12-13-511-11 □	12-11-511-14 □	12-12-511-14 □	12-13-511-14 □	13.97/.550	7.06/.278	
2.54/.100	19.05/.750	2.54/.100	12-11-603-11 ■	12-12-603-11 □	12-13-603-11 □	12-11-603-14 □	12-12-603-14 □	12-13-603-14 □	3.81/.150	20.40/.803	28.22/1.111
3.81/.150	19.05/.750	3.81/.150	12-11-604-11 ■	12-12-604-11 □	12-13-604-11 □	12-11-604-14 □	12-12-604-14 □	12-13-604-14 □	5.08/.200	19.13/.753	
5.08/.200	19.05/.750	5.08/.200	12-11-605-11 ■	12-12-605-11 □	12-13-605-11 □	12-11-605-14 □	12-12-605-14 □	12-13-605-14 □	6.35/.250	17.86/.703	
7.62/.300	19.05/.750	7.62/.300	12-11-607-11 ■	12-12-607-11 □	12-13-607-11 □	12-11-607-14 □	12-12-607-14 □	12-13-607-14 □	8.89/.350	15.32/.603	
10.16/.400	19.05/.750	10.16/.400	12-11-609-11 ■	12-12-609-11 □	12-13-609-11 □	12-11-609-14 □	12-12-609-14 □	12-13-609-14 □	11.43/.450	12.78/.503	
12.70/.500	19.05/.750	12.70/.500	12-11-611-11 ■	12-12-611-11 □	12-13-611-11 □	12-11-611-14 □	12-12-611-14 □	12-13-611-14 □	13.97/.550	10.24/.403	
15.24/.600	19.05/.750	15.24/.600	12-11-613-11 ■	12-12-613-11 □	12-13-613-11 □	12-11-613-14 □	12-12-613-14 □	12-13-613-14 □	16.51/.650	7.70/.303	
17.78/.700	19.05/.750	17.78/.700	12-11-615-11 □	12-12-615-11 □	12-13-615-11 □	12-11-615-14 □	12-12-615-14 □	12-13-615-14 □	19.05/.750	5.16/.203	
2.54/.100	22.23/.875	2.54/.100	12-11-703-11 □	12-12-703-11 □	12-13-703-11 □	12-11-703-14 □	12-12-703-14 □	12-13-703-14 □	3.81/.150	23.57/.928	31.39/1.236
3.81/.150	22.23/.875	3.81/.150	12-11-704-11 □	12-12-704-11 □	12-13-704-11 □	12-11-704-14 □	12-12-704-14 □	12-13-704-14 □	5.08/.200	22.30/.878	
5.08/.200	22.23/.875	5.08/.200	12-11-705-11 □	12-12-705-11 □	12-13-705-11 □	12-11-705-14 □	12-12-705-14 □	12-13-705-14 □	6.35/.250	21.03/.828	
7.62/.300	22.23/.875	7.62/.300	12-11-707-11 □	12-12-707-11 □	12-13-707-11 □	12-11-707-14 □	12-12-707-14 □	12-13-707-14 □	8.89/.350	18.49/.728	
10.16/.400	22.23/.875	10.16/.400	12-11-709-11 □	12-12-709-11 □	12-13-709-11 □	12-11-709-14 □	12-12-709-14 □	12-13-709-14 □	11.43/.450	15.94/.628	
12.70/.500	22.23/.875	12.70/.500	12-11-711-11 □	12-12-711-11 □	12-13-711-11 □	12-11-711-14 □	12-12-711-14 □	12-13-711-14 □	13.97/.550	13.41/.528	
15.24/.600	22.23/.875	15.24/.600	12-11-713-11 □	12-12-713-11 □	12-13-713-11 □	12-11-713-14 □	12-12-713-14 □	12-13-713-14 □	16.51/.650	10.87/.428	
17.78/.700	22.23/.875	17.78/.700	12-11-715-11 □	12-12-715-11 □	12-13-715-11 □	12-11-715-14 □	12-12-715-14 □	12-13-715-14 □	19.05/.750	8.33/.328	
20.32/.800	22.23/.875	20.32/.800	12-11-717-11 □	12-12-717-11 □	12-13-717-11 □	12-11-717-14 □	12-12-717-14 □	12-13-717-14 □	21.59/.850	5.79/.228	
2.54/.100	25.40/1.000	2.54/.100	12-11-803-11 □	12-12-803-11 □	12-13-803-11 □	12-11-803-14 □	12-12-803-14 □	12-13-803-14 □	3.81/.150	26.75/1.053	34.57/1.361
3.81/.150	25.40/1.000	3.81/.150	12-11-804-11 □	12-12-804-11 □	12-13-804-11 □	12-11-804-14 □	12-12-804-14 □	12-13-804-14 □	5.08/.200	25.48/1.003	
5.08/.200	25.40/1.000	5.08/.200	12-11-805-11 □	12-12-805-11 □	12-13-805-11 □	12-11-805-14 □	12-12-805-14 □	12-13-805-14 □	6.35/.250	24.21/.953	
7.62/.300	25.40/1.000	7.62/.300	12-11-807-11 □	12-12-807-11 □	12-13-807-11 □	12-11-807-14 □	12-12-807-14 □	12-13-807-14 □	8.89/.350	21.67/.853	
10.16/.400	25.40/1.000	10.16/.400	12-11-809-11 □	12-12-809-11 □	12-13-809-11 □	12-11-809-14 □	12-12-809-14 □	12-13-809-14 □	11.43/.450	19.13/.753	
12.70/.500	25.40/1.000	12.70/.500	12-11-811-11 □	12-12-811-11 □	12-13-811-11 □	12-11-811-14 □	12-12-811-14 □	12-13-811-14 □	13.97/.550	16.59/.653	
15.24/.600	25.40/1.000	15.24/.600	12-11-813-11 □	12-12-813-11 □	12-13-813-11 □	12-11-813-14 □	12-12-813-14 □	12-13-813-14 □	16.51/.650	14.05/.553	
17.78/.700	25.40/1.000	17.78/.700	12-11-815-11 □	12-12-815-11 □	12-13-815-11 □	12-11-815-14 □	12-12-815-14 □	12-13-815-14 □	19.05/.750	11.51/.453	
20.32/.800	25.40/1.000	20.32/.800	12-11-817-11 □	12-12-817-11 □	12-13-817-11 □	12-11-817-14 □	12-12-817-14 □	12-13-817-14 □	21.59/.850	8.97/.353	
22.86/.900	25.40/1.000	22.86/.900	12-11-819-11 □	12-12-819-11 □	12-13-819-11 □	12-11-819-14 □	12-12-819-14 □	12-13-819-14 □	24.13/.950	6.43/.253	

millimeter
inch
millimeter/inch

DELIVERY SYMBOLS
(see part numbers)

■ From stock, subject to prior sale.

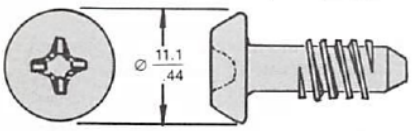
□ Up to 8 weeks. Minimum order required; setup charge may apply.

†Registered tradename of Metal Coatings International, Inc.

NO. 12 SCREW ASSEMBLIES

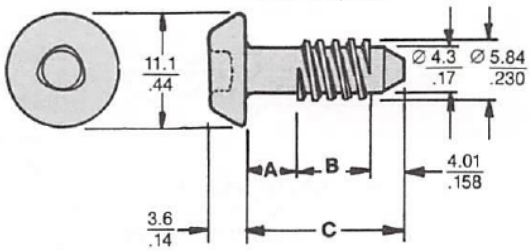
PHILLIPS HEAD

Material and Finish
Case hardened low carbon steel, zinc plated.



TOOLHEAD

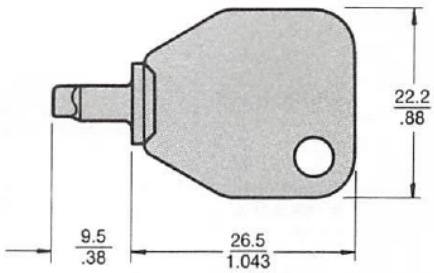
Material and Finish
Case hardened low carbon steel, zinc plated.



No. 4 size TOOLHEAD KEY

Material and Finish
case hardened steel with bright nickel plate.

PART NUMBER 29-90-214-10 ■



COL. I		COL.II	SCREW ASSEMBLY PART NUMBERS					DIMENSIONS		
Range of total thickness to be fastened		MAX. thick of outer panel	303 stainless steel, passivated (wing is 302 stainless steel)			case hardened low carbon steel, zinc plated.		A	B	C
MIN.	MAX.		SLOTTED	WING	KNURLED	TOOLHEAD	PHILLIPS			
1.27/.050	3.18/.125	1.27/.050	12-11-102-12 □	12-12-102-12 □	12-13-102-12 □	12-T-102 □	12-P-102 □	2.54/.100	5.79/.228	12.34/.486
2.54/.100	3.18/.125	2.54/.100	12-11-103-12 □	12-12-103-12 □	12-13-103-12 □	12-T-103 □	12-P-103 □	3.81/.150	4.52/.178	
1.27/.050	6.35/.250	1.27/.050	12-11-202-12 □	12-12-202-12 □	12-13-202-12 □	12-T-202 □	12-P-202 □	2.54/.100	8.97/.363	15.52/.611
2.54/.100	6.35/.250	2.54/.100	12-11-203-12 □	12-12-203-12 □	12-13-203-12 □	12-T-203 □	12-P-203 □	3.81/.150	7.70/.303	
3.81/.150	6.35/.250	3.81/.150	12-11-204-12 □	12-12-204-12 □	12-13-204-12 □	12-T-203 □	12-P-203 □	5.08/.200	6.43/.253	
5.08/.200	6.35/.250	5.08/.200	12-11-205-12 □	12-12-205-12 □	12-12-205-12 □	12-T-204 □	12-P-204 □	6.35/.250	5.16/.203	
1.27/.050	9.53/.375	1.27/.050	12-11-302-12 □	12-12-302-12 □	12-13-302-12 □	12-T-302 □	12-P-302 □	2.54/.100	12.14/.478	18.69/.736
2.54/.100	9.53/.375	2.54/.100	12-11-303-12 □	12-12-303-12 □	12-13-303-12 □	12-T-303 □	12-P-303 □	3.81/.150	10.87/.428	
3.81/.150	9.53/.375	3.81/.150	12-11-304-12 □	12-12-304-12 □	12-13-304-12 □	12-T-304 □	12-P-304 □	5.08/.200	9.60/.378	
5.08/.200	9.53/.375	5.08/.200	12-11-305-12 □	12-12-305-12 □	12-13-305-12 □	12-T-305 □	12-P-305 □	6.35/.250	8.33/.328	
7.62/.300	9.53/.375	7.62/.300	12-11-307-12 □	12-12-307-12 □	12-13-307-12 □	12-T-307 □	12-P-307 □	8.89/.350	5.79/.228	
2.54/.100	12.70/.500	2.54/.100	12-11-403-12 □	12-12-403-12 □	12-13-403-12 □	12-T-403 □	12-P-403 □	3.81/.150	14.05/.553	21.87/.861
3.81/.150	12.70/.500	3.81/.150	12-11-404-12 □	12-12-404-12 □	12-13-404-12 □	12-T-404 □	12-P-404 □	5.08/.200	12.78/.503	
5.08/.200	12.70/.500	5.08/.200	12-11-405-12 □	12-12-405-12 □	12-13-405-12 □	12-T-405 □	12-P-405 □	6.35/.250	11.51/.453	
7.62/.300	12.70/.500	7.62/.300	12-11-407-12 □	12-12-407-12 □	12-13-407-12 □	12-T-407 □	12-P-407 □	8.89/.350	8.97/.353	
10.16/.400	12.70/.500	10.16/.400	12-11-409-12 □	12-12-409-12 □	12-13-409-12 □	12-T-409 □	12-P-409 □	11.43/.450	6.43/.253	
2.54/.100	15.88/.625	2.54/.100	12-11-503-12 □	12-12-503-12 □	12-13-503-12 □	12-T-503 □	12-P-503 □	3.81/.150	17.22/.678	24.59/.966
3.81/.150	15.88/.625	3.81/.150	12-11-504-12 □	12-12-504-12 □	12-13-504-12 □	12-T-504 □	12-P-504 □	5.08/.200	15.95/.628	
5.08/.200	15.88/.625	5.08/.200	12-11-505-12 □	12-12-505-12 □	12-13-505-12 □	12-T-505 □	12-P-505 □	6.35/.250	14.68/.578	
7.62/.300	15.88/.625	7.62/.300	12-11-507-12 □	12-12-507-12 □	12-13-507-12 □	12-T-507 □	12-P-507 □	8.89/.350	12.14/.478	
10.16/.400	15.88/.625	10.16/.400	12-11-509-12 □	12-12-509-12 □	12-13-509-12 □	12-T-509 □	12-P-509 □	11.43/.450	9.60/.378	
12.70/.500	15.88/.625	12.70/.500	12-11-511-12 □	12-12-511-12 □	12-13-511-12 □	12-T-511 □	12-P-511 □	13.97/.550	7.06/.278	
2.54/.100	19.05/.750	2.54/.100	12-11-603-12 □	12-12-603-12 □	12-13-603-12 □	12-T-603 □	12-P-603 □	3.81/.150	20.40/.803	28.22/1.111
3.81/.150	19.05/.750	3.81/.150	12-11-604-12 □	12-12-604-12 □	12-13-604-12 □	12-T-604 □	12-P-604 □	5.08/.200	19.13/.753	
5.08/.200	19.05/.750	5.08/.200	12-11-605-12 □	12-12-605-12 □	12-13-605-12 □	12-T-605 □	12-P-605 □	6.35/.250	17.86/.793	
7.62/.300	19.05/.750	7.62/.300	12-11-607-12 □	12-12-607-12 □	12-13-607-12 □	12-T-607 □	12-P-607 □	8.89/.350	15.32/.603	
10.16/.400	19.05/.750	10.16/.400	12-11-609-12 □	12-12-609-12 □	12-13-609-12 □	12-T-609 □	12-P-609 □	11.43/.450	12.78/.503	
12.70/.500	19.05/.750	12.70/.500	12-11-611-12 □	12-12-611-12 □	12-13-611-12 □	12-T-611 □	12-P-611 □	13.97/.550	10.24/.403	
15.24/.600	19.05/.750	15.24/.600	12-11-613-12 □	12-12-613-12 □	12-13-613-12 □	12-T-613 □	12-P-613 □	16.51/.650	7.70/.303	
17.78/.700	19.05/.750	17.78/.700	12-11-615-12 □	12-12-615-12 □	12-13-615-12 □	12-T-615 □	12-P-615 □	19.05/.750	5.16/.203	
2.54/.100	22.23/.875	2.54/.100	12-11-703-12 □	12-12-703-12 □	12-13-703-12 □	12-T-703 □	12-P-703 □	3.81/.150	23.57/.928	31.39/1.236
3.81/.150	22.23/.875	3.81/.150	12-11-704-12 □	12-12-704-12 □	12-13-704-12 □	12-T-704 □	12-P-704 □	5.08/.200	22.30/.878	
5.08/.200	22.23/.875	5.08/.200	12-11-705-12 □	12-12-705-12 □	12-13-705-12 □	12-T-705 □	12-P-705 □	6.35/.250	21.03/.828	
7.62/.300	22.23/.875	7.62/.300	12-11-707-12 □	12-12-707-12 □	12-13-707-12 □	12-T-707 □	12-P-707 □	8.89/.350	18.49/.728	
10.16/.400	22.23/.875	10.16/.400	12-11-709-12 □	12-12-709-12 □	12-13-709-12 □	12-T-709 □	12-P-709 □	11.43/.450	15.94/.628	
12.70/.500	22.23/.875	12.70/.500	12-11-711-12 □	12-12-711-12 □	12-13-711-12 □	12-T-711 □	12-P-711 □	13.97/.550	13.41/.528	
15.24/.600	22.23/.875	15.24/.600	12-11-713-12 □	12-12-713-12 □	12-13-713-12 □	12-T-713 □	12-P-713 □	16.51/.650	10.87/.428	
17.78/.700	22.23/.875	17.78/.700	12-11-715-12 □	12-12-715-12 □	12-13-715-12 □	12-T-715 □	12-P-715 □	19.05/.750	8.33/.328	
20.32/.800	22.23/.875	20.32/.800	12-11-717-12 □	12-12-717-12 □	12-13-717-12 □	12-T-717 □	12-P-717 □	21.59/.850	5.79/.228	
2.54/.100	25.40/1.000	2.54/.100	12-11-803-12 □	12-12-803-12 □	12-13-803-12 □	12-T-803 □	12-P-803 □	3.81/.150	26.75/1.053	34.57/1.361
3.81/.150	25.40/1.000	3.81/.150	12-11-804-12 □	12-12-804-12 □	12-13-804-12 □	12-T-804 □	12-P-804 □	5.08/.200	25.48/1.003	
5.08/.200	25.40/1.000	5.08/.200	12-11-805-12 □	12-12-805-12 □	12-13-805-12 □	12-T-805 □	12-P-805 □	6.35/.250	24.21/.953	
7.62/.300	25.40/1.000	7.62/.300	12-11-807-12 □	12-12-807-12 □	12-13-807-12 □	12-T-807 □	12-P-807 □	8.89/.350	21.67/.853	
10.16/.400	25.40/1.000	10.16/.400	12-11-809-12 □	12-12-809-12 □	12-13-809-12 □	12-T-809 □	12-P-809 □	11.43/.450	19.13/.753	
12.70/.500	25.40/1.000	12.70/.500	12-11-811-12 □	12-12-811-12 □	12-13-811-12 □	12-T-811 □	12-P-811 □	13.97/.550	16.59/.653	
15.24/.600	25.40/1.000	15.24/.600	12-11-813-12 □	12-12-813-12 □	12-13-813-12 □	12-T-813 □	12-P-813 □	16.51/.650	14.05/.563	
17.78/.700	25.40/1.000	17.78/.700	12-11-815-12 □	12-12-815-12 □	12-13-815-12 □	12-T-815 □	12-P-815 □	19.05/.750	11.51/.453	
20.32/.800	25.40/1.000	20.32/.800	12-11-817-12 □	12-12-817-12 □	12-13-817-12 □	12-T-817 □	12-P-817 □	21.59/.850	8.97/.353	
22.86/.900	25.40/1.000	22.86/.900	12-11-819-12 □	12-12-819-12 □	12-13-819-12 □	12-T-819 □	12-P-819 □	24.13/.950	6.43/.253	

millimeter
inch
millimeter/inch

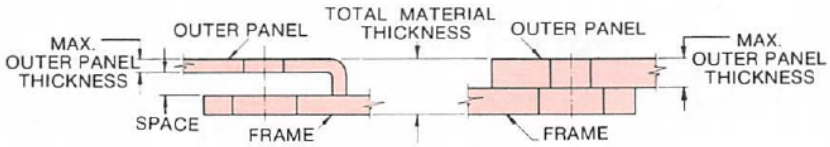
DELIVERY SYMBOLS
(see part numbers)

■ From stock, subject to prior sale.

□ Up to 8 weeks. Minimum order required; setup charge may apply.

NO. 17 QUICK-OPENING CAPTIVE SCREW FASTENERS

1. Select receptacle best suited to your application. ● **Flat** ◗ **Clip-on** ● **Side Mount**



2. Determine your total material thickness (or total material thickness range if using same length screw in several applications) by measuring the distance between the outer surface of the OUTER PANEL and the inner surface of the FRAME including spaces created by gaskets, flanges, etc.

3. Select retainer.

- The nylon push-on retainer requires a minimum space between the frame and outer panel of 1.93/.076 which must be included in your total material thickness.
- The metal retainer requires a minimum space between frame and outer panel only with some receptacles. See receptacle installation.

4. See receptacle installation to adjust total material thickness before entering Screw Assembly Selection Table on pages C-10 and C-11.

5. Enter column I of the Screw Assembly Selection Table. Find the range that most closely brackets your thickness requirement.

6. Check column II. Your outer panel thickness plus 1.30/.051 must not exceed the maximum listed because screw selected must have sufficient throat length for captivation in panel. The screw will work perfectly in any thinner panel.

7. Choose finish and head style. (Other head styles are available on special order.)

8. Order all 4 parts — SCREW ASSEMBLY, RETAINER, RECEPTACLE, and TOOL by part number.

millimeter/inch $\frac{\text{millimeter}}{\text{inch}}$

EXAMPLE A: When using FLAT TYPE receptacle

Your total material thickness = 6.35/.250. This dimension is closely bracketed in Col. I by 5.08/.200 to 6.35/.250. Use screw assembly part No. 17-11-106-11.

EXAMPLE B: When using CLIP-ON TYPE receptacle

Your total material thickness = 6.35/.250. A constant of 2.18/.086 MUST be added to allow for thickness of clip-on receptacle and metal retainer. 6.35/.250 plus 2.18/.086 = 8.53/.336. 8.53/.336 is most closely bracketed in Col. I by 7.62/.300 to 9.53/.375. Use screw assembly part No. 17-11-208-11.

	COL. I Range of total thickness to be fastened		COL. II MAX. thick. of outer panel	CARBON STEEL ZINC** PLATED	
	MIN.	MAX.		SLOTTED	WING
A	2.54/.100	6.35/.250	3.05/.120	17-11-104-11	17-12-104-11
	5.08/.200	6.35/.250	5.59/.220	17-11-106-11	17-12-106-11
B	2.54/.100	9.53/.375	3.05/.120	17-11-204-11	17-12-204-11
	5.08/.200	9.53/.375	5.59/.220	17-11-206-11	17-12-206-11
	7.62/.300	9.53/.375	8.13/.320	17-11-208-11	17-12-208-11
D	2.54/.100	12.70/.500	3.05/.120	17-11-304-11	17-12-304-11
	5.08/.200	12.70/.500	5.59/.220	17-11-306-11	17-12-306-11
	7.62/.300	12.70/.500	8.13/.320	17-11-308-11	17-12-308-11
	10.16/.400	12.70/.500	10.67/.420	17-11-310-11	17-12-310-11
C	2.54/.100	15.88/.625	3.05/.120	17-11-404-11	17-12-404-11
	5.08/.200	15.88/.625	5.59/.220	17-11-406-11	17-12-406-11
	7.62/.300	15.88/.625	8.13/.320	17-11-408-11	17-12-408-11
	10.16/.400	15.88/.625	10.67/.420	17-11-410-11	17-12-410-11
	12.70/.500	15.88/.625	13.21/.520	17-11-412-11	17-12-412-11
	15.24/.600	15.88/.625	15.75/.620	17-11-414-11	17-12-414-11
	2.54/.100	19.05/.750	3.05/.120	17-11-504-11	17-12-504-11
	5.08/.200	19.05/.750	5.59/.220	17-11-506-11	17-12-506-11
	7.62/.300	19.05/.750	8.13/.320	17-11-508-11	17-12-508-11
	10.16/.400	19.05/.750	10.67/.420	17-11-510-11	17-12-510-11
	12.70/.500	19.05/.750	13.21/.520	17-11-512-11	17-12-512-11
	15.24/.600	19.05/.750	15.75/.620	17-11-514-11	17-12-514-11
	17.78/.700	19.05/.750	18.29/.720	17-11-516-11	17-12-516-11

EXAMPLE C: When using SIDE MOUNT receptacle

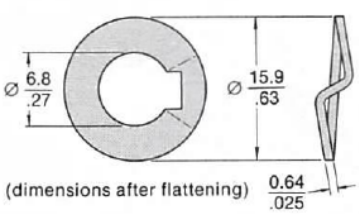
Your dimension is 12.70/.500. A constant of 1.60/.063 MUST be added to allow for the thickness of the side mount bracket. 12.70/.500 plus 1.60/.063 = 14.30/.563. 14.30/.563 is most closely bracketed in Col. I by 12.70/.500 to 15.88/.625. Use screw assembly part No. 17-11-412-11.

EXAMPLE D: When using SAME GRIP fastener in several different applications.

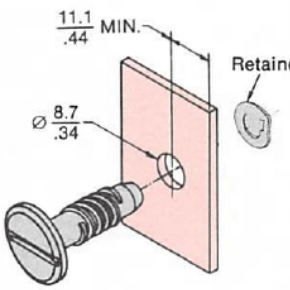
Your total material thickness vary from 6.35/.250 to 12.45/.490 (max. outer panel = 5.08/.200). These dimensions are most closely bracketed in Col. I by 5.08/.200 to 12.70/.500. Screw assembly part No. 17-11-306-11 will operate in all of these applications.

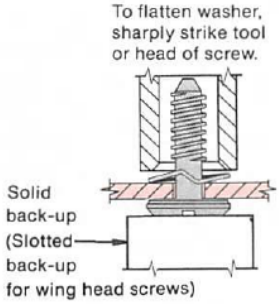
Retainers:

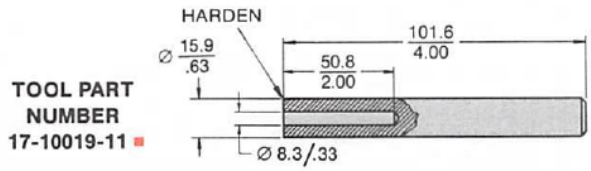
Metal



PART NUMBER
5052 aluminum, natural **17-10014-12** ■
302 stainless steel, passivated **17-10014-26** ■

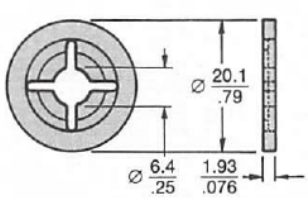




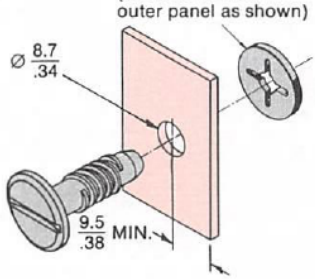


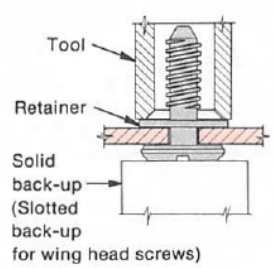
TOOL PART NUMBER 17-10019-11 ■

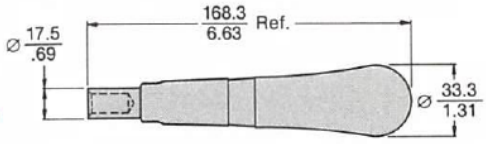
Nylon



PART NUMBER
17-10054-42 ■ nylon, black







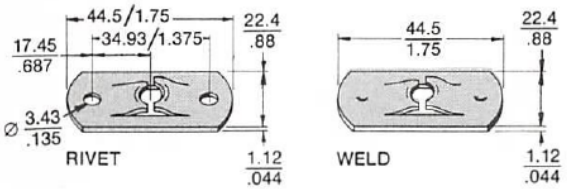
TOOL PART NUMBER 17-0-21333-11 ■

■ From stock, subject to prior sale.

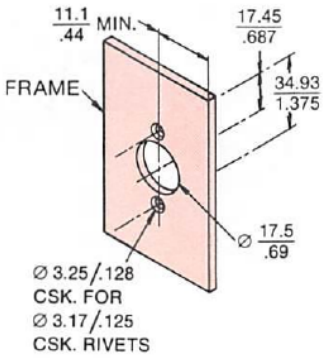
NO. 17 RECEPTACLES

millimeter/inch $\frac{\text{millimeter}}{\text{inch}}$

FLAT TYPE

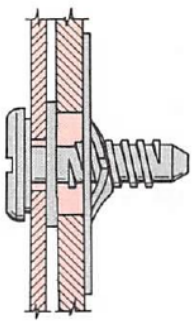


TYPE	PART NUMBER	MATERIAL AND FINISH
RIVET	17-10015-13■	1064 steel, DACROTIZED†
	17-10015-14■	302 stainless steel, passivated
WELD	17-10016-11■	



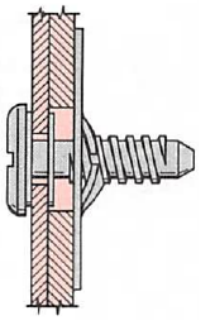
Nylon Retainer

To enter Screw Selection Table use: Total Material Thickness + 1.93/.076 (constant)

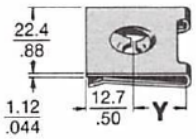


Metal Retainer

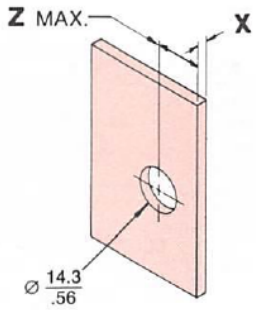
(No adjustment required to enter Screw Selection Table.)



CLIP-ON TYPES



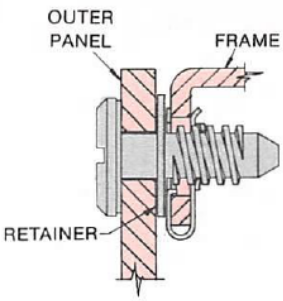
MATERIAL and FINISH
1064 steel, DACROTIZED†



PART NUMBERS	THICKNESS X	Z MAX	Y
17-10017-11■	1.14/.045 — 2.36/.093	15.0/.59	15.7/.62
17-10027-11■	2.36/.093 — 3.61/.142	14.2/.56	14.7/.58
17-10029-11■	3.61/.142 — 4.85/.191	14.2/.56	13.7/.54
17-10031-11■	4.85/.191 — 6.10/.240	13.5/.53	13.5/.53
17-10033-11■	6.10/.240 — 7.34/.289	12.7/.50	13.0/.51

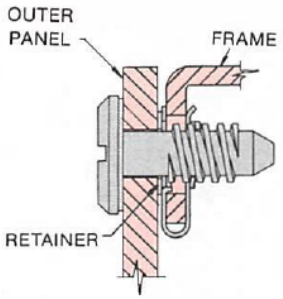
Nylon Retainer

To enter Screw Selection Table use: Total Material Thickness + 3.48/.137 (constant)

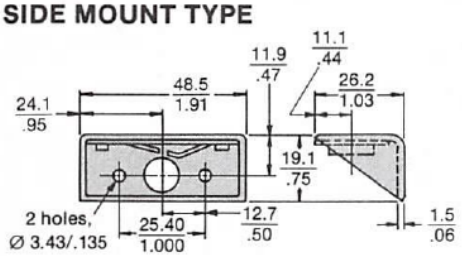


Metal Retainer

To enter Screw Selection Table use: Total Material Thickness + 2.18/.086 (constant)

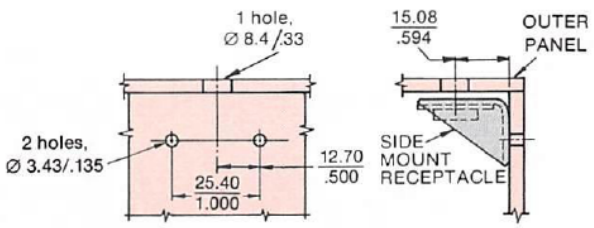


SIDE MOUNT TYPE



BRACKET: 1010 steel, DACROTIZED†.
RECEPTACLE: 1064 steel, DACROTIZED†.
RIVET: 2117 aluminum, natural.

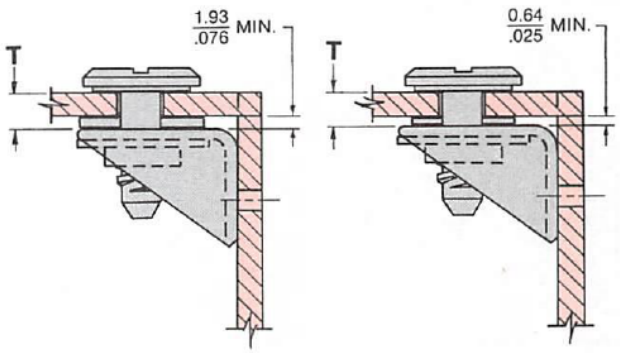
Part Number
17-90-101-10■



Nylon Retainer

Metal Retainer

To enter Screw Selection Table when using either retainer use: T + 1.52/.060 (constant)



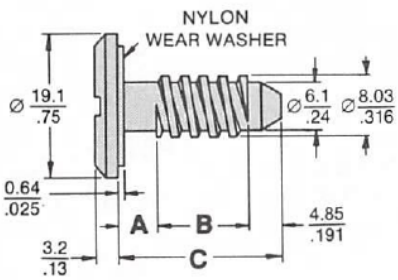
†Registered tradename of Metal Coatings International, Inc.

■ From stock, subject to prior sale.

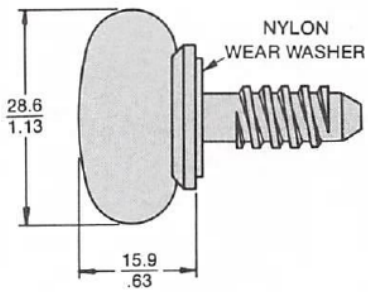
No. 17 SCREW ASSEMBLIES

SLOTTED HEAD

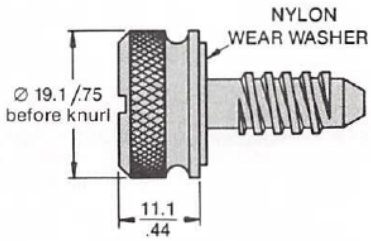
SLOT—2.0/.08 WIDE
× 1.6/.06 DEEP



WING HEAD



KNURLED HEAD



Shown approx actual size

millimeter
inch
millimeter/inch

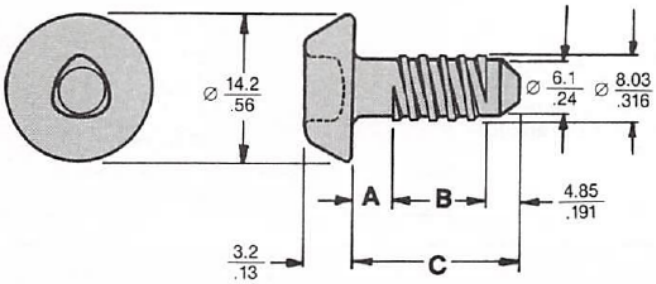
DELIVERY SYMBOLS
(see part numbers)
■ From stock, subject to prior sale.
□ Up to 8 weeks. Minimum order required; setup charge may apply.

COL. I		COL. II	SCREW ASSEMBLY PART NUMBERS						DIMENSIONS		
Range of Total Thickness to be fastened		MAX. thick. of outer panel	1008 steel, case hardened, DACROTIZED† (Wing is 1010 steel.)		Low carbon steel, case hardened, DACRO-TIZED†	18-19LW stainless steel, passivated. (Wing is 302 stainless steel, passivated).		302 stainless steel passivated.	A	B	C
MIN.	MAX.		SLOTTED	WING	KNURLED	SLOTTED	WING	KNURLED			
2.54/.100	6.35/.250	3.05/.120	17-11-104-11 ■	17-12-104-11 ■	17-13-104-11 ■	17-11-104-12 □	17-12-104-12 □	17-13-104-12 □	5.08/.200	9.14/.360	19.08/.751
5.08/.200	6.35/.250	5.59/.220	17-11-106-11 ■	17-12-106-11 ■	17-13-106-11 ■	17-11-106-12 □	17-12-106-12 □	17-13-106-12 □	7.62/.300	6.60/.260	
2.54/.100	9.53/.375	3.05/.120	17-11-204-11 ■	17-12-204-11 ■	17-13-204-11 ■	17-11-204-12 □	17-12-204-12 □	17-13-204-12 □	5.08/.200	12.32/.485	
5.08/.200	9.53/.375	5.59/.220	17-11-206-11 ■	17-12-206-11 ■	17-13-206-11 ■	17-11-206-12 □	17-12-206-12 □	17-13-206-12 □	7.62/.300	9.78/.385	22.25/.876
7.62/.300	9.53/.375	8.13/.320	17-11-208-11 ■	17-12-208-11 ■	17-13-208-11 ■	17-11-208-12 □	17-12-208-12 □	17-13-208-12 □	10.16/.400	7.24/.285	
2.54/.100	12.70/.500	3.05/.120	17-11-304-11 ■	17-12-304-11 ■	17-13-304-11 ■	17-11-304-12 □	17-12-304-12 □	17-13-304-12 □	5.08/.200	15.49/.610	
5.08/.200	12.70/.500	5.59/.220	17-11-306-11 ■	17-12-306-11 ■	17-13-306-11 □	17-11-306-12 □	17-12-306-12 □	17-13-306-12 □	7.62/.300	12.95/.510	25.43/1.001
7.62/.300	12.70/.500	8.13/.320	17-11-308-11 □	17-12-308-11 □	17-13-308-11 □	17-11-308-12 □	17-12-308-12 □	17-13-308-12 □	10.16/.400	10.41/.410	
10.16/.400	12.70/.500	10.67/.420	17-11-310-11 □	17-12-310-11 □	17-13-310-11 □	17-11-310-12 □	17-12-310-12 □	17-13-310-12 □	12.70/.500	7.87/.310	
2.54/.100	15.88/.625	3.05/.120	17-11-404-11 □	17-12-404-11 □	17-13-404-11 □	17-11-404-12 □	17-12-404-12 □	17-13-404-12 □	5.08/.200	18.67/.735	
5.08/.200	15.88/.625	5.59/.220	17-11-406-11 □	17-12-406-11 □	17-13-406-11 □	17-11-406-12 □	17-12-406-12 □	17-13-406-12 □	7.62/.300	16.13/.635	
7.62/.300	15.88/.625	8.13/.320	17-11-408-11 □	17-12-408-11 □	17-13-408-11 □	17-11-408-12 □	17-12-408-12 □	17-13-408-12 □	10.16/.400	13.59/.535	28.60/1.126
10.16/.400	15.88/.625	10.67/.420	17-11-410-11 □	17-12-410-11 □	17-13-410-11 □	17-11-410-12 □	17-12-410-12 □	17-13-410-12 □	12.70/.500	11.05/.435	
12.70/.500	15.88/.625	13.21/.520	17-11-412-11 □	17-12-412-11 □	17-13-412-11 □	17-11-412-12 □	17-12-412-12 □	17-13-412-12 □	15.24/.600	8.51/.335	
15.24/.600	15.88/.625	15.75/.620	17-11-414-11 □	17-12-414-11 □	17-13-414-11 □	17-11-414-12 □	17-12-414-12 □	17-13-414-12 □	17.78/.700	5.97/.235	
2.54/.100	19.05/.750	3.05/.120	17-11-504-11 □	17-12-504-11 □	17-13-504-11 □	17-11-504-12 □	17-12-504-12 □	17-13-504-12 □	5.08/.200	21.84/.860	
5.08/.200	19.05/.750	5.59/.220	17-11-506-11 □	17-12-506-11 □	17-13-506-11 □	17-11-506-12 □	17-12-506-12 □	17-13-506-12 □	7.62/.300	19.30/.760	
7.62/.300	19.05/.750	8.13/.320	17-11-508-11 □	17-12-508-11 □	17-13-508-11 □	17-11-508-12 □	17-12-508-12 □	17-13-508-12 □	10.16/.400	16.76/.660	
10.16/.400	19.05/.750	10.67/.420	17-11-510-11 □	17-12-510-11 □	17-13-510-11 □	17-11-510-12 □	17-12-510-12 □	17-13-510-12 □	12.70/.500	14.22/.560	31.78/1.251
12.70/.500	19.05/.750	13.21/.520	17-11-512-11 □	17-12-512-11 □	17-13-512-11 □	17-11-512-12 □	17-12-512-12 □	17-13-512-12 □	15.24/.600	11.68/.460	
15.24/.600	19.05/.750	15.75/.620	17-11-514-11 □	17-12-514-11 □	17-13-514-11 □	17-11-514-12 □	17-12-514-12 □	17-13-514-12 □	17.78/.700	9.14/.360	
17.78/.700	19.05/.750	18.29/.720	17-11-516-11 □	17-12-516-11 □	17-13-516-11 □	17-11-516-12 □	17-12-516-12 □	17-13-516-12 □	20.32/.800	6.60/.260	
2.54/.100	22.23/.875	3.05/.120	17-11-604-11 □	17-12-604-11 □	17-13-604-11 □	17-11-604-12 □	17-12-604-12 □	17-13-604-12 □	5.08/.200	25.02/.985	
5.08/.200	22.23/.875	5.59/.220	17-11-606-11 □	17-12-606-11 □	17-13-606-11 □	17-11-606-12 □	17-12-606-12 □	17-13-606-12 □	7.62/.300	22.48/.885	
7.62/.300	22.23/.875	8.13/.320	17-11-608-11 □	17-12-608-11 □	17-13-608-11 □	17-11-608-12 □	17-12-608-12 □	17-13-608-12 □	10.16/.400	19.44/.785	
10.16/.400	22.23/.875	10.67/.420	17-11-610-11 □	17-12-610-11 □	17-13-610-11 □	17-11-610-12 □	17-12-610-12 □	17-13-610-12 □	12.70/.500	17.40/.685	34.95/1.376
12.70/.500	22.23/.875	13.21/.520	17-11-612-11 □	17-12-612-11 □	17-13-612-11 □	17-11-612-12 □	17-12-612-12 □	17-13-612-12 □	15.24/.600	14.86/.585	
15.24/.600	22.23/.875	15.75/.620	17-11-614-11 □	17-12-614-11 □	17-13-614-11 □	17-11-614-12 □	17-12-614-12 □	17-13-614-12 □	17.78/.700	12.32/.485	
17.78/.700	22.23/.875	18.29/.720	17-11-616-11 □	17-12-616-11 □	17-13-616-11 □	17-11-616-12 □	17-12-616-12 □	17-13-616-12 □	20.32/.800	9.78/.385	
20.32/.800	22.23/.875	20.83/.820	17-11-618-11 □	17-12-618-11 □	17-13-618-11 □	17-11-618-12 □	17-12-618-12 □	17-13-618-12 □	22.86/.900	7.24/.285	
2.54/.100	25.40/1.000	3.05/.120	17-11-704-11 □	17-12-704-11 □	17-13-704-11 □	17-11-704-12 □	17-12-704-12 □	17-13-704-12 □	5.08/.200	28.19/1.110	
5.08/.200	25.40/1.000	5.59/.220	17-11-706-11 □	17-12-706-11 □	17-13-706-11 □	17-11-706-12 □	17-12-706-12 □	17-13-706-12 □	7.62/.300	25.65/1.010	
7.62/.300	25.40/1.000	8.13/.320	17-11-708-11 □	17-12-708-11 □	17-13-708-11 □	17-11-708-12 □	17-12-708-12 □	17-13-708-12 □	10.16/.400	23.11/.910	
10.16/.400	25.40/1.000	10.67/.420	17-11-710-11 □	17-12-710-11 □	17-13-710-11 □	17-11-710-12 □	17-12-710-12 □	17-13-710-12 □	12.70/.500	20.57/.810	
12.70/.500	25.40/1.000	13.21/.520	17-11-712-11 □	17-12-712-11 □	17-13-712-11 □	17-11-712-12 □	17-12-712-12 □	17-13-712-12 □	15.24/.600	18.03/.710	38.13/1.501
15.24/.600	25.40/1.000	15.75/.620	17-11-714-11 □	17-12-714-11 □	17-13-714-11 □	17-11-714-12 □	17-12-714-12 □	17-13-714-12 □	17.78/.700	15.49/.610	
17.78/.700	25.40/1.000	18.29/.720	17-11-716-11 □	17-12-716-11 □	17-13-716-11 □	17-11-716-12 □	17-12-716-12 □	17-13-716-12 □	20.32/.800	12.95/.510	
20.32/.800	25.40/1.000	20.83/.820	17-11-718-11 □	17-12-718-11 □	17-13-718-11 □	17-11-718-12 □	17-12-718-12 □	17-13-718-12 □	22.86/.900	10.41/.410	
22.86/.900	25.40/1.000	23.37/.920	17-11-720-11 □	17-12-720-11 □	17-13-720-11 □	17-11-720-12 □	17-12-720-12 □	17-13-720-12 □	25.40/1.000	7.87/.310	

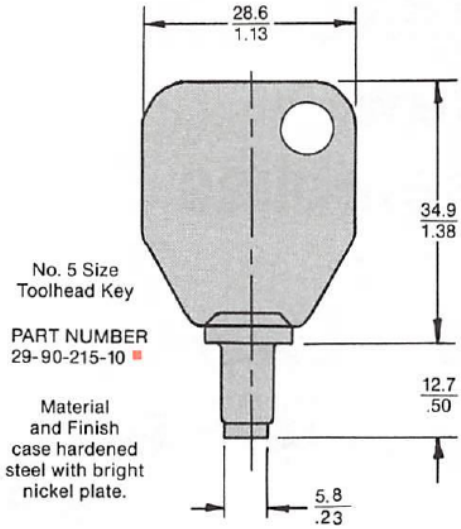
†Registered tradename of Metal Coatings International, Inc.

NO. 17 SCREW ASSEMBLIES

TOOLHEAD SCREW



Material and Finish
Case hardened steel, zinc plated.



No. 5 Size Toolhead Key

PART NUMBER
29-90-215-10 ■

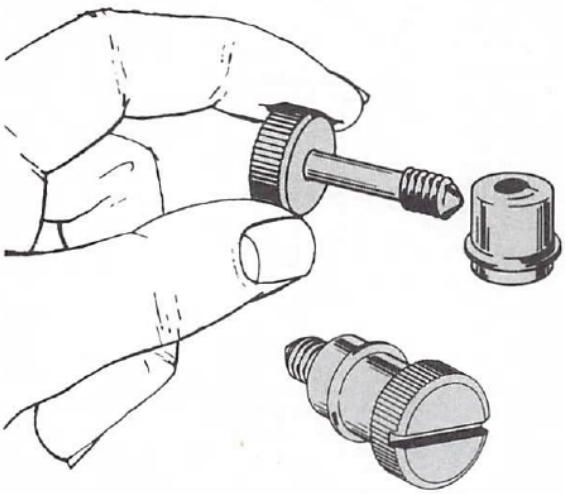
Material and Finish
case hardened steel with bright nickel plate.

millimeter
inch
millimeter/inch

DELIVERY SYMBOLS
(see part numbers)
■ From stock, subject to prior sale. □ Up to 8 weeks. Minimum order required

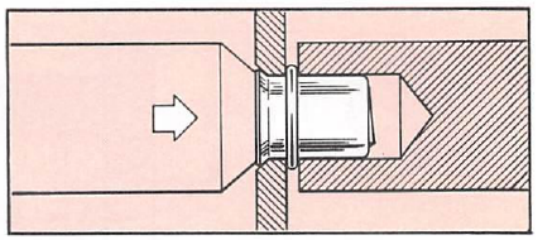
COL. I		COL.II	SCREW ASSEMBLY PART NUMBERS				DIMENSIONS		
Range of Total Thickness to be fastened		MAX thick. of outer panel	1008 Steel, case hardened chromium plated (Wing is 1010 steel)		Low Carbon steel, case hardened, chromium plated	Hardened steel, zinc plated.	A	B	C
MIN.	MAX.		SLOTTED	WING	KNURLED	TOOLHEAD			
2.54/.100	6.35/.250	3.05/.120	17-11-104-14□	17-12-104-14□	17-13-104-14□	17-T-104□	5.08/.200	9.14/.360	19.08/.751
5.08/.200	6.35/.250	5.59/.220	17-11-106-14□	17-12-106-14□	17-13-106-14□	17-T-106□	7.62/.300	6.60/.260	
2.54/.100	9.53/.120	3.05/.120	17-11-204-14□	17-12-204-14□	17-13-204-14□	17-T-204□	5.98/.200	12.32/.485	22.25/.876
5.08/.200	9.53/.375	5.59/.220	17-11-206-14□	17-12-206-14□	17-13-206-14□	17-T-206□	7.62/.300	9.78/.385	
7.62/.300	9.53/.375	8.13/.320	17-11-208-14□	17-12-208-14□	17-13-208-14□	17-T-208□	10.16/.400	7.24/.285	
2.54/.100	12.70/.500	3.05/.120	17-11-304-14□	17-12-304-14□	17-13-304-14□	17-T-304□	5.08/.200	15.49/.610	25.43/1.001
5.08/.200	12.70/.500	5.59/.220	17-11-306-14□	17-12-306-14□	17-13-306-14□	17-T-306□	7.62/.300	12.95/.510	
7.62/.300	12.70/.500	8.13/.320	17-11-308-14□	17-12-308-14□	17-13-308-14□	17-T-308□	10.16/.400	10.41/.410	
10.16/.400	12.70/.500	10.67/.420	17-11-310-14□	17-12-310-14□	17-13-310-14□	17-T-310□	12.70/.500	7.87/.310	
2.54/.100	15.88/.625	3.05/.120	17-11-404-14□	17-12-404-14□	17-13-404-14□	17-T-404□	5.08/.200	18.67/.735	28.60/1.126
5.08/.200	15.88/.625	5.59/.220	17-11-406-14□	17-12-406-14□	17-13-406-14□	17-T-406□	7.62/.300	16.13/.635	
7.62/.300	15.88/.625	8.13/.320	17-11-408-14□	17-12-408-14□	17-13-408-14□	17-T-408□	10.16/.400	13.59/.535	
10.16/.400	15.88/.625	10.67/.420	17-11-410-14□	17-12-410-14□	17-13-410-14□	17-T-410□	12.70/.500	11.05/.435	
12.70/.500	15.88/.625	13.21/.520	17-11-412-14□	17-12-412-14□	17-13-412-14□	17-T-412□	15.24/.600	8.51/.335	
15.24/.600	15.88/.625	15.75/.620	17-11-414-14□	17-12-414-14□	17-13-414-14□	17-T-414□	17.78/.700	5.97/.235	
2.54/.100	19.05/.750	3.05/.120	17-11-504-14□	17-12-504-14□	17-13-504-14□	17-T-504□	5.08/.200	21.84/.860	31.78/1.251
5.08/.200	19.05/.750	5.59/.220	17-11-506-14□	17-12-506-14□	17-13-506-14□	17-T-506□	7.62/.300	19.30/.760	
7.62/.300	19.05/.750	8.13/.320	17-11-508-14□	17-12-508-14□	17-13-508-14□	17-T-508□	10.16/.400	16.76/.660	
10.16/.400	19.05/.750	10.67/.420	17-11-510-14□	17-12-510-14□	17-13-510-14□	17-T-510□	12.70/.500	14.22/.560	
12.70/.500	19.05/.750	13.21/.520	17-11-512-14□	17-12-512-14□	17-13-512-14□	17-T-512□	15.24/.600	11.68/.460	
15.24/.600	19.05/.750	15.75/.620	17-11-514-14□	17-12-514-14□	17-13-514-14□	17-T-514□	17.78/.700	9.14/.360	
17.78/.700	19.05/.750	18.29/.720	17-11-516-14□	17-12-516-14□	17-13-516-14□	17-T-516□	20.32/.800	6.60/.260	
2.54/.100	22.23/.875	3.05/.120	17-11-604-14□	17-12-604-14□	17-13-604-14□	17-T-604□	5.08/.200	25.02/.985	34.95/1.376
5.08/.200	22.23/.875	5.59/.220	17-11-606-14□	17-12-606-14□	17-13-606-14□	17-T-606□	7.62/.300	22.48/.885	
7.62/.300	22.23/.875	8.13/.320	17-11-608-14□	17-12-608-14□	17-13-608-14□	17-T-608□	10.16/.400	19.94/.785	
10.16/.400	22.23/.875	10.67/.420	17-11-610-14□	17-12-610-14□	17-13-610-14□	17-T-610□	12.70/.500	17.40/.685	
12.70/.500	22.23/.875	13.21/.520	17-11-612-14□	17-12-612-14□	17-13-612-14□	17-T-612□	15.24/.600	14.86/.585	
15.24/.600	22.23/.875	15.75/.620	17-11-614-14□	17-12-614-14□	17-13-614-14□	17-T-614□	17.78/.700	12.32/.485	
17.78/.700	22.23/.875	18.29/.720	17-11-616-14□	17-12-616-14□	17-13-616-14□	17-T-616□	20.32/.800	9.78/.385	
20.32/.800	22.23/.875	20.83/.820	17-11-618-14□	17-12-618-14□	17-13-618-14□	17-T-618□	22.86/.900	7.24/.285	
2.54/.100	25.40/1.000	3.05/.120	17-11-704-14□	17-12-704-14□	17-13-704-14□	17-T-704□	5.08/.200	28.20/1.110	38.13/1.501
5.08/.200	25.40/1.000	5.59/.220	17-11-706-14□	17-12-706-14□	17-13-706-14□	17-T-706□	7.62/.300	25.65/1.010	
7.62/.300	25.40/1.000	8.13/.320	17-11-708-14□	17-12-708-14□	17-13-708-14□	17-T-708□	10.16/.400	23.11/.910	
10.16/.400	25.40/1.000	10.67/.420	17-11-710-14□	17-12-710-14□	17-13-710-14□	17-T-710□	12.70/.500	20.59/.810	
12.70/.500	25.40/1.000	13.21/.520	17-11-712-14□	17-12-712-14□	17-13-712-14□	17-T-712□	15.24/.600	18.03/.710	
15.24/.600	25.40/1.000	15.75/.620	17-11-714-14□	17-12-714-14□	17-13-714-14□	17-T-714□	17.78/.700	15.49/.610	
17.78/.700	15.40/1.000	18.29/.720	17-11-716-14□	17-12-716-14□	17-13-716-14□	17-T-716□	20.32/.800	12.95/.510	
20.32/.800	25.40/1.000	20.83/.820	17-11-718-14□	17-12-718-14□	17-13-718-14□	17-T-718□	22.86/.900	10.41/.410	
22.86/.900	25.40/1.000	23.37/.920	17-11-720-14□	17-12-720-14□	17-13-720-14□	17-T-720□	25.40/1.000	7.87/.310	

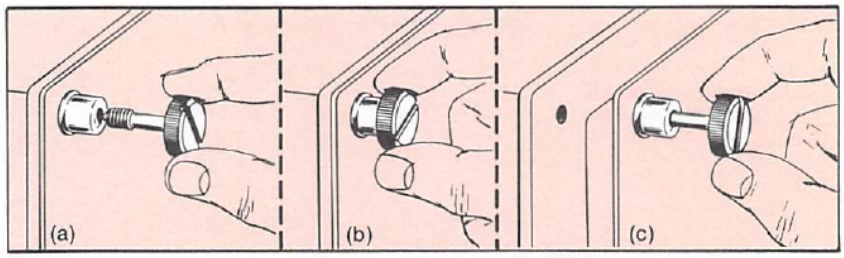
Captive Screw Assemblies



1. A panel fastener called "Number 51" has become the standard of the electronics industry. The assembly consists of a screw, a standoff—and a host of practical advantages.

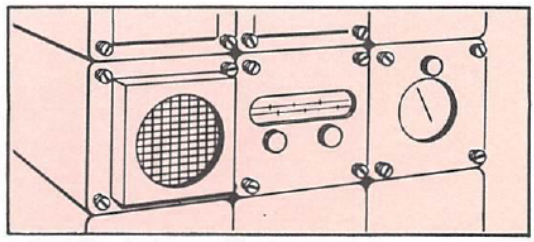
2. Standoff installation is simple. Flare it into the panel with a flaring punch and back-up tool. (There is no need to countersink in many applications.)

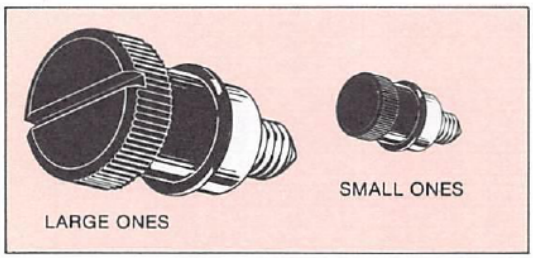


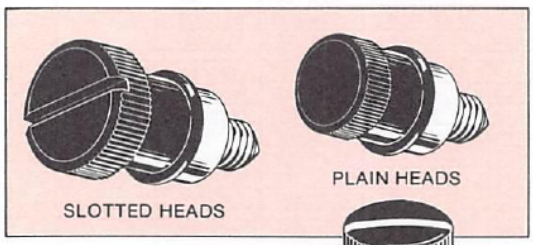


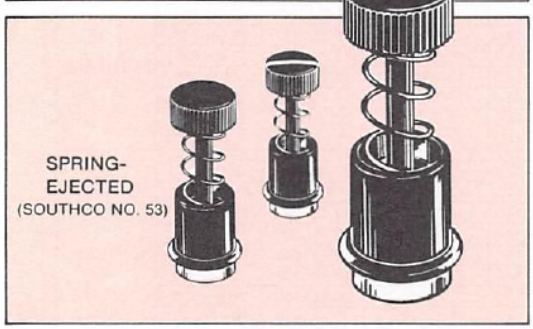
3. (a) When you install the No. 51, thread the screw into the standoff and turn . . . (b) Next, thread the screw tightly into the frame until the undersurface of the screw head fully flattens the raised helix on standoff. (c) Draw the screw back to ensure it is now captivated.

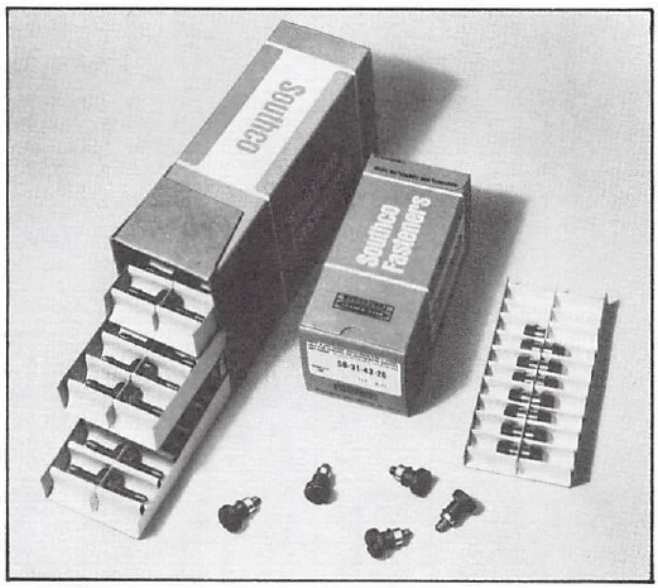
4. Many sizes are available from stock. They're shipped to you in protective packaging to guard the bright polished or black finish. These handsome fasteners make your cabinet or panel more eye-pleasing.







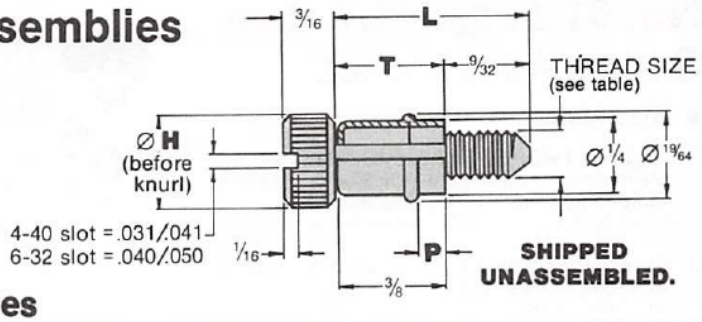




Southco stocks stainless steel retractable panel screw assemblies with a good looking bright polished or black organic coating. Ready-to-serve packaging individually protects the finish on each standoff and screw.

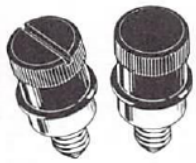
No. 51 *Smaller* Captive Screw Assemblies

- **No.4 and No.6 thread sizes**
- **Black or bright finish**
- **Tighten the screw to captivate it in the standoff**
- **Slotted or unslotted**



PART NUMBER TABLES

BLACK screw assemblies



Material and Finish
NO. 4 SCREW: 303 stainless steel.
NO. 6 SCREW: 302 stainless steel.
STANDOFF: 305 stainless steel.
SCREWS and STANDOFFS are passivated and have black epoxy enamel.

your OUTER PANEL THICKNESS			with SLOTTED screws			with UNSLOTTED screws			Dimensions		
			4-40	6-32	6-32	4-40	6-32	6-32	P	L	T
Min.	Nom.	Max.	∅ H = 5/16	∅ H = 5/16	∅ H = 3/8	∅ H = 5/16	∅ H = 5/16	∅ H = 3/8			
.052	.063	.067	51-10-406-26 ■	51-18-406-26 ■	51-18-106-26 ■	51-20-406-26 ■	51-28-406-26 ■	51-28-106-26 ■	1/16	21/32	3/8
.084	.094	.099	51-10-506-26 ■	51-18-506-26 ■	51-18-206-26 ■	51-20-506-26 ■	51-28-506-26 ■	51-28-206-26 ■	3/32		
.115	.125	.130	51-10-606-26 ■	51-18-606-26 ■	51-18-306-26 ■	51-20-606-26 ■	51-28-606-26 ■	51-28-306-26 ■	1/8		
Longer screws											
.052	.063	.067	51-10-407-26 □	51-18-407-26 ■	51-18-107-26 ■	51-20-407-26 □	51-28-407-26 ●	51-28-107-26 ●	1/16	23/32	7/16
.084	.094	.099	51-10-507-26 □	51-18-507-26 ■	51-18-207-26 ■	51-20-507-26 □	51-28-507-26 ●	51-28-207-26 ●	3/32		
.115	.125	.130	51-10-607-26 □	51-18-607-26 ■	51-18-307-26 ■	51-20-607-26 □	51-28-607-26 ●	51-28-307-26 ●	1/8		
.052	.063	.067	51-10-408-26 □	51-18-408-26 ■	51-18-108-26 ●	51-20-408-26 □	51-28-408-26 ●	51-28-108-26 ●	1/16	25/32	1/2
.084	.094	.099	51-10-508-26 □	51-18-508-26 ■	51-18-208-26 ●	51-20-508-26 □	51-28-508-26 ●	51-28-208-26 ●	3/32		
.115	.125	.130	51-10-608-26 □	51-18-608-26 ■	51-18-308-26 ●	51-20-608-26 □	51-28-608-26 ●	51-28-308-26 ●	1/8		
.052	.063	.067	51-10-409-26 □	51-18-409-26 ■	51-18-109-26 ●	51-20-409-26 □	51-28-409-26 ●	51-28-109-26 ●	1/16	27/32	9/16
.084	.094	.099	51-10-509-26 □	51-18-509-26 ■	51-18-209-26 ●	51-20-509-26 □	51-28-509-26 ●	51-28-209-26 ●	3/32		
.115	.125	.130	51-10-609-26 □	51-18-609-26 ■	51-18-309-26 ●	51-20-609-26 □	51-28-609-26 ●	51-28-309-26 ●	1/8		
.052	.063	.067	51-10-410-26 □	51-18-410-26 ■	51-18-110-26 ●	51-20-410-26 □	51-28-410-26 ●	51-28-110-26 ●	1/16	29/32	5/8
.084	.094	.099	51-10-510-26 □	51-18-510-26 ■	51-18-210-26 ●	51-20-510-26 □	51-28-510-26 ●	51-28-210-26 ●	3/32		
.115	.125	.130	51-10-610-26 □	51-18-610-26 ■	51-18-310-26 ●	51-20-610-26 □	51-28-610-26 ●	51-28-310-26 ●	1/8		

BRIGHT POLISHED screw assemblies



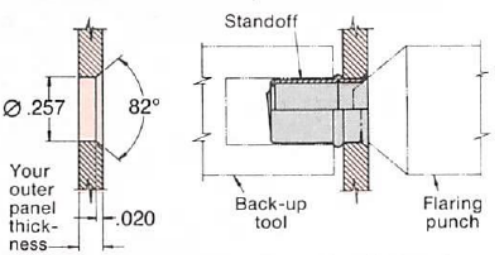
Material and Finish
NO. 4 SCREW: 303 stainless steel.
NO. 6 SCREW: 302 stainless steel.
STANDOFF: 305 stainless steel
SCREWS and STANDOFFS are passivated.

your OUTER PANEL THICKNESS			with SLOTTED screws			with UNSLOTTED screws			Dimensions		
			4-40	6-32	6-32	4-40	6-32	6-32	P	L	T
Min.	Nom.	Max.	∅ H = 5/16	∅ H = 5/16	∅ H = 3/8	∅ H = 5/16	∅ H = 5/16	∅ H = 3/8			
.052	.063	.067	51-10-406-24 ■	51-18-406-24 ■	51-18-106-24 ■	51-20-406-24 ■	51-28-406-24 ■	51-28-106-24 ■	1/16	21/32	3/8
.084	.094	.099	51-10-506-24 ■	51-18-506-24 ■	51-18-206-24 ■	51-20-506-24 ■	51-28-506-24 ■	51-28-206-24 ■	3/32		
.115	.125	.130	51-10-606-24 ■	51-18-606-24 ■	51-18-306-24 ■	51-20-606-24 ■	51-28-606-24 ■	51-28-306-24 ■	1/8		
Longer screws											
.052	.063	.067	51-10-407-24 ■	51-18-407-24 ■	51-18-107-24 ■	51-20-407-24 □	51-28-407-24 ●	51-28-107-24 ●	1/16	23/32	7/16
.084	.094	.099	51-10-507-24 ■	51-18-507-24 ■	51-18-207-24 ■	51-20-507-24 □	51-28-507-24 ●	51-28-207-24 ●	3/32		
.115	.125	.130	51-10-607-24 ■	51-18-607-24 ■	51-18-307-24 ■	51-20-607-24 □	51-28-607-24 ●	51-28-307-24 ●	1/8		
.052	.063	.067	51-10-408-24 □	51-18-408-24 ■	51-18-108-24 ■	51-20-408-24 □	51-28-408-24 ●	51-28-108-24 ●	1/16	25/32	1/2
.084	.094	.099	51-10-508-24 □	51-18-508-24 ■	51-18-208-24 ■	51-20-508-24 □	51-28-508-24 ●	51-28-208-24 ●	3/32		
.115	.125	.130	51-10-608-24 □	51-18-608-24 ■	51-18-308-24 ■	51-20-608-24 □	51-28-608-24 ●	51-28-308-24 ●	1/8		
.052	.063	.067	51-10-409-24 □	51-18-409-24 ■	51-18-109-24 ■	51-20-409-24 □	51-28-409-24 ●	51-28-109-24 ●	1/16	27/32	9/16
.084	.094	.099	51-10-509-24 □	51-18-509-24 ■	51-18-209-24 ■	51-20-509-24 □	51-28-509-24 ●	51-28-209-24 ●	3/32		
.115	.125	.130	51-10-609-24 □	51-18-609-24 ■	51-18-309-24 ■	51-20-609-24 □	51-28-609-24 ●	51-28-309-24 ●	1/8		
.052	.063	.067	51-10-410-24 □	51-18-410-24 ■	51-18-110-24 ■	51-20-410-24 □	51-28-410-24 ●	51-28-110-24 ■	1/16	29/32	5/8
.084	.094	.099	51-10-510-24 □	51-18-510-24 ■	51-18-210-24 ■	51-20-510-24 □	51-28-510-24 ●	51-28-210-24 ■	3/32		
.115	.125	.130	51-10-610-24 □	51-18-610-24 ■	51-18-310-24 ■	51-20-610-24 □	51-28-610-24 ●	51-28-310-24 ■	1/8		

DELIVERY SYMBOLS
- ■ From stock, subject to prior sale.
- ● Up to 4 weeks. Minimum order required
- □ Up to 8 weeks. Minimum order required

Fasteners are ordered by their assembly part number but are shipped and identified as components of the finished assembly.

TO INSTALL STANDOFF



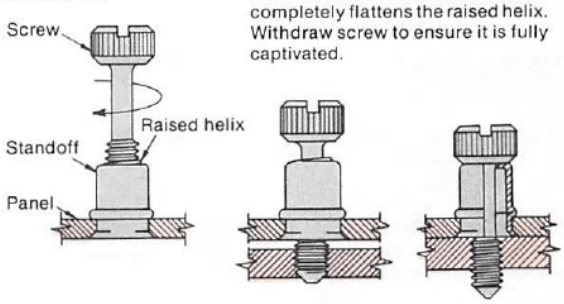
Prepare panel.

Insert standoff into hole and flare into countersink as shown.

TO CAPTIVATE SCREW

Thread screw through hole in top surface of standoff.

Bring panels together. Thread screw tightly into frame until undersurface of screw head completely flattens the raised helix. Withdraw screw to ensure it is fully captivated.



See page C-19 for flaring and back-ups tools.

No. 51 *Larger* Captive Screw Assemblies

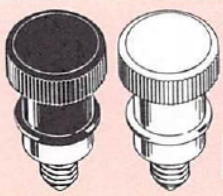


- **Black or bright finish**

TO SELECT PROPER SCREW ASSEMBLY

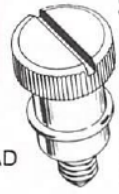
1—Measure your outer panel thickness and enter table (below) with your thickness.
2—Read across to find **P** dimension and installation method (A or B).
3—Enter part number table with your **P** dimension and read across to find correct assembly part number under head and thread size desired.

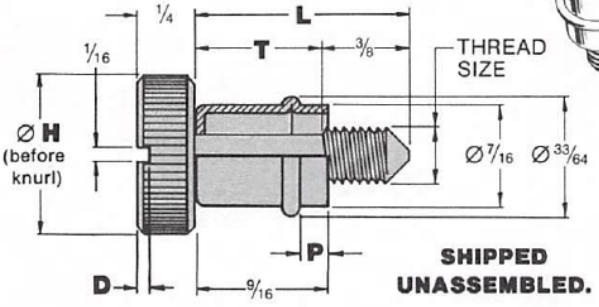
your Outer Panel Thickness		Select an assembly with **P** dim. of:	Use this installation method
Min.	Max.		
1/16	5/64	1/8	B
3/32	9/64	3/16	B
7/64	9/64	1/8	A
5/32	13/64	1/4	B
11/64	13/64	3/16	A
15/64	17/64	1/4	A



To order assemblies with unslotted screws, change third digit of part number from "1" to "2" as indicated. Ie:

5 1 - 2 - - - -





SHIPPED UNASSEMBLED.

Ø H	D
11/16	1/8
9/16	3/32
7/16	1/16

Material and Finish
SCREWS: 302 stainless steel.
STANDOFFS: 305 stainless steel.
SCREWS and STANDOFFS are passivated or are passivated and have black epoxy enamel.

Fasteners are ordered by their assembly part number but are shipped and identified as components of the finished assembly.

DELIVERY SYMBOLS
- From stock, subject to prior sale.
- ● Up to 4 weeks. Minimum order required

Slotted BLACK screw assemblies

Dimensions			Ø H = 7/16			Ø H = 9/16	Ø H = 11/16
P	L	T	8-32	10-32	10-24	1/4-20	1/4-20
1/8	15/16	9/16	51-17-709-26 ■	51-16-709-26 ■	51-13-709-26 ■	51-11-409-26 ■	51-11-109-26 ■
3/16			51-17-809-26 ■	51-16-809-26 ■	51-13-809-26 ■	51-11-509-26 ■	51-11-209-26 ■
1/4			51-17-909-26 ■	51-16-909-26 ■	51-13-909-26 ■	51-11-609-26 ■	51-11-309-26 ■

Longer screws

1/8	1"	5/8	51-17-710-26 ■	51-16-710-26 ■	51-13-710-26 ■	51-11-410-26 ■	51-11-110-26 ■
3/16			51-17-810-26 ■	51-16-810-26 ■	51-13-810-26 ■	51-11-510-26 ■	51-11-210-26 ■
1/4			51-17-910-26 ■	51-16-910-26 ■	51-13-910-26 ■	51-11-610-26 ■	51-11-310-26 ■
1/8	1 1/16	11/16	51-17-711-26 ■	51-16-711-26 ■	51-13-711-26 ●	51-11-411-26 ■	51-11-111-26 ●
3/16			51-17-811-26 ■	51-16-811-26 ■	51-13-811-26 ●	51-11-511-26 ■	51-11-211-26 ●
1/4			51-17-911-26 ■	51-16-911-26 ■	51-13-911-26 ●	51-11-611-26 ■	51-11-311-26 ●
1/8	1 1/8	3/4	51-17-712-26 ●	51-16-712-26 ■	51-13-712-26 ●	51-11-412-26 ■	51-11-112-26 ■
3/16			51-17-812-26 ●	51-16-812-26 ■	51-13-812-26 ●	51-11-512-26 ■	51-11-212-26 ●
1/4			51-17-912-26 ●	51-16-912-26 ■	51-13-912-26 ●	51-11-612-26 ■	51-11-312-26 ●
1/8	1 3/16	13/16	51-17-713-26 ●	51-16-713-26 ■	51-13-713-26 ●	51-11-413-26 ●	51-11-113-26 ●
3/16			51-17-813-26 ●	51-16-813-26 ■	51-13-813-26 ●	51-11-513-26 ●	51-11-213-26 ●
1/4			51-17-913-26 ●	51-16-913-26 ■	51-13-913-26 ●	51-11-613-26 ●	51-11-313-26 ●
1/8	1 1/4	7/8	51-17-714-26 ●	51-16-714-26 ■	51-13-714-26 ●	51-11-414-26 ●	51-11-114-26 ■
3/16			51-17-814-26 ●	51-16-814-26 ■	51-13-814-26 ●	51-11-514-26 ●	51-11-214-26 ■
1/4			51-17-914-26 ●	51-16-914-26 ■	51-13-914-26 ●	51-11-614-26 ●	51-11-314-26 ■
1/8	1 5/16	15/16	51-17-715-26 ●	51-16-715-26 ●	51-13-715-26 ●	51-11-415-26 ●	51-11-115-26 ●
3/16			51-17-815-26 ●	51-16-815-26 ●	51-13-815-26 ●	51-11-515-26 ●	51-11-215-26 ●
1/4			51-17-915-26 ●	51-16-915-26 ●	51-13-915-26 ●	51-11-615-26 ●	51-11-315-26 ●
1/8	1 3/8	1	51-17-716-26 ●	51-16-716-26 ●	51-13-716-26 ●	51-11-416-26 ■	51-11-116-26 ■
3/16			51-17-816-26 ●	51-16-816-26 ●	51-13-816-26 ●	51-11-516-26 ■	51-11-216-26 ■
1/4			51-17-916-26 ●	51-16-916-26 ●	51-13-916-26 ●	51-11-616-26 ■	51-11-316-26 ■

Slotted BRIGHT POLISHED screw assemblies

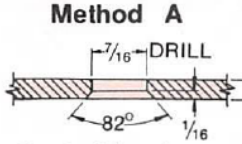
Dimensions			Ø H = 7/16			Ø H = 9/16	Ø H = 11/16
P	L	T	8-32	10-32	10-24	1/4-20	1/4-20
1/8	15/16	9/16	51-17-709-24 ■	51-16-709-24 ■	51-13-709-24 ■	51-11-409-24 ■	51-11-109-24 ■
3/16			51-17-809-24 ■	51-16-809-24 ■	51-13-809-24 ■	51-11-509-24 ■	51-11-209-24 ■
1/4			51-17-909-24 ■	51-16-909-24 ■	51-13-909-24 ■	51-11-609-24 ■	51-11-309-24 ■

Longer screws

1/8	1"	5/8	51-17-710-24 ■	51-16-710-24 ■	51-13-710-24 ■	51-11-410-24 ■	51-11-110-24 ■
3/16			51-17-810-24 ■	51-16-810-24 ■	51-13-810-24 ■	51-11-510-24 ■	51-11-210-24 ■
1/4			51-17-910-24 ■	51-16-910-24 ■	51-13-910-24 ■	51-11-610-24 ■	51-11-310-24 ■
1/8	1 1/16	11/16	51-17-711-24 ■	51-16-711-24 ■	51-13-711-24 ■	51-11-411-24 ■	51-11-111-24 ■
3/16			51-17-811-24 ■	51-16-811-24 ■	51-13-811-24 ■	51-11-511-24 ■	51-11-211-24 ■
1/4			51-17-911-24 ■	51-16-911-24 ■	51-13-911-24 ■	51-11-611-24 ■	51-11-311-24 ■
1/8	1 1/8	3/4	51-17-712-24 ■	51-16-712-24 ■	51-13-712-24 ●	51-11-412-24 ■	51-11-112-24 ■
3/16			51-17-812-24 ■	51-16-812-24 ■	51-13-812-24 ●	51-11-512-24 ■	51-11-212-24 ■
1/4			51-17-912-24 ■	51-16-912-24 ■	51-13-912-24 ●	51-11-612-24 ■	51-11-312-24 ■
1/8	1 3/16	13/16	51-17-713-24 ■	51-16-713-24 ■	51-13-713-24 ●	51-11-413-24 ■	51-11-113-24 ■
3/16			51-17-813-24 ■	51-16-813-24 ■	51-13-813-24 ●	51-11-513-24 ■	51-11-213-24 ■
1/4			51-17-913-24 ■	51-16-913-24 ■	51-13-913-24 ●	51-11-613-24 ■	51-11-313-24 ■
1/8	1 1/4	7/8	51-17-714-24●	51-16-714-24 ■	51-13-714-24 ●	51-11-414-24 ■	51-11-114-24 ■
3/16			51-17-814-24●	51-16-814-24 ■	51-13-814-24 ●	51-11-514-24 ■	51-11-214-24 ■
1/4			51-17-914-24●	51-16-914-24 ■	51-13-914-24 ●	51-11-614-24 ■	51-11-314-24 ■
1/8	1 5/16	15/16	51-17-715-24●	51-16-715-24 ■	51-13-715-24 ●	51-11-415-24 ■	51-11-115-24 ■
3/16			51-17-815-24●	51-16-815-24 ■	51-13-815-24 ●	51-11-515-24 ■	51-11-215-24 ■
1/4			51-17-915-24●	51-16-915-24 ■	51-13-915-24 ●	51-11-615-24 ■	51-11-315-24 ■
1/8	1 3/8	1	51-17-716-24 ■	51-16-716-24 ■	51-13-716-24 ●	51-11-416-24 ■	51-11-116-24 ■
3/16			51-17-816-24 ■	51-16-816-24 ■	51-13-816-24 ●	51-11-516-24 ■	51-11-216-24 ■
1/4			51-17-916-24 ■	51-16-916-24 ■	51-13-916-24 ●	51-11-616-24 ■	51-11-316-24 ■

TO INSTALL STANDOFF

Method A

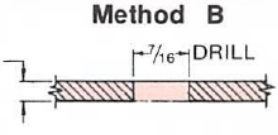


Countersink as shown.

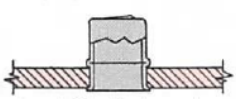


Flare standoff into countersink. Back-up tool must be used.

Method B



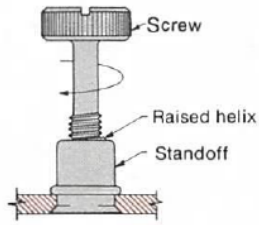
No further preparation required.



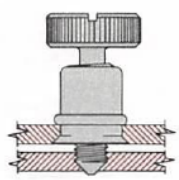
Flare standoff behind panel as shown. Back-up tool must be used.

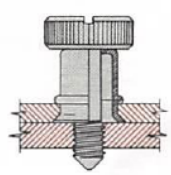
TO CAPTIVATE SCREW

Thread screw through hole in top surface of standoff.



Bring panels together. Thread screw tightly into frame until under-surface of screw head completely flattens the raised helix. Withdraw screw to ensure it is fully captivated.



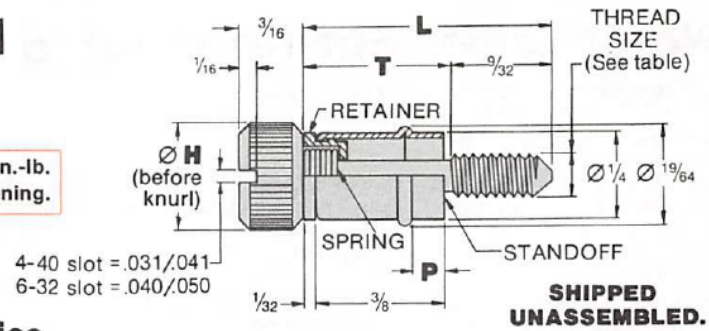


See page C-19 for flaring and back-ups tools.

No. 53 *Smaller* Spring-ejected Captive Screw Assemblies

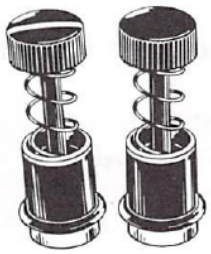
- **No.4 and No.6 thread sizes**
- **Black or bright finish**
- **Slotted or unslotted**

CAUTION: Do not exceed 3½ in.-lb. tightening torque when fastening.



SHIPPED UNASSEMBLED.

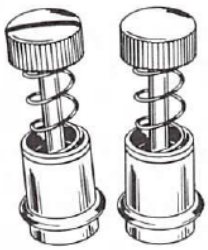
PART NUMBER TABLES



BLACK screw assemblies

YOUR OUTER PANEL THICKNESS			with **SLOTTED** screws			with **UNSLOTTED** SCREWS			DIMENSIONS		
			4-40	6-32	6-32	4-40	6-32	6-32	P	L	T
MIN.	NOM.	MAX.	Ø H = 5/16	Ø H = 5/16	Ø H = 3/8	Ø H = 5/16	Ø H = 5/16	Ø H = 3/8			
Screws will fully retract											
.052	.063	.067	53-10-406-26 ■	53-18-406-26 ■	53-18-106-26 ■	53-20-406-26 ■	53-28-406-26 ■	53-28-106-26 ■	1/16	21/32	3/8
.084	.094	.099	53-10-506-26 ■	53-18-506-26 ■	53-18-206-26 ■	53-20-506-26 ■	53-28-506-26 ■	53-28-206-26 ■	3/32		
.115	.125	.130	53-10-606-26 ■	53-18-606-26 ■	53-18-306-26 ■	53-20-606-26 ■	53-28-606-26 ■	53-28-306-26 ■	1/8		
Longer screws (spring will not fully retract screw)											
.052	.063	.067	53-10-407-26 □	53-18-407-26 □	53-18-107-26 ●	53-20-407-26 □	53-28-407-26 ●	53-28-107-26 ●	1/16	23/32	7/16
.084	.094	.099	53-10-507-26 □	53-18-507-26 □	53-18-207-26 ●	53-20-507-26 □	53-28-507-26 ●	53-28-207-26 ●	3/32		
.115	.125	.130	53-10-607-26 □	53-18-607-26 □	53-18-307-26 ●	53-20-607-26 □	53-28-607-26 ●	53-28-307-26 ●	1/8		
.052	.063	.067	53-10-408-26 □	53-18-408-26 □	53-18-108-26 ●	53-20-408-26 □	53-28-408-26 ●	53-28-108-26 ●	1/16	25/32	1/2
.084	.094	.099	53-10-508-26 □	53-18-508-26 □	53-18-208-26 ●	53-20-508-26 □	53-28-508-26 ●	53-28-208-26 ●	3/32		
.115	.125	.130	53-10-608-26 □	53-18-608-26 □	53-18-308-26 ●	53-20-608-26 □	53-28-608-26 ●	53-28-308-26 ●	1/8		
.052	.063	.067	53-10-409-26 □	53-18-409-26 ●	53-18-109-26 ●	53-20-409-26 □	53-28-409-26 ●	53-28-109-26 ●	1/16	27/32	9/16
.084	.094	.099	53-10-509-26 □	53-18-509-26 ●	53-18-209-26 ●	53-20-509-26 □	53-28-509-26 ●	53-28-209-26 ●	3/32		
.115	.125	.130	53-10-609-26 □	53-18-609-26 ●	53-18-309-26 ●	53-20-609-26 □	53-28-609-26 ●	53-28-309-26 ●	1/8		
.052	.063	.067	53-10-410-26 □	53-18-410-26 □	53-18-110-26 ●	53-20-410-26 □	53-28-410-26 ●	53-28-110-26 ●	1/16	29/32	5/8
.084	.094	.099	53-10-510-26 □	53-18-510-26 □	53-18-210-26 ●	53-20-510-26 □	53-28-510-26 ●	53-28-210-26 ●	3/32		
.115	.125	.130	53-10-610-26 □	53-18-610-26 □	53-18-310-26 ●	53-20-610-26 □	53-28-610-26 ●	53-28-310-26 ●	1/8		

Material and Finish
NO. 4 SCREW: 303 stainless steel.
NO. 6 SCREW: 302 stainless steel.
STANDOFF: 305 stainless steel.
SCREWS and STANDOFFS are passivated or are passivated with black epoxy enamel.
SPRING: 302 stainless steel, passivated. RETAINER: NO. 4 size, natural color nylon; NO. 6 size, black nylon.



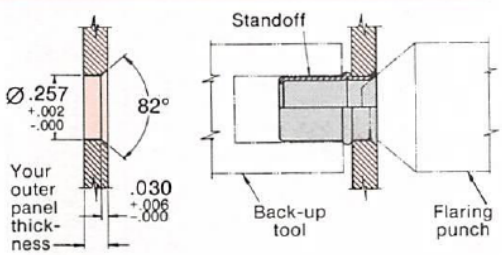
BRIGHT POLISHED screw assemblies

YOUR OUTER PANEL THICKNESS			with **SLOTTED** screws			with **UNSLOTTED** SCREWS			DIMENSIONS		
			4-40	6-32	6-32	4-40	6-32	6-32	P	L	T
MIN.	NOM.	MAX.	Ø H = 5/16	Ø H = 5/16	Ø H = 3/8	Ø H = 5/16	Ø H = 5/16	Ø H = 3/8			
Screws will fully retract											
.052	.063	.067	53-10-406-24 ■	53-18-406-24 ■	53-18-106-24 ■	53-20-406-24 ■	53-28-406-24 ■	53-28-106-24 ■	1/16	21/32	3/8
.084	.094	.099	53-10-506-24 ■	53-18-506-24 ■	53-18-206-24 ■	53-20-506-24 ■	53-28-506-24 ■	53-28-206-24 ■	3/32		
.115	.125	.130	53-10-606-24 ■	53-18-606-24 ■	53-18-306-24 ■	53-20-606-24 ■	53-28-606-24 ■	53-28-306-24 ■	1/8		
Longer screws (spring will not fully retract screw)											
.052	.063	.067	53-10-407-24 ■	53-18-407-24 ■	53-18-107-24 ■	53-20-407-24 □	53-28-407-24 ●	53-28-107-24 ●	1/16	23/32	7/16
.084	.094	.099	53-10-507-24 ■	53-18-507-24 ■	53-18-207-24 ■	53-20-507-24 □	53-28-507-24 ●	53-28-207-24 ●	3/32		
.115	.125	.130	53-10-607-24 ■	53-18-607-24 ■	53-18-307-24 ■	53-20-607-24 □	53-28-607-24 ●	53-28-307-24 ●	1/8		
.052	.063	.067	53-10-408-24 □	53-18-408-24 ■	53-18-108-24 ■	53-20-408-24 □	53-28-408-24 ●	53-28-108-24 ●	1/16	25/32	1/2
.084	.094	.099	53-10-508-24 □	53-18-508-24 ■	53-18-208-24 ■	53-20-508-24 □	53-28-508-24 ●	53-28-208-24 ●	3/32		
.115	.125	.130	53-10-608-24 □	53-18-608-24 ■	53-18-308-24 ■	53-20-608-24 □	53-28-608-24 ●	53-28-308-24 ●	1/8		
.052	.063	.067	53-10-409-24 □	53-18-409-24 ■	53-18-109-24 ■	53-20-409-24 □	53-28-409-24 ●	53-28-109-24 ●	1/16	27/32	9/16
.084	.094	.099	53-10-509-24 □	53-18-509-24 ■	53-18-209-24 ■	53-20-509-24 □	53-28-509-24 ●	53-28-209-24 ●	3/32		
.115	.125	.130	53-10-609-24 □	53-18-609-24 ■	53-18-309-24 ■	53-20-609-24 □	53-28-609-24 ●	53-28-309-24 ●	1/8		
.052	.063	.067	53-10-410-24 □	53-18-410-24 ■	53-18-110-24 ■	53-20-410-24 □	53-28-410-24 ■	53-28-110-24 ■	1/16	29/32	5/8
.084	.094	.099	53-10-510-24 □	53-18-510-24 ■	53-18-210-24 ■	53-20-510-24 □	53-28-510-24 ■	53-28-210-24 ■	3/32		
.115	.125	.130	53-10-610-24 □	53-18-610-24 ■	53-18-310-24 ■	53-20-610-24 □	53-28-610-24 ■	53-28-310-24 ■	1/8		

Fasteners are ordered by their assembly part number but are shipped and identified as components of the finished assembly.

DELIVERY SYMBOLS
- ■ From stock, subject to prior sale.
- ● Up to 4 weeks. Minimum order required
- □ Up to 8 weeks. Minimum order required

TO INSTALL STANDOFF

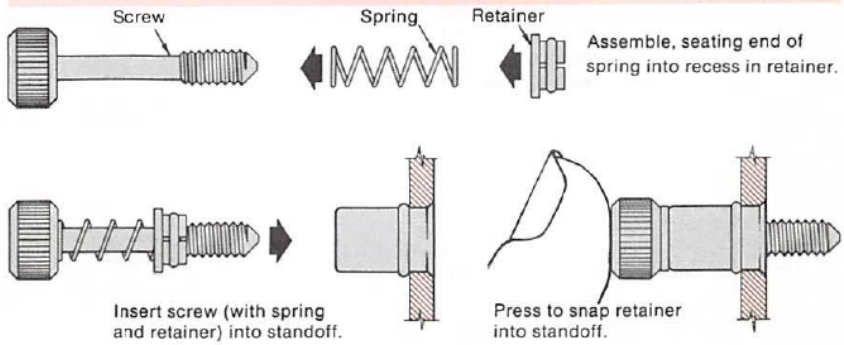


Prepare panel.

Insert standoff into hole and flare into countersink as shown.

See page C-19 for flaring and back-ups tools.

TO CAPTIVATE SCREW



Assemble, seating end of spring into recess in retainer.

Insert screw (with spring and retainer) into standoff.

Press to snap retainer into standoff.

No. 53 *Larger* Spring-ejected Captive Screw Assemblies

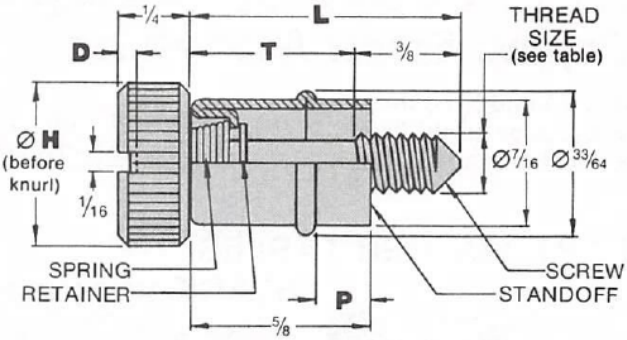
●Black or bright finish

TO SELECT PROPER SCREW ASSEMBLY

1—Measure your outer panel thickness and enter table (below) with your thickness.
2—Read across to find **P** dimension and installation method (A or B).
3—Enter part number table with your **P** dimension and read across to find correct assembly part number under head and thread size desired.

your Outer Panel Thickness		Select an assembly with **P** dim. of:	Use this installation method
Min.	Max.		
1/16	5/64	1/8	B
3/32	9/64	3/16	B
7/64	9/64	1/8	A
5/32	13/64	1/4	B
11/64	13/64	3/16	A
15/64	17/64	1/4	A

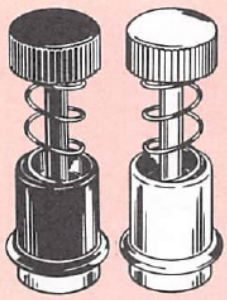
∅H	D
11/16	1/8
9/16	3/32
7/16	1/16



SHIPPED UNASSEMBLED.



Material and Finish
SCREW: 302 stainless steel, passivated with black organic coating. STANDOFF: 305 stainless steel, passivated with black epoxy enamel. SPRING and RETAINER: 302 stainless steel, passivated.



To order assemblies with* unslotted *screws, change third digit of part number from "1" to "2" as indicated. ie :

53-2-▲

PART NUMBER TABLES

Slotted BLACK screw assemblies

Dimensions			∅H = 7/16			∅H = 9/16	∅H = 11/16
P	L	T	8-32	10-32	10-24	1/4-20	1/4-20
Screws will fully retract							
1/8	1"	5/8	53-17-710-26 ■	53-16-710-26 ■	53-13-710-26 ■	53-11-410-26 ■	53-11-110-26 ■
3/16			53-17-810-26 ■	53-16-810-26 ■	53-13-810-26 ■	53-11-510-26 ■	53-11-210-26 ■
1/4			53-17-910-26 ■	53-16-910-26 ■	53-13-910-26 ■	53-11-610-26 ■	53-11-310-26 ■
Longer screws (spring will not fully retract screw)							
1/8	1 1/16	11/16	53-17-711-26 ■	53-16-711-26 ■	53-13-711-26 ●	53-11-411-26 ■	53-11-111-26 ●
3/16			53-17-811-26 ■	53-16-811-26 ■	53-13-811-26 ●	53-11-511-26 ■	53-11-211-26 ●
1/4			53-17-911-26 ■	53-16-911-26 ■	53-13-911-26 ●	53-11-611-26 ■	53-11-311-26 ●
1/8	1 1/8	3/4	53-17-712-26 ●	53-16-712-26 ■	53-13-712-26 ●	53-11-412-26 ■	53-11-112-26 ●
3/16			53-17-812-26 ●	53-16-812-26 ■	53-13-812-26 ●	53-11-512-26 ■	53-11-212-26 ●
1/4			53-17-912-26 ●	53-16-912-26 ■	53-13-912-26 ●	53-11-612-26 ■	53-11-312-26 ●
1/8	1 3/16	13/16	53-17-713-26 ●	53-16-713-26 ■	53-13-713-26 ●	53-11-413-26 ●	53-11-113-26 ●
3/16			53-17-813-26 ●	53-16-813-26 ■	53-13-813-26 ●	53-11-513-26 ●	53-11-213-26 ●
1/4			53-17-913-26 ●	53-16-913-26 ■	53-13-913-26 ●	53-11-613-26 ●	53-11-313-26 ●
1/8	1 1/4	7/8	53-17-714-26 ●	53-16-714-26 ■	53-13-714-26 ●	53-11-414-26 ●	53-11-114-26 ●
3/16			53-17-814-26 ●	53-16-814-26 ■	53-13-814-26 ●	53-11-514-26 ●	53-11-214-26 ●
1/4			53-17-914-26 ●	53-16-914-26 ■	53-13-914-26 ●	53-11-614-26 ●	53-11-314-26 ●
1/8	1 5/16	15/16	53-17-715-26 ●	53-16-715-26 ●	53-13-715-26 ●	53-11-415-26 ●	53-11-115-26 ●
3/16			53-17-815-26 ●	53-16-815-26 ●	53-13-815-26 ●	53-11-515-26 ●	53-11-215-26 ●
1/4			53-17-915-26 ●	53-16-915-26 ●	53-13-915-26 ●	53-11-615-26 ●	53-11-315-26 ●
1/8	1 3/8	1"	53-17-716-26 ●	53-16-716-26 ●	53-13-716-26 ●	53-11-416-26 ■	53-11-116-26 ■
3/16			53-17-816-26 ●	53-16-816-26 ●	53-13-816-26 ●	53-11-516-26 ■	53-11-216-26 ■
1/4			53-17-916-26 ●	53-16-916-26 ●	53-13-916-26 ●	53-11-616-26 ■	53-11-316-26 ■

DELIVERY SYMBOLS
■ From stock, subject to prior sale. ● Up to 4 weeks. Minimum order required.



Material and Finish
SCREW, SPRING, and RETAINER: 302 stainless steel, passivated. STANDOFF: 305 stainless steel, passivated.

Slotted BRIGHT POLISHED screw assemblies

Dimensions			∅H = 7/16			∅H = 9/16	∅H = 11/16
P	L	T	8-32	10-32	10-24	1/4-20	1/4-20
Screws will fully retract							
1/8	1"	5/8	53-17-710-24 ■	53-16-710-24 ■	53-13-710-24 ■	53-11-410-24 ■	53-11-110-24 ■
3/16			53-17-810-24 ■	53-16-810-24 ■	53-13-810-24 ■	53-11-510-24 ■	53-11-210-24 ■
1/4			53-17-910-24 ■	53-16-910-24 ■	53-13-910-24 ■	53-11-610-24 ■	53-11-310-24 ■
Longer screws (spring will not fully retract screw)							
1/8	1 1/16	11/16	53-17-711-24 ■	53-16-711-24 ■	53-13-711-24 ■	53-11-411-24 ■	53-11-111-24 ■
3/16			53-17-811-24 ■	53-16-811-24 ■	53-13-811-24 ■	53-11-511-24 ■	53-11-211-24 ■
1/4			53-17-911-24 ■	53-16-911-24 ■	53-13-911-24 ■	53-11-611-24 ■	53-11-311-24 ■
1/8	1 1/8	3/4	53-17-712-24 ■	53-16-712-24 ■	53-13-712-24 ●	53-11-412-24 ■	53-11-112-24 ■
3/16			53-17-812-24 ■	53-16-812-24 ■	53-13-812-24 ●	53-11-512-24 ■	53-11-212-24 ■
1/4			53-17-912-24 ■	53-16-912-24 ■	53-13-912-24 ●	53-11-612-24 ■	53-11-312-24 ■
1/8	1 3/16	13/16	53-17-713-24 ■	53-16-713-24 ■	53-13-713-24 ●	53-11-413-24 ■	53-11-113-24 ■
3/16			53-17-813-24 ■	53-16-813-24 ■	53-13-813-24 ●	53-11-513-24 ■	53-11-213-24 ■
1/4			53-17-913-24 ■	53-16-913-24 ■	53-13-913-24 ●	53-11-613-24 ■	53-11-313-24 ■
1/8	1 1/4	7/8	53-17-714-24 ●	53-16-714-24 ■	53-13-714-24 ●	53-11-414-24 ■	53-11-114-24 ■
3/16			53-17-814-24 ●	53-16-814-24 ■	53-13-814-24 ●	53-11-514-24 ■	53-11-214-24 ■
1/4			53-17-914-24 ●	53-16-914-24 ■	53-13-914-24 ●	53-11-614-24 ■	53-11-314-24 ■
1/8	1 5/16	15/16	53-17-715-24 ●	53-16-715-24 ■	53-13-715-24 ●	53-11-415-24 ■	53-11-115-24 ■
3/16			53-17-815-24 ●	53-16-815-24 ■	53-13-815-24 ●	53-11-515-24 ■	53-11-215-24 ■
1/4			53-17-915-24 ●	53-16-915-24 ■	53-13-915-24 ●	53-11-615-24 ■	53-11-315-24 ■
1/8	1 3/8	1"	53-17-716-24 ■	53-16-716-24 ■	53-13-716-24 ●	53-11-416-24 ■	53-11-116-24 ■
3/16			53-17-816-24 ■	53-16-816-24 ■	53-13-816-24 ●	53-11-516-24 ■	53-11-216-24 ■
1/4			53-17-916-24 ■	53-16-916-24 ■	53-13-916-24 ●	53-11-616-24 ■	53-11-316-24 ■

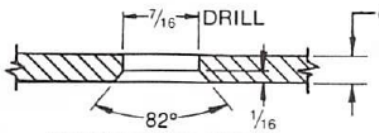
Fasteners are ordered by their assembly part number but are shipped and identified as components of the finished assembly.

See next page for installation instructions.

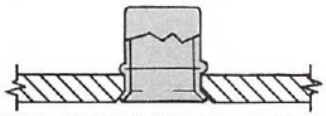
INSTALLATION FOR LARGER SPRING-EJECTED NO.53 ASSEMBLIES

TO INSTALL STANDOFF

Method A

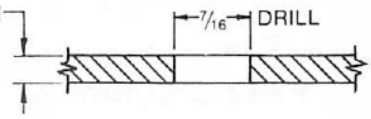


Countersink as shown.

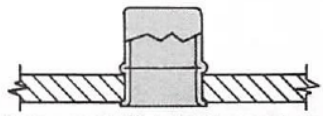


Flare standoff into countersink. Back-up tool must be used.

Method B

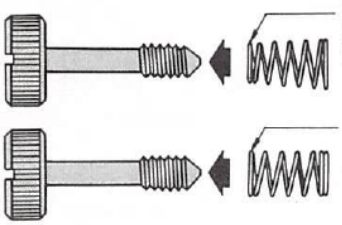


No further preparation required.

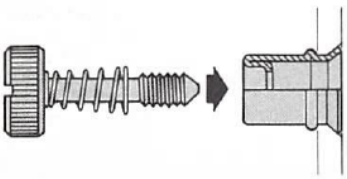


Flare standoff behind panel as shown. Back-up tool must be used.

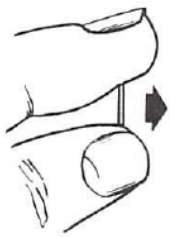
TO CAPTIVATE SCREW

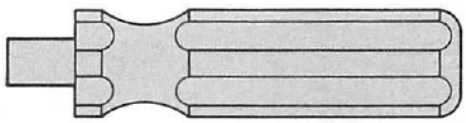


1. Slip spring over shank of screw. Spring must be oriented as shown in diagram.

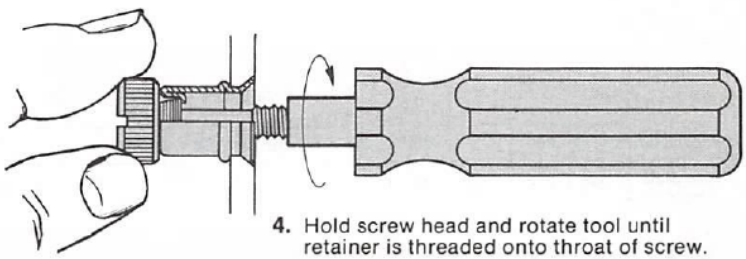


2. Insert screw (with spring in place) through hole in standoff.



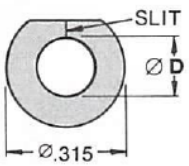


3. Insert retainer into recess in end of tool.



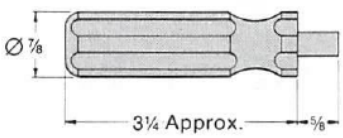
4. Hold screw head and rotate tool until retainer is threaded onto throat of screw.

SPLIT RING RETAINER



SCREW THREAD SIZE	D
No. 8	.139
No. 10-32	.165
1/4-20	.202
No. 10-24	.149

INSTALLATION TOOL FOR RETAINERS



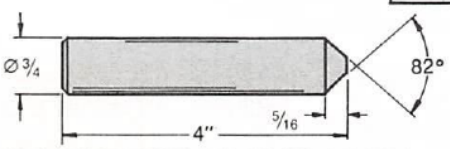
PART NUMBER
29-53-101-10 ■

NO. 51 *and* NO. 53 STANDOFF INSTALLATION TOOLS

Larger sizes

FLARING PUNCH

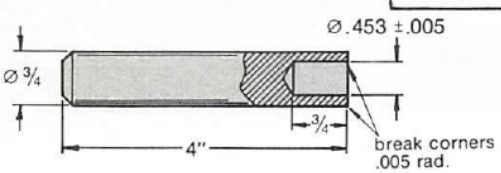
PART NUMBER
90-2824-11 ■



MATERIAL
Steel, hardened

BACK-UP TOOL

PART NUMBER
90-2825-11 ■

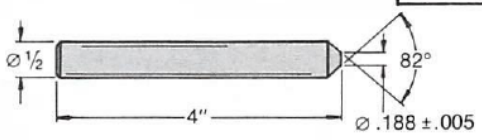


MATERIAL
Mild steel

Smaller sizes

FLARING PUNCH

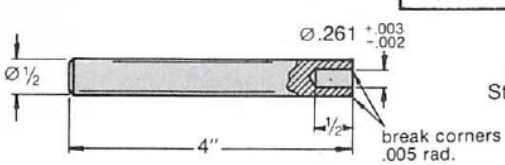
PART NUMBER
54-0-5467-11 ■



MATERIAL
Steel, hardened

BACK-UP TOOL

PART NUMBER
54-0-5466-11 ■



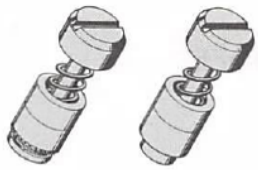
MATERIAL
Steel, hardened

■ From stock, subject to prior sale.

Mini Captive Panel Screws

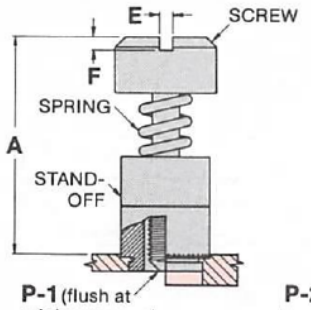
- Smaller sizes
- Press-in or Flare-in installation
- Pre-assembled, one piece
- Spring-ejected for full retraction

All dimensions are in inches.

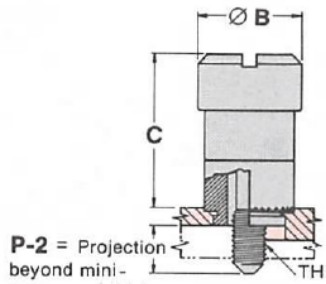


MATERIAL and FINISH
SCREW and STANDOFF: 303 stainless steel, passivated.
SPRING: 302 stainless steel, passivated.

Press-in



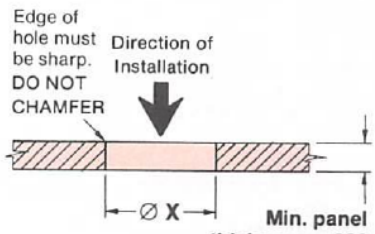
P-1 (flush at minimum panel thickness)

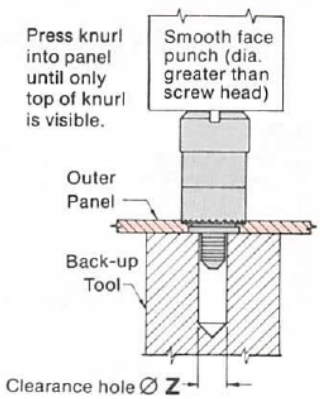


P-2 = Projection beyond minimum panel thickness

THREAD SIZE	A Ref.	Ø B	C	E & F	P-2	PART NUMBERS	Ø X +.003 -.000	Ø Z
4-40 UNC	.61	.281	.43	.036	.18	52-50-301-24 ■	.219	.120
6-32 UNC	.70	.312	.49	.045	.21	52-50-401-24 ■	.250	.144

INSTALLATION



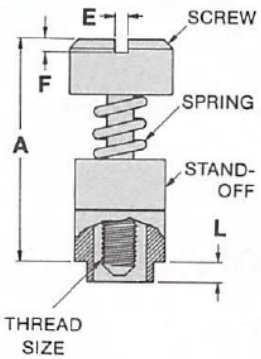


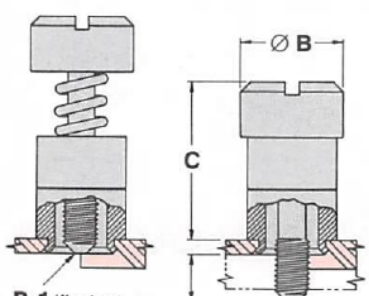
A general guide:
For use in most aluminums or in low carbon steels that are ¼ hard or softer. Ask for samples for testing.

To insure proper installation, punch surface and back-up tool surface must remain parallel during installation.

■ From stock, subject to prior sale.

Flare-in

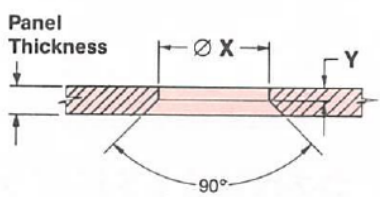


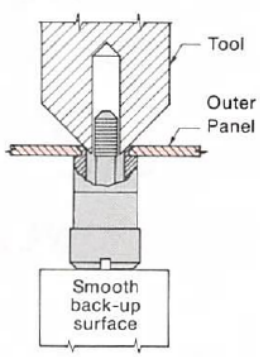


P-1 (flush at minimum panel thickness)

P-2 = Projection beyond minimum panel thickness

INSTALLATION

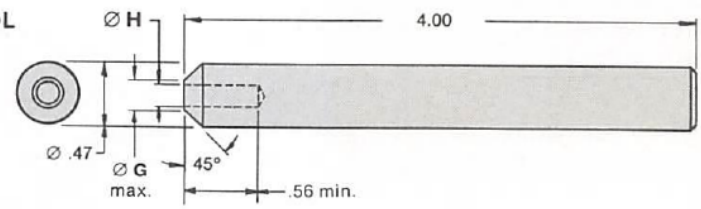




THREAD SIZE	A Ref.	Ø B	C	E & F	P-2	L	Panel Thickness MIN.	Panel Thickness MAX.	PART NUMBERS	Ø X +.003 -.000	Y
4-40 UNC	.62	.281	.44	.036	.18	.041	.031	.094	52-10-301-24 ■	.187	.016
						.104	.095	.156	52-10-303-24 ■		.032
6-32 UNC	.68	.312	.47	.045	.21	.070	.058	.125	52-10-402-24 ■	.213	.016
						.135	.126	.187	52-10-404-24 ■		.063

INSTALLATION TOOL

MATERIAL and FINISH
Low carbon steel, case hardened, zinc plated plus bright chromate dip.

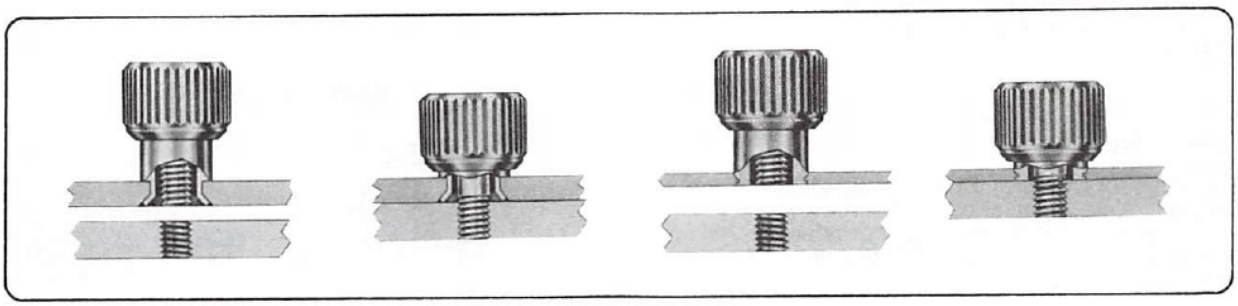


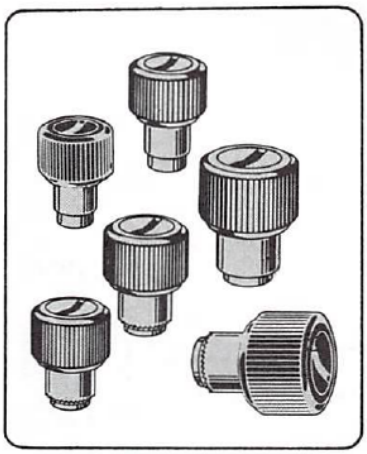
FOR THREAD SIZE	USE TOOL PART NO.	Ø H	Ø G
No. 4-40	52-0-23069-01 ■	.120	.124
No. 6-32	52-0-23069-02 ■	.140	.144

■ From stock, subject to prior sale.

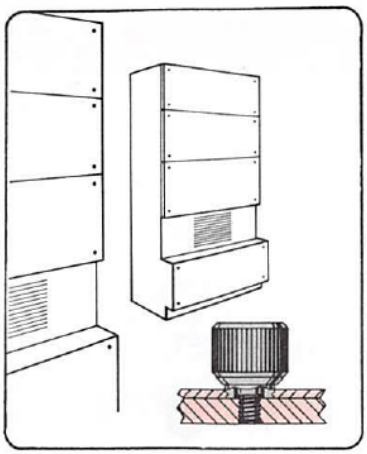
Retractable Screw Fasteners: Press-in and Flare-in styles

- Captive to panel
- Non-corrosive
- Spring-ejected
- Fast, smooth operation

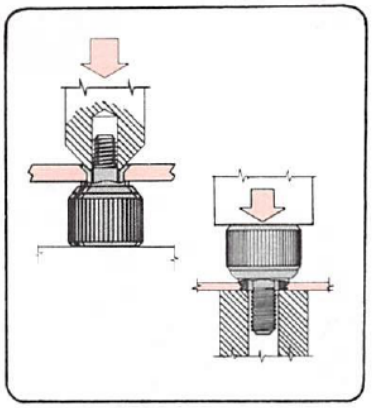




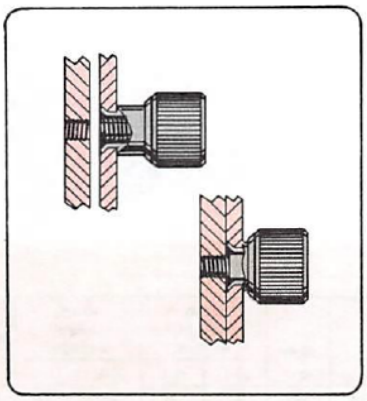
1. Southco No. 47 Captive-screw assemblies are stocked in five thread sizes, 4-40 through ¼-20 (Metric sizes in Section CC).



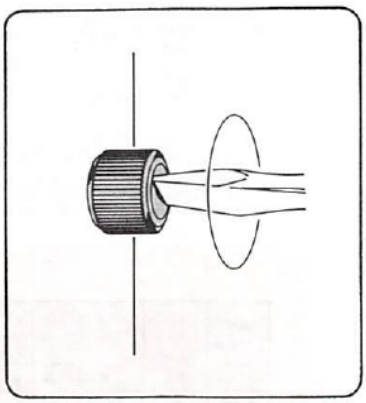
2. Spring-loaded, one-piece, low profile No. 47's float .03" to engage mating thread.



3. Installation is quick and easy for both the flare-in and press-in styles.



4. The knob position signals whether screw is engaged.



5. The screw slot is recessed to keep the screwdriver from slipping and damaging your panel.



6. Assemblies are individually compartmented to protect their finish.

SOUTHCO fasteners

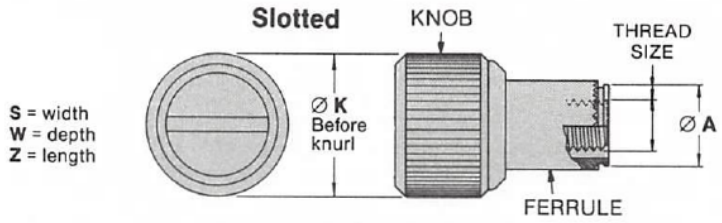
Retractable Screw Fasteners:
No. 47 Press-in style

A general guide:

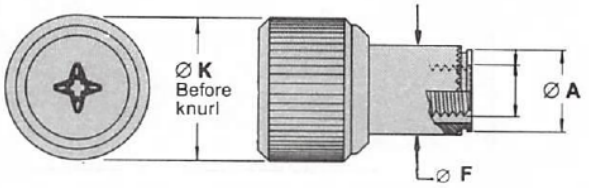
For use in grades of aluminum that are non-heat treatable or that have an "O" or "H" temper. Ask for samples for testing.

For installation in harder metals, see Press-in Style with Steel Ferrules, pg. C-24, or Flare-in Style, page C-26.

Slotted



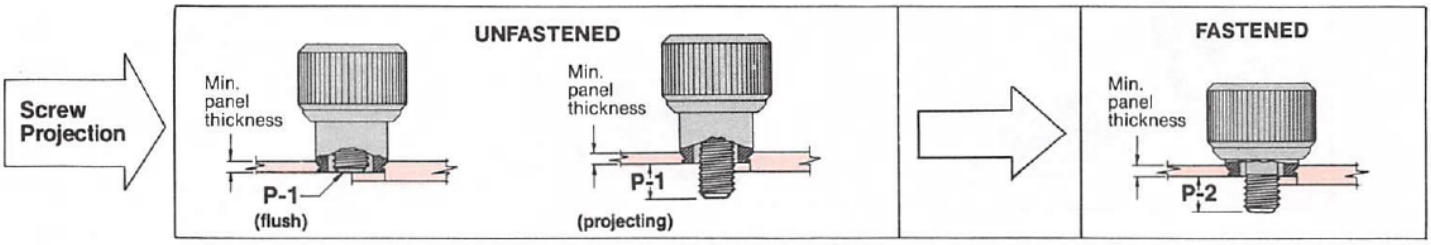
Phillips Recess



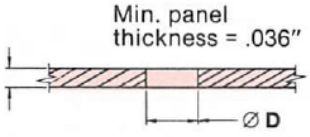
MATERIAL and FINISH

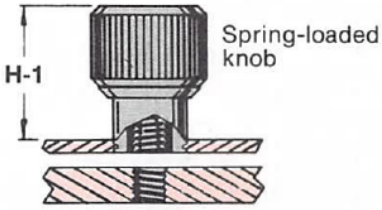
KNOB: 6262 aluminum, natural. SCREW: 430 stainless steel, passivated. (Note: Knob and top of screw available with black organic coating; see part number tables.) FERRULE: 7075 aluminum, natural. SPRING: 302 stainless steel, passivated.

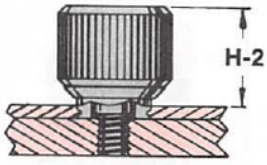
THREAD SIZE	KNOB Ø K	Ø A	SLOT DIMENSIONS			PHILLIPS RECESS SIZES
			S	W	Z	
4-40	.41	.217	.04	.04	.23	No. 2
6-32	.44	.247	.05	.04	.27	No. 2
8-32	.50	.310	.05	.05	.33	No. 2
10-32	.50	.310	.05	.05	.33	No. 2
¼-20	.56	.372	.06	.06	.39	No. 2

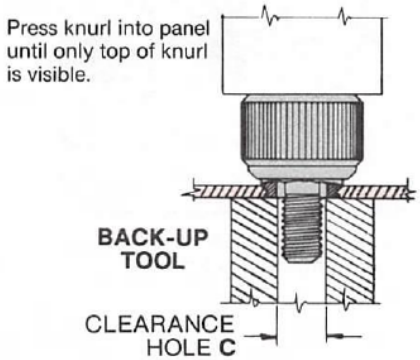


INSTALLATION









For Thread Size	Ø D +.003 -.000	CLEARANCE HOLE C	Knob Height Slotted		Knob Height Phillips	
			H-1	H-2	H-1	H-2
4-40	.219	.120	.47	.31	.48	.32
6-32	.250	.144	.64	.44	.65	.45
8-32	.312	.169	.64	.44	.66	.46
10-32	.312	.196	.64	.44	.66	.46
¼-20	.375	.265	.80	.53	.82	.55

Retractable Screw Fasteners: No. 47 Press-in Style

Slotted

		Screw Projection Beyond Min. Panel Thickness		PART NUMBERS FOR 4-40	
		P-1 Unfastened	P-2 Fastened	KNOB: natural	KNOB: black organic coating
4-40 size	Unfastened screw is flush	FLUSH	.16	47-60-101-10 ■	47-60-101-50 ■
	Unfastened screw projects	.06	.22	47-61-101-10 ■	47-61-101-50 •
		.13	.28	47-62-101-10 ■	47-62-101-50 •
		.19	.34	47-63-101-10 ■	47-63-101-50 •

		Screw Projection Beyond Min. Panel Thickness		PART NUMBERS					
				KNOB: natural			KNOB: black organic coating		
		P-1 Unfastened	P-2 Fastened	6-32	8-32	10-32	6-32	8-32	10-32
6-32 8-32 10-32 sizes	Unfastened screw is flush	FLUSH	.19	47-60-201-10 ■	47-60-301-10 ■	47-60-501-10 ■	47-60-201-50 ■	47-60-301-50 ■	47-60-501-50 ■
	Unfastened screw projects	.06	.25	47-61-201-10 ■	47-61-301-10 ■	47-61-501-10 ■	47-61-201-50 ■	47-61-301-50 ■	47-61-501-50 ■
		.13	.31	47-62-201-10 ■	47-62-301-10 ■	47-62-501-10 ■	47-62-201-50 ■	47-62-301-50 ■	47-62-501-50 ■
		.19	.38	47-63-201-10 ■	47-63-301-10 ■	47-63-501-10 ■	47-63-201-50 ■	47-63-301-50 ■	47-63-501-50 ■

		Screw Projection Beyond Min. Panel Thickness		PART NUMBERS FOR ¼-20	
		P-1 Unfastened	P-2 Fastened	KNOB: natural	KNOB: black organic coating
¼-20 size	Unfastened screw is flush	FLUSH	.25	47-60-601-10 ■	47-60-601-50 ■
	Unfastened screw projects	.06	.31	47-61-601-10 ■	47-61-601-50 •
		.13	.38	47-62-601-10 ■	47-62-601-50 •
		.19	.44	47-63-601-10 ■	47-63-601-50 •

DELIVERY SYMBOLS
(see part numbers)
■ From stock, subject to prior sale.
● Up to 4 weeks.

Phillips Recess

		Screw Projection Beyond Min. Panel Thickness		PART NUMBERS FOR 4-40	
		P-1 Unfastened	P-2 Fastened	KNOB: natural	KNOB: black organic coating
4-40 size	Unfastened screw is flush	FLUSH	.16	47-60-121-10 ■	47-60-121-50 ■
	Unfastened screw projects	.06	.22	47-61-121-10 ■	47-61-121-50 •
		.13	.28	47-62-121-10 ■	47-62-121-50 •
		.19	.34	47-63-121-10 ■	47-63-121-50 •

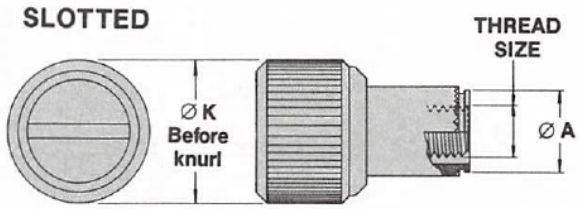
		Screw Projection Beyond Min. Panel Thickness		PART NUMBERS					
				KNOB: natural			KNOB: black organic coating		
		P-1 Unfastened	P-2 Fastened	6-32	8-32	10-32	6-32	8-32	10-32
6-32 8-32 10-32 sizes	Unfastened screw is flush	FLUSH	.19	47-60-221-10 ■	47-60-321-10 ■	47-60-521-10 ■	47-60-221-50 ■	47-60-321-50 ■	47-60-521-50 ■
	Unfastened screw projects	.06	.25	47-61-221-10 ■	47-61-321-10 ■	47-61-521-10 ■	47-61-221-50 •	47-61-321-50 •	47-61-521-50 •
		.13	.31	47-62-221-10 ■	47-62-321-10 ■	47-62-521-10 ■	47-62-221-50 •	47-62-321-50 •	47-62-521-50 •
		.19	.38	47-63-221-10 ■	47-63-321-10 ■	47-63-521-10 ■	47-63-221-50 •	47-63-321-50 •	47-63-521-50 •

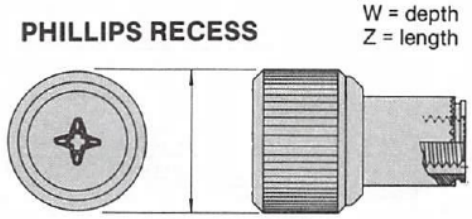
		Screw Projection Beyond Min. Panel Thickness		PART NUMBERS FOR ¼-20	
		P-1 Unfastened	P-2 Fastened	KNOB: natural	KNOB: black organic coating
¼-20 size	Unfastened screw is flush	FLUSH	.25	47-60-621-10 ■	47-60-621-50 ■
	Unfastened screw projects	.06	.31	47-61-621-10 ■	47-61-621-50 ■
		.13	.38	47-62-621-10 ■	47-62-621-50 •
		.19	.44	47-63-621-10 ■	47-63-621-50 ■

Retractable Screw Fasteners: Press-in style with *HARDENED STEEL FERRULES* for installation in a broader range of materials

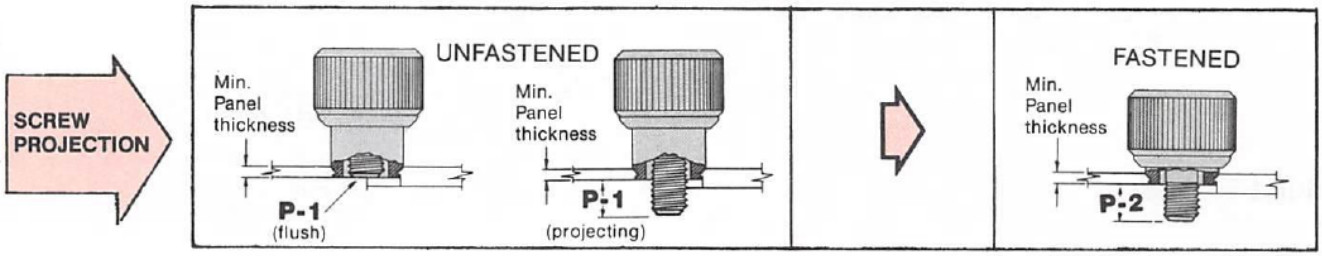
A general guide:
For use in low carbon steels that are ½ hard or softer and for stainless steels in the anealed conditions. Ask for samples for testing.
For installation in harder metals, see Flare-in style, pages CC-14 and CC-15.

MATERIAL and FINISH
KNOB: 6262 aluminum, natural. SCREW: 430 stainless steel, passivated. (Note: knob and top of screw available with black organic coating; see part number tables.)
FERRULE: Low-carbon steel, case hardened, zinc plated plus bright chromate dip.



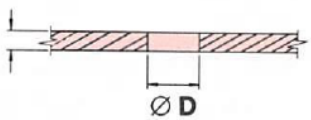


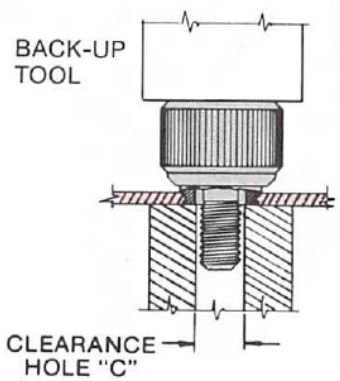
THREAD SIZE	KNOB Ø K	Ø A	SLOT DIMENSIONS			PHILLIPS RECESS SIZES
			S	W	Z	
4-40	.41	.217	.04	.04	.23	No. 2
6-32	.44	.247	.05	.04	.27	No. 2
8-32	.50	.310	.05	.05	.33	No. 2
10-32	.50	.310	.05	.05	.33	No. 2
¼-20	.56	.372	.06	.06	.39	No. 2



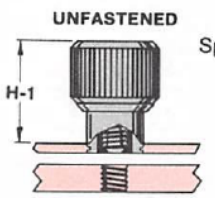
INSTALLATION:

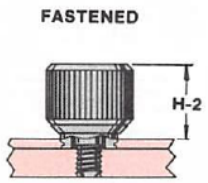
Min. Panel thickness = .036"





Press knurl into panel until only top of knurl is visible.





For Thread Size	Ø D +.003 -.000	CLEARANCE HOLE C	Knob Height Slotted		Knob Height Phillips	
			H-1	H-2	H-1	H-2
4-40	.219	.120	.47	.31	.48	.32
6-32	.250	.144	.64	.44	.65	.45
8-32	.312	.169	.64	.44	.66	.46
10-32	.312	.196	.64	.44	.66	.46
¼-20	.375	.265	.80	.53	.82	.55

Retractable Screw Fasteners: Press-in style with HARDENED STEEL FERRULES

Slotted

		Screw Projection Beyond Min. Panel Thickness		PART NUMBERS FOR **4-40 STEEL FERRULES**	
		P-1 Unfastened	**P-2** Fastened	KNOB: natural	KNOB: black organic coating
4-40 size	Unfastened screw is flush	FLUSH	.16	47-**60**-101-20 ■	47-**60**-101-60 ■
	Unfastened screw projects	.06	.22	47-**61**-101-20 ■	47-**61**-101-60 ●
		.13	.28	47-**62**-101-20 ■	47-**62**-101-60 ●
		.19	.34	47-**63**-101-20 ■	47-**63**-101-60 ●

		Screw Projection Beyond Min. Panel Thickness		**STEEL FERRULES** PART NUMBERS KNOB: natural			**STEEL FERRULES** KNOB: black organic coating		
		P-1 Unfastened	**P-2** Fastened	**6-32**	**8-32**	**10-32**	**6-32**	**8-32**	**10-32**
6-32 8-32 10-32 sizes	Unfastened screw is flush	FLUSH	.19	47-**60**-201-20 ■	47-**60**-301-20 ■	47-**60**-501-20 ■	47-**60**-201-60 ■	47-**60**-301-60 ■	47-**60**-501-60 ■
	Unfastened screw projects	.06	.25	47-**61**-201-20 ■	47-**61**-301-20 ■	47-**61**-501-20 ■	47-**61**-201-60 ●	47-**61**-301-60 ●	47-**61**-501-60 ●
		.13	.31	47-**62**-201-20 ■	47-**62**-301-20 ■	47-**62**-501-20 ■	47-**62**-201-60 ●	47-**62**-301-60 ●	47-**62**-501-60 ●
		.19	.38	47-**63**-201-20 ■	47-**63**-301-20 ■	47-**63**-501-20 ■	47-**63**-201-60 ●	47-**63**-301-60 ●	47-**63**-501-60 ●

		Screw Projection Beyond Min. Panel Thickness		PART NUMBERS FOR **¼-20 STEEL FERRULES**	
		P-1 Unfastened	**P-2** Fastened	KNOB: natural	KNOB: black organic coating
¼-20 size	Unfastened screw is flush	FLUSH	.25	47-**60**-601-10 ■	47-**60**-601-50 ■
	Unfastened screw projects	.06	.31	47-**61**-601-20 ■	47-**61**-601-60 ●
		.13	.38	47-**62**-601-20 ■	47-**62**-601-60 ●
		.19	.44	47-**63**-601-20 ■	47-**63**-601-60 ●

DELIVERY SYMBOLS
(see part numbers)

■ From stock, subject to prior sale.

● Up to 4 weeks.

Phillips Recess

		Screw Projection Beyond Min. Panel Thickness		PART NUMBERS FOR **4-40 STEEL FERRULES**	
		P-1 Unfastened	**P-2** Fastened	KNOB: bright	KNOB: black organic coating
4-40 size	Unfastened screw is flush	FLUSH	.16	47-60-121-20 ■	47-60-121-60 ■
	Unfastened screw projects	.06	.22	47-61-121-20 ■	47-61-121-60 •
		.13	.22	47-62-121-20 ■	47-62-121-60 •
		.19	.34	47-63-121-20 ■	47-63-121-60 •

		Screw Projection Beyond Min. Panel Thickness		**STEEL FERRULES** PART NUMBERS KNOB: bright			**STEEL FERRULES** KNOB: black organic coating		
		P-1 Unfastened	**P-2** Fastened	**6-32**	**8-32**	**10-32**	**6-32**	**8-32**	**10-32**
6-32 8-32 10-32 sizes	Unfastened screw is flush	FLUSH	.19	47-60-221-20 ■	47-60-321-20 ■	47-60-521-20 ■	47-60-221-60 ■	47-60-321-60 ■	47-60-521-60 ■
	Unfastened screw projects	.06	.25	47-61-221-20 ■	47-61-321-20 ■	47-61-521-20 ■	47-61-221-60 •	47-61-321-60 •	47-61-521-60 •
		.13	.31	47-62-221-20 ■	47-62-321-20 ■	47-62-521-20 ■	47-62-221-60 •	47-62-321-60 •	47-62-521-60 •
		.19	.38	47-63-221-20 ■	47-63-321-20 ■	47-63-521-20 ■	47-63-221-60 •	47-63-321-60 •	47-63-521-60 •

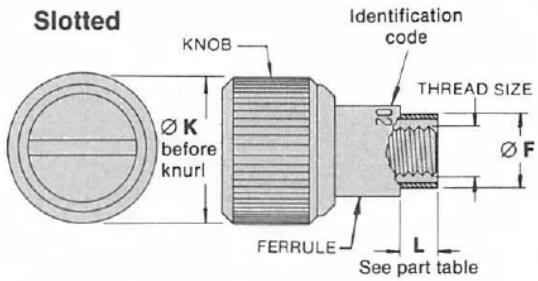
		Screw Projection Beyond Min. Panel Thickness		PART NUMBERS FOR **¼-20 STEEL FERRULES**	
		P-1 Unfastened	**P-2** Fastened	KNOB: bright	KNOB: black organic coating
¼-20 size	Unfastened screw is flush	FLUSH	.25	47-60-621-10 ■	47-60-621-50 ■
	Unfastened screw projects	.06	.31	47-61-621-20 ■	47-61-621-60 •
		.13	.38	47-62-621-20 ■	47-62-621-60 •
		.19	.44	47-63-621-20 ■	47-63-621-60 •

Retractable Screw Fasteners: No. 47 Flare-in style

MATERIAL and FINISH

KNOB: 6262 aluminum, natural. SCREW: 430 stainless steel, passivated. (Note: knob and top of screw available with black organic coating; see part number tables.) FERRULE: low carbon steel, case hardened, zinc plated plus bright chromate dip. SPRING: 302 stainless steel, passivated.

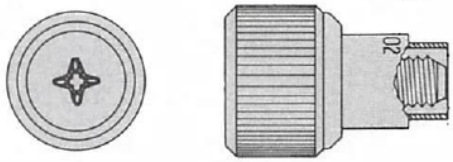
Slotted



For Thread Size	Knob Ø K	Ø F	Slot Dimensions			Hole Ø D	Knob Height Slotted		Knob Height Phillips		Phillips Recess Size
			S	W	Z		H-1	H-2	H-1	H-2	
4-40	.41	.183	.04	.04	.23	.187	.47	.31	.48	.32	No. 2
6-32	.44	.209	.05	.04	.27	.213	.61	.41	.65	.45	No. 2
8-32	.50	.262	.05	.05	.33	.266	.61	.41	.66	.46	No. 2
10-32	.50	.262	.05	.05	.33	.266	.61	.41	.66	.46	No. 2
¼-20	.56	.319	.06	.06	.39	.323	.77	.50	.82	.44	No. 2

Phillips Recess

S = width
W = depth
Z = length



Slotted

	Panel thickness		Screw projection beyond min. panel thickness		L	B	PART NUMBERS FOR 4-40		Identification Code No.
	Min.	Max.	P-1 Unfastened	P-2 Fastened			KNOB: natural	KNOB: black organic coating	
4-40 Size Unfastened screw is flush	.031	.094	Flush	.16	.041	.02	47-10-101-10 ■	47-10-101-50 ■	01
	.095	.156			.104	.03	47-10-103-10 ■	47-10-103-50 ■	03
	.157	.219			.166	.09	47-10-105-10 ■	47-10-105-50 ■	05
	.220	.281			.229	.16	47-10-107-10 ■	47-10-107-50 ■	07
Unfastened screw projects	.031	.094	.06	.22	.041	.02	47-11-101-10 ■	47-11-101-50 ■	01
			.13	.28			47-12-101-10 ■	47-12-101-50 ■	
			.19	.34			47-13-101-10 ■	47-13-101-50 ■	
	.095	.156	.06	.22	.104	.03	47-11-103-10 ■	47-11-103-50 ■	03
			.13	.28			47-12-103-10 ■	47-12-103-50 ■	
	.157	.281	.06	.22	.166	.09	47-11-105-10 ■	47-11-105-50 ■	05

	Panel thickness		Screw projection beyond min. panel thickness		L	B	PART NUMBERS						Identification Code No.
							KNOB: natural			KNOB: black organic coating			
	Min.	Max.	P-1 Unfastened	P-2 Fastened			6-32	8-32	10-32	6-32	8-32	10-32	
6-32, 8-32 and 10-32 Sizes Unfastened screw is flush	.058	.125	Flush	.19	.070	.03	47-10-202-10 ■	47-10-302-10 ■	47-10-502-10 ■	47-10-202-50 ■	47-10-302-50 ■	47-10-502-50 ■	02
	.126	.187			.135	.06	47-10-204-10 ■	47-10-304-10 ■	47-10-504-10 ■	47-10-204-50 ■	47-10-304-50 ■	47-10-504-50 ■	04
	.188	.250			.197	.13	47-10-206-10 ■	47-10-306-10 ■	47-10-506-10 ■	47-10-206-50 ■	47-10-506-50 ■	47-10-506-50 ■	06
	.251	.312			.260	.19	47-10-208-10 ■	47-10-308-10 ■	47-10-508-10 ■	47-10-208-50 ■	47-10-308-50 ■	47-10-508-50 ■	08
Unfastened screw projects	.058	.125	.06	.25	.070	.02	47-11-202-10 ■	47-11-302-10 ■	47-11-502-10 ■	47-11-202-50 ■	47-11-302-50 ■	47-11-502-50 ■	02
			.13	.31			47-12-202-10 ■	47-12-302-10 ■	47-12-502-10 ■	47-12-202-50 ■	47-12-302-50 ■	47-12-502-50 ■	
			.19	.38			47-13-202-10 ■	47-13-302-10 ■	47-13-502-10 ■	47-13-202-50 ■	47-13-302-50 ■	47-13-502-50 ■	
	.126	.187	.06	.25	.135	.06	47-11-204-10 ■	47-11-304-10 ■	47-11-504-10 ■	47-11-204-50 ■	47-11-304-50 ■	47-11-504-50 ■	04
			.13	.31			47-12-204-10 ■	47-12-304-10 ■	47-12-504-10 ■	47-12-204-50 ■	47-12-304-50 ■	47-12-504-50 ■	
	.186	.250	.06	.25	.197	.13	47-11-206-10 ■	47-11-306-10 ■	47-11-506-10 ■	47-11-206-50 ■	47-11-306-50 ■	47-11-506-50 ■	06

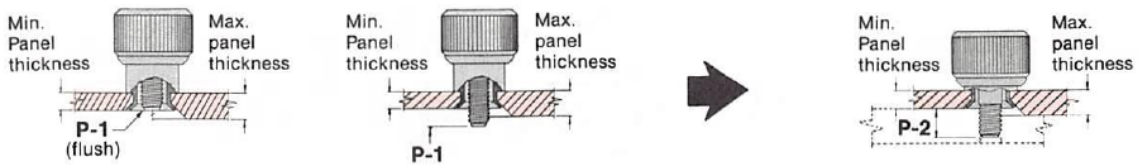
	Panel thickness		Screw projection beyond min. panel thickness		L	B	PART NUMBERS FOR ¼-20		Identification Code No.
	Min.	Max.	P-1 Unfastened	P-2 Fastened			KNOB: natural	KNOB: black organic coating	
¼-20 Size Unfastened screw is flush	.058	.125	Flush	.25	.070	.02	47-10-602-10 ■	47-10-602-50 ■	02
	.126	.187			.135	.06	47-10-604-10 ■	47-10-604-50 ■	04
	.188	.250			.197	.13	47-10-606-10 ■	47-10-606-50 ■	06
	.251	.312			.260	.19	47-10-608-10 ■	47-10-608-50 ■	08
Unfastened screw projects	.058	.125	.06	.31	.070	.02	47-11-602-10 ■	47-11-602-50 ■	02
			.13	.38			47-12-602-10 ■	47-12-602-50 ■	
			.19	.44			47-13-602-10 ■	47-13-602-50 ■	
	.126	.187	.06	.31	.135	.06	47-11-604-10 ■	47-11-604-50 ■	04
			.13	.38			47-12-604-10 ■	47-12-604-50 ■	
	.188	.250	.06	.31	.197	.13	47-11-606-10 ■	47-11-606-50 ■	06

■ From stock subject to prior sale.

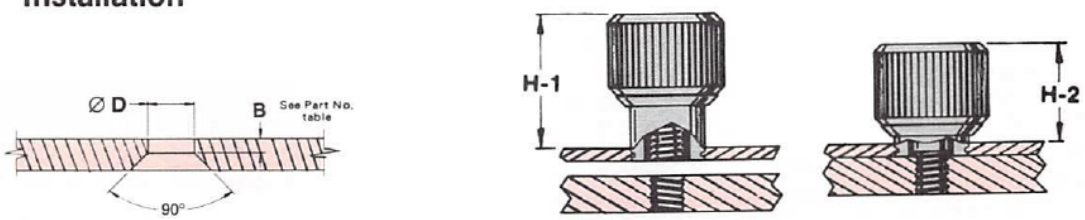
Retractable Screw Fasteners: No. 47 Flare-in style

Screw Projection

Unfastened **Fastened**



Installation



NOTE: Screw will float .03" total movement.

Phillips Recess

	Panel thickness		Screw projection beyond min. panel thickness		L	B	PART NUMBERS FOR 4-40		Identification Code No.
	Min.	Max.	P-1 Unfastened	P-2 Fastened			KNOB: natural	KNOB: black organic coating	
4-40 Size Unfastened screw is flush	.031	.094	Flush	.16	.041	.02	47-10-121-10 ■	47-10-121-50 ■	01
	.095	.156			.104	.03	47-10-123-10 ■	47-10-123-50 ■	03
	.157	.219			.166	.09	47-10-125-10 ■	47-10-125-50 ■	05
	.220	.281			.229	.16	47-10-127-10 ■	47-10-127-50 ■	07
Unfastened screw projects	.031	.094	.06	.22	.041	.02	47-11-121-10 ■	47-11-121-50 ■	01
			.13	.28			47-12-121-10 ■	47-12-121-50 ■	
			.19	.34			47-13-121-10 ■	47-13-121-50 ■	
	.095	.156	.06	.22	.104	.03	47-11-123-10 ■	47-11-123-50 ■	03
			.13	.28			47-12-123-10 ■	47-12-123-50 ■	
	.157	.281	.06	.22	.166	.09	47-11-125-10 ■	47-11-125-50 ■	05

	Panel thickness		Screw projection beyond min. panel thickness		L	B	PART NUMBERS						Identification Code No.
							KNOB: natural			KNOB: black organic coating			
	Min.	Max.	P-1 Unfastened	P-2 Fastened			6-32	8-32	10-32	6-32	8-32	10-32	
6-32, 8-32 and 10-32 Sizes Unfastened screw is flush	.058	.125	Flush	.19	.070	.03	47-10-222-10 ■	47-10-322-10 ■	47-10-522-10 ■	47-10-222-50 ■	47-10-322-50 ■	47-10-522-50 ■	02
	.126	.187			.135	.06	47-10-224-10 ■	47-10-324-10 ■	47-10-524-10 ■	47-10-224-50 ■	47-10-324-50 ■	47-10-524-50 ■	04
	.188	.250			.197	.13	47-10-226-10 ■	47-10-326-10 ■	47-10-526-10 ■	47-10-226-50 ■	47-10-326-50 ■	47-10-526-50 ■	06
	.251	.312			.260	.19	47-10-228-10 ■	47-10-328-10 ■	47-10-528-10 ■	47-10-228-50 ■	47-10-328-50 ■	47-10-528-50 ■	08
Unfastened screw projects	.058	.125	.06	.25	.070	.02	47-11-222-10 ■	47-11-322-10 ■	47-11-522-10 ■	47-11-222-50 ■	47-11-322-50 ■	47-11-522-50 ■	02
			.13	.31			47-12-222-10 ■	47-12-322-10 ■	47-12-522-10 ■	47-12-222-50 ■	47-12-322-50 ■	47-12-522-50 ■	
			.19	.38			47-13-222-10 ■	47-13-322-10 ■	47-13-522-10 ■	47-13-222-50 ■	47-13-322-50 ■	47-13-522-50 ■	
	.126	.187	.06	.25	.135	.06	47-11-224-10 ■	47-11-324-10 ■	47-11-524-10 ■	47-11-224-50 ■	47-11-324-50 ■	47-11-524-50 ■	04
			.13	.31			47-12-224-10 ■	47-12-324-10 ■	47-12-524-10 ■	47-12-224-50 ■	47-12-324-50 ■	47-12-524-50 ■	
	.186	.250	.06	.25	.197	.13	47-11-226-10 ■	47-11-326-10 ■	47-11-526-10 ■	47-11-226-50 ■	47-11-326-50 ■	47-11-526-50 ■	06

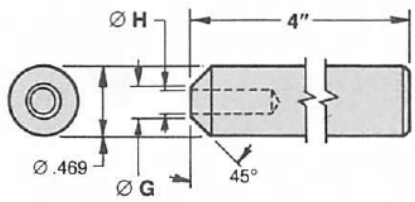
	Panel thickness		Screw projection beyond min. panel thickness		L	B	PART NUMBERS FOR ¼-20		Identification Code No.
	Min.	Max.	P-1 Unfastened	P-2 Fastened			KNOB: natural	KNOB: black organic coating	
¼-20 Size Unfastened screw is flush	.058	.125	Flush	.25	.070	.02	47-10-622-10 ■	47-10-622-50 ■	02
	.126	.187			.135	.06	47-10-624-10 ■	47-10-624-50 ■	04
	.188	.250			.197	.13	47-10-626-10 ■	47-10-626-50 ■	06
	.251	.312			.260	.19	47-10-628-10 ■	47-10-628-50 ■	08
Unfastened screw projects	.058	.125	.06	.31	.070	.02	47-11-622-10 ■	47-11-622-50 ■	02
			.13	.38			47-12-622-10 ■	47-12-622-50 ■	
			.19	.44			47-13-622-10 ■	47-13-622-50 ■	
	.126	.187	.06	.31	.135	.06	47-11-624-10 ■	47-11-624-50 ■	04
			.13	.38			47-12-624-10 ■	47-12-624-50 ■	
	.188	.250	.06	.31	.197	.13	47-11-626-10 ■	47-11-626-50 ■	06

■ From stock subject to prior sale.

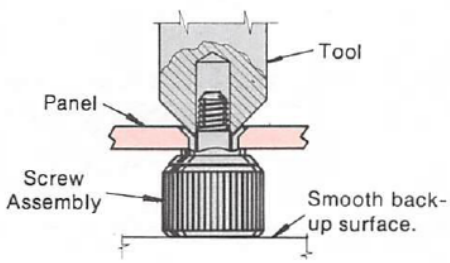
INSTALLATION TOOLS

METHOD A

1. Install tool in suitable press. Only **light** pressure will be required.



2. Insert screw assembly into prepared hole in panel (see panel preparation, pg. C-27)
3. Place work under press, center tool over screw thread and flare ferrule into countersink in panel. Use **light** pressure.



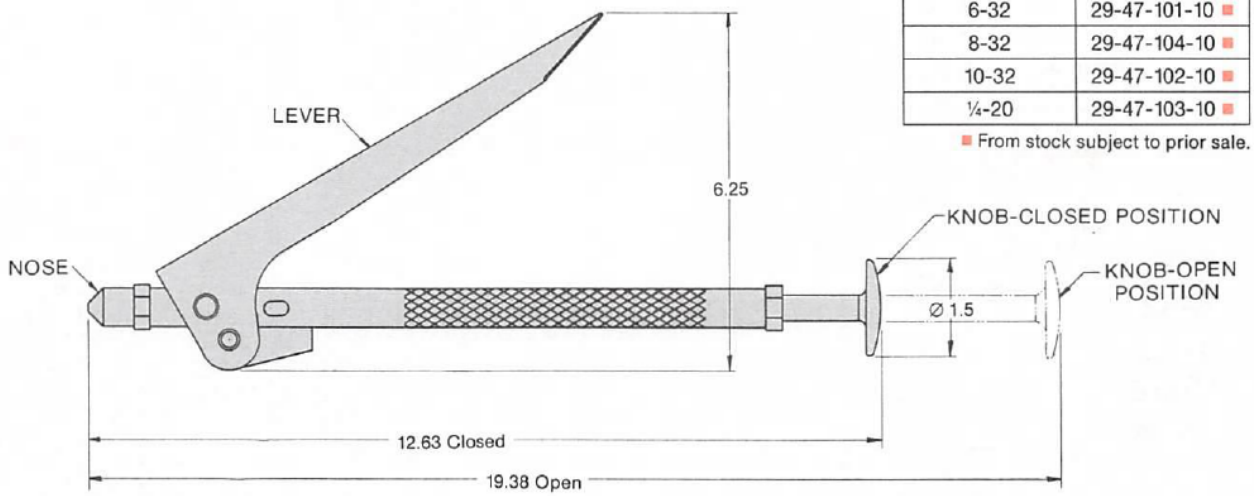
For Thread Size	Ø H	Ø G	Use Tool Part Number
4-40	.120	.124	47-0-13749-01 ■
6-32	.140	.144	47-0-13749-02 ■
8-32	.156	.170	47-0-13749-03 ■
10-32	.191	.195	47-0-13749-05 ■
¼-20	.257	.261	47-0-13749-06 ■

From stock subject to prior sale.

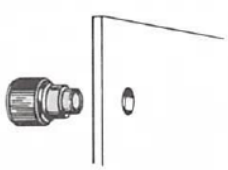
METHOD B

For Thread Size	Use Tool Part Number
4-40	29-47-105-10 ■
6-32	29-47-101-10 ■
8-32	29-47-104-10 ■
10-32	29-47-102-10 ■
¼-20	29-47-103-10 ■

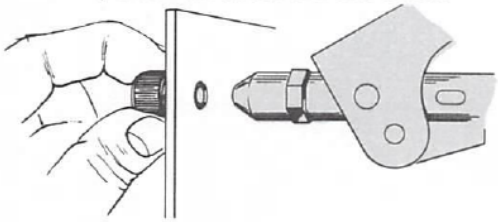
■ From stock subject to prior sale.



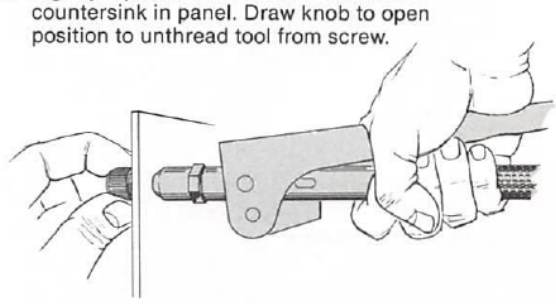
1. Place screw assembly into prepared hole in panel (see panel preparation. pg. C-27)



2. Draw knob of tool to open position. Hold screw assembly in place and position nose of tool against end of screw thread. Returning knob to closed position will thread tool onto screw.

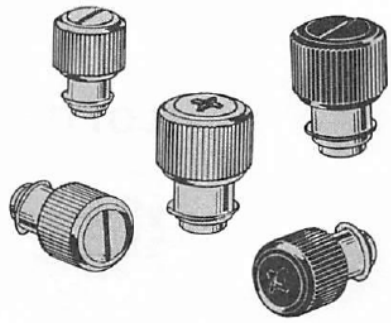


3. Lightly squeeze lever to flare ferrule into countersink in panel. Draw knob to open position to unthread tool from screw.

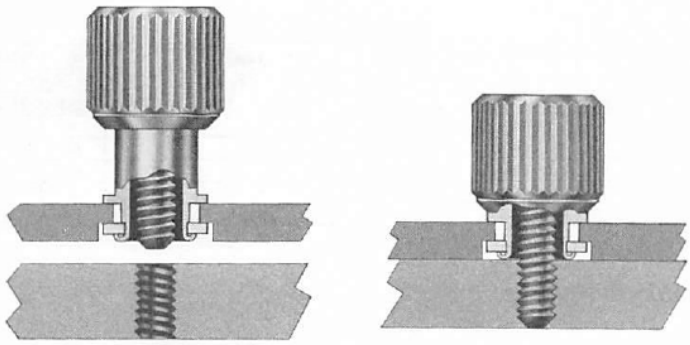


Floating Captive Screw Assemblies

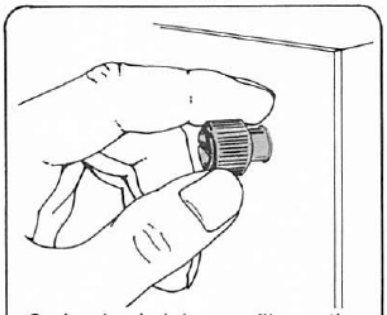
- **Provides up to .045 in. radial float to accommodate misalignment between mating parts.**
- **Retractable, spring ejected.**
- **Stainless steel and aluminum construction.**
- **Phillips or slotted head styles.**
- **Metric sizes also available. (See pg. CC-17.)**



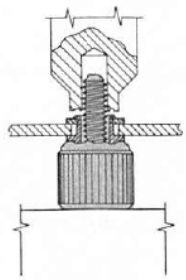
Black and Bright finishes available.



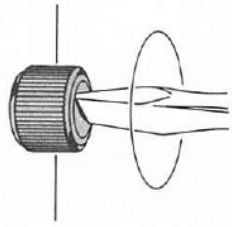
Southco No. 47 Captive-screw assemblies are stocked in thread sizes 4-40 through ¼-20.



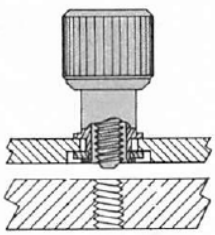
Spring-loaded, low profile captive screw assemblies float to engage mating thread.



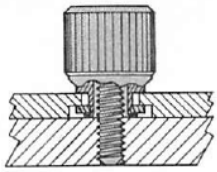
Installation is quick and easy.



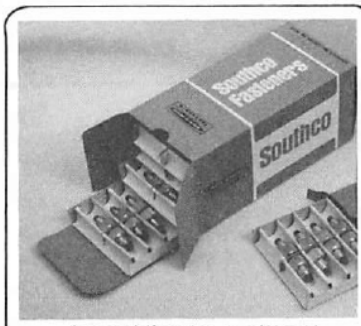
The recessed slot or phillips operation helps to keep the screwdriver from slipping and damaging your panel.



The knob position signals whether screw assembly is unfastened...



...or fastened.



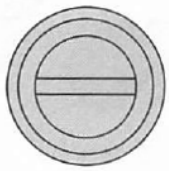
Assemblies are packaged to protect their finish.

SOUTHCO fasteners

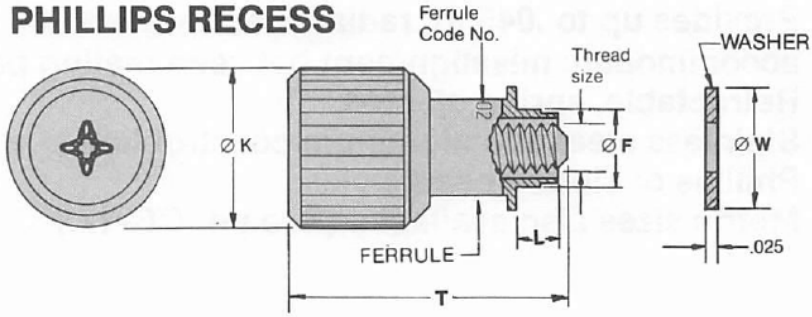
SOUTHCO INC., CONCORDVILLE, PA. 19331 • Phone (215) 459-4000
Fax (215) 459-4012 • Telex 83-1485 • TWX 710-760-1715

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SLOTTED



No. 2 PHILLIPS RECESS



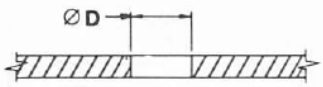
Thread Size	Knob Ø K	Ø F	Slot Dimensions			Ø D +.003 -.001	Counter-bore Min Ø C	Ø W	KNOB HEIGHT			
			width	depth	length				Slotted		Phillips	
									H-1	H-2	H-1	H-2
4-40	.42	.194	.04	.04	.24	.250	.375	.307	.49	.34	.52	.37
6-32	.45	.224	.05	.04	.27	.281	.406	.338	.63	.42	.66	.45
8-32	.51	.287	.05	.05	.33	.344	.469	.400	.63	.43	.66	.46
10-32	.51	.287	.05	.05	.33	.344	.469	.400	.63	.43	.66	.46
¼-20	.58	.349	.06	.06	.39	.406	.531	.470	.79	.52	.82	.55

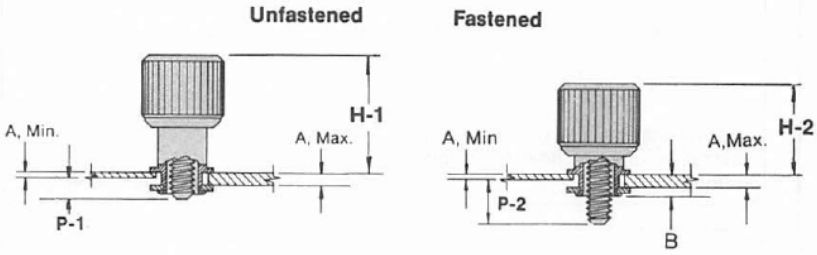
Choosing the correct part number:

1. Choose Panel Preparation I or II and select that range of "A" or "B" which applies to your application.
2. Select an assembly which provides adequate thread projection for your application.
3. Specify an assembly with desired head style and finish.
4. Specify the correct installation tool for your thread size. A Southco installation tool must be used.

PANEL PREPARATION I

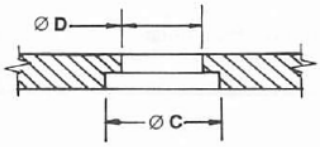
Requires space between outer and inner panels equal to "B" minus your outer panel thickness.

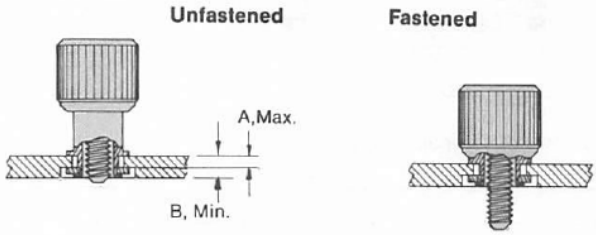




PANEL PREPARATION II

Provides a flush panel-to-panel condition requiring a counterbore of Ø C and a depth which leaves a thickness within the specified range of "A".





***To specify black finish knob and screw head, replace last two digits of part number with 50. ex. 47-10-110-50**

Thread Size	Panel Thickness A Min.	Panel Thickness A Max.	B	Screw Projection Beyond Min. Panel Thickness P-1	Screw Projection Beyond Min. Panel Thickness P-2	L	Ferrule Code No.	Overall Length T slotted	Overall Length T phillips	Part Numbers Slotted	Part Numbers Phillips
										Bright Finish*	
4-40	.000	.031	.080	.07	.23	.101	00	.56	.59	47-10-110-10 ■	47-10-130-10 ■
				.13	.29			.62	65	47-11-110-10 ■	47-11-130-10 ■
				.20	.35			.69	.72	47-12-110-10 ■	47-12-130-10 ■
	.031	.063	.111	.04	.19	.132	01	.56	.59	47-10-111-10 ■	47-10-131-10 ■
				.10	.26			.62	.65	47-11-111-10 ■	47-11-131-10 ■
				.16	.32			.69	.72	47-12-111-10 ■	47-12-131-10 ■
	.063	.094	.143	.07	.23	.164	02	.62	.65	47-10-112-10 ■	47-10-132-10 ■
				.13	.29			.69	.72	47-11-112-10 ■	47-11-132-10 ■
	.094	.125	.174	.04	.19	.195	03	.62	.65	47-10-113-10 ■	47-10-133-10 ■
				.10	.26			.69	.72	47-11-113-10 ■	47-11-133-10 ■
	.125	.156	.205	.07	.23	.226	04	.69	.72	47-10-114-10 ■	47-10-134-10 ■
	.156	.188	.236	.04	.19	.257	05	.69	.72	47-10-115-10 ■	47-10-135-10 ■
6-32	.000	.031	.084	.08	.29	.113	00	.71	.74	47-10-210-10 ■	47-10-230-10 ■
				.15	.35			.77	.80	47-11-210-10 ■	47-11-230-10 ■
				.21	.41			.83	.86	47-12-210-10 ■	47-12-230-10 ■
	.031	.063	.115	.05	.26	.144	01	.71	.74	47-10-211-10 ■	47-10-231-10 ■
				.11	.32			.77	.80	47-11-211-10 ■	47-11-231-10 ■
				.18	.38			.83	.86	47-12-211-10 ■	47-12-231-10 ■
	.063	.094	.147	.08	.29	.176	02	.77	.80	47-10-212-10 ■	47-10-232-10 ■
				.15	.35			.83	.86	47-11-212-10 ■	47-11-232-10 ■
	.094	.125	.178	.05	.26	.207	03	.77	.80	47-10-213-10 ■	47-10-233-10 ■
				.11	.32			.83	.86	47-11-213-10 ■	47-11-233-10 ■
	.125	.156	.209	.08	.29	.238	04	.83	.86	47-10-214-10 ■	47-10-234-10 ■
	.156	.188	.240	.05	.26	.269	05	.83	.86	47-10-215-10 ■	47-10-235-10 ■
8-32	.000	.031	.090	.08	.29	.127	00	.71	.74	47-10-310-10 ■	47-10-330-10 ■
				.15	.35			.78	.81	47-11-310-10 ■	47-11-330-10 ■
				.21	.41			.84	.87	47-12-310-10 ■	47-12-330-10 ■
	.031	.063	.121	.05	.26	.158	01	.71	.74	47-10-311-10 ■	47-10-331-10 ■
				.11	.32			.78	.81	47-11-311-10 ■	47-11-331-10 ■
				.18	.38			.84	.87	47-12-311-10 ■	47-12-331-10 ■
	.063	.094	.153	.08	.29	.190	02	.78	.81	47-10-312-10 ■	47-10-332-10 ■
				.15	.35			.84	.87	47-11-312-10 ■	47-11-332-10 ■
	.094	.125	.184	.05	.26	.221	03	.78	.81	47-10-313-10 ■	47-10-333-10 ■
				.11	.32			.84	.87	47-11-313-10 ■	47-11-333-10 ■
	.125	.156	.215	.08	.29	.252	04	.84	.87	47-10-314-10 ■	47-10-334-10 ■
	.156	.188	.246	.05	.26	.283	05	.84	.87	47-10-315-10 ■	47-10-335-10 ■
10-32	.000	.031	.090	.08	.29	.127	00	.71	.74	47-10-510-10 ■	47-10-530-10 ■
				.15	.35			.78	.81	47-11-510-10 ■	47-11-530-10 ■
				.21	.41			.84	.87	47-12-510-10 ■	47-12-530-10 ■
	.031	.063	.121	.05	.26	.158	01	.71	.74	47-10-511-10 ■	47-10-531-10 ■
				.11	.32			.78	.81	47-11-511-10 ■	47-11-531-10 ■
				.18	.38			.84	.87	47-12-511-10 ■	47-12-531-10 ■
	.063	.094	.153	.08	.29	.190	02	.78	.81	47-10-512-10 ■	47-10-532-10 ■
				.15	.35			.84	.87	47-11-512-10 ■	47-11-532-10 ■
	.094	.125	.184	.05	.26	.221	03	.78	.81	47-10-513-10 ■	47-10-533-10 ■
				.11	.32			.84	.87	47-11-513-10 ■	47-11-533-10 ■
	.125	.156	.215	.08	.29	.252	04	.84	.87	47-10-514-10 ■	47-10-534-10 ■
	.156	.188	.246	.05	.26	.283	05	.84	.87	47-10-515-10 ■	47-10-535-10 ■
¼-20	.000	.031	.097	.08	.35	.127	00	.87	.90	47-10-610-10 ■	47-10-630-10 ■
				.15	.41			.93	.96	47-11-610-10 ■	47-11-630-10 ■
				.21	.48			1.00	1.03	47-12-610-10 ■	47-12-630-10 ■
	.031	.063	.128	.05	.32	.158	01	.87	.90	47-10-611-10 ■	47-10-631-10 ■
				.11	.38			.93	.96	47-11-611-10 ■	47-11-631-10 ■
				.18	.44			1.00	1.03	47-12-611-10 ■	47-12-631-10 ■
	.063	.094	.160	.08	.35	.190	02	.93	.96	47-10-612-10 ■	47-10-632-10 ■
				.15	.41			1.00	1.03	47-11-612-10 ■	47-11-632-10 ■
	.094	.125	.191	.05	.32	.221	03	.93	.96	47-10-613-10 ■	47-10-633-10 ■
				.11	.38			1.00	1.03	47-11-613-10 ■	47-11-633-10 ■
	.125	.156	.222	.08	.35	.252	04	1.00	1.03	47-10-614-10 ■	47-10-634-10 ■
	.156	.188	.253	.05	.32	.283	05	1.00	1.03	47-10-615-10 ■	47-10-635-10 ■

Dimensions shown in inches

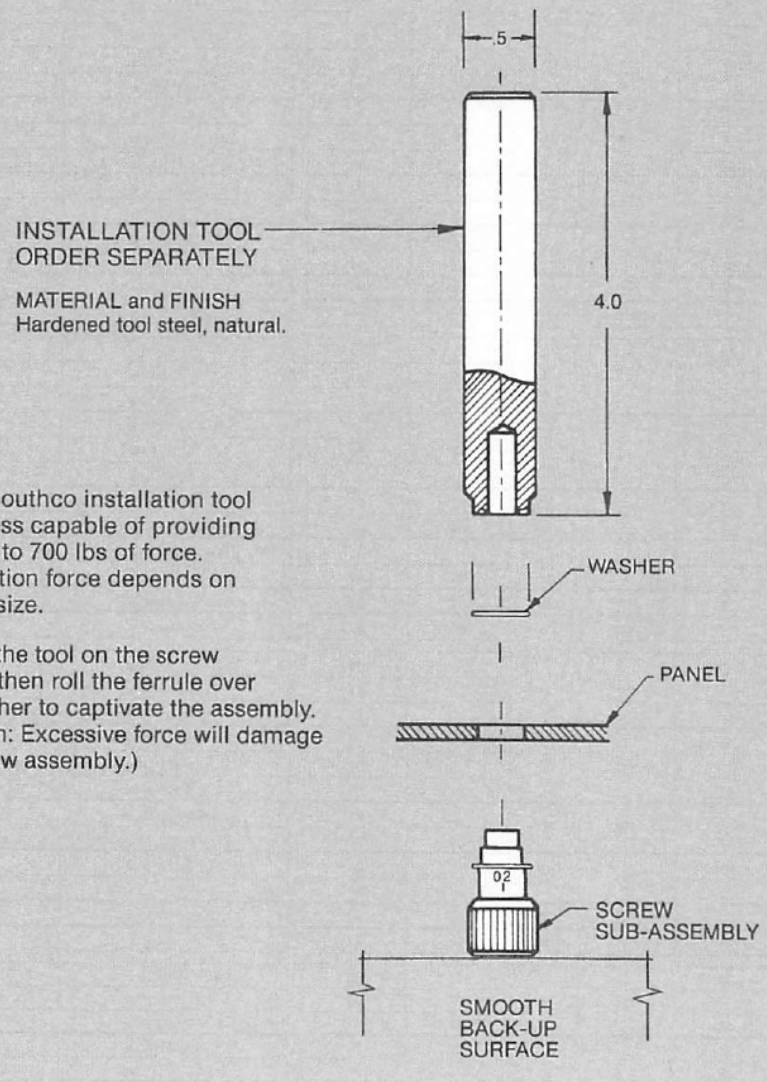
■ From stock subject to prior sale.

Floating Captive Screw Assemblies

MATERIAL and FINISH
KNOB and FERRULE: 6061 Aluminum, natural.
SCREW: 430 stainless steel, passivated.
SPRING (internal component, not shown) and
WASHER: 302 stainless steel, passivated.
NOTE: Black Finish (specified by -50 suffix) is a supplementary Black Enamel Organic Coating applied to knob and screw head.

An assembly consists of one screw sub-assembly and one washer, shipped separately.

INSTALLATION



1. Place Southco installation tool in a press capable of providing 200 lbs to 700 lbs of force. Installation force depends on thread size.
2. Center the tool on the screw thread, then roll the ferrule over the washer to captivate the assembly. (Caution: Excessive force will damage the screw assembly.)

For Thread size	Tool Part Number
4-40	47-04 ■
6-32	47-06 ■
8-32	47-08 ■
10-32	47-10 ■
¼-20	47-25 ■

■ From stock subject to prior sale.

SOUTHCO fasteners

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Fax (215) 459-4012 • Telex 83-1485 • TWX 710-760-1715

Form No. 47689

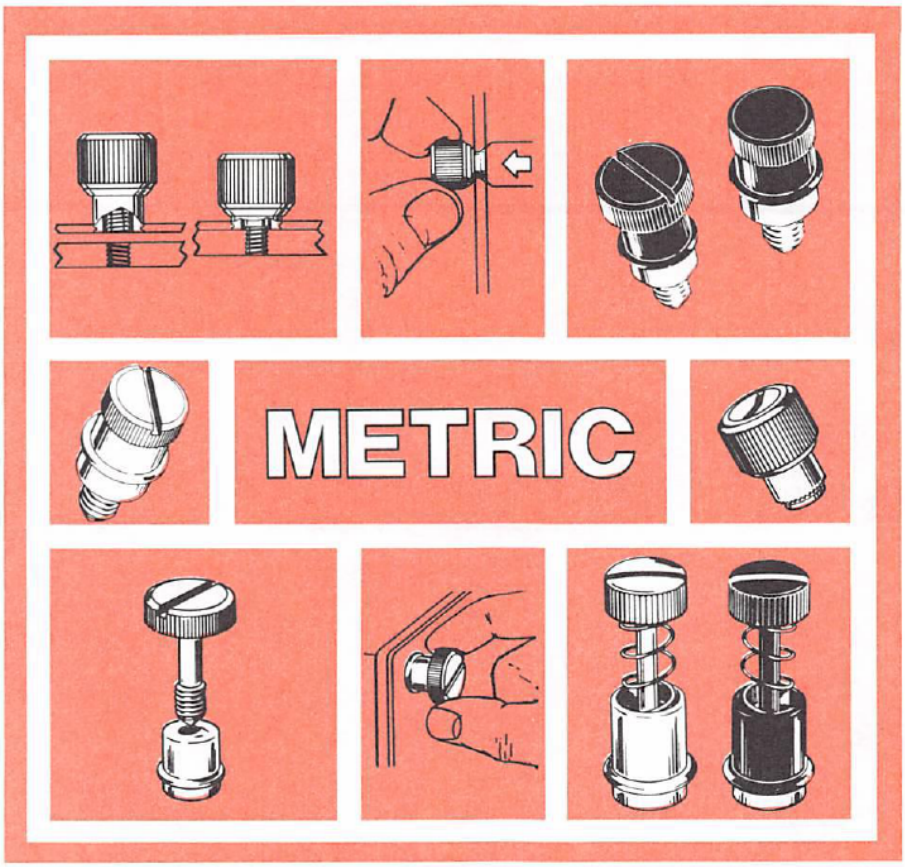
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Section CC

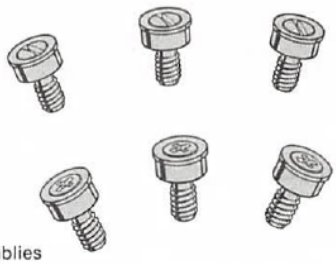
Metric Captive-screw Fasteners

contents guide | **page**

No. F5 Metric Press-in Captive Panel Screws CC-2
No. 47 Metric Spring-loaded Fastener ..... CC-9 to CC-19
No. 51 Metric Screw Assemblies — smaller sizes CC-3
No. 51 Metric Screw Assemblies — larger sizes CC-4

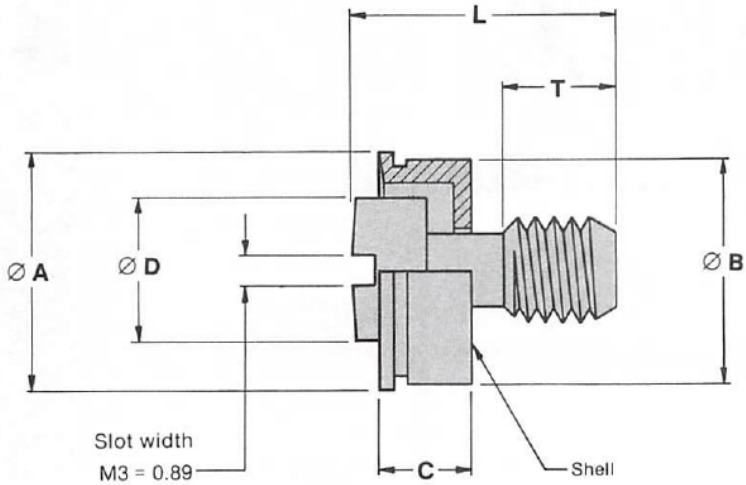


METRIC Miniature flush-mounted press-in captive screws



Cross Recess assemblies are operated by #0 or #1 phillips drivers.

ACTUAL SIZE



A general guide:
For use in most aluminums or in low-carbon steels that are ¼ hard or softer. Ask for samples for testing.

MATERIAL and FINISH
SCREW: 303 stainless steel, passivated.
SHELL: 304 stainless steel, passivated.

Shipped assembled.
Protectively Packaged.

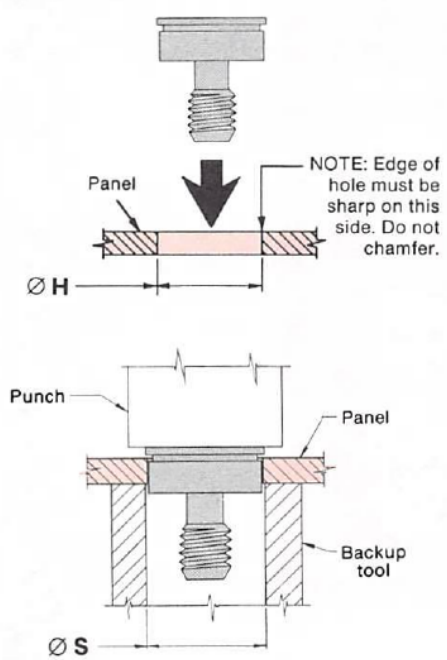
All dimensions are in millimeters.

THREAD SIZE	PART DIMENSIONS					Screw Length L	PART NUMBERS	
	∅ A	∅ B	C	∅ D	T		SLOTTED	CROSS RECESS
M3 x 0.5	6.9	6.45	1.65	4.0	3.8	5.8	F5-90-402-20 ■	——
						7.9	F5-90-406-20 ■	——
M4 x 0.7	10.2	9.47	2.29	6.4	5.1	8.9	F5-M40-14 ■	F5-M40-94 ■
						9.9	F5-M40-16 ■	F5-M40-96 ■
						10.9	F5-M40-18 ■	F5-M40-98 ■

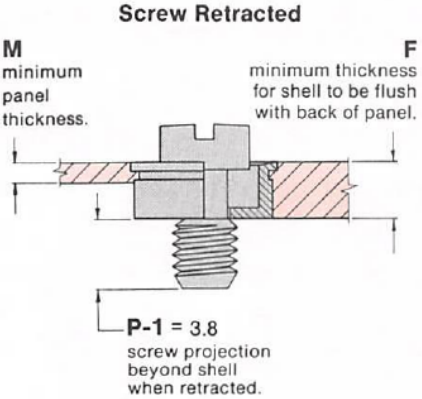
INSTALLATION DIMENSIONS					
∅ H	M	F	P-1	P-2	∅ S
$6.50^{+0.07}_{-0.02}$	1.27	1.78	3.8	4.1	$6.50^{+0.10}_{+0.00}$
				6.1	
$9.50^{+0.07}_{-0.02}$	1.52	2.41	5.1	6.6	$9.50^{+0.10}_{+0.00}$
				7.6	
				8.6	

■ From stock, subject to prior sale.

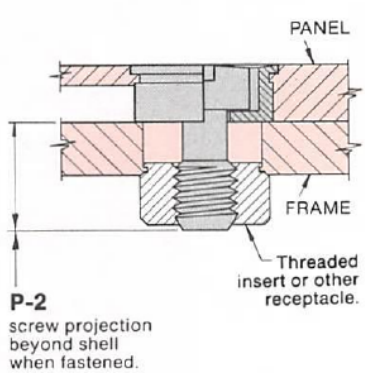
INSTALLATION



Screw Retracted



Fastened



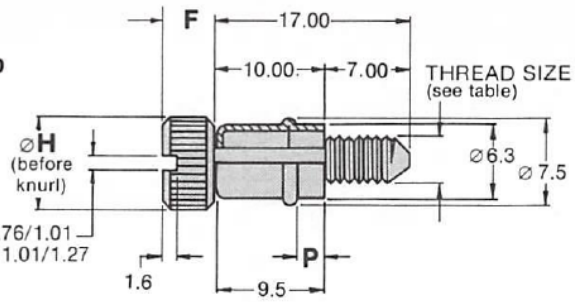
NOTE:

M3 screw will float
0.6 mm total movement.

Smaller METRIC No. 51 Captive Screw Assemblies

- **M3 x 0.5 and M3.5 x 0.6 thread sizes**

SHIPPED UNASSEMBLED



Material and Finish
SCREWS: 302 stainless steel.
STANDOFFS: 305 stainless steel.
BOTH PARTS are passivated or are passivated with black organic coating.

Each part number represents a screw and standoff **shipped unassembled,** protectively packaged (bright standoffs are bulk packaged).

DELIVERY SYMBOLS
(see part numbers)
■ From stock, subject to prior sale. ● Up to 4 weeks. Minimum order required

NOTE: All dimensions are in millimeters

To select proper screw assembly. Measure your outer panel thickness. Enter table with your thickness range.

YOUR OUTER PANEL THICKNESS		DIMENSIONS			THREAD SIZE	PART NUMBERS
MIN.	MAX.	⌀H	F	P		

BLACK screw assemblies



1.3	1.7	7.1	4.0	1.6	M3 x 0.5	51-72-410-26 ●
2.1	2.5			2.3		51-72-510-26 ●
2.9	3.3			3.2		51-72-610-26 ●
1.3	1.7	7.9	4.8	1.6	M3.5 x 0.6	51-73-410-26 ●
2.1	2.5			2.3		51-73-510-26 ●
2.9	3.3			3.2		51-73-610-26 ●

BRIGHT POLISHED screw assemblies

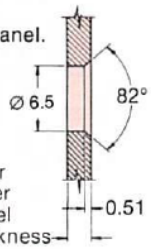


1.3	1.7	7.1	4.0	1.6	M3 x 0.5	51-72-410-24 ■
2.1	2.5			2.3		51-72-510-24 ■
2.9	3.3			3.2		51-72-610-24 ■
1.3	1.7	7.9	4.8	1.6	M3.5 x 0.6	51-73-410-24 ■
2.1	2.5			2.3		51-73-510-24 ■
2.9	3.3			3.2		51-73-610-24 ■

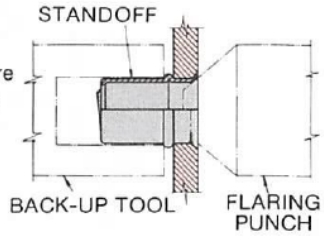
NOTE: Longer screw lengths and unslotted head styles are available on special order.

TO INSTALL STANDOFF

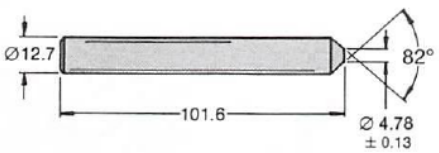
Prepare panel.



Insert standoff into hole and flare into countersink as shown.

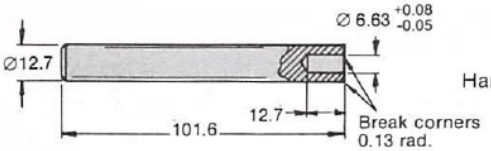


STAND OFF INSTALLATION TOOLS Order separately



Flaring punch

Material	Part Number
Hardened steel	54-0-5467-11 ■

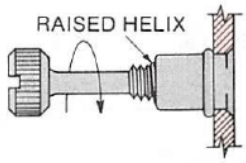


Back-up tool

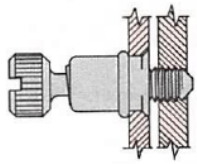
Material	Part Number
Hardened steel	54-0-5466-11 ■

TO CAPTIVATE SCREW

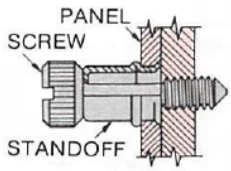
Thread screw through hole in top surface of standoff.



Bring panels together.



Thread screw tightly into frame until undersurface of screw head completely flattens the raised helix. Withdraw screw to ensure it is fully captivated.



Larger METRIC No. 51 Captive Screw Assemblies

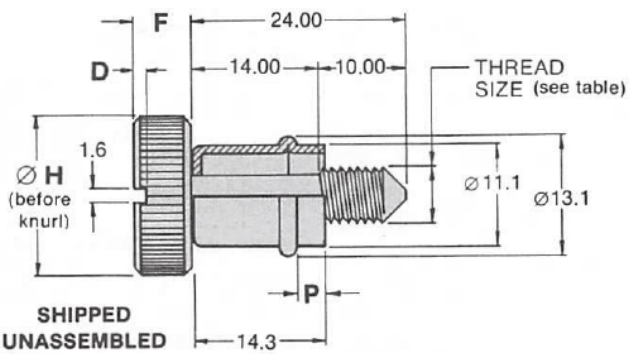
- **M4 x 0.7, M5 x 0.8 and M6 x 1.0 thread sizes**

TO SELECT PROPER SCREW ASSEMBLY

1. Measure your outer panel thickness and enter SCREW ASSEMBLY SELECTION TABLE (right) with your thickness.
2. Read across to find **P** dimension and installation method (A or B).
3. Enter ASSEMBLY PART NUMBER TABLE (right) with your **P** dimension, at section having your desired thread size, and read across to find correct assembly part number.

SCREW ASSEMBLY SELECTION TABLE

YOUR OUTER PANEL THICKNESS		SELECT AN ASSEMBLY WITH **P** DIM. OF:	AND USE THIS INSTALLATION METHOD:
MIN.	MAX.		
1.6	1.9	3.2	B
2.3	3.6	4.8	B
2.8	3.6	3.2	A
3.9	5.2	6.3	B
4.4	5.2	4.8	A
5.9	6.7	6.3	A



Each part number represents a screw and standoff **shipped unassembled,** protectively packaged (bright standoffs are bulk packaged).

NOTE: All dimensions are in millimeters

Material and Finish
SCREWS: 302 stainless steel.
STANDOFFS: 305 stainless steel.
BOTH PARTS are passivated or are passivated with black organic coating.

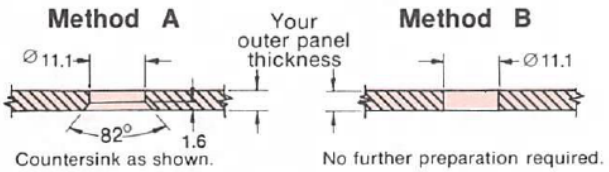
DELIVERY SYMBOLS
(see part numbers)
■ From stock, subject to prior sale. ● Up to 4 weeks. Minimum order required

ASSEMBLY PART NUMBER TABLE

DIMENSIONS				THREAD SIZE	PART NUMBERS
P	∅H	D	F		
BLACK screw assemblies					
3.2	10.3	1.6	6.0	M4 x 0.7	51-74-714-26 ●
4.8					51-74-814-26 ●
6.3					51-74-914-26 ●
3.2	11.1	1.6	6.3	M5 x 0.8	51-76-714-26 ●
4.8					51-76-814-26 ●
6.3					51-76-914-26 ●
3.2	14.3	2.3	6.3	M6 x 1.0	51-77-414-26 ●
4.8					51-77-514-26 ●
6.3					51-77-614-26 ●
BRIGHT POLISHED screw assemblies					
3.2	10.3	1.6	6.0	M4 x 0.7	51-74-714-24 ■
4.8					51-74-814-24 ■
6.3					51-74-914-24 ■
3.2	11.1	1.6	6.3	M5 x 0.8	51-76-714-24 ■
4.8					51-76-814-24 ■
6.3					51-76-914-24 ■
3.2	14.3	2.3	6.3	M6 x 1.0	51-77-414-24 ■
4.8					51-77-514-24 ■
6.3					51-77-614-24 ■

NOTE: Longer screw lengths and unslotted head styles are available on special order.

TO INSTALL STANDOFF



Countersink as shown.

No further preparation required.



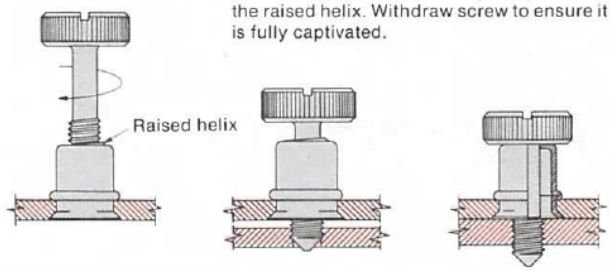
Flare standoff into countersink. Back-up tool must be used.

Flare standoff behind panel as shown. Back-up tool must be used.

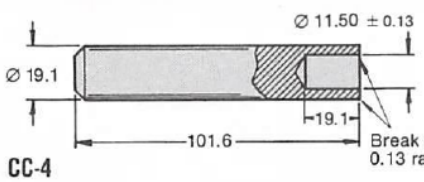
TO CAPTIVATE SCREW

Thread screw through hole in top surface of standoff.

Bring panels together. Thread screw tightly into frame until undersurface of screw head completely flattens the raised helix. Withdraw screw to ensure it is fully captivated.



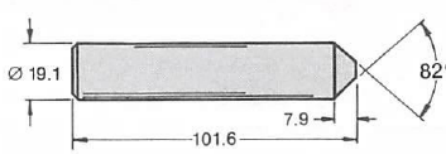
STANDOFF INSTALLATION TOOLS Order Separately



Back-up tool

Part Number 90-2825-11 ■

Material Mild Steel



Flaring punch

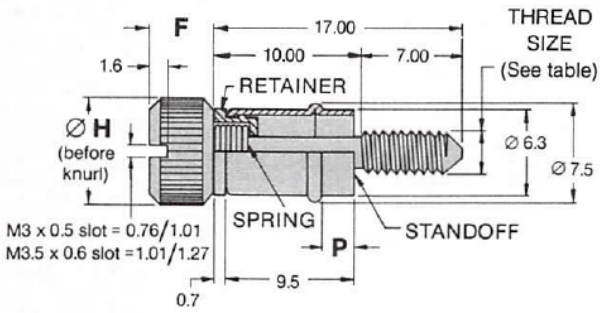
Part Number 90-2824-11 ■

Material Hardened steel

Smaller METRIC Spring-ejected No. 53 Captive Screw Assemblies

- **M3 x 0.5 and M3.5 x 0.6 thread sizes**

CAUTION: Do not exceed 0.4 N·m tightening torque when fastening.



Material and Finish

SCREW: 302 stainless steel.
STANDOFF: 305 stainless steel. BOTH PARTS are passivated or are passivated with black organic coating.
SPRING: 302 stainless steel, passivated.
RETAINER: M3 X 0.5, natural color nylon; M3 X 0.6, black nylon.

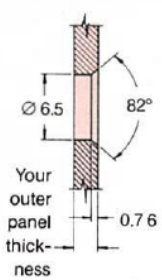
Each part number represents a screw and standoff **shipped unassembled,** protectively packaged (bright standoffs are bulk packaged).

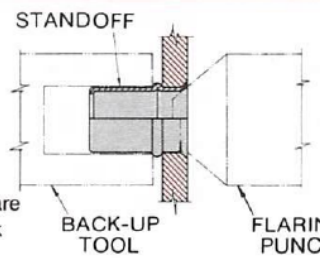
NOTE: All dimensions are in millimeters

DELIVERY SYMBOLS
(see part numbers)
■ From stock, subject to prior sale. ● Up to 4 weeks. Minimum order required.

OUTER PANEL THICKNESS		Dimensions			THREAD SIZE	PART NUMBERS	
Min.	Max.	P	⌀H	F		SLOTTED	UNSLOTTED
BLACK screw assemblies							
1.3	1.7	1.6	7.1	4.0	M3 x 0.5	53-72-410-26 ●	53-82-410-26 ●
2.1	2.5	2.3				53-72-510-26 ●	53-82-510-26 ●
2.9	3.3	3.2				53-72-610-26 ●	53-82-610-26 ●
1.3	1.7	1.6	7.9	4.8	M3.5 x 0.6	53-73-410-26 ●	53-83-410-26 ●
2.1	2.5	2.3				53-73-510-26 ●	53-83-510-26 ●
2.9	3.3	3.2				53-73-610-26 ●	53-83-610-26 ●
1.3	1.7	1.6	9.5	4.8		—	53-83-110-26 ●
2.1	2.5	2.3				—	53-83-210-26 ●
2.9	3.3	3.2				—	53-83-310-26 ●
BRIGHT POLISHED screw assemblies							
1.3	1.7	1.6	7.1	4.0	M3 x 0.5	53-72-410-24 ■	53-82-410-24 ●
2.1	2.5	2.3				53-72-510-24 ■	53-82-510-24 ●
2.9	3.3	3.2				53-72-610-24 ■	53-82-610-24 ●
1.3	1.7	1.6	7.9	4.8	M3.5 x 0.6	53-73-410-24 ■	53-83-410-24 ●
2.1	2.5	2.3				53-73-510-24 ■	53-83-510-24 ●
2.9	3.3	3.2				53-73-610-24 ■	53-83-610-24 ●
1.3	1.7	1.6	9.5	4.8		—	53-83-110-24 ●
2.1	2.5	2.3				—	53-83-210-24 ●
2.9	3.3	3.2				—	53-83-310-24 ●

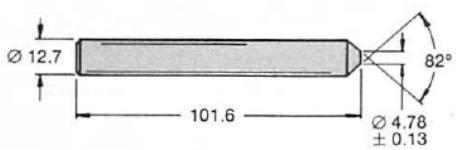
TO INSTALL STANDOFF





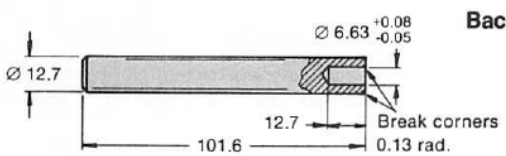
Insert standoff into hole and flare into countersink as shown.

STANDOFF INSTALLATION TOOLS Order separately



Flaring punch — **Part Number 54-0-5467-11** ■

Material Hardened steel



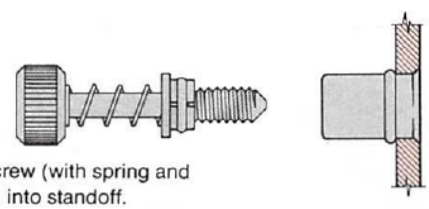
Back-up tool — **Part Number 54-0-5466-11** ■

Material Hardened steel

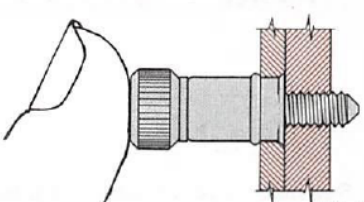
TO CAPTIVATE SCREW



Assemble seating end of spring into recess in retainer.



Insert screw (with spring and retainer) into standoff.



Press to snap retainer into standoff.

■ From stock, subject to prior sale.

Larger METRIC Spring-ejected No. 53 Captive Screw Assemblies

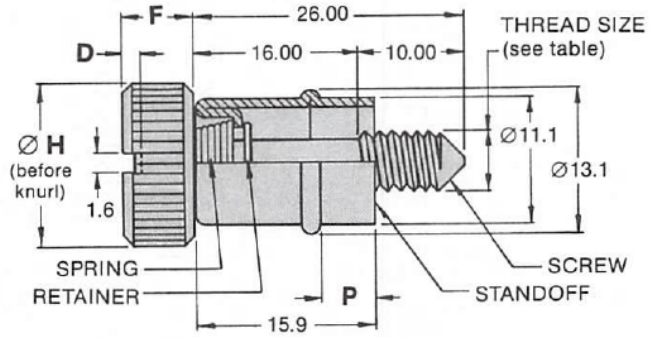
- **M4 x 0.7, M5 x 0.8 and M6 x 1.0 thread sizes**

TO SELECT PROPER SCREW ASSEMBLY

1. Measure your outer panel thickness and enter SCREW ASSEMBLY SELECTION TABLE (right) with your thickness.
2. Read across to find **P** dimension and installation method (A or B).
3. Enter ASSEMBLY PART NUMBER TABLE (right) with your **P** dimension, at section having your desired thread size, and read across to find correct assembly part number.

SCREW ASSEMBLY SELECTION TABLE

YOUR OUTER PANEL THICKNESS		SELECT AN ASSEMBLY WITH **P** DIM. OF:	AND USE THIS INSTALLATION METHOD:
MIN.	MAX.		
1.6	1.9	3.2	B
2.3	3.6	4.8	B
2.8	3.6	3.2	A
3.9	5.2	6.3	B
4.4	5.2	4.8	A
5.9	6.7	6.3	A



SHIPPED UNASSEMBLED

ASSEMBLY PART NUMBER TABLE

DIMENSIONS				THREAD SIZE	PART NUMBERS
P	ØH	D	F		
BLACK screw assemblies					
3.2	10.3	1.6	6.0	M4 x 0.7	53-74-716-26 ●
4.8					53-74-816-26 ●
6.3					53-74-916-26 ●
3.2	11.1	1.6	6.3	M5 x 0.8	53-76-716-26 ●
4.8					53-76-816-26 ●
6.3					53-76-916-26 ●
3.2	14.3	2.3	6.3	M6 x 1.0	53-77-416-26 ●
4.8					53-77-516-26 ●
6.3					53-77-616-26 ●
BRIGHT POLISHED screw assemblies					
3.2	10.3	1.6	6.0	M4 x 0.7	53-74-716-24 ■
4.8					53-74-816-24 ■
6.3					53-74-916-24 ■
3.2	11.1	1.6	6.3	M5 x 0.8	53-76-716-24 ■
4.8					53-76-816-24 ■
6.3					53-76-916-24 ■
3.2	14.3	2.3	6.3	M6 x 1.0	53-77-416-24 ■
4.8					53-77-516-24 ■
6.3					53-77-616-24 ■

Each part number represents a screw and standoff **shipped unassembled,** protectively packaged (bright standoffs are bulk packaged).

NOTE: All dimensions are in millimeters

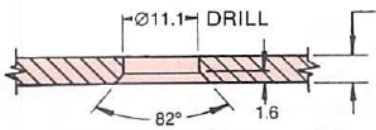
Material and Finish
SCREW: 302 stainless steel.
STANDOFF: 305 stainless steel.
SCREWS and STANDOFFS are passivated or are passivated with black organic coating.
SPRING and RETAINER: 302 stainless steel, passivated.

NOTE: Longer screw lengths and unslotted head styles are available on special order.

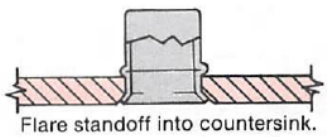
DELIVERY SYMBOLS
(see part numbers)
■ From stock, subject to prior sale. ● Up to 4 weeks. Minimum order required

TO INSTALL STANDOFF

Method A



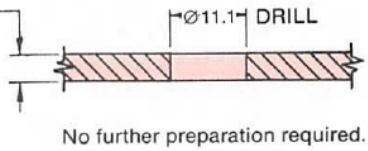
Countersink as shown.



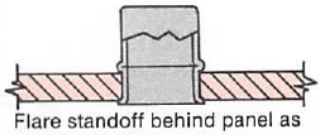
Flare standoff into countersink. Back-up tool must be used.

Your outer panel thickness

Method B



No further preparation required.

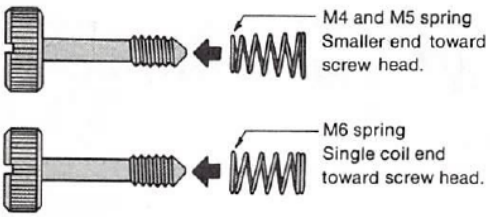


Flare standoff behind panel as shown. Back-up tool must be used.

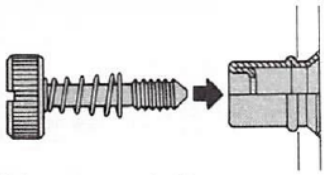
See next page for captivating screw and for installation tools.

INSTALLATION FOR LARGER METRIC SPRING-EJECTED NO.53 ASSEMBLIES

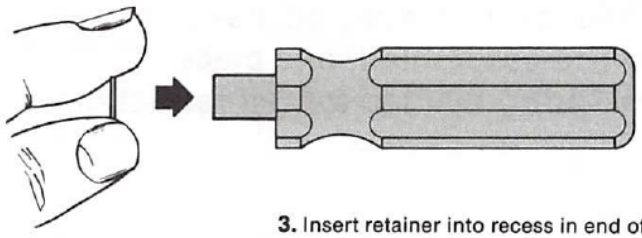
TO CAPTIVATE SCREW



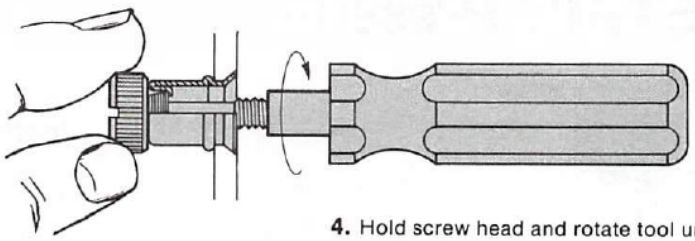
1. Slip spring over shank of screw.
Spring must be oriented as shown in diagram.



2. Insert screw (with spring) through hole in standoff.

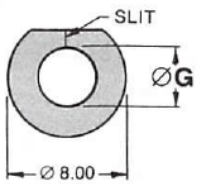


3. Insert retainer into recess in end of tool.



4. Hold screw head and rotate tool until retainer is threaded onto throat of screw.

SPLIT RING RETAINER

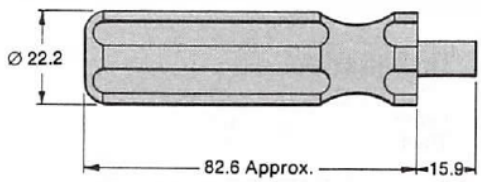


SCREW THREAD SIZE	Ø G
M4 x 0.7	3.53
M5 x 0.8	4.19
M6 x 1	5.13

INSTALLATION TOOLS for larger metric spring-ejected NO. 53 assemblies

Order separately

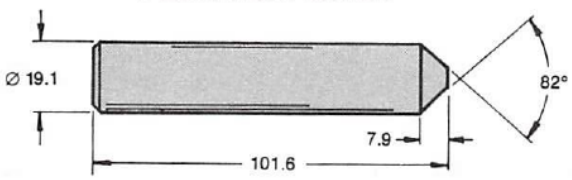
FOR RETAINERS



PART NUMBER
29-53-101-10 ■

FOR STANDOFF

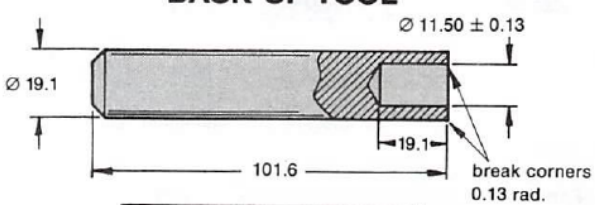
FLARING PUNCH



PART NUMBER
90-2824-11 ■

Material
Hardened steel

BACK-UP TOOL



PART NUMBER
90-2825-11 ■

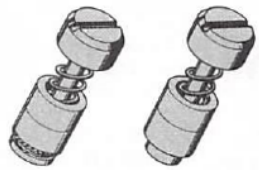
Material
Mild Steel

All dimensions are in millimeters

■ From stock, subject to prior sale.

New METRIC Mini Captive Panel Screws

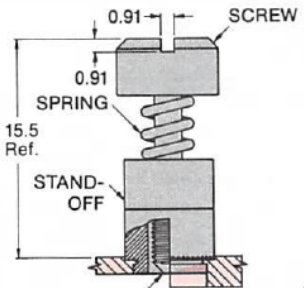
- Smaller sizes
- Press-in or Flare-in installation
- Pre-assembled, one piece
- Spring-ejected for full retraction



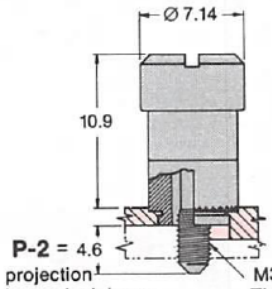
MATERIAL and FINISH
SCREW and STANDOFF: 303 stainless steel, passivated.
SPRING: 302 stainless steel, passivated.

All dimensions are in millimeters.

METRIC Press-in

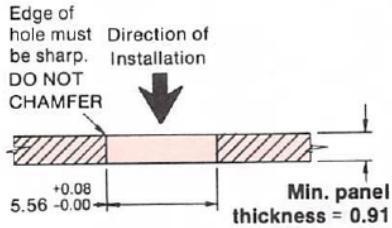


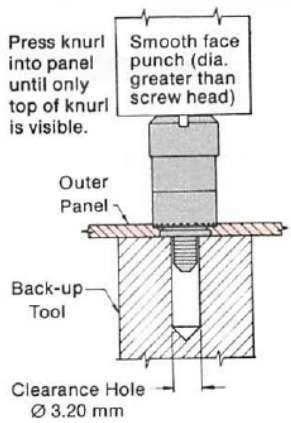
P-1 (flush at minimum panel thickness)



P-2 = 4.6 projection beyond minimum panel thickness

Installation





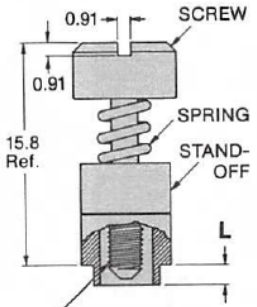
To insure proper installation, punch surface and back-up tool surface must remain parallel during installation.

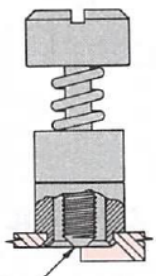
M3 X 0.5 PART NUMBER
52-50-601-24 ■

■ From stock, subject to prior sale.

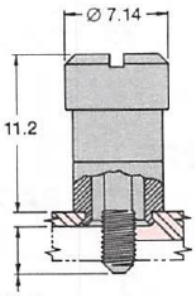
A general guide:
For use in most aluminums or in low carbon steels that are ¼ hard or softer. Ask for samples for testing.

METRIC Flare-in



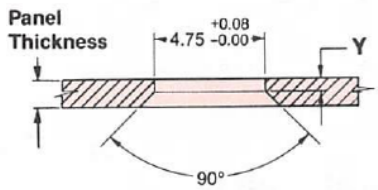


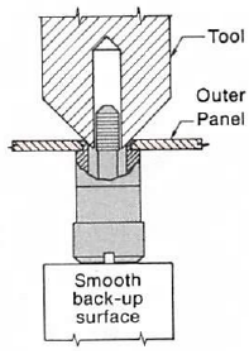
P-1 (flush at minimum panel thickness)



P-2 = 4.6 projection beyond minimum panel thickness

Installation

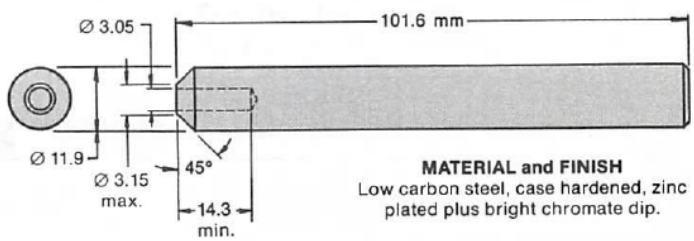




Panel Thickness		L	Y	M3 X 0.5 PART NUMBER
MIN.	MAX.			
0.79	2.40	1.04	0.40	52-10-601-24 ■
2.41	3.97	2.64	0.79	52-10-603-24 ■

■ From stock, subject to prior sale.

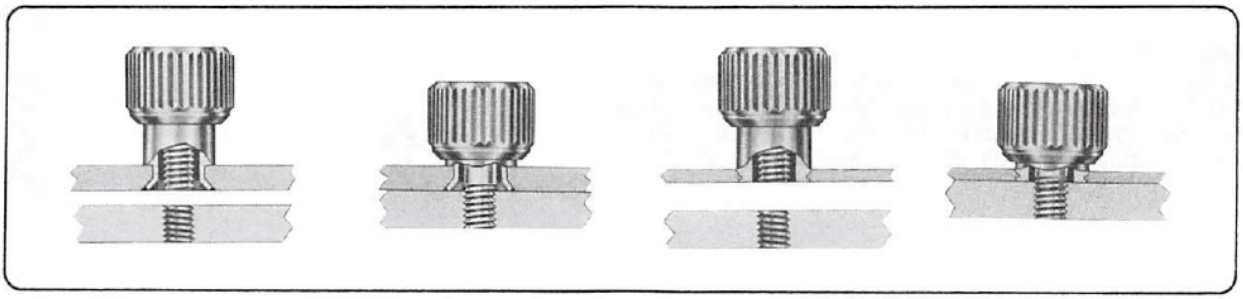
INSTALLATION TOOL **Tool part number 52-0-23069-01** ■

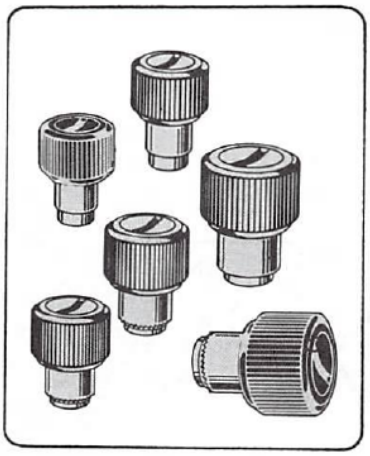


MATERIAL and FINISH
Low carbon steel, case hardened, zinc plated plus bright chromate dip.

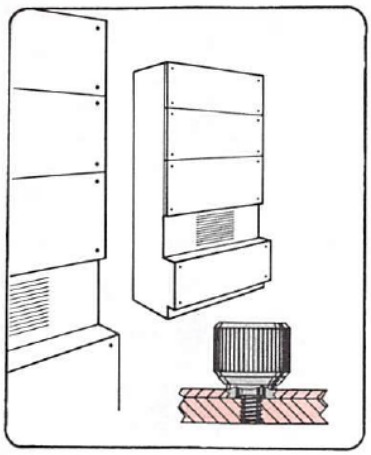
METRIC Retractable Screw Fasteners: Press-in and Flare-in styles

- Captive to panel
- Non-corrosive
- Spring-ejected
- Fast, smooth operation

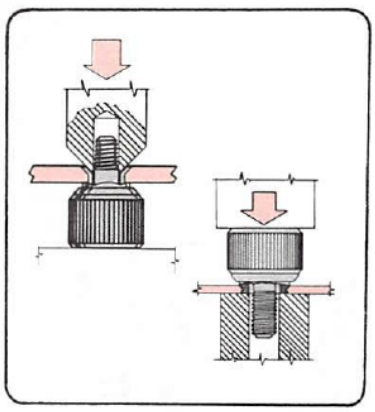




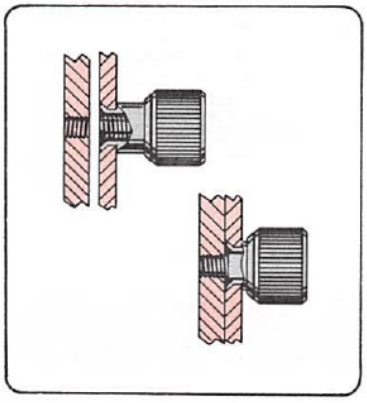
1. Southco No. 47 Captive-screw assemblies are stocked in five metric thread sizes, M3 through M6 (4-40 through ¼-20 sizes in Section C).



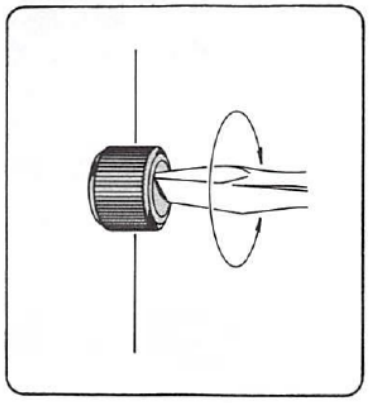
2. Spring-loaded, one-piece, low-profile No. 47's float 0.8 mm in metric sizes to engage mating thread.



3. Installation is quick and easy for both the flare-in and press-in styles.



4. The knob position signals whether screw is engaged.



5. The screw slot is recessed to keep the screwdriver from slipping and damaging your panel.



6. Assemblies are individually compartmented to protect their finish.

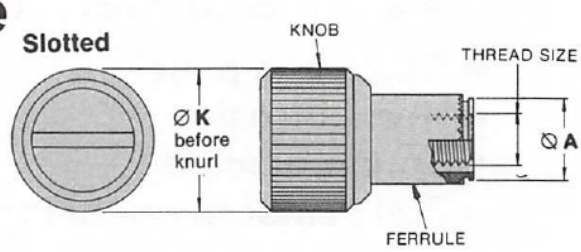
Retractable Screw Fasteners:

METRIC No. 47 Press-in style

A general guide:
For use in grades of aluminum that are non-heat treatable or that have an "O" or "H" temper. Ask for samples for testing.

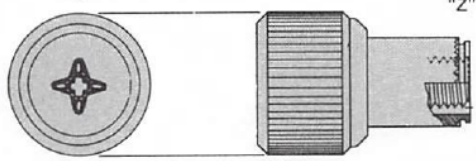
MATERIAL and FINISH
KNOB: 6262 aluminum, natural. SCREW: 430 stainless steel, passivated. (Note: knob and top of screw available with black organic coating; see part number tables.) FERRULE: 7075 aluminum, natural. SPRING: 302 stainless steel, passivated.

Slotted

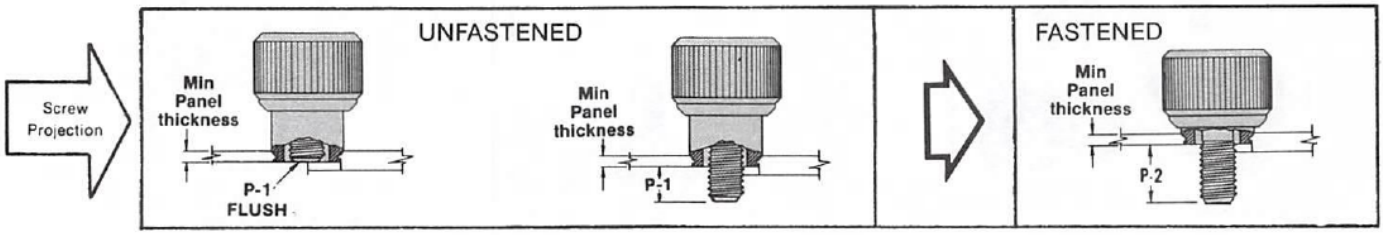


Phillips Recess

"S" = Width
"W" = Depth
"Z" = Length

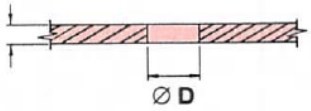


THREAD SIZE	KNOB Ø K	Ø A	SLOT DIMENSIONS			PHILLIPS RECESS SIZES
			S	W	Z	
M3	10.3	5.51	1.0	0.9	6.0	No. 1
M3.5	11.1	6.27	1.2	1.2	7.1	No. 2
M4	12.7	7.87	1.2	1.2	8.7	No. 2
M5	12.7	7.87	1.2	1.2	8.7	No. 2
M6	14.3	9.45	1.6	1.6	10.3	No. 2

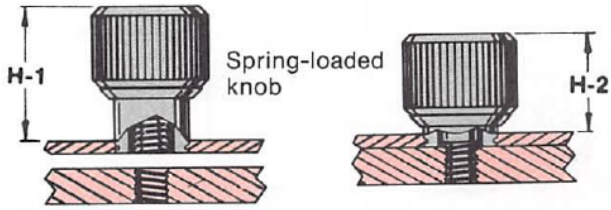


Installation:

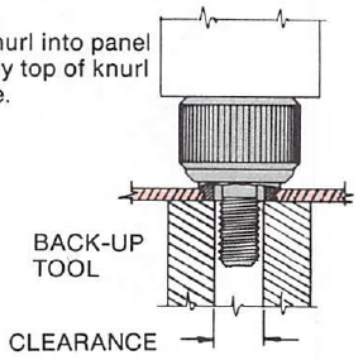
Min. panel thickness = 0.91 mm



UNFASTENED **FASTENED**



Press knurl into panel until only top of knurl is visible.



THREAD SIZE	Ø D +0.03 -0.00	CLEARANCE HOLE C	KNOB HEIGHT SLOTTED		KNOB HEIGHT PHILLIPS	
			H-1	H-2	H-1	H-2
M3	5.56	3.2	11.9	7.9	12.7	8.7
M3.5	8.35	3.7	16.3	11.1	17.1	11.9
M4	7.93	5.2	16.3	11.1	17.1	11.9
M5	7.93	5.2	16.3	11.1	17.1	11.9
M6	9.53	6.2	20.2	13.5	21.0	14.3

Retractable Screw Fasteners: METRIC No. 47 Press-in style

Slotted

		Screw Projection Beyond Min. Panel Thickness		PART NUMBERS FOR M3 x 0.5	
		P-1 Unfastened	P-2 Fastened	KNOB: natural	KNOB: black organic coating
M3 size	Unfastened screw is flush	FLUSH	4.0	47-90-101-10 ■	47-90-101-50 ■
	Unfastened screw projects	1.6	5.6	47-91-101-10 ■	47-91-101-50 •
		3.2	7.1	47-92-101-10 ■	47-92-101-50 •
		4.8	8.7	47-93-101-10 ■	47-93-101-50 •

		Screw Projection Beyond Min. Panel Thickness		PART NUMBERS					
				KNOB: natural			KNOB: black organic coating		
M 3.5 M4 M5 sizes	Unfastened screw is flush	P-1 Unfastened	P-2 Fastened	M3.5 x 0.6	M4 x 0.7	M5 x 0.8	M3.5 x 0.6	M4 x 0.7	M5 x 0.8
		FLUSH	4.8	47-90-201-10 ■	47-90-301-10 ■	47-90-501-10 ■	47-90-201-50 ■	47-90-301-50 ■	47-90-501-50 ■
	Unfastened screw projects	1.6	6.4	47-91-201-10 ■	47-91-301-10 ■	47-91-501-10 ■	47-91-201-50 •	47-91-301-50 •	47-91-501-50 •
		3.2	7.9	47-92-201-10 ■	47-92-301-10 ■	47-92-501-10 ■	47-92-201-50 •	47-92-301-50 •	47-92-501-50 •
		4.8	9.5	47-93-201-10 ■	47-93-301-10 ■	47-93-501-10 ■	47-93-201-50 •	47-93-301-50 •	47-93-501-50 •

		Screw Projection Beyond Min. Panel Thickness		PART NUMBERS FOR M6 x 1	
		P-1 Unfastened	P-2 Fastened	KNOB: natural	KNOB: black organic coating
M6 size	Unfastened screw is flush	FLUSH	6.4	47-90-601-10 ■	47-90-601-50 ■
	Unfastened screw projects	1.6	7.9	47-91-601-10 ■	47-91-601-50 •
		3.2	9.5	47-92-601-10 ■	47-92-601-50 •
		4.8	11.1	47-93-601-10 ■	47-93-601-50 •

DELIVERY SYMBOLS
(see part numbers)
■ From stock, subject to prior sale.
● Up to 4 weeks.

Phillips Recess

		Screw Projection Beyond Min. Panel Thickness		PART NUMBERS FOR M3 x 0.5	
		P-1 Unfastened	P-2 Fastened	KNOB: natural	KNOB: black organic coating
M3 size	Unfastened screw is flush	FLUSH	4.0	47-90-121-10 ■	47-90-121-50 ■
	Unfastened screw projects	1.6	5.6	47-91-121-10 ■	47-91-121-50 •
		3.2	7.1	47-92-121-10 ■	47-92-121-50 •
		4.8	8.7	47-93-121-10 ■	47-93-121-50 •

		Screw Projection Beyond Min. Panel Thickness		PART NUMBERS					
				KNOB: natural			KNOB: black organic coating		
M 3.5 M4 M5 sizes	Unfastened screw is flush	P-1 Unfastened	P-2 Fastened	M3.5 x 0.6	M4 x 0.7	M5 x 0.8	M3.5 x 0.6	M4 x 0.7	M5 x 0.8
		FLUSH	4.8	47-90-221-10 ■	47-90-321-10 ■	47-90-521-10 ■	47-90-221-50 ■	47-90-321-50 ■	47-90-521-50 ■
	Unfastened screw projects	1.6	6.4	47-91-221-10 ■	47-91-321-10 ■	47-91-521-10 ■	47-91-221-50 •	47-91-321-50 •	47-91-521-50 •
		3.2	7.9	47-92-221-10 ■	47-92-321-10 ■	47-92-521-10 ■	47-92-221-50 •	47-92-321-50 •	47-92-521-50 •
		4.8	9.5	47-93-221-10 ■	47-93-321-10 ■	47-93-521-10 ■	47-93-221-50 •	47-93-321-50 •	47-93-521-50 •

		Screw Projection Beyond Min. Panel Thickness		PART NUMBERS FOR M6 x 1	
		P-1 Unfastened	P-2 Fastened	KNOB: natural	KNOB: black organic coating
M6 size	Unfastened screw is flush	FLUSH	6.4	47-90-621-10 ■	47-90-621-50 ■
	Unfastened screw projects	1.6	7.9	47-91-621-10 ■	47-91-621-50 •
		3.2	9.5	47-92-621-10 ■	47-92-621-50 •
		4.8	11.1	47-93-621-10 ■	47-93-621-50 •

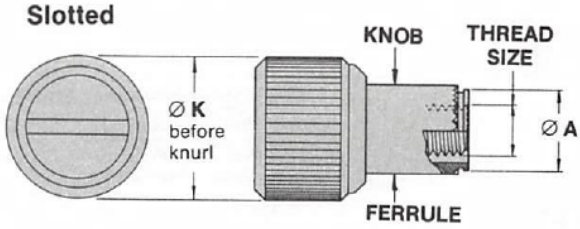
Retractable Screw Fasteners:
METRIC Press-in style with *HARDENED STEEL FERRULES*
for installation in a broader range of materials

A general guide:
For use in low-carbon steels that are ½ hard or softer and for stainless steels in the annealed conditions. Ask for samples for testing.

For installation in harder metals, see Flare-in style, pages C-26 and C-27.

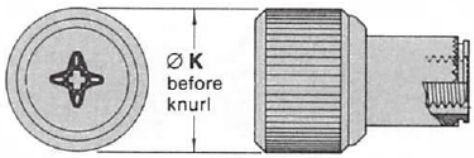
MATERIAL and FINISH
KNOB: 6262 aluminum, natural. SCREW: 430 stainless steel, passivated. (Note: Knob and top of screw available with black organic coating; see part number tables.) FERRULE: Low carbon steel, case hardened, zinc plated plus bright chromate dip. SPRING: 302 stainless steel, passivated.

Slotted

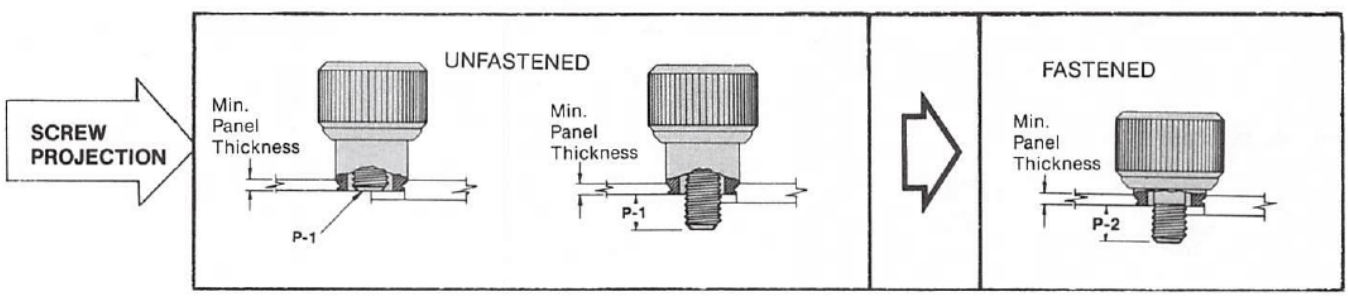


S = width
W = depth
Z = length

Phillips Recess

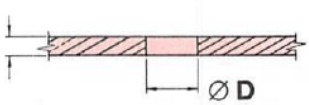


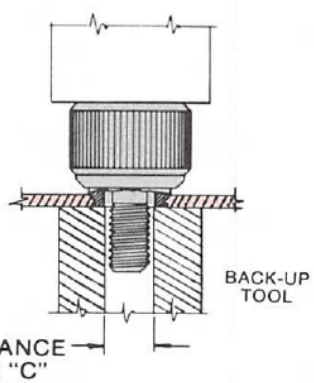
THREAD SIZE	KNOB Ø K	Ø A	SLOT DIMENSIONS			PHILLIPS RECESS SIZES
			S	W	Z	
M3	10.3	5.51	1.0	0.9	6.0	No. 1
M3.5	11.1	6.27	1.2	1.2	7.1	No. 2
M4	12.7	7.87	1.2	1.2	8.7	No. 2
M5	12.7	7.87	1.2	1.2	8.7	No. 2
M6	14.3	9.45	1.6	1.6	10.3	No. 2

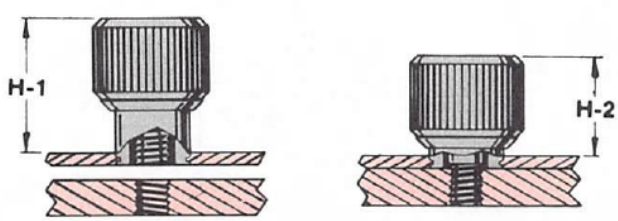


Installation:

Min. panel thickness = 0.91 mm







NOTE: Screw will float 0.8 total movement.

THREAD SIZE	Ø D +0.03 -0.00	CLEARANCE HOLE C	KNOB HEIGHT SLOTTED		KNOB HEIGHT PHILLIPS	
			H-1	H-2	H-1	H-2
M3	5.56	3.2	11.9	7.9	12.7	8.7
M3.5	8.35	3.7	16.3	11.1	17.1	11.9
M4	7.93	5.2	16.3	11.1	17.1	11.9
M5	7.93	5.2	16.3	11.1	17.1	11.9
M6	9.53	6.2	20.2	13.5	21.0	14.3

Retractable Screw Fasteners: METRIC Press-in style with *HARDENED STEEL FERRULES*

Slotted

		Screw Projection Beyond Min. Panel Thickness		PART NUMBERS FOR M3 x 0.5 STEEL FERRULES	
		P-1 Unfastened	P-2 Fastened	KNOB: natural	KNOB: black organic coating
M3 size	Unfastened screw is flush	FLUSH	4.0	47-90-101-20 ■	47-90-101-60 ■
	Unfastened screw projects	1.6	5.6	47-91-101-20 ■	47-91-101-60 •
		3.2	7.1	47-92-101-20 ■	47-92-101-60 •
		4.8	8.7	47-93-101-20 ■	47-93-101-60 •

		Screw Projection Beyond Min. Panel Thickness		STEEL FERRULES PART NUMBERS KNOB: natural			STEEL FERRULES KNOB: black organic coating		
		P-1 Unfastened	P-2 Fastened	M3.5 x 0.6	M4 x 0.7	M5 x 0.8	M3.5 x 0.6	M4 x 0.7	M5 x 0.8
M 3.5 M4 M5 sizes	Unfastened screw is flush	FLUSH	4.8	47-90-201-20 ■	47-90-301-20 ■	47-90-501-20 ■	47-90-201-60 ■	47-90-301-60 ■	47-90-501-60 ■
	Unfastened screw projects	1.6	6.4	47-91-201-20 ■	47-91-301-20 ■	47-91-501-20 ■	47-91-201-60 •	47-91-301-60 •	47-91-501-60 •
		3.2	7.9	47-92-201-20 ■	47-92-301-20 ■	47-92-501-20 ■	47-92-201-60 •	47-92-301-60 •	47-92-501-60 •
		4.8	9.5	47-93-201-20 ■	47-93-301-20 ■	47-93-501-20 ■	47-93-201-60 •	47-93-301-60 •	47-93-501-60 •

		Screw Projection Beyond Min. Panel Thickness		PART NUMBERS FOR M6 x 1 STEEL FERRULES	
		P-1 Unfastened	P-2 Fastened	KNOB: natural	KNOB: black organic coating
M6 size	Unfastened screw is flush	FLUSH	6.4	47-90-601-20 ■	47-90-601-60 ■
	Unfastened screw projects	1.6	7.9	47-91-601-20 ■	47-91-601-60 •
		3.2	9.5	47-92-601-20 ■	47-92-601-60 •
		4.8	11.1	47-93-601-20 ■	47-93-601-60 •

DELIVERY SYMBOLS
(see part numbers)
■ From stock, subject to prior sale.
● Up to 4 weeks.

Phillips Recess

		Screw Projection Beyond Min. Panel Thickness		PART NUMBERS FOR M3 x 0.5 STEEL FERRULES	
		P-1 Unfastened	P-2 Fastened	KNOB: natural	KNOB: black organic coating
M3 size	Unfastened screw is flush	FLUSH	4.0	47-90-121-20 ■	47-90-121-60 ■
	Unfastened screw projects	1.6	5.6	47-91-121-20 ■	47-91-121-60 •
		3.2	7.1	47-92-121-20 ■	47-92-121-60 •
		4.8	8.7	47-93-121-20 ■	47-93-121-60 •

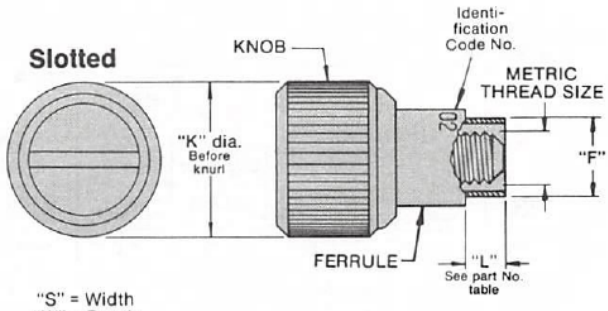
		Screw Projection Beyond Min. Panel Thickness		STEEL FERRULES PART NUMBERS KNOB: natural			STEEL FERRULES KNOB: black organic coating		
		P-1 Unfastened	P-2 Fastened	M3.5 x 0.6	M4 x 0.7	M5 x 0.8	M3.5 x 0.6	M4 x 0.7	M5 x 0.8
M 3.5 M4 M5 sizes	Unfastened screw is flush	FLUSH	4.8	47-90-221-20 ■	47-90-321-20 ■	47-90-521-20 ■	47-90-221-60 ■	47-90-321-60 ■	47-90-521-60 ■
	Unfastened screw projects	1.6	6.4	47-91-221-20 ■	47-91-321-20 ■	47-91-521-20 ■	47-91-221-60 •	47-91-321-60 •	47-91-521-60 •
		3.2	7.9	47-92-221-20 ■	47-92-321-20 ■	47-92-521-20 ■	47-92-221-60 •	47-92-321-60 •	47-92-521-60 •
		4.8	9.5	47-93-221-20 ■	47-93-321-20 ■	47-93-521-20 ■	47-93-221-60 •	47-93-321-60 •	47-93-521-60 •

		Screw Projection Beyond Min. Panel Thickness		PART NUMBERS FOR M6 x 1 STEEL FERRULES	
		P-1 Unfastened	P-2 Fastened	KNOB: natural	KNOB: black organic coating
M6 size	Unfastened screw is flush	FLUSH	6.4	47-90-621-20 ■	47-90-621-60 ■
	Unfastened screw projects	1.6	7.9	47-91-621-20 ■	47-91-621-60 •
		3.2	9.5	47-92-621-20 ■	47-92-621-60 •
		4.8	11.1	47-93-621-20 ■	47-93-621-60 •

Retractable Screw Fasteners:
METRIC No. 47 Flare-in style

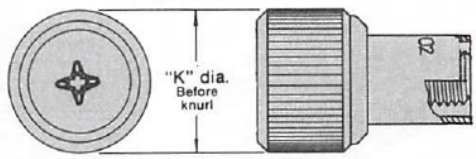
MATERIAL and FINISH
KNOB: 6062 aluminum, natural. SCREW: 430 stainless steel, passivated. (Note: knob and top of screw available with black organic coating; see part number tables.)
FERRULE: 6061 aluminum, natural. SPRING: 302 stainless steel, passivated.

Slotted



"S" = Width
"W" = Depth
"Z" = Length

Phillips Recess



For Thread Size	Knob Ø K	Ø F	Slot Dimensions			Hole Ø D	Knob Height Slotted		Knob Height Phillips		Phillips Recess Size
			S	W	Z		H-1	H-2	H-1	H-2	
M3	10.3	4.64	1.0	0.9	6.0	4.75	11.9	7.9	12.7	8.7	No. 1
M3.5	11.1	5.30	1.2	1.2	7.1	5.40	15.5	10.3	16.3	11.1	No. 2
M4	12.7	6.65	1.2	1.2	8.7	6.76	15.5	10.3	16.3	11.1	No. 2
M5	12.7	6.65	1.2	1.2	8.7	6.75	15.5	10.3	16.3	11.1	No. 2
M6	14.3	8.10	1.6	1.6	10.3	8.20	19.4	12.7	20.2	13.5	No. 2

Slotted

M3 Size

Panel thickness Min.	Panel thickness Max.	Screw projection beyond min. panel thickness P-1 Unfastened	Screw projection beyond min. panel thickness P-2 Fastened	L	B	PART NUMBERS FOR M3 x 0.5 KNOB: natural	PART NUMBERS FOR M3 x 0.5 KNOB: black organic coating	Identification Code No.
Unfastened screw is flush								
.079	2.40	Flush	4.0	1.04	0.4	47-80-101-10 ■	47-80-101-50 ■	01
2.41	3.97			2.64	0.6	47-80-103-10 ■	47-80-103-50 ■	03
3.98	5.56			4.22	2.4	47-80-105-10 ■	47-80-105-50 •	05
5.57	7.14			5.82	4.0	47-80-107-10 ■	47-80-107-50 •	07
Unfastened screw projects								
0.79	2.40	1.6	5.6	1.04	0.4	47-**81**-101-10 ■	47-**81**-101-50 •	01
		3.2	7.1			47-**82**-101-10 ■	47-**82**-101-50 •	
		4.8	8.7			47-**83**-101-10 ■	47-**83**-101-50 •	
2.41	3.97	1.6	5.6	2.64	0.5	47-**81**-103-10 ■	47-**81**-103-50 •	03
		3.2	7.1			47-**82**-103-10 ■	47-**82**-103-50 •	
3.98	5.58	1.6	5.6	4.22	2.4	47-**81**-105-10 ■	47-**81**-105-50 •	05

M3.5, M4 and M5 Sizes

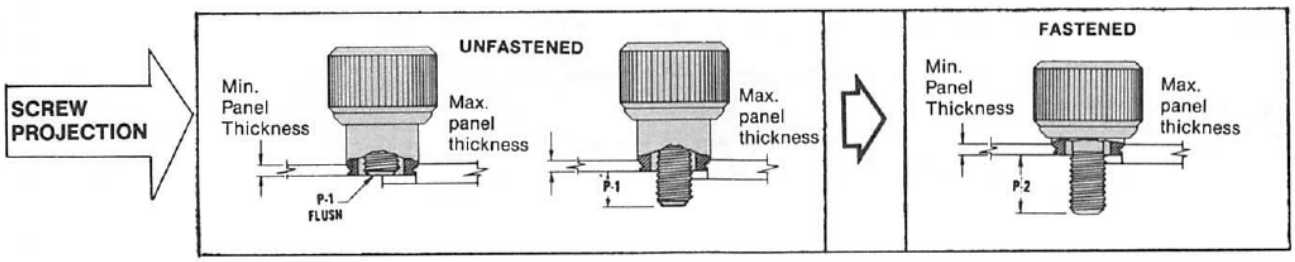
Panel thickness Min.	Panel thickness Max.	Screw projection beyond min. panel thickness P-1 Unfastened	Screw projection beyond min. panel thickness P-2 Fastened	L	B	PART NUMBERS KNOB: natural M3.5 x 0.6	KNOB: natural M4 x 0.7	KNOB: natural M5 x 0.8	KNOB: black organic coating M3.5 x 0.6	KNOB: black organic coating M4 x 0.7	KNOB: black organic coating M5 x 0.8	Identification Code No.
Unfastened screw is flush												
1.47	3.18	Flush	4.8	1.78	0.6	47-80-202-10 ■	47-80-302-10 ■	47-80-502-10 ■	47-80-202-50 ■	47-80-302-50 ■	47-80-502-50 ■	02
3.19	4.76			3.43	1.6	47-80-204-10 ■	47-80-304-10 ■	47-80-504-10 ■	47-80-204-50 •	47-80-304-50 •	47-80-504-50 •	04
4.77	6.35			5.00	3.2	47-80-206-10 ■	47-80-306-10 ■	47-80-506-10 ■	47-80-206-50 •	47-80-506-50 •	47-80-506-50 •	06
6.36	7.93			6.60	4.6	47-80-208-10 ■	47-80-308-10 ■	47-80-508-10 ■	47-80-208-50 •	47-80-308-50 •	47-80-508-50 •	08
Unfastened screw projects												
1.47	3.18	1.5	6.4	1.78	0.4	47-**81**-202-10 ■	47-**81**-302-10 ■	47-**81**-502-10 ■	47-**81**-202-50 •	47-**81**-302-50 •	47-**81**-502-50 •	02
		3.2	7.9			47-**82**-202-10 ■	47-**82**-302-10 ■	47-**82**-502-10 ■	47-**82**-202-50 •	47-**82**-302-50 •	47-**82**-502-50 •	
		4.8	9.5			47-**83**-202-10 ■	47-**83**-302-10 ■	47-**83**-502-10 ■	47-**83**-202-50 •	47-**83**-302-50 •	47-**83**-502-50 •	
3.19	4.76	1.6	6.4	3.43	1.6	47-**81**-204-10 ■	47-**81**-304-10 ■	47-**81**-504-10 ■	47-**81**-204-50 •	47-**81**-304-50 •	47-**81**-504-50 •	04
		3.2	7.9			47-**82**-204-10 ■	47-**82**-304-10 ■	47-**82**-504-10 ■	47-**82**-204-50 •	47-**82**-304-50 •	47-**82**-504-50 •	
4.77	6.35	1.6	6.4	5.00	3.2	47-**81**-206-10 ■	47-**81**-306-10 ■	47-**81**-506-10 ■	47-**81**-206-50 •	47-**81**-306-50 •	47-**81**-506-50 •	06

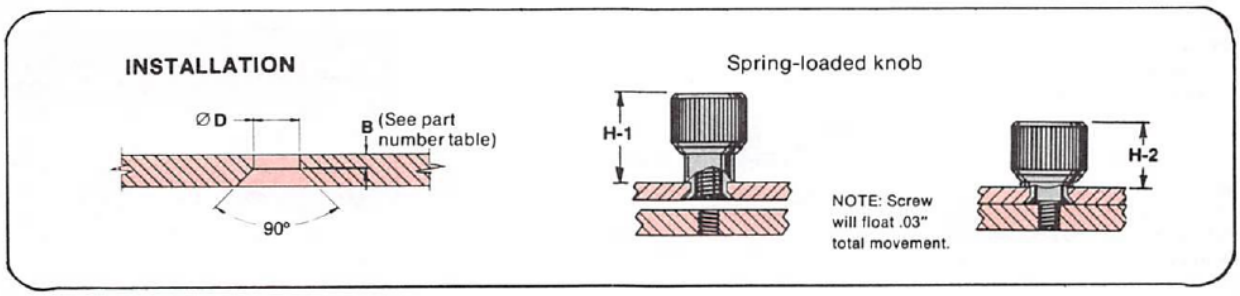
M6 Size

Panel thickness Min.	Panel thickness Max.	Screw projection beyond min. panel thickness P-1 Unfastened	Screw projection beyond min. panel thickness P-2 Fastened	L	B	PART NUMBERS FOR M6 x 1 KNOB: natural	PART NUMBERS FOR M6 x 1 KNOB: black organic coating	Identification Code No.
Unfastened screw is flush								
1.47	3.18	Flush	6.4	1.78	0.4	47-80-602-10 ■	47-80-602-50 ■	02
3.19	4.76			3.43	1.6	47-80-604-10 ■	47-80-604-50 •	04
4.77	6.35			5.00	3.2	47-80-606-10 ■	47-80-606-50 •	06
6.36	7.93			6.60	4.5	47-80-608-10 ■	47-80-608-50 •	08
Unfastened screw projects								
1.47	3.18	1.6	7.9	1.78	0.4	47-**81**-602-10 ■	47-**81**-602-50 •	02
		3.2	9.5			47-**82**-602-10 ■	47-**82**-602-50 •	
		4.8	11.1			47-**83**-602-10 ■	47-**83**-602-50 •	
3.19	4.76	1.6	7.9	3.43	1.6	47-**81**-604-10 ■	47-**81**-604-50 •	04
		3.2	9.5			47-**82**-604-10 ■	47-**82**-604-50 •	
4.77	6.35	1.6	7.9	5.00	3.2	47-**81**-606-10 ■	47-**81**-606-50 •	06

DELIVERY SYMBOLS
(see part numbers)
■ From stock, subject to prior sale
● Up to 4 weeks.

Retractable Screw Fasteners:
METRIC No. 47 Flare-in style





Phillips Recess

M3 Size

Unfastened screw is flush	Panel thickness Min.	Panel thickness Max.	Screw projection beyond min. panel thickness P-1 Unfastened	Screw projection beyond min. panel thickness P-2 Fastened	L	B	PART NUMBERS FOR M3 x 0.5 KNOB: natural	PART NUMBERS FOR M3 x 0.5 KNOB: black organic coating	Identification Code No.
	.079	2.40	Flush	4.0	1.04	0.4	47-80-121-10 ■	47-80-121-50 ■	01
	2.41	3.97			2.64	0.6	47-80-123-10 ■	47-80-123-50 ■	03
	3.98	5.56			4.22	2.4	47-80-125-10 ■	47-80-125-50 •	05
	5.57	7.14			5.82	4.0	47-80-127-10 ■	47-80-127-50 •	07
Unfastened screw projects	0.79	2.40	1.6	5.6	1.04	0.4	47-**81**-121-10 ■	47-**81**-121-50 •	01
			3.2	7.1			47-**82**-121-10 ■	47-**82**-121-50 •	
			4.8	8.7			47-**83**-121-10 ■	47-**83**-121-50 •	
	2.41	3.97	1.6	5.6	2.64	0.5	47-**81**-123-10 ■	47-**81**-123-50 •	03
			3.2	7.1			47-**82**-123-10 ■	47-**82**-123-50 •	
	3.98	5.58	1.6	5.6	4.22	2.4	47-**81**-125-10 ■	47-**81**-125-50 •	05

M3.5, M4 and M5 Sizes

Unfastened screw is flush	Panel thickness Min.	Panel thickness Max.	Screw projection beyond min. panel thickness P-1 Unfastened	Screw projection beyond min. panel thickness P-2 Fastened	L	B	PART NUMBERS KNOB: natural M3.5 x 0.6	KNOB: natural M4 x 0.7	KNOB: natural M5 x 0.8	KNOB: black organic coating M3.5 x 0.6	KNOB: black organic coating M4 x 0.7	KNOB: black organic coating M5 x 0.8	Identification Code No.
	1.47	3.18	Flush	4.8	1.78	0.6	47-80-222-10 ■	47-80-322-10 ■	47-80-522-10 ■	47-80-222-50 ■	47-80-322-50 ■	47-80-522-50 ■	02
	3.19	4.76			3.43	1.6	47-80-224-10 ■	47-80-324-10 ■	47-80-524-10 ■	47-80-224-50 •	47-80-324-50 •	47-80-524-50 •	04
	4.77	6.35			5.00	3.2	47-80-226-10 ■	47-80-326-10 ■	47-80-526-10 ■	47-80-226-50 •	47-80-526-50 •	47-80-526-50 •	06
	6.36	7.93			6.60	4.6	47-80-228-10 ■	47-80-328-10 ■	47-80-528-10 ■	47-80-228-50 •	47-80-328-50 •	47-80-528-50 •	08
Unfastened screw projects	1.47	3.18	1.5	6.4	1.78	0.4	47-**81**-222-10 ■	47-**81**-322-10 ■	47-**81**-522-10 ■	47-**81**-222-50 •	47-**81**-322-50 •	47-**81**-522-50 •	02
			3.2	7.9			47-**82**-222-10 ■	47-**82**-322-10 ■	47-**82**-522-10 ■	47-**82**-222-50 •	47-**82**-322-50 •	47-**82**-522-50 •	
			4.8	9.5			47-**83**-222-10 ■	47-**83**-322-10 ■	47-**83**-522-10 ■	47-**83**-222-50 •	47-**83**-322-50 •	47-**83**-522-50 •	
	3.19	4.76	1.6	6.4	3.43	1.6	47-**81**-224-10 ■	47-**81**-324-10 ■	47-**81**-524-10 ■	47-**81**-224-50 •	47-**81**-324-50 •	47-**81**-524-50 •	04
			3.2	7.9			47-**82**-224-10 ■	47-**82**-324-10 ■	47-**82**-524-10 ■	47-**82**-224-50 •	47-**82**-324-50 •	47-**82**-524-50 •	
	4.77	6.35	1.6	6.4	5.00	3.2	47-**81**-226-10 ■	47-**81**-326-10 ■	47-**81**-526-10 ■	47-**81**-226-50 •	47-**81**-326-50 •	47-**81**-526-50 •	06

M6 Size

Unfastened screw is flush	Panel thickness Min.	Panel thickness Max.	Screw projection beyond min. panel thickness P-1 Unfastened	Screw projection beyond min. panel thickness P-2 Fastened	L	B	PART NUMBERS FOR M6 x 1 KNOB: natural	PART NUMBERS FOR M6 x 1 KNOB: black organic coating	Identification Code No.
	1.47	3.18	Flush	6.4	1.78	0.4	47-80-622-10 ■	47-80-622-50 ■	02
	3.19	4.76			3.43	1.6	47-80-624-10 ■	47-80-624-50 •	04
	4.77	6.35			5.00	3.2	47-80-626-10 ■	47-80-626-50 •	06
	6.36	7.93			6.60	4.5	47-80-628-10 ■	47-80-628-50 •	08
Unfastened screw projects	1.47	3.18	1.6	7.9	1.78	0.4	47-**81**-622-10 ■	47-**81**-622-50 •	02
			3.2	9.5			47-**82**-622-10 ■	47-**82**-622-50 •	
			4.8	11.1			47-**83**-622-10 ■	47-**83**-622-50 •	
	3.19	4.76	1.6	7.9	3.43	1.6	47-**81**-624-10 ■	47-83-624-50 •	04
			3.2	9.5			47-**82**-624-10 ■	47-**82**-624-50 •	
	4.77	6.35	1.6	7.9	5.00	3.2	47-**81**-626-10 ■	47-**81**-626-50 •	06

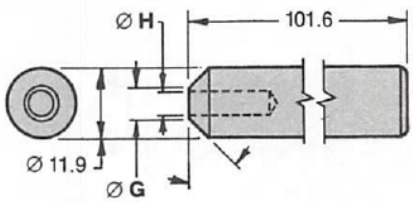
■ From stock subject to prior sale.

Retractable Screw Fasteners:
METRIC No. 47 Flare-in style

Installation:

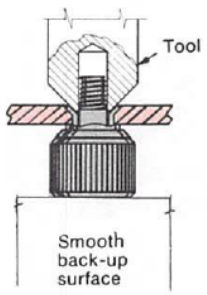
METHOD A

1. Install tool in suitable press. Only light pressure will be required.



2. Insert screw assembly into prepared hole in panel. (see panel preparation, pg. CC-15.)

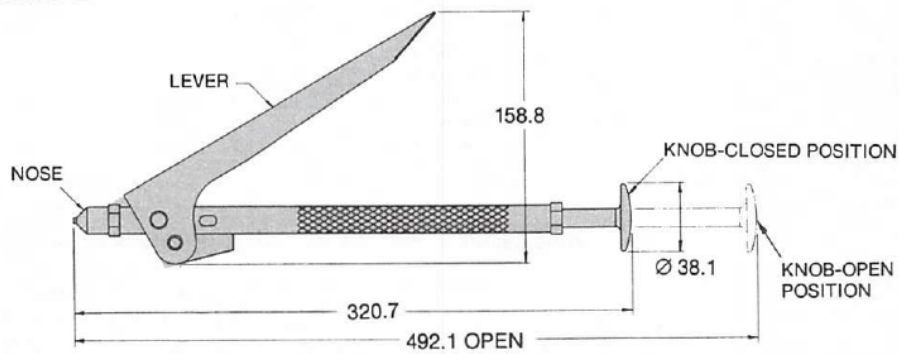
3. Place work under press, center tool over screw thread and flare ferrule into countersink in panel. Use light pressure.



For Thread Size	Ø H	Ø G	Use Tool Part Number
M3	3.05	3.15	47-0-13749-01 ■
M3.5	3.56	3.66	47-0-13749-02 ■
M4	4.22	4.32	47-0-13749-03 ■
M5	5.05	5.16	47-0-13749-15 ■
M6	6.53	6.63	47-0-13749-06 ■

■ From stock, subject to prior sale.

METHOD B



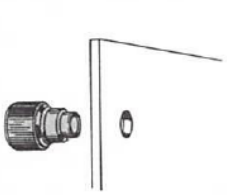
For Thread Size	Use Tool Part Number
M3	29-47-505-10 ■
M3.5	29-47-501-10 ■
M4	29-47-504-10 ■
M5	29-47-502-10 ■
M6	29-47-503-10 ■

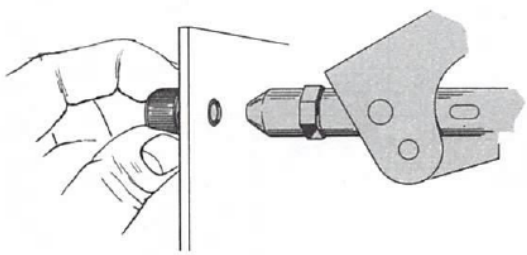
■ From stock, subject to prior sale.

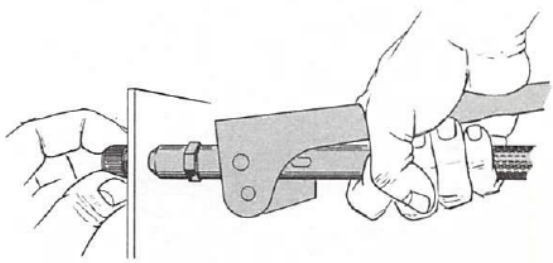
1. Place screw assembly into prepared hole in panel (see panel preparation. pg. C-27)

2. Draw knob of tool to open position. Hold screw assembly in place and position nose of tool against end of screw thread. Returning knob to closed position will thread tool onto screw.

3. Lightly squeeze lever to flare ferrule into countersink in panel. Draw knob to open position to unthread tool from screw.

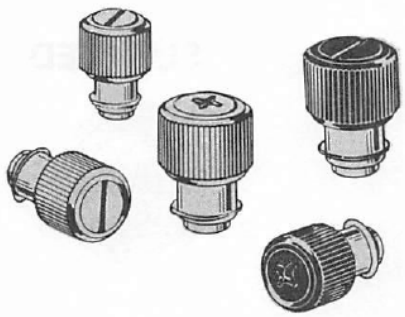




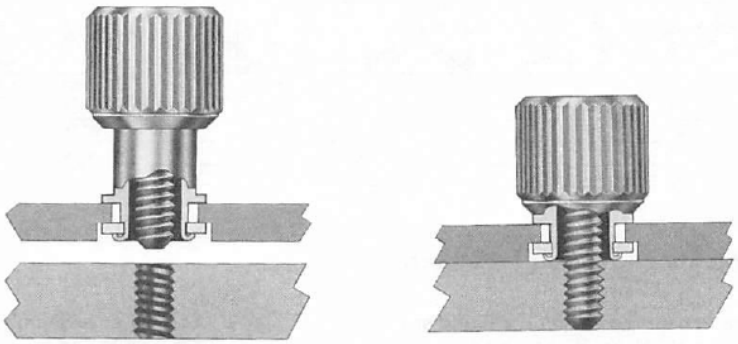


Floating Captive Screw Assemblies: METRIC Threads

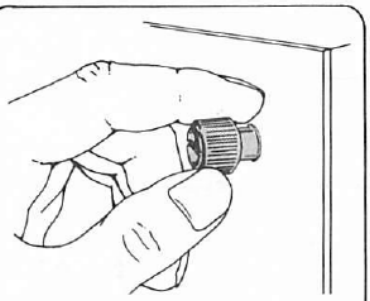
- **Provides up to 1.14 mm radial float to accommodate misalignment between mating parts.**
- **Retractable, spring ejected.**
- **Stainless steel and aluminum construction.**
- **Phillips or slotted head styles.**
- **Unified threads also available. (See pg. C-29)**



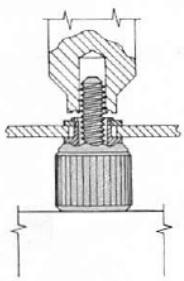
Black and Bright finishes available.



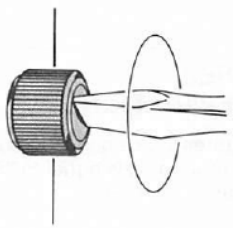
Southco No. 47 captive screw assemblies are stocked in thread sizes M3 through M6.



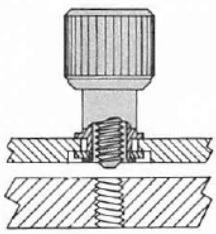
Spring-loaded, low profile captive screw assemblies float to engage mating thread.



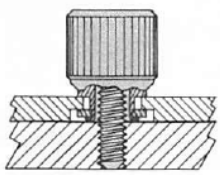
Installation is quick and easy.



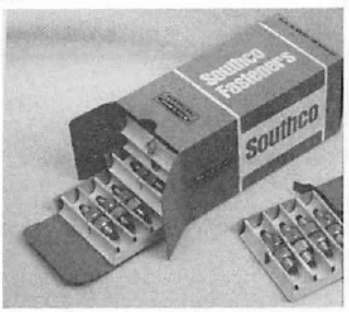
The recessed slot or phillips operation helps to keep the screwdriver from slipping and damaging your panel.



The knob position signals whether screw assembly is unfastened...



...or fastened.



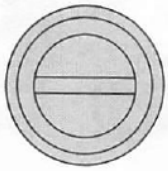
Assemblies are packaged to protect their finish.

SOUTHCO fasteners

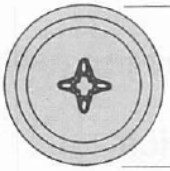
SOUTHCO INC., CONCORDVILLE, PA. 19331 • Phone (215) 459-4000
Fax (215) 459-4012 • Telex 83-1485 • TWX 710-760-1715

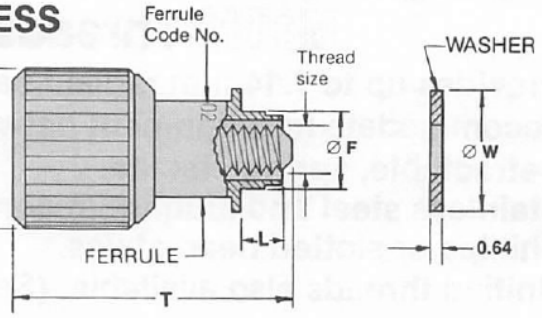
Form No. 47689**M**
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SLOTTED



No. 2 PHILLIPS RECESS





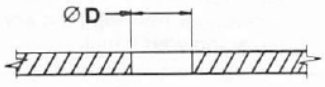
Thread Size	Knob Ø K	Ø F	Slot Dimensions			Ø D +0.08 -0.03	Counter-bore Min Ø C	Ø W	KNOB HEIGHT			
			width	depth	length				Slotted		Phillips	
									H-1	H-2	H-1	H-2
M3	10.6	4.93	1.0	0.9	6.0	6.40	9.40	7.80	12.5	8.6	13.3	9.3
M3.5	11.5	5.69	1.2	1.1	6.8	7.20	10.50	8.59	15.9	10.7	16.7	11.5
M4	13.0	7.29	1.2	1.3	8.3	8.80	12.00	10.16	16.0	10.8	16.8	11.6
M5	13.0	7.29	1.2	1.3	8.3	8.80	12.00	10.16	16.0	10.8	16.8	11.6
M6	14.7	8.86	1.6	1.6	9.8	10.50	13.50	11.94	20.0	13.3	20.8	14.0

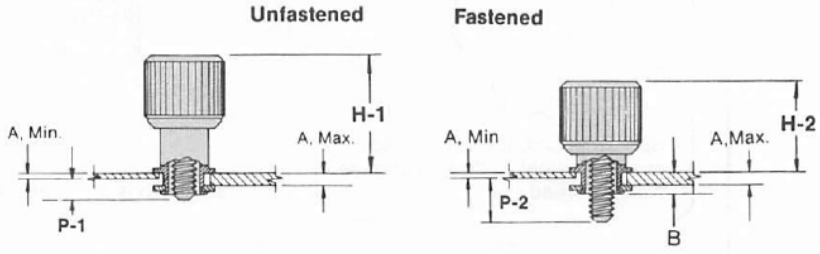
Choosing the correct part number:

1. Choose Panel Preparation I or II and select that range of "A" or "B" which applies to your application.
2. Select an assembly which provides adequate thread projection for your application.
3. Specify an assembly with desired head style and finish.
4. Specify the correct installation tool for your thread size. A Southco installation tool must be used.

PANEL PREPARATION I

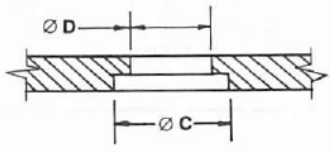
Requires space between outer and inner panels equal to "B" minus your outer panel thickness.

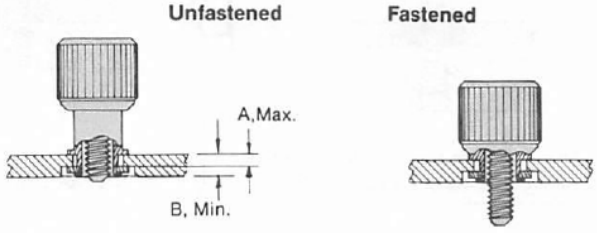




PANEL PREPARATION II

Provides a flush panel-to-panel condition requiring a counterbore of Ø C and a depth which leaves a thickness within the specified range of "A".





*To specify black finish knob and screw head, replace last two digits of part number with 50.
ex. 47-80-110-**50**

Thread Size	Panel Thickness A Min.	Panel Thickness A Max.	B	Screw Projection Beyond Min. Panel Thickness P-1	Screw Projection Beyond Min. Panel Thickness P-2	L	Ferrule Code No.	Overall Length T slotted	Overall Length T phillips	PART NUMBERS Slotted	PART NUMBERS Phillips
										Bright Finish*	
M3	0.00	0.79	2.03	1.8	5.7	2.57	00	14.3	15.0	47-80-110-10 ■	47-80-130-10 ■
				3.4	7.3			15.8	16.6	47-81-110-10 ■	47-81-130-10 ■
				5.0	8.9			17.4	18.2	47-82-110-10 ■	47-82-130-10 ■
	0.79	1.60	2.82	1.0	4.9	3.35	01	14.3	15.0	47-80-111-10 ■	47-80-131-10 ■
				2.6	6.5			15.8	16.6	47-81-111-10 ■	47-81-131-10 ■
				4.2	8.1			17.4	18.2	47-82-111-10 ■	47-82-131-10 ■
	1.60	2.39	3.63	1.8	5.7	4.17	02	15.8	16.6	47-80-112-10 ■	47-80-132-10 ■
				3.4	7.3			17.4	18.2	47-81-112-10 ■	47-81-132-10 ■
	2.39	3.18	4.42	1.0	4.9	4.95	03	15.8	16.6	47-80-113-10 ■	47-80-133-10 ■
				2.6	6.5			17.4	18.2	47-81-113-10 ■	47-81-133-10 ■
	3.18	3.96	5.21	1.8	5.7	5.74	04	17.4	18.2	47-80-114-10 ■	47-80-134-10 ■
	3.96	4.78	5.99	1.0	4.9	6.53	05	17.4	18.2	47-80-115-10 ■	47-80-135-10 ■
M3.5	0.00	0.79	2.13	2.1	7.3	2.87	00	18.0	18.8	47-80-210-10 ■	47-80-230-10 ■
				3.7	8.9			19.6	20.3	47-81-210-10 ■	47-81-230-10 ■
				5.3	10.5			21.2	21.9	47-82-210-10 ■	47-82-230-10 ■
	0.79	1.60	2.92	1.3	6.5	3.66	01	18.0	18.8	47-80-211-10 ■	47-80-231-10 ■
				2.9	8.1			19.6	20.3	47-81-211-10 ■	47-81-231-10 ■
				4.5	9.7			21.2	21.9	47-82-211-10 ■	47-82-231-10 ■
	1.60	2.39	3.73	2.1	7.3	4.47	02	19.6	20.3	47-80-212-10 ■	47-80-232-10 ■
				3.7	8.9			21.2	21.9	47-81-212-10 ■	47-81-232-10 ■
	2.39	3.18	4.52	1.3	6.5	5.26	03	19.6	20.3	47-80-213-10 ■	47-80-233-10 ■
				2.9	8.1			21.2	21.9	47-81-213-10 ■	47-81-233-10 ■
	3.18	3.96	5.31	2.1	7.3	6.05	04	21.2	21.9	47-80-214-10 ■	47-80-234-10 ■
	3.96	4.78	6.10	1.3	6.5	6.83	05	21.2	21.9	47-80-215-10 ■	47-80-235-10 ■
M4	0.00	0.79	2.29	2.1	7.3	3.23	00	18.1	18.9	47-80-310-10 ■	47-80-330-10 ■
				3.7	8.9			19.7	20.4	47-81-310-10 ■	47-81-330-10 ■
				5.3	10.5			21.3	22.0	47-82-310-10 ■	47-82-330-10 ■
	0.79	1.60	3.07	1.3	6.5	4.01	01	18.1	18.9	47-80-311-10 ■	47-80-331-10 ■
				2.9	8.1			19.7	20.4	47-81-311-10 ■	47-81-331-10 ■
				4.5	9.7			21.3	22.0	47-82-311-10 ■	47-82-331-10 ■
	1.60	2.39	3.89	2.1	7.3	4.83	02	19.7	20.4	47-80-312-10 ■	47-80-332-10 ■
				3.7	8.9			21.3	22.0	47-81-312-10 ■	47-81-332-10 ■
	2.39	3.18	4.67	1.3	6.5	5.61	03	19.7	20.4	47-80-313-10 ■	47-80-333-10 ■
				2.9	8.1			21.3	22.0	47-81-313-10 ■	47-81-333-10 ■
	3.18	3.96	5.46	2.1	7.3	6.40	04	21.3	22.0	47-80-314-10 ■	47-80-334-10 ■
	3.96	4.78	6.25	1.3	6.5	7.19	05	21.3	22.0	47-80-315-10 ■	47-80-335-10 ■
M5	0.00	0.79	2.29	2.1	7.3	3.23	00	18.1	18.9	47-80-510-10 ■	47-80-530-10 ■
				3.7	8.9			19.7	20.4	47-81-510-10 ■	47-81-530-10 ■
				5.3	10.5			21.3	22.0	47-82-510-10 ■	47-82-530-10 ■
	0.79	1.60	3.07	1.3	6.5	4.01	01	18.1	18.9	47-80-511-10 ■	47-80-531-10 ■
				2.9	8.1			19.7	20.4	47-81-511-10 ■	47-81-531-10 ■
				4.5	9.7			21.3	22.0	47-82-511-10 ■	47-82-531-10 ■
	1.60	2.39	3.89	2.1	7.3	4.83	02	19.7	20.4	47-80-512-10 ■	47-80-532-10 ■
				3.7	8.9			21.3	22.0	47-81-512-10 ■	47-81-532-10 ■
	2.39	3.18	4.67	1.3	6.5	5.61	03	19.7	20.4	47-80-513-10 ■	47-80-533-10 ■
				2.9	8.1			21.3	22.0	47-81-513-10 ■	47-81-533-10 ■
	3.18	3.96	5.46	2.1	7.3	6.40	04	21.3	22.0	47-80-514-10 ■	47-80-534-10 ■
	3.96	4.78	6.25	1.3	6.5	7.19	05	21.3	22.0	47-80-515-10 ■	47-80-535-10 ■
M6	0.00	0.79	2.46	2.1	8.9	3.23	00	22.1	22.9	47-80-610-10 ■	47-80-630-10 ■
				3.7	10.5			23.7	24.5	47-81-610-10 ■	47-81-630-10 ■
				5.3	12.1			25.3	26.1	47-82-610-10 ■	47-82-630-10 ■
	0.79	1.60	3.25	1.3	8.1	4.01	01	22.1	22.9	47-80-611-10 ■	47-80-631-10 ■
				2.9	9.7			23.7	24.5	47-81-611-10 ■	47-81-631-10 ■
				4.5	11.3			25.3	26.1	47-82-611-10 ■	47-82-631-10 ■
	1.60	2.39	4.06	2.1	8.9	4.83	02	23.7	24.5	47-80-612-10 ■	47-80-632-10 ■
				3.7	10.5			25.3	26.1	47-81-612-10 ■	47-81-632-10 ■
	2.39	3.18	4.85	1.3	8.1	5.61	03	23.7	24.5	47-80-613-10 ■	47-80-633-10 ■
				2.9	9.7			25.3	26.1	47-81-613-10 ■	47-81-633-10 ■
	3.18	3.96	5.64	2.1	8.9	6.40	04	25.3	26.1	47-80-614-10 ■	47-80-634-10 ■
	3.96	4.78	6.43	1.3	8.1	7.19	05	25.3	26.1	47-80-615-10 ■	47-80-635-10 ■

Dimensions shown in millimeters.

■ From stock subject to prior sale.

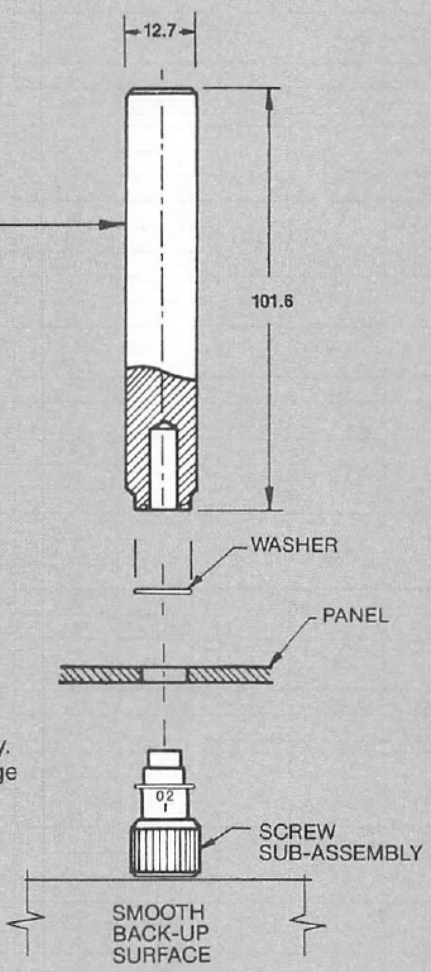
Floating Captive Screw Assemblies: METRIC Threads

MATERIAL and FINISH
KNOB and FERRULE: 6061 Aluminum, natural.
SCREW: 430 stainless steel, passivated.
SPRING (internal component, not shown) and
WASHER: 302 stainless steel, passivated.

NOTE: Black Finish (specified by -50 suffix) is a supplementary Black Enamel Organic Coating applied to knob and screw head.

An assembly consists of one screw sub-assembly and one washer, shipped separately.

INSTALLATION



1. Place Southco installation tool in a press capable of providing 890 N to 3115 N of force. Installation force depends on thread size.
2. Center the tool on the screw thread, then roll the ferrule over the washer to captivate the assembly. (Caution: Excessive force will damage the screw assembly.)

For Thread size	Tool Part Number
M3	47-04 ■
M3.5	47-06 ■
M4	47-08 ■
M5	47-05 ■
M6	47-25 ■

■ From stock subject to prior sale.

SOUTHCO fasteners

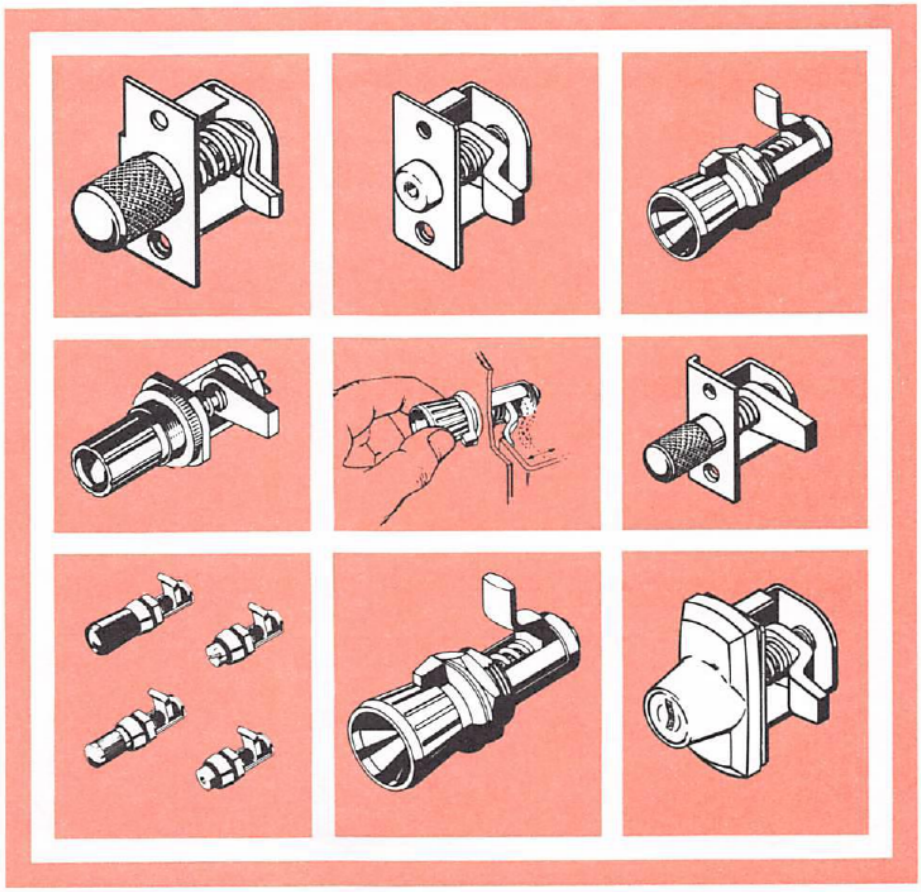
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Section D

Adjustable-grip Latches (self-adjusting styles)

contents guide	page
No. 14 & No. 36 Large size	D-4 & D-5
No. 14 & No. 44 With metric hex-socket drive	D-10 & D-11
No. 14, No. 43, & No. 44 With black, low-profile knob	D-6 & D-7
No. 14 & No. 44 — with key lock	D-12 & D-13
No. 14, 43, & No. 44 — with tool head	D-14 & D-15
No. 16 with actuator/indicator	D-16 & D-17
No. 27 Sub-midget size	D-18
No. 43 & No. 65 Midget Size	D-1
No. 43 & No. 44 — with black knob	D-8 & D-9
No. 44 & No. 66 Intermediate size	D-2 & D-3
No. 48 Small-heavy duty	D-19



Section D

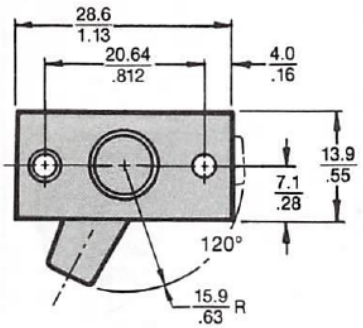
Adjustable-grip Latches (self-adjusting styles)

contents guide | **page**

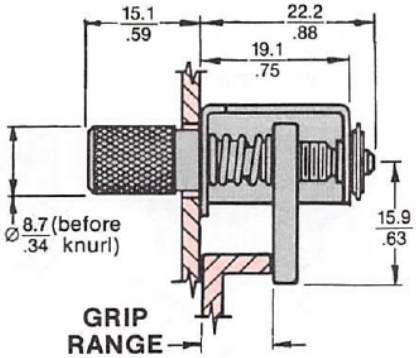
No. 14 & No. 36 Large size	D-4 & D-5
No. 14 & No. 44 With metric hex-socket drive	D-10 & D-11
No. 14, No. 43, & No. 44 With black, low-profile knob	D-6 & D-7
No. 14 & No. 44 — with key lock	D-12 & D-13
No. 14, 43, & No. 44 — with tool head	D-14 & D-15
No. 16 with actuator/indicator	D-16 & D-17
No. 27 Sub-midget size	D-18
No. 43 & No. 65 Midget size	D-1
No. 43 & No. 44 — with black knob	D-8 & D-9
No. 44 & No. 66 Intermediate size	D-2 & D-3
No. 48 Small-heavy duty	D-19

Adjustable-grip latches *MIDGET SIZE*

ACTUAL SIZE



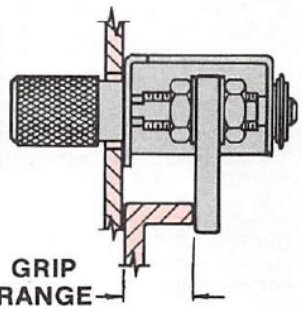
No. 43 SELF-ADJUSTING



No. 65 MANUAL-ADJUSTING

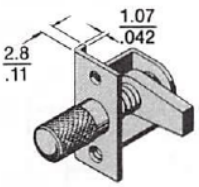
No. 65 is dimensionally identical with No. 43 except for 2 jam nuts and 2 lockwashers replacing spring. Jam nuts permit locking pawl in desired fixed grip.

millimeter
inch
millimeter/inch

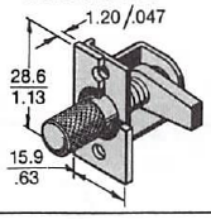


Styles:

Knurled head



Dust and moisture seal

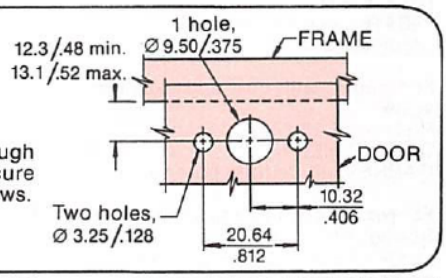


Slotted flush head



INSTALLATION

1. Prepare door.
2. Pass knob of latch through center hole and secure with two rivets or screws.



LEFT HAND ASSEMBLIES turn counterclockwise to latch.

RIGHT HAND ASSEMBLIES. turn clockwise to latch.

MATERIAL and FINISH

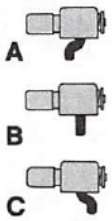
PAWL and RETAINING WASHER: 1010 steel.
BUSHING: 12L14 steel.
The components listed above are zinc plated plus yellow chromate dip.
SPRING: 17-7PH stainless steel, passivated.
CONICAL SPRING: 302 stainless steel, passivated.
HOUSING: 1010 steel, DACROTIZED†.
SCREW: 12L14 steel, DACROTIZED† plus metallic organic coating or chrome plate (see table).

For models with dust and moisture seals
RETAINER PLATE: 1010 steel, zinc plated plus yellow chromate dip.
Gasket: cork-rubber.

For No. 65 Manual-adjusting style Spring is replaced by two JAM NUTS: steel, zinc plated plus yellow chromate dip.
LOCKWASHERS: spring steel, DACROTIZED†.

†Registered tradename of Metal Coatings International, Inc.

PAWL STYLE AND POSITION (pre-assembled) determines grip range see table



STYLE	GRIP RANGE		LEFT HAND		RIGHT HAND		Pawl style
	MIN.	MAX.	Dacrotized†	chrome finish	Dacrotized†	Chrome finish	
No. 43 SELF-ADJUSTING							
Knurled Head	3.18/.125	7.14/.281	43-10-1-0 ■	43-10-1-1 ■	43-1-1-0 ■	43-1-1-1 ■	A
	6.35/.250	13.49/.531	43-10-2-0 ■	43-10-2-1 ■	43-1-2-0 ■	43-1-2-1 ■	B
	12.70/.500	19.84/.781	43-10-3-0 ■	43-10-3-1 ■	43-1-3-0 ■	43-1-3-1 ■	C
Slotted Knurled Head	3.18/.125	7.14/.281	43-10-4-0 ■	43-10-4-1 ■	43-1-4-0 ■	43-1-4-1 ■	A
	6.35/.250	13.49/.531	43-10-5-0 ■	43-10-5-1 ■	43-1-5-0 ■	43-1-5-1 ■	B
	12.70/.500	19.84/.781	43-10-6-0 ■	43-10-6-1 ■	43-1-6-0 ■	43-1-6-1 ■	C
Slotted Flush Head	3.18/.125	7.14/.281	43-10-13-0 ■	43-10-13-1 ■	43-1-13-0 ■	43-1-13-1 ■	A
	6.35/.250	13.49/.531	43-10-14-0 ■	43-10-14-1 ■	43-1-14-0 ■	43-1-14-1 ■	B
	12.70/.500	19.84/.781	43-10-15-0 ■	43-10-15-1 ■	43-1-15-0 ■	43-1-15-1 ■	C
Slotted Knurled Head—Dust and Moisture Seal	3.97/.156	8.33/.328	43-10-10-0 ■	43-10-10-1 ■	43-1-10-0 ■	43-1-10-1 ■	A
	7.54/.297	14.68/.578	43-10-11-0 ■	43-10-11-1 ■	43-1-11-0 ■	43-1-11-1 ■	B
	13.89/.547	21.03/.828	43-10-12-0 ■	43-10-12-1 ■	43-1-12-0 ■	43-1-12-1 ■	C
Slotted Flush Head—Dust and Moisture Seal	3.97/.156	8.33/.328	43-10-16-0 ■	43-10-16-1 ■	43-1-16-0 ■	43-1-16-1 ■	A
	7.54/.297	14.68/.578	43-10-17-0 ■	43-10-17-1 ■	43-1-17-0 ■	43-1-17-1 ■	B
	13.89/.547	21.03/.828	43-10-18-0 ■	43-10-18-1 ■	43-1-18-0 ■	43-1-18-1 ■	C
No. 65 MANUAL-ADJUSTING							
Knurled Head	3.18/.125	4.76/.188	65-10-1-0 ■	65-10-1-1 ■	65-1-1-0 ■	65-1-1-1 ■	A
	4.76/.188	10.32/.406	65-10-2-0 ■	65-10-2-1 ■	65-1-2-0 ■	65-1-2-1 ■	B
	10.32/.406	17.46/.688	65-10-3-0 ■	65-10-3-1 ■	65-1-3-0 ■	65-1-3-1 ■	C
Slotted Knurled Head	3.18/.125	4.76/.188	65-10-4-0 ■	65-10-4-1 ■	65-1-4-0 ■	65-1-4-1 ■	A
	4.76/.188	10.32/.406	65-10-5-0 ■	65-10-5-1 ■	65-1-5-0 ■	65-1-5-1 ■	B
	10.32/.406	17.46/.688	65-10-6-0 ■	65-10-6-1 ■	65-1-6-0 ■	65-1-6-1 ■	C
Slotted Flush Head	3.18/.125	4.76/.188	65-10-10-0 ■	65-10-10-1 ■	65-1-10-0 ■	65-1-10-1 ■	A
	4.76/.188	10.32/.406	65-10-11-0 ■	65-10-11-1 ■	65-1-11-0 ■	65-1-11-1 ■	B
	10.32/.406	17.46/.688	65-10-12-0 ■	65-10-12-1 ■	65-1-12-0 ■	65-1-12-1 ■	C
Slotted Knurled Head—Dust and Moisture Seal	4.37/.172	5.95/.234	65-10-7-0 ■	65-10-7-1 ■	65-1-7-0 ■	65-1-7-1 ■	A
	5.95/.234	11.51/.453	65-10-8-0 ■	65-10-8-1 ■	65-1-8-0 ■	65-1-8-1 ■	B
	11.51/.453	18.65/.734	65-10-9-0 ■	65-10-9-1 ■	65-1-9-0 ■	65-1-9-1 ■	C
Slotted Flush Head—Dust and Moisture Seal	4.37/.172	5.95/.234	65-10-13-0 ■	65-10-13-1 ■	65-1-13-0 ■	65-1-13-1 ■	A
	5.95/.234	11.51/.453	65-10-14-0 ■	65-10-14-1 ■	65-1-14-0 ■	65-1-14-1 ■	B
	11.51/.453	18.65/.734	65-10-15-0 ■	65-10-15-1 ■	65-1-15-0 ■	65-1-15-1 ■	C

■ From stock, subject to prior sale.

Adjustable-grip latches *INTERMEDIATE SIZE*

MATERIAL and FINISH

steel assemblies
RETAINING WASHER: 1010 steel.
BUSHING: low carbon steel.
The components listed above are zinc plated plus yellow chromate dip.
PAWL: 1010 steel, DACROTIZED†.
SPRING and CONICAL SPRING: 302 stainless steel, passivated.
HOUSING: 1010 steel, DACROTIZED†.
SCREW: low carbon steel, DACROTIZED† plus bright metallic organic coating or chrome plated (see table).

For T-bar style:
T-BAR: steel, zinc plated plus bright chromate dip.

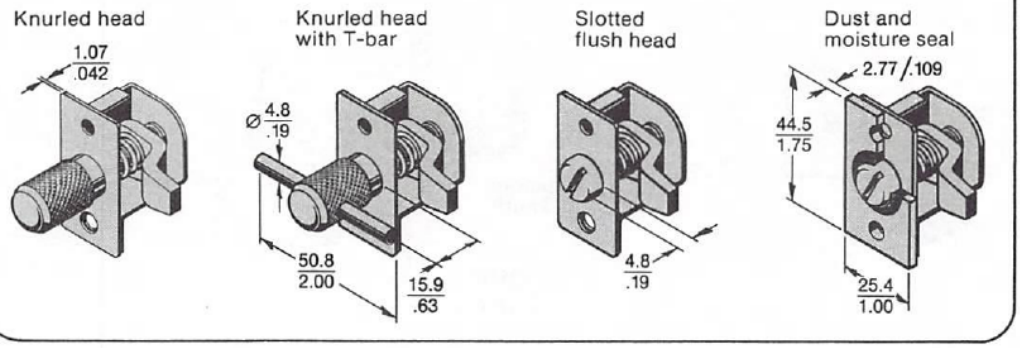
For models with dust and moisture seals
RETAINER PLATE: 1010 steel, DACROTIZED†.
GASKET: nitrile fibre core rubber.

For No. 66 manual-adjusting style
Spring is replaced by two LOCKWASHERS: spring steel, DACROTIZED† and two JAM NUTS: steel, DACROTIZED†.

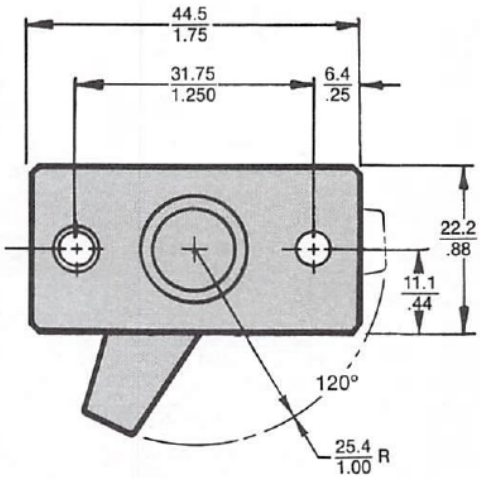
stainless steel assemblies
HOUSING, SPRING, CONICAL SPRING, RETAINING WASHER and PAWL: 302 stainless steel, passivated. SCREW and BUSHING: 303 stainless steel, passivated.

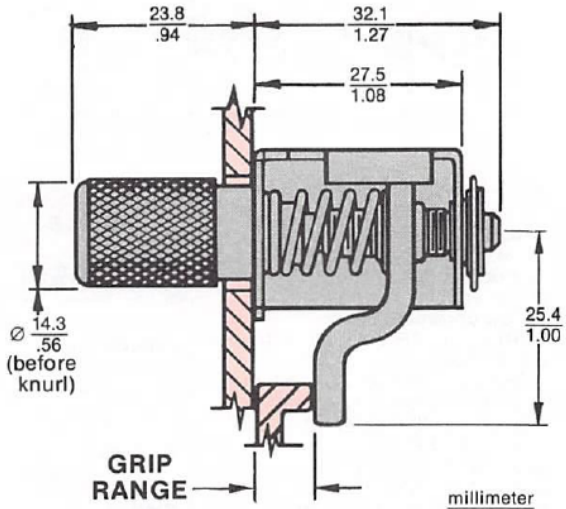
†Registered tradename of Metal Coatings International, Inc.

Styles:



ACTUAL SIZE



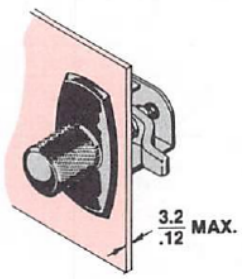


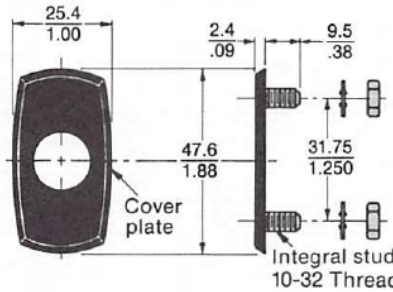
millimeter
inch
millimeter/inch

Trimplates

NOTE: Mounting Trimplates can be used with all No. 44 and No. 66 adjustable-grip latch styles EXCEPT key lock styles and those with dust and moisture seals.

Trimplate Part Number
44-30-101-10 ■





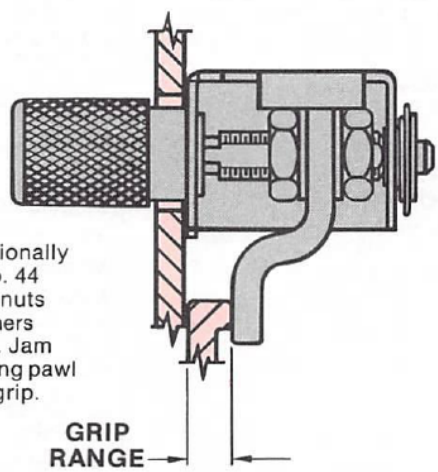
Two nuts and two lockwashers are supplied.
NOTE: Maximum recommended tightening torque for mounting nuts 2.8 N·m/25 in.-lbs.

MATERIAL and FINISH

PLATE: 1010 steel, phosphate dip plus matte black polyester powder coated. STUDS: 10B21 steel, phosphate dip. NUTS are steel, DACROTIZED†. LOCKWASHERS are spring steel, DACROTIZED†.

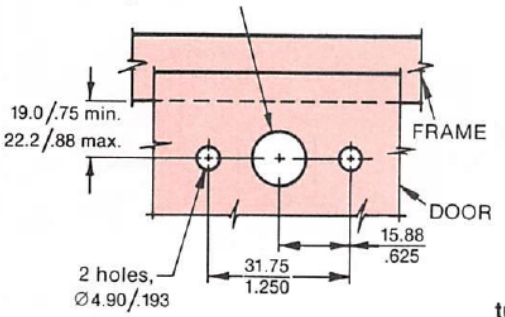
■ From stock, subject to prior sale.

No. 66 MANUAL-ADJUSTING



No. 66 is dimensionally identical with No. 44 except for 2 jam nuts and two lockwashers replacing spring. Jam nuts permit locking pawl in desired fixed grip.

1 hole: Ø 13.50/.531 for slotted flush head styles.
Ø 14.0/.562 for slotted head with dust and moisture seal styles.
Ø 16.0/.625 for all other styles.

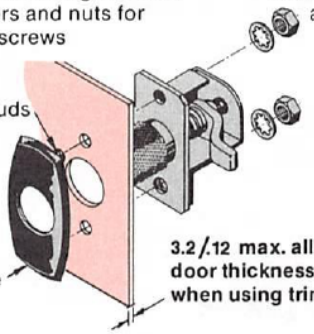


INSTALLATION

1. Prepare door.
2. Pass knob of latch through center hole and secure with two rivets or screws.
3. For T-bar models press T-bar into cross hole in knob.

If trimplate is used, substitute the trimplate's integral studs, lockwashers and nuts for mounting screws or rivets.

Two nuts and two lockwashers are supplied.



3.2/.12 max. allowable door thickness when using trimplates

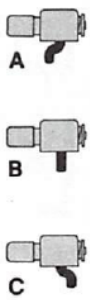
LEFT HAND ASSEMBLIES turn counterclockwise to latch.

RIGHT HAND ASSEMBLIES. turn clockwise to latch.

millimeter
inch
millimeter/inch

STYLE	GRIP RANGE		LEFT HAND		RIGHT HAND			Pawl style
			Steel		Steel		Stainless steel, passivated	
	MIN.	MAX.	Dacrotized†	Chrome finish	Dacrotized†	Chrome finish		
No. 44 SELF-ADJUSTING								
Knurled Head	3.18/.125	9.53/.375	44-10-1-0 ■	44-10-1-1 ■	44-1-1-0 ■	44-1-1-1 ■	44-1-1-24 ■	A
	9.53/.375	19.05/.750	44-10-2-0 ■	44-10-2-1 ■	44-1-2-0 ■	44-1-2-1 ■	44-1-2-24 ■	B
	19.05/.750	28.58/1.125	44-10-3-0 ■	44-10-3-1 ■	44-1-3-0 ■	44-1-3-1 ■	44-1-3-24 ■	C
Knurled Head With T-bar	3.18/.125	9.53/.375	44-10-7-0 ■	44-10-7-1 ■	44-1-7-0 ■	44-1-7-1 ■	—	A
	9.53/.375	19.05/.750	44-10-8-0 ■	44-10-8-1 ■	44-1-8-0 ■	44-1-8-1 ■	—	B
	19.05/.750	28.58/1.125	44-10-9-0 ■	44-10-9-1 ■	44-1-9-0 ■	44-1-9-1 ■	—	C
Slotted Knurled Head	3.18/.125	9.53/.375	44-10-10-0 ■	44-10-10-1 ■	44-1-10-0 ■	44-1-10-1 ■	—	A
	9.53/.375	19.05/.750	44-10-11-0 ■	44-10-11-1 ■	44-1-11-0 ■	44-1-11-1 ■	—	B
	19.05/.750	28.58/1.125	44-10-12-0 ■	44-10-12-1 ■	44-1-12-0 ■	44-1-12-1 ■	—	C
Slotted Flush Head	3.18/.125	9.53/.375	44-10-16-0 ■	44-10-16-1 ■	44-1-16-0 ■	44-1-16-1 ■	44-1-16-24 ■	A
	9.53/.375	19.05/.750	44-10-17-0 ■	44-10-17-1 ■	44-1-17-0 ■	44-1-17-1 ■	44-1-17-24 ■	B
	19.05/.750	28.58/1.125	44-10-18-0 ■	44-10-18-1 ■	44-1-18-0 ■	44-1-18-1 ■	44-1-18-24 ■	C
Knurled Head—Dust and Moisture Seal	6.35/.250	12.70/.500	44-10-4-0 ■	44-10-4-1 ■	44-1-4-0 ■	44-1-4-1 ■	—	A
	12.70/.500	22.23/.875	44-10-5-0 ■	44-10-5-1 ■	44-1-5-0 ■	44-1-5-1 ■	—	B
	22.23/.875	31.75/1.250	44-10-6-0 ■	44-10-6-1 ■	44-1-6-0 ■	44-1-6-1 ■	—	C
Knurled Head With T-bar—Dust and Moisture Seal	6.35/.250	12.70/.500	44-10-13-0 ■	44-10-13-1 ■	44-1-13-0 ■	44-1-13-1 ■	—	A
	12.70/.500	22.23/.875	44-10-14-0 ■	44-10-14-1 ■	44-1-14-0 ■	44-1-14-1 ■	—	B
	22.23/.875	31.75/1.250	44-10-15-0 ■	44-10-15-1 ■	44-1-15-0 ■	44-1-15-1 ■	—	C
Slotted Knurled Head—Dust and Moisture Seal	6.35/.250	12.70/.500	44-10-25-0 ■	44-10-25-1 ■	44-1-25-0 ■	44-1-25-1 ■	—	A
	12.70/.500	22.23/.875	44-10-26-0 ■	44-10-26-1 ■	44-1-26-0 ■	44-1-26-1 ■	—	B
	22.23/.875	31.75/1.250	44-10-27-0 ■	44-10-27-1 ■	44-1-27-0 ■	44-1-27-1 ■	—	C
Slotted Flush Head—Dust and Moisture Seal	6.35/.250	12.70/.500	44-10-19-0 ■	44-10-19-1 ■	44-1-19-0 ■	44-1-19-1 ■	—	A
	12.70/.500	22.23/.875	44-10-20-0 ■	44-10-20-1 ■	44-1-20-0 ■	44-1-20-1 ■	—	B
	22.23/.875	31.75/1.250	44-10-21-0 ■	44-10-21-1 ■	44-1-21-0 ■	44-1-21-1 ■	—	C
No. 66 MANUAL-ADJUSTING								
Knurled Head	3.18/.125	7.94/.313	66-10-1-0 ■	66-10-1-1 ■	66-1-1-0 ■	66-1-1-1 ■	—	A
	6.35/.250	17.46/.688	66-10-2-0 ■	66-10-2-1 ■	66-1-2-0 ■	66-1-2-1 ■	—	B
	15.88/.625	26.99/1.063	66-10-3-0 ■	66-10-3-1 ■	66-1-3-0 ■	66-1-3-1 ■	—	C
Knurled Head With T-bar	3.18/.125	7.94/.313	66-10-7-0 ■	66-10-7-1 ■	66-1-7-0 ■	66-1-7-1 ■	—	A
	6.35/.250	17.46/.688	66-10-8-0 ■	66-10-8-1 ■	66-1-8-0 ■	66-1-8-1 ■	—	B
	15.88/.625	26.99/1.063	66-10-9-0 ■	66-10-9-1 ■	66-1-9-0 ■	66-1-9-1 ■	—	C
Slotted Knurled Head	3.18/.125	7.94/.313	66-10-10-0 ■	66-10-10-1 ■	66-1-10-0 ■	66-1-10-1 ■	—	A
	6.35/.250	17.46/.688	66-10-11-0 ■	66-10-11-1 ■	66-1-11-0 ■	66-1-11-1 ■	—	B
	15.88/.625	26.99/1.063	66-10-12-0 ■	66-10-12-1 ■	66-1-12-0 ■	66-1-12-1 ■	—	C
Slotted Flush Head	3.18/.125	7.94/.313	66-10-16-0 ■	66-10-16-1 ■	66-1-16-0 ■	66-1-16-1 ■	—	A
	6.35/.250	17.46/.688	66-10-17-0 ■	66-10-17-1 ■	66-1-17-0 ■	66-1-17-1 ■	—	B
	15.88/.625	26.99/1.063	66-10-18-0 ■	66-10-18-1 ■	66-1-18-0 ■	66-1-18-1 ■	—	C
Knurled Head—Dust and Moisture Seal	6.35/.250	11.11/.438	66-10-4-0 ■	66-10-4-1 ■	66-1-4-0 ■	66-1-4-1 ■	—	A
	9.53/.395	20.64/.813	66-10-5-0 ■	66-10-5-1 ■	66-1-5-0 ■	66-1-5-1 ■	—	B
	19.05/.750	30.16/1.188	66-10-6-0 ■	66-10-6-1 ■	66-1-6-0 ■	66-1-6-1 ■	—	C
Knurled Head—T-bar—Dust and Moisture Seal	6.35/.250	11.11/.438	66-10-13-0 ■	66-10-13-1 ■	66-1-13-0 ■	66-1-13-1 ■	—	A
	9.53/.375	20.64/.813	66-10-14-0 ■	66-10-14-1 ■	66-1-14-0 ■	66-1-14-1 ■	—	B
	19.05/.750	30.16/1.188	66-10-15-0 ■	66-10-15-1 ■	66-1-15-0 ■	66-1-15-1 ■	—	C
Slotted Flush Head—Dust and Moisture Seal	6.35/.250	11.11/.438	66-10-19-0 ■	66-10-19-1 ■	66-1-19-0 ■	66-1-19-1 ■	—	A
	9.53/.375	20.64/.813	66-10-20-0 ■	66-10-20-1 ■	66-1-20-0 ■	66-1-20-1 ■	—	B
	19.05/.750	30.16/1.188	66-10-21-0 ■	66-10-21-1 ■	66-1-21-0 ■	66-1-21-1 ■	—	C

PAWL STYLE AND POSITION (pre-assembled)



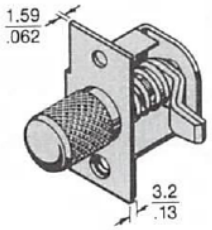
■ From stock, subject to prior sale.

†Registered tradename of Metal Coatings International, Inc.

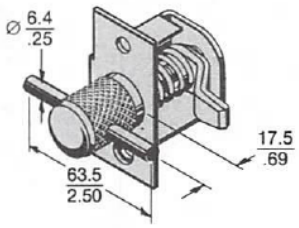
Adjustable-grip latches *LARGE SIZE*

Styles:

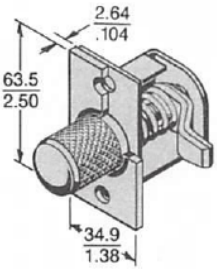
Knurled head



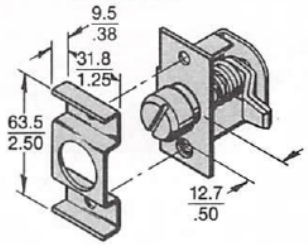
Knurled head with T-bar



Dust and moisture seal

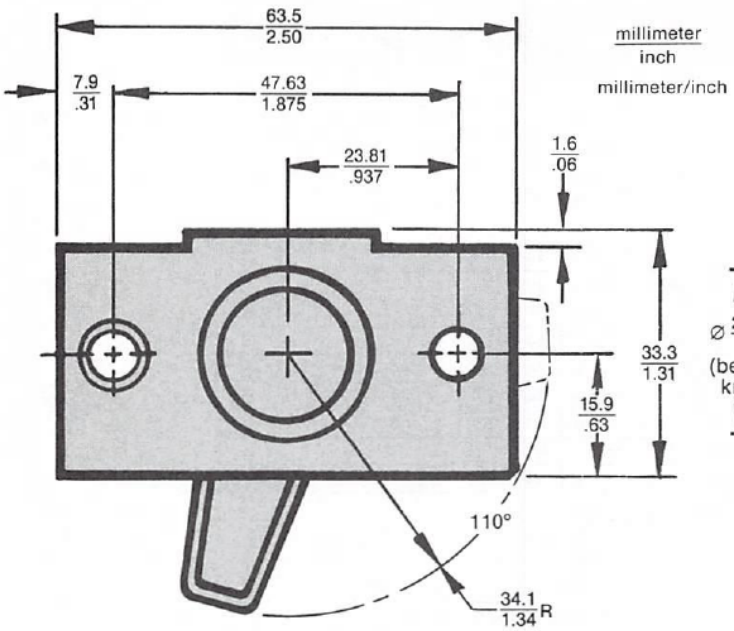


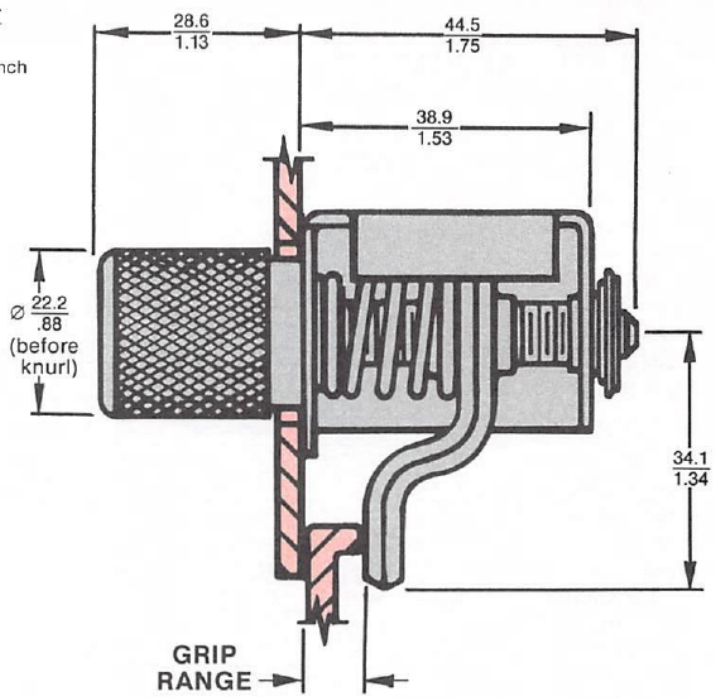
Slotted flush head with spacer



ACTUAL SIZE

No. 14 SELF-ADJUSTING





MATERIAL and FINISH

PAWL: malleable iron.
BUSHING: low carbon steel or brass.
RETAINING WASHER: 1010 steel.
Ferrous components listed above are zinc plated plus yellow chromate dip.
SPRING and CONICAL SPRING: 302 stainless steel, passivated.
HOUSING: 1010 steel, DACROTIZED†.
SCREW: low carbon steel, DACROTIZED† plus bright metallic organic coating or chrome plated (see table).

T-BAR: steel, zinc plated plus bright chromate dip.

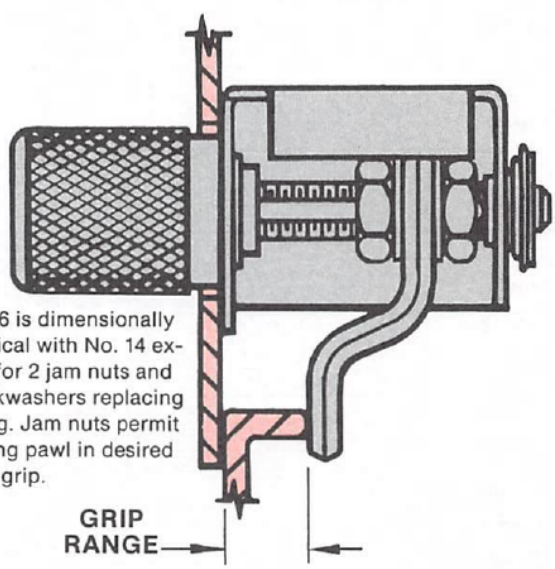
SPACER: 1010 steel, DACROTIZED†.

For models with dust and moisture seals
GASKET: neoprene.
RETAINER PLATE: 1010 steel, DACROTIZED†.

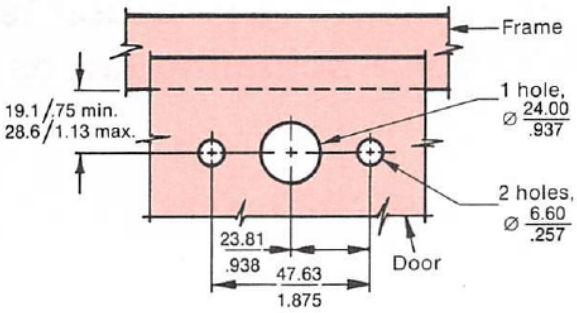
For No. 36 Manual-adjusting styles
Springs are replaced by two JAM NUTS: steel, DACROTIZED†.
LOCKWASHERS: spring steel, DACROTIZED†.

†Registered tradename of Metal Coatings International, Inc.

No. 36 MANUAL-ADJUSTING



No. 36 is dimensionally identical with No. 14 except for 2 jam nuts and 2 lockwashers replacing spring. Jam nuts permit locking pawl in desired fixed grip.



INSTALLATION

1. Prepare door.
2. Pass knob of latch through center hole and secure with two rivets or screws.
3. For T-bar models press T-bar into cross hole in knob.

■ From stock, subject to prior sale.

millimeter / inch

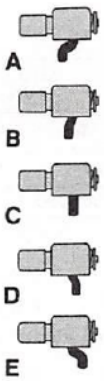
millimeter/inch

LEFT HAND ASSEMBLIES turn counterclockwise to latch.

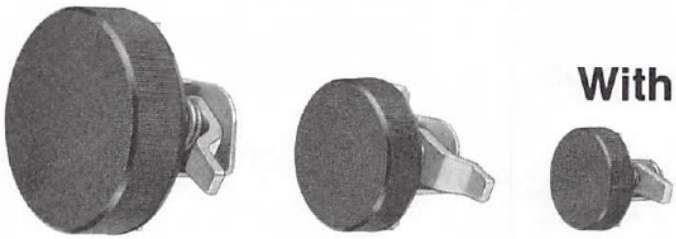
RIGHT HAND ASSEMBLIES. turn clockwise to latch.

STYLE	GRIP		LEFT HAND		RIGHT HAND		Pawl style
	MIN.	MAX.	Dacrotized†	Chrome finish	Dacrotized†	Chrome finish	
No. 14 SELF-ADJUSTING							
Knurled Head	3.18/.125	15.88/.625	14-40-11-11 ■	14-40-11-12 ■	14-10-11-11 ■	14-10-11-12 ■	A
	14.29/.563	23.81/.938	14-40-12-11 ■	14-40-12-12 ■	14-10-12-11 ■	14-10-12-12 ■	B
	20.64/.813	31.75/1.250	14-40-13-11 ■	14-40-13-12 ■	14-10-13-11 ■	14-10-13-12 ■	D
	28.58/1.125	38.10/1.500	14-40-14-11 ■	14-40-14-12 ■	14-10-14-11 ■	14-10-14-12 ■	E
Knurled Head With T-bar	3.18/.125	15.88/.625	14-40-51-11 ■	14-40-51-12 ■	14-10-51-11 ■	14-10-51-12 ■	A
	14.29/.563	23.81/.938	14-40-52-11 ■	14-40-52-12 ■	14-10-52-11 ■	14-10-52-12 ■	B
	20.64/.813	31.75/1.250	14-40-53-11 ■	14-40-53-12 ■	14-10-53-11 ■	14-10-53-12 ■	D
	28.58/1.125	38.10/1.500	14-40-54-11 ■	14-40-54-12 ■	14-10-54-11 ■	14-10-54-12 ■	E
Slotted Flush Head	3.18/.125	15.88/.625	14-40-71-11 ■	14-40-71-12 ■	14-10-71-11 ■	14-10-71-12 ■	A
	14.29/.563	23.81/.938	14-40-72-11 ■	14-40-72-12 ■	14-10-72-11 ■	14-10-72-12 ■	B
	20.64/.813	31.75/1.250	14-40-73-11 ■	14-40-73-12 ■	14-10-73-11 ■	14-10-73-12 ■	D
	28.58/1.125	38.10/1.500	14-40-74-11 ■	14-40-74-12 ■	14-10-74-11 ■	14-10-74-12 ■	E
Slotted Flush Head With Spacer	12.70/.500	25.40/1.000	14-40-61-11 ■	14-40-61-12 ■	14-10-61-11 ■	14-10-61-12 ■	A
	23.81/.938	33.34/1.313	14-40-62-11 ■	14-40-62-12 ■	14-10-62-11 ■	14-10-62-12 ■	B
	30.16/1.188	41.28/1.625	14-40-63-11 ■	14-40-63-12 ■	14-10-63-11 ■	14-10-63-12 ■	D
	38.10/1.500	47.63/1.875	14-40-64-11 ■	14-40-64-12 ■	14-10-64-11 ■	14-10-64-12 ■	E
Knurled Head With Dust and Moisture Seal	6.35/.250	19.05/.750	14-940-11-11 ■	14-940-11-12 ■	14-910-11-11 ■	14-910-11-12 ■	A
	17.46/.688	26.99/1.063	14-940-12-11 ■	14-940-12-12 ■	14-910-12-11 ■	14-910-12-12 ■	B
	23.81/.938	34.93/1.375	14-940-13-11 ■	14-940-13-12 ■	14-910-13-11 ■	14-910-13-12 ■	D
	31.75/1.250	41.28/1.625	14-940-14-11 ■	14-940-14-12 ■	14-910-14-11 ■	14-910-14-12 ■	E
Knurled Head With T-Bar— Dust and Moisture Seal	6.35/.250	19.05/.750	14-940-51-11 ■	14-940-51-12 ■	14-910-51-11 ■	14-910-51-12 ■	A
	17.46/.688	26.99/1.063	14-940-52-11 ■	14-940-52-12 ■	14-910-52-11 ■	14-910-52-12 ■	B
	23.81/.938	34.93/1.375	14-940-53-11 ■	14-940-53-12 ■	14-910-53-11 ■	14-910-53-12 ■	D
	31.75/1.250	41.28/1.625	14-940-54-11 ■	14-940-54-12 ■	14-910-54-11 ■	14-910-54-12 ■	E
Slotted Flush Head—Dust & Moisture Seal (No spacer)	6.35/.250	19.05/.750	14-940-71-11 ■	14-940-71-12 ■	14-910-71-11 ■	14-910-71-12 ■	A
	17.46/.688	26.99/1.063	14-940-72-11 ■	14-940-72-12 ■	14-910-72-11 ■	14-910-72-12 ■	B
	23.81/.938	34.93/1.375	14-940-73-11 ■	14-940-73-12 ■	14-910-73-11 ■	14-910-73-12 ■	D
	31.75/1.250	41.28/1.625	14-940-74-11 ■	14-940-74-12 ■	14-910-74-11 ■	14-910-74-12 ■	E
No. 36 MANUAL-ADJUSTING							
Knurled Head	1.59/.063	14.29/.563	36-10-4-0 ■	36-10-4-1 ■	36-1-4-0 ■	36-1-4-1 ■	A
	14.29/.563	26.99/1.063	36-10-5-0 ■	36-10-5-1 ■	36-1-5-0 ■	36-1-5-1 ■	C
	26.99/1.063	39.69/1.563	36-10-6-0 ■	36-10-6-1 ■	36-1-6-0 ■	36-1-6-1 ■	E
Knurled Head With T-Bar	1.59/.063	14.29/.563	36-10-1-0 ■	36-10-1-1 ■	36-1-1-0 ■	36-1-1-1 ■	A
	14.29/.563	26.99/1.063	36-10-2-0 ■	36-10-2-1 ■	36-1-2-0 ■	36-1-2-1 ■	C
	26.99/1.063	39.69/1.563	36-10-3-0 ■	36-10-3-1 ■	36-1-3-0 ■	36-1-3-1 ■	E
Slotted Flush Head	1.59/.063	14.29/.563	36-11-13-0 ■	36-11-13-1 ■	36-2-13-0 ■	36-2-13-1 ■	A
	14.29/.563	26.99/1.063	36-11-14-0 ■	36-11-14-1 ■	36-2-14-0 ■	36-2-14-1 ■	C
	26.99/1.063	39.69/1.563	36-11-15-0 ■	36-11-15-1 ■	36-2-15-0 ■	36-2-15-1 ■	E
Slotted Flush Head With Spacer	11.11/.438	23.81/.938	36-10-13-0 ■	36-10-13-1 ■	36-1-13-0 ■	36-1-13-1 ■	A
	23.81/.938	36.51/1.438	36-10-14-0 ■	36-10-14-1 ■	36-1-14-0 ■	36-1-14-1 ■	C
	36.51/1.438	49.21/1.938	36-10-15-0 ■	36-10-15-1 ■	36-1-15-0 ■	36-1-15-1 ■	E
Knurled Head With Dust and Moisture Seal	4.37/.172	17.07/.672	36-10-10-0 ■	36-10-10-1 ■	36-1-10-0 ■	36-1-10-1 ■	A
	17.07/.672	29.77/1.172	36-10-11-0 ■	36-10-11-1 ■	36-1-11-0 ■	36-1-11-1 ■	C
	29.77/1.172	42.47/1.672	36-10-12-0 ■	36-10-12-1 ■	36-1-12-0 ■	36-1-12-1 ■	E
Knurled Head with T-bar—Dust and Moisture Seal	4.37/.172	17.07/.672	36-10-7-0 ■	36-10-7-1 ■	36-1-7-0 ■	36-1-7-1 ■	A
	17.07/.672	29.77/1.172	36-10-8-0 ■	36-10-8-1 ■	36-1-8-0 ■	36-1-8-1 ■	C
	29.77/1.172	42.47/1.672	36-10-9-0 ■	36-10-9-1 ■	36-1-9-0 ■	36-1-9-1 ■	E
Slotted Flush Head Dust & Moisture Seal (No spacer)	4.37/.172	17.07/.672	36-10-16-0 ■	36-10-16-1 ■	36-1-16-0 ■	36-1-16-1 ■	A
	17.07/.672	29.77/1.172	36-10-17-0 ■	36-10-17-1 ■	36-1-17-0 ■	36-1-17-1 ■	C
	29.77/1.172	42.47/1.672	36-10-18-0 ■	36-10-18-1 ■	36-1-18-0 ■	36-1-18-1 ■	E

PAWL STYLE AND POSITION (pre-assembled)

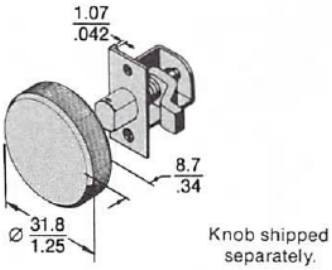


†Registered tradename of Metal Coatings International, Inc.

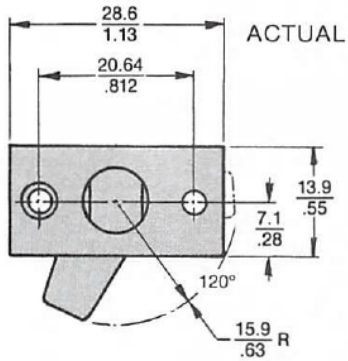


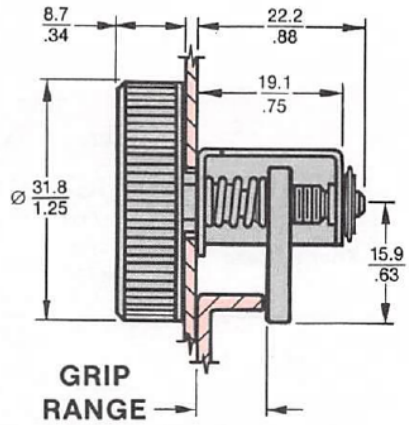
Adjustable-grip Latches
With black, low-profile actuating knobs.

No. 43 ADJUSTABLE-GRIP LATCH *MIDGET SIZE*



Knob shipped separately.





GRIP RANGE		PART NUMBERS Right hand assemblies
Min.	Max.	
3.18/.125	7.14/.281	43-1-**28**-0 ■
6.35/.250	13.49/.531	43-1-**29**-0 ■
12.70/.500	19.84/.781	43-1-**30**-0 ■

■ From stock, subject to prior sale.

RIGHT HAND ASSEMBLIES
turn knob clockwise to latch.

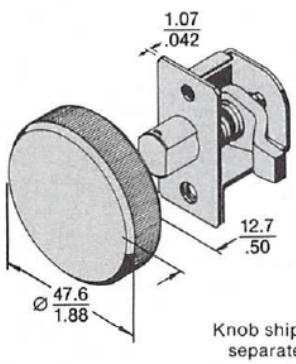
MATERIAL and FINISH
PAWL and RETAINING WASHER: 1010 steel.
BUSHING: 12L14 steel.
The components listed above are zinc plated plus yellow chromate dip.
SPRING: 17-7PH stainless steel, passivated.
CONICAL SPRING: 302 stainless steel, passivated.
HOUSING: 1010 steel, DACROTIZED†.
SCREW: 12L14 steel, DACROTIZED† plus bright metallic organic coating.
KNOB: nylon, black.

†Registered tradename of Metal Coatings International, Inc.

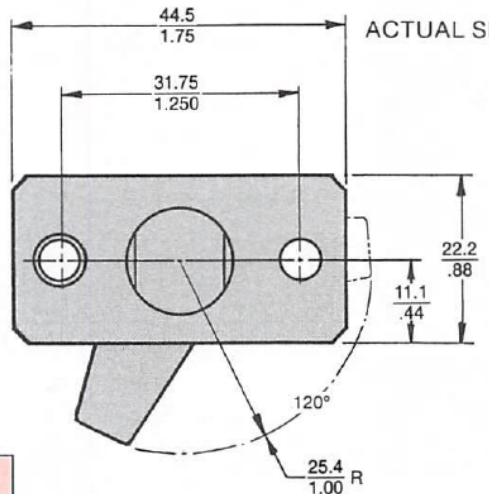
DOOR THICKNESS RANGE
0.8/.03 min. to 3.2/.13 max.

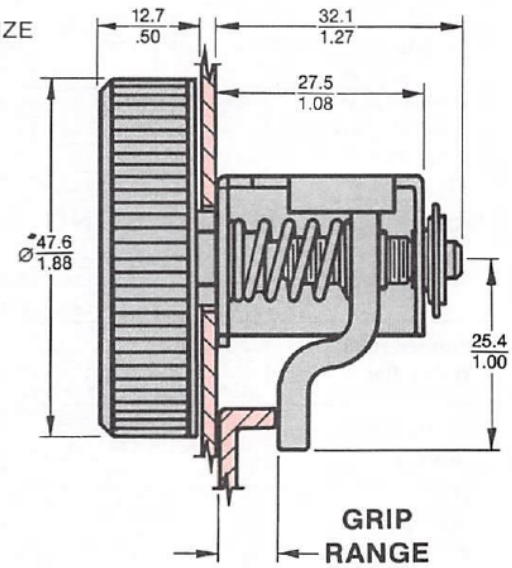
millimeter
inch
millimeter/inch

No. 44 ADJUSTABLE-GRIP LATCH *INTERMEDIATE SIZE*



Knob shipped separately.





GRIP RANGE		PART NUMBERS Right hand assemblies
Min.	Max.	
3.18/.125	9.53/.375	44-1-**34**-0 ■
9.53/.375	19.05/.750	44-1-**35**-0 ■
19.05/.750	28.58/1.125	44-1-**36**-0 ■

■ From stock, subject to prior sale.

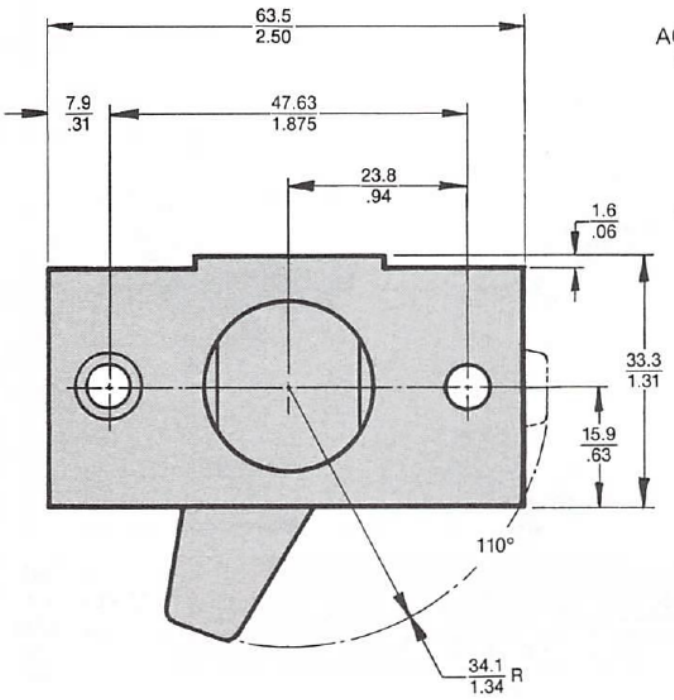
RIGHT HAND ASSEMBLIES
turn knob clockwise to latch.

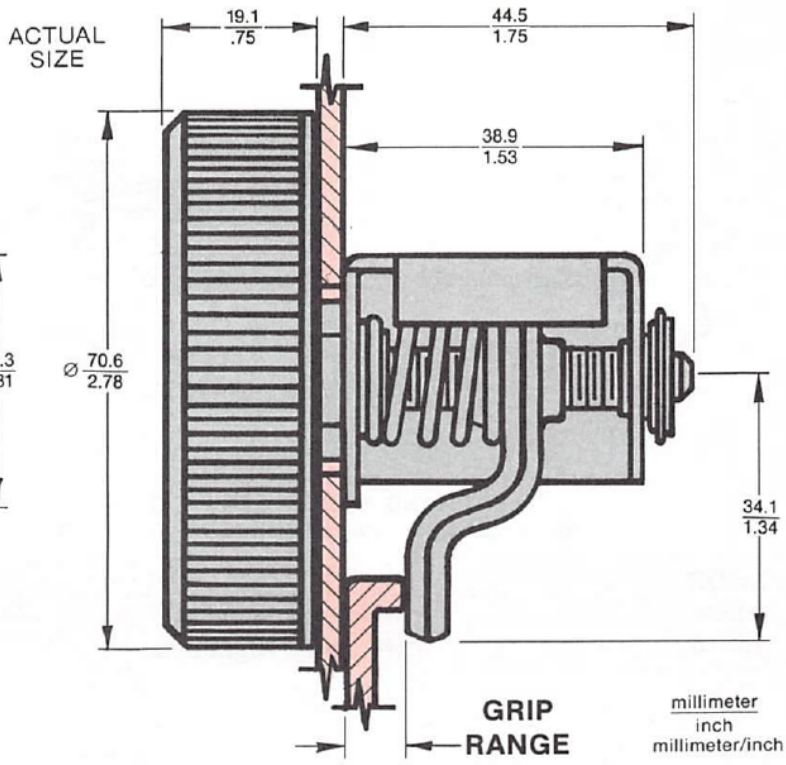
MATERIAL and FINISH
RETAINING WASHER: 1010 steel.
BUSHING: low carbon steel.
The components listed above are zinc plated plus yellow chromate dip.
SPRING and CONICAL SPRING: 302 stainless steel, passivated.
PAWL and HOUSING: 1010 steel, DACROTIZED†.
SCREW: low carbon steel, DACROTIZED† plus bright metallic organic coating.
KNOB: nylon, black.

†Registered tradename of Metal Coatings International, Inc.

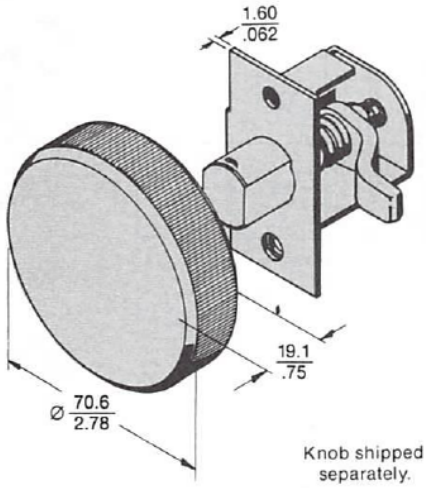
DOOR THICKNESS RANGE
0.8/.03 min. to 6.4/.25 max.

No. 14 ADJUSTABLE-GRIP LATCH *LARGE SIZE*





millimeter
inch
millimeter/inch



Knob shipped separately.

GRIP RANGE		PART NUMBERS Right hand assemblies
Min.	Max.	
3.18/.125	15.88/.625	14-10-**81**-11 ■
14.29/.563	23.81/.938	14-10-**82**-11 ■
20.64/.813	31.75/1.250	14-10-**83**-11 ■
28.58/1.125	38.10/1.500	14-10-**84**-11 ■

■ From stock, subject to prior sale.

RIGHT HAND ASSEMBLIES
turn knob clockwise to latch.

DOOR THICKNESS RANGE
0.8/.03 min. to 9.5/.38 max.

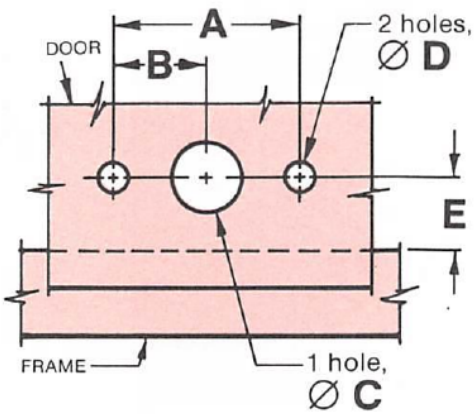
MATERIAL and FINISH

PAWL: malleable iron.
BUSHING: low carbon steel or brass.
RETAINING WASHER: 1010 steel.
Ferrous components listed above are zinc plated plus yellow chromate dip.
SPRING and CONICAL SPRING: 302 stainless steel, passivated.
HOUSING: 1010 steel, DACROTIZED†.
SCREW: low carbon steel, DACROTIZED† plus bright metallic organic coating.
KNOB: ABS, black.

†Registered tradename of Metal Coatings International, Inc.

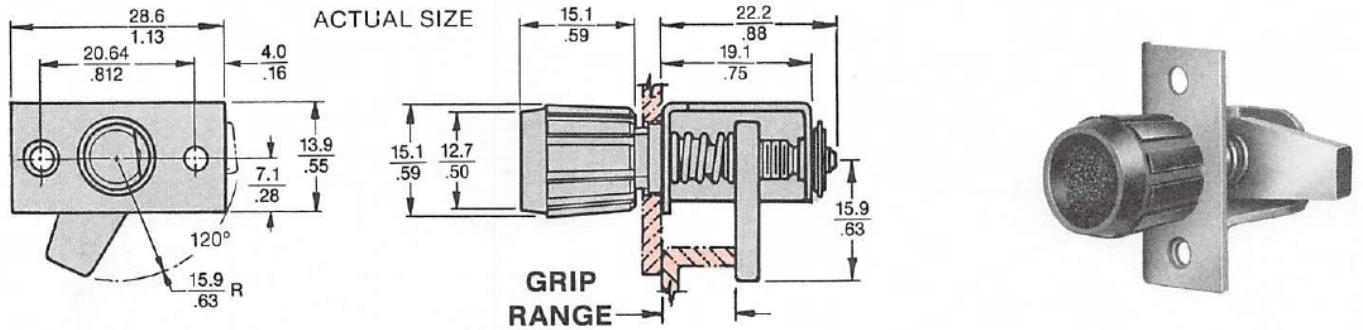
INSTALLATION

1. Prepare door.
2. Install latch with screws or rivets.
3. Press knob onto barbed shaft.
   NOTE: Once pressed onto shaft, knob cannot be removed.



A	B	⌀C	⌀D	E min.	E max.	Screw Size	Rivet Size
No. 43							
20.64/.812	10.32/.406	9.50/.375	3.25/.128	12.30/.484	13.11/.516	3.0mm No. 5	⌀ 3.18/.125
No. 44							
31.75/1.250	15.88/.625	15.88/.625	4.90/.193	19.05/.750	22.23/.875	5.0mm No.10	⌀ 4.76/.188
No. 14							
47.63/1.875	23.81/.938	24.00/.938	6.50/.257	19.05/.750	28.58/1.125	6.0mm ¼	⌀ 6.35/.250

Adjustable-grip latches
No. 43 with black nylon knob



millimeter
inch

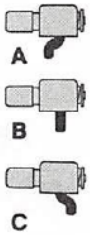
millimeter/inch

LEFT HAND ASSEMBLIES
turn knob counterclockwise to latch.

RIGHT HAND ASSEMBLIES.
turn knob clockwise to latch.

DOOR THICKNESS	GRIP RANGE		PART NUMBERS				Pawl position	D	E
			with knob supplied		without knob				
	MIN.	MAX.	Left hand	Right hand	Left hand	Right hand			
.78/.031	3.18/.125	7.14/.281	43-99-144-**11** ■	43-99-124-**11** ■	43-99-144-**41** ■	43-99-124-**41** ■	A	10.72 .422	9.52 .375
to	6.35/.250	13.49/.531	43-99-144-**12** ■	43-99-124-**12** ■	43-99-144-**42** ■	43-99-124-**42** ■	B		
4.32/.170	12.70/.500	19.84/.781	43-99-144-**13** ■	43-99-124-**13** ■	43-99-144-**43** ■	43-99-124-**43** ■	C		
4.34/.171	3.18/.125	7.14/.281	43-99-230-**11** ■	43-99-199-**11** ■	43-99-230-**41** ■	43-99-199-**41** ■	A	13.89 .547	12.70 .500
to	6.35/.250	13.49/.531	43-99-230-**12** ■	43-99-199-**12** ■	43-99-230-**42** ■	43-99-199-**42** ■	B		
7.52/.296	12.70/.500	19.84/.781	43-99-230-**13** ■	43-99-199-**13** ■	43-99-230-**43** ■	43-99-199-**43** ■	C		
7.54/.297	3.18/.125	7.14/.281	43-99-127-**11** ■	43-99-125-**11** ■	43-99-127-**41** ■	43-99-125-**41** ■	A	17.07 .672	15.87 .625
to	6.35/.250	13.49/.531	43-99-127-**12** ■	43-99-125-**12** ■	43-99-127-**42** ■	43-99-125-**42** ■	B		
10.72/.422	12.70/.500	19.84/.781	43-99-127-**13** ■	43-99-125-**13** ■	43-99-127-**43** ■	43-99-125-**43** ■	C		

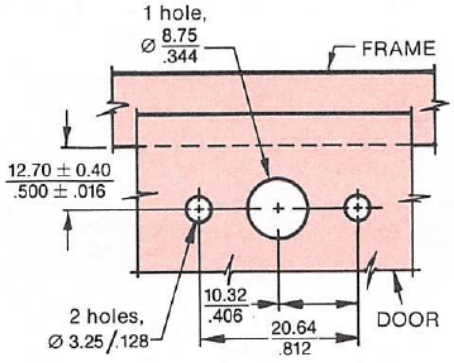
PAWL STYLE AND POSITION (pre-assembled)



■ From stock, subject to prior sale.

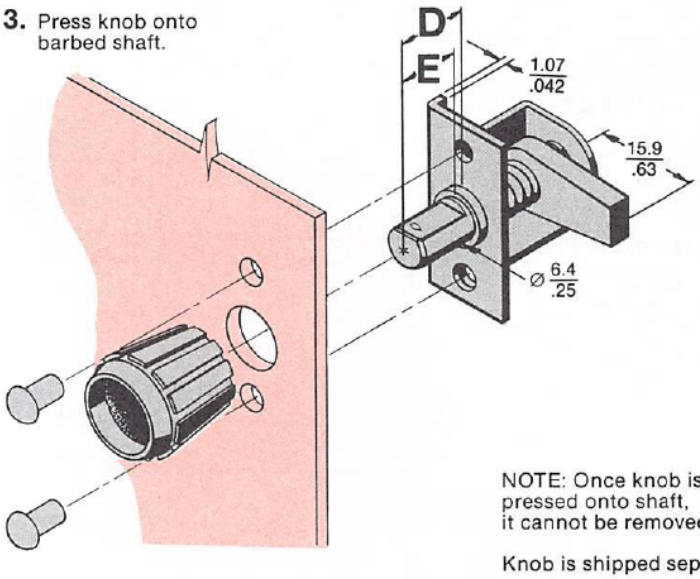
INSTALLATION

1. Prepare door.



2. Pass barbed shaft through hole in door. Attach latch with screws or rivets.

3. Press knob onto barbed shaft.



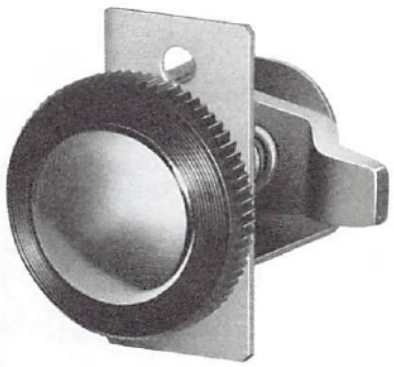
MATERIAL and FINISH
PAWL and RETAINING WASHER: 1010 steel.
SCREW and BUSHING: 12L14 steel.
The components listed above are zinc plated plus yellow chromate dip.
SPRING: 17-7PH stainless steel, passivated.
CONICAL SPRING: 302 stainless steel, passivated.
HOUSING: 1010 steel, DACROTIZED†.
KNOB: nylon, black.

†Registered tradename of Metal Coatings International, Inc.

NOTE: Once knob is pressed onto shaft, it cannot be removed.

Knob is shipped separately.

Adjustable-grip latches
No. 44 with black nylon knob



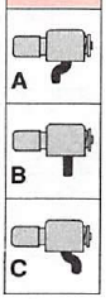
millimeter
inch
millimeter/inch

LEFT HAND ASSEMBLIES
turn knob counterclockwise to latch.

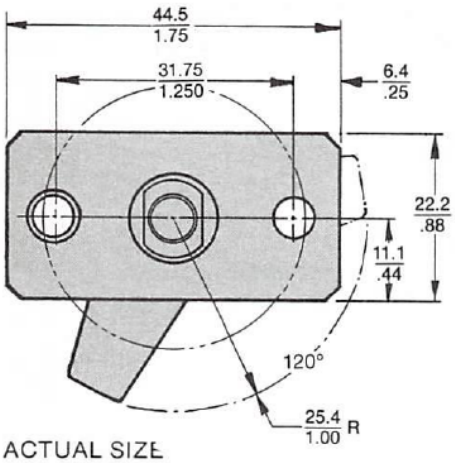
RIGHT HAND ASSEMBLIES.
turn knob clockwise to latch.

Panel Thickness	GRIP RANGE MIN.	GRIP RANGE MAX.	PART NUMBERS Left Hand	PART NUMBERS Right Hand	Pawl Style
1.17/.046	3.18/.125	9.53/.375	44-99-117-**11** ■	44-99-116-**11** ■	A
to	9.53/.375	19.05/.750	44-99-117-**12** ■	44-99-116-**12** ■	B
2.77/.109	19.05/.750	28.58/1.125	44-99-117-**13** ■	44-99-116-**13** ■	C
2.77/.109	3.18/.125	9.53/.375	44-99-120-**11** ■	44-99-119-**11** ■	A
to	9.53/.375	19.05/.750	44-99-120-**12** ■	44-99-119-**12** ■	B
4.37/.172	19.05/.750	28.58/1.125	44-99-120-**13** ■	44-99-119-**13** ■	C
4.37/.172	3.18/.125	9.53/.375	44-99-122-**11** ■	44-99-121-**11** ■	A
to	9.53/.375	19.05/.750	44-99-122-**12** ■	44-99-121-**12** ■	B
5.94/.234	19.05/.750	28.58/1.125	44-99-122-**13** ■	44-99-121-**13** ■	C

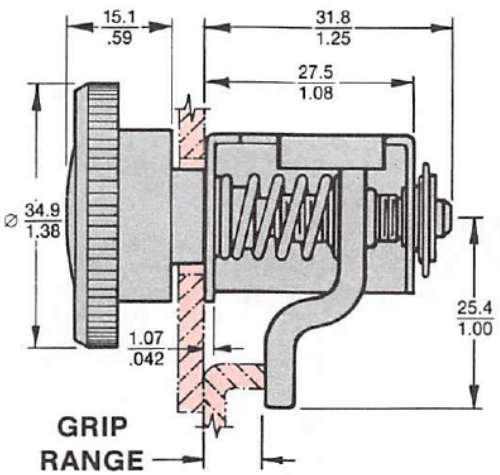
Pawl style



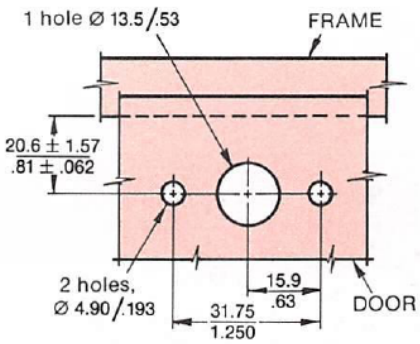
■ From stock, subject to prior sale.



ACTUAL SIZE

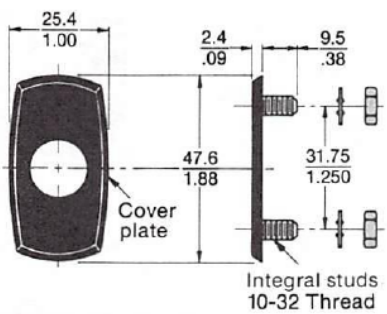


INSTALLATION



1. Prepare door.
2. Attach latch body with rivets or screws.
3. Attach knob and snap in chrome plated cap.

Trimplates

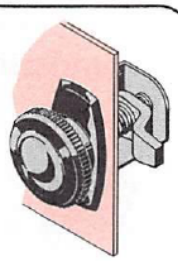


MATERIAL and FINISH

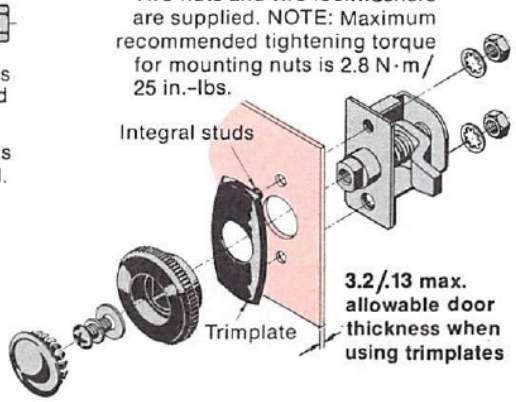
PLATE: 1010 steel, phosphate dip plus matte black polyester powder coated.
STUDS: 10B21 steel, phosphate dip.
NUTS are steel, DACROTIZED†.
LOCKWASHERS are spring steel, DACROTIZED†.

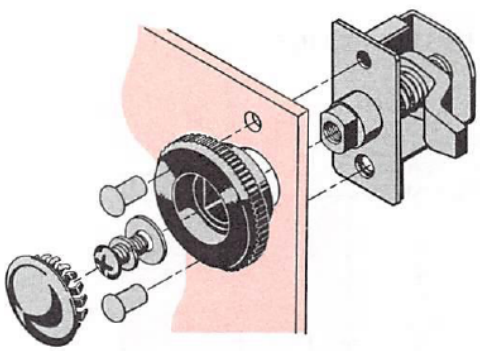
Trimplate Part Number 44-30-101-10 ■

■ From stock, subject to prior sale.



Two nuts and two lockwashers are supplied. NOTE: Maximum recommended tightening torque for mounting nuts is 2.8 N·m/ 25 in.-lbs.





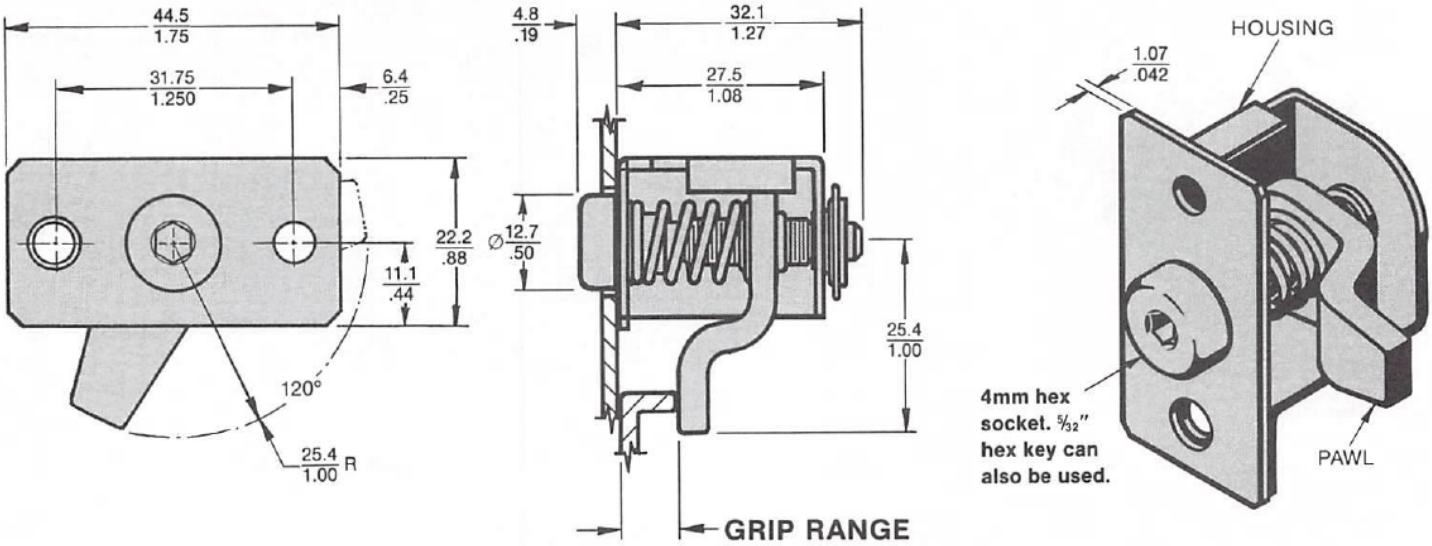
MATERIAL and FINISH

SCREW and BUSHING: low carbon steel.
RETAINING WASHER: 1010 steel.
LOCKWASHER: 1060 steel.
FLATWASHER: steel.
The components listed above are zinc plated plus yellow chromate dip.
SPRING and CONICAL SPRING: 302 stainless steel, passivated.
PAWL and HOUSING: 1010 steel, DACROTIZED†.
KNOB: nylon, black.
CAP: 1010 steel, chrome plated.
MACHINE SCREW: steel, zinc plated plus bright chromate dip.

†Registered tradename of Metal Coatings International, Inc.

Adjustable-grip latches
No. 44 low profile head style with *hex-socket drive*

ACTUAL SIZE



millimeter
inch
millimeter/inch

Screw Finish	Grip Range	PART NUMBERS	
		Left Hand	Right Hand
Zinc plated	3.18/.125 to 9.53/.375	44-10-**22**-0 ■	44-1-**22**-0 ■
	9.53/.375 to 19.05/.750	44-10-**23**-0 ■	44-1-**23**-0 ■
	19.05/.750 to 28.58/1.125	44-10-**24**-0 ■	44-1-**24**-0 ■
Chrome plated	3.18/.125 to 9.53/.375	44-10-**22**-1 ■	44-1-**22**-1 ■
	9.53/.375 to 19.05/.750	44-10-**23**-1 ■	44-1-**23**-1 ■
	19.05/.750 to 28.58/1.125	44-10-**24**-1 ■	44-1-**24**-1 ■

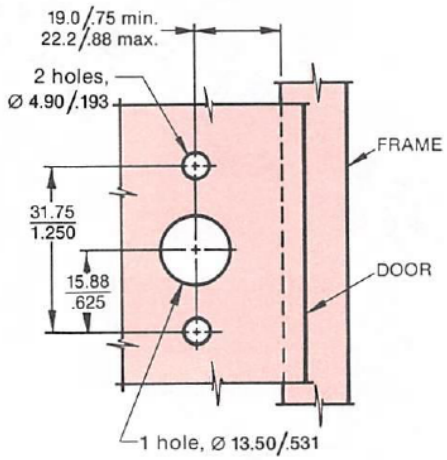
■ From stock, subject to prior sale.

MATERIAL and FINISH

RETAINING WASHER: 1010 steel.
BUSHING: low carbon steel.
The components listed above are zinc plated with yellow chromate dip.
SPRING and CONICAL SPRING: 302 stainless steel, passivated.
PAWL and HOUSING: 1010 steel, DACROTIZED†.
SCREW: low carbon steel, zinc plated plus bright chromate dip or chrome plated (see table).

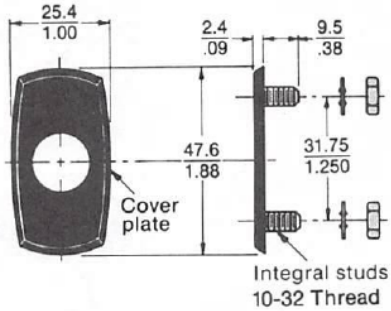
†Registered tradename of Metal Coatings International, Inc.

INSTALLATION



1. Drill or punch three holes as shown.
2. Pass head of latch through center hole and fasten in place with two rivets or screws.

Trimplates

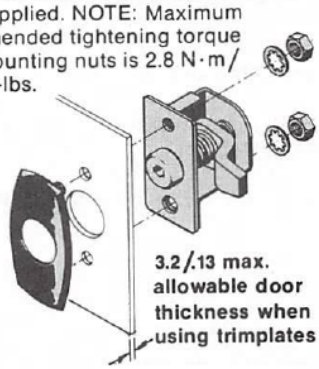


Trimplate Part Number 44-30-101-10 ■

■ From stock, subject to prior sale.



Two nuts and two lockwashers are supplied. NOTE: Maximum recommended tightening torque for mounting nuts is 2.8 N·m/ 25 in.-lbs.



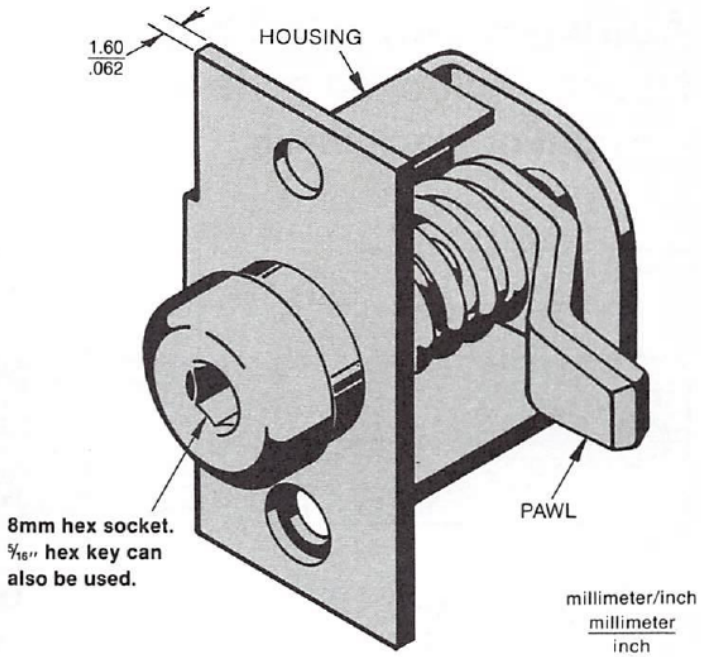
MATERIAL and FINISH

PLATE: 1010 steel, phosphate dip plus matte black polyester powder coated.
STUDS: 10B21 steel, phosphate dip.
NUTS are steel, DACROTIZED†.
LOCKWASHERS spring steel, DACROTIZED†.

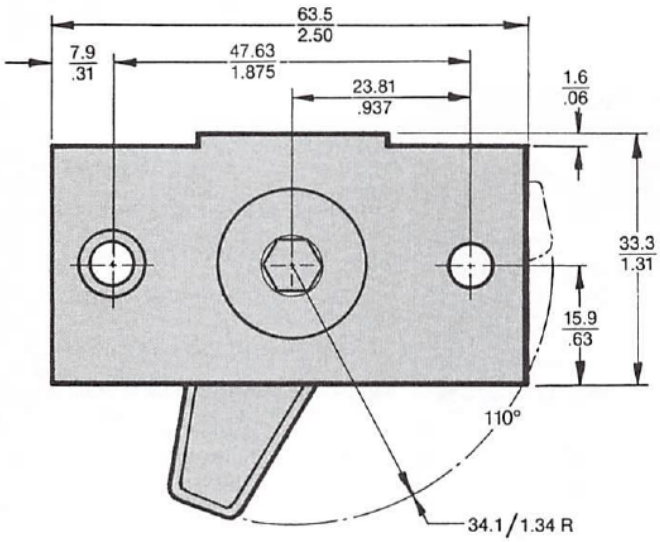
Adjustable-grip latches
No. 14 low profile head style with *hex-socket drive*

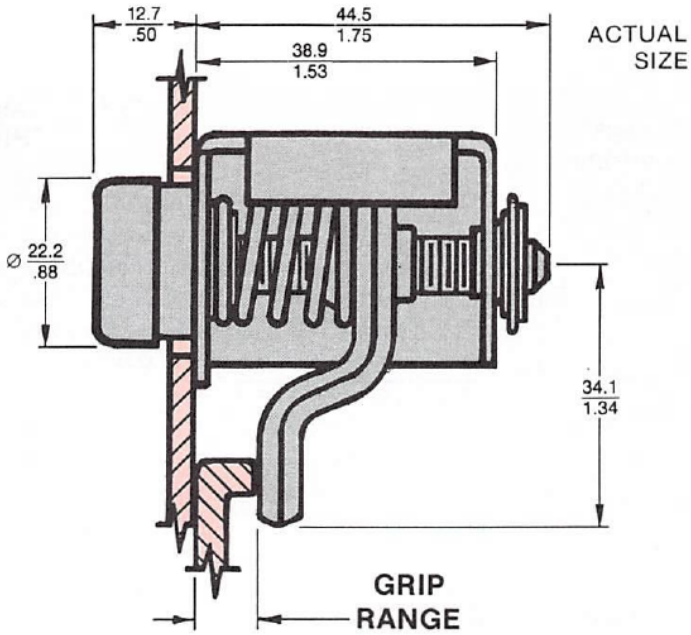
Screw Finish	GRIP RANGE	PART NUMBERS Right hand assemblies
zinc plated	3.18/.125 to 15.88/.625	14-10-**91**-11 ■
	14.29/.563 to 23.81/.938	14-10-**92**-11 ■
	20.64/.813 to 31.75/1.250	14-10-**93**-11 ■
	28.58/1.125 to 38.10/1.500	14-10-**94**-11 ■
chrome plated	3.18/.125 to 15.88/.625	14-10-**91**-12 ■
	14.29/.563 to 23.81/.938	14-10-**92**-12 ■
	20.64/.813 to 31.75/1.250	14-10-**93**-12 ■
	28.58/1.125 to 38.10/1.500	14-10-**94**-12 ■

■ From stock, subject to prior sale.



millimeter/inch
millimeter
inch

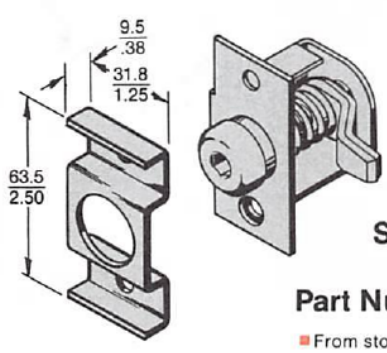




MATERIAL and FINISH

BUSHING: low carbon steel or brass.
PAWL: malleable iron. RETAINING WASHER: 1010 steel.
Ferrous components listed above are zinc plated plus yellow chromate dip.
SPRING and CONICAL SPRING: 302 stainless steel, passivated.
HOUSING: 1010 steel, DACROTIZED†.
SCREW: low carbon steel, zinc plated plus bright chromate dip or chrome plated (see table).
SPACER: 1010 steel, DACROTIZED†.

†Registered tradename of Metal Coatings International, Inc.

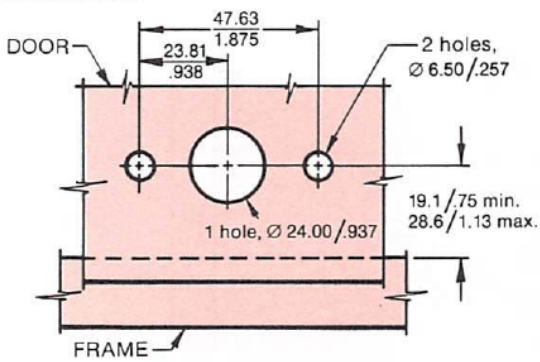


SPACER

Spacer is optional. Order separately. Part Number 14-7-11-15. ■

■ From stock, subject to prior sale.

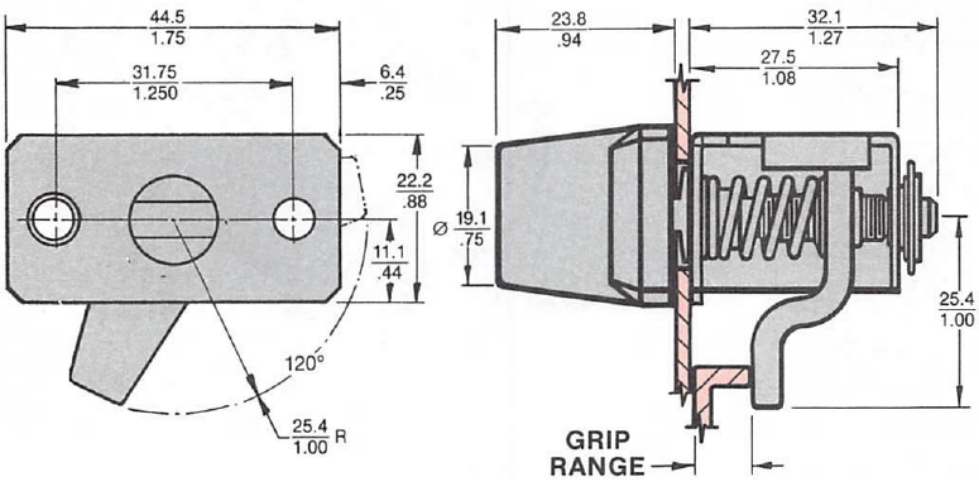
INSTALLATION

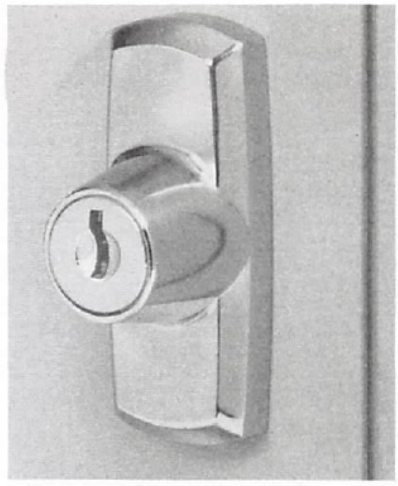


1. Drill or punch three holes as shown.
2. Pass head of latch through center hole and fasten in place with two rivets or screws.

Adjustable-grip latches
No. 44 keylocked style
• Bright or black finish

ACTUAL SIZE





Lock housing finish	Grip Range	PART NUMBERS BY DOOR THICKNESS			
		1.07/.042 to 2.36/.093	2.36/.093 to 3.96/.156	3.96/.156 to 5.37/.218	5.37/.218 to 7.14/.281
zinc plated	3.18/.125 to 9.53/.375	44-99-222-**51** ■	44-99-223-**51** ■	44-99-224-**51** ■	44-99-225-**51** ■
	9.53/.375 to 19.05/.750	44-99-222-**52** ■	44-99-223-**52** ■	44-99-224-**52** ■	44-99-225-**52** ■
	19.05/.750 to 28.58/1.125	44-99-222-**53** ■	44-99-223-**53** ■	44-99-224-**53** ■	44-99-225-**53** ■
chrome plated	3.18/.125 to 9.53/.375	44-99-222-**61** ■	44-99-223-**61** ■	44-99-224-**61** ■	44-99-225-**61** ■
	9.53/.375 to 19.05/.750	44-99-222-**62** ■	44-99-223-**62** ■	44-99-224-**62** ■	44-99-225-**62** ■
	19.05/.750 to 28.58/1.125	44-99-222-**63** ■	44-99-223-**63** ■	44-99-224-**63** ■	44-99-225-**63** ■
matte black polyester powder coating	3.18/.125 to 9.53/.375	44-99-222-**71** ■	44-99-223-**71** ■	44-99-224-**71** ■	44-99-225-**71** ■
	9.53/.375 to 19.05/.750	44-99-222-**72** ■	44-99-223-**72** ■	44-99-224-**72** ■	44-99-225-**72** ■
	19.05/.750 to 28.58/1.125	44-99-222-**73** ■	44-99-223-**73** ■	44-99-224-**73** ■	44-99-225-**73** ■

■ From stock, subject to prior sale.

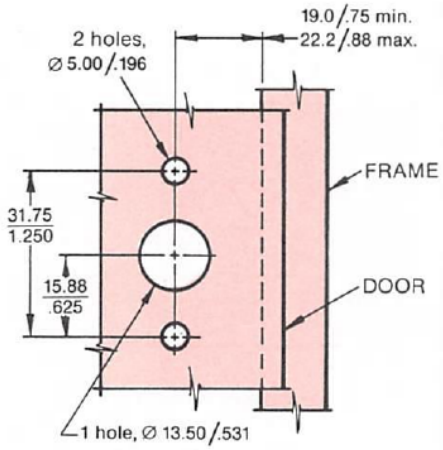
MATERIAL and FINISH

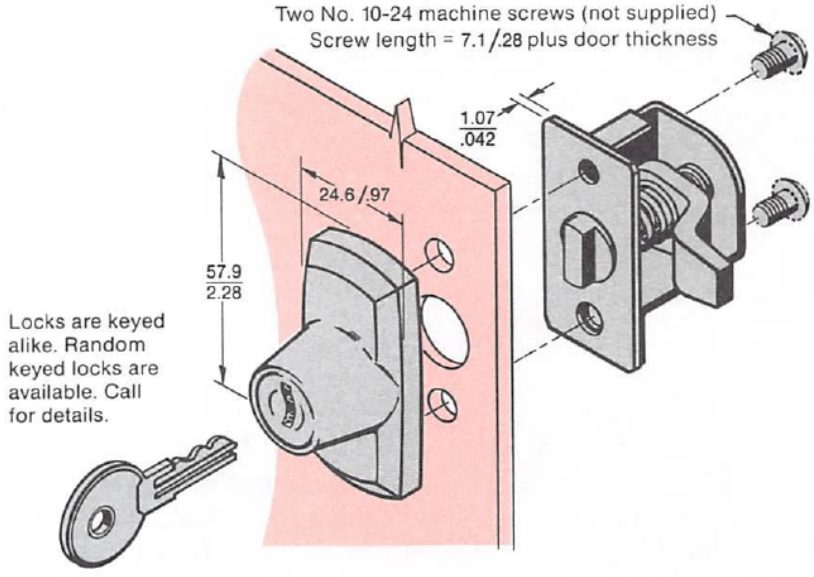
RETAINING WASHER: 1010 steel.
BUSHING: low carbon steel.
The components listed above are zinc plated plus yellow chromate dip.
SPRING and CONICAL SPRING: 302 stainless steel, passivated.
PAWL and HOUSING: 1010 steel, DACROTIZED†.
SCREW: low carbon steel, yellow chromate dip.

LOCK HOUSING: die cast zinc, zinc plated plus bright chromate dip, chrome plated or matte black polyester powder coated.
LOCK PLUG: die cast zinc, chrome plated or matte black polyester powder coated to match lock housing.
KEYS: brass, natural.

†Registered tradename of Metal Coatings International, Inc.

INSTALLATION



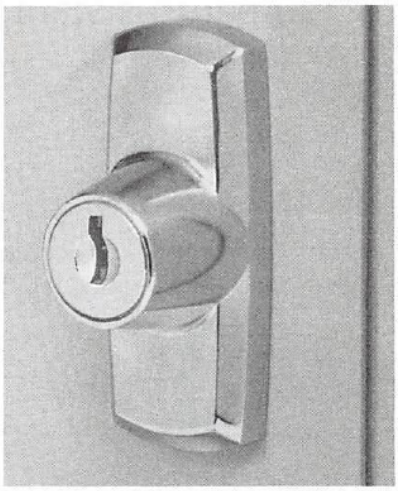


Locks are keyed alike. Random keyed locks are available. Call for details.

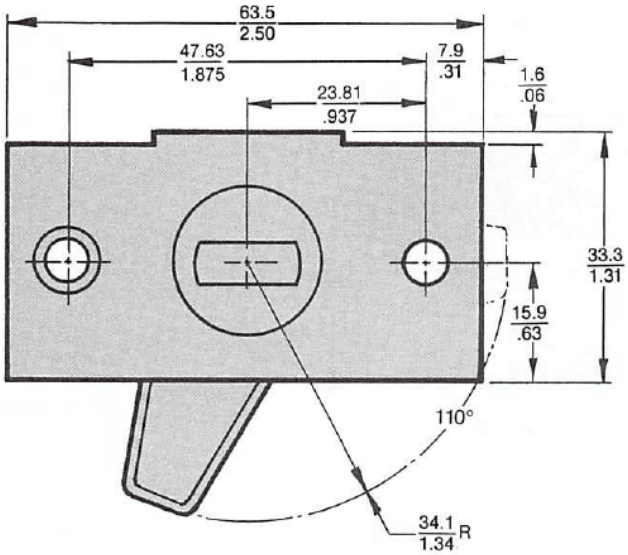
Adjustable-grip latches
No. 14 keylocked style
• Bright or black finish

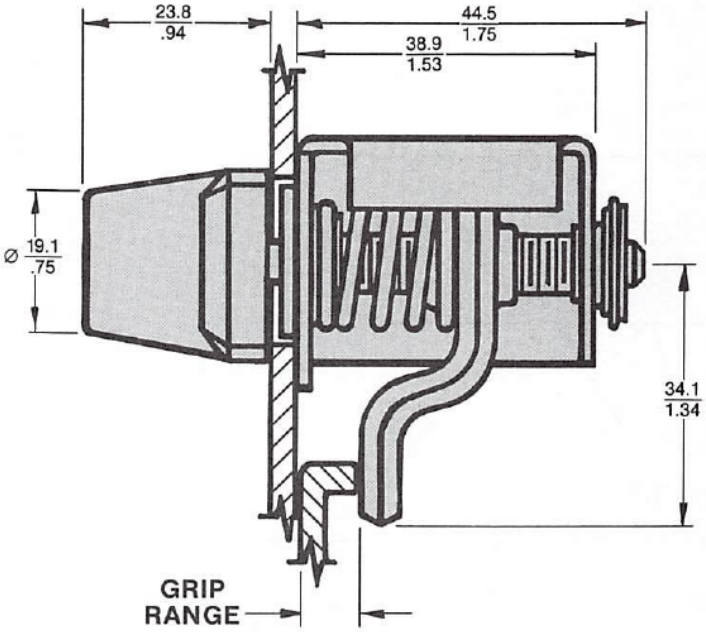
Lock housing finish	GRIP RANGE	PART NUMBERS BY DOOR THICKNESS			
		1.27 to 2.77 / .050 .109	2.77 to 4.34 / .109 .171	4.34 to 5.94 / .171 .234	5.94 to 7.52 / .234 .296
zinc plated	3.18/.125 to 15.88/.625	14-99-200-**51** ■	14-99-201-**51** ■	14-99-202-**51** ■	14-99-203-**51** ■
	14.29/.563 to 23.81/.938	14-99-200-**52** ■	14-99-201-**52** ■	14-99-202-**52** ■	14-99-203-**52** ■
	20.64/.813 to 31.75/1.250	14-99-200-**53** ■	14-99-201-**53** ■	14-99-202-**53** ■	14-99-203-**53** ■
	28.58/1.125 to 38.10/1.500	14-99-200-**54** ■	14-99-201-**54** ■	14-99-202-**54** ■	14-99-203-**54** ■
chrome plated	3.18/.125 to 15.88/.625	14-99-200-**61** ■	14-99-201-**61** ■	14-99-202-**61** ■	14-99-203-**61** ■
	14.29/.563 to 23.81/.938	14-99-200-**62** ■	14-99-201-**62** ■	14-99-202-**62** ■	14-99-203-**62** ■
	20.64/.813 to 31.75/1.250	14-99-200-**63** ■	14-99-201-**63** ■	14-99-202-**63** ■	14-99-203-**63** ■
	28.58/1.125 to 38.10/1.500	14-99-200-**64** ■	14-99-201-**64** ■	14-99-202-**64** ■	14-99-203-**64** ■
matte black polyester coat	3.18/.125 to 15.88/.625	14-99-200-**71** ■	14-99-201-**71** ■	14-99-202-**71** ■	14-99-203-**71** ■
	14.29/.562 to 23.81/.938	14-99-200-**72** ■	14-99-201-**72** ■	14-99-202-**72** ■	14-99-203-**72** ■
	20.64/.813 to 31.75/1.250	14-99-200-**73** ■	14-99-201-**73** ■	14-99-202-**73** ■	14-99-203-**73** ■
	28.58/1.125 to 38.10/1.500	14-99-200-**74** ■	14-99-201-**74** ■	14-99-202-**74** ■	14-99-203-**74** ■

■ From stock, subject to prior sale.



ACTUAL SIZE





millimeter
inch
millimeter/inch

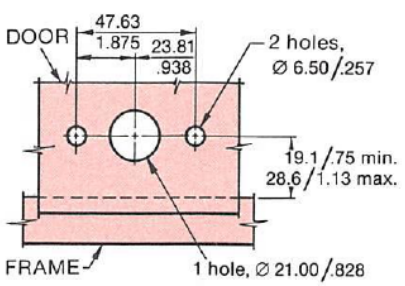
MATERIAL and FINISH

PAWL: malleable iron.
BUSHING: low carbon steel or brass.
RETAINING WASHER: 1010 steel.
Ferrous components listed above are zinc plated plus yellow chromate dip.
SPRING and CONICAL SPRING: 302 stainless steel, passivated.
HOUSING: 1010 steel, DACROTIZED†.
SCREW: 12L14 steel, DACROTIZED†.

LOCK HOUSING: die cast zinc, zinc plated plus bright chromate dip, chrome plated or polyester coating (see table).
LOCK PLUG: die cast zinc, chrome plated or matte black polyester powder coated to match lock housing.
KEYS: brass, natural.

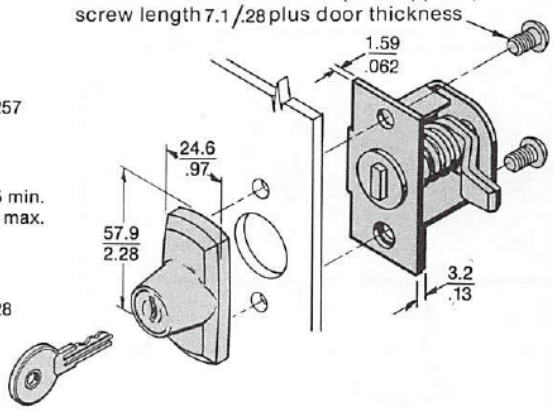
†Registered tradename of Metal Coatings International, Inc.

INSTALLATION



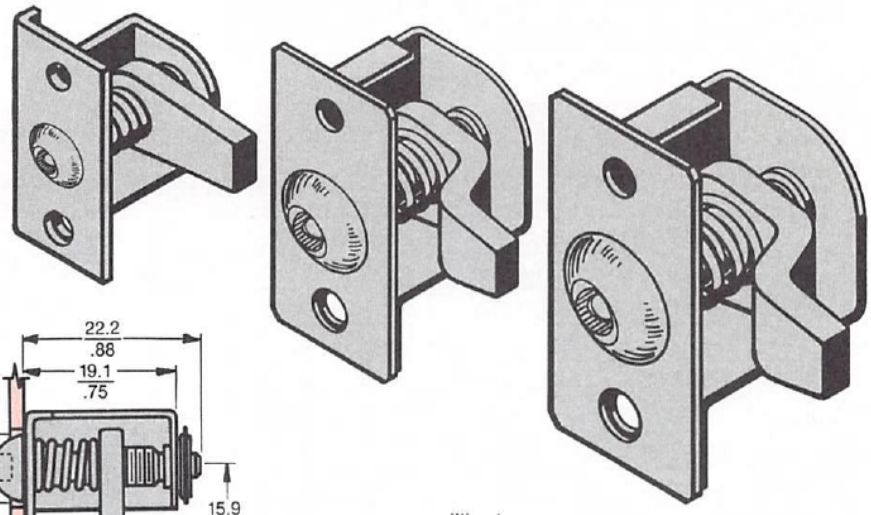
Locks are keyed alike. Random keyed locks are available. Call for details.

Two ¼-20 machine screws (not supplied) screw length 7.1/.28 plus door thickness

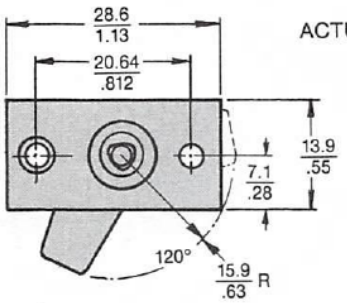


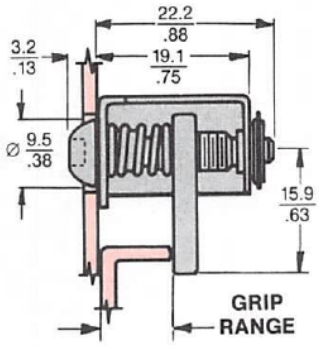
Toolhead™ Adjustable—Grip Latches

- Tamper Resistant Access



No. 43

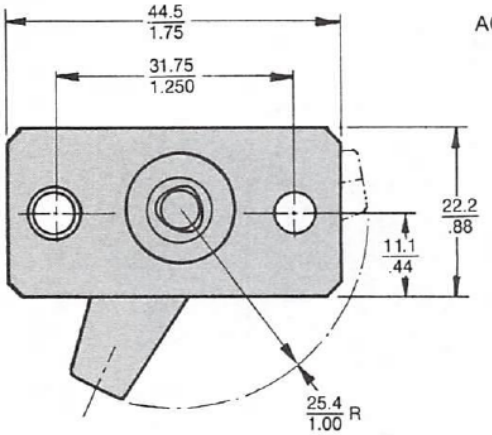


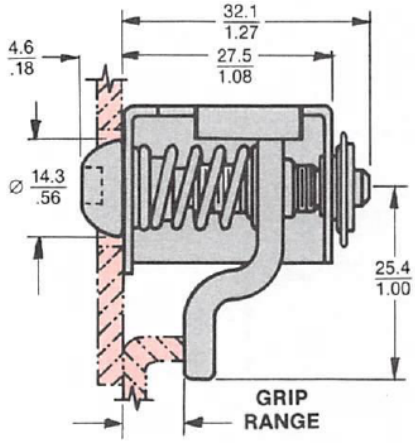


millimeter
inch

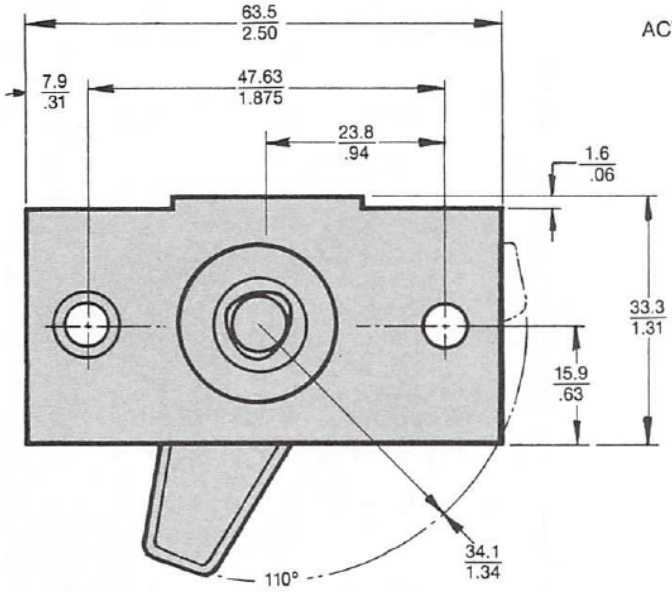
millimeter/inch

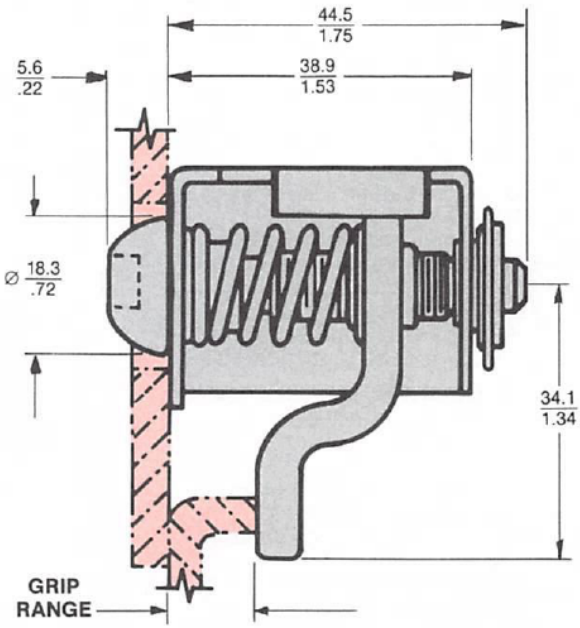
No. 44





No. 14





Toolhead Adjustable Grip Latches

MATERIAL and FINISH

RETAINING WASHER is 1010 steel.

BUSHING is low carbon steel. These components are zinc plated plus yellow chromate dip.

SPRING and CONICAL SPRING: 3 oz stainless steel, passivated.

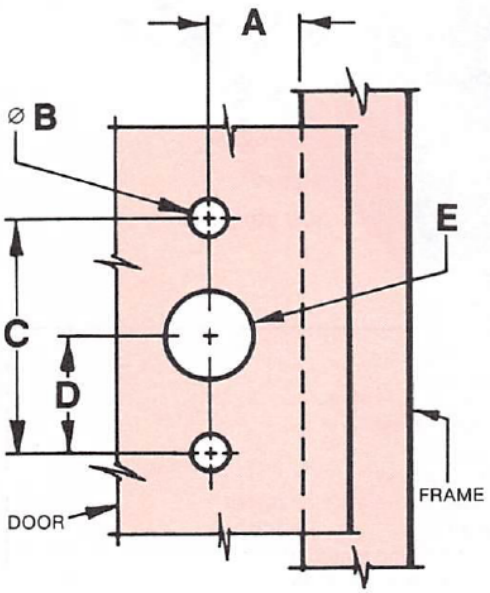
HOUSING: 1010 steel, DACROTIZED †.
SCREW: low carbon steel, case hardened, zinc plated plus bright chromate dip.

No. 43
PAWL: 1010 steel, zinc plated plus yellow chromate dip.
SPRING: 17-7PH stainless steel, passivated.

No. 44
PAWL: 1010 steel, DACROTIZED †.

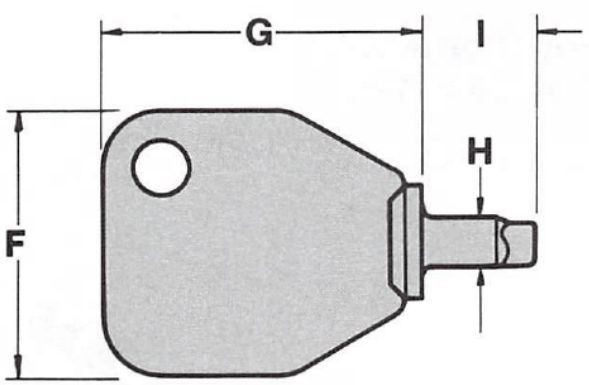
No. 14
PAWL: malleable iron, zinc plated plus yellow chromate dip.

INSTALLATION



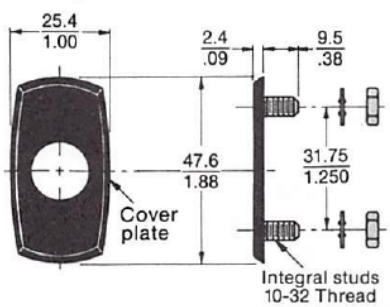
GRIP RANGE		PART NUMBERS	INSTALLATION				
MIN.	MAX.	Right hand assemblies	A	⌀B	C	D	⌀E
No. 43							
3.18/.125	7.14/.281	43-T-1	12.70±0.40 / .500±.016	3.25 / .128	20.64 / .812	10.32 / .406	10.7 / .42
6.35/.250	13.49/.531	43-T-2					
12.70/.500	19.84/.781	43-T-3					
No. 44							
3.18/.125	9.53/.375	44-T-1	20.6±1.6 / .81±.06	4.90 / .193	31.75 / 1.250	15.9 / .63	15.1 / .59
9.53/.375	19.05/.750	44-T-2					
19.05/.750	28.58/.1.125	44-T-3					
No. 14							
3.18/.125	15.88/.625	14-T-1	23.8±4.8 / .94±.19	6.50 / .257	47.63 / 1.875	23.81 / .938	19.8 / .78
14.29/.563	23.81/.938	14-T-2					
20.64/.813	31.75/1.250	14-T-3					
28.58/1.125	38.10/1.500	14-T-4					

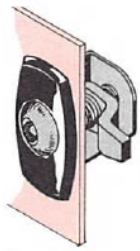
Toolhead Key



	KEY PART NUMBER	F	G	⌀H	I	Key No.
43	29-90-214-10 ■	22.2 / .88	26.5 / 1.05	4.2 / .17	9.5 / .38	4
44,14	29-90-215-10 ■	28.6 / 1.13	34.9 / 1.38	6.4 / .25	12.7 / .50	5

Trimplates



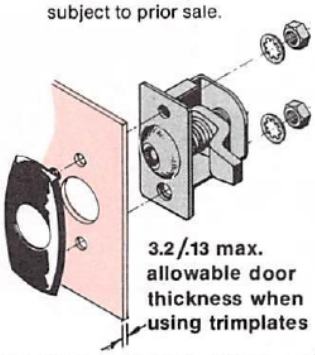


Trimplate Part Number 44-30-101-10 ■

■ From stock, subject to prior sale.

MATERIAL and FINISH
PLATE: 1010 steel, phosphate dip plus matte black polyester powder coated.
STUDS: 10B21 steel, phosphate dip.
NUTS are steel, DACROTIZED†.
LOCKWASHERS spring steel, DACROTIZED†.

Two nuts and two lockwashers are supplied. NOTE: Maximum recommended tightening torque for mounting nuts in 2.8 N·m/ 25 in.-lbs.

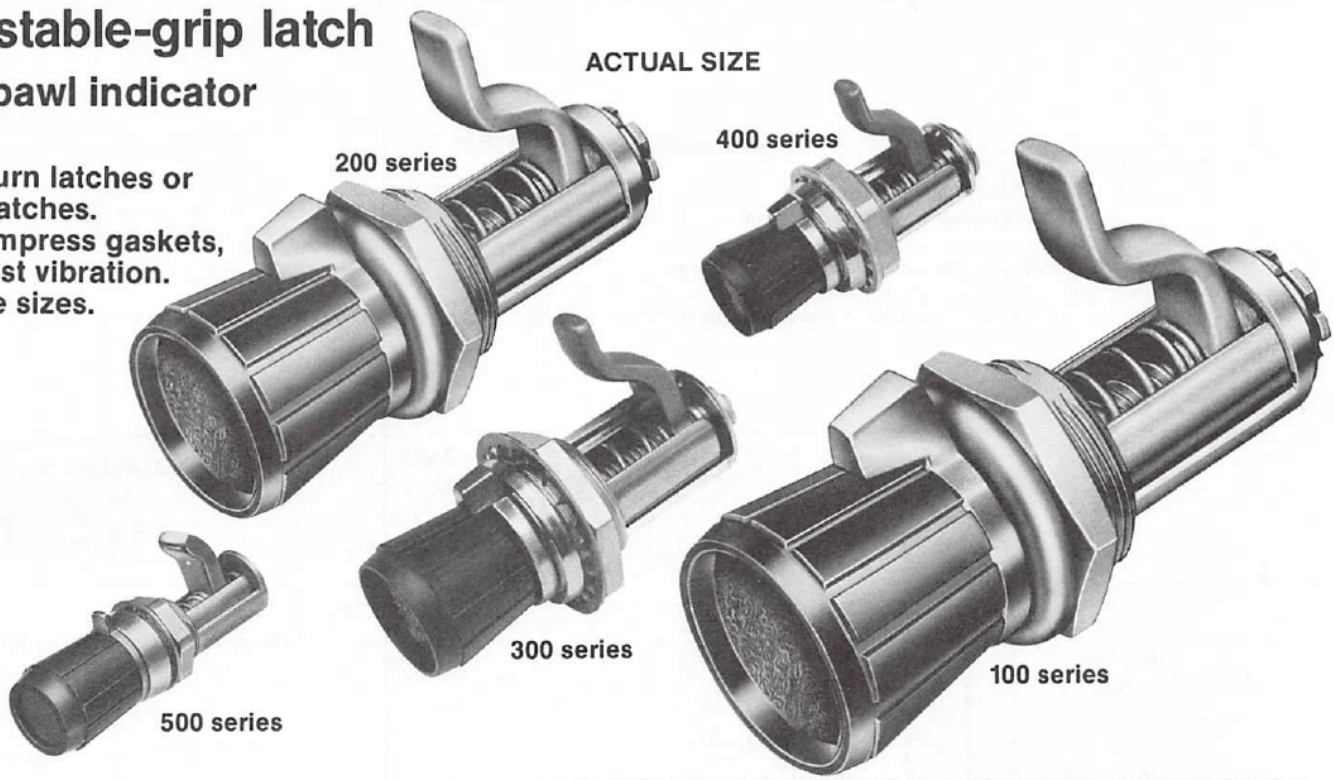


3.2/.13 max. allowable door thickness when using trimplates

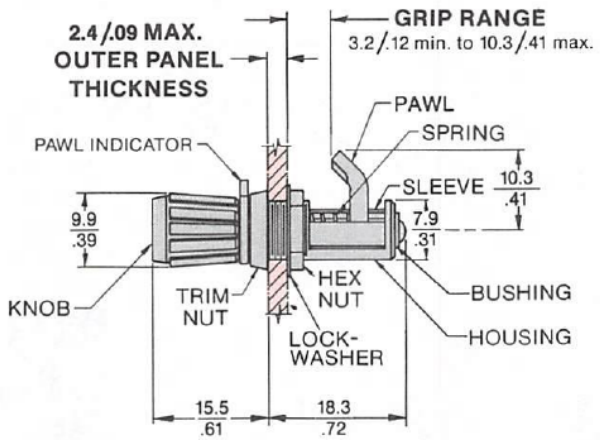
Adjustable-grip latch

With pawl indicator

- ¼ turn latches or unlatches.
- Compress gaskets, resist vibration.
- Five sizes.



500 SERIES



MATERIAL and FINISH

SCREW and SLEEVE: 12L14 steel.
HOUSING: low carbon steel.
PAWL: 1010 steel.
LOCKWASHER: spring steel.
All components listed above are zinc plated plus yellow chromate dip.
BUSHING: 12L14 steel, zinc plated plus yellow chromate dip or brass, natural.
TRIM NUT and HEX NUT: 303 stainless steel, passivated.
COIL SPRING and PAWL INDICATOR: 302 stainless steel, passivated.
KNOB: nylon, black.

PART NUMBER
16-10-511-16■

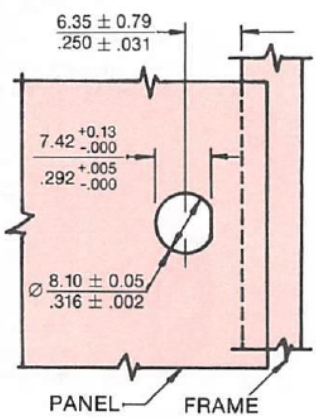
Latch is shipped one unit per package.

■ From stock, subject to prior sale.

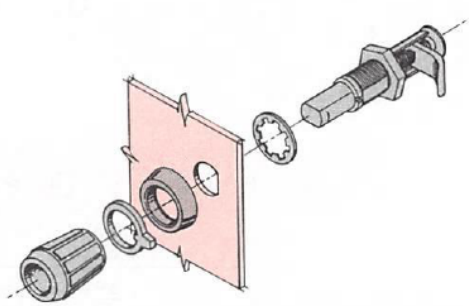
millimeter
inch

millimeter/inch

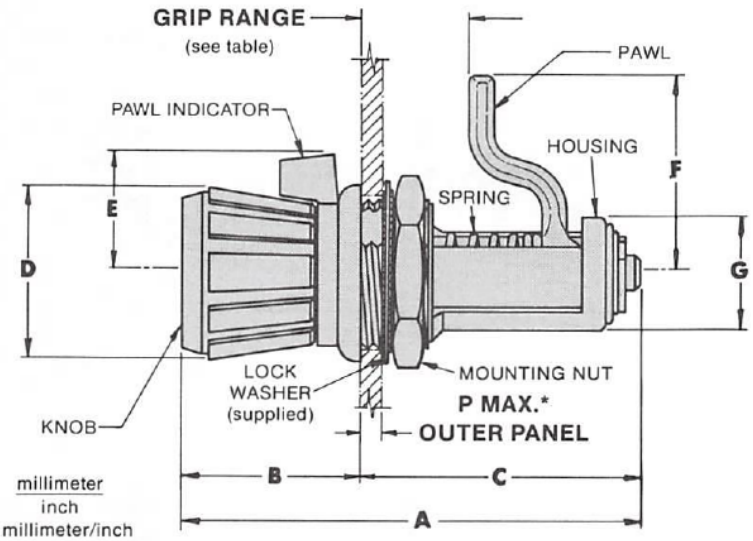
INSTALLATION for 500 series



1. Prepare panel.
2. Remove trim nut from latch assembly and install latch from back side of panel.
3. Tighten hex nut.
4. Align tang on inside diameter of indicator with slot in head of sleeve, slide into position and press knob over head of screw. NOTE: Neither knob nor latch can be removed once knob is pressed into position.



100, 200, 300 and 400 SERIES



MATERIAL and FINISH

BUSHING: low carbon steel.
RETAINING WASHER: 1010 steel.
The components listed above are zinc plated plus yellow chromate dip.
LOCKWASHER: spring steel, DACROTIZED†.
SCREW: low carbon steel with black organic coating.
SPRING and CONICAL SPRING: 302 stainless steel, passivated.
PAWL: die cast zinc with chemical protective coating.
MOUNTING NUT: 12L14 steel, zinc plated plus bright chromate dip.

Latches are shipped fully assembled one unit per package.

Nylon knob style
KNOB: nylon, black.
HOUSING and PAWL INDICATOR: die cast zinc, chrome plated.

Die cast zinc knob style
KNOB, HOUSING and PAWL INDICATOR: die cast zinc, zinc plated plus bright chromate dip.

100 Series (both styles)
MOUNTING NUT: 12L14 steel, DACROTIZED†.

400 Series (both styles)
LOCKWASHER: Spring steel, zinc plated plus yellow chromate dip.

†Registered tradename of Metal Coatings International, Inc.

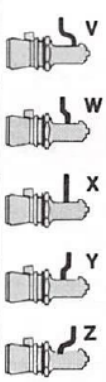
Nylon knob style

DIMENSIONS								GRIP		PART NUMBERS	pawl position	series	INSTALLATION				
A	B	C	D	E	F	G	P	min.	max.				∅H	K	M	N min.	N max.
77.39 3.047	30.56 1.203	46.83 1.844	28.58 1.125	19.84 .781	33.34 1.312	19.05 .750	6.35 .250	2.38/.094	15.88/.625	16-10-111-14 ■	V	100	25.40 1.000	23.80 .937	11.89 .468	22.23 .875	28.58 1.125
								12.70/.500	25.40/1.000	16-10-112-14 ■	W						
								20.64/.813	33.34/1.313	16-10-113-14 ■	Y						
								28.58/1.125	42.86/1.688	16-10-114-14 ■	Z						
65.88 2.594	25.80 1.016	40.08 1.578	24.61 .969	15.88 .625	26.99 1.063	17.46 .688	6.35 .250	1.59/.063	14.29/.563	16-10-211-14 ■	V	200	22.23 .875	20.62 .812	10.31 .406	15.88 .625	22.23 .875
								12.70/.500	25.40/1.000	16-10-212-14 ■	X						
								23.81/.938	36.51/1.438	16-10-213-14 ■	Z						
54.77 2.156	21.83 .859	32.94 1.297	19.05 .750	12.70 .500	1.063 .906	15.48 .609	4.76 .188	1.59/.063	12.70/.500	16-10-311-14 ■	V	300	19.05 .750	17.45 .687	8.74 .344	17.46 .688	20.64 .813
								9.53/.375	20.64/.813	16-10-312-14 ■	X						
								17.46/.688	25.58/1.125	16-10-313-14 ■	Z						
39.69 1.563	16.27 .641	23.42 .922	13.49 .531	9.13 .359	19.05 .750	11.51 .453	2.38 .094	1.59/.063	8.73/.344	16-10-411-14 ■	V	400	14.27 .562	12.70 .500	6.35 .250	14.29 .563	17.46 .688
								7.14/.281	14.29/.563	16-10-412-14 ■	X						
								12.70/.500	19.84/.781	16-10-413-14 ■	Z						

Die-cast zinc knob style

77.39 3.047	30.56 1.203	46.83 1.844	28.58 1.125	19.84 .781	33.34 1.312	19.05 .750	6.35 .250	2.38/.094	15.88/.625	16-10-101-11 ■	V	100	25.40 1.000	23.80 .937	11.89 .468	22.23 .875	28.58 1.125
								12.70/.500	26.4/1.000	16-10-102-11 ■	W						
								20.64/.813	33.34/1.313	16-10-103-11 ■	Y						
								28.58/1.125	42.86/1.688	16-10-104-11 ■	Z						
65.88 2.594	24.61 .969	40.08 1.578	23.02 .906	15.88 .625	26.99 1.063	17.46 .688	6.35 .250	1.59/.063	14.29/.563	16-10-201-11 ■	V	200	22.23 .875	20.62 .812	10.31 .406	15.88 .625	22.23 .875
								12.70/.500	25.40/1.000	16-10-202-11 ■	X						
								23.81/.938	36.51/1.438	16-10-203-11 ■	Z						

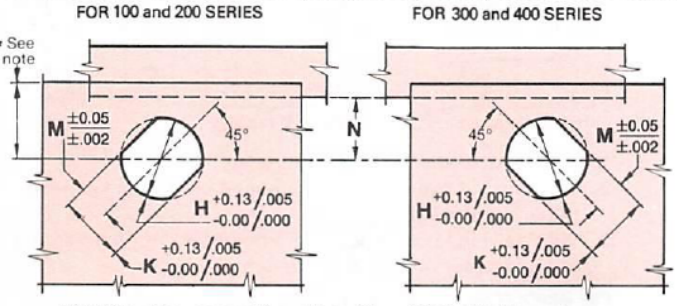
Pawl style and position (pre-assembled)



■ From stock, subject to prior sale.

INSTALLATION for 100, 200, 300, and 400 series

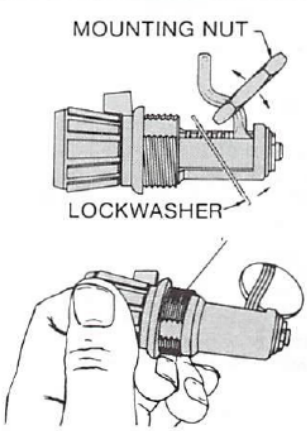
FOR 100 and 200 SERIES



FOR 300 and 400 SERIES

*NOTE: For assemblies Part No. 16-10-101-11 and 16-10-111-14 only—when panel thickness exceeds 4.8/.19 center of mounting hole must be LESS than 31.8/1.25 from EDGE OF PANEL.

1. Prepare panel.
2. Rotate knob to run pawl to back of housing.
3. Remove mounting nut and lockwasher.
4. Insert latch into hole by hooking pawl through hole, following through with housing.
5. Replace lockwasher and mounting nut and tighten.



Adjustable-grip latch, sub-midget size

- **Rugged construction**
- **Single hole installation**

SHOWN ACTUAL SIZE

Black Nylon Knob



Knurled Steel or Stainless Steel Knob



Low-profile Slotted Head

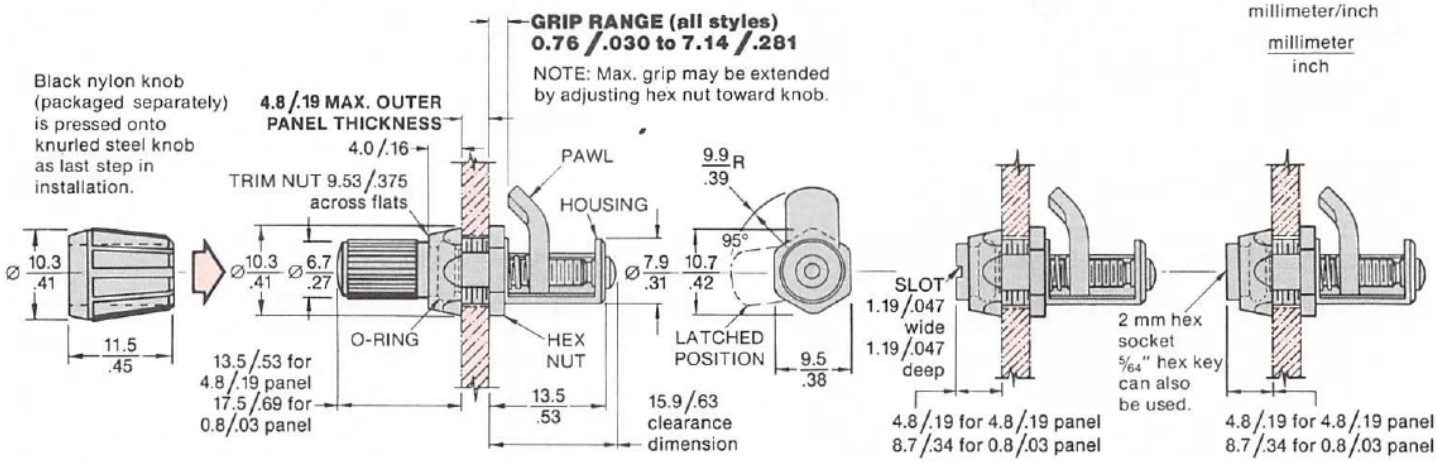


Hex-Socket Head



millimeter/inch

millimeter
inch



MATERIAL and FINISH	Black Nylon Knob		Knurled Steel or Stainless Steel Knob		Low-profile Slotted Head		Hex-socket Head
	**Left hand	‡Right hand	**Left hand	‡Right hand	**Left hand	‡Right hand	‡Right hand
Steel, zinc plated	27-20-**311-10** ■	27-10-**311-10** ■	27-99-**126-10** ■	27-99-**123-10** ■	27-20-**501-10** ■	27-10-**501-10** ■	27-10-**701-10** ■
Stainless steel, passivated	27-20-**311-20** ■	27-10-**311-20** ■	27-99-**126-20** ■	27-99-**123-20** ■	27-20-**501-20** ■	27-10-**501-20** ■	27-10-**701-20** ■
Steel, chrome plated	27-20-**311-30** ■	27-10-**311-30** ■	27-99-**126-30** ■	27-99-**123-30** ■	27-20-**501-30** ■	27-10-**501-30** ■	27-10-**701-30** ■
Stainless steel with black organic coating	———	———	27-99-**126-50** ■	27-99-**123-50** ■	27-20-**501-50** ■	27-10-**501-50** ■	———

****Left hand assemblies turn knob or head counterclockwise to latch**

‡Right hand assemblies turn knob or head clockwise to latch

■ From stock, subject to prior sale.

MATERIAL and FINISH

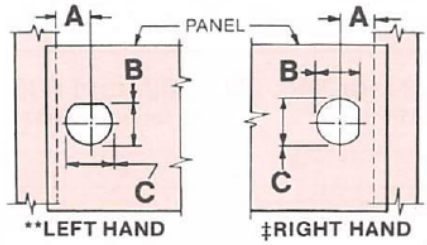
For steel assemblies

HOUSING: low carbon steel, zinc plated plus yellow chromate dip.
SCREW: 12L14 steel, zinc plated plus bright chromate dip or chrome plated.
PAWL: 1010 steel, zinc plated plus yellow chromate dip.
BUSHING: 12L14 steel, zinc plated plus yellow chromate dip or brass, natural.
TRIM NUT: low carbon steel, zinc plated plus bright chromate dip or chrome plated.
SPRING: 302 stainless steel, passivated.
HEX NUT: 303 stainless steel, passivated.
O-RING: buna N rubber.

For stainless steel assemblies

HOUSING, SCREW and TRIM NUT: 303 stainless steel, passivated or with black organic coating.
BUSHING and HEX NUT: 303 stainless steel, passivated.
PAWL and SPRING: 302 stainless steel, passivated.
O-RING: buna N rubber.

INSTALLATION



A	6.35 ± 0.79 / .250 ± .031
B	7.42 +0.13 −0.00 / .292 +.005 −.000
C	Ø 8.10 ± 0.05 / .316 ± .002

1. Install latch from back side of panel.
2. Slip trim nut over knob, slotted head or hex socket head and finger tighten against panel.
3. With pawl in latched position, tighten hex nut hard against back of panel with 3/8" end wrench.

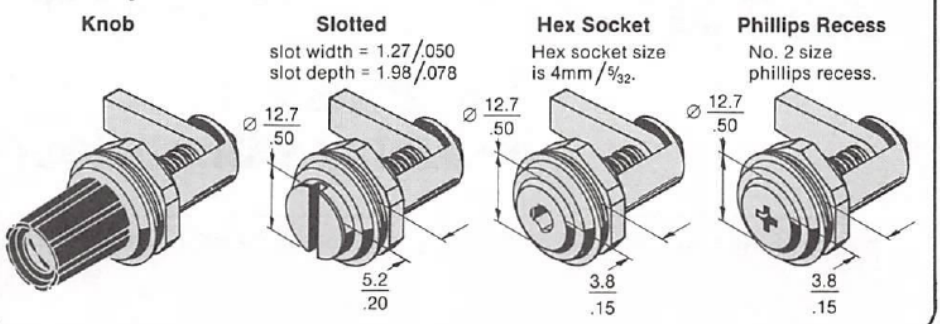
For Black Nylon Knob style:

Be sure latch is properly attached and functioning *then* press knob onto knurled steel head of screw. Neither knob nor latch can be removed once knob is pressed into position.

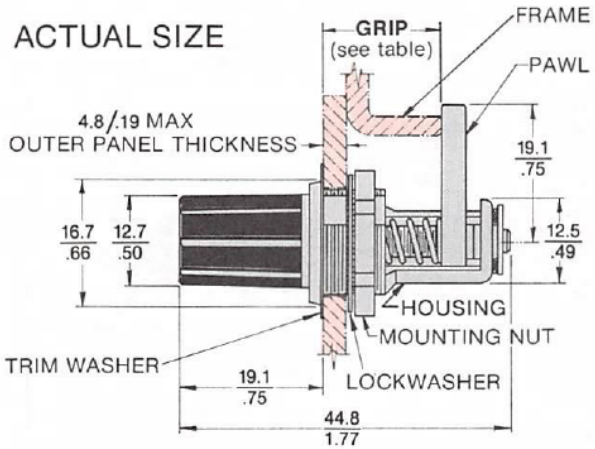
Adjustable-grip latch

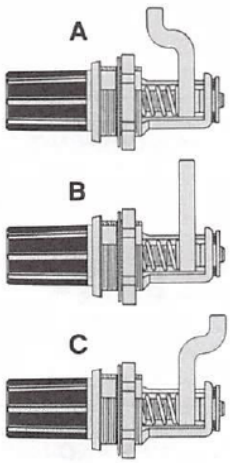
- An extra turn adds pull-up to compress a gasket or resist vibration.
- Compact yet rugged.
- Smooth acting.
- Choice of four operating head styles.

Head Styles



ACTUAL SIZE





MATERIAL and FINISH

millimeter/inch
millimeter
inch

HOUSING: die cast zinc.
SCREW: low carbon steel.
HEX NUT: 12L14 steel.
TRIM WASHER: steel.
LOCKWASHER: steel.
The above components are zinc plated plus bright chromate dip.
PAWL : 1010 steel.
BUSHING: 12L14 steel.
The above components are zinc plated plus yellow chromate dip.

SPRING: 17-7 PH stainless steel, passivated.
KNOB: nylon, black.

Pawl position (pre-assembled) determines grip range. See table.

Grip Range		PART NUMBERS								Pawl Position
		Knob Style		Slotted Head		Hex Socket		Phillips Recess		
Min.	Max.	Left Hand	Right Hand	Left Hand	Right Hand	Left Hand	Right Hand	Left Hand	Right Hand	
2.4 .09	9.5 .38	48-20-401-10 ■	48-10-401-10 ■	48-11-L ■	48-11-R ■	48-81-L ■	48-81-R ■	48-91-L ■	48-91-R ■	A
8.7 .34	15.9 .63	48-20-402-10 ■	48-10-402-10 ■	48-12-L ■	48-12-R ■	48-82-L ■	48-82-R ■	48-92-L ■	48-92-R ■	B
15.1 .59	22.2 .88	48-20-403-10 ■	48-10-403-10 ■	48-13-L ■	48-13-R ■	48-83-L ■	48-83-R ■	48-93-L ■	48-93-R ■	C

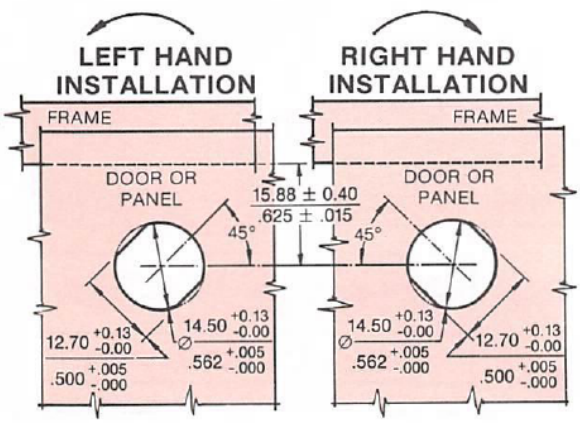
■ From stock, subject to prior sale.

INSTALLATION

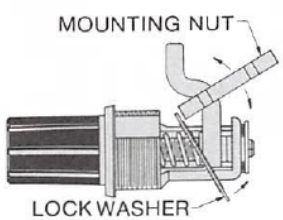
1. Prepare panel.

LEFT HAND ASSEMBLIES turn counterclockwise to latch.

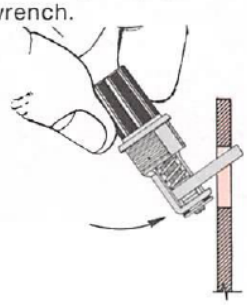
RIGHT HAND ASSEMBLIES turn clockwise to latch.



2. Rotate knob to run pawl to back of housing.
3. Remove mounting nut and lockwasher.
   NOTE: Use of trim washer is optional.



4. Insert latch into hole by hooking pawl through hole.
5. Replace lockwasher and mounting nut; tighten with wrench.

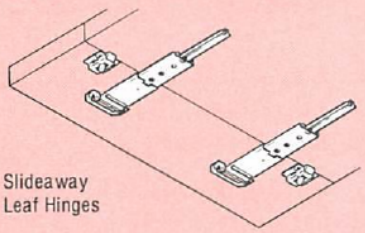


SOUTHCO fasteners

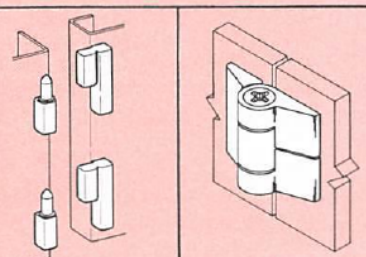
Assembly and Design Fasteners

All kinds...from industry's broadest line

DOOR AND LEAF HINGES



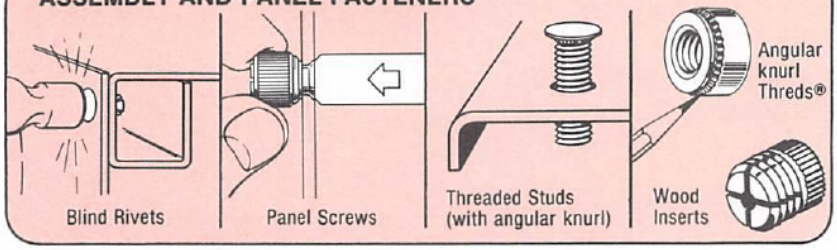
Slideaway Leaf Hinges



Lift-off Hinges

Adjustable Hinges

ASSEMBLY AND PANEL FASTENERS



Blind Rivets

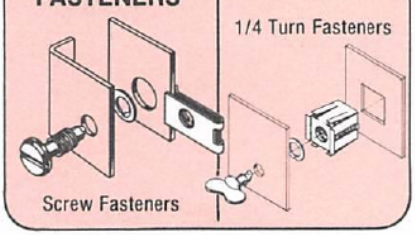
Panel Screws

Threaded Studs (with angular knurl)

Angular knurl Threds®

Wood Inserts

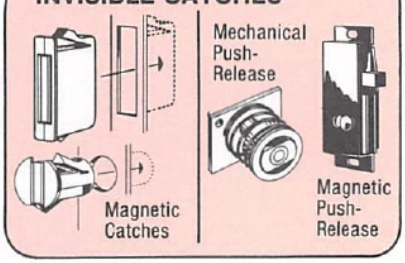
QUICK-OPENING CAPTIVE FASTENERS



1/4 Turn Fasteners

Screw Fasteners

INVISIBLE CATCHES

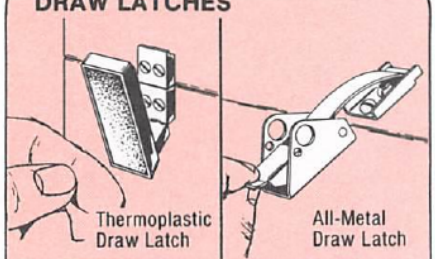


Mechanical Push-Release

Magnetic Catches

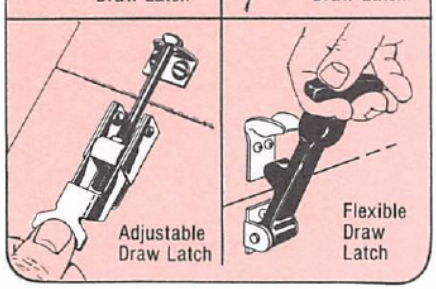
Magnetic Push-Release

DRAW LATCHES



Thermoplastic Draw Latch

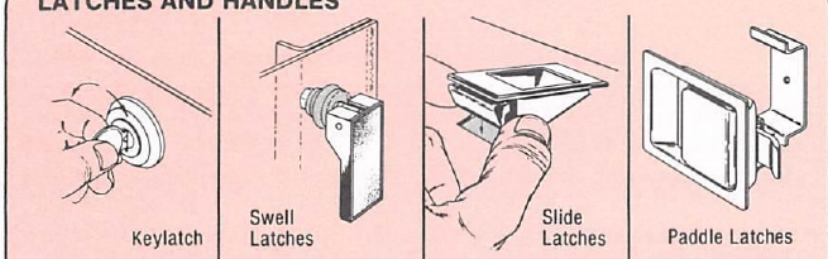
All-Metal Draw Latch



Adjustable Draw Latch

Flexible Draw Latch

LATCHES AND HANDLES

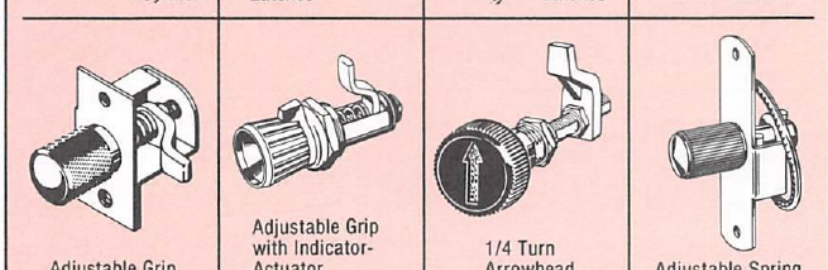


Keylatch

Swell Latches

Slide Latches

Paddle Latches

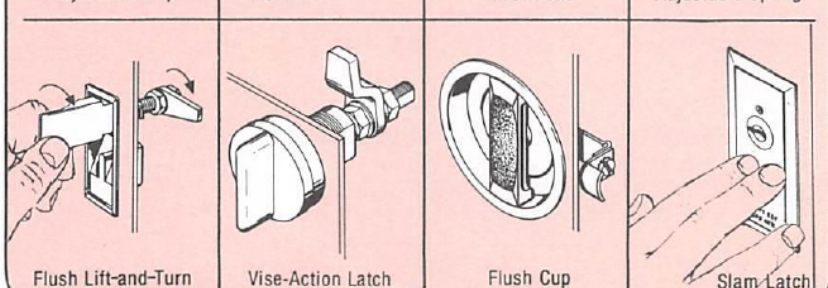


Adjustable Grip

Adjustable Grip with Indicator-Actuator

1/4 Turn Arrowhead

Adjustable Spring



Flush Lift-and-Turn

Vise-Action Latch

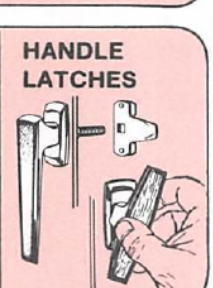
Flush Cup

Slam Latch

PULLS AND HANDLES



HANDLE LATCHES



SOUTHCO®

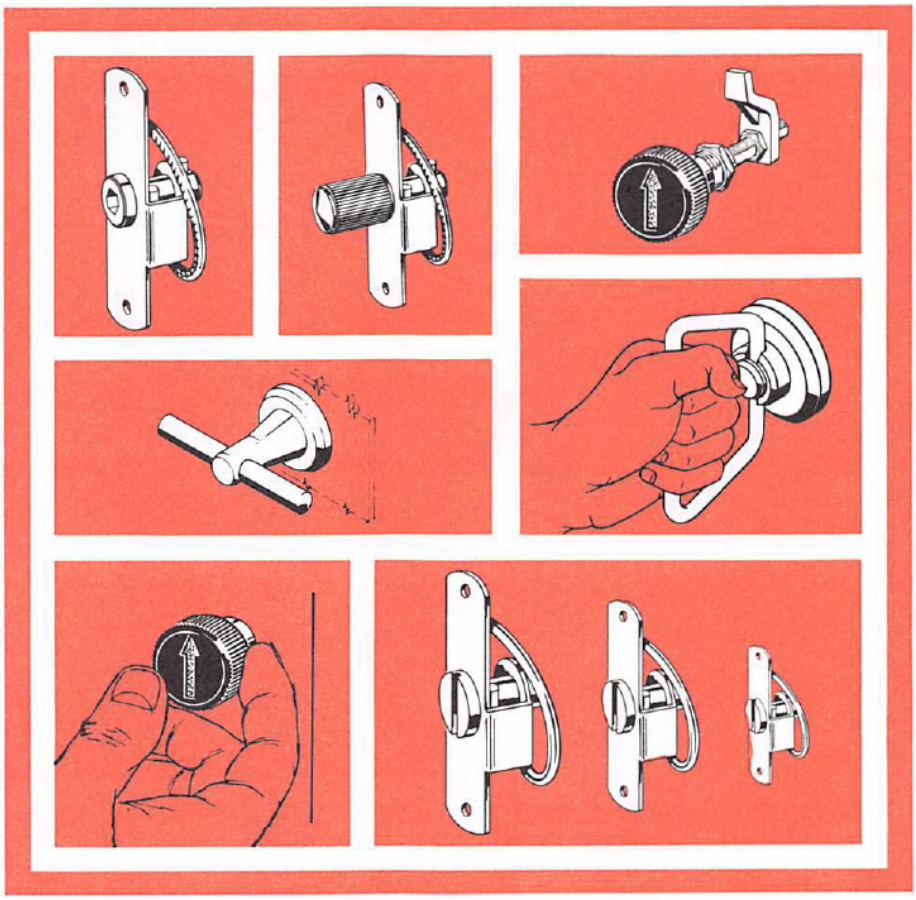
fasteners

Section DD

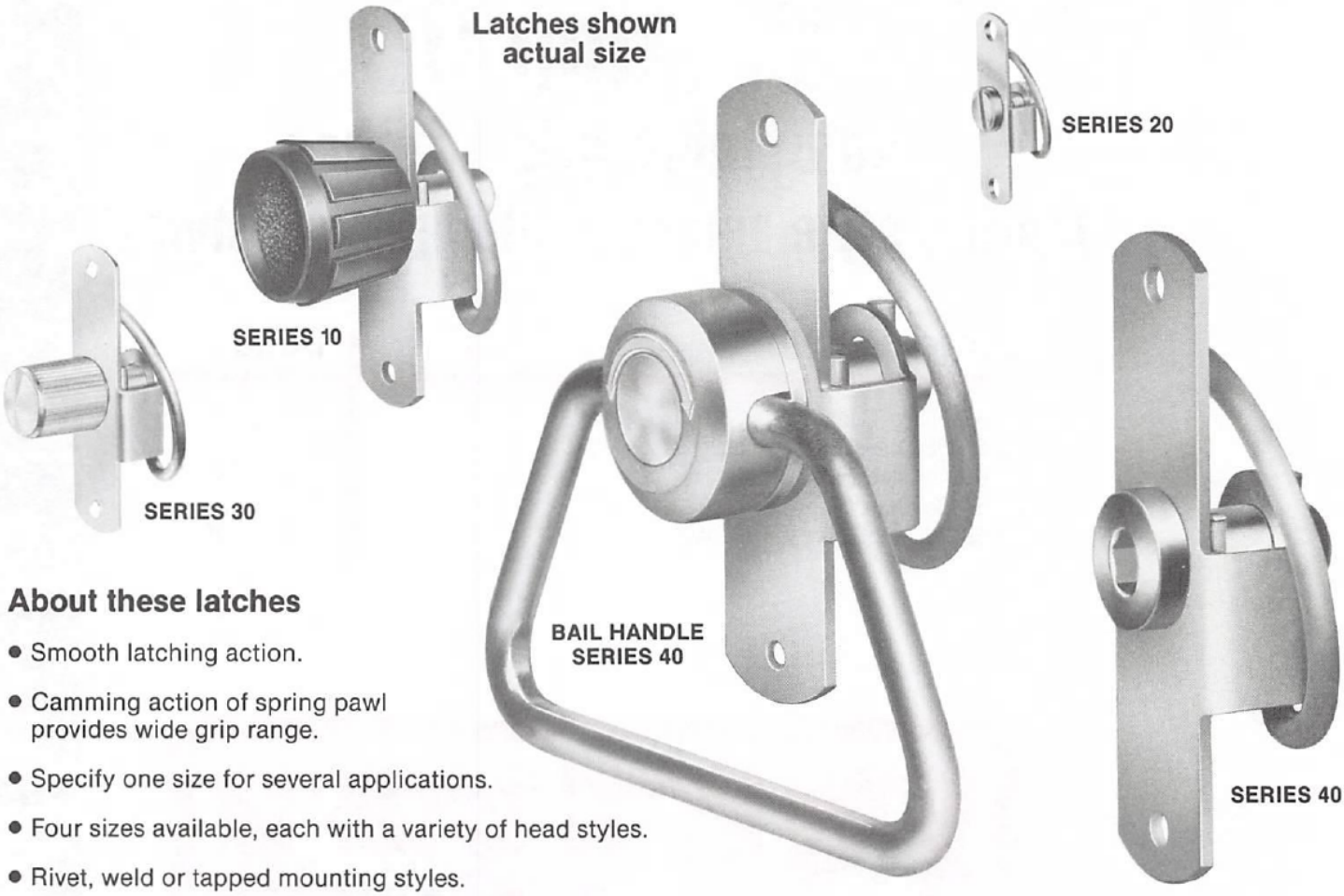
Adjustable-grip Latches

(spring style and manual-adjusting styles)

contents guide	page
No. 57 Spring Latch	DD-2 to DD-6
No. 57 Bail Handle Spring Latch	DD-7
No. 68 Adjustable T-Handle Latches	DD-8 to DD-13
No. 68 Bail Handle Latches	DD-14 to DD-16
No. 69 Adjustable Arrowhead Latches	DD-17 to DD-18



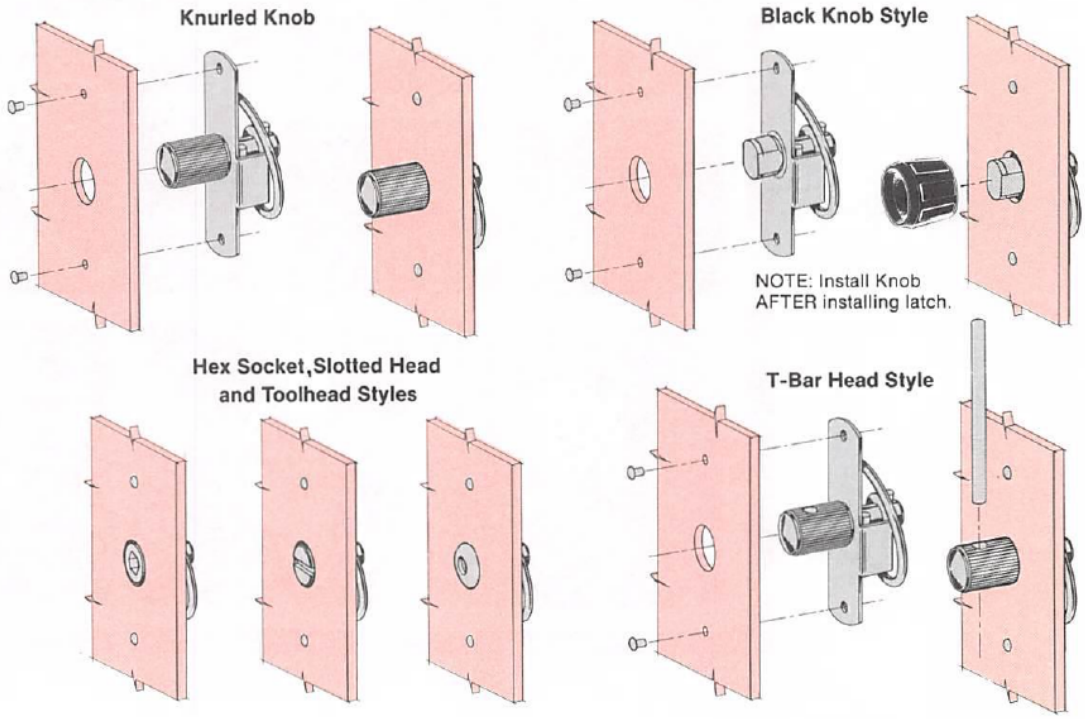
Southco Spring Latches



About these latches

- Smooth latching action.
- Camming action of spring pawl provides wide grip range.
- Specify one size for several applications.
- Four sizes available, each with a variety of head styles.
- Rivet, weld or tapped mounting styles.

INSTALLATION

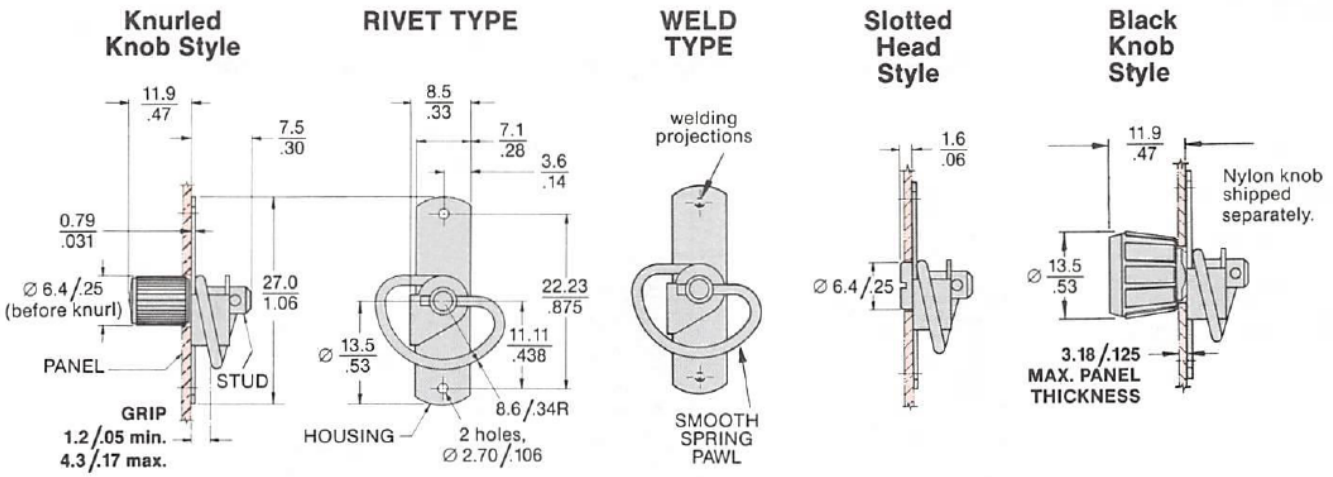


Spring Latches

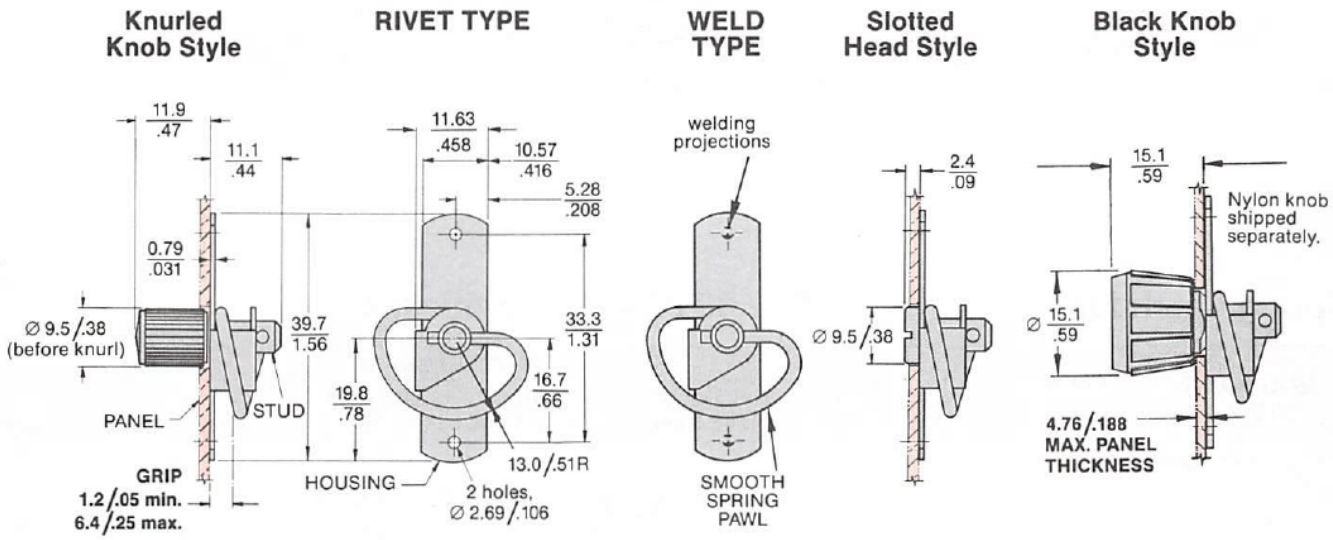
See page DD-2 for actual size.

millimeter / inch
millimeter/inch

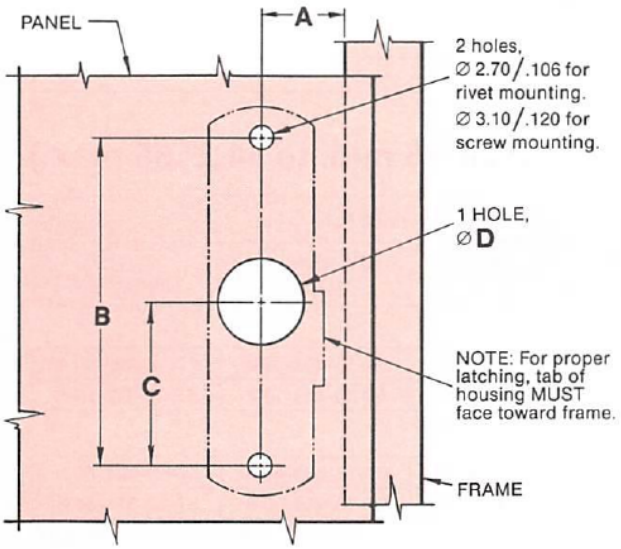
Series 20



Series 30



INSTALLATION



Series	A	B	C	D
20	5.56 / .219	22.22 / .875	11.11 / .437	7.20 / .28
30	8.7 / .34	33.34 / 1.313	16.67 / .656	10.50 / .406

MATERIAL and FINISH
SPRING: 302 stainless steel, passivated.
HOUSING: 1010 steel, DACROTIZED†.
STUDS: low carbon steel, DACROTIZED† plus bright metallic organic coating.
KNOB: nylon, black.

†Registered tradename of Metal Coatings International, Inc.

Series	MOUNTING STYLES	PART NUMBERS		
		Knurled Knob Style	Slotted Head Style	Black Knob Style
20	Rivet	57-20-**201**-10 ■	57-20-**101**-10 ■	57-20-**401**-10 ■
	Weld	57-20-**202**-50 ■	57-20-**102**-50 ■	57-20-**402**-50 ■
30	Rivet	57-30-**201**-10 ■	57-30-**101**-10 ■	57-30-**401**-10 ■
	Weld	57-30-**202**-50 ■	57-30-**102**-50 ■	57-30-**402**-50 ■

■ From stock, subject to prior sale.

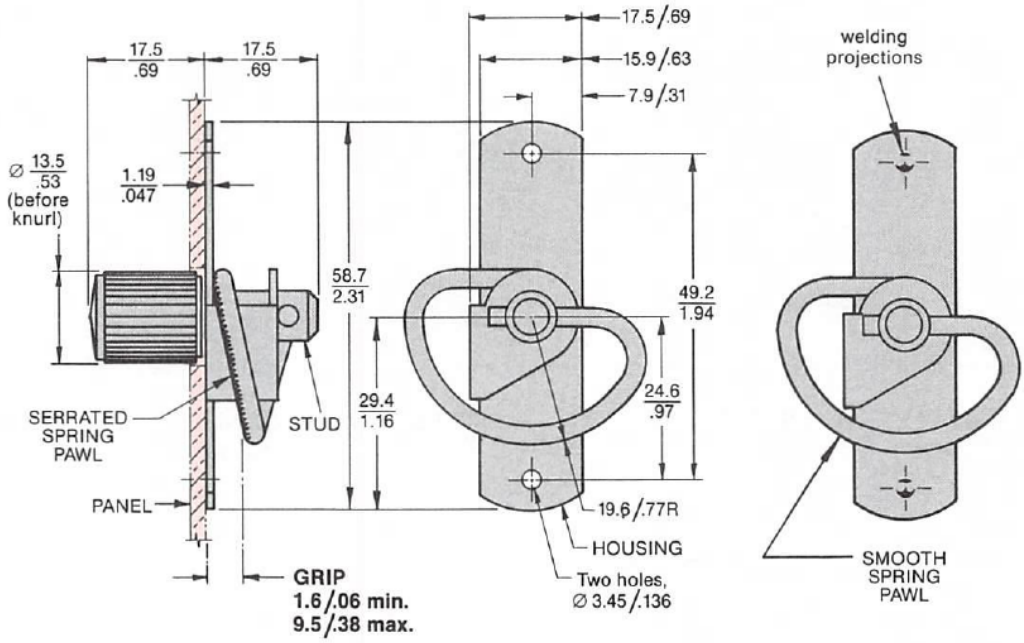
Spring Latches Series 10 With smooth or serrated spring pawl

See page DD-2 for actual size.

millimeter/inch

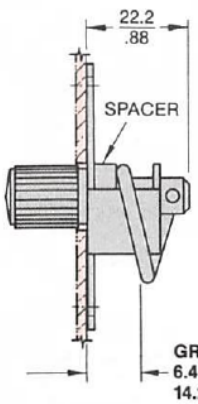
millimeter
inch

Knurled Knob Style **RIVET TYPE** **WELD TYPE**



Spring Latch for 1.6/.06 min. to 9.5/.38 max. frame thickness

MOUNTING STYLES	SPRING STYLE	PART NUMBERS					
		Knurled Knob Style	Hex Socket Head Style	Slotted Head Style	Black Knob Style	T-Bar Head Style	Toolhead Style
STEEL ASSEMBLIES							
Rivet	Smooth	57-10-**201**-10 ■	57-10-**801**-10 ■	57-10-**101**-10 ■	57-10-**401**-10 ■	57-10-**301**-10 ■	—
	Serrated	57-10-**211**-10 ■	57-10-**811**-10 ■	57-10-**111**-10 ■	57-10-**411**-10 ■	57-10-**311**-10 ■	57-**T**-10 ■
Weld	Smooth	57-10-**202**-50 ■	57-10-**802**-50 ■	57-10-**102**-50 ■	57-10-**402**-50 ■	57-10-**302**-50 ■	—
	Serrated	57-10-**212**-50 ■	57-10-**812**-50 ■	57-10-**112**-50 ■	57-10-**412**-50 ■	57-10-**312**-50 ■	
ALL STAINLESS STEEL ASSEMBLIES							
Rivet	Smooth	57-10-**201**-40 ■	—	57-10-**101**-40 ■	—	—	—
Weld	Smooth	57-10-**202**-40 ■	—	57-10-**102**-40 ■	—	—	—



Spring Latch for greater frame thickness (6.4/.25 min. to 14.2/.56 max.)

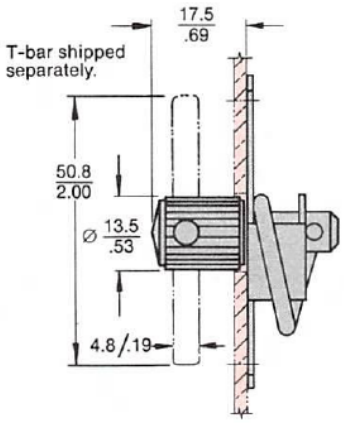
MOUNTING STYLES	PAWL STYLE	PART NUMBERS			
		Knurled Knob Style	Slotted Head Style	Black Knob Style	T-Bar Head Style
STEEL ASSEMBLIES					
Rivet	Smooth Spring	57-10-**203**-10 ■	57-10-**103**-10 ■	57-10-**403**-10 ■	57-10-**303**-10 ■
	Serrated Spring	57-10-**213**-10 ■	57-10-**113**-10 ■	57-10-**413**-10 ■	57-10-**313**-10 ■
Weld	Smooth Spring	57-10-**204**-50 ■	57-10-**104**-50 ■	57-10-**404**-50 ■	57-10-**304**-50 ■
	Serrated Spring	57-10-**214**-50 ■	57-10-**114**-50 ■	57-10-**414**-50 ■	57-10-**314**-50 ■

■ From stock, subject to prior sale.

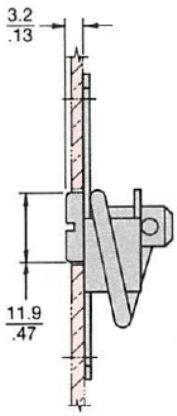
Spring Latches Series 10

See page DD-2 for actual size

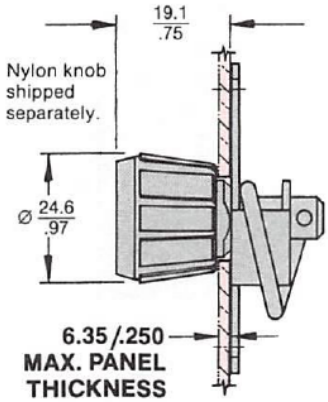
T-Bar Head Style



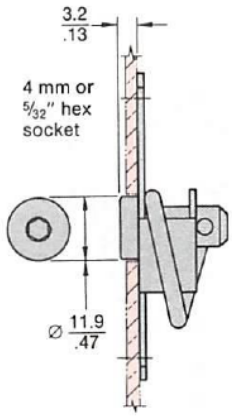
Slotted Head Style



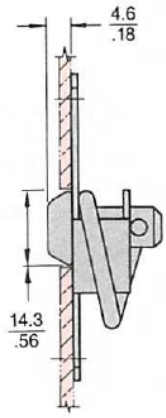
Black Knob Style



Hex Socket Head Style



Toolhead Style



MATERIAL and FINISH

Steel assemblies

SPRING: 302 stainless steel, passivated.
HOUSING: 1010 steel, DACROTIZED†.
T-BAR, T-BAR STUD and HEX DRIVE STUD: low carbon steel, zinc plated.
OTHER STUDS: low carbon steel, DACROTIZED† plus bright metallic organic coating.
KNOB: nylon, black.

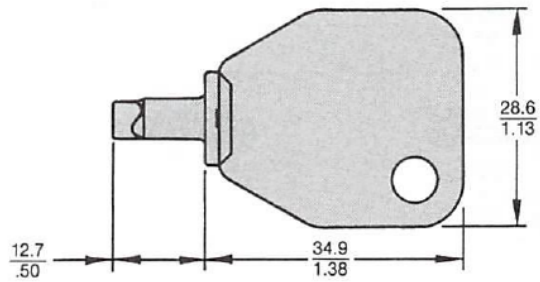
All Stainless Steel assemblies

SPRING and HOUSING: 302 stainless steel, passivated.
STUDS: 303 stainless steel, passivated.

†Registered tradename of Metal Coatings International, Inc.

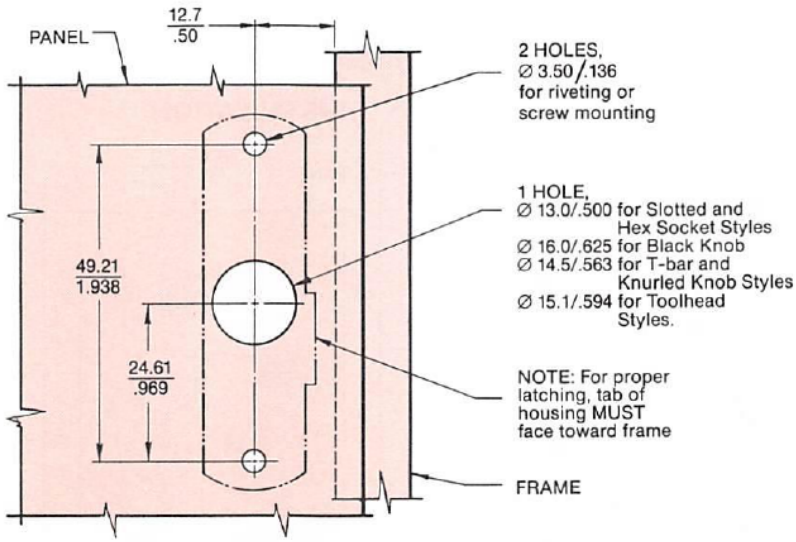
No. 5 Toolhead Key
Part Number
29-90-215-10 ■

MATERIAL and FINISH
case hardened steel with bright nickel plate.



■ From stock, subject to prior sale.

SERIES 10 INSTALLATION



millimeter/inch
millimeter
inch

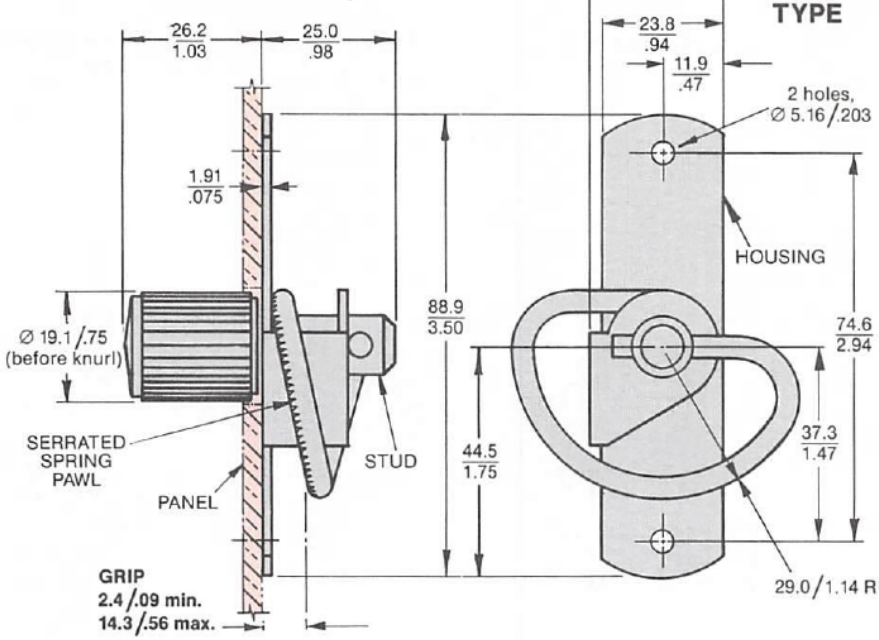
Spring Latches

Series 40 With smooth or serrated spring pawl

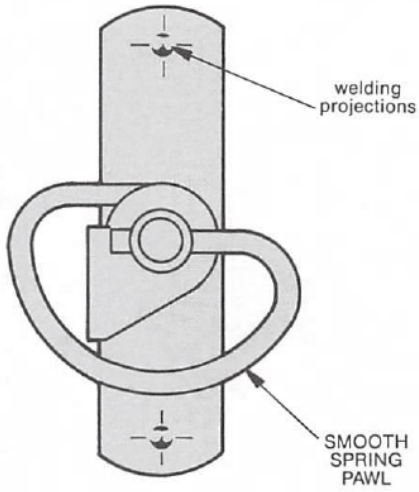
See page DD-2 for actual sizes.

millimeter/inch
millimeter
inch

Knurled Knob Style

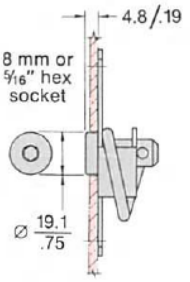


WELD TYPE

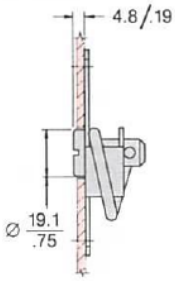


MOUNTING STYLES	SPRING STYLE	PART NUMBERS					
		Knurled Knob Style	Hex Socket Head Style	Slotted Head Style	Black Knob Style	T-Bar Head Style	Toolhead Style
Rivet	Smooth	57-40-**201**-10 ■	57-40-**801**-10 ■	57-40-**101**-10 ■	57-40-**401**-10 ■	57-40-**301**-10 ■	—
	Serrated	57-40-**211**-10 ■	57-40-**811**-10 ■	57-40-**111**-10 ■	57-40-**411**-10 ■	57-40-**311**-10 ■	57-**T**-40 ■
Weld	Smooth	57-40-**202**-50 ■	57-40-**802**-50 ■	57-40-**102**-50 ■	57-40-**402**-50 ■	57-40-**302**-50 ■	—
	Serrated	57-40-**212**-50 ■	57-40-**812**-50 ■	57-40-**112**-50 ■	57-40-**412**-50 ■	57-40-**312**-50 ■	—

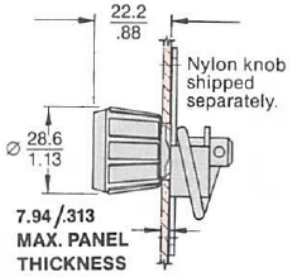
Hex Socket Head Style



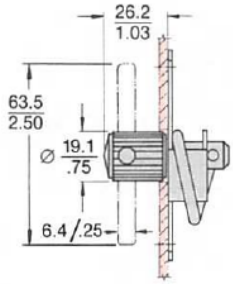
Slotted Head Style



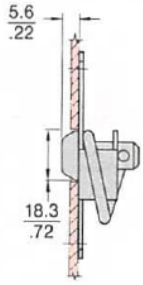
Black Knob Style



T-Bar Head Style

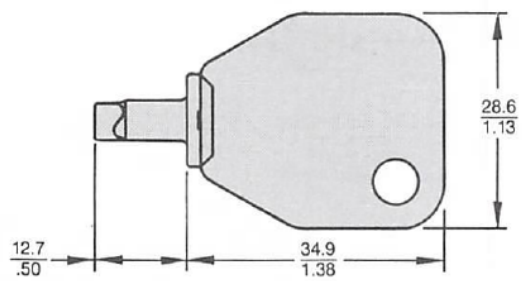


Toolhead Style

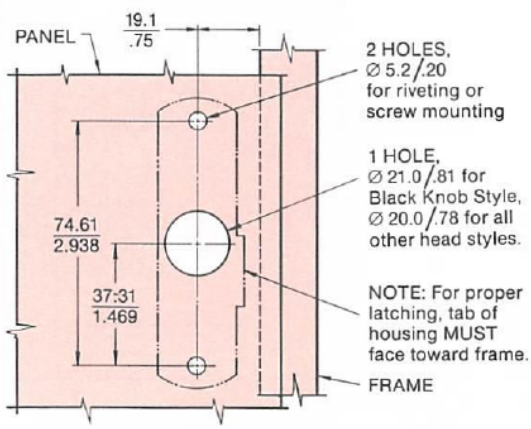


No. 5 Toolhead Key Part Number 29-90-215-10 ■

MATERIAL and FINISH
case hardened steel with bright nickel plate.



INSTALLATION



MATERIAL and FINISH
SPRING: 302 stainless steel, passivated.
HOUSING: 1010 steel, DACROTIZED†.
T-BAR, T-BAR STUD and HEX DRIVE STUD: low carbon steel, zinc plated.
OTHER STUDS: low carbon steel, DACROTIZED† plus bright metallic organic coating.
KNOB: nylon, black.

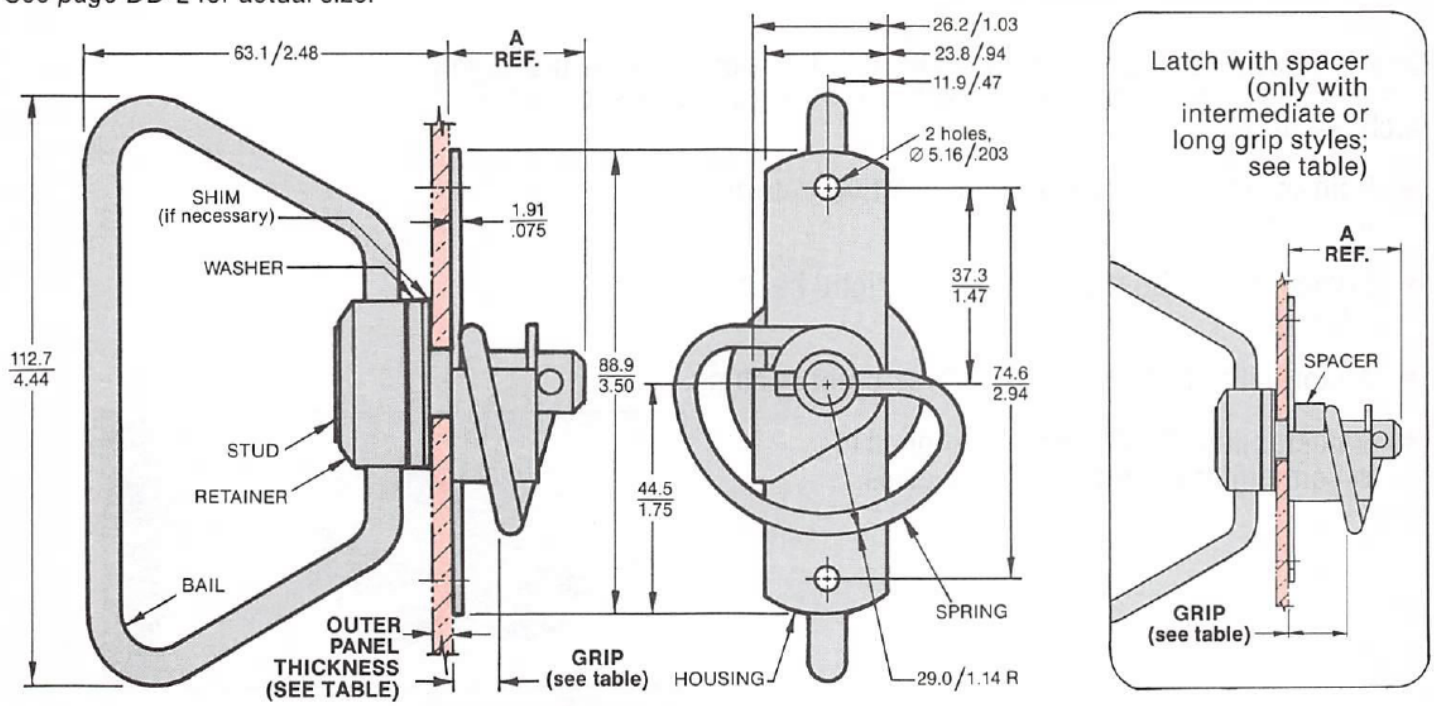
†Registered tradename of Metal Coatings International, Inc.

■ From stock, subject to prior sale.

Spring Latches

Series 40 with Bail Handle

See *page DD-2* for actual size.



millimeter
inch

millimeter/inch

GRIP MIN.	GRIP MAX.	A Ref.	MOUNT STYLE	PART NUMBERS
2.4 / .09	14.3 / .56	25.0 / .98	RIVET	57-40-**701**-80 ■
			WELD	57-40-**702**-85 ■
12.7 / .50	24.6 / .97	35.3 / 1.39	RIVET	57-40-**704**-80 ■
			WELD	57-40-**705**-85 ■
23.4 / .92	35.3 / 1.39	46.0 / 1.81	RIVET	57-40-**707**-80 ■
			WELD	57-40-**708**-85 ■

■ From stock, subject to prior sale.

OUTER PANEL THICKNESS	NUMBER OF SHIMS NEEDED
4.60/.181 to 4.98/.196	none
4.19/.165 to 4.57/.180	one .41/.016 thick
3.78/.149 to 4.17/.164	one .79/.031 thick
3.38/.133 to 3.76/.148	one .79/.031 thick & one .40/.016 thick
2.97/.117 to 3.35/.132	two .79/.031 thick
2.57/.101 to 2.95/.116	two .79/.031 thick & one .40/.016 thick

MATERIAL and FINISH

STUD is low carbon steel, RETAINER is die cast zinc, and BAIL is 1008 steel; these components are zinc plated plus bright chromate dip. SHIMS: nylon, black.
SPRING: 302 stainless steel, passivated.
HOUSING and WASHER: 1010 steel, DACROTIZED†.
SPACER: low carbon steel, DACROTIZED†.

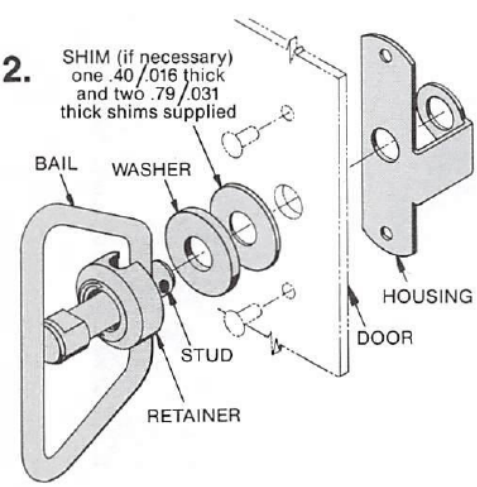
†Registered tradename of Metal Coatings International, Inc.

Latch is shipped unassembled, one per package

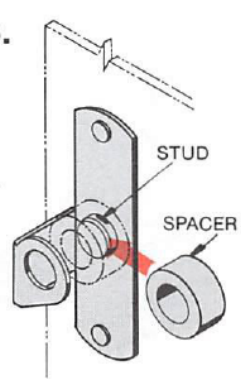
INSTALLATION

1. For panel preparation see previous page.

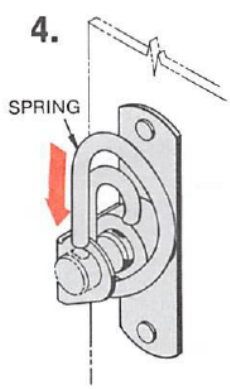
2.



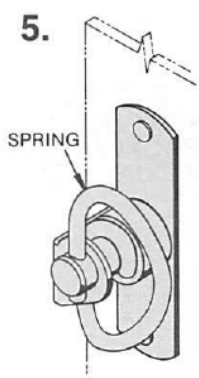
3.



4.



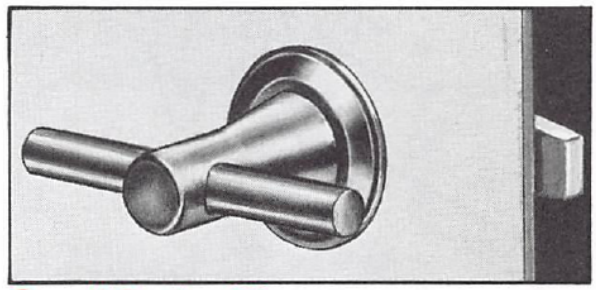
5.



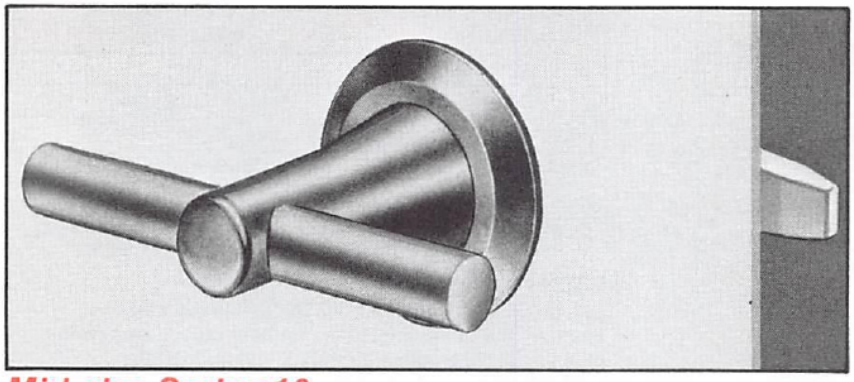
T-handle Latches

Now . . . Southco's rugged No. 68 T-handle Latch is offered in two additional sizes, one smaller and one larger than our long-popular series 10. Each latch features:

- Built-in 90° rotation stops for positive ¼-turn latching.
- Choice of installation for left or right hand operation.
- Adaptability to single, two or three-point latching.
- Adjustability. Pawl can be positioned to accommodate a wide range of grips.

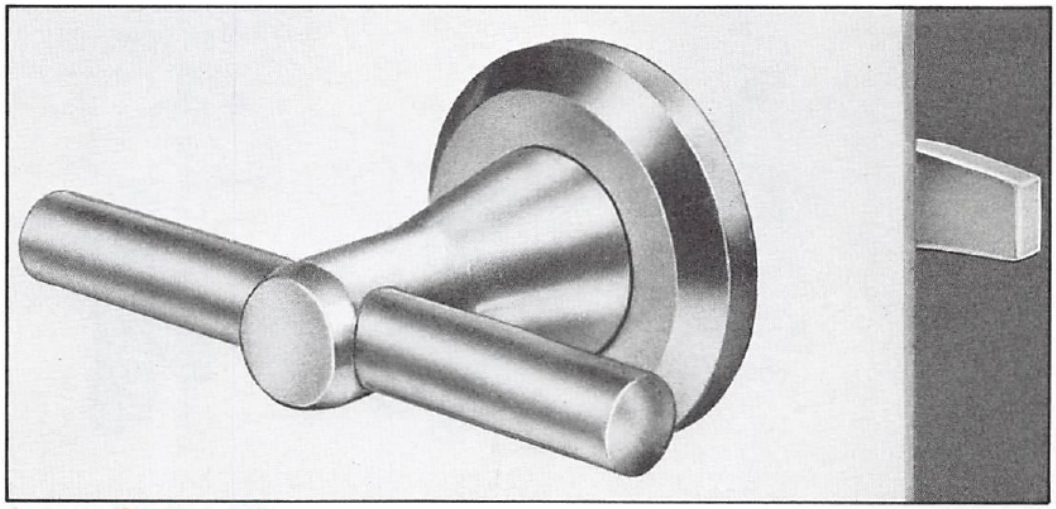


Small Series 50



Mid-size Series 10

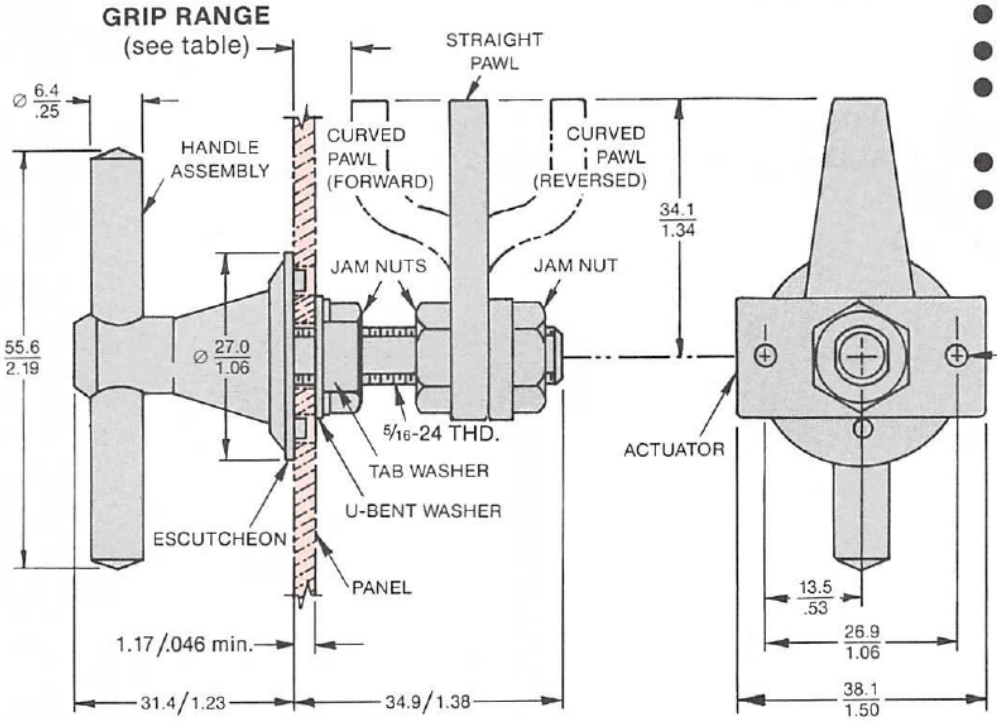
LATCHES ARE SHOWN APPROXIMATELY ACTUAL SIZE

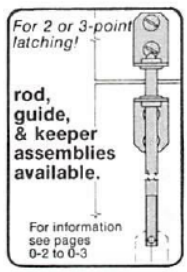


Large Series 70

T-handle Latch, small series 50

- Wide grip range
- Restricted 90° rotation
- Single or three-point latching
- T-handle for easy access
- Mounts from inside panel— no visible mounting hardware





ACTUAL SIZE

millimeter / inch

millimeter/inch

MATERIAL and FINISH

FERRULE and ESCUTCHEON are die cast zinc, copper plated and HANDLE is 12L14 steel; these components are zinc plated plus bright chromate dip or chrome plated. See table.
TAB WASHER and ACTUATOR are 1010 steel, JAM NUTS are steel and U-BENT WASHER is 1070 or 1080 steel; these components are zinc plated plus yellow chromate dip.
PIN: 302 stainless steel, natural.
SHAFT: low carbon steel, DACROTIZED†.
PAWL: 1010 steel, DACROTIZED†.

†Registered tradename of Metal Coatings International, Inc.

Latch is shipped unassembled, one unit per package.

GRIP RANGE		PART NUMBERS	
		Handle assembly finish	
MIN.	MAX.	Zinc plated	Chrome plated
0	12.7 /.50	68-50-301-10* ■	68-50-301-20* ■
12.7 /.50	25.4 / 1.00	68-50-302-10‡ ■	68-50-302-20‡ ■
25.4 / 1.00	38.1 / 1.50	68-50-301-10* ■	68-50-301-20* ■

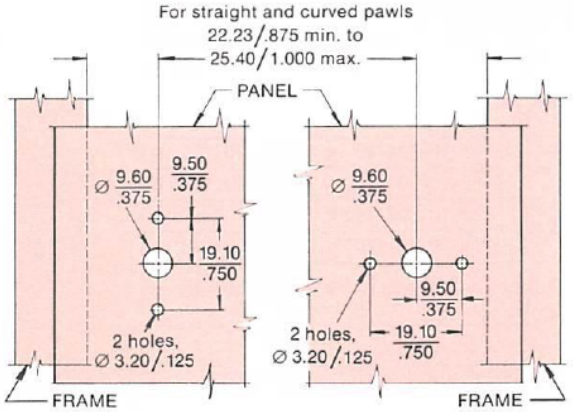
*The same assembly is supplied for both long and short grips. Short grip curves toward panel. Reverse pawl for long grip.
‡For intermediate grip, straight pawl is supplied.
■ From stock, subject to prior sale.

INSTALLATION

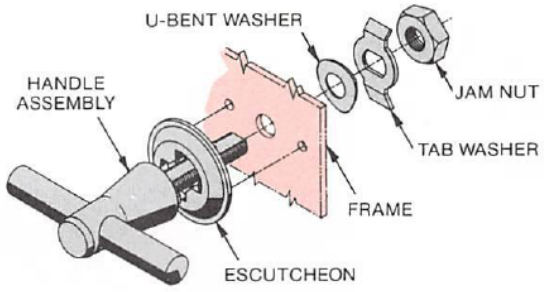
1. Prepare panel as shown.

Left hand operation
Turn handle counterclockwise to latch

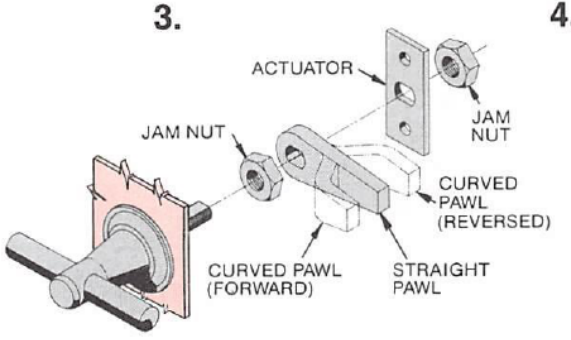
Right hand operation
Turn handle clockwise to latch



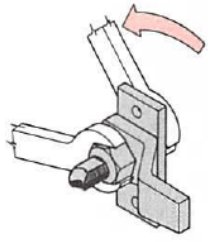
2. Assemble as shown. Tighten first nut to hold fastener snugly in panel, yet permit smooth operation. Bend tabs of washer against sides of nut.



3.



4. Adjust pawl to GRIP measurement. Use two wrenches to tighten.



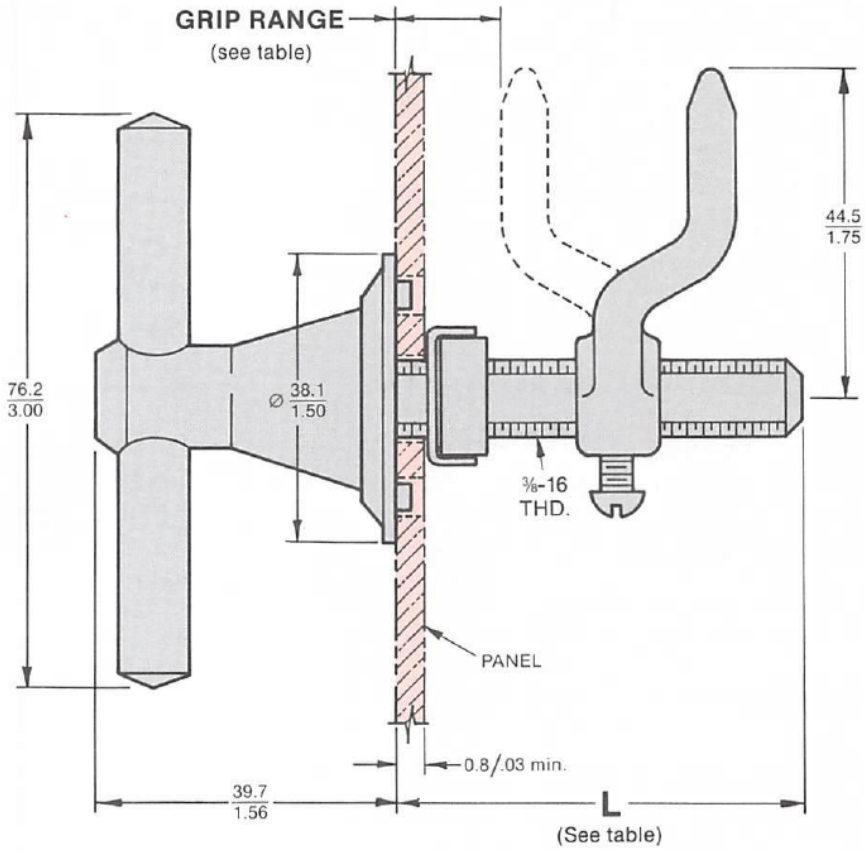
T-handle Latch, mid-size series 10

- Wide grip range
- Restricted 90° rotation
- Single, two or three-point latching
- Two handle version for inside and outside operation
- Mounts from inside panel—
  no visible mounting hardware

ACTUAL SIZE



Latch is shipped unassembled, one unit per package.



millimeter / inch

millimeter/inch

MODEL	GRIP RANGE MIN.	GRIP RANGE MAX.	L	F	PART NUMBERS Handle assembly finish: Zinc plated	PART NUMBERS Handle assembly finish: Chrome plated
A	3.2/.13	25.4/1.00	50.8/2.00	31.8 ± 3.2 / 1.25 ± .13	68-10-101-10* ■	68-10-101-20* ■
	25.4/1.00	50.8/2.00				
B	—	—	50.8/2.00	—	68-10-201-10 ■	68-10-201-20 ■
C	1.6/.06	19.8/.78	50.8/2.00	28.6 ± 1.6 / 1.13 ± .06	68-10-301-10* ■	68-10-301-20* ■
	14.3/.56	32.5/1.28			68-10-302-10‡ ■	68-10-302-20‡ ■
	27.0/1.06	45.2/1.78			68-10-301-10* ■	68-10-301-20* ■
D	3.2/.13	25.4/1.00	65.1/2.56	31.8 ± 3.2 / 1.25 ± .13	68-10-401-10* ■	68-10-401-20* ■
	25.4/1.00	50.8/2.00				

*The same assembly is supplied for both long and short grips.
Short grip curves toward panel. Reverse pawl for long grip.
‡For intermediate grip, straight pawl is supplied.

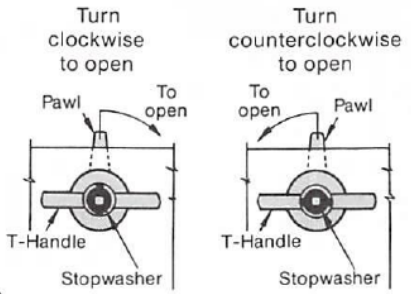
■ From stock, subject to prior sale.

T-handle Latch, mid-size series 10

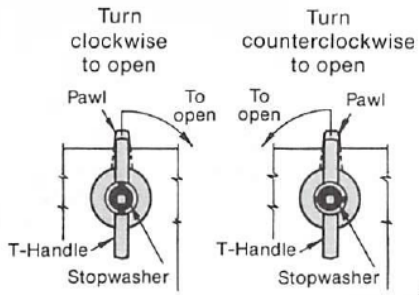
INSTALLATION INSTRUCTIONS

T-HANDLE ORIENTATION AND OPERATION

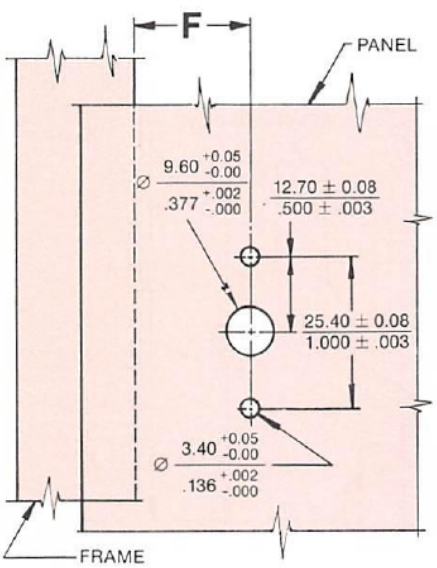
Handle parallel to edge of panel



Handle perpendicular to edge of panel



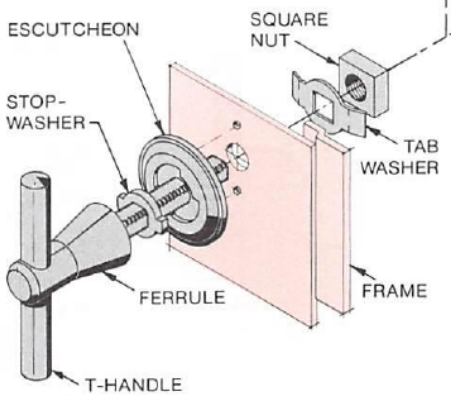
1. Prepare panel as shown. See instructions above for left or right hand operation and T-handle orientation.



2. BASIC LATCH ASSEMBLY
Common to all models.

Slip stop washer over shaft (see above for orientation) and follow with escutcheon plate.

Insert shaft into panel; fit stop pins into holes; apply tab washer and square nut. Tighten nut sufficiently to hold fastener snugly in panel, yet permit smooth operation. Bend tabs of washer against sides of nut.



MATERIAL and FINISH

FERRULE and ESCUTCHEON are die cast zinc, copper plated and HANDLE is low carbon steel; these components are zinc plated plus bright chromate dip or chrome plated. See table.
FLAT PAWL and ACTUATOR are 1010 steel, zinc plated plus yellow chromate dip.
SQUARE NUTS and SCREW are steel; DACROTIZED†.
SHAFT: 12L14 steel, DACROTIZED†.
CURVED PAWL: die cast zinc, DACROTIZED†.
TAB WASHER and STOP WASHER: 1010 steel, DACROTIZED†.
PIN: 302 stainless steel, natural.
SETSCREW: steel, DACROTIZED†.

†Registered tradename of Metal Coatings International, Inc.

For 2 or 3-point latching!

rod, guide, & keeper assemblies available.

For information see pages 0-2 to 0-3

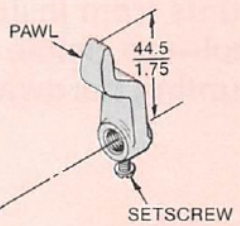
millimeter / inch

millimeter/inch

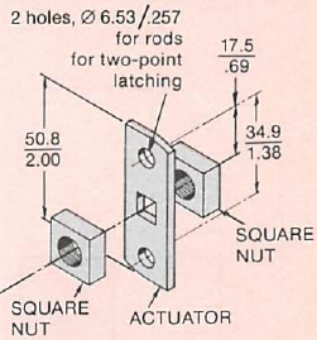
3. MODEL VARIATIONS

See table for part numbers

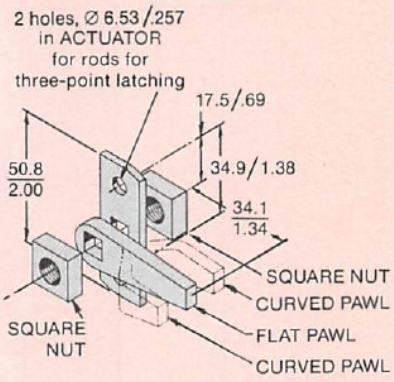
MODEL A Single-point latching



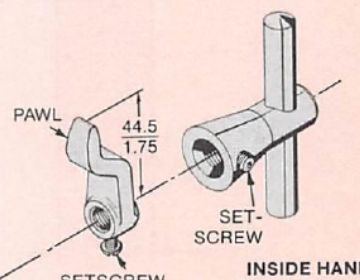
MODEL B Two-point latching



MODEL C Three-point latching



MODEL D Inside/outside handle



INSIDE HANDLE
Dimensionally the same as basic handle

T-handle Latch, large series 70

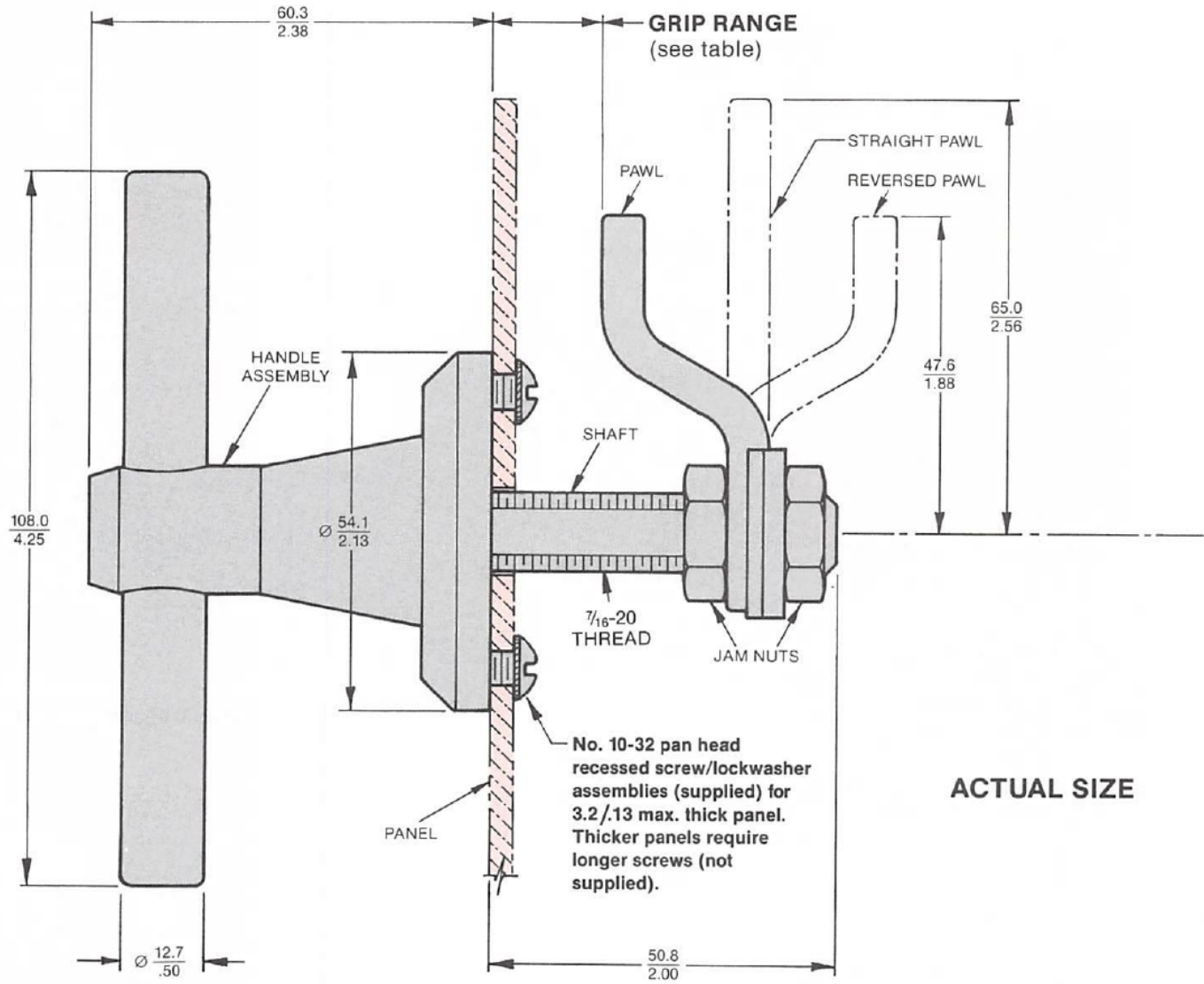
- **Heavy duty design**
- **Large, easily gripped T-handle**
- **Restricted 90° rotation**
- **Wide grip range**
- **Mounts from inside panel—no visible mounting hardware**

GRIP RANGE		PART NUMBERS	
		Handle assembly finish	
MIN.	MAX.	Zinc plated	Chrome plated
0	19.1/.75	68-70-301-10* ■	68-70-301-20* ■
6.4/.25	38.1/1.50	68-70-302-10‡ ■	68-70-302-20‡ ■
25.4/1.00	57.2/2.25	68-70-301-10* ■	68-70-301-20* ■

*The same assembly is supplied for both long and short grips. Short grip curves toward panel. Reverse pawl for long grip.
‡For intermediate grip, straight pawl is supplied.

■ From stock, subject to prior sale.

Latch is shipped partially assembled, one unit per package.



ACTUAL SIZE

millimeter/inch

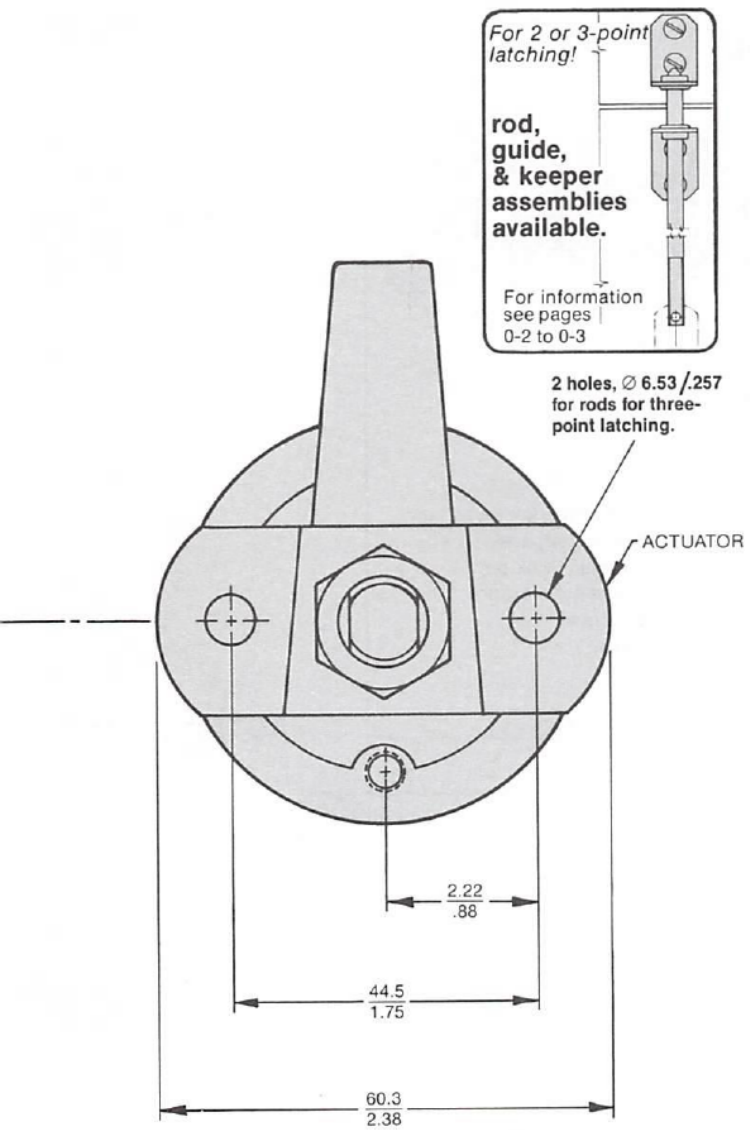
millimeter
inch

T-handle Latch, large series 70

MATERIAL and FINISH

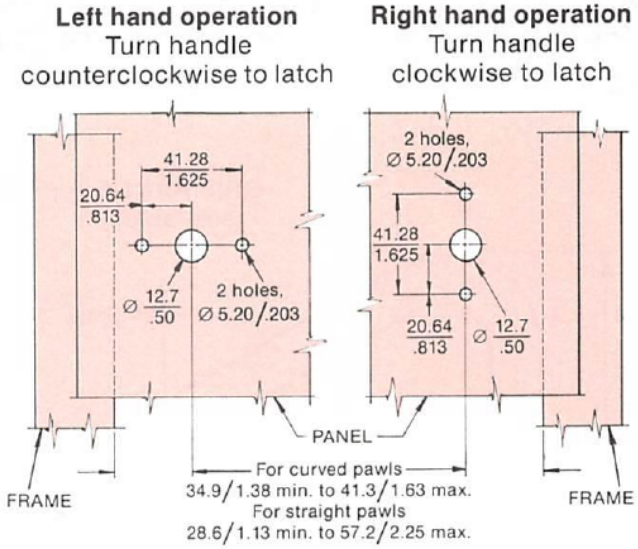
FERRULE and ESCUTCHEON are die cast zinc, copper plated and HANDLE is low carbon steel; these components are zinc plated plus bright chromate dip or chrome plated. See table.
SHAFT is low carbon steel and BASE PLATE is 1010 steel; these components are DACROTIZED†.
BEARING WASHER is 1010 steel, JAM NUTS are steel and U-BENT WASHER is spring steel; these components are DACROTIZED†.
PIN: 302 stainless steel, natural.
PAWL and ACTUATOR: 1010 steel, DACROTIZED†.
MOUNTING SCREWS: steel, DACROTIZED†.

†Registered tradename of Metal Coatings International, Inc.

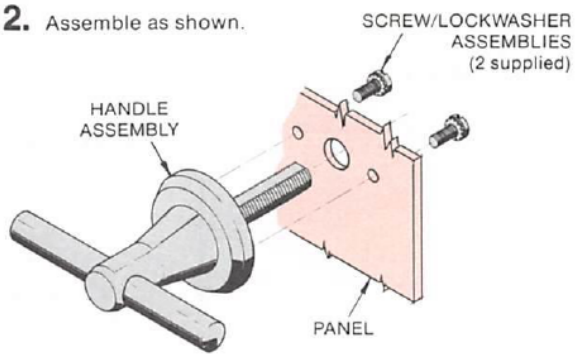


INSTALLATION

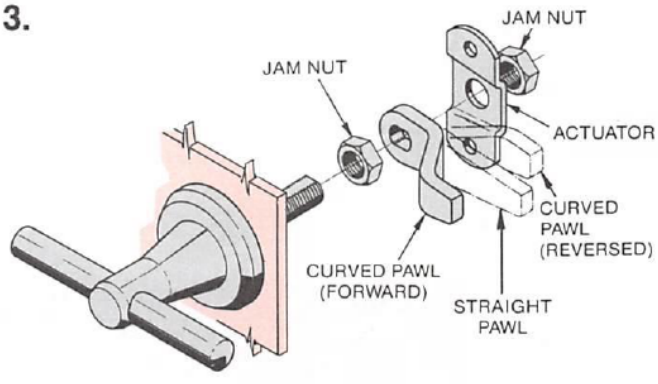
1. Prepare panel as shown.



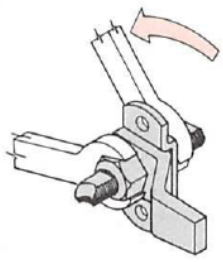
2. Assemble as shown.



3.

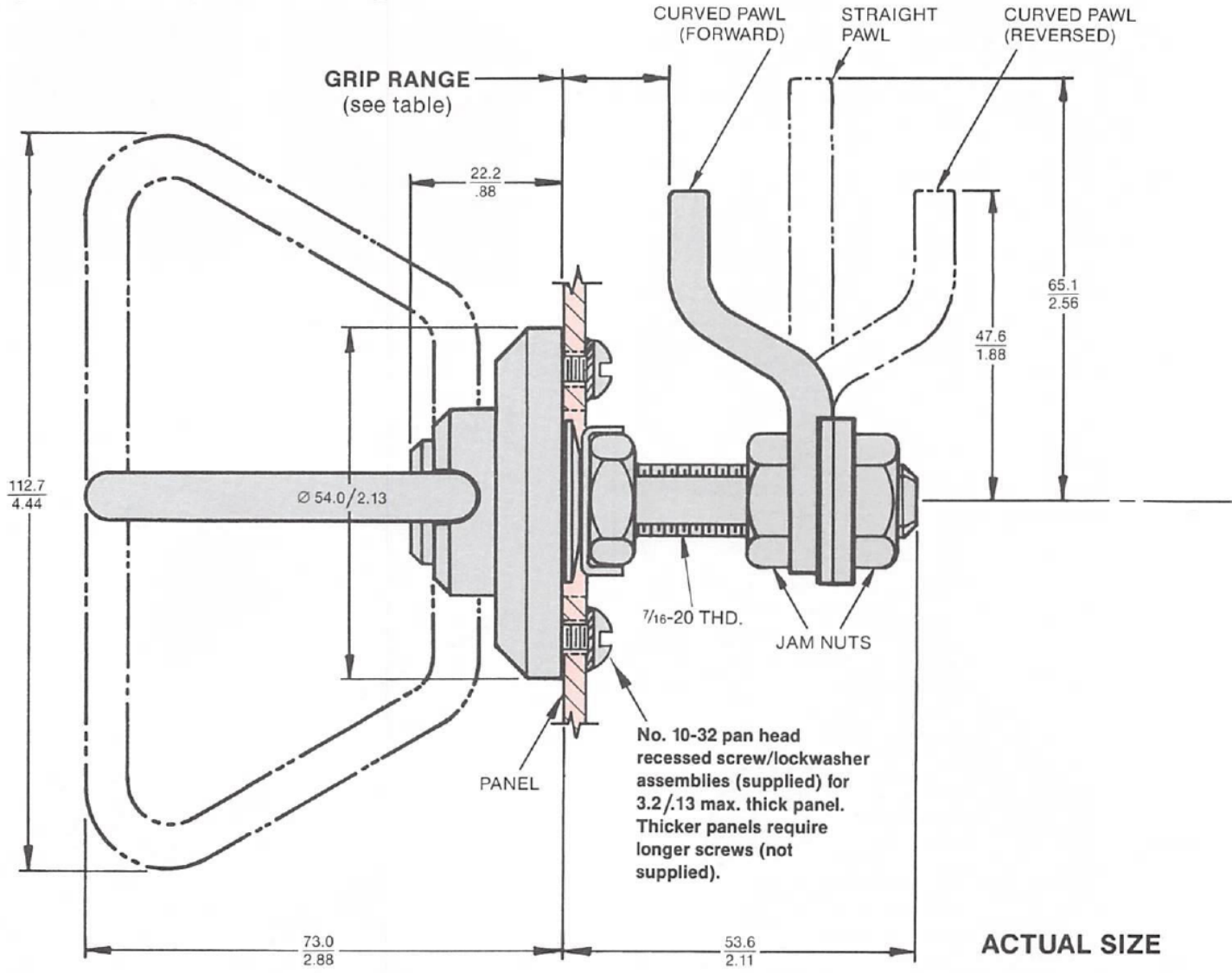


4. Adjust pawl to GRIP measurement. Use two wrenches to tighten.



Bail Handle Latch, series 80

- Wide grip range
- Restricted 90° rotation
- Large easily gripped bail handle
- Mounts from inside panel—no visible mounting hardware
- Detents hold handle in open and stored positions
- Single or three-point latching

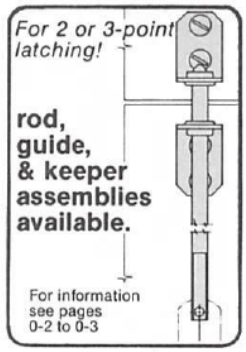


ACTUAL SIZE

GRIP RANGE		PART NUMBERS	
		Handle assembly finish	
MIN	MAX	Zinc plated	Chrome plated
0	17.5 .69	68-80-301-10* ■	68-80-301-20* ■
15.9 .63	36.5 1.44	68-80-302-10‡ ■	68-80-302-20‡ ■
34.9 1.38	55.6 2.19	68-80-301-10* ■	68-80-301-20* ■

*The same assembly is supplied for both long and short grips. Short grip curves toward panel. Reverse pawl for long grip.
‡For intermediate grip, straight pawl is supplied.

■ From stock, subject to prior sale.



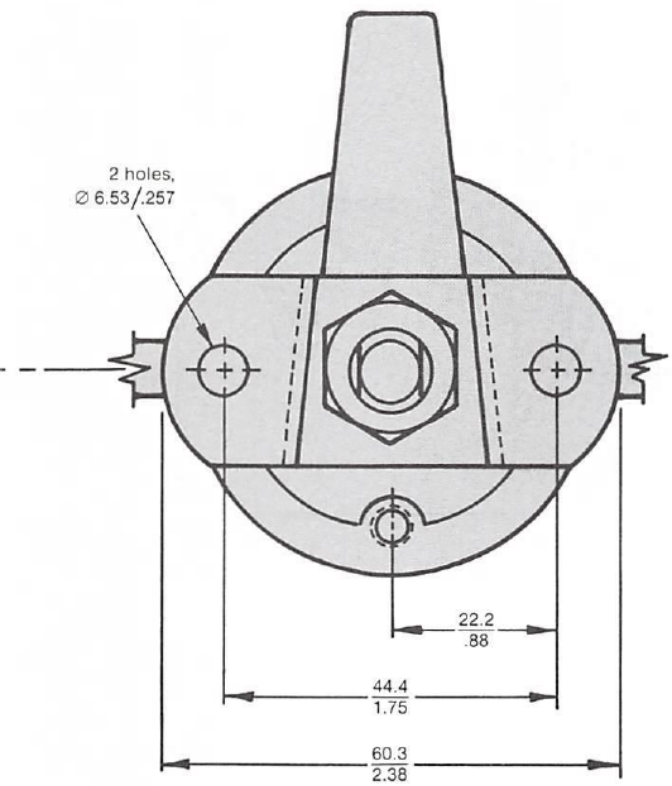
millimeter / inch millimeter/inch

Bail Handle Latch, series 80

Latch is shipped partially assembled, one unit per package.

millimeter
inch

millimeter/inch



MATERIAL and FINISH

ESCUTCHEON and STOP WASHER are die cast zinc, copper plated, BAIL HANDLE is 1008 steel and SHAFT is low carbon steel; these components are zinc plated plus bright chromate dip or chrome plated. See table.
PAWL and ACTUATOR: 1010 steel, DACROTIZED†.
BASE PLATE: 1010 steel, DACROTIZED†.
TAB WASHER is 1010 steel, WASHER is spring steel, MOUNTING SCREWS are steel and JAM NUTS are steel;
these components are DACROTIZED†.

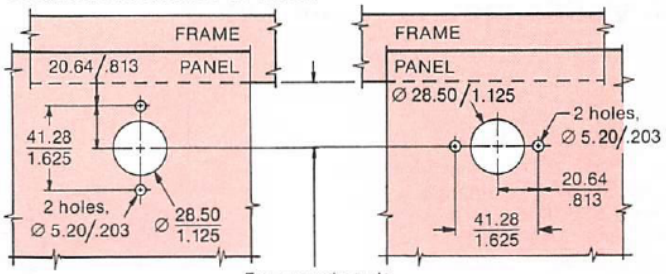
†Registered tradename of Metal Coatings International, Inc.

INSTALLATION

1. Prepare panel as shown.

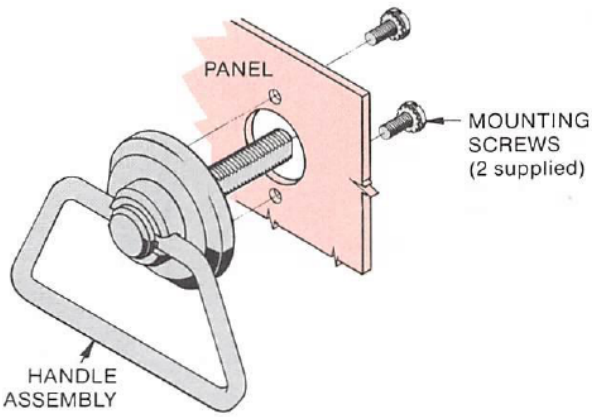
Left hand operation
Turn bail handle counterclockwise to latch

Right hand operation
Turn bail handle clockwise to latch

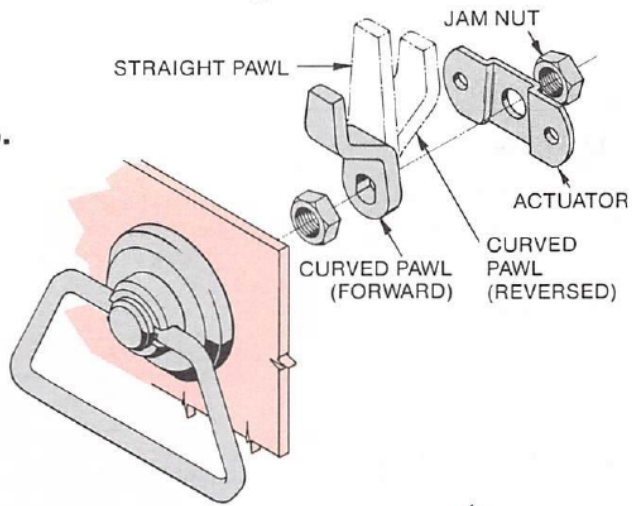


For curved pawls
34.9/1.38 min. to 41.3/1.63 max.
For straight pawls
28.6/1.13 min. to 57.2/2.25 max.

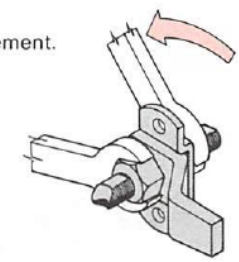
2.



3.



4. Adjust pawl to GRIP measurement. Use two wrenches to tighten.



Bail Handle Latch, series 20

- **Wide grip range**
- **Restricted 90° rotation**
- **Detents hold handle in open and stored positions**
- **Mounts from inside panel—no visible mounting hardware**

PART NUMBERS	
Handle assembly finish	
Zinc plated	Chrome plated
68-20-101-10 ■	68-20-101-20 ■

■ From stock, subject to prior sale.

MATERIAL and FINISH

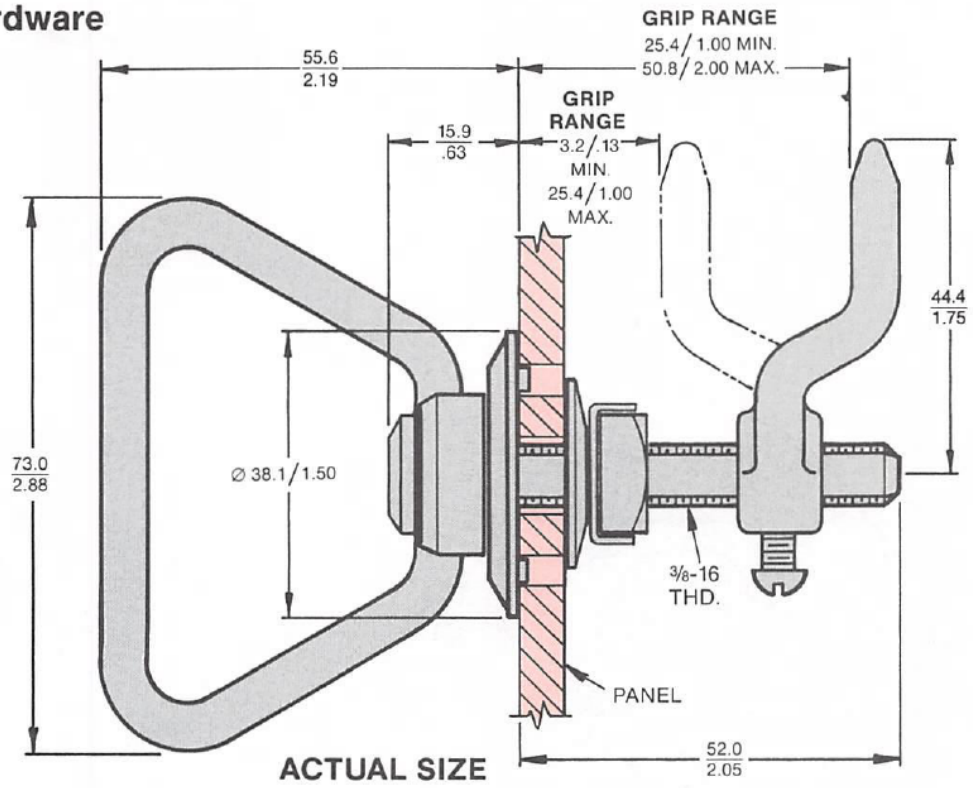
ESCUTCHEON and STOP WASHER are die cast zinc, copper plated. BAIL HANDLE is 1008 steel and SHAFT is low carbon steel; these components are zinc plated plus bright chromate dip or chrome plated. See table.
NUT is steel and WASHER is spring steel; these components are zinc plated plus yellow chromate dip.
PAWL: die cast zinc, DACROTIZED†.
TAB WASHER: 1010 steel, DACROTIZED†.
SETSCREW: steel, DACROTIZED†.

†Registered tradename of Metal Coatings International, Inc.

Latch is shipped unassembled, one unit per package.

millimeter / inch

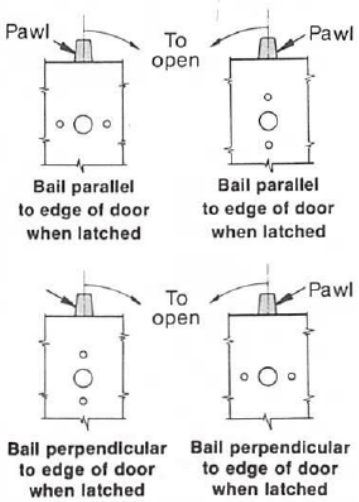
millimeter/inch



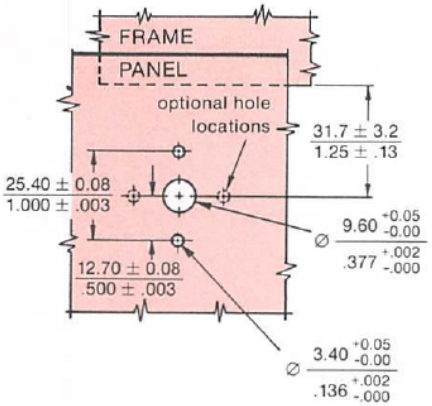
ACTUAL SIZE

INSTALLATION

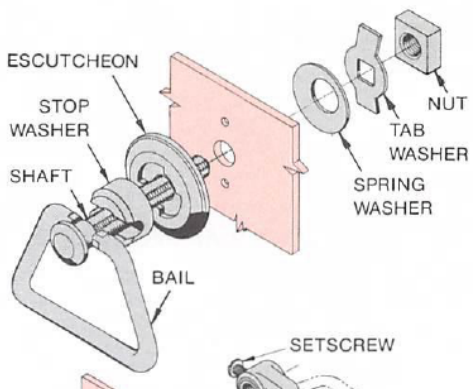
Left hand operation | **Right hand operation**



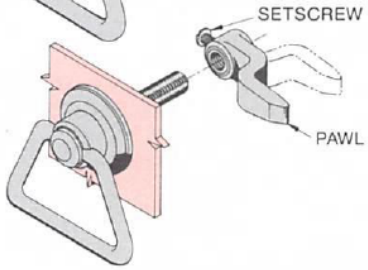
1. Prepare panel according to desired bail position and latching direction, as shown.



2.



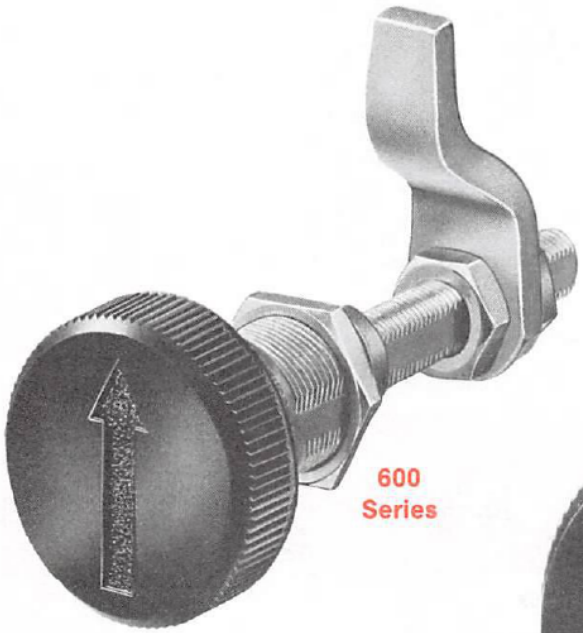
3.



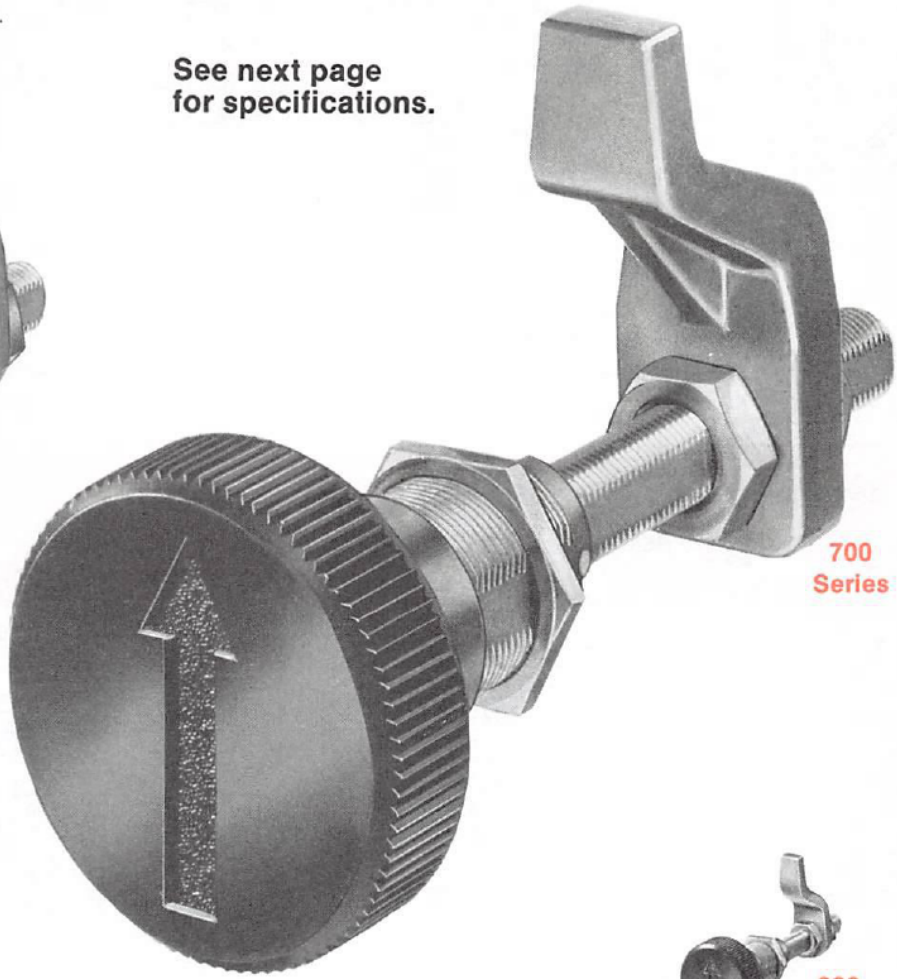
Adjustable-Grip Arrowhead Latches—in 5 sizes

This quarter-turn latch has an unusual list of features. It lets you 1) Adjust the distance between the knob and door panel. 2) Adjust the grip to handle almost any door frame thickness. 3) Feel and hear the positive click stops that hold the latch in the open or closed positions. 4) See (by the direction of the arrow) whether the latch is engaged. 5) Select a size for almost any door, from the smallest to the largest. 6) Make a quick installation through a single hole. 7) Install for either left or right hand operation.

See next page for specifications.



600 Series



700 Series

300 Series



500 Series

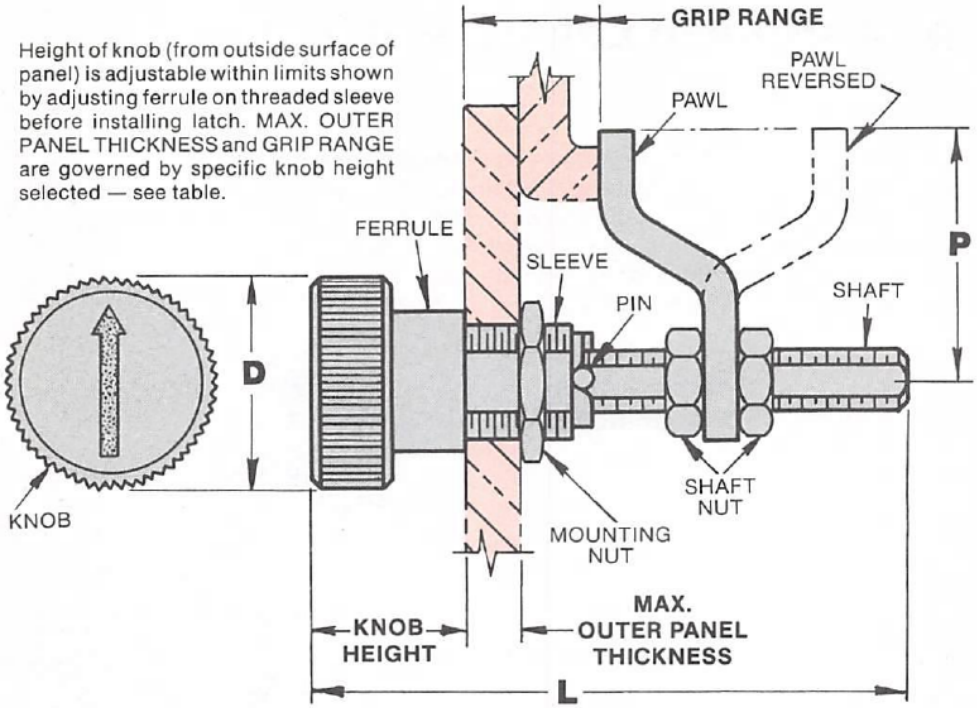


400 Series

All styles shown approx. full size

SOUTHCO® fasteners

Height of knob (from outside surface of panel) is adjustable within limits shown by adjusting ferrule on threaded sleeve before installing latch. MAX. OUTER PANEL THICKNESS and GRIP RANGE are governed by specific knob height selected — see table.



MATERIAL and FINISH

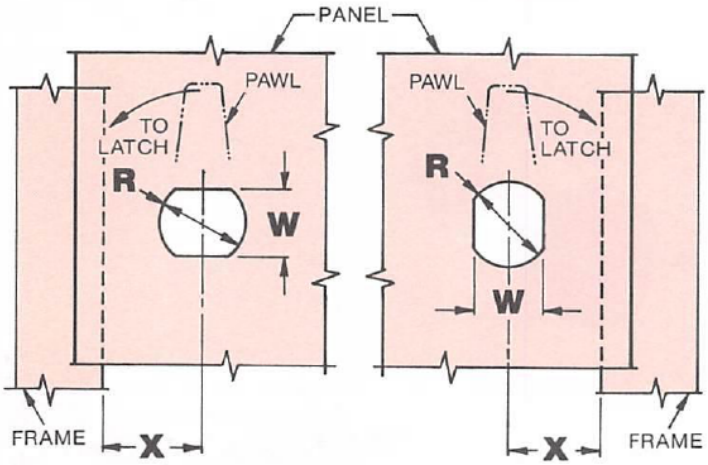
KNOB: nylon, black.
SHAFT: low carbon steel, DACROTIZED†.
PAWL, 700 SERIES: die cast zinc with chemical protective film.
PAWL, OTHER SERIES: 1010 steel, DACROTIZED†.
FERRULE, 700 SERIES: 5086 aluminum, natural.
FERRULE, OTHER SERIES: 6061 aluminum, natural.
SLEEVE: die cast zinc with chemical protective film.
MOUNTING NUT, 300 SERIES: 303 stainless steel, passivated.
MOUNTING NUT, OTHER SERIES: steel, zinc plated plus yellow chromate dip.
SHAFT NUTS, 500 SERIES: steel, DACROTIZED†.
SHAFT NUTS, OTHER SERIES: steel, zinc plated plus yellow chromate dip.
SPRING: 302 stainless steel, natural.
PIN: 303 stainless steel, natural.
WASHER: 300 series stainless steel, passivated.

†Registered tradename of Metal Coatings International, Inc.

DIMENSIONS			KNOB HEIGHT	Max. Outer Panel Thickness	GRIP RANGE				PART NUMBERS	Series	INSTALLATION				Shaft thread size
					Pawl as shown		Pawl reversed				R	W	X		
∅ D	L	P Rad.			Min.	Max.	Min.	Max.			±0.13 ±.005	+0.13 -0.00 +.005 -.000	Min.	Max.	
12.7 0.50	39.3 1.55	13.5 0.53	12.7/.50 max.	1.59/.063	3.2/.13	14.3/.56	14.3/.56	25.4/1.00	69-10-301-11 ■	300	8.33 .328	6.99 .275	9.53 .375	11.11 .438	6-32 UNC
			9.5/.38 min.	4.75/.188	6.4/.25	17.5/.69	17.5/.69	28.6/1.13							
19.1 0.75	47.6 1.88	15.9 .63	17.5/.69 max.	1.59/.063	3.2/.13	15.9/.63	15.9/.63	28.6/1.13	69-10-401-11 ■	400	11.51 .453	9.78 .385	12.30 .484	13.10 .516	10-32 UNF
			12.7/.50 min.	6.35/.250	7.9/.31	20.6/.81	20.6/.81	33.3/1.31							
28.6 1.13	79.8 3.14	34.1 1.34	25.4/1.00 max.	6.35/.250	4.8/.19	30.2/1.19	30.2/1.19	55.6/2.19	69-10-501-11 ■	500	16.26 .640	13.72 .540	22.23 .875	25.40 1.000	5/16-24 UNF
			19.1/.75 min.	12.70/.500	11.1/.44	36.5/1.44	36.5/1.44	61.9/2.44							
42.9 1.69	113.1 4.45	47.6 1.88	36.5/1.44 max.	9.53/.375	4.8/.19	42.9/1.69	42.9/1.69	80.9/3.19	69-10-601-11 ■	600	22.61 .890	20.07 .790	34.93 1.375	41.28 1.625	7/16-20 UNF
			27.0/1.06 min.	19.05/.750	14.3/.56	52.4/2.06	52.4/2.06	90.5/3.56							
63.5 2.50	159.1 6.27	65.1 2.56	50.8/2.00 max.	12.70/.500	6.4/.25	60.3/2.38	60.3/2.38	114.3/4.50	69-10-701-11 ■	700	28.96 1.140	25.65 1.010	47.63 1.875	57.15 2.250	9/16-18 UNF
			38.1/1.50 min.	25.40/1.000	19.1/.75	73.0/2.88	73.0/2.88	127.0/5.00							

■ From stock, subject to prior sale.

PANEL PREPARATION



LEFT HAND ASSEMBLIES
turn counterclockwise to latch

RIGHT HAND ASSEMBLIES
turn clockwise to latch

INSTALLATION

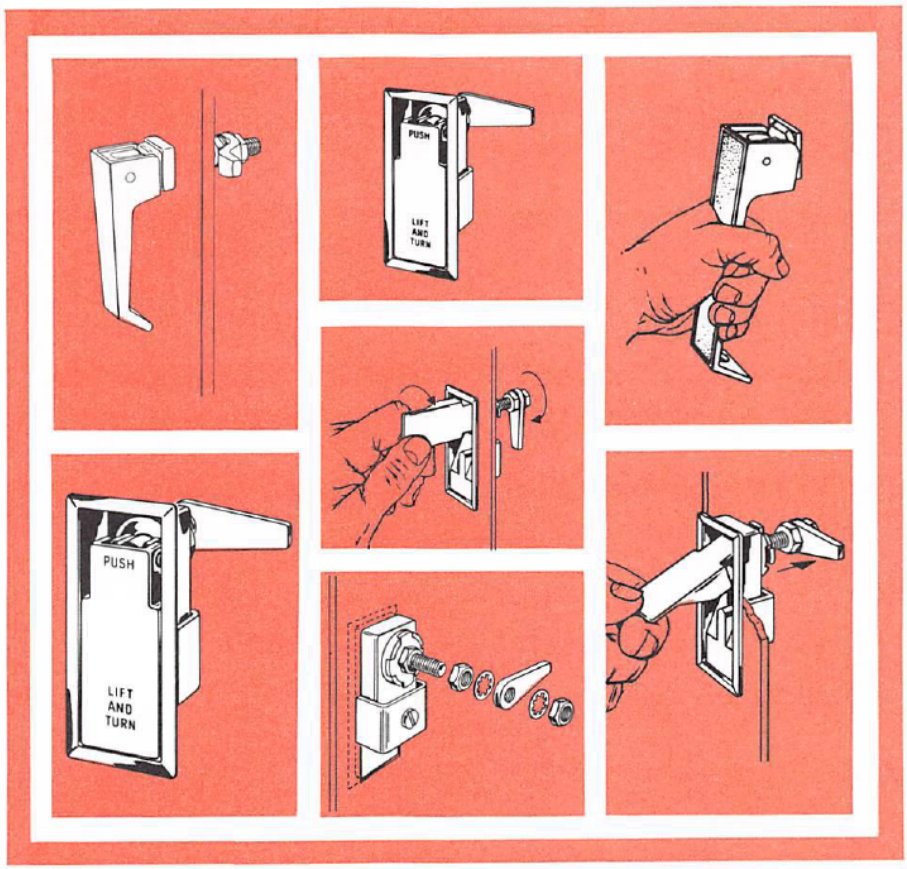
Latch operates through 90° rotation in direction shown with a positive click stop at both extremes. Pawl pulls up at both extremes.

1. Adjust ferrule to desired knob height (see table).
2. Remove shaft nuts, pawl and mounting nut (if assembled).
3. Insert shaft through hole in panel to engage flats of sleeve with shaped hole.
4. Check arrow orientation.
5. Apply and tighten mounting nut.
6. Install pawl and shaft nuts as shown, position pawl for desired grip and use two wrenches to tighten nuts hard against pawl.

Section E
Lift-and-turn™ Latches

contents guide | **page**

No. 62 100 Series	E-3
No. 62 200 Series	E-2
No. 62 300 Series	E-4
No. 62 400 Series (Flush)	E-10 & E-11
No. 62 500 Series	E-6 & E-7
No. 62 600 Series	E-5
No. 62 700 Series (Flush)	E-9
No. 62 800 Series (Flush)	E-12 & E-13



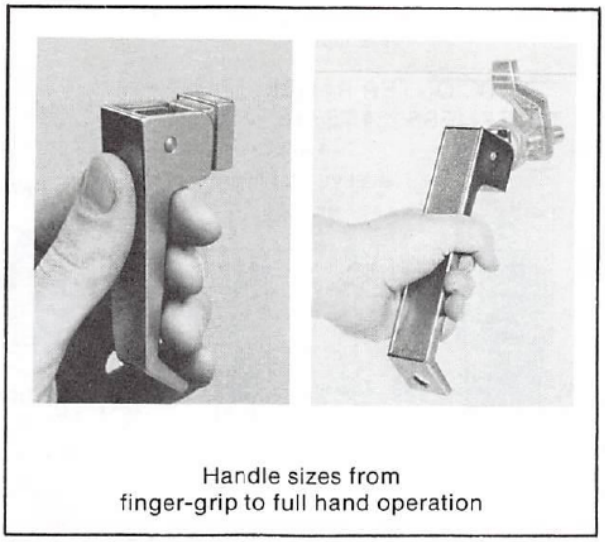
Section E

Lift-and-turn™ Latches

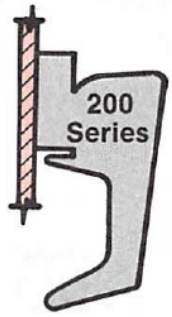
contents guide | **page**

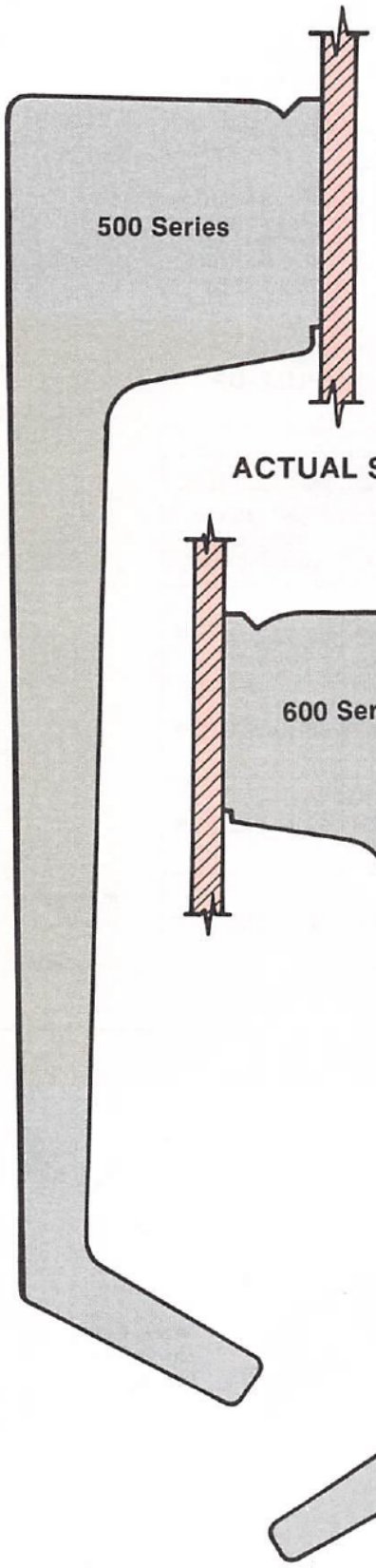
No. 62 100 Series	E-3
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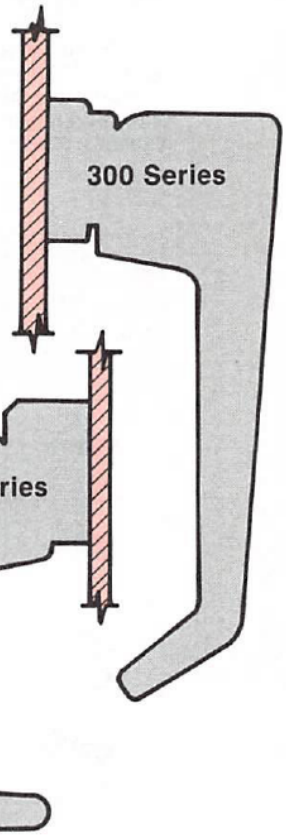
Southco Lift-and-Turn™ Latches

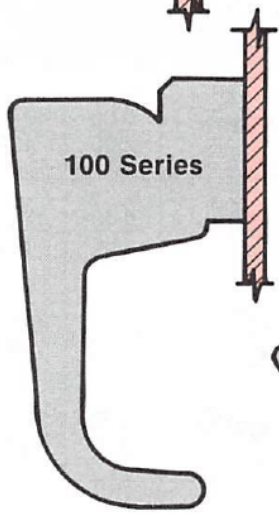


Handle sizes from
finger-grip to full hand operation

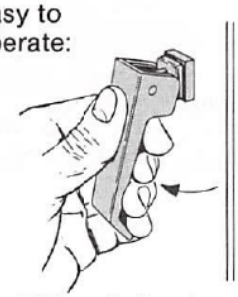




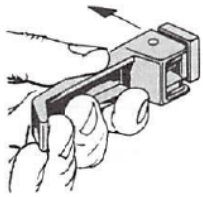




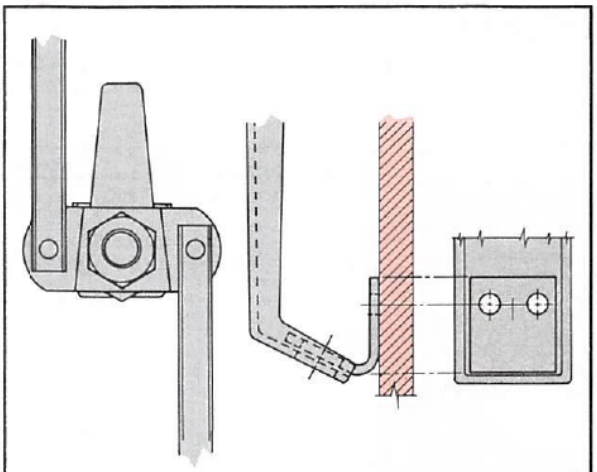
Easy to
operate:



Lift handle to relax
compression.



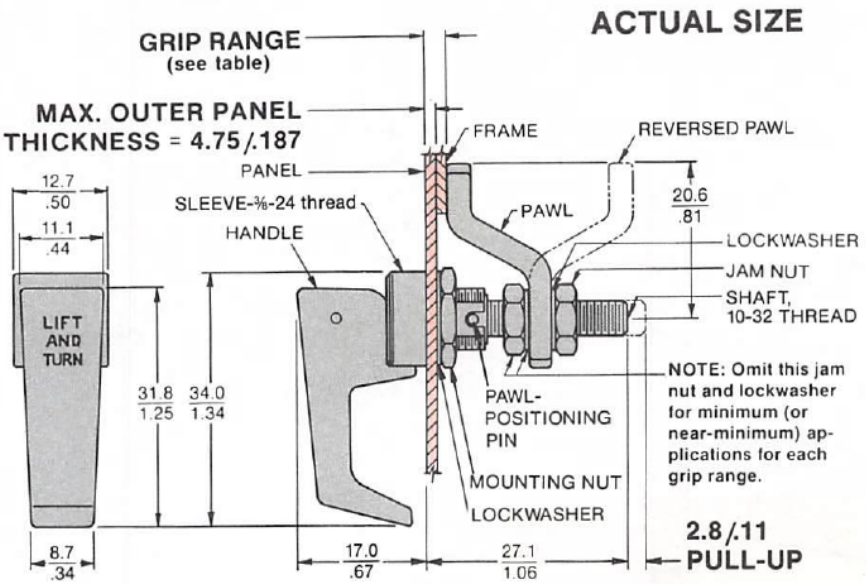
Turn to open.



Optional locking and latching designs
satisfy many latching needs.

Lift-and-turn™ Latch, 200 Series

Pawl-positioning design



NEW

NOTE: To delete "LIFT AND TURN" from handle, change the third digit of the part number to 8. Example: 62-80-203-30.

PAWL POSITIONS	GRIP RANGE		PART NUMBERS Handle and Sleeve finish			
	MIN.	MAX.	Natural with chemical protective film	Polished and bright chrome plated	Matte black polyester powder coat	Satin Silver polyester powder coat
	0.00 / .000	10.72 / .422	62-10-203-30 ■	62-10-203-10 ■	62-10-203-50 ■	62-10-203-75 ■
	6.35 / .250	18.65 / .734	62-10-204-30 ■	62-10-204-10 ■	62-10-204-50 ■	62-10-204-75 ■
	12.70 / .500	25.00 / .984	62-10-204-30 ■	62-10-204-10 ■	62-10-204-50 ■	62-10-204-75 ■
	20.62 / .812	32.94 / 1.297	62-10-203-30 ■	62-10-203-10 ■	62-10-203-50 ■	62-10-203-75 ■

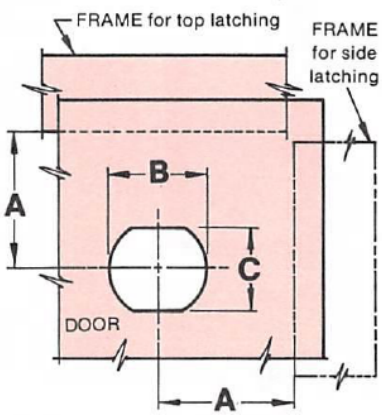
millimeter / inch

millimeter/inch

■ From stock, subject to prior sale.

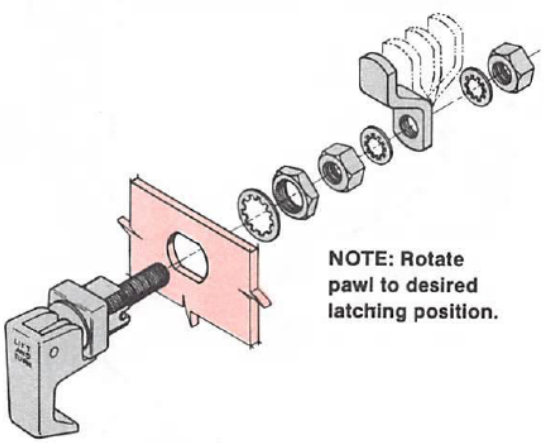
Installation

1. Locate and orient hole with respect to handle in latched position (as shown in next step). This hole orientation is preferred for all latching positions.



DIMENSIONS	Series 200	Series 100
A	15.88 ± 0.81 / 6.25 ± .032	22.23/.875 min. 25.40/1.000 max.
B	9.50 +0.10 -0.00 / .375 +.004 -.000	16.50 +0.13 -0.00 / .640 +.005 -.000
C	8.13 +0.10 -0.00 / .320 +.004 -.000	13.72 +0.13 -0.00 / .540 +.005 -.000

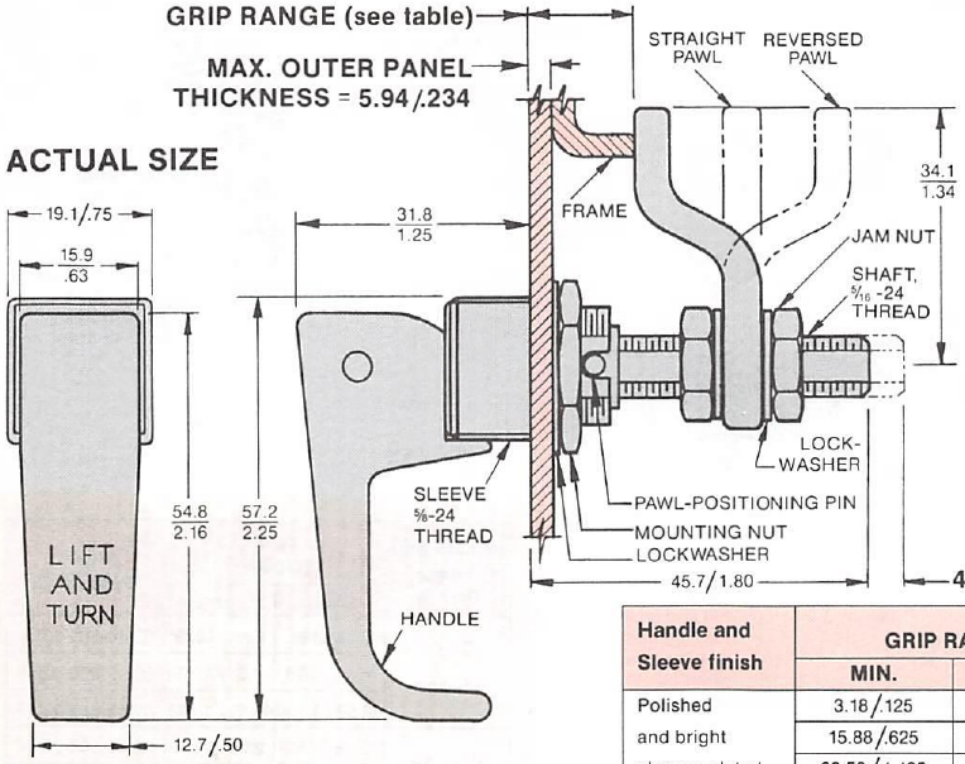
2. Assemble as shown.



NOTE: Rotate pawl to desired latching position.

Lift-and-turn™ Latch, 100 Series

Pawl-positioning design



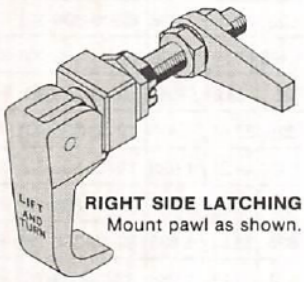
millimeter
inch

millimeter/inch

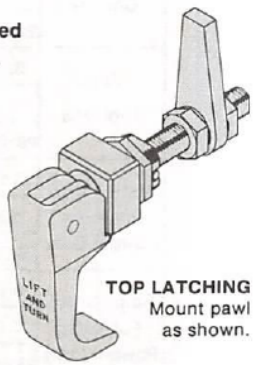
NEW

NOTE: To delete "LIFT AND TURN" from handle, change the third digit of the part number to 8.
Example: 62-80-103-10.

Note: Pawl may be mounted 180° from position shown.



RIGHT SIDE LATCHING
Mount pawl as shown.

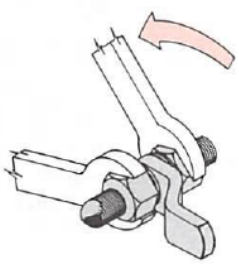


TOP LATCHING
Mount pawl as shown.

Handle and Sleeve finish	GRIP RANGE		PART NUMBERS	
	MIN.	MAX.	TOP LATCHING	SIDE LATCHING
Polished and bright chrome plated	3.18/.125	23.80/.938	62-10-103-10* ■	62-10-113-10* ■
	15.88/.625	36.51/1.438	62-10-104-10† ■	62-10-114-10† ■
	28.58/1.125	49.20/1.938	62-10-103-10* ■	62-10-113-10* ■
Brushed chrome	3.18/.125	23.80/.938	62-10-103-20* ■	62-10-113-20* ■
	15.88/.625	36.51/1.438	62-10-104-20† ■	62-10-114-20† ■
	28.58/1.125	49.20/1.938	62-10-103-20* ■	62-10-113-20* ■
Natural with chemical protective film	3.18/.125	23.80/.938	62-10-103-30* ■	62-10-113-30* ■
	15.88/.625	36.51/1.438	62-10-104-30† ■	62-10-114-30† ■
	28.58/1.125	49.20/1.938	62-10-103-30* ■	62-10-113-30* ■
Matte black polyester powder coat	3.18/.125	23.80/.938	62-10-103-50* ■	62-10-113-50* ■
	15.88/.625	36.51/1.438	62-10-104-50† ■	62-10-114-50† ■
	28.58/1.125	49.20/1.938	62-10-103-50* ■	62-10-113-50* ■
Satin silver polyester powder coat	3.18/.125	23.80/.938	62-10-103-75* ■	62-10-113-75* ■
	15.88/.625	36.51/1.438	62-10-104-75† ■	62-10-114-75† ■
	28.58/1.125	49.20/1.938	62-10-103-75* ■	62-10-113-75* ■

* The same curved pawl is used for both fasteners, positioned according to desired grip.
‡For intermediate grip, straight pawl is supplied. ■ From stock, subject to prior sale.

3. Pawl should be adjusted to GRIP measurement with the door open and the handle in the LATCHED position. Use two wrenches to tighten.



MATERIAL and FINISH
HANDLE and SLEEVE: die cast zinc, see table for finish.
SPRING: 302 stainless steel, passivated.
PAWL: 1010 steel, DACROTIZED†.
PAWL POSITIONING PIN is 1213 steel, DACROTIZED† or DACROTIZED† plus black organic coating.
LOCKWASHERS are spring steel, DACROTIZED†.

FOR 200 SERIES
LONG PIN: 1112 steel, zinc plated or zinc plated plus black organic coating.
BUSHING and SHAFT are 12L14 steel, DACROTIZED† or DACROTIZED† plus black organic coating.
MOUNTING NUT: low carbon steel, zinc plated plus bright cromate dip.
MOUNTING LOCKWASHER: Spring steel, DACROTIZED†.
JAM NUTS: low carbon steel, DACROTIZED†.

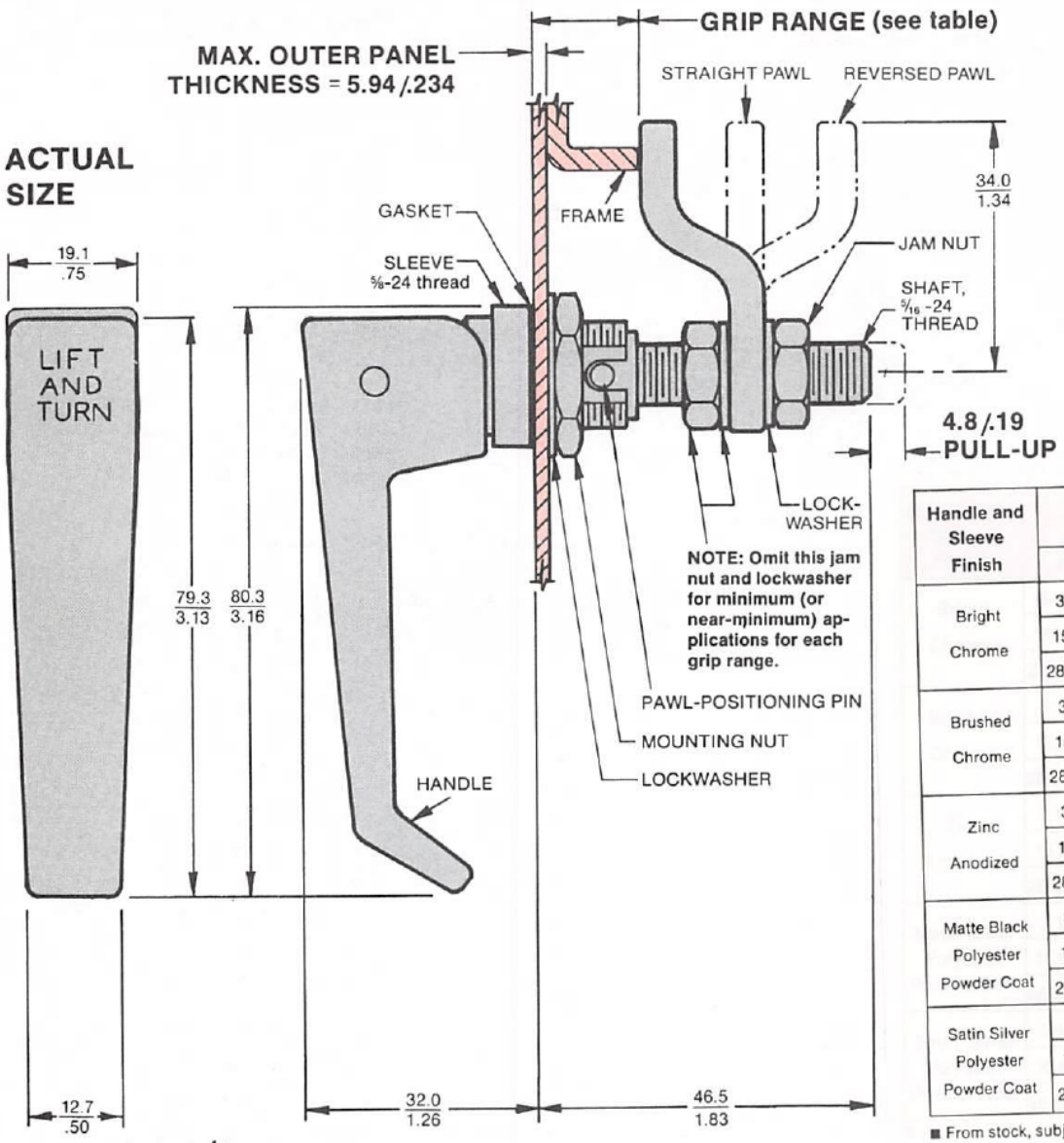
FOR 100 SERIES
LONG PIN: 303 stainless steel, natural or with black organic coating.
BUSHING and SHAFT are low carbon steel DACROTIZED† or DACROTIZED† plus black organic coating.
MOUNTING NUT and JAM NUTS are low carbon steel, DACROTIZED†.

†Registered tradename of Metal Coatings International, Inc.

Latches are shipped partially assembled; attach pawls in desired grip position during assembly.

Lift-and-turn™ Latch, 300 Series

Pawl-positioning design





For exceptional corrosion resistance . . .

zinc anodized handle and sleeve with all other components stainless steel.

millimeter / inch

millimeter/inch

Handle and Sleeve Finish	GRIP RANGE Min.	GRIP RANGE Max.	PART NUMBERS
Bright Chrome	3.18/.125	23.81/.938	62-10-303-10* ■
	15.88/.625	36.51/1.438	62-10-304-10‡ ■
	28.58/1.125	49.21/1.938	62-10-303-10* ■
Brushed Chrome	3.18/.125	23.81/.938	62-10-303-20* ■
	15.88/.625	36.51/1.438	62-10-304-20‡ ■
	28.58/1.125	49.21/1.938	62-10-303-20* ■
Zinc Anodized	3.18/.125	23.81/.938	62-10-303-40* ■
	15.88/.625	36.51/1.438	62-10-304-40‡ ■
	28.58/1.125	49.21/1.938	62-10-303-40* ■
Matte Black Polyester Powder Coat	3.18/.125	23.81/.938	62-10-303-50* ■
	15.88/.625	36.51/1.438	62-10-304-50‡ ■
	28.58/1.125	49.21/1.938	62-10-303-50* ■
Satin Silver Polyester Powder Coat	3.18/.125	23.81/.938	62-10-303-75* ■
	15.88/.625	36.51/1.438	62-10-304-75‡ ■
	28.58/1.125	49.21/1.938	62-10-303-75* ■

■ From stock, subject to prior sale.

*The same assembly is supplied for both short and long grips. For short grip, offset pawl curves back toward panel. For long grip, reverse pawl.

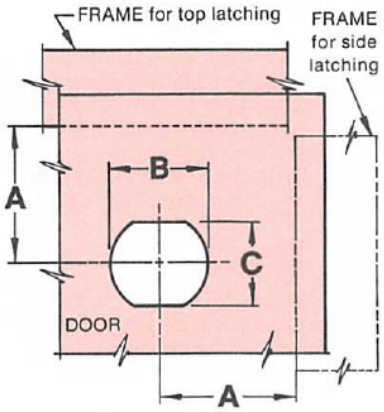
‡For intermediate grip, straight pawl is supplied.

NEW

NOTE: To delete "LIFT AND TURN" from handle, change the third digit of the part number to 8. Example: 62-80-303-10.

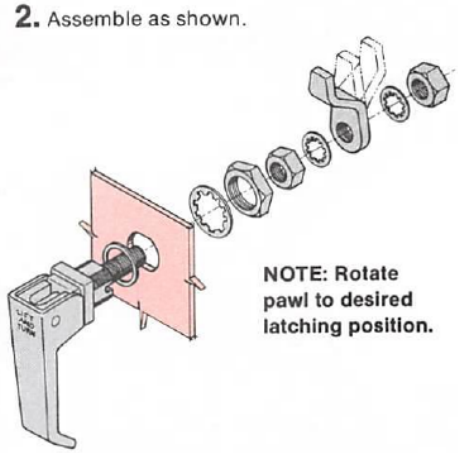
INSTALLATION

1. Locate and orient hole with respect to handle in latched position as shown in next step. This hole orientation is preferred for all latching positions.



DIMENSIONS	SERIES NUMBERS 300	SERIES NUMBERS 600
A	22.23/.875 min.	41.28/1.623 min.
	25.40/1.000 max.	47.63/1.875 max.
B	Ø 16.50 +0.13 -0.00 / .640 +.005 -.000	Ø 22.50 +0.25 -0.00 / .875 +.010 -.000
C	13.72 +0.13 -0.00 / .540 +.005 -.000	19.05 +0.25 -0.00 / .750 +.010 -.000

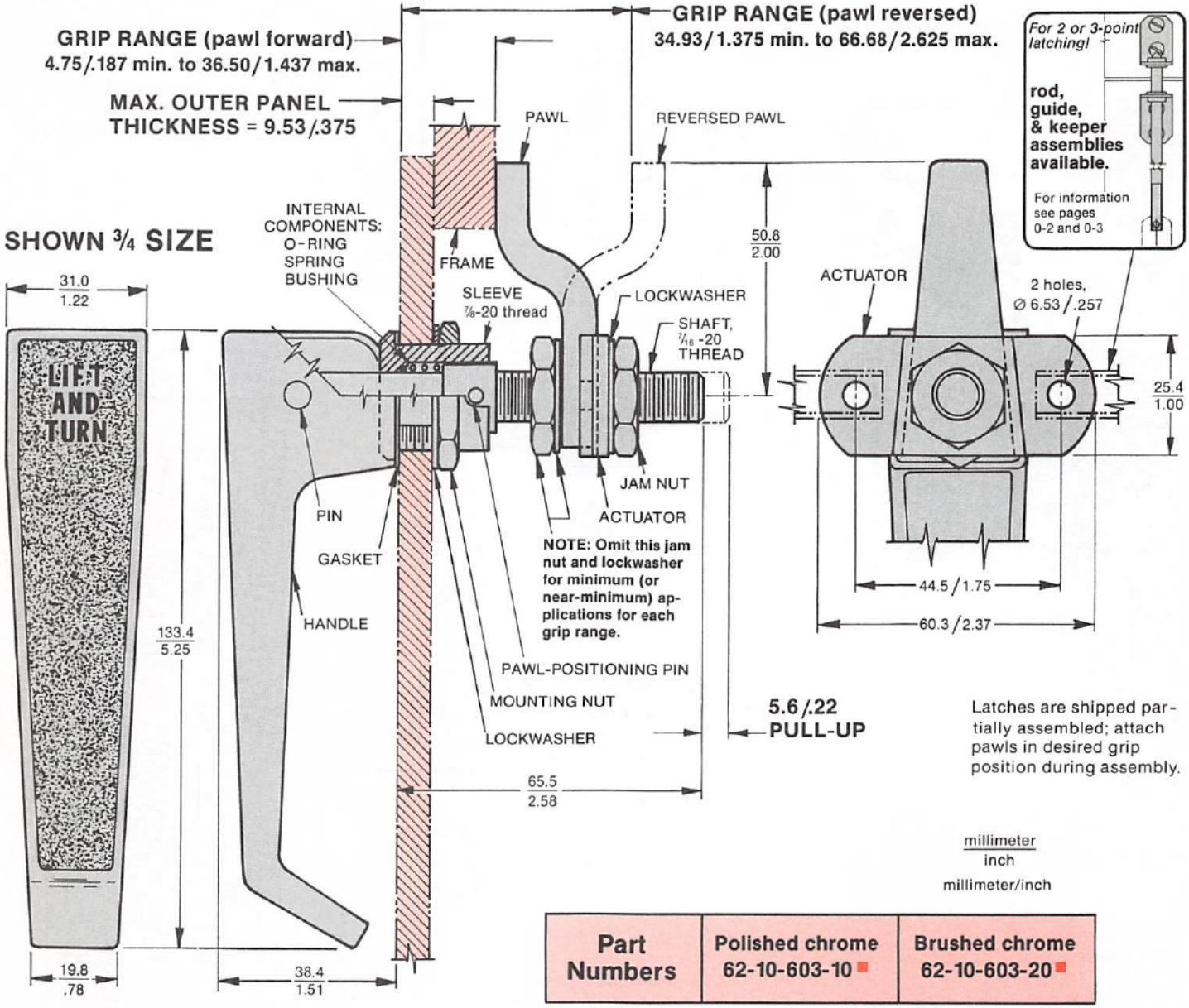
2. Assemble as shown.



NOTE: Rotate pawl to desired latching position.

Pawl-positioning design

Lift-and-turn™ Latch, 600 Series



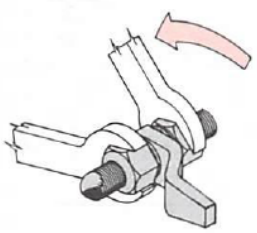
Latches are shipped partially assembled; attach pawls in desired grip position during assembly.

millimeter
inch
millimeter/inch

Part Numbers	Polished chrome 62-10-603-10 ■	Brushed chrome 62-10-603-20 ■

■ From stock, subject to prior sale.

3. Pawl should be adjusted to GRIP measurement with the door open and the handle in the LATCHED position. Use two wrenches to tighten.



MATERIAL and FINISH

FOR BOTH 300 and 600 SERIES

HANDLE and SLEEVE: die cast zinc, see table for finish.
WASHER and SPRING: 302 stainless steel, passivated.
O-RING: buna N rubber, natural.
LONG PIN and SHAFT: 303 stainless steel, passivated or passivated plus black organic coating. GASKET: fibre, natural.
PAWL POSITIONING PIN: 303 stainless steel, natural or with black organic coating.

FOR 300 SERIES ONLY

For chrome and powder coated models
BUSHING: 6061 aluminum, natural or with black organic coating.
MOUNTING NUT and JAM NUTS are Low carbon steel, PAWL is 1010 steel and LOCKWASHERS are spring steel; these components are DACROTIZED†.

For zinc anodized models
BUSHINNG: brass, natural.
MOUNTING NUT and JAM NUTS are 303 stainless steel, LOCKWASHERS are 410 stainless steel, 303 series PAWL IS 302 stainless steel and the 304 series PAWL is 304 stainless steel; these components are passivated.

FOR 600 SERIES ONLY

HANDLE and SLEEVE: die cast zinc with polished or brushed chrome plate. PAWL and ACTUATOR: 1010 steel, DACROTIZED†. PAWL POSITIONING PIN: 303 stainless steel, natural. LONG PIN, SHAFT and WASHER: 303 stainless steel, passivated. BUSHING: 6061 aluminum, natural. MOUNTING NUT: brass, zinc plated plus bright chromate dip. LOCKWASHERS are spring steel and JAM NUTS are low carbon steel; these components are DACROTIZED†.

†Registered tradename of Metal Coatings International, Inc.

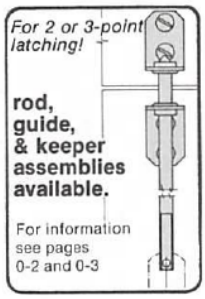
Latches are shipped partially assembled; attach pawls in desired grip position during assembly.

Lift-and-Turn™ Latch, 500 Series

Pawl-positioning design



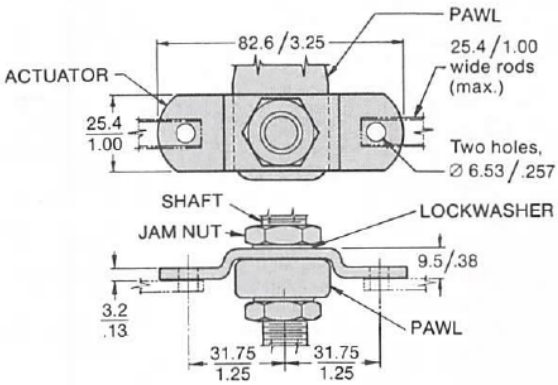
Latches are shipped partially assembled; attach pawls in desired grip position during assembly.



MATERIAL and FINISH
HANDLE and SLEEVE: die cast zinc, chrome plated. MOUNTING NUT and PAWL: die cast zinc with chemical protective film. GASKET: fibre, natural. SPRING and WASHER: 302 stainless steel, passivated. O-RING: buna N rubber, natural. LONG PIN: 303 stainless steel, natural. PAWL POSITIONING PIN is 1213 steel, SHAFT and BUSHING are low carbon steel DACROTIZED†.

JAM NUTS are low carbon steel and LOCKWASHER is spring steel; these components are zinc plated plus yellow chromate dip.
PAWL LOCKWASHERS: spring steel, zinc plated plus bright chromate dip.

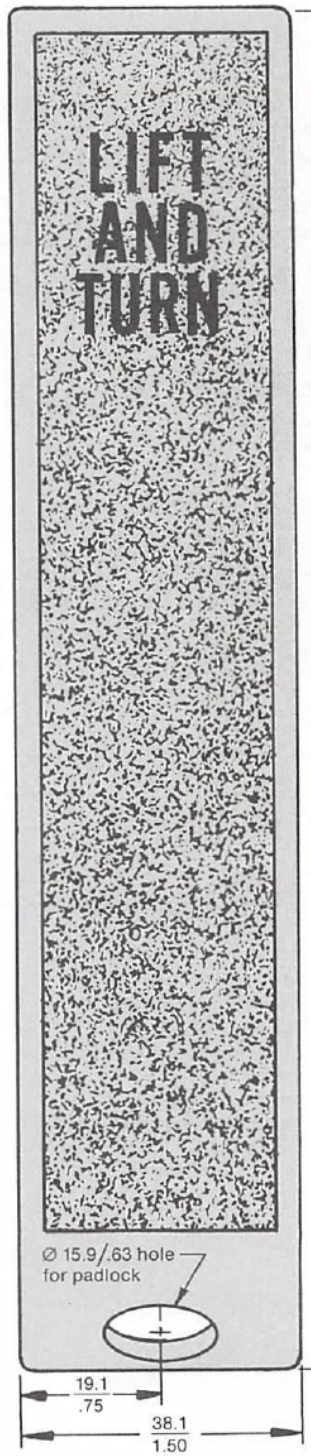
†Registered tradename of Metal Coatings International, Inc.



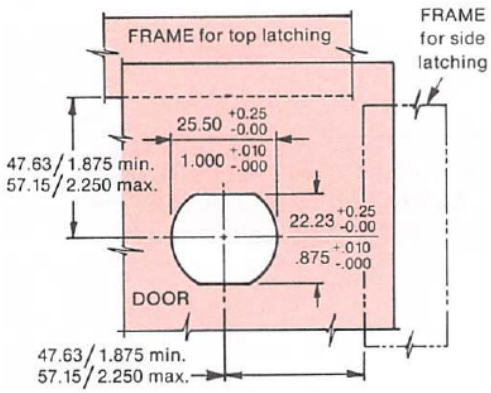
ACTUATOR for 3-point latching. 1008 or 1010 steel, DACROTIZED†. Order separately. Part No. 62-19-501-15. ■

†Registered tradename of Metal Coatings International, Inc.

■ From stock, subject to prior sale.

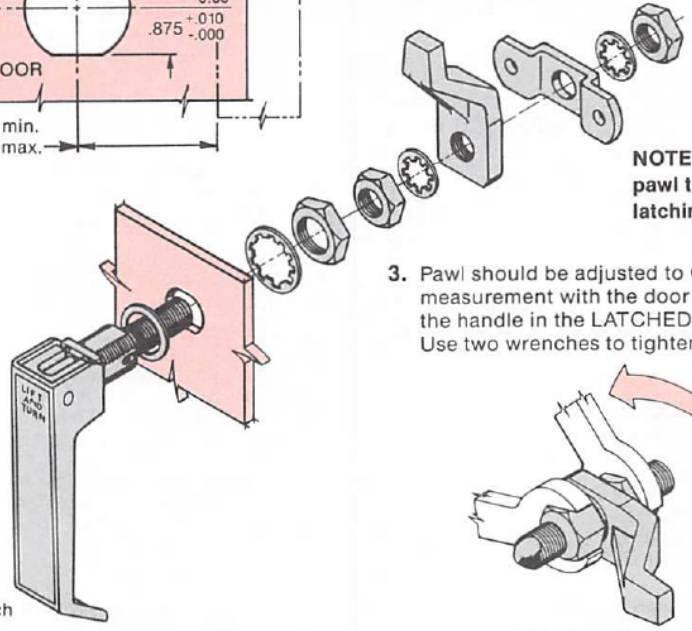


INSTALLATION



1. Locate and orient hole with respect to handle in latched position (as shown in next step). This hole orientation is preferred for all latching positions.

2. Assemble as shown.



NOTE: Rotate pawl to desired latching position.

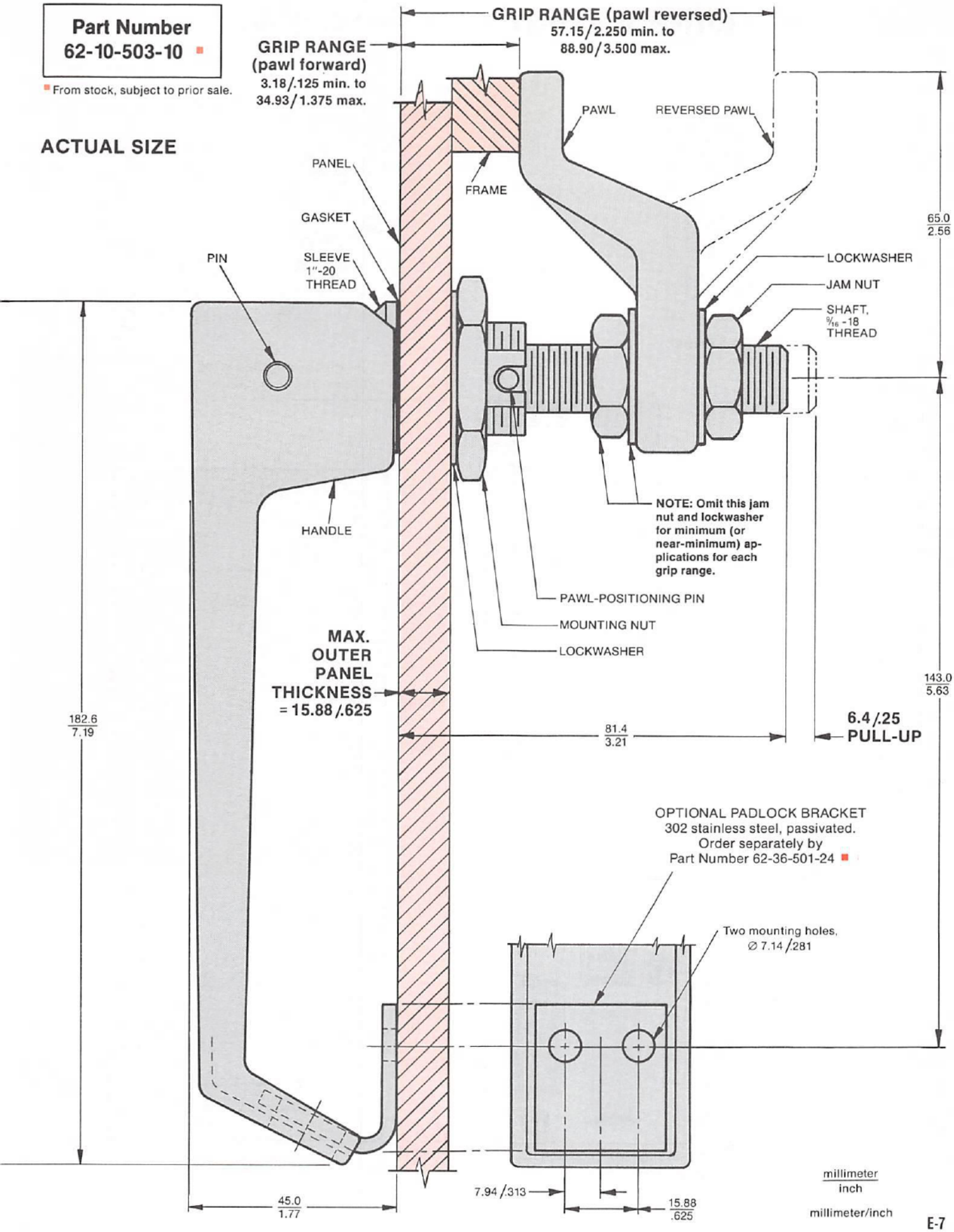
3. Pawl should be adjusted to GRIP measurement with the door open and the handle in the LATCHED position. Use two wrenches to tighten.

millimeter
inch
millimeter/inch

Part Number
62-10-503-10 ■

■ From stock, subject to prior sale.

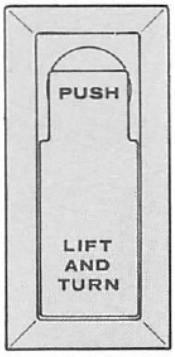
ACTUAL SIZE



millimeter
inch

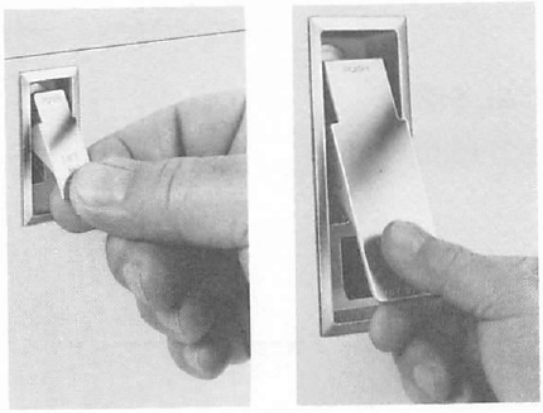
millimeter/inch

Lift-and-Turn™ Flush Latches



700 Series

ACTUAL SIZES

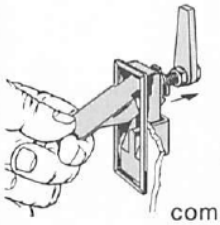


Flush-mounted sizes from
finger-grip to full hand operation

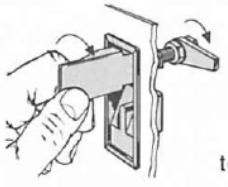
Easy to operate:



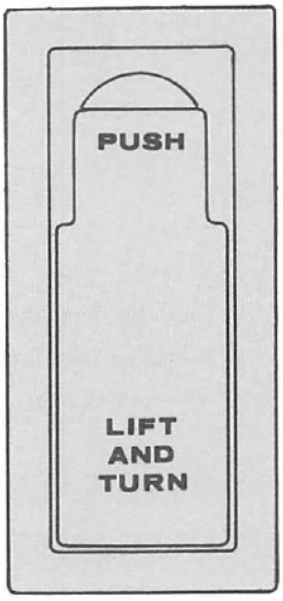
Press
top of
lever in.



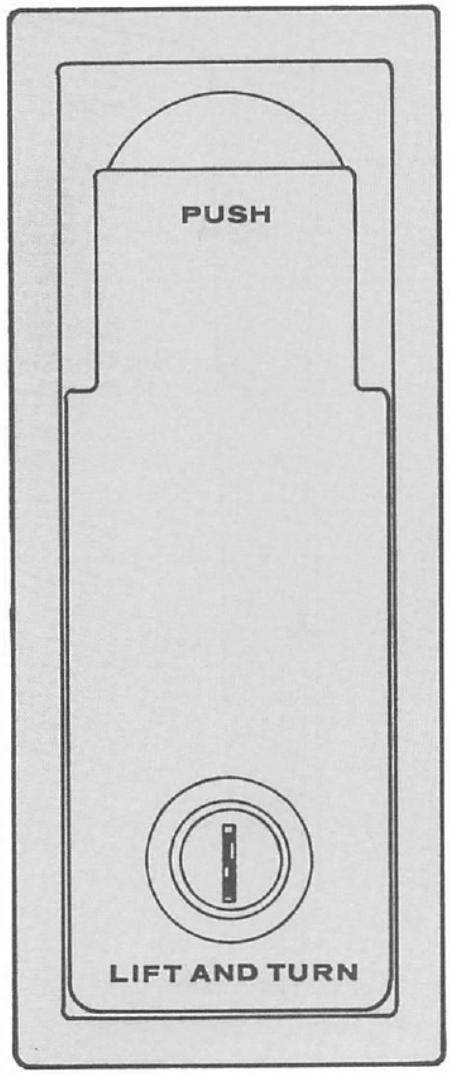
Lift lever
to relax
compression.



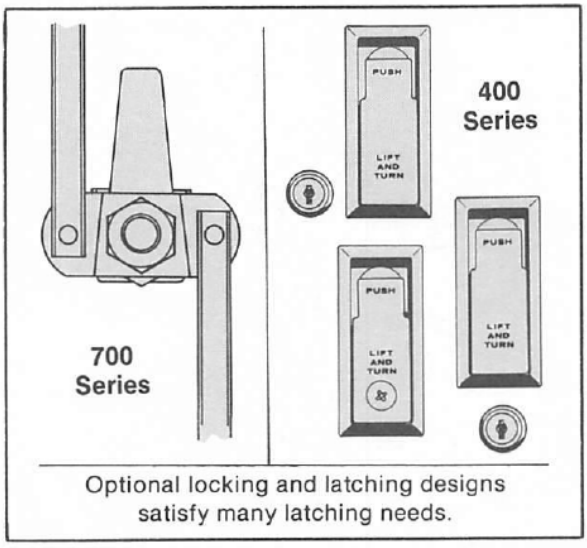
Turn
to open.



400 Series



800 Series



Optional locking and latching designs
satisfy many latching needs.

Lift-and-turn™ Latch, Flush 700 Series

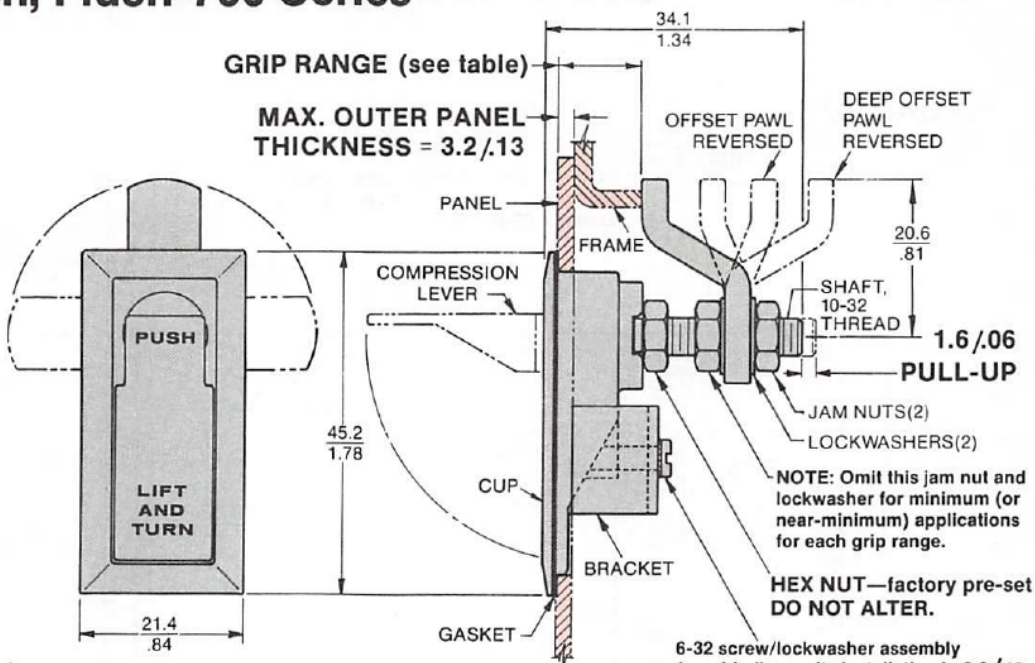
MATERIAL and FINISH

COMPRESSION LEVER and CUP: die cast zinc, see table for finish.
SHAFT is 12L14 steel and CAM is 1010 steel; these components are DACROTIZED† or DACROTIZED† plus black organic coating.
PAWL, BRACKET and BEARING WASHER: 1010 steel, DACROTIZED†.
SPRINGS: 302 stainless steel, passivated.
WASHER: 1010 steel, zinc plated plus bright chromate dip.
PIN is 1112 steel, zinc plated plus yellow chromate dip.
LOCKWASHERS: spring steel; SCREW/LOCKWASHER ASSEMBLY and JAM NUTS: steel. These components are DACROTIZED†.

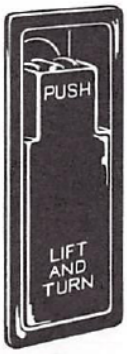
for dust and moisture sealed models
SEALING WASHER and CUP GASKET are synthetic rubber, black.

†Registered tradename of Metal Coatings International, Inc.

Latches are shipped partially assembled; attach pawls in desired grip position during assembly.



NEW **NOTE: To delete lettering from compression lever, change the third digit of the part number to 8. Example: 62-80-701-10.**



available with black finish

GRIP RANGE		PART NUMBERS					
					available with dust and moisture seals		
MIN.	MAX.	polished chrome cup and lever	brushed chrome cup and lever	black organic coated cup and lever	polished chrome cup and lever	brushed chrome cup and lever	black organic coated cup and lever
4.80/.188	14.30/.563	62-10-701-10*■	62-10-701-20*■	62-10-701-50*■	62-40-701-10*■	62-40-701-20*■	62-40-701-50*■
12.70/.500	22.3/.875	62-10-702-10‡■	62-10-702-20‡■	62-10-702-50‡■	62-40-702-10‡■	62-40-702-20‡■	62-40-702-50‡■
19.05/.752	28.60/1.125	62-10-702-10‡■	62-10-702-20‡■	62-10-702-50‡■	62-40-702-10‡■	62-40-702-20‡■	62-40-702-50‡■
27.00/1.063	36.51/1.438	62-10-701-10*■	62-10-701-20*■	62-10-701-50*■	62-40-701-10*■	62-40-701-20*■	62-40-701-50*■

Not available with lock.

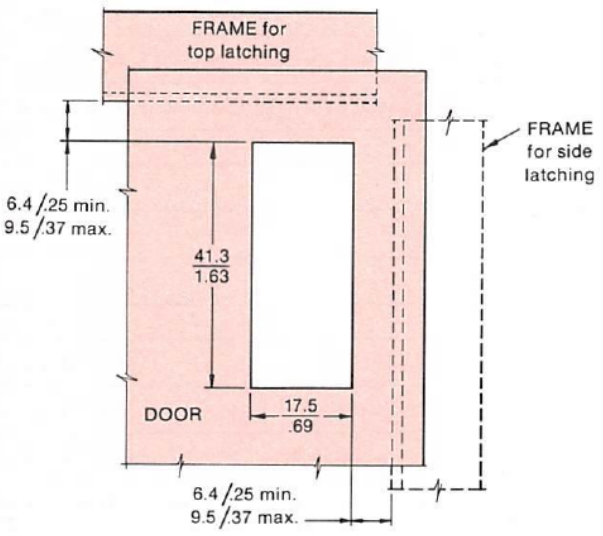
■ From stock, subject to prior sale.

millimeter
inch
millimeter/inch

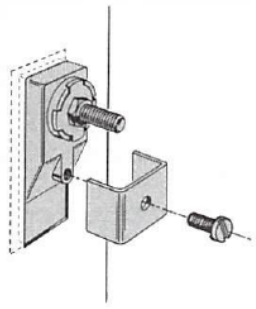
*The same assembly is supplied for both short and long grips. For short grip, deep offset pawl curves back toward panel. For long grip, reverse pawl.
‡Shallow offset pawl is supplied for intermediate grips. For shorter grip, shallow offset pawl curves back toward panel, reverses for longer grip.

INSTALLATION

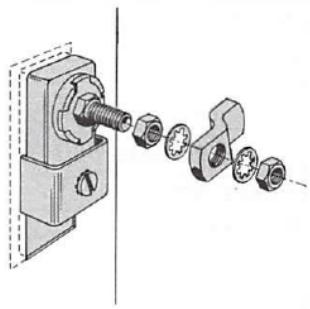
1. Prepare a rectangular opening as shown.



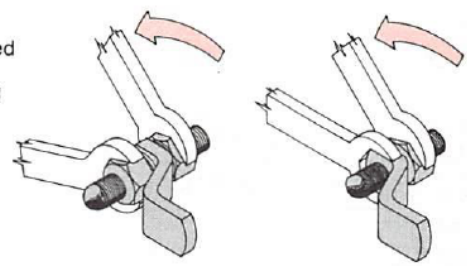
2.



3.



4. Pawl should be adjusted to GRIP measurement with the door open and the compression lever in the LATCHED position. Use two wrenches to tighten.

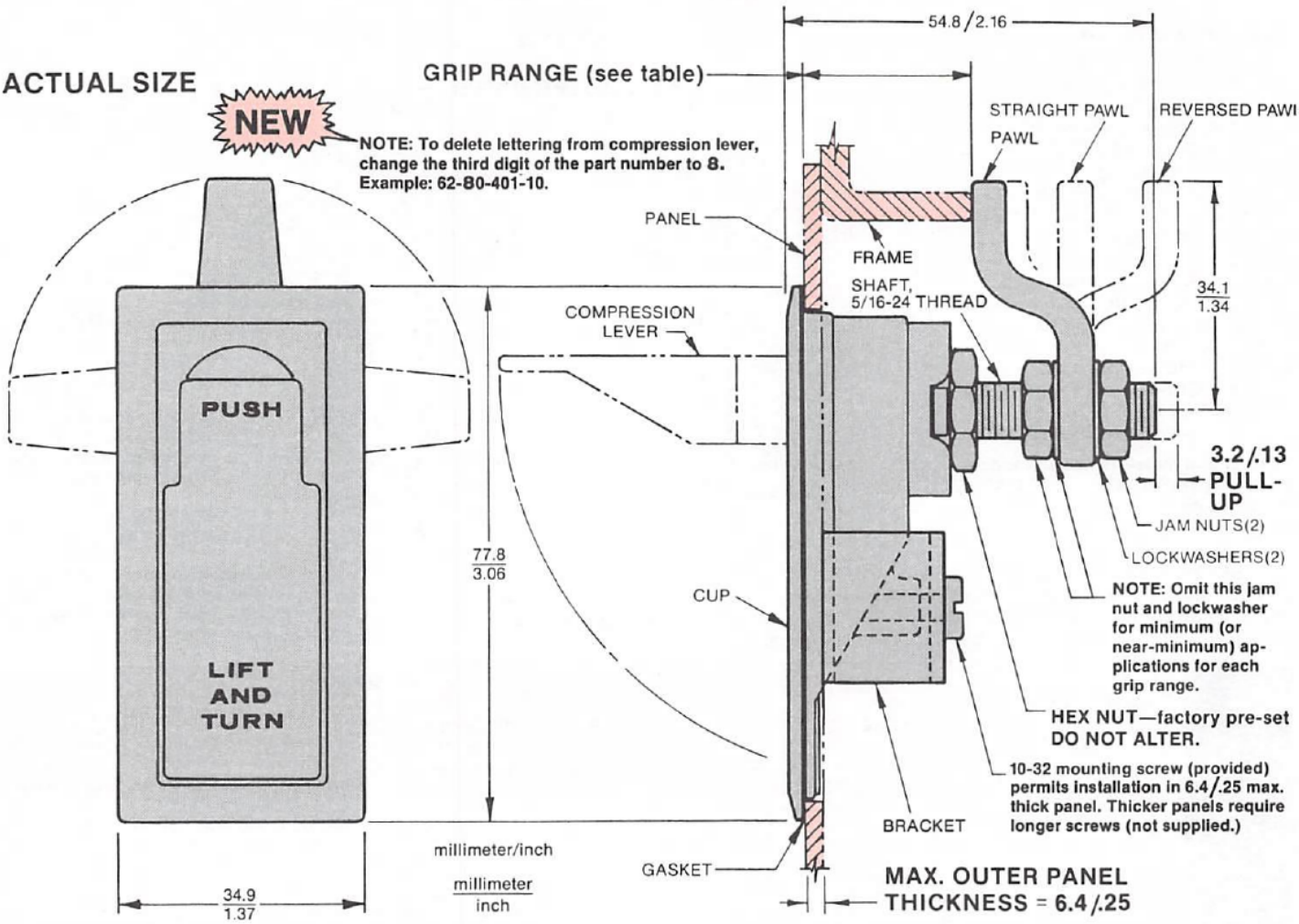


Lift-and-turn™ Latch, Flush 400 Series

ACTUAL SIZE

NEW

NOTE: To delete lettering from compression lever, change the third digit of the part number to 8. Example: 62-80-401-10.



GRIP RANGE MIN.	GRIP RANGE MAX.	PART NUMBERS by cup and lever finish: Polished chrome	Brushed chrome	Zinc anodized	Matte black polyester powder coat	Polished chrome (with dust and moisture seals)	Brushed chrome (with dust and moisture seals)	Zinc anodized (with dust and moisture seals)	Matte black polyester powder coat (with dust and moisture seals)
BASIC LATCH									
14.3/.56	28.6/1.13	62-10-401-10* ■	62-10-401-20* ■	62-10-401-40* ■	62-10-401-50* ■	62-40-401-10* ■	62-40-401-20* ■	62-40-401-40* ■	62-40-401-50* ■
27.0/1.06	41.3/1.63	62-10-402-10‡ ■	62-10-402-20‡ ■	62-10-402-40‡ ■	62-10-402-50‡ ■	62-40-402-10‡ ■	62-40-402-20‡ ■	62-40-402-40‡ ■	62-40-402-50‡ ■
39.7/1.56	54.0/2.13	62-10-401-10* ■	62-10-401-20* ■	62-10-401-40* ■	62-10-401-50* ■	62-40-401-10* ■	62-40-401-20* ■	62-40-401-40* ■	62-40-401-50* ■
with KEYLOCK									
14.3/.56	28.6/1.13	62-10-411-10* ■	62-10-411-20* ■	—	62-10-411-50* ■	—	—	—	—
27.0/1.06	41.3/1.63	62-10-412-10‡ ■	62-10-412-20‡ ■	—	62-10-412-50‡ ■	—	—	—	—
39.7/1.56	54.0/2.13	62-10-411-10* ■	62-10-411-20* ■	—	62-10-411-50* ■	—	—	—	—
TOOL-SECURED (see next page)									
14.3/.56	28.6/1.13	62-10-431-10* ■	62-10-431-20* ■	—	62-10-431-50* ■	62-40-431-10* ■	62-40-431-20* ■	—	62-40-431-50* ■
27.0/1.06	41.3/1.63	62-10-432-10‡ ■	62-10-432-20‡ ■	—	62-10-432-50‡ ■	62-40-432-10‡ ■	62-40-432-20‡ ■	—	62-40-432-50‡ ■
39.7/1.56	54.0/2.13	62-10-431-10* ■	62-10-431-20* ■	—	62-10-431-50* ■	62-40-431-10* ■	62-40-431-20* ■	—	62-40-431-50* ■

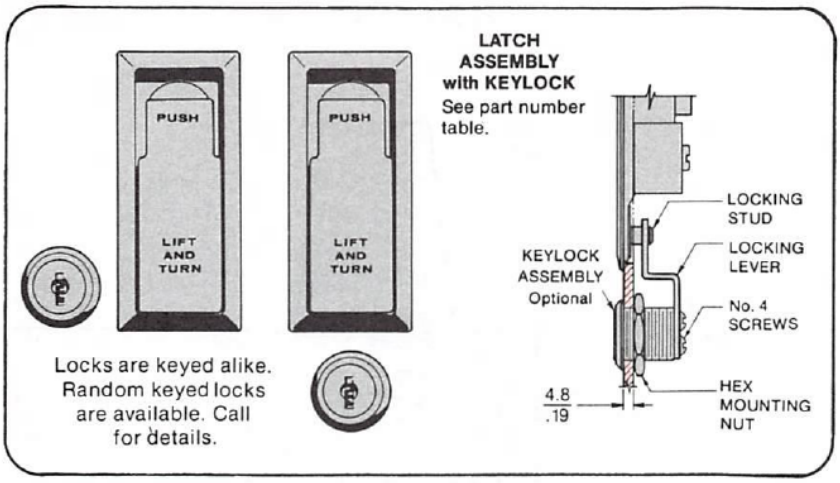
*The same assembly is supplied for both long and short grips. For short grip, deep offset pawl curves back toward panel. For long grip, reverse pawl.
‡For intermediate grip, a straight pawl is supplied.

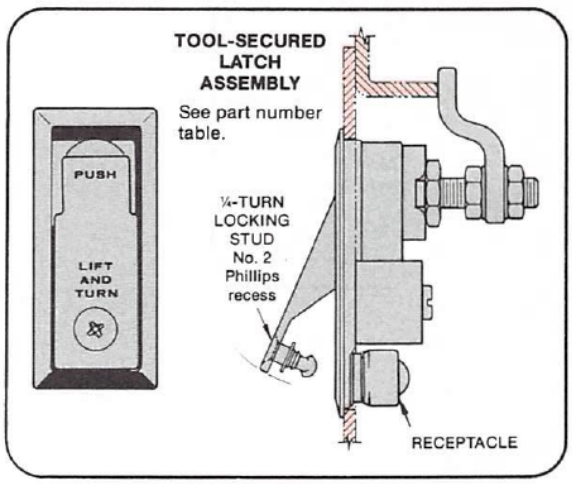
NOTE: For satin silver polyester powder coated finish on handle and sleeve, change the last two digits of the part number to 75. Example: 62-10-402-75.

■ From stock, subject to prior sale.

Lift-and-Turn™ Latch, Flush 400 Series

Latches are shipped partially assembled; attach pawls in desired grip position during asssembly.





MATERIAL and FINISH

COMPRESSION LEVER and CUP: die cast zinc, see table for finish.

for dust and moisture sealed models
CUP GASKET and SEALING WASHER: synthetic rubber, black.

for zinc anodized models
SHAFT and PIN: 303 stainless steel.
LOCKWASHER: 410 stainless steel.
SCREW: stainless steel.
OTHER COMPONENTS: 302 stainless steel.
All components listed above are passivated.

for chrome and powder coated models
SHAFT is low carbon steel and CAM is 1010 steel. These components are DACROTIZED† or DACROTIZED† plus black organic coating.
PAWL, BRACKET, and BEARING WASHER: 1010 steel, DACROTIZED†.
SPRINGS: 302 stainless steel, passivated.
PIN: 303 stainless steel, passivated.
WASHER: 1010 steel, zinc plated plus bright chromate dip. SCREW: steel, zinc plated plus yellow chromate dip
JAM NUTS are steel and LOCKWASHERS are spring steel; these components are DACROTIZED†.

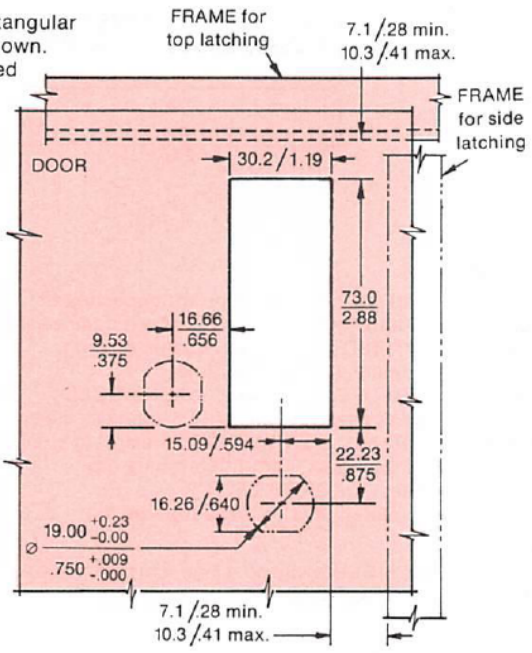
for tool-secured models
¼-TURN STUD: 1008 steel, chrome plated.
RETAINER: nylon, black.
RECEPTACLE: 1010 steel, DACROTIZED†.
SHELL: low carbon steel, DACROTIZED†.
SPRING: 302 stainless steel, passivated.

for key locked models
LOCK CYLINDER and LOCK PLUG: die cast zinc, chrome plated or matte black or satin silver polyester powder coated (to match cup and lever finish).
LOCKING LEVER: 1010 steel, DACROTIZED†.
MOUNTING NUT: die cast zinc with chemical protective film.
SCREWS: steel, zinc plated plus yellow chromate dip. KEYS: brass, natural.

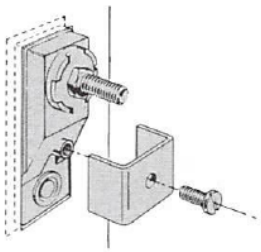
†Registered tradename of Metal Coatings International, Inc.

INSTALLATION

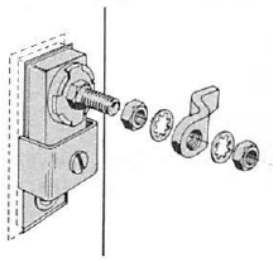
1. Prepare a rectangular opening as shown. Prepare shaped hole only if lock assembly is to be used.



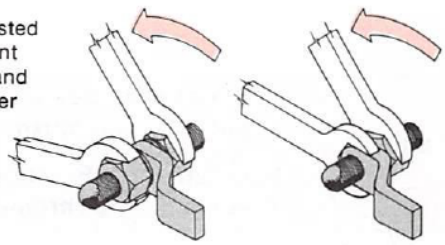
2.



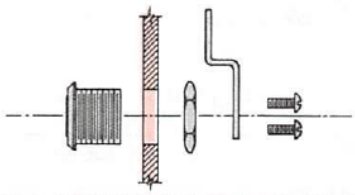
3.



4. Pawl should be adjusted to GRIP measurement with the door open and the compression lever in the LATCHED position. Use two wrenches to tighten.



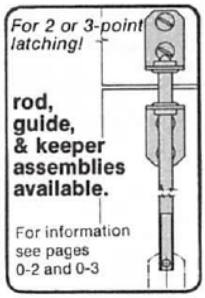
5. Optional lock assembly.

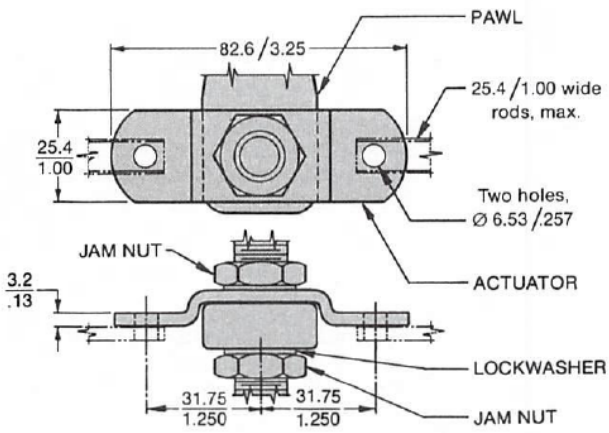


Lift-and-Turn™ Latch, Flush 800 Series

millimeter
inch

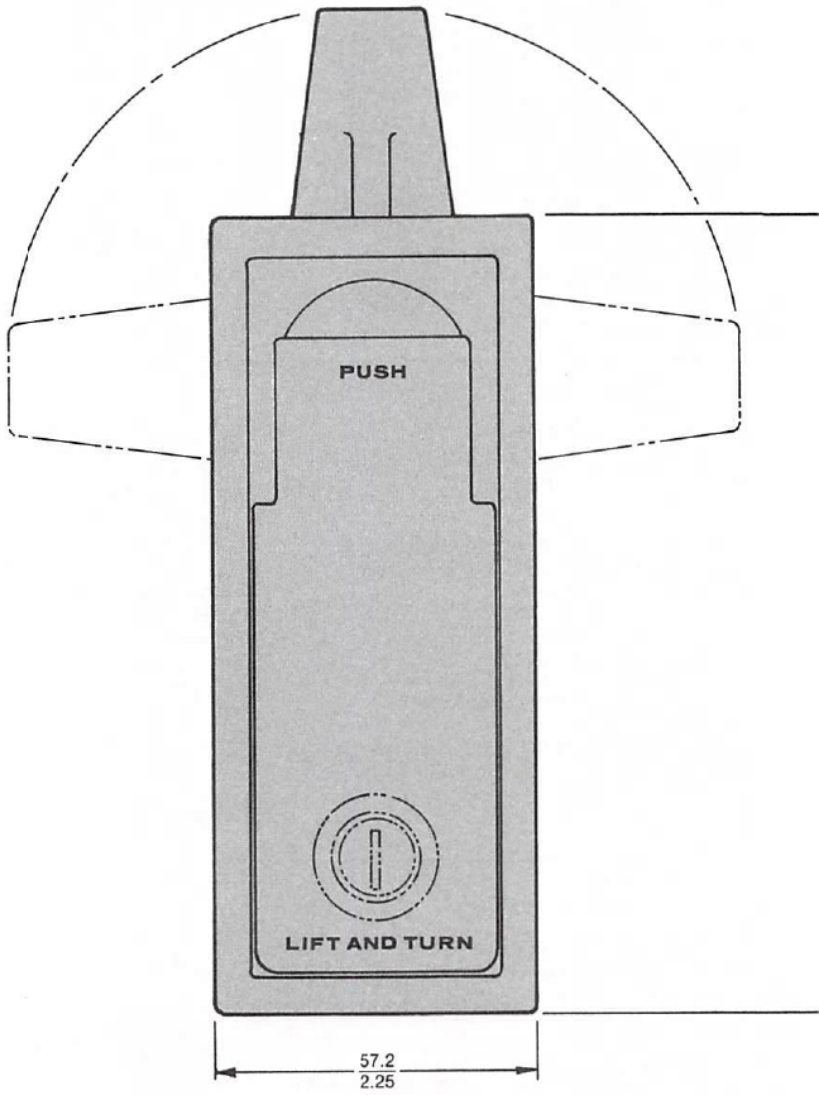
millimeter/inch





ACTUATOR
for 3-point latching.
1008 or 1010 steel, DACROTIZED†.
Part No. 62-19-501-15. ■
Order separately.

SHOWN ¾ SIZE



Latches are shipped partially assembled; attach pawls in desired grip position during assembly.

STYLE	PART NUMBERS cup and lever finish	
	Polished chrome	Brushed chrome
without LOCK	62-10-801-10 ■	62-10-801-20 ■
with LOCK*	62-10-811-10 ■	62-10-811-20 ■

■ From stock, subject to prior sale.

*Locks are keyed alike. Random keyed locks are available. Call for details.

MATERIAL and FINISH

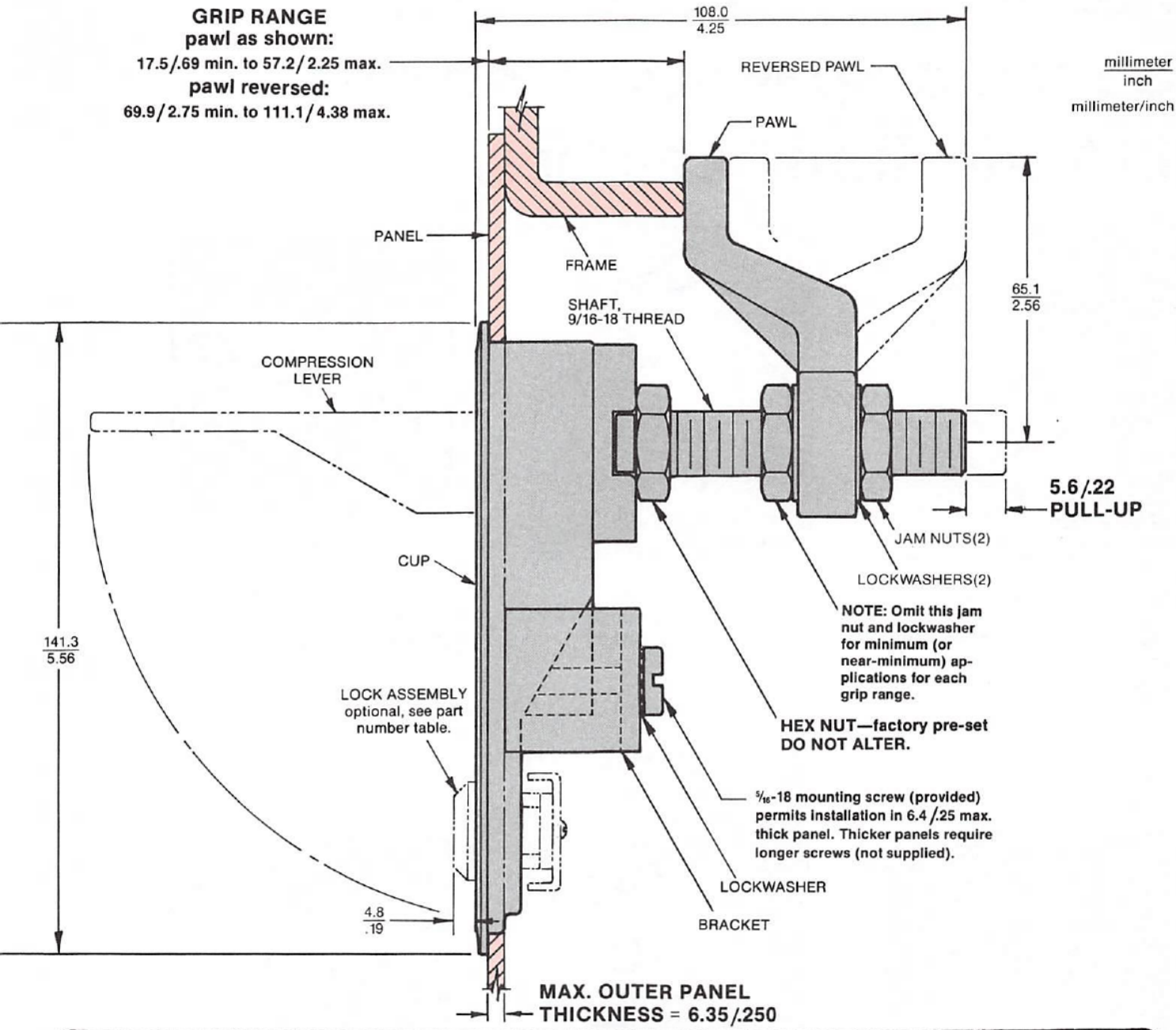
COMPRESSION LEVER and CUP: die cast zinc with polished or brushed chrome plate.
SHAFT is low carbon steel and CAM is 1010 steel; these components are DACROTIZED† or DACROTIZED† plus black organic coating.
PAWL: die cast zinc with chemical protective film.
BEARING WASHER and BRACKET: 1010 steel, DACROTIZED†.
SPRINGS: 302 stainless steel, passivated. PIN: 303 stainless steel, passivated.
WASHER is 1010 steel and PAWL LOCKWASHERS are spring steel; these components are zinc plated plus bright chromate dip.
JAM NUTS and SCREW: steel, DACROTIZED†.
LOCKWASHER: steel, zinc plated plus yellow chromate dip.

for locking models

LOCK CYLINDER and LOCK PLUG: die cast zinc, chrome plated.
LOCK PAWL: 1010 steel, DACROTIZED†.
KEYS: brass, natural.

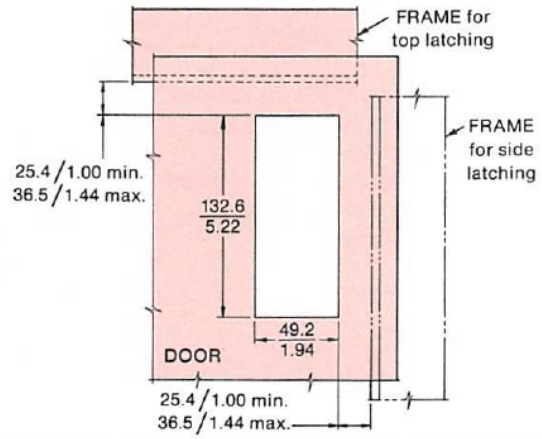
†Registered tradename of Metal Coatings International, Inc.

Lift-and-Turn™ Latch, Flush 800 Series

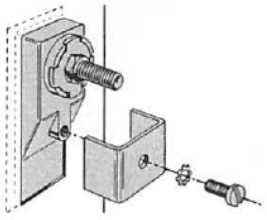


INSTALLATION

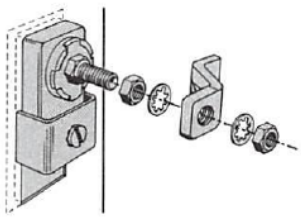
1. Prepare a rectangular opening as shown.



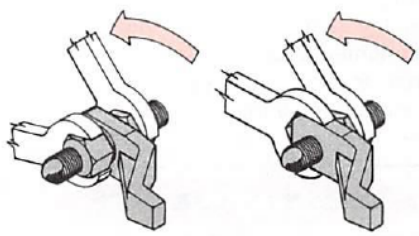
2.



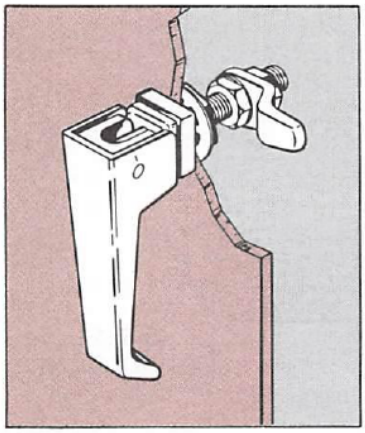
3.



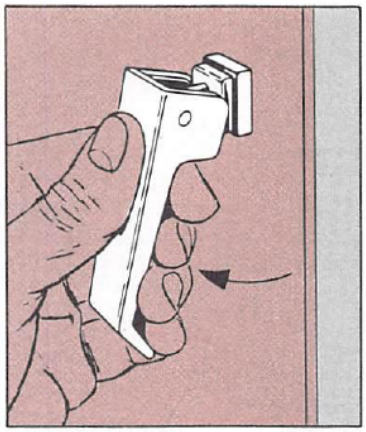
4. Pawl should be adjusted to GRIP measurement with the door open and the compression lever in the LATCHED position. Use two wrenches to tighten.



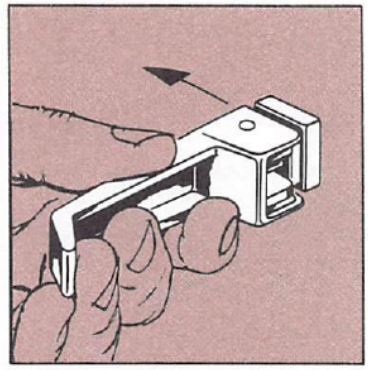
Pre-set compression with Southco's pawl-positioning Lift-and-Turn™ Latches.



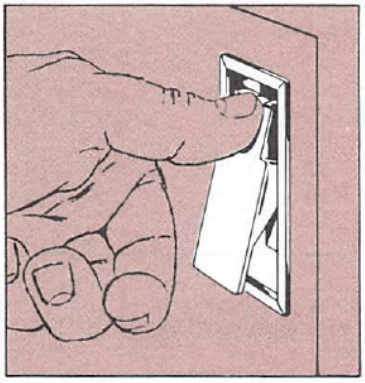
1. Southco **Lift-and-Turn ™** latches provide positive latching and consistent gasket compression. As the handle is closed an alignment pin assures a latched pawl position and a pre-set compression is applied to the panel and frame.



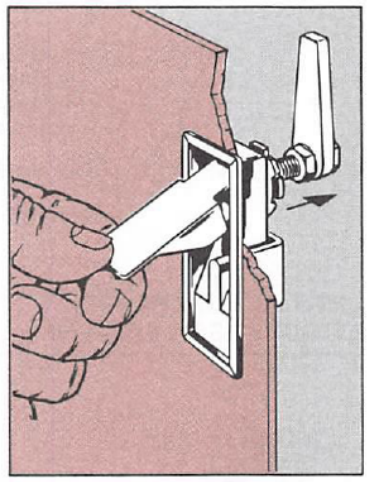
2. To open, lift the handle to release compression on the pawl, relax the gasket, and disengage the pawl-positioning pin.



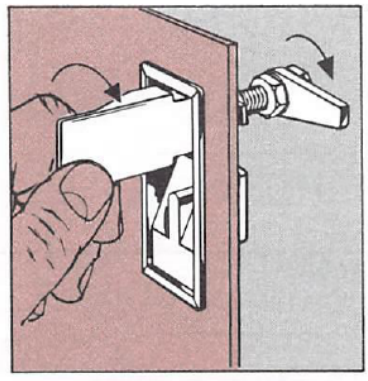
3. Once the handle is raised it can be rotated 90° in either direction to unlatch. Handle-style latches are stocked in five sizes to suit a range of applications.



4. For applications where a flush-mounted latch is desired, Southco flush latches use the same camming action to maintain pressure. To open, press the top of the lever *in* to bring the handle *out.*



5. Lift handle to release the pressure.



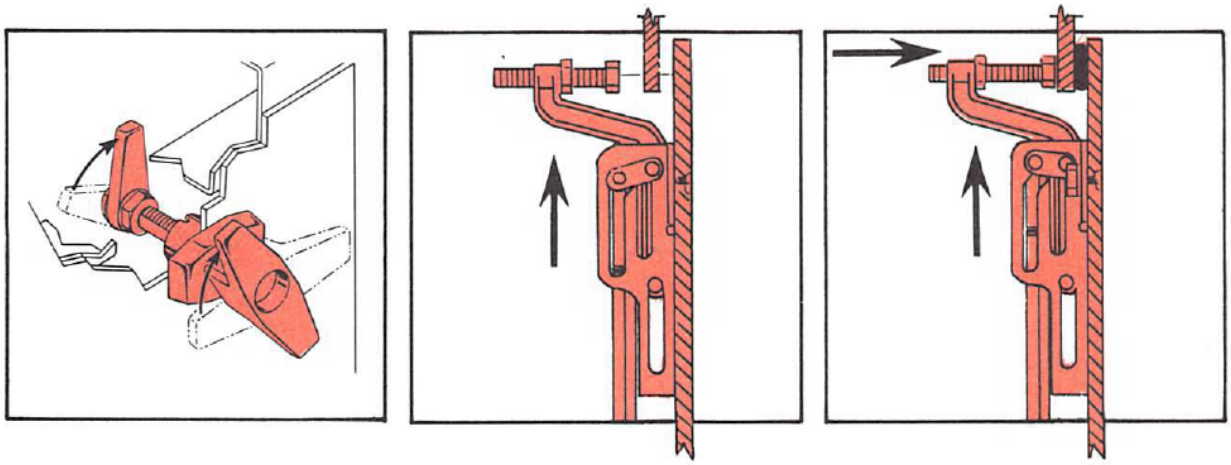
6. Then twist ¼ turn to open. Flush-mounting latches are stocked in three sizes and are easily installed through a single hole with just one screw.

SOUTHCO®
fasteners

Section F
Vise-action Latches

contents guide | **page**

No. E3 Vise-action Latches ..... F-2 to F-7
No. E3 Vise-action 3-point Compression System™ ..... F-10 to F-12

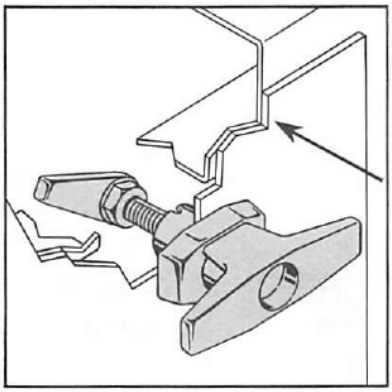


Section F
Vise-action Latches

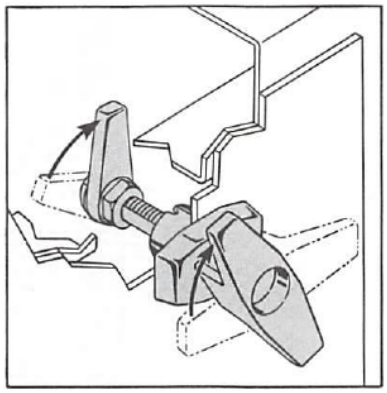
contents guide | **page**

No. E3 Vise-action Latches ..... F-2 to F-7
No. E3 Vise-action 3-point Compression System™ ..... F-10 to F-12

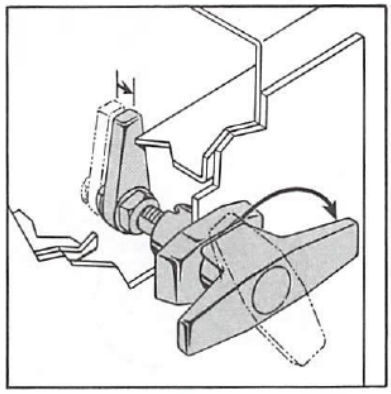
One quick turn. First, it latches the door. Then it applies compression!



With a single half-turn, Southco's Vise-action Latch completes two sequential motions — it latches the door, then pulls it up tight.



First — start the turn. Click. The latching pawl swings smoothly into place behind the door frame.



Then — finish the turn. Click. The latching pawl now moves toward the door, pulls up tightly against the frame, applies a quarter-inch of vise-like compression to shielding or gasketing material.

Now ~~6~~ 9 versions:

T-handle



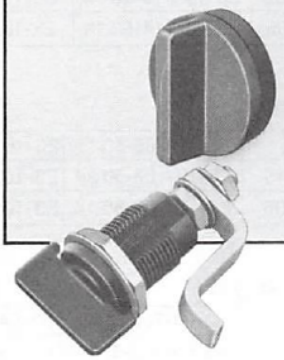
Tool operated, weather sealed



Key operated, weather sealed



Knob style



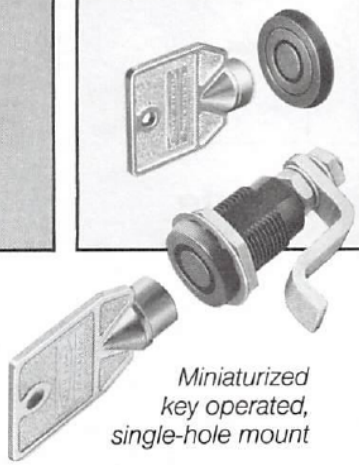
Miniaturized knob style

Tool operated, single-hole mount



Miniaturized tool operated, single-hole mount

Key operated, single-hole mount



Miniaturized key operated, single-hole mount

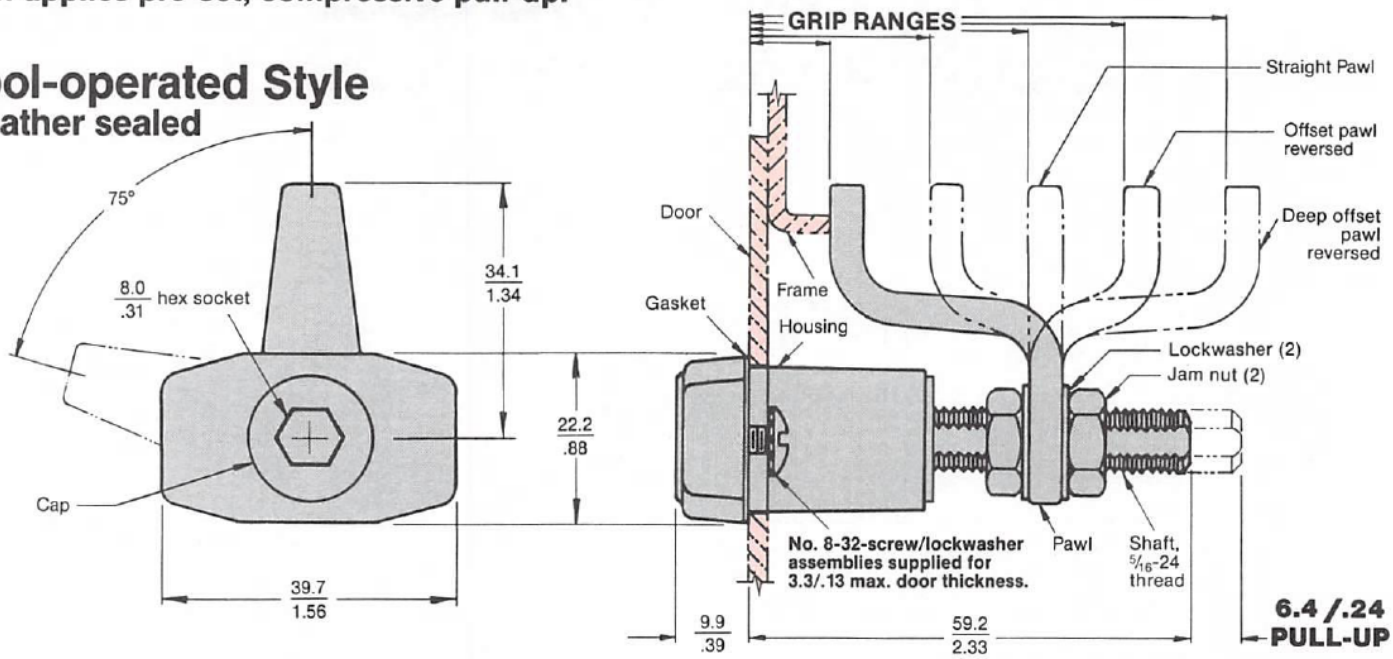
SOUTHCO fasteners

Southco Vise-action™ Latch

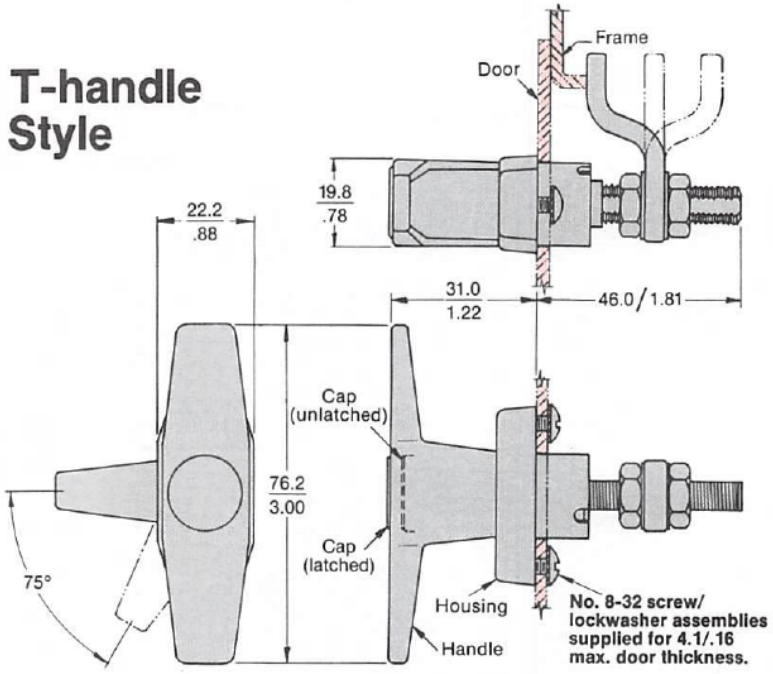
A single half-turn latches the door, *then* applies pre-set, compressive pull-up.

ACTUAL SIZE

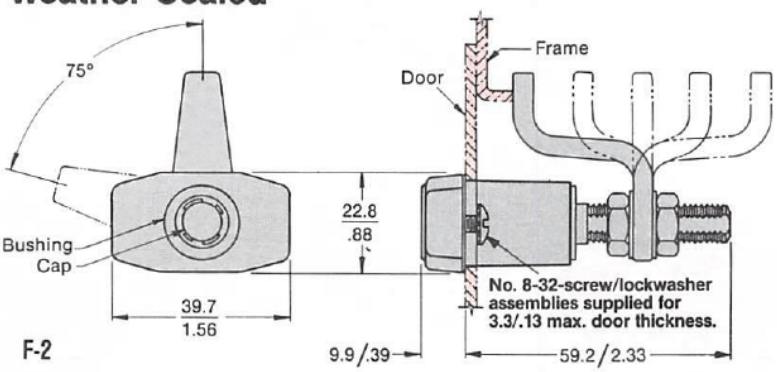
Tool-operated Style
Weather sealed



T-handle Style



Key-operated Style
Weather Sealed



GRIP RANGE		PART NUMBERS	
Min.	Max.	matte black coat	satin-silver coat
Tool-operated Style			
6.4/.25	24.1/.95	E3-10-314-50 *■	E3-10-314-75 *■
20.3/.80	38.1/1.50	E3-10-315-50 *■	E3-10-315-75 *■
33.0/1.30	50.8/2.00	E3-10-316-50‡■	E3-10-316-75‡■
45.7/1.80	63.5/2.50	E3-10-315-50 *■	E3-10-315-75 *■
59.7/2.35	77.5/3.05	E3-10-314-50 *■	E3-10-314-75 *■
T-handle Style			
6.4/.25	24.1/.95	E3-10-105-50 *■	E3-10-105-75 *■
19.1/.75	36.8/1.45	E3-10-106-50‡■	E3-10-106-75‡■
31.8/1.25	49.5/1.95	E3-10-105-50 *■	E3-10-105-75 *■
Key-operated Style			
6.4/.25	24.1/.95	E3-64-715-50 *■	E3-64-715-75 *■
20.3/.80	38.1/1.50	E3-65-715-50 *■	E3-65-715-75 *■
33.0/1.30	50.8/2.00	E3-66-715-50‡■	E3-66-715-75‡■
45.7/1.80	63.5/2.50	E3-65-715-50 *■	E3-65-715-75 *■
59.7/2.35	77.5/3.05	E3-64-715-50 *■	E3-64-715-75 *■

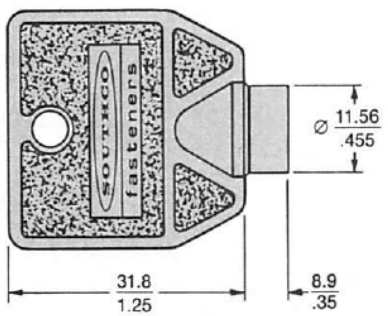
■ From stock. Subject to prior sale.

*The same pawl (curved forward or reversed) is supplied for both short and long grips.

‡For intermediate grip, straight pawl is supplied.

Vise-action™ Latch

ACTUAL SIZE KEY



KEY PART NUMBER E3-26-715-19 ■

Die cast zinc, nickel plated.

Order separately.

Custom key configurations are available.

Call for details.

Material and Finish

HOUSING: die cast zinc, matte black or satin silver polyester powder coated. See table.
PIN: 1008 steel, zinc plated plus yellow chromate dip.
O-RING: buna N rubber.
SCREW/LOCKWASHER ASSEMBLIES and JAM NUTS are steel, LOCKWASHERS are spring steel, PAWL is 1010 steel and SHAFT is low carbon steel; these components are DACROTIZED†.

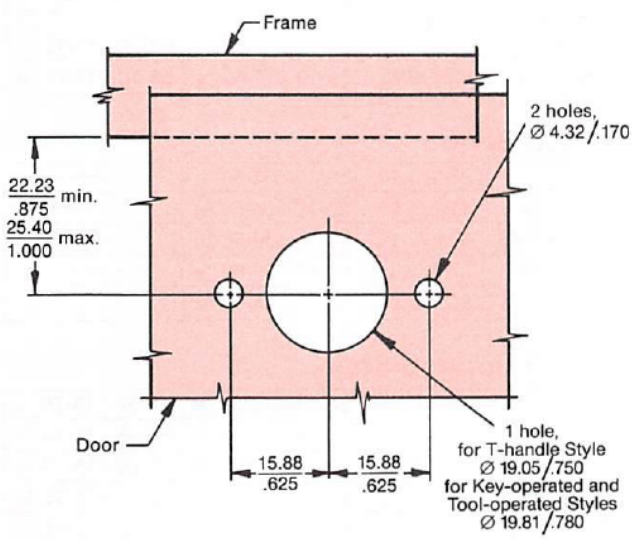
TOOL-OPERATED STYLE
CAP: die cast zinc, matte black or satin silver polyester powder coated. See table.
CAM and SLEEVE: hardened 1075 steel, DACROTIZED†.
SPRING: 302 stainless steel, natural.
RETAINER: polycarbonate, black.
GASKET: SBR rubber, impregnated vellum, black.

T-HANDLE STYLE
HANDLE: die cast zinc, matte black or satin silver polyester powder coated. See table.
CAM: case hardened 1010 steel, DACROTIZED†.
BUSHING: 7075 aluminum, natural.
CAP: thermoplastic polyester, matte black or satin silver colored.
SPRING and WASHERS: 302 stainless steel, passivated.
PIN (housing): 303 stainless steel, natural.

KEY-OPERATED STYLE
CAP is type 303 stainless steel, BUSHING is 6061-T6 aluminum; these components are matte black or satin silver polyester powder coated. See table.
CAM and SLEEVE: hardened 1075 steel, DACROTIZED†.
SPRING: 302 stainless steel, natural.
RETAINER: type 302 stainless steel, copper flash.
GASKET: SBR rubber, impregnated vellum, black.

†Registered tradename of Metal Coatings International, Inc.

Door Preparation

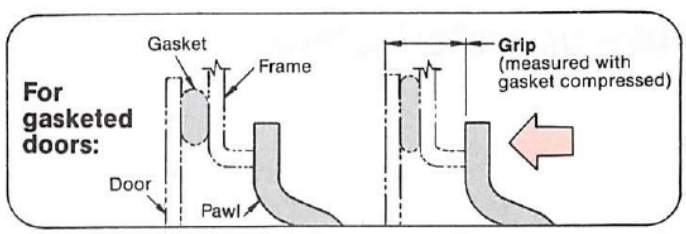


millimeter / inch

millimeter/inch

To adjust latch:

1. Measure your grip
2. Open door. Position pawl on shaft to your grip measurement (with pawl in latched position).
3. Tighten jam nuts hard against lockwashers and pawl using *two* wrenches.



CAUTION: Set pawl position so that no more than 3.4 N•m or 30 in.-lbs. of torque is required to secure door.

Strength Guideline

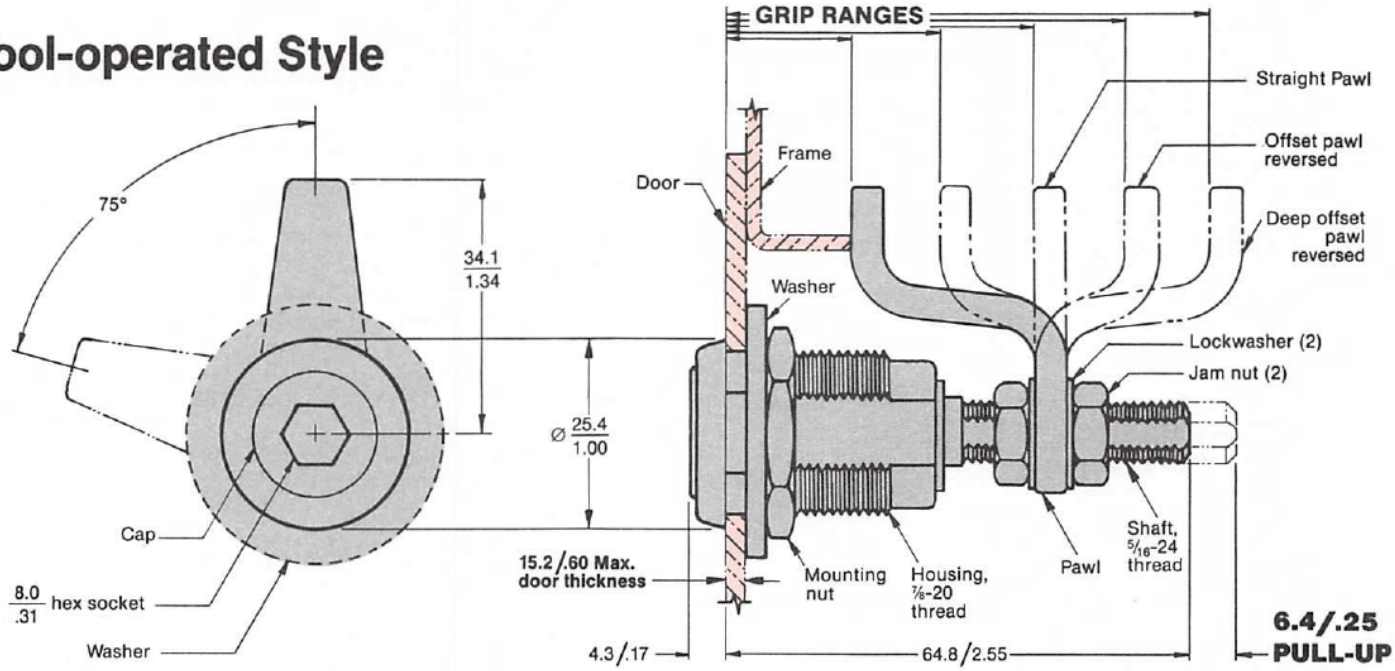
Compressive Strength: 445 N/100 lbs. Maximum working load
890 N/200 lbs. Average ultimate load

Southco Vise-action™ Latch
Single-hole mount

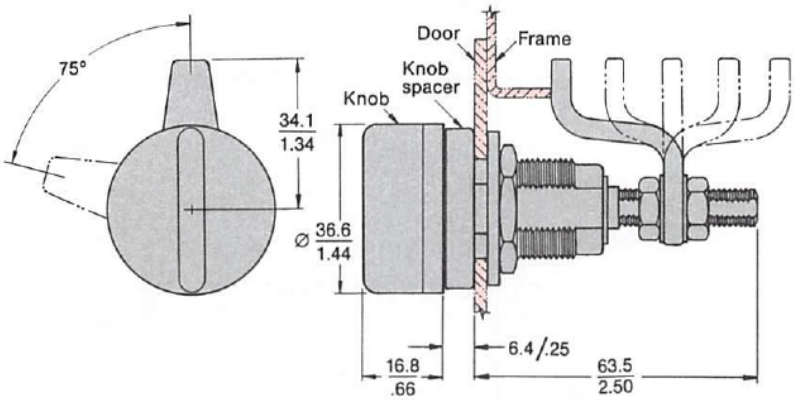
A single half-turn latches the door, *then* applies pre-set, compressive pull-up

ACTUAL SIZE

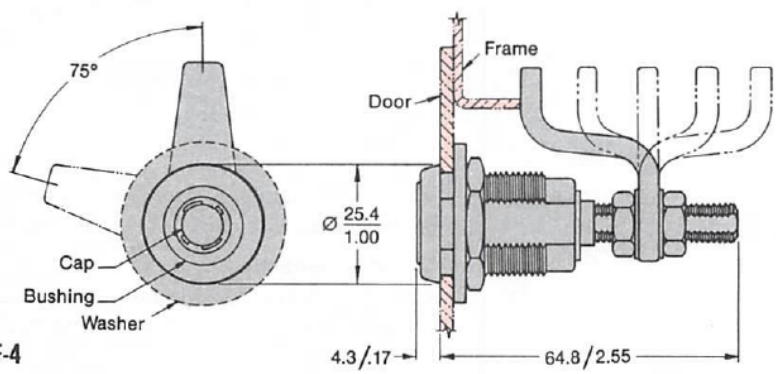
Tool-operated Style



Knob Style



Key-operated Style



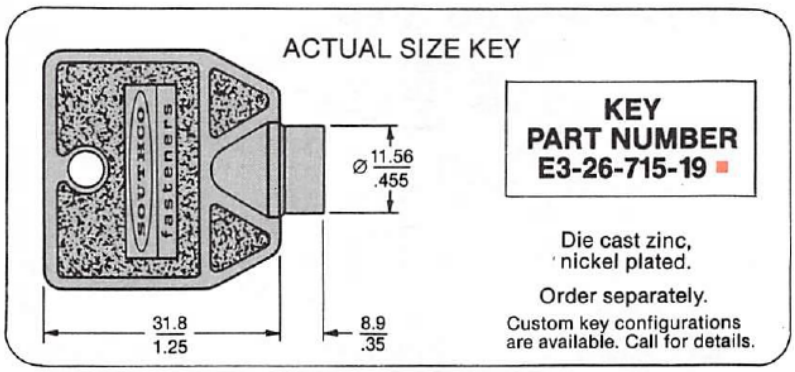
GRIP RANGE		PART NUMBERS	
Min.	Max.	matte black coat	satin silver coat
Tool-operated Style			
11.4/.45	29.2/1.15	E3-10-214-50 *■	E3-10-214-75 *■
25.4/1.00	43.2/1.70	E3-10-215-50 *■	E3-10-215-75 *■
38.1/1.50	55.9/2.20	E3-10-216-50‡■	E3-10-216-75 ‡■
50.8/2.00	68.6/2.70	E3-10-215-50 *■	E3-10-215-75 *■
64.8/2.55	82.6/3.25	E3-10-214-50 *■	E3-10-214-75 *■
Knob Style			
10.2/.40	27.9/1.10	E3-10-504-50 *■	——
24.1/.95	41.9/1.65	E3-10-505-50 *■	——
36.8/1.45	54.6/2.15	E3-10-506-50 ‡■	——
49.5/1.95	67.3/2.65	E3-10-505-50 *■	——
63.5/2.50	81.3/3.20	E3-10-504-50 *■	——
Key-operated Style			
11.4/.45	29.2/1.15	E3-54-715-50 *■	E3-54-715-75 *■
25.4/1.00	43.2/1.70	E3-55-715-50 *■	E3-55-715-75 *■
38.1/1.50	55.9/2.20	E3-56-715-50 ‡■	E3-56-715-75 ‡■
50.8/2.00	68.6/2.70	E3-55-715-50 *■	E3-55-715-75 *■
64.8/2.55	82.6/3.25	E3-54-715-50 *■	E3-54-715-75 *■

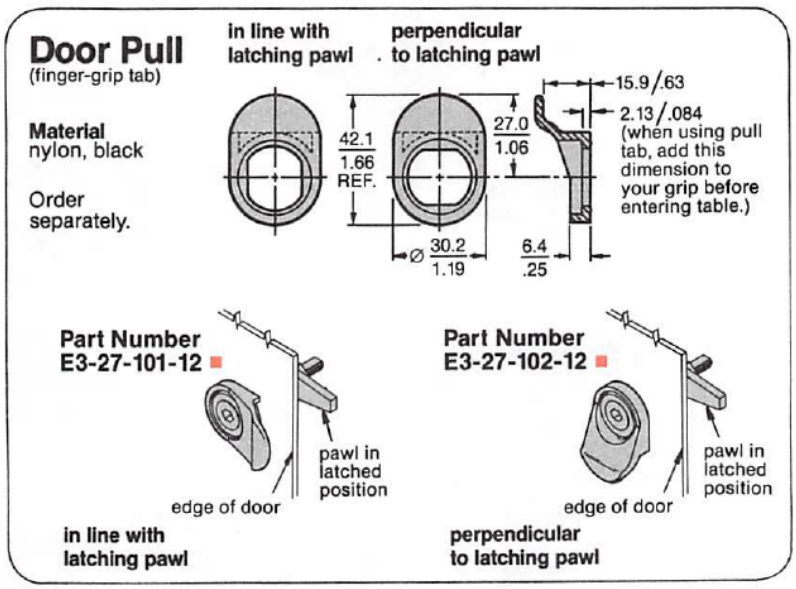
■ From stock. Subject to prior sale

*The same pawl (curved forward or reversed) is supplied for both short and long grips.

‡For intermediate grip, straight pawl is supplied.

Vise-action™ Latch
Single-hole mount





Material and Finish

HOUSING: die cast zinc, matte black or satin silver polyester powder coated. See table.
SPRING: 302 stainless steel, natural.
O-RING: buna N rubber.
PIN: 1008 steel, zinc plated plus yellow chromate dip.
WASHER and PAWL are 1010 steel, CAM and SLEEVE are hardened 1075 steel, SHAFT is low carbon steel, MOUNTING NUT is brass, JAM NUTS are steel, and LOCKWASHERS are spring steel; these components are DACROTIZED†.

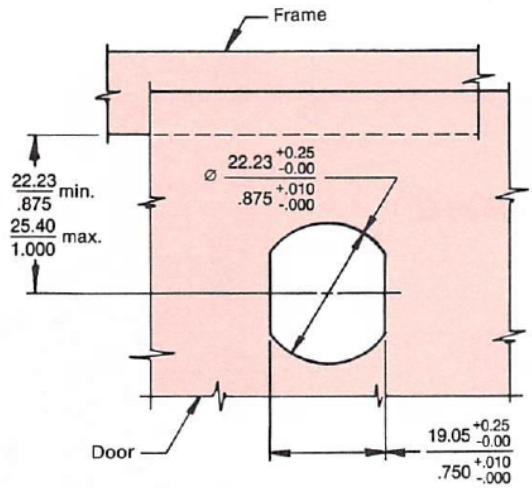
TOOL-OPERATED STYLE
CAP: die cast zinc, matte black or satin silver polyester powder coated. See table.
RETAINER: polycarbonate, black.

KNOB STYLE
KNOB: nylon, black
KNOB SPACER: acetal, black.
RETAINER: polycarbonate, black.

KEY-OPERATED STYLE
CAP is type 303 stainless steel, BUSHING is 6061-T6 aluminum; these components are matte black or satin silver polyester powder coated. See table.
RETAINER: type 302 stainless steel, copper flash.

†Registered tradename of Metal Coatings International, Inc.

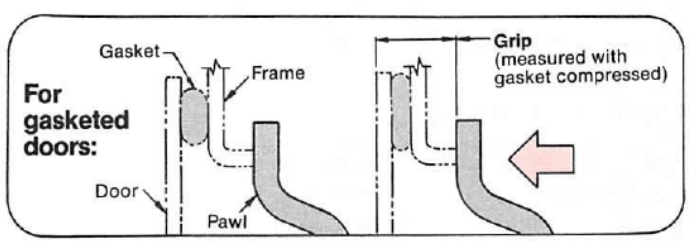
Door Preparation



millimeter/inch millimeter / inch

To adjust latch:

1. Measure your grip.
2. Open door. Position pawl on shaft to your grip measurement (with pawl in latched position).
3. Tighten jam nuts hard against lockwashers and pawl using *two* wrenches.



CAUTION: Set pawl position so that no more than 3.4 N•m or 30 in.-lbs. of torque is required to secure door.

Strength Guideline

Compressive Strength: 445 N/100 lbs. Maximum working load
890 N/200 lbs. Average ultimate load

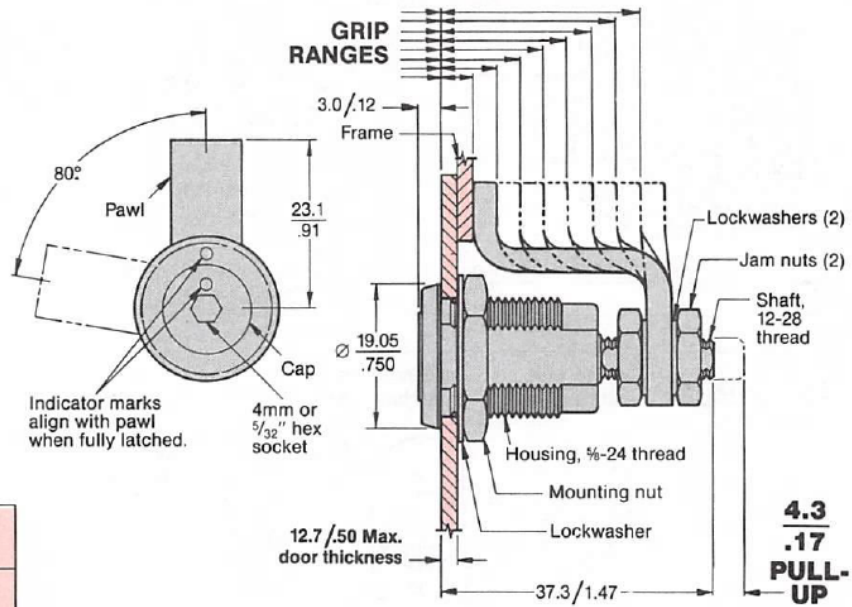
Vise-action™ Latch, *Smaller size*
Single-hole mount

ACTUAL SIZE

- Small size
- Internal O-ring gasket
- Provides compression
- Fast access
- Quick installation

A single half-turn latches the door, *then* applies pre-set, compressive pull-up.

Tool-operated Style

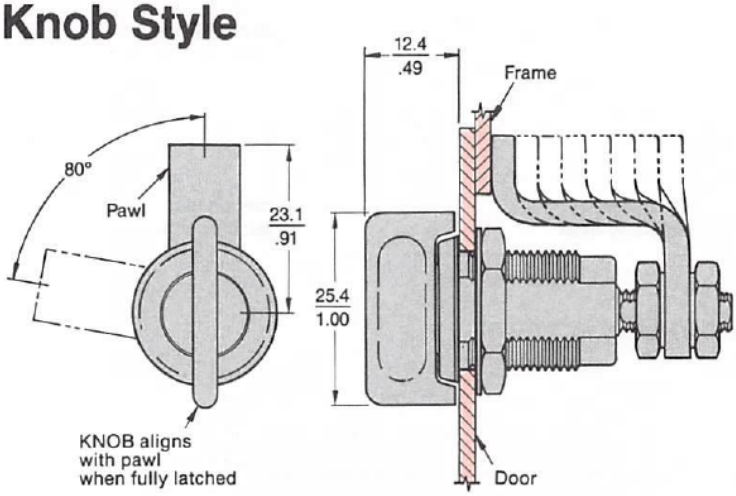


GRIP RANGE		PART NUMBERS	
Min.	Max.	matte black coat	satin silver coat

Tool-operated Style

3.18/.125	6.35/.250	E3-10-601-50 ■	E3-10-601-75 ■
6.35/.250	9.53/.375	E3-10-602-50 ■	E3-10-602-75 ■
9.53/.375	12.70/.500	E3-10-603-50 ■	E3-10-603-75 ■
12.70/.500	15.88/.625	E3-10-604-50 ■	E3-10-604-75 ■
15.88/.625	19.05/.750	E3-10-605-50 ■	E3-10-605-75 ■
19.05/.750	22.23/.875	E3-10-606-50 ■	E3-10-606-75 ■
22.23/.875	25.40/1.000	E3-10-607-50 ■	E3-10-607-75 ■
25.40/1.000	28.58/1.125	E3-10-608-50 ■	E3-10-608-75 ■

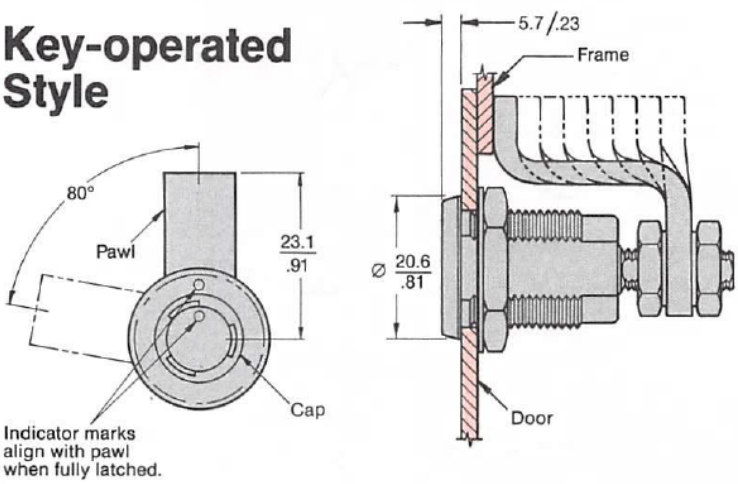
Knob Style



Knob Style

3.18/.125	6.35/.250	E3-10-621-50 ■	E3-10-621-75 ■
6.35/.250	9.53/.375	E3-10-622-50 ■	E3-10-622-75 ■
9.53/.375	12.70/.500	E3-10-623-50 ■	E3-10-623-75 ■
12.70/.500	15.88/.625	E3-10-624-50 ■	E3-10-624-75 ■
15.88/.625	19.05/.750	E3-10-625-50 ■	E3-10-625-75 ■
19.05/.750	22.23/.875	E3-10-626-50 ■	E3-10-626-75 ■
22.23/.875	25.40/1.000	E3-10-627-50 ■	E3-10-627-75 ■
25.40/1.000	28.58/1.125	E3-10-628-50 ■	E3-10-628-75 ■

Key-operated Style



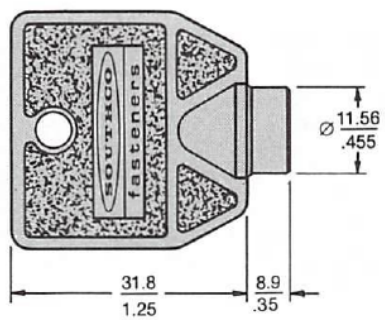
Key-operated Style

3.18/.125	6.35/.250	E3-65-15 ■	E3-65-17 ■
6.35/.250	9.53/.375	E3-65-25 ■	E3-65-27 ■
9.53/.375	12.70/.500	E3-65-35 ■	E3-65-37 ■
12.70/.500	15.88/.625	E3-65-45 ■	E3-65-47 ■
15.88/.625	19.05/.750	E3-65-55 ■	E3-65-57 ■
19.05/.750	22.23/.875	E3-65-65 ■	E3-65-67 ■
22.23/.875	25.40/1.000	E3-65-75 ■	E3-65-77 ■
25.40/1.000	28.58/1.125	E3-65-85 ■	E3-65-87 ■

■ From stock, subject to prior sale.

Vise-action™ Latch, *Smaller size*

ACTUAL SIZE KEY



KEY PART NUMBER
E3-26-819-19 ■

Die cast zinc nickel plated.

Order separately.
Custom key configurations are available.
Call for details

Material and Finish

HOUSING: die cast zinc, satin silver or matte black polyester powder coated. See table. CAM and SLEEVE are hardened 1064 steel, SHAFT is 12L14 steel, JAM NUTS are steel, ALL LOCKWASHERS are spring steel, MOUNTING NUT is 12L14 steel or brass and PAWL is 1010 steel; these components are DACROTIZED†.
PIN: case hardened 1008 steel, zinc plated plus yellow chromate dip.
SPRING: 302 stainless steel, passivated.
O-RING: buna N rubber, black.

TOOL-OPERATED STYLE

CAP: die cast zinc, satin silver or matte black polyester powder coated. See table.
RETAINER: 302 stainless steel, passivated.

KNOB STYLE

KNOB: die cast zinc, satin silver or matte black polyester powder coated. See table.
RETAINER: 302 stainless steel, passivated.

KEY-OPERATED STYLE

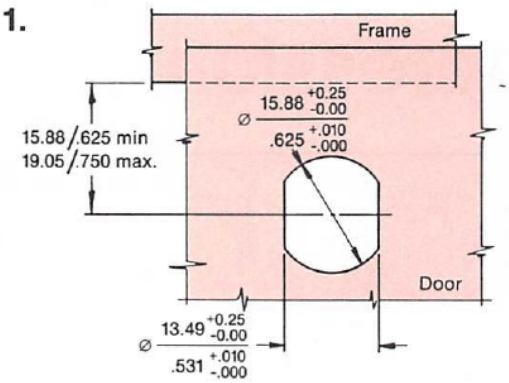
CAP: 303 stainless steel, satin silver or matte black polyester powder coated. See table.
RETAINER: 302 stainless steel, passivated.

†Registered tradename of Metal Coatings International, Inc.

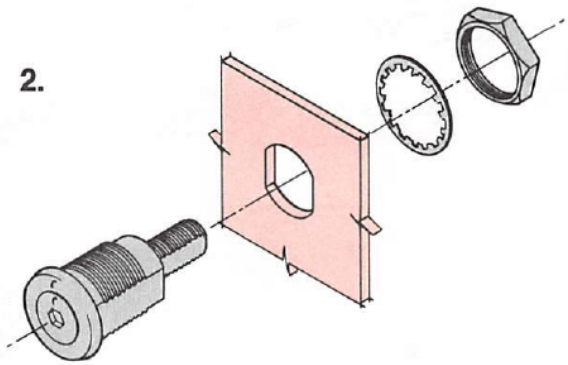
Latch is shipped partially assembled, one unit per bag.

Installation

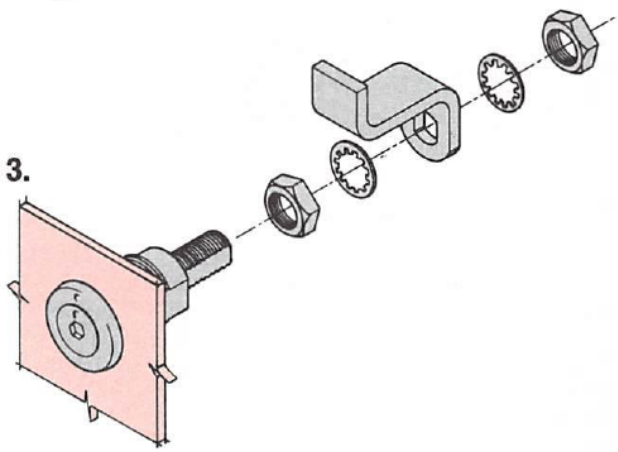
1.



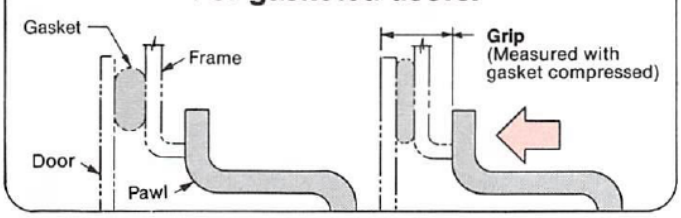
2.



3.



For gasketed doors:



CAUTION: Set pawl position so that no more than 1.6 N•m or 14 in.-lbs. of torque is required to secure door.

Strength Guideline

Compressive Strength: 445 N/100 lbs. Maximum working load
690 N/155 lbs. Average ultimate load

4. To adjust grip: Measure your grip

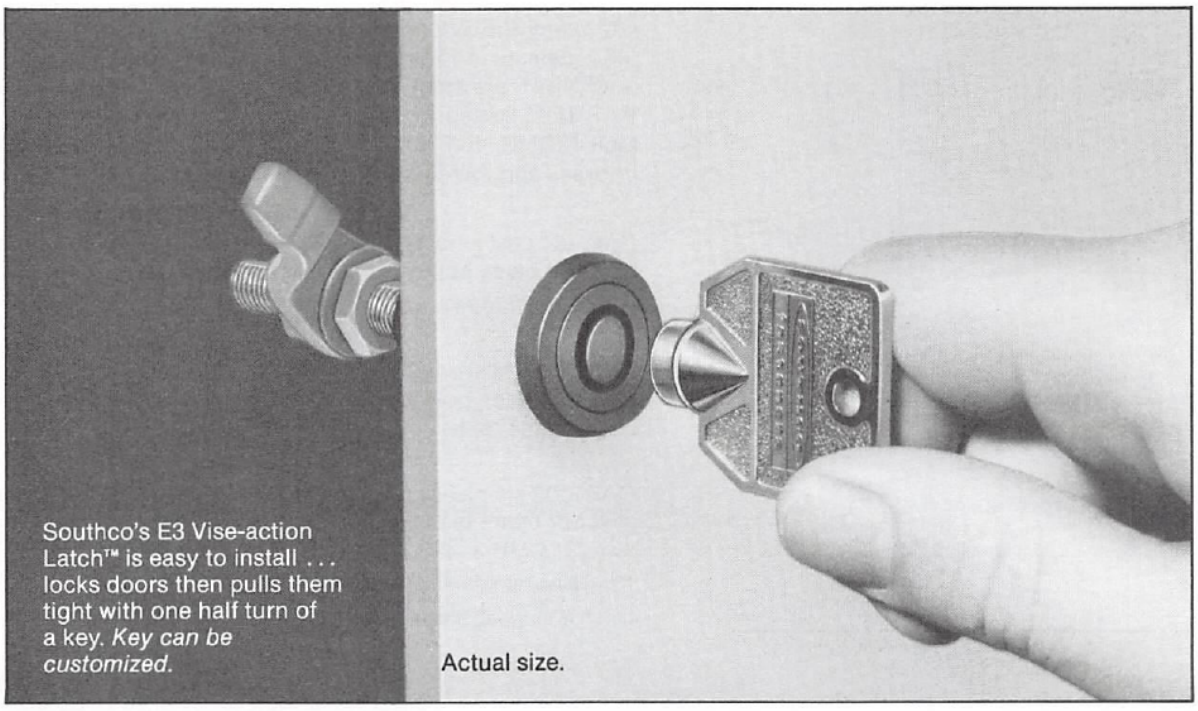
Open door. Position pawl on shaft to your grip measurement (with pawl in latched position).

Tighten jam nuts hard against lockwashers and pawl using *two* wrenches.

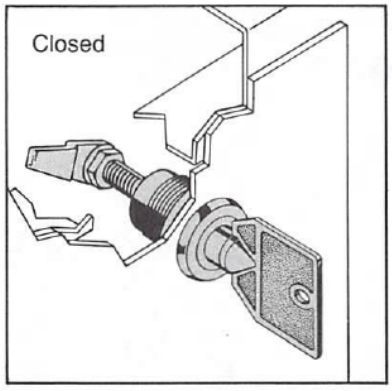
millimeter / inch

millimeter/inch

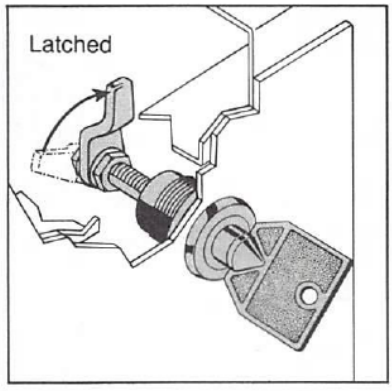
Tamper Resistance. . .



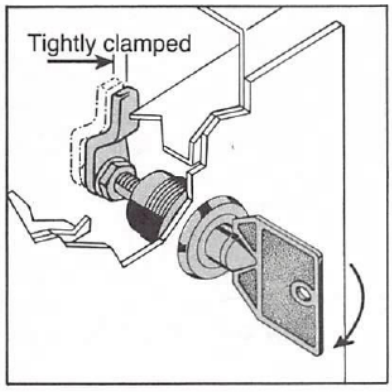
plus 100 lbs. of compression.



With a single half-turn, Southco's Vise-action Latch completes two sequential motions—it latches the door, then pulls it up tight.



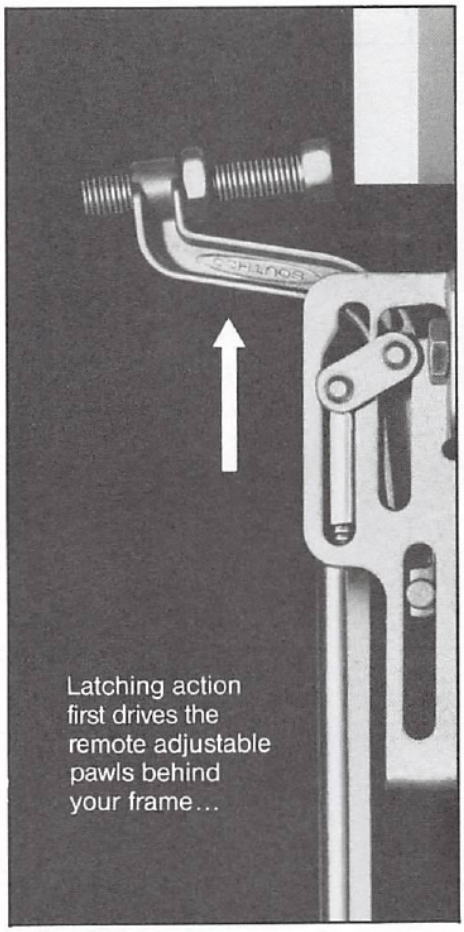
Give the key a fraction of a turn and the latching pawl swings smoothly into place behind the door frame. The door is now lightly secured against opening.

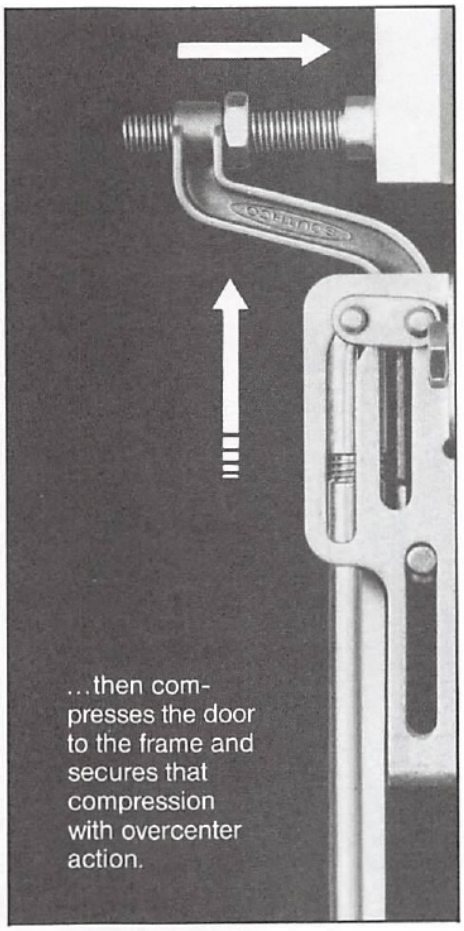


Then—finish the half-turn. The latching pawl now moves toward the door, pulls up tightly against the frame, applies up to a quarter-inch of vise-like compression to RFI and EMI gasketing material.

SOUTHCO®
fasteners

How to quickly turn a vise-action™ latch into a 3 point compression system.





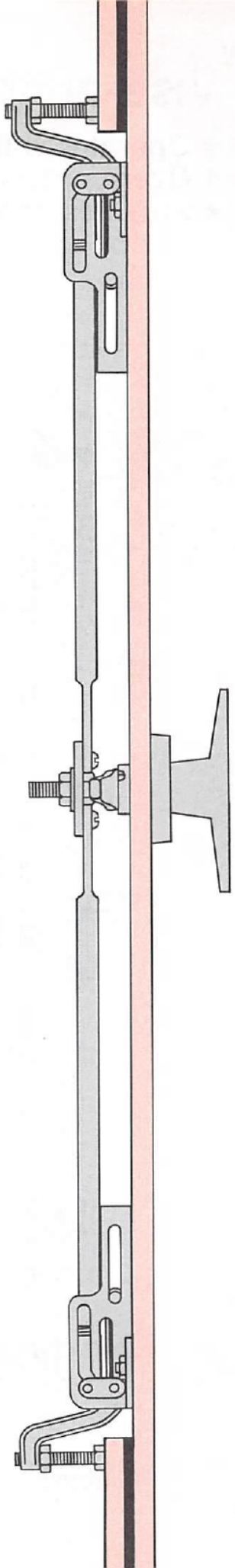
Now, with just a single turn of a Southco Vise-action Latch, you can engage three latching points behind a frame and apply a positive compression of 6.3 mm to each.

Result? EMI/RFI shielding or environmental gasketing can now be consistently compressed at either top and bottom or side to side corners, in addition to the central latching point, with one easy operating motion.

Southco's new Vise-action 3 Point Compression System consists of two remote compression units, two connecting rods selected from stock or custom lengths, and your choice of any one of Southco's T-handle, Knob, or Hex Recess Vise-action Latches.

For ease of operation and assurance of gasket and shield compression, specify Southco's Vise-action 3 Point Compression System.

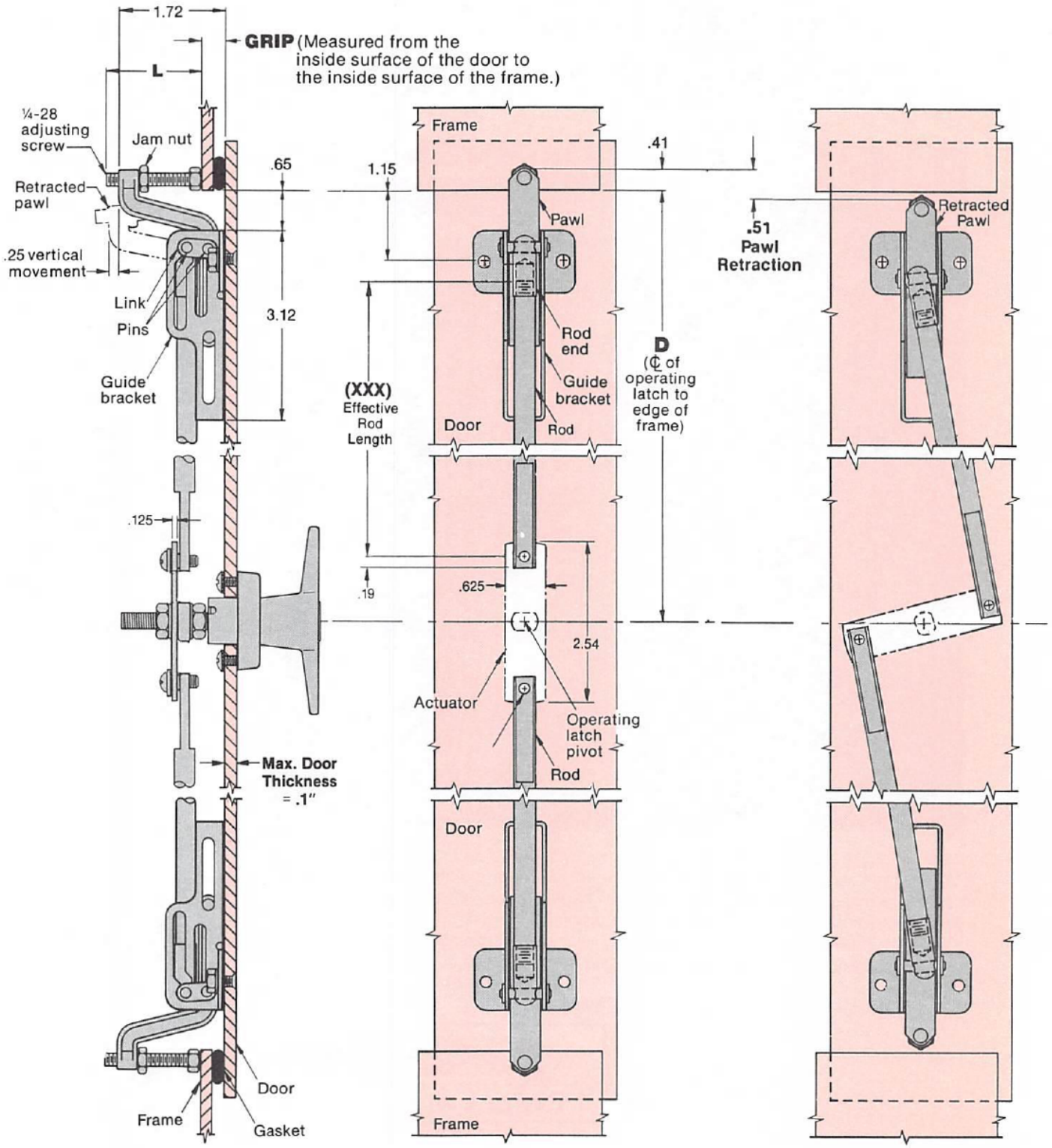
SOUTHCO®
fasteners



NEW

Vise-action 3 point Compression System™

- Operates with a fractional turn.
- Over-center action first latches, then compresses.
- Provides consistent .25" compression for gasketed applications.

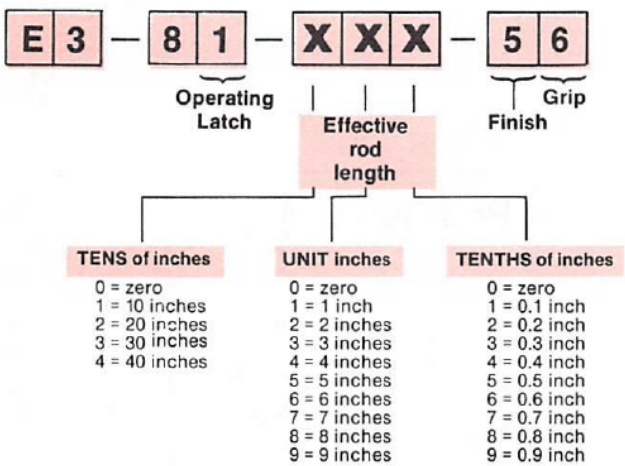


Follow these three steps to select a complete system consisting of an operating latch, two remote latches, an actuator and two rods of *equal length.* (When rods of unequal length are required, call for assistance in determining part number.)

1. Determine your **GRIP** and select basic system part number from table at right.
2. Determine your effective rod length **(XXX)** = **D** minus 2.54

   Rods to accommodate a **D** dimension of 31.5" and 35" are available from stock.
3. Replace the **XXX** in the basic system part number with your effective rod length expressed in inches and tenths of inches.

Part Number Formulation:



Example: If your required length is 29.6 inches, substitute 296 for the **XXX** portion of the basic part number **e.g. E3-81-296-52.**

xxx MIN. = 085
xxx MAX. = 480

Vise-action™ operating latch style and finish		GRIP Min.	GRIP Max.	SYSTEM WITH RODS	SYSTEM WITHOUT RODS
T-handle	black	.25	.625	E3-81-XXX-56	E3-81-000-56
		.50	.875	E3-81-XXX-57	E3-81-000-57
		.75	1.18	E3-81-XXX-58	E3-81-000-58
	satin silver	.25	.625	E3-81-XXX-76	E3-81-000-76
		.50	.875	E3-81-XXX-77	E3-81-000-77
		.75	1.18	E3-81-XXX-78	E3-81-000-78
Tool Operated Single Hole Mount (large size)	black	.41	.625	E3-82-XXX-56	E3-82-000-56
		.50	.875	E3-82-XXX-57	E3-82-000-57
		.75	1.05	E3-82-XXX-58	E3-82-000-58
	satin silver	.41	.625	E3-82-XXX-76	E3-82-000-76
		.50	.875	E3-82-XXX-77	E3-82-000-77
		.75	1.05	E3-82-XXX-78	E3-82-000-78
Tool Operated Weather Sealed	black	.25	.625	E3-83-XXX-56	E3-83-000-56
		.50	.875	E3-83-XXX-57	E3-83-000-57
		.75	1.18	E3-83-XXX-58	E3-83-000-58
	satin silver	.25	.625	E3-83-XXX-76	E3-83-000-76
		.50	.875	E3-83-XXX-77	E3-83-000-77
		.75	1.18	E3-83-XXX-78	E3-83-000-78
Knob (large size)	black	.36	.625	E3-84-XXX-56	E3-84-000-56
		.50	.875	E3-84-XXX-57	E3-84-000-57
		.75	1.00	E3-84-XXX-58	E3-84-000-58

NOTE: Maximum Door Thickness = .1"

GRIP Min.	GRIP Max.	Screw length L
.25	.625	1.31
.50	.875	1.06
.75	1.18	.81

MATERIAL and FINISH
GUIDE BRACKET is case hardened 1010 steel, LINK and ACTUATOR are 1010 steel, JAM NUT, and ADJUSTING SCREWS are low carbon steel; these components are DACROTIZED†.
PAWL: die cast zinc plus chemical protective film.
ROD END: 7075 aluminum, natural.
PINS are Low Carbon Steel, case hardened and zinc plated plus bright chromate dip.
RODS: 2011 aluminum, natural.
SPACERS are 12L14 steel, DACROTIZED†.
ACTUATOR SCREWS are low carbon steel, and zinc plated plus bright chromate dip.

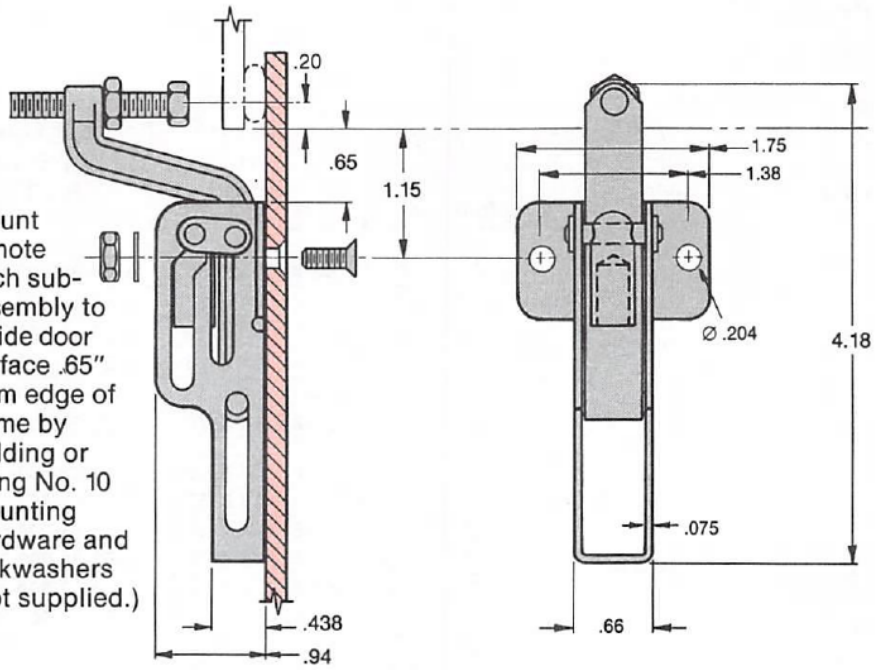
Material and finish notes for the operating latches can be found on Vise-action™ Latch literature or handbook pages.

†Registered tradename of Metal Coatings International, Inc.

Strength Guideline
(load exerted on frame by adjusting screw)
100 lbs. Maximum working load
250 lbs. Average ultimate load

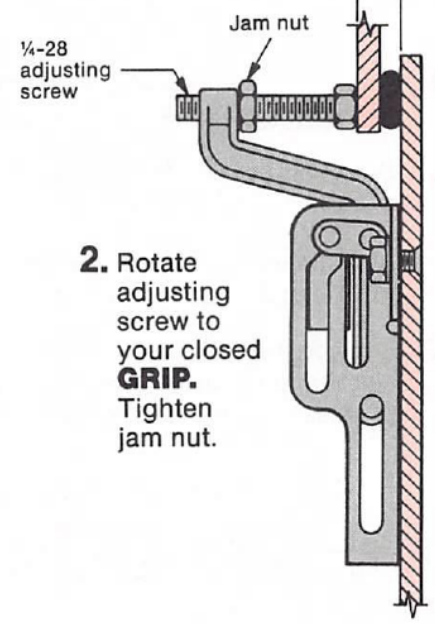
Maximum working load exerted on frame by remote latches varies with rod length:
100 lbs. for 1' rod
100 lbs. for 2' rod
60 lbs. for 3' rod
Variations in operating latch, gasketing and rod length will effect the maximum load applied by the system.
Ask for samples for testing.

Installation

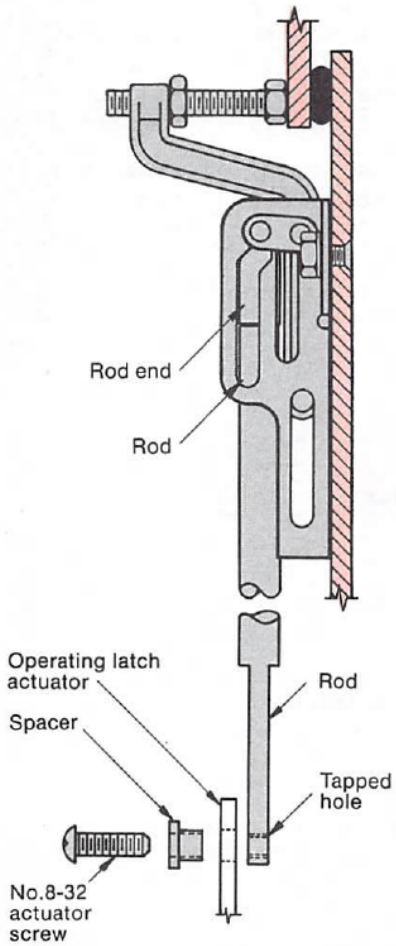


1. Mount remote latch sub-assembly to inside door surface .65" from edge of frame by welding or using No. 10 mounting hardware and lockwashers (not supplied.)

GRIP
(Measured from the inside surface of the door to the inside surface of the frame.)



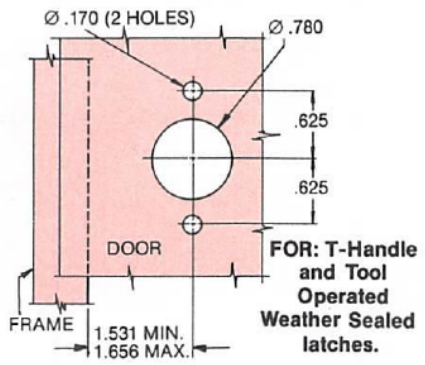
2. Rotate adjusting screw to your closed **GRIP.** Tighten jam nut.



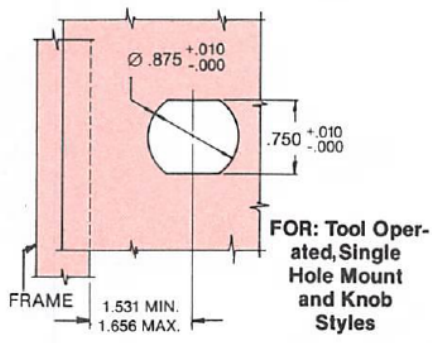
3. With remote and operating latches in closed position, thread rod into rod end until hole in rod is centered on mounting hole of actuator.

4. Attach rod to actuator. Operate latch to check for correct installation.

PANEL PREPARATION

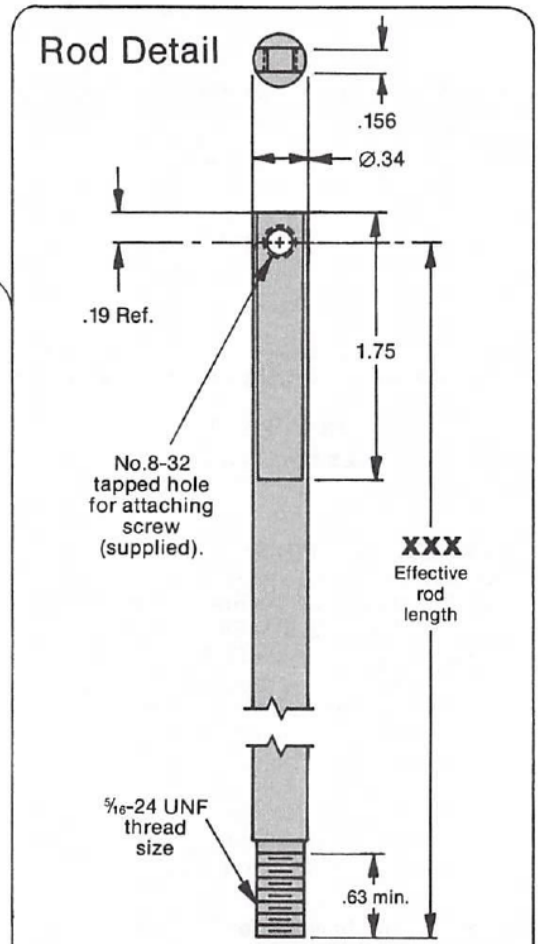


FOR: T-Handle and Tool Operated Weather Sealed latches.



FOR: Tool Operated, Single Hole Mount and Knob Styles

Rod Detail



Section FF

Metric Vise-action Compression System

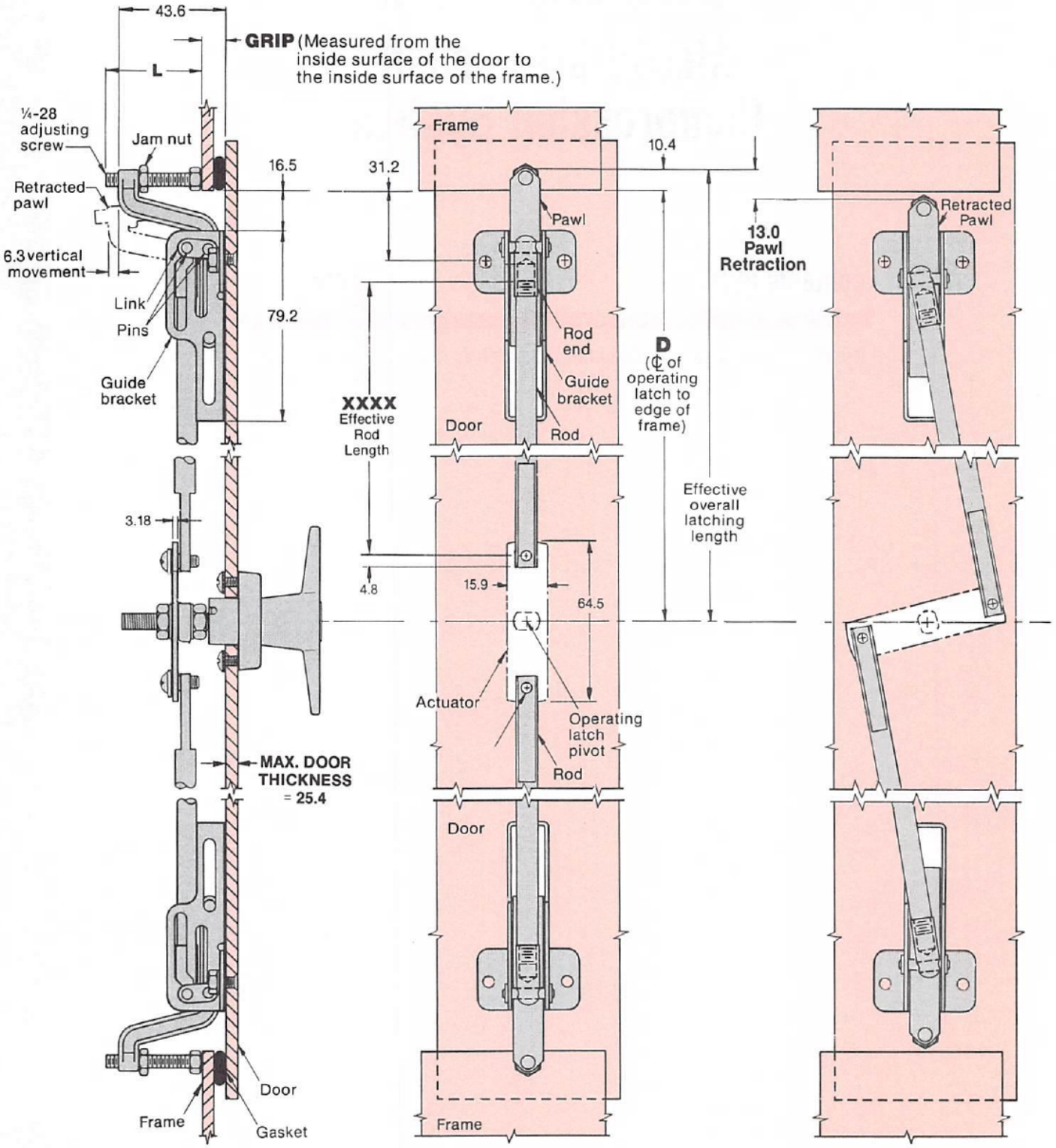
contents guide | **page**

No. E3 Metric Vise-action Compression Latches . . . . . FF-2 to FF-4

NEW

METRIC
Vise-action 3 point Compression System™

- **Operates with a fractional turn.**
- **Over-center action first latches, then compresses.**
- **Provides consistent 6.3 mm compression for gasketed applications.**

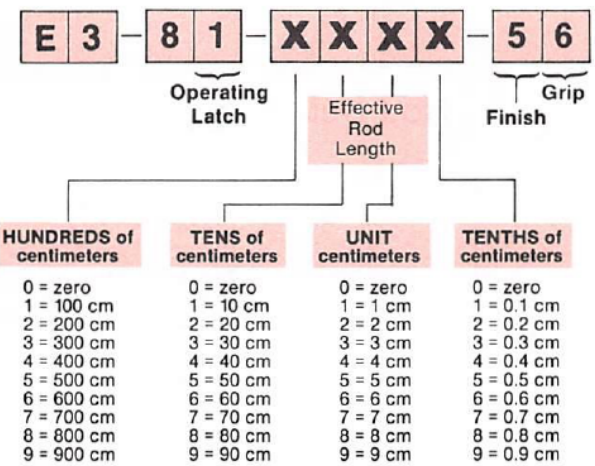


Follow these three steps to select a complete system consisting of an operating latch, two remote latches, an actuator and two rods of *equal length.* (When rods of unequal length are required, call for assistance in determining part number.)

METRIC

1. Determine your **GRIP** and select basic system part number from table at right.
2. Determine your effective rod length = **D** minus 64.5 mm
3. Replace the **XXXX** in the basic system part number with your effective rod length expressed in centimeters and tenths of centimeters.

Part Number Formulation:



EXAMPLE: If Your required length is 85 cm, substitute 0850 for the **XXXX** portion of the basic part number.
e.g. **E3-81-0850-52**

XXXX MIN = 0216
XXXX MAX = 1219

Vise-action™ operating latch style and finish		GRIP Min.	GRIP Max.	SYSTEM WITH RODS	SYSTEM WITHOUT RODS
T-handle	black	6.4	15.9	E3-81-XXXX-56	E3-81-000-56
		12.7	22.2	E3-81-XXXX-57	E3-81-000-57
		19.1	30.0	E3-81-XXXX-58	E3-81-000-58
	satin silver	6.4	15.9	E3-81-XXXX-76	E3-81-000-76
		12.7	22.2	E3-81-XXXX-77	E3-81-000-77
		19.1	30.0	E3-81-XXXX-78	E3-81-000-78
Tool Operated Single Hole Mount (large size)	black	6.4	15.9	E3-82-XXXX-56	E3-82-000-56
		12.7	22.2	E3-82-XXXX-57	E3-82-000-57
		19.1	30.0	E3-82-XXXX-58	E3-82-000-58
	satin silver	6.4	15.9	E3-82-XXXX-76	E3-82-000-76
		12.7	22.2	E3-82-XXXX-77	E3-82-000-77
		19.1	30.0	E3-82-XXXX-78	E3-82-000-78
Tool Operated Weather Sealed	black	6.4	15.9	E3-83-XXXX-56	E3-83-000-56
		12.7	22.2	E3-83-XXXX-57	E3-83-000-57
		19.1	30.0	E3-83-XXXX-58	E3-83-000-58
	satin silver	6.4	15.9	E3-83-XXXX-76	E3-83-000-76
		12.7	22.2	E3-83-XXXX-77	E3-83-000-77
		19.1	30.0	E3-83-XXXX-78	E3-83-000-78
Knob (large size)	black	6.4	15.9	E3-84-XXXX-56	E3-84-000-56
		12.7	22.2	E3-84-XXXX-57	E3-84-000-57
		19.1	30.0	E3-84-XXXX-58	E3-84-000-58

MAX. DOOR THICKNESS = 25.4

GRIP Min.	GRIP Max.	Screw length L
6.4	15.9	33.3
12.7	22.2	26.9
19.1	30.0	20.6

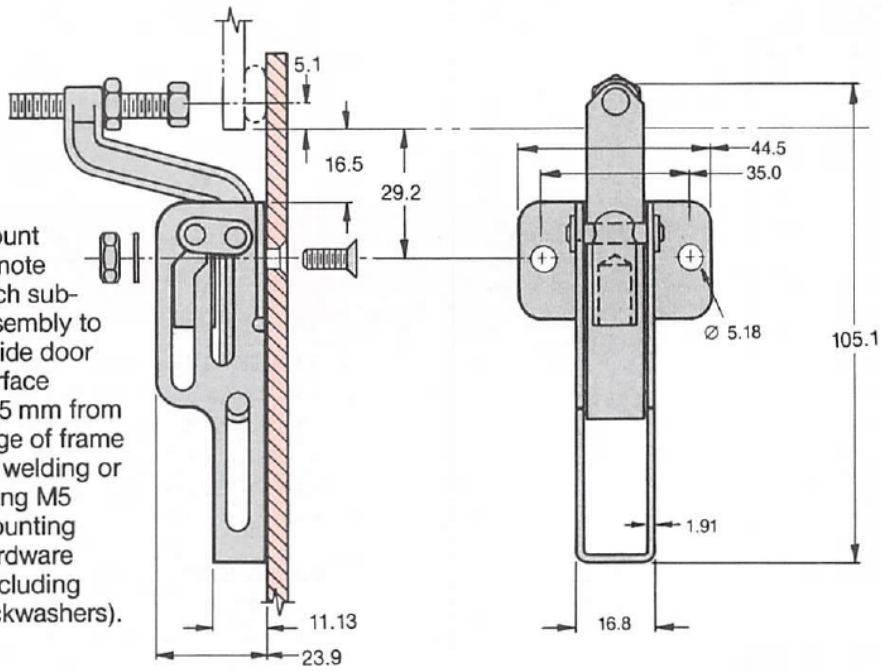
MATERIAL and FINISH
LINK, ACTUATOR and SPACERS are steel, GUIDE BRACKET is case hardened steel, JAM NUT and ADJUSTING SCREWS are low carbon steel; these components are DACROTIZED†.
PAWL: die cast zinc plus chemical protective film.
ROD END and ROD: aluminum, natural.
PINS: low carbon steel case hardened and zinc plated plus bright chromate dip.
ACTUATOR SCREWS are low carbon steel, zinc plated plus bright chromate dip.

Material and finish notes for the operating latches can be found on Vise-action™ Latch literature or handbook pages.

Strength Guideline
(load exerted on frame by adjusting screw)
445 N. Maximum working load
1112 N Average ultimate load
Variations in operating latch, gasketing and rod length will effect the maximum load applied by the system.
Ask for samples for testing.

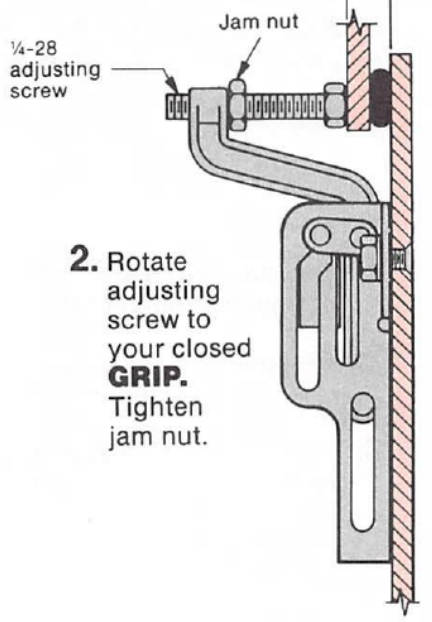
†Registered tradename of Metal Coatings International, Inc.

METRIC Installation

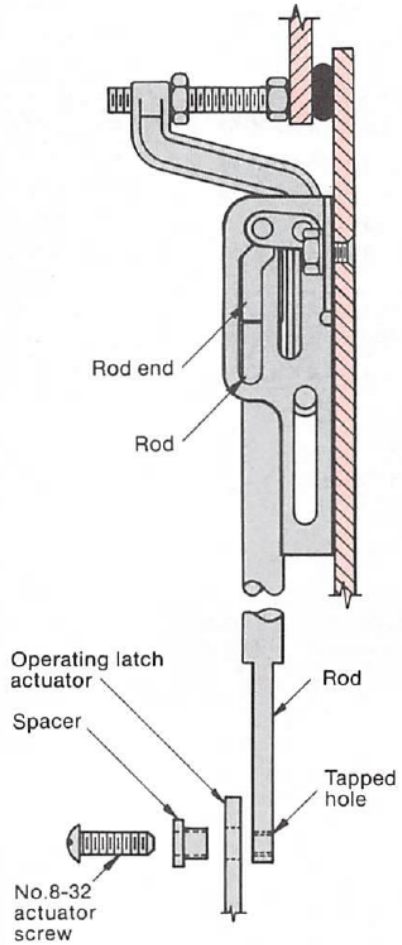


1. Mount remote latch sub-assembly to inside door surface 16.5 mm from edge of frame by welding or using M5 mounting hardware (including lockwashers).

GRIP
(Measured from the inside surface of the door to the inside surface of the frame.)



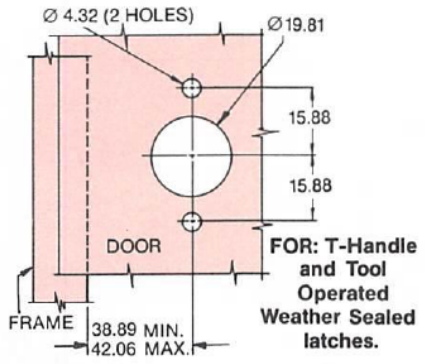
2. Rotate adjusting screw to your closed **GRIP.** Tighten jam nut.



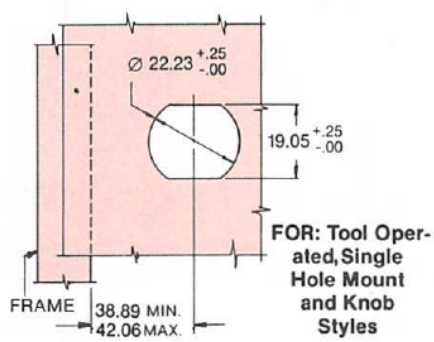
3. With remote and operating latches in closed position, thread rod into rod end until hole in rod is centered on mounting hole of actuator.

4. Attach rod to actuator. Operate latch to check for correct installation.

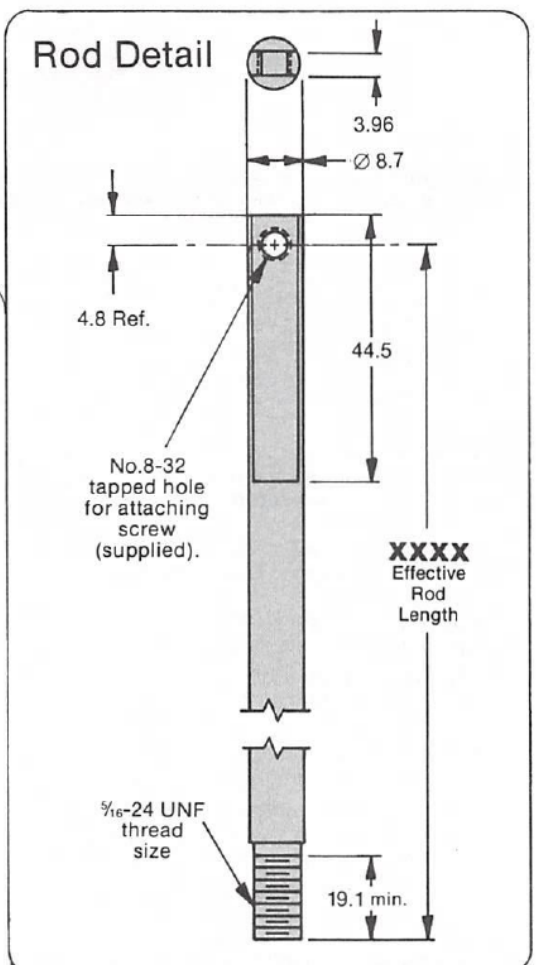
PANEL PREPARATION



FOR: T-Handle and Tool Operated Weather Sealed latches.



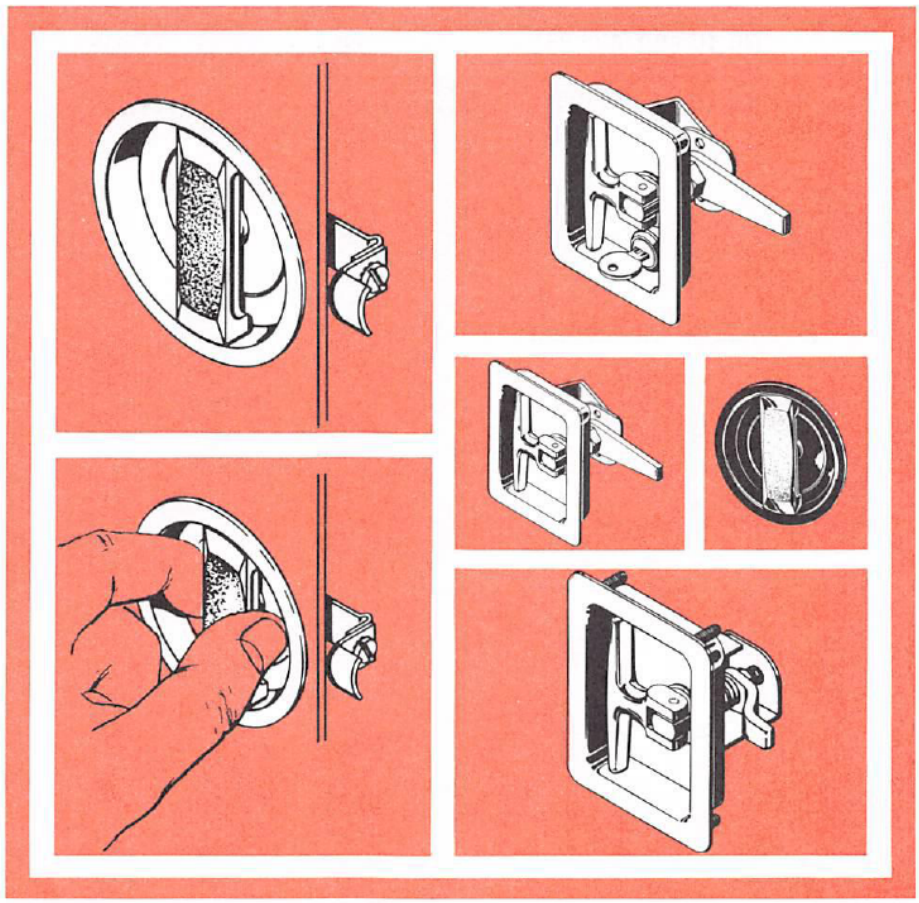
FOR: Tool Operated, Single Hole Mount and Knob Styles



Flush (cup-type) Latches

contents guide

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No. 01 cup latches	G-1 to G-5
No. 24 latches	G-6 to G-9
No. C2 lever latch	G-10 & G-11



Flush (cup-type) Latches

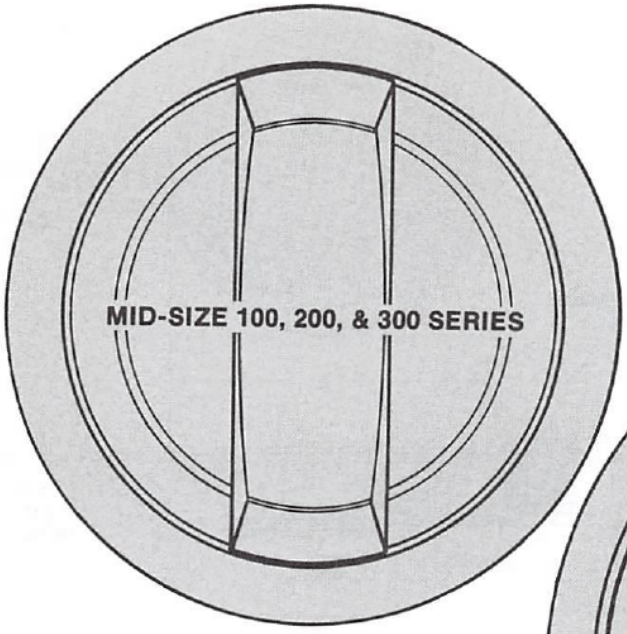
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No. C2 lever latch	G-10 & G-11

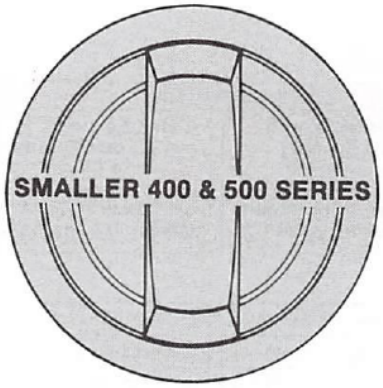
Flush (recessed-cup) Latches

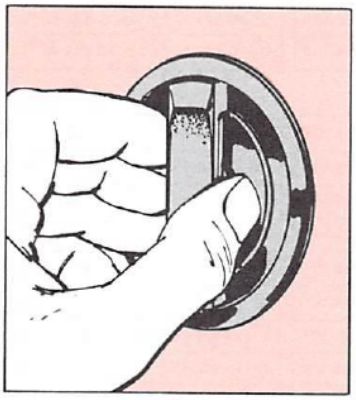
for single, two or three-point latching.

LATCHES SHOWN
ACTUAL SIZE

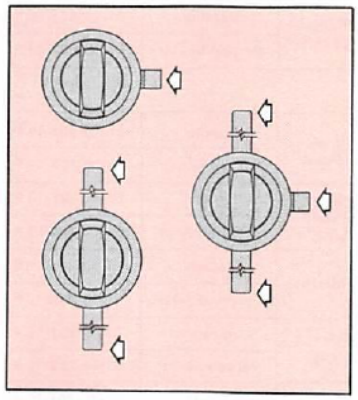




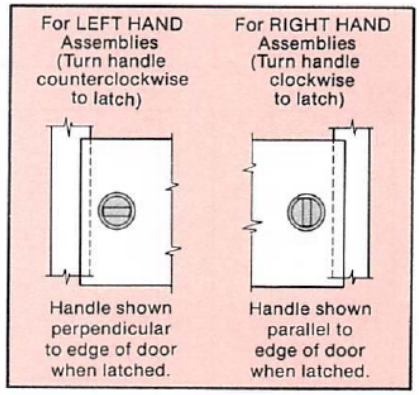




- Functionally shaped for comfortable turning without protruding.

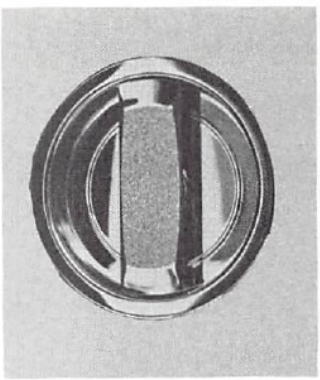


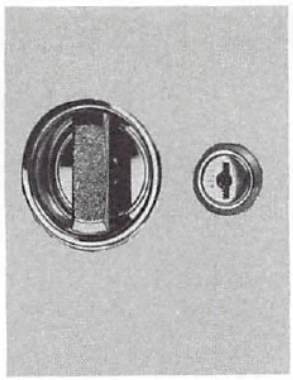
- Choose one-, two-, or three-point latching.

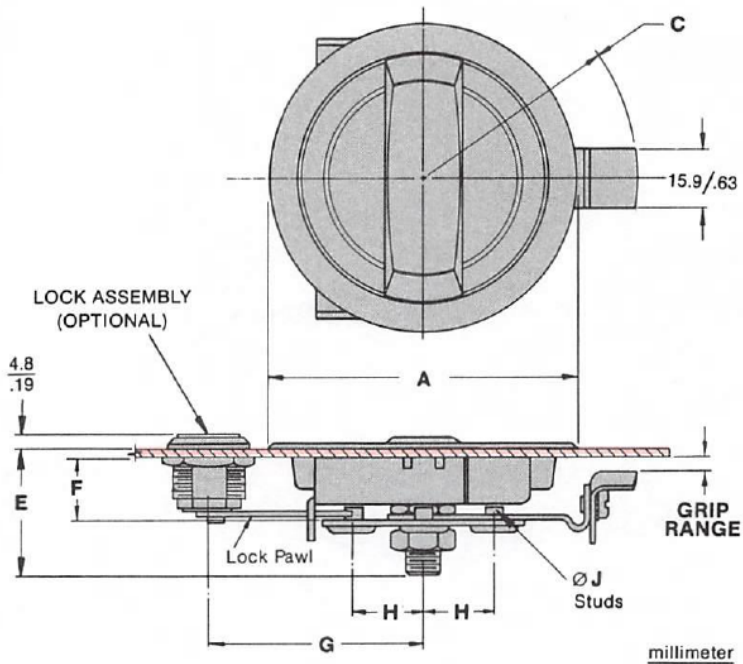


- Mounted on either right- or left-handed doors. Choose horizontal or vertical closed position of handle.

Flush (recessed-cup) Latches
for single, two or three-point latching.







millimeter
inch
millimeter/inch

Material and Finish
HANDLE: ABS (see table for finish).
CUP: 1010 steel, chrome plated or matte black polyester powder coated (see table).
HOUSING and ACTUATOR: 1010 steel, DACROTIZED†.
STUDS: 1006 steel (100, 200 & 300 series) or 1008 steel (400 & 500 series), DACROTIZED†.
PAWL and PAWL FOOT are 1010 steel, SCREWS and NUTS are steel and SHAFT is low carbon steel; these components are zinc plated plus yellow chromate dip.
LOCKWASHER: spring steel, zinc plated plus bright chromate dip. PIN: 18-8 stainless steel, passivated.

LOCK HOUSING and PLUG: die cast zinc, chrome plated or matte black polyester powder coated (see table).
LOCK PAWL: steel, zinc plated plus yellow chromate dip.
HEX NUT: die cast zinc, zinc plated plus bright chromate dip.

†Registered tradename of Metal Coatings International, Inc.

Shipped one unit per package.

A	C (RAD).	E	F	G	H	ØJ	GRIP RANGE	TYPE OF ASSEMBLY	Handle position when latched relative to edge of door.	PART NUMBERS: Cup, Handle, and Lock Assembly: chrome plated. Left hand assemblies	PART NUMBERS: Cup, Handle, and Lock Assembly: chrome plated. Right hand assemblies	PART NUMBERS: Handle: black. Cup and Lock Assembly: matte black coat. Left hand assemblies	PART NUMBERS: Handle: black. Cup and Lock Assembly: matte black coat. Right hand assemblies	SERIES
Smaller size														
49.2 / 1.94	40.5 / 1.59	34.1 / 1.34	18.3 / .72 min. 19.8 / .78 max.	46.0 / 1.81	12.7 / .50	3.18 / .125	0 – 12.7 / .50	Single or Three-Point	Parallel	01-10-**401**-10 ■	01-10-**402**-10 ■	01-10-**401**-65 ■	01-10-**402**-65 ■	400
									Perpendicular	01-10-**402**-10 ■	01-10-**401**-10 ■	01-10-**402**-65 ■	01-10-**401**-65 ■	
								Single or Three-Point With Lock*	Parallel	01-10-**421**-10 ■	01-10-**422**-10 ■	01-10-**421**-65 ■	01-10-**422**-65 ■	
									Perpendicular	01-10-**422**-10 ■	01-10-**421**-10 ■	01-10-**422**-65 ■	01-10-**421**-65 ■	
							—	Two-Point††	Parallel	01-10-**501**-10 ■	01-10-**502**-10 ■	01-10-**501**-65 ■	01-10-**502**-65 ■	500
									Perpendicular	01-10-**502**-10 ■	01-10-**501**-10 ■	01-10-**502**-65 ■	01-10-**501**-65 ■	
								Two-Point†† With Lock*	Parallel	01-10-**521**-10 ■	01-10-**522**-10 ■	01-10-**521**-65 ■	01-10-**522**-65 ■	
									Perpendicular	01-10-**522**-10 ■	01-10-**521**-10 ■	01-10-**522**-65 ■	01-10-**521**-65 ■	
Mid-size														
82.6 / 3.25	57.2 / 2.25	38.9 / 1.53	16.7 / .66 min. 19.8 / .78 max.	57.2 / 2.25	19.1 / .75	4.75 / .187	0 – 12.7 / .50	Single or Three-Point	Parallel	01-10-**101**-10 ■	01-10-**102**-10 ■	01-10-**101**-65 ■	01-10-**102**-65 ■	100
									Perpendicular	01-10-**102**-10 ■	01-10-**101**-10 ■	01-10-**102**-65 ■	01-10-**101**-65 ■	
								Single or Three-Point With Lock*	Parallel	01-10-**121**-10 ■	01-10-**122**-10 ■	01-10-**121**-65 ■	01-10-**122**-65 ■	
									Perpendicular	01-10-**122**-10 ■	01-10-**121**-10 ■	01-10-**122**-65 ■	01-10-**121**-65 ■	
							—	Two-Point††	Parallel	01-10-**201**-10 ■	01-10-**202**-10 ■	01-10-**201**-65 ■	01-10-**202**-65 ■	200
									Perpendicular	01-10-**202**-10 ■	01-10-**201**-10 ■	01-10-**202**-65 ■	01-10-**201**-65 ■	
								Two-Point†† With Lock*	Parallel	01-10-**221**-10 ■	01-10-**222**-10 ■	01-10-**221**-65 ■	01-10-**222**-65 ■	
									Perpendicular	01-10-**222**-10 ■	01-10-**221**-10 ■	01-10-**222**-65 ■	01-10-**221**-65 ■	
							12.7 / .50 – 28.6 / 1.13	Single or Three-Point	Parallel	01-10-**301**-10 ■	01-10-**302**-10 ■	01-10-**301**-65 ■	01-10-**302**-65 ■	300
									Perpendicular	01-10-**302**-10 ■	01-10-**301**-10 ■	01-10-**302**-65 ■	01-10-**301**-65 ■	
								Single or Three-Point With Lock*	Parallel	01-10-**321**-10 ■	01-10-**322**-10 ■	01-10-**321**-65 ■	01-10-**322**-65 ■	
									Perpendicular	01-10-**322**-10 ■	01-10-**321**-10 ■	01-10-**322**-65 ■	01-10-**321**-65 ■	

††Pawl is not included with two-point assemblies. *Locks are keyed alike. Random keying is available. Call for details.

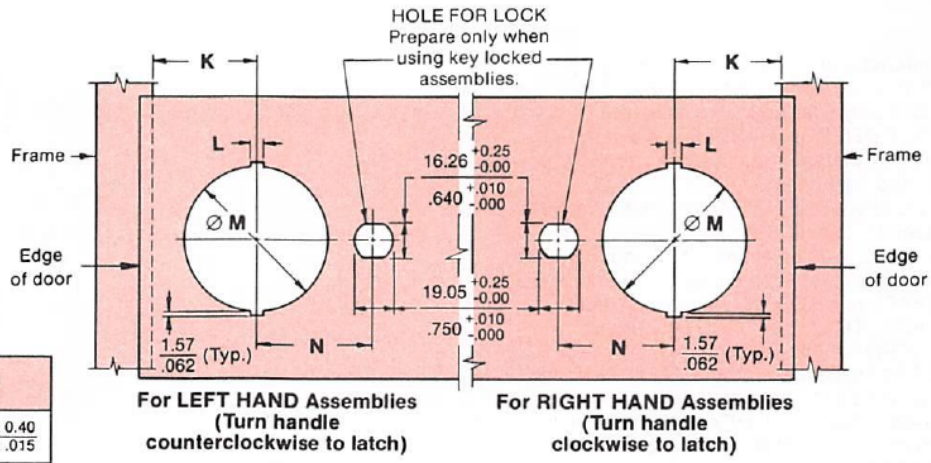
■ From stock, subject to prior sale.

Flush (recessed-cup) Latches
for single, two or three-point latching.

INSTALLATION

SERIES	WEIGHT PER ASS'Y (kg. / LBS.)		
	SINGLE & THREE POINT TYPE	TWO POINT TYPE	LOCK ASS'Y
400 & 500	.09 / .20	.08 / .17	.05 / .11
100,200, & 300	.21 / .46	.19 / .42	.05 / .11

SERIES	K	L	∅ M	N
400 & 500	33.3 ± 3.2 / 1.31 ± .13	4.75 / 187	42.85 ± 0.40 / 1.687 ± .015	46.04 ± 0.40 / 1.812 ± .015
100,200, & 300	50.8 ± 3.2 / 2.00 ± .13	6.35 / .250	71.42 ± 0.40 / 2.812 ± .015	57.15 ± 0.40 / 2.250 ± .015

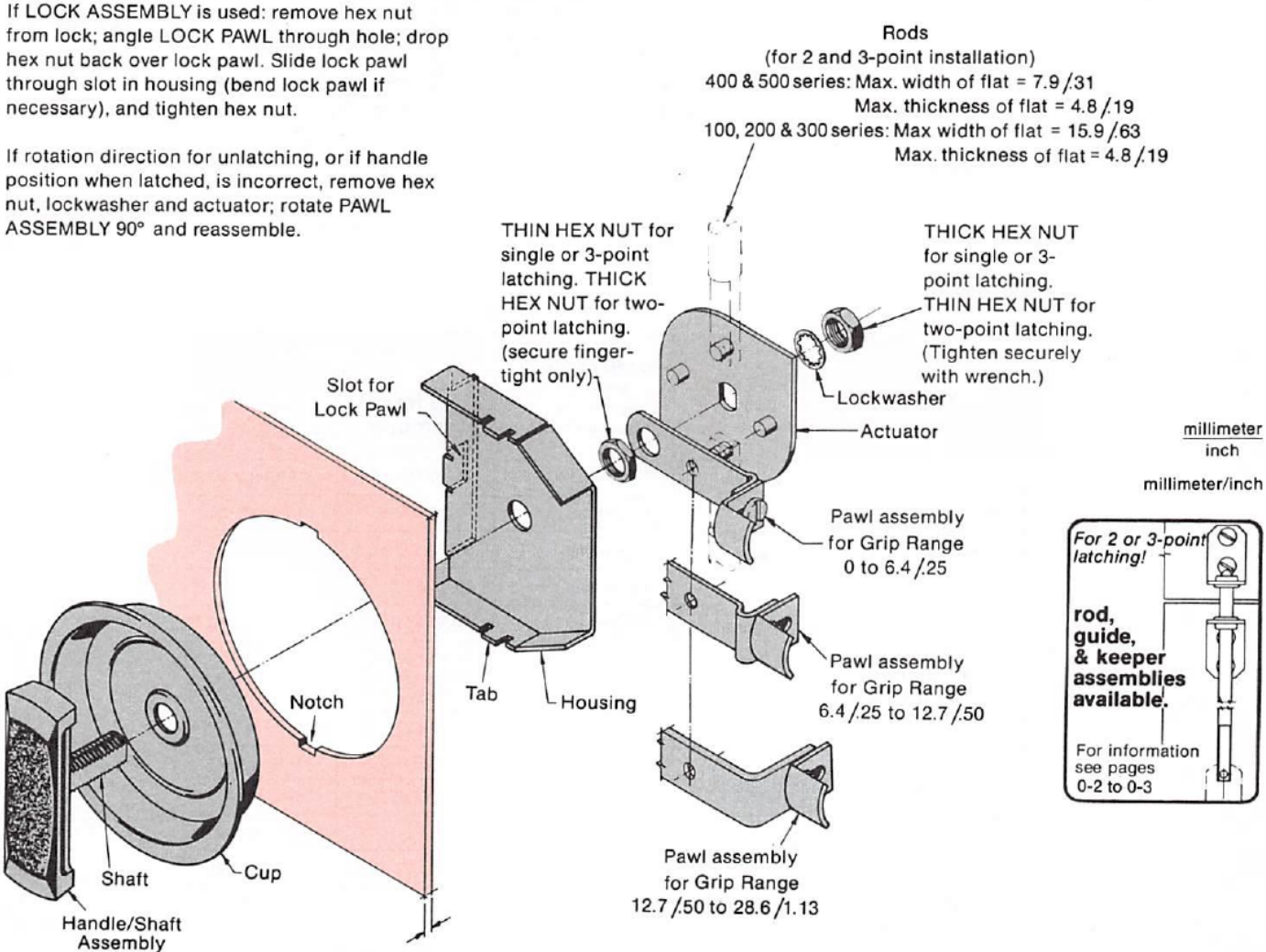


For LEFT HAND Assemblies (Turn handle counterclockwise to latch)

For RIGHT HAND Assemblies (Turn handle clockwise to latch)

If LOCK ASSEMBLY is used: remove hex nut from lock; angle LOCK PAWL through hole; drop hex nut back over lock pawl. Slide lock pawl through slot in housing (bend lock pawl if necessary), and tighten hex nut.

If rotation direction for unlatching, or if handle position when latched, is incorrect, remove hex nut, lockwasher and actuator; rotate PAWL ASSEMBLY 90° and reassemble.



millimeter / inch

millimeter/inch

Panel Thickness
For assemblies without lock
0.8 /.03 min. to 9.5 /.38 max.
For assemblies with lock
1.6 /.06 min. to 7.9 /.31 max.

To adjust pawl assembly, loosen screw; move pawl foot to desired position(note orientation); tighten screw.

Large Flush (recessed-cup) Latch

Pull-out handle provides strong hand grip

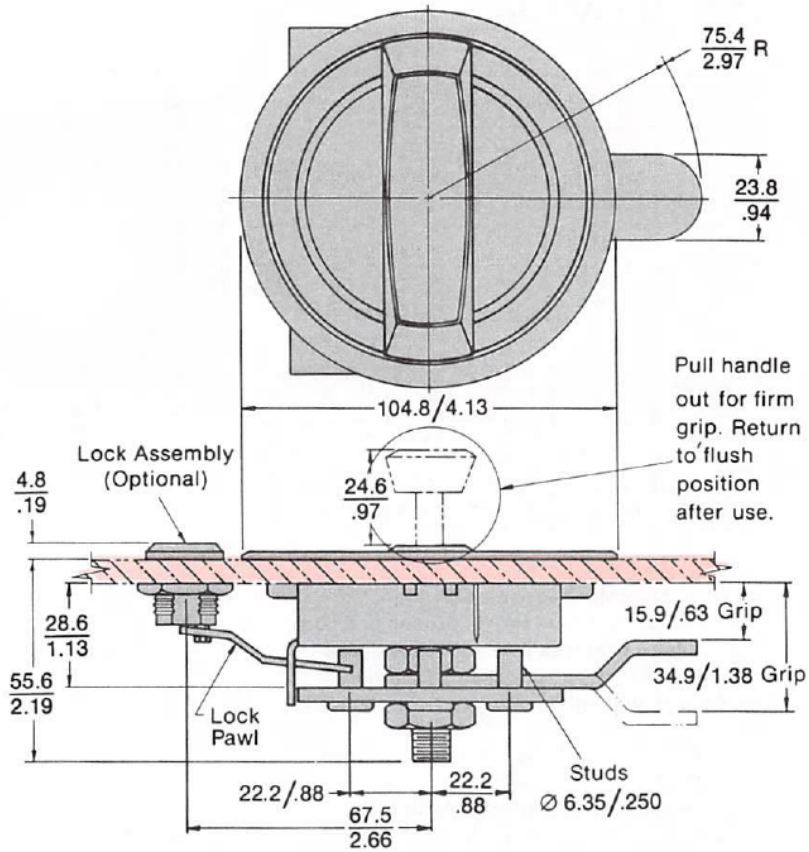
Material and Finish (for 600 series)
CUP is 1010 steel, chrome plated with matte black polyester powder coated, or DACROTIZED†. HANDLE is die cast zinc, chrome plated or matte black polyester powder coated (see table).
HOUSING, ACTUATOR and PAWL are 1010 steel, DACROTIZED†.
SPRING is 302 stainless steel and PIN is 303 stainless steel; both components are natural.
SHAFT and SLEEVE: low carbon steel, DACROTIZED†. HEX NUTS: steel, DACROTIZED†.
LOCK HOUSING and PLUG: die cast zinc, chrome plated or matte black polyester powder coated (see table). HEX NUT: die cast zinc with chemical protective coating. LOCK PAWL: steel, DACROTIZED†.

Shipped one unit per package.

†Registered tradename of Metal Coatings International, Inc.

millimeter
inch

millimeter/inch



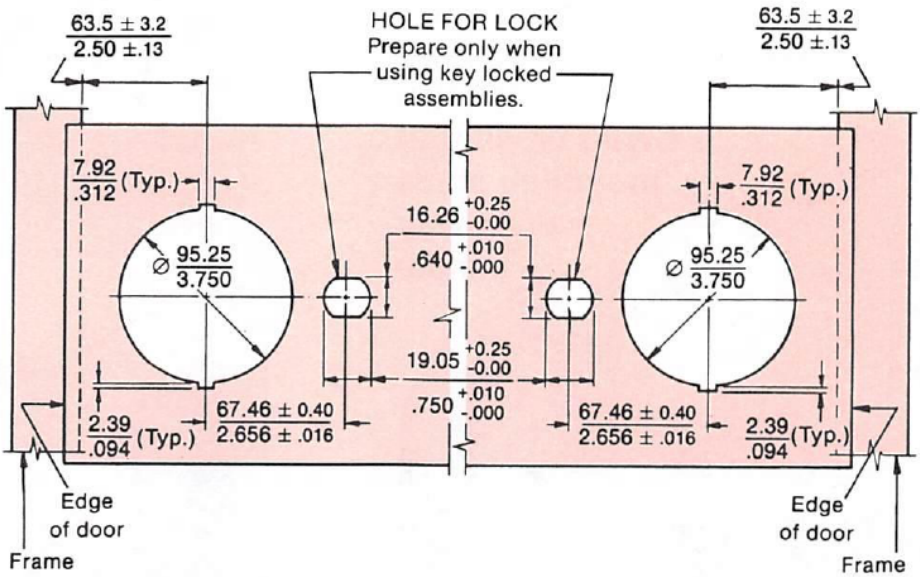
FINISH	TYPE OF ASS'Y	Handle position relative to edge of door when latched	PART NUMBERS	
			Left hand assemblies	Right hand assemblies
CUP HANDLE and LOCK ASSEMBLY: matte black coat.	without lock	Parallel	01-10-601-65 ■	01-10-602-65 ■
		Perpendicular	01-10-602-65 ■	01-10-601-65 ■
	with lock*	Parallel	01-10-621-65 ■	01-10-622-65 ■
		Perpendicular	01-10-622-65 ■	01-10-621-65 ■
CUP: DACROTIZED†. HANDLE and LOCK ASSEMBLY: chrome plated.	without lock	Parallel	01-10-601-50 ■	01-10-602-50 ■
		Perpendicular	01-10-602-50 ■	01-10-601-50 ■
	with lock*	Parallel	01-10-621-50 ■	01-10-622-50 ■
		Perpendicular	01-10-622-50 ■	01-10-621-50 ■
CUP and LOCK ASSEMBLY: chrome plated. HANDLE: chrome plated with walnut vinyl trim	without lock	Parallel	01-10-601-20 ■	01-10-602-20 ■
		Perpendicular	01-10-602-20 ■	01-10-601-20 ■
	with lock*	Parallel	01-10-621-20 ■	01-10-622-20 ■
		Perpendicular	01-10-622-20 ■	01-10-621-20 ■
CUP and LOCK ASSEMBLY: chrome plated. HANDLE: chrome plated with black vinyl trim.	without lock	Parallel	01-10-601-30 ■	01-10-602-30 ■
		Perpendicular	01-10-602-30 ■	01-10-601-30 ■
	with lock*	Parallel	01-10-621-30 ■	01-10-622-30 ■
		Perpendicular	01-10-622-30 ■	01-10-621-30 ■

*Locks are keyed alike. Random keying is available. Call for details.
■ From stock, subject to prior sale.

INSTALLATION (for 600 series)

For LEFT HAND Assemblies (Turn handle counterclockwise to latch)

For RIGHT HAND Assemblies (Turn handle clockwise to latch)



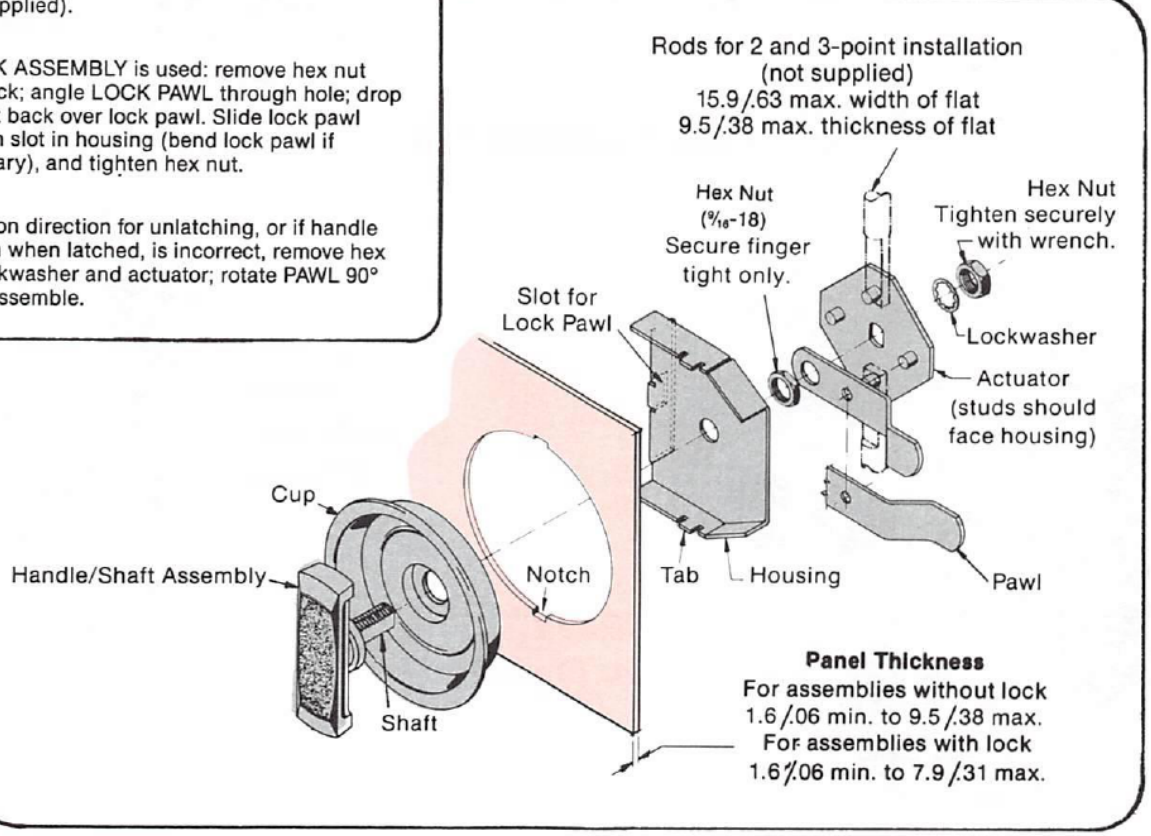
millimeter
inch

millimeter/inch

For 2-point installations, pawl must be replaced with an equal thickness of washers (not supplied).

If LOCK ASSEMBLY is used: remove hex nut from lock; angle LOCK PAWL through hole; drop hex nut back over lock pawl. Slide lock pawl through slot in housing (bend lock pawl if necessary), and tighten hex nut.

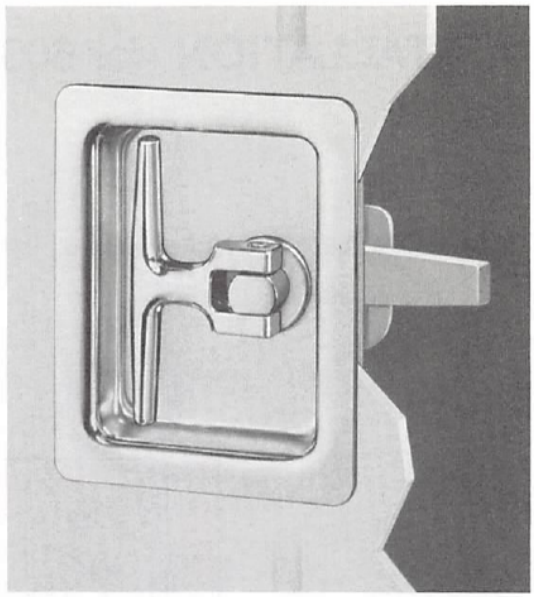
If rotation direction for unlatching, or if handle position when latched, is incorrect, remove hex nut, lockwasher and actuator; rotate PAWL 90° and reassemble.

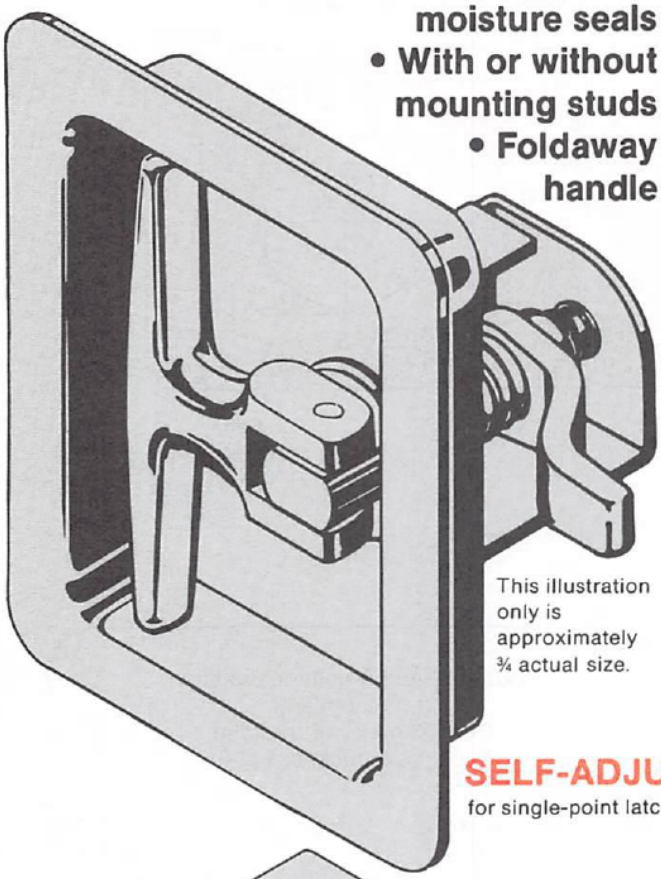


FLUSH (cup) LATCHES

adjustable grip

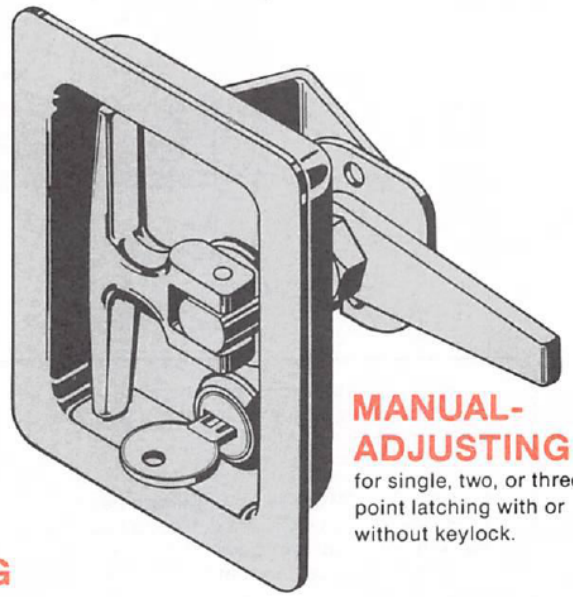
- **Self-adjusting (vary grip by turning the handle)**
- **Manual-adjusting (set grip during installation)**
- **With or without dust and moisture seals**
- **With or without mounting studs**
- **Foldaway handle**



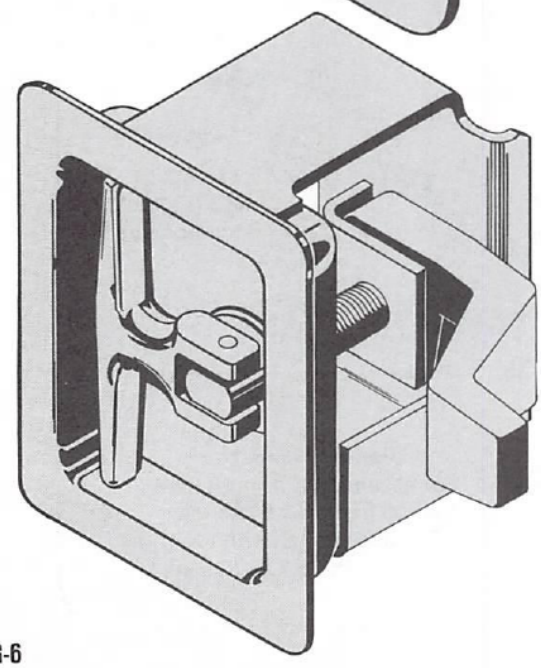


This illustration only is approximately ¾ actual size.

SELF-ADJUSTING
for single-point latching

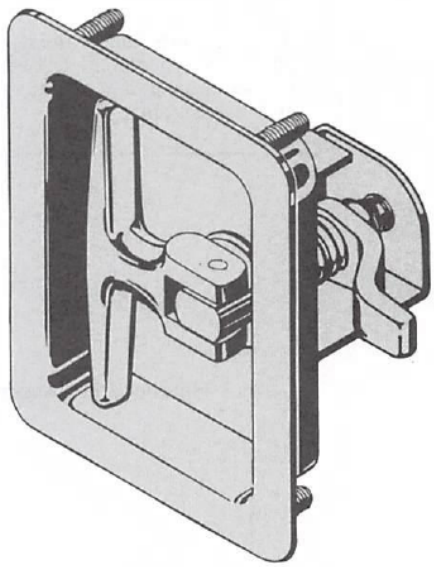


MANUAL-ADJUSTING
for single, two, or three-point latching with or without keylock.



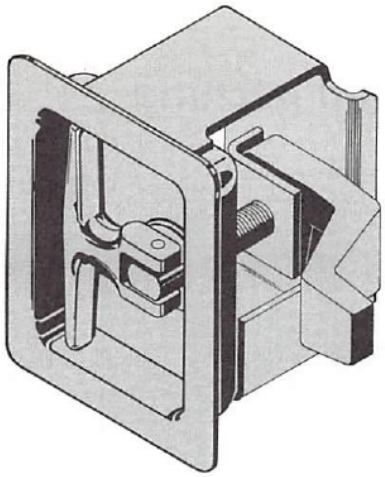
HEAVY DUTY

WITH MOUNTING STUDS



Heavy Duty Flush (cup) Latch

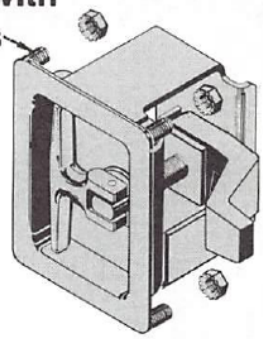
ONLY RIGHT HAND ASSEMBLIES AVAILABLE
Turn clockwise to latch.

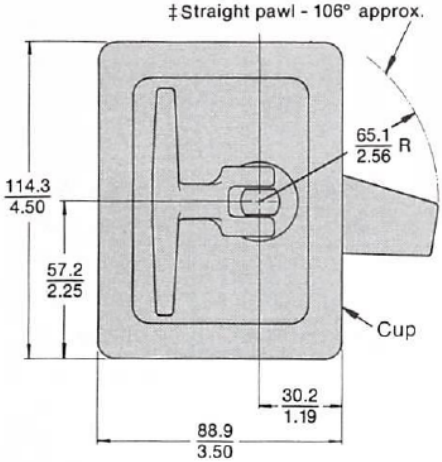


No. 24 Heavy Duty Flush Latches with mounting studs

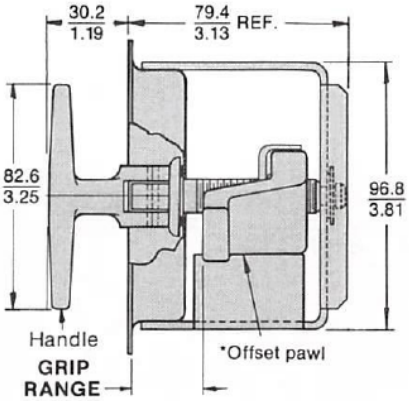
(nut/lockwasher assemblies supplied)

- 9.53/.38 max. panel thickness
- Tightening torque of mounting nuts not to exceed 8.5 N·m or 75 in.-lbs.





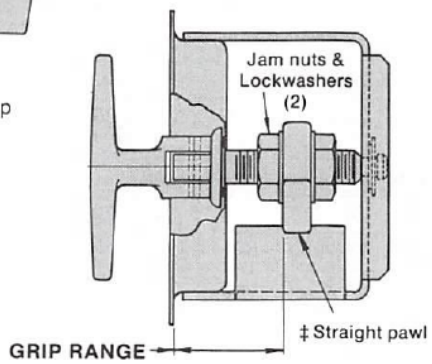
Envelope dimensions are the same for both self-adjusting and manual-adjusting styles.



Self-adjusting

Turn handle 90° to latch/unlatch.
Additional turns to pull up tighter, compress a gasket.

GRIP RANGE		PART NUMBERS	
		WITH MOUNTING STUDS	WELD
Min.	Max.		
19.1/.75	28.6/1.13	24-20-601-10* ■	24-10-601-10* ■
28.6/1.13	58.7/2.31	24-20-602-10‡ ■	24-10-602-10‡ ■

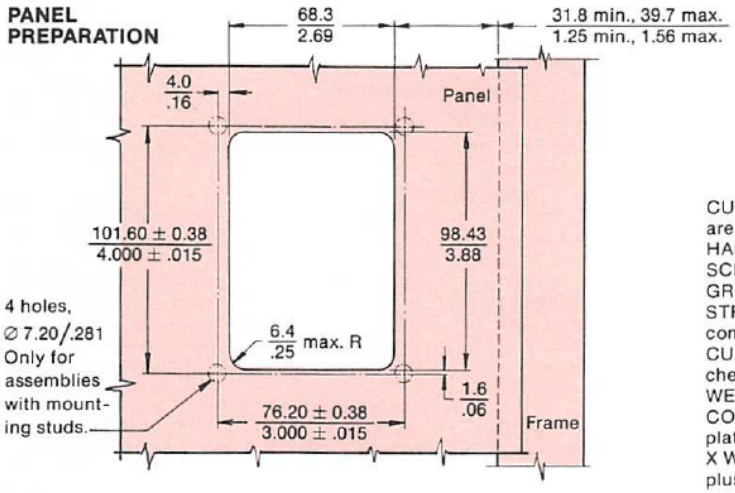


Manual-adjusting

Loosen jam nuts to adjust pawl to exact grip.
Tighten jam nuts to lock pawl in position.

GRIP RANGE		PART NUMBERS	
		WITH MOUNTING STUDS	WELD
Min.	Max.		
17.5/.69	20.6/.81	24-20-621-10* ■	24-10-621-10* ■
31.8/1.25	49.2/1.94	24-20-622-10‡ ■	24-10-622-10‡ ■
59.5/2.34	61.9/2.44	24-20-623-10* ■	24-10-623-10* ■

PANEL PREPARATION



■ From stock, subject to prior sale.

Strength Guideline

Force applied to pawl where it contacts frame
*Offset pawl: Maximum working load = 2670 N/600 lbs.
‡Straight pawl: Maximum working load = 1335 N/300 lbs.

MATERIAL and FINISH

CUP, BRACKET and CUP WASHER are 1010 steel,
HANDLE is die cast zinc,
SCREW is low carbon steel,
GROOVE PIN is 1112 steel and STRAIGHT PAWL is 1008 steel; these components are DACROTIZED†.
CURVED PAWL: die cast zinc plus chemical protective coating.
WEAR WASHER: nylon, natural.
CONICAL SPRING: spring wire, zinc plated plus bright chromate dip.
X WASHER: 1010 steel, zinc plated plus yellow chromate dip.

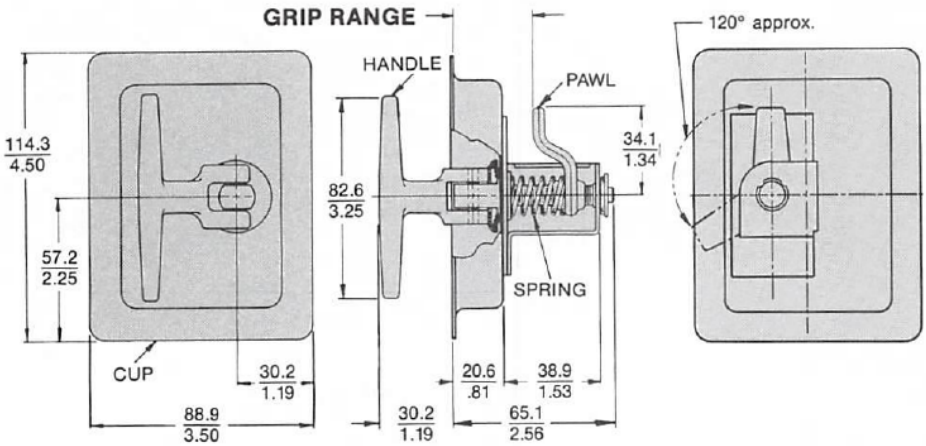
For models with mounting studs
MOUNTING STUDS: steel, DACROTIZED†.
NUT/LOCKWASHER ASSEMBLIES: Nut is 1020 steel and lockwasher is steel; both are zinc plated plus bright chromate dip.

For manual-adjusting models
JAM NUTS and LOCKWASHERS: steel, zinc plated plus yellow chromate dip.

For self-adjusting models
FRICTION NUT: 1010 steel, DACROTIZED†.

†Registered tradename of Metal Coatings International, Inc.

Flush (cup) Latches
Self-adjusting, for single-point latching

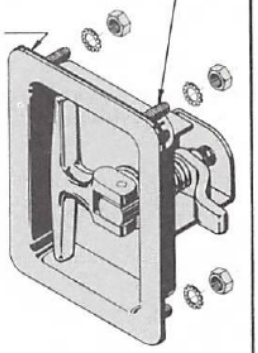


No. 24 Flush Latches with mounting studs

(mounting nuts and lockwashers supplied)

FLANGE GASKET OPTIONAL

- 7.9/.31 max. panel thickness
- Tightening torque of mounting nuts not to exceed 2.8 N·m or 25 in.-lbs.



RIGHT HAND MODELS ILLUSTRATED

GRIP RANGE		PART NUMBERS					
		WITH MOUNTING STUDS				WELD	
		CUP and HOUSING: polished stainless steel HANDLE: die cast zinc, chrome plated.		CUP and HOUSING: steel, DACROTIZED†. HANDLE: die cast zinc, DACROTIZED†.		CUP and HOUSING: steel, DACROTIZED†. HANDLE: die cast zinc, DACROTIZED†.	
MIN.	MAX.	RIGHT HAND	LEFT HAND	RIGHT HAND	LEFT HAND	RIGHT HAND	LEFT HAND
22.2/.88	34.9/1.38	24-20-101-35 ■	24-20-201-35 ■	24-20-101-10 ■	24-20-201-10 ■	24-10-101-10 ■	24-10-201-10 ■
33.3/1.31	42.9/1.69	24-20-102-35 ■	24-20-202-35 ■	24-20-102-10 ■	24-20-202-10 ■	24-10-102-10 ■	24-10-202-10 ■
39.7/1.56	50.8/2.00	24-20-103-35 ■	24-20-203-35 ■	24-20-103-10 ■	24-20-203-10 ■	24-10-103-10 ■	24-10-203-10 ■
47.6/1.88	57.2/2.25	24-20-104-35 ■	24-20-204-35 ■	24-20-104-10 ■	24-20-204-10 ■	24-10-104-10 ■	24-10-204-10 ■

DUST AND MOISTURE SEALED (Neoprene gasketed shaft and cup flange)						SEALED SHAFT ONLY	
22.2/.88	34.9/1.38	24-20-701-35 ■	24-20-721-35 ■	24-20-701-10 ■	24-20-721-10 ■	24-10-701-10 ■	24-10-721-10 ■
33.3/1.31	42.9/1.69	24-20-702-35 ■	24-20-722-35 ■	24-20-702-10 ■	24-20-722-10 ■	24-10-702-10 ■	24-10-722-10 ■
39.7/1.56	50.8/2.00	24-20-703-35 ■	24-20-723-35 ■	24-20-703-10 ■	24-20-723-10 ■	24-10-703-10 ■	24-10-723-10 ■
47.6/1.88	57.2/2.25	24-20-704-35 ■	24-20-724-35 ■	24-20-704-10 ■	24-20-724-10 ■	24-10-704-10 ■	24-10-724-10 ■

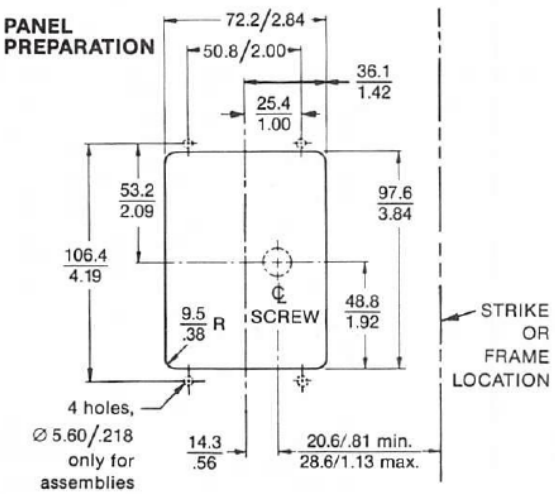
millimeter / inch millimeter/inch

LEFT HAND ASSEMBLIES turn counterclockwise to latch.

RIGHT HAND ASSEMBLIES turn clockwise to latch.

■ From stock, subject to prior sale.

PANEL PREPARATION



Strength Guideline

Force applied to pawl where it contacts frame
Maximum working load = 1110 N/250 lbs.

MATERIAL and FINISH

For all models
PAWL: malleable iron. WASHER: steel.
RETAINER: 1010 steel.
BUSHING: low carbon steel.
MOUNTING NUTS and LOCKWASHERS (for models with mounting studs): steel.
Components listed above are zinc plated plus yellow chromate dip.
DRAG SPRING: 302 stainless steel, passivated.
GROOVE PIN: 1112 steel, DACROTIZED†.
CONICAL SPRING: spring wire, zinc plated plus bright chromate dip.
SHAFT and FLANGE GASKETS (for dust and moisture sealed models): neoprene, black.

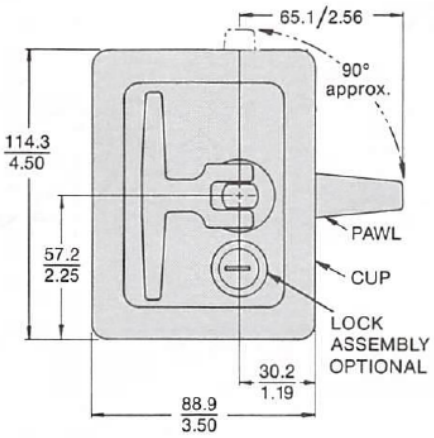
For assemblies with a stainless steel cup
CUP and HOUSING: 304 stainless steel, highly polished.
MOUNTING STUDS (optional): 302 or 305 stainless steel, natural.
SCREW is low carbon steel, HANDLE is die cast zinc and CUP WASHER is 1010 steel; these components are chrome plated.

For assemblies with a steel cup
CUP, HOUSING, and CUP WASHER: 1010 steel.
MOUNTING STUDS (optional): steel.
SCREW: low carbon steel.
HANDLE: die cast zinc.
Components listed above are DACROTIZED†.

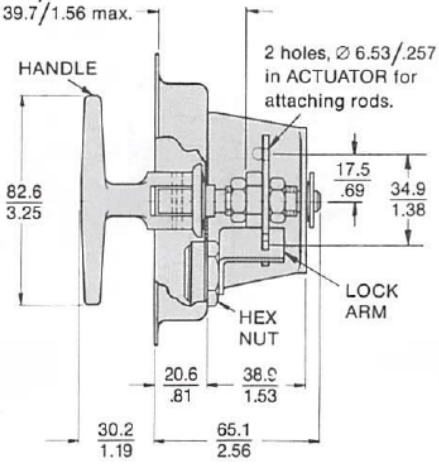
†Registered tradename of Metal Coatings International, Inc.

Flush (cup) Latches
Manual-adjusting, for single, two, or three-point latching

RIGHT HAND MODELS ILLUSTRATED



GRIP RANGE
27.8/1.09 min.
39.7/1.56 max.

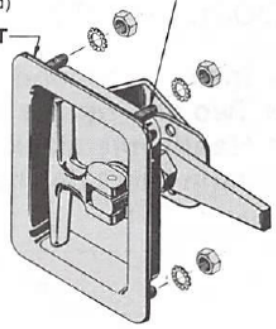


No. 24 Flush Latches with mounting studs

(mounting nuts and lockwashers supplied)

FLANGE GASKET OPTIONAL

- 7.9/.31 max. panel thickness
- Tightening torque of mounting nuts not to exceed 2.8 N·m or 25 in.-lbs.



STYLE	PART NUMBERS					
	WITH MOUNTING STUDS				WELD	
	CUP and BRACKET: polished stainless steel. HANDLE: die cast zinc, chrome plated.		CUP and BRACKET: steel, DACROTIZED†. HANDLE: die cast zinc, DACROTIZED†.		CUP and BRACKET: steel, DACROTIZED†. HANDLE: die cast zinc, DACROTIZED†.	
	RIGHT HAND	LEFT HAND	RIGHT HAND	LEFT HAND	RIGHT HAND	LEFT HAND
WITH KEYLOCK (keyed alike)*	24-20-812-35 ■	24-20-912-35 ■	24-20-812-10 ■	24-20-912-10 ■	24-10-812-10 ■	24-10-912-10 ■
WITHOUT KEYLOCK	24-20-302-35 ■	24-20-402-35 ■	24-20-302-10 ■	24-20-402-10 ■	24-10-302-10 ■	24-10-402-10 ■
WITHOUT KEYLOCK	DUST AND MOISTURE SEALED (Neoprene gasketed shaft and cup flange)				SEALED SHAFT ONLY	
	24-20-312-35 ■	24-20-412-35 ■	24-20-312-10 ■	24-20-412-10 ■	24-10-312-10 ■	24-10-412-10 ■

*Randomly keyed locks are available. Call for details.

■ From stock, subject to prior sale.

Strength Guideline
Force applied to pawl where it contacts frame
Maximum working load = 445 N/100 lbs.

RIGHT HAND ASSEMBLIES
turn clockwise to latch.

LEFT HAND ASSEMBLIES
turn counterclockwise to latch.

MATERIAL and FINISH

For all models
ACTUATOR and PAWL: 1010 steel, DACROTIZED†.
GROOVE PIN: 1112 steel, DACROTIZED†.
CONICAL SPRING: spring wire, zinc plated plus bright chromate dip.
LOCKWASHERS and MOUNTING NUTS (for models with mounting studs) are steel,
JAM NUTS are steel,
X WASHER is 1010 steel and
U BENT WASHER is 1070 or 1080 steel; these components are zinc plated plus yellow chromate dip.
SHAFT and FLANGE GASKETS (for dust and moisture sealed models): neoprene, black.

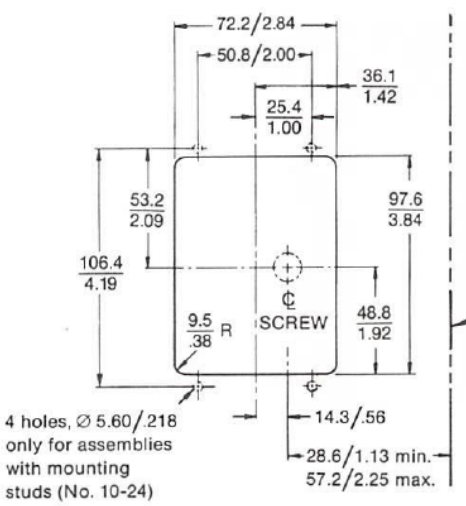
LOCK PLUG and LOCK CYLINDER: die cast zinc, chrome plated.
SPACER: low carbon steel, DACROTIZED†.
LOCK ARM: 1010 steel, DACROTIZED†.
SCREW: steel, zinc plated plus yellow chromate dip.
HEX NUT: die cast zinc with chemical protective coating. KEYS: brass, natural.

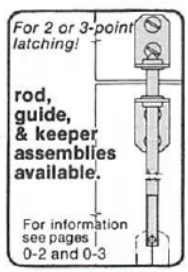
For assemblies with a stainless steel cup
CUP and BRACKET: 304 stainless steel, highly polished.
MOUNTING STUDS: (optional): 302 or 305 stainless steel, natural.
SCREW is low carbon steel,
HANDLE is die cast zinc and
CUP WASHER is 1010 steel; these components are chrome plated.

For assemblies with a steel cup
CUP, BRACKET and
CUP WASHER: 1010 steel.
MOUNTING STUDS (optional): steel.
SCREW: low carbon steel.
HANDLE: die cast zinc.
Components listed above are DACROTIZED†.

†Registered tradename of Metal Coatings International, Inc.

PANEL PREPARATION



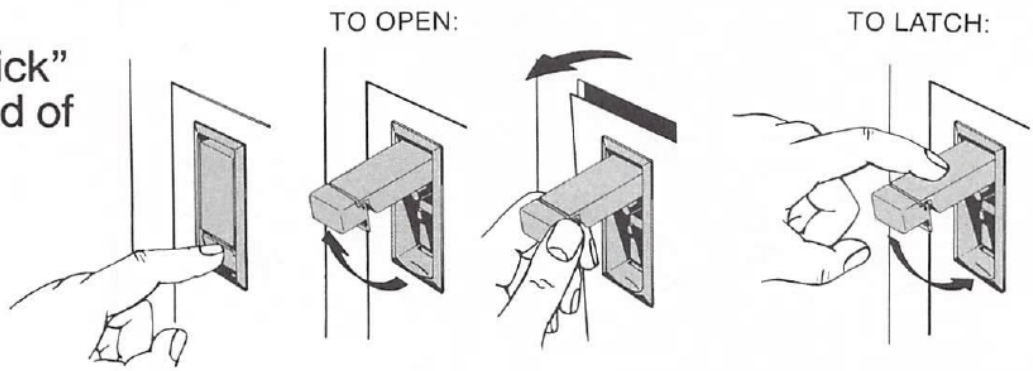


millimeter
inch
millimeter/inch

Adjustable Lever Latch

Snap it shut. The "click" you hear is the sound of positive latching!

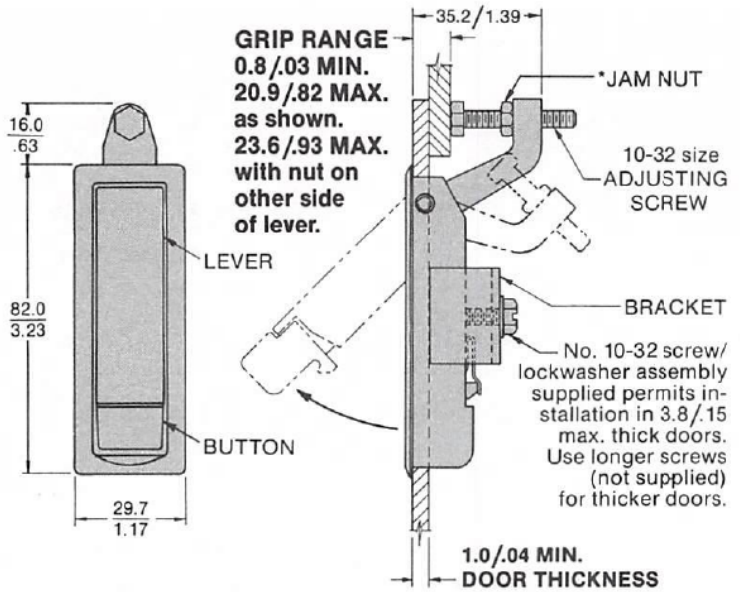
- **Install in seconds**
- **Two grip ranges**
- **Handsome black and satin silver finishes**

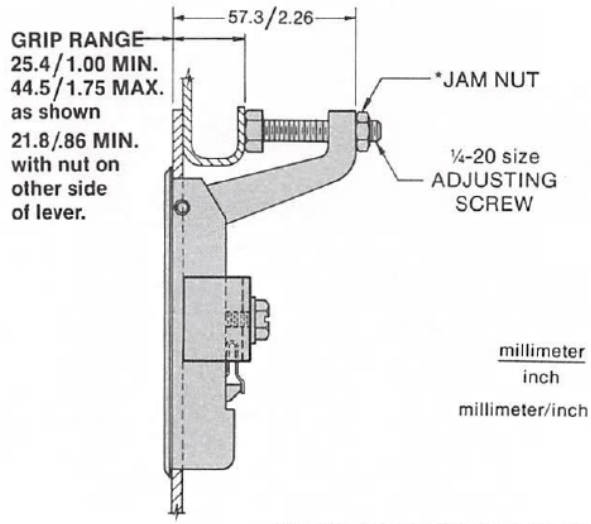


For THIN sections PART NUMBERS	
Matte black coat C2-10-301-**50** ■	Satin silver coat C2-10-301-**75** ■

■ From stock.
Subject to prior sale.

For THICK sections PART NUMBERS	
Matte black coat C2-10-302-**50** ■	Satin silver coat C2-10-302-**75** ■

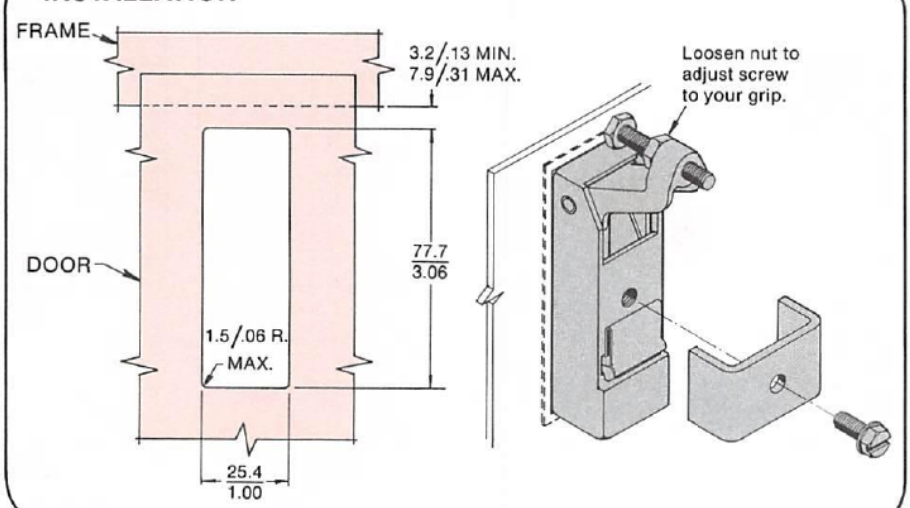




millimeter
inch
millimeter/inch

*NOTE: Assemblies are shipped with adjusting screws and jam nuts positioned as shown.

INSTALLATION



Strength Guideline
Maximum working load — 1335 N/300 lbs.
Average ultimate load — 2170 N/488 lbs.

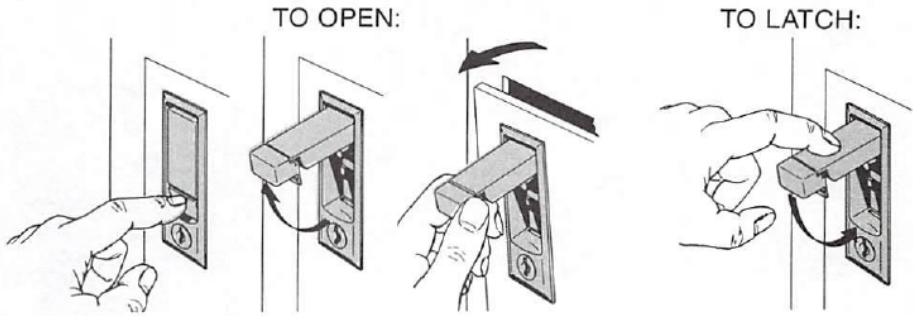
MATERIAL and FINISH
HOUSING, LEVER and BUTTON: die cast zinc, matte black or satin silver polyester powder coated.
SPRINGS: 302 stainless steel, passivated.
PIN: 303 stainless steel, passivated.
ROLL PIN: 420 stainless steel, passivated.
LEAF SPRING: 301 stainless steel, black organic coating.
SCREWS: steel, DACROTIZED†.
JAM NUT: steel, DACROTIZED†.
BRACKET: 1010 steel, DACROTIZED†.

†Registered tradename of Metal Coatings International, Inc.

Adjustable Lever Latch
with Keylock

Snap it shut. The "click" you hear is the sound of positive latching!

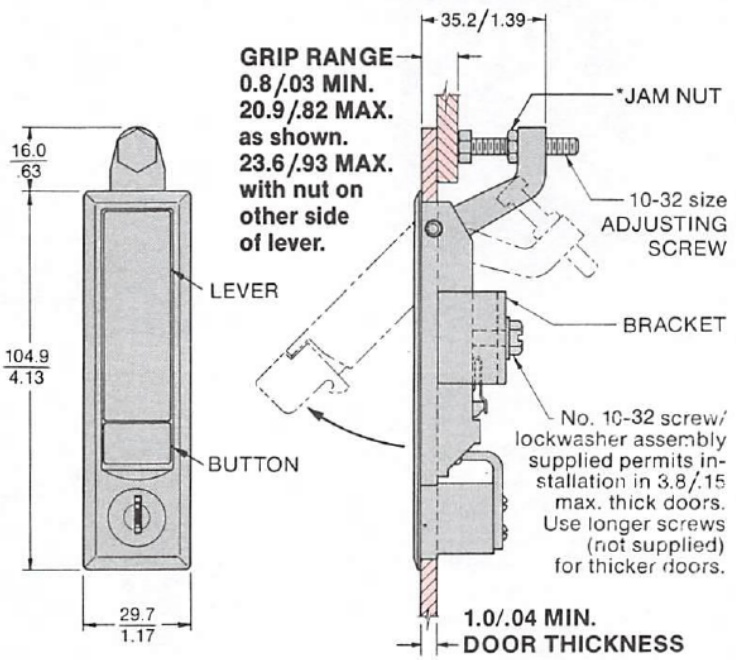
- **Key-locked security**
- **Installs in seconds**
- **Two grip ranges**
- **Handsome black and satin silver finishes**

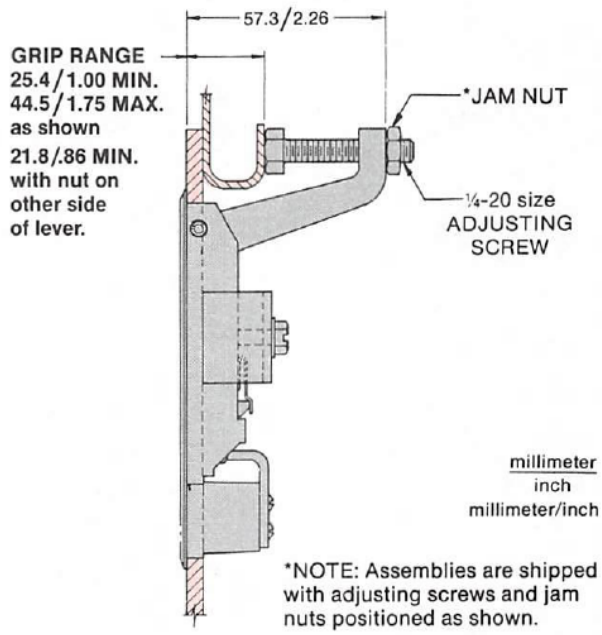


For THIN sections PART NUMBERS	
Matte black coat	Satin silver coat
C2-20-301-**50** ■	C2-20-301-**75** ■

■ From stock. Subject to prior sale.

For THICK sections PART NUMBERS	
Matte black coat	Satin silver coat
C2-20-302-**50** ■	C2-20-302-**75** ■

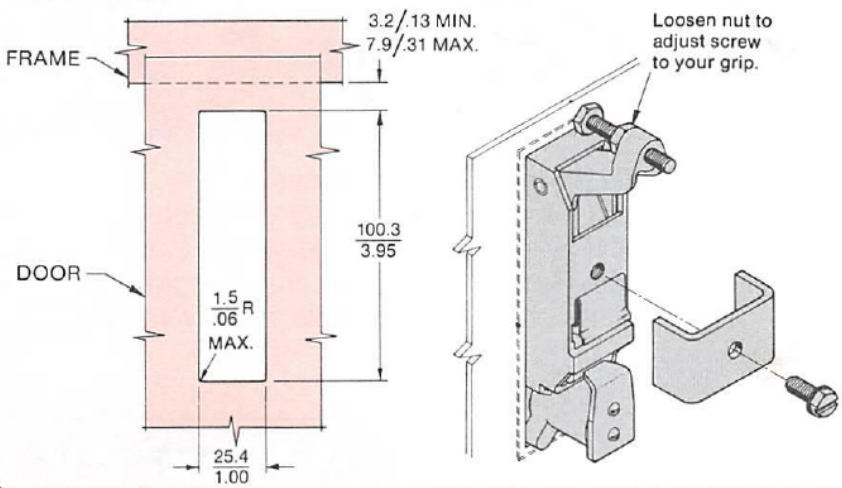




millimeter
inch
millimeter/inch

*NOTE: Assemblies are shipped with adjusting screws and jam nuts positioned as shown.

INSTALLATION



Strength Guideline
Maximum working load — 1335 N/300 lbs.
Average ultimate load — 2170 N/488 lbs.

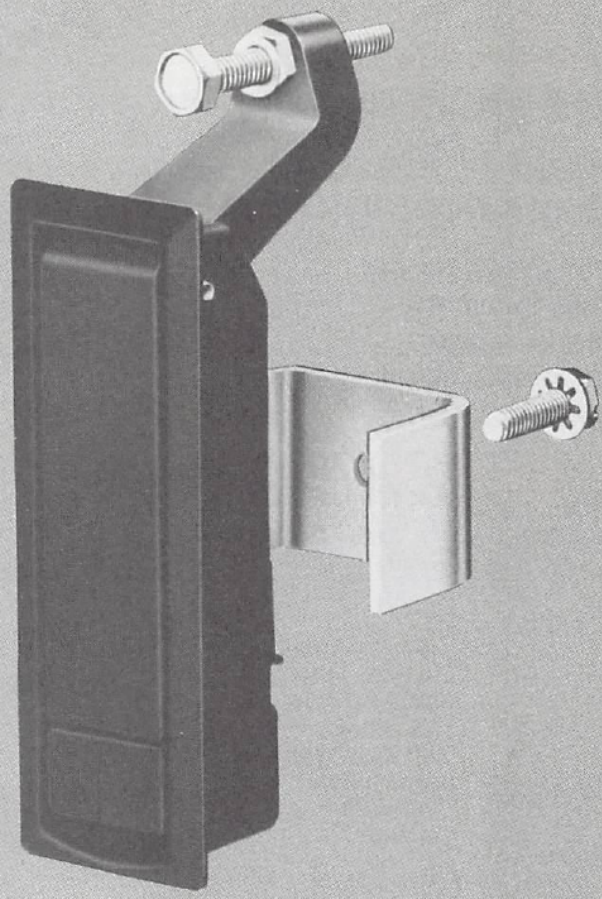
MATERIAL and FINISH
HOUSING, LEVER and BUTTON: die cast zinc, matte black or satin siiver polyester powder coated.
SPRINGS: 302 stainless steel, passivated.
PIN: 303 stainless steel, passivated.
ROLL PIN: 420 stainless steel, passivated.
LEAF SPRING: 301 stainless steel, black organic coating.
HEXHEAD SCREWS: steel, DACROTIZED†.
JAM NUT: steel, DACROTIZED†.
BRACKET: 1010 steel, DACROTIZED†.

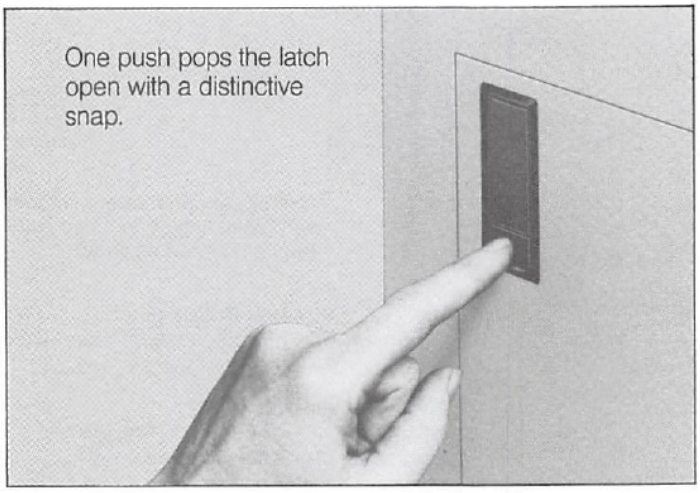
LOCK PLUG: die cast zinc, matte black or satin silver polyester powder coated.
LOCK PAWL: 1010 steel, DACROTIZED†.
ROUNDHEAD SCREWS: steel, zinc plated.

†Registered tradename of Metal Coatings International, Inc.

You don't bump into a good looking lever latch like this every day.

But that's exactly what it's designed for.







Beyond the sleek styling and elegant yet durable black powder coat finish, you'll find Southco's adjustable lever latch attractive in other ways.

The wide ¾" adjustability means you don't need lots of different lever latches to accommodate lots of different door frame thicknesses.

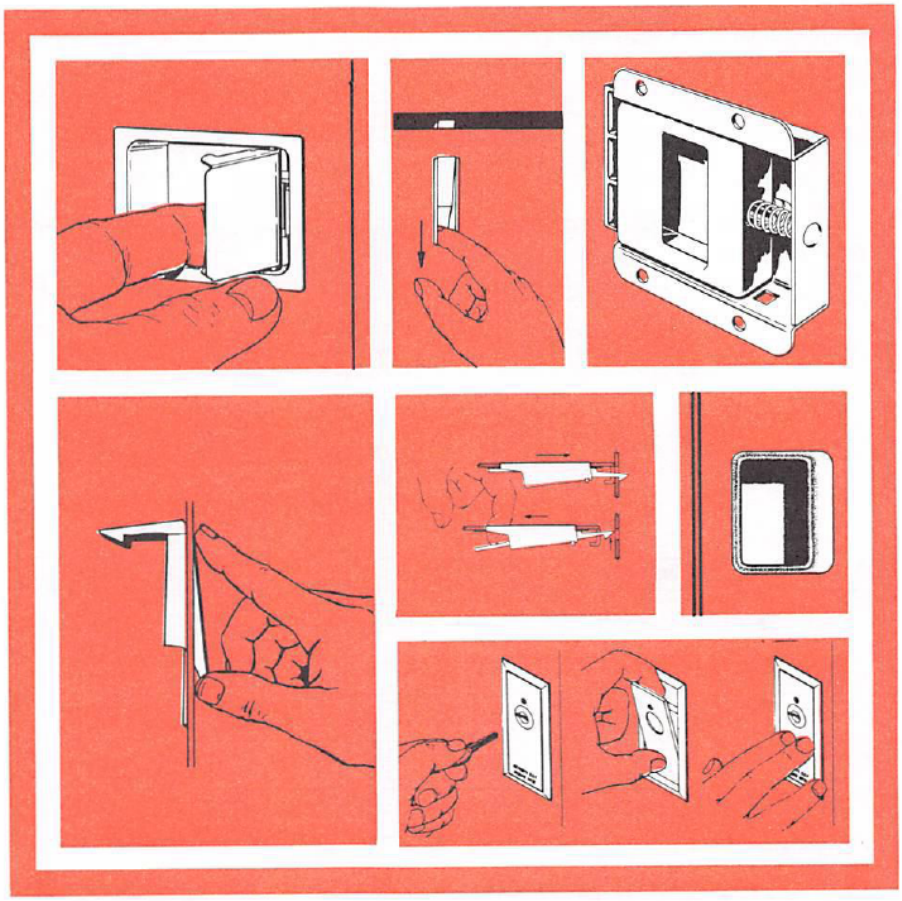
It installs easily in seconds. Helps keep your inventory to a minimum. And, when you've got a lot of different applications in just one area, gives a "universal" look to your design. Available from inventory. Right now!

SOUTHCO®
fasteners

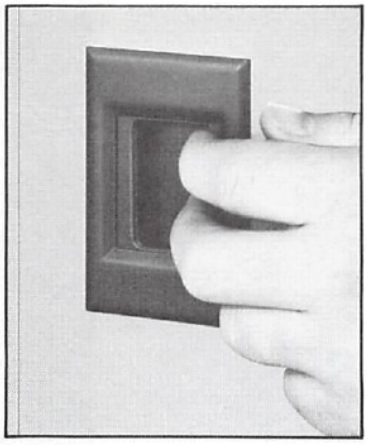
Section GG
Flush Slam Latches

contents guide | **page**

No. B7 Sliding Flush Latch	GG-2 to GG-3
No. 64 Paddle Latch	GG-4 to GG-9
No. 79 Flush Latch	GG-10 to GG-11
No. 79 Quick Release	GG-12 to GG-13
No. E1 Keylocking Slam Latch	GG-14



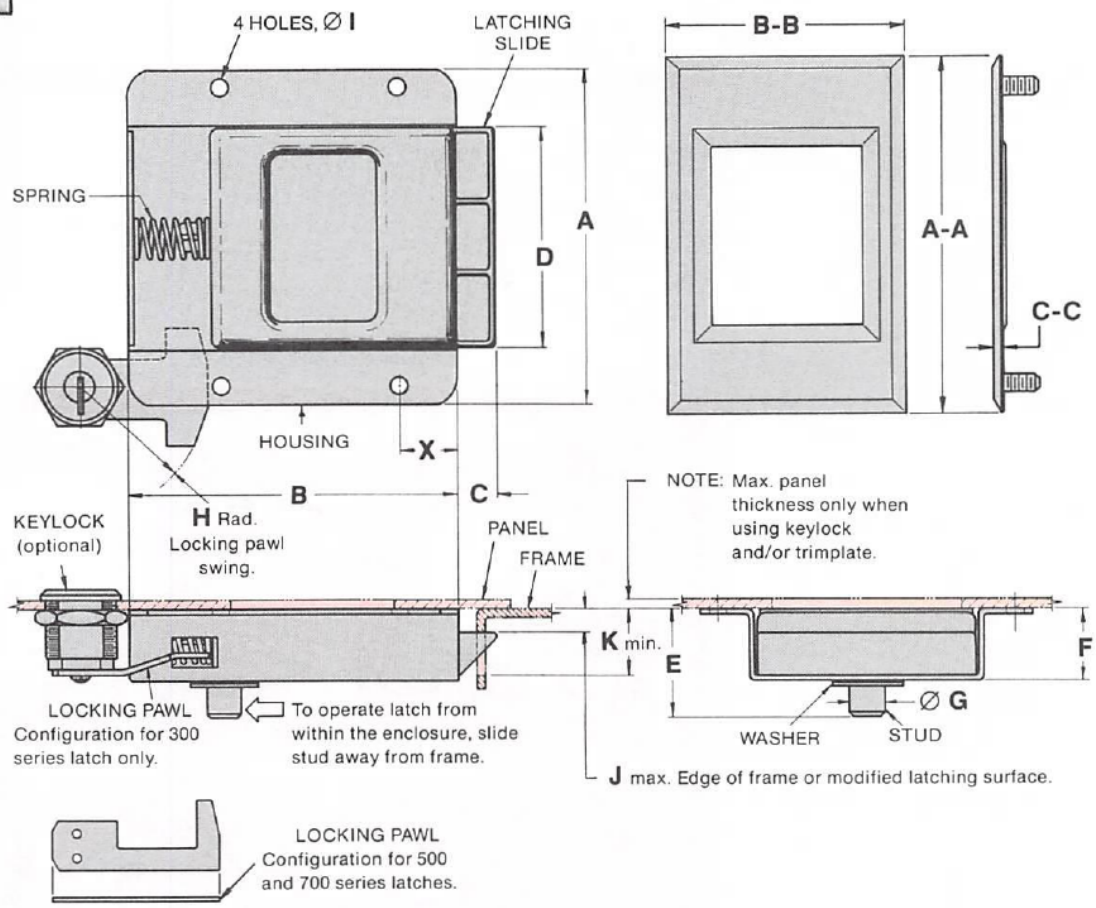
Sliding Flush Latch



- Slam to close.
- Flush mounted.
- Durable.
- Mounts with or without trimplate.
- With or without keylock.
- Operable from both sides of an enclosure.
- Available in three sizes.

Latch Assembly

Mounting Trimplate (optional)



MATERIAL and FINISH

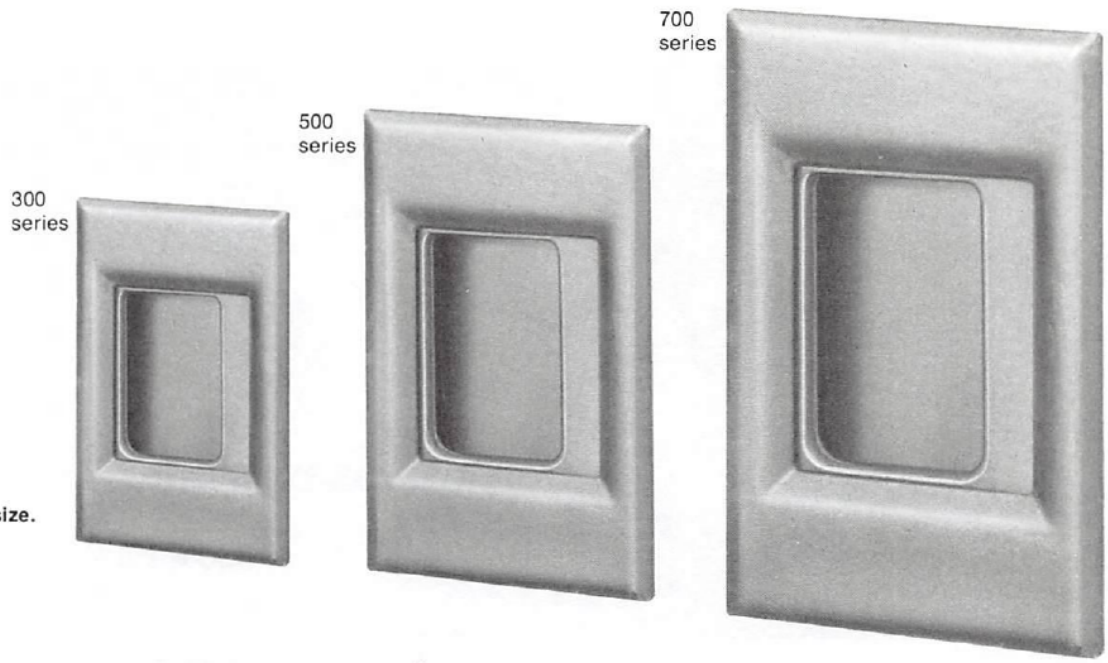
HOUSING: 1010 steel, matte black polyester powder coated.
SLIDE: nylon, black.
WASHER: acetal, black.
STUD: low carbon steel, DACROTIZED†.
SPRING: 302 stainless steel, passivated.
TRIMPLATE: 1010 steel, matte black polyester powder coated.
TRIMPLATE STUDS: 10B12 steel, matte black polyester powder coated.
NUT/LOCKWASHER ASSEMBLIES: steel, zinc plated.
LOCK: die cast zinc, matte black polyester powder coated.
LOCKING PAWL: 1010 steel, DACROTIZED†.
MOUNTING SCREWS (locking pawl): steel, zinc plated.
MOUNTING HEX NUT (for lock): die cast zinc, chemical protective coating.
KEY: Brass, natural

Locks are keyed alike.

†Registered tradename of Metal Coatings International, Inc.

DIMENSIONS												WITH KEYLOCK		WITHOUT KEYLOCK		Series
A	B	C	D	E	F	Ø G	H	Ø I	A-A	B-B	C-C	Max. Panel Thickness	Part Numbers	Max. Panel Thickness	Part Numbers	
With Mounting Trimplate																
88.9 / 3.50	88.1 / 3.47	10.3 / .41	58.7 / 2.31	29.4 / 1.16	19.1 / .75	9.5 / .38	35.7 / 1.41	5.16 / .203	94.8 / 3.73	63.5 / 2.50	2.4 / .10	3.97 / .156	B7-50-301-10 ■	3.97 / .156	B7-40-301-10 ■	300
117.5 / 4.63	116.7 / 4.59	13.9 / .55	79.4 / 3.13	36.1 / 1.50	24.6 / .97	12.7 / .50	45.2 / 1.78	6.53 / 2.57	126.2 / 4.97	84.9 / 3.34	3.2 / .13	4.76 / .188	B7-50-501-10 ■	4.76 / .188	B7-40-501-10 ■	500
152.4 / 6.00	158.3 / 6.23	18.3 / .72	104.8 / 4.13	50.8 / 2.00	33.7 / 1.32	15.9 / .63	58.7 / 2.31	8.20 / .323	169.1 / 6.65	121.8 / 4.80	3.6 / .14	4.76 / .188	B7-50-701-10 ■	4.76 / .188	B7-40-701-10 ■	700
Without Mounting Trimplate																
88.9 / 3.50	88.1 / 3.47	10.3 / .41	58.7 / 2.31	29.4 / 1.16	19.1 / .75	9.5 / .38	35.7 / 1.41	5.16 / .203	—	—	—	5.56 / .219	B7-20-301-10 ■	—	B7-10-301-10 ■	300
117.5 / 4.63	116.7 / 4.59	13.9 / .55	79.4 / 3.13	36.1 / 1.50	24.6 / .97	12.7 / .50	45.2 / 1.78	6.53 / .257	—	—	—	5.56 / .219	B7-20-501-10 ■	—	B7-10-501-10 ■	500
152.4 / 6.00	158.3 / 6.23	18.3 / .72	104.8 / 4.13	50.8 / 2.00	33.7 / 1.32	15.9 / .63	58.7 / 2.31	8.20 / .323	—	—	—	7.94 / .313	B7-20-701-10 ■	—	B7-10-701-10 ■	700

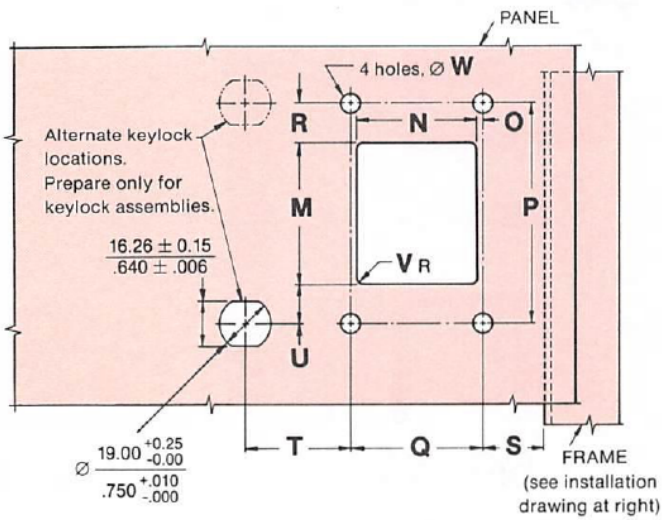
■ From stock, subject to prior sale.



Shown ½ actual size.

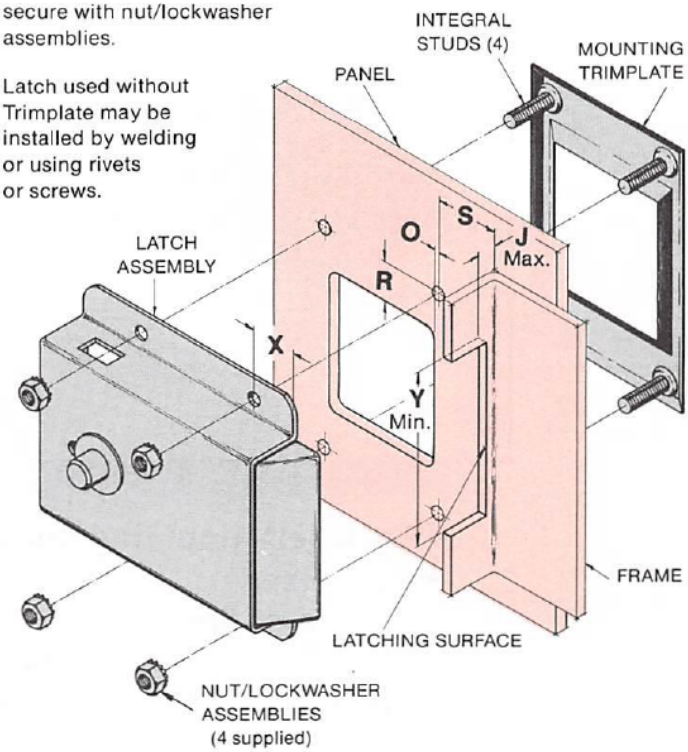
INSTALLATION

1. Prepare door panel, and prepare frame if necessary.



2. Pass integral studs of Trimplate through holes. Place latch over studs and secure with nut/lockwasher assemblies.

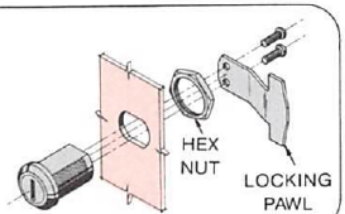
Latch used without Trimplate may be installed by welding or using rivets or screws.



For keylock:

Prepare hole in door.

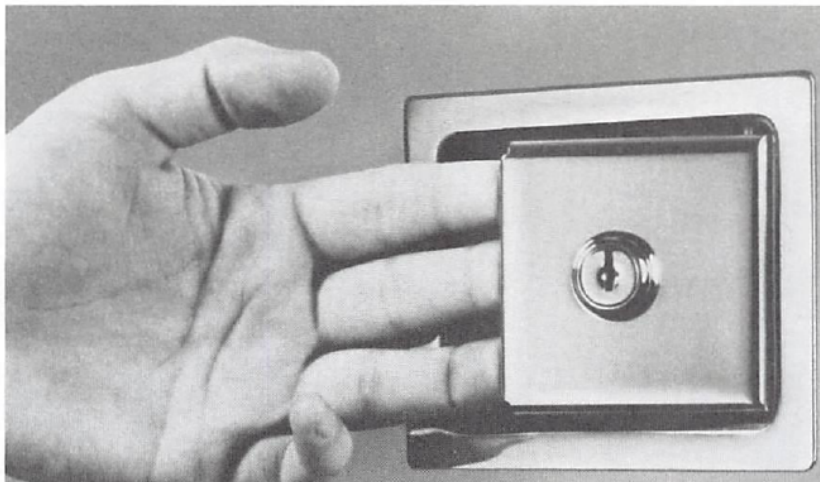
When installed, be sure pawl cleanly enters opening in side of housing.



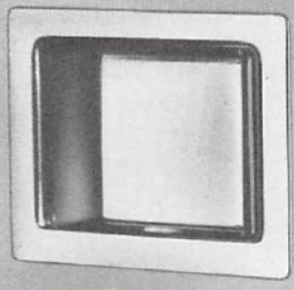
Series	INSTALLATION DIMENSIONS															
	J	K	M	N	O	P	Q	R	S Min.	S Max.	T	U	V	W	X	Y
300	6.35 .250	16.67 .656	50.80 2.000	43.66 1.719	1.98 .078	79.38 3.125	47.63 1.875	14.29 .563	20.24 .797	23.41 .922	38.10 1.500	14.3 .563	6.35 .250	5.60 .219	15.5 .61	61.91 2.438
500	7.94 .313	21.43 .844	68.25 2.688	57.94 2.281	2.78 .109	104.78 4.125	63.50 2.500	18.26 .719	24.61 .969	30.94 1.219	50.80 2.000	8.73 .344	7.94 .109	7.20 .281	20.2 .80	82.55 3.250
700	11.11 .434	29.40 1.156	93.65 3.688	81.76 3.219	3.57 .141	136.53 5.375	88.90 3.500	21.43 .844	30.55 1.406	40.08 1.578	63.50 2.500	8.73 .344	11.11 .125	8.70 .344	25.8 1.02	107.95 4.250

For mounting assemblies without trimplates			
English		Metric	
Screw	Rivet	Screw	Rivet
No. 10	Ø 3/16	5.0 mm	Ø 5.0 mm
¼	Ø ¼	6.0 mm	Ø 6.0 mm
5/16	Ø 5/16	8.0 mm	Ø 8.0 mm

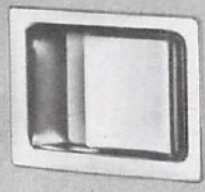
Paddle Latches



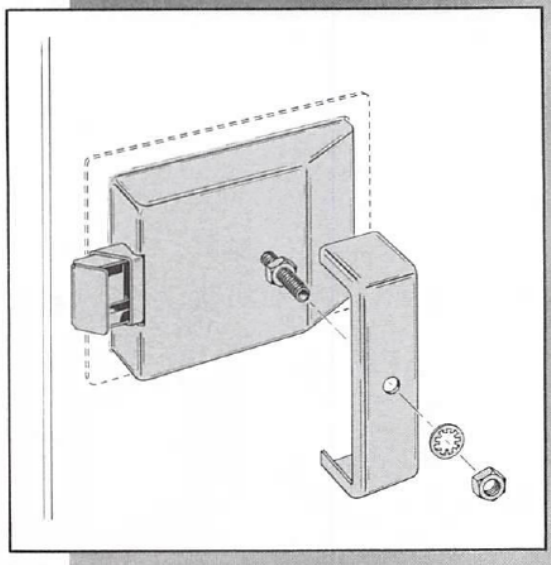
300 series



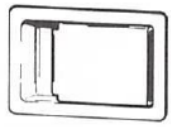
200 series



100 series



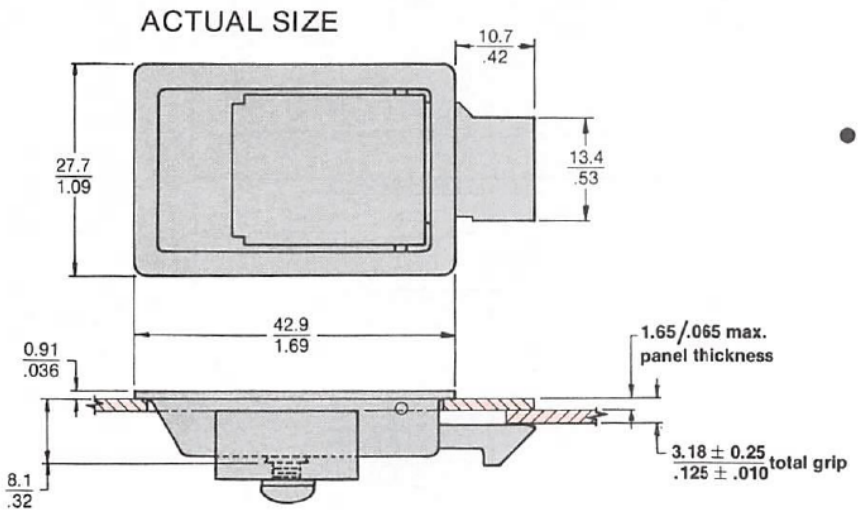
- Fast, self-mounting installation
- Four sizes
- Choice of finishes
- Smooth, slam-action latching
- Keylock available on 300 series



051 series

SOUTHCO® fasteners

Paddle latches, miniature size



- It's handsome, flush, corrosion-resistant.
- Spring-loaded paddle won't rattle.
- Smooth, slam-action latching.
- Quick, one-screw mounting.

Strength Guideline
Working load = 90 N / 20 lbs.
Ultimate load = 124 N / 28 lbs.

Part Number
64-10-051-50 ■

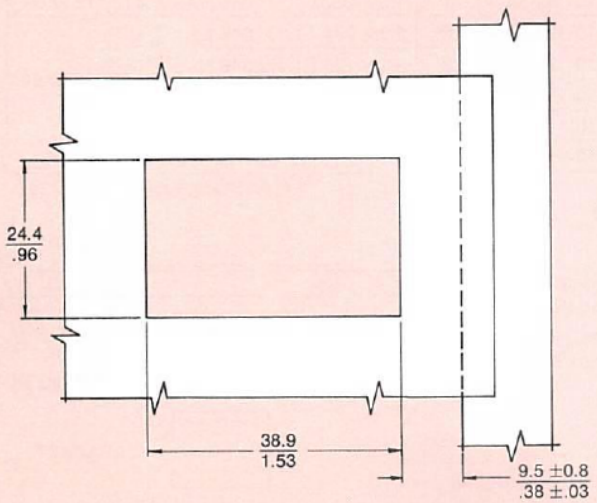
■ From stock, subject to prior sale.

millimeter / inch millimeter/inch

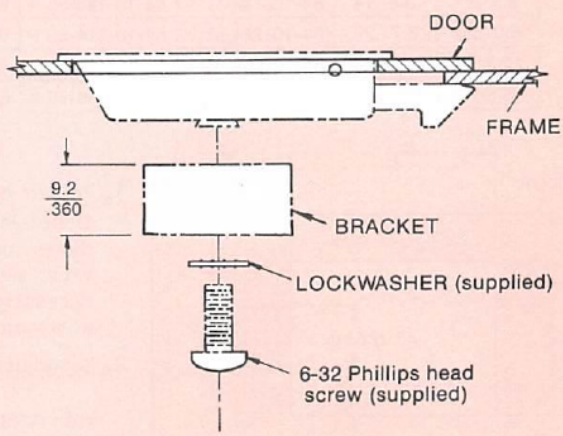
MATERIAL and FINISH
CUP and PADDLE: 302 stainless steel, passivated with brushed finish.
SLIDE and LEVER: polyester thermoplastic, gray.
BRACKET, SPRING and SCREW: 302 stainless steel, passivated.
TAPPED RIVET: 6061 aluminum, natural.
SEMI-TUBULAR RIVET: 430 stainless steel, passivated.
LOCKWASHER: 400 series stainless steel, natural.

Installation

1. Prepare opening in door.



2. Seat latch assembly in opening; apply mounting bracket and screw.



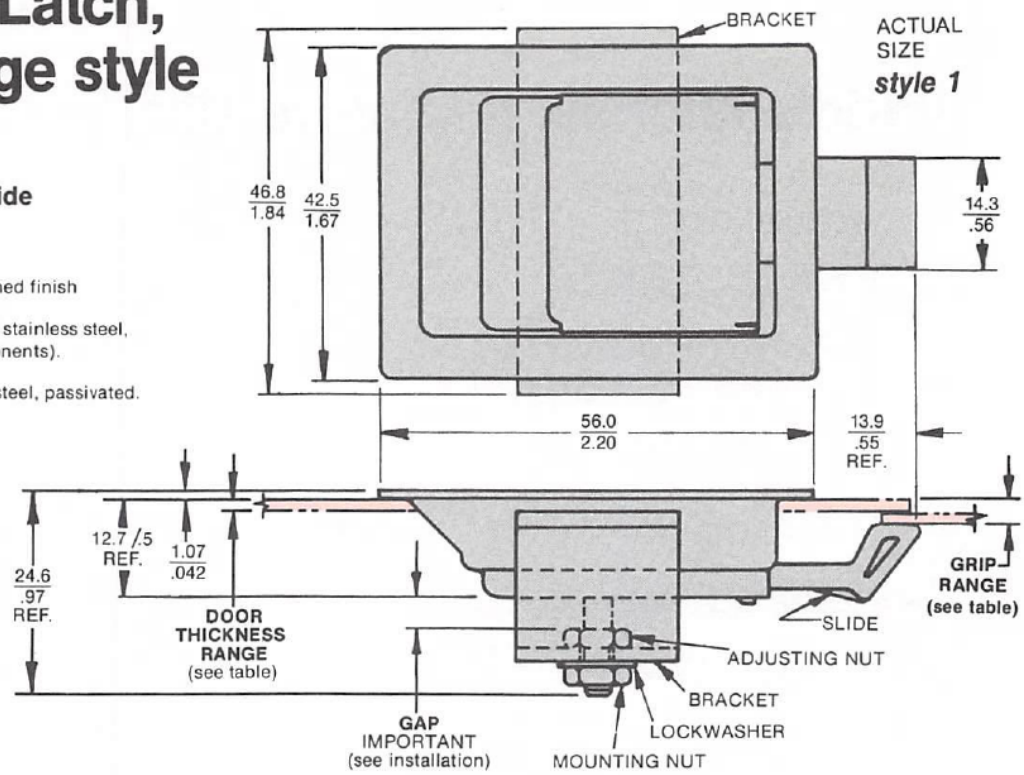
No. 64 Paddle Latch, broad grip range style 100 series

- **Six grip ranges**
- **Plastic slide**

MATERIAL and FINISH
CUP: 305 stainless steel, passivated plus brushed finish or plus black organic coating.
COVER, PADDLE and TORSION SPRING: 302 stainless steel, passivated (see table for finish of these components).
SLIDE: glass reinforced nylon, natural.
SPRING, BRACKET and STUD: 302 stainless steel, passivated.
PIN: 430 stainless steel, passivated.
LOCKWASHER: 400 stainless steel, natural.
NUT: 300 stainless steel, passivated.

Latch is shipped one unit per bag.

Style	Strength Guideline	
	Working load	Ultimate load
1	133 N/30 lb.	330 N/74 lb.
2	132 N/30 lb.	227 N/51 lb.
3	111 N/25 lb.	156 N/35 lb.
4	89 N/20 lb.	138 N/31 lb.
5	67 N/15 lb.	120 N/27 lb.
6	53 N/12 lb.	89 N/20 lb.



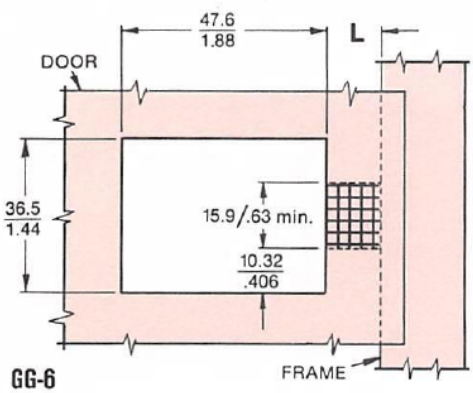


millimeter / inch

millimeter/inch

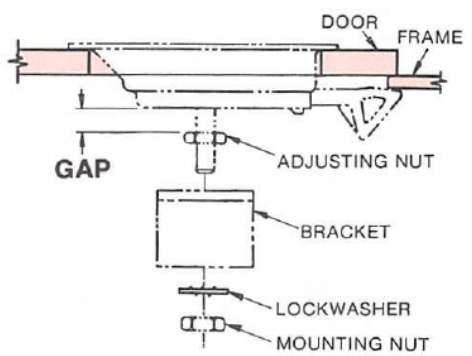
Grip Range		PART NUMBERS Door Thickness Range				Style	T	C	L	
Min.	Max.	3.66 / .144 max.	3.91 / .154 to 7.32 / .288	11.10 / .437 to 14.63 / .576	18.64 / .734 to 22.05 / .868				Min.	Max.
Brushed finish										
1.2/.05	2.0/.08	64-10-**111**-50 ■	64-10-**131**-50 ■	64-10-**151**-50 ■	64-10-**151**-50 ■	1	1.59/.063	1.17/.046	10.3/.41	12.7/.50
2.0/.08	2.8/.11	64-10-**112**-50 ■	64-10-**132**-50 ■	64-10-**152**-50 ■	64-10-**152**-50 ■	2	2.38/.094	1.17/.046	11.9/.47	14.3/.56
2.8/.11	3.6/.14	64-10-**113**-50 ■	64-10-**133**-50 ■	64-10-**153**-50 ■	64-10-**153**-50 ■	3	3.18/.125	1.17/.046		
6.0/.23	6.7/.27	64-10-**124**-50 ■	64-10-**114**-50 ■	64-10-**154**-50 ■	64-10-**154**-50 ■	4	6.35/.250	4.83/.190		
12.3/.48	13.1/.52	64-10-**125**-50 ■	64-10-**135**-50 ■	64-10-**115**-50 ■	64-10-**115**-50 ■	5	7.14/.281	12.14/.478		
18.6/.73	19.4/.77	64-10-**126**-50 ■	64-10-**136**-50 ■	64-10-**116**-50 ■	64-10-**116**-50 ■	6	7.14/.281	12.14/.478		
Black organic finish										
1.2/.05	2.0/.08	64-10-**111**-55 ■	64-10-**131**-55 ■	64-10-**151**-55 ■	64-10-**151**-55 ■	1	1.59/.063	1.17/.046	10.3/.41	12.7/.50
2.0/.08	2.8/.11	64-10-**112**-55 ■	64-10-**132**-55 ■	64-10-**152**-55 ■	64-10-**152**-55 ■	2	2.38/.094	1.17/.046	11.9/.47	14.3/.56
2.8/.11	3.6/.14	64-10-**113**-55 ■	64-10-**133**-55 ■	64-10-**153**-55 ■	64-10-**153**-55 ■	3	3.18/.125	1.17/.046		
6.0/.23	6.7/.27	64-10-**124**-55 ■	64-10-**114**-55 ■	64-10-**154**-55 ■	64-10-**154**-55 ■	4	6.35/.250	4.83/.190		
12.3/.48	13.1/.52	64-10-**125**-55 ■	64-10-**135**-55 ■	64-10-**115**-55 ■	64-10-**115**-55 ■	5	7.14/.281	12.14/.478		
18.6/.73	19.4/.77	64-10-**126**-55 ■	64-10-**136**-55 ■	64-10-**116**-55 ■	64-10-**116**-55 ■	6	7.14/.281	12.14/.478		

■ From stock, subject to prior sale.



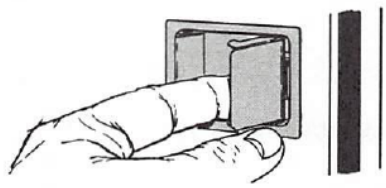
Installation

1. Prepare door.
   Door thickness must not exceed T dimension (see table) in area through which slide will operate. It may be necessary to reduce thickness of door in area indicated by grid.
2. Set adjusting nut so that
   GAP=
   your door thickness **-C** (plus 1/32, minus 0)
3. Assemble latch in door and tighten mounting nut.

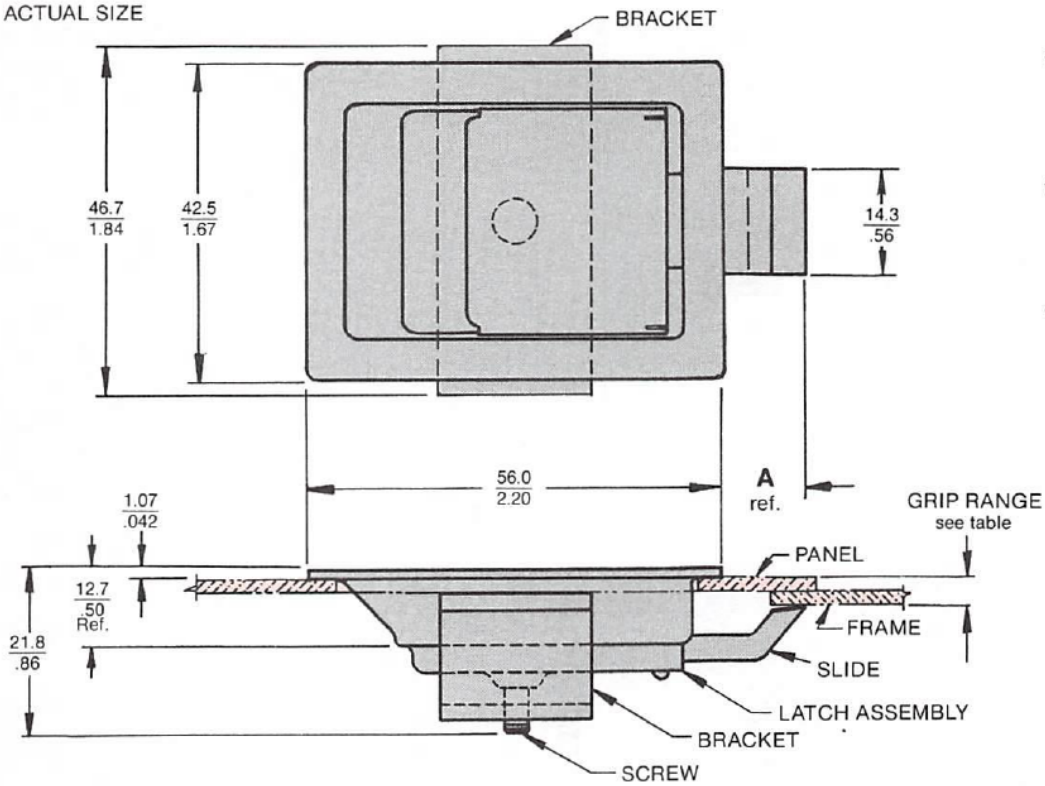


No. 64 Paddle Latch, 100 series

- Metal slide
- Three grip ranges



ACTUAL SIZE



MATERIAL and FINISH

for stainless steel cup models
CUP: 305 stainless steel, brushed finish.
PADDLE: 302 stainless steel, passivated plus brushed finish.
COVER: 302 stainless steel, natural.

for carbon steel cup models
CUP is 1006-1018 steel,
PADDLE is case hardened 1010 steel and
COVER is 1010 steel; these components have a phosphate dip.

for all models
SLIDE: 1010 steel, chrome plated.
BRACKET: 1010 steel, DACROTIZED†.
SPRING: 302 stainless steel, passivated.
PIN is 1018 steel and SCREW is steel; these components are zinc plated plus bright chromate dip.

Strength Guideline
Working load = 222 N/50 lbs.
Ultimate load = 578 N/130 lbs.

millimeter
inch

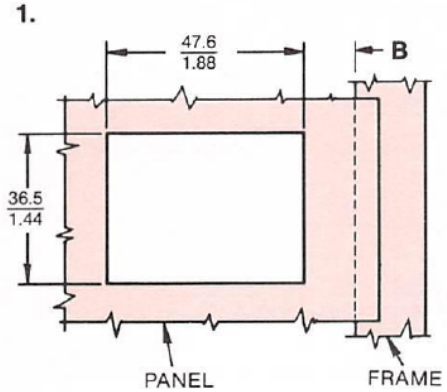
millimeter/inch

GRIP RANGE		PART NUMBERS		A ref.	B	
		Stainless steel, brushed finish	Carbon steel, phosphate dip			
Min.	Max.				Min.	Max.
1.2/.05	2.0/.08	64-10-101-**50** ■	64-10-101-**70** ■	11.5/.45	10.3/.41	12.7/.50
2.0/.08	2.8/.11	64-10-102-**50** ■	64-10-102-**70** ■	11.9/.47	11.1/.44	13.5/.53
2.8/.11	3.6/.14	64-10-103-**50** ■	64-10-103-**70** ■	12.2/.48	11.9/.47	14.3/.56

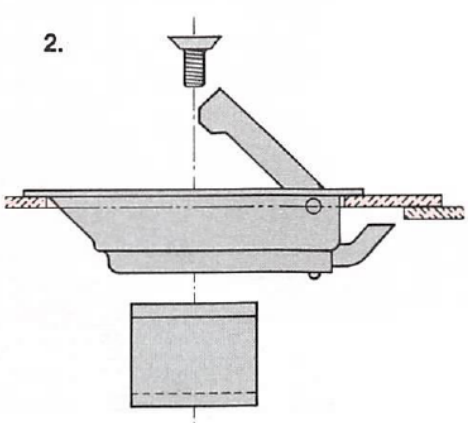
■ From stock, subject to prior sale.

Installation

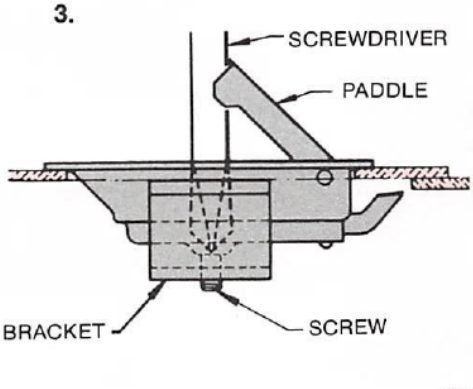
1.



2.

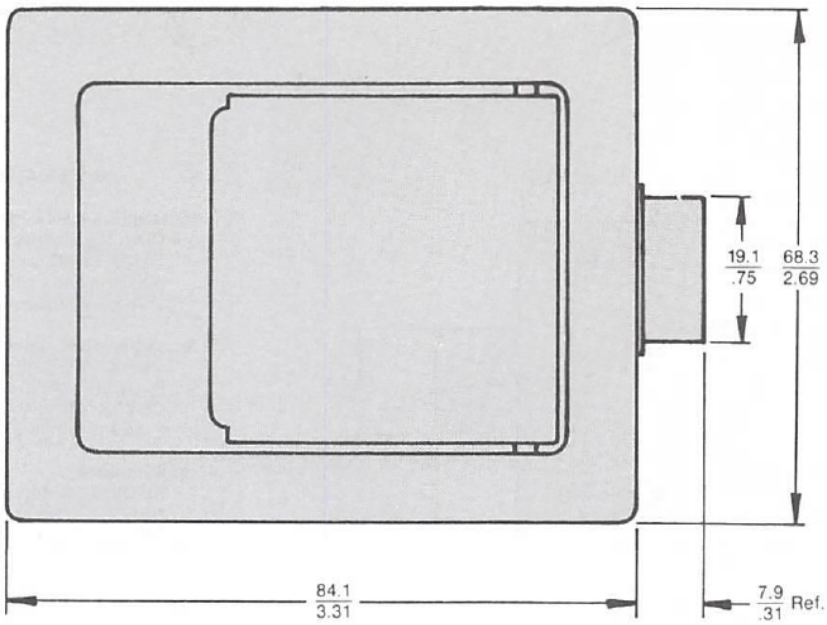


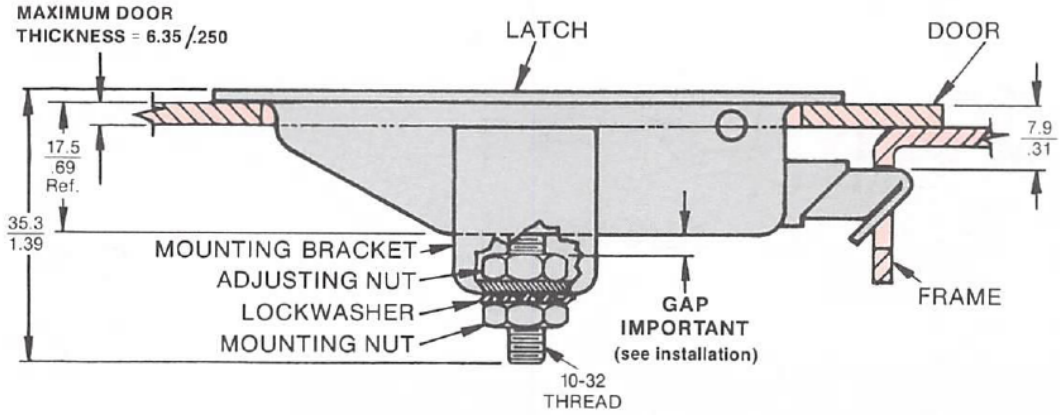
3.



Paddle Latch, 200 series

ACTUAL SIZE





FINISH	200 Series Part Numbers
Stainless steel	
Brushed	64-10-201-50 ■
Steel	
Zinc plated	64-10-201-40 ■
Satin silver coat	64-10-201-75 ■
Matte black coat	64-10-201-90 ■

■ From stock, subject to prior sale.

MATERIAL and FINISH

CUP and PADDLE: 1010 steel, zinc plated or polyester powder coated (matte black or satin silver) or 304 stainless steel, passivated (brushed). See table.
GUIDE and SLIDE: 1010 steel, zinc plated plus bright chromate dip or 304 stainless steel, passivated.
BRACKET: 1010 steel, DACROTIZED† or 304 stainless steel passivated.
SPRING is 302 stainless steel and RIVET is 430 stainless steel; both components are passivated.
STUD: 10B21 steel, zinc plated plus bright chromate dip or 302 stainless steel passivated.
NUT: steel, DACROTIZED† or stainless steel, passivated.
LOCKWASHER: spring steel, DACROTIZED† or 410 stainless steel, passivated.

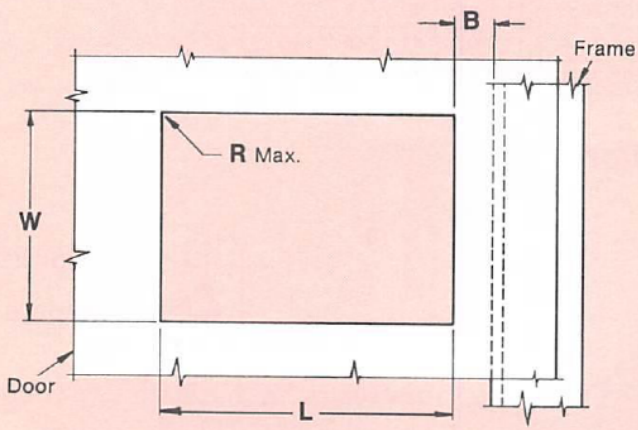
†Registered tradename of Metal Coatings International, Inc.

Strength Guideline

Working load = 556 N/125 lbs.
Ultimate load = 1246 N/280 lbs.

millimeter/inch

INSTALLATION INSTRUCTIONS



1. Prepare door.
2. If frame requires modification (notch, hole or shim), be sure to observe C and D dimensions and to allow sufficient width clearance for latching slide. See latch drawings for width of slide.
3. Measure your door thickness and set adjusting nut so that **GAP** is equal to door thickness within plus 0.8/.03, minus 0.0/.00.
4. Assemble latch in door and tighten mounting nut.

Series	L	W	R Max.	B		C	D min.	E ref.	T max.
				min.	max.				
200	71.4/2.81	55.6/2.19	2.4/.09	7.9/.31	11.1/.44	7.9/.31	11.1/.44	14.3/.56	6.4/.25
300	108.0/4.25	82.6/3.25	3.2/.13	11.1/.44	15.9/.63	11.9/.47	14.3/.56	20.6/.81	9.5/.38

and 300 series

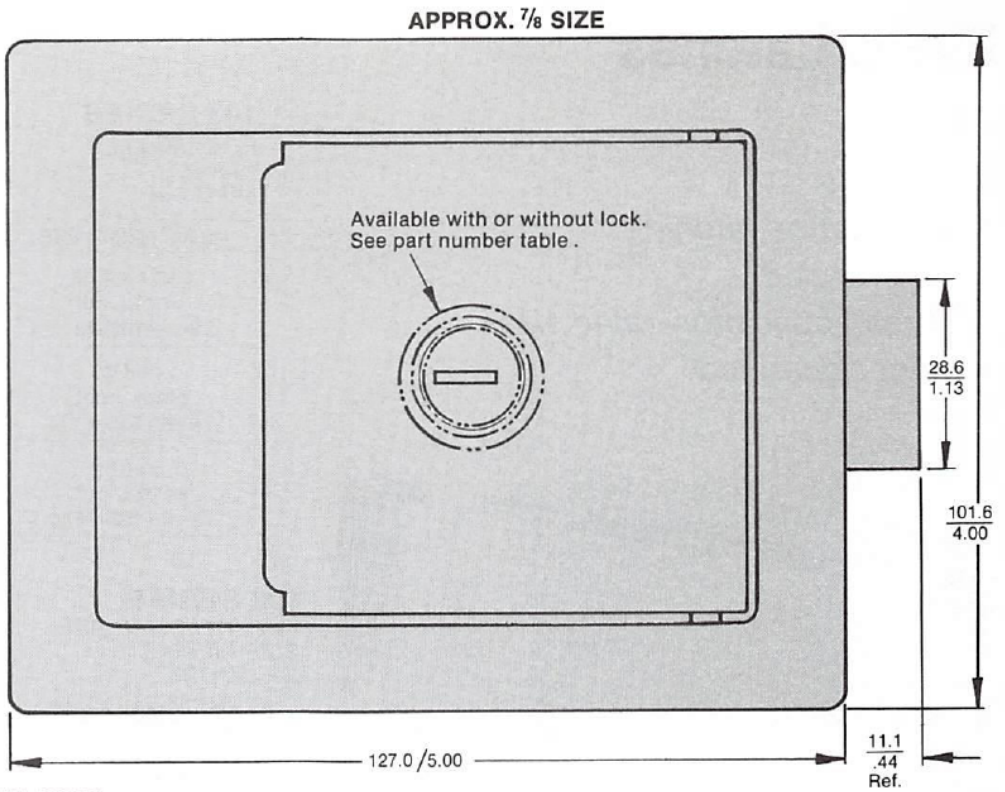
FINISH	300 Series Part Numbers	
	without lock	with lock*
Stainless steel		
Brushed	64-10-301-50 ■	64-10-302-50 ■
Steel		
Satin silver coat	64-10-301-75 ■	64-10-302-75 ■
zinc plated	64-10-301-40 ■	64-10-302-40 ■
Matte black coat	64-10-301-90 ■	64-10-302-90 ■

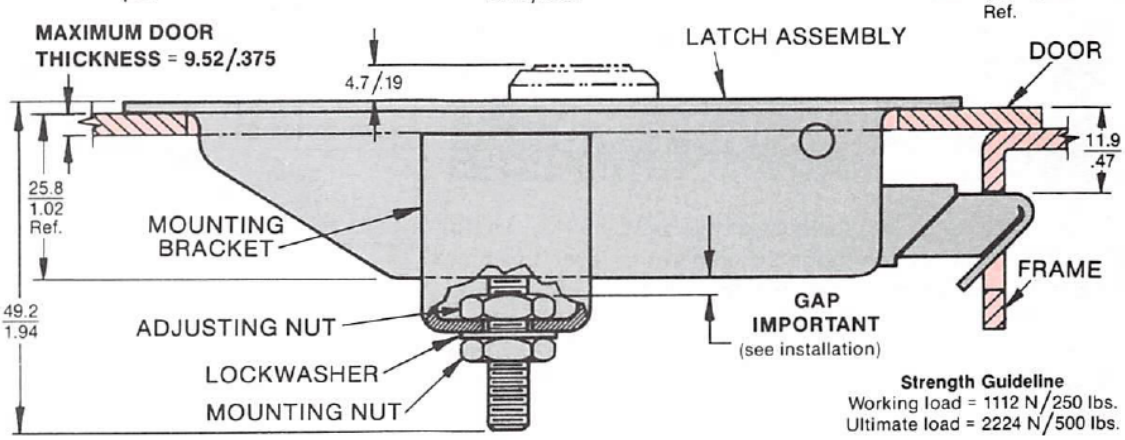
■ From stock, subject to prior sale.
* Locks are keyed alike. Random keyed locks are available. Call for details.

MATERIAL and FINISH
CUP and PADDLE: 1010 steel, zinc plated or polyester powder coated (matte black or satin silver) or 304 stainless steel, passivated (brushed). See table.
GUIDE and SLIDE: 1010 steel, zinc plated plus bright chromate dip or 304 stainless steel, passivated.
BRACKET: 1010 steel, DACROTIZED† or 304 stainless steel, passivated.
SPRING is 302 stainless steel and RIVET is 430 stainless steel; both components are passivated.
STUD: 10B21 steel, zinc plated plus bright chromate dip or 18-9LW stainless steel, passivated.
NUT: steel, DACROTIZED† or 18-8 stainless steel, passivated.
LOCKWASHER: spring steel, DACROTIZED† or 410 stainless steel, passivated.

LOCK: die cast zinc, polyester powder coated (matte black or satin silver) or chrome plated.
LOCK ARM: steel, DACROTIZED† or stainless steel, passivated.
MOUNTING NUT: die cast zinc with chemical protective film.
SCREWS: steel, zinc plated plus yellow chromate dip or stainless steel, passivated.
KEYS (2): brass, natural.

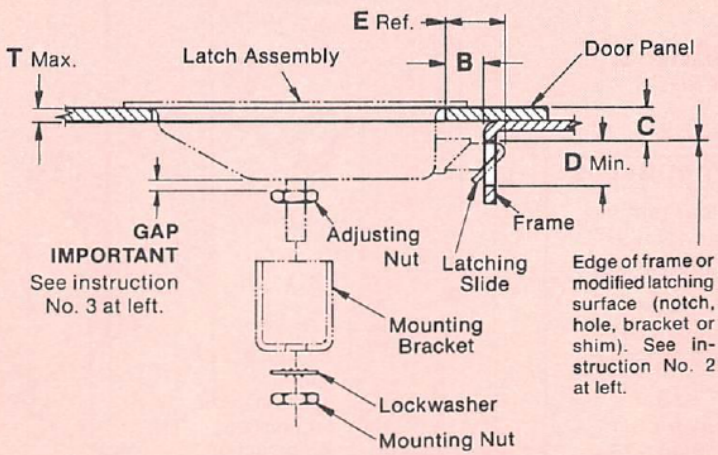
†Registered tradename of Metal Coatings International, Inc.

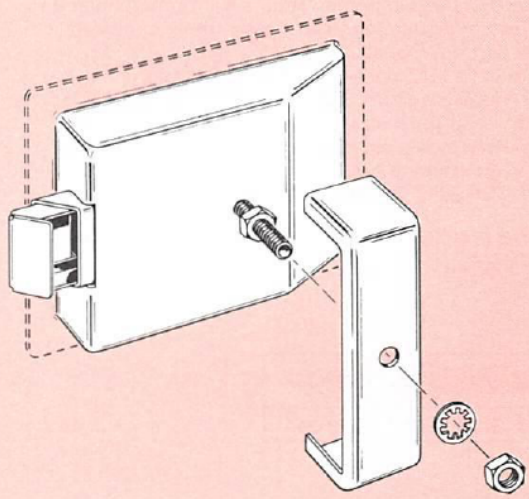




Strength Guideline
Working load = 1112 N/250 lbs.
Ultimate load = 2224 N/500 lbs.

for 200 and 300 series

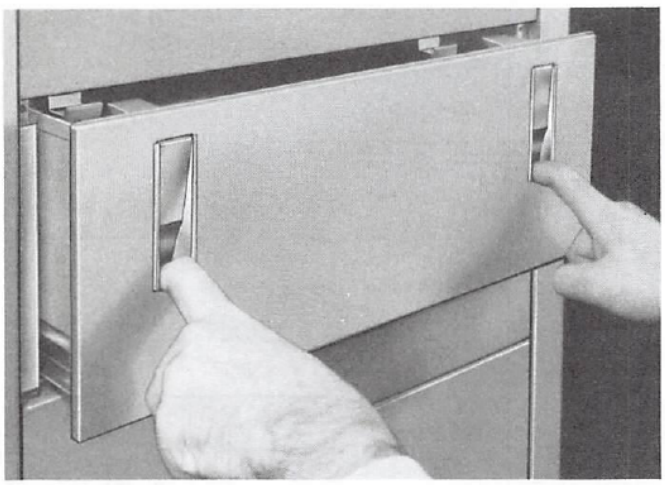




Packaged complete with latch assembly bracket, adjusting nut, mounting nut and lockwasher (and keys when 300 series locking model is ordered) per bag.

Flush Latches

- *Slam action latching*
- *Flush styled*
- *Three application-rated sizes*
- *Finger operated*



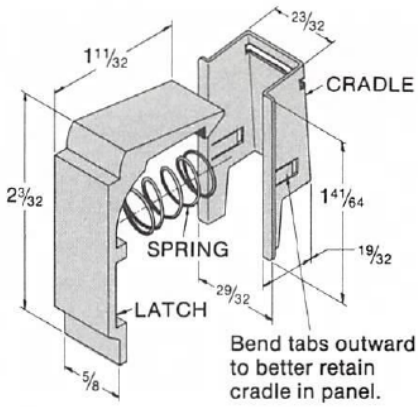
Just hook a finger into the base of the latch and pull. That's all. That single motion triggers the operating lever, unlatches the door, and opens it. Push the door shut, and it's latched.

Installation in a pre-punched door takes seconds; the entire assembly is in place and self-retained without fastening or tools.

103 SERIES

FOR SMALLER PANELS OR DOORS

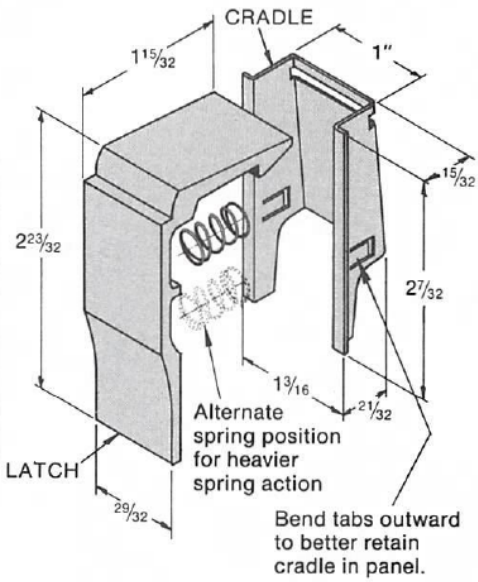
PART NUMBERS
clear matte anodized **79-10-103-12** ■
matte black coat **79-10-103-13** ■
satin silver coat **79-10-103-75** ■



102 SERIES

FOR INTERMEDIATE SIZE PANELS OR DOORS

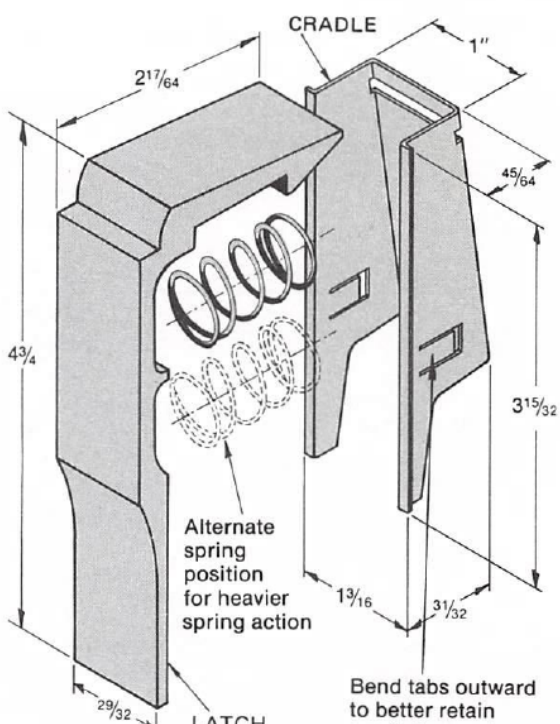
PART NUMBERS
clear matte anodized **79-10-102-18** ■
matte black coat **79-10-102-22** ■
satin silver coat **79-10-102-75** ■



101 SERIES

FOR LARGER PANELS OR DOORS

PART NUMBERS
clear matte anodized **79-10-101-12** ■
matte black coat **79-10-101-13** ■
satin silver coat **79-10-101-75** ■



MATERIAL and FINISH

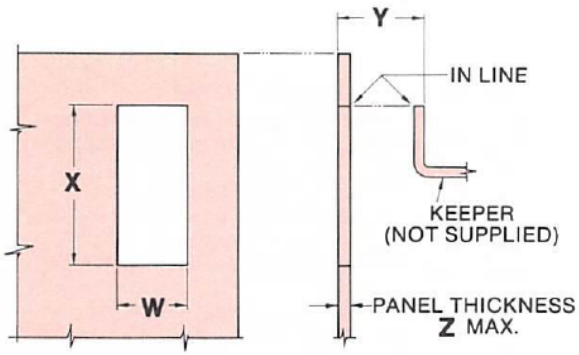
LATCH: 6063 aluminum, satin silver or matte black polyester powder coated or clear matte anodized. See part numbers.
CRADLE: 1010 steel, zinc plated plus bright chromate dip or phosphate dip plus matte black or satin silver polyester powder coated.
SPRING: music wire (1090 steel), zinc plated plus yellow chromate dip.
SPACER: 6061 aluminum, natural.

Latch is shipped unassembled, packaged one unit per package.

SOUTHCO fasteners

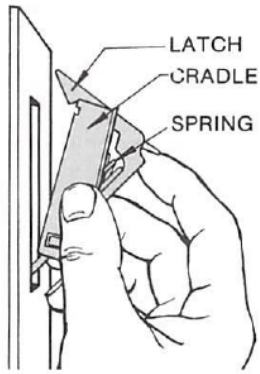
■ From stock, subject to prior sale.

Flush Latch—Panel Preparation and Installation Instructions

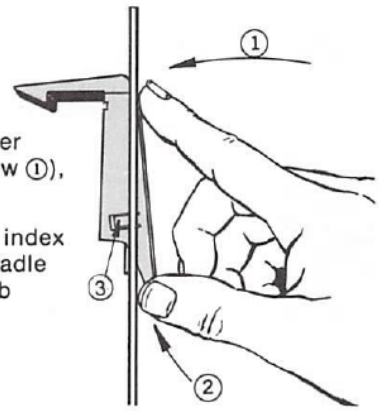


Punch a rectangular hole in the panel as shown. Keeper (not supplied) must be located as dimensioned.

FOR FASTENER SIZE	PART NUMBER	W	X	Y	Z
103 SERIES	79-10-103-XX	.719	1.640	1"	.109
102 SERIES	79-10-102-XX	1.000	2.250	1 1/32	.125
101 SERIES	79-10-101-XX	1.000	3.520	1 19/32	.188



Group latch, cradle and spring in position in one hand. Insert tail end of latch through lower end of rectangular hole in panel.



Arc top end of latch into upper end of rectangular hole (arrow ①), then push upward.

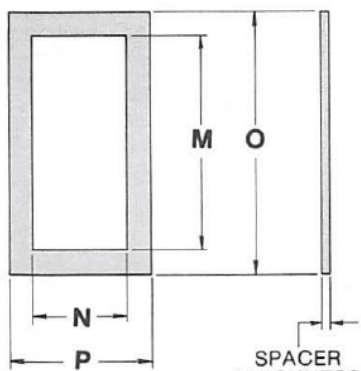
Press top of latch firmly with index finger (arrow ①) and snap cradle into flush position with thumb (arrow ②).

Bend tabs ③ for secure retention in panel.

SPACER

PANEL THICKNESS MIN.	PANEL THICKNESS MAX.	SPACER THICKNESS T	SPACER PART NUMBER	M	N	O	P	Unit Weight (lbs.)
For 103 Series (2 3/32" Size)								
.016	.047	1/16	79-19-132-15 ■	1.640	23/32	2 1/8	1 3/32	.009
.048	.078	1/32	79-19-131-15 ■					.003
.079	.109	SPACER NOT REQUIRED						
For 102 Series (2 23/32" Size)								
.031	.062	1/16	79-19-122-15 ■	2.250	1"	2 1/4	1 1/2	.012
.063	.093	1/32	79-19-121-15 ■					.006
.094	.125	SPACER NOT REQUIRED						
For 101 Series (4 3/4" Size)								
.031	.062	1/8	79-19-104-15 ■	3.520	1"	4 1/2	1 1/2	.028
.063	.093	3/32	79-19-103-15 ■					.021
.094	.124	1/16	79-19-102-15 ■					.014
.125	.155	1/32	79-19-101-15 ■					.007
.156	.188	SPACER NOT REQUIRED						

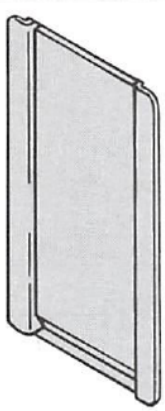
■ From stock, subject to prior sale.



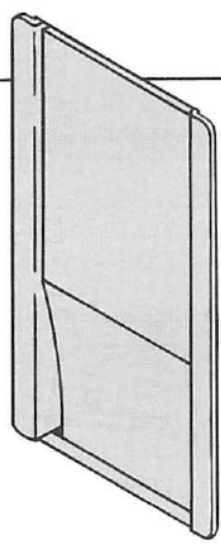
If a spacer is required, it must be ordered separately by part number.

NOTE: When a spacer is required, place it behind panel with holes in alignment before inserting fastener. The installed fastener will secure the spacer in position.

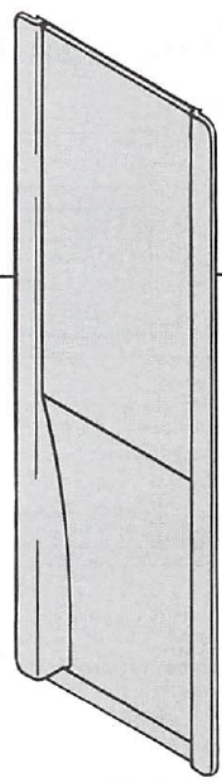
ACTUAL SIZE ILLUSTRATIONS



103 SERIES



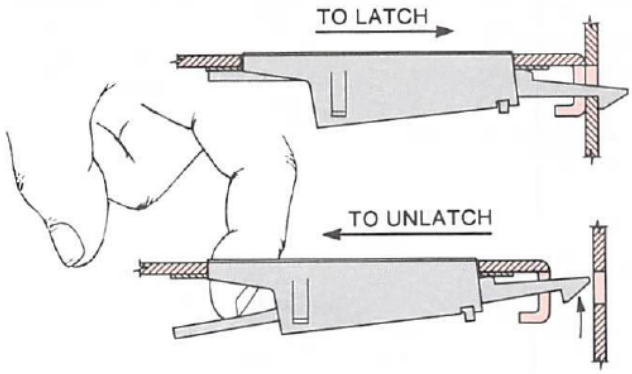
102 SERIES



101 SERIES

Quick-release Flush Latch

for latching components that meet edge-to-edge or at right angles.

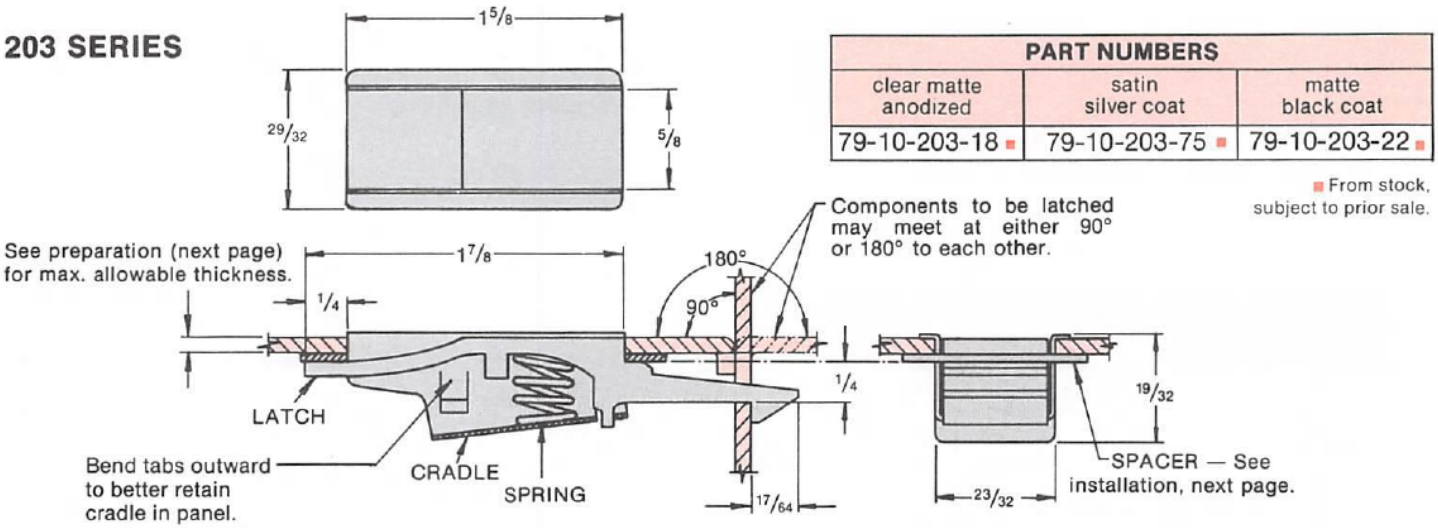


MATERIAL and FINISH

LATCH: 6063 aluminum, satin silver or matte black polyester powder coated or clear matte anodized. See part numbers.
CRADLE: 1010 steel, zinc plated plus bright chromate dip or phosphate dip plus matte black or satin silver polyester powder coated.
SPRING: music wire (1090 steel), zinc plated plus yellow chromate dip.
SPACER: 6061 aluminum, natural.

Latch is shipped unassembled, packaged one unit per package.

203 SERIES



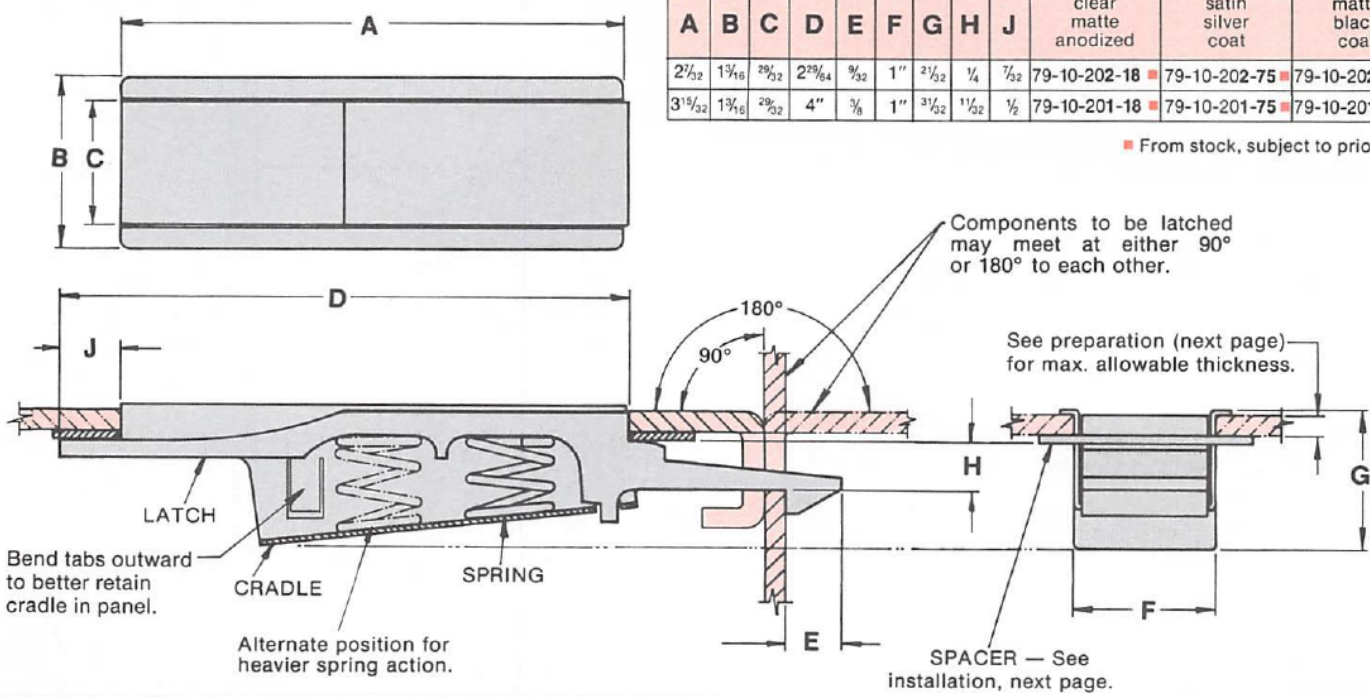
PART NUMBERS		
clear matte anodized	satin silver coat	matte black coat
79-10-203-18 ■	79-10-203-75 ■	79-10-203-22 ■

■ From stock, subject to prior sale.

202 SERIES–201 SERIES

DIMENSIONS									PART NUMBERS		
A	B	C	D	E	F	G	H	J	clear matte anodized	satin silver coat	matte black coat
2 7/32	1 3/16	29/32	2 29/64	9/32	1"	21/32	1/4	7/32	79-10-202-18 ■	79-10-202-75 ■	79-10-202-22 ■
3 15/32	1 3/16	29/32	4"	3/8	1"	31/32	1 1/32	1/2	79-10-201-18 ■	79-10-201-75 ■	79-10-201-22 ■

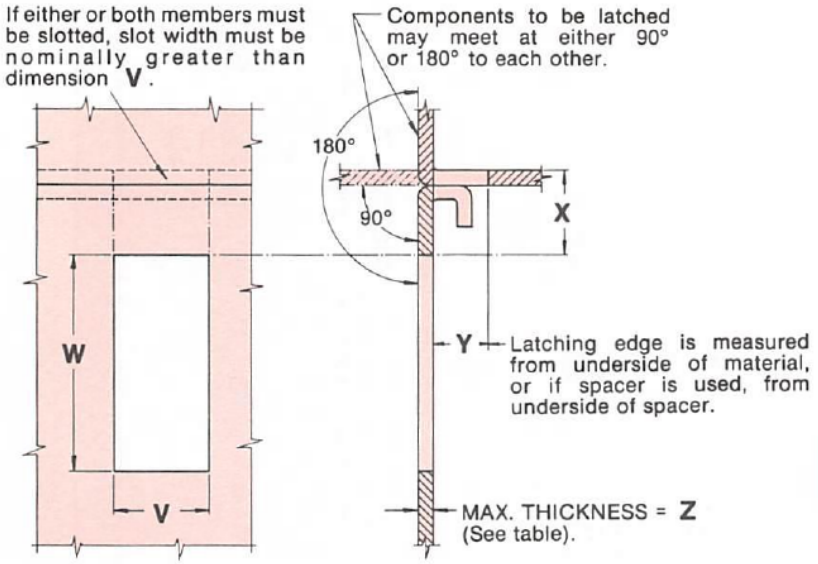
■ From stock, subject to prior sale.



See next page for preparation and installation instructions.

Quick-release Flush Latch: Installation Instructions

PREPARATION

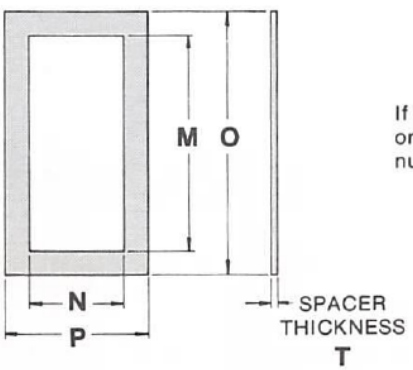


Prepare an opening in one member to receive latch. See table for dimensions according to latch series selected.

Prepare a latching edge on the other member or supply a keeper (not available from Southco). See table for location of latching edge according to latch series selected.

FOR FASTENER SIZE	PART NUMBER	V	W	X	Y	Z
203 SERIES	79-10-203-XX	.719	1.625	.750	1/4	.109
202 SERIES	79-10-202-XX	1.000	2.236	1.000	1/4	.125
201 SERIES	79-10-201-XX	1.000	3.484	1.125	11/32	.188

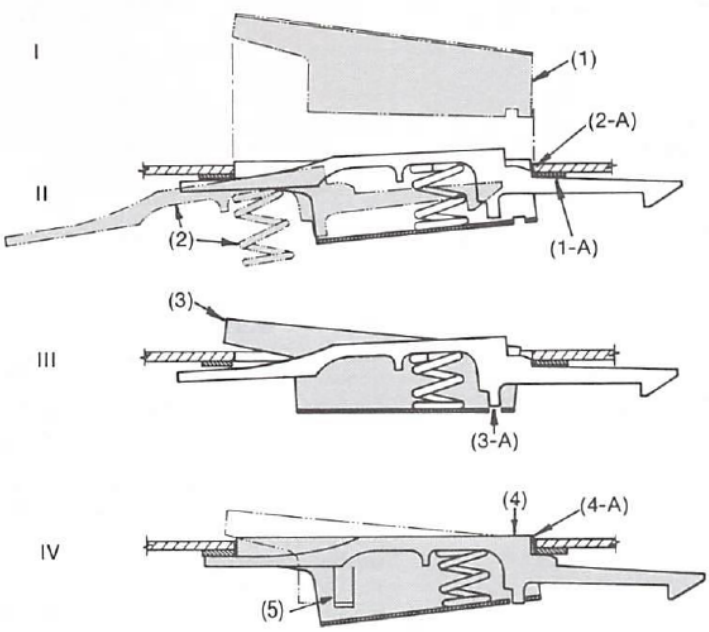
SPACERS



If a spacer is required, it must be ordered separately by part number.

PANEL THICKNESS MIN.	PANEL THICKNESS MAX.	SPACER THICKNESS T	SPACER PART NUMBER	M	N	O	P	Unit Weight (lbs.)
FOR 203 SERIES								
.016	.047	1/16	79-19-132-15 ■	1.640	23/32	2 1/8	1 13/32	.009
.048	.078	1/32	79-19-131-15 ■					.003
.079	.109	SPACER NOT REQUIRED						
FOR 202 SERIES								
.031	.062	1/16	79-19-122-15 ■	2.250	1"	2 3/4	1 1/2	.012
.063	.093	1/32	79-19-121-15 ■					.006
.094	.125	SPACER NOT REQUIRED						
FOR 201 SERIES								
.031	.062	1/8	79-19-104-15 ■	3.520	1"	4 1/2	1 1/2	.028
.063	.093	3/32	79-19-103-15 ■					.021
.094	.124	1/16	79-19-102-15 ■					.014
.125	.155	1/32	79-19-101-15 ■					.007
.156	.188	SPACER NOT REQUIRED						

■ From stock, subject to prior sale.



INSTALLATION INSTRUCTIONS

I Working from the *outside* of your panel, insert cradle (1). If spacer (1-A) is required, place it over cradle from the *inside*. The installed latch will secure the spacer in position.

II Position spring and latch (2) as shown. Working from the *inside*, slide latch and spring forward into cradle, continuing until lower step of latch (2-A) contacts edge of opening in your material.

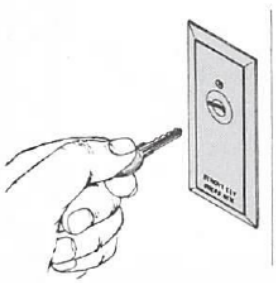
III Lift rear of cradle (3) and slide it rearward until latch tang (3-A) is directly in line with slot in cradle.

IV Depress latch at point (4) to insert tang into slot. Holding latch in depressed position, slide forward to engage top step of latch (4-A) with edge of opening. Reposition rear of cradle in opening by pressing forward and down. Check operation of latch.

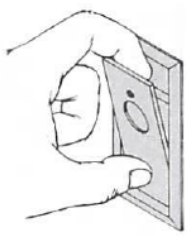
V After checking operation, bend tabs (5) outward to retain assembly in panel.

Flush, keylocking slam-latch

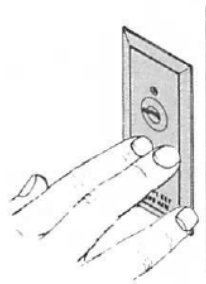
- **Flush, self-mounting design.**
- **Lockable—with tumbler-type keylock.**
- **Slam-action latching.**
- **Lock indicator on face of latch.**
- **Minimum inside protrusion**



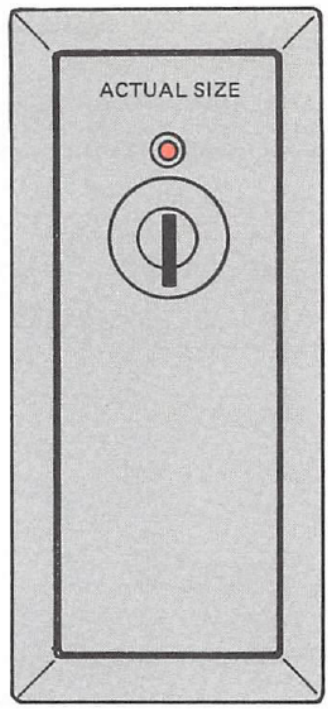
To operate: Unlock latch and completely remove Key. Red dot will disappear from indicator window.

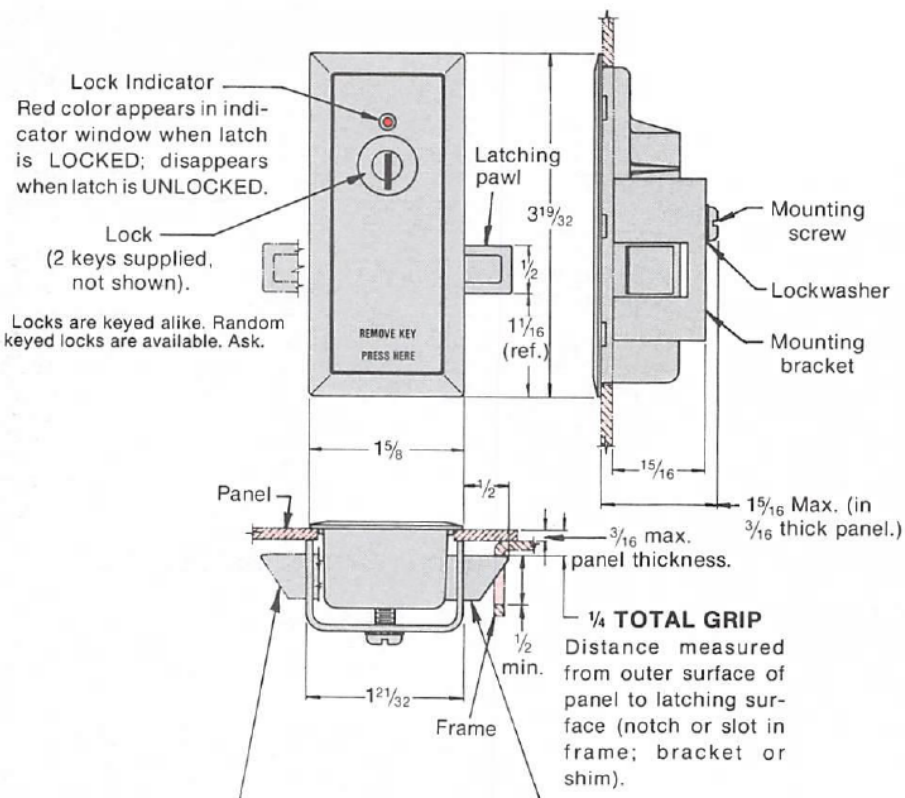


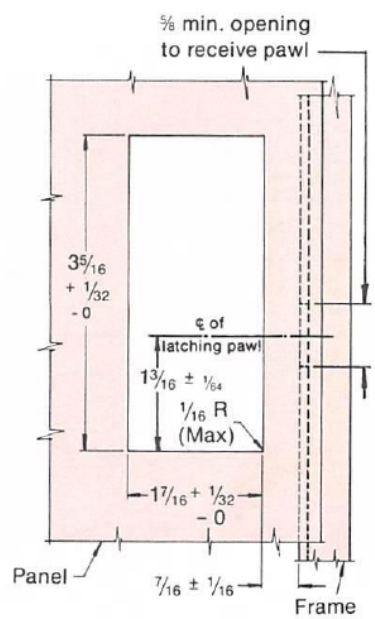
Use thumb to press where indicated. Catch top of lever with index finger; pull outward to unlatch and open door.



Push door shut. It will be latched whether latch is locked or unlocked. When locked, red dot will re-appear in indicator window.







LATCH ASSEMBLY PART NUMBER
E1-10-102-50 ■
Latching pawl is on left side of latch when viewed as shown.

LATCH ASSEMBLY PART NUMBER
E1-10-101-50 ■
Latching pawl is on right side of latch when viewed as shown.

■ From stock, subject to prior sale.

MATERIAL and FINISH

HOUSING, LEVER and LOCK PLUG: die-cast zinc with black organic coating.
LATCHING PAWL: acetal, black.
SPRING: 302 stainless steel, passivated.
PINS: 18-9 LW stainless steel.
SCREWS: Steel, zinc plated.
MOUNTING BRACKET: 1010 steel, DACROTIZED†.
LOCK PAWL: 1010 steel, zinc plated.
LOCKWASHER: spring steel, zinc plated.

†Registered tradename of Metal Coatings International, Inc.

INSTALLATION

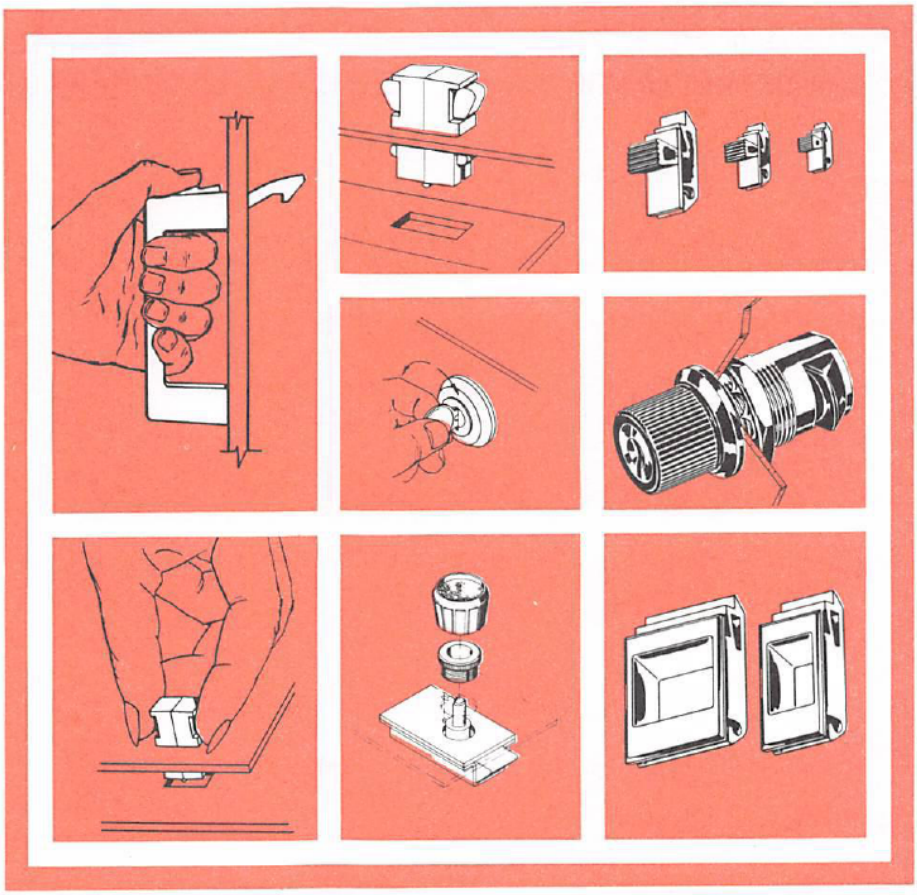
Prepare opening in panel as shown above. Note the location of frame or latching surface with respect to desired position of latch (see note under each Part Number).

Place assembly into panel opening; apply mounting bracket and secure entire assembly with screw and lockwasher provided.

Packaged one latch assembly, mounting bracket, screw, lockwasher and 2 keys per package.

Section H
Slam Latches

contents guide	page
No. A3 Slide Latch	H-8 & H-9
No. A6 Slam Latch	H-12
No. E9 Snap-in Latch	H-6 & H-7
No. 60 Squeeze Release	H-10
No. 89 Handle Latch	H-11
No. 93 Slam-action Keylatch	H-1 to H-3
No. 93 Push Lock *NEW*	H-4 & H-5



Section H
Slam Latches

contents guide | **page**

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No. 93 Push Lock *NEW*	H-4 & H-5

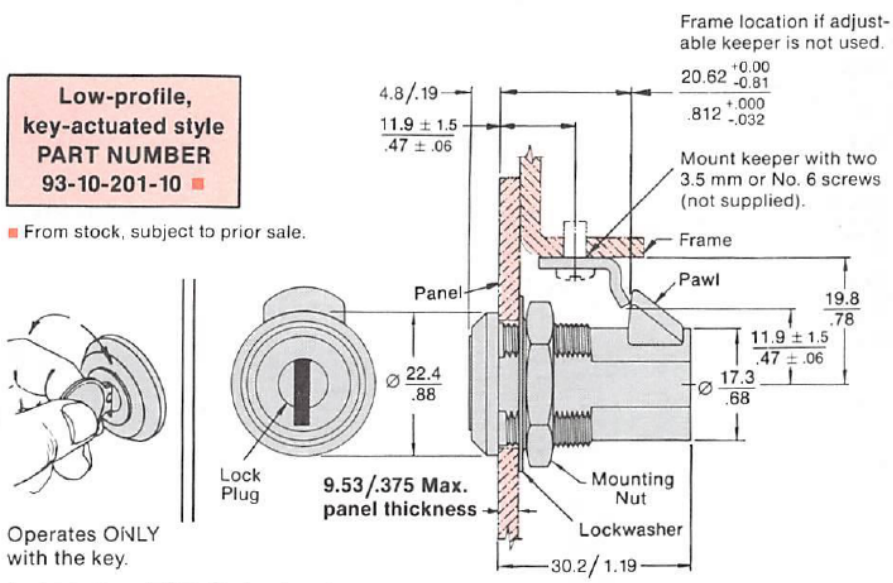
Slam-action Keylatch, *200 Series*



ACTUAL SIZE

Low-profile, key-actuated style
PART NUMBER
93-10-201-10 ■

■ From stock, subject to prior sale.

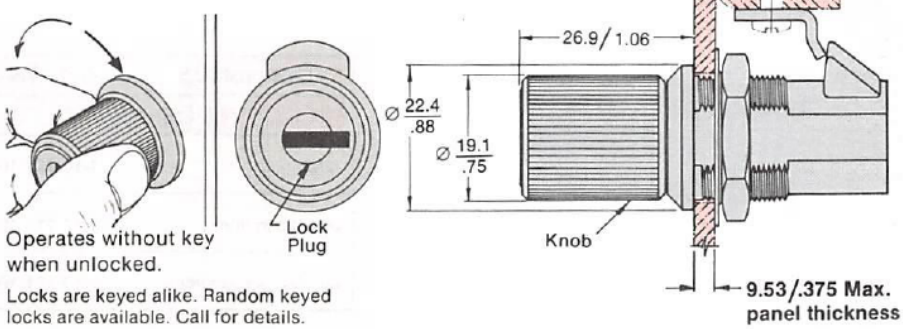


Operates ONLY with the key.

Locks are keyed alike. Random keyed locks are available. Call for details.

Lock Plug Finish	Knob style Part Numbers	
	with keylock	without keylock
Bright	93-10-202-10 ■	93-10-203-10 ■
Matte black coat	93-10-202-50 ■	93-10-203-50 ■

■ From stock, subject to prior sale.



Operates without key when unlocked.

Locks are keyed alike. Random keyed locks are available. Call for details.

MATERIAL and FINISH

For all styles
HOUSING: die cast zinc, chrome plated. SMALL SPRING: 302 stainless steel, passivated. LARGE SPRING: 17-7PH stainless steel, natural. MOUNTING NUT: die cast zinc plus chemical protective coating. CAM: die cast zinc, natural. LOCKWASHER is spring steel and KEEPER is 1010 steel; both components are zinc plated plus yellow chromate dip. PAWL: acetal, black.

For low profile style LOCK PLUG: die cast zinc, chrome plated.

For knob style without keylock KNOB: polycarbonate, black. PIN: 303 stainless steel, natural. PLUG: 6262 aluminum, matte black polyester powder coated or natural.

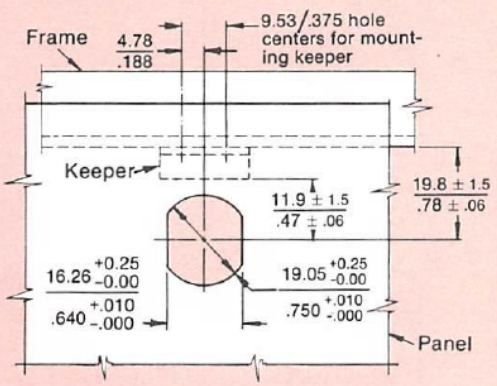
For knob style with keylock KNOB: polycarbonate, black. LOCK PLUG: die cast zinc, matte black polyester powder coated or chrome plated. LOCK PLUG EXTENSION: die cast zinc with chemical protective coating. LOCK SLIDE: 12L14 steel, phosphate dip plus matte black polyester powder coated.

Packaged one unit per package.

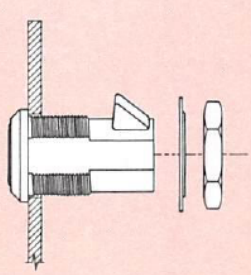
Strength Guideline
Maximum working load—330 N/75 lbs.
Average ultimate load—890 N/200 lbs.

Installation

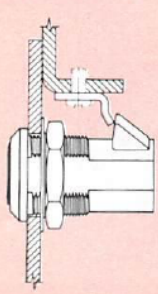
1. Prepare panel and frame.



2. Insert latch into hole. Add lockwasher and nut.



3. Install keeper and adjust for proper latching.



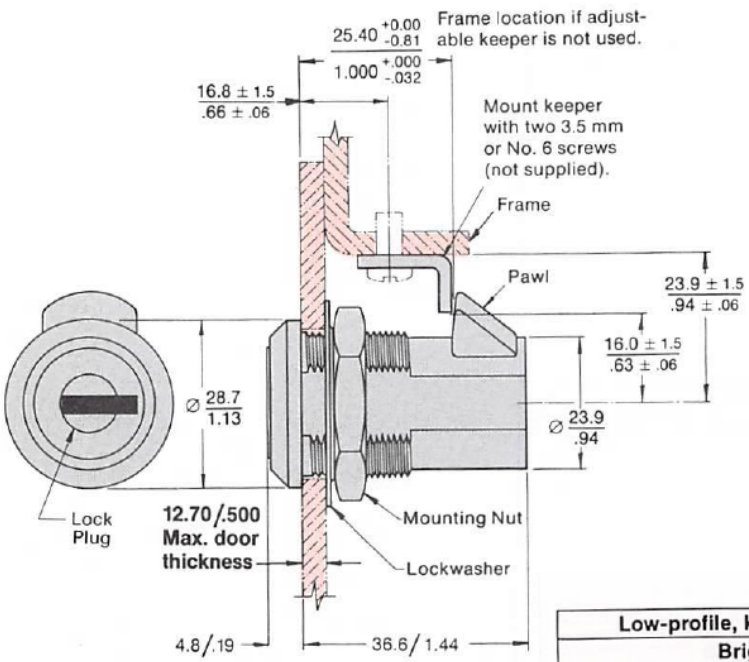
millimeter
inch
millimeter/inch

Slam-action Keylatch, *100 Series*

- **Single hole mounting.**
- **Key-locked tamper resistance.**
- **Unlatches with a 90° turn.**
- **Simply slam door to latch.**



ACTUAL SIZE



millimeter/inch

millimeter
inch

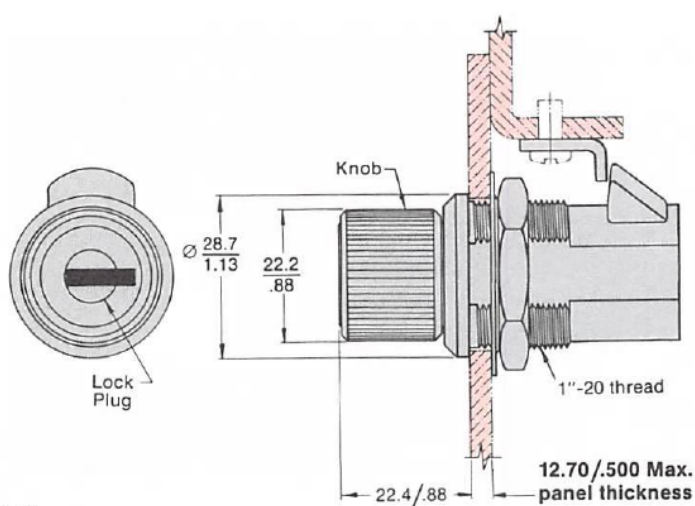


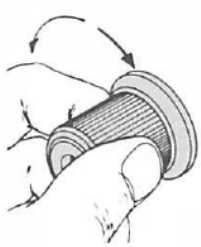
Operates ONLY with the key.

Locks are keyed alike. Random keyed locks are available. Call for details.

Low-profile, key-actuated style Bright only		DIMENSIONS			
Latch only	93-10-**101**-10 ■	25.40 +0.00 -0.81 / 1.000 +.000 -.037	16.8 ± 1.5 / .66 ± .06	4.8 / 1.9	36.6 / 1.44
Pull tab in line	93-10-**111**-10 ■	23.24 +0.13 -0.94 / .915 +.006 -.037	14.6 ± 1.7 / .58 ± .07	7.0 / .28	34.4 / 1.36
Pull tab Perpendicular	93-10-**121**-10 ■				

■ From stock, subject to prior sale.





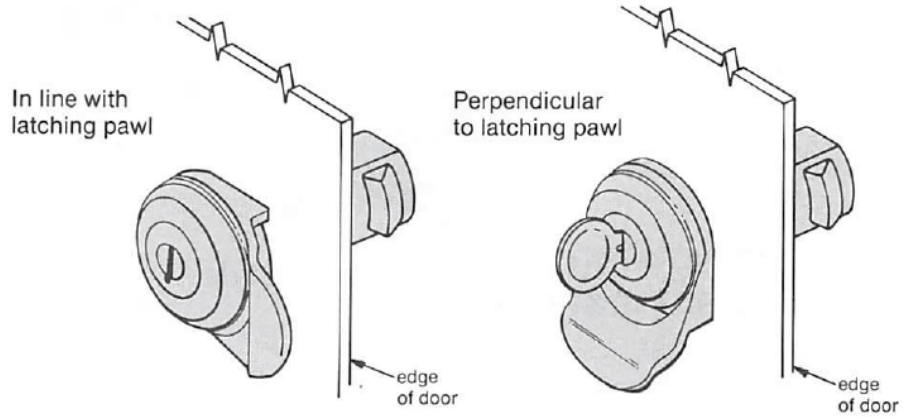
Operates without key when unlocked.

Locks are keyed alike. Random keyed locks are available. Call for details.

Lock Plug Finish	Knob style Part Numbers	
	with keylock	without keylock
Bright	93-10-**102-10** ■	93-10-**103-10** ■
Matte black coat	93-10-**102-50** ■	93-10-**103-50** ■

■ From stock, subject to prior sale.

Pull Tab



MATERIAL and FINISH

For all styles
HOUSING: die cast zinc, chrome plated.
SPRINGS: 302 stainless steel, passivated.
MOUNTING NUT: 12L14 steel, PAWL: acetal, black.
LOCKWASHER: is spring steel and KEEPER is 1010 steel; these components are all DACROTIZED†. CAM: die cast zinc, natural.

For low profile style
LOCK PLUG: die cast zinc, chrome plated.

For knob style without keylock
KNOB: mineral filled nylon, black. PIN 303 stainless steel, natural. PLUG: 6262 aluminum, matte black polyester powder coated or natural.

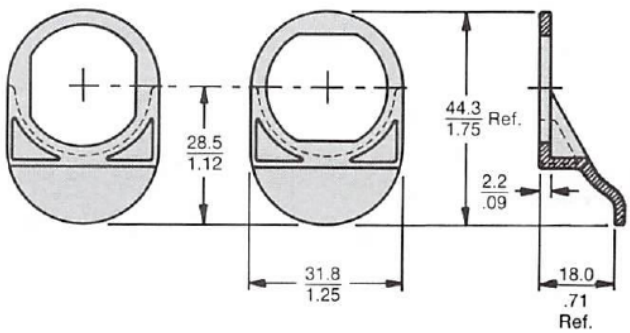
For knob style with keylock
KNOB: mineral filled nylon, black. LOCK PLUG: die cast zinc, matte black polyester powder coated or chrome plated. LOCK PLUG EXTENSION: die cast zinc with chemical protective coating. LOCK SLIDE 12L14 steel, phosphate dip plus matte black polyester powder coated.

Packaged one unit per package.

†Registered tradename of Metal Coating International, Inc.

PULL TAB

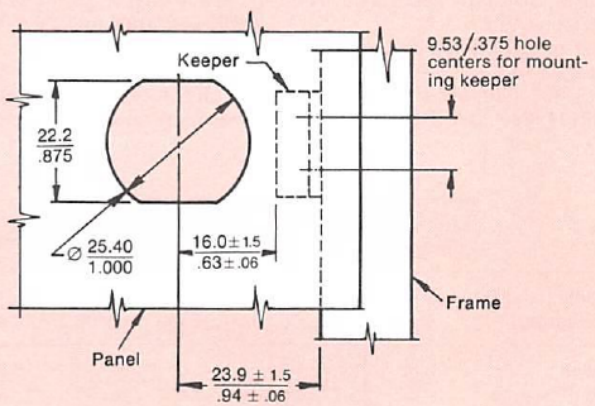
In line with latching pawl **Perpendicular to latching pawl**



Strength Guideline
Maximum working load—560 N/125 lbs.
Average ultimate load—980 N/220 lbs.

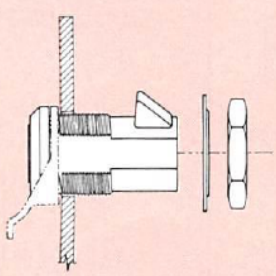
Installation

1. Prepare panel and frame.

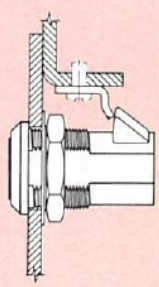


millimeter
inch
millimeter/inch

2. Insert latch into hole. Add lockwasher and nut.



3. Install keeper and adjust for proper latching.



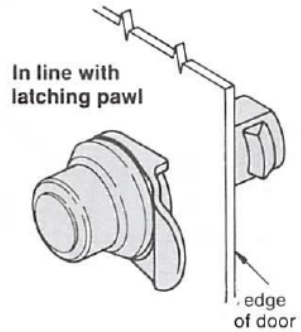
NEW

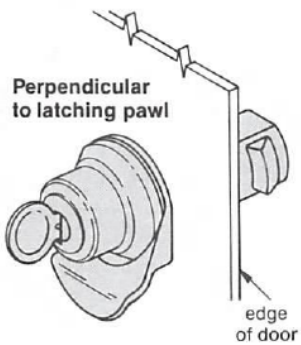
Push Lock

- A push on the panel latches
- A push on the button unlatches
- Locking or non-locking
- Corrosion resistant materials
- Application options: Pull Tab, Ejector Spring

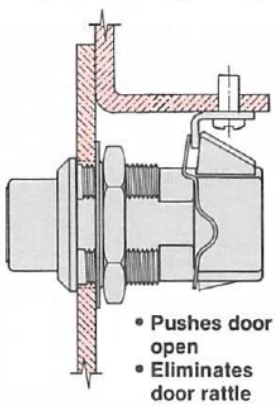


Pull Tab

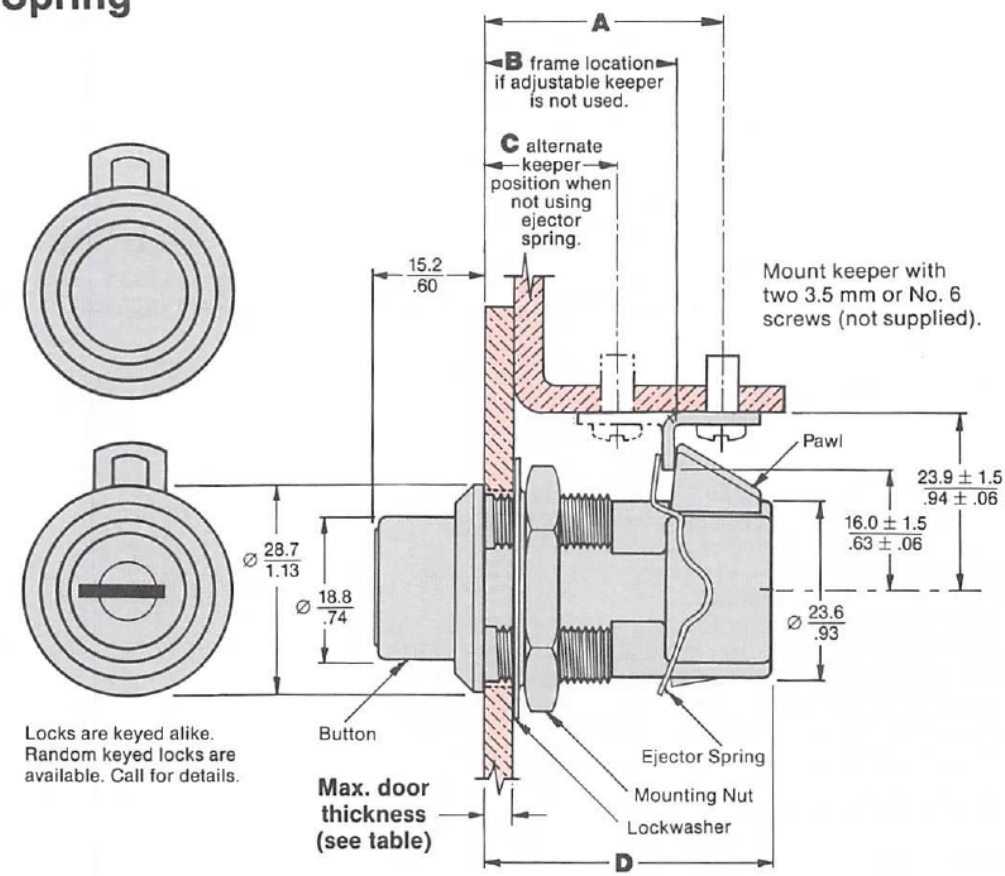




Ejector Spring



- Pushes door open
- Eliminates door rattle
- Provides 13.3N/3 lb to 15.6N/3.5 lb ejection force



MATERIAL and FINISH

HOUSING, PAWL, CAM, BUTTON and BUTTON PLUG: thermoplastic polyester, black.
LOCK PLUG: die cast zinc, matte black polyester powder coated.
INTERNAL SPRINGS: 302 stainless steel, natural.
MOUNTING NUT: 12L14 steel, DACROTIZED†.
LOCKWASHER: spring steel, DACROTIZED†.
KEEPER: 1010 steel, DACROTIZED†.
PULL TAB: nylon, black.
EJECTOR SPRING: spring steel, phosphate dip plus fluoropolymer coating.

† Registered tradename of Metal Coatings International, Inc.

	Max. door thickness	A	B	C	D
Latch only (or with ejector spring)	12.70 .500	31.8±1.5 1.25±.06	25.40 +0.00 1.000 -0.81	16.8±1.5 .66±.06	39.1 1.54
Latch with pull tab	10.54 .415	29.7±1.5 1.17±.06	23.24 +.000 .915 -.032	14.7±1.5 .58±.06	36.8 1.45

millimeter
inch

millimeter/inch

Part Numbers

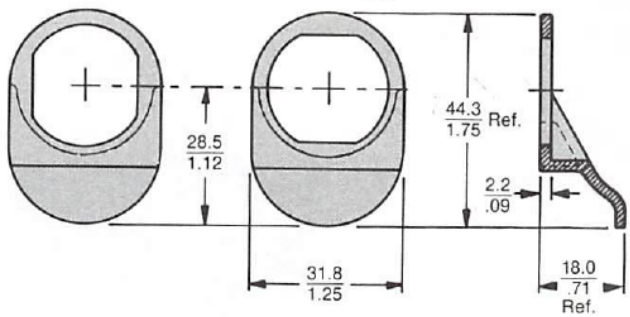
Keylock Style	with ejector spring	without ejector spring
Pull tab in line with latching pawl.	93-10-**301**-10 ■	93-10-**303**-10 ■
Pull tab perpendicular to latching pawl.	93-10-**311**-10 ■	93-10-**313**-10 ■
Latch only	93-10-**305**-10 ■	93-10-**307**-10 ■

Button Style	with ejector spring	without ejector spring
Pull tab in line with latching pawl.	93-10-**302**-10 ■	93-10-**304**-10 ■
Pull tab perpendicular to latching pawl.	93-10-**312**-10 ■	93-10-**314**-10 ■
Latch only	93-10-**306**-10 ■	93-10-**308**-10 ■

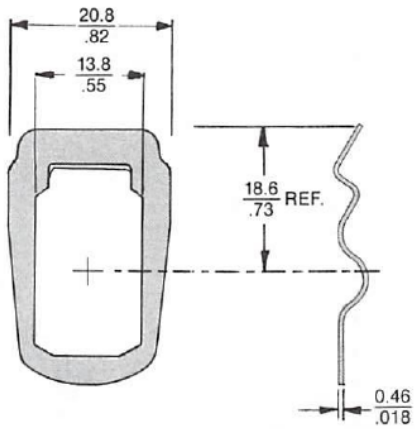
■ From stock; subject to prior sale.

Pull Tab

In line with latching pawl **Perpendicular to latching pawl**



Ejector Spring



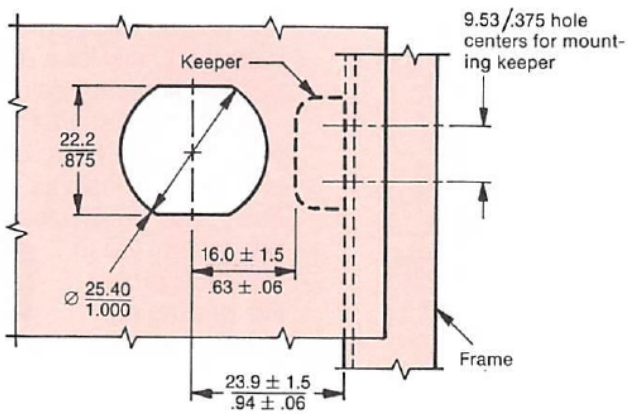
Strength Guideline
Maximum working load—356 N/80 lbs.
Average ultimate load—622 N/140 lbs.

millimeter
inch

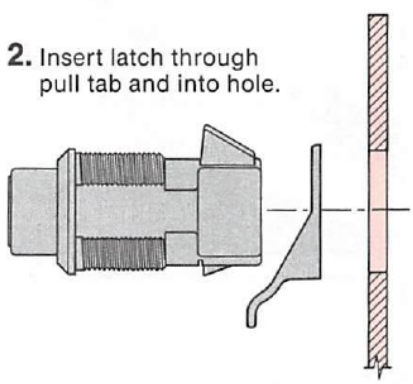
millimeter/inch

Installation

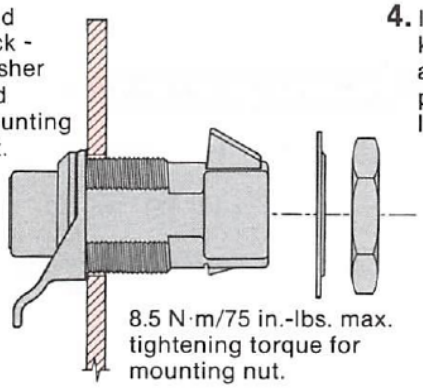
1. Prepare panel and frame..



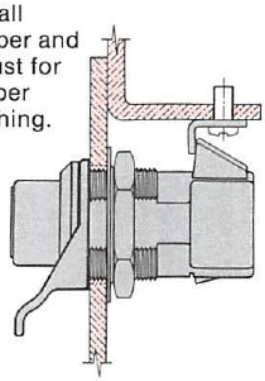
2. Insert latch through pull tab and into hole.



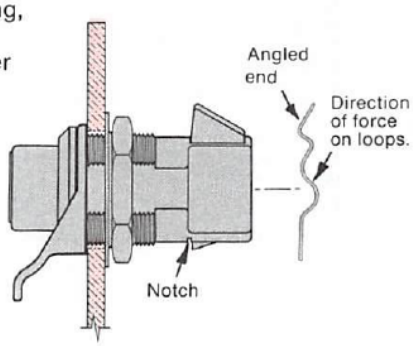
3. Add lock - washer and mounting nut.

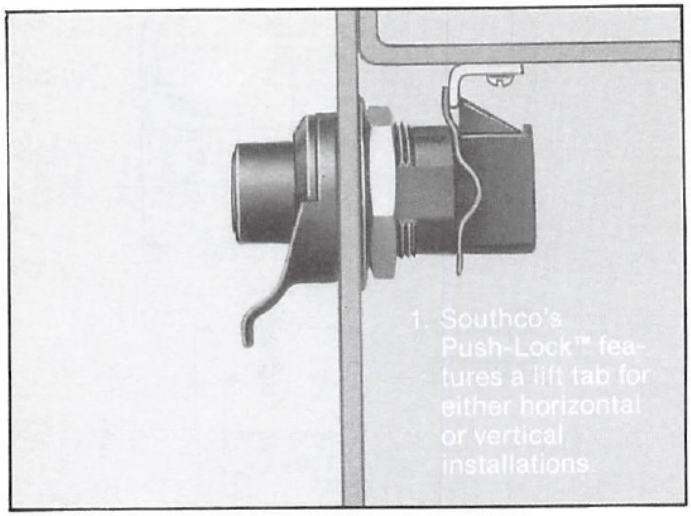


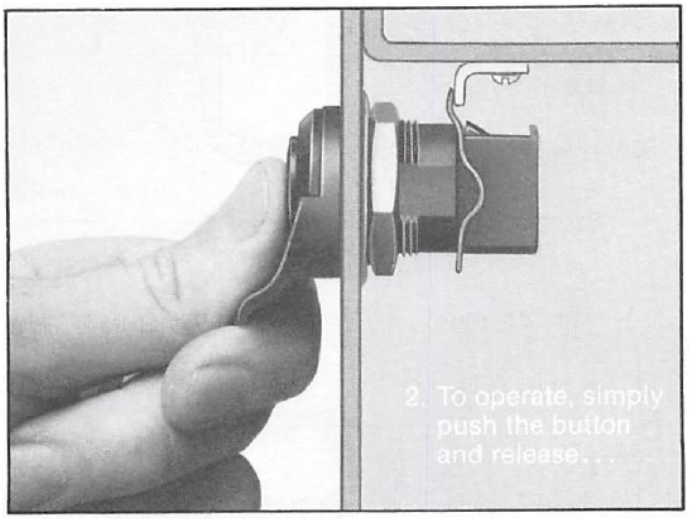
4. Install keeper and adjust for proper latching.

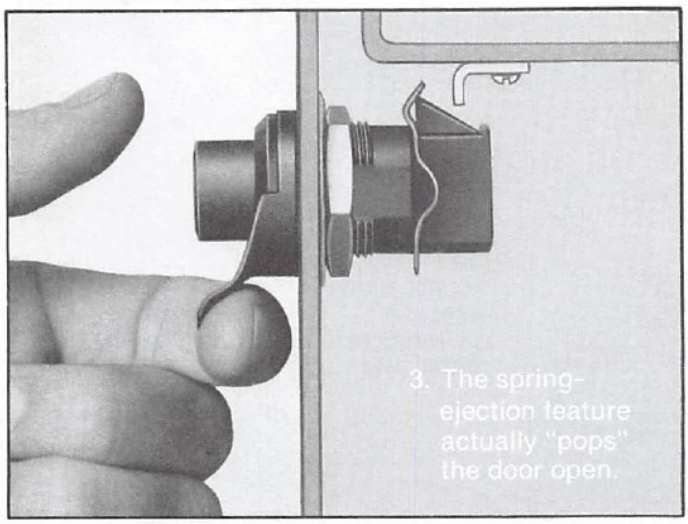


5. To install ejector spring, snap over housing after installation.









Now opening a door is as easy as pushing a button.

Southco's Push-Lock™...featuring eight different operating options... installs in just seconds: one hole, one lock washer, one mounting nut.

To gain access, simply push the button, release, and the door "pops" open. To secure, a slight push on the door is all you need. The nonmetallic pawl supplies natural lubricity for a quick, positive, smooth closing action.

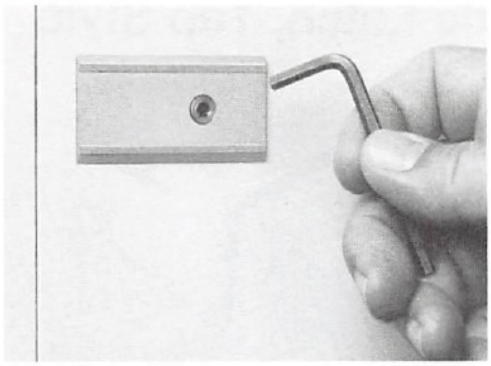
Southco offers Push-Lock™ with or without a keylock. Construction is black thermoplastic polyester. Push-Lock™ is shipped pre-assembled in individual protective packaging.

For more information on Push-Lock,™ contact Southco.



SOUTHCO®
fasteners

SOUTHCO, INC., 232 Brinton Lake Rd.,
Concordville, PA 19331
(215) 459-4000 / TELEX: 83-1485
FAX: 215-459-4012



Snap-in Slam Latch

Tool or knob actuated

Fast, easy installation.

Snap the latch into a rectangular opening and slam the door; it's installed, securely self-retained and latched.

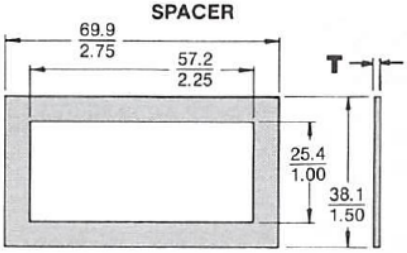
MATERIAL and FINISH

COVER: 6063 aluminum, see part number table for finish.
CAM and SPACER: 6061 aluminum, natural.
SLIDE, PIN and RETAINER: polyester thermoplastic.
SPRING: 302 stainless steel, passivated.
KNOB: nylon, black.

Latch is packaged in a protective bag.

STYLE	PART NUMBERS		
	clear anodized	clear anodized with black vinyl trim	black organic coating
Tool actuated	E9-10-102-18 ■	E9-10-102-28 ■	E9-10-102-13 ■
Knob actuated	E9-10-122-18 ■	E9-10-122-28 ■	E9-10-122-13 ■

SPACER

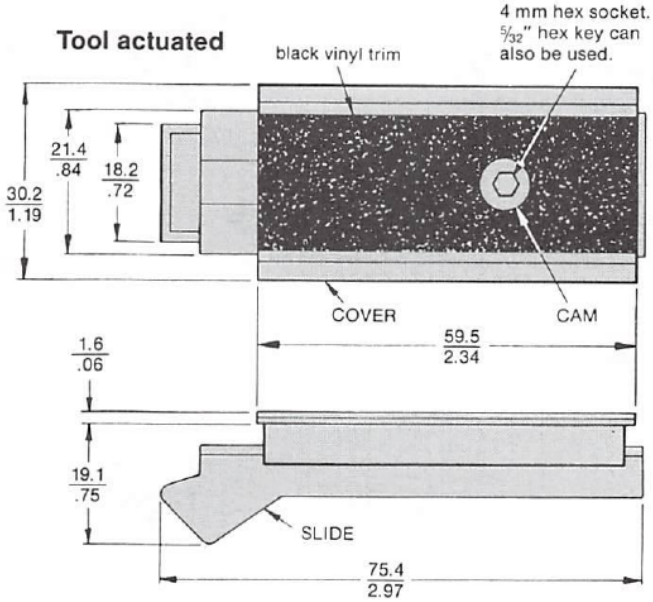


SPACER SELECTION TABLE

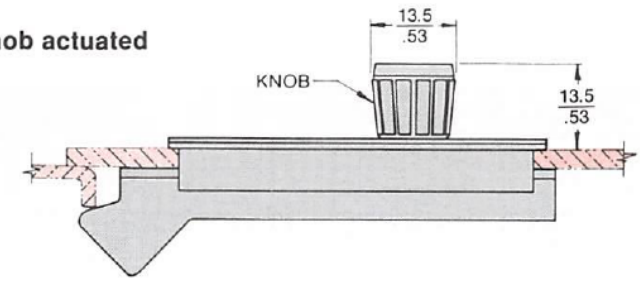
DOOR THICKNESS z		SPACER THICKNESS T	SPACER PART NUMBER
MIN.	MAX.		
0.79/.031	1.57/.062	1.60/.063	79-19-122-15 ■
1.60/.063	2.36/.093	0.81/.032	79-19-121-15 ■
2.39/.094	3.18/.125	SPACER NOT REQUIRED	

■ From stock, subject to prior sale.

Tool actuated



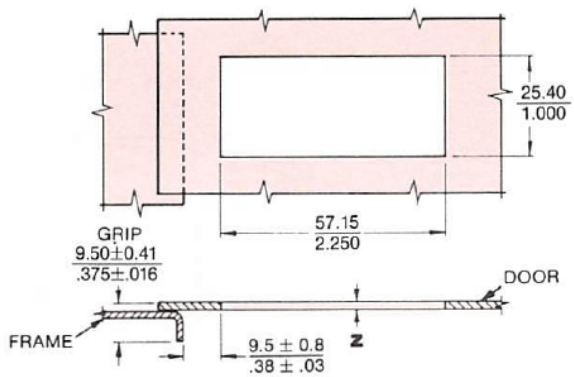
Knob actuated



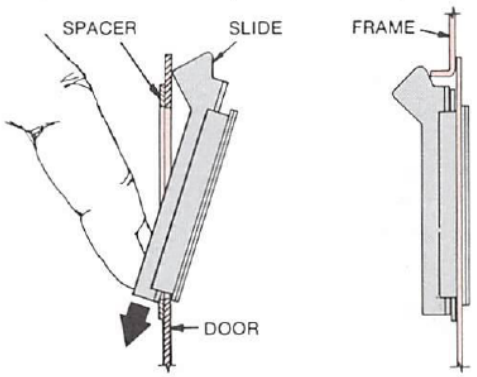
millimeter/inch millimeter / inch

Installation

1. Prepare door or panel.



2. Place back end of latch into hole in door. Pull slide back until assembly snaps into hole, then push slide forward until you hear a click. If spacer is used, hold it in place behind door or panel while installing latch.

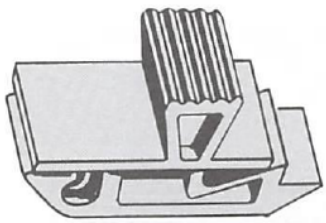


SHOWN ACTUAL SIZE

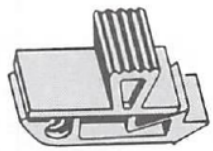
Slide Latch, Tab Style

- **Fast snap-in installation**
- **Slam latching**
- **Non-corrosive materials**

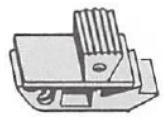




Series 30



Series 20



Series 10

Strength Guideline

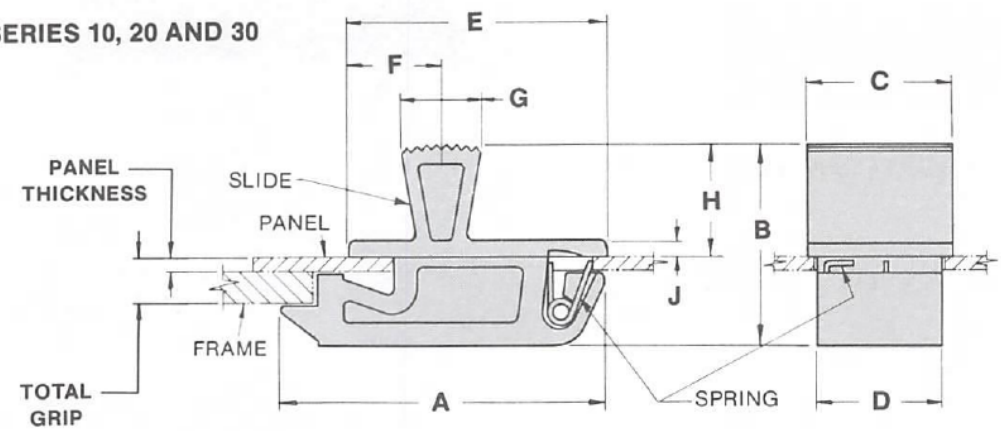
Maximum working load for:

10 SERIES — 22 N/5 lbs.

20 SERIES — 89 N/20 lbs.

30 SERIES — 133 N/30 lbs.

SERIES 10, 20 AND 30



MATERIAL and FINISH

LATCH BODY: acetal, black.

SPRING: 302 stainless steel, passivated.

millimeter
inch

millimeter/inch

Weight per 1000

10 SERIES = .5 kg/1 lb.

20 SERIES = 1.8 kg/4 lbs.

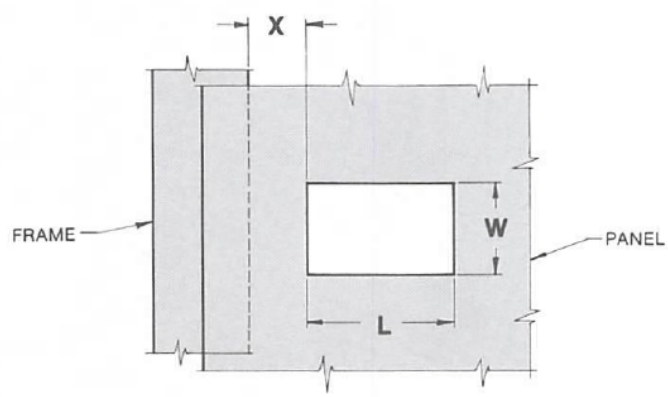
30 SERIES = 6.8 kg/15 lbs.

GRIP		DIMENSIONS									PART NUMBERS	SIZE	INSTALLATION		
PANEL THICKNESS	TOTAL GRIP	A	B	C	D	E	F	G	H	J			L	W	X
0.76 ± .08 .030 ±.003	2.54 ± 0.13 .100 ±.005	15.1 .59	11.1 .44	6.0 .23	4.4 .17	11.9 .47	4.4 .17	4.0 .16	5.6 .22	0.8 .03	A3-10-310-12■	Series 10	8.33 ± 0.05 .328 ±.002	4.57 ± 0.05 .180 ±.002	4.8 ± 0.8 .19 ±.03
1.02 ± 0.13 .040 ±.005	3.05 ± 0.13 .120 ±.005	22.2 .88	15.5 .61	9.5 .38	7.5 .30	17.9 .70	6.4 .25	5.6 .22	8.3 .33	1.2 .05	A3-20-412-12■	Series 20	12.70 ± 0.13 .500 ±.005	7.80 ± 0.05 .307 ±.002	6.3 ± 0.8 .25 ±.03
1.27 ± 0.13 .050 ±.005	4.83 ± 0.13 .190 ±.005	36.5 1.44	22.2 .88	16.3 .64	13.9 .55	28.6 1.13	10.3 .41	8.7 .34	12.7 .50	1.6 .06	A3-30-519-12■	Series 30	22.23 ± 0.13 .875 ±.005	14.27 ± 0.13 .562 ±.005	9.5 ± 0.8 .38 ±.03

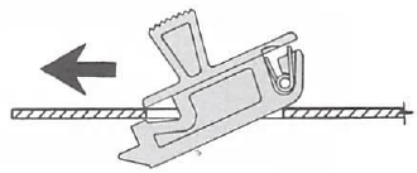
■ From stock, subject to prior sale.

INSTALLATION

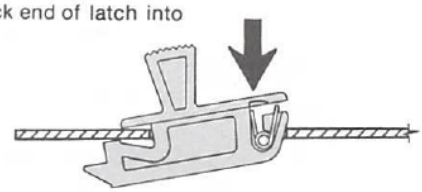
1. Prepare burr-free hole.



2. Slip front of latch through hole. Push forward.

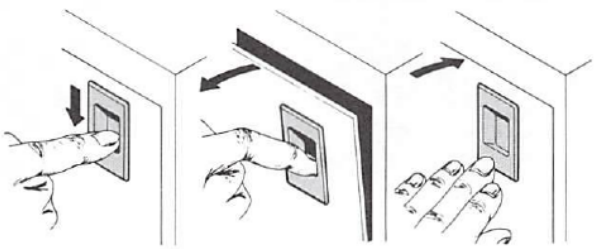


3. Snap back end of latch into position.

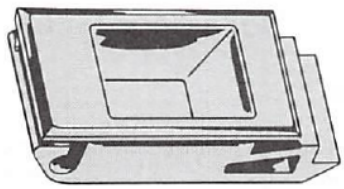


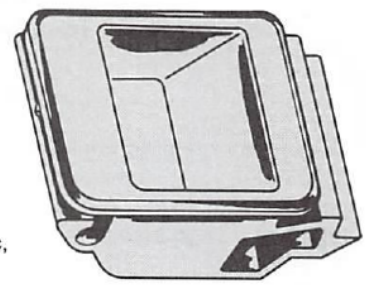
Slide Latch, Flush Style

- **Fast snap-in installation**
- **Slam latching**
- **Non-corrosive materials**
- **New style with deeper finger depression allows easier lifting**



SHOWN ¾ SIZE



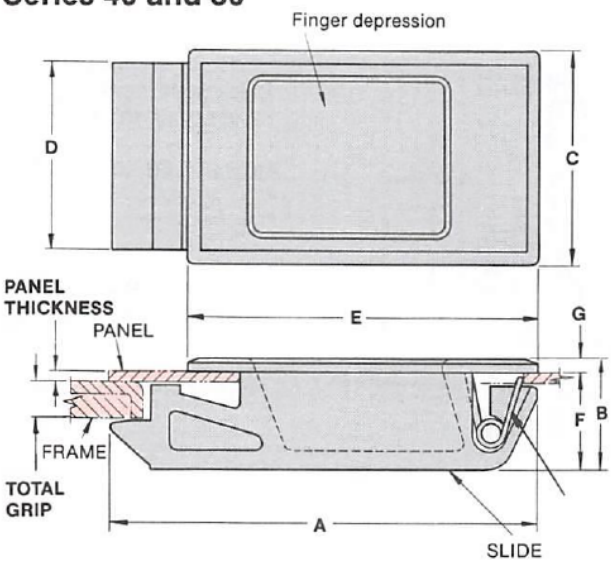


MATERIAL and FINISH
SLIDE: black polyester thermoplastic, textured. SPRING: 302 stainless steel, passivated.
SERIES 50 with deeper depression:
SLIDE: black ABS, textured.

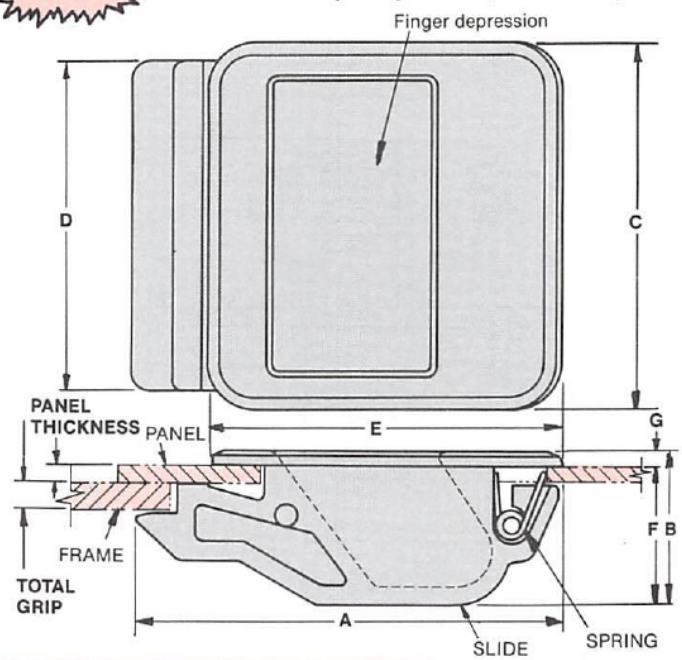
Weight per 1000
40 SERIES = 16.3 kg/36 lbs.
50 SERIES = 25.4 kg/ 56 lbs.

Strength Guideline
Maximum working load for:
40 SERIES — 178N/40 lbs.
50 SERIES — 222N/50 lbs.

Series 40 and 50



NEW Series 50 (deeper depression)*



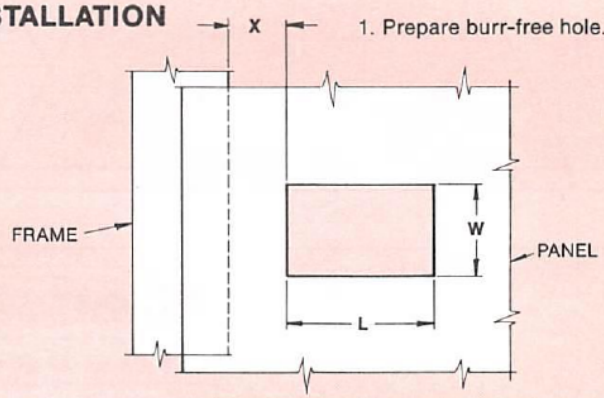
	PART NUMBER	SIZE	GRIP		DIMENSIONS							INSTALLATION		
			PANEL THICKNESS	TOTAL GRIP	A	B	C	D	E	F	G	L	W	X
	A3-40-625-12■	Series 40	1.52±0.13 .060±.005	6.35±0.13 .250±.005	57.2 2.23	14.7 .58	28.2 1.11	25.0 .98	46.8 1.84	12.7 .50	2.0 .08	38.10±0.13 1.500±.005	25.40±0.13 1.000±.005	12.7±0.8 .50±.03
	A3-50-925-12■	Series 50	2.29±0.13 .090±.005	6.35±0.13 .250±.005	57.2 2.23	14.7 .58	47.2 1.86	44.0 1.73	46.8 1.84	12.7 .50	2.0 .08	38.10±0.13 1.500±.005	44.45±0.13 1.750±.005	12.7±0.8 .50±.03
*	A3-99-122-12■	Series 50	2.29±0.13 .090±.005	6.35±0.13 .250±.005	57.2 2.23	20.7 .81	49.2 1.94	44.0 1.73	46.8 1.84	18.7 .74	2.0 .08	38.10±.013 1.500±.005	44.45±0.13 1.750±.005	12.7±0.8 .50±.03

millimeter / inch

millimeter/inch

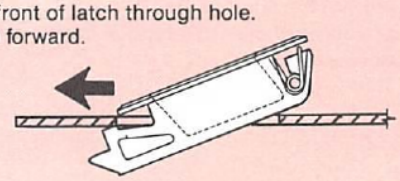
■ From stock subject to prior sale.

INSTALLATION



1. Prepare burr-free hole.

2. Slip front of latch through hole. Push forward.

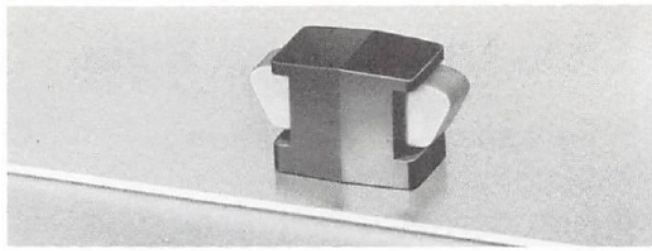


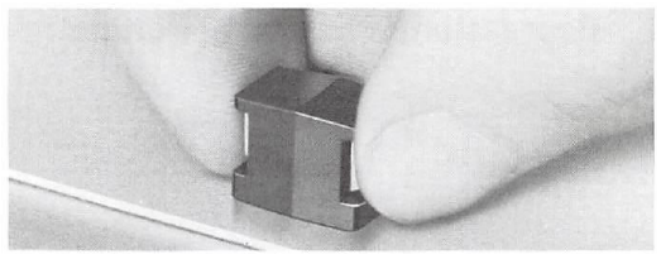
3. Snap back end of latch. into position



Squeeze Release

Squeeze tabs to open—Close door to latch

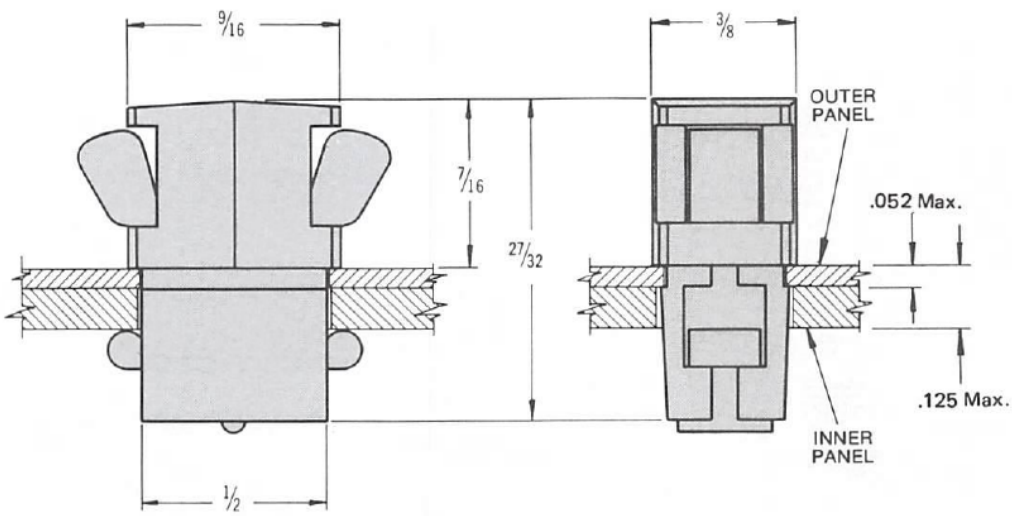




Need a tiny, slam-action latch that's almost weightless? To open your door or lid, you just pinch the squeeze tabs; takes only light pressure, yet holds positively. To close, just slam the lid. The Squeeze Release latches through a small punched hole in the frame.

Installation time is almost zero—just snap the latch into the outer panel . . . hand pressure alone will do the job. A pre-assembled two-piece fastener, the Squeeze Release comes in all black, or black with metallic grey squeeze tabs.

SPECIFICATIONS



SHOWN TWICE ACTUAL SIZE

PART NUMBERS
Black with metallic grey tabs: **60-10-101-11** ■

All black: **60-10-101-12** ■

■ From stock, subject to prior sale.

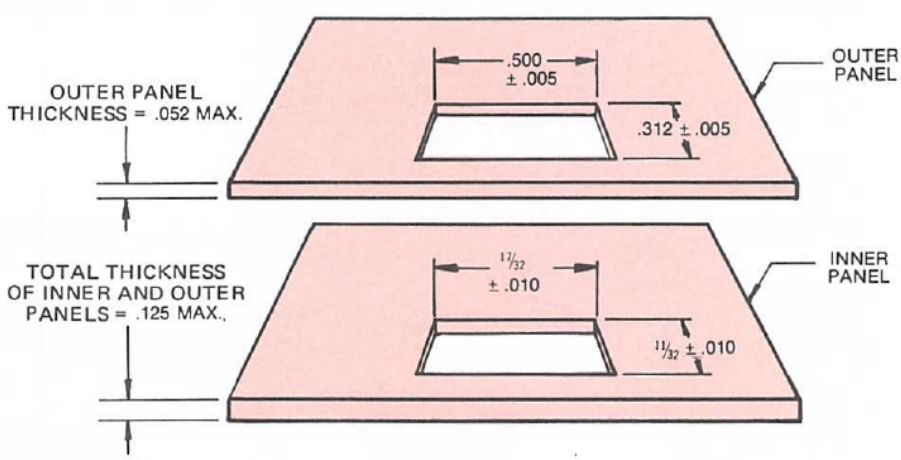
MATERIAL
CATCH and SHELL: acetal

Weight = 4.5 lbs. per M

PANEL PREPARATION

TO INSTALL - Prepare panel and frame as shown. Snap assembly into hole in outer panel.

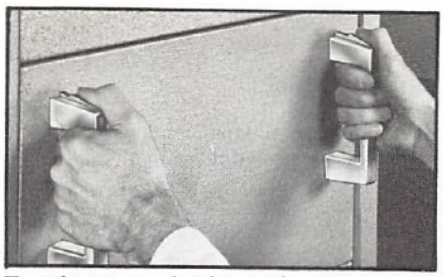
TO OPERATE - Squeeze tabs to release; pull panel open. To lock, just slam panel closed.



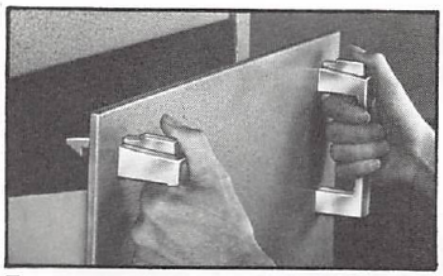
SOUTHCO® fasteners

HANDLE LATCH

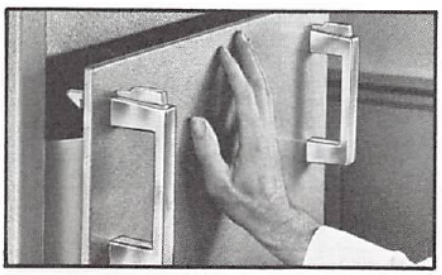
- Slam action latch
- Sturdy carry handle
- Cast aluminum construction



To release, push trigger down

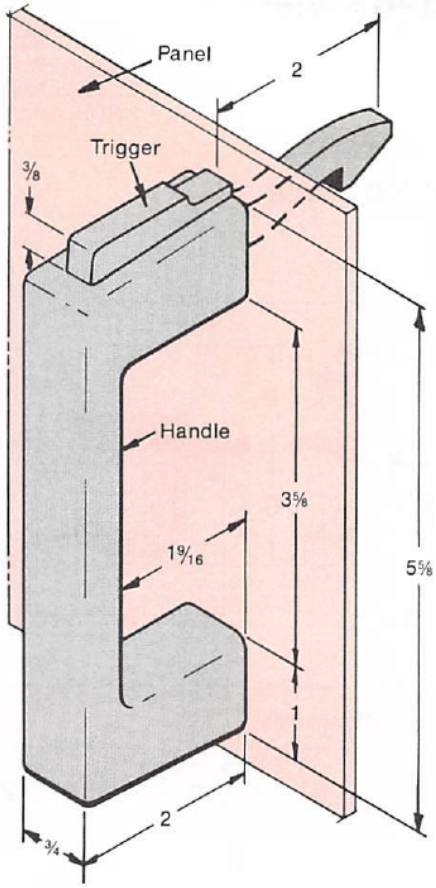


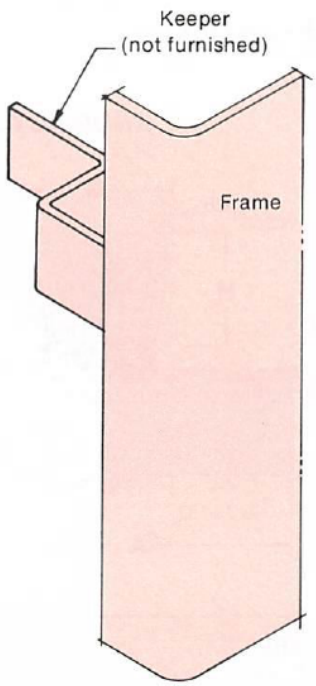
To open, pull out



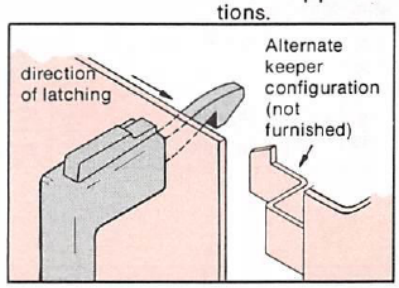
To latch, slam shut

½ ACTUAL SIZE





No. 89 may be used for sliding door applications.



MATERIAL and FINISH

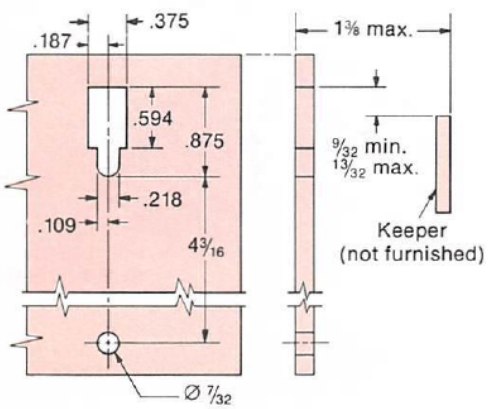
HANDLE and LATCH: A360 aluminum, satin brushed plus clear organic coating.
SPRING: stainless steel, passivated.

PART NUMBER
89-10-101-10 ■

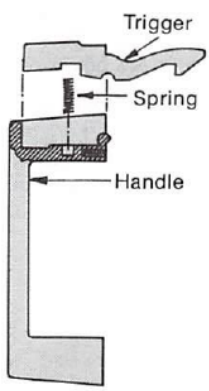
■ From stock, subject to prior sale.

INSTALLATION

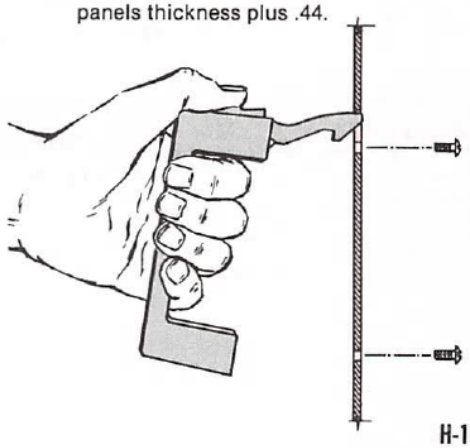
1. Prepare two holes in panel as shown. Keeper (not supplied) must be located as dimensioned.



2. Drop end of spring into recess. Seat trigger in slot at top of handle.



3. Hold in position with thumb as shown. Insert trigger through hole in panel and secure handle with two No. 10-32. Machine screws (not furnished). Maximum screw length equals panels thickness plus .44.



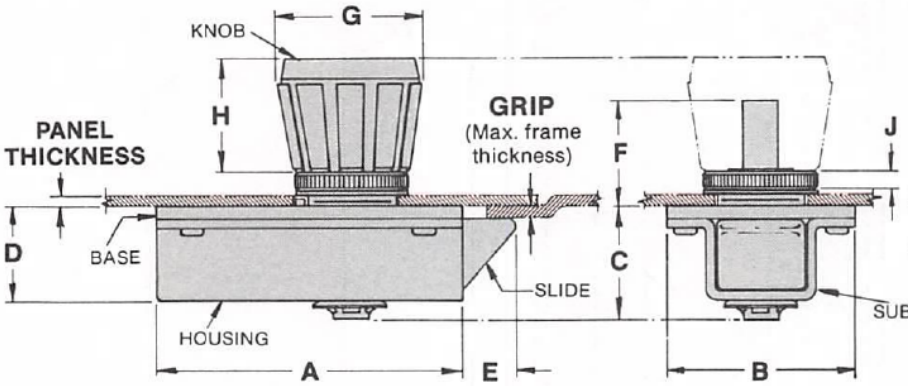
Slam Latch

- ¼-turn to open—slam to close
- Hand or tool actuated styles
- Simple installation
- Two sizes

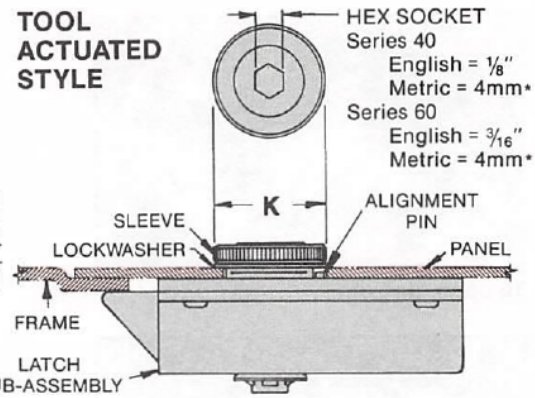
MATERIAL and FINISH

HOUSING: 1010 steel, zinc plated.
SLIDE and PINION: die cast zinc, black organic coating.
BASE: die cast zinc with chemical protective coating.
SPRING: 302 stainless steel, passivated.
RETAINER and LOCKWASHER: spring steel, DACROTIZED†.
SLEEVE: low carbon steel, black organic coating.
KNOB: nylon, black.

KNOB ACTUATED STYLE



TOOL ACTUATED STYLE

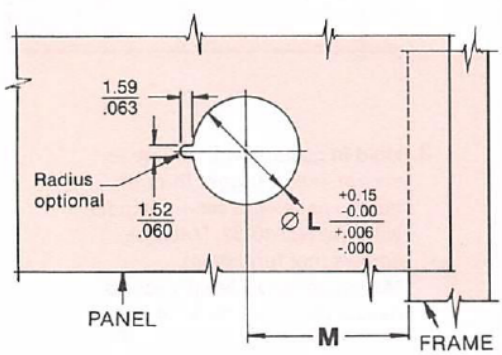


Hex tool actuated style is dimensionally identical to knob style except as shown

* A 5/32 hex key can be used with a 4mm hex socket.

Panel Thickness Min.	Panel Thickness Max.	GRIP (Max. frame thickness)	Dimensions A	B	C	D	E	F	G	H	J	K	Part Numbers Knob actuated style	Tool actuated style English (inch) hex socket	Tool actuated style Metric hex socket	Series
0.9 / .036	3.18 / .125	1.59/.063	34.9 / 1.38	23.0 / .91	13.5/.53	11.1/.44	6.4 / .25	13.9 / .55	15.1 / .59	15.1 / .59	2.4 / .09	14.3 / .56	A6-40-**112**-10 ■	A6-40-**212**-10 ■	A6-40-**312**-10 ■	40
		3.18/.125			15.1/.59	12.4/.49							A6-40-**114**-10 ■	A6-40-**214**-10 ■	A6-40-**314**-10 ■	
0.9 / .036	4.76 / .188	2.38/.094	52.4 / 2.06	31.8 / 1.25	19.1/.75	16.1/.63	9.5 / .38	18.3 / .72	24.6 / .97	19.1 / .75	3.2 / .13	19.1 / .75	A6-60-**113**-10 ■	A6-60-**213**-10 ■	A6-60-**313**-10 ■	60
		4.76/.188			21.4/.84	18.5/.73							A6-60-**116**-10 ■	A6-60-**216**-10 ■	A6-60-**316**-10 ■	

■ From stock, subject to prior sale.



Series	Ø L	M	Wrench Part No.
40	11.10 / .437	15.88 ± 1.59 / .625 ± .063	A6-0-15640-11 ■
60	16.00 / .625	23.81 ± 2.38 / .938 ± .094	A6-0-15641-11 ■

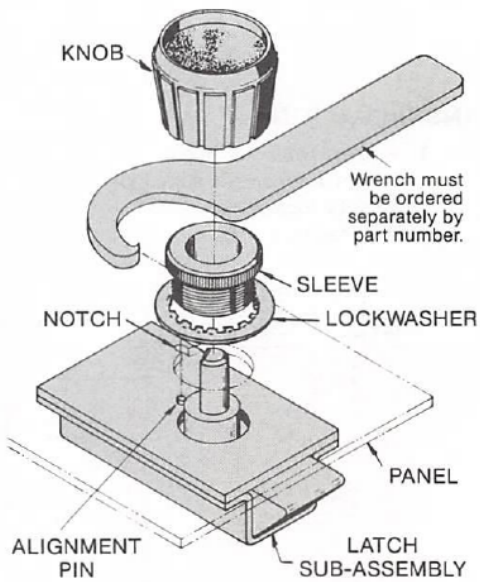
■ From stock, subject to prior sale.

INSTALLATION

Prepare hole in panel as shown.

Pass shaft of latch through hole from back side of panel, fit alignment pin into notch, apply lockwasher and thread sleeve over shaft from front side of panel. Note: *alignment pin is for proper orientation and alignment of latch during installation only. When tightening sleeve, be sure to hold latch firmly in position.*

This completes installation of tool actuated style. For knob style, orient shaped hole in knob with flat on shaft and press knob fully onto shaft.

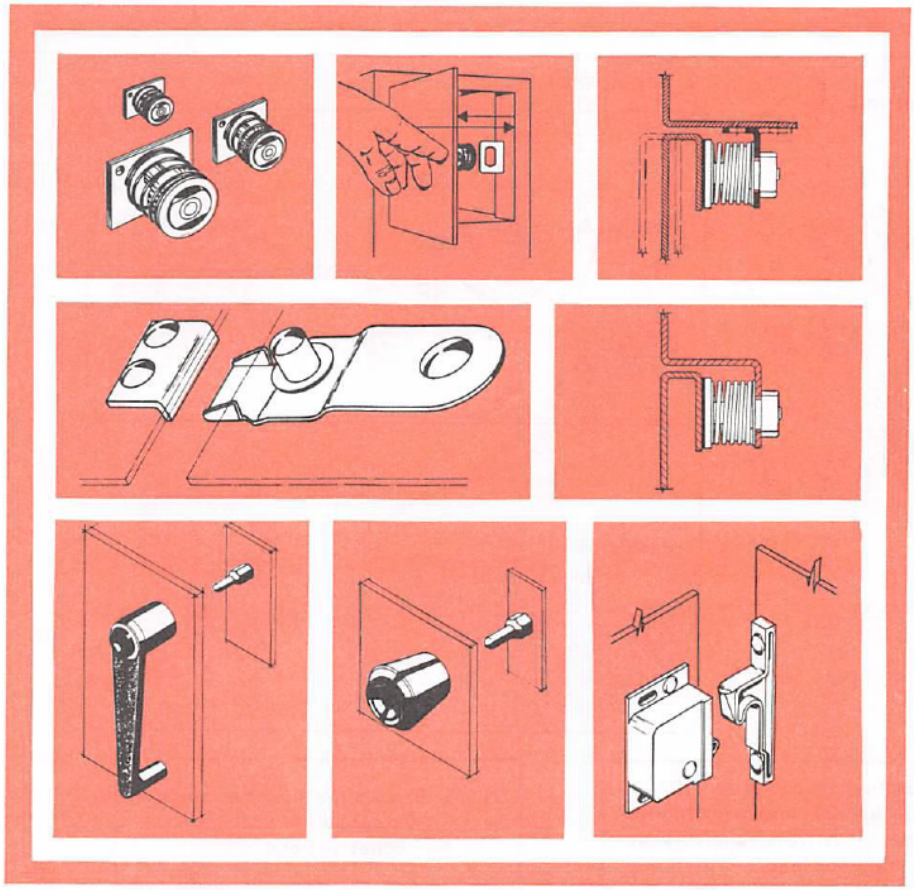


Section HH

Push-to-release Slam Latches

contents guide | **page**

No. A4 Push-release Latch	HH-6 & HH-7
No. C3 Grabber Door Latch	HH-5
No. E4 Touch Latch, 100 series	HH-2
No. E4 Touch Latch, 200 series	HH-3
No. 33 Push-Release Slam Latch	HH-10
No. 34 Push-Button Slam Latch, Button Style	HH-8
No. 34 Push-Button Slam Latch, Knob Style	HH-9



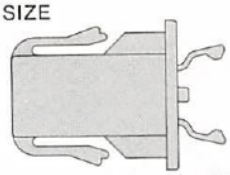
Series 100

Touch Latch

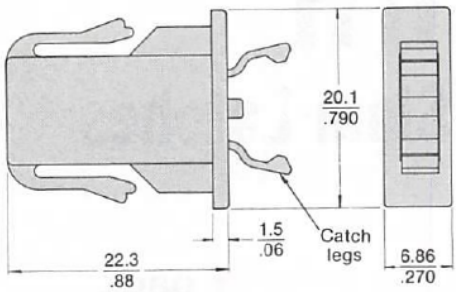
Just press the door to latch or unlatch.

- Latch *snaps* into the frame.
- Self-adhering keeper.
- Nothing shows outside.

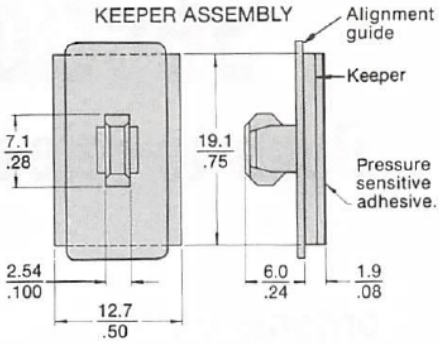
ACTUAL SIZE



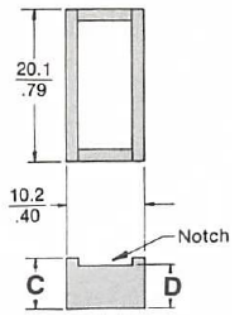
LATCH



KEEPER ASSEMBLY



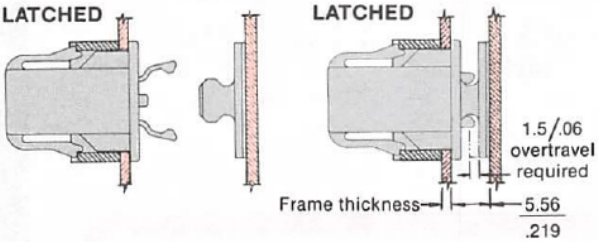
SPACER



MATERIAL and FINISH

LEAF SPRING: beryllium copper.
SPRING: 302 stainless steel, passivated.
PRESSURE SENSITIVE TAPE: neoprene foam with acrylic adhesive. ALIGNMENT GUIDE: acetal, white.
BALL: chrome steel. OTHER PARTS: acetal, black.

UNLATCHED **LATCHED**



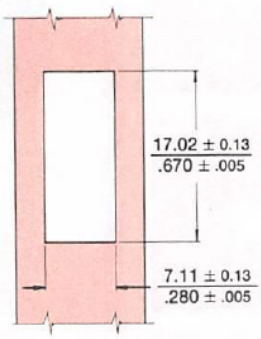
Strength Guideline

Maximum latch tensile — 15.6 N/3.50 lbs.

When your frame thickness is:		Order assembly Part No:	Install spacer in position:	Spacer thickness	
Min.	Max.			C	D
0.76/.030	1.02/.040	E4-10-102-10 ■	A	7.49 .295	6.86 .270
1.40/.055	1.65/.065		B		
1.78/.070	2.03/.080	E4-10-103-10 ■	A	6.48 .255	5.33 .210
2.92/.115	3.18/.125		B		
4.62/.182	4.88/.192	E4-10-104-10 ■	A	3.63 .143	2.03 .080
6.22/.245	6.48/.255		B		
8.13/.320	8.64/.340	E4-10-101-10 ■	Spacer not required		

■ From stock, subject to prior sale.

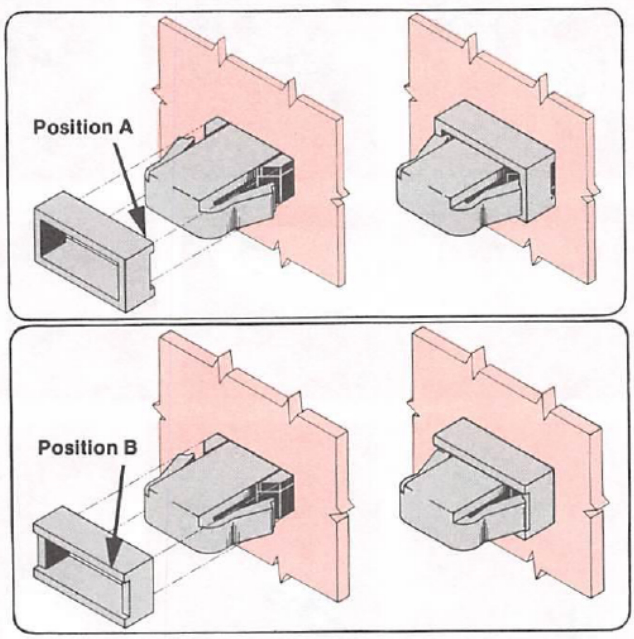
1. Prepare frame. Snap latch into place.



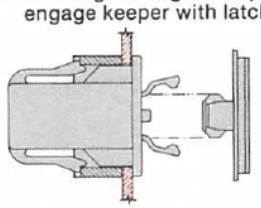
millimeter
inch

millimeter/inch

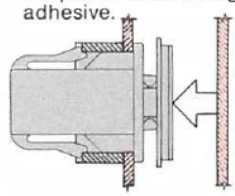
2. Install spacer.



3. With alignment guide in place, engage keeper with latch.



4. Peel protective backing from keeper. Close door against adhesive.



5. Remove alignment guide from keeper and discard.



NOTE: Self-adhesive keepers are designed to function under intermittent break-away loads. Do not subject keeper to a continuous load.

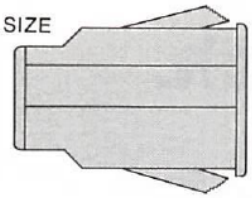
NOTE: Be sure the mounting surface is clean and capable of retaining a satisfactory adhesive bond.

Touch Latch

Just press the door to latch or unlatch.

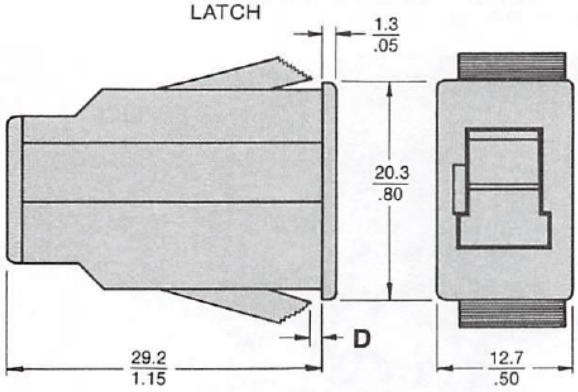
Series 200

ACTUAL SIZE

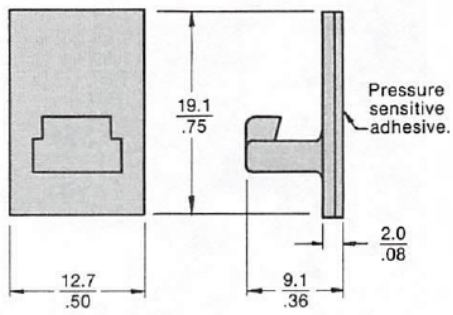


- **Latch *snaps* into the frame.**
- **Self-adhering keeper.**
- **Nothing shows outside.**

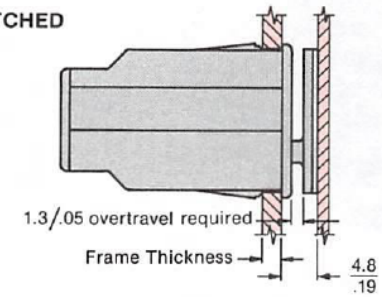
LATCH



KEEPER



LATCHED



MATERIAL and FINISH

SPRING: 302 stainless steel, passivated.
PRESSURE SENSITIVE TAPE: neoprene foam with acrylic adhesive.
ALL OTHER PARTS: acetal, black.

Strength Guideline

Average latch tensile with:
standard adhesive keeper—48 N/11 lbs.
integrally molded keeper—120 N/27 lbs.

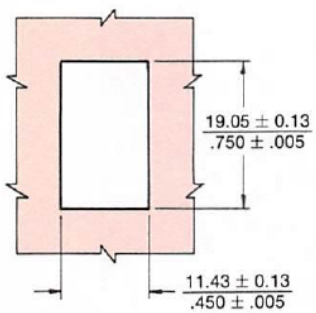
Frame Thickness		D	Part Number
Min.	Max.		
1.0/.04	3.0/.12	0.89/.035	E4-10-201-10 ■
3.0/.12	5.0/.20	2.92/.115	E4-10-202-10 ■
5.0/.20	7.1/.28	4.95/.195	E4-10-203-10 ■

■ From stock, subject to prior sale.

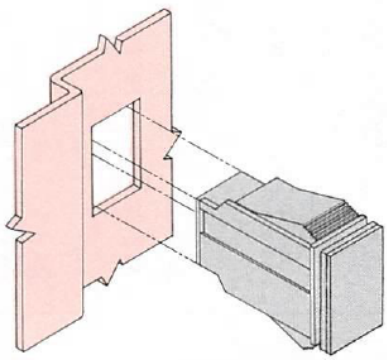
millimeter/inch

millimeter
inch

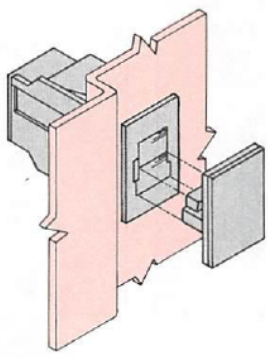
1. Prepare frame.



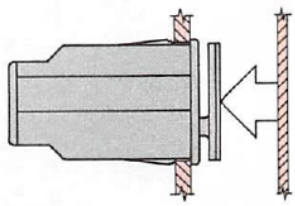
2. Snap latch into place.



3. Re-engage keeper with latch.



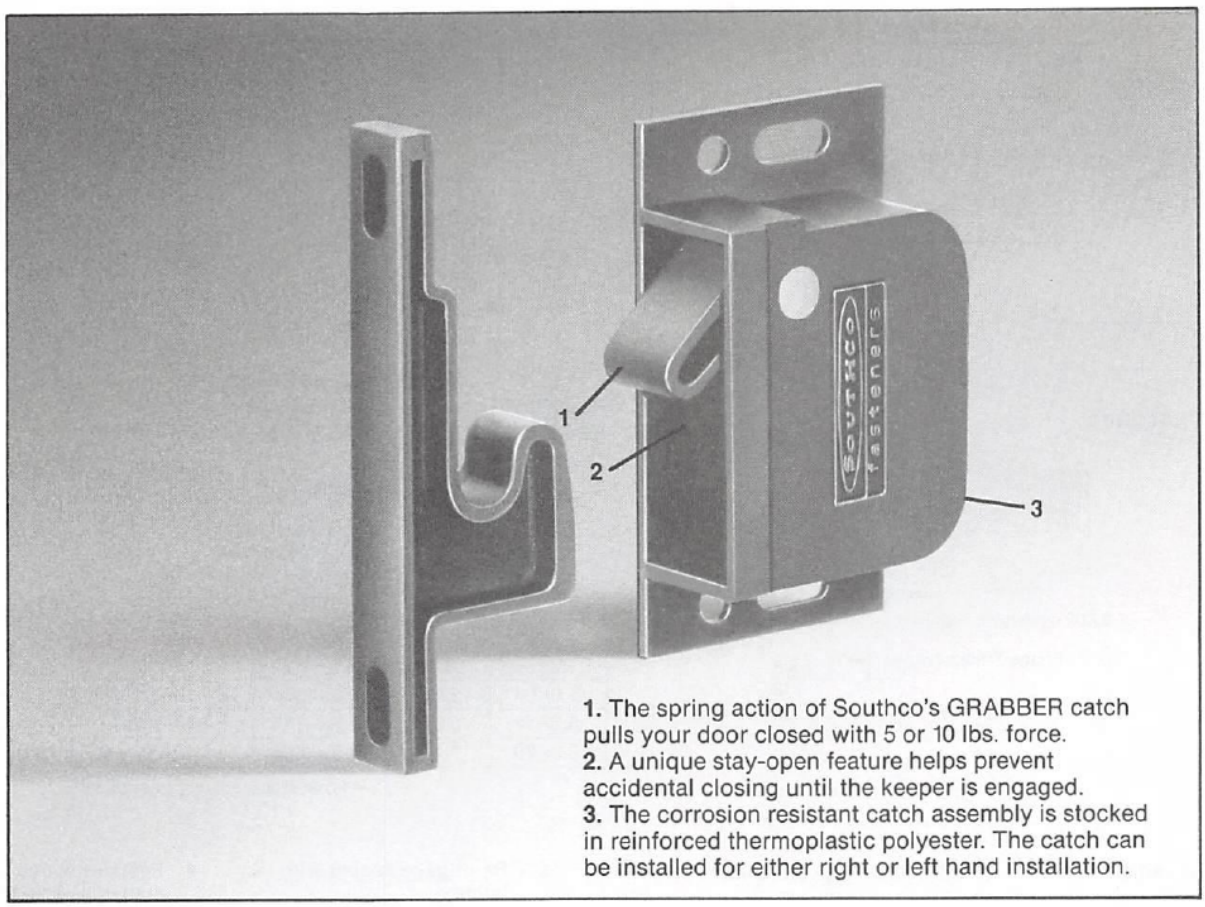
4. Peel protective backing from keeper. Close door against adhesive.



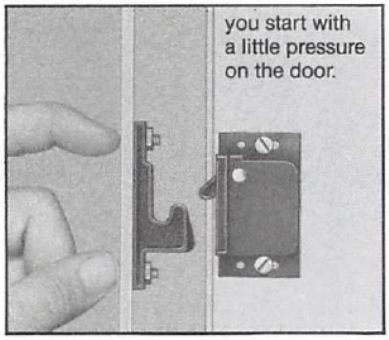
NOTE: Self-adhesive keepers are designed to function under intermittent break-away loads. Do not subject keeper to a continuous load.

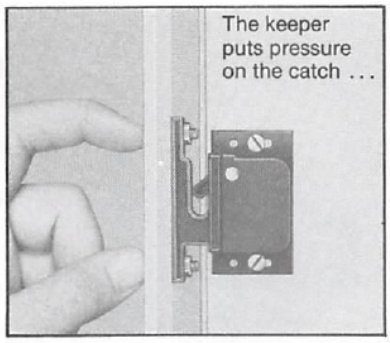
NOTE: Be sure the mounting surface is clean and capable of retaining a satisfactory adhesive bond.

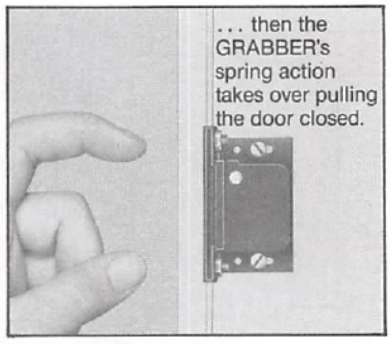
Southco's GRABBER door catch. One little push: SNAP, it pulls shut!



1. The spring action of Southco's GRABBER catch pulls your door closed with 5 or 10 lbs. force.
2. A unique stay-open feature helps prevent accidental closing until the keeper is engaged.
3. The corrosion resistant catch assembly is stocked in reinforced thermoplastic polyester. The catch can be installed for either right or left hand installation.







SOUTHCO®
fasteners

GRABBER door catch

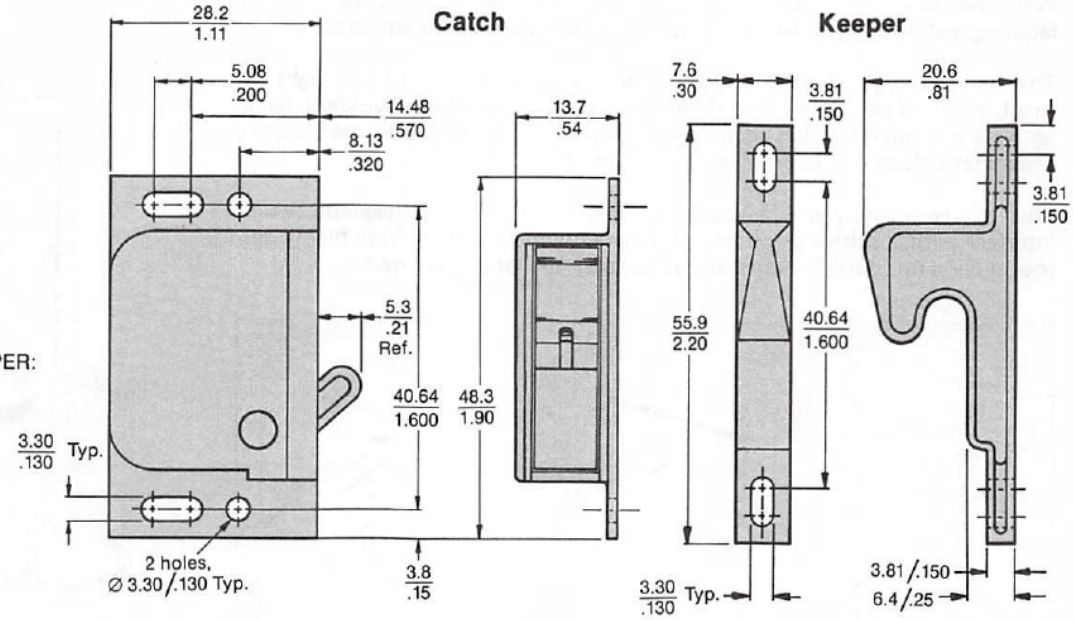
Latches only with keeper engaged

- **Concealed when closed**
- **Choice of two pull-up forces**

It doesn't just hold the door shut: it pulls it shut.

MATERIAL and FINISH
SPRING: 302 stainless steel, passivated (for 22 N/5 lbs. pull-up latches) or black organic coating (for 44 N/10 lbs. pull-up latches).
RIVET: 5056 aluminum, natural,
CATCH SUPPORT, HOUSING, SPRING SUPPORT, PAWL and KEEPER: glass fiber reinforced nylon, black.

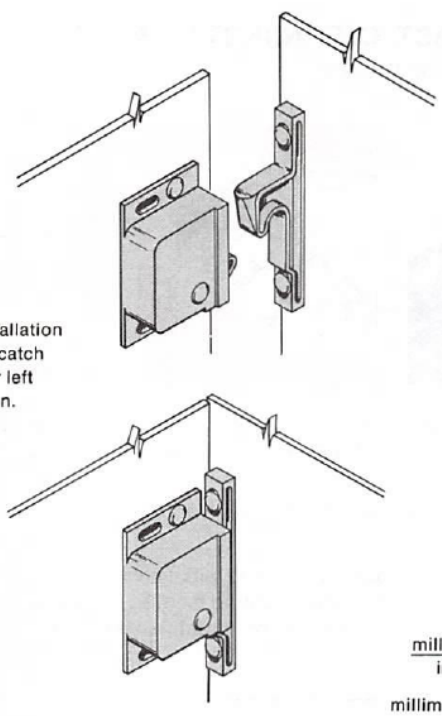
Catch and keeper are packaged together.



Catch and keeper actual size.

Approximate Pull-up Force	Part Number
44 N/10 lbs.	C3-**10** ■
22 N/5 lbs.	C3-**05** ■

■ From stock, subject to prior sale.

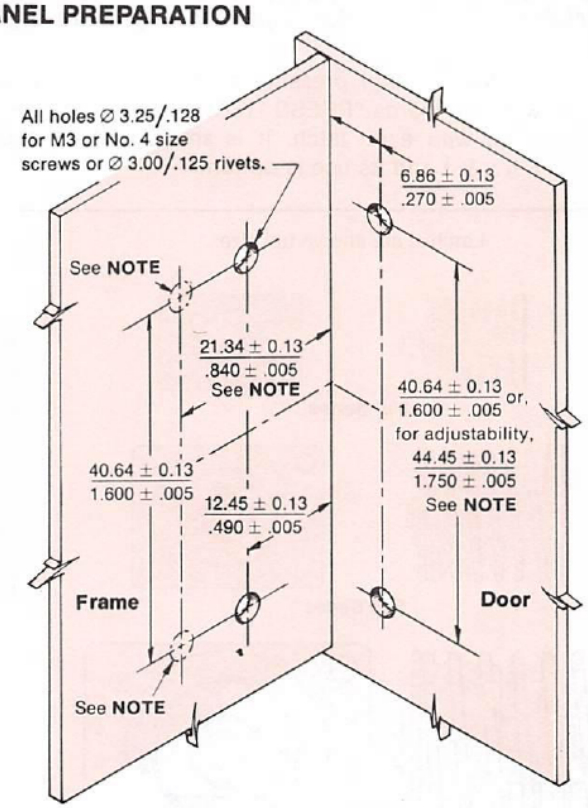


Right side installation shown. Invert catch and keeper for left side installation.

millimeter
inch

millimeter/inch

PANEL PREPARATION



Minimum distance from frame (or surface on which catch sub-assembly is mounted) to centerline of door hinge is 152.4 mm/6 in.

NOTE: These holes and dimensions are used only if adjustability through the use of slotted holes in catch and keeper is desired.

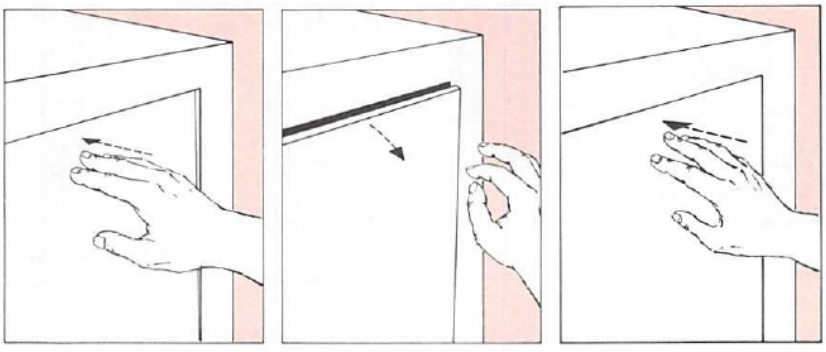
Push-release Latch

Non-magnetic invisible latch—in three sizes

Push the door to unlatch — push the door to latch. Fast acting, positive latching, yet nothing is visible on the outside surface of your equipment.

The A4 is offered in three selectively scaled sizes; there's one just right for small, medium or larger sized doors. It is shipped to you individually packaged as a complete latch including a keeper and a small pressure-sensitive decal that tells your customer to "Press here to open".

This is a completely mechanically operated latch. It's non-magnetic (won't interfere with sensitive electronic or tape equipment), made from highly corrosion-resistant, durable materials, quick, easy to install and operate.

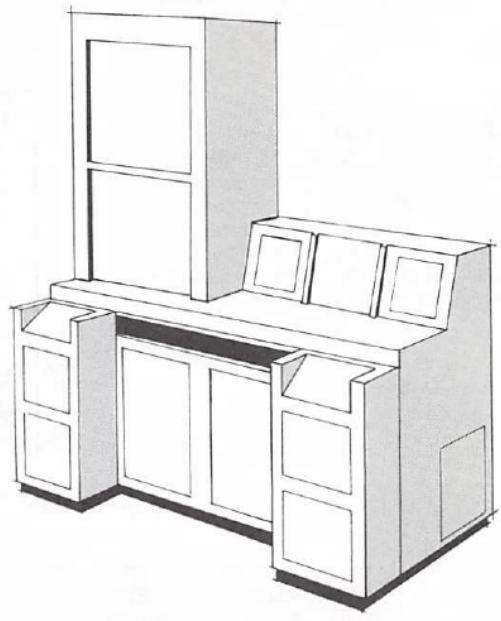


Press in on door... it's unlatched.

Relax pressure... door pops open.

Push door closed... it's latched.

A clear acetate pressure-sensitive decal, printed with the words "PRESS HERE TO OPEN", is supplied with each latch. It is small, inconspicuous (¾ x ⅝) and its use is optional.

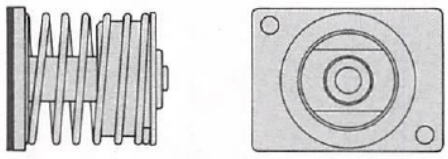


The A4 latch is invisible from the outside of your cabinet. Self-adhesive attachment eliminates need for mounting hardware. You won't even need a pull or handle; the A4 latch itself pushes the door open.

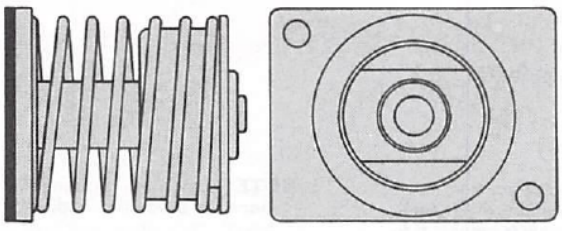
Latches are shown full size



300 Series



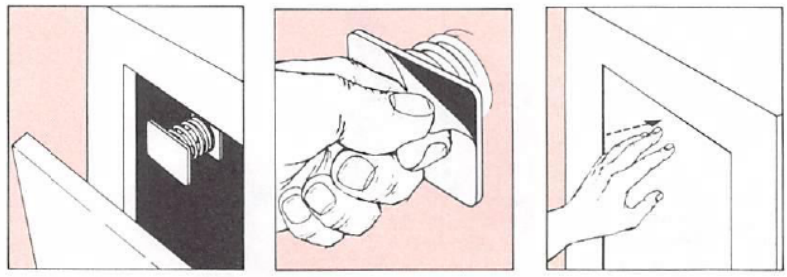
500 Series



700 Series

FAST, CLEAN INSTALLATION

Without screws, bolts or rivets



Engage latch in keeper or frame hole.

Peel protective paper from adhesive.

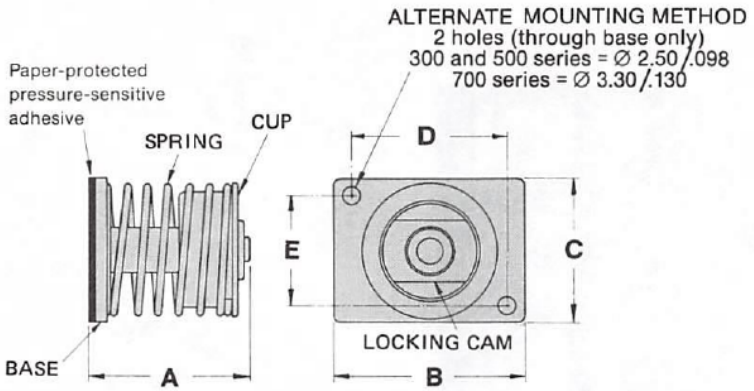
Close door against adhesive. That's all.

See other side for installation instructions.

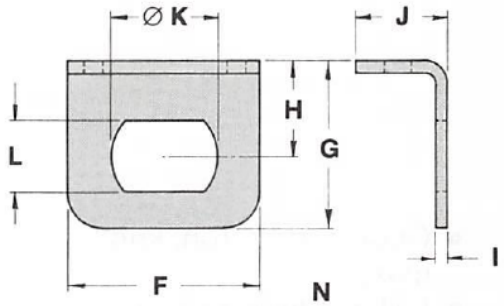
Each latch base is provided with two holes to permit an alternate mounting method (screws or rivets) should this type of mounting be preferred.

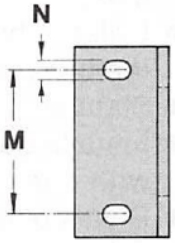
Push-release Latch Specifications

LATCH

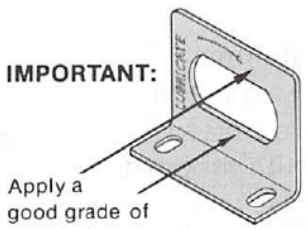


KEEPER





IMPORTANT:



Apply a good grade of non-drying grease to both sides of keeper at points indicated by arrows.

MATERIAL and FINISH

BASE: die cast zinc, black organic coating.
SPRING: 302 stainless steel, black oxide.
CUP WASHER: acetal, black.
CAM: TFE reinforced polycarbonate, black.
KEEPER: 1010 steel, bright nickel plate.

Material Flammability Guideline
All series: UL 94HB

Latch is shipped one unit (latch assembly, keeper and pressure-sensitive label) per package.

DIMENSIONS														PART NUMBERS	Series
LATCH					KEEPER										
A	B	C	D	E	F	G	H	I	J	Ø K	L	M	N		
15.1 / .59	19.1 / .75	12.7 / .50	14.3 / .56	7.9 / .31	19.1 / .75	15.1 / .59	8.7 / .34	1.3 / .05	7.1 / .28	9.5 / .38	6.4 / .25	12.7 / .50	2.49 / .098	A4-10-301-20 ■	300
21.4 / .84	25.4 / 1.00	19.1 / .75	20.6 / .81	14.3 / .56	25.4 / 1.00	22.2 / .88	12.7 / .50	1.5 / .06	10.3 / .41	14.3 / .56	9.5 / .38	19.1 / .75	3.30 / .130	A4-10-501-20 ■	500
30.2 / 1.19	38.1 / 1.50	28.6 / 1.13	30.2 / 1.19	20.6 / .81	38.1 / 1.50	33.3 / 1.31	19.1 / .75	2.4 / .09	15.1 / .59	21.4 / .84	14.3 / .56	28.6 / 1.15	4.90 / .193	A4-10-701-20 ■	700

INSTALLATION DIMENSIONS						
O	P	Q	R	S	T	U
6.7 / .27	14.3 / .56	0.5 / .02	2.4 / .09	3.2 / .13	11.1 / .44	1.6 / .06
9.5 / .38	20.6 / .81	0.8 / .03	3.6 / .14	4.8 / .19	15.9 / .63	2.4 / .09
12.7 / .50	29.9 / 1.16	1.2 / .05	5.6 / .22	7.1 / .28	22.2 / .88	3.6 / .14

■ From stock, subject to prior sale.

INSTALLATION

NOTE: Be sure the mounting surface is clean and capable of retaining a satisfactory adhesive bond.

NOTE: Self-adhesive mounted latches are designed to function under intermittent break-away loads. Use alternate mounting method for continuous load applications.

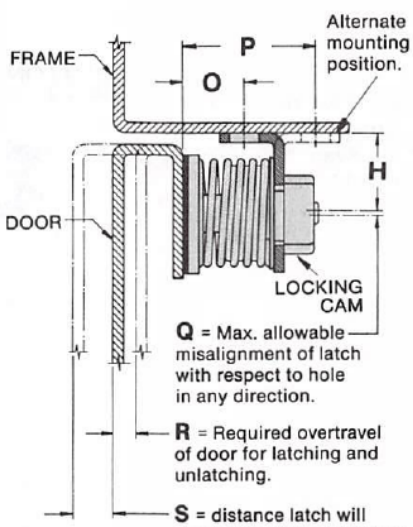
To mount keeper, refer to the drawing (right) and the chart (above) for locating dimensions. Attach keeper to frame with screws (not supplied). Keeper mounting holes are elongated to permit nominal adjustment. Keeper may be mounted in either of two positions (see drawing, near right).

Engage latch in keeper (or slot in frame — see alternate preparation, far right) by aligning locking cam with keeper slot, then pressing inward against latch base. Locking cam will rotate 90° to catch behind keeper. Center latch in keeper within allowance "Q" (see table above) and visually align edges of latch base parallel with edges of keeper.

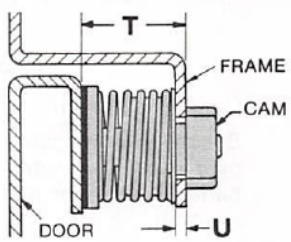
Remove protective paper from latch base (do not touch adhesive). Check that you have not moved latch in keeper — if so, carefully realign. Close door gently against adhesive, then press firmly inward; latch will adhere in proper position to inside door surface.

Pressure-sensitive decal may be affixed to front side of door, opposite the latch assembly, to indicate location of latch and method of operation.

Using keeper supplied



With latch engaging hole in frame



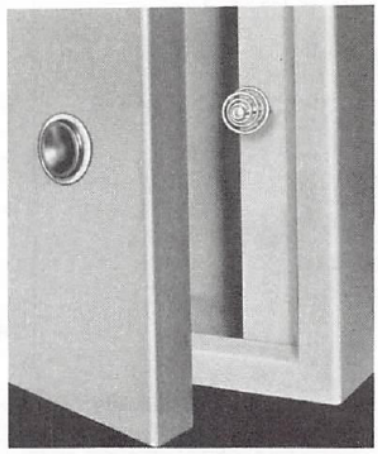
If you prepare cabinet frame to receive latch be sure:

1. With door closed, your distance **T** is same as in chart.
2. Your frame thickness is no greater than **U** dim.
3. The frame surface receiving the latch is *smooth* and *hard*.

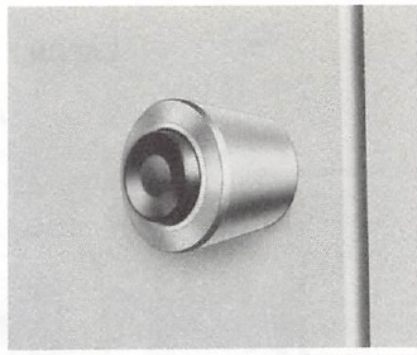
Hole in frame may be dimensioned the same as for keeper (see dwg. above), or simply a slot **L** dim. wide of any length ≥ **K** dim. Hole or slot may be positioned 90° from position shown without affecting latch mounting or performance.

Push-Button Slam Latches

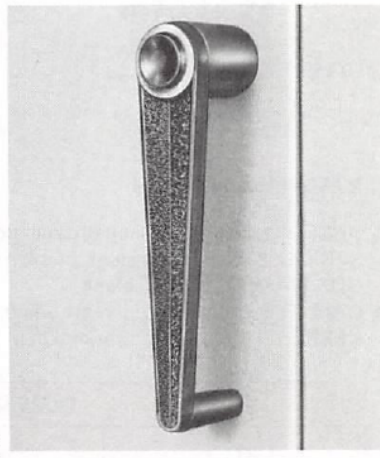
- Choice of button, knob or handle style
- Unlatch by pressing the button
- Slam action latching
- Installs quickly in panel with one or two holes
- Styles blend with modern cabinet designs



button style

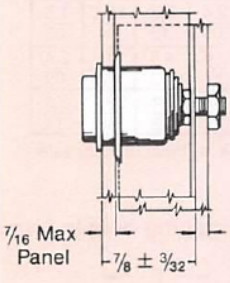


knob style



handle style

button style



PANEL PREPARATION

NOTE: Mounting surface for stud assembly must be located 7/8" ± 3/32" behind front surface of outer panel.

INSTALLATION

Prepare panel and frame as shown.

Secure button assembly in panel by pressing retainer over shank of button housing, seating firmly against panel. A retainer installation tool is available—order separately by part number 34-23-101-11 ■

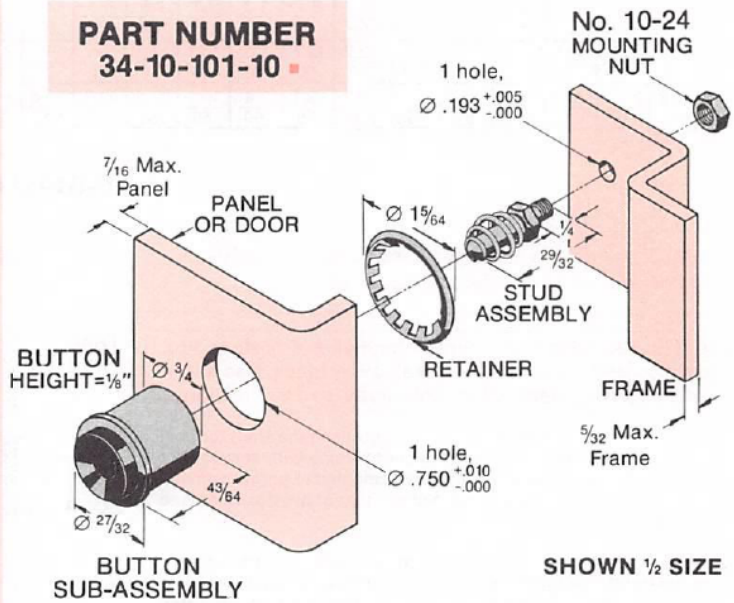
No. 10 hex nut is provided to secure stud assembly to frame.

NOTE: On hinged doors, minimum mounting distance from ℄ hinge to ℄ fastener = 6"

■ From stock, subject to prior sale.

Latch is shipped unassembled, one assembly per package.

PART NUMBER
34-10-101-10 ■



SHOWN ½ SIZE

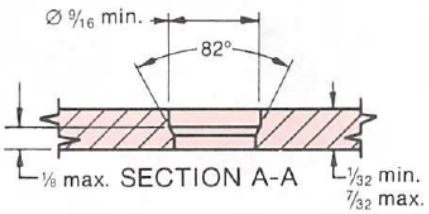
MATERIAL and FINISH

BUTTON: acetal, black.
SHELL: aluminum, polished.
STUD: 12L14 steel, zinc plated plus yellow chromate dip.
RETAINER: spring steel, zinc plated.
MOUNTING NUT: steel, DACROTIZED†.
WASHERS: 1064 steel, zinc plated plus bright chromate dip.
SPRINGS: music wire (1090 steel), zinc plated plus yellow chromate dip.

Push-Button Slam Latches

knob style

PANEL PREPARATION



INSTALLATION

Prepare panel as shown and attach knob to panel with threaded sleeve. Attach stud to frame with No. 6-32 machine screw.

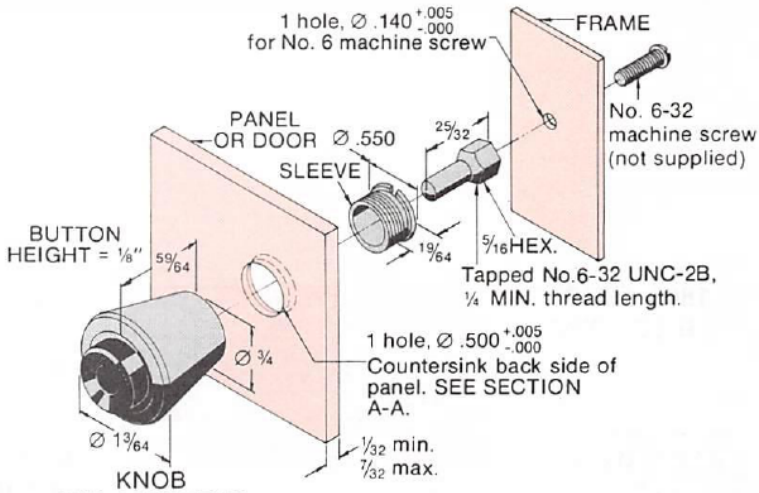
Note—panel must abut frame or striker plate when in closed position.

MATERIAL and FINISH

BUTTON: acetal, black.
KNOB: 6262 aluminum (see table for finish).
STUD; 12L14 steel, zinc plated plus yellow chromate dip.
SLEEVE and RING: low carbon steel, zinc plated plus bright chromate dip.
WASHERS: 1064 steel, zinc plated plus bright chromate dip.
SPRINGS: music wire (1090 steel), zinc plated plus yellow chromate dip.

Latch is shipped unassembled, one assembly per package.

PART NUMBERS		
Aluminum, bright anodize	Aluminum, natural	Aluminum, black anodize
34-10-201-10 ■	**34-10-201-20** ■	**34-10-201-30** ■

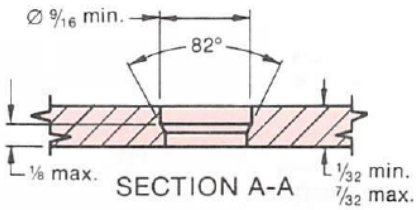


SHOWN ½ SIZE

NOTE: On hinged doors, minimum mounting distance from ℄ hinge to ℄ fastener = 6½"

handle style

PANEL PREPARATION



INSTALLATION

Prepare panel and frame (or striker) as shown.

Secure top post of handle with sleeve; bottom post with No. 10-24, flat head machine screw Note: handle is not tapped—machine screw will form its own threads.

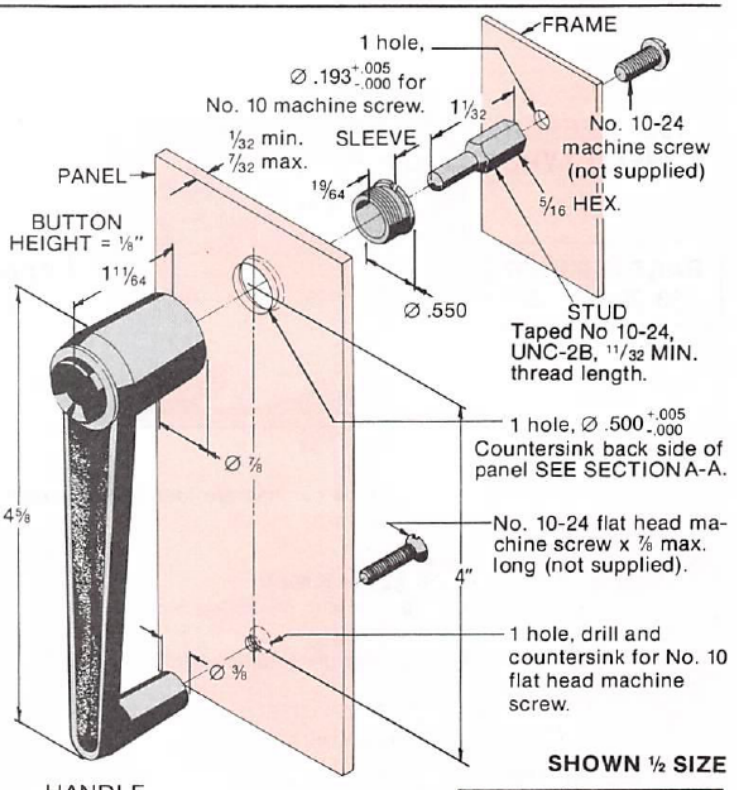
Fasten stud to frame with No. 10-24 machine screw.

Note — panel must abut frame or striker plate when in closed position.

MATERIAL and FINISH

BUTTON: acetal, black.
HANDLE: ABS, black.
STUD: 12L14 steel, zinc plated plus yellow chromate dip.
SLEEVE and BUSHING: low carbon steel, zinc plated plus bright chromate dip.
SHELL: die cast zinc, bright chrome plate.
WASHERS: 1064 steel, zinc plated plus bright chromate dip.
SPRINGS: music wire (1090 steel), zinc plated plus yellow chromate dip.

Latch is shipped unassembled, one assembly per package.



SHOWN ½ SIZE

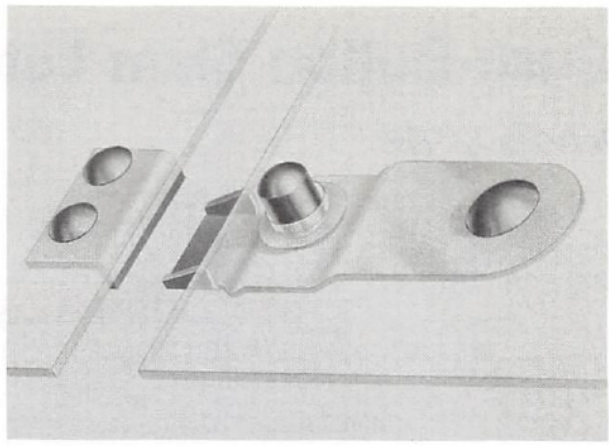
NOTE: On hinged doors, minimum mounting distance from ℄ hinge to ℄ fastener = 9"

PART NUMBER
34-10-301-10 ■

■ From stock, subject to prior sale.

PUSH-RELEASE CATCH

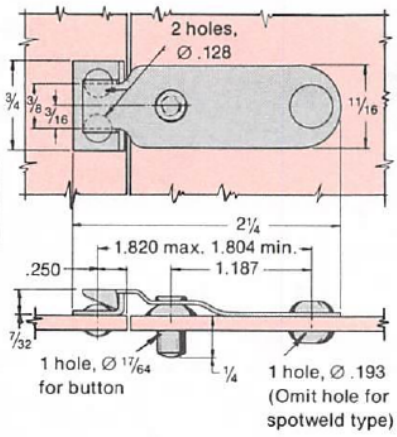
- Activated by the push of a button
- Lightweight
- Attached by either riveting or welding
- Mount latch and keeper at right angles or parallel



ACTUAL SIZE

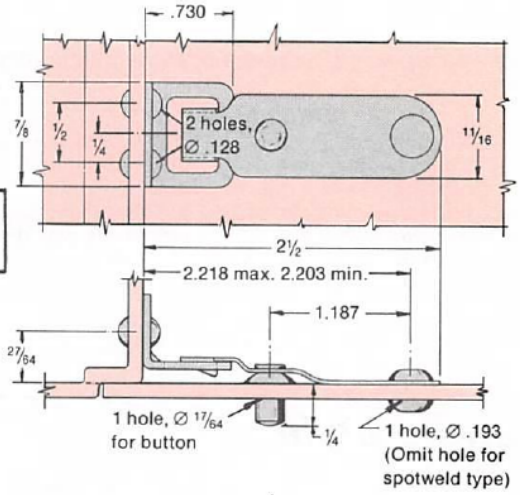
180° KEEPER RIVET TYPE

PART NUMBER 33-10-101-10 ■



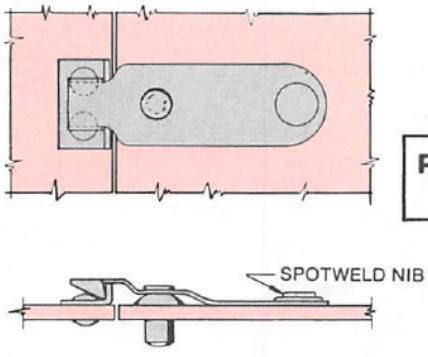
90° KEEPER RIVET TYPE

PART NUMBER 33-10-104-20 ■



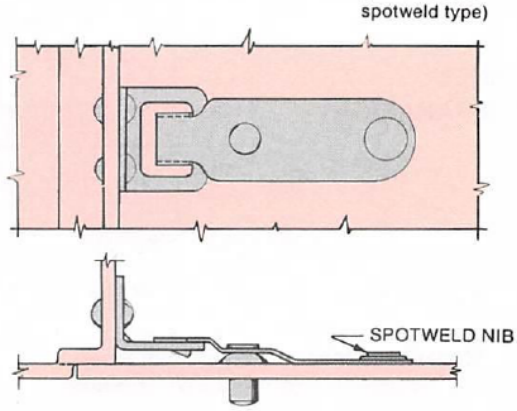
180° KEEPER WELD TYPE

PART NUMBER 33-20-101-10 ■



90° KEEPER WELD TYPE

PART NUMBER 33-20-104-20 ■

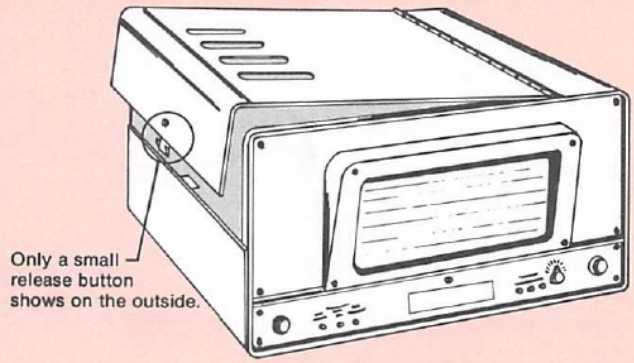


Weld type catches are identical with rivet types (above) except for welding nibs.

MATERIAL and FINISH

SPRING: 1060-1070 steel with phosphate dip and flouropolymer coating.
BUTTON: 1006 steel, zinc plated plus bright chromate dip.
KEEPER: 1010 steel, DACROTIZED†.
SPOTWELD NIB: 11L17 steel, copper plated.

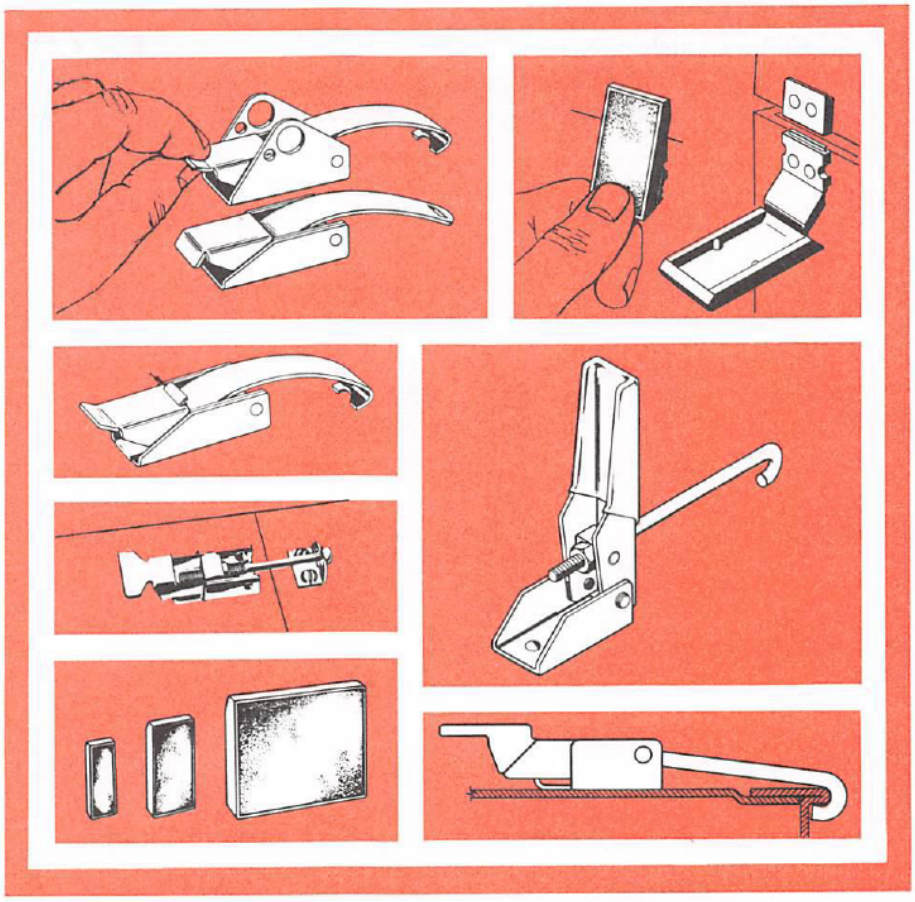
†Registered tradename of Metal Coatings International, Inc.



■ From stock, subject to prior sale.

Section I
Draw Latches
(over-center clamp styles)

contents guide	page
No. A1 Adjustable Draw Latch	I-9 to I-13
No. E7 Designer Series Draw Latch	I-16 & I-17
No. E8 Adjustable Draw Latch	I-14 & I-15
No. 07 Designer Series Draw Latch	I-18 & I-19
No. 07 Draw Latch	I-20 & I-21
No. 07 Draw Latch with Secondary Catch	I-22
No. 97 Draw Latch, 30 Series	I-3
No. 97 Draw Latch, 50 Series	I-4 & I-5
No. 97 Draw Latch, 60 Series	I-6
No. 97 Draw Latch, 70 Series	I-7 & I-8



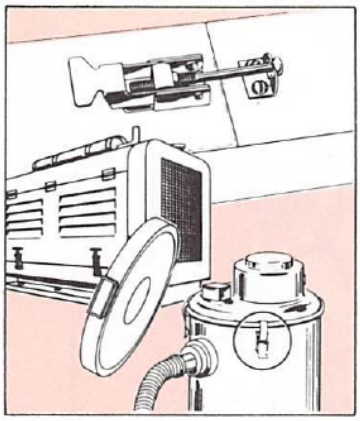
Section I
Draw Latches
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contents guide | **page**

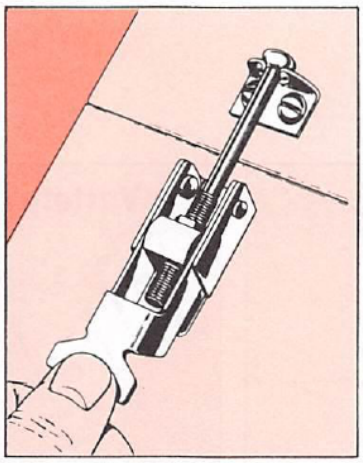
No. A1 Adjustable Draw Latch	I-9 to I-13
No. E7 Designer Series Draw Latch	I-16 & I-17
No. E8 Adjustable Draw Latch	I-14 & I-15
No. 07 Designer Series Draw Latch	I-18 & I-19
No. 07 Draw Latch	I-20 & I-21
No. 07 Draw Latch with Secondary Catch	I-22
No. 97 Draw Latch, 30 Series	I-3
No. 97 Draw Latch, 50 Series	I-4 & I-5
No. 97 Draw Latch, 60 Series	I-6
No. 97 Draw Latch, 70 Series	I-7 & I-8

Now there are five basic draw latches from Southco

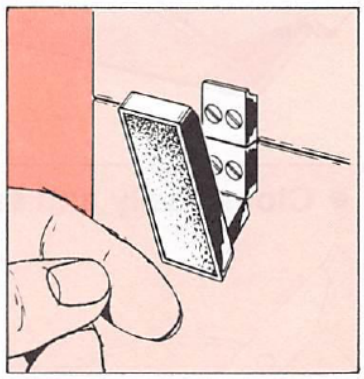
for your hood, lid, cover, door, or panel



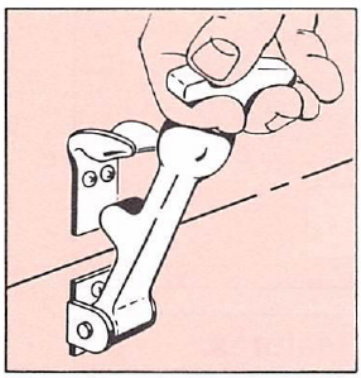
1. Southco has expanded the over-center draw latch principle in all directions. On our shelf, you'll find the right latch in the right material for the smallest box, the heaviest hood, the tough applications (like corrosion, misalignment of parts, vibration, dust, and security).



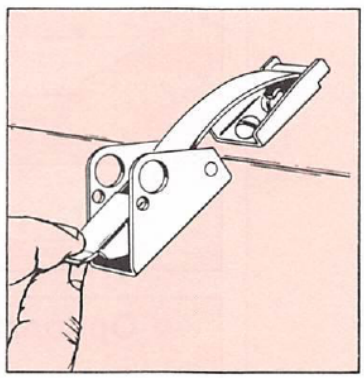
2. The No. A1 Adjustable Draw Latch is designed so you can easily vary gasket compression between case and lid. A simple adjustment of the extra-long threaded latching rod gives the precise latching tension you want.



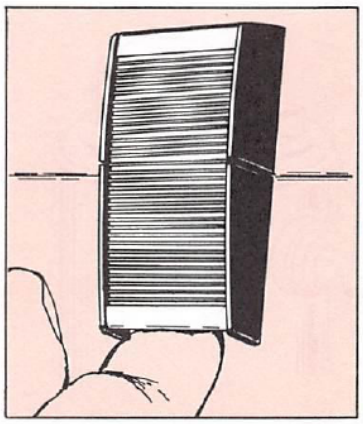
3. The No. 07 Draw Latch features a one-piece "living hinge" latch body that flips open, snaps shut on the mating keeper. Latches in black or white have a clean, modern look.



4. No. 37 Flexible Draw Latches are ideal for holding down and quieting noisy hoods and covers. Pull the swing arm and lift it into the shaped keeper. Latches flex in any direction to compensate for misalignment of parts.



5. No. 97 All-Metal Draw Latches come in a variety of spring and keeper combinations. To close, position the latch spring over the keeper, depress the lever, and the latch draws tight and holds. Flip up to open.

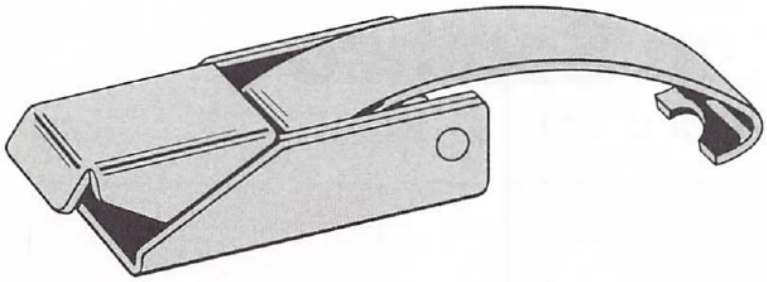


6. New E7 Draw Latches feature sleek, fold-away design in an elegant silver and black finish. Made of anodized aluminum, stainless steel and high-impact thermoplastic, they exhibit unusual strength and corrosion resistance.

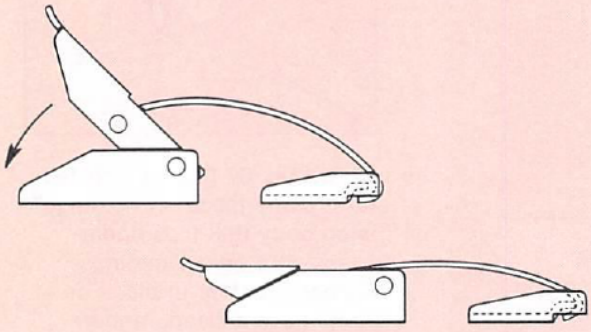
No. A1	No. E 7	No. 07	No. 37	No. 97
				
4 sizes	2 sizes	4 sizes	10 sizes	4 sizes

7. Southco draw Latches are in stock in sizes and styles to meet your needs. Many stocked in stainless steel.

Over-center Draw Latches



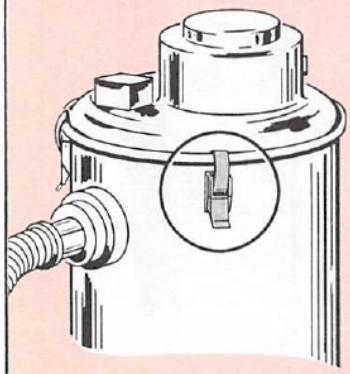
- Close easily and securely.

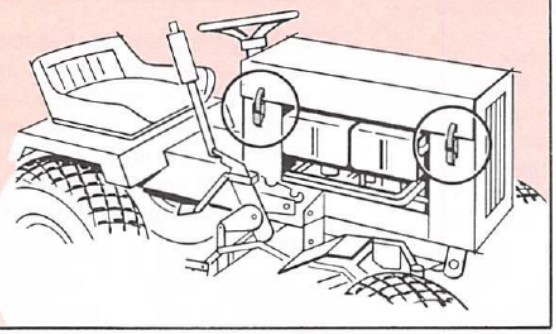


- Variety of keeper styles.

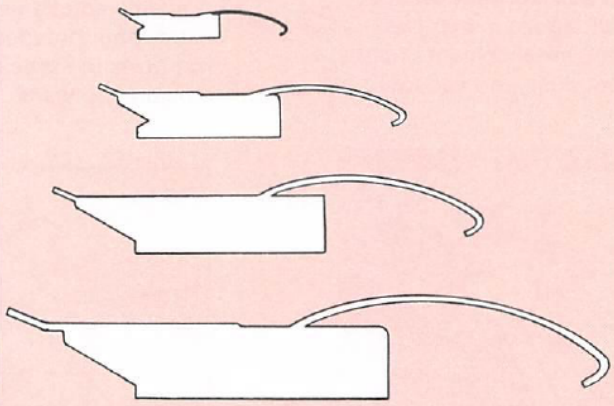


- Reduce rattles, vibration.

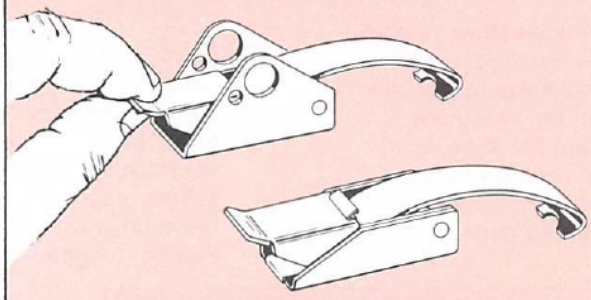




- Available in four sizes.



- Optional safety features.

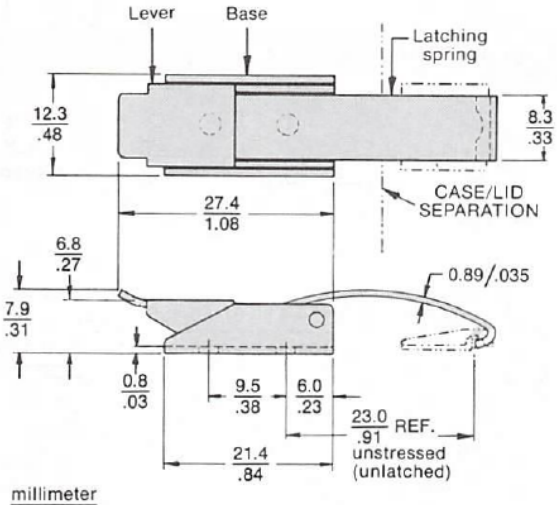


SOUTHCO fasteners

Over-center Draw Latch

Series 30



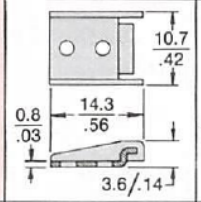
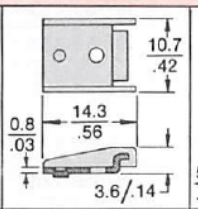
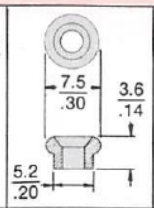
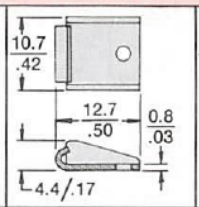
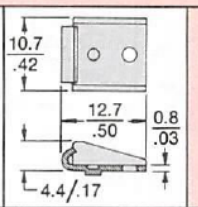


millimeter/inch

MATERIAL and FINISH

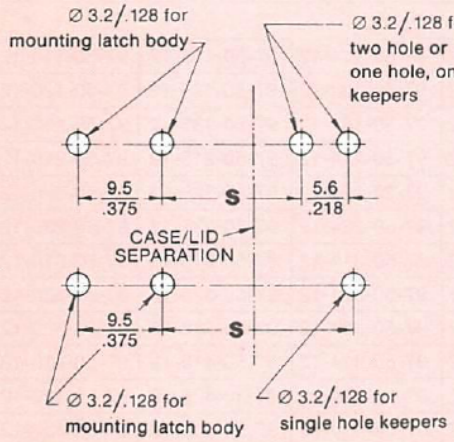
Steel assemblies
BUTTON KEEPER: low carbon steel, case hardened.
OTHER KEEPERS, LEVER and BASE: 1010 steel, case hardened. SPRING: 1064 steel.
Components listed above are zinc plated plus bright chromate dip.
PINS: 18-9LW stainless steel, passivated.

Stainless steel assemblies
BUTTON KEEPER: 303 stainless steel, passivated.
OTHER KEEPERS, LEVER and BASE: 302 stainless steel, passivated.
PINS: 18-9LW stainless steel, passivated.
SPRING: 455 stainless steel, passivated.

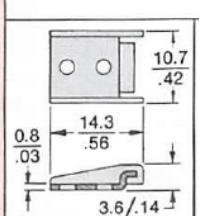
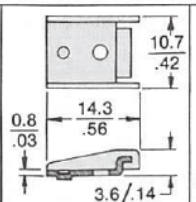
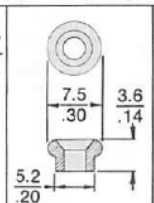
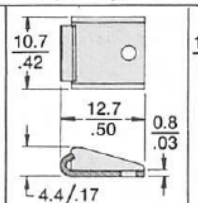
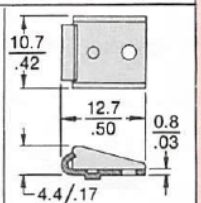
MATERIAL	ASSEMBLY PART NUMBERS BY KEEPER STYLE					
						NO KEEPER (Latch Only)
STEEL	97-30-161-11 ■	97-30-162-11 ■	97-30-163-11 ■	97-30-164-11 ■	97-30-165-11 ■	97-30-160-11 ■
STAINLESS STEEL	97-30-161-12 ■	97-30-162-12 ■	97-30-163-12 ■	97-30-164-12 ■	97-30-165-12 ■	97-30-160-12 ■

■ From stock. Subject to prior sale.

INSTALLATION

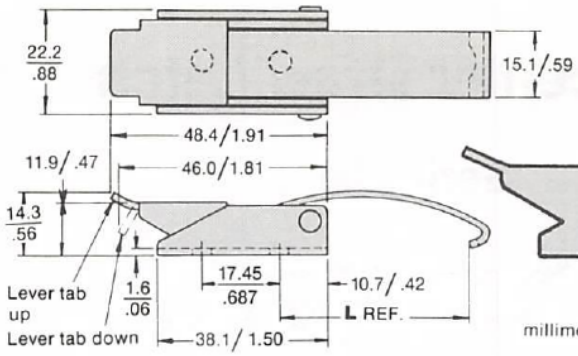


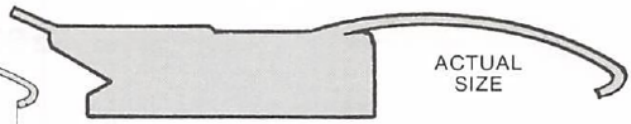
Mount latches and keepers with M3/No. 4 screws.
For button type keeper use a countersunk head screw.

Dimension S — according to keeper style				
				
14.7/.58	14.7/.58	21.8/.86	32.9/1.30	27.4/1.08

Over-center Draw Latch

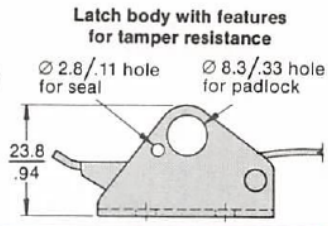
Southco No. 97 Series 50

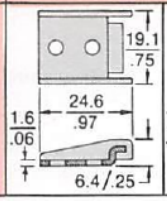
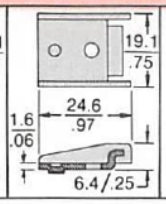
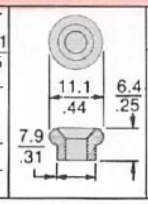
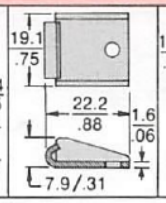
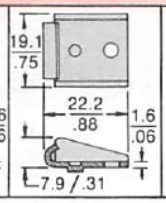
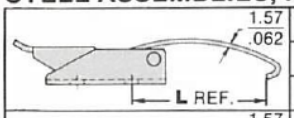
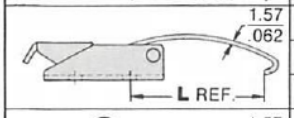
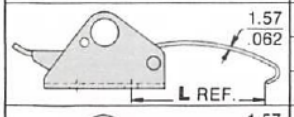
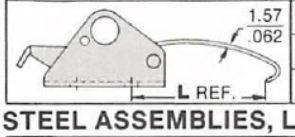
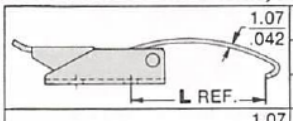
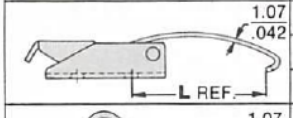
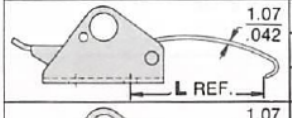
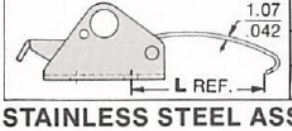
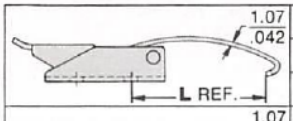
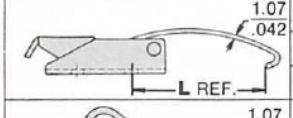
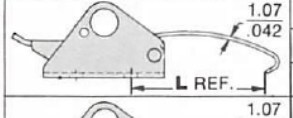
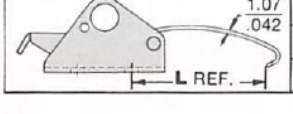




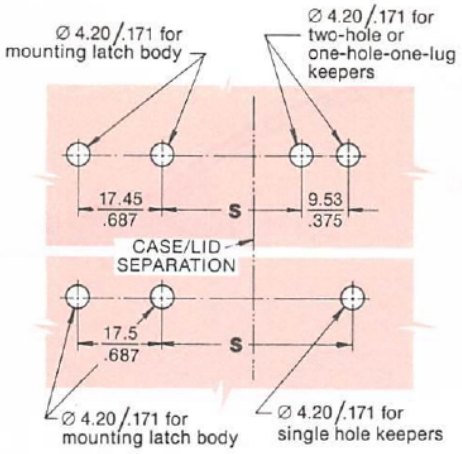
millimeter/inch

millimeter / inch

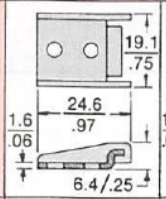
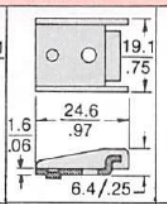
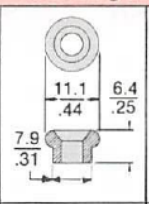
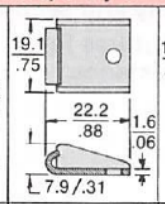
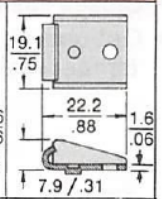


LATCH BODY STYLE	LATCHING SPRING		ASSEMBLY PART NUMBERS — All stock					
	Length	L un-stressed (unlatched)						LATCH ONLY (No Keeper)
STEEL ASSEMBLIES, HEAVY DUTY								
	SHORT	29.4/1.16	97-50-151-11	97-50-152-11	97-50-153-11	97-50-154-11	97-50-155-11	97-50-150-11
	MEDIUM	42.1/1.66	97-50-161-11	97-50-162-11	97-50-163-11	97-50-164-11	97-50-165-11	97-50-160-11
	LONG	54.8/2.16	97-50-171-11	97-50-172-11	97-50-173-11	97-50-174-11	97-50-175-11	97-50-170-11
	SHORT	29.4/1.16	97-50-251-11	97-50-252-11	97-50-253-11	97-50-254-11	97-50-255-11	97-50-250-11
	MEDIUM	42.1/1.66	97-50-261-11	97-50-262-11	97-50-263-11	97-50-264-11	97-50-265-11	97-50-260-11
	LONG	54.8/2.16	97-50-271-11	97-50-272-11	97-50-273-11	97-50-274-11	97-50-275-11	97-50-270-11
	SHORT	29.4/1.16	97-50-351-11	97-50-352-11	97-50-353-11	97-50-354-11	97-50-355-11	97-50-350-11
	MEDIUM	42.1/1.66	97-50-361-11	97-50-362-11	97-50-363-11	97-50-364-11	97-50-365-11	97-50-360-11
	LONG	54.8/2.16	97-50-371-11	97-50-372-11	97-50-373-11	97-50-374-11	97-50-375-11	97-50-370-11
	SHORT	29.4/1.16	97-50-451-11	97-50-452-11	97-50-453-11	97-50-454-11	97-50-455-11	97-50-450-11
	MEDIUM	42.1/1.66	97-50-461-11	97-50-462-11	97-50-463-11	97-50-464-11	97-50-465-11	97-50-460-11
	LONG	54.8/2.16	97-50-471-11	97-50-472-11	97-50-473-11	97-50-474-11	97-50-475-11	97-50-470-11
STEEL ASSEMBLIES, LIGHT DUTY								
	SHORT	29.4/1.16	97-50-111-11	97-50-112-11	97-50-113-11	97-50-114-11	97-50-115-11	97-50-110-11
	MEDIUM	42.1/1.66	97-50-121-11	97-50-122-11	97-50-123-11	97-50-124-11	97-50-125-11	97-50-120-11
	LONG	54.8/2.16	97-50-131-11	97-50-132-11	97-50-133-11	97-50-134-11	97-50-135-11	97-50-130-11
	SHORT	29.4/1.16	97-50-211-11	97-50-212-11	97-50-213-11	97-50-214-11	97-50-215-11	97-50-210-11
	MEDIUM	42.1/1.66	97-50-221-11	97-50-222-11	97-50-223-11	97-50-224-11	97-50-225-11	97-50-220-11
	LONG	54.8/2.16	97-50-231-11	97-50-232-11	97-50-233-11	97-50-234-11	97-50-235-11	97-50-230-11
	SHORT	29.4/1.16	97-50-311-11	97-50-312-11	97-50-313-11	97-50-314-11	97-50-315-11	97-50-310-11
	MEDIUM	42.1/1.66	97-50-321-11	97-50-322-11	97-50-323-11	97-50-324-11	97-50-325-11	97-50-320-11
	LONG	54.8/2.16	97-50-331-11	97-50-332-11	97-50-333-11	97-50-334-11	97-50-335-11	97-50-330-11
	SHORT	29.4/1.16	97-50-411-11	97-50-412-11	97-50-413-11	97-50-414-11	97-50-415-11	97-50-410-11
	MEDIUM	42.1/1.66	97-50-421-11	97-50-422-11	97-50-423-11	97-50-424-11	97-50-425-11	97-50-420-11
	LONG	54.8/2.16	97-50-431-11	97-50-432-11	97-50-433-11	97-50-434-11	97-50-435-11	97-50-430-11
STAINLESS STEEL ASSEMBLIES, LIGHT DUTY ONLY								
	SHORT	29.4/1.16	97-50-111-12	97-50-112-12	97-50-113-12	97-50-114-12	97-50-115-12	97-50-110-12
	MEDIUM	42.1/1.66	97-50-121-12	97-50-122-12	97-50-123-12	97-50-124-12	97-50-125-12	97-50-120-12
	LONG	54.8/2.16	97-50-131-12	97-50-132-12	97-50-133-12	97-50-134-12	97-50-135-12	97-50-130-12
	SHORT	29.4/1.16	97-50-211-12	97-50-212-12	97-50-213-12	97-50-214-12	97-50-215-12	97-50-210-12
	MEDIUM	42.1/1.66	97-50-221-12	97-50-222-12	97-50-223-12	97-50-224-12	97-50-225-12	97-50-220-12
	LONG	54.8/2.16	97-50-231-12	97-50-232-12	97-50-233-12	97-50-234-12	97-50-235-12	97-50-230-12
	SHORT	29.4/1.16	97-50-311-12	97-50-312-12	97-50-313-12	97-50-314-12	97-50-315-12	97-50-310-12
	MEDIUM	42.1/1.66	97-50-321-12	97-50-322-12	97-50-323-12	97-50-324-12	97-50-325-12	97-50-320-12
	LONG	54.8/2.16	97-50-331-12	97-50-332-12	97-50-333-12	97-50-334-12	97-50-335-12	97-50-330-12
	SHORT	29.4/1.16	97-50-411-12	97-50-412-12	97-50-413-12	97-50-414-12	97-50-415-12	97-50-410-12
	MEDIUM	42.1/1.66	97-50-421-12	97-50-422-12	97-50-423-12	97-50-424-12	97-50-425-12	97-50-420-12
	LONG	54.8/2.16	97-50-431-12	97-50-432-12	97-50-433-12	97-50-434-12	97-50-435-12	97-50-430-12

Over-center Draw Latch
Southco No. 97 Series 50



Mount latches and keepers with M4 or No. 8 screws or 5/32" rivets.
For button type keepers use a countersunk head screw.

LATCHING SPRING LENGTH	Dimension S - according to keeper style				
					
SHORT	15.9/.63	15.9/.63	29.4/1.16	47.6/1.88	38.1/1.50
MEDIUM	28.6/1.13	28.6/1.13	42.1/1.66	60.3/2.38	50.8/2.00
LONG	41.3/1.63	41.3/1.63	54.8/2.16	73.0/2.88	63.5/2.50

Material and Finish

Steel assemblies
BUTTON KEEPER: low carbon steel, case hardened.
OTHER KEEPERS, LEVER and BASE: 1010 steel.
LATCHING SPRING: 1064 steel.
Components listed above are zinc plated plus bright chromate dip.
PIN: 302 stainless steel, passivated.
RIVET: 302 stainless steel, passivated.

Stainless steel assemblies
BUTTON KEEPER: 303 stainless steel, passivated.
OTHER KEEPERS, BASE, RIVET and PIN: 302 stainless steel, passivated.
LEVER: 304 stainless steel, passivated.
LATCHING SPRING: 455 stainless steel, passivated.

millimeter / inch — millimeter/inch

Series 50 Optional Features

1. Other Finishes

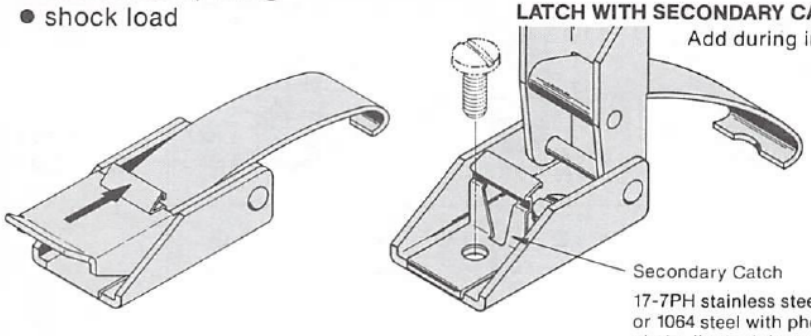
To order matte black or satin silver polyester powder coating finishes on steel assemblies, change the **last digit** of the part number as follows:

For matte black coat, change from 1 to **5**. Example: 97-50-151-1**5**.
For satin silver coat, change from 1 to **7**. Example: 97-50-151-1**7**.

2. Secondary Catch provides added resistance to:

- severe vibration
- accidental opening
- shock load

LATCH WITH SECONDARY CATCH
Add during installation

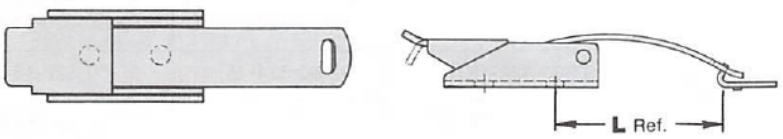


17-7PH stainless steel or 1064 steel with phosphate dip; both have black organic coating.

To order, change next-to-last digit of the basic latch assembly part number (previous page) as follows:

Basic latch part number 97-5X-XXX-**1**X
Latch with secondary catch 97-5X-XXX-**2**X

3. Latch with Slotted End Spring

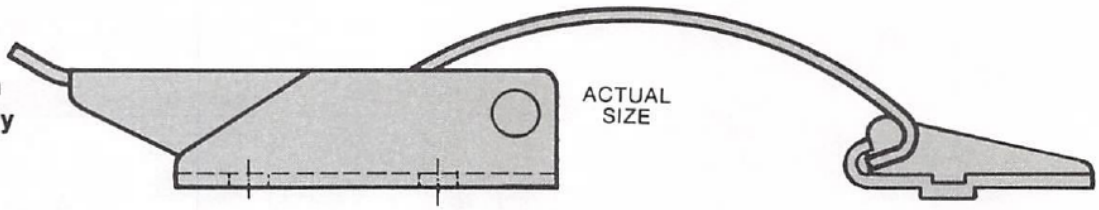


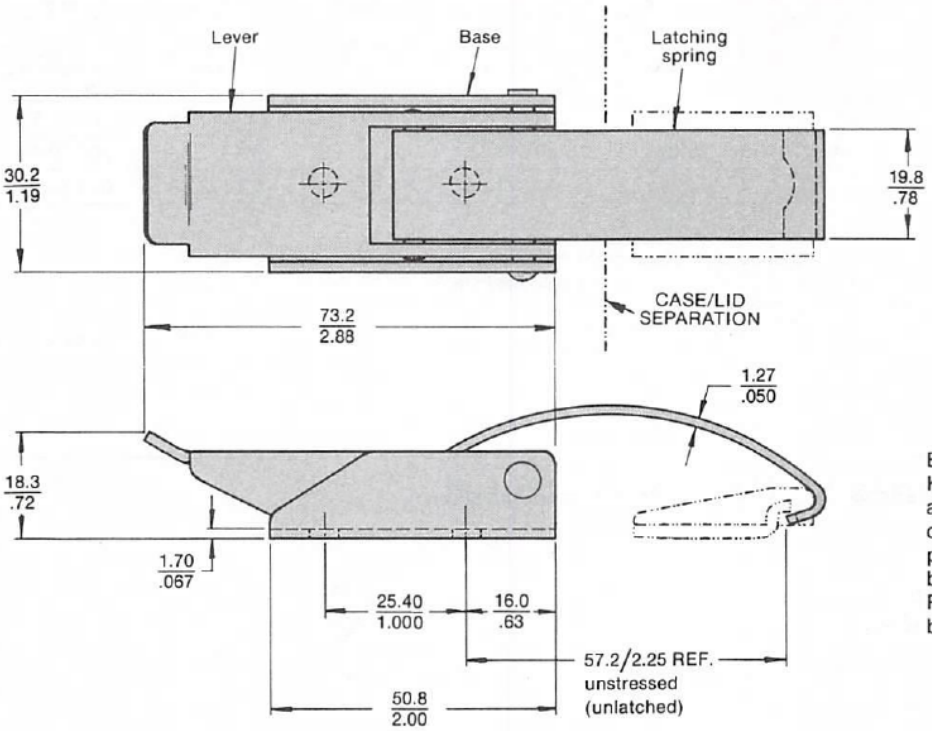
- Not available for button type keeper.
- Mounting dimensions are the same as the hook-end style.
- Use any of the Series 50 tables (previous page) and change the second unit of part number from 50 nto **51**.
  e.g. 97-**51**-XXX-XX.

Over-center Draw Latch

Series 60

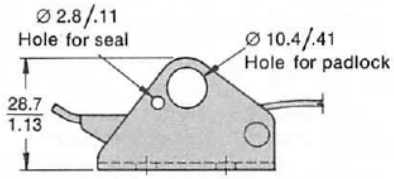
- Choice of three finishes
- Variety of keeper styles
- Reduces rattles, vibration
- Closes easily and securely
- Optional features for tamper resistance





millimeter
inch
millimeter/inch

Latch body with features for tamper resistance

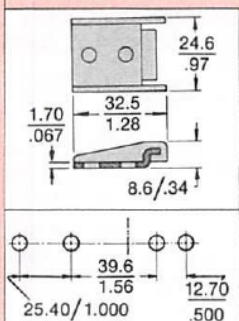
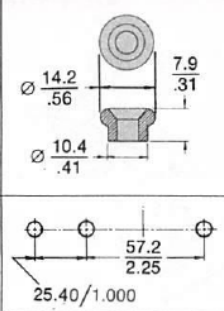
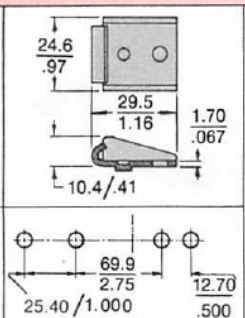
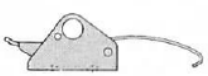


MATERIAL and FINISH

BUTTON KEEPER is low carbon steel, OTHER KEEPERS, LEVER and BASE are 1010 steel and LATCHING SPRING is 1064 steel; these components are matte black or satin silver polyester powder coated or zinc plated plus bright chromate dip. See table.
RIVETS: 430 stainless steel, natural or with black organic coating.

All mounting holes in fastener are Ø 5.16/.203.

Mount latches and keepers with M5 screws, No. 10 screws or 3/16" rivets. For button type keeper use a countersunk head screw.

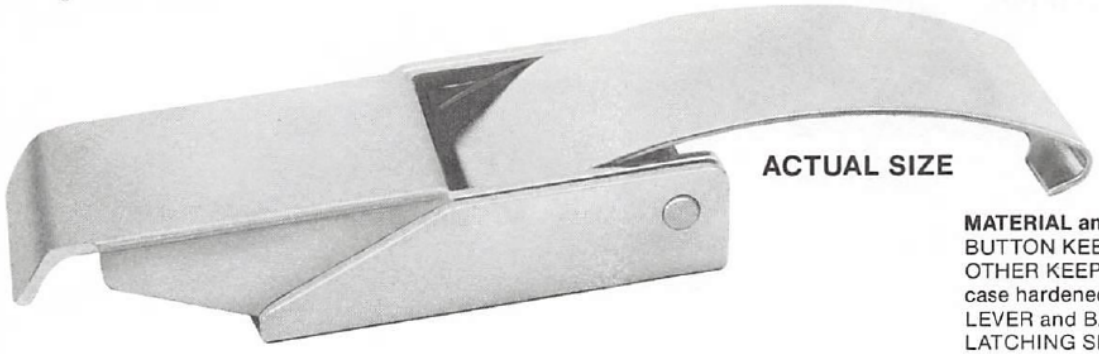
LATCH BODY STYLE	FINISH (Lever, Base, Keeper, and Latching spring)	ASSEMBLY PART NUMBERS			NO KEEPER (Latch Only)
					
	zinc plated plus bright chromate dip	97-60-121-11 ■	97-60-123-11 ■	97-60-124-11 ■	97-60-120-11 ■
	matte black coat	97-60-121-15 ■	97-60-123-15 ■	97-60-124-15 ■	97-60-120-15 ■
	satin silver coat	97-60-121-17 ■	97-60-123-17 ■	97-60-124-17 ■	97-60-120-17 ■
	zinc plated plus bright chromate dip	97-60-321-11 ■	97-60-323-11 ■	97-60-324-11 ■	97-60-320-11 ■
	matte black coat	97-60-321-15 ■	97-60-323-15 ■	97-60-324-15 ■	97-60-320-15 ■
	satin silver coat	97-60-321-17 ■	97-60-323-17 ■	97-60-324-17 ■	97-60-320-17 ■

■ From stock. Subject to prior sale.

Over-center Draw Latches

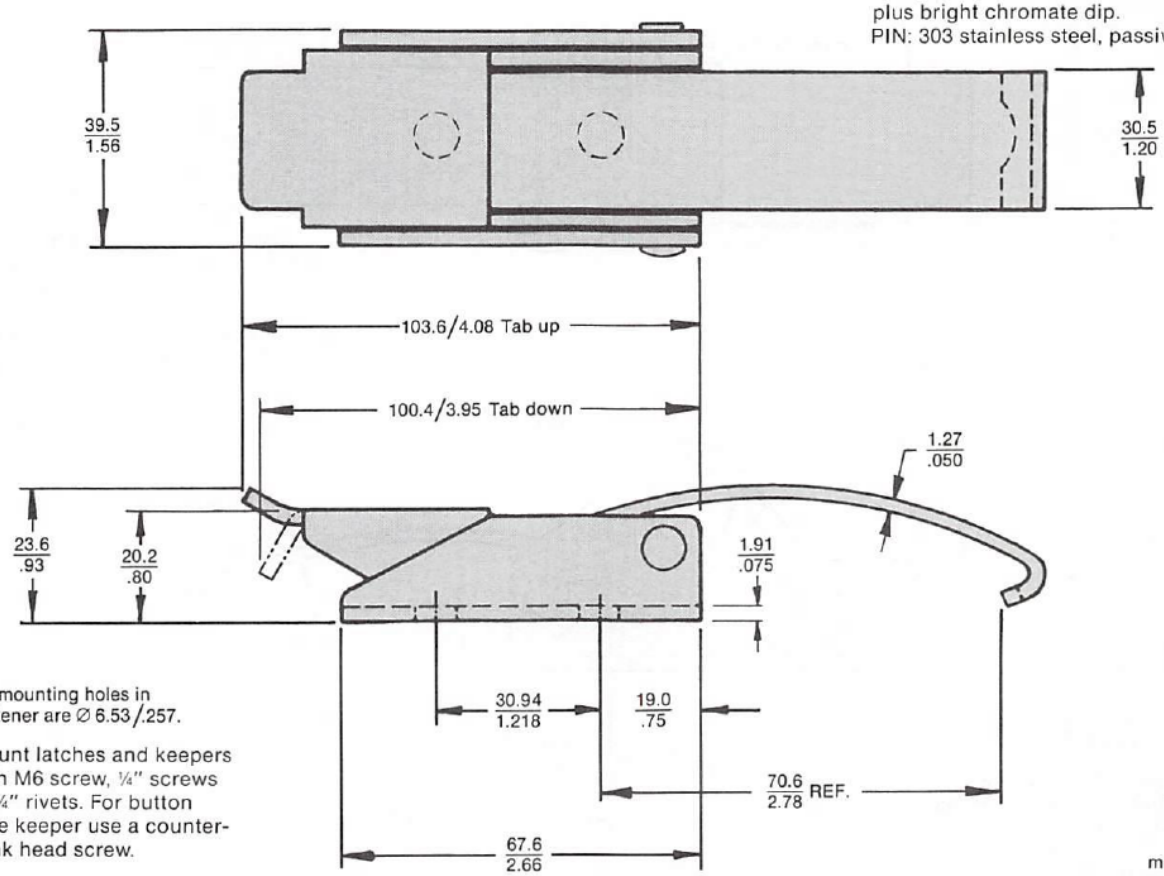
Series 70

Super-size



ACTUAL SIZE

MATERIAL and FINISH
BUTTON KEEPER: low carbon steel.
OTHER KEEPERS: 1008 or 1010 steel, case hardened.
LEVER and BASE: 1010 steel. RIVET: steel.
LATCHING SPRING: 1064 steel.
Components listed above are zinc plated plus bright chromate dip.
PIN: 303 stainless steel, passivated.

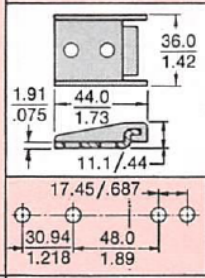
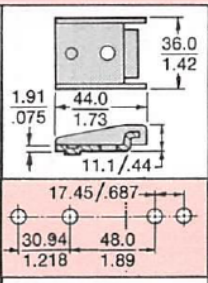
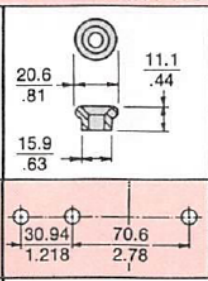
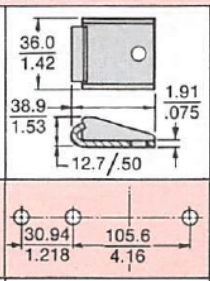
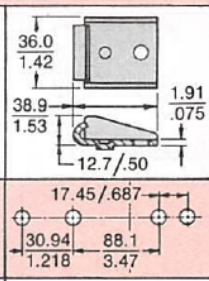


All mounting holes in fastener are Ø 6.53/.257.

Mount latches and keepers with M6 screw, ¼" screws or ¼" rivets. For button type keeper use a counter-sunk head screw.

millimeter / inch

millimeter/inch

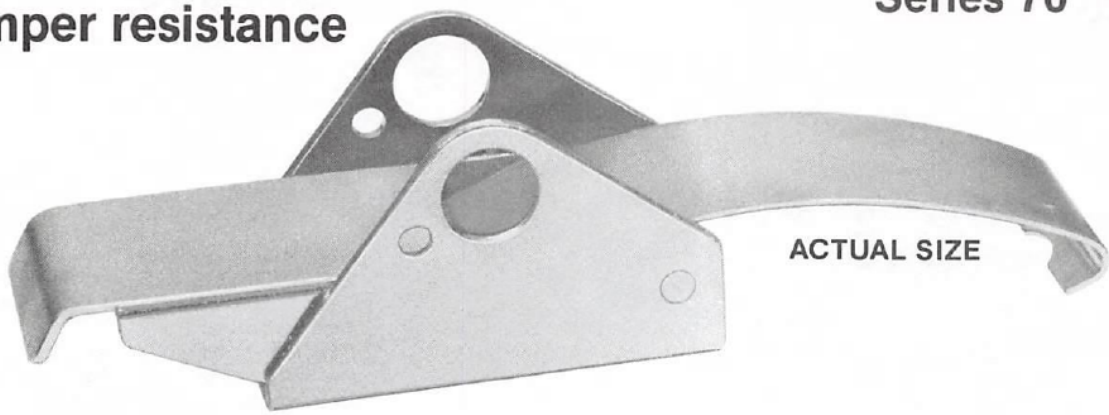
Tab position on lever	PART NUMBERS					
						Latch only no keeper
	97-70-121-11 ■	97-70-122-11 ■	97-70-123-11 ■	97-70-124-11 ■	97-70-125-11 ■	97-70-120-11 ■
	97-70-221-11 ■	97-70-222-11 ■	97-70-223-11 ■	97-70-224-11 ■	97-70-225-11 ■	97-70-220-11 ■

■ From stock. Subject to prior sale.

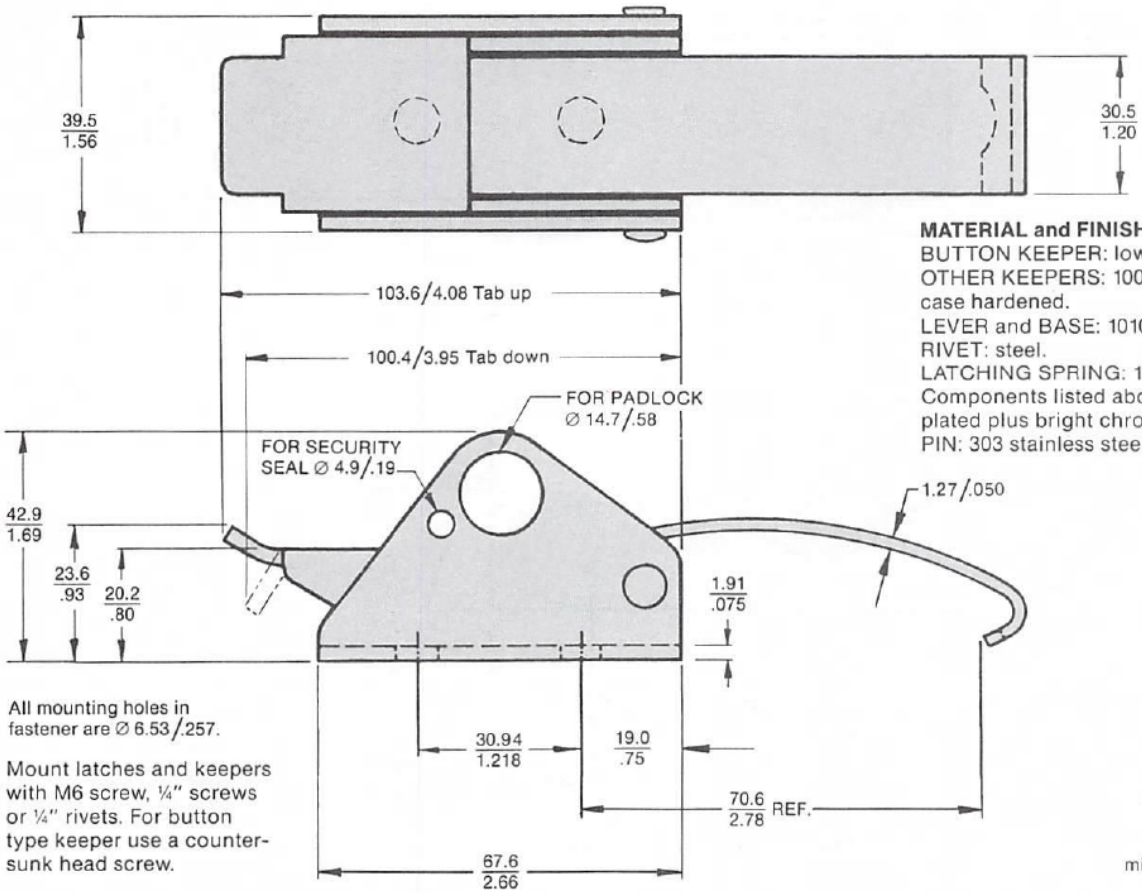
Over-center Draw Latches

Series 70

Super-size with Features for Tamper resistance



ACTUAL SIZE



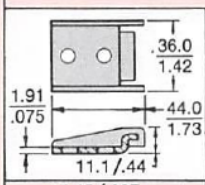
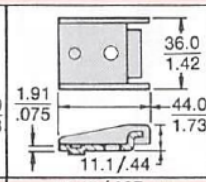
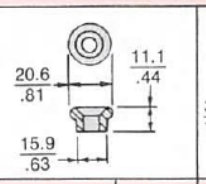
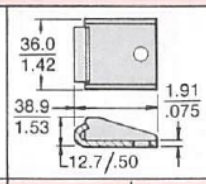
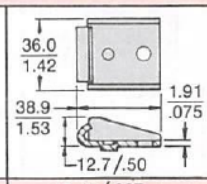
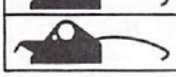
MATERIAL and FINISH
BUTTON KEEPER: low carbon steel.
OTHER KEEPERS: 1008 or 1010 steel, case hardened.
LEVER and BASE: 1010 steel.
RIVET: steel.
LATCHING SPRING: 1064 steel.
Components listed above are zinc plated plus bright chromate dip.
PIN: 303 stainless steel, passivated.

All mounting holes in fastener are Ø 6.53/.257.

Mount latches and keepers with M6 screw, ¼" screws or ¼" rivets. For button type keeper use a countersunk head screw.

millimeter / inch

millimeter/inch

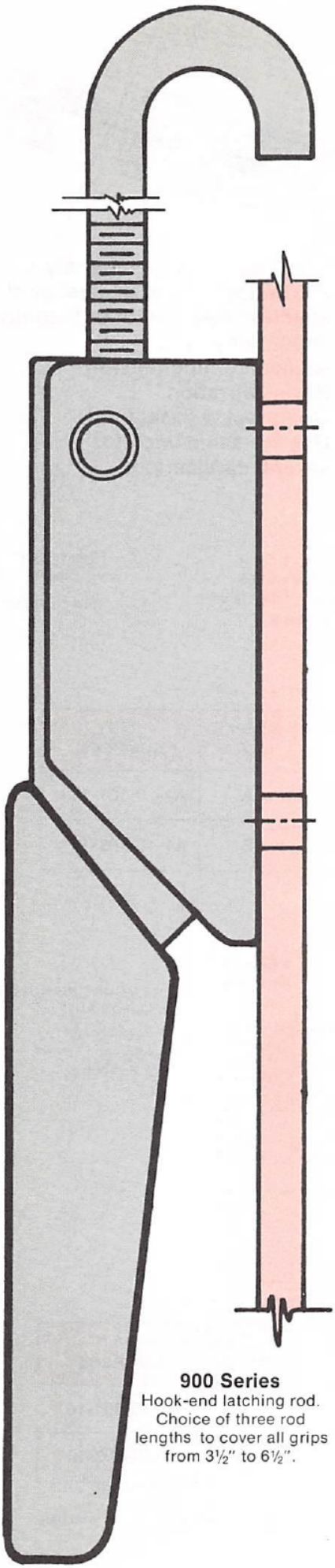
Tab position on lever	PART NUMBERS					
						Latch only no keeper
	97-70-321-11 ■	97-70-322-11 ■	97-70-323-11 ■	97-70-324-11 ■	97-70-325-11 ■	97-70-320-11 ■
	97-70-421-11 ■	97-70-422-11 ■	97-70-423-11 ■	97-70-424-11 ■	97-70-425-11 ■	97-70-420-11 ■

■ From stock. Subject to prior sale.

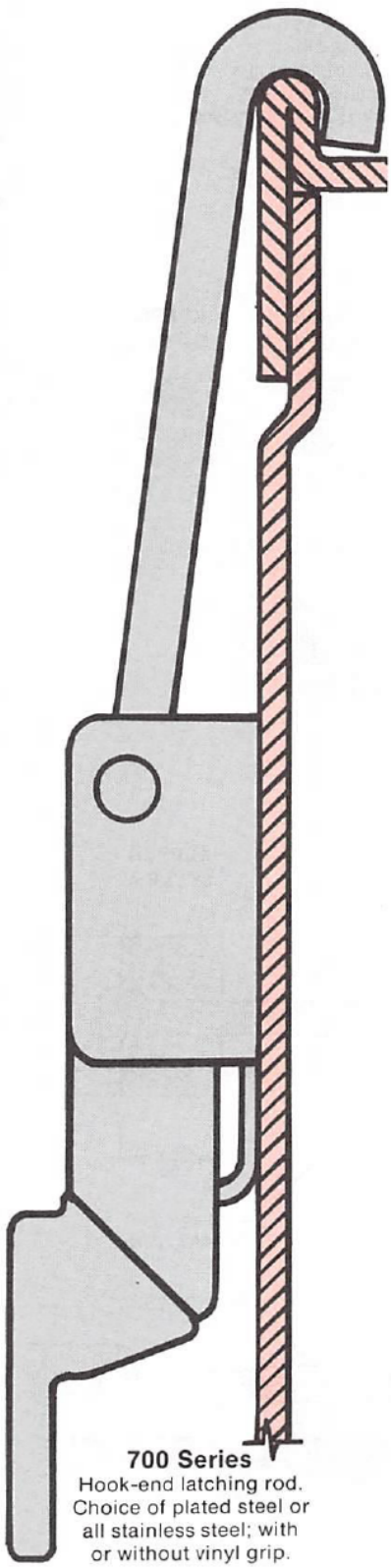
Adjustable Draw Latches
Southco No. A1

Two styles—four sizes. Two largest sizes (700 and 900 series) are offered with comfortable vinyl hand grip. 700 series is also available in all stainless steel.

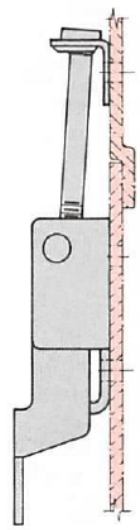
ALL ARE SHOWN APPROXIMATELY ACTUAL SIZE



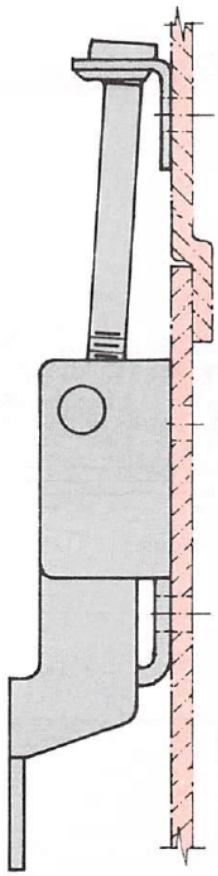
900 Series
Hook-end latching rod.
Choice of three rod lengths to cover all grips from 3½" to 6½".



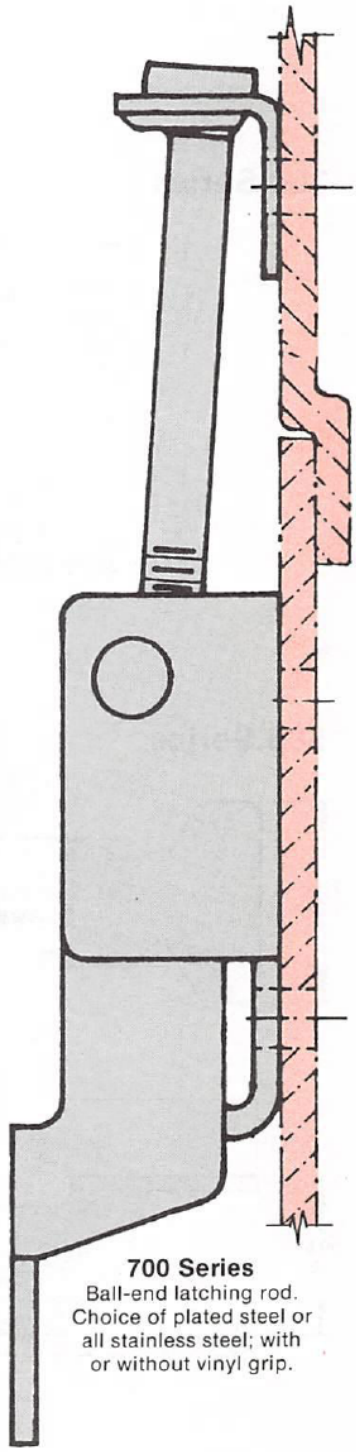
700 Series
Hook-end latching rod.
Choice of plated steel or all stainless steel; with or without vinyl grip.



300 Series
Ball-end latching rod.
Two keeper styles.

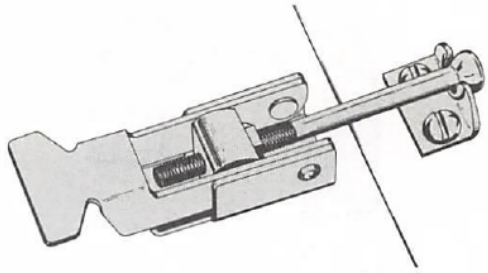


500 Series
Ball-end latching rod.
Two keeper styles.



700 Series
Ball-end latching rod.
Choice of plated steel or all stainless steel; with or without vinyl grip.

Adjustable Draw Latch —in three sizes



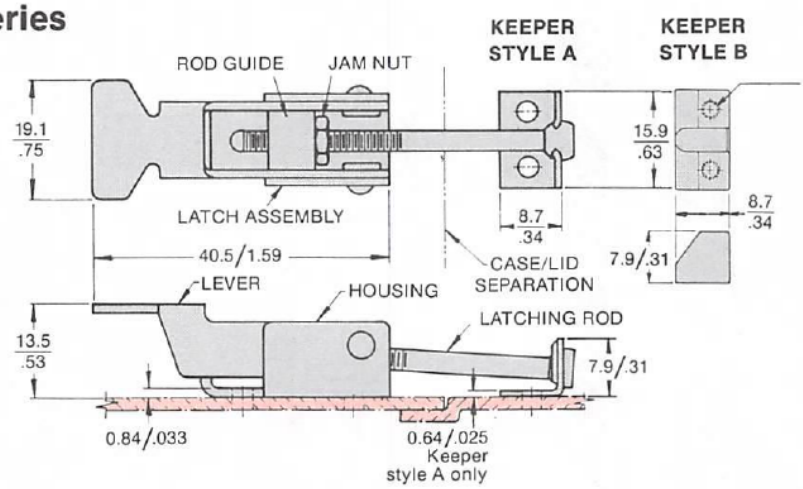
MATERIAL and FINISH

Stainless steel 700 series
LEVER and HOUSING: 304 stainless steel, passivated.
ROD and RIVET: 302 stainless steel, passivated.
JAM NUT: 300 stainless steel, passivated.
KEEPER: 17-7PH stainless steel, passivated.

Steel 300, 500 and 700 series
LEVER and HOUSING: 1010 steel.
ROD GUIDE and JAM NUT: low carbon steel.
SERIES 300 and 700 ROD: 1008 steel.
SERIES 500 ROD: 1006 steel.
KEEPER STYLE A: 1064 steel.
Steel components are zinc plated plus bright chromate dip.
KEEPER STYLE B: die cast zinc with chemical protective film.
RIVET: 302 stainless steel, passivated.

- **Three sizes, two keeper styles**
- **700 series offered in steel or all stainless steel—with or without yellow vinyl grip**
- **Adjust latching tension**
- **Resist vibration**
- **Compress a gasket**
- **Use the same latch for several applications**

300 Series

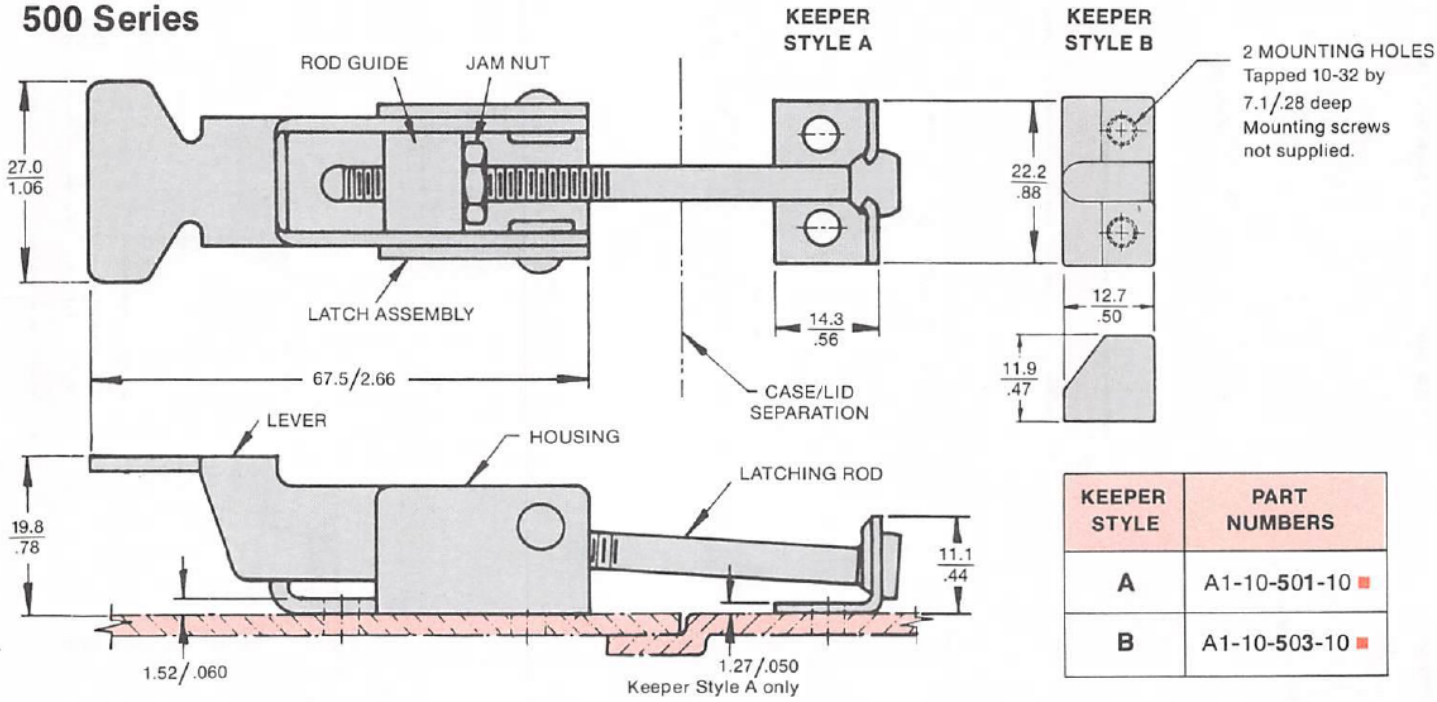


millimeter / inch

millimeter/inch

KEEPER STYLE	PART NUMBERS
A	A1-10-301-10 ■
B	A1-10-303-10 ■

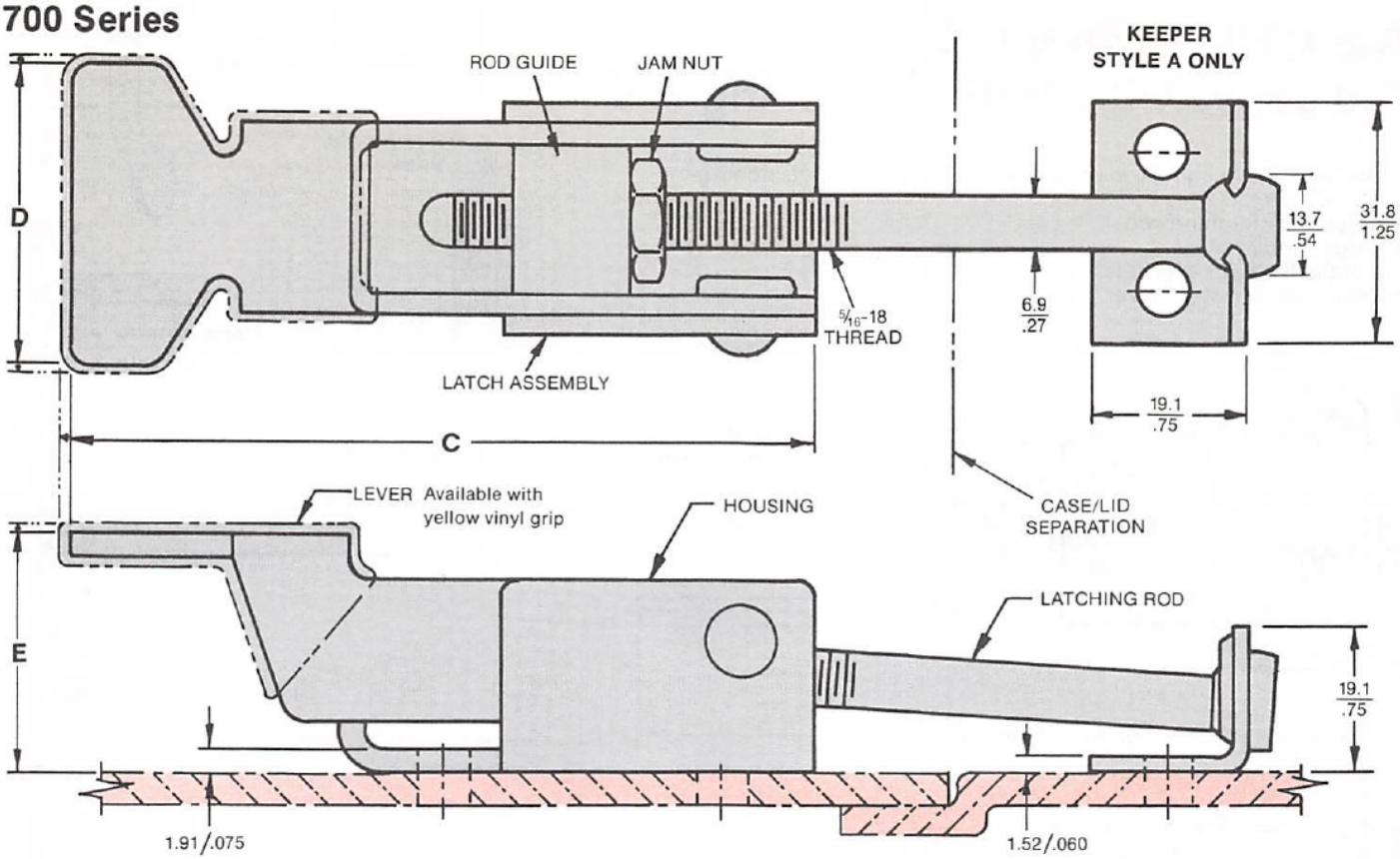
500 Series



KEEPER STYLE	PART NUMBERS
A	A1-10-501-10 ■
B	A1-10-503-10 ■

■ From stock, subject to prior sale.

700 Series



millimeter
inch

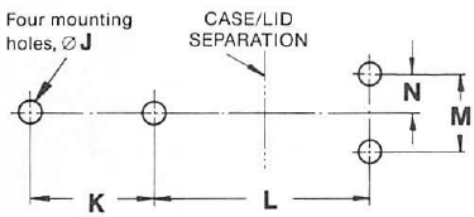
millimeter/inch

DIMENSIONS			PART NUMBERS	
C	D	E	Steel, zinc plated	Stainless steel, passivated
113.1/4.45	39.7/1.56	31.8/1.25	A1-10-701-10 ■	A1-10-701-40 ■
with yellow vinyl grip				
114.7/4.52	42.9/1.69	33.3/1.31	A1-10-701-20 ■	A1-10-701-50 ■

■ From stock, subject to prior sale.

INSTALLATION

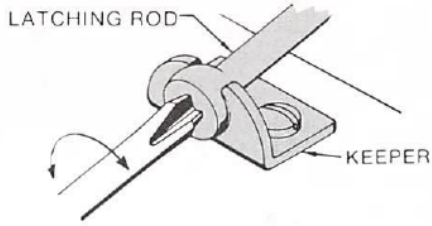
Prepare case and lid as shown and mount both latch and keeper using four screws or rivets.



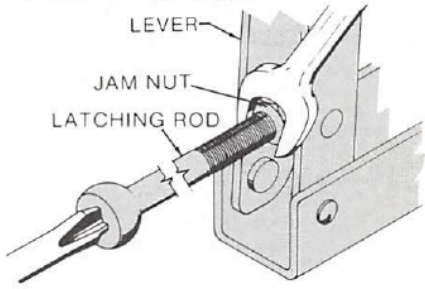
series	INSTALLATION DIMENSIONS					
	⌀J	K	L min.	L max.	M	N
latch with keeper style A						
300 series	3.30/.129	19.05/.750	10.3/.41	20.6/.81	9.53/.375	4.76/.188
500 series	5.20/.203	25.40/1.000	25.4/1.00	44.5/1.75	12.70/.500	6.35/.250
700 series	6.50/.257	44.45/1.750	23.8/.94	57.2/2.25	19.05/.750	9.53/.375
latch with keeper style B						
300 series	3.30/.129	19.05/.750	13.5/.53	23.0/.91	9.53/.375	4.76/.188
500 series	5.20/.203	25.40/1.000	28.6/1.13	47.6/1.88	12.70/.500	6.35/.250

To adjust

1. With rod and lever in latched position, turn latching rod with a Phillips screwdriver until desired tension is reached.

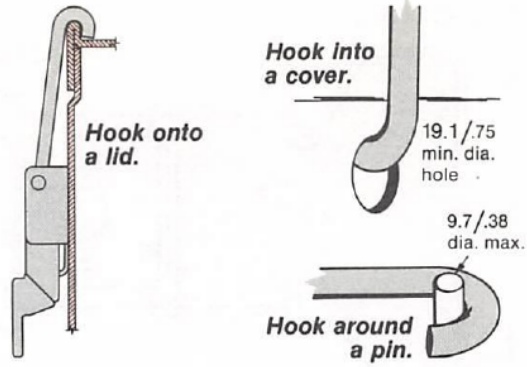


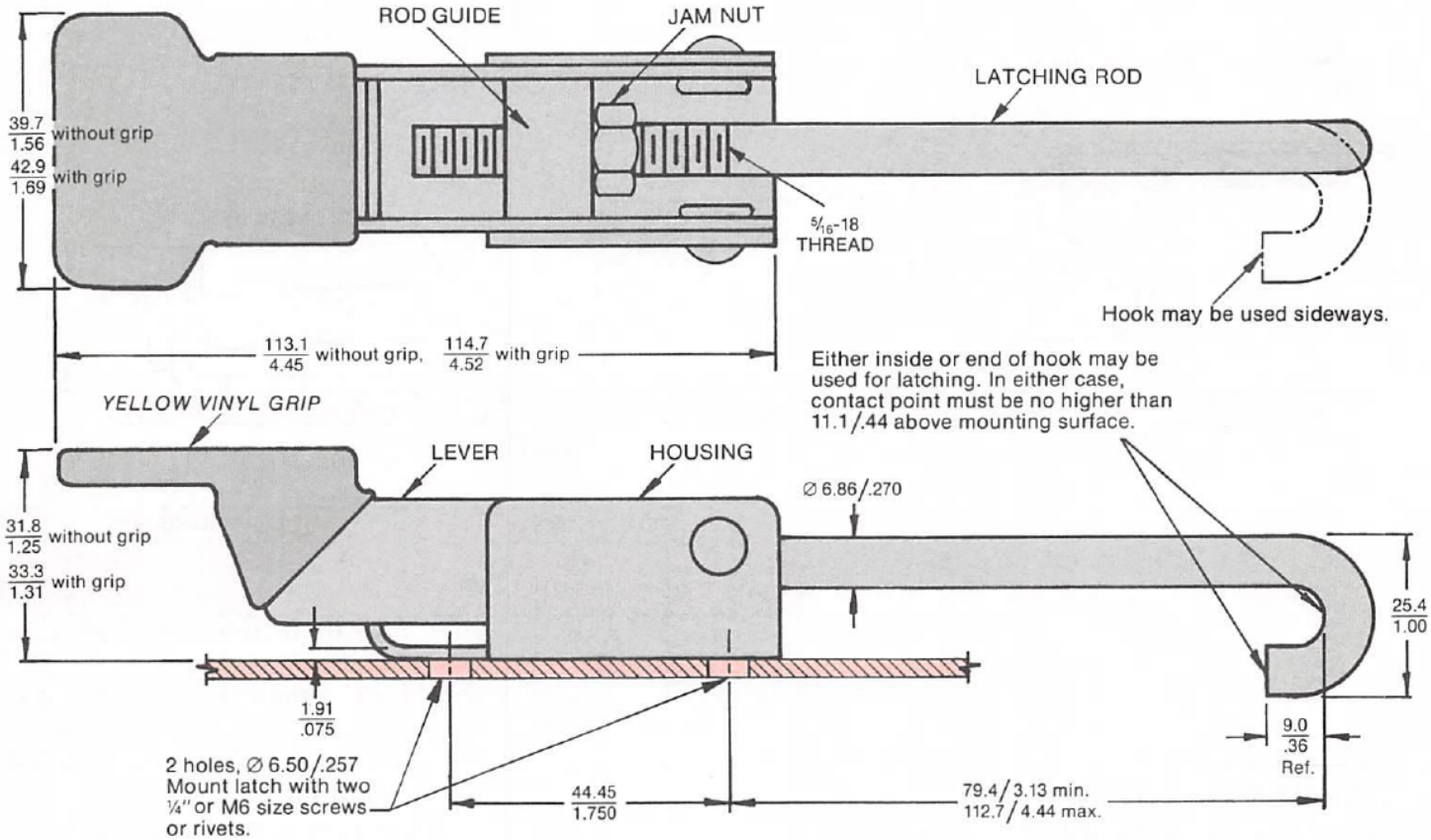
2. Raise lever and tighten jam nut hard against rod guide using an open end wrench. Use Phillips screwdriver to prevent latching rod from turning.



Adjustable Draw Latch
700 series with hooked latching rod

- Hooked-end latching rod rotates to pick up a variety of latching surfaces.
- Adjustable latching rod.
- Large industrial size.
- Installs through two holes.
- Yellow vinyl coated lever.





PART NUMBERS		
Steel with vinyl grip	Stainless Steel	
	with vinyl grip	without vinyl grip
A1-11-702-20 ■	A1-11-702-50 ■	A1-11-702-40 ■

■ From stock, subject to prior sale.

MATERIAL and FINISH

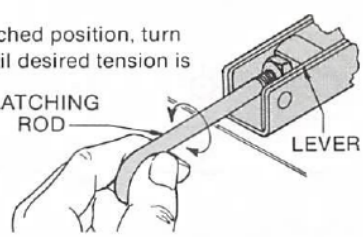
STEEL 700 series,
LEVER and HOUSING: 1010 steel.
ROD GUIDE and JAM NUT: low carbon steel.
ROD: 1008 steel.
ALL STEEL PARTS are zinc plated plus bright chromate dip.
RIVET: 302 stainless steel, passivated.
GRIP: vinyl, yellow.

STAINLESS STEEL 700 series,
LEVER and HOUSING: 304 stainless steel.
ROD GUIDE: 303 stainless steel.
JAM NUT: 300 stainless steel.
ROD and RIVET: 302 stainless steel.
ALL STAINLESS STEEL PARTS are passivated.
Available with or without yellow vinyl grip.

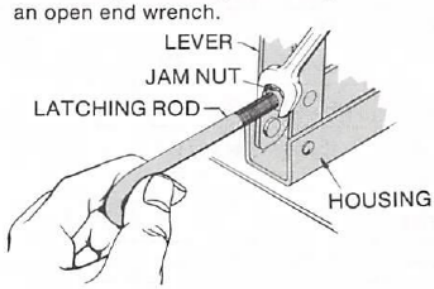
millimeter/inch

To adjust

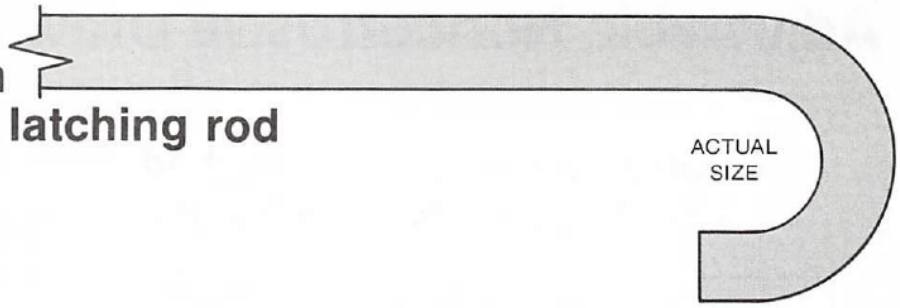
1. With lever in latched position, turn latching rod until desired tension is reached.



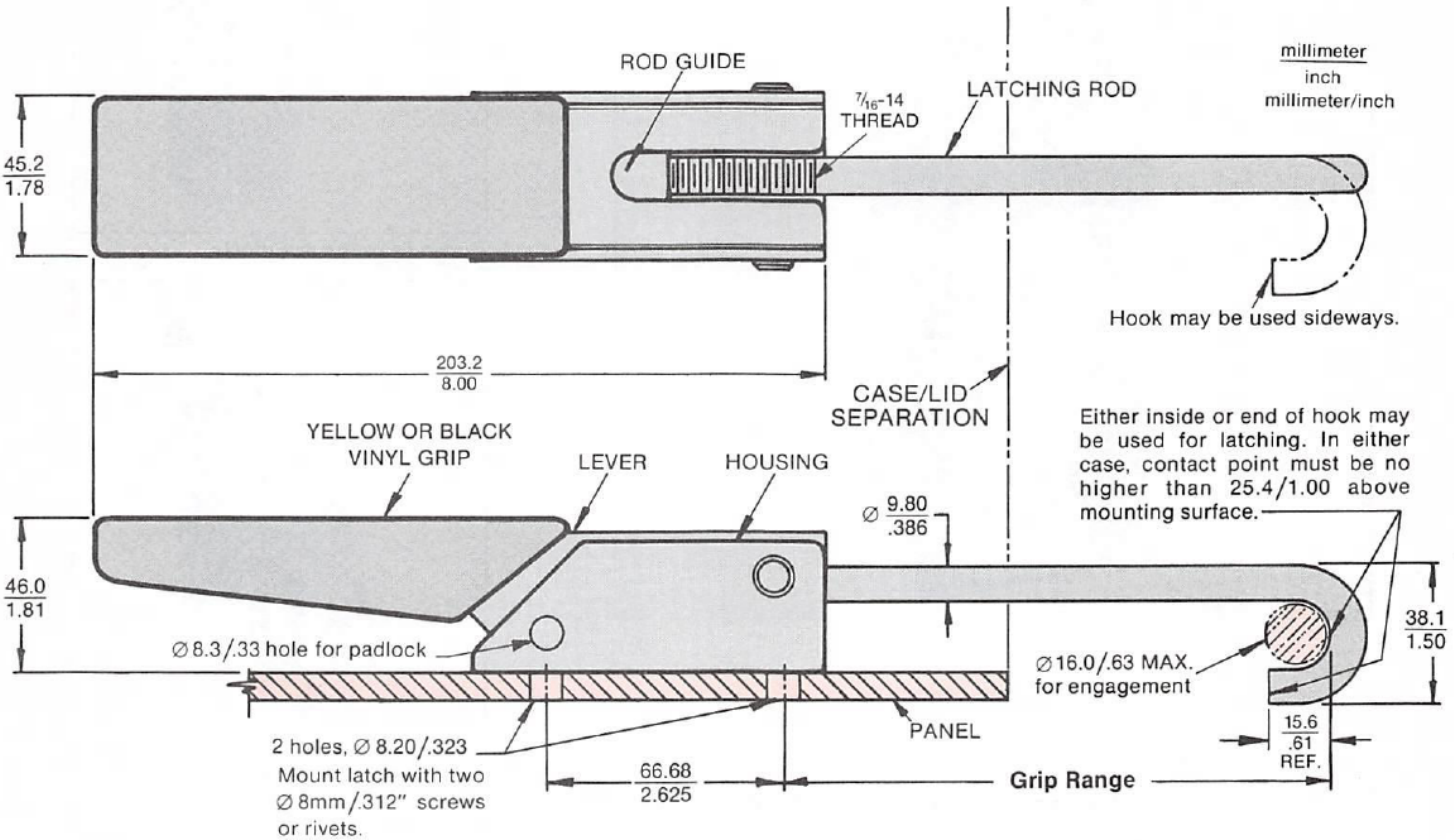
2. Raise lever. While holding latching rod to prevent rotation, tighten jam nut hard against rod guide using an open end wrench.



Adjustable Draw Latch
900 series with hooked latching rod



- **Built big — of heavy gauge steel**
- **Adjustable latching hook**
- **Choice of finish**
- **Low-profile design with large vinyl-covered handle**
- **Keeper not required.**

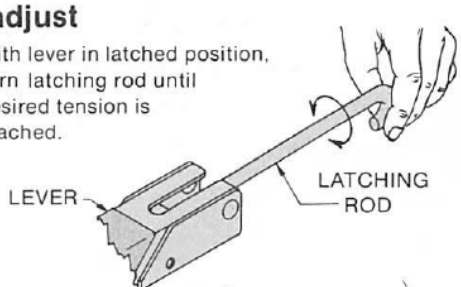


Grip Range		PART NUMBERS		
MIN.	MAX.	Bright latch with yellow vinyl grip	Black latch with yellow vinyl grip	Black latch with black vinyl grip
88.9/3.50	114.3/4.50	A1-11-902-**20** ■	A1-11-902-**30** ■	A1-11-902-**31** ■
114.3/4.50	139.7/5.50	A1-11-912-**20** ■	A1-11-912-**30** ■	A1-11-912-**31** ■
139.7/5.50	165.1/6.50	A1-11-922-**20** ■	A1-11-922-**30** ■	A1-11-922-**31** ■

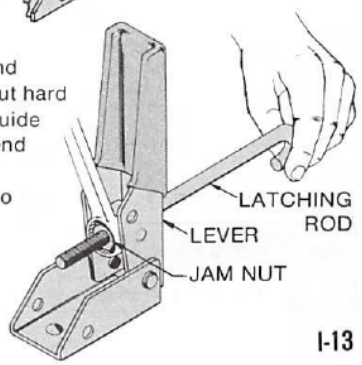
■ From stock, subject to prior sale.

To adjust

1. With lever in latched position, turn latching rod until desired tension is reached.



2. Raise lever and tighten jam nut hard against rod guide using a box-end wrench. Hold latching rod to prevent rotation.



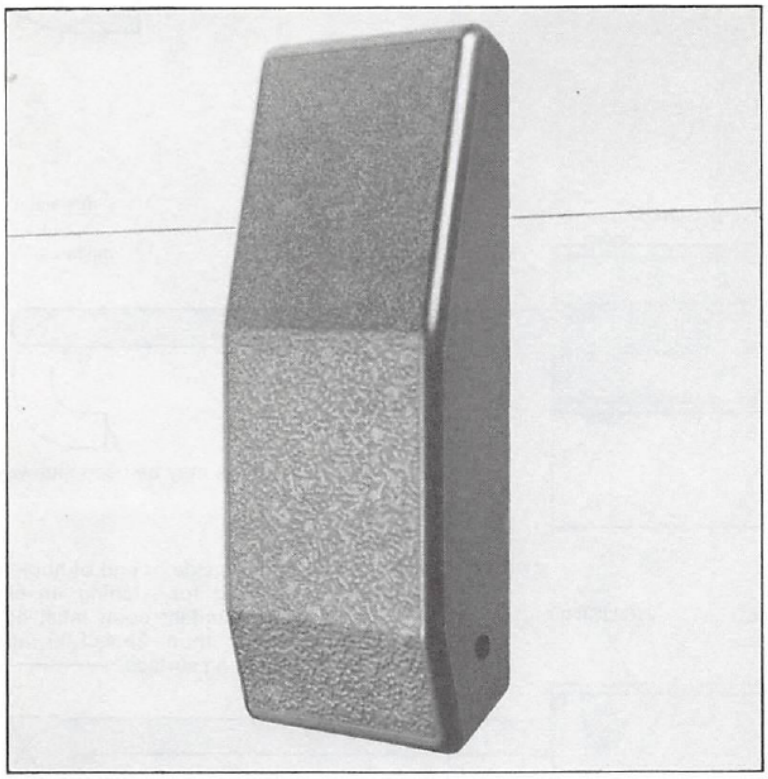
MATERIAL and FINISH

Bright latch with yellow vinyl grip,
LEVER, HOUSING and ROD: 1010 steel, zinc plated with bright chromate dip.
JAM NUT, RIVET and PIN: low carbon steel, zinc plated with bright chromate dip.
Black latch with yellow or black vinyl grip,
LEVER, HOUSING and ROD: 1010 steel, matte black polyester powder coated.
JAM NUT: low carbon steel, matte black polyester powder coated.
RIVET and PIN: low carbon steel, DACROTIZED†.

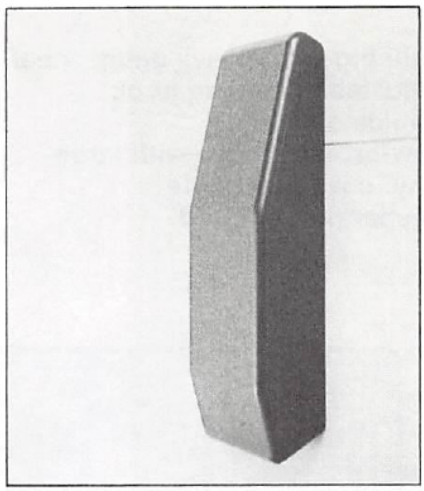
†Registered tradename of Metal Coatings International, Inc.

Adjustable Noncorrosive Draw Latch

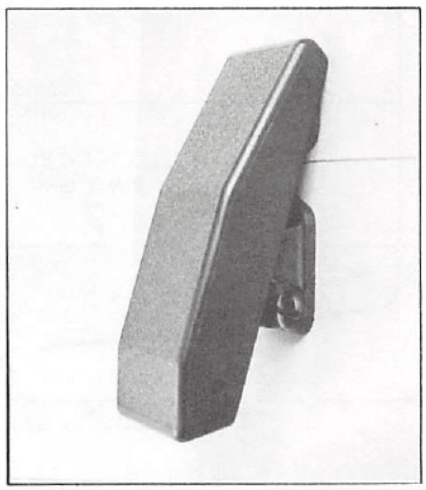
Clean and compact, the latched cover hides the working parts.



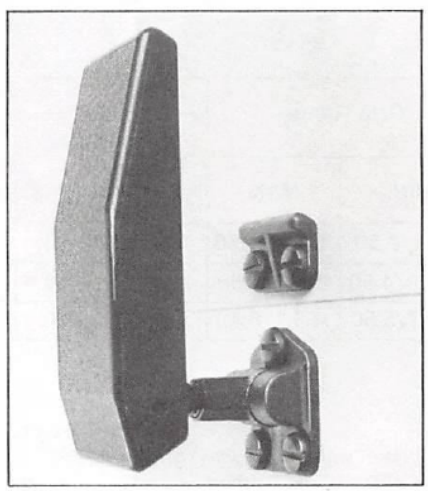
- Adjusts a total 7.9 mm /.31".
- Allows for mounting tolerance.
- Adapts to varying applications.
- Resists corrosion.
- Reduces heat transfer.
- Lightweight, rugged, durable.
- Custom cover colors available.



Rugged • sleek • low-profile.



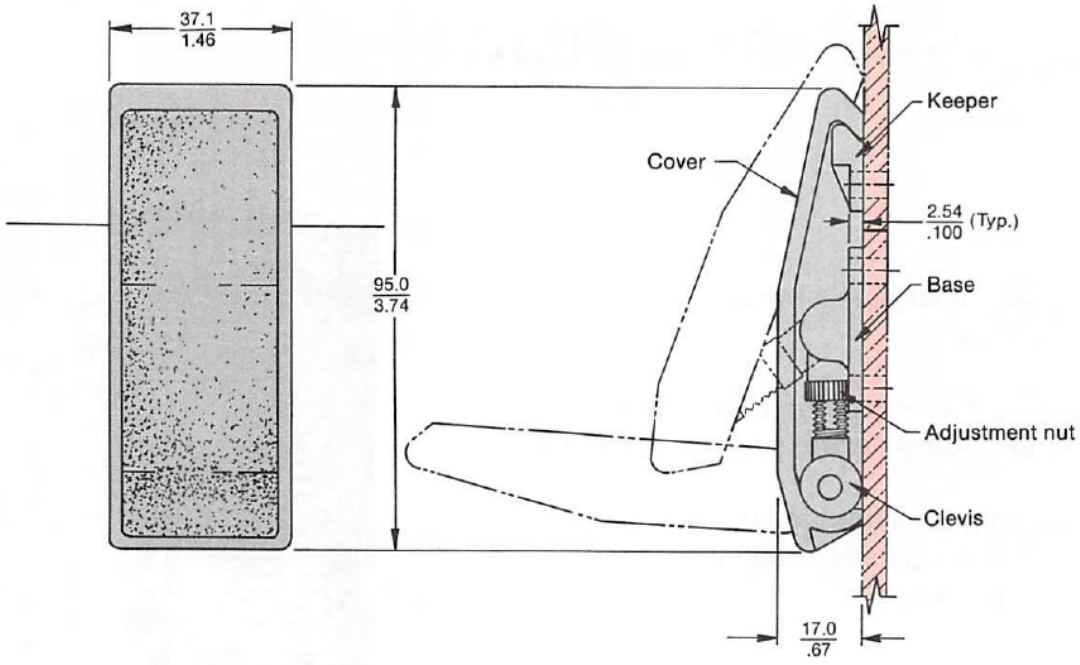
Raise cover to unlatch.



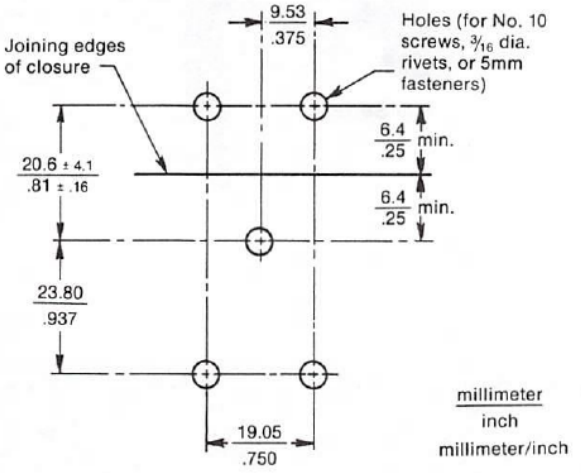
Rotate knurled nut to adjust latching force.

Adjustable Noncorrosive Draw Latch

Specifications and Installation



PANEL PREPARATION



millimeter
inch
millimeter/inch

MATERIAL and FINISH

BASE, CLEVIS, PIVOT NUT and KEEPER: glass reinforced nylon, black.
COVER and RETAINER: acetal, black.
ADJUSTMENT NUT: 303 stainless steel, passivated.

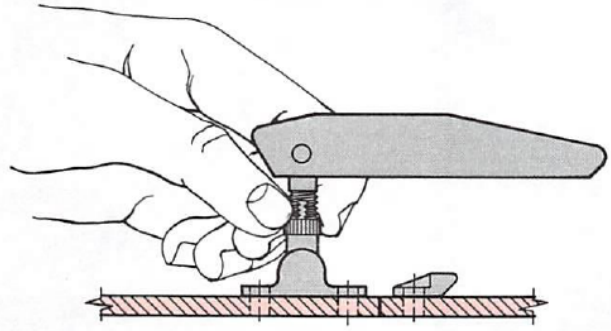
Strength Guideline

Maximum working tensile strength 1560 N/350 lbs.
Ultimate tensile strength 2220 N/500 lbs.

PART NUMBER

E8-10-502-20 ■

■ From stock, subject to prior sale.



To adjust latching force thread adjustment nut up or down clevis (total 7.9 mm or .31" range).

Designer Series Draw Latch

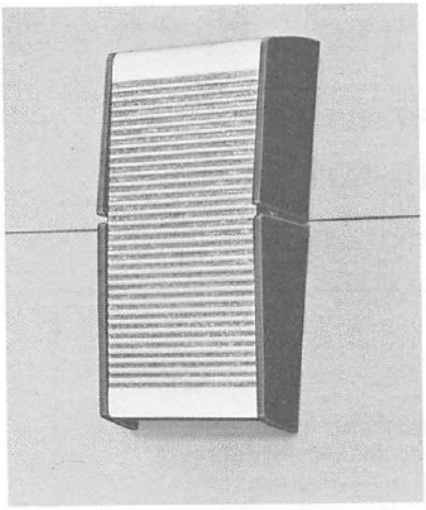
- Sleek fold-away design is a balance of function and style.
- Smooth cam-action draws up edge-mating parts easily providing strong positive latching.
- Anodized aluminum, stainless steel and high impact thermoplastic provide corrosion resistance.
- Two sizes.

ACTUAL SIZE

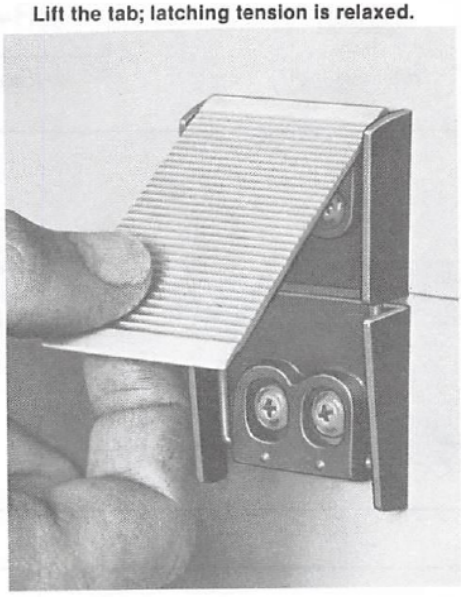


500 Series

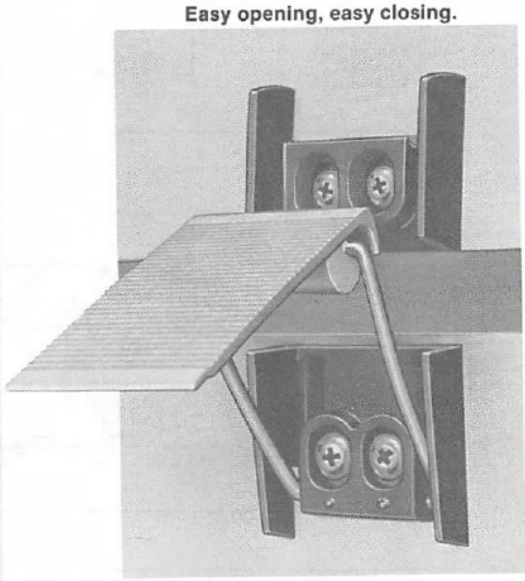
300 Series



Lift the tab; latching tension is relaxed.

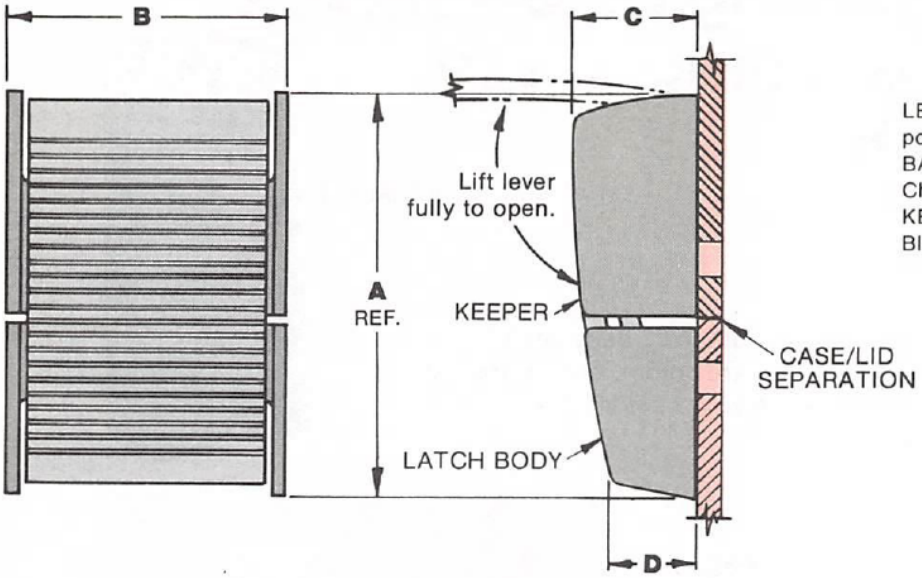


Easy opening, easy closing.



SOUTHCO® fasteners

Designer Series Draw Latch—*in two sizes*



MATERIAL and FINISH
LEVER: 6063 aluminum, satin silver polyester powder coated.
BAIL: 302 stainless steel, passivated.
Charcoal grey LATCH BODY and KEEPER: nylon.
Black LATCH BODY and KEEPER: ABS.

DIMENSIONS				PART NUMBERS		SERIES	INSTALLATION					SCREW
A	B	C	D	Charcoal grey and satin silver	Black and satin silver		E	F	G	H	∅ J	SIZE
2 7/64	1 29/64	21/32	13/32	E7-10-301-75 ■	E7-10-301-85 ■	300 series	5/16	5/16	5/8 ± 1/16	1/2	.172	No. 8
3 1/8	1 45/64	21/32	13/32	E7-10-501-75 ■	———	500 series	9/16	15/16	1 1/2 ± 1/16	1/2	.203	No.10

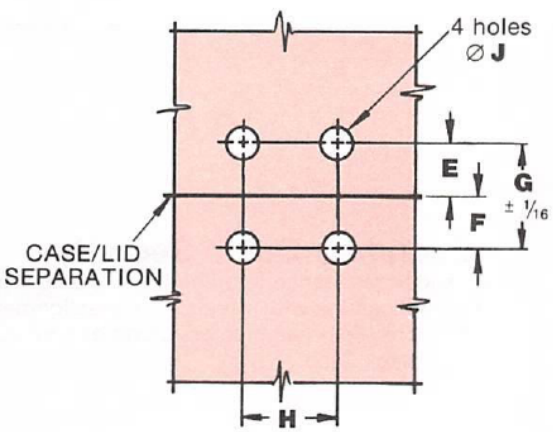
■ From stock, subject to prior sale.

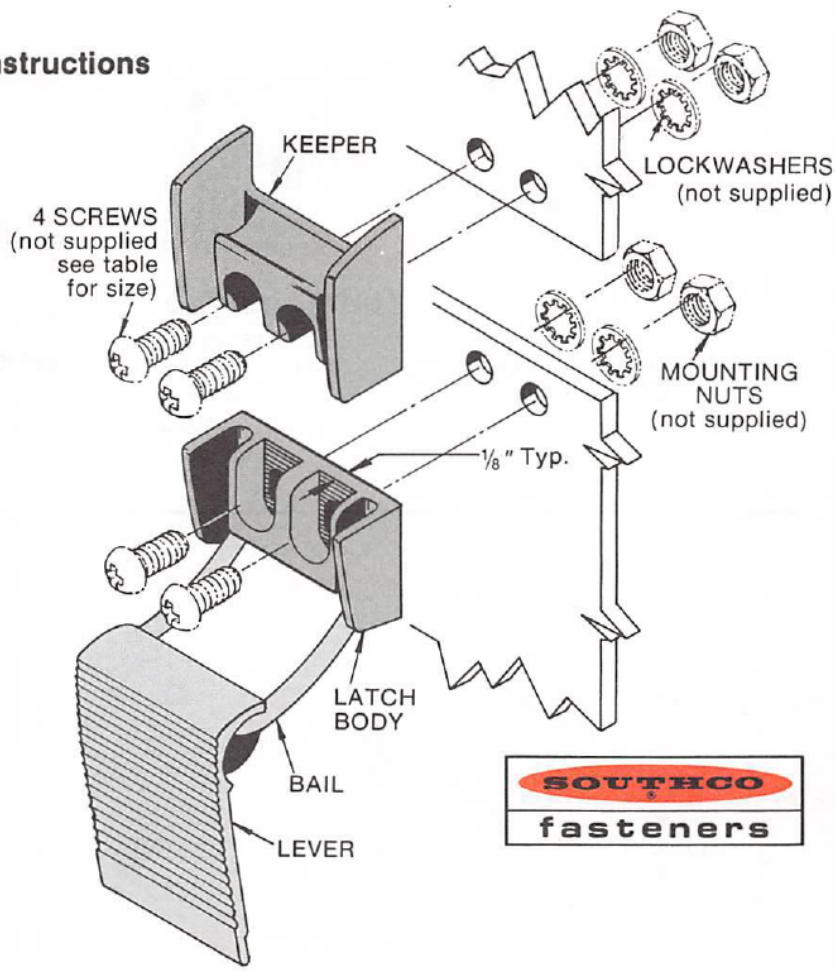
Panel Preparation and Installation Instructions

Prepare four holes. See drawing below for locations and hole size.

Mount keeper and latch body with four screws (see table for size).

Screw length equals your material thickness plus 1/8" (keeper and latch body thickness, both sizes) plus allowance for nuts and washers.

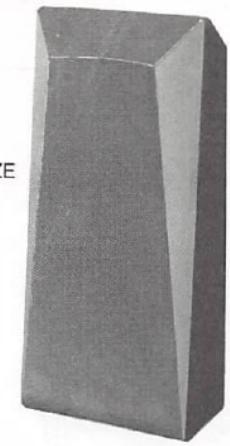




SOUTHCO fasteners

Designer styling for Southco's low-profile, living hinge Draw Latch

ACTUAL SIZE

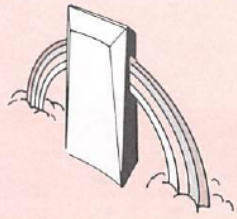


Available from stock, the handsome Southco 07 draw latch is offered in a striking shape in five standard colors. And on special order, your latches can be produced to your custom design in your color, even with your logotype.

Customized Draw Latches

On special order

Southco can custom tailor the outer appearance of 07 draw latches to complement your product's design. Choose a distinctive shape, design or color. Have your logotype molded into the latch cover. Call us at (215) 459-4000 for details and design help; there's no obligation.

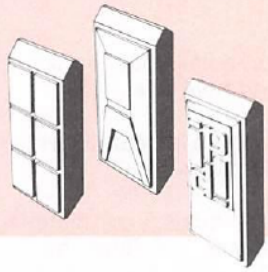


Your color

07 draw latches can be molded in standard and specially formulated colors. Send your color chip.

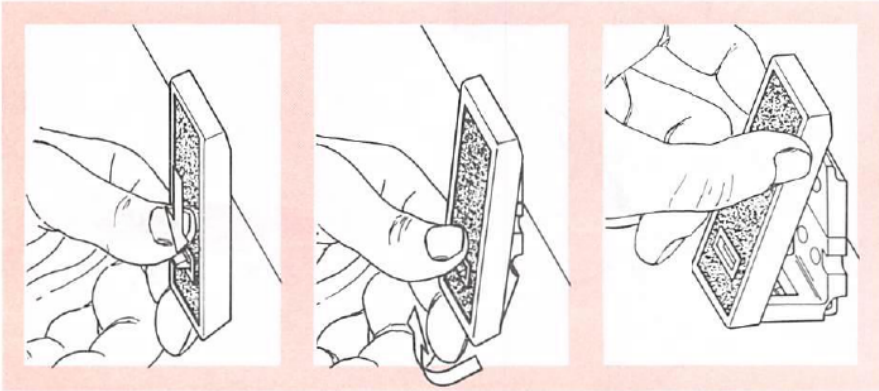
Your logotype

Your company's logo can, in most cases, be molded into the face of our standard latch by itself, or as part of your own design. Send us a copy of your logo; we'll return it with a quotation.



Your design

As these drawings suggest, the cover portion of the draw latch can be customized. Send us your sketch.



Secondary Catch Security

for added resistance to unintentional opening and applications with vibration or misalignment conditions. Four catch colors blend or contrast with a black latch.

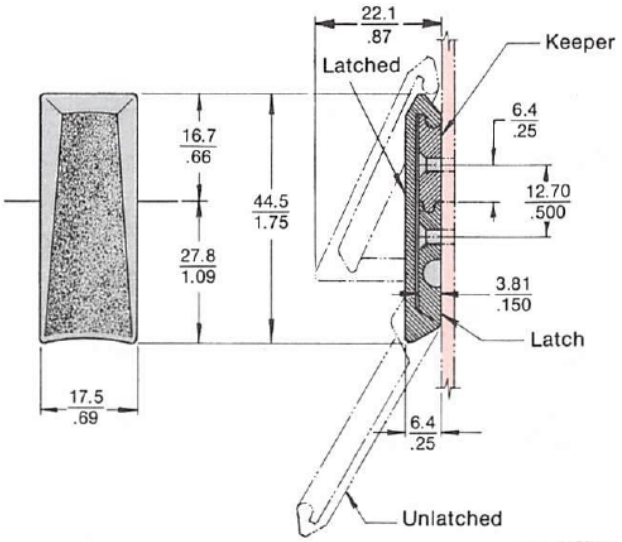
Designer series
Specifications for 100 and 200 series latches.

100 series

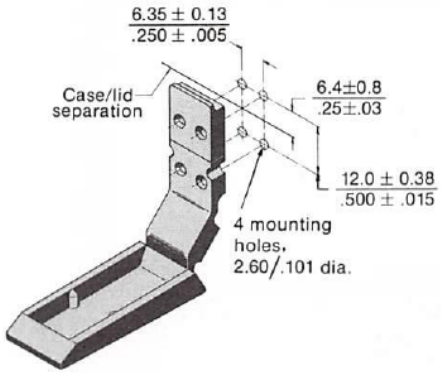
MATERIAL
Polypropylene (see part number table for color)

Color	Part Number
Sand	07-10-105-**64** ■
Charcoal	07-10-105-**19** ■
Black	07-10-105-**12** ■

■ From stock, subject to prior sale.



MILLIMETER
INCH



Install latch with four 2.5/.093 dia. **countersunk head** rivets or M2.5/ No. 2 **flat head** screws (not furnished).

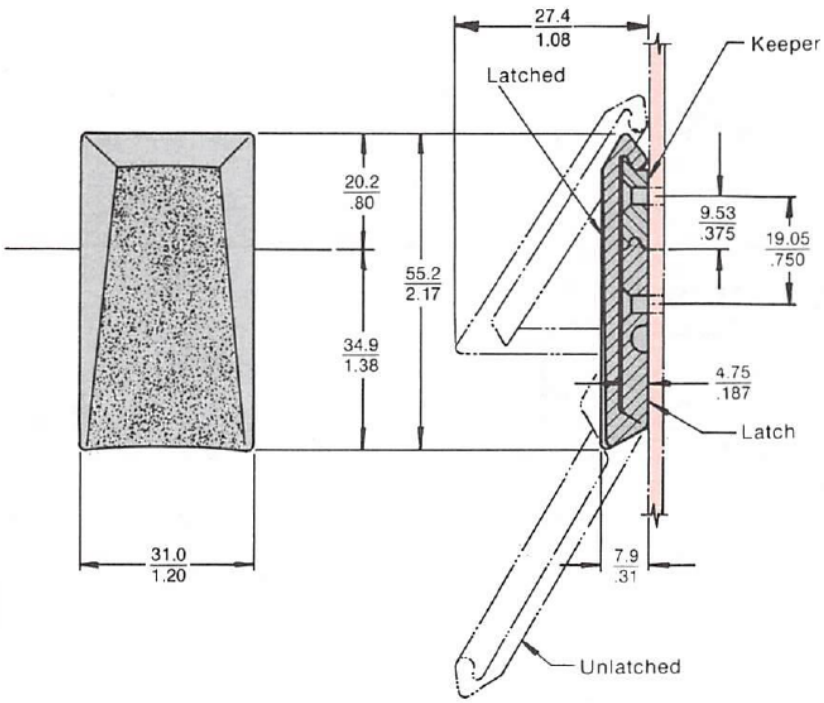
200 series

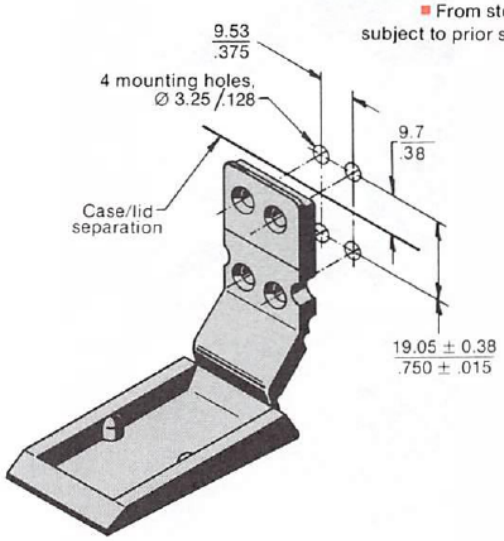
MILLIMETER/INCH

MATERIAL
Polypropylene (see part number table for color)

Color	Part Number
Sand	07-10-205-**64** ■
Sepia	07-10-205-**62** ■
Slate gray	07-10-205-**61** ■
Charcoal	07-10-205-**19** ■
Black	07-10-205-**12** ■

■ From stock, subject to prior sale.





Install latch with four 3.0/.125 dia. **countersunk head** rivets or M3/No. 4 **flat head** screws (not furnished).

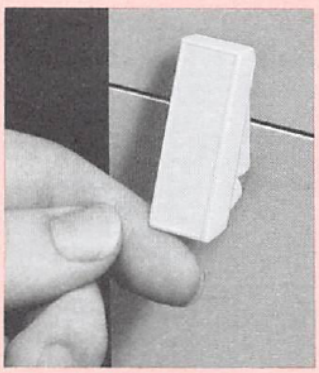
Southco No. 07 Draw Latch

Four sizes
for edge-mating closures

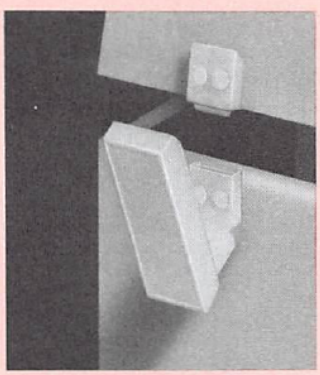
Draw Latches flip open, snap shut; hold edge-mating parts in three planes. These clean decorative latches are molded of polypropylene in one piece with integrally hinged sections (no pins). Supplied with mating keeper.

Custom Colors!

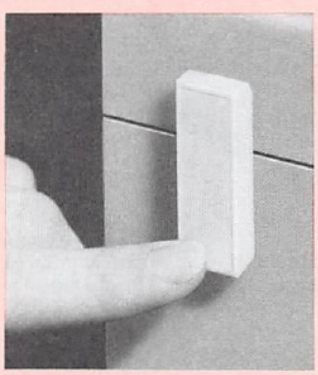
No. 07 Draw Latches on special order; you supply color chip. Call for details 215-459-4000



An upward flip opens it.

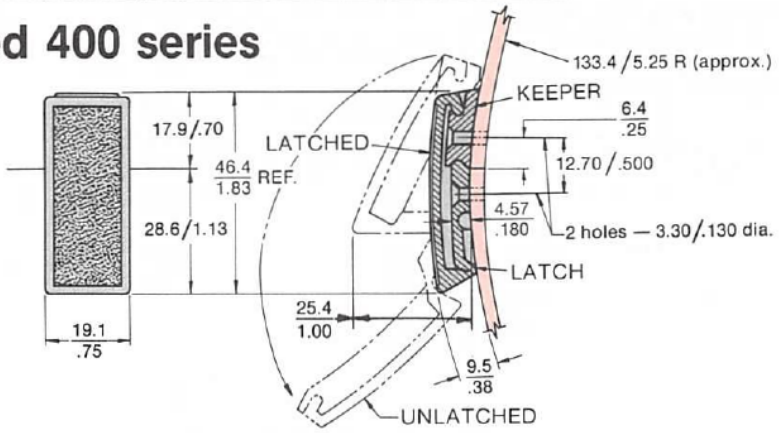


Simple, one piece latch body.

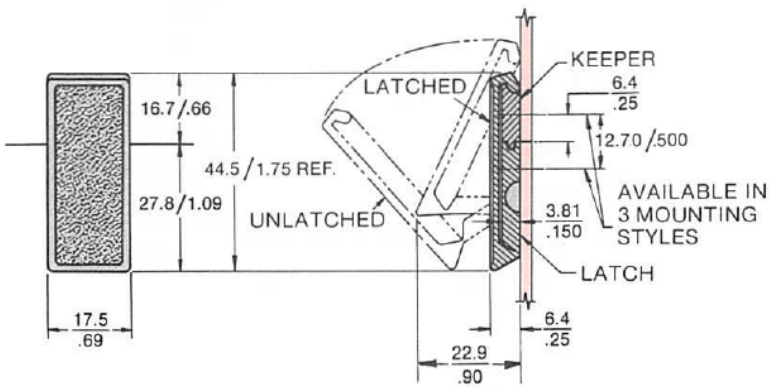


Closed, it's a decorative panel.

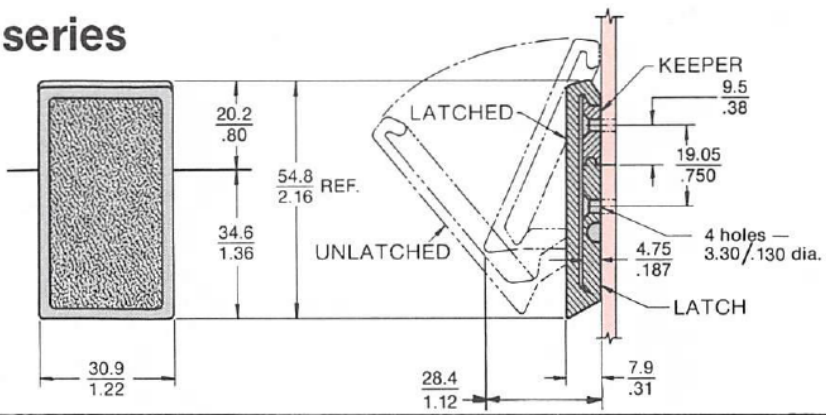
curved 400 series



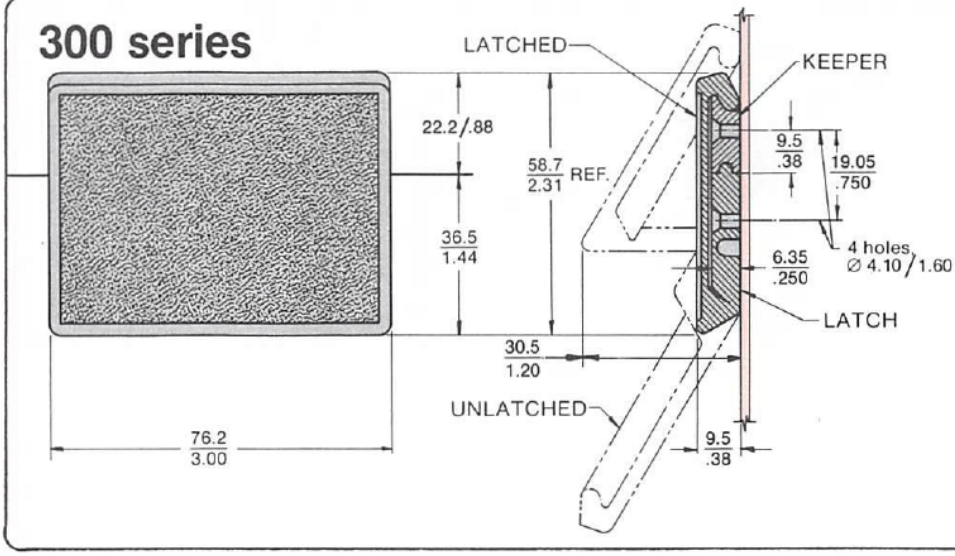
100 series



200 series



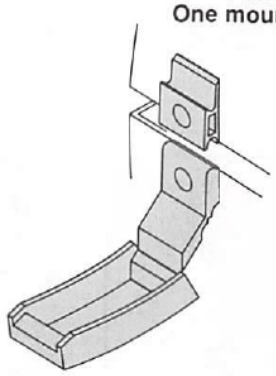
300 series

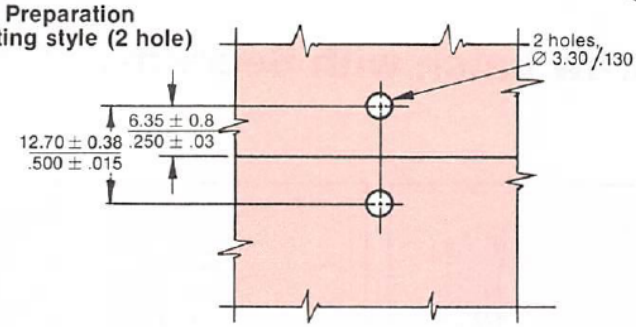


PART NUMBER
Black 07-10-402-12 ■

MATERIAL
Polypropylene

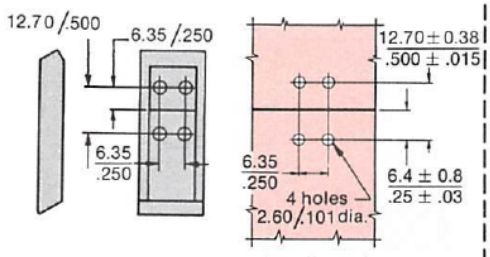
Panel Preparation
One mounting style (2 hole)





Attach latch with two 3.0/.125 dia. ***countersunk head*** rivets or M3/No. 4 ***flat head*** screws (not furnished).

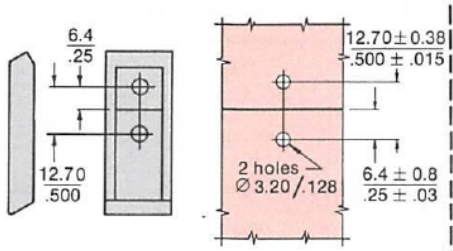
4 Hole Mounting Style



Install catch with four 2.5/.093 dia. ***countersunk head*** rivets or M2.5/No. 2 ***flat head*** screws (not furnished).

PART NUMBERS
White 07-10-101-11 ■
Black 07-10-101-12 ■

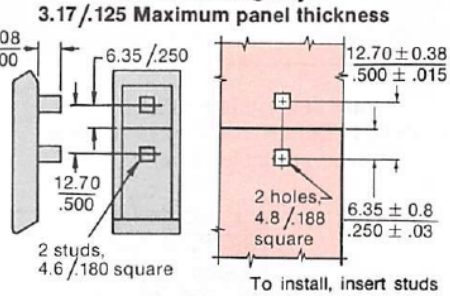
2 Hole Mounting Style



Install catch with two 3.0/.125 dia. ***countersunk head*** rivets or M3/No. 4 ***flat head*** screws (not furnished).

PART NUMBERS
White 07-10-102-11 ■
Black 07-10-102-12 ■

Stud Mounting Style
3.17/.125 Maximum panel thickness



To install, insert studs in square holes; swage by sliding heated tool over stud ends.

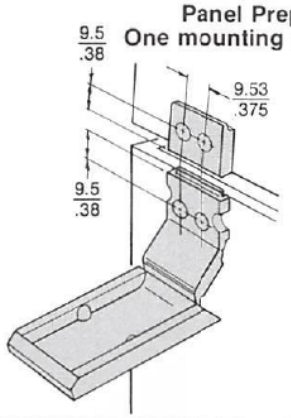
PART NUMBERS
White 07-10-103-11 □
Black 07-10-103-12 □

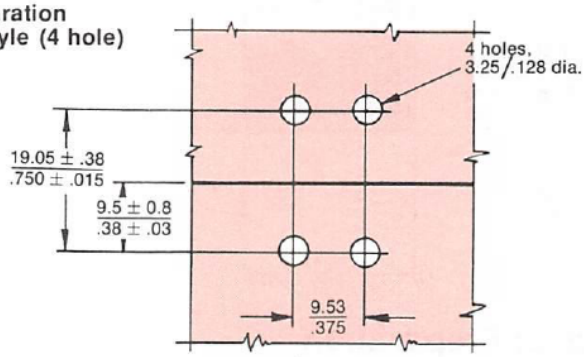
MATERIAL: Polypropylene

PART NUMBERS
White 07-10-201-11 ■
Black 07-10-201-12 ■

MATERIAL
Polypropylene,

Panel Preparation
One mounting style (4 hole)





Attach latch with four 3.0/.125 dia. ***countersunk head*** rivets or M3/No. 4 ***flat head*** screws (not furnished).

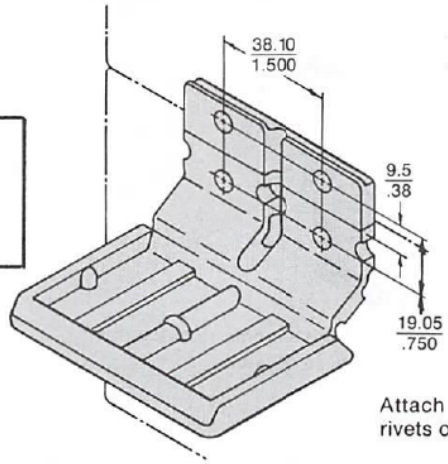
millimeter
inch

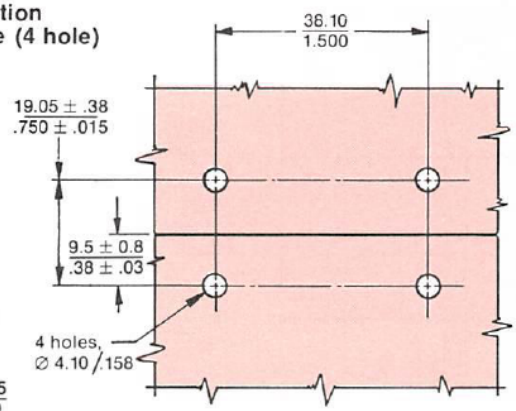
millimeter/inch

PART NUMBERS
White 07-10-301-11 ■
Black 07-10-301-12 ■

MATERIAL
polypropylene,

Panel Preparation
One mounting style (4 hole)

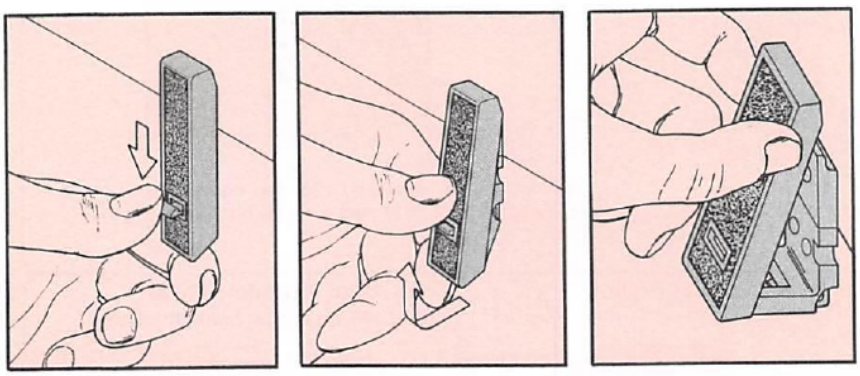




Attach latch with four 4.0/.156 dia. ***countersunk head*** rivets or M4/No. 6 ***flat head*** screws (not furnished).

■ From stock, subject to prior sale.
□ Up to 8 weeks. Minimum order required.

Draw Latch with Secondary Catch Security

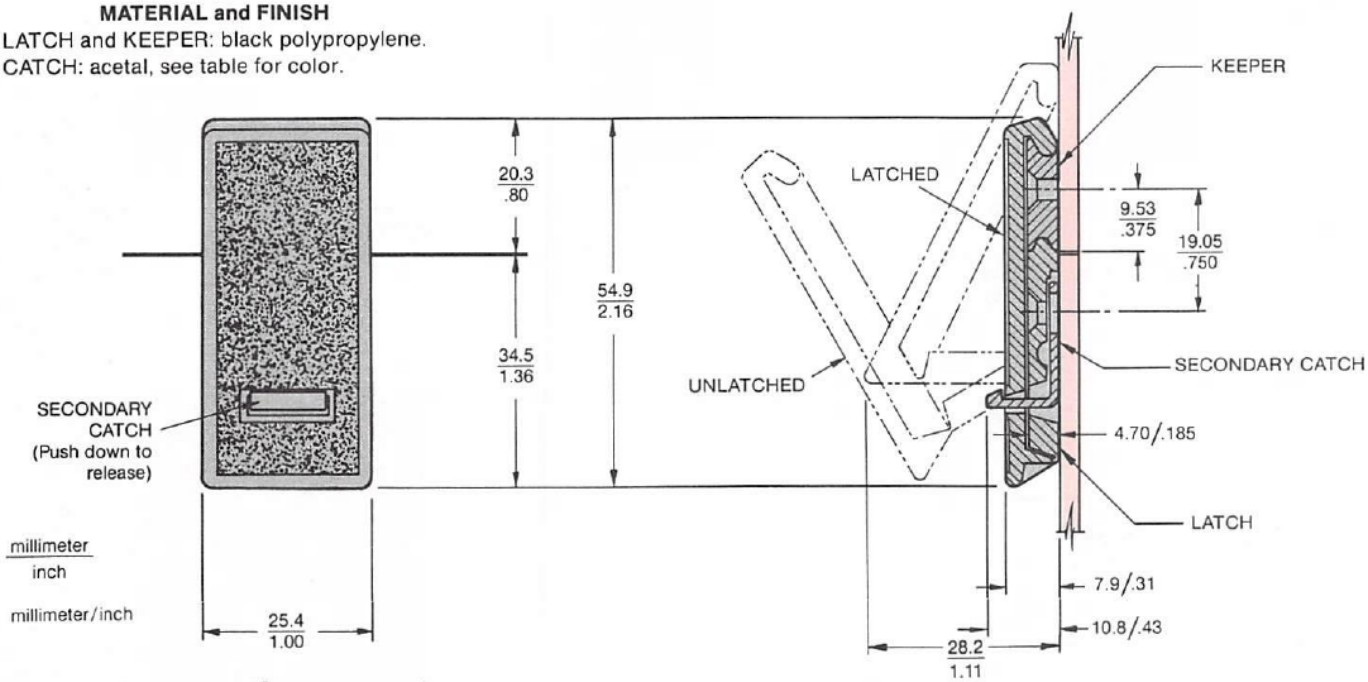


- Added vibration resistance
- Black latch with choice of secondary catch color
- Low profile

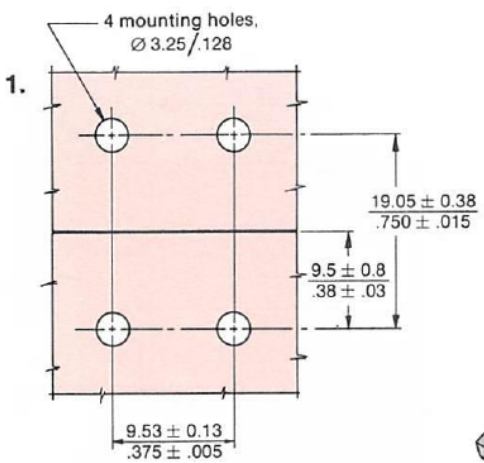
SECONDARY CATCH COLORS	LATCH ASSEMBLY PART NUMBERS
GRAY	07-10-501-**69** ■
RED	07-10-501-**70** ■
YELLOW	07-10-501-**71** ■
BLACK	07-10-501-**72** ■

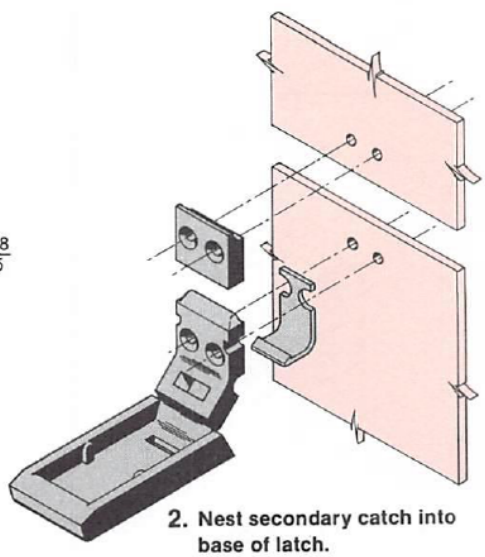
■ From stock, subject to prior sale.

MATERIAL and FINISH
LATCH and KEEPER: black polypropylene.
CATCH: acetal, see table for color.

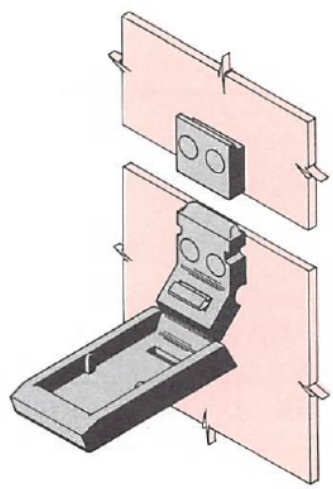


Panel Preparation





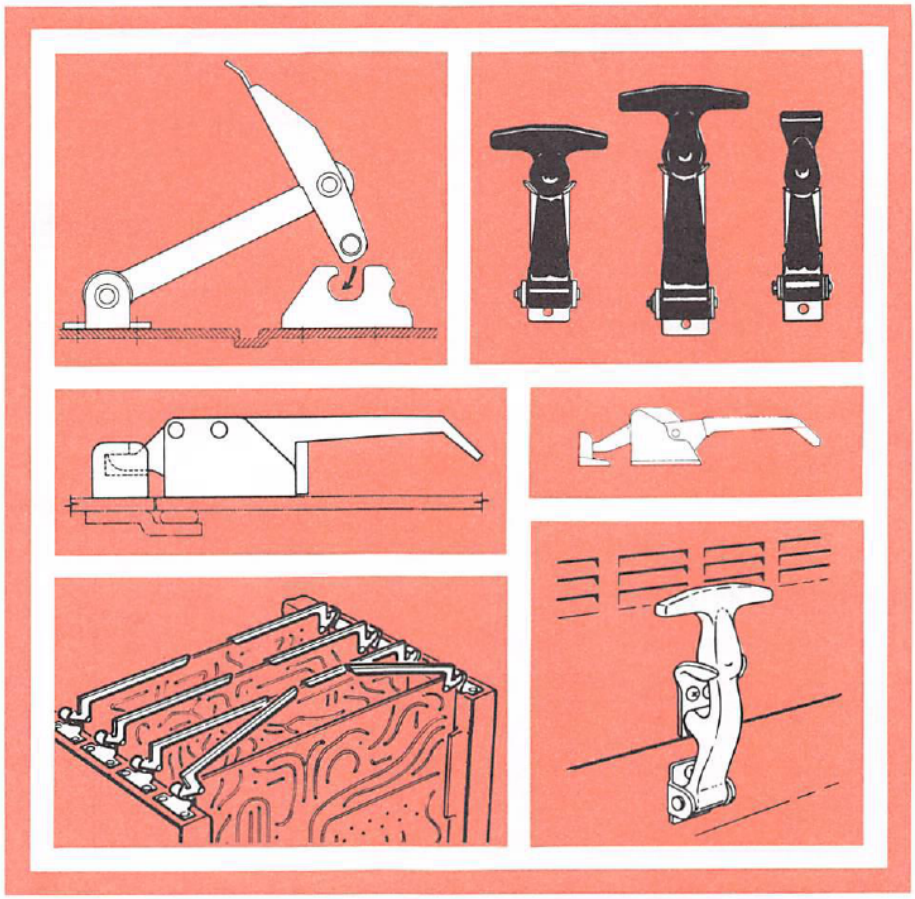
2. Nest secondary catch into base of latch.



3. Install assembly with four 3.0/.125 dia. countersunk head rivets or M3/No. 4 flat head screws (not supplied).

Section II
Draw Latches
(flexible and compression styles)

contents guide	page
No. 37 T-Handle	II-3 to II-9
No. C7 *New Soft Latch*™	II-2
No. A7 Draw Latch with Toggle Action	II-10
No. A2 Lever Latch	II-11
No. 90 Circuit Board Fastener	II-12

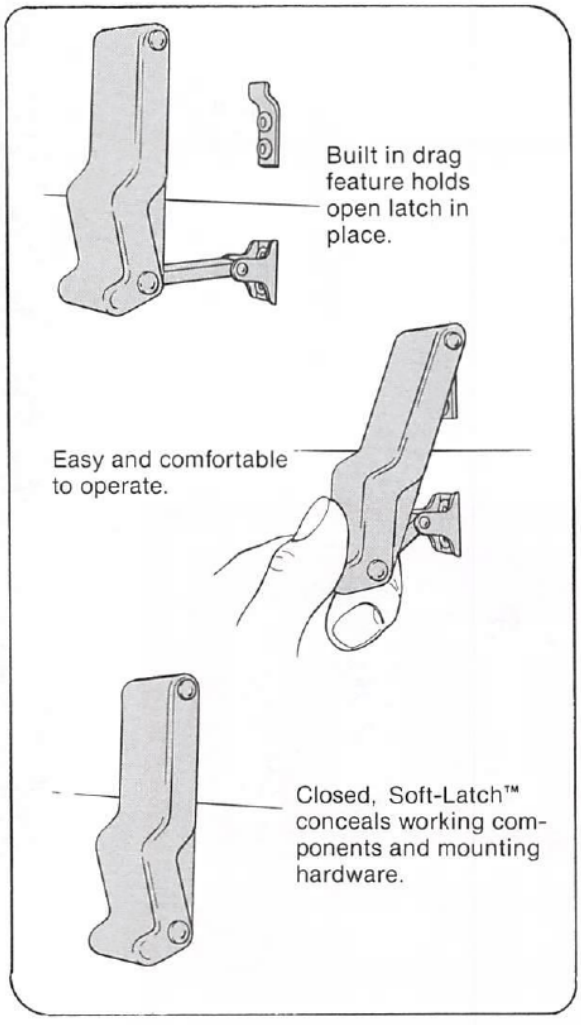


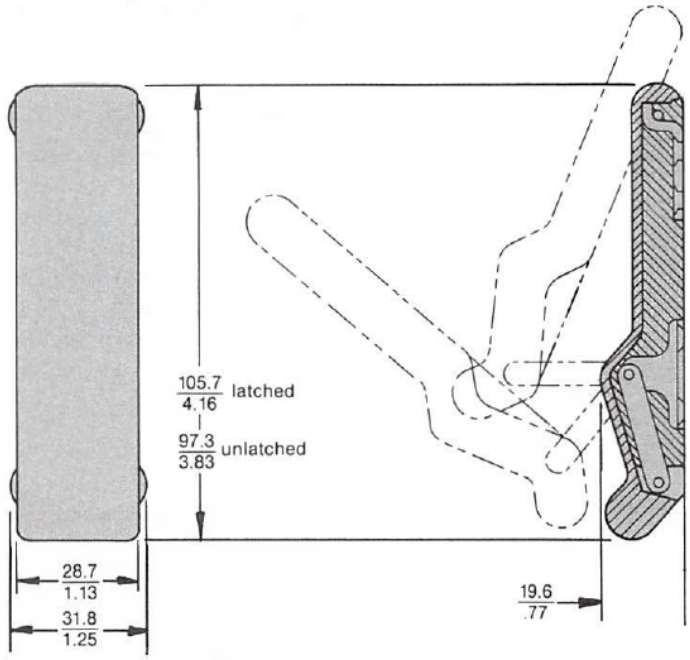
New

Soft Latch™... a unique overcenter latch

- Styled Appearance
- Cushions Impact
- Tolerates Misalignment
- Absorbs Vibration
- Noncorrosive Materials

MATERIAL and FINISH
LATCH BODY: Thermoplastic Elastomer, Matte Black finish. LEVER and BUSHINGS: Glass reinforced nylon, black. RIVET, PINS, BRACKET, and KEEPER: 300 series stainless steel, passivated.



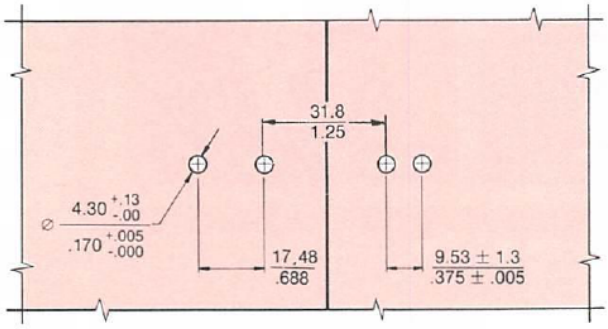


Assembly Part Number
C7-10 ■

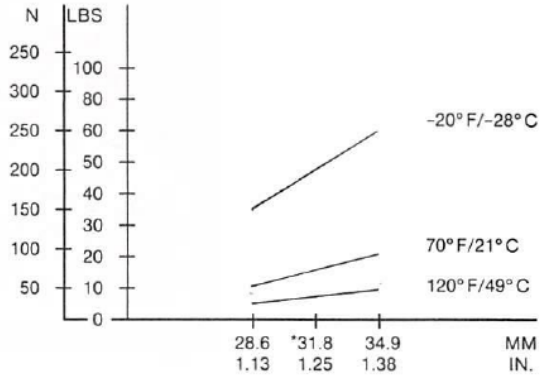
■ From stock, subject to prior sale

PANEL PREPARATION

Mount latch using No. 8, M4 size screws, or .156 rivets.

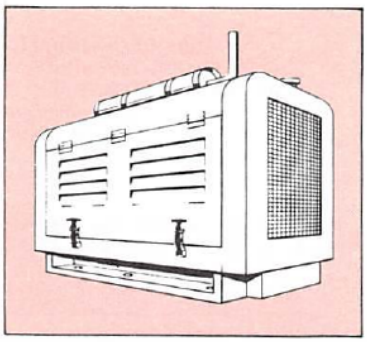


Steady state clamp force vs. mounting dimension.

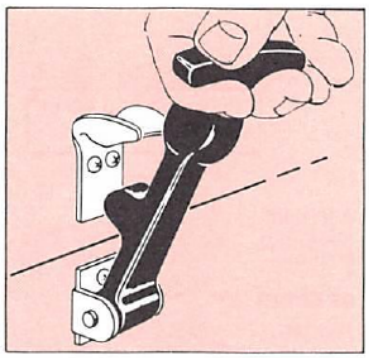


Distance between Bracket and Keeper mounting holes.
*Recommended mounting dimension.

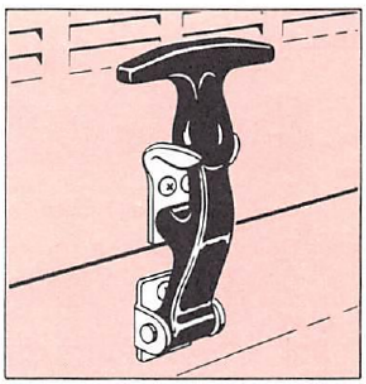
Southco flexible draw latches help to muffle vibration and noise



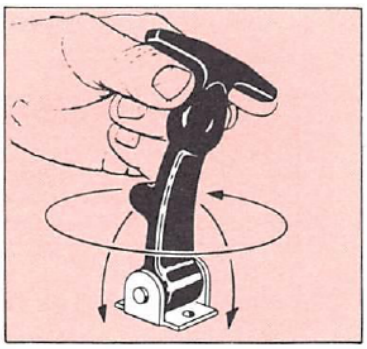
1. Vibration can cause loose-fitting hoods and covers to rattle. This can be the main source of noise coming from engines, pumps and compressors.



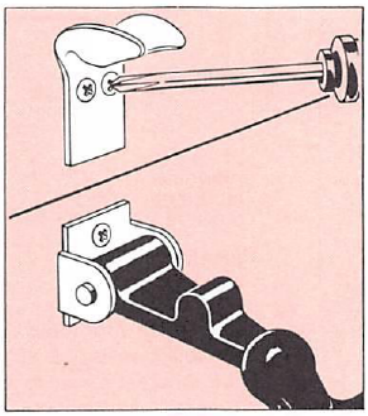
2. Now you can silence this noise with Southco's No. 37 Flexible Draw Latches. Pull the synthetic rubber arm and it stretches to fit into the keeper.



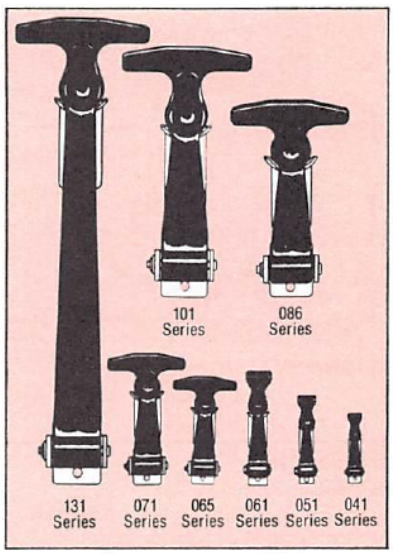
3. A bumper molded into the swing arm is forced against the panel for additional snugness, and the battle against rattles is won.



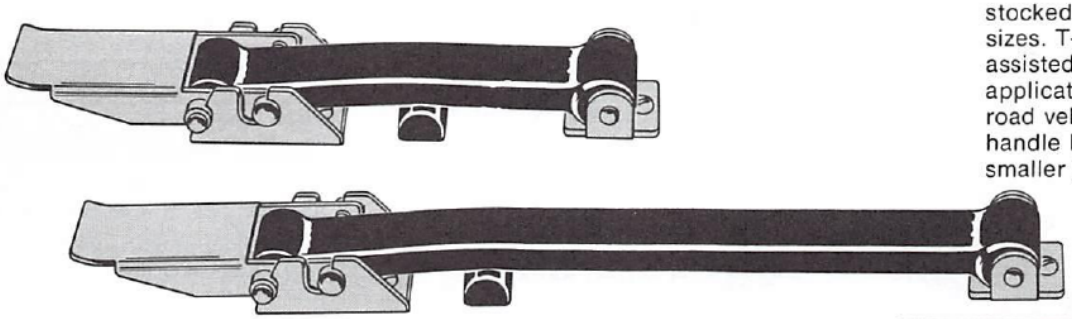
4. Because the swing arm can flex in any direction, these draw latches compensate for misalignment between handle bracket and keeper.



5. Installation is simple. The latch, consisting of keeper and handle bracket, is installed with four rivets or screws, or can be welded.



6. Flexible Draw Latches are stocked in three styles and ten sizes. T-handle and lever assisted latches are used for applications up to giant off-the-road vehicles. Smaller Tab-handle Latches are used for smaller jobs.



Lever-assisted Draw Latches available in two lengths and in heavy duty style.

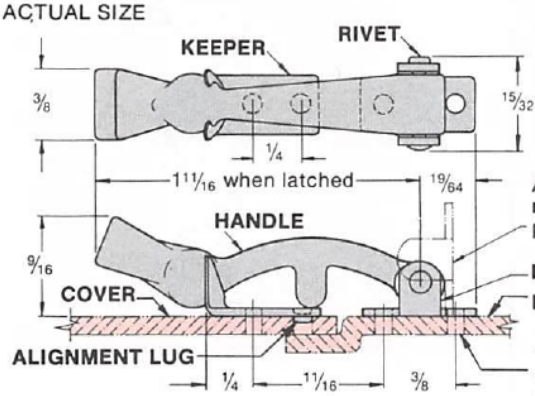
SOUTHCO®
fasteners

Tab-handle Style Flexible Draw Latch

Southco No. 37 —in 3 smaller sizes

041 SERIES

ACTUAL SIZE



Thickness of bracket and keeper = .042

4 holes, Ø 3/32 for three Ø 3/32 rivets or No. 2 screws plus alignment lug. Alternate: weld keeper and bracket in place.

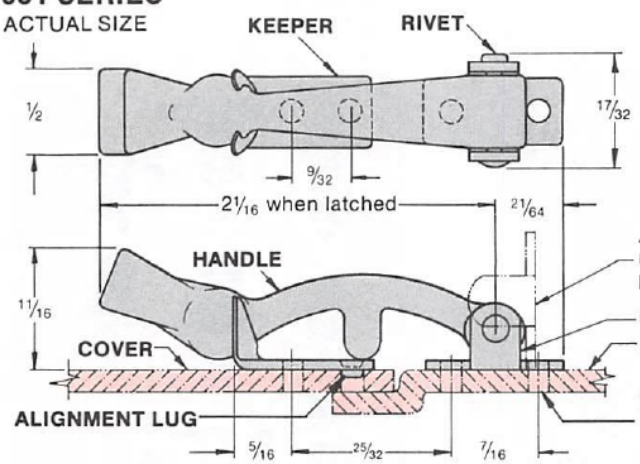
MATERIAL and FINISH
HANDLE: EPDM rubber, black.
KEEPER and BRACKET: 1010 steel, DACROTIZED† plus bright metallic organic coating or 302 stainless steel, passivated.
RIVET: 5056 aluminum, natural.

PART NUMBERS	
plated steel	stainless steel
37-10-041-10 ■	37-10-041-20 ■

Latch shipped one unit per package.

051 SERIES

ACTUAL SIZE



Thickness of bracket and keeper = .042

4 holes, Ø 1/8 for three Ø 1/8 rivets or No.4 screws plus alignment lug. Alternate: weld keeper and bracket in place.

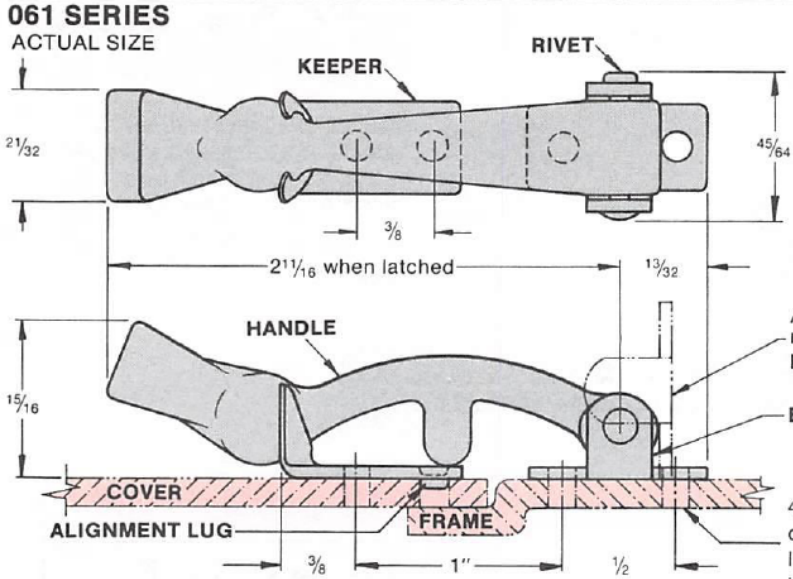
MATERIAL and FINISH
HANDLE: EPDM rubber, black.
KEEPER and BRACKET: 1010 steel, DACROTIZED† plus bright metallic organic coating or 302 stainless steel, passivated.
RIVET: 5056 aluminum, natural.

PART NUMBERS	
plated steel	stainless steel
37-10-051-10 ■	37-10-051-20 ■

Latch shipped one unit per package.

061 SERIES

ACTUAL SIZE



Thickness of bracket and keeper = .042

4 holes, Ø 1/8 for three Ø 1/8 rivets or No.4 screws plus alignment lug. Alternate: weld keeper and bracket in place.

MATERIAL and FINISH
HANDLE: EPDM rubber, black.
KEEPER and BRACKET: 1010 steel, DACROTIZED† plus bright metallic organic coating or 302 stainless steel, passivated.
RIVET: 5056 aluminum, natural.

PART NUMBERS	
plated steel	stainless steel
37-10-061-10 ■	37-10-061-20 ■

Latch shipped one unit per package.

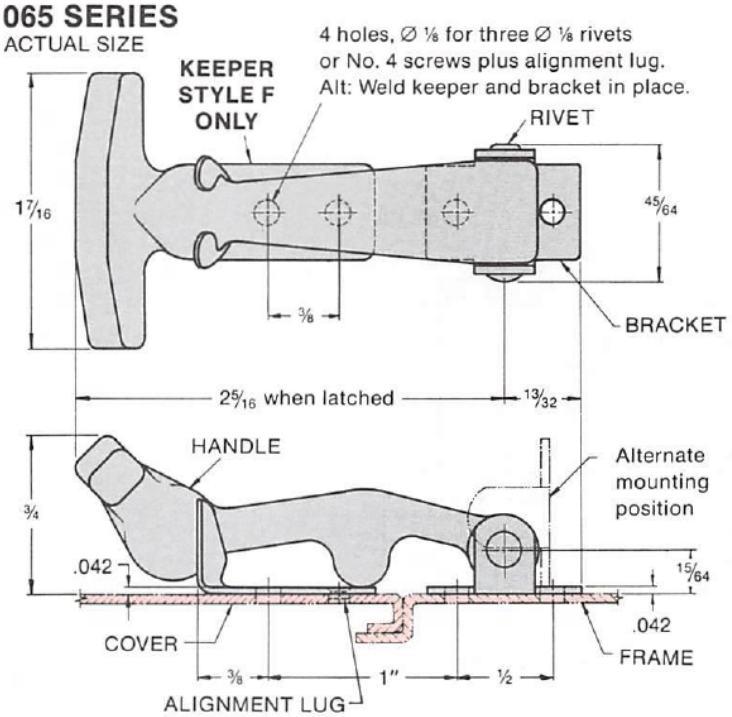
■ From stock, subject to prior sale.

†Registered tradename of Metal Coatings International, Inc.

T-handle Style Flexible Draw Latches

065 SERIES

ACTUAL SIZE



MATERIAL and FINISH

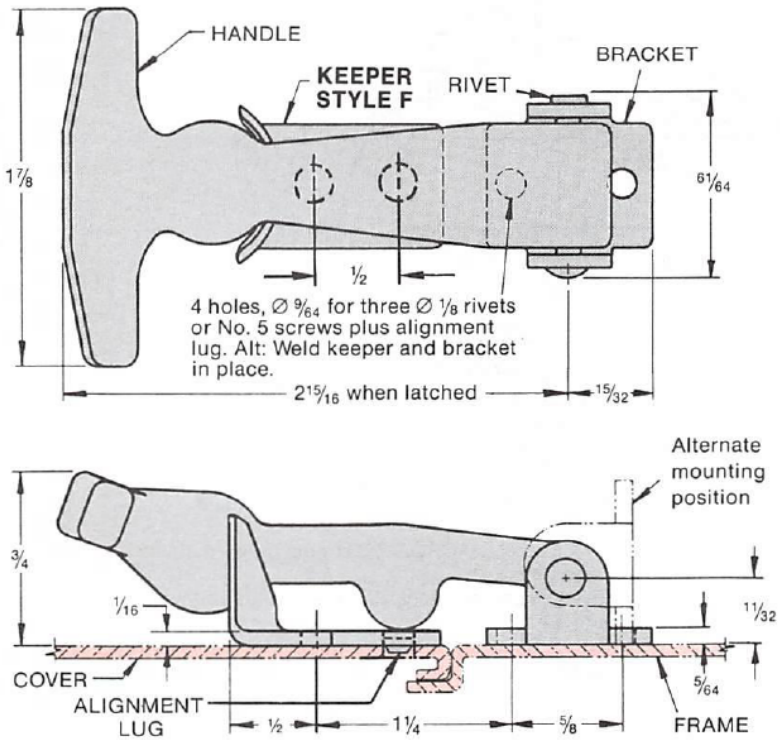
HANDLE: EPDM rubber, black.
KEEPER and BRACKET: 1010 steel, DACROTIZED† plus bright metallic organic coating or 302 stainless steel, passivated.
RIVET: 5056 aluminum, natural.

Latch shipped one unit per package.

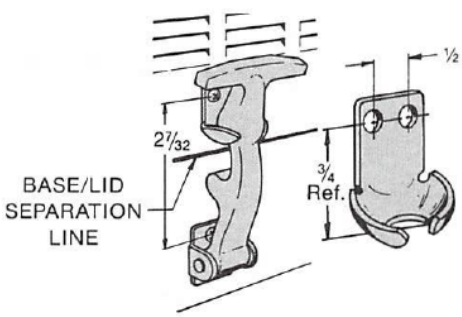
PART NUMBERS	
Steel, DACROTIZED†. Black rubber.	Stainless steel metal parts. Black rubber.
37-10-065-10 ■	37-10-065-20 ■

071 SERIES

ACTUAL SIZE



KEEPER STYLE R



MATERIAL and FINISH

HANDLE: EPDM rubber, black or white.
KEEPER and BRACKET: 1010 steel, DACROTIZED† plus bright metallic organic coating or 302 stainless steel, passivated.
RIVET (pre-assembled latches only): 5056 aluminum, natural or 302 stainless steel, passivated.

The following components are for unassembled latches only.
STUD: 1008 steel, DACROTIZED† plus bright metallic organic coating.
WASHER: low carbon steel, zinc plated plus yellow chromate dip.
RETAINING RING: spring steel, zinc plated plus yellow chromate dip.

†Registered tradename of Metal Coatings International, Inc.

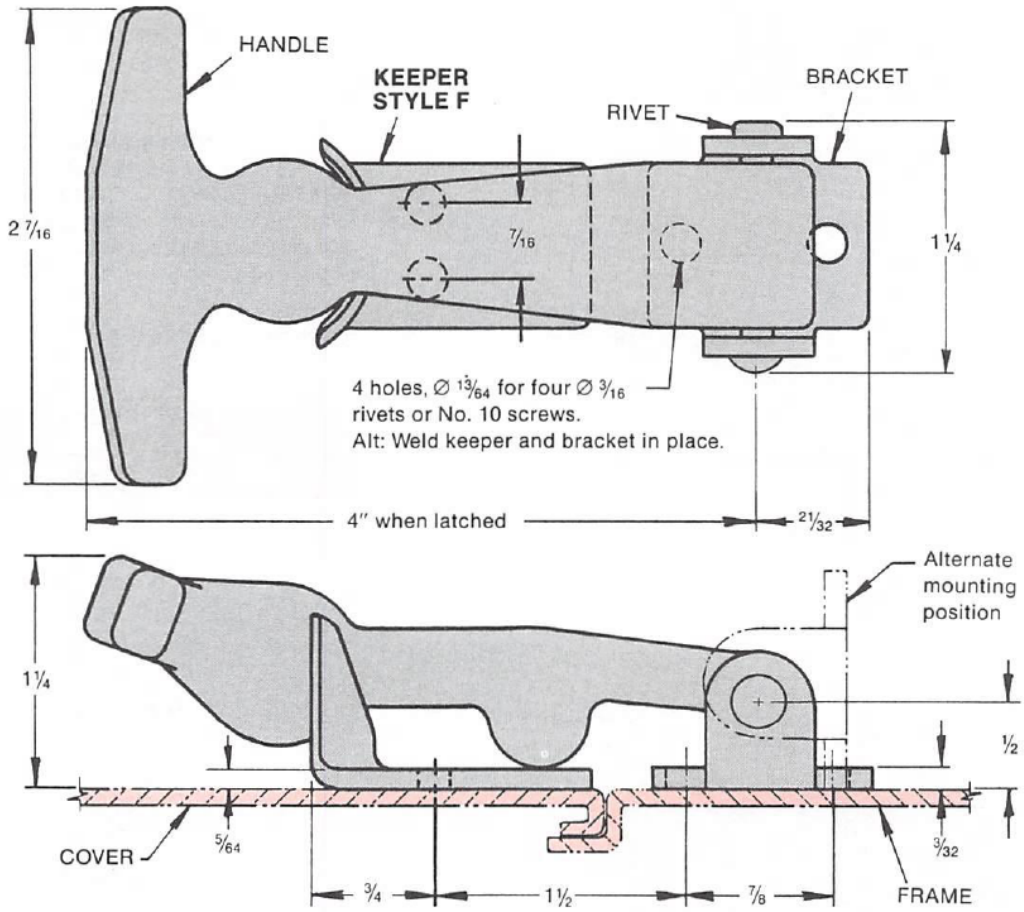
KEEPER STYLE	PART NUMBERS			
	Latch shipped one unit per package.			Latch shipped unassembled.
	Steel, DACROTIZED†. Black rubber.	Stainless steel metal parts. Black rubber.	Stainless steel metal parts. White rubber.	Steel, DACROTIZED†. Black rubber.
F	37-10-071-10 ■	37-10-071-20 ■	37-10-071-40 ■	37-10-072-10 ■
R	37-20-071-10 ■	37-20-071-20 ■	37-20-071-40 ■	37-20-072-10 ■

■ From stock, subject to prior sale.

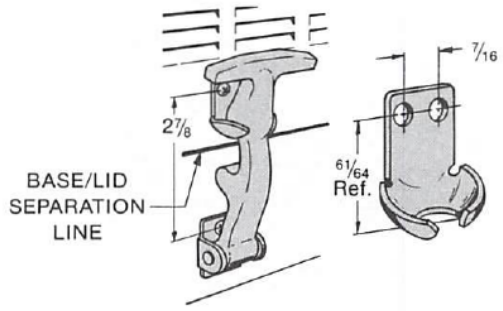
T-handle Style Flexible Draw Latches

086 SERIES

ACTUAL SIZE



KEEPER STYLE R



MATERIAL and FINISH

HANDLE: EPDM rubber, black.
KEEPER and BRACKET: 1010 steel, DACROTIZED† plus bright metallic organic coating or 302 stainless steel, passivated.
RIVET (pre-assembled latches only): 5056 aluminum, natural or 302 stainless steel, passivated.

The following components are for unassembled latches only.
STUD: 1008 steel, DACROTIZED† plus bright metallic organic coating.
WASHER: low carbon steel, zinc plated plus yellow chromate dip.
RETAINING RING: spring steel, zinc plated plus yellow chromate dip.

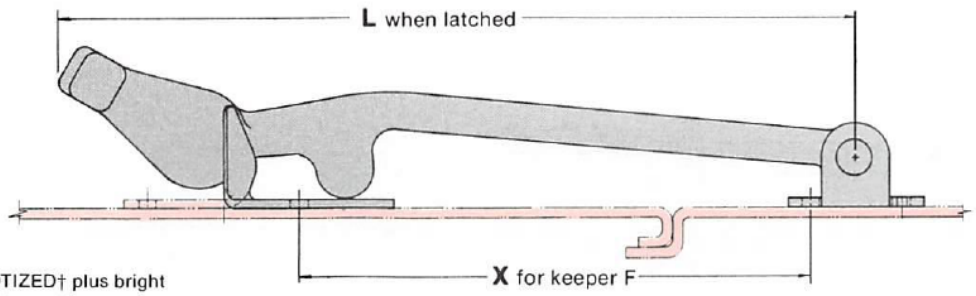
†Registered tradename of Metal Coatings International, Inc.

KEEPER STYLE	PART NUMBERS		
	Latch shipped one unit per package.		Latch shipped unassembled.
	Steel, DACROTIZED†. Black rubber.	Stainless steel metal parts. Black rubber.	Plated steel metal parts. Black rubber.
F	37-10-086-10 ■	37-10-086-20 ■	37-10-087-10 ■
R	37-20-086-10 ■	37-20-086-20 ■	37-20-087-10 ■

■ From stock, subject to prior sale.

T-handle Style
Flexible Draw Latches, available in two lengths

100 SERIES

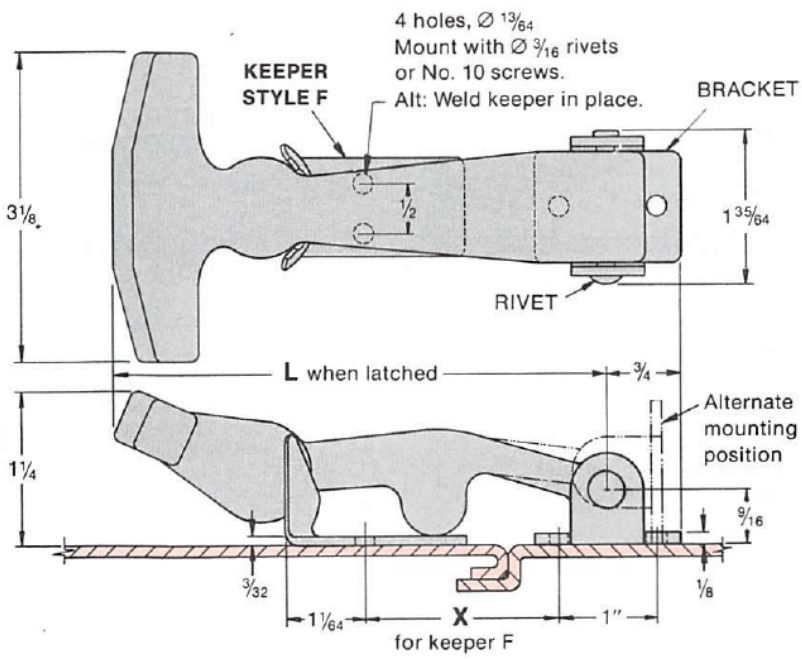


MATERIAL and FINISH

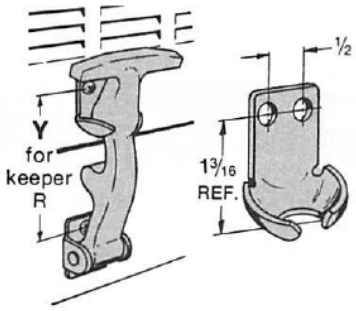
HANDLE: EPDM rubber, black.
KEEPER and BRACKET: 1010 steel, DACROTIZED† plus bright metallic organic coating or 302 stainless steel, passivated.
RIVET (pre-assembled latches only): 5056 aluminum, natural or 302 stainless steel, passivated.

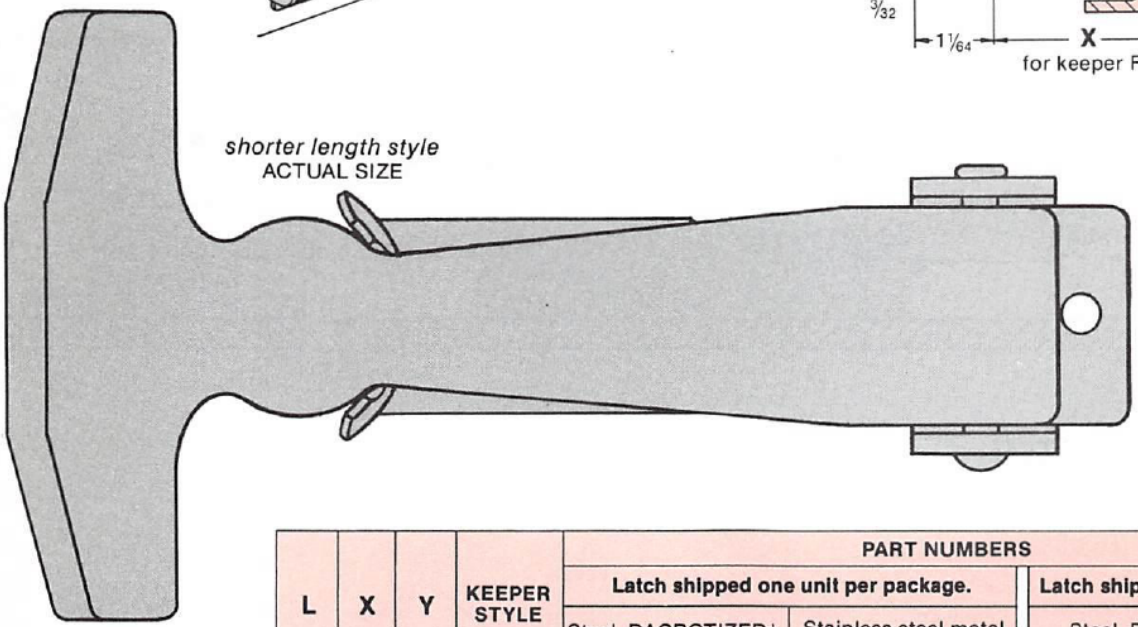
The following components are for unassembled latches only.
STUD: 1008 steel, DACROTIZED† plus bright metallic organic coating.
WASHER: low carbon steel, zinc plated plus yellow chromate dip.
RETAINING RING: spring steel, zinc plated plus yellow chromate dip.

†Registered tradename of Metal Coatings International, Inc.



KEEPER STYLE R



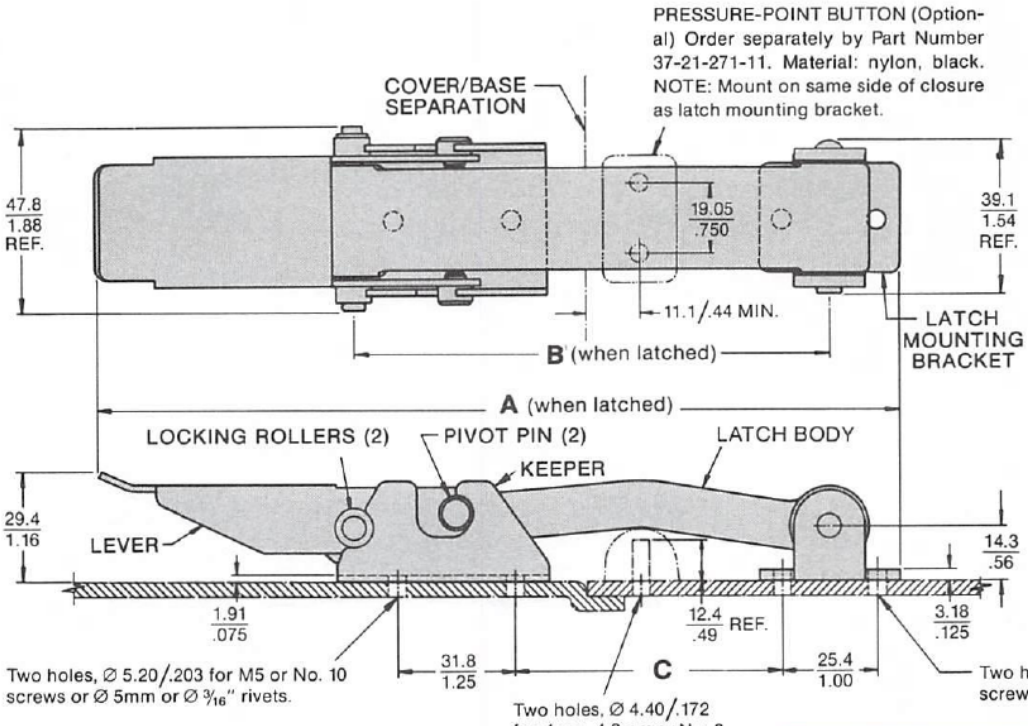


L	X	Y	KEEPER STYLE	PART NUMBERS			SERIES
				Latch shipped one unit per package.		Latch shipped unassembled.	
				Steel, DACROTIZED†. Black rubber.	Stainless steel metal parts. Black rubber.	Steel, DACROTIZED†. Black rubber.	
5⅛	2"	—	F	37-10-101-10 ■	37-10-101-20 ■	37-10-102-10 ■	101
	—	3 9/16	R	37-20-101-10 ■	37-20-101-20 ■	37-20-102-10 ■	
9¾	6½	—	F	37-10-131-10 ■	37-10-131-20 ■	37-10-132-10 ■	131
	—	8 1/16	R	37-20-131-10 ■	37-20-131-20 ■	37-20-132-10 ■	

■ From stock, subject to prior sale.

Lever-assisted Style Flexible Draw Latch —*in two lengths*

(Southco No. 37)



MATERIAL and FINISH

LATCH BODY: EPDM rubber, black.
LEVER, KEEPER and BRACKET: 1010 steel, zinc plated plus bright chromate dip or 302 stainless steel, passivated.
RIVET: 5056 aluminum, natural, or 302 stainless steel, passivated.
PIVOT PINS: 303 stainless steel, passivated.
LOCKING ROLLERS: 303 stainless steel, passivated.
ROLLER PIN: 302 stainless steel, passivated.

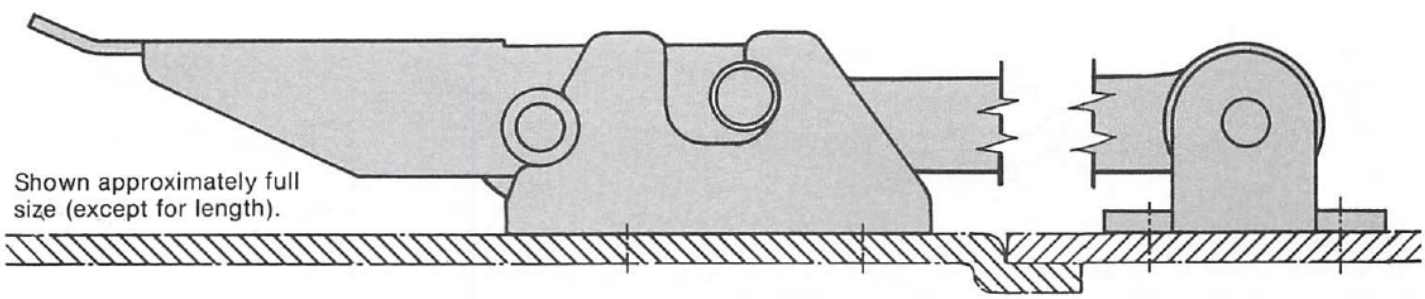
†Registered tradename of Metal Coatings International, Inc.

Latch sub-assembly and keeper are shipped bulk in separate packages.

millimeter
inch
millimeter/inch

DIMENSIONS			PART NUMBERS		SERIES
A	B	C	plated steel	stainless steel	
241.3 / 9.50	152.4 / 6.00	96.8 / 3.81	37-10-274-10 ■	37-10-274-20 ■	274
366.7 / 14.44	277.8 / 10.94	222.3 / 8.75	37-10-277-10 ■	37-10-277-20 ■	277

■ From stock, subject to prior sale.

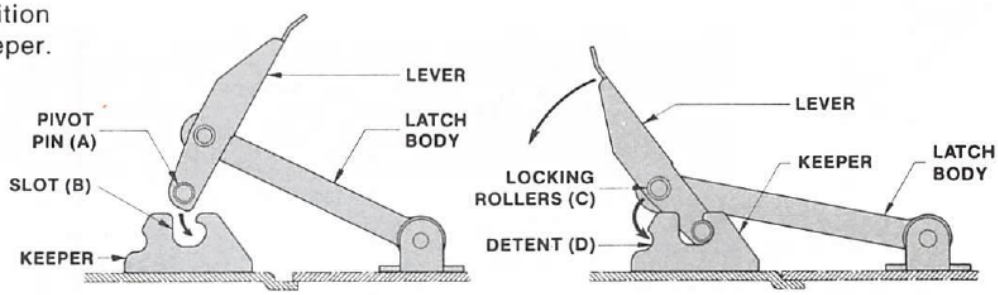


TO OPERATE LATCH

Swing lever over keeper to position pivot pins (A) in slots (B) of keeper.

Press lever down until locking rollers (C) engage detent (D).

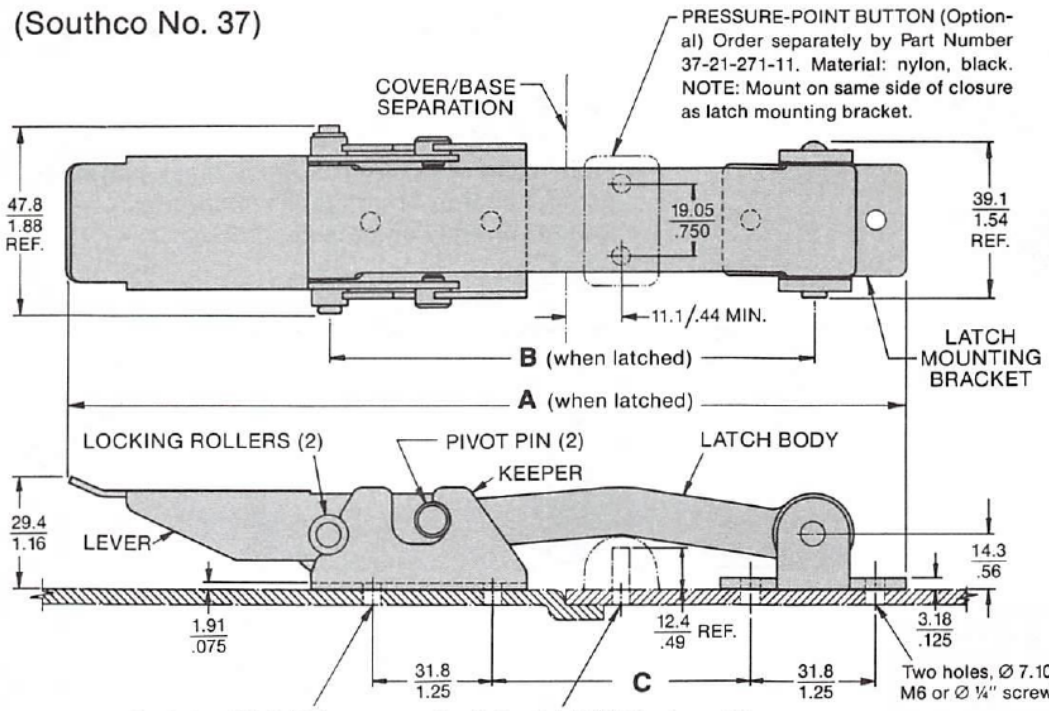
To unlatch, raise lever.



Heavy Duty Lever-assisted Style Flexible Draw Latch—*in two lengths*

(Southco No. 37)

- **Extra pull-up force**
- **Quick installation**
- **Withstands heavy loading**
- **Anti-flopping feature**
- **Molded-in inserts strengthen latch body**

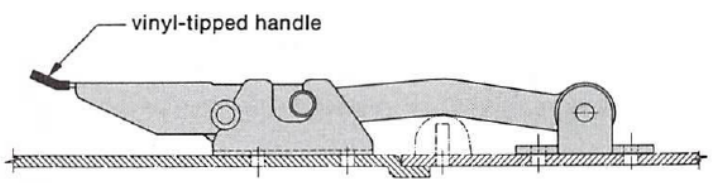


MATERIAL and FINISH

LATCH BODY: black urethane rubber with 303 stainless steel inserts.
LEVER, KEEPER and BRACKET: 1010 steel, black polyester coating or 302 stainless steel passivated.
RIVET: 5056 aluminum, natural or 302 stainless steel, passivated.
PIVOT PINS: 303 stainless steel, passivated.
LOCKING ROLLERS: 416 stainless steel, passivated.
ROLLER PIN: 302 stainless steel, passivated.

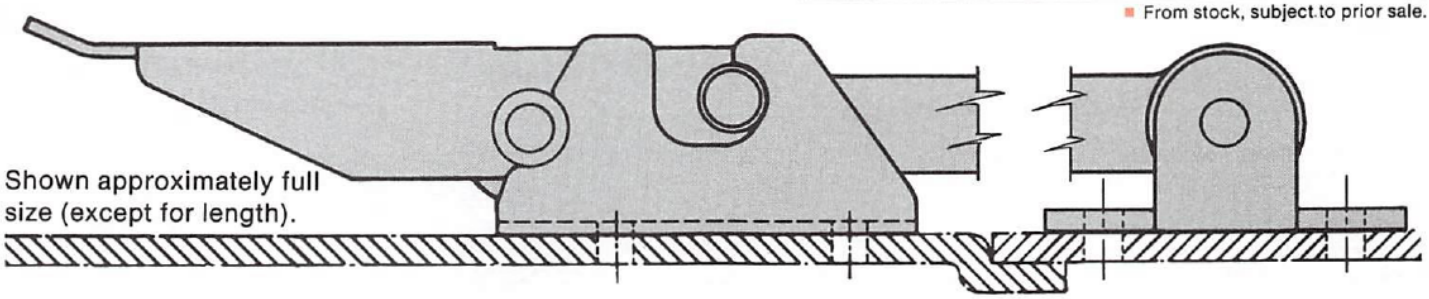
†Registered tradename of Metal Coatings International, Inc.

Latch shipped one unit (latch subassembly and keeper) per package.



DIMENSIONS			PART NUMBERS		SERIES
A	B	C	Steel, black polyester coating. RIVET: aluminum, natural	Stainless steel, highly polished. Vinyl-tipped handle. RIVET: stainless steel, passivated.	
245.3 / 9.66	152.4 / 6.00	93.7 / 3.69	37-10-284-50 ■	37-10-284-25 ■	284
362.7 / 14.28	269.9 / 10.63	211.1 / 8.31	37-10-287-50 ■	37-10-287-25 ■	287

■ From stock, subject to prior sale.



millimeter / inch

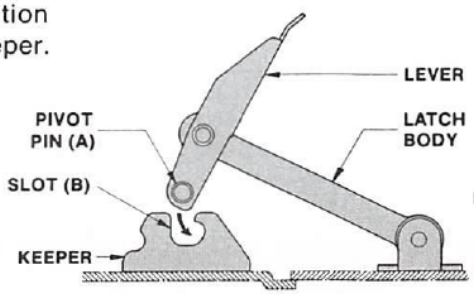
millimeter/inch

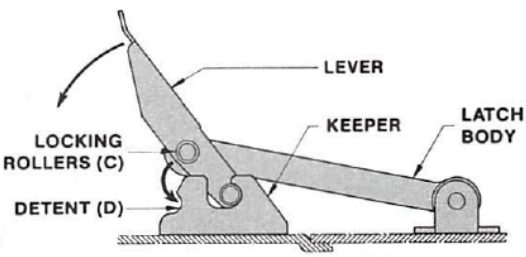
TO OPERATE LATCH

Swing lever over keeper to position pivot pins (A) in slots (B) of keeper.

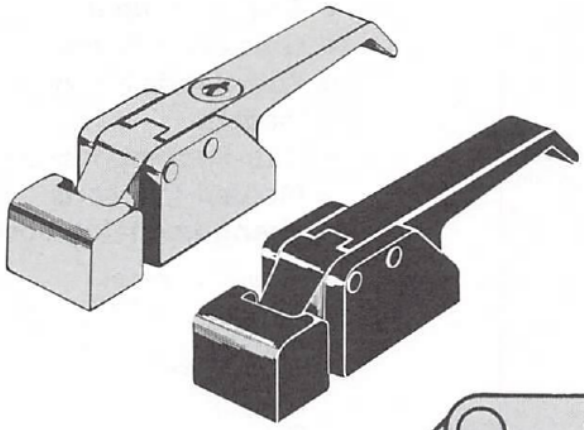
Press lever down until locking rollers (C) engage detent (D).

To unlatch, raise lever.

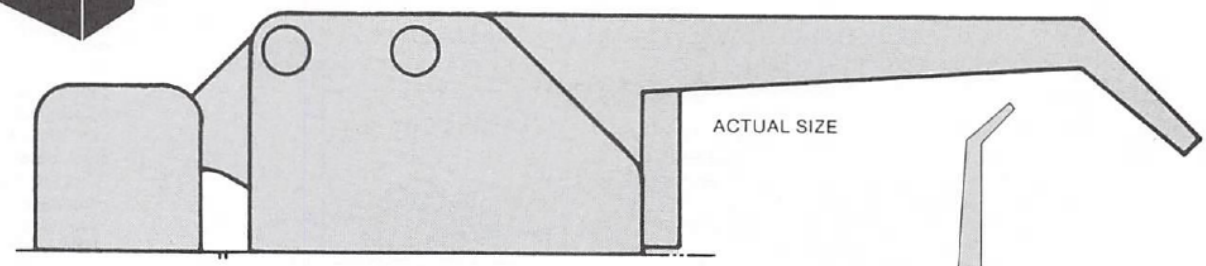




Over-center Draw Latch with Toggle Action



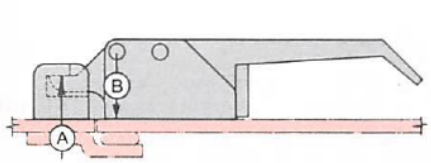
- **Lockable—with tumbler type key lock.**
- **Latches/unlatches with over-center toggle action.**
- **Finished in satin silver or matte black polyester powder coat or bright polished chrome.**
- **Mounts entirely on outside of door.**



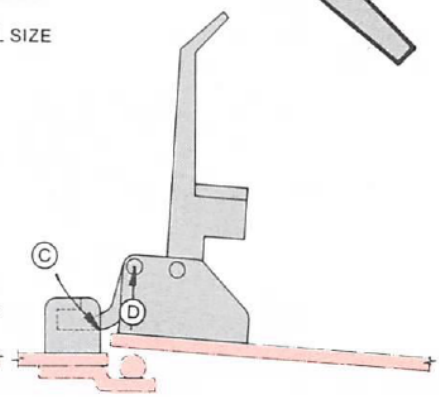
FINISH	STYLE	PART NUMBERS by tapped mounting hole size	
		American Standard 10-32 x 0.38" deep	Metric M5 x 0.8 x 9.5mm deep
Satin silver coat	standard	A7-10-301-75 ■	A7-10-351-75 ■
	with lock*	A7-10-302-75 ■	A7-10-352-75 ■
Matte black coat	standard	A7-10-301-20 ■	A7-10-351-20 ■
	with lock*	A7-10-302-20 ■	A7-10-352-20 ■
Chrome plated	standard	A7-10-301-30 ■	A7-10-351-30 ■
	with lock*	A7-10-302-30 ■	A7-10-352-30 ■

* Locks are keyed alike. Random keyed locks are available. Call for details.

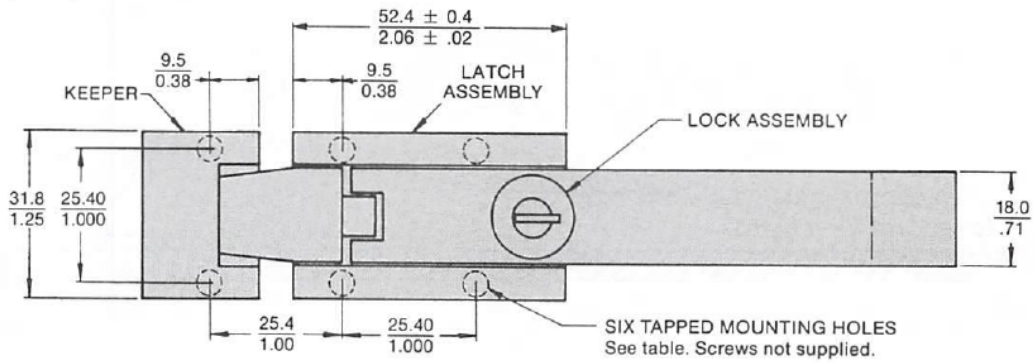
■ From stock, subject to prior sale.



Latching. Lower handle. Latching pawl engages keeper, applies force A. Resultant force B closes and latches door with over-center toggle action, 9.5/0.38 pull-up distance.



Unlatching. Raise handle; action is reversed. Force C results in opposite force D applied through latch; door is mechanically pried open a distance of 7.9/0.31.



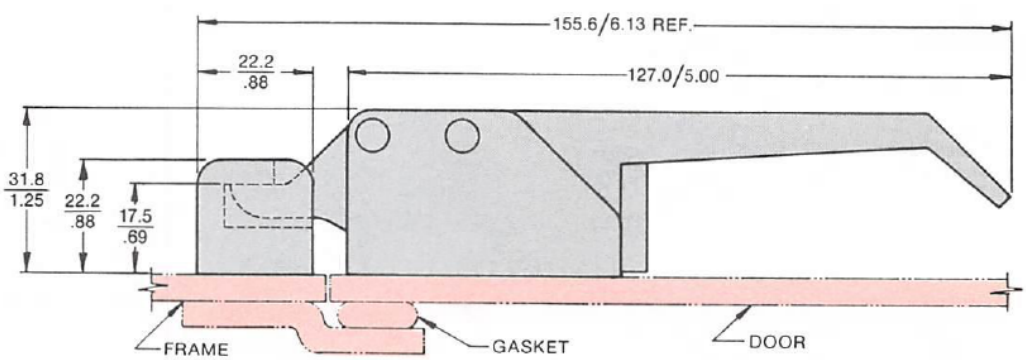
MATERIAL and FINISH

LEVER, PAWL, BASE, LINK, KEEPER and LOCK (when used): die cast zinc, chrome plated or polyester powder coated (matte black or satin silver). See table.
INTERNAL PINS: 303 stainless steel, passivated.
VISIBLE PINS: 302 stainless steel, passivated.
SPRING: music wire, phosphate dip plus black organic coating.
LOCK SLIDE: die cast zinc with chemical protective film.

Latch is packaged one unit per box.

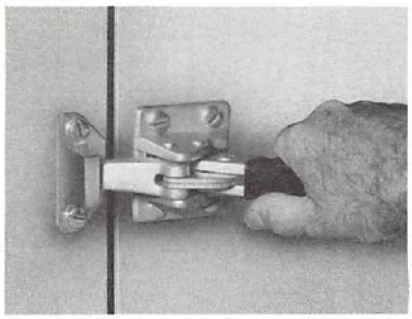
millimeter/inch

millimeter
inch

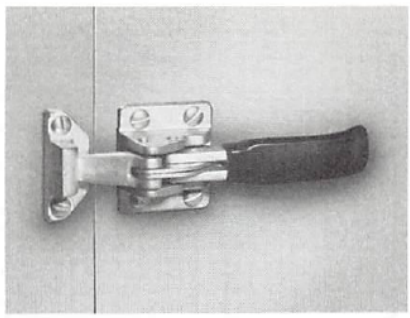


Lever Latch

- **Pries open stuck doors**
- **Rugged, high-strength**
- **Built-in leverage**
- **Can be used with padlock**



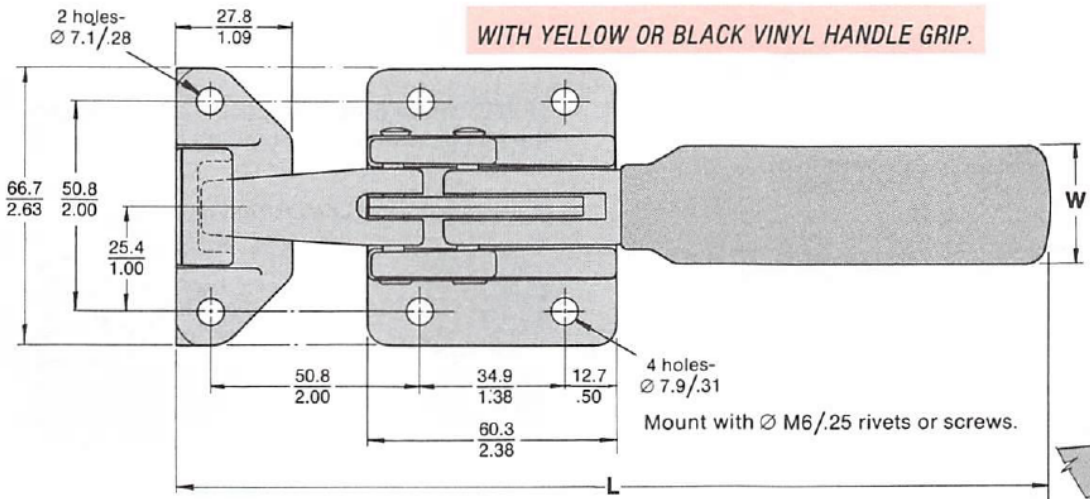
Raise the handle; built-in leverage applies a prying force against any rust, ice or paint that tries to resist opening.

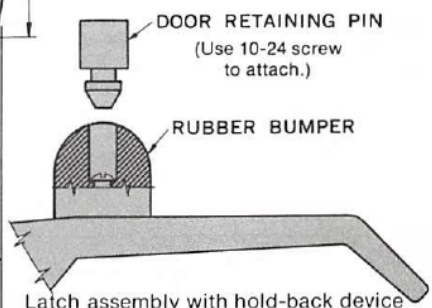


Close the door, push the handle down; the same linkage forces a secure closure regardless of dirt or corrosion.

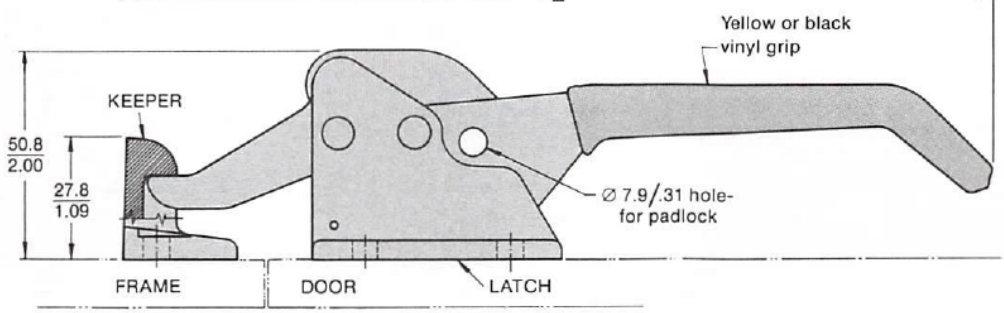
Strength Guideline
Working load = 2220N/500 lbs.

WITH YELLOW OR BLACK VINYL HANDLE GRIP.

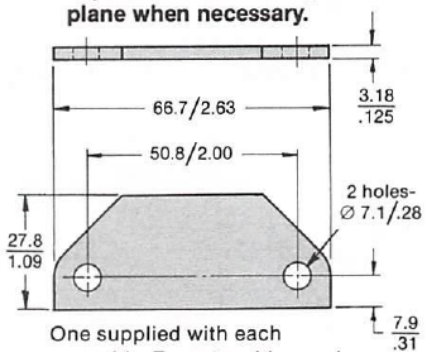




Latch assembly with hold-back device is available with plain handle only (see table).



SHIM provided to make adjustments in latching plane when necessary.



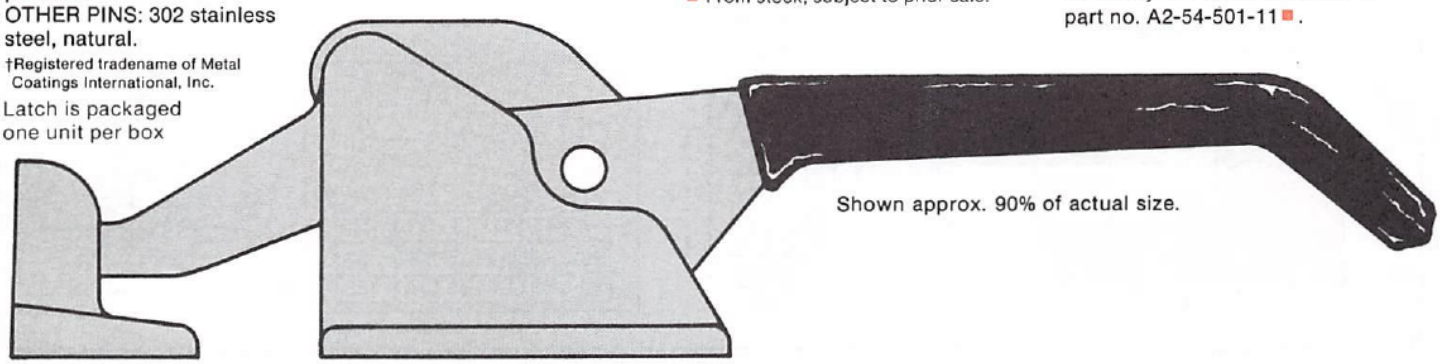
One supplied with each assembly. For extra shims order part no. A2-54-501-11■.

MATERIAL and FINISH
BASE, LEVER, PAWL and KEEPER: malleable iron. LINKS: 1065 steel. MAIN CROSSPINS: 10B21 steel. Components listed above are DACROTIZED† plus bright metallic organic coating.
LINK PINS: 6150 steel, zinc plated plus bright chromate dip.
SHIM: 1010 steel, DACROTIZED† plus bright metallic organic coating.
SPRING: 302 stainless steel, passivated.
OTHER PINS: 302 stainless steel, natural.
†Registered tradename of Metal Coatings International, Inc.

Style	Part Numbers	L	W
with plain handle	A2-10-501-**10** ■	211/8.31	25.4/1.00
plain handle with hold-back device	A2-10-502-**10** ■	211/8.31	25.4/1.00
with yellow vinyl handle grip	A2-10-501-**22** ■	214/8.44	30.2/1.19
with black vinyl handle grip	A2-10-501-**21** ■	214/8.44	30.2/1.19

■ From stock, subject to prior sale.

Latch is packaged one unit per box

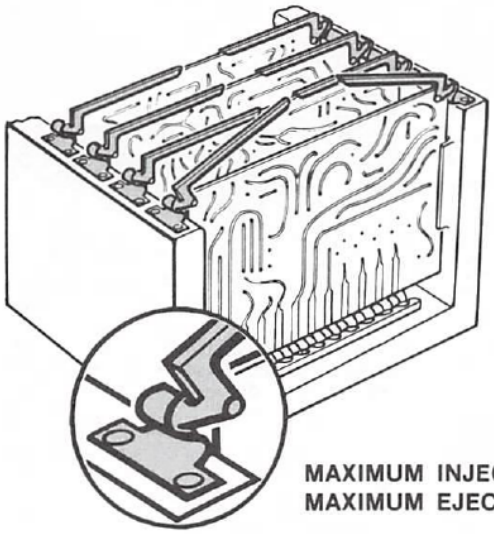


Shown approx. 90% of actual size.

Printed Circuit Board Fastener

lever-action inject-eject latch

- Makes or breaks circuit smoothly.
- Resists vibration.
- Permits quick removal or changeover.

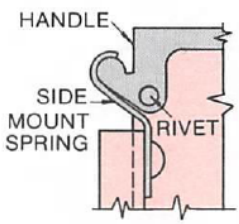


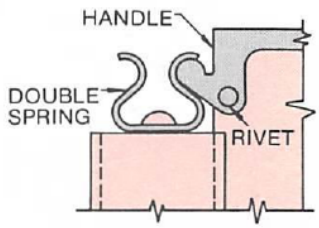
MAXIMUM INJECTION = .250
MAXIMUM EJECTION = .350

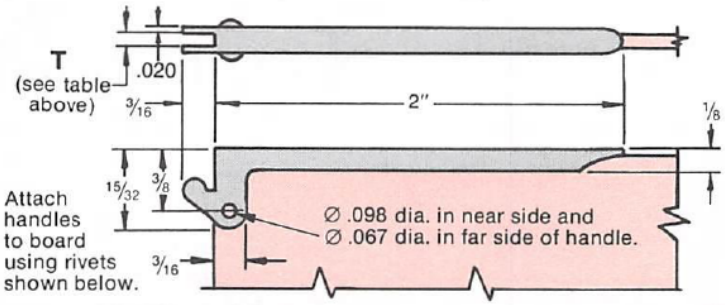
Components	Part Numbers		Material and Finish
	For 1/16 thick circuit board T = .075	For 3/32 thick circuit board T = .109	
Handle	90-0-6503-11 ■	90-0-6635-11 ■	301 stainless steel, passivated
Rivet	90-0-5858-24 ■	90-0-5971-24 ■	303 stainless steel, passivated
Double Spring	90-0-5930-11 ■	90-0-5930-11 ■	1070 steel, zinc plated plus yellow chromate dip
Single Spring	90-0-5931-11 ■	90-0-5931-11 ■	
Side Mount Spring	90-0-6434-11 ■	90-0-6434-11 ■	

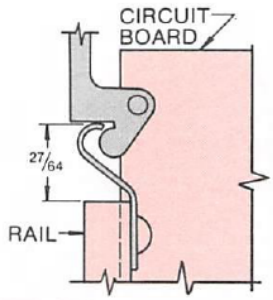
NOTE: When ordering, specify all three parts; handle, rivet and proper spring by part number.

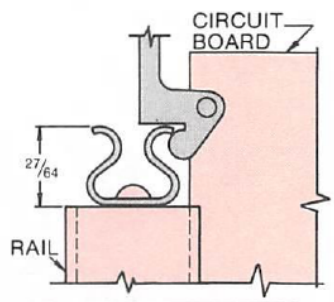
LEVER RATIO — APPROX. 8:1



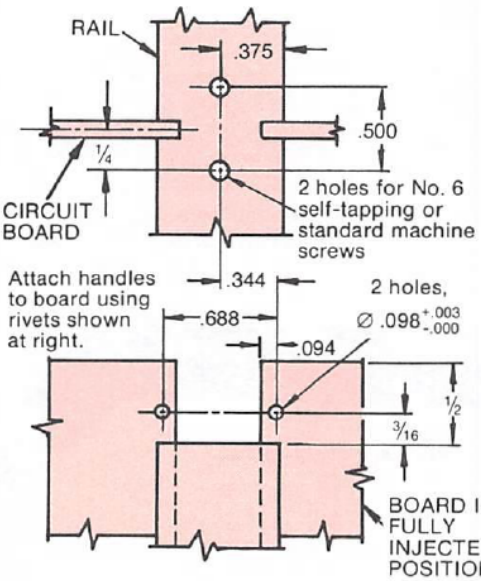




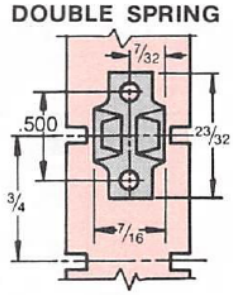




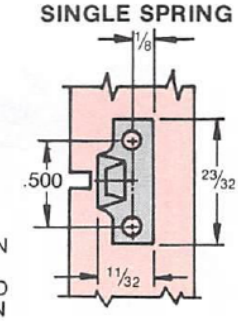
PANEL PREPARATION SINGLE and DOUBLE SPRING



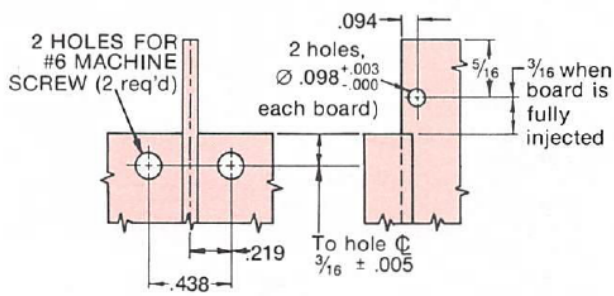
DOUBLE SPRING



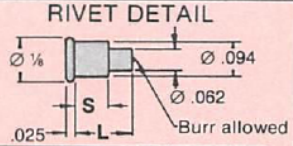
SINGLE SPRING



PANEL PREPARATION SIDE MOUNT SPRING

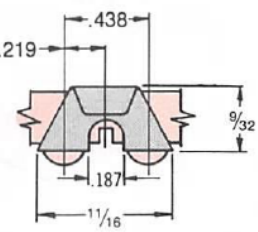


RIVET DETAIL



PART NO.	S	L
90-0-5858-24 ■	.097	.156
90-0-5971-24 ■	.127	.187

SIDE MOUNT SPRING

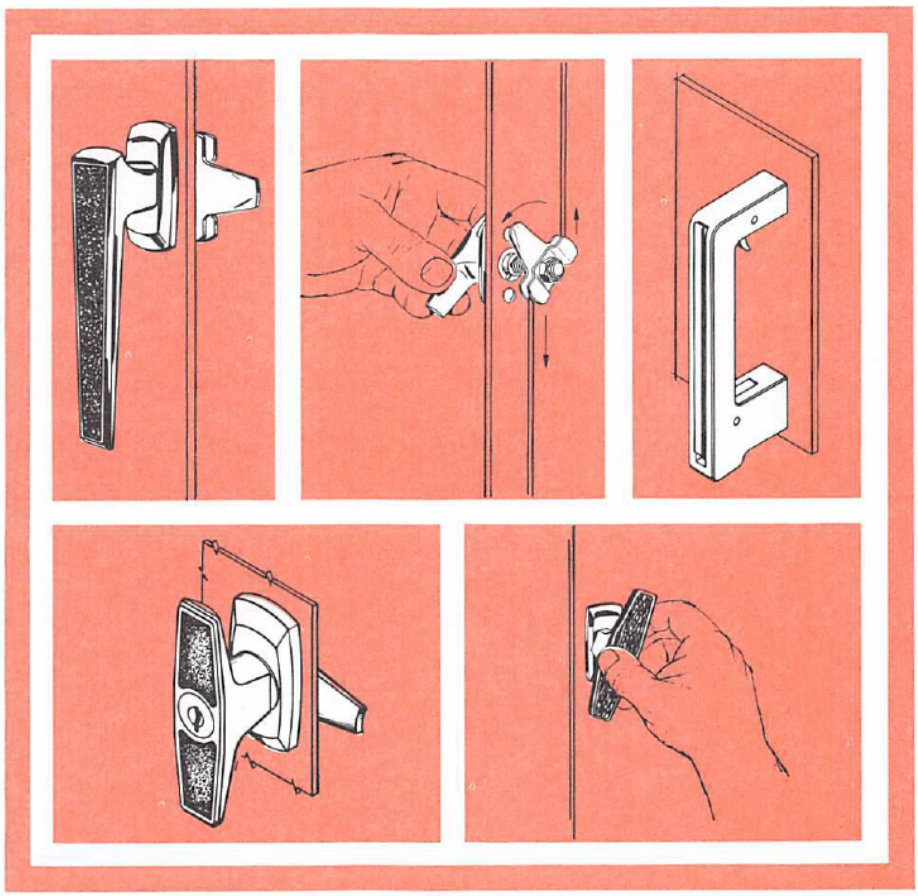


■ From stock, subject to prior sale.

Section J
Handle Latches

contents guide | **page**

No. 59 Modulatch ® J-4
No. 92 L & T Handle Latches ..... J-1 to J-3



Section J
Handle Latches

contents guide | **page**

No. 59 Modulatch ® J-4
No. 92 L & T Handle Latches ..... J-1 to J-3

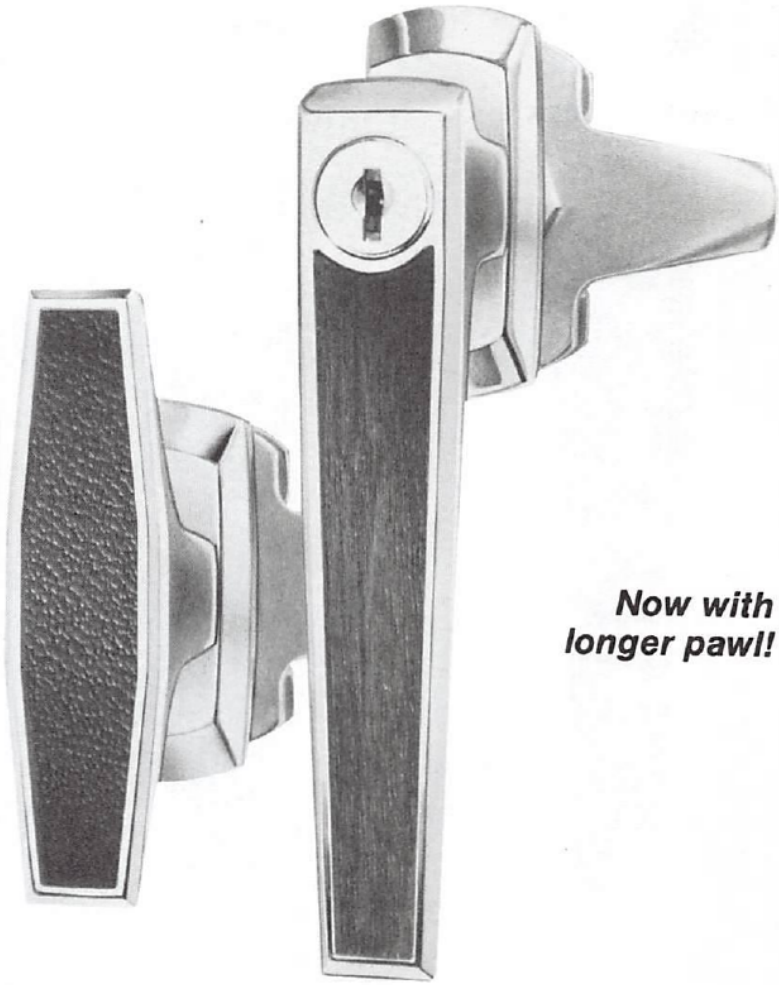
NINETY-TWO L and NINETY-TWO T

SOUTHCO LOCK SETS FOR INDUSTRIAL CLOSURES

- ***Style-matched L and T handle designs with wood grain or black vinyl trim***
- ***For 1 or 3-point latching***
- ***With or without key locks***

Offered in a style-matched series of 48 standard model variations, Southco's *NINETY-TWO L and NINETY-TWO T* handle latches are designed to harmonize with the latest concepts in industrial closure styling. The crisp, sculptured lines of these easy-grip handles are accented with a choice of walnut grain or black vinyl trim. Both left and right hand operating models are standard and each is available with or without key locks; will accommodate a wide range of door/frame thicknesses and is adaptable to single or three-point latching (order a complete latching system; Southco offers rod, guide, and keeper assemblies).

Attractively finished in polished chrome, these die-cast handle assemblies are quickly and easily installed with two concealed screws. The pawl assembly, attached with two hex nuts, completes the installation and is adjustable to provide snug, rattle-free latching against thin or thick frame members.



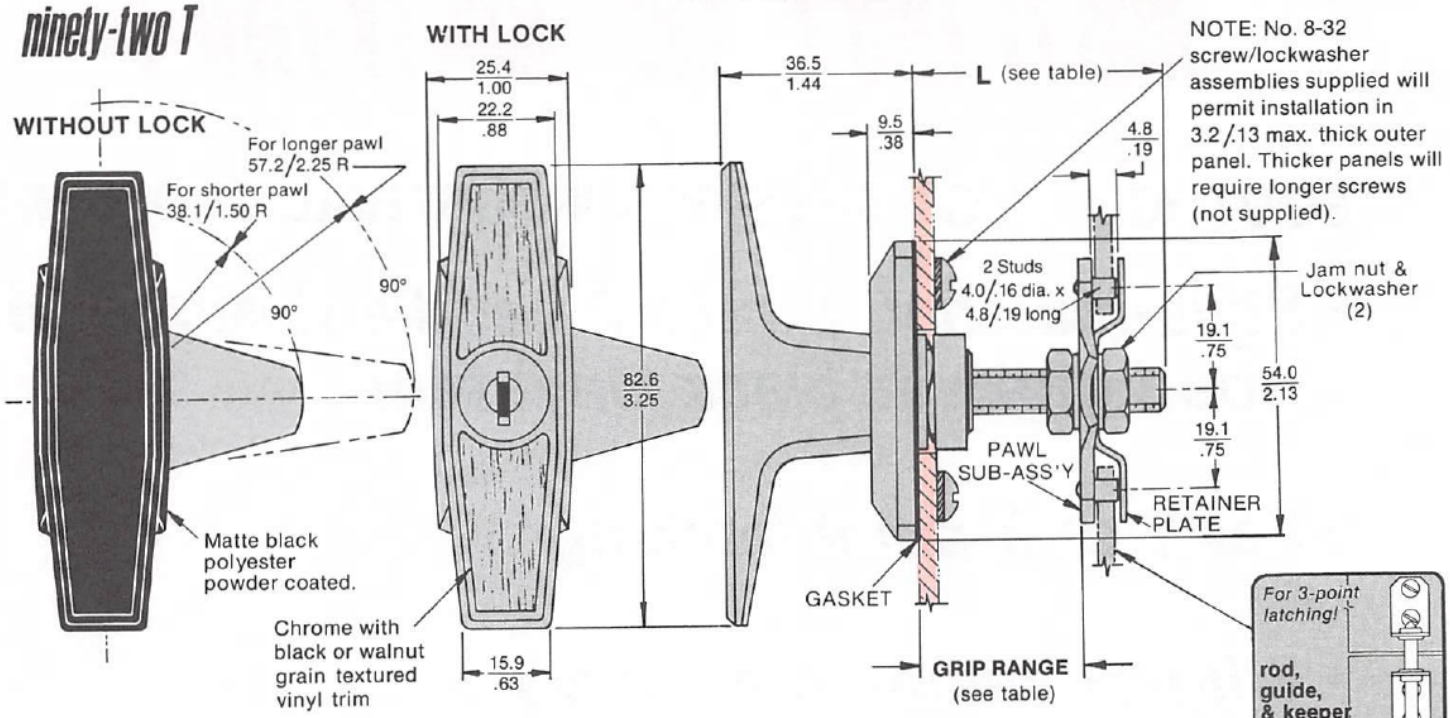
Now with longer pawl!

ACTUAL SIZE ILLUSTRATIONS

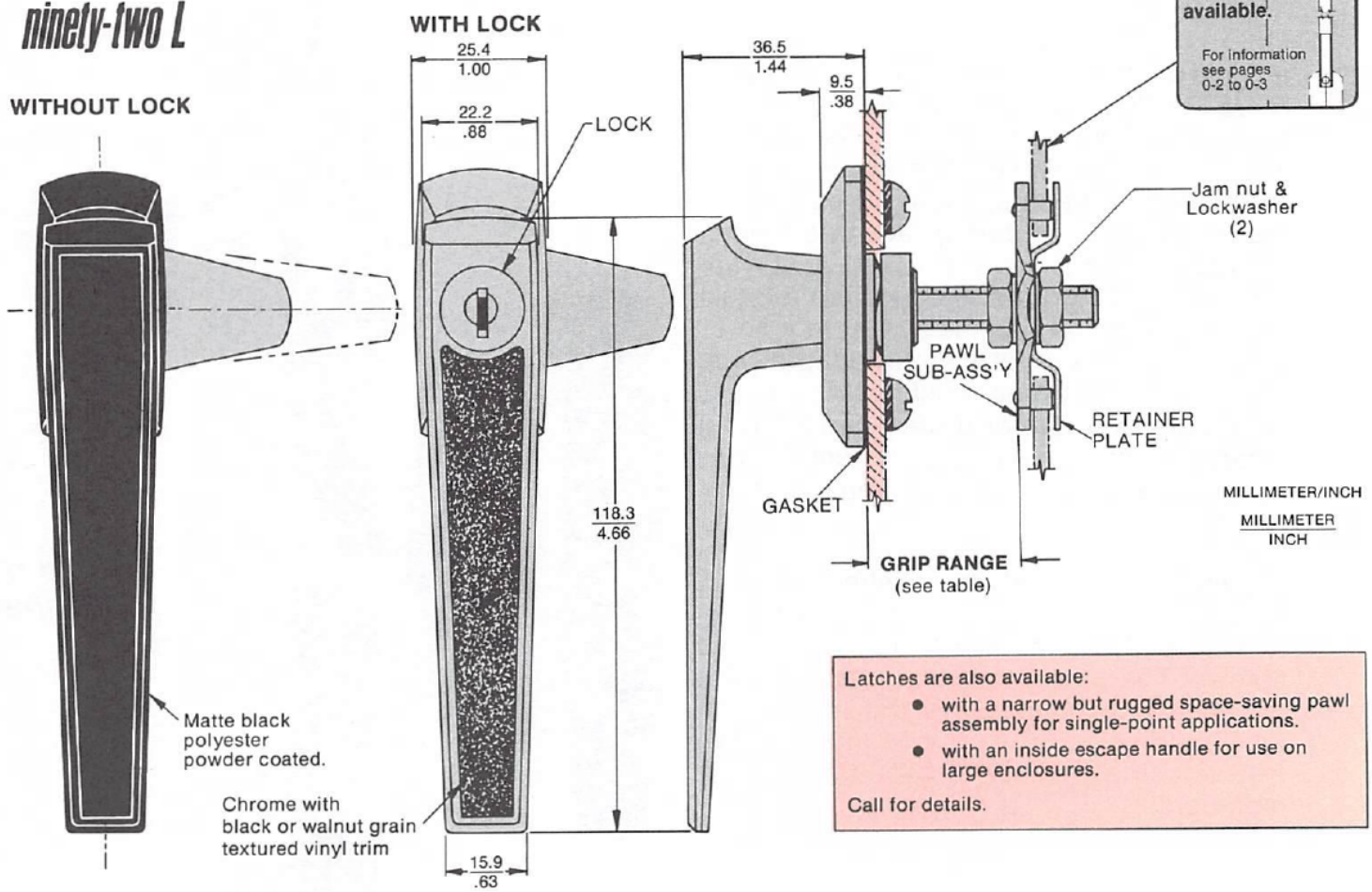
Southco No. 92 Handle Latches

- Matte black polyester powder coated or chrome plated with black or walnut grain textured vinyl trim
- With two pawl lengths
- T or L handle, with or without keylocks
- Single or 3-point latching
- Left or right hand operation

ninety-two T



ninety-two L



MILLIMETER/INCH

MILLIMETER / INCH

Latches are also available:

- with a narrow but rugged space-saving pawl assembly for single-point applications.
- with an inside escape handle for use on large enclosures.

Call for details.

****LEFT HAND ASSEMBLIES**
turn handle counterclockwise to latch

‡RIGHT HAND ASSEMBLIES
turn handle clockwise to latch

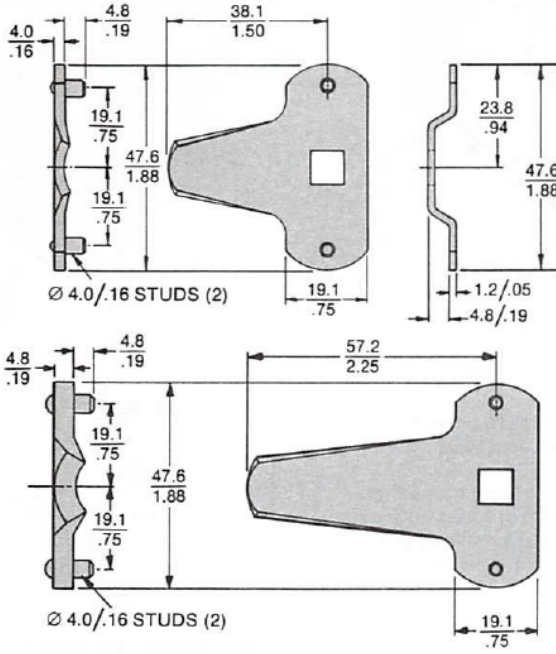
Style	L	Grip Range		T handle				L handle			
				Short pawl		Long pawl		Short pawl		Long pawl	
		min.	max.	left hand**	right hand ‡	left hand**	right hand ‡	left hand**	right hand ‡	left hand**	right hand ‡
Chrome with Black Vinyl Trim											
WITH LOCK *	31.8/1.25	15.9/.63	19.1/.75	92-11-105-72 ■	92-10-105-72 ■	92-11-125-72 ■	92-10-125-72 ■	92-21-105-72 ■	92-20-105-72 ■	92-21-125-72 ■	92-20-125-72 ■
	44.5/1.75	15.9/.63	31.8/1.25	92-11-107-72 ■	92-10-107-72 ■	92-11-127-72 ■	92-10-127-72 ■	92-21-107-72 ■	92-20-107-72 ■	92-21-127-72 ■	92-20-127-72 ■
	57.2/2.25	15.9/.63	44.5/1.75	92-11-109-72 ■	92-10-109-72 ■	92-11-129-72 ■	92-10-129-72 ■	92-21-109-72 ■	92-20-109-72 ■	92-21-129-72 ■	92-20-129-72 ■
WITHOUT LOCK	31.8/1.25	15.9/.63	19.1/.75	92-11-305-72 ■	92-10-305-72 ■	92-11-325-72 ■	92-10-325-72 ■	92-21-305-72 ■	92-20-305-72 ■	92-21-325-72 ■	92-20-325-72 ■
	44.5/1.75	15.9/.63	31.8/1.25	92-11-307-72 ■	92-10-307-72 ■	92-11-327-72 ■	92-10-327-72 ■	92-21-307-72 ■	92-20-307-72 ■	92-21-327-72 ■	92-20-327-72 ■
	57.2/2.25	15.9/.63	44.5/1.75	92-11-309-72 ■	92-10-309-72 ■	92-11-329-72 ■	92-10-329-72 ■	92-21-309-72 ■	92-20-309-72 ■	92-21-329-72 ■	92-20-329-72 ■
Chrome with Walnut Vinyl Trim											
WITH LOCK *	31.8/1.25	15.9/.63	19.1/.75	92-11-105-71 ■	92-10-105-71 ■	92-11-125-71 ■	92-10-125-71 ■	92-21-105-71 ■	92-20-105-71 ■	92-21-125-71 ■	92-20-125-71 ■
	44.5/1.75	15.9/.63	31.8/1.25	92-11-107-71 ■	92-10-107-71 ■	92-11-127-71 ■	92-10-127-71 ■	92-21-107-71 ■	92-20-107-71 ■	92-21-127-71 ■	92-20-127-71 ■
	57.2/2.25	15.9/.63	44.5/1.75	92-11-109-71 ■	92-10-109-71 ■	92-11-129-71 ■	92-10-129-71 ■	92-21-109-71 ■	92-20-109-71 ■	92-21-129-71 ■	92-20-129-71 ■
WITHOUT LOCK	31.8/1.25	15.9/.63	19.1/.75	92-11-305-71 ■	92-10-305-71 ■	92-11-325-71 ■	92-10-325-71 ■	92-21-305-71 ■	92-20-305-71 ■	92-21-325-71 ■	92-20-325-71 ■
	44.5/1.75	15.9/.63	31.8/1.25	92-11-307-71 ■	92-10-307-71 ■	92-11-327-71 ■	92-10-327-71 ■	92-21-307-71 ■	92-20-307-71 ■	92-21-327-71 ■	92-20-327-71 ■
	57.2/2.25	15.9/.63	44.5/1.75	92-11-309-71 ■	92-10-309-71 ■	92-11-329-71 ■	92-10-329-71 ■	92-21-309-71 ■	92-20-309-71 ■	92-21-329-71 ■	92-20-329-71 ■
Matte black polyester powder coated (no trim)											
WITH LOCK *	31.8/1.25	15.9/.63	19.1/.75	92-11-105-50 ■	92-10-105-50 ■	92-11-125-50 ■	92-10-125-50 ■	92-21-105-50 ■	92-20-105-50 ■	92-21-125-50 ■	92-20-125-50 ■
	44.5/1.75	15.9/.63	31.8/1.25	92-11-107-50 ■	92-10-107-50 ■	92-11-127-50 ■	92-10-127-50 ■	92-21-107-50 ■	92-20-107-50 ■	92-21-127-50 ■	92-20-127-50 ■
	57.2/2.25	15.9/.63	44.5/1.75	92-11-109-50 ■	92-10-109-50 ■	92-11-129-50 ■	92-10-129-50 ■	92-21-109-50 ■	92-20-109-50 ■	92-21-129-50 ■	92-20-129-50 ■
WITHOUT LOCK	31.8/1.25	15.9/.63	19.1/.75	92-11-305-50 ■	92-10-305-50 ■	92-11-325-50 ■	92-10-325-50 ■	92-21-305-50 ■	92-20-305-50 ■	92-21-325-50 ■	92-20-325-50 ■
	44.5/1.75	15.9/.63	31.8/1.25	92-11-307-50 ■	92-10-307-50 ■	92-11-327-50 ■	92-10-327-50 ■	92-21-307-50 ■	92-20-307-50 ■	92-21-327-50 ■	92-20-327-50 ■
	57.2/2.25	15.9/.63	44.5/1.75	92-11-309-50 ■	92-10-309-50 ■	92-11-329-50 ■	92-10-329-50 ■	92-21-309-50 ■	92-20-309-50 ■	92-21-329-50 ■	92-20-329-50 ■

millimeter/inch millimeter / inch

■ From stock, subject to prior sale.

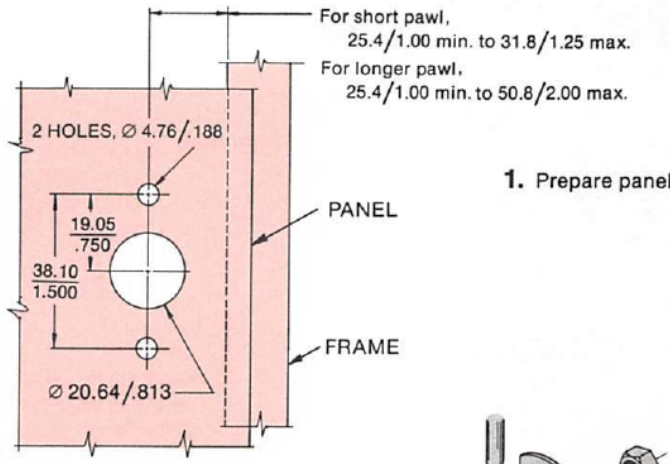
* Locks are keyed alike, keyed randomly on special order. Call for details.

PAWL SUB-ASSEMBLY

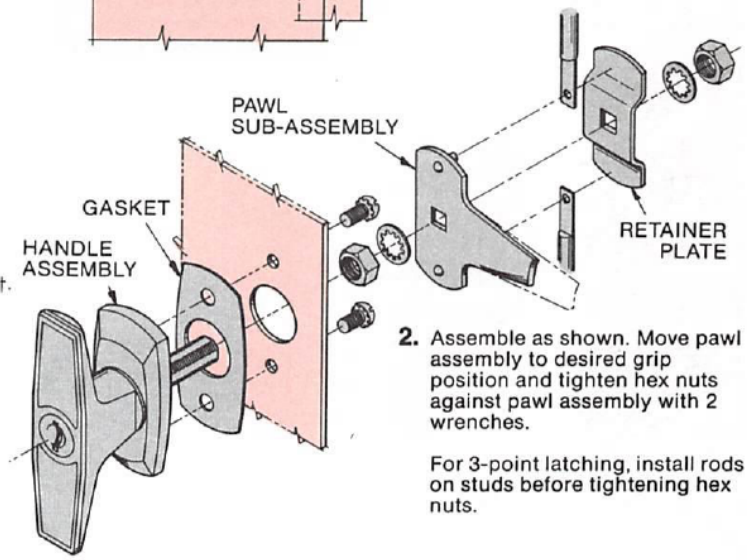


RETAINER PLATE

INSTALLATION



1. Prepare panel.



2. Assemble as shown. Move pawl assembly to desired grip position and tighten hex nuts against pawl assembly with 2 wrenches.

For 3-point latching, install rods on studs before tightening hex nuts.

MATERIAL and FINISH

HANDLE and ESCUTCHEON: die cast zinc, bright chrome plated or matte black polyester powder coated.
LOCK PLUG: die cast zinc with bright chrome plate or with a matte black polyester powder coat on exposed surfaces.
EXTENDER: die cast zinc with chemical protective film.
RETAINING PLATE, STOP LUG and PAWL: 1010 steel, DACROTIZED†.
SHAFT: 12L14 steel, DACROTIZED†.
ROLL PIN: 420 stainless steel, natural.
BEARING COLLAR: low carbon steel, DACROTIZED†.
STUDS (pawl):1008 steel,DACROTIZED†.
JAM NUTS: Steel, DACROTIZED†.
SCREW/LOCKWASHER ASSEMBLY: steel, zinc plated plus bright chromate dip.
LOCKWASHERS: spring steel, DACROTIZED†.
O-RING: buna N rubber.
GASKET: vellum, natural.
KEYS (2): brass, natural.

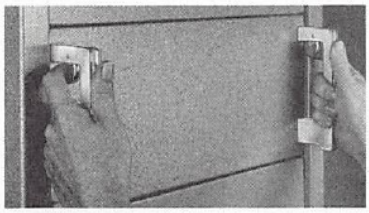
Latches are shipped one unit per package.

†Registered tradename of Metal Coatings International, Inc.

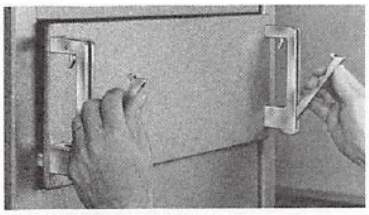
MODULATCH® with concealed keeper

- **Lever action provides insertion and ejection force for electrical connectors**
- **Inject/eject travel of 17.46 mm or .688"**

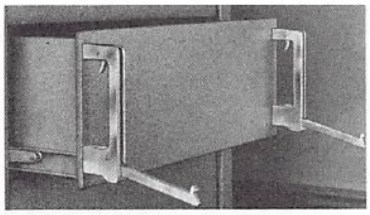
Thread Series	PART NUMBERS	
	Brushed finish	Black finish
American Standard	59-10-101-14 ■	59-10-101-16 ■
Metric	59-10-102-14 ■	59-10-102-16 ■



To release — pull trigger

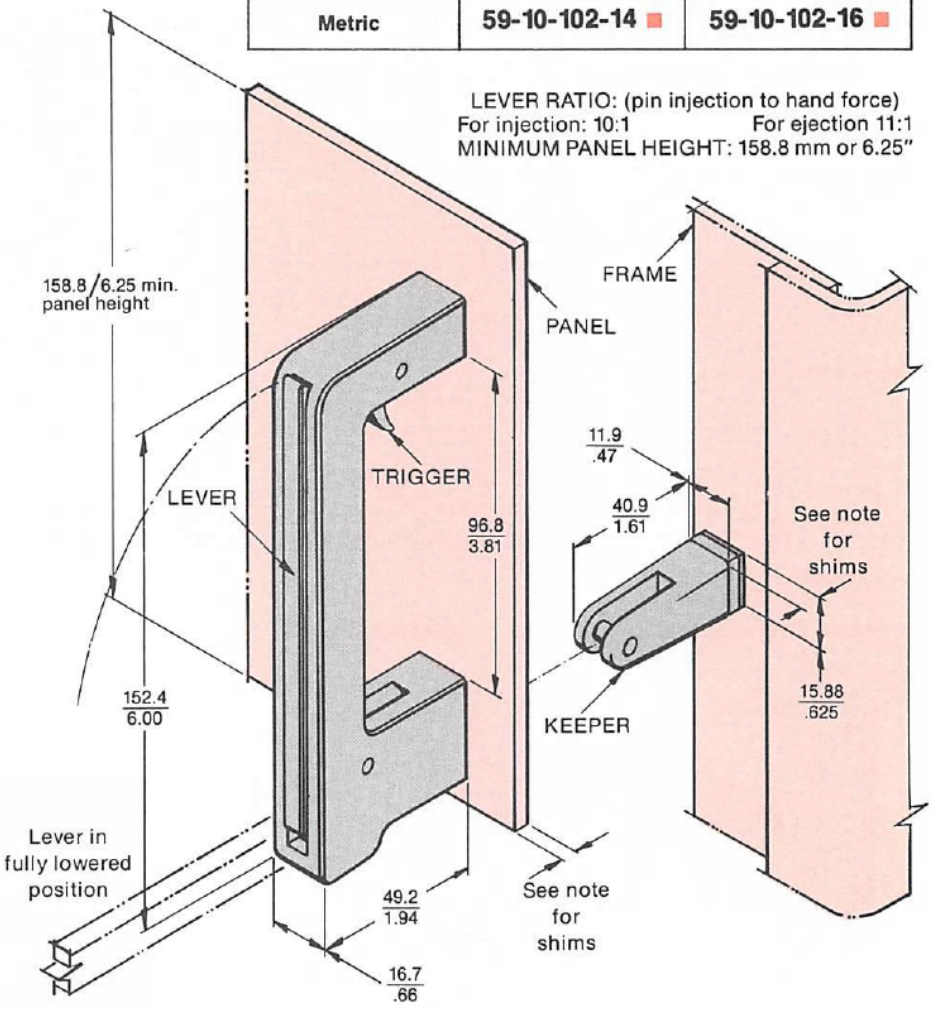


To eject — swing lever down



To open — pull out

LEVER RATIO: (pin injection to hand force)
For injection: 10:1 For ejection 11:1
MINIMUM PANEL HEIGHT: 158.8 mm or 6.25"

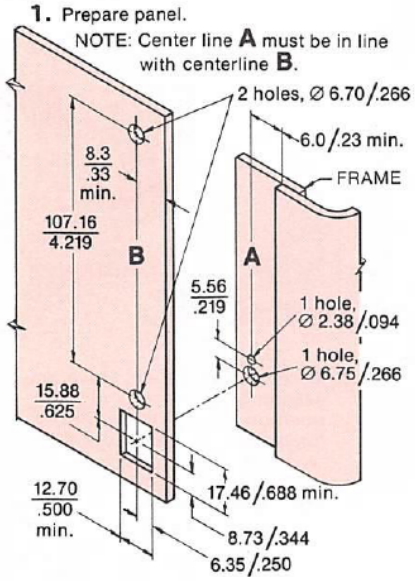


MATERIAL and FINISH

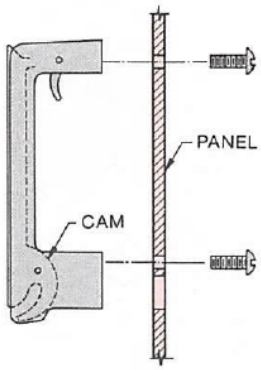
HANDLE, LEVER ARM, TRIGGER and KEEPER: A360 aluminum with brushed or black epoxy/enamel finish.
PINS: 303 stainless steel, natural or with black oxide.
SPRINGS: 302 stainless steel, passivated.

INSTALLATION

1. Prepare panel.
NOTE: Center line **A** must be in line with centerline **B**.



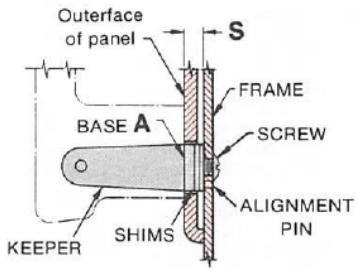
2. Attach handle assembly to panel with M6 or ¼-20 machine screws (not supplied). Max. screw length = panel thickness plus 9.5/.38.



3. Select shim or shims whose thickness equals **S**.(Order separately.)

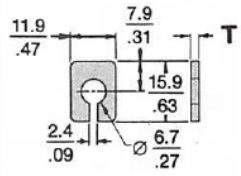
4. Attach keeper and shims to frame using one M6 or ¼-20 machine screw. Base **A** must be in line (within 0.40/.015) with outer face of panel.

Alignment pin can be driven flush with back of frame.



SHIMS

(Order separately)



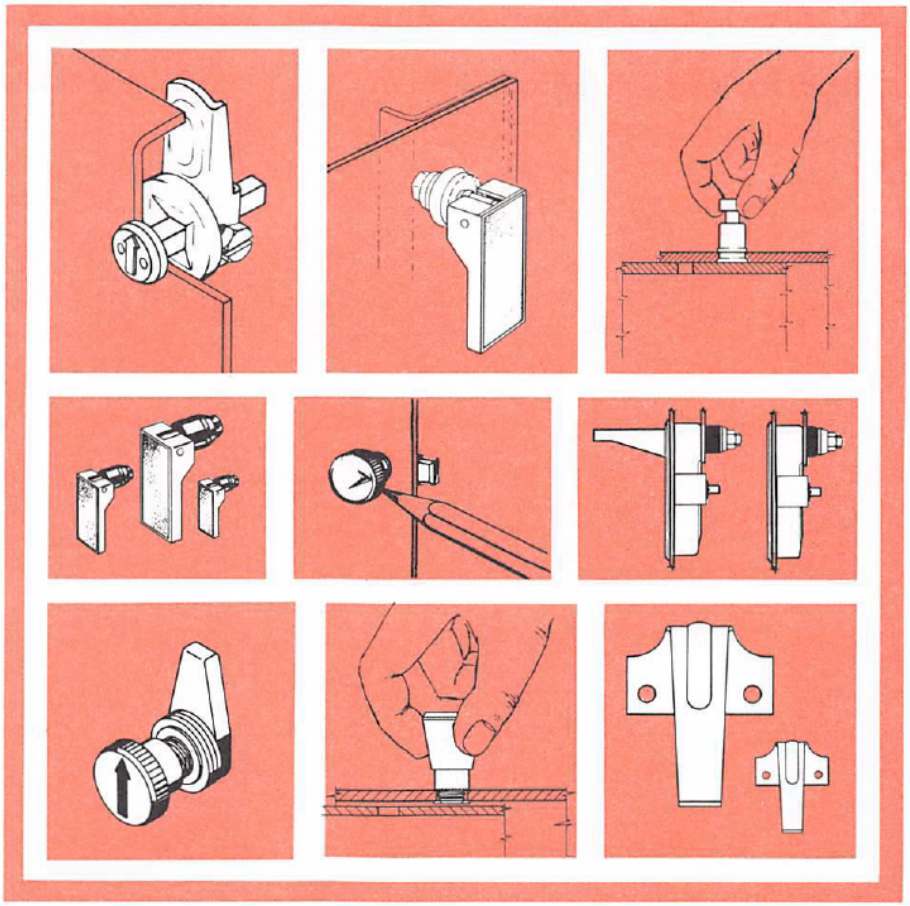
T	PART NUMBERS
0.25 .010	59-19-101-13 ■
0.51 .020	59-19-102-13 ■
1.02 .040	59-19-103-13 ■
2.03 .080	59-19-104-13 ■

■ From stock, subject to prior sale.

Section K

Door, Cover, Panel and Module Latches

contents guide	page
No. 19 Swell Latch	K-2 & K-3
No. 31 Door Latch	K-8
No. 45 Panel Latch	K-9
No. 49 Arrowhead Latch	K-1
No. 50 Panel-retaining Clips	K-12
No. 56 Spring-loaded Plunger	K-4 & K-5
No. 61 Universal Cabinet Latch	K-6 & K-7
No. 84 Fractional-turn Fastener	K-10 & K-11



Section K

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contents guide | **page**

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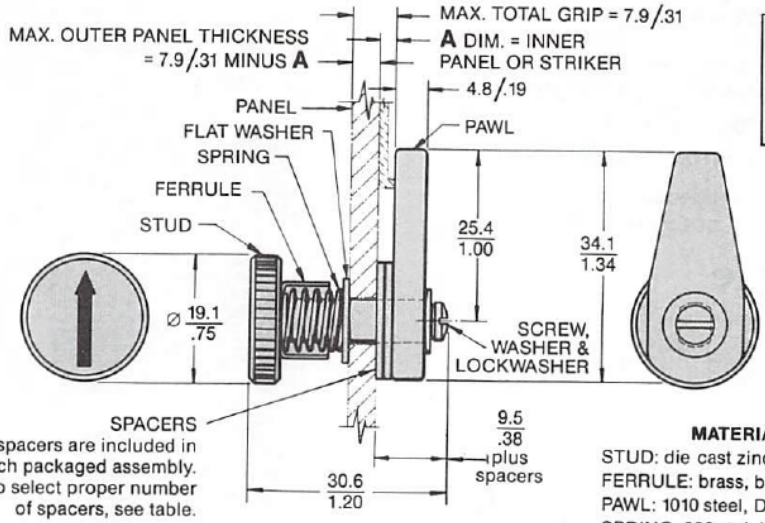
ARROWHEAD LATCH

- **neat appearance**
- **simple installation**
- **quick access**

ACTUAL SIZE



Latch is shipped unassembled, one unit per bag.



PART NUMBER 49-1-1-0 ■

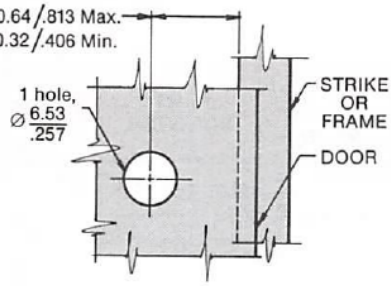
■ From stock, subject to prior sale.

MATERIAL and FINISH

STUD: die cast zinc, bright chrome plated.
FERRULE: brass, bright nickel plated.
PAWL: 1010 steel, DACROTIZED†.
SPRING: 302 stainless steel, passivated.
FLAT WASHER: 302 or 304 stainless steel, natural.
SPACERS: 5052 aluminum, natural.
SCREW, LOCKWASHER and WASHER: steel, zinc plated plus bright chromate dip.

† Registered trademark of Metal Coatings International, Inc.

PANEL PREPARATION



Spacer thickness = 1.30/.051

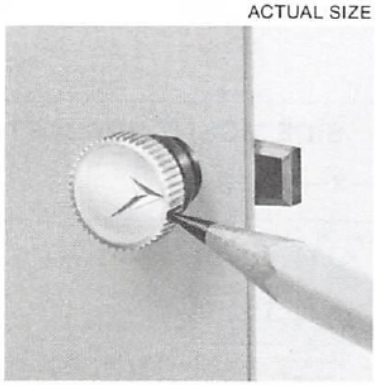
When **A** dim. is...	0.00/.000 to 1.52/.060	1.55/.061 to 2.82/.111	2.84/.112 to 4.11/1.62	4.14/.163 to 5.41/.213	5.44/.214 to 6.71/.264	6.73/.265 to 7.92/.312
No. of spacers to be used	0	1	2	3	4	5

ARROWHEAD LATCH

the little latch

- **Attractive compact design**
- **Spring loaded pawl**
- **Arrow indicates pawl position**
- **Lightweight**

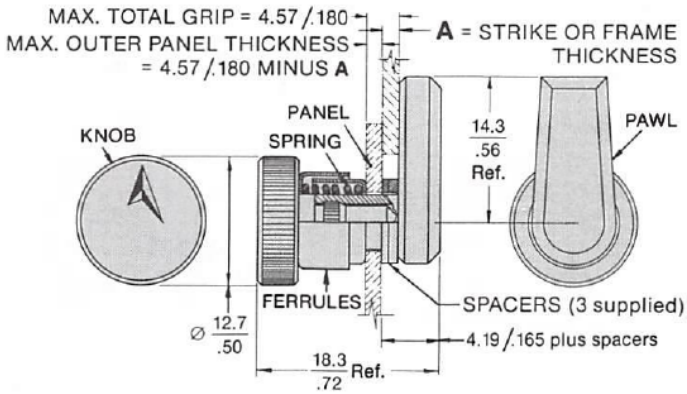
ACTUAL SIZE



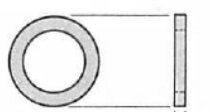
MATERIAL and FINISH

KNOB: 6262 aluminum, natural.
SPRING: 302 stainless steel, passivated.
PAWL, FERRULE and SPACERS: nylon, black.

Latch is shipped unassembled packaged one unit per bag.



3 SPACERS



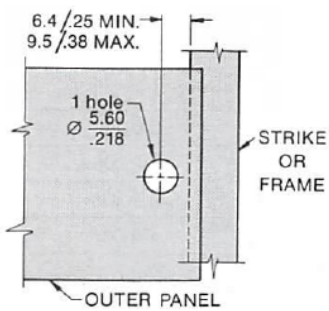
PART NUMBER 49-10-101-10 ■

■ From stock, subject to prior sale.

COMPONENT PARTS NOT SOLD SEPARATELY.

INSTALLATION and ASSEMBLY

1. Prepare panel.

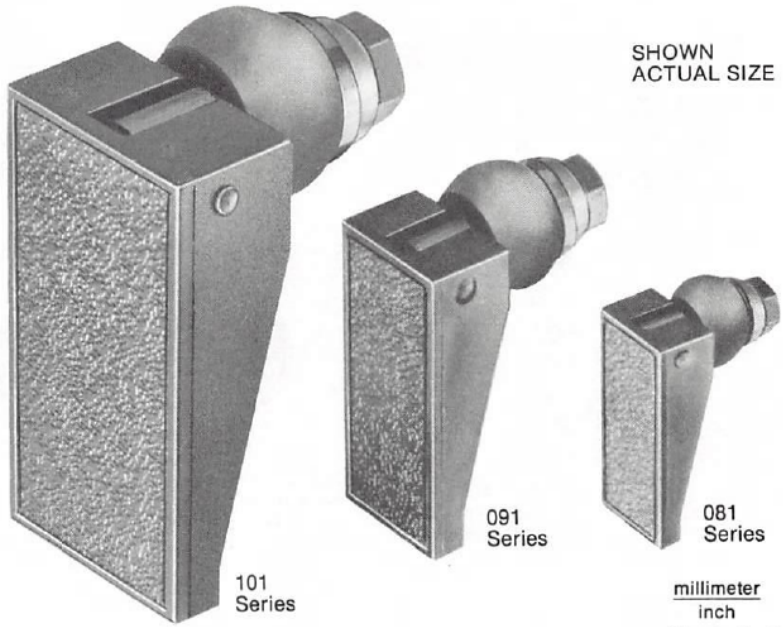


2. Separate inner and outer ferrules. Break spacers away from pawl.
3. Place 1 to 3 spacers over tubular stem of pawl. Spacers should equal from .000 to 0.51/.020 less than **A**.
4. Sandwich spring between ferrules and place over knurled stem of knob, *larger ferrule first.*
5. Pass tubular stem of pawl through hole in outer panel. *With pawl oriented with arrow on knob,* press over knurled shaft of knob. (Arbor type bench press can be used.)

Swell Latches

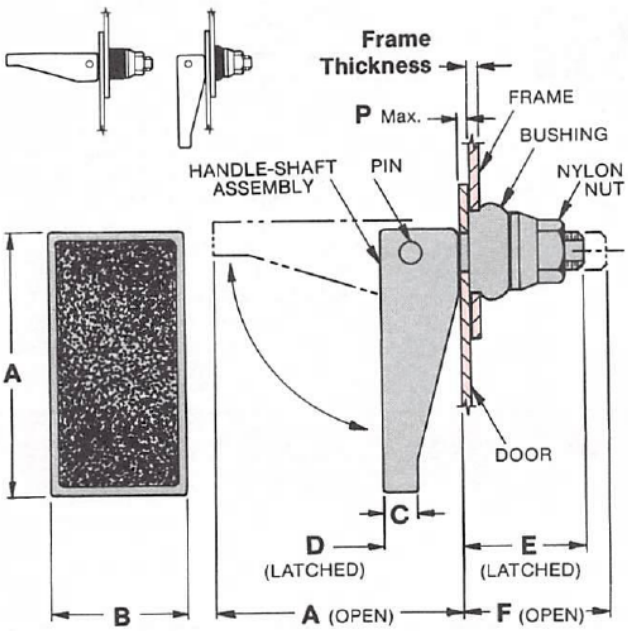
- **Latches in any frame thickness, blind application, glass or plastic.**
- **Accommodates misalignment between door and frame.**

Custom colors on special order.
Send your color chip or call for details.



millimeter
inch
millimeter/inch

Handle Style

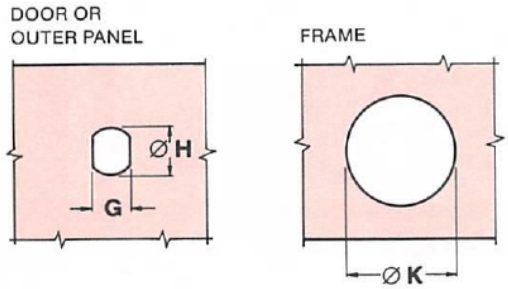


Series	Dimensions							PART NUNBERS	Thread Size
	A	B	C	D	E	F	P Max.		
081	27.8/1.09	11.9/.47	3.6/.14	7.9/.31	13.1/.52	15.5/.61	3.2/.13	19-10-**081**-10 ■	8-32 UNC
091	38.9/1.53	16.7/.66	4.8/.19	11.5/.45	19.1/.75	22.6/.89	4.8/.19	19-10-**091**-10 ■	12-24 UNC
101	55.6/2.19	28.6/1.13	7.1/.28	16.3/.64	26.6/1.05	31.4/1.23	6.4/.25	19-10-**101**-10 ■	5/16-24 UNF

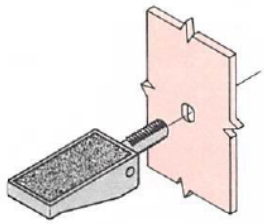
■ From stock, subject to prior sale.

Installation

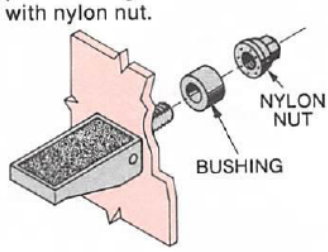
1. Prepare shaped hole in door and round hole in frame.



2. Insert shaft through hole in door.



3. With handle in raised position, pass bushing over shaft and secure with nylon nut.

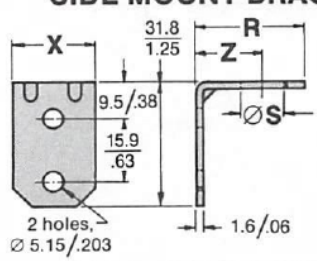


MATERIAL and FINISH

HANDLE and NUT: nylon, black.
SCREW: brass, black organic coating.
BUSHING: SBR rubber, black.
PIN: 18-9LW stainless steel, passivated with black oxide coating.
Shipped unassembled; one unit per bag.

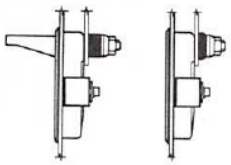
Series	G	Ø H +0.08 −0.05 / +.003 −.002	Frame Thickness	Ø K +0.79 −0.00 / +.031 −.000	Max. misalignment between ℄'s of panel hole and frame hole.
081	3.30/.130	4.10/.161	3.2/.13 max.	9.53/.375	0.8/.03
091	4.50/.177	5.80/.228	up to 3.2/.13	13.49/.531	1.2/.05
			3.2/.13 to 4.8/.19	13.89/.547	1.6/.06
101	6.50/.257	8.00/.316	1.2/.05 to 3.2/.13	19.05/.750	1.8/.07
			3.2/.13 to 4.8/.19	19.45/.766	2.2/.09
			4.8/.19 to 6.4/.25	19.84/.781	2.6/.10
			6.4/.25 and up	20.24/.797	3.0/.12

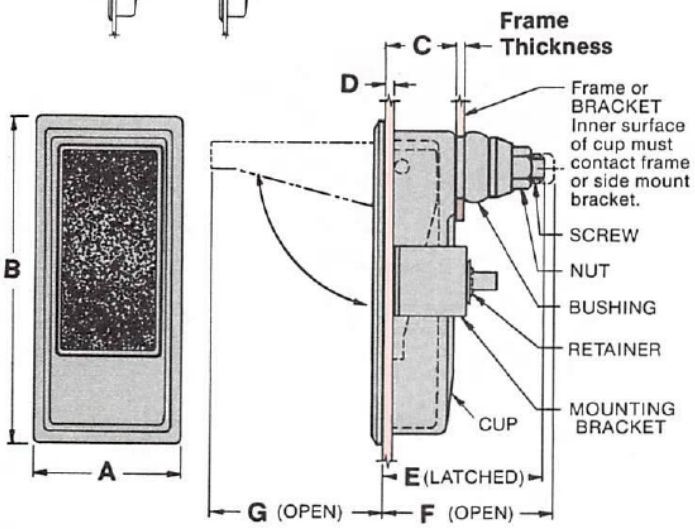
SIDE MOUNT BRACKET

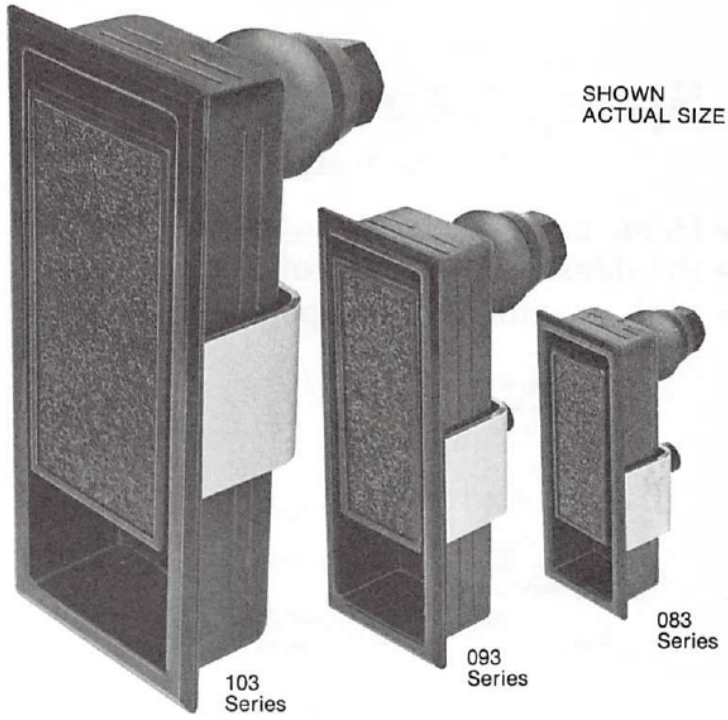


Series	Ø S	R	X	Z	PART NUMBERS
081 & 083	9.5/.38	27.0/1.06	20.6/.81	16.7/.66	19-0-15666-11 ■
091 & 093	13.5/.53				19-0-15665-11 ■
101 & 103	19.1/.75	38.1/1.50	28.6/1.13	23.8/.94	19-0-15664-11 ■

Flush Style





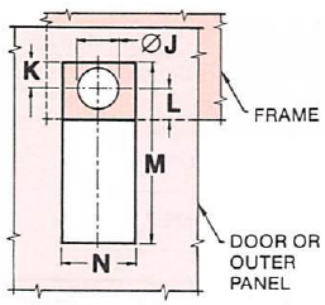


Series	DIMENSIONS							PART NUMBERS	Thread Size
	A	B	C	D max.	E	F	G		
083	18.5/.73	43.9/1.73	9.5/.37	3.2/.13	20.5/.81	22.9/.90	21.4/.84	19-10-**083**-10 ■	8-32 UNC
093	24.2/.95	60.7/2.39	13.3/.52	4.8/.19	29.5/1.16	33.0/1.30	28.4/1.12	19-10-**093**-10 ■	12-24 UNC
103	39.9/1.57	87.4/3.44	18.3/.72	6.4/.25	41.3/1.63	46.1/1.81	40.8/1.61	19-10-**103**-10 ■	5/16-24 UNF

■ From stock, subject to prior sale.

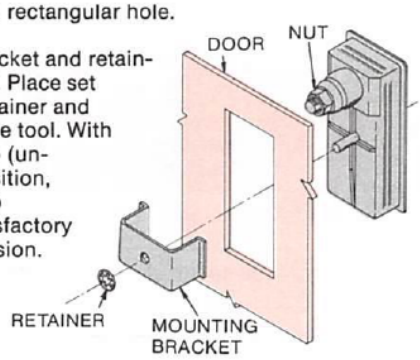
Installation

1. Prepare rectangular hole in door and round hole in frame.



2. Seat latch in rectangular hole.

3. Position bracket and retainer over stud. Place set tool over retainer and sharply strike tool. With handle in up (unlatched) position, adjust nut to provide satisfactory latching tension.

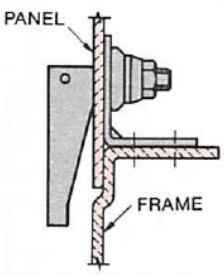


MATERIAL and FINISH
CUP, HANDLE and NUT: nylon, black.
SCREW: brass, black organic coating.
BUSHING: SBR rubber, black.
PIN: 18-9LW stainless steel, passivated with black oxide coating.
RETAINING RING: spring steel, zinc plated with yellow chromate dip.
MOUNTING BRACKET: 302 stainless steel, passivated.

Shipped unassembled; one unit per bag.

order separately

MATERIAL and FINISH
1010 steel, zinc plated with yellow chromate dip.



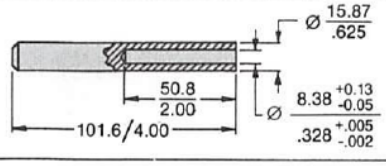
Inner surface of panel MUST contact side mount.

■ From stock, subject to prior sale.

Series	Max. misalignment between ℄'s of panel hole and frame hole.	FRAME OR BRACKET				OUTER PANEL	
		FRAME THICKNESS	Ø J +0.79/+.031 -0.00/-.000	K (±0.25/.010)	L (MAX.)	M (±0.13/.005)	N (±0.13/.005)
083	0.8/.03	3.2/.13 MAX.	9.53/.375	5.95/.234	11.5/.45	41.66/1.640	16.26/.640
093	1.2/.05	up to 3.2/.13	13.49/.531	7.93/.312	14.3/.56	57.53/2.265	20.62/.812
	1.6/.06	3.2/.13 to 4.8/.19	13.89/.547				
103	1.8/.07	1.2/.05 to 3.2/.13	19.05/.750	11.11/.437	14.3/.56	81.03/3.190	34.30/1.350
	2.2/.09	3.2/.13 to 4.8/.19	19.45/.766				
	2.6/.10	4.8/.19 to 6.4/.25	19.84/.781				
	3.0/.12	6.4/.25 and up	20.24/.797				

SET TOOL

Part Number 17-10019-11 ■



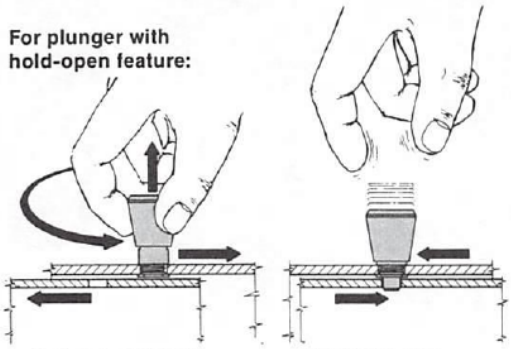
MATERIAL
1095 steel, zinc plated.

Spring-loaded Plunger

Thread-in style

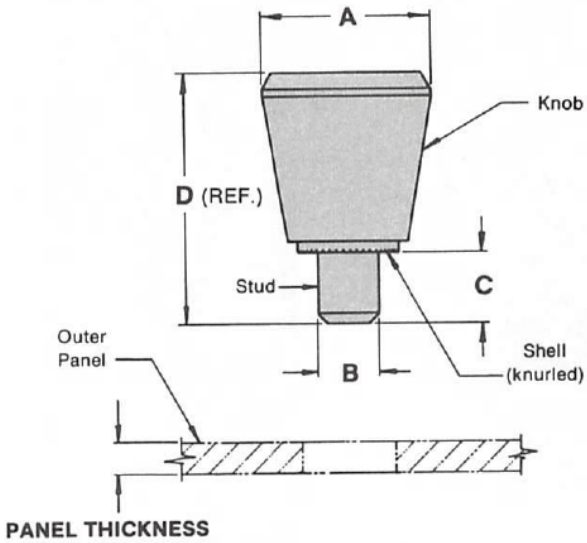
- **Holds against lateral motion.**
- **Provides quick release of sliding parts.**
- **With or without hold-open feature.**

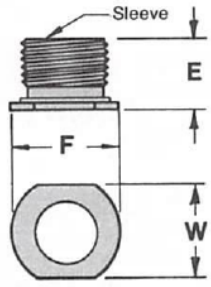
For plunger with hold-open feature:



Pull on knob to withdraw stud from hole in inner member; rotate 90° to hold stud in retracted position.

Rotate 90° and release knob. Stud snaps back into inner hole when units are realigned.





MATERIAL and FINISH

KNOB: 6262 aluminum, natural.
SHELL, STUD and SLEEVE: 12L14 steel, zinc plated plus bright chromate dip.
SPRING: stainless steel, passivated.
DETENT WASHER: 1064 steel, DACROTIZED†.

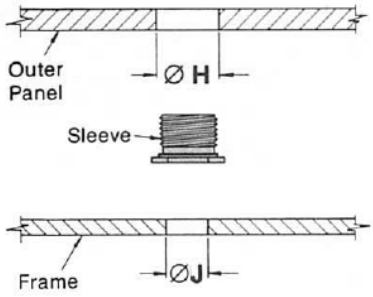
†Registered tradename of Metal Coatings International, Inc.

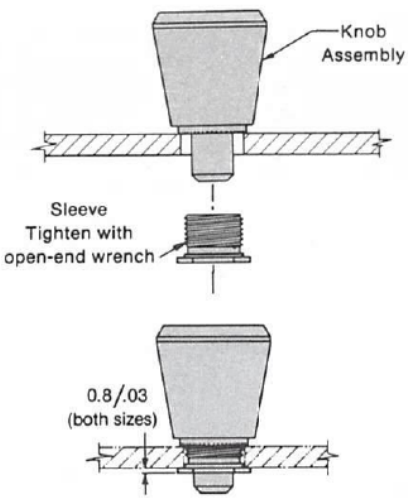
millimeter / inch

millimeter/inch

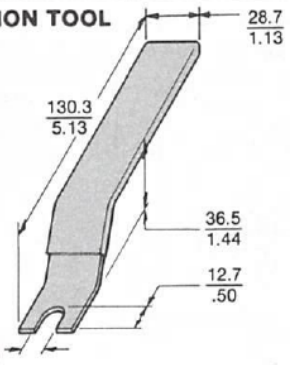
DIMENSIONS							PART NUMBERS		INSTALLATION				Sleeve thread size
A	B	C	D	E	F	W	With hold-open feature	Without hold-open feature	PANEL THICKNESS Min.	PANEL THICKNESS Max.	∅ H ±.08 ±.003	∅ J	
13.5 / .53	4.65 / .183	6.4 / .25	19.8 / .78	5.6 / .22	8.7 / .34	6.99 / .275	56-10-**301**-20 ■	56-99-**196**-20 ■	0.64 / .025	1.52 / .060	7.14 / .281	4.78 / .188	M7 X 1
17.5 / .69	6.22 / .245	7.9 / .31	26.2 / 1.03	7.1 / .28	11.1 / .44	9.40 / .370	56-10-**401**-20 ■	56-99-**197**-20 ■	0.79 / .031	3.18 / .125	9.12 / .359	6.35 / .250	M9 X 1

INSTALLATION





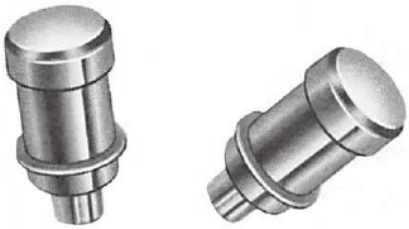
INSTALLATION TOOL



Plunger Part Number	Tool Part Number	X
56-10-301-20	56-0-22041-03 ■	7.14/.281
56-99-196-20		
56-10-401-20	56-0-22041-04 ■	9.53/.375
56-99-197-20		

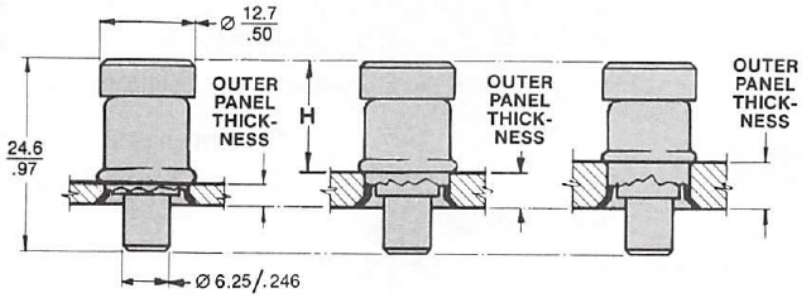
■ From stock, subject to prior sale.

Spring-loaded Plunger



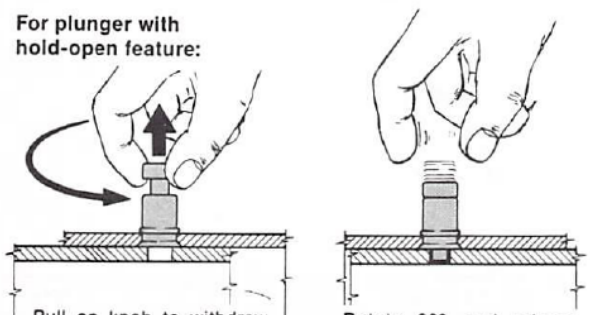
- Holds against lateral motion.
- Provides quick release of sliding parts.
- With or without hold-open feature.
- Stainless steel construction.

Flare-in style



MATERIAL and FINISH
STUD: 430 stainless steel, passivated.
STANDOFF: 305 stainless steel, passivated.
COLLAR: 303 stainless steel, passivated.
SPRING: stainless steel, passivated.

For plunger with hold-open feature:



Pull on knob to withdraw stud from hole in inner member; rotate 90° to hold stud in retracted position.

Rotate 90° and release knob. Stud snaps back into inner hole when units are re-aligned.

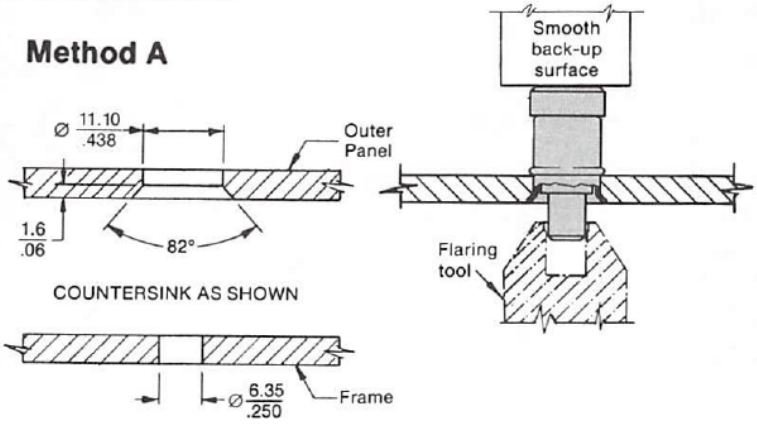
millimeter / inch — millimeter/inch

OUTER PANEL THICKNESS		H	PART NUMBERS		Use installation method:
Min.	Max.		With hold-open feature	Without hold-open feature	
1.59/.063	1.98/.078	15.9/.63	56-10-**801**-10 ■	56-99-192-**01** ■	B
2.38/.094	3.57/.141	14.3/.56	56-10-**802**-10 ■	56-99-192-**02** ■	B
2.78/.109	3.57/.141	15.9/.63	56-10-**801**-10 ■	56-99-192-**01** ■	A
3.97/.156	5.16/.203	12.7/.50	56-10-**803**-10 ■	56-99-192-**03** ■	B
4.37/.172	5.16/.203	14.3/.56	56-10-**802**-10 ■	56-99-192-**02** ■	A
5.95/.234	6.75/.266	12.7/.50	56-10-**803**-10 ■	56-99-192-**03** ■	A

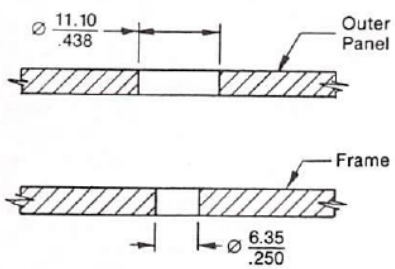
■ From stock, subject to prior sale.

INSTALLATION

Method A

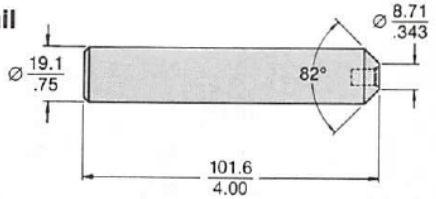


Method B

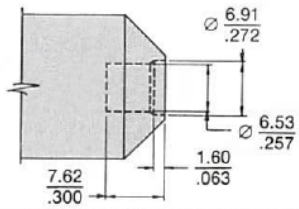


FLARING PUNCH

Punch Detail



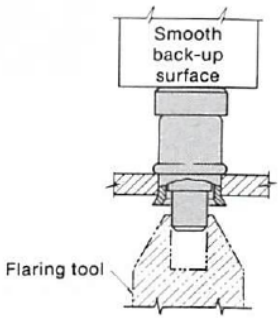
Hole Detail



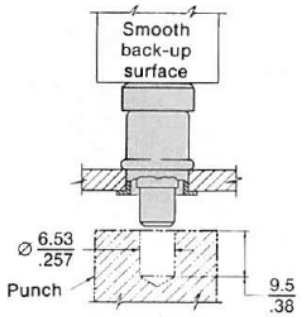
Order Separately

Part Number 56-0-17355-11 ■

MATERIAL
Steel, hardened.



Partially flare standoff.



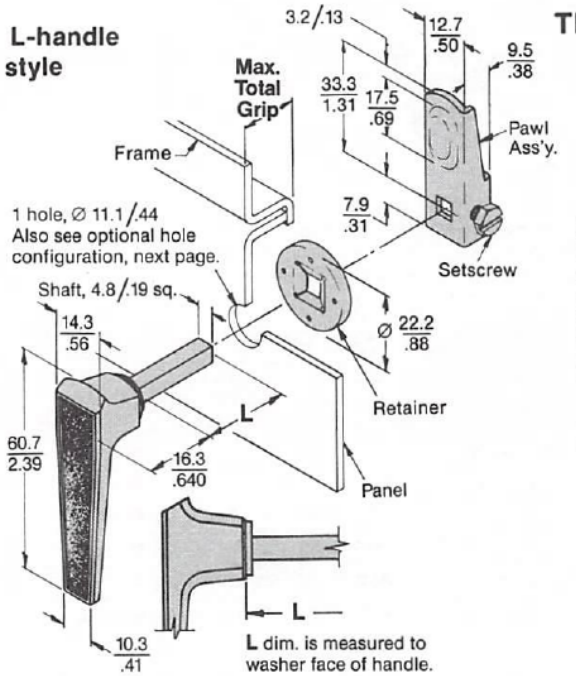
Flatten with a smooth-faced punch.

Universal Cabinet Latch
for lighter weight doors

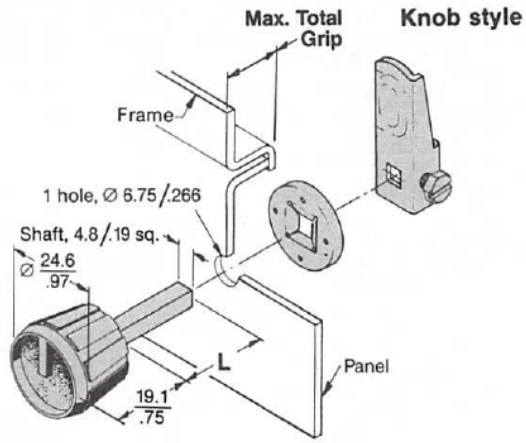
- **Quick one-hole installation**
- **6 handle and head styles**
- **Accommodates varying thicknesses**

All latch styles are dimensionally identical to the L-handle style except as shown.

Thermoplastic L-handle and Knob Styles

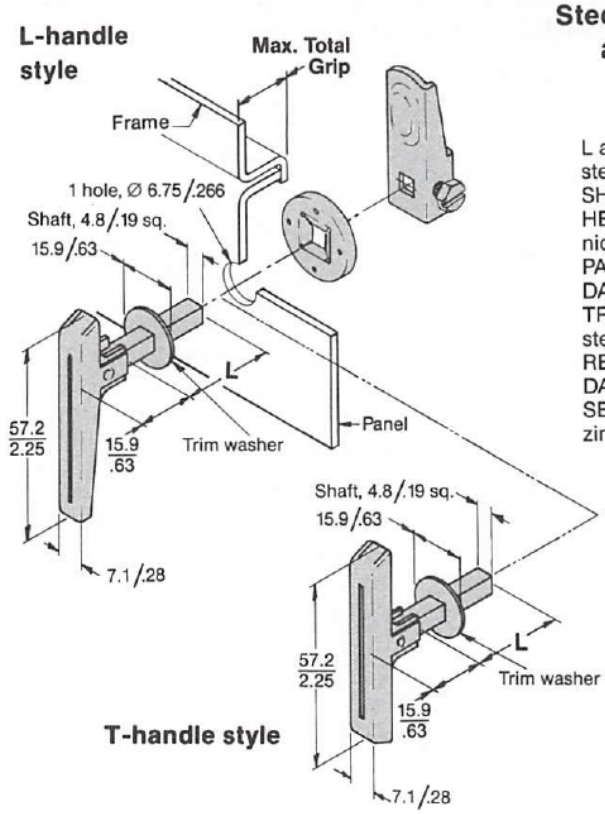


MATERIAL and FINISH
L-HANDLE: ABS, black.
KNOB: nylon, black.
SHAFT: 1008 steel, zinc plated.
PAWL: 1010 steel, DACROTIZED†.
RETAINER: spring steel, DACROTIZED†.
SETSCREW: hardened steel, zinc plated.

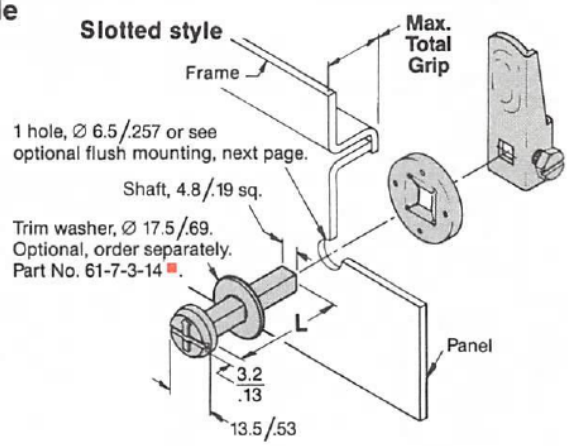


Max. Total Grip	Shaft Length L	Assembly Part Numbers	
		L-handle	Knob
12.7/.50	25.4/1.00	61-20-102-11 ■	61-10-102-11 ■
25.4/1.00	38.1/1.50	61-20-104-11 ■	61-10-104-11 ■
44.5/1.75	57.2/2.25	61-20-107-11 ■	61-10-107-11 ■

Steel L-handle, T-handle and Slotted Styles



MATERIAL and FINISH
L and T-HANDLES: 1010 steel, bright nickel plated.
SHAFTS and SLOTTED HEAD: 1008 steel, bright nickel plated.
PAWL: 1010 steel, DACROTIZED†.
TRIM WASHER: low carbon steel, bright nickel plated.
RETAINER: spring steel, DACROTIZED†.
SETSCREW: hardened steel, zinc plated.

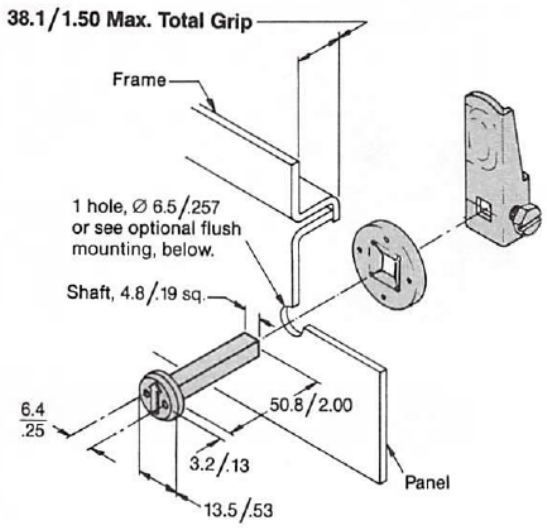


Max. Total Grip	Shaft Length L	Assembly Part Numbers		
		L-handle	T-handle	Slotted
44.5/1.75	57.2/2.25	61-1-1-0 ■	61-30-1-0 ■	—
69.9/2.75	82.6/3.25	61-1-2-0 ■	—	61-10-5-0 ■
19.1/.75	31.8/1.25	61-1-3-0 ■	61-30-3-0 ■	61-10-4-0 ■
25.4/1.00	38.1/1.50	61-1-4-0 ■	61-30-4-0 ■	61-10-1-0 ■
12.7/.50	25.4/1.00	61-1-5-0 ■	—	61-10-6-0 ■
50.8/2.00	63.5/2.50	61-1-6-0 ■	—	—
31.8/1.25	44.5/1.75	61-1-7-0 ■	—	61-10-7-0 ■
38.1/1.50	50.8/2.00	61-1-8-0 ■	—	61-10-2-0 ■
6.4/.25	19.1/.75	61-1-9-0 ■	61-30-9-0 ■	61-10-8-0 ■
57.2/2.25	69.9/2.75	—	—	61-10-3-0 ■

†Registered tradename of Metal Coatings International, Inc.

■ From stock, subject to prior sale.

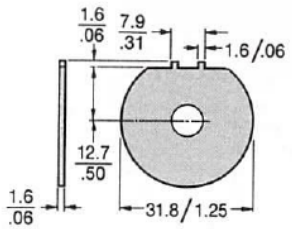
Tamper-resistant Spanner Style



Part Number 61-99-113-10 ■

MATERIAL and FINISH
SPANNER HEAD and SHAFTS:
1008 steel, bright nickel plated.
PAWL: 1010 steel, DACROTIZED†.
RETAINER: spring steel, DACROTIZED†.
SETSCREW: hardened steel,
zinc plated.
†Registered tradename of Metal Coatings International, Inc.

Spanner Head Key
Order separately



MATERIAL and FINISH
Steel, zinc plated.

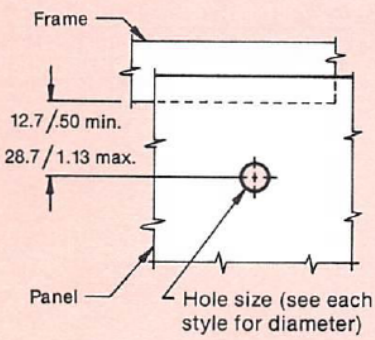
Part Number 61-0-6649-11 ■

■ From stock, subject to prior sale.

INSTALLATION

For all styles

1. Prepare panel.

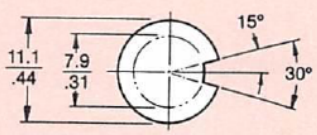


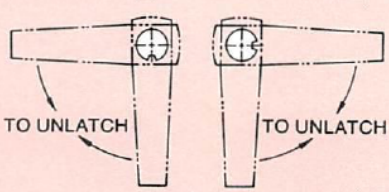
2. Press retainer down shaft until snug against panel using shaped installed tool (20.6/.81 O.D. tubing can be used).
3. Adjust pawl to proper grip position and tighten setscrew.

For thermoplastic L-handle styles only (optional)

SHAPED INSTALLATION HOLE

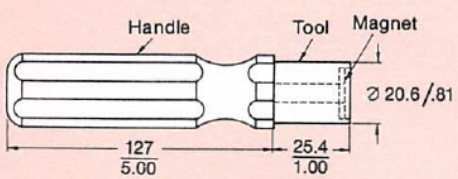
To provide 90° rotation stops.





Handles are shown in LATCHED position.

Push-on clip Installation Tool
Order separately

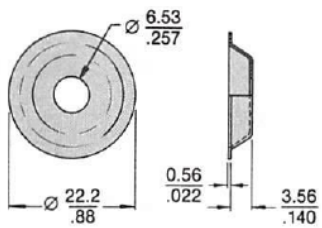


Part Number 61-0-12280-11 ■

Material and Finish
Steel, zinc plated tool with magnetic insert. Amber thermoplastic handle.

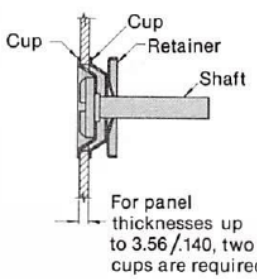
■ From stock, subject to prior sale.

Optional Flush Mounting Cup for slotted and spanner style assemblies
Order separately

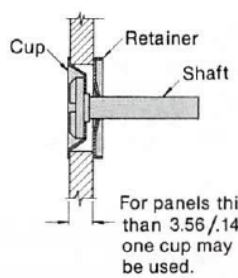


Part Number 61-16-101-14 ■

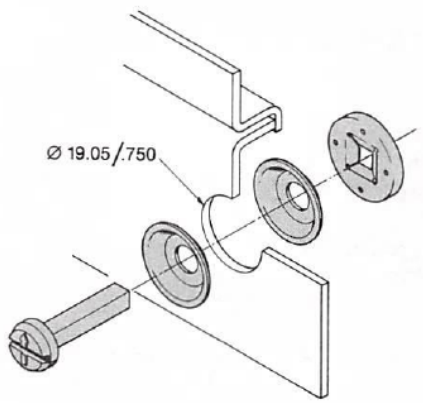
MATERIAL and FINISH
1010 steel, bright nickel plated.



For panel thicknesses up to 3.56/.140, two cups are required.

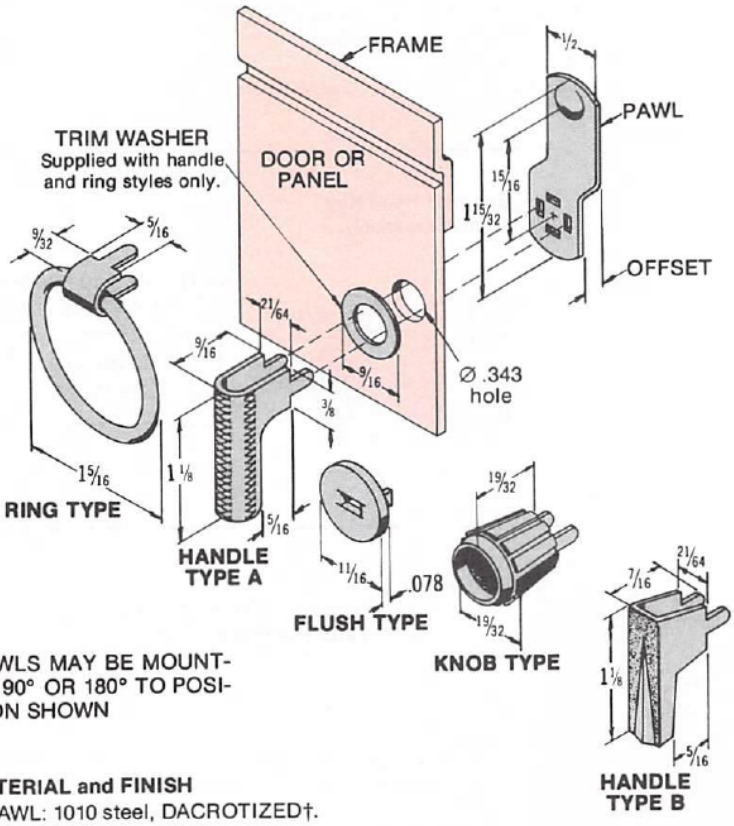


For panels thicker than 3.56/.140, one cup may be used.



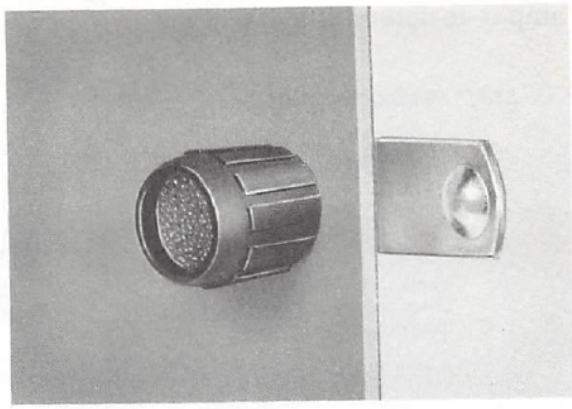
No. 31 DOOR LATCH

- **Low cost**
- **Simple installation**



PAWLS MAY BE MOUNTED 90° OR 180° TO POSITION SHOWN

Shown approximately actual size



STYLE	GRIP	OFFSET	PART NUMBERS
HANDLE TYPE A	0 to 3/16	3/16	31-10-11-11 ■
	3/16 to 7/16	29/64	31-40-11-11 ■
	7/16 to 1 1/16	45/64	31-50-11-11 ■
FLUSH TYPE	0 to 3/16	3/16	31-20-21-11 ■
	3/16 to 7/16	29/64	31-100-11-11 ■
	7/16 to 1 1/16	45/64	31-90-11-11 ■
RING TYPE	0 to 3/16	3/16	31-10-401-11 ■
	3/16 to 7/16	29/64	31-10-402-11 ■
	7/16 to 1 1/16	45/64	31-10-403-11 ■
KNOB TYPE	0 to 3/16	3/16	31-10-701-11 ■
	3/16 to 7/16	29/64	31-10-702-11 ■
	7/16 to 1 1/16	45/64	31-10-703-11 ■
HANDLE TYPE B	0 to 3/16	3/16	31-10-101-11 ■
	3/16 to 7/16	29/64	31-10-102-11 ■
	7/16 to 1 1/16	45/64	31-10-103-11 ■

■ From stock, subject to prior sale.

MATERIAL and FINISH

PAWL: 1010 steel, DACROTIZED†.

RING TYPE

RING and WASHER: steel, zinc plated plus bright chromate dip.

YOKE: 1010 steel, zinc plated plus bright chromate dip.

HANDLE TYPE A and B

HANDLE: 1010 steel, DACROTIZED† plus bright metallic organic coating.

WASHER: steel, zinc plated plus bright chromate dip.

FLUSH TYPE:

SLOTTED HEAD: 1010 steel, zinc plated plus bright chromate dip.

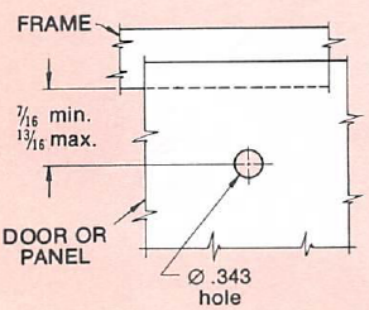
KNOB TYPE:

KNOB: ABS, black.

STAPLE: 1010 steel, zinc plated plus bright chromate dip.

†Registered tradename of Metal Coatings International, Inc.

PANEL PREPARATION



NOTE: MAXIMUM THICKNESS OF DOOR OR PANEL = 3/32

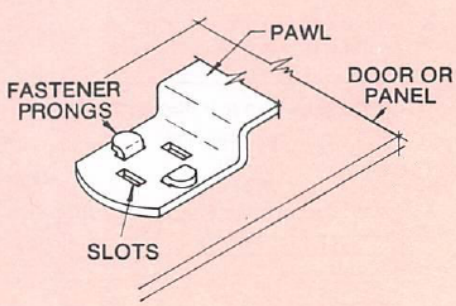
INSTALLATION

Drill or punch one hole in door or panel as shown.

Insert fastener prongs through hole and into slots in pawl. Note: Pawl may be oriented in any 90° position to suit your application.

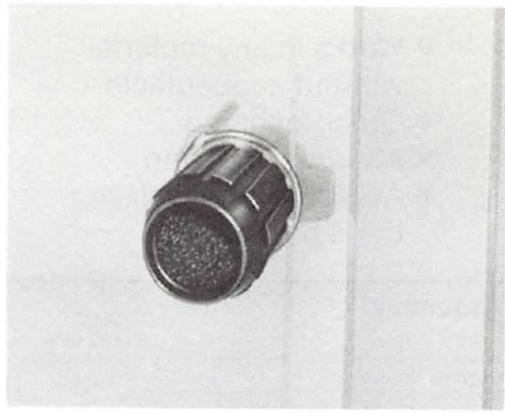
Trim washer (see above) is supplied with handle and ring styles only, and its use with these styles, while recommended, is optional.

Fastener prongs should then be spread and staked sufficiently to provide a *snug* assembly (see right). Pliers may be used to *twist* the prongs *provided* they are given sufficient set to prevent loosening.



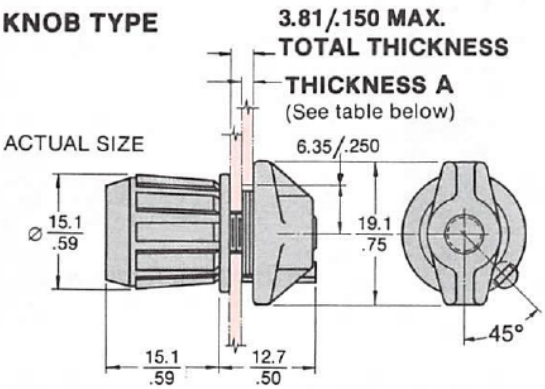
Panel Latch
in three head styles
(Southco No. 45)

- ¼ turn to latch or unlatch; extra turning tightens against vibration.
- Fast installation in door/frame combinations up to 3.81/.150 total thickness.
- Lightweight
- Compact design

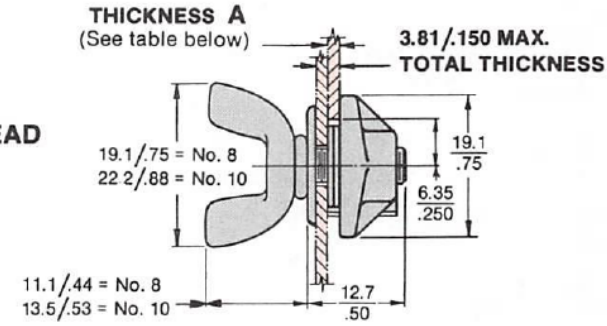


SPECIFICATIONS

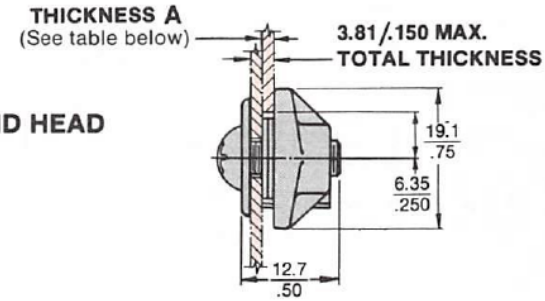
KNOB TYPE



WING HEAD

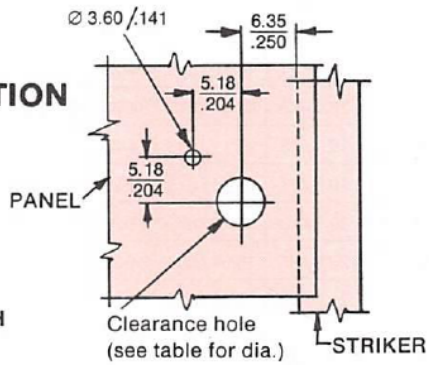


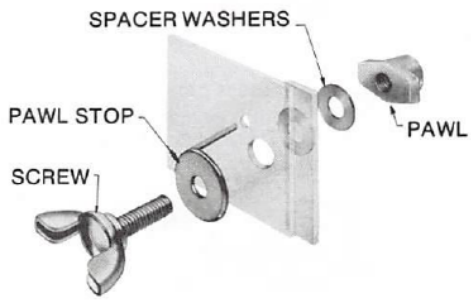
ROUND HEAD



COMPONENT PARTS NOT SOLD SEPARATELY

PANEL PREPARATION





MATERIAL and FINISH

WING HEAD and ROUND HEAD (including screws) and SPACERS: steel, zinc plated with bright chromate dip.
KNOB TYPE: nylon, black with 1018 steel screw, zinc plated plus bright chromate dip.
PAWL: nylon, black.
PAWL STOP: 1010 steel, zinc plated plus bright chromate dip.
SPACERS: steel, zinc plated plus yellow chromate dip.

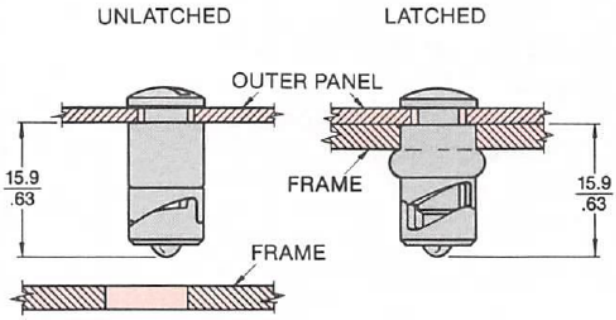
SCREW STYLE	THREAD SIZE	ASSEMBLY PART No.	CLEAR. HOLE	No. of spacer washers to be ordered for your panel thickness A					SPACER WASHER PART No.
				0 to 0.25/.010	0.26/.011 to 0.76/.030	0.77/.031 to 1.27/.050	1.28/.051 to 1.78/.070	1.79/.071 to 2.29/.090	
WING	No. 8	45-10-301-10 ■	4.3/.169	0	1	2	3	4	45-14-101-15 ■
	No. 10	45-20-301-10 ■	5.0/.196						45-24-101-15 ■
ROUND	No. 8	45-10-101-10 ■	4.3/.169	0	1	2	3	4	45-14-101-15 ■
	No. 10	45-20-101-10 ■	5.0/.196						45-24-101-15 ■
KNOB	No. 10	45-20-601-60 ■	5.0/.196	0	1	2	3	4	45-24-101-15 ■

■ From stock, subject to prior sale.

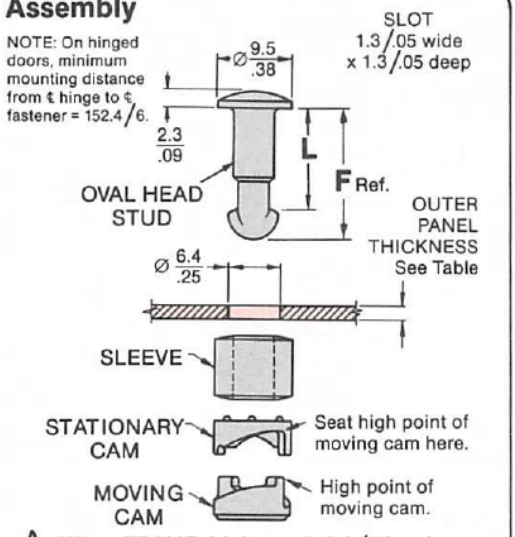
NOTE: If spacers are required, order proper number separately by part number.

FRACTIONAL-TURN FASTENER
SERIES 20

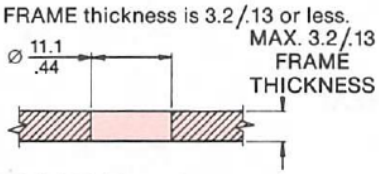
- Works in any material without a receptacle
- Quick-opening
- Absorbs vibration
- Available in two sizes, three head styles



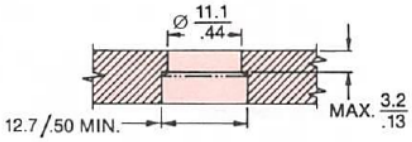
Assembly



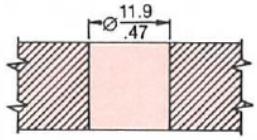
A. When FRAME thickness is 3.2/.13 or less.



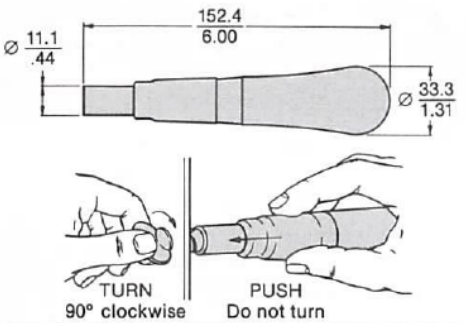
B. When FRAME thickness is greater than 3.2/.13, countersink or counterbore as shown.



C. When FRAME thickness is greater than 7.92/.312. Note: If hole is blind (Solid material), MIN. DEPTH of hole = 17.5/.69.

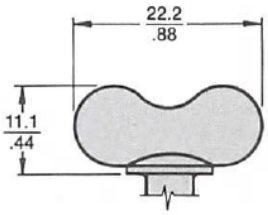


INSTALLATION TOOL
Part No. 82-0-14719-11
(Order separately by part number)

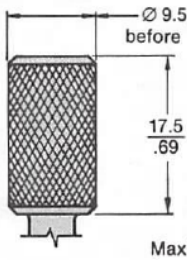


OTHER STUD HEAD STYLES

WING HEAD STUD



KNURLED HEAD STUD



MATERIAL and FINISH
WING and SLOTTED HEAD STUDS: 1008 steel, DACROTIZED†.
KNURLED HEAD STUDS: 11L17 steel, DACROTIZED†.
SLEEVE: SBR rubber.
STATIONARY CAM: acetal, black.
MOVING CAM: die cast zinc, black organic coating.

†Registered tradename of Metal Coatings International, Inc.

Studs are bulk packaged. Sleeves and cams are packaged one set per bag.

STRENGTH GUIDELINES

Maximum working load	178N/40 lbs.
Average ultimate load	334N/75 lbs.

To enter Assembly Selection Table find your Outer Panel Thickness.

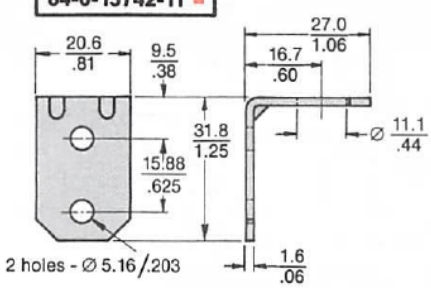
YOUR OUTER PANEL THICKNESS		F Ref.	ASSEMBLY PART NUMBERS			
MIN.	MAX.		L	With Oval Head Stud	With Wing Head Stud	with Knurled Head Stud
0.76/.030	1.24/.049	17.0/.67	13.08/.515	84-20-040-10 □	84-20-040-20 □	84-20-040-30 □
1.25/.050	1.75/.069	17.5/.69	13.59/.535	84-20-060-10 ■	84-20-060-20 ■	84-20-060-30 □
1.76/.070	2.26/.089	18.0/.71	14.10/.555	84-20-080-10 ■	84-20-080-20 ■	84-20-080-30 □
2.27/.090	2.77/.109	18.5/.73	14.61/.575	84-20-100-10 ■	84-20-100-20 ■	84-20-100-30 □
2.78/.110	3.28/.129	19.1/.75	15.11/.595	84-20-120-10 ■	84-20-120-20 ■	84-20-120-30 □
3.29/.130	3.78/.149	19.6/.77	15.62/.615	84-20-140-10 ■	84-20-140-20 ■	84-20-140-30 □
3.79/.150	4.29/.169	20.1/.79	16.13/.635	84-20-160-10 □	84-20-160-20 □	84-20-160-30 □
4.30/.170	4.80/.189	20.6/.81	16.64/.655	84-20-180-10 □	84-20-180-20 □	84-20-180-30 □
4.81/.190	5.31/.209	21.8/.83	17.15/.675	84-20-200-10 □	84-20-200-20 □	84-20-200-30 □

■ From stock, subject to prior sale. □ Up to 8 weeks. Minimum order required.

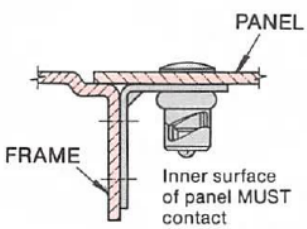
SIDE MOUNT BRACKET

Order separately by part number.

PART NUMBER
84-0-15742-11 ■



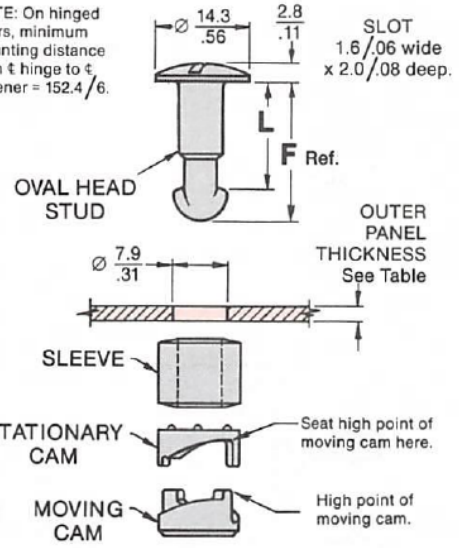
MATERIAL and FINISH
Steel, zinc plated, yellow chromate dip



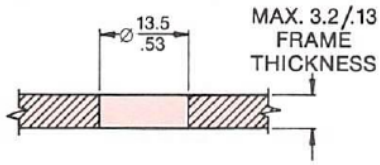
FRACTIONAL-TURN FASTENER
SERIES 50

Assembly

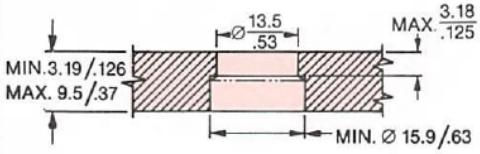
NOTE: On hinged doors, minimum mounting distance from ℄ hinge to ℄ fastener = 152.4/6.



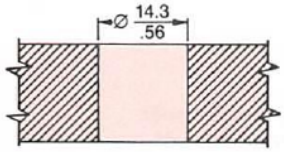
A. When FRAME thickness is 3.2/.13 or less.



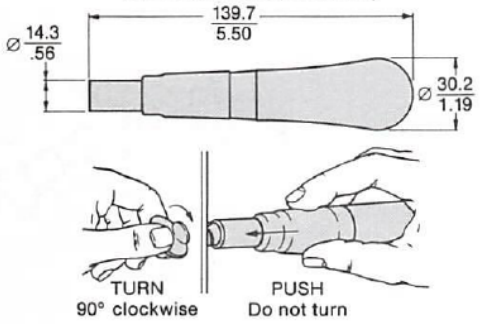
B. When FRAME thickness is greater than 3.2/.13, countersink or counterbore as shown.



C. When FRAME thickness is greater than 9.53/.38. NOTE: If hole is blind (solid material), MIN. DEPTH = 20.64/.813



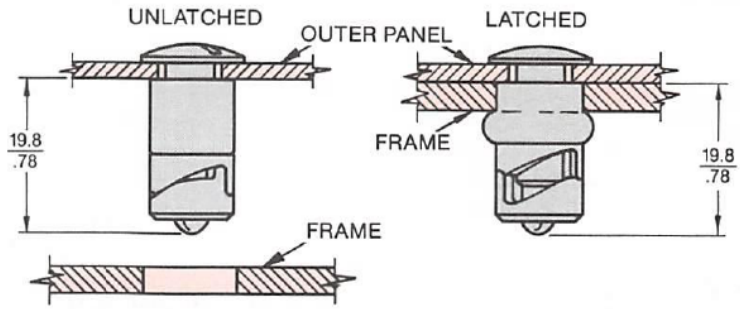
INSTALLATION TOOL
Part No. 41-0-12125-11
(Order separately by part number)



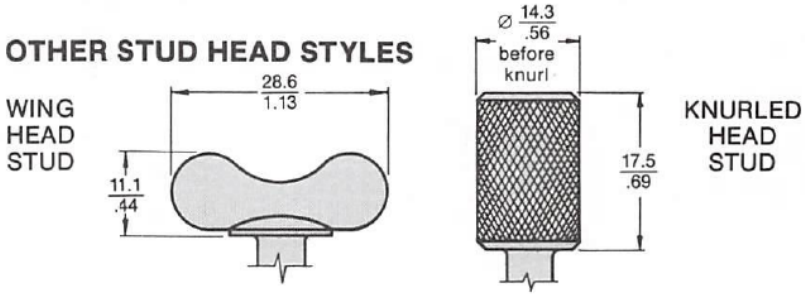
MATERIAL and FINISH
WING and SLOTTED HEAD STUDS: 1008 steel, DACROTIZED†.
KNURLED HEAD STUDS: low carbon steel, DACROTIZED†.
SLEEVE: SBR Rubber.
STATIONARY CAM: acetal, black.
MOVING CAM: die cast zinc, black organic coating.
†Registered tradename of Metal Coatings International, Inc.

Studs are bulk packaged. Sleeves and cams are packaged one set per bag.

STRENGTH GUIDELINES
Maximum working load 222N/50 lbs.
Average ultimate load 445N/100 lbs.



OTHER STUD HEAD STYLES



To enter Assembly Selection Table find your Outer Panel Thickness.

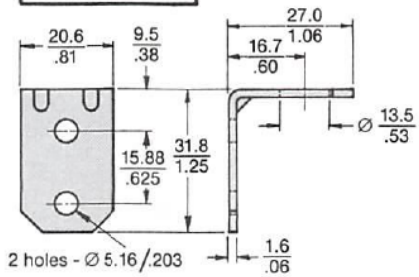
YOUR OUTER PANEL THICKNESS		F Ref.	ASSEMBLY PART NUMBERS			
MIN.	MAX.		L	With Oval Head Stud	With Wing Head Stud	with Knurled Head Stud
0.76/.030	1.24/.049	20.8/.82	16.10/.634	84-50-040-10 ■	84-50-040-20 ■	84-50-040-30 □
1.25/.050	1.75/.069	21.3/.84	16.61/.654	84-50-060-10 ■	84-50-060-20 ■	84-50-060-30 □
1.76/.070	2.26/.089	21.8/.86	17.12/.674	84-50-080-10 ■	84-50-080-20 ■	84-50-080-30 □
2.27/.090	2.77/.109	22.4/.88	17.63/.694	84-50-100-10 ■	84-50-100-20 ■	84-50-100-30 □
2.78/.110	3.28/.129	22.9/.90	18.14/.714	84-50-120-10 ■	84-50-120-20 ■	84-50-120-30 □
3.29/.130	3.78/.149	23.4/.92	18.64/.734	84-50-140-10 ■	84-50-140-20 □	84-50-140-30 □
3.79/.150	4.29/.169	23.9/.94	19.15/.754	84-50-160-10 ■	84-50-160-20 □	84-50-160-30 □
4.30/.170	4.80/.189	24.4/.96	19.66/.774	84-50-180-10 ■	84-50-180-20 □	84-50-180-30 □
4.81/.190	5.31/.209	24.9/.98	20.17/.794	84-50-200-10 □	84-50-200-20 □	84-50-200-30 □

□ Up to 8 weeks. Minimum order required.
■ From stock, subject to prior sale.

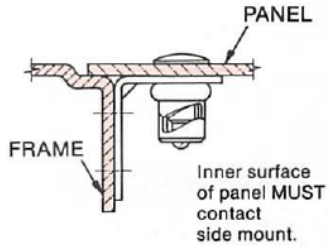
SIDE MOUNT BRACKET

Order separately by part number.

PART NUMBER 19-0-15665-11 ■



MATERIAL and FINISH
Steel, zinc plated, yellow chromate dip

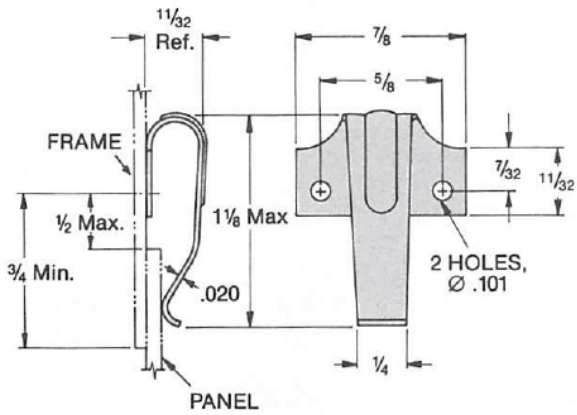


Panel-retaining Clips

- **Holds panel or door securely while allowing for quick removal**
- **Holds under spring pressure**
- **Resists vibration**

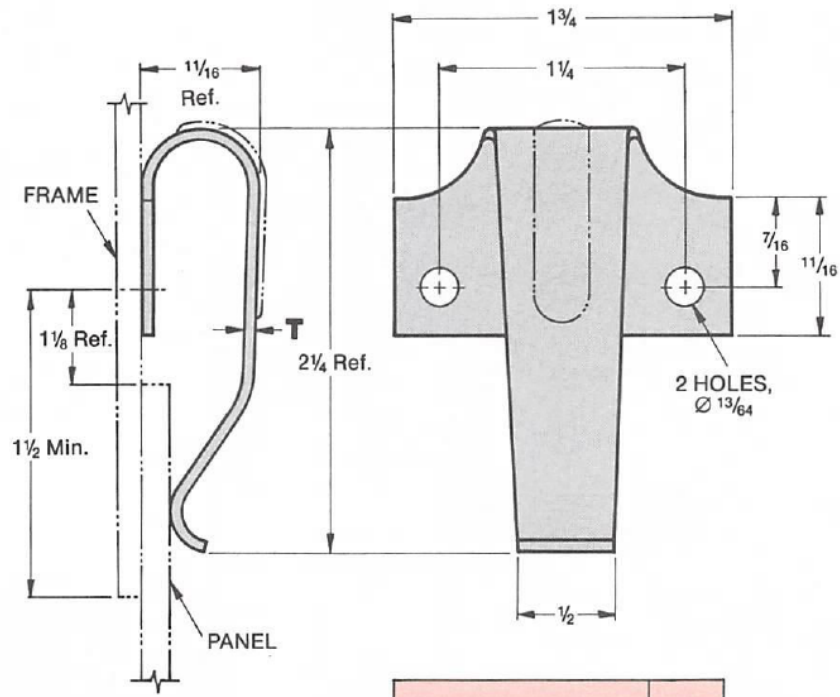
ACTUAL SIZE ILLUSTRATIONS

SMALLER



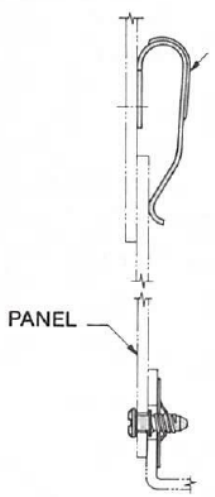
PART NUMBERS
50-12-102-11

LARGER



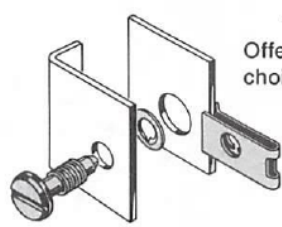
MATERIAL and FINISH
1065 spring steel,
phosphate coated.

PART NUMBERS	T
50-17011-15	.063
50-17211-15	.050

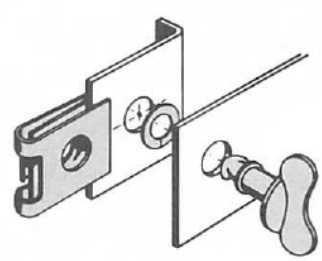


To secure panel at end opposite retaining clips, Southco quick-opening captive fasteners offer positive vibration-resistant fastening, quick access, and the security of being captive in the panel.

Among the many quick-acting fasteners offered by Southco, the following offer a very practical solution to the requirements of quick-access type installations.



The Southco Screw Fastener.
Offered in three sizes, each with a choice of receptacles and head styles.



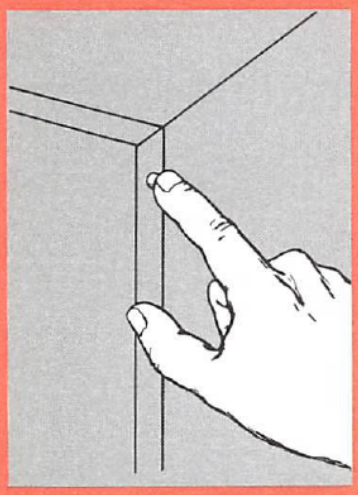
The Southco ¼-turn Fastener.
Locks and unlocks with a 90° turn. Offered in four sizes with a variety of stud head styles and receptacles.

SOUTHCO fasteners

Section L
Hidden Panel-latching System

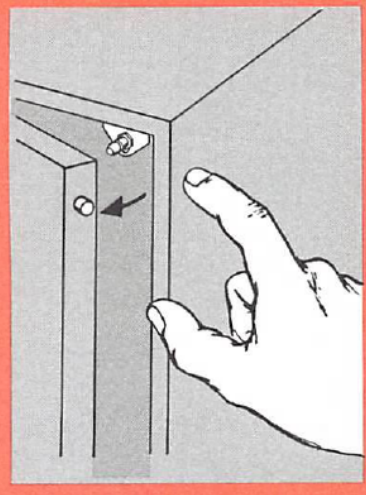
contents guide | **page.**

No. E2 Near-edge Application L-1
No. E2 Remote-latching Application L-2
No. E2 Two-point Application L-3
No. E2 Installation L-4



A tiny push button at the edge of the door is all you'll see. Need more security? Set the button inside, push through a small hole.

Easily fine-tuned for compression against RFI & sheilding or gasketing. Hinged or hung doors are held tight, popped open. Mount E2 at top, bottom, or side: use in pairs, or trigger at opposite edge using extension rods. Nothing shows on the front of the door.



Section L

Hidden Panel-latching System

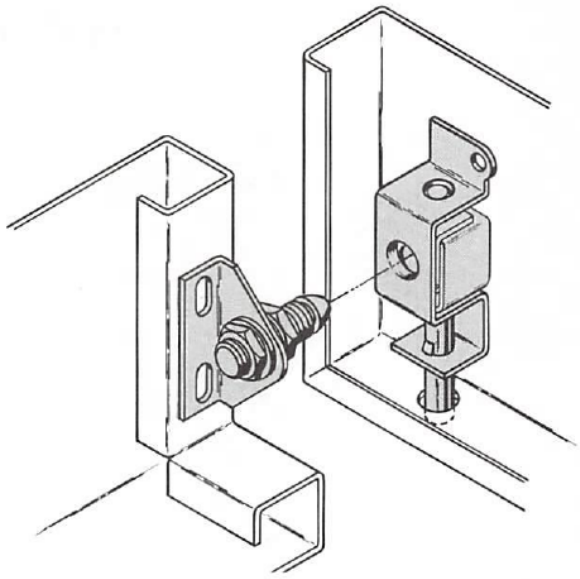
contents guide | page

No. E2 Near-edge Application L-1
No. E2 Remote-latching Application L-2
No. E2 Two-point Applications L-3
No. E2 Installation L-4

Hidden Panel-latching System

For near-edge applications

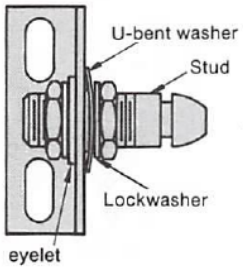
- **Secure mechanical fastening/latching**
- **Clean, unblemished panel surfaces**
- **Push the panel to latch**
- **Single or multiple latching points**
- **Floating keeper assists alignment**



ASSEMBLY PART NUMBERS	
with floating keeper E2-50-101-20 ■	with fixed keeper E2-50-101-10 ■

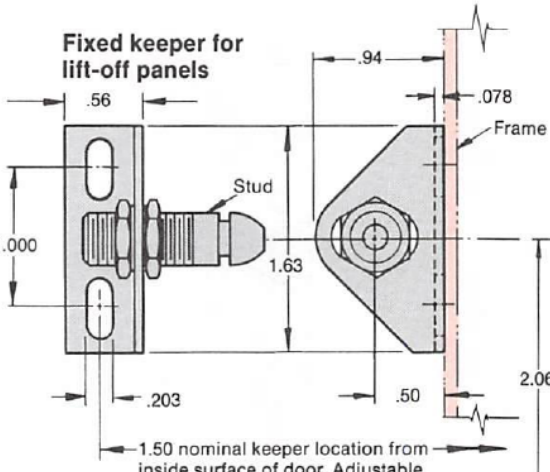
■ From stock, subject to prior sale.

Floating keeper for hinged panels



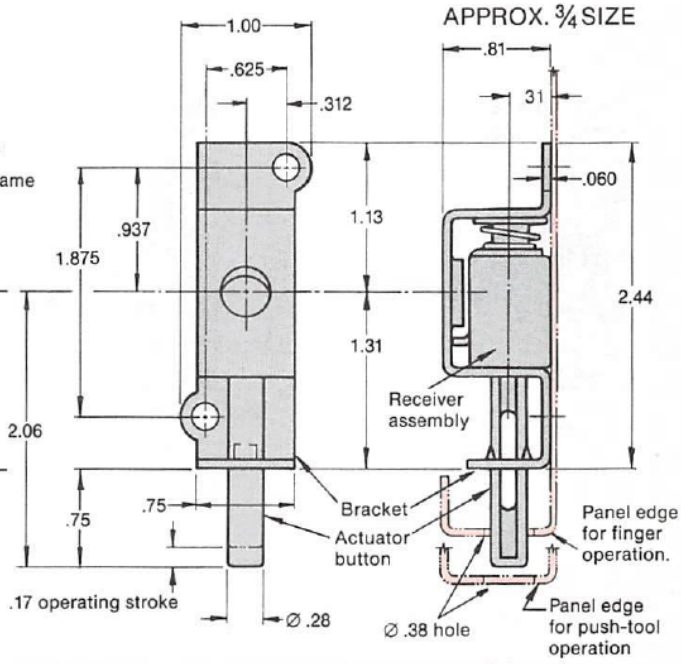
Stud will float .16" total movement.

Fixed keeper for lift-off panels



1.50 nominal keeper location from inside surface of door. Adjustable .25 either way to allow for variations in mounting, gasketing, etc.

APPROX. ¾ SIZE



IMPORTANT INSTRUCTION

for remote-latching and two-point latching styles shown on next two pages.

How to formulate the part number to include custom length actuator extension rod.

Substitute your *Dimension A* expressed in inches and tenths of inches for the **XXX** portion of the basic part number.

EXAMPLE:
If your *Dimension A* is 8.5 inches, substitute 085 for the **XXX** portion of the basic part number.

If your *Dimension A* is 18.5 inches, substitute 185 for the **XXX** portion of the basic part number.

BASIC PART NUMBER

E	2	5	1	X	X	X	1	0

Dimension A

Assembly style
- 51 = Remote latching, push button operated
- 70 = Two-point latching, push button operated

Length in TENS of inches
- 0 = zero
- 1 = 10 inches
- 2 = 20 inches
- 3 = 30 inches
- 4 = 40 inches
- 5 = 50 inches

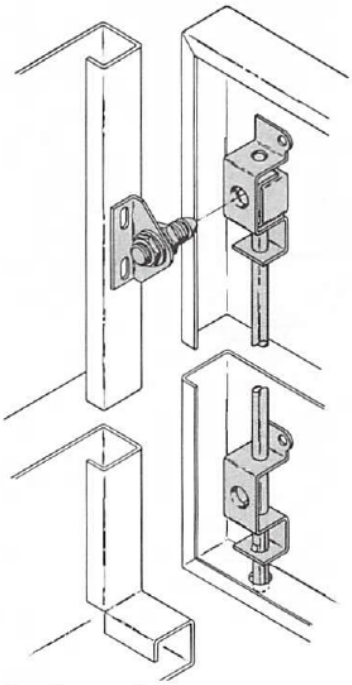
Length in UNIT inches
- 0 = zero
- 1 = 1 inch
- 2 = 2 inches
- 3 = 3 inches
- 4 = 4 inches
- 5 = 5 inches
- 6 = 6 inches
- 7 = 7 inches
- 8 = 8 inches
- 9 = 9 inches

Length in TENTHS of inches
- 0 = zero
- 1 = 0.1 inch
- 2 = 0.2 inch
- 3 = 0.3 inch
- 4 = 0.4 inch
- 5 = 0.5 inch
- 6 = 0.6 inch
- 7 = 0.7 inch
- 8 = 0.8 inch
- 9 = 0.9 inch

Keeper style
- 1 = Fixed
- 2 = Floating

Hidden Panel-latching System

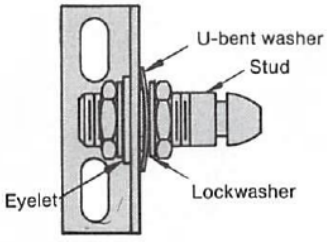
For remote-latching applications



ASSEMBLY PART NUMBERS
for fixed keeper
E2-51-XXX-10
for floating keeper
E2-51-XXX-20
see page L-1 to formulate the XXX portion of your ordering part number.

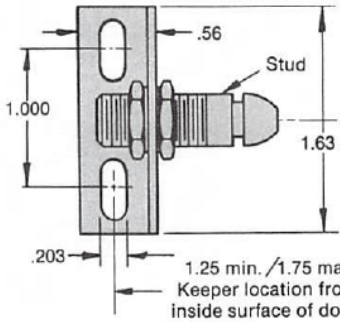
APPROX. ¾ SIZE

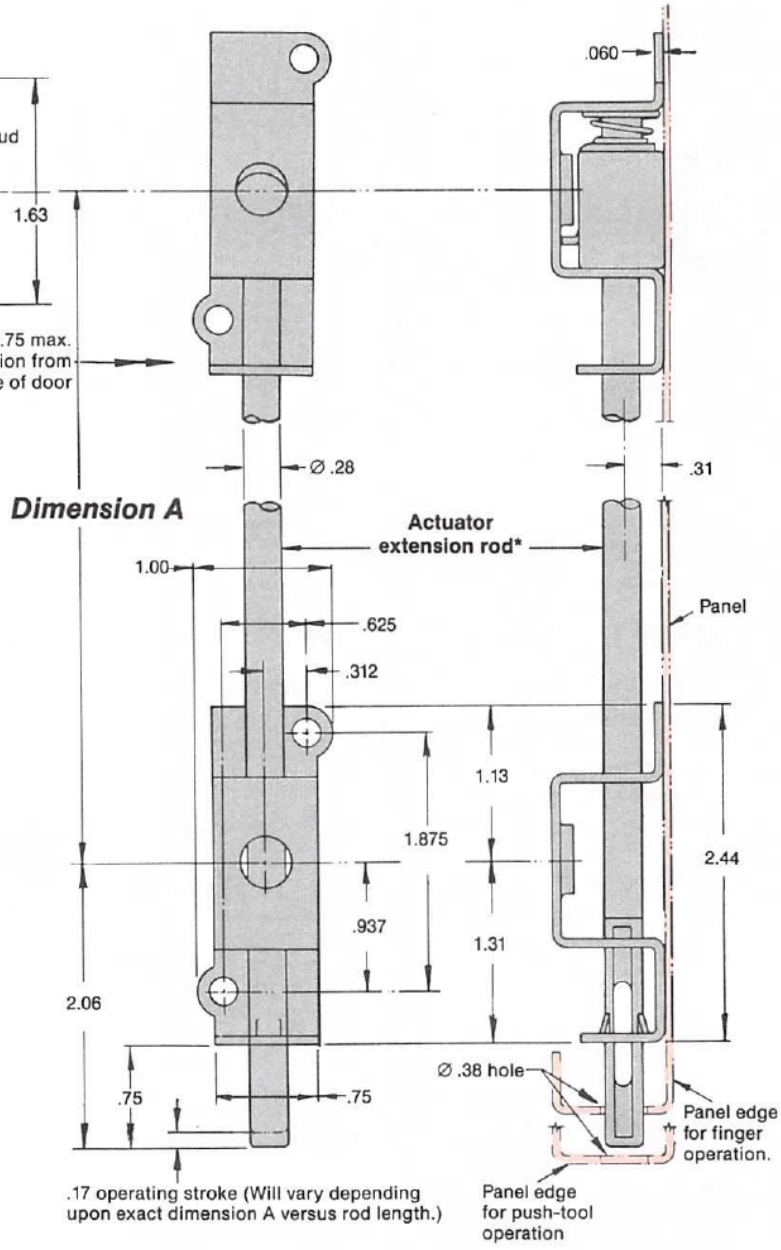
Floating keeper for hinged panels



Stud will float .16" total movement.

Fixed keeper for lift-off panels



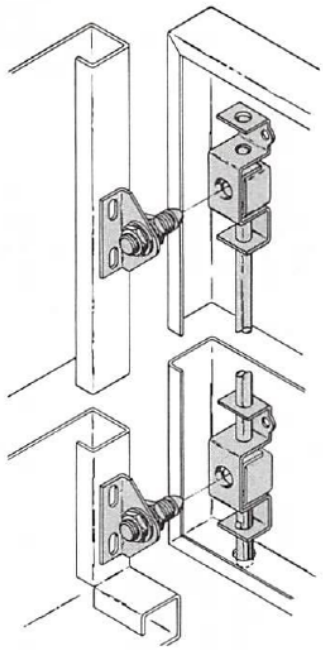


If you elect to supply your own actuator extension rod, order either assembly part number* **E2-58-101-20 *(floating keeper) or* **E2-58-101-10** *(fixed keeper) and use Ø.28 aluminum rod equal in length to your Dimension A.*

See page L-1 for detailed latch and keeper dimensions

Hidden Panel-latching System

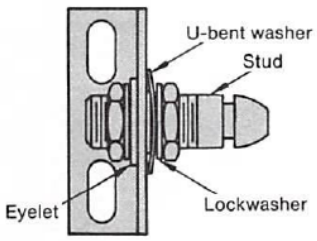
For two-point applications



ASSEMBLY PART NUMBERS
for fixed keeper
E2-70-XXX-10
for floating keeper
E2-70-XXX-20
see page L-1 to formulate the XXX portion of your ordering part number.

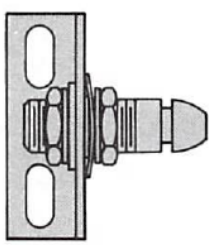
APPROX. ¾ SIZE

Floating keeper for hinged panels



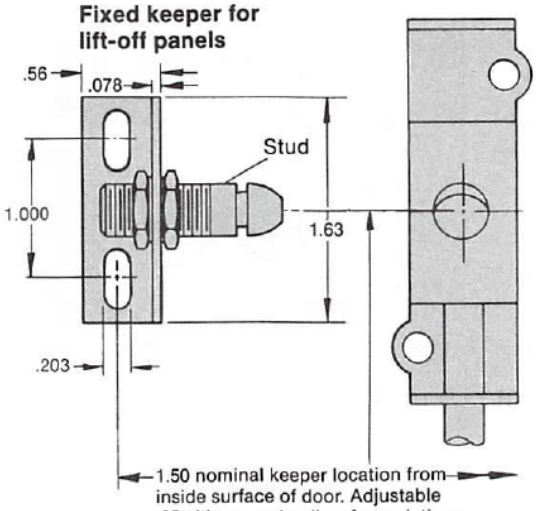
Stud will float .16" total movement.

Floating keeper

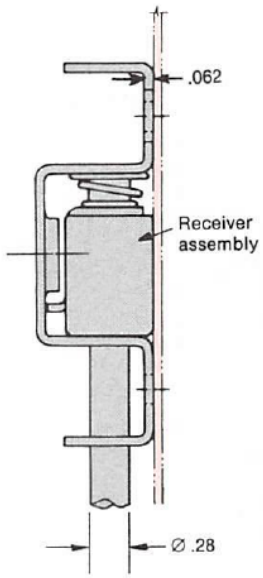


See page L-1 for detailed latch and keeper dimensions

Fixed keeper for lift-off panels

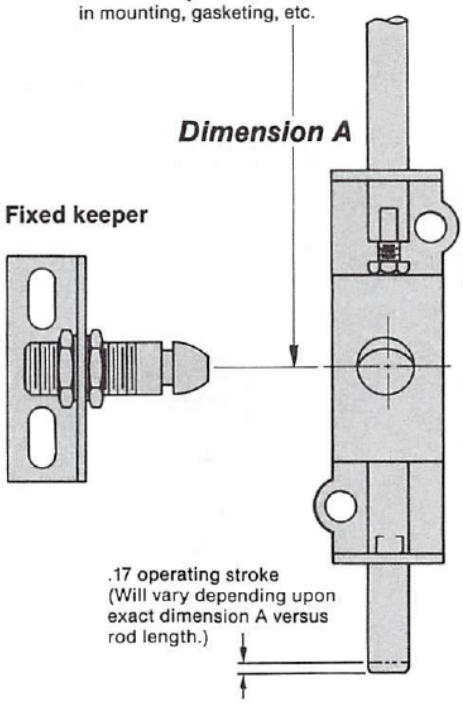


1.50 nominal keeper location from inside surface of door. Adjustable .25 either way to allow for variations in mounting, gasketing, etc.

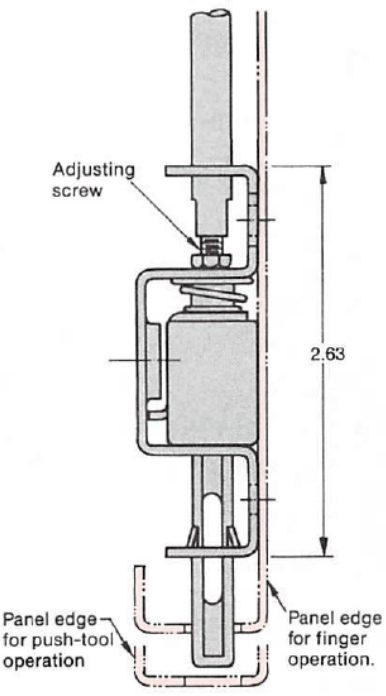


Dimension A

Fixed keeper



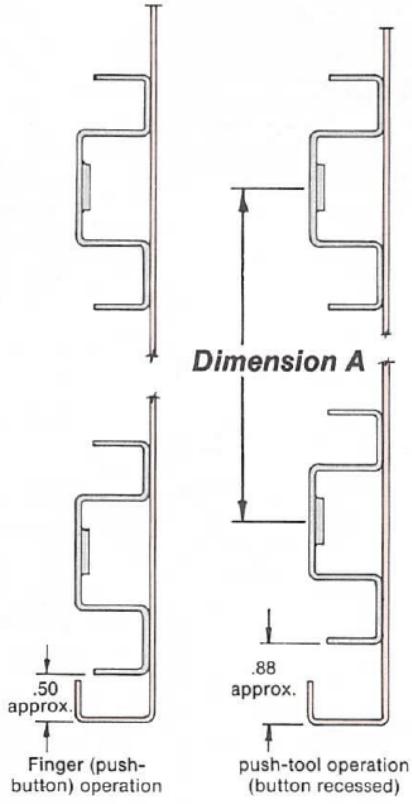
.17 operating stroke (Will vary depending upon exact dimension A versus rod length.)



Hidden Panel-latching System
Installation

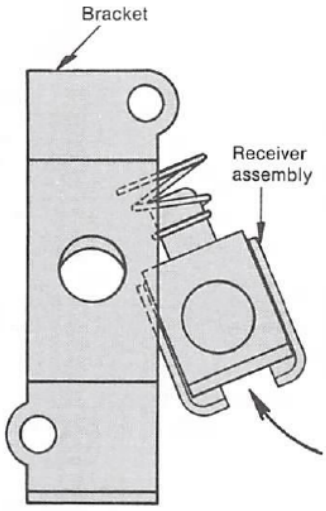
1

Mount brackets on inside surface of your panel using studs, welds, M5/No.10 screws or Ø.188 rivets.



2

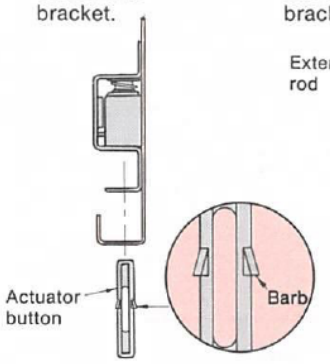
Slide receiver assembly into side of *upper* bracket.



3

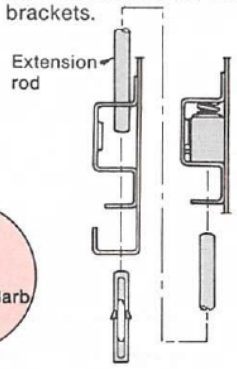
Near-edge latching style

Snap actuator button into bracket.



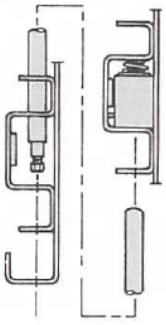
Remote-latching style

Insert extension rod and actuator button into brackets.

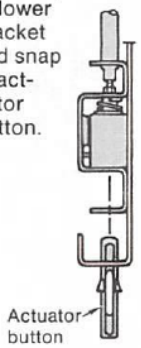


Two-point style

A. Insert extension rod into brackets.

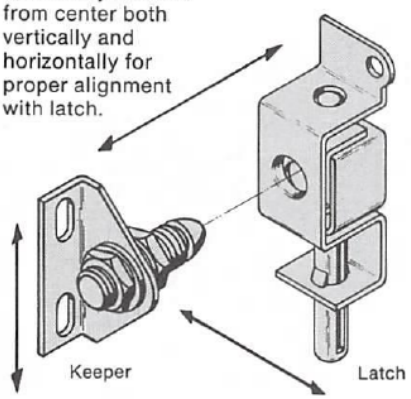


B. Slide receiver assembly into side of lower bracket and snap in actuator button.



4

Mount one or two keepers with No.10 or M5 screws. Keeper can be adjusted .13 from center both vertically and horizontally for proper alignment with latch.



MATERIAL and FINISH

LATCH, BRACKET, and KEEPER BRACKET are 1010 steel,
LATCH PLATE is case hardened 1010 steel.
STUD is case hardened low carbon steel; these components are DACROTIZED†.
LATCH GUIDE, RECEIVER CUP and ACTUATOR BUTTON: thermoplastic polyester, white.
NUTS: Steel, zinc plated plus yellow chromate dip.
LOCKWASHERS: spring steel, DACROTIZED†.

For near-edge style
SPRINGS: 302 stainless steel, natural.

For remote latching and two-point style
SPRING: 302 stainless steel, passivated.
CONICAL SPRING: 302 stainless steel, natural.
ACTUATOR ROD: 2011 aluminum, natural.
ADJUSTING SCREW: steel, zinc plated.

†Registered tradename of Metal Coatings International, Inc.

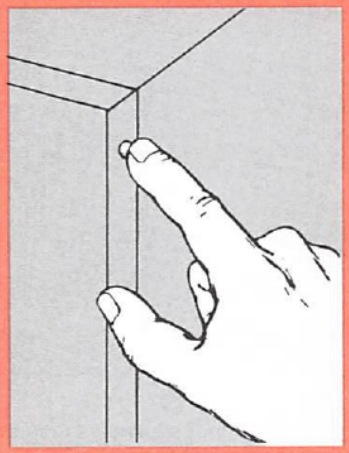
Keeper Style	Strength Guideline	
	Working load	Ultimate load
Fixed	300 lbs.	500 lbs.
Floating	170 lbs.	310 lbs.

Section LL

Metric Hidden Panel-latching System

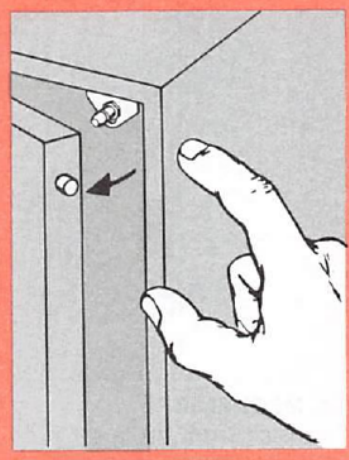
contents guide | **page**

No. E2 Metric Hidden Panel-latching System LL-3
No. E2 Metric Hidden Panel-latching System *for remote-latching application* LL-4
No. E2 Metric Hidden Panel-latching System *for two-point application* . . . . . LL-5 & LL-6



Tiny push button at the edge of the door is all you'll see. Need more security? Set the button inside, push through a small hole. More still? There's a hex-key operated style.

Easily fine-tuned for compression against RFI shielding or gasketing. Hinged or hung doors are held tight, popped open. Mount E2 at top, bottom or side: use in pairs, or trigger at opposite edge using extension rods. Nothing shows on the front of the door.

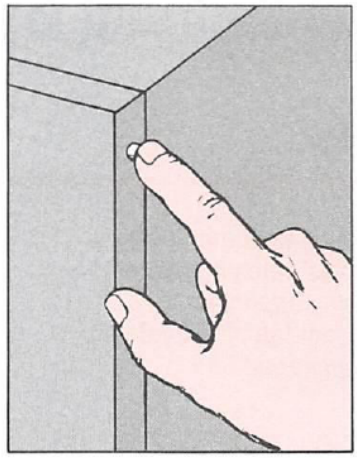


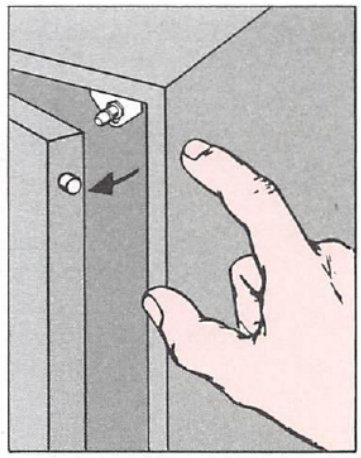
For a modern cabinet... four Southco latches:

one you won't notice,

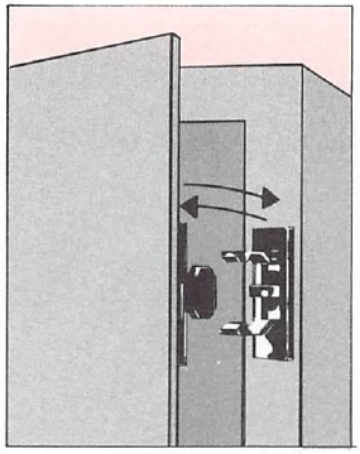
E2: MECHANICAL
Tiny push button at the edge of the door is all you'll see. Need more security? Set the button inside, push through a small hole.

Easily fine-tuned for compression against RFI shielding or gasketing. Hinged or hung doors are held tight, popped open. Mount E2 at top, bottom or side: use in pairs, or trigger at opposite edge using extension rods. Nothing shows on the front of the door.

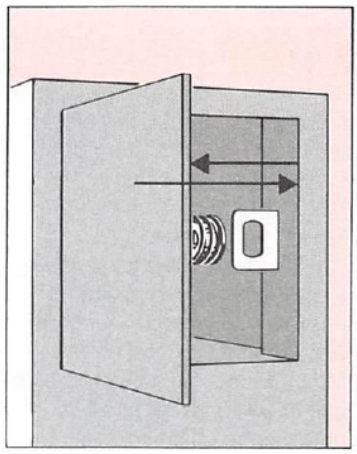




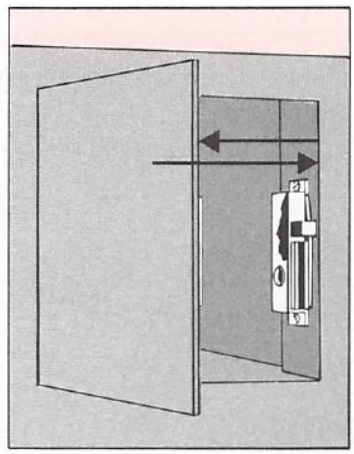
and three you can't see!



E4: MECHANICAL
Tiny latch snaps into a slot in your door frame. Spring fingers grasp or release a keeper on the door each time you push. Nothing shows on the outside.



A4: MECHANICAL
Spring loaded cam rotates 90°, alternately latches and unlatches the door when you push.
Three sizes serve big, little doors.
Nothing shows on the outside.



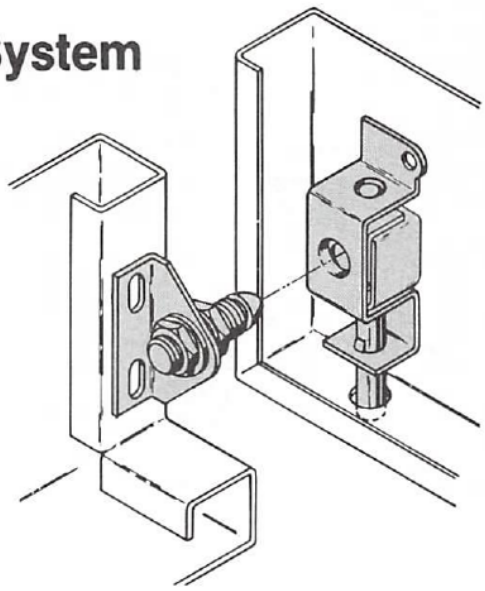
B2: MAGNETIC
Press the door shut and a magnet holds it there. Press again; the magnet releases, pops the door open. Nothing shows on the outside.

SOUTHCO®
fasteners

METRIC Hidden Panel-latching System

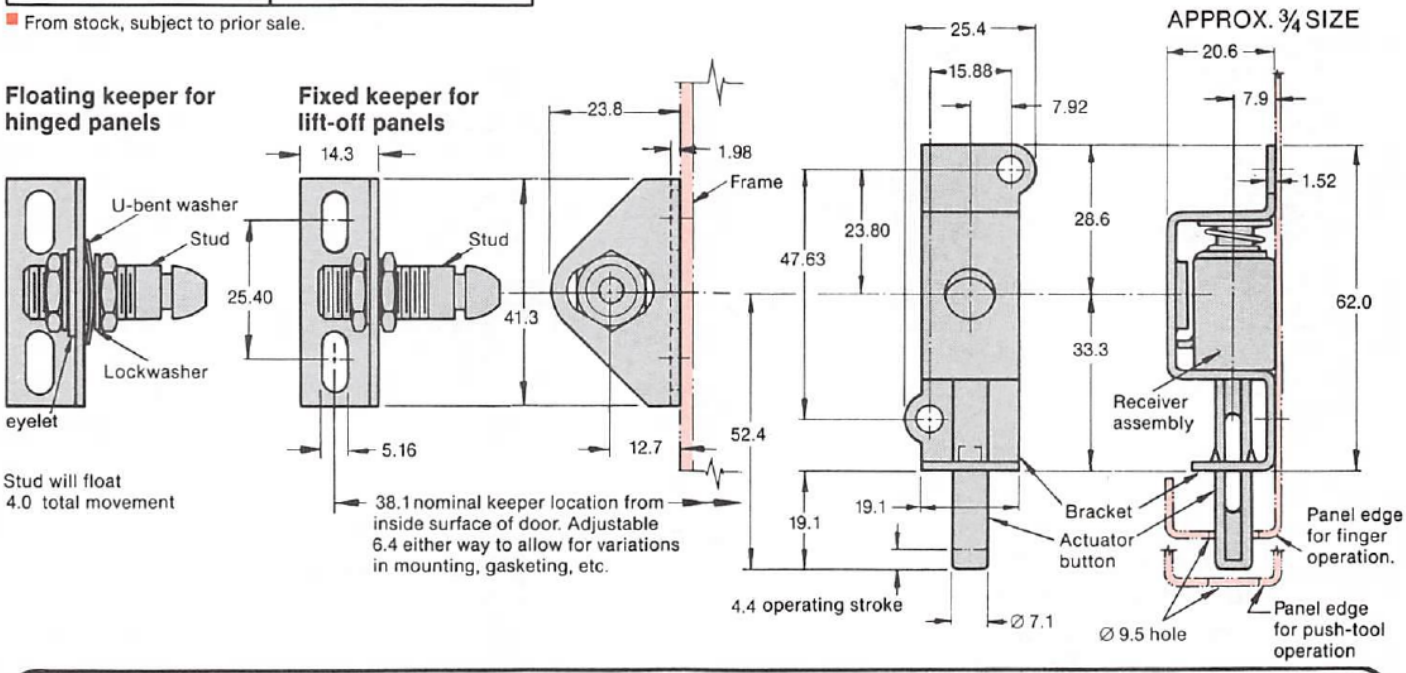
For near-edge applications

- **Secure mechanical fastening/latching**
- **Clean, unblemished panel surfaces**
- **Push the panel to latch**
- **Single or multiple latching points**
- **Floating keeper assists alignment**



ASSEMBLY PART NUMBERS	
with floating keeper E2-50-101-20■	with fixed keeper E2-50-101-10■

■ From stock, subject to prior sale.



IMPORTANT INSTRUCTION

for remote-latching and two-point latching styles shown on next two pages.

How to formulate the part number to include custom length actuator extension rod.

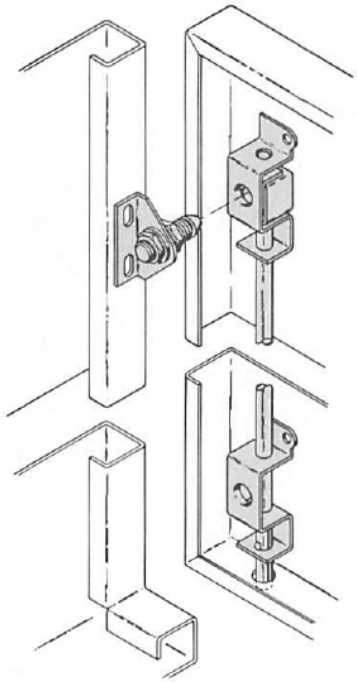
Substitute your *Dimension A* expressed in inches and tenths of inches for the **XXXX** portion of the basic part number.

EXAMPLE:
If your *Dimension A* is 85 cm, substitute 0850 for the **XXXX** portion of the basic part number.
e.g. E2-51-**0850**-10

BASIC PART NUMBER

E 2	5 1	X X X X	1 0
		Dimension A	

Assembly style	METERS	DECI METERS	CENTI METERS	MILLI METERS	Keeper style
51 = Remote latching, push button operated 70 = Two-point latching, push button operated	0 = zero 1 = 100 cm 2 = 200 cm 3 = 300 cm 4 = 400 cm 5 = 500 cm 6 = 600 cm 7 = 700 cm 8 = 800 cm 9 = 900 cm	0 = zero 1 = 10 cm 2 = 20 cm 3 = 30 cm 4 = 40 cm 5 = 50 cm 6 = 60 cm 7 = 70 cm 8 = 80 cm 9 = 90 cm	0 = zero 1 = 1 cm 2 = 2 cm 3 = 3 cm 4 = 4 cm 5 = 5 cm 6 = 6 cm 7 = 7 cm 8 = 8 cm 9 = 9 cm	0 = zero 1 = 0.1 cm 2 = 0.2 cm 3 = 0.3 cm 4 = 0.4 cm 5 = 0.5 cm 6 = 0.6 cm 7 = 0.7 cm 8 = 0.8 cm 9 = 0.9 cm	1 = Fixed 2 = Floating

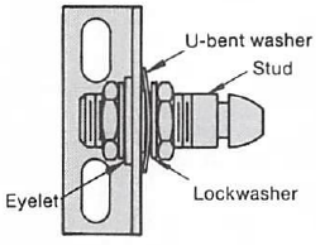


METRIC Hidden Panel-latching System *For remote-latching applications*

ASSEMBLY PART NUMBERS
for fixed keeper
E2-51-XXXX-10
for floating keeper
E2-51-XXXX-20
see page LL-3 to formulate the XXXX portion of your ordering part number.

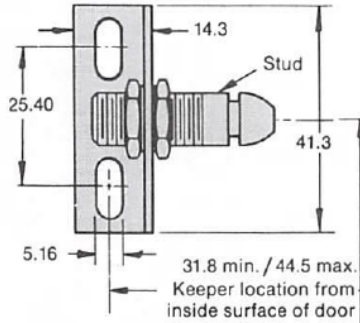
APPROX. 3/4 SIZE

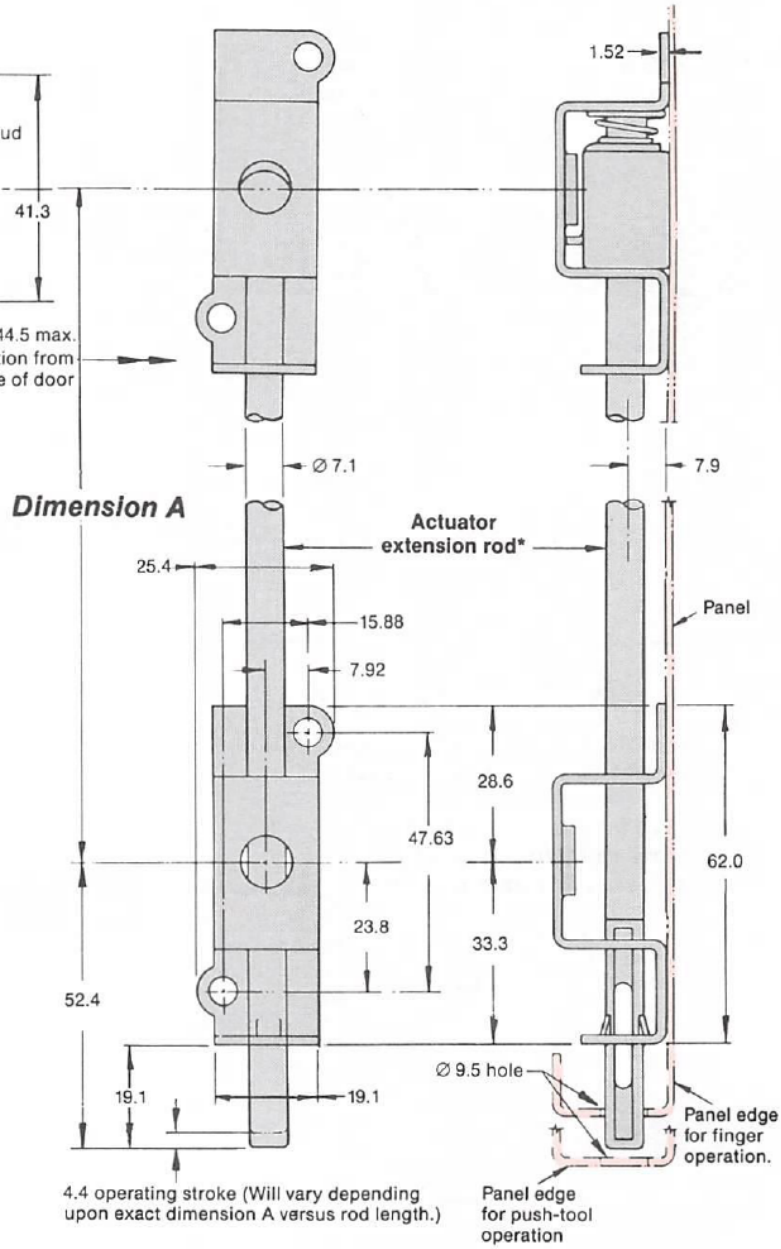
Floating keeper for hinged panels



Stud will float
4.0 total movement.

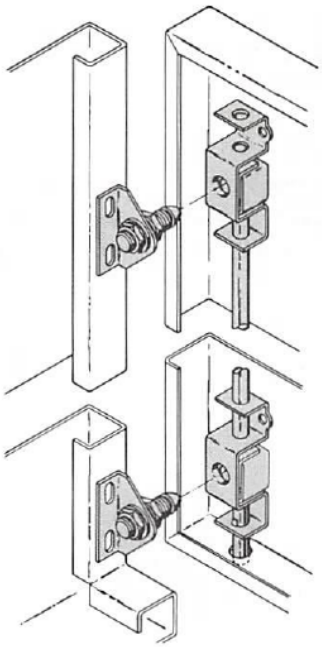
Fixed keeper for lift-off panels





If you elect to supply your own actuator extension rod, order either assembly part number* **E2-58-101-20 *(floating keeper) or* **E2-58-101-10** *(fixed keeper) and use Ø 7.1 aluminum rod equal in length to your Dimension A.*

See page LL-3 for detailed latch and keeper dimensions

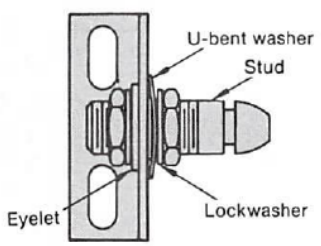


METRIC Hidden Panel-latching System *For two-point applications*

ASSEMBLY PART NUMBERS
for fixed keeper
E2-70-XXXX-10
for floating keeper
E2-70-XXXX-20
see page LL-3 to formulate the XXXX portion of your ordering part number.

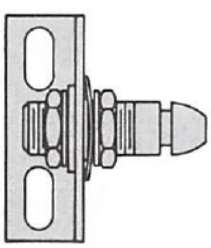
APPROX. 3/4 SIZE

Floating keeper for hinged panels



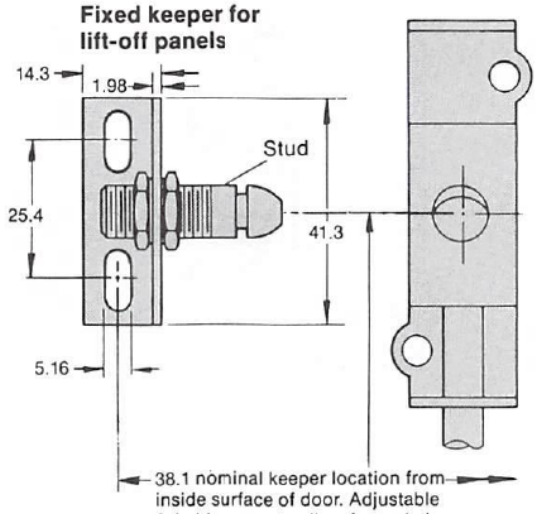
Stud will float
4.0 total movement.

Floating keeper



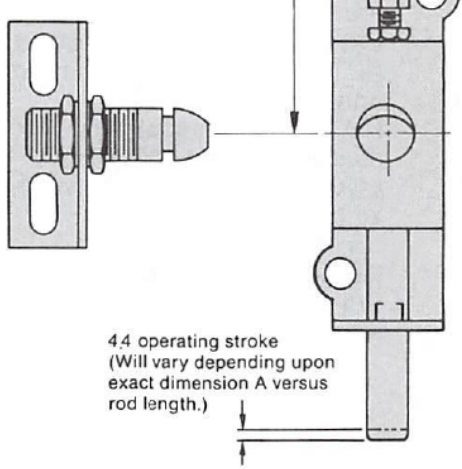
See page LL-3 for detailed latch and keeper dimensions

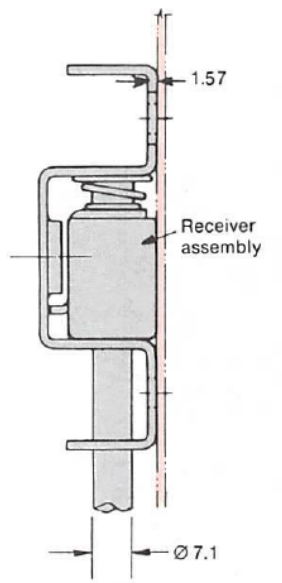
Fixed keeper for lift-off panels

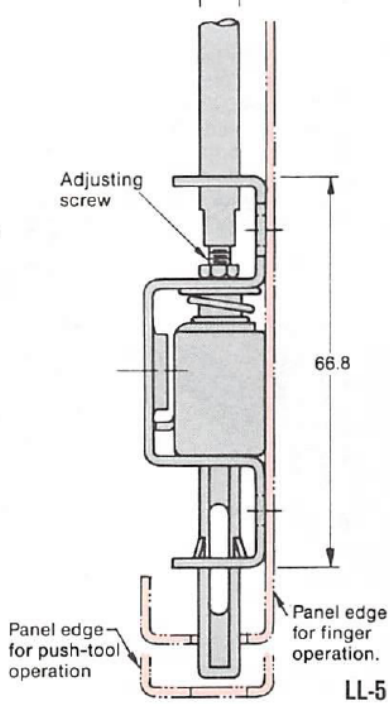


Dimension A

Fixed keeper





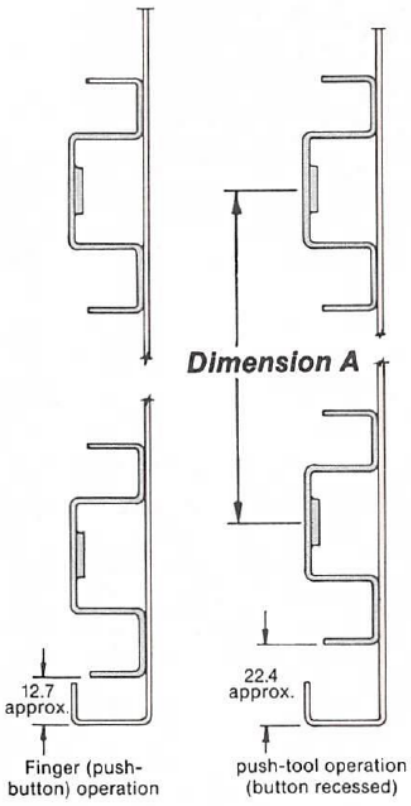


METRIC Hidden Panel-latching System

Installation

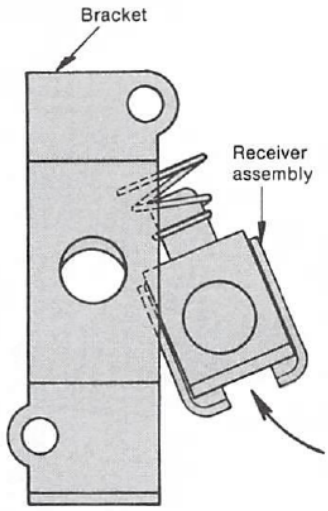
1

Mount brackets on inside surface of your panel using studs, welds, M5/No.10 screws or ∅ 5 mm rivets.



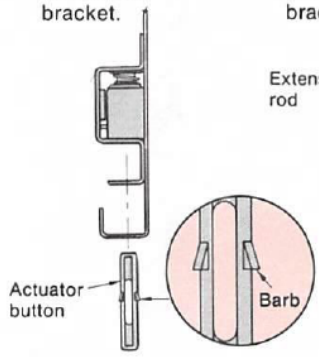
2

Slide receiver assembly into side of *upper* bracket.



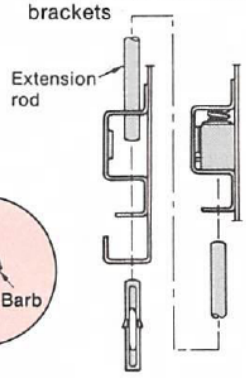
3 *Near-edge latching style*

Snap actuator button into bracket.



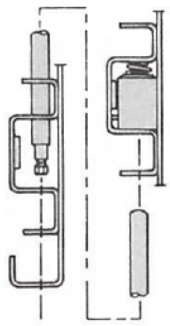
Remote-latching style

Insert extension rod and actuator button into brackets

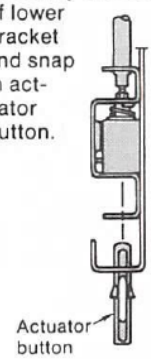


Two-point style

A. Insert extension rod into brackets.

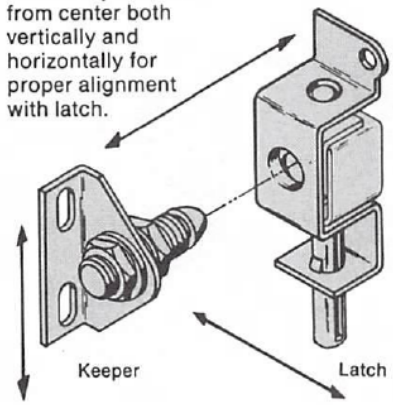


B. Slide receiver assembly into side of lower bracket and snap in actuator button.



4

Mount one or two keepers with No.10 or M5 screws. Keeper can be adjusted 3.3 from center both vertically and horizontally for proper alignment with latch.



MATERIAL and FINISH

LATCH, BRACKET, and KEEPER BRACKET are steel,
LATCH PLATE is case hardened steel,
STUD is case hardened low carbon steel; these components are DACROTIZED†.
LATCH GUIDE, RECEIVER CUP and ACTUATOR BUTTON: thermoplastic polyester, white.
NUTS: Steel, zinc plated plus yellow chromate dip.
LOCKWASHERS: spring steel, zinc plated plus bright chromate dip.

For near-edge style
SPRINGS: stainless steel, natural.

For remote latching and two-point style
SPRING: stainless steel, passivated.
CONICAL SPRING: stainless steel, natural.
ACTUATOR ROD: aluminum, natural.
ADJUSTING SCREW: steel, zinc plated.

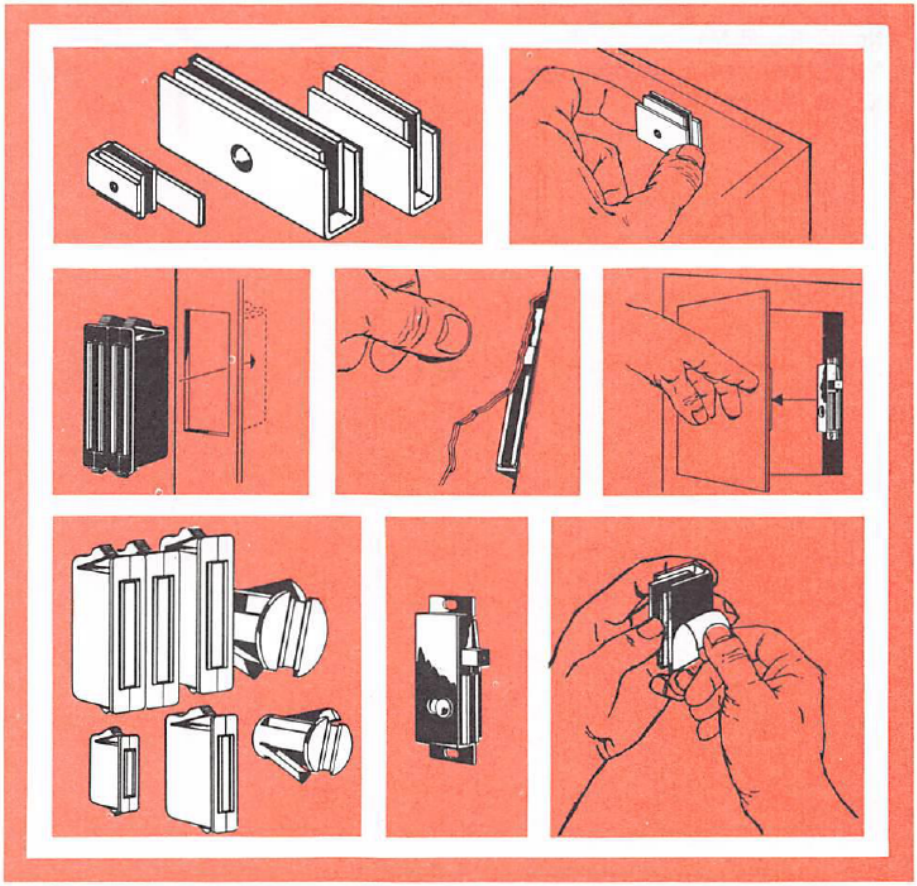
†Registered tradename of Metal Coatings International, Inc.

Keeper Style	Strength Guideline	
	Working load	Ultimate load
Fixed	1332 N	2220 N
Floating	755 N	1376 N

Section M
Magnetic Catches

contents guide | **page**

No. B2 Magnetic Push Release	M-6
No. 02 Adhesive Mounted Magnetic Catch	M-4
No. 02 Round Magnetic Catch	M-1
No. 02 Rectangular Magnetic Catch	M-2 & M-3
No. 02 Magnetic Pull	M-5



Section M
Magnetic Catches

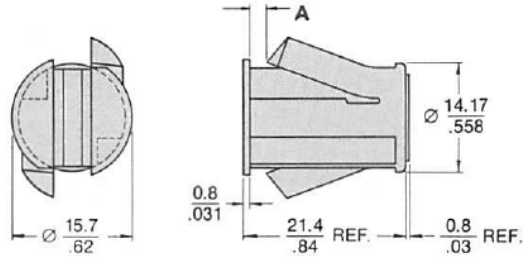
contents guide | **page**

No. B2 Magnetic Push Release	M-6
No. 02 Adhesive Mounted Magnetic Catch	M-4
No. 02 Round Magnetic Catch	M-1
No. 02 Rectangular Magnetic Catch	M-2 & M-3
No. 02 Magnetic Pull	M-5

Magnetic Catches
for round hole installation

MATERIAL and FINISH
HOUSING: polypropylene, black.
POLE PIECES: 1010 steel, zinc plated.
Barium ferrite permanent magnet.

400 SERIES ACTUAL SIZE



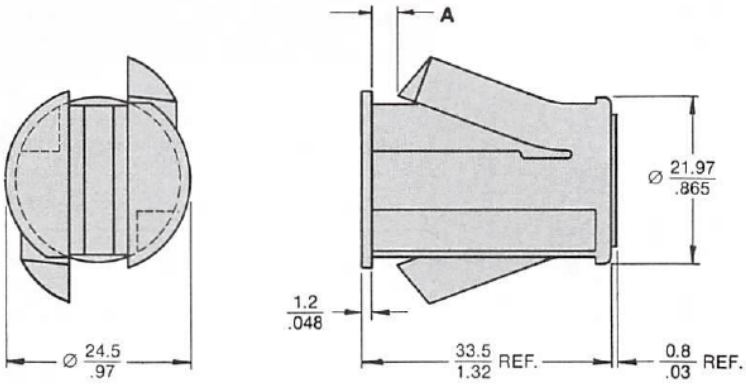
Wt/ass'y = .007 kg /.017 lb.

FRAME THICKNESS		A	PART NUMBER
MIN.	MAX.		
0.51 .020	2.03 .080	0.76 .030	02-20-411-10 ■
2.0 .080	3.56 .140	2.29 .090	02-20-412-10 ■
3.56 .140	5.08 .200	3.81 .150	02-20-413-10 ■

■ From stock, subject to prior sale.

millimeter / inch — millimeter/inch

600 SERIES ACTUAL SIZE



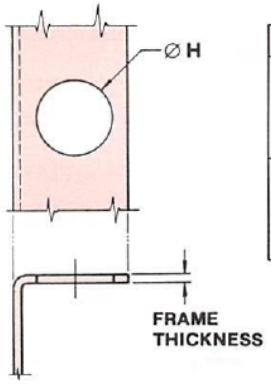
Wt/ass'y = .031 kg /.068 lb.

FRAME THICKNESS		A	PART NUMBER
MIN.	MAX.		
0.51 .020	2.03 .080	0.51 .020	02-20-611-10 ■
2.03 .080	3.56 .140	2.03 .080	02-20-612-10 ■
3.56 .140	5.08 .200	3.56 .140	02-20-613-10 ■

■ From stock, subject to prior sale.

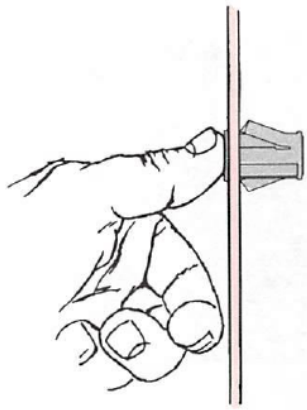
INSTALLATION

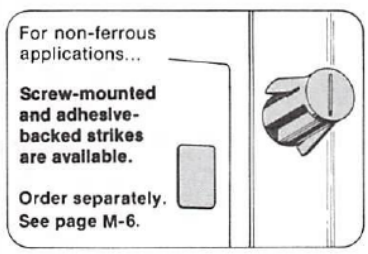
1. Drill or punch hole.



SIZE	Ø H
400 Series	14.30 +0.10 -0.00 / .563 +.004 -.000
600 Series	22.30 +0.10 -0.00 / .875 +.005 -.000

2. Snap catch into hole.





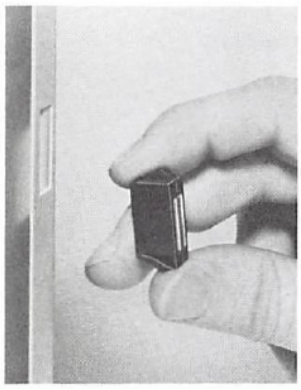
Magnetic Catches

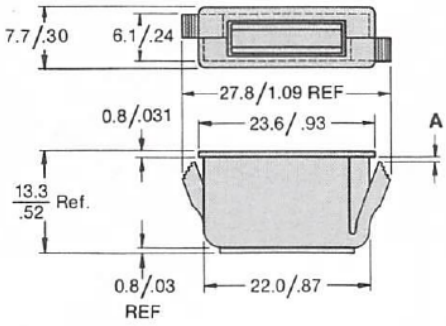
300 SERIES

ACTUAL SIZE

MATERIAL and FINISH
HOUSING: polypropylene, black or white.
POLE PIECES: 1010 steel, zinc plated.
Barium ferrite permanent magnet.

Wt./ass'y = .004 kg/.0078 lbs.



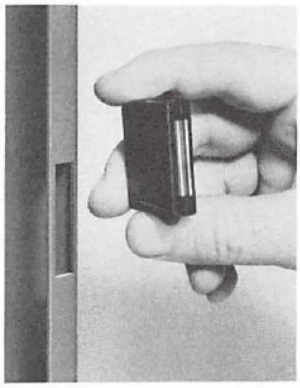


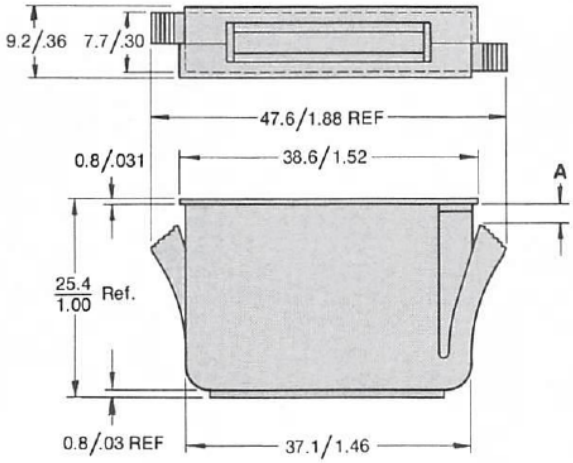
HOUSING COLOR	FRAME THICKNESS MIN.	FRAME THICKNESS MAX.	A	PART NUMBER
Black	0.51/.020	2.03/.080	0.89/.035	02-10-301-10 ■
	2.03/.080	3.56/.140	2.41/.095	02-10-302-10 ■
White	0.51/.020	2.03/.080	0.89/.035	02-10-301-20 ■
	2.03/.080	3.56/.140	2.41/.095	02-10-302-20 ■

100 SERIES

ACTUAL SIZE

Wt./ass'y = .018 kg/.040 lbs.



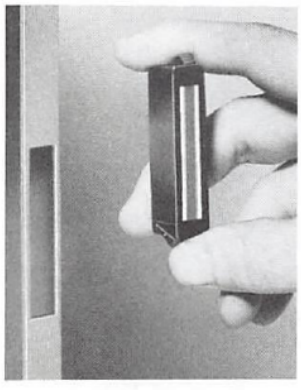


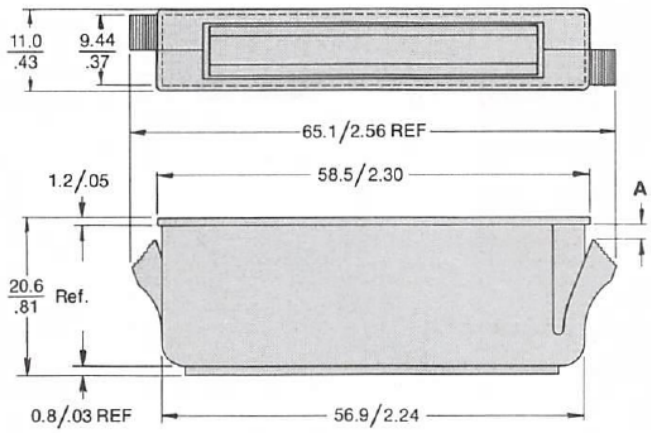
HOUSING COLOR	FRAME THICKNESS MIN.	FRAME THICKNESS MAX.	A	PART NUMBER
Black	0.51/.020	2.03/.080	1.02/.040	02-10-101-10 ■
	2.03/.080	3.56/.140	2.54/.100	02-10-102-10 ■
	3.56/.140	5.08/.200	4.06/.160	02-10-103-10 ■
White	0.51/.020	2.03/.080	1.02/.040	02-10-101-20 ■
	2.03/.080	3.56/.140	2.54/.100	02-10-102-20 ■
	3.56/.140	5.08/.200	4.06/.160	02-10-103-20 ■

200 SERIES

ACTUAL SIZE

Wt./ass'y = .031 kg/.068 lbs.





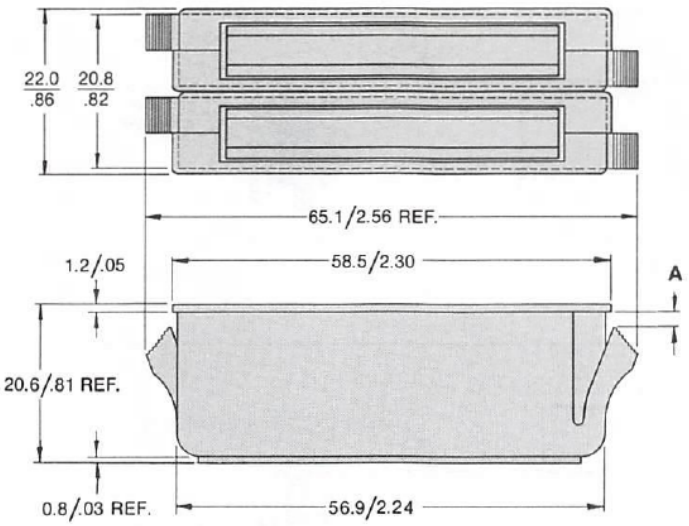
HOUSING COLOR	FRAME THICKNESS MIN.	FRAME THICKNESS MAX.	A	PART NUMBER
Black	0.51/.020	2.03/.080	0.25/.010	02-10-201-10 ■
	2.03/.080	3.56/.140	1.78/.070	02-10-202-10 ■
	3.56/.140	5.08/.200	3.30/.130	02-10-203-10 ■
White	0.51/.020	2.03/.080	0.25/.010	02-10-201-20 ■
	2.03/.080	3.56/.140	1.78/.070	02-10-202-20 □
	3.56/.140	5.08/.200	3.30/.130	02-10-203-20 □

millimeter / inch millimeter/inch

■ From stock, subject to prior sale.
□ Up to 8 weeks. Minimum order required; setup charge may apply.

800 SERIES with double magnet

ACTUAL SIZE



millimeter
inch

millimeter/inch

MATERIAL and FINISH
HOUSING: polypropylene, black.
POLE PIECES: 1010 steel, zinc plated.
Barium ferrite permanent magnet.

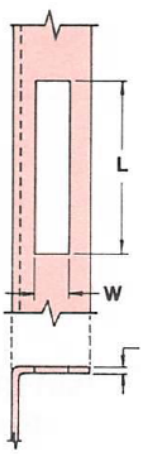
Wt/ass'y = .062 kg /.136 lb.

FRAME THICKNESS MIN.	FRAME THICKNESS MAX.	A	PART NUMBER
0.51/.020	2.03/.080	0.25/.010	02-10-801-10 ■
2.03/.080	3.56/.140	1.78/.070	02-10-802-10 ■
3.56/.140	5.08/.200	3.30/.130	02-10-803-10 ■

■ From stock, subject to prior sale.

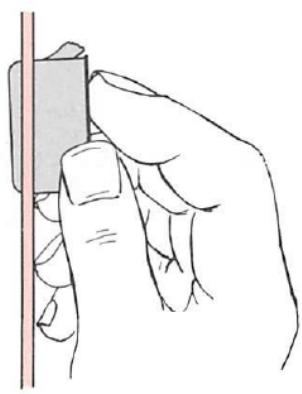
INSTALLATION

1. Punch rectangular slot.



SIZE	L ± 0.13/.005	W ± 0.13/.005
300 series	22.22/.875	6.35/.250
100 series	38.10/1.500	8.13/.320
200 series	57.15/2.250	9.65/.380
800 series	57.15/2.250	21.03/.828

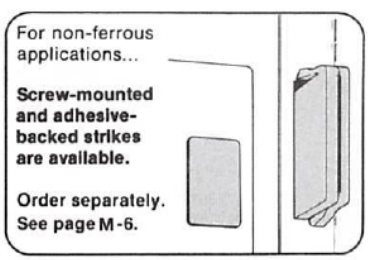
2. Snap catch into slot.



For non-ferrous applications...

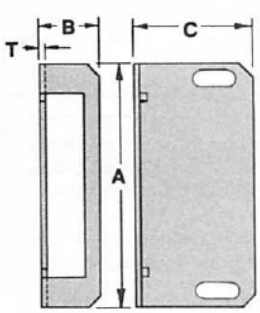
Screw-mounted and adhesive-backed strikes are available.

Order separately.
See page M-6.



Mounting Bracket — Order separately.
For applications where frame is not suitable for punching.

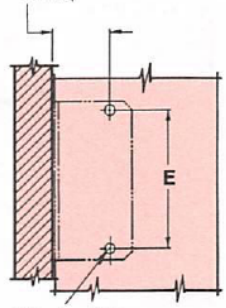
MATERIAL and FINISH
1010 steel, zinc plated.



SIZE	BRACKET PART NO.	For use with these catches ONLY:	A	B	C	D	E	T	Wt. per 1000 kg/lbs
300 series	02-16-301-11 ■	02-10-301-10 ■	41.3/1.63	11.1/.44	13.5/.53	7.9 ± 2.4/.31 ± .09	34.9/1.38		6.3/13.9
100 series	02-16-101-11 ■	02-10-101-10 ■	50.8/2.00	12.7/.50	24.6/.97	17.5 ± 3.2/.69 ± .13	44.5/1.75	1.07/.042	12.5/27.5
200 series	02-16-201-11 ■	02-10-201-10 ■	76.2/3.00	14.3/.56	18.7/.73	12.7 ± 3.2/.50 ± .13	69.9/2.75		15.1/33.3
800 series	02-16-801-11 ■	02-10-801-10 ■	76.2/3.00	25.4/1.00	18.7/.73	12.7 ± 3.2/.50 ± .13	69.9/2.75	1.57/.062	15.4/34.0

■ From stock, subject to prior sale.

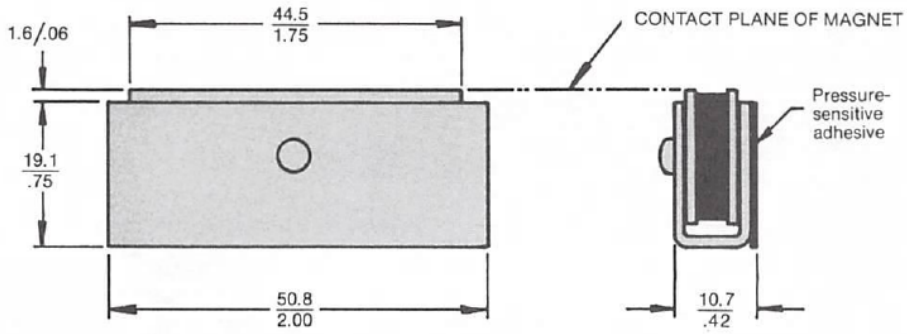
D (measured from inside surface of door or strike)



Attach with two No. 4 or No. 5 or two M3 screws.

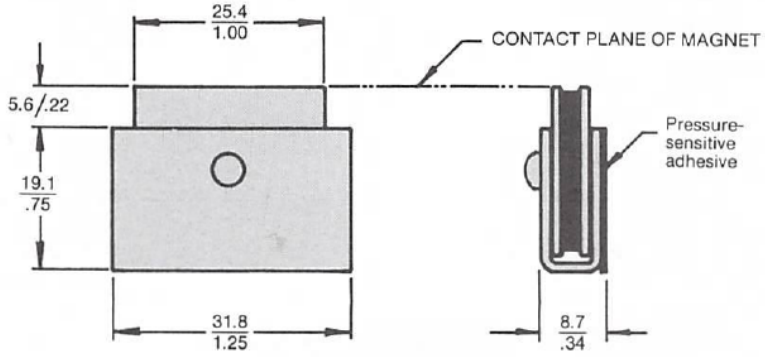
Magnetic Catches
adhesive mounted

MATERIAL and FINISH
HOUSING: 3003 aluminum, natural.
PIN: 2024 and 5056 aluminum, natural.
POLE PIECES: 1010 steel, zinc plated.
PRESSURE-SENSITIVE ADHESIVE: neoprene foam with acrylic adhesive.
Barium ferrite permanent magnet.



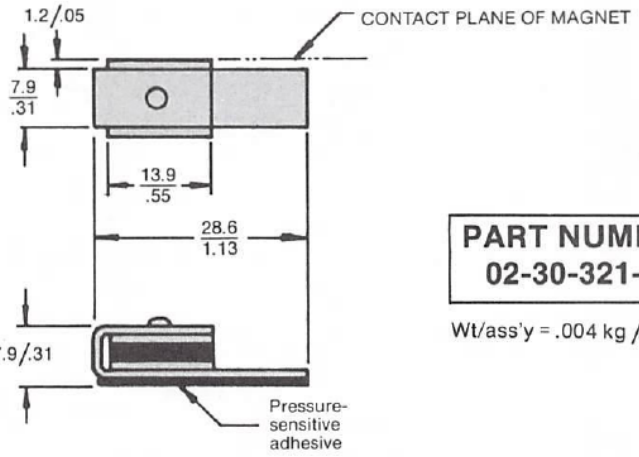
PART NUMBER
02-30-221-10 ■

Wt/ass'y = .034 kg /.075 lb.



PART NUMBER
02-30-121-10 ■

Wt/ass'y = .019 kg /.042 lb.



millimeter
inch

millimeter/inch

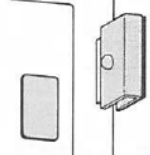
PART NUMBER
02-30-321-10 ■

Wt/ass'y = .004 kg /.009 lb.

■ From stock, subject to prior sale.

For non-ferrous applications...

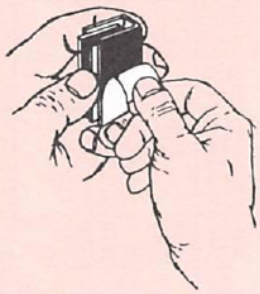
Screw-mounted and adhesive-backed strikes are available.



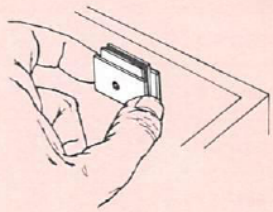
Order separately. See page M-6.

INSTALLATION

1. Remove protective paper.



2. Place in position.

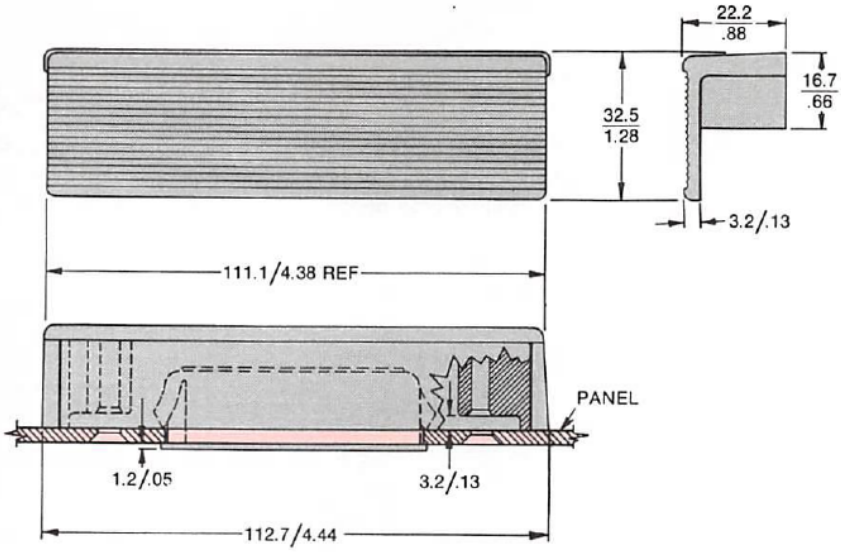


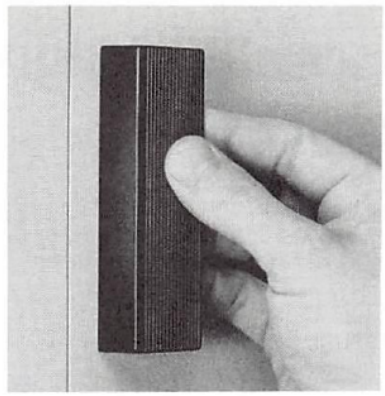
NOTE: Be sure the mounting surface is clean and capable of retaining a satisfactory adhesive bond.

NOTE: Self-adhesive catches are designed to function under intermittent break-away loads. Do not subject catch to a continuous load.

Provide stops to prevent excessive load on adhesive during door closure.

Magnetic Pulls





MATERIAL and FINISH

PULL: ABS
MAGNET HOUSING: polypropylene, black.
POLE PIECES: 1010 steel, zinc plated.
Barium ferrite permanent magnet.
SCREWS: type B steel, self tapping, zinc plated.

Components shipped separately. Pull and two screws packaged one set per bag. Magnet assemblies shipped bulk.

Custom colors available.
Call for details.

millimeter
inch
millimeter/inch

PANEL THICKNESS		A	PART NUMBERS			
MIN.	MAX.		Black	White	Slate Gray	Sepia
0.51/.020	2.03/.080	0.25/.010	02-50-251-10 ■	02-50-251-20 ■	02-50-251-30 ■	02-50-251-40 ■
2.03/.080	3.56/.140	1.78/.070	02-50-252-10 ■	02-50-252-20 ■	02-50-252-30 ■	02-50-252-40 ■
3.56/.140	5.08/.200	3.30/.130	02-50-253-10 ■	02-50-253-20 ■	02-50-253-30 ■	02-50-253-40 ■
PULL ONLY						
6.4/.25 MAX.		—	02-51-251-10 ■	02-51-251-20 ■	02-51-251-30 ■	02-51-251-40 ■

■ From stock, subject to prior sale.

INSTALLATION

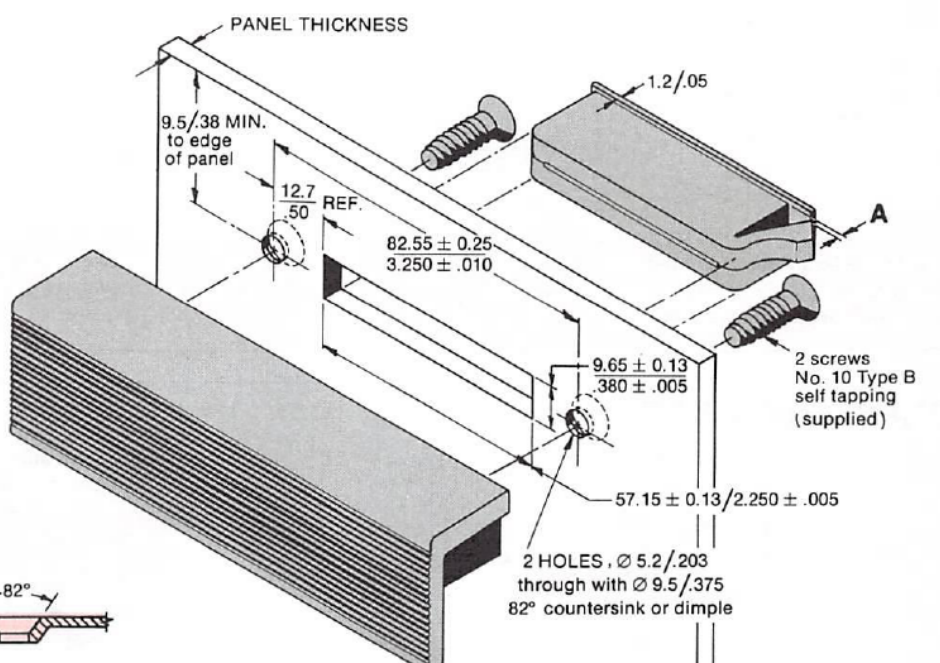
MAGNETIC PULL
Prepare panel.
Mount pull with screws provided.
Snap magnet into rectangular slot.

PULL ONLY
Prepare panel but omit rectangular shaped hole.
Mount pull with screws provided.

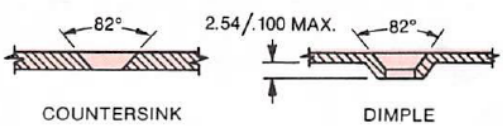
For non-ferrous applications...

Screw-mounted and adhesive-backed strikes are available.

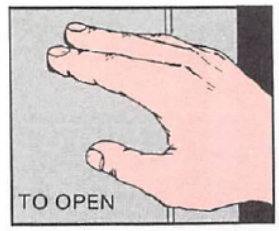
Order separately. See page M-6.



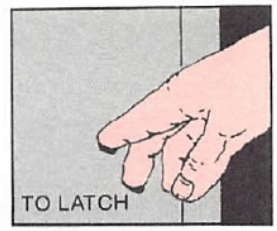
PANEL DETAIL:



Concealed Magnetic Push Release

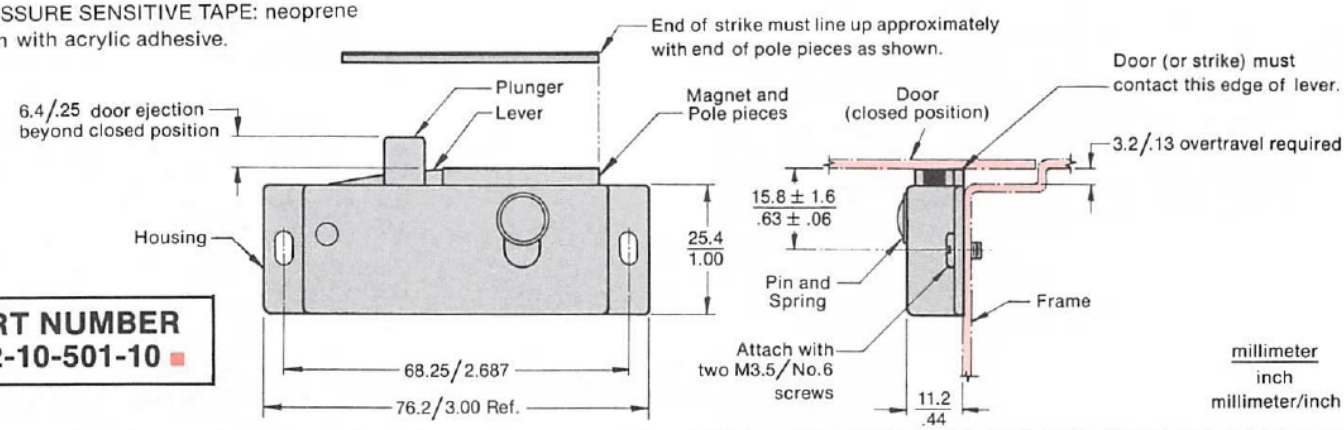


Push firmly inward on door; catch will release door.



Push door lightly into closed position.

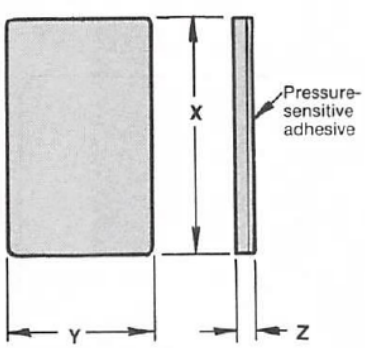
MATERIAL and FINISH
HOUSING, PLUNGER and LEVER: acetal, black.
POLE PIECES: 1010 steel, zinc plated.
SPRING: 302 stainless steel, passivated.
PIN: 2117 aluminum, natural.
STRIKE: 1010 steel, zinc plated.
PRESSURE SENSITIVE TAPE: neoprene foam with acrylic adhesive.



PART NUMBER
B2-10-501-10 ■

Steel Strikes for non-ferrous applications

SELF-ADHESIVE



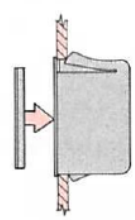
MATERIAL and FINISH
STRIKE: 1010 steel, zinc plated.
PRESSURE-SENSITIVE ADHESIVE: neoprene foam with acrylic adhesive.

For use with:	Part Number	X ±.015	Y ±.015	Z ±.015	Wt/Unit kg/lbs
300 Series Catch	02-14-301-14■	23.8 / .94	7.9 / .31	2.0 / .08	.002 / .004
400 Series Catch					
100 Series Catch	02-14-101-14■	31.8 / 1.25	19.1 / .75	2.4 / .09	.008 / .017
600 Series Catch					
200 Series Catch	02-14-201-14■	50.8 / 2.00	19.1 / .75	2.4 / .09	.012 / .026
800 Series Catch					
B2 Push Release					
02 Pulls					

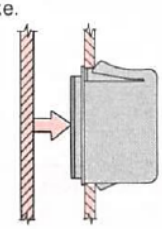
NOTE: Self-adhesive mounted strikes are designed to function under intermittent break-away loads. Use screw-mounted strikes for continuous load applications.

NOTE: Be sure the mounting surface is clean and capable of retaining a satisfactory adhesive bond.

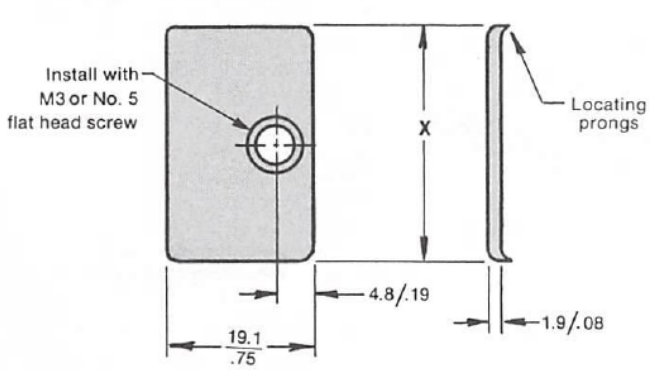
INSTALLATION
Position strike on installed catch.



Remove protective paper. Close door or panel onto strike.



SCREW-MOUNTED



MATERIAL and FINISH
1010 steel, zinc plated.

For use with:	Part Number	X	Wt/Unit kg/lbs
100 Series Catch	02-14-102-11■	31.8 / 1.25	.009 / .020
600 Series Catch			
200 Series Catch	02-14-202-11■	50.8 / 2.00	.014 / .030
800 Series Catch			
B2 Push Release			
02 Pulls			

■ From stock, subject to prior sale.

Section N
Pulls and Door-retaining Springs

contents guide | **page**

No. B4 Pulls	N-9
No. B5 Pulls	N-10
No. B6 Pulls	N-11
No. B8 Retractable Pulls	N-12
No. B8 Grab Handle	N-13
No. 02 Pulls	N-4
No. P1 Pocket Pull	N-14
No. P2 Pocket Pull, *NEW*	N-15
No. 25 Pulls	N-1 to N-4
No. 50 Door-Retaining Spring	N-17



Section N

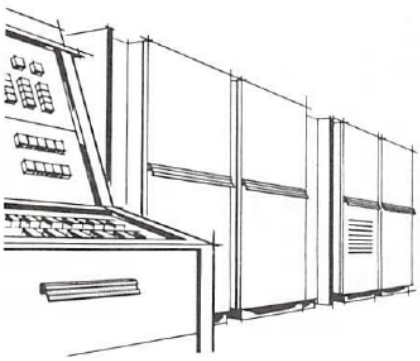
Pulls and Door-retaining Springs

contents guide | **page**

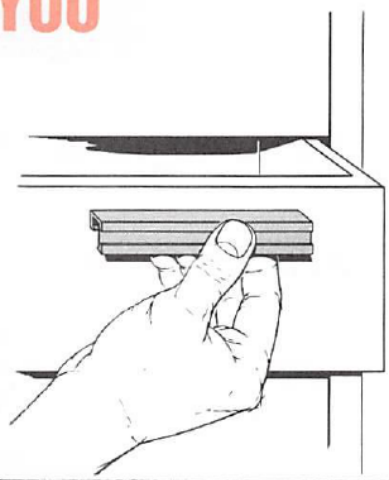
No. B4 Pulls	N-9
No. B5 Pulls	N-10
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No. B8 Retractable Pulls	N-12
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No. P2 Pocket Pull, *NEW*	N-15
No. 25 Pulls	N-1 to N-4
No. 50 Door-Retaining Spring	N-17

Industrial designers!

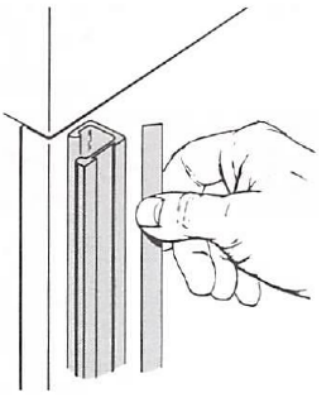
MEET THE FIRST DOOR AND DRAWER PULLS EVER DESIGNED JUST FOR YOU

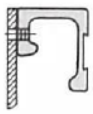


1. If your modern cabinet needs a pull handle that doesn't look like part of a 1906 rail car washroom you'll have to design it yourself. Right?

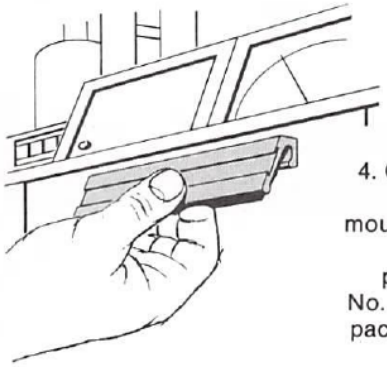


2. Wrong. Now you can stylize your cabinet and still keep costs within budget. Southco's new line of No. 25 Pulls in four distinctive designs are beautifully styled in brushed anodized extruded aluminum.



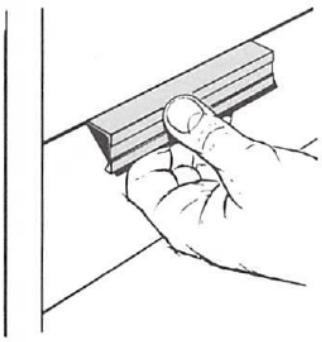


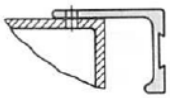
3. The face-mounted C Style and two of the others have a slot with standard black or walnut-grained trim, or just plain—in case you want to provide space for an identification label.



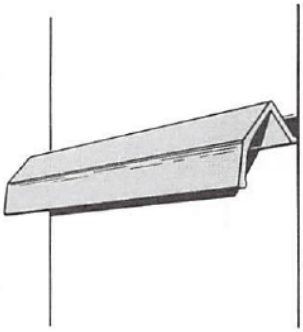


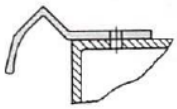
4. Or, you can design with a flare. This 29° Angle Pull mounts readily on the face of a door, drawer or sliding panel. Like other Southco No. 25's, it's been styled with packaged instrumentation in mind.



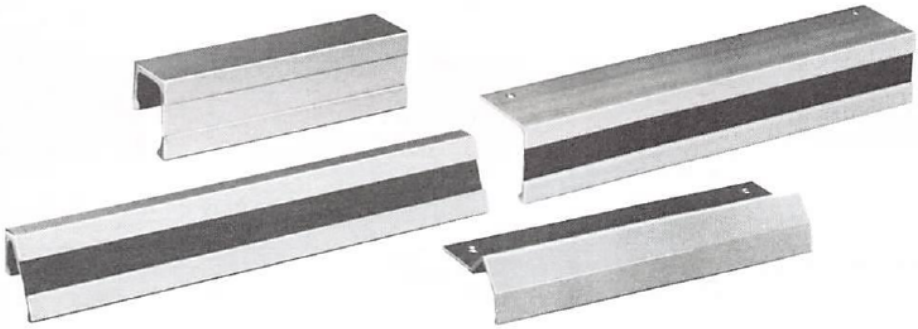


5. The L Style mounts on the edge of a panel and adjusts to fit conditions. Southco's Pulls also make ideal protective devices to shield cabinet faces, edges and corners from damage.





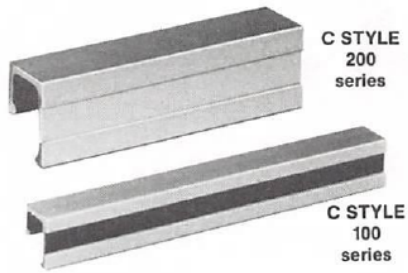
6. The Offset Style has no slot for trim, but its simple, timeless design masks an important feature; the offset hides any gap that may exist between adjoining sections.

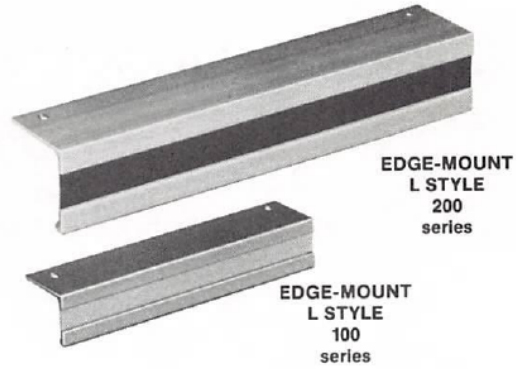


7. Four distinctive styles, each in two envelope sizes, plus various standard lengths from 3⅜" to 10⅜" in increments of 1¾" (to fit standard rack drawer heights). Special lengths can be made to order.

Southco No. 25 Pulls

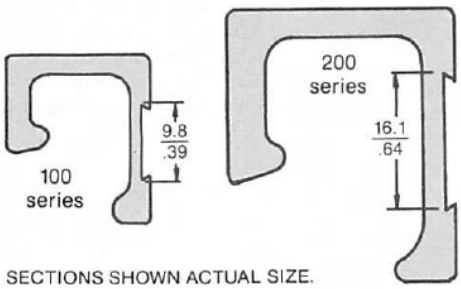
- **Can be face-mounted or edge-mounted.**
- **Four distinctive shapes.**
- **Available plain or with black or walnut vinyl trim.**



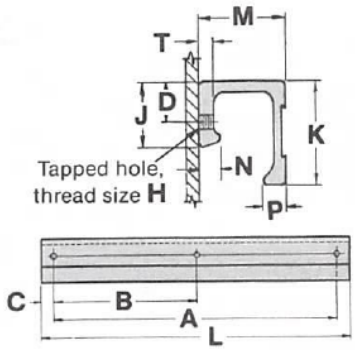


millimeter/inch millimeter / inch

C STYLE



SECTIONS SHOWN ACTUAL SIZE.



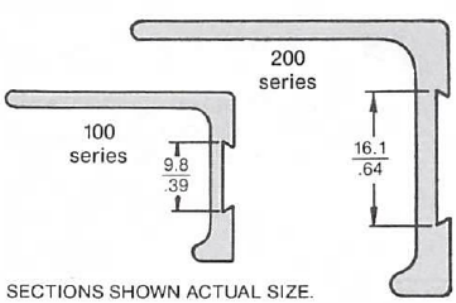
MATERIAL and FINISH
PULL: 6463 aluminum, clear anodized brushed finish.
TRIM: vinyl.

To install, see **H** column of table for screw thread size. Screw length equals thickness of panel plus **T.** For optimum engagement, screw length tolerance should be plus 1/32", minus 0".

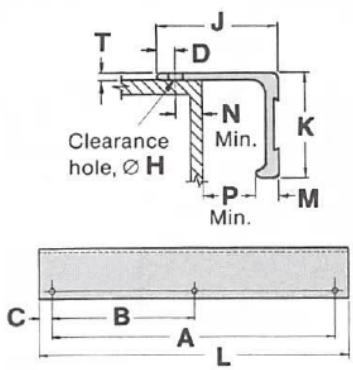
L	A	B	PART NUMBERS			DIMENSIONS									series
			Plain, without trim strip	With walnut vinyl trim strip	With black vinyl trim strip	C	D	H	J	K	M	N	P	T	
85.7/3.38	63.50/2.500	—	25-11-101-11 ■	25-11-101-12 ■	25-11-101-13 ■	11.1 / .44	7.94 / .313	8-32 UNC	13.9 / .55	22.2 / .88	19.1 / .75	5.6 / .22	4.8 / .19	3.18 / .125	100
130.2/5.13	107.95/4.250	—	25-11-102-11 ■	25-11-102-12 ■	25-11-102-13 ■										
174.6/6.88	152.40/6.000	—	25-11-103-11 ■	25-11-103-12 ■	25-11-103-13 ■										
130.2/5.13	107.95/4.250	—	25-11-202-11 ■	25-11-202-12 ■	25-11-202-13 ■	11.1 / .44	14.29 / .563	10-32 UNF	23.0 / .91	36.5 / 1.44	30.2 / 1.19	7.9 / .31	7.9 / .31	4.78 / .188	200
174.6/6.88	152.40/6.000	—	25-11-203-11 ■	25-11-203-12 ■	25-11-203-13 ■										
219.1/8.63	196.85/7.750	—	25-11-204-11 ■	25-11-204-12 ■	25-11-204-13 ■										
263.5/10.38	241.30/9.500	120.65/4.750	25-11-205-11 ■	25-11-205-12 ■	25-11-205-13 ■										

■ From stock, subject to prior sale.

L STYLE



SECTIONS SHOWN ACTUAL SIZE.

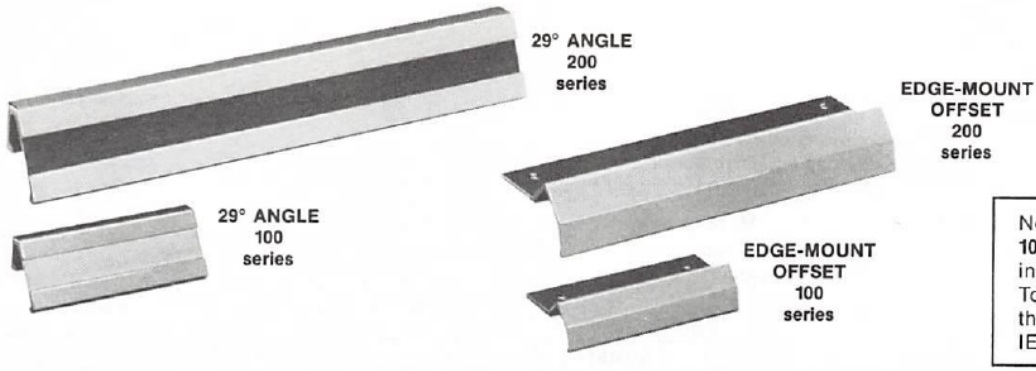


MATERIAL and FINISH
PULL: 6463 aluminum, clear anodized brushed finish.
TRIM: vinyl.

Install with suitable screws or rivets. See ∅ **H** column for clearance hole size.

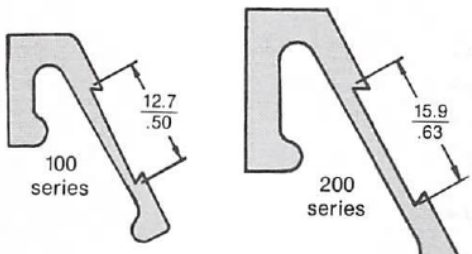
L	A	B	PART NUMBERS			DIMENSIONS									series
			Plain, without trim strip	With walnut vinyl trim strip	With black vinyl trim strip	C	D	∅H	J	K	M	N Min.	P Min.	T	
85.7/3.38	63.50/2.500	—	25-12-101-11 ●	25-12-101-12 ●	25-12-101-13 ●	11.1 / .44	11.11 / .438	4.50 / .177	30.2 / 1.19	22.2 / .88	4.8 / .19	4.8 / .19	11.1 / .44	1.98 / .078	100
130.2/5.13	107.95/4.250	—	25-12-102-11 ●	25-12-102-12 ●	25-12-102-13 ●										
174.6/6.88	152.40/6.000	—	25-12-103-11 ●	25-12-103-12 ●	25-12-103-13 ●										
130.2/5.13	107.95/4.250	—	25-12-202-11 ●	25-12-202-12 ●	25-12-202-13 ●	11.1 / .44	12.70 / .500	5.10 / .201	42.9 / 1.69	36.5 / 1.44	7.9 / .31	6.4 / .25	15.9 / .63	2.39 / .094	200
174.6/6.88	152.40/6.000	—	25-12-203-11 ●	25-12-203-12 ●	25-12-203-13 ●										
219.1/8.63	196.85/7.750	—	25-12-204-11 ●	25-12-204-12 ●	25-12-204-13 ●										
263.5/10.38	241.30/9.500	120.65/4.750	25-12-205-11 ●	25-12-205-12 ●	25-12-205-13 ●										

● Up to 4 weeks for delivery.

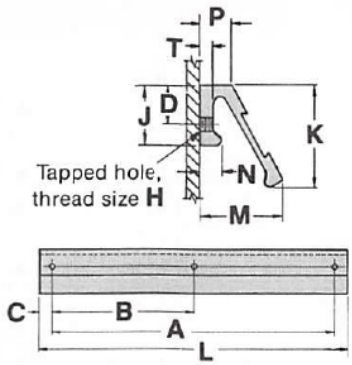


No. 25 Pulls are available in **standard 10 ft. lengths without mounting holes** in each style, series and trim option. To order, change 6th and 7th digit of the part number to **9**.
IE: 25-XX-X**99**-XX.

29° ANGLE



SECTIONS SHOWN ACTUAL SIZE.



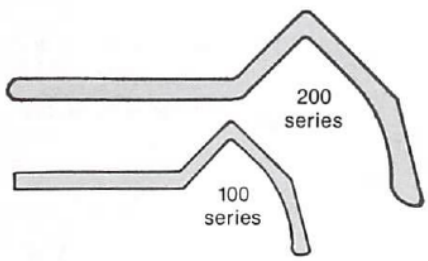
MATERIAL and FINISH
PULL: 6463 aluminum, clear anodized brushed finish.
TRIM: vinyl.

To install, see **H** column of table for screw thread size. Screw length equals thickness of panel plus **T.** For optimum engagement, screw length tolerance should be plus 1/32", minus 0".

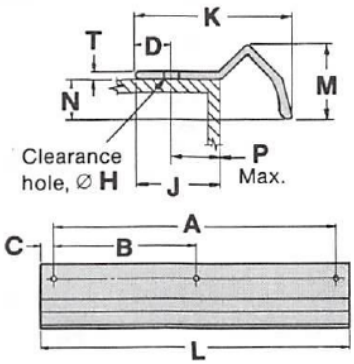
L	A	B	PART NUMBERS			DIMENSIONS									series
			Plain, without trim strip	With walnut vinyl trim strip	With black vinyl trim strip	C	D	H	J	K	M	N	P	T	
85.7/3.38	63.50/2.500	—	25-13-101-11 ■	25-13-101-12 ■	25-13-101-13 ■	11.1 / .44	7.94 / .313	8-32 UNC	14.3 / .56	27.8 / 1.09	21.4 / .84	5.6 / .22	8.7 / .34	3.18 / .125	100
130.2/5.13	107.95/4.250	—	25-13-102-11 ■	25-13-102-12 ■	25-13-102-13 ■										
174.6/6.88	152.40/6.000	—	25-13-103-11 ■	25-13-103-12 ■	25-13-103-13 ■										
130.2/5.13	107.95/4.250	—	25-13-202-11 ■	25-13-202-12 ■	25-13-202-13 ■	11.1 / .44	14.29 / .563	10-32 UNF	21.4 / .84	35.7 / 1.41	28.6 / 1.13	7.9 / .31	11.1 / .44	4.76 / .188	200
174.6/6.88	152.40/6.000	—	25-13-203-11 ■	25-13-203-12 ■	25-13-203-13 ■										
219.1/8.63	196.85/7.750	—	25-13-204-11 ■	25-13-204-12 ■	25-13-204-13 ■										
263.5/10.38	241.30/9.500	120.65/4.750	25-13-205-11 ■	25-13-205-12 ■	25-13-205-13 ■										

■ From stock, subject to prior sale.

OFFSET STYLE



SECTIONS SHOWN ACTUAL SIZE.



MATERIAL and FINISH
PULL: 6463 aluminum, clear anodized brushed finish.

Install with suitable screws or rivets. See ⌀**H** column for clearance hole size.

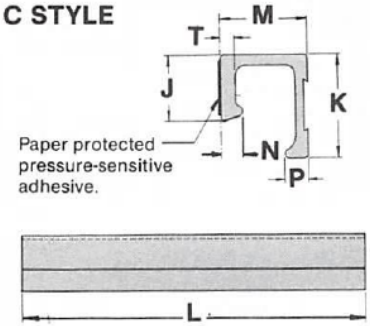
L	A	B	PART NUMBERS	DIMENSIONS									series
			Plain, without trim strip	C	D	⌀H	J	K	M	N	P Max.	T	
85.7/3.38	63.50/2.500	—	25-14-101-11 ●	11.1 / .44	11.11 / .438	4.50 / .177	22.2 / .88	39.3 / 1.55	17.6 / .69	8.7 / .34	15.9 / .63	2.16 / .085	100
130.2/5.13	107.95/4.250	—	25-14-102-11 ●										
174.6/6.88	152.40/6.000	—	25-14-103-11 ●										
130.2/5.13	107.95/4.250	—	25-14-202-11 ●	11.1 / .44	12.70 / .500	5.10 / .201	30.2 / 1.19	54.8 / 2.16	26.2 / 1.03	13.9 / .55	23.8 / .94	2.39 / .094	200
174.6/6.88	152.40/6.000	—	25-14-203-11 ●										
219.1/8.63	196.85/7.750	—	25-14-204-11 ●										
263.5/10.38	241.30/9.500	120.65/4.750	25-14-205-11 ●										

● Up to 4 weeks delivery.

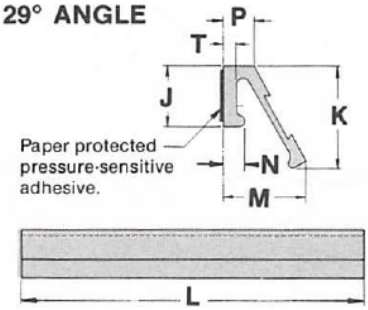
Southco No. 25 Pulls
self-adhesive type for instant mounting

- Two styles.
- Plain or with black or walnut vinyl trim.

C STYLE



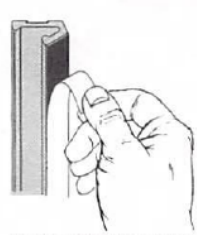
29° ANGLE

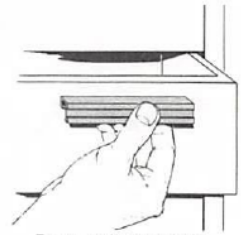


NOTE: Be sure the mounting surface is clean and capable of retaining a satisfactory adhesive bond.

MATERIAL and FINISH
PULL: 6463 aluminum, clear anodized brushed finish.
TRIM: vinyl.

TO INSTALL


Peel protective paper from adhesive.


Press pull exactly in desired position.

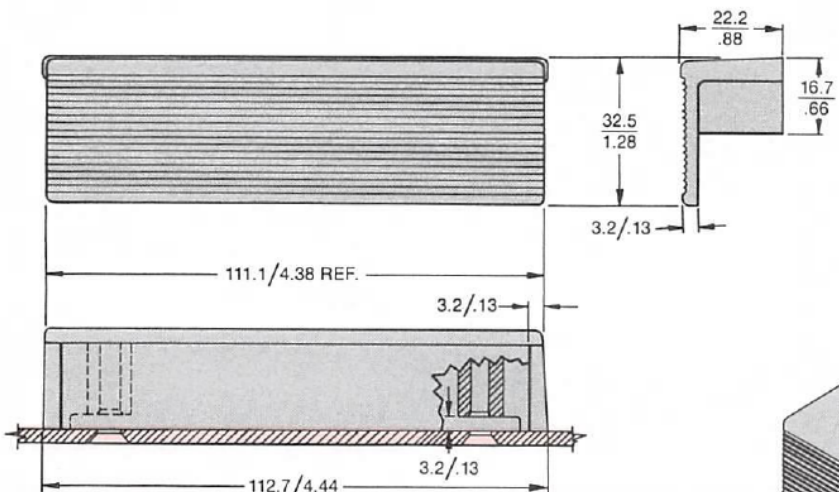
L	PART NUMBERS			DIMENSIONS						series
	Plain, without trim strip	With walnut vinyl trim strip	With black vinyl trim strip	J	K	M	N	P	T	
C STYLE										
85.7/3.38	25-11-101-21 ●	25-11-101-22 ●	25-11-101-23 ●	13.9/.55	22.2/.88	19.1/.75	5.6/.22	4.8/.19	3.18/.125	100
130.2/5.13	25-11-102-21 ●	25-11-102-22 ●	25-11-102-23 ●							
174.6/6.88	25-11-103-21 ●	25-11-103-22 ●	25-11-103-23 ●							
130.2/5.13	25-11-202-21 ●	25-11-202-22 ●	25-11-202-23 ●	23.0/.91	36.5/1.44	30.2/1.19	7.9/.31	7.9/.31	4.78/.188	200
174.6/6.88	25-11-203-21 ●	25-11-203-22 ●	25-11-203-23 ●							
219.1/8.63	25-11-204-21 ●	25-11-204-22 ●	25-11-204-23 ●							
263.5/10.38	25-11-205-21 ●	25-11-205-22 ●	25-11-205-23 ●							
29° ANGLE										
85.7/3.38	25-13-101-21 ●	25-13-101-22 ●	25-13-101-23 ●	14.3/.56	27.8/1.09	21.4/.84	5.6/.22	8.7/.34	3.18/.125	100
130.2/5.13	25-13-102-21 ●	25-13-102-22 ●	25-13-102-23 ●							
174.6/6.88	25-13-103-21 ●	25-13-103-22 ●	25-13-103-23 ●							
130.2/5.13	25-13-202-21 ●	25-13-202-22 ●	25-13-202-23 ●	21.4/.84	35.7/1.41	28.6/1.13	7.9/.31	11.1/.44	4.76/.188	200
174.6/6.88	25-13-203-21 ●	25-13-203-22 ●	25-13-203-23 ●							
219.1/8.63	25-13-204-21 ●	25-13-204-22 ●	25-13-204-23 ●							
263.5/10.38	25-13-205-21 ●	25-13-205-22 ●	25-13-205-23 ●							

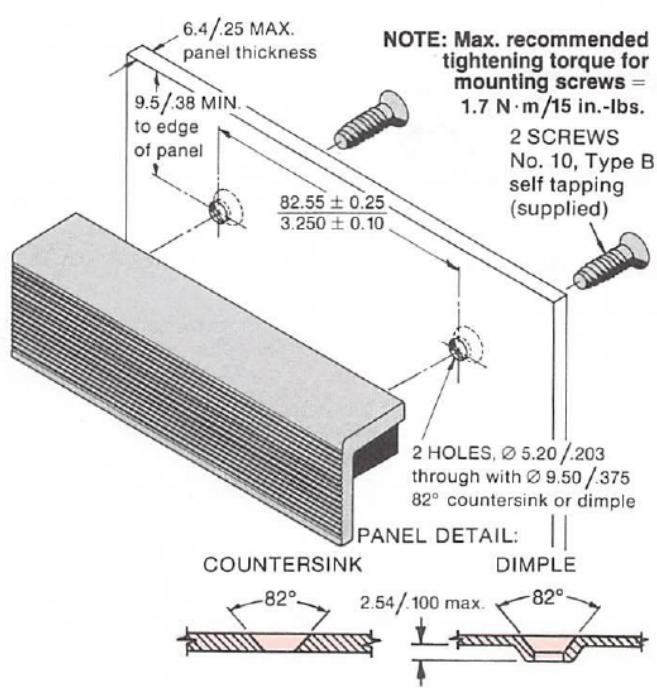
● Up to 4 weeks delivery.

Southco No. 02 Pulls

- Rugged.
- Choice of four colors—black, white, slate gray, sepia.
- Simple installation, everything is supplied.
- Good-looking.

MATERIAL and FINISH
PULL: ABS
SCREWS: type B steel, self tapping, zinc plated.





NOTE: Max. recommended tightening torque for mounting screws = 1.7 N·m/15 in.-lbs.

COLOR	PART NUMBERS (Pull with screws only)
Black	02-51-251-10 ■
White	02-51-251-20 ■
Slate Gray	02-51-251-30 ■
Sepia	02-51-251-40 ■

■ From stock, subject to prior sale.

Pull is shipped with two screws (for 6.4/.25 MAX. panel thickness) and one pull per package.

To install, prepare panel as shown (right) and mount with screws supplied.

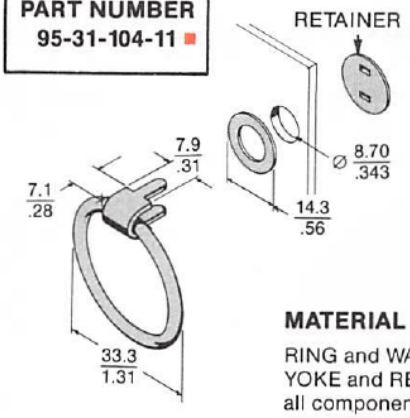
No. 02 Pulls are also available with a hidden magnetic catch. See page M-5 for No. 02 Magnetic Pulls.

SOUTHCO No. 95 KNOBS, PULLS AND HANDLES

• Use in combination with Magnetic Door Catch or Door Retaining Springs

Illustrations are ½ size.

PART NUMBER
95-31-104-11 ■

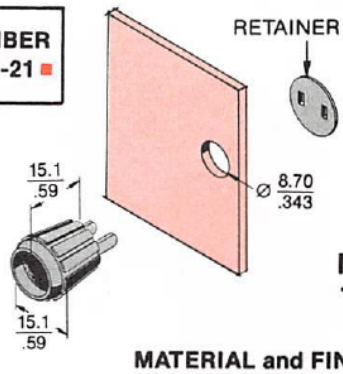


5.6/.22 MAX. PANEL THICKNESS

MATERIAL and FINISH

RING and WASHER are steel, and YOKE and RETAINER are 1010 steel; all components are zinc plated plus bright chromate dip.

PART NUMBER
95-31-201-21 ■

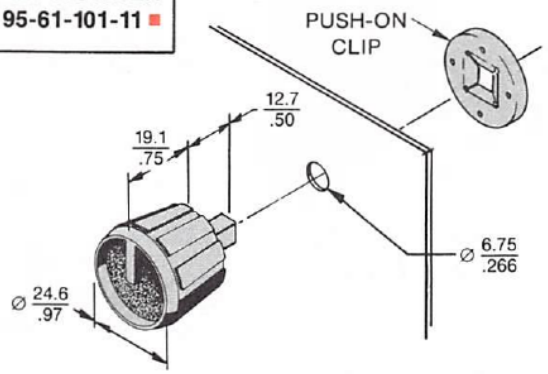


4.0/.16 MAX. PANEL THICKNESS

MATERIAL and FINISH

KNOB: ABS, black.
STAPLE and RETAINER: 1010 steel, zinc plated plus bright chromate dip.

PART NUMBER
95-61-101-11 ■

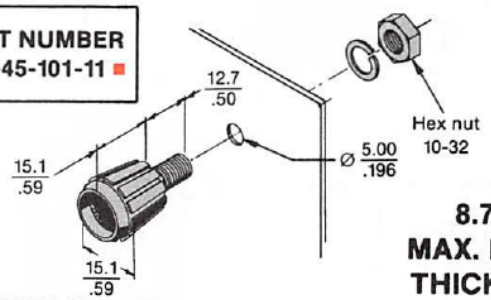


9.5/.38 MAX. PANEL THICKNESS

MATERIAL and FINISH

KNOB: nylon, black.
SHAFT: 1008 steel, zinc plated plus bright chromate dip.
PUSH-ON CLIP: 1070 steel, DACROTIZED†.

PART NUMBER
95-45-101-11 ■



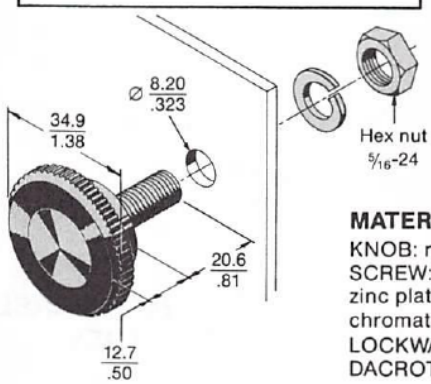
8.7/.34 MAX. PANEL THICKNESS

MATERIAL and FINISH

KNOB: nylon, black.
SCREW: 1018 steel, zinc plated plus bright chromate dip.
LOCKWASHER: steel, zinc plated.
NUT: steel, zinc plated plus yellow chromate dip.

PART NUMBERS

Chrome Plate	Zinc Plate
95-04-101-20 ■	95-04-101-10 ■



6.4/.25 MAX. PANEL THICKNESS

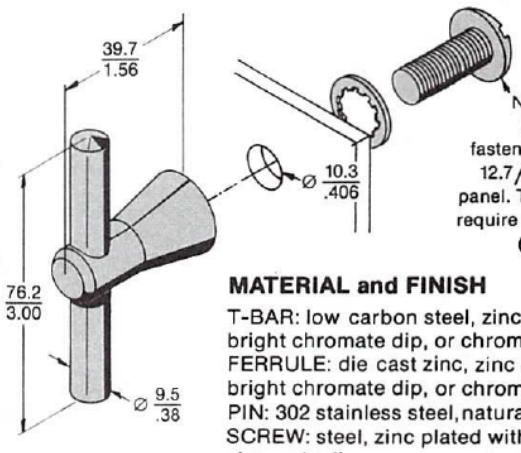
MATERIAL and FINISH

KNOB: nylon, black.
SCREW: low carbon steel, zinc plated plus bright chromate dip or chrome plated.
LOCKWASHER and NUT: steel, DACROTIZED†.

PART NUMBERS

Chrome Plate	Zinc Plate
95-68-101-20 ■	95-68-101-10 ■

12.7/.50 MAX. PANEL THICKNESS



MATERIAL and FINISH

T-BAR: low carbon steel, zinc plated plus bright chromate dip, or chrome plated.
FERRULE: die cast zinc, zinc plated plus bright chromate dip, or chrome plated.
PIN: 302 stainless steel, natural.
SCREW: steel, zinc plated with bright chromate dip.
LOCKWASHER: spring steel, DACROTIZED†.

†Registered tradename of Metal Coatings International, Inc.

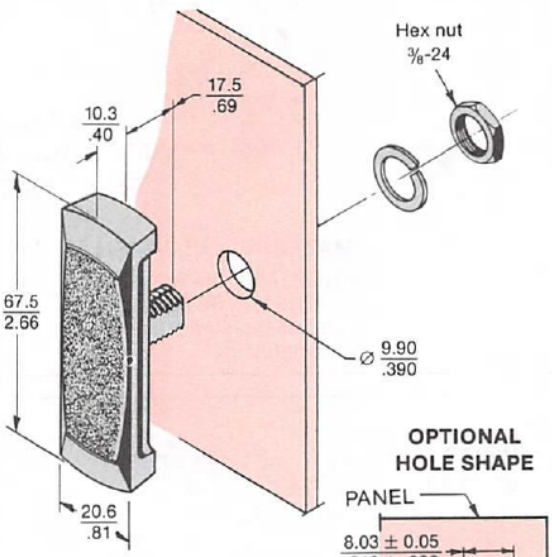
■ From stock, subject to prior sale.

SOUTHCO No. 95 KNOBS, PULLS AND HANDLES

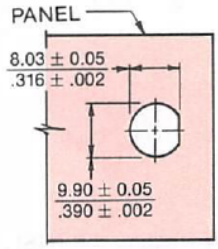
● Use in combination with Magnetic Door Catch or Door Retaining Springs

Illustrations are ½ size.

PART NUMBER
95-01-101-11 ■



OPTIONAL HOLE SHAPE



6.4/.25 MAX. PANEL THICKNESS

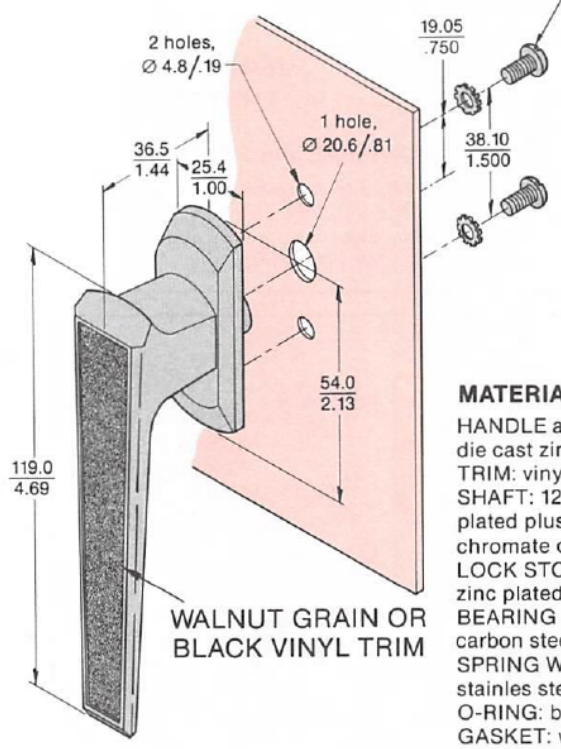
MATERIAL and FINISH

HANDLE: ABS, chrome plated.
WASHER: spring steel, DACROTIZED†.
NUT is steel, DACROTIZED
SCREW is low carbon steel;
these components are zinc
plated plus yellow chromate dip.
PIN: 18-8 stainless steel, passivated.

PART NUMBERS

With walnut grain trim	With black vinyl trim
95-92-102-10 ■	95-92-102-20 ■

No. 8-32 screws and lockwashers supplied for installation in 3.2/.13 max. thick panel. Thicker panels require longer screws (not supplied).



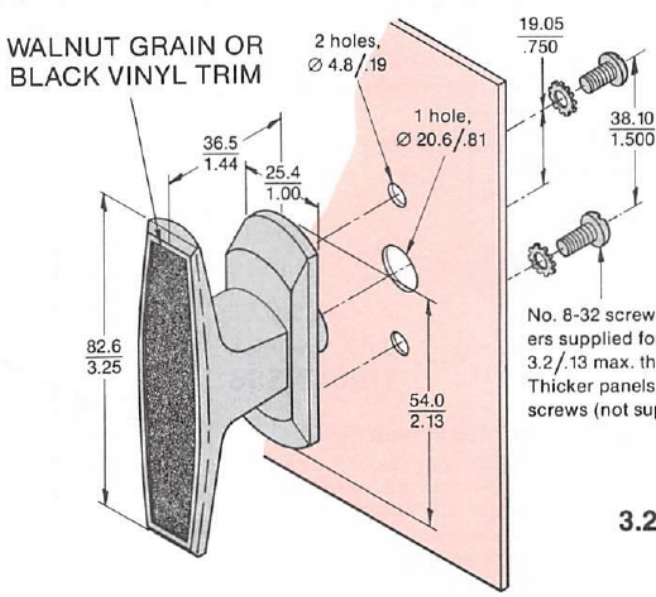
MATERIAL and FINISH

HANDLE and ESCUTCHEON:
die cast zinc, chrome plated.
TRIM: vinyl.
SHAFT: 12L14 steel, zinc
plated plus bright
chromate dip.
LOCK STOP: 1008 steel,
zinc plated.
BEARING COLLAR: low
carbon steel, DACROTIZED†.
SPRING WASHER: 302
stainles steel, natural.
O-RING: buna N rubber.
GASKET: vellum, natural.

3.2/.13 MAX. PANEL THICKNESS

PART NUMBERS

With walnut grain trim	With black vinyl trim
95-92-101-10 ■	95-92-101-20 ■



No. 8-32 screws and lockwashers supplied for installation in 3.2/.13 max. thick panel. Thicker panels require longer screws (not supplied).

MATERIAL and FINISH

HANDLE and ESCUTCHEON:
die cast zinc, chrome plated.
TRIM: vinyl.
SHAFT: 12L14 steel, zinc
plated plus bright chromate dip.
LOCK STOP: 1008 steel,
zinc plated.
BEARING COLLAR: low
carbon steel, DACROTIZED†.
SPRING WASHER: 302
stainles steel, natural.
O-RING: buna N rubber.
GASKET: vellum, natural.

3.2/.13 MAX. PANEL THICKNESS

†Registered tradename of Metal Coatings International, Inc.

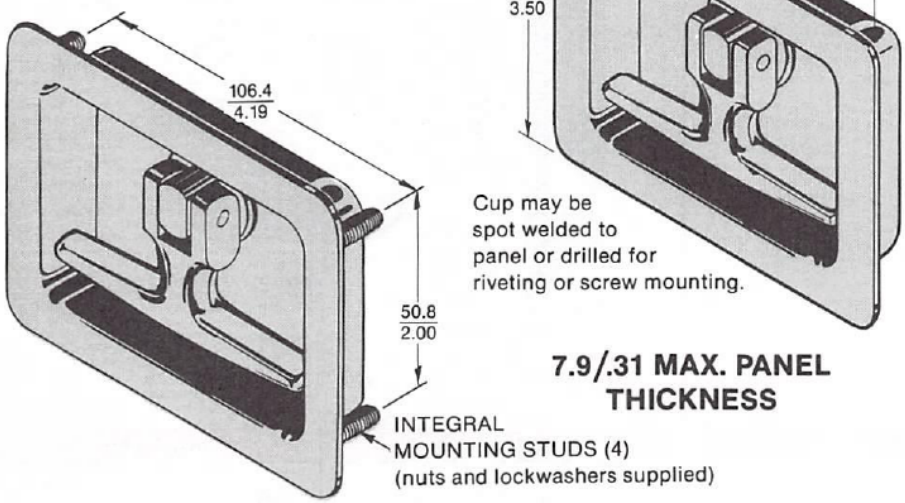
■ From stock, subject to prior sale.

SOUTHCO No. 95 KNOBS, PULLS AND HANDLES

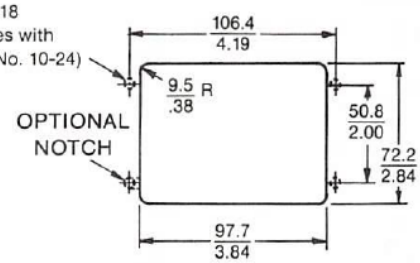
● Use in combination with Magnetic Door Catch or Door Retaining Springs

Illustrations are ½ size.

STYLE	PART NUMBERS	
	DACROTIZED† cup	Stainless steel cup
For weld or rivet mounting (no studs)	95-24-102-10 ■	95-24-102-35 ■
With integral mounting studs	95-24-103-10 ■	95-24-103-35 ■



7.9/.31 MAX. PANEL THICKNESS

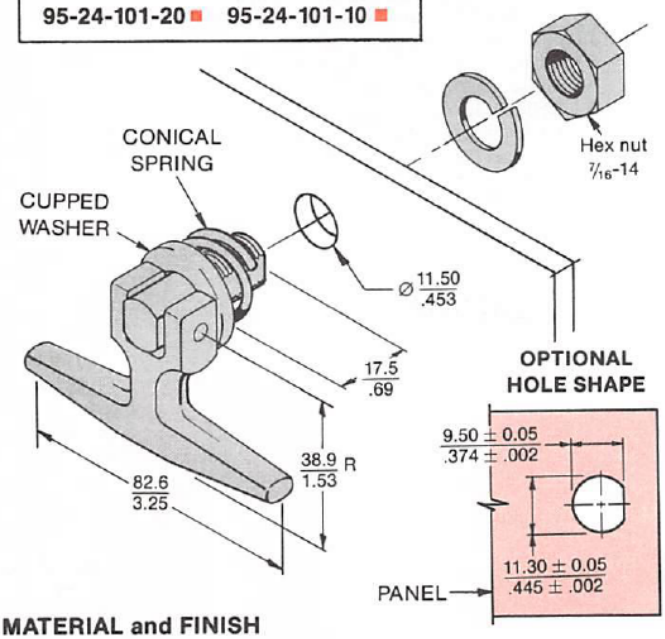


NOTE: Tightening torque of mounting nuts not to exceed 2.8 N·m/25 in.-lbs.

MATERIAL and FINISH

CUP: 1010 steel, DACROTIZED† or 304 stainless steel, highly polished (see table).
STUDS (optional): steel, DACROTIZED† or 302 or 305 stainless steel, natural.
PIN: 1112 steel, DACROTIZED† or zinc plated plus bright chromate dip.
SCREW is low carbon steel,
HANDLE is die cast zinc and
CUPPED WASHER is 1010 steel;
these components are DACROTIZED† or chrome plated.
CONICAL SPRING: steel, zinc plated plus bright chromate dip.
MOUNTING NUTS and LOCKWASHERS (optional), HEX NUT and LOCKWASHER: steel, DACROTIZED† or stainless steel, passivated.

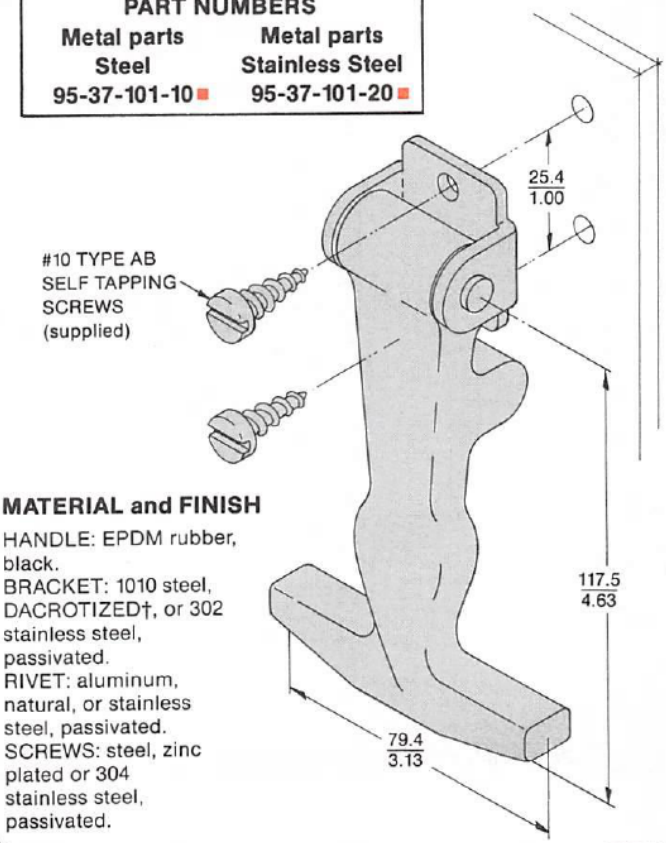
PART NUMBERS	
Chrome Plate	DACROTIZED†
95-24-101-20 ■	95-24-101-10 ■



MATERIAL and FINISH

HANDLE is die cast zinc, SCREW is low carbon steel and CUP WASHER is 1010 steel; these components are DACROTIZED† or chrome plated. PIN is 1112 steel and SPRING is steel; these components are zinc plated plus bright chromate dip. LOCKWASHER and NUT: steel, DACROTIZED†.

PART NUMBERS	
Metal parts Steel	Metal parts Stainless Steel
95-37-101-10 ■	95-37-101-20 ■



MATERIAL and FINISH

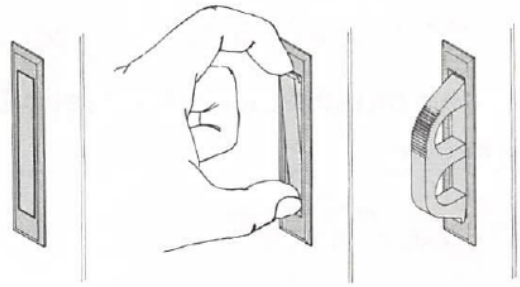
HANDLE: EPDM rubber, black.
BRACKET: 1010 steel, DACROTIZED†, or 302 stainless steel, passivated.
RIVET: aluminum, natural, or stainless steel, passivated.
SCREWS: steel, zinc plated or 304 stainless steel, passivated.

†Registered tradename of Metal Coatings International, Inc.

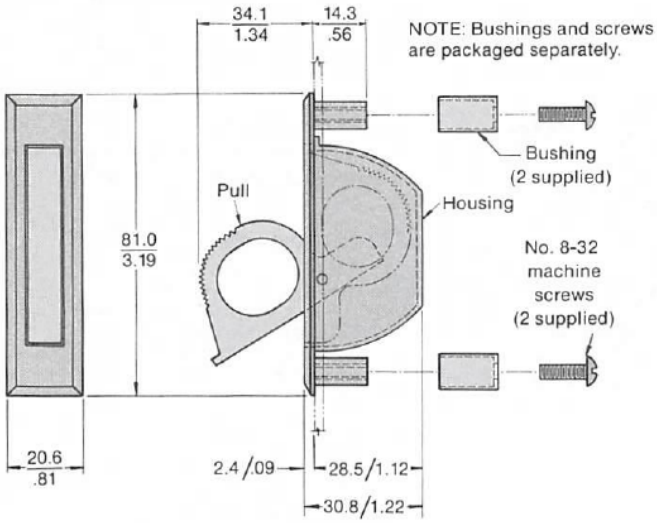
■ From stock, subject to prior sale.

Concealed Pulls

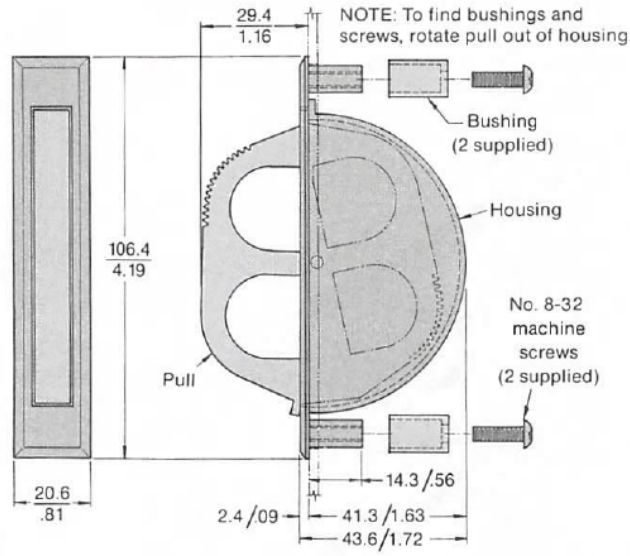
- **A pull when you need it, a flush surface when you don't.**
- **Completely enclosed housing.**



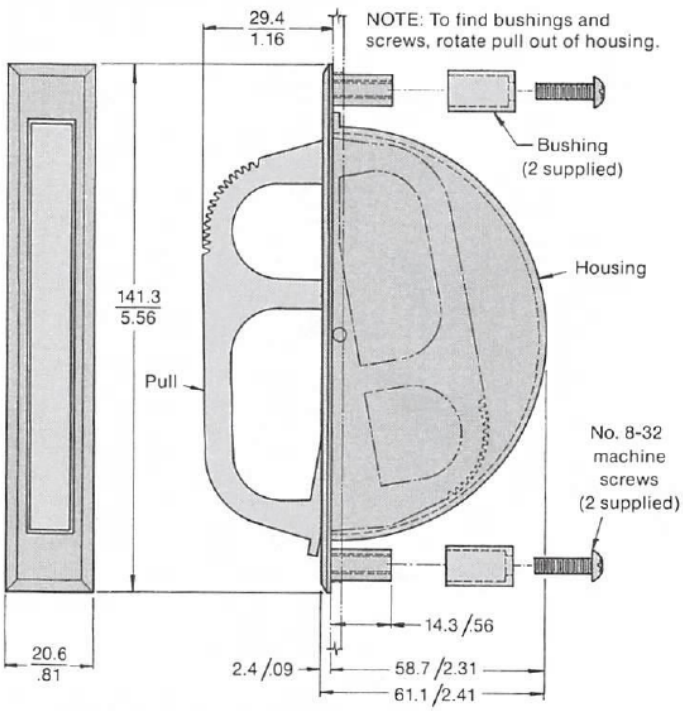
SHOWN ½ ACTUAL SIZE



Part Numbers		Installation		
Satin silver coat	Matte black coat	A	B	C
67-10-101-75 ■	67-10-101-20 ■	15.9/.63	58.7/2.31	68.3/2.69



Part Numbers		Installation		
Satin silver coat	Matte black coat	A	B	C
67-10-201-75 ■	67-10-201-20 ■	15.9/.63	84.1/3.31	93.7/3.69



Part Numbers		Installation		
Satin silver coat	Matte black coat	A	B	C
67-10-401-75 ■	67-10-401-20 ■	15.88/.625	119.1/4.69	128.6/5.06

■ From stock, subject to prior sale.

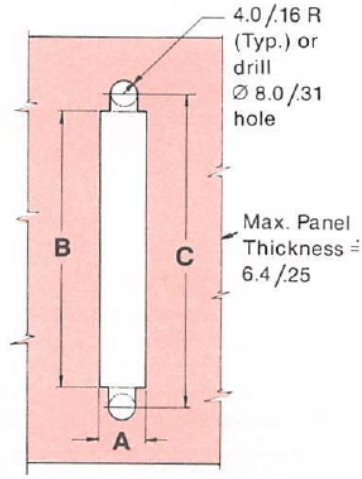
MATERIAL and FINISH

HANDLE: 6063 aluminum, satin silver or matte black polyester powder coated.
HOUSING and SCREWS: nylon, black.
SPRING: 302 stainless steel, natural.
BUSHING: low carbon steel, DACROTIZED†.
PIN (series 101): 303 stainless steel, DACROTIZED†.
PIN (series 201 and 401): 302 stainless steel, black organic coating.

†Registered tradename of Metal Coatings International, Inc.

INSTALLATION

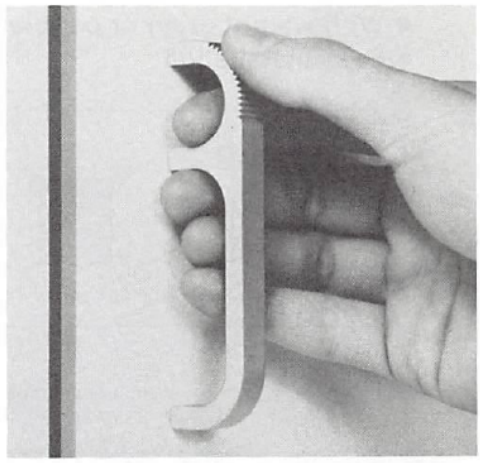
1. Prepare Panel.
2. Insert assembly into panel opening, locating serrated section at the top when pull is open.
3. Slide bushings over bosses on back of housing. Run screws into bosses and tighten.



millimeter / inch millimeter/inch

SOUTHCO B4 PULLS

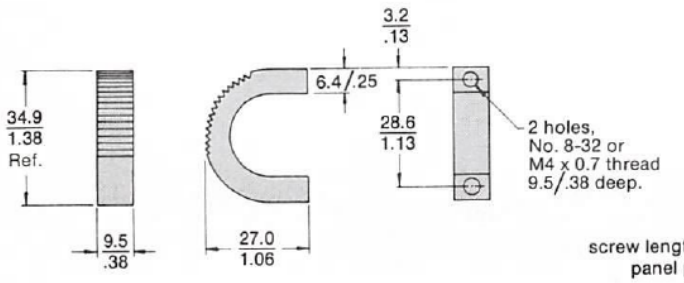
- Four sizes
- Durable polyester powder coated and anodized finishes
- Modern styling
- Light weight
- Easily installed

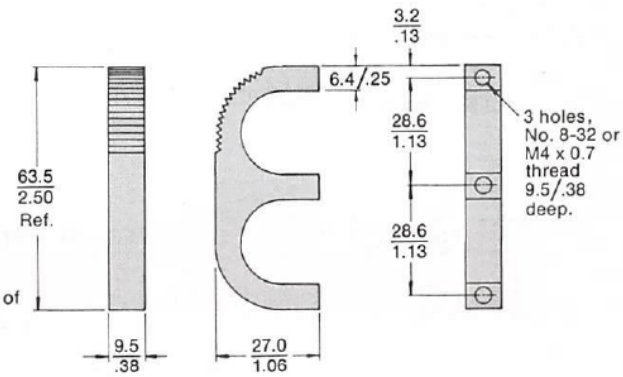


millimeter
inch
millimeter/inch

MATERIAL and FINISH
6063 aluminum, satin silver or matte black polyester powder coated, or clear anodized.

SHOWN ½ SIZE



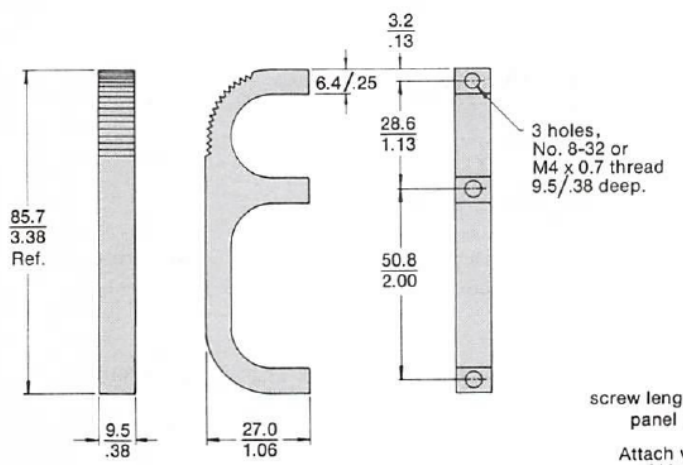


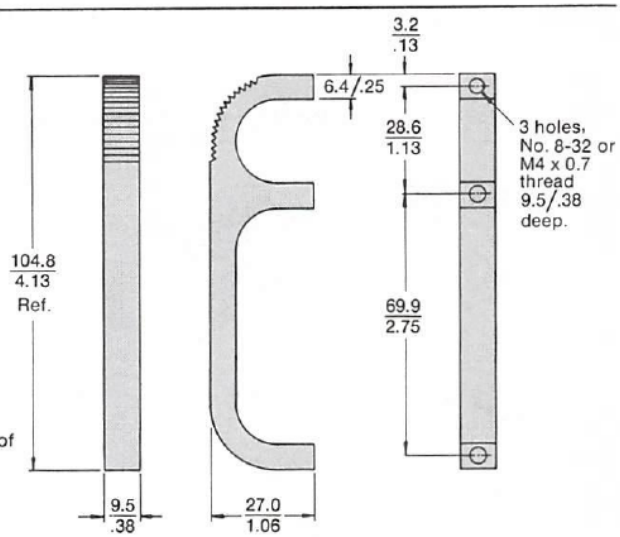
screw length = thickness of panel plus 9.5/.38

Attach with No. 8-32 or M4 x 0.7 screws.

Thread Series	Part Numbers		
	Satin Silver coat	Matte Black coat	Clear Anodized
American Standard	B4-10-103-75 ■	B4-10-103-12 ■	B4-10-103-11 ■
Metric	B4-50-103-75 ■	B4-50-103-12 ■	B4-50-103-11 ■

Thread Series	Part Numbers		
	Satin Silver coat	Matte Black coat	Clear Anodized
American Standard	B4-10-203-75 ■	B4-10-203-12 ■	B4-10-203-11 ■
Metric	B4-50-203-75 ■	B4-50-203-12 ■	B4-50-203-11 ■





screw length = thickness of panel plus 9.5/.38

Attach with No. 8-32 or M4 x 0.7 screws.

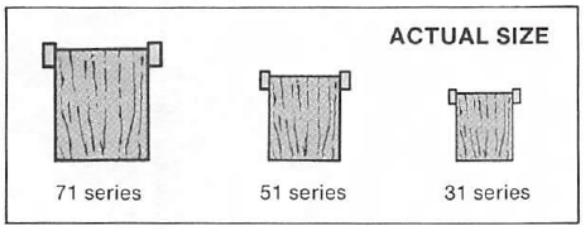
Thread Series	Part Numbers		
	Satin Silver coat	Matte Black coat	Clear Anodized
American Standard	B4-10-303-75 ■	B4-10-303-12 ■	B4-10-303-11 ■
Metric	B4-50-303-75 ■	B4-50-303-12 ■	B4-50-303-11 ■

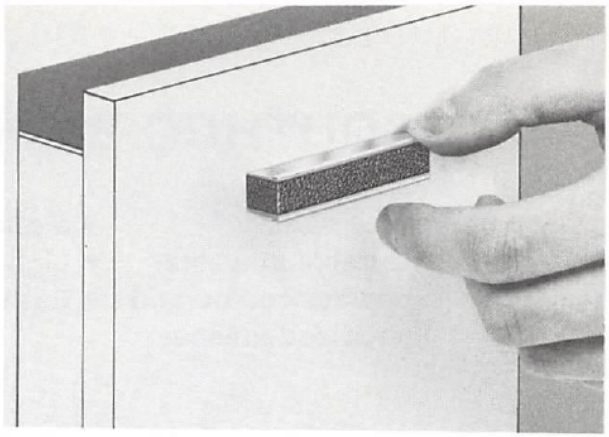
Thread Series	Part Numbers		
	Satin Silver coat	Matte Black coat	Clear Anodized
American Standard	B4-10-403-75 ■	B4-10-403-12 ■	B4-10-403-11 ■
Metric	B4-50-403-75 ■	B4-50-403-12 ■	B4-50-403-11 ■

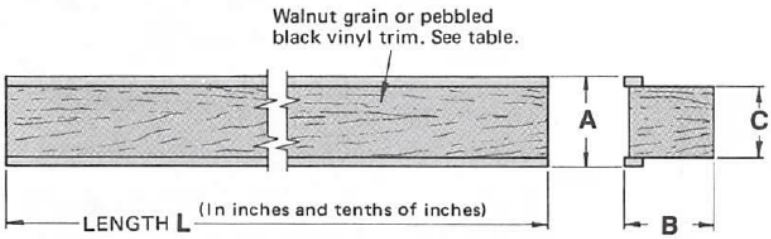
■ From stock, subject to prior sale.

SOUTHCO B5 PULLS

- **Three low profile series**
- **With walnut grain or pebbled black vinyl trim**
- **Easy installation**







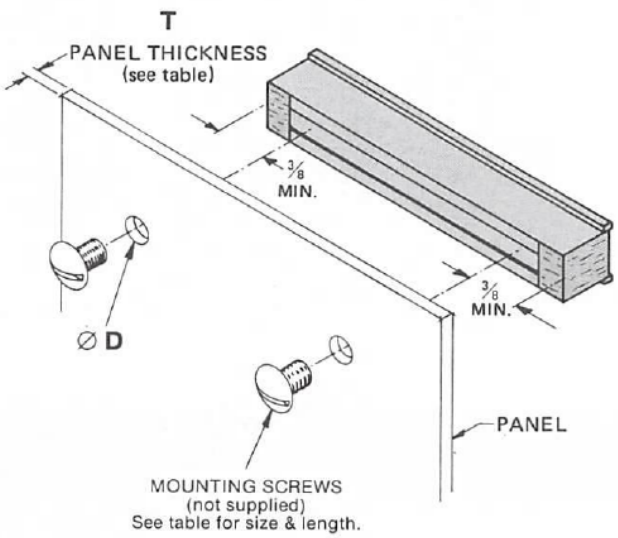
MATERIAL and FINISH
PULL: 6463 aluminum, clear anodize brushed finish.
TRIM: vinyl, walnut or black.

DIMENSIONS				PART NUMBERS		WEIGHT PER UNIT (lbs.)	SIZE
A	B	C	L	walnut vinyl trim	black vinyl trim		
5/16	5/16	17/64	1.7	B5-31-017-12 ■	B5-31-017-13 ■	.009	31 series
			2.6	B5-31-026-12 ■	B5-31-026-13 ■	.013	
			3.4	B5-31-034-12 ■	B5-31-034-13 ■	.017	
15/32	15/32	25/64	2.4	B5-51-024-12 ■	B5-51-024-13 ■	.031	51 series
			3.4	B5-51-034-12 ■	B5-51-034-13 ■	.044	
			4.7	B5-51-047-12 ■	B5-51-047-13 ■	.060	
5/8	5/8	33/64	3.4	B5-71-034-12 ■	B5-71-034-13 ■	.082	71 series
			5.1	B5-71-051-12 ■	B5-71-051-13 ■	.123	
			8.6	B5-71-086-12 ■	B5-71-086-13 ■	.207	

INSTALLATION		
∅ D	MOUNTING SCREW SIZE	MOUNTING SCREW LENGTH
5/32	6-32	T + 3/16 +1/16 -0
3/16	8-32	T + 5/16 +1/16 -0
7/32	10-24	T + 3/8 +1/8 -0

■ From stock, subject to prior sale.

PANEL PREPARATION AND INSTALLATION INSTRUCTIONS

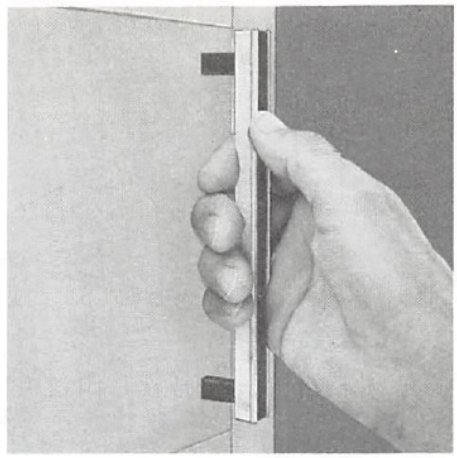


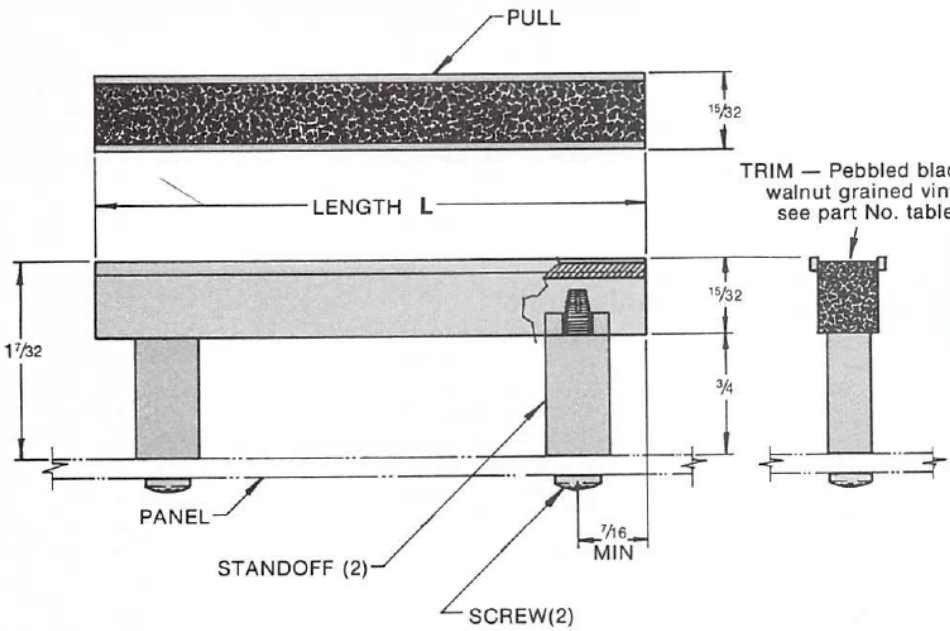
Attach Pulls to panel using type "F" self-tapping screws or machine screws (see table for size and length).

Since screws engage slot in back side of Pull, mounting may be made at any point along centerline of Pull, but no closer than 3/8" from each end; prepare mounting holes in panel accordingly (see table for mounting hole diameter).

B6 PULLS

Southco's B6 Pulls are carefully styled to compliment the design of modern electronic cabinetry and industrial equipment. Your choice of walnut grain or black pebbled trim lends a handsome touch to the satin finished aluminum body with black acetal standoffs. The four lengths offered are correct for the height of standard electronic modules.





MATERIAL and FINISH

PULL: 6463 aluminum, clear anodized brush finish with vinyl trim.
STANDOFF: acetal, black
SCREWS: steel, zinc plated.

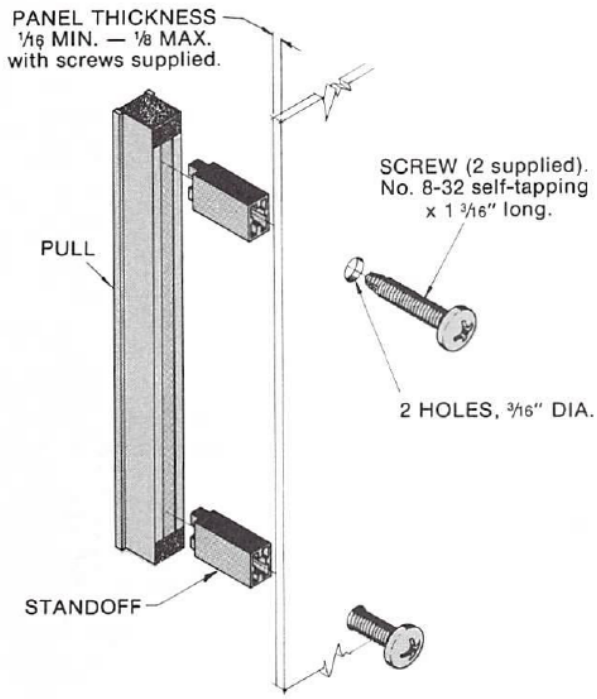
ASSEMBLY PART NUMBERS		LENGTH L (inches)
Walnut grained vinyl trim	Pebbled black vinyl trim	
B6-50-034-12 ■	B6-50-034-13 ■	3.40
B6-50-051-12 ■	B6-50-051-13 ■	5.10
B6-50-069-12 ■	B6-50-069-13 ■	6.90
B6-50-086-12 ■	B6-50-086-13 ■	8.60

■ From stock, subject to prior sale.

An assembly consists of: one pull, two stand-offs and two mounting screws.

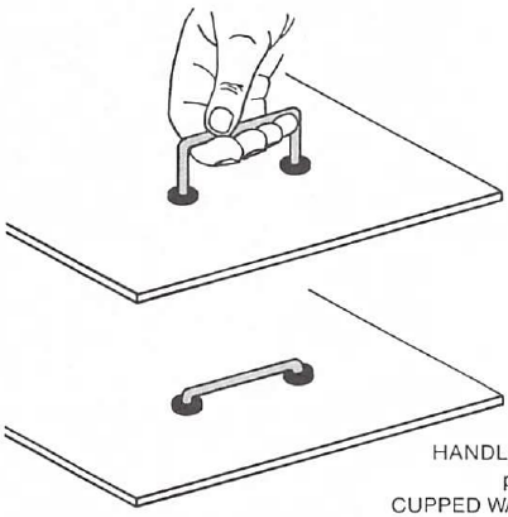
Individual component parts are not sold separately.

INSTALLATION



Prepare two 3/16" diameter mounting holes in panel. Since mounting screws engage and form their own threads in slot in bottom of pull, mounting may be made at any point along the centerline of the Pull, but no closer than 7/16" from each end.

To attach Pull, pass mounting screws through holes in panel from back side and on through standoffs (be sure to orient standoffs with lugs away from panel as shown). Fit lugs of standoffs into slot in bottom of pull and thread screws up until tight. NOTE: For panel thicknesses less than 1/16", washers (not supplied) may be used under screw heads to decrease effective screw penetration (keep screw from bottoming before tight). For panel thicknesses greater than 1/8", the mounting hole may be counterbored (back side of panel) to increase the effective screw penetration. Or, longer screws may be used (not supplied).



RETRACTABLE HANDLE

With panel-protecting grommets or handle alone

- **Installs in two round holes**
- **Retracts to low-profile position**
- **Grommets deaden sound and vibration**

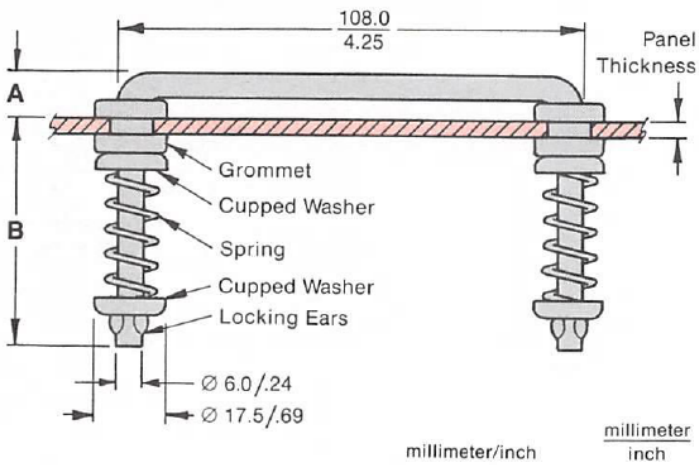
Material and Finish

HANDLE: 1008 steel, zinc plated plus bright chromate dip.
CUPPED WASHERS: 1010 steel, zinc plated plus bright chromate dip.
SPRING: 302 stainless steel, passivated.
GROMMETS: neoprene, black.

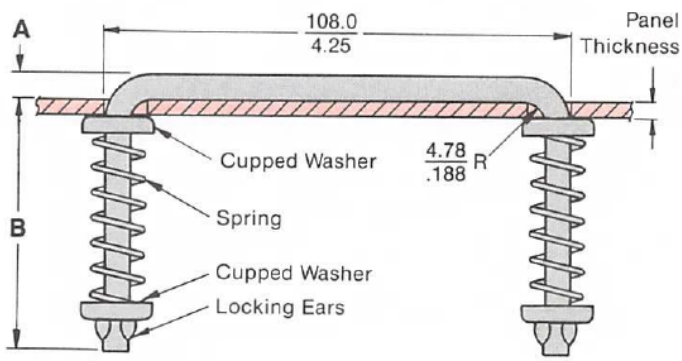
Panel thickness MIN	Panel thickness MAX	A Ref	B	Part Numbers
With Grommets				
0	1.6/.06	8.7/.34	58.7/2.31	B8-10-711-11 ■
1.6/.06	3.2/.13	9.5/.38	57.9/2.28	B8-10-712-11 ■
Handle Alone				
0.9/.04	9.5/.38	6.4/.25	61.1/2.41	B8-10-701-11 ■

■ From stock, subject to prior sale.

Handle with grommets

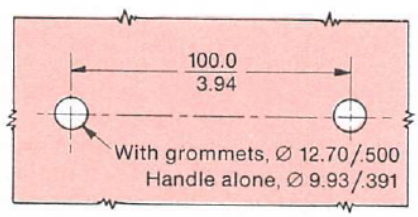


Handle alone

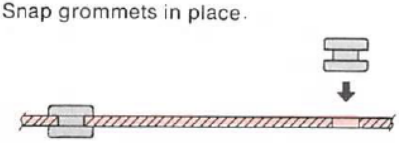


Installation

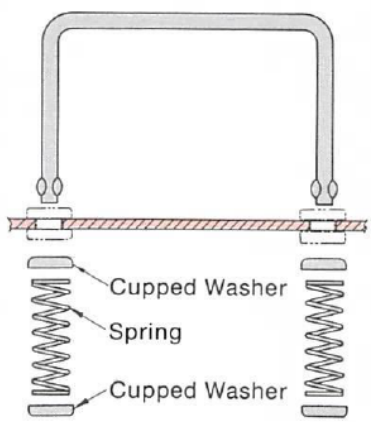
1. Prepare two holes in panel.



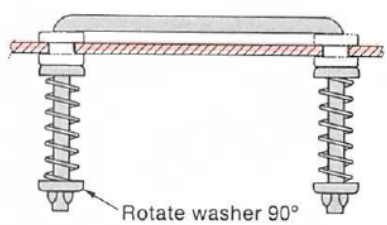
2. Snap grommets in place.



3. UNASSEMBLED



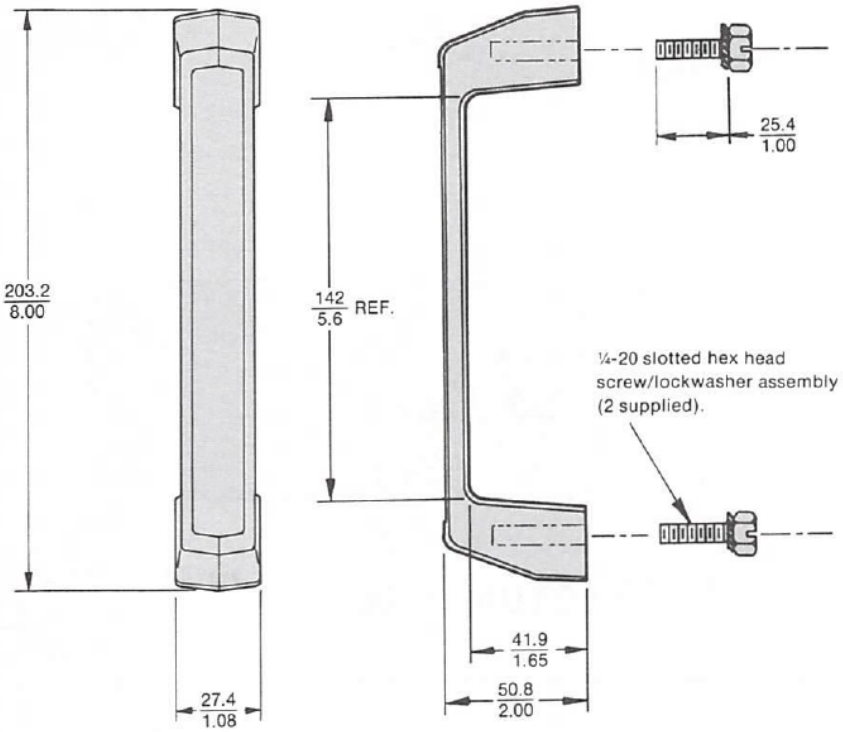
4. ASSEMBLED

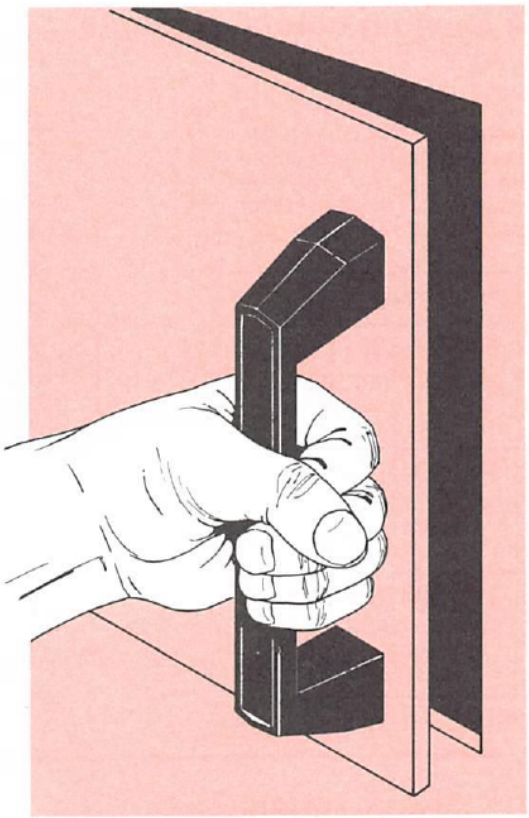


B8 Grab Handle

- Generous grip
- Fast installation
- One piece construction

Made of tough high-impact ABS.
It's sleek, rugged, durable, lightweight.



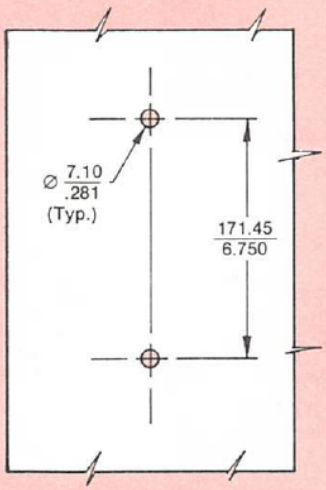


PART NUMBER
B8-20-503-10 ■

■ From stock. Subject to prior sale.

MATERIAL and FINISH
HANDLE: ABS, black matte texture.
SCREW/LOCKWASHER ASSEMBLIES:
Screws are 1010 steel, zinc plated.
Lockwashers are spring steel, zinc plated.

PANEL PREPARATION



Mounting screws supplied will permit installation in 9.53/.375 maximum panel thickness. Thicker panels will require longer screws (not supplied).

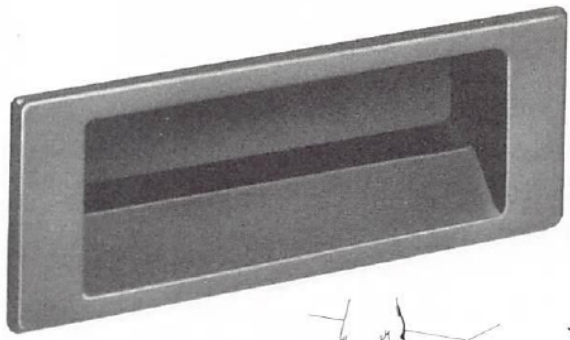
millimeter/inch

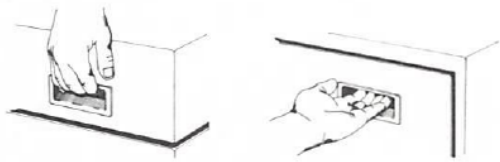
millimeter
inch

Shipped one unit per bag.

NEW
Pocket Pull™

- Flush installation
- For lifting or pulling
- Low luster finish
- Lifting load transferred directly to panel edge
- Custom colors available





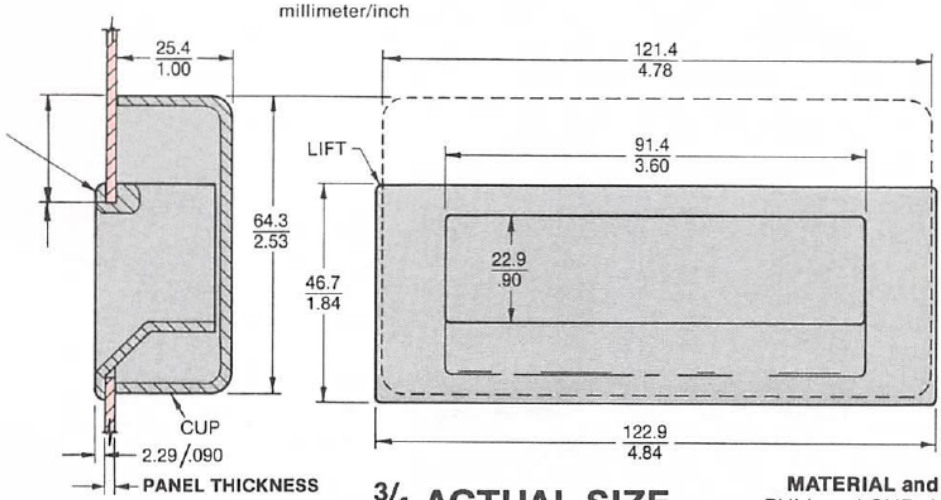
Installation in a panel thickness less than the maximum for each range allows some movement of the pull. Ask for samples for testing.

PART NUMBER	
P1-30-101-11 ■	PANEL THICKNESS 1.02/.040 Min. 1.78/.070 Max.
P1-30-103-11 ■	PANEL THICKNESS 2.54/.100 Min. 3.30/.130 Max.
P1-30-105-11 ■	PANEL THICKNESS 4.06/.160 Min. 4.83/.190 Max.

■ From stock, subject to prior sale.

millimeter / inch

millimeter/inch

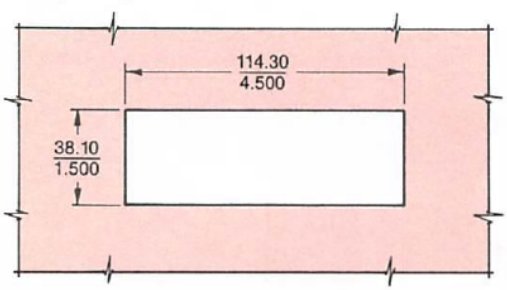


¾ ACTUAL SIZE

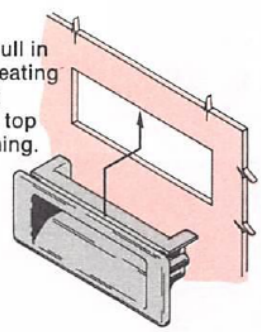
MATERIAL and FINISH
PULL and CUP: ABS, black.
SCREWS: steel, zinc plated plus bright chromate dip.

INSTALLATION

1. Prepare a rectangular opening as shown.

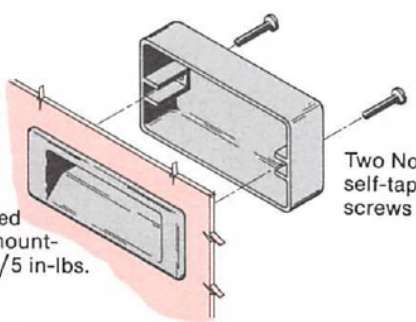


2. Place pull in panel seating the slot against top of opening.



3. Secure cup to pull and back of panel with two screws (supplied).

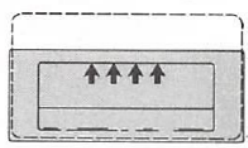
Maximum recommended tightening torque for mounting screws is 0.5 N • m/5 in-lbs.



Two No. 6 BT self-tapping screws (supplied).

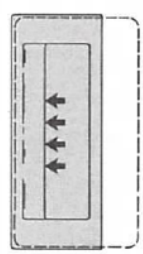
Strength Guidelines
(Distributed Load)

Lifting, Pulling



Maximum working load
1334 N/300 lbs.
Average ultimate load
2668 N/600 lbs.

Pushing, Sliding

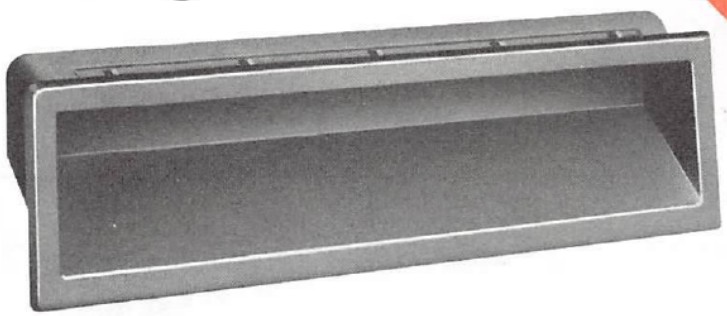


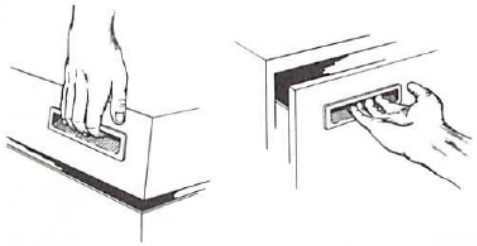
Maximum working load
445 N/100 lbs.
Average ultimate load
667 N/150 lbs.

Pocket Pull™, *snap-in design*

NEW

- **Fast, strong, efficient installation**
- **One-piece design**
- **Compact envelope**
- **For lifting or pulling**



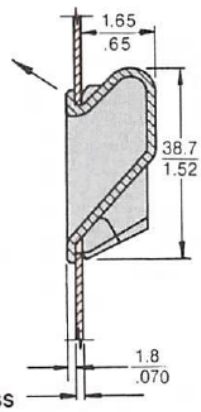


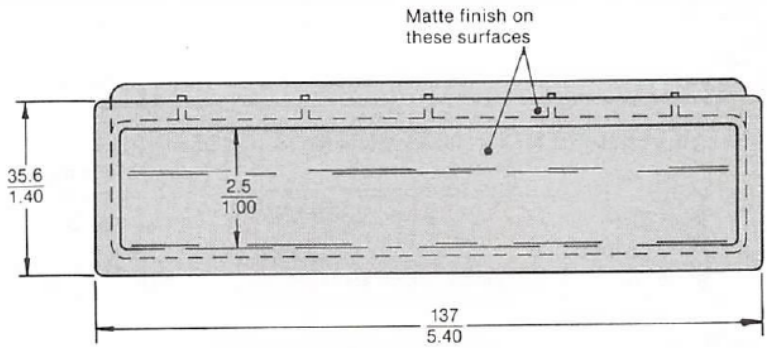
PART NUMBER	PANEL THICKNESS	
	MIN.	MAX.
P2-51 ■	.040	.055
P2-52 ■	.055	.070
P2-53 ■	.070	.085
P2-54 ■	.085	.100

MATERIAL and FINISH
PULL High Impact ABS, low gloss black.

millimeter / inch

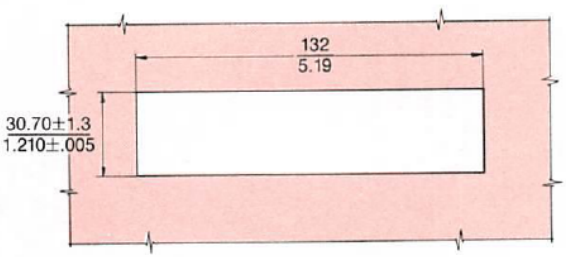
millimeter/inch



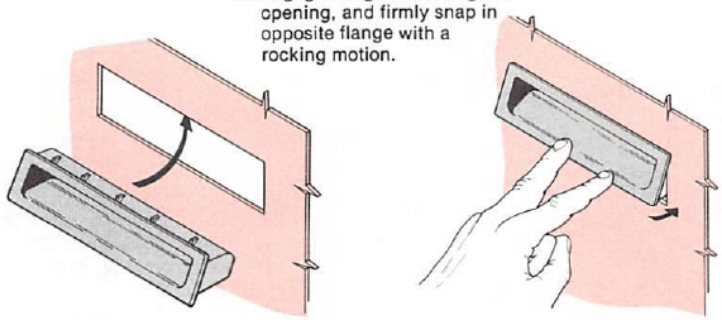


INSTALLATION

1. Prepare a rectangular opening as shown.



2. Engage flange under edge of opening, and firmly snap in opposite flange with a rocking motion.



PERFORMANCE

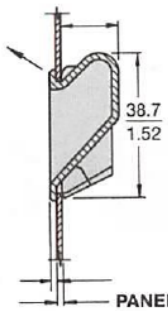


Maximum working load 1780 N / 400 lbs.

Average ultimate load 4450 N / 1000 lbs.

Maximum working load 445 N / 100 lbs.

Average ultimate load 1113 N / 250 lbs.

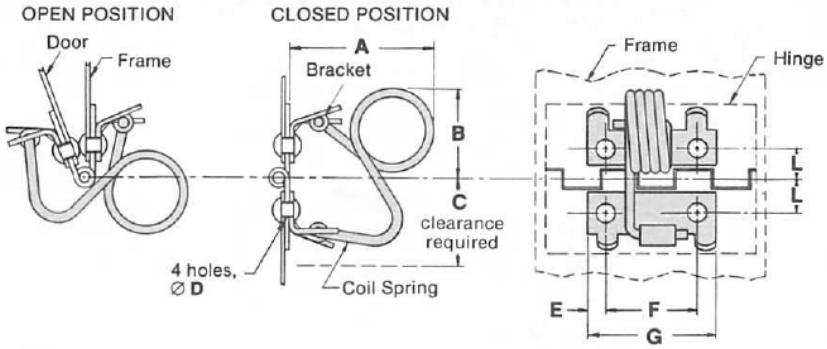


Door Positioning Spring, Coil spring style

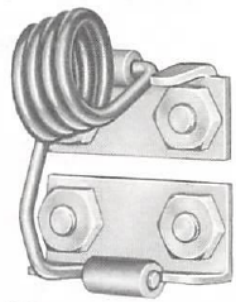
Holds doors open or closed under spring tension.

MATERIAL and FINISH
SPRING: spring steel, phosphate coated.
BRACKET: 1010 steel, DACROTIZED†.
†Registered tradename of Metal Coatings International, Inc.

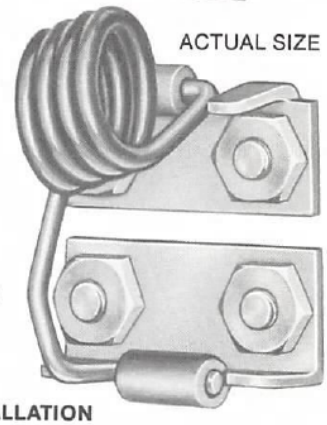
millimeter
inch millimeter/inch



LIGHTWEIGHT SIZES



SERIES 50

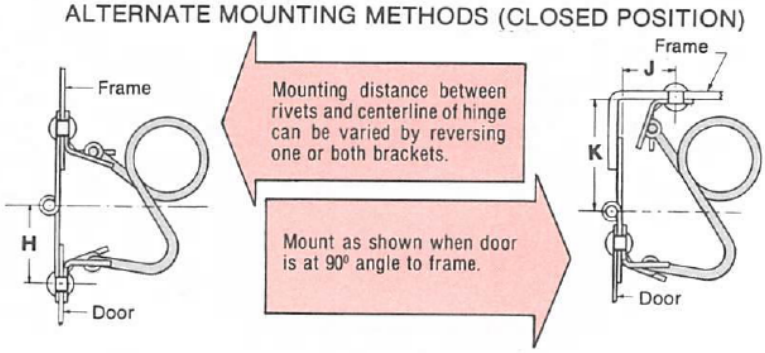


ACTUAL SIZE

SERIES 70

DIMENSIONS											PART NUMBER	SERIES
A	B	C	Ø D	E	F	G	H	J	K	L		
25.4 1.00	23.8 .94	19.1 .75	3.60 .141	4.0 .16	15.88 .625	23.8 .94	19.1 .75	12.7 .50	19.1 .75	6.4 .25	23-10-051-11 ■	50
36.5 1.44	30.2 1.19	25.4 1.00	4.30 .171	5.6 .22	22.23 .875	33.3 1.31	23.8 .94	15.9 .63	24.6 .97	8.7 .34	23-10-071-11 ■	70

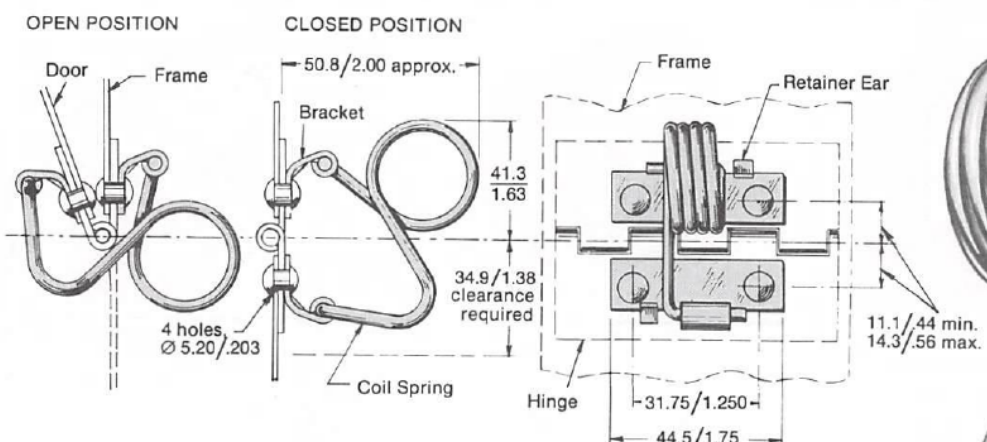
ALTERNATE MOUNTING METHODS (CLOSED POSITION)

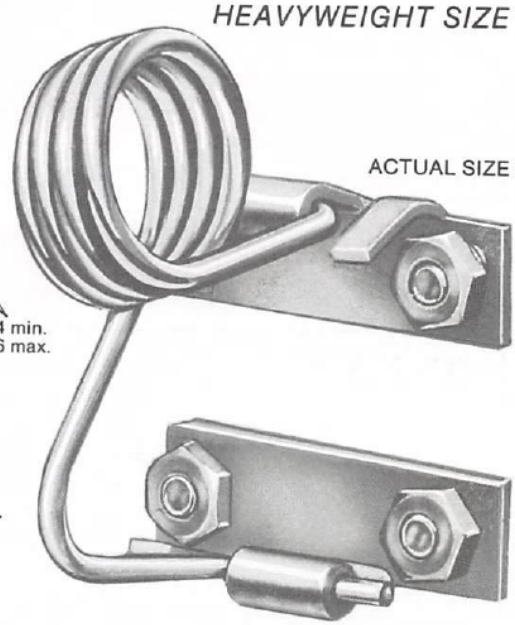


INSTALLATION

1. Drill or punch four Ø **D** holes through the hinge and/or panel.
2. Attach spring brackets (interchangeable) to the frame and door with door fully open.
3. Slip short leg of spring into frame bracket.
4. Slip long leg of spring into door bracket.
5. With spring in place, bend retainer ears over to secure spring.

HEAVYWEIGHT SIZE





ACTUAL SIZE

PART NUMBER
23-10-11-12 ■

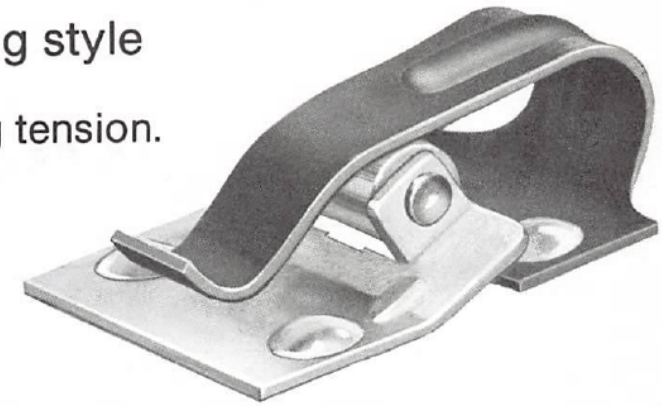
INSTALLATION

1. Drill or punch four 5.20/.203 holes through hinge and/or panel.
2. Attach spring brackets (interchangeable) to the frame and door with door fully open.
3. Slip short leg of spring into frame bracket.
4. Slip long leg of spring into door bracket.
5. With spring in place, bend retainer ears over to secure spring.

■ From stock, subject to prior sale.

Door Positioning Spring, Leaf spring style

Holds doors open or closed under spring tension.



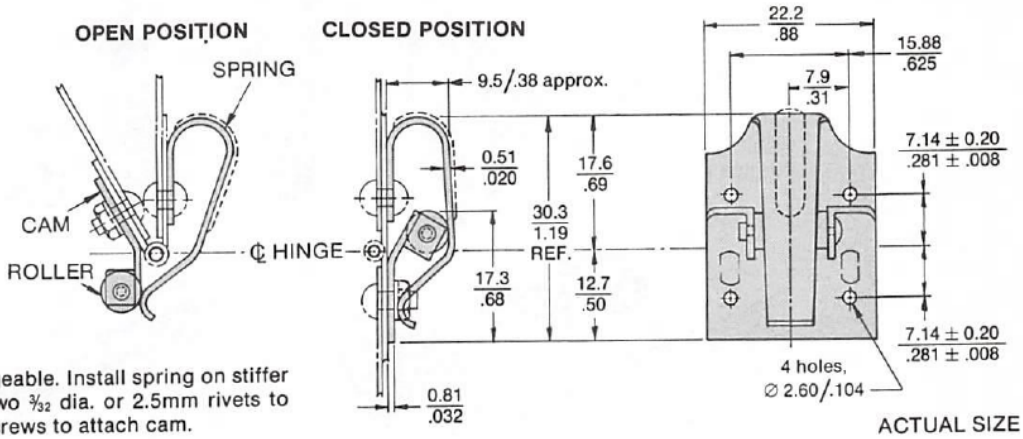
MATERIAL and FINISH
SPRING: 1065 spring steel, phosphate coated.
CAM: 1010 steel, DACROTIZED†.
ROLLER: brass.
RIVET: steel, zinc plated plus yellow chromate dip.

†Registered tradename of Metal Coatings International, Inc.

miniature size

- Attached to the hinge
- For smaller doors and panels
- Occupies a minimum of space
- Lightweight

PART NUMBER
50-10-102-10 ■

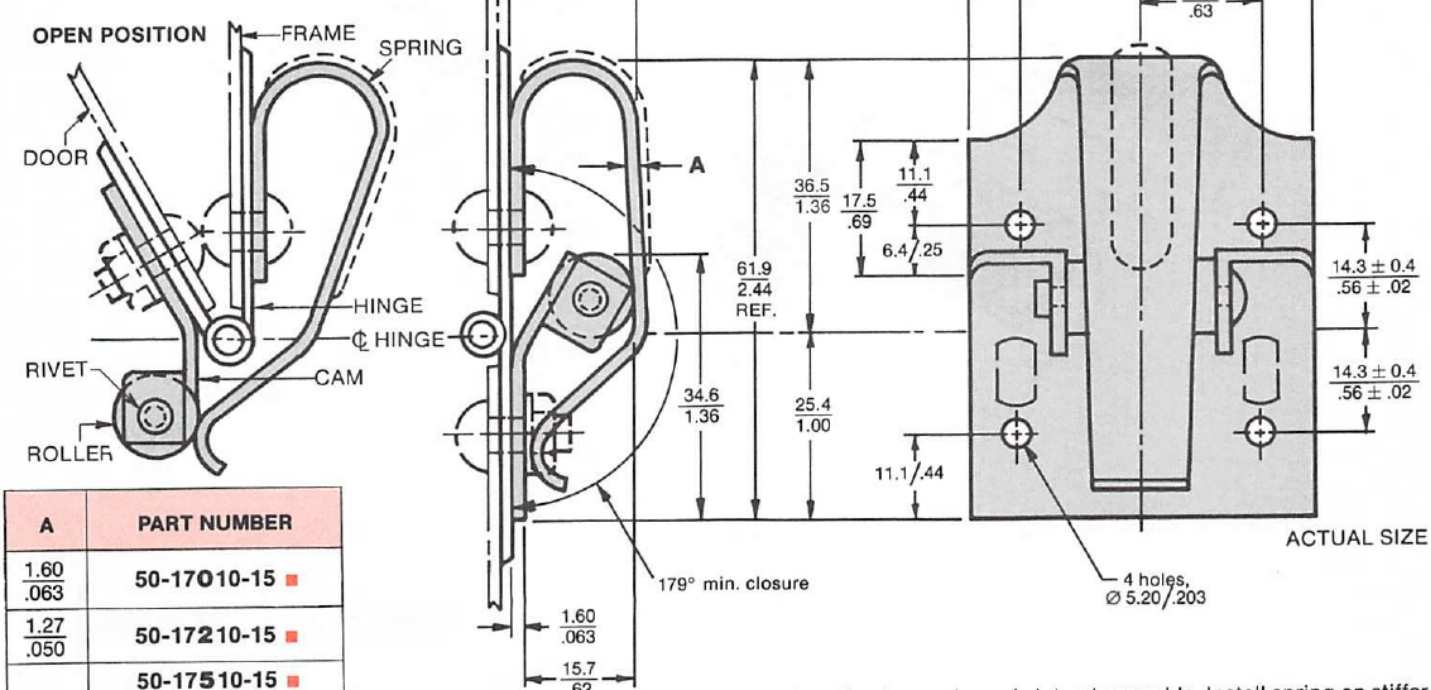


Location of spring and cam is interchangeable. Install spring on stiffer member BEFORE installing cam. Use two 3/32 dia. or 2.5mm rivets to attach spring. Use two No. 3 or 2.5mm screws to attach cam.

large size

- Attached to the hinge
- Light or heavy gauge spring
- Model with 3 stops holds doors in 10°, 35°, or full positions

millimeter/inch
millimeter
inch

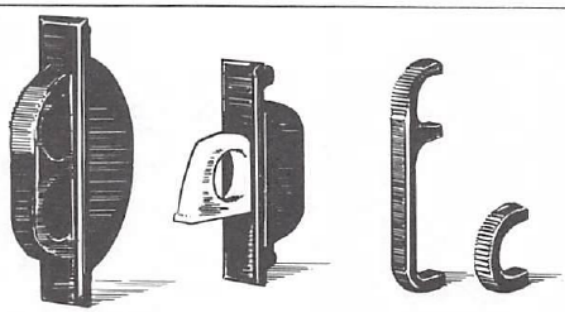


A	PART NUMBER
1.60 .063	50-17010-15 ■
1.27 .050	50-17210-15 ■
1.60 .063	50-17510-15 ■ with 3 stops to hold door in 10°, 35°, or full open positions

Location of spring and cam is interchangeable. Install spring on stiffer member BEFORE installing cam. Use two 3/16 dia. or 5mm rivets to attach spring. Use two No. 10 or M5 bolts to attach cam.

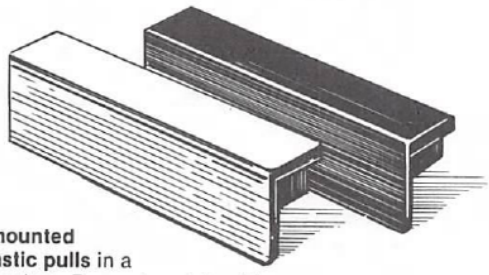
■ From stock, subject to prior sale.

Pulls for every purpose...

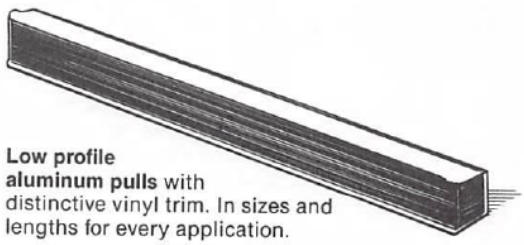


Concealed pulls pivot within their enclosed housing to provide a pull when you need it, a flush surface when you don't.

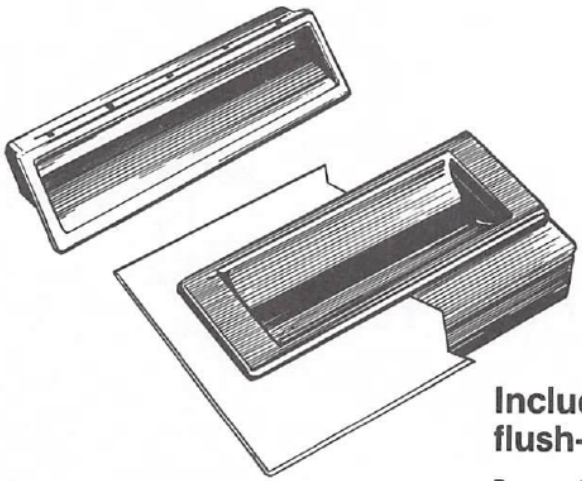
Surface-mounted aluminum pulls for a sure, comfortable grip. Available in four sizes to accommodate one through four fingers, in black, silver, or anodized aluminum.

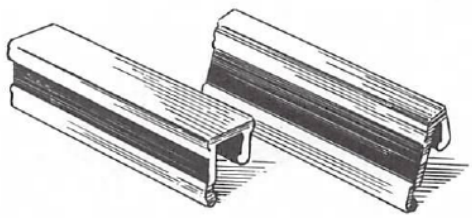


Surface-mounted thermoplastic pulls in a variety of colors. Rugged and durable; also available with magnetic catch.



Low profile aluminum pulls with distinctive vinyl trim. In sizes and lengths for every application.





Stylized aluminum pulls available for face mounting or edge mounting, in four different styles. Anodized aluminum with or without vinyl inlay.

Including the new flush-mounted *recessed* Pocket Pull.

Recessed design mounts easily from inside, provides sure grip. Discrete styling blends with any application; custom colors available.

For doors and drawers... for panels, covers, and modules... everywhere you could use a pull, Southco makes a complete line of handsome, functional pulls.

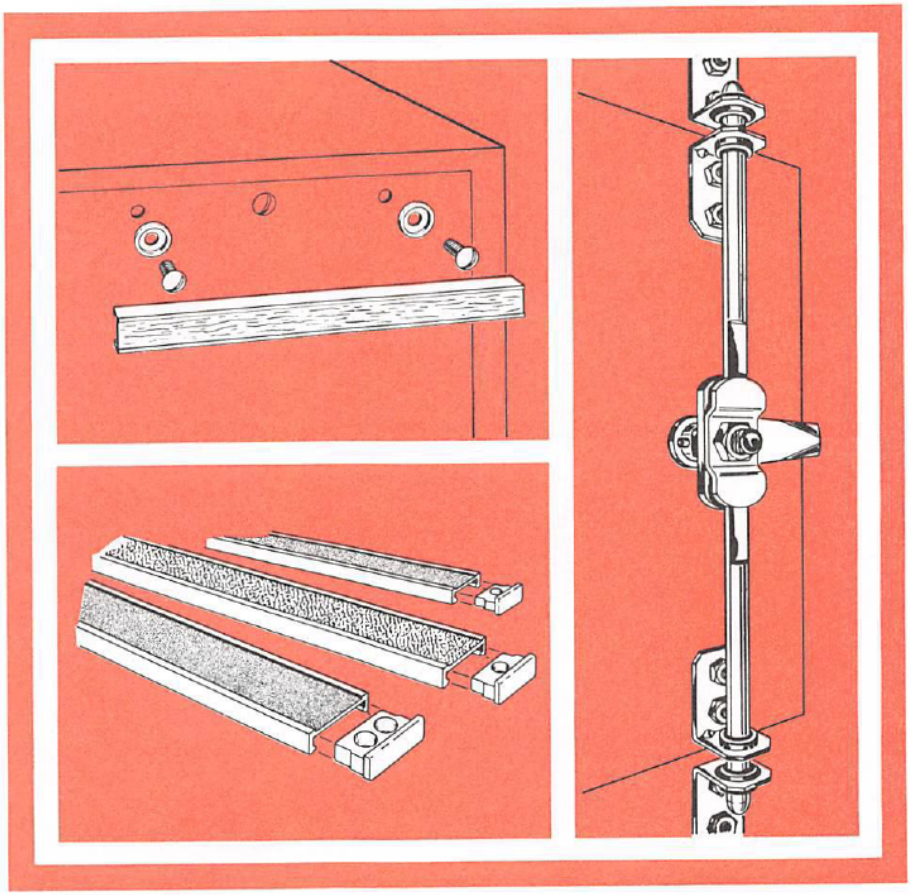
SOUTHCO fasteners

Section 0
Accessories

Trimstrips®, Rods, guides, and remote compression system.

contents guide | **page**

No. A5 Accessory Rod, Guide & Keeper Assemblies	0-1 to 0-4
No. RS-E3 Remote Compression	0-5 to 0-8
No. 98 Trimstrips	0-9 to 0-11



Section 0
Accessories

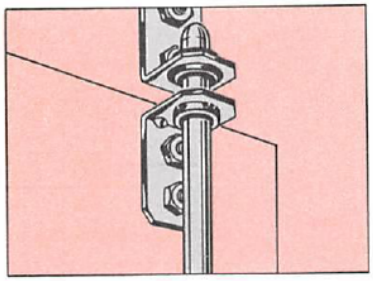
Trimstrips®, Rods, guides, and remote compression system.

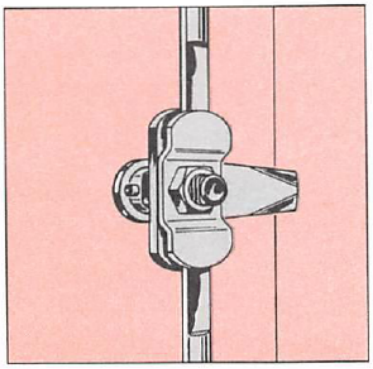
contents guide | **page**

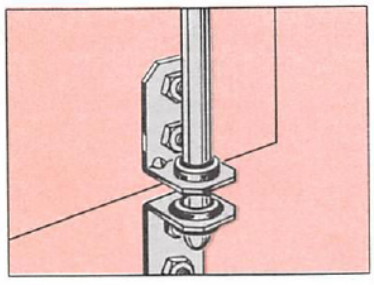
No. A5 Accessory Rod, Guide & Keeper Assemblies ..... 0-1 to 0-4
No. RS-E3 Remote Compression ..... 0-5 to 0-8
No. 98 Trimstrips ..... 0-9 to 0-11

2 and 3-point latching.

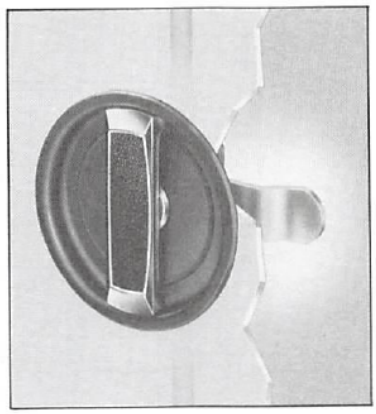
20 latches with guides, keepers, and rods custom-sized to your specifications.



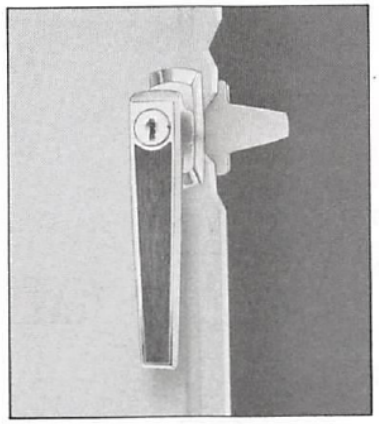




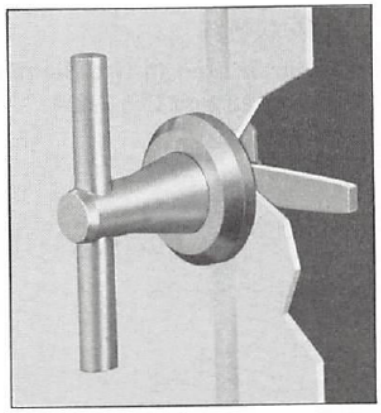
Now you can order complete 3-point latching systems from Southco. Specify the rod lengths, and we precisely cut each rod ready for attachment to the latch of your choice. Guides and keeper brackets complete the package.
Look at a few of the 20 in-stock Southco latches with adapters for 2 and 3-point latching.



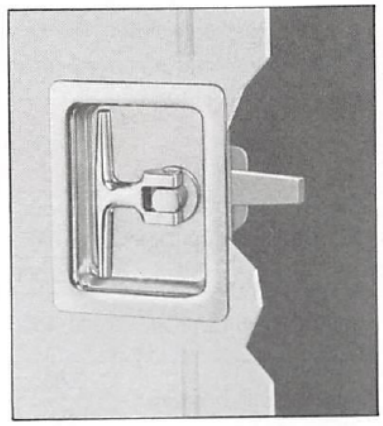
No. 01 Recessed Cup Latch — Good looking, contemporary styling in black and bright chrome. Assembles through single hole in door without mounting hardware. Three sizes; optional keylock.



No. 92 Handle Latch — Choose L or T handle style, with or without keylock. Bright chrome finish with black or walnut-grained trim makes this the best looking latch of its kind.



No. 68 T-handle Latch — Rugged latching device for doors on machines and plant and industrial equipment. Wide range of super grip handles to fit most doors and frames. 90° rotation stops; three sizes.

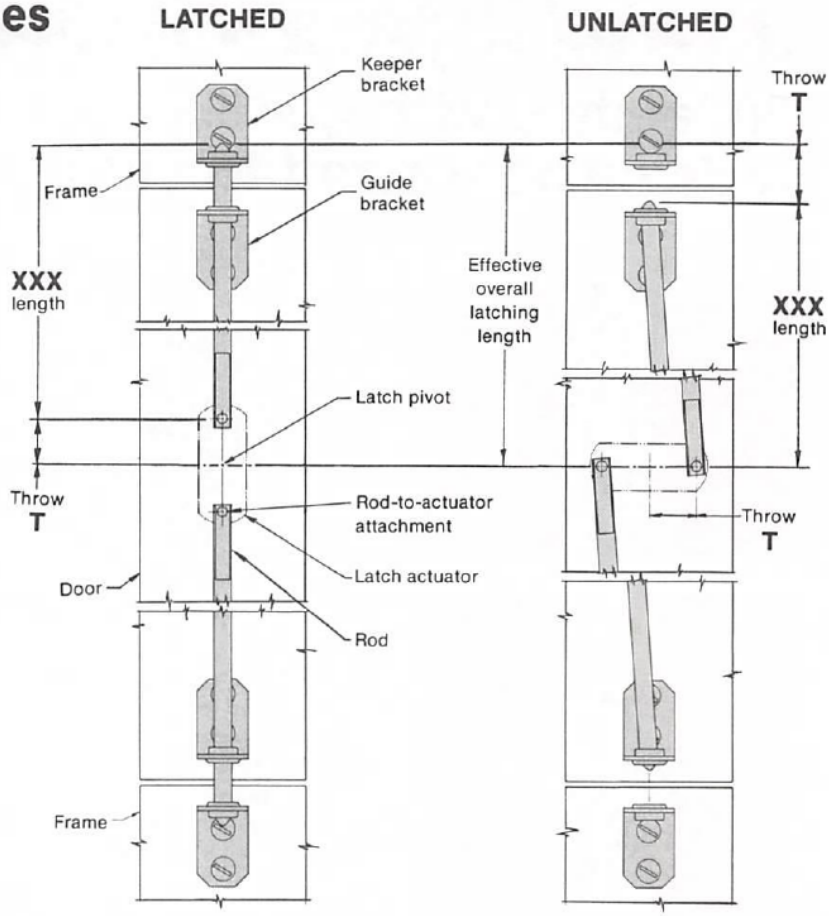


No. 24 Recessed Cup Latch — Big, rugged handle folds flush. Latch is available in bright chrome to combine toughness and good looks. Internal mounting studs don't show on front. With or without keylock.

SOUTHCO®
fasteners

Accessory rod, guide and keeper assemblies

- **A system for two or three-point latching.**
- **Custom length rods — in 2.54/.100 increments, from 152/6.0 to 2537/ 99.9.**
- **Rods offered in two diameters — ∅ 7.1/.28 and ∅ 8.7/.34**



To order rod assemblies:

NOTE: Two assemblies must be ordered for each latch.

1. Determine basic part number from table below.

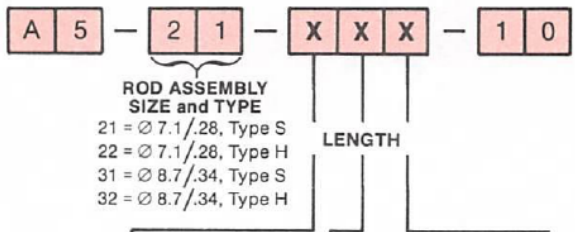
Latch	Series	Basic Part Number	Rod Type	T
No. 01 Flush Cup Latch	100, 200 & 300	**A5-31-XXX-10**	S	19.1/.75
	400 & 500	**A5-21-XXX-10**		12.7/.50
No. 24 Flush Cup Latch	300, 400,	**A5-32-XXX-10**	H	17.5/.69
No. 62 Lift-and-turn™ Latches	500			31.8/1.25
	600			22.2/.88
	800			31.8/1.25
No. 68 T & Bail-handle Latches	10			17.5/.69
	50	**A5-22-XXX-10**		13.5/.53
	70	**A5-32-XXX-10**		22.2/.88
No. 92 L & T-handle Latches	All	**A5-21-XXX-10**	S	19.1/.75

NOTE: These LENGTHS are standard and available from stock in each rod assembly size and type. ALL OTHER LENGTHS are manufactured to order.	LENGTH (Inches)	PART NUMBERS
	305/12.0	A5-XX-120-10
	610/24.0	A5-XX-240-10
	914/36.0	A5-XX-360-10
	1219/48.0	A5-XX-480-10

2. Effective overall latching lengths = **XXX** length + **T**. **XXX** length rod (152/6.0 in. 2537/99.9 max.) must clear frame in unlatched position.

3. Replace **XXX** in basic part number with your **XXX** length expressed in inches and tenths of inches.

Note: If **XXX** length is determined in mm, that length must be converted to inches (mm ÷ 25.4).



Length in TENS of inches	Length in UNIT inches	Length in TENTHS of inches
0 = zero	0 = zero	0 = zero
1 = 10 inches	1 = 1 inch	1 = 0.1 inch
2 = 20 inches	2 = 2 inches	2 = 0.2 inch
3 = 30 inches	3 = 3 inches	3 = 0.3 inch
4 = 40 inches	4 = 4 inches	4 = 0.4 inch
5 = 50 inches	5 = 5 inches	5 = 0.5 inch
	6 = 6 inches	6 = 0.6 inch
	7 = 7 inches	7 = 0.7 inch
	8 = 8 inches	8 = 0.8 inch
	9 = 9 inches	9 = 0.9 inch

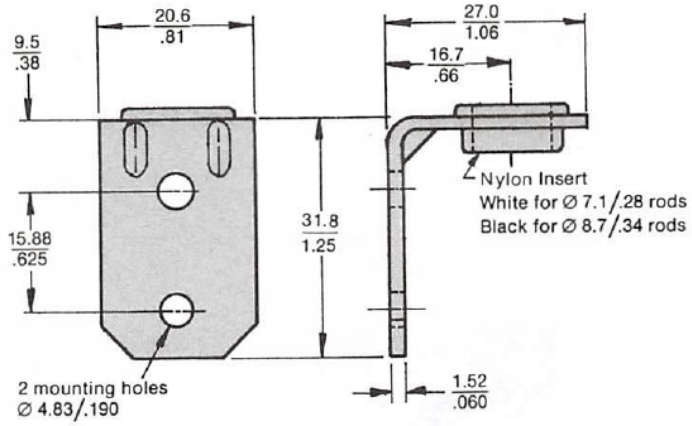
EXAMPLE: If your required length is **8.5 inches,** substitute **085** for the **XXX** portion of the basic part number.
e.g A5-21-085-10

If your required length is **18.5** inches, substitute **185** for the **XXX** portion of the basic part number.
e.g. A5-21-185-10

millimeter / inch millimeter/inch

Guide and keeper bracket detail

Guide and keeper brackets are interchangeable.



millimeter
inch

millimeter/inch

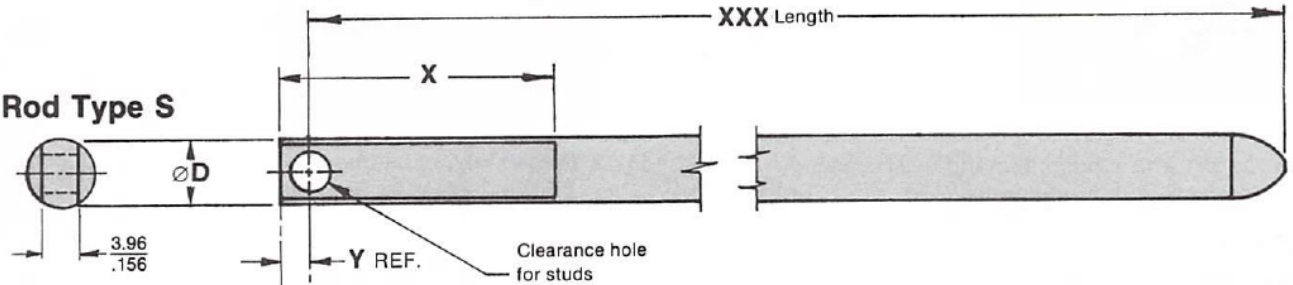
MATERIAL and FINISH

RODS: 2011 aluminum, natural.
BRACKETS: 1010 steel, DACROTIZED†.
BRACKET INSERTS: nylon, white or black.
FOR TYPE **H** ONLY, SPACERS: 12L14 steel, DACROTIZED†.
SCREWS: low carbon steel.

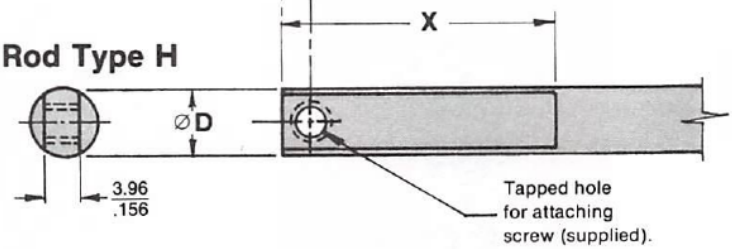
†Registered tradename of Metal Coatings International, Inc.

Rod detail

Rod Type S



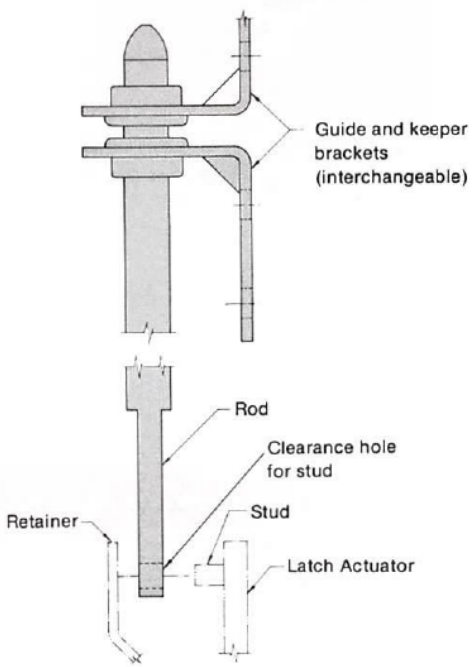
Rod Type H



Basic Part Number	Rod Assembly type	Ø D	Hole Size	X	Y
A5-21-XXX-10	S	7.1/.28	Ø 4.22/.166 clear.	30.2/1.19	3.2/.13
A5-22-XXX-10	H		Tapped No. 8-32		
A5-31-XXX-10	S	8.7/.34	Ø 4.98/.196 clear.	44.5/1.75	4.8/.19
A5-32-XXX-10	H		Tapped No. 8-32		

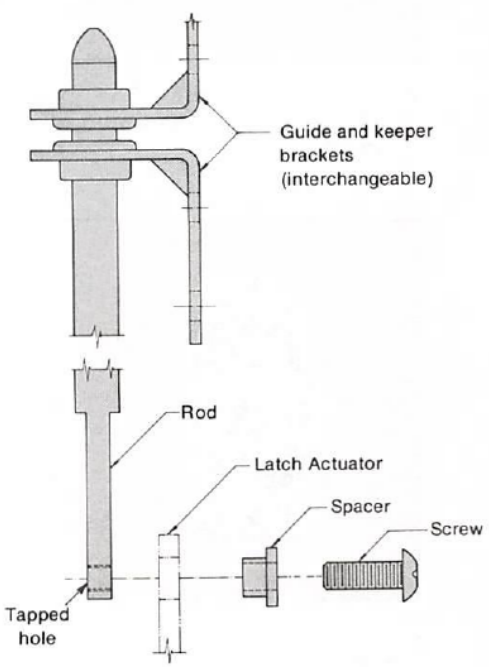
Type S assembly

To attach rod to latch actuators having integral studs and rod retainer.



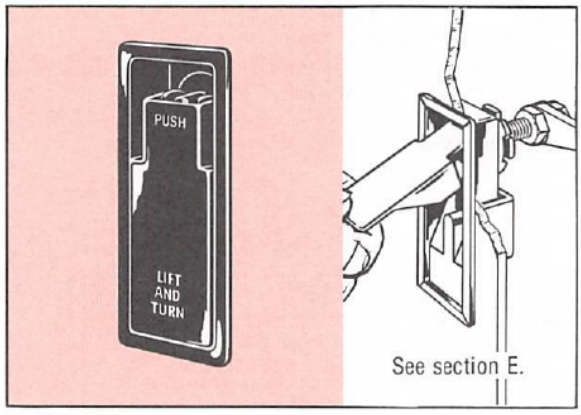
Type H assembly

To attach rod to latch actuators having Ø6.35/.250 holes.

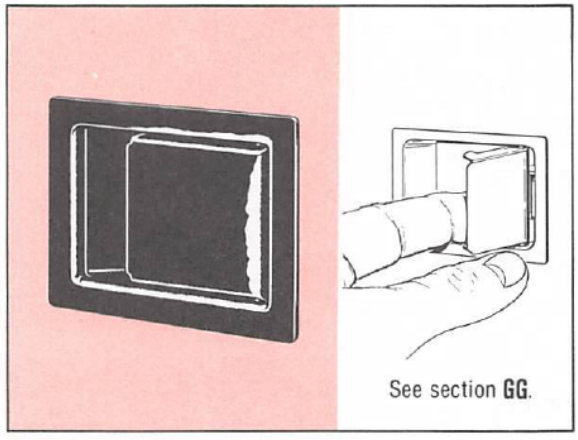


Black Latches

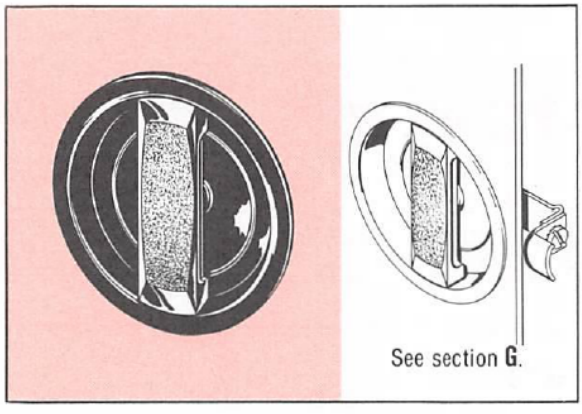
Now Southco has them *in stock* for your modern enclosure designs



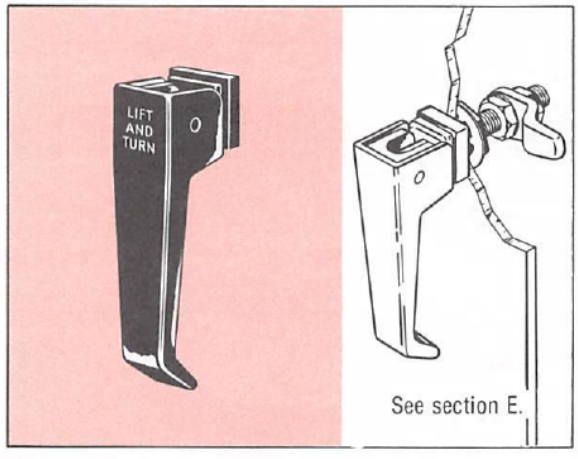
1. Flush lift-and-turn latch in a handsome black finish. Opens with a push, flip and twist, installs with one screw and mounting bracket.



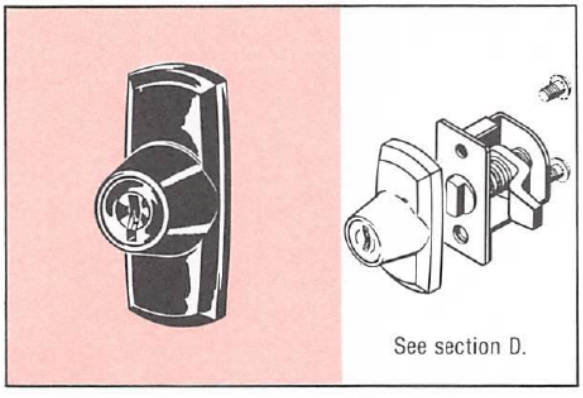
2. Black finished paddle latch, installed in seconds. Lift the paddle to open; slam to shut.



3. Black flush cup with chrome handle — installs without mounting hardware as you assemble it. One, two, or three point latching.



4. Black lift-and-turn latch compresses gasketed door to a pre-selected pressure, prevents door from vibrating.

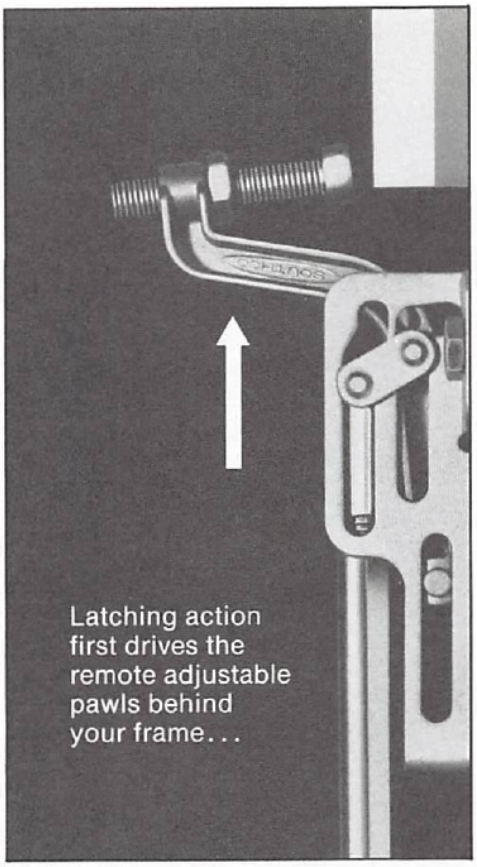


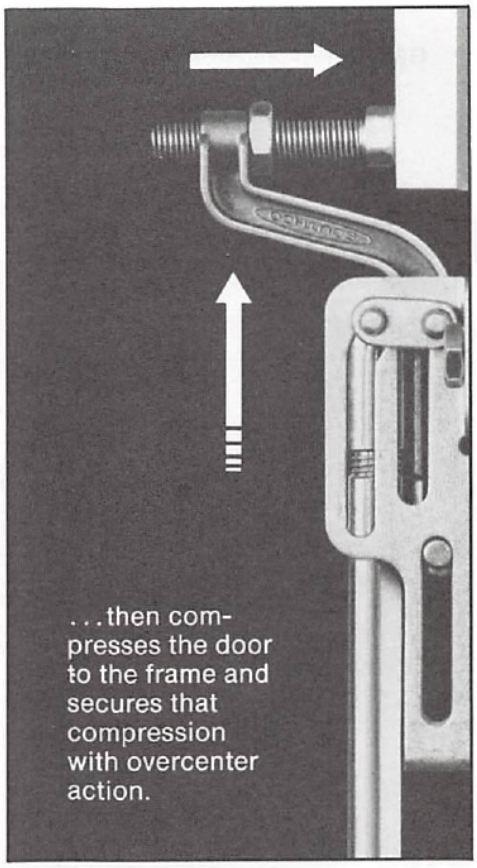
5. Black escutcheon with contrasting bright chrome key lock. Adjustable grip latch; extra turns on key draw door tighter.

SOUTHCO® fasteners

NEW

How to add remote compression to your choice of single point latches.

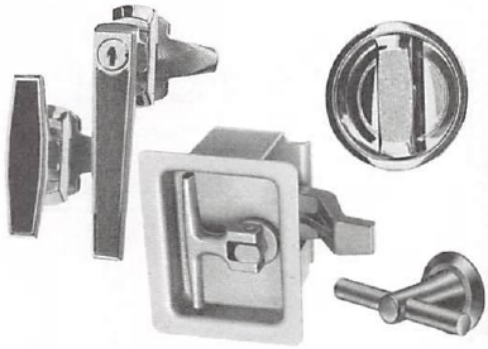


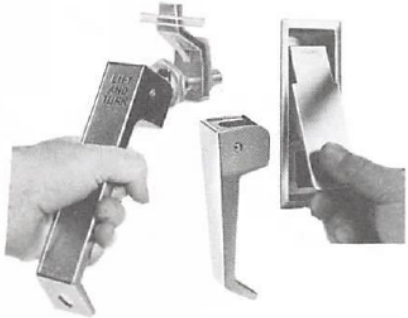


Now, with the quarter turn of a central operating latch, you can first drive two remote latches behind the frame and then apply a consistent compression of .25" at each of those two locations.

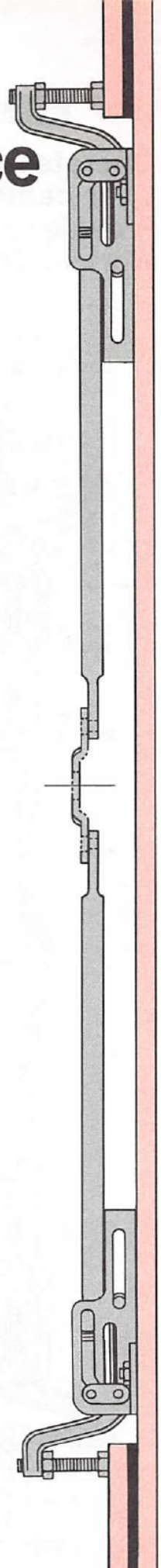
A single operating motion compresses environmental gasketing, EMI/RFI shielding, or warped doors at either top and bottom, or side to side corners.

Southco's Remote Compression System consists of two latch subassemblies and two connecting rods of equal length which mate with five Southco latch families.





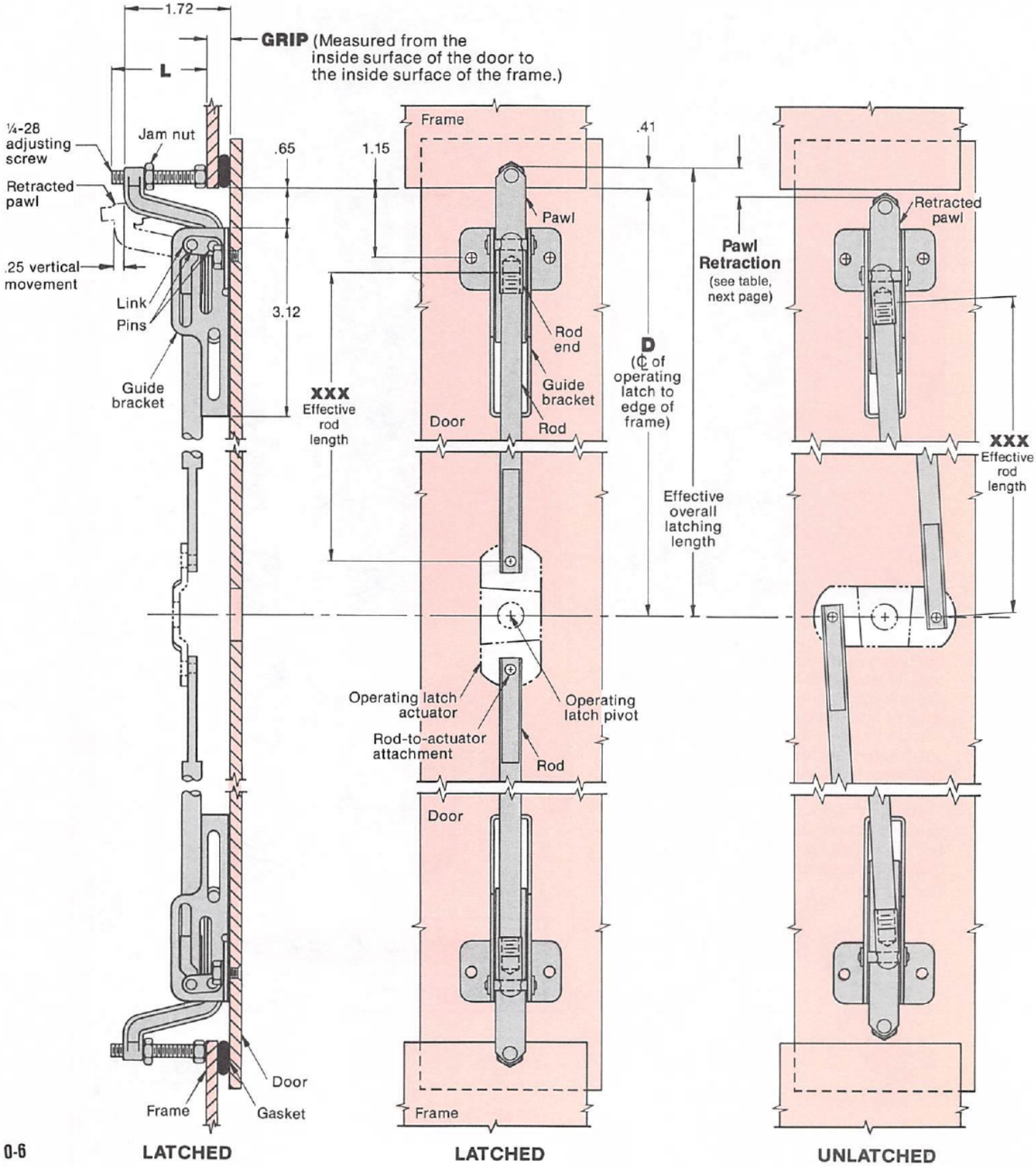
SOUTHCO®
fasteners



NEW

Remote Compression System

- Operates with a fractional turn.
- Over-center action first latches, then compresses.
- Provides consistent .25" compression for gasketed applications.
- Works with any of five Southco latch families.



Follow these four steps to select a remote compression system consisting of two remote latches and two rods of *equal length.* (When rods of unequal length are required, call for assistance in determining part number.)

1. Determine your basic remote assembly part number from the table below.
2. Calculate your effective rod length **(XXX)** = **D** minus **T** (constant, see table below).

   Rods to accommodate a **D** dimension of 31.5" or 35" are available from stock.

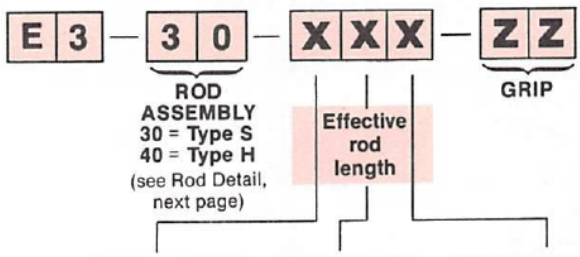
Operating Latch	Series	Basic Part Number	T	Pawl Retraction
No. 01 Flush Cup Latches	100, 200, 300	E3-30-XXX-ZZ	2.21	.50
No. 24 Flush Cup Latches	300, 400, 800, 900	E3-40-XXX-ZZ	2.15	.44
No. 62 Lift-and-turn™ Latches	500		2.71	1.00
	600		2.34	.63
	800		2.71	1.00
No. 68 Bail and T-handle Latches	10,20		2.15	.44
	70,80		2.39	.63
No. 92 L - and T-handle Latches	ALL	E3-30-XXX-ZZ	2.21	.50

3. Replace **XXX** in the basic part number with your effective rod length expressed in inches and tenths of inches.
4. Determine the **ZZ** portion of your basic part number which denotes **GRIP** (see previous page) of remote latch in closed position from the following table:

GRIP		ZZ	Screw length
Min.	Max.		L
0	.375	50	1.56
.25	.625	60	1.31
.50	.875	70	1.06
.75	1.18	80	.81

Note: For a *single* remote compression latch only (without rod) determine your **GRIP** and order by using part number E3-20-101-**ZZ**.

Part Number Formulation:



TENS of Inches
0 = zero
1 = 10 inches
2 = 20 inches
3 = 30 inches
4 = 40 inches

UNIT inches
0 = zero
1 = 1 inch
2 = 2 inches
3 = 3 inches
4 = 4 inches
5 = 5 inches
6 = 6 inches
7 = 7 inches
8 = 8 inches
9 = 9 inches

TENTHS of inches
0 = zero
1 = 0.1 inch
2 = 0.2 inch
3 = 0.3 inch
4 = 0.4 inch
5 = 0.5 inch
6 = 0.6 inch
7 = 0.7 inch
8 = 0.8 inch
9 = 0.9 inch

Example: If your required length is 29.3 inches, substitute 293 for the **XXX** portion of the basic part number **e.g. E3-30-293-10.**

XXX MIN. = 085
XXX MAX. = 480

MATERIAL and FINISH

GUIDE BRACKET is case hardened 1010 steel, LINK is 1010 steel, JAM NUT and ADJUSTING SCREWS are low carbon steel, these components are DACROTIZED†.
PAWL: die cast zinc plus chemical protective film.
ROD END: 7075 aluminum, natural.
PINS: low carbon steel, case hardened and zinc plated plus bright chromate dip.
BOTH ROD TYPES: 2011 aluminum, natural. DACROTIZED†. ACTUATOR SCREWS are low carbon steel, zinc plated plus bright chromate dip.

Material and finish notes for the operating latches can be found on their respective literature or handbook pages.

†Registered tradename of Metal Coatings International, Inc.

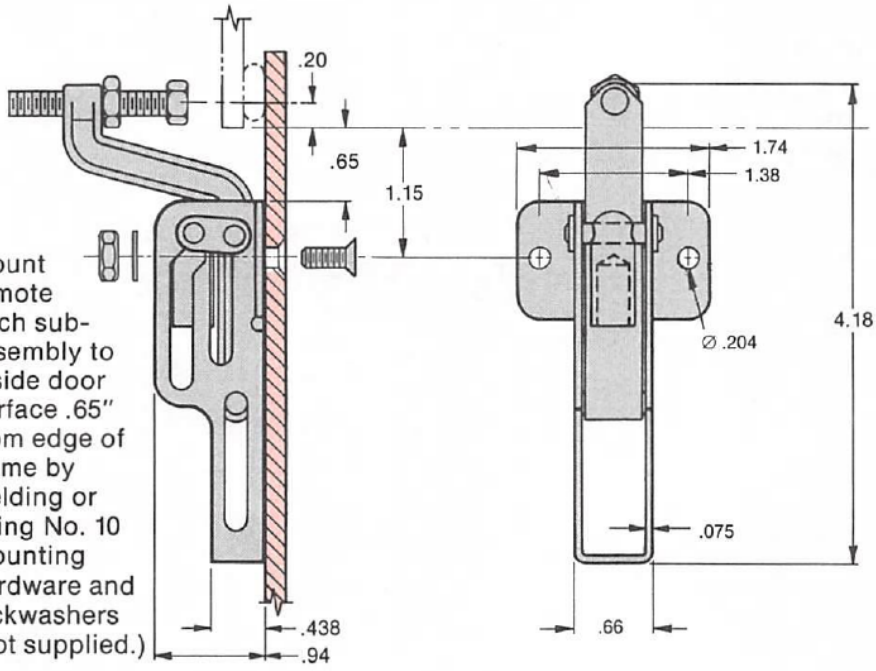
Strength Guideline

(load exerted on frame by adjusting screw)
100 lbs. Maximum working load
250 lbs. Average ultimate load

Maximum working load exerted on frame by remote latches varies with rod length:
100 lbs. for 1' rod
100 lbs. for 2' rod
60 lbs. for 3' rod

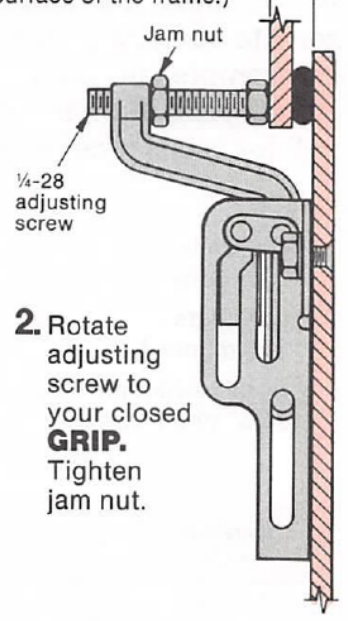
Variations in operating latch, gasketing and rod length will effect the maximum load applied by the system.
Ask for samples for testing.

Installation

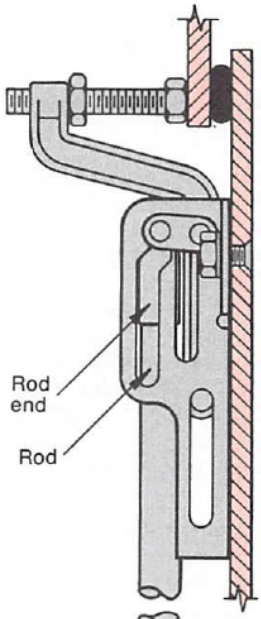


1. Mount remote latch sub-assembly to inside door surface .65" from edge of frame by welding or using No. 10 mounting hardware and lockwashers (not supplied.)

GRIP
(Measured from the inside surface of the door to the inside surface of the frame.)

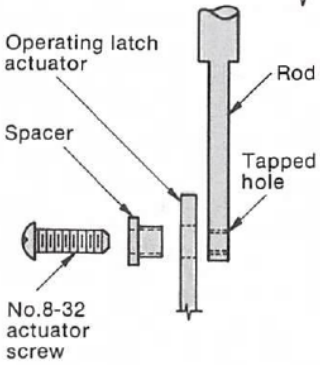


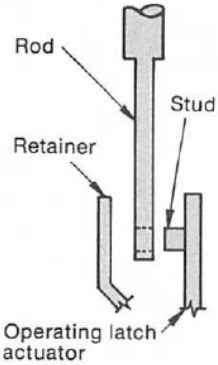
2. Rotate adjusting screw to your closed **GRIP.** Tighten jam nut.



3. With remote and operating latches in closed position, thread rod into rod end until hole in rod is centered on mounting hole or stud of actuator.

4. Attach rod to actuator. Operate latch to check for correct installation.





Rod Type H

For attaching rod to latch actuators having Ø .250 holes.

Rod Type S

For attaching rod to latch actuators having integral studs and rod retainer.

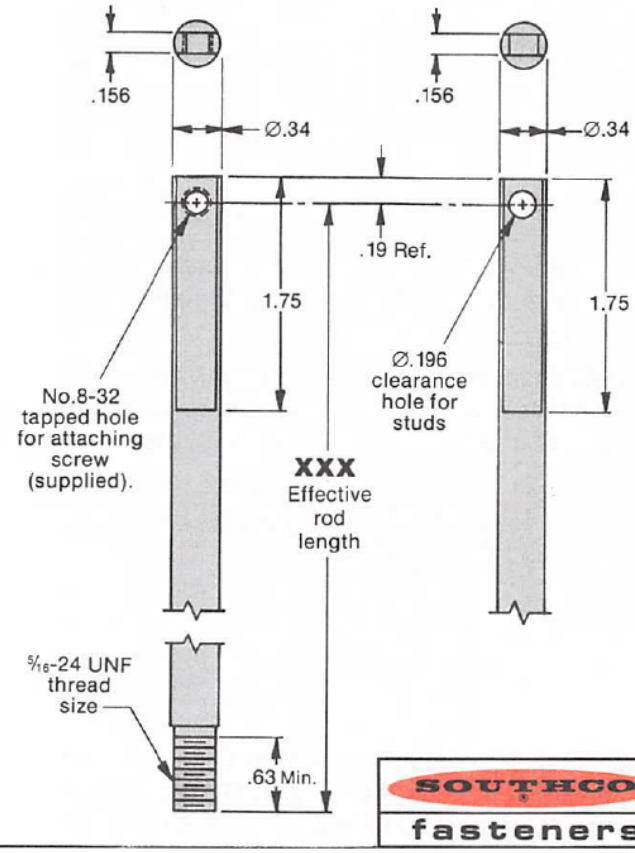
Rod Detail

Rod Type H

Basic Part Number
E3-40-XXX-ZZ

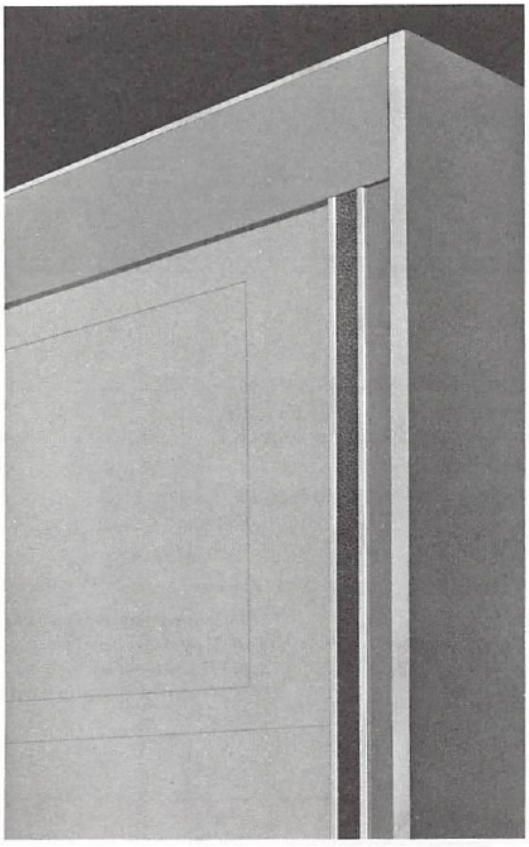
Rod Type S

Basic Part Number
E3-30-XXX-ZZ

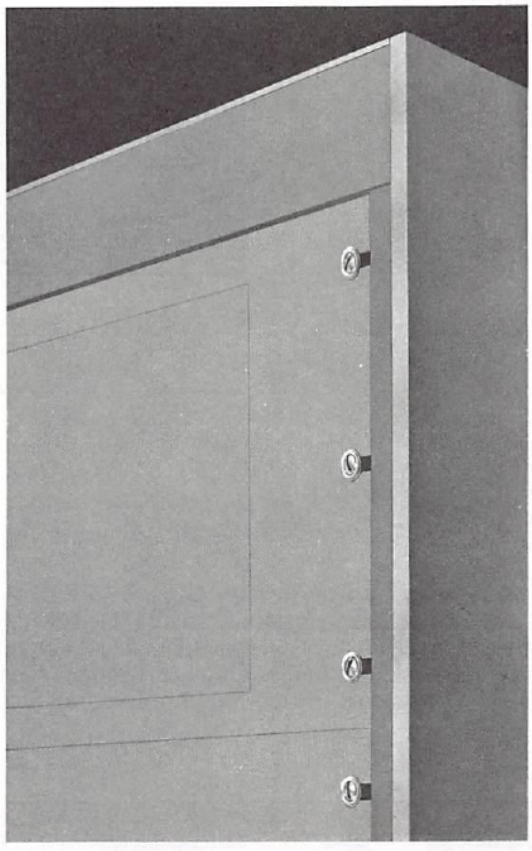


SOUTHCO fasteners

Nobody loves a screwhead!



If your customer could buy a package that looks like this . . .

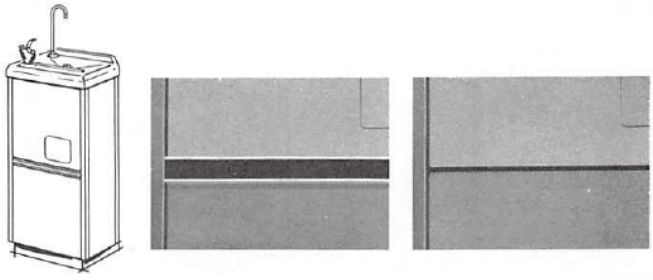


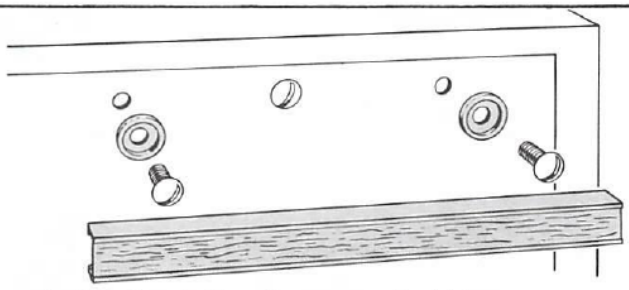
Would he want one that looks like this?

THE DIFFERENCE IS SOUTHCO TRIMSTRIPS®

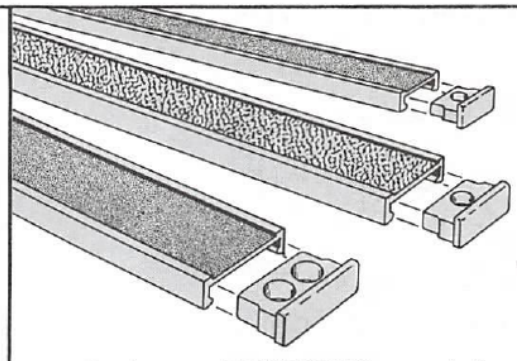
Why should *your* cabinet be an also-ran in the styling race? It's easy to do the job right. See for yourself.

Southco No. 98 Hide-a-Head TRIMSTRIPS are an excellent way to hide screw or rivet heads, paint jointures, slots, gaps and seams. And, they add styling and protection. These handsome aluminum feature strips come in a brushed anodized finish. They are furnished with trim of either walnut-grained or pebbled-black vinyl, and can be ordered plain.





Installation is literally a snap. To hide screw or rivet heads, you don't have to punch or drill new holes. Thermoplastic retainers fit beneath the heads you want to hide. TRIMSTRIPS are simply snapped onto retainers. And they can be removed just as easily for servicing. Simply slide a plastic or plastic coated blade (to avoid scratching panel) under TRIMSTRIP and pry it free of the retainers.

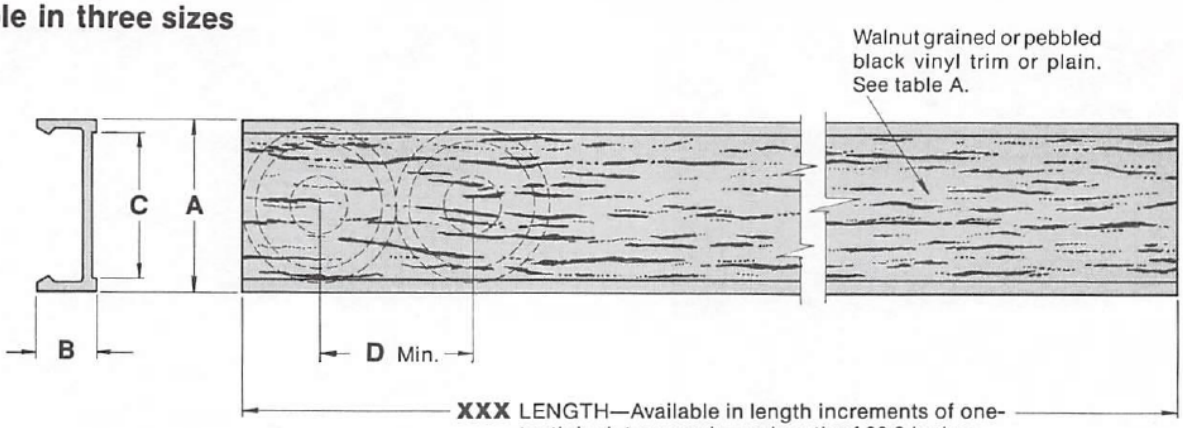


TRIMCAPS

Be choosey. TRIMSTRIPS come in three sizes to fit No. 4, No. 10 and $\frac{5}{16}$" screws. They're available in graduated increments of 0.1 in. with lengths up to 99.9 in. TRIMCAPS can be used to close off exposed ends. Simply snap them in.

No. 98 HIDE-A-HEAD TRIMSTRIPS®

- **Ideal finishing detail**
- **Available in three sizes**



XXX LENGTH—Available in length increments of one-tenth inch to a maximum length of 99.9 inches. See important instructions (opposite page) for ordering specified length.

See box, opposite page, for standard lengths available from stock. NOTE: 50 piece min. order for special cut lengths.

MATERIAL and FINISH
TRIMSTRIP: 6463 aluminum, clear anodized brushed finish.
TRIM: vinyl.

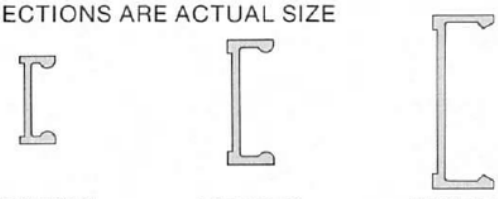
To select proper Trimstrip series, enter Table A with your mounting screw size. The second column lists the Trimstrip series designed for that screw size. Read across to find the basic part number under trim (plain, walnut or black). Instructions for completing basic part number for your required length are at top of opposite page.

NOTE: Each part number shown in TABLE A covers one Trimstrip and specified number of retainers (depending on Trimstrip length, see table B below.)

TABLE A

Mounting screw size	Basic Assembly Part No.			Trimstrip Dimensions				Retainer Dimensions			Trimstrip series
	Plain without trim	With walnut grain vinyl trim	With black vinyl trim	A	B	C	D	E	F	G	
No. 3 or No. 4	98-10-**XXX**-11	98-10-**XXX**-12	98-10-**XXX**-13	.460	.192	.385	25/64	.262	.118	25/64	10
No. 8 or No. 10	98-50-**XXX**-11	98-50-**XXX**-12	98-50-**XXX**-13	.652	.243	.510	19/32	.459	.197	19/32	50
1/4" or 5/16"	98-70-**XXX**-11	98-70-**XXX**-12	98-70-**XXX**-13	.901	.322	.760	27/32	.710	.318	27/32	70

SECTIONS ARE ACTUAL SIZE

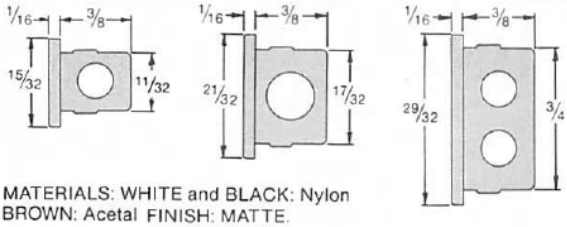


SERIES 10 SERIES 50 SERIES 70

TRIM CAPS (end covers)

SHOWN ACTUAL SIZE

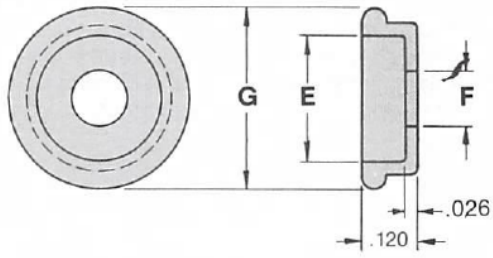
Order separately by part number.



MATERIALS: WHITE and BLACK: Nylon
BROWN: Acetal FINISH: MATTE.

Trimstrip series	TRIM CAP PART NUMBERS		
	WHITE	BROWN	BLACK
10	98-11 ■	98-12 ■	98-13 ■
50	98-51 ■	98-52 ■	98-53 ■
70	98-71 ■	98-72 ■	98-73 ■

RETAINERS See Table A for dimensions



MATERIAL
Polycarbonate, natural.

TABLE B

See instruction notes on opposite page for length formulation. See Selection Table A above for values of XX.

TRIMSTRIP PART NUMBERS BY LENGTH DESIGNATION ONLY	NUMBER OF RETAINERS SUPPLIED
98-XX-001-XX to 98-XX-089-XX	2
98-XX-090-XX to 98-XX-149-XX	3
98-XX-150-XX to 98-XX-189-XX	4
98-XX-190-XX to 98-XX-229-XX	5
98-XX-230-XX to 98-XX-279-XX	6
98-XX-280-XX to 98-XX-379-XX	8
98-XX-380-XX to 98-XX-579-XX	12
98-XX-580-XX to 98-XX-999-XX	20

■ From stock, subject to prior sale.

IMPORTANT INSTRUCTIONS— How to order trimstrips by length

Trimstrip may be ordered to *any length,* in increments of one-tenth inch, to a maximum of 99.9 inches. IMPORTANT: You must complete the *basic part number* (from Table A on preceding page), to order your required length.

To complete basic part number you substitute, for the XXX portion of the basic part number, your length expressed in inches and tenths of inches formulated as shown below.

PART NUMBER FORMULATION

98 — 10 — XXX — 12

PRODUCT CLASS NO.
98 = Trimstrips

TRIMSTRIP SIZE
(Series)
10 = For No. 4 screws
50 = For No. 10 screws
70 = For 5/16" screws

LENGTH

TRIM STYLE
11 = Plain — no trim
12 = Walnut grain vinyl trim
13 = Black vinyl trim

Length in TENS of inches	Length in UNIT inches	Length in TENTHS of inches
0 = zero	0 = zero	0 = zero
1 = 10 inches	1 = 1 inch	1 = 0.1 inch
2 = 20 inches	2 = 2 inches	2 = 0.2 inch
3 = 30 inches	3 = 3 inches	3 = 0.3 inch
4 = 40 inches	4 = 4 inches	4 = 0.4 inch
5 = 50 inches	5 = 5 inches	5 = 0.5 inch
6 = 60 inches	6 = 6 inches	6 = 0.6 inch
7 = 70 inches	7 = 7 inches	7 = 0.7 inch
8 = 80 inches	8 = 8 inches	8 = 0.8 inch
9 = 90 inches	9 = 9 inches	9 = 0.9 inch

EXAMPLE: If your required length is **8.5 inches,** substitute **085** for the XXX portion of the basic part number.
e.g. : 98-10-085-11
If your required length is **18.5 inches,** substitute **185** for the XXX portion of the basic part number.
e.g. : 98-10-185-11

NOTE: The following LENGTHS are standard and available from stock in each series and each trim style. ALL OTHER LENGTHS are manufactured to order—50 piece min. order for special cut lengths.

LENGTH (inches)	PART NUMBER See formulation above or Table A—opp. page.	Number of retainers supplied per length ordered.
12"	98-XX-120-XX	3
24"	98-XX-240-XX	6
36"	98-XX-360-XX	8
48"	98-XX-480-XX	12
60"	98-XX-600-XX	20
120"	98-XX-1200-XX	30

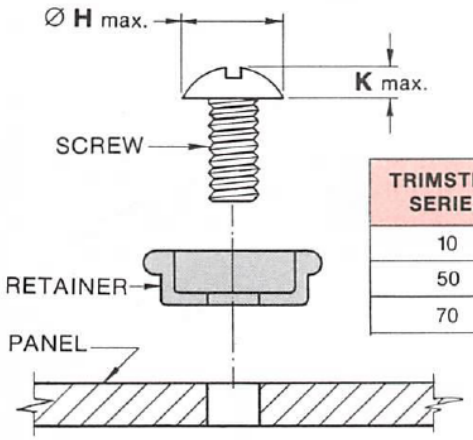
INSTALLATION

The number of retainers supplied per Trimstrip depends on Trimstrip length (see Table B under retainers, preceding page). The minimum number used is two (one at each end for Trimstrips less than 9" long.) For Trimstrips 9" and longer, the additional retainers are spaced between the end retainers.

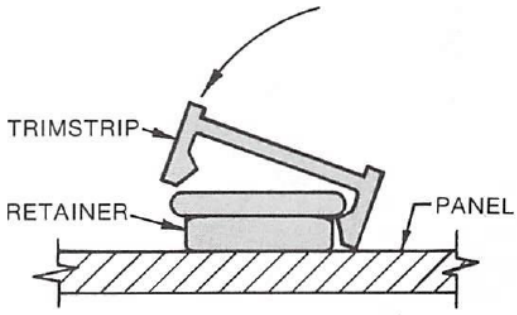
The retainers are placed under the heads of selected mounting screws as the panel is installed. Trimstrips snap over the retainers. For best results, see sketch below right for proper method of snapping Trimstrip in place.

If TRIMCAPS are ordered, simply snap them into ends of Trimstrips.

Install retainers under screw heads as shown.



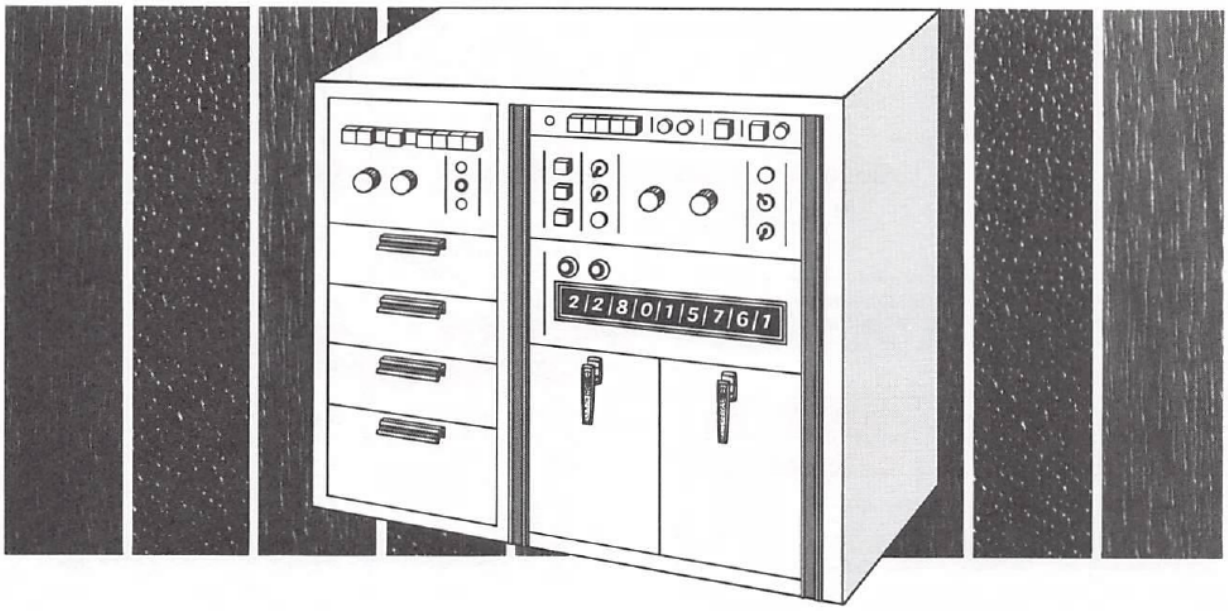
TRIMSTRIP SERIES	Ø H max.	K max.
10	.234	.102
50	.426	.153
70	.672	.232



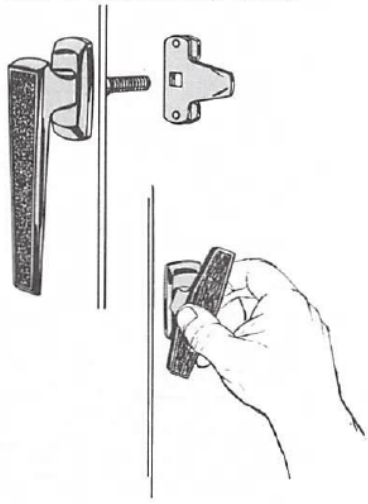
Install Trimstrip by hooking one leg of Trimstrip edge under lip of retainer and rotating other leg down over retainer as indicated. To remove, pry up under one edge of Trimstrip, just the reverse of the way you installed it.

accessories help make the cabinet . . .

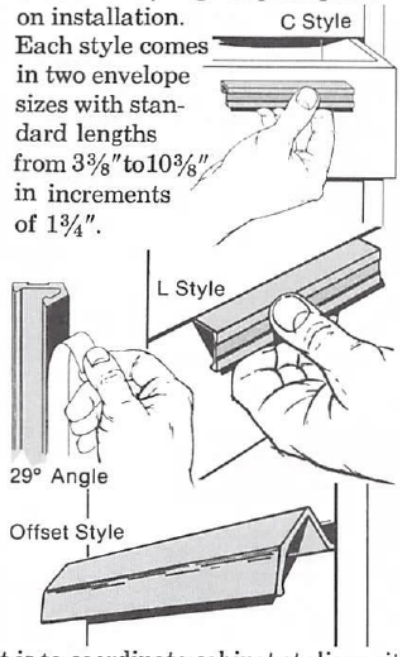
Install a Southco Pull or Latch and add a TRIMSTRIP® to match



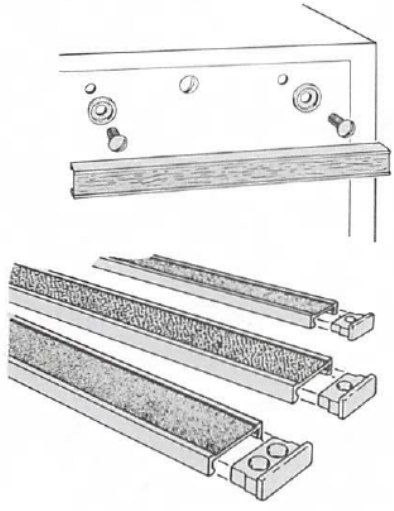
1. Start handsomely with Southco 92L or 92T Latches. Solid die cast handles are finished in sparkling chrome and accented with pebbled-black or walnut-grained trim. Handle assembly attaches to door with two concealed screws. Pawl is quickly adjusted to thin or thick frames and readily adaptable to 1, or 3-point latching. Both L and T Styles available for right or left hand operation . . . with or without key locks.



2. Add Southco No. 25 Designer Pulls to drawers (or doors). Four distinctive designs are beautifully styled in brushed anodized aluminum. All are available with black or walnut-grained trim. Pulls attach quickly with screws. C and 29° Angle Styles also available with pressure-sensitive adhesive backing for quick press-on installation. Each style comes in two envelope sizes with standard lengths from 3⅜" to 10⅜" in increments of 1¾".



3. Finish in style with decorative Southco TRIMSTRIPS®. They hide screw or rivet heads, paint jointures, slots, gaps, and seams. Installation is literally a snap. Thermoplastic retainers fit beneath the screw heads you want to hide. Trimstrips are simply snapped onto retainers. Three sizes are available to fit No. 4, No. 10 and 5/16" screws. Each size is supplied in lengths up to 99.9 inches in increments of 0.1 inch.



See how easy it is to coordinate cabinet styling with Southco Latches, Pulls and Trimstrips.

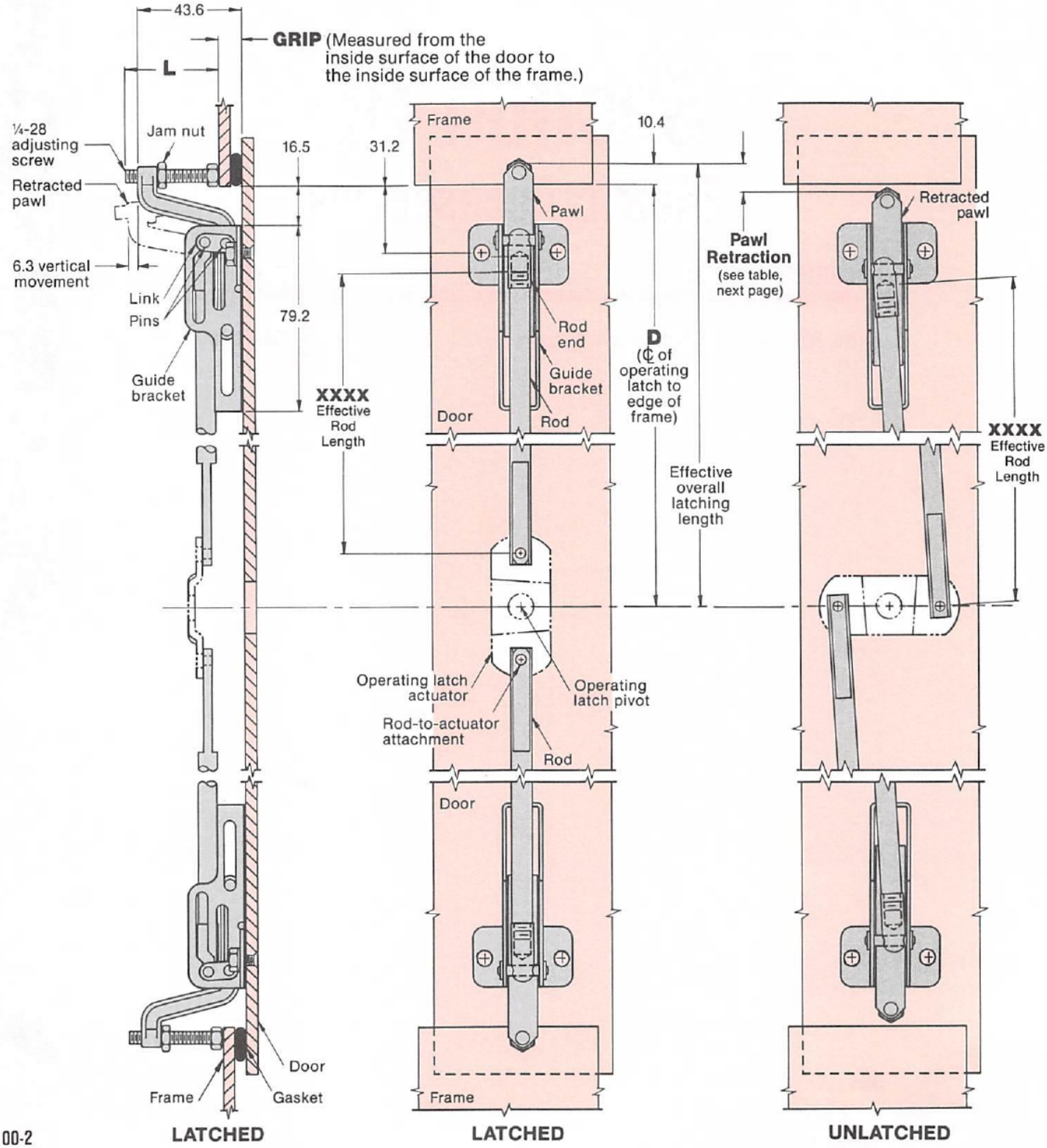
SOUTHCO fasteners

Section 00
Metric Accessories

contents guide	page
No. RS-E3 Remote Compression System	00-2 to 00-4

METRIC Remote Compression System

- **Operates with a fractional turn.**
- **Over-center action first latches, then compresses.**
- **Provides consistent 6.3 mm compression for gasketed applications.**
- **Works with any of five Southco latch families.**



METRIC

Follow these four steps to select a remote compression system consisting of two remote latches and two rods of *equal length.* (When rods of unequal length are required, call for assistance in determining part number.)

1. Determine your basic remote assembly part number from the table below.

2. Calculate your effective rod length **(XXX)** = **D** minus **T** (constant, see table below).

Operating Latch	Series	Basic Part Number	T	Pawl Retraction
No. 01 Flush Cup Latches	100, 200, 300	E3-30-**XXXX**-**ZZ**	19.1	12.7
No. 24 Flush Cup Latches	300, 400, 800, 900	E3-40-**XXXX**-**ZZ**	17.5	11.2
No. 62 Lift-and-turn™ Latches	500		31.8	25.4
	600		22.2	19.1
	800		31.8	25.4
No. 68 Bail and T-handle Latches	10,20		17.5	11.2
	70,80		22.2	16.0
No. 92 L - and T-handle Latches	ALL	E3-30-**XXXX**-**ZZ**	19.1	12.7

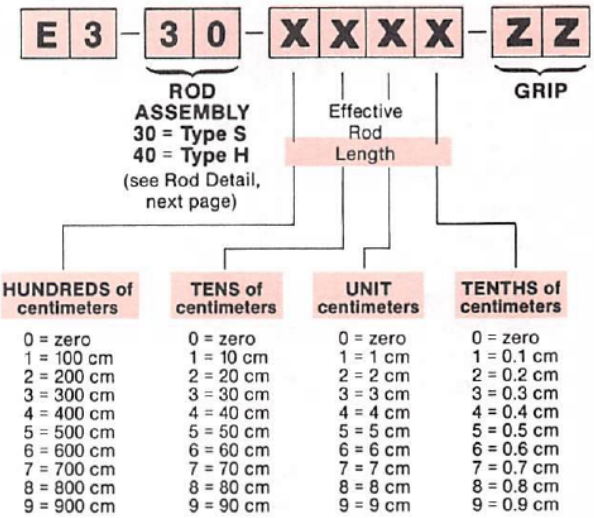
3. Replace **XXXX** in the basic part number with your effective rod length expressed in centimeters and tenths of centimeters.

4. Determine the **ZZ** portion of your basic part number which denotes **GRIP** (see previous page) of remote latch in closed position from the following table:

GRIP		ZZ	Screw length
Min.	Max.		L
0	9.5	50	39.5
6.4	15.9	60	33.3
12.7	22.2	70	26.9
19.1	30.0	80	20.6

Note: For a *single* remote compression latch only (without rod) determine your **GRIP** and order by using part number E3-20-101-**ZZ**.

Part Number Formulation:



EXAMPLE: If Your required length is 85 cm, substitute 0850 for the **XXXX** portion of the basic part number.
e.g. E3-30-0850-10.

XXXX MIN = 2160
XXXX MAX = 1219

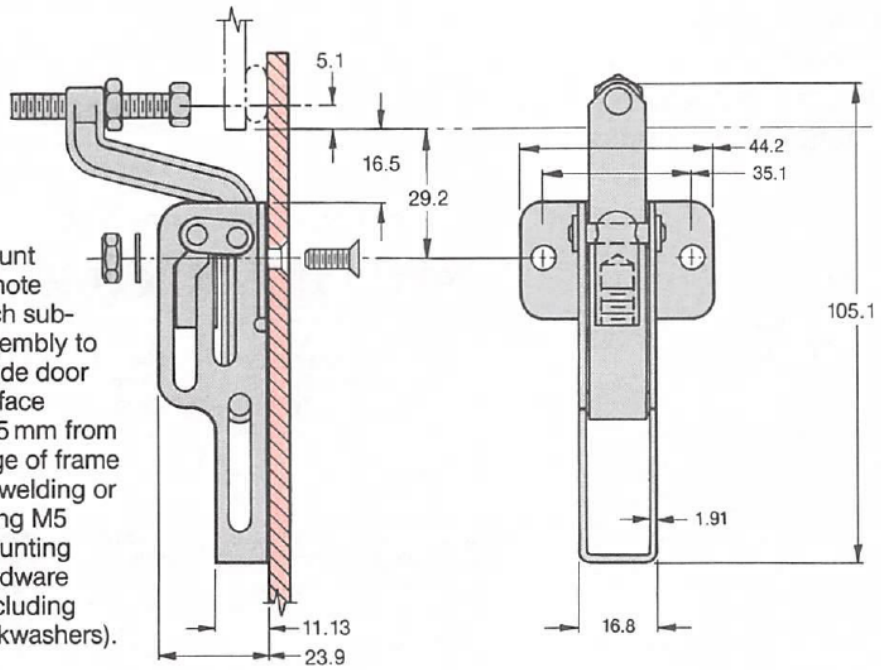
MATERIAL and FINISH
GUIDE BRACKET is case hardened steel, LINK is steel, JAM NUT and ADJUSTING SCREWS are low carbon steel, these components are DACROTIZED†.
PAWL: die cast zinc plus chemical protective film.
ROD END and BOTH ROD TYPES are aluminum, natural.
PINS: low carbon steel case hardened and zinc plated plus bright chromate dip.
For Type H Rod only: SPACERS are steel, DACROTIZED†. ACTUATOR SCREWS are low carbon steel, zinc plated plus bright chromate dip.

Material and finish notes for the operating latches can be found on their respective literature or handbook pages.

†Registered tradename of Metal Coatings International, Inc.

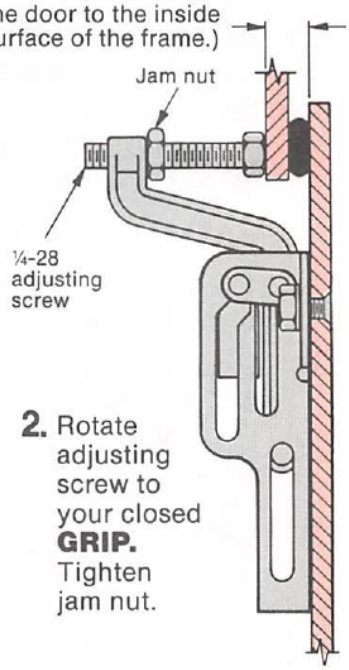
Strength Guideline
(load exerted on frame by adjusting screw)
445 N Maximum working load
1112 N Average ultimate load
Variations in operating latch, gasketing and rod length will effect the maximum load applied by the system.
Ask for samples for testing.

Installation METRIC

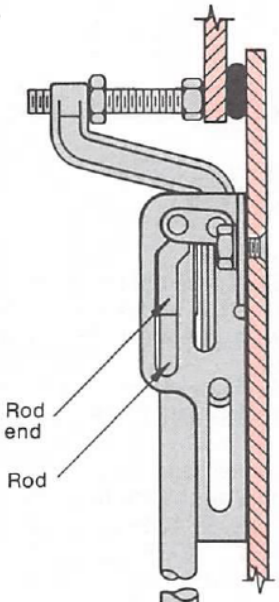


1. Mount remote latch sub-assembly to inside door surface 16.5 mm from edge of frame by welding or using M5 mounting hardware (including lockwashers).

GRIP
(Measured from inside surface of the door to the inside surface of the frame.)

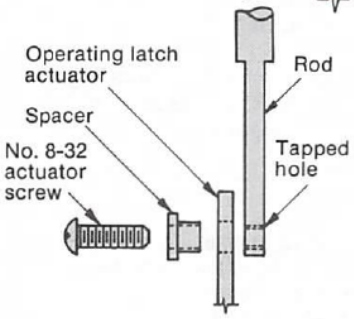


2. Rotate adjusting screw to your closed **GRIP.** Tighten jam nut.



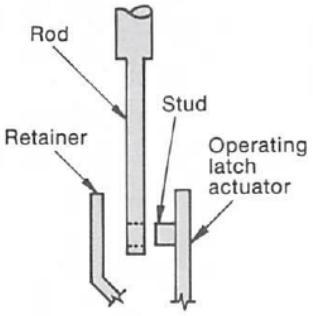
3. With remote and operating latches in closed position, thread rod into rod end until hole in rod is centered on mounting hole or stud of actuator.

4. Attach rod to actuator. Operate latch to check for correct installation.



Rod Type H

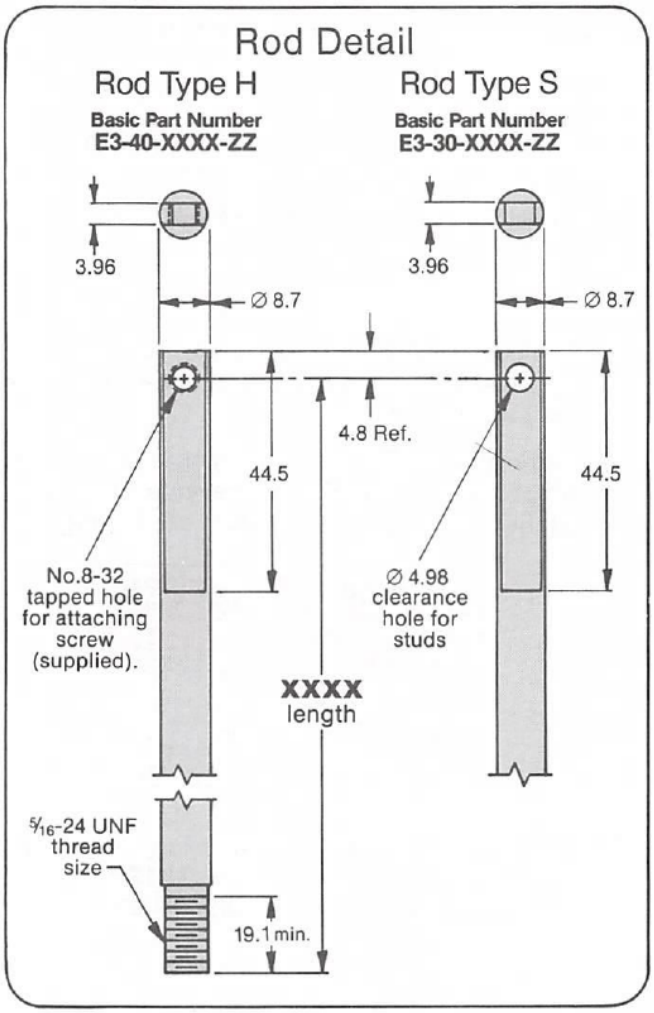
For attaching rod to latch actuators having Ø 6.3 holes.



Rod Type S

For attaching rod to latch actuators having integral studs and rod retainer.

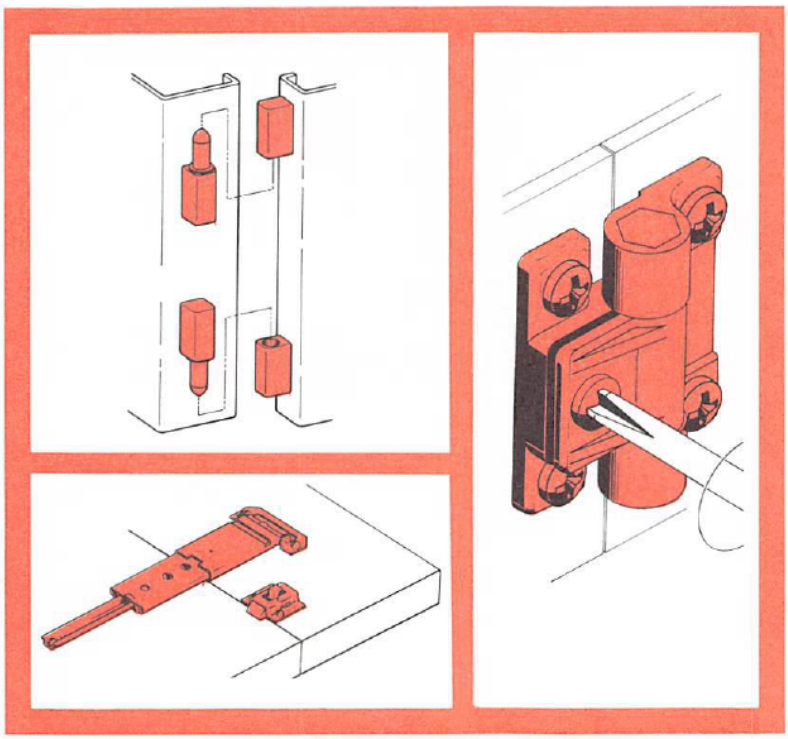
Rod Detail



Section P
Hinges

contents guide | **page**

No. 96 Metal lift-off hinges ..... P-1 to P-3
No. 96 Nylon lift-off hinges ..... P-4 to P-4
No. C4 Slideaway™ Leaf Hinge ..... P-6 to P-7
No. E6 Adjustable Hinges ..... P-8 to P-9

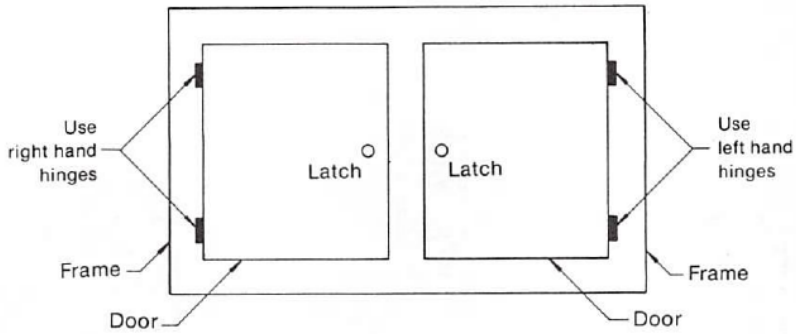


Section P
Hinges

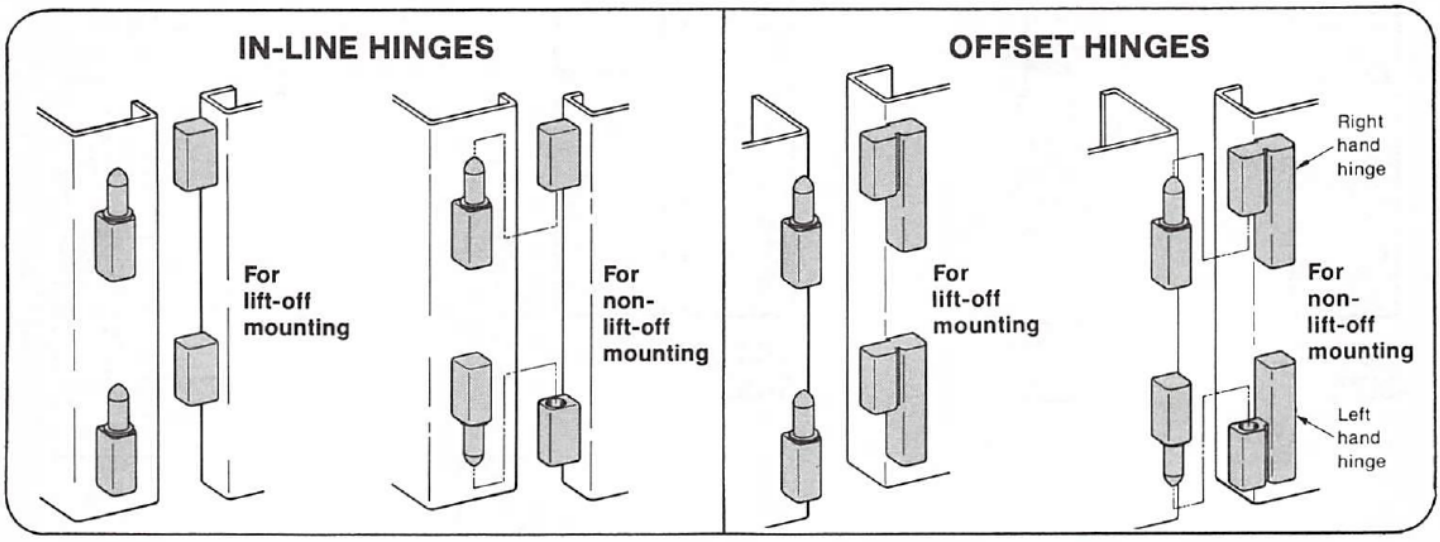
contents guide | **page**

No. 96 Metal lift-off hinges ..... P-1 to P-3
No. 96 Nylon lift-off hinges ..... P-4 to P-4
No. C4 Slideaway™ Leaf Hinge ..... P-6 to P-7
No. E6 Adjustable Hinges ..... P-8 to P-9

Metal lift-off hinges



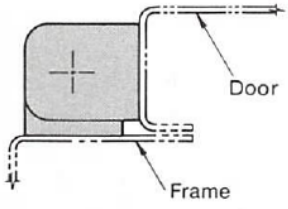
MATERIAL and FINISH
KNUCKLE: die cast zinc, matte black polyester powder coated or natural.
PIN: 6061 aluminum with black fluoropolymer coating.
WASHER: nylon, black.



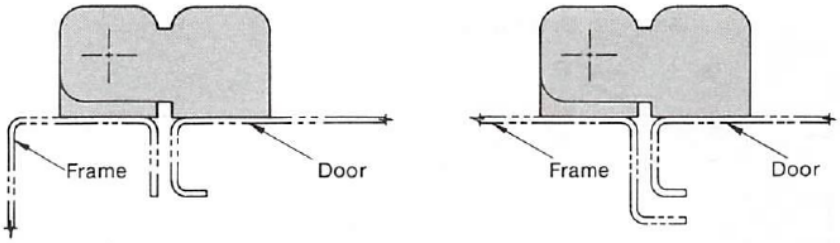
Offset hinges must be ordered as left hand or right hand assemblies (see diagram above).

MOUNTING VARIATIONS

For In-line Hinges



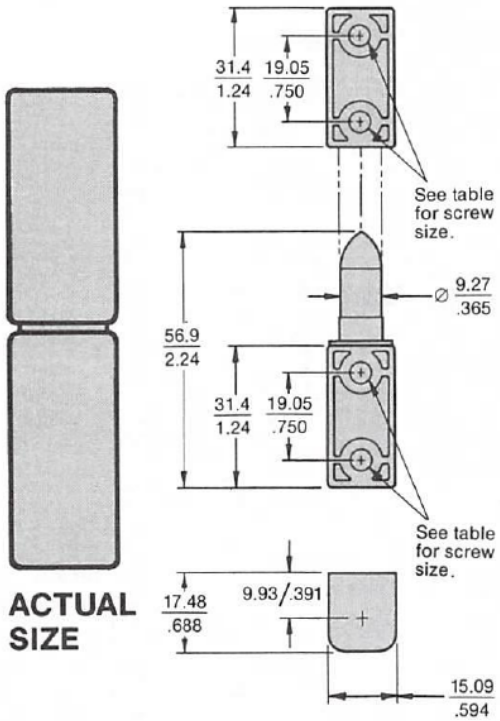
For Offset Hinges



SOUTHCO® fasteners

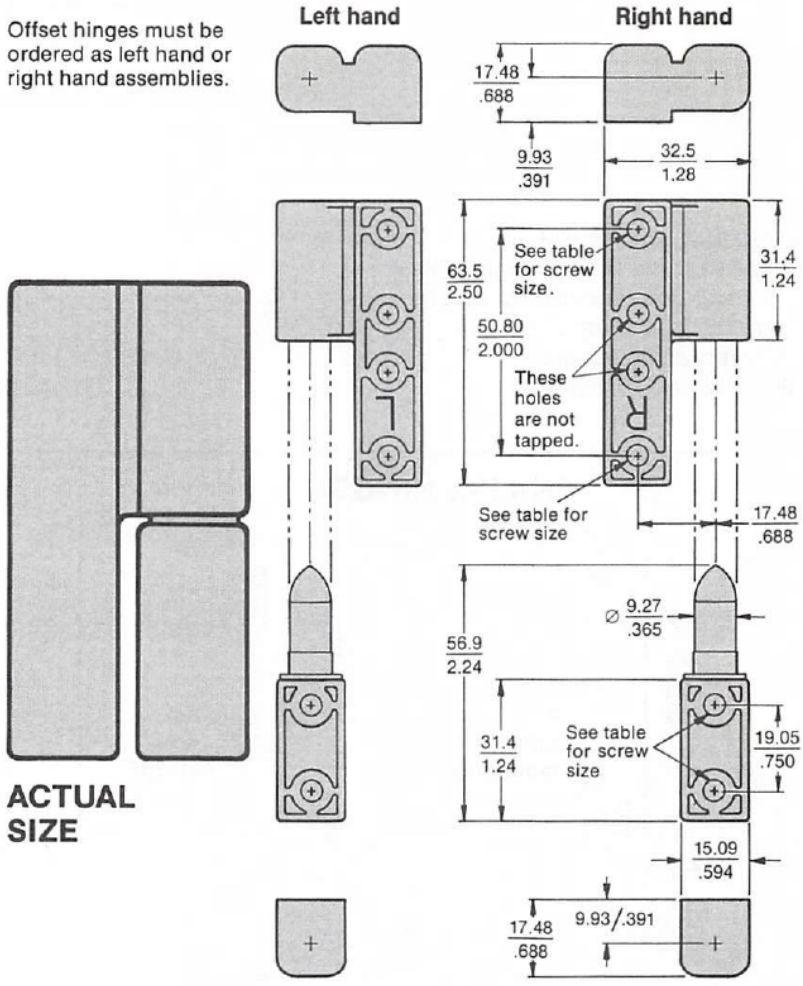
In-line Hinges

In-line hinges can be used interchangeably on either left. or right hand side of doors.



Offset Hinges

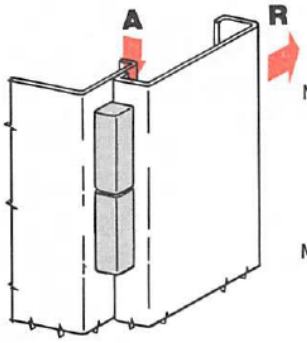
Offset hinges must be ordered as left hand or right hand assemblies.



In-line Hinges

FINISH	Use screw size	PART NUMBERS
matte black coat	10-32	96-10-500-50 ■
	M5 x 0.8	96-50-500-50 ■
natural	10-32	96-10-500-33 ■
	M5 x 0.8	96-50-500-33 ■

Strength Guidelines



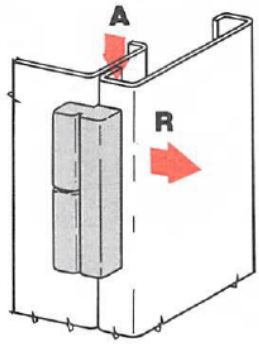
R
Maximum working load
1334 N/300 lbs.
Average ultimate load
4759 N/1070 lbs.

A
Maximum working load
2224 N/500 lbs.
Average ultimate load
9608 N/2160 lbs.

Offset Hinges

FINISH	Use screw size	PART NUMBERS	
		Left hand	Right hand
matte black coat	10-32	96-10-520-50 ■	96-10-510-50 ■
	M5 x 0.8	96-50-520-50 ■	96-50-510-50 ■
natural	10-32	96-10-520-33 ■	96-10-510-33 ■
	M5 x 0.8	96-50-520-33 ■	96-50-510-33 ■

Strength Guidelines



R
Maximum working load
1112 N/250 lbs.
Average ultimate load
2830 N/535 lbs.

A
Maximum working load
1334 N/300 lbs.
Average ultimate load
5738 N/1290 lbs.

millimeter
inch millimeter/inch

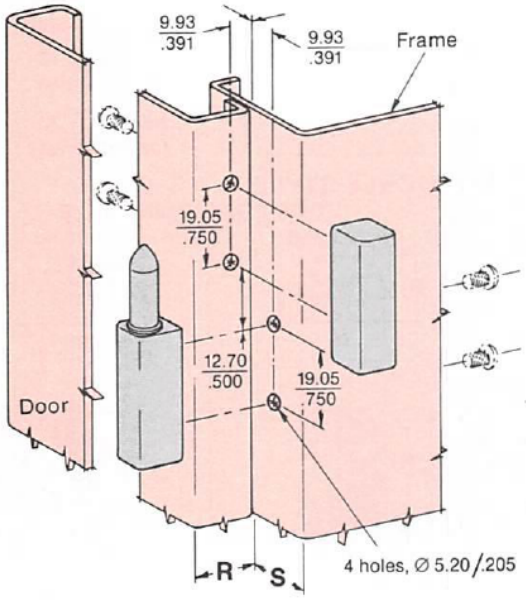
■ From stock, subject to prior sale.

DOOR AND FRAME PREPARATION

NOTE: To insure lift-off capability, the *lower* knuckle must be installed on the frame, the *upper* knuckle on the door.

NOTE: For non-lift-off mounting one hinge knuckle must be mounted *AFTER* the door is hung.

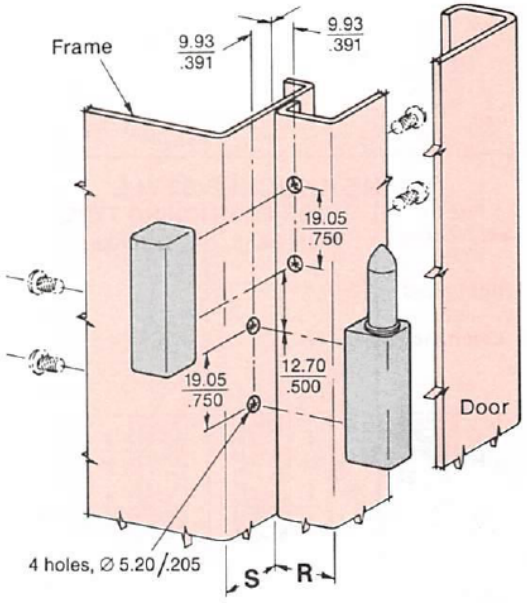
IN-LINE HINGE . . . Left hand



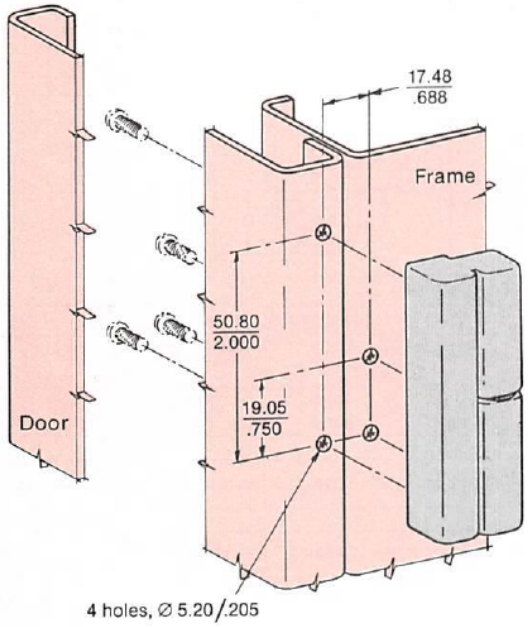
screw length = door (or frame thickness + 5.08/.200. (Screws not supplied.)

For door to open a full 180°, one of the two dimensions, **R** or **S**, must be less than 19.9/.782.

IN-LINE HINGE . . . Right hand

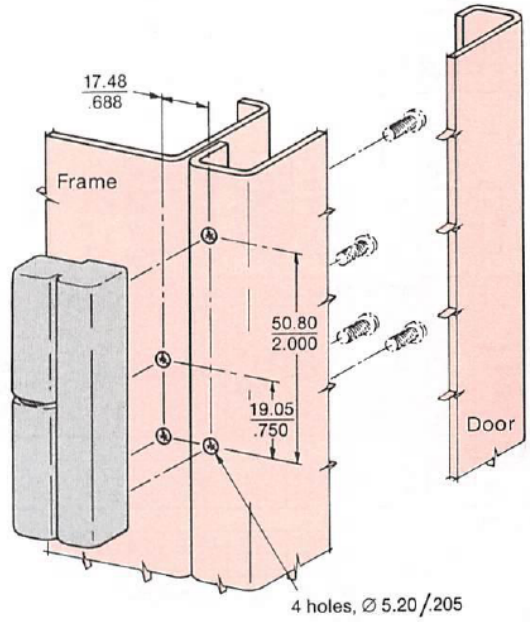


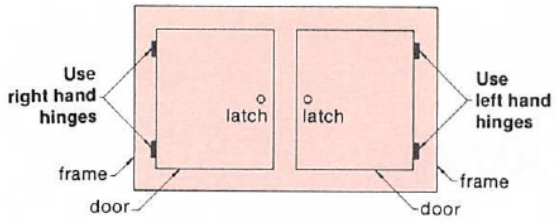
OFFSET HINGE . . . Left hand



screw length = door (or frame thickness + 5.08/.200. (Screws not supplied.)

OFFSET HINGE . . . Right hand

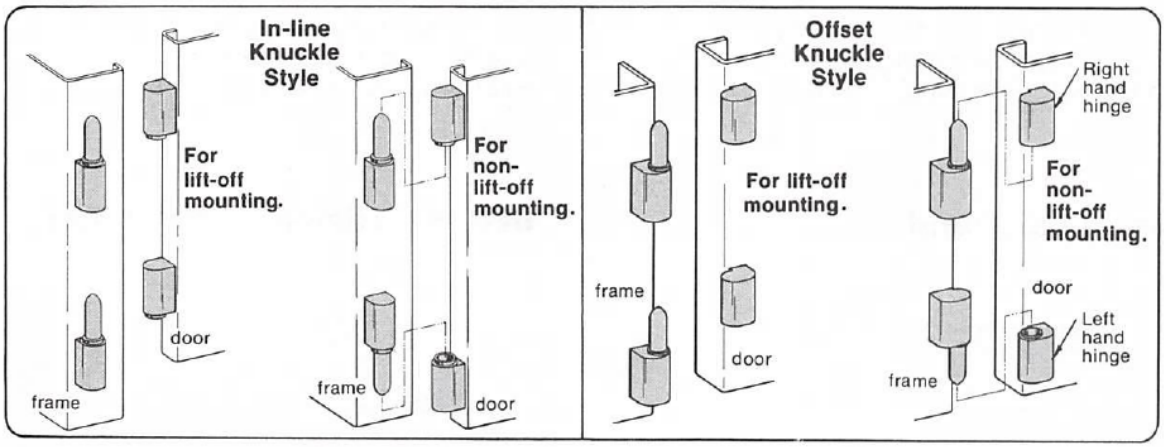




Nylon lift-off hinges

1. Door-positioning type. *Holds door shut (cams position door 10° past closed; the door constantly presses against frame) — holds door open at 80° or 170° positions.*

2. Free-swinging type — *without cams.*



- **Corrosion resistant**
- **In two sizes**
- **Two operating types**

For door-positioning hinges:

Clearance for vertical movement of door due to camming action

Allow 4.1/.16 for 300 series

Allow 5.1/.20 for 400 series

IN-LINE KNUCKLE STYLE

FREE-SWINGING TYPE

Right hand and Left hand

DOOR-POSITIONING TYPE

Right hand | Left hand

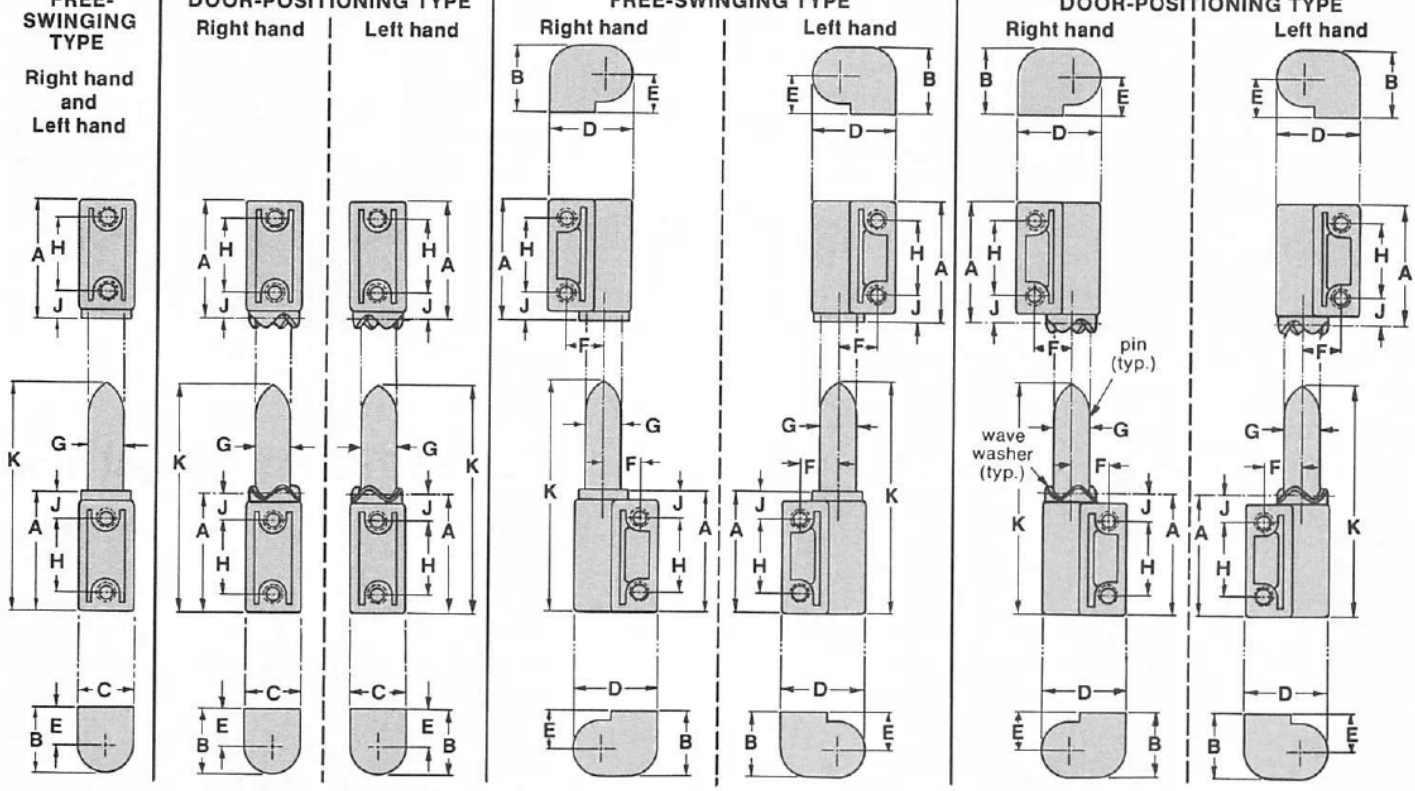
OFFSET KNUCKLE STYLE

FREE-SWINGING TYPE

Right hand | Left hand

DOOR-POSITIONING TYPE

Right hand | Left hand

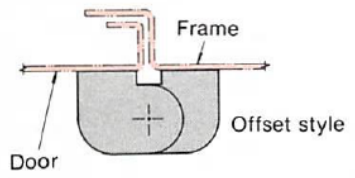


DIMENSIONS millimeter/inch									PART NUMBERS					
									IN-LINE KNUCKLE STYLE			OFFSET KNUCKLE STYLE		
Screw thread size	A Ref.	B	C	D	E, F & G	H	J	K	FREE-SWINGING TYPE	DOOR-POSITIONING TYPE		FREE-SWINGING TYPE	DOOR-POSITIONING TYPE	
										Right hand	Left hand	Right hand	Left hand	Right hand	Left hand
300 series															
10-24	31.0 1.22	16.7 .66	14.3 .56	21.4 .84	9.5 .38	19.1 .75	7.1 .28	57.9 2.28	96-10-**300**-11 ■	96-10-**331**-11 ■	96-10-**341**-11 ■	96-10-**310**-11 ■	96-10-**320**-11 ■	96-10-**311**-11 ■	96-10-**321**-11 ■
400 series															
¼-20	41.3 1.63	22.2 .88	19.1 .75	28.6 1.13	12.7 .50	25.4 1.00	9.5 .38	77.8 3.06	96-10-**400**-11 ■	96-10-**431**-11 ■	96-10-**441**-11 ■	96-10-**410**-11 ■	96-10-**420**-11 ■	96-10-**411**-11 ■	96-10-**421**-11 ■

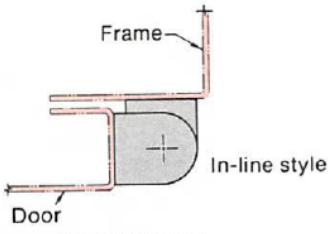
To order lift-off hinges tapped with metric thread sizes, change third digit of part number to "5".
Example: 96-50-300-11 (use 300 series for M5 x 0.8 threads)
96-5**0**-411-11 (use 400 series for M6 x 1 threads)

■ From stock, subject to prior sale.

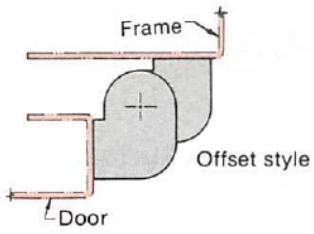
MOUNTING VARIATIONS



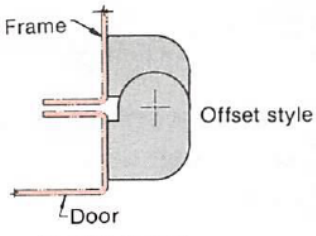
FLUSH DOOR
(front)



OFFSET DOOR



OFFSET DOOR
(heavily gasketed)



FLUSH DOOR
(side)

DOOR AND FRAME PREPARATION

NOTE: To insure lift-off capability, the *lower* knuckle must be installed on the frame, the *upper* knuckle on the door.

NOTE: For non-lift-off mounting one hinge knuckle must be mounted *AFTER* the door is hung.

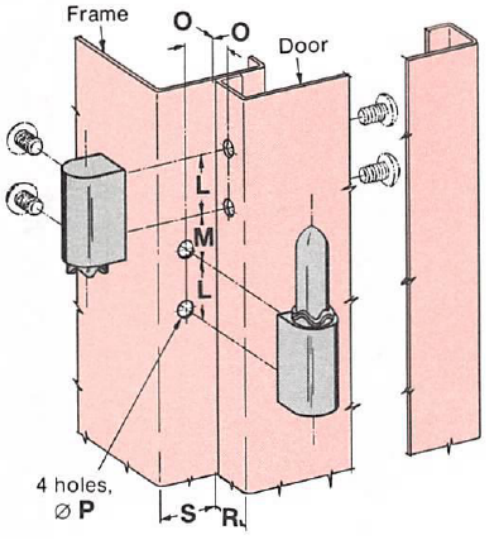
Series	Installation dimensions					Screw thread size
	L	M	N	O	∅ P	
300	19.05 / .750	14.29 / .563	19.05 / .750	9.53 / .375	5.20 / .205	M5x0.8 or 10-24
400	25.40 / 1.000	19.05 / .750	25.40 / 1.000	12.70 / .500	6.70 / .266	M6 x 1 or ¼-20

MATERIAL and FINISH

KNUCKLES: glass-reinforced nylon, black.
PIN: nylon, black.
WAVE WASHER: 300 series stainless steel with black oxide.

NOTE: Maximum recommended tightening torque for mounting screws:
300 series = 2.8 N.m/25 inch-lb.
400 series = 5.6 N.m/50 inch-lb.

IN-LINE KNUCKLE STYLE...Right hand



For 300 series:

screw length =
panel thickness + 4.8/.19

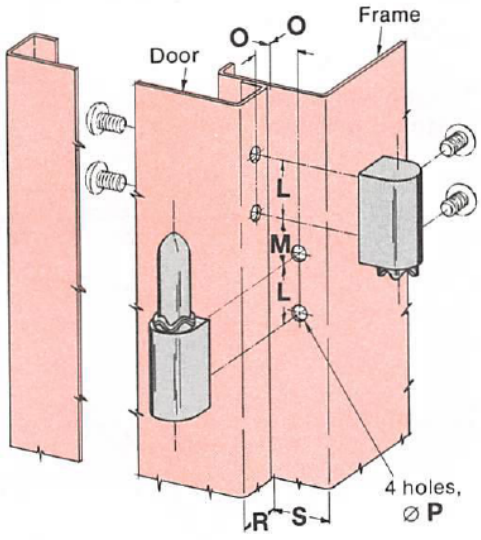
For 400 series:

screw length =
panel thickness + 6.4/.25

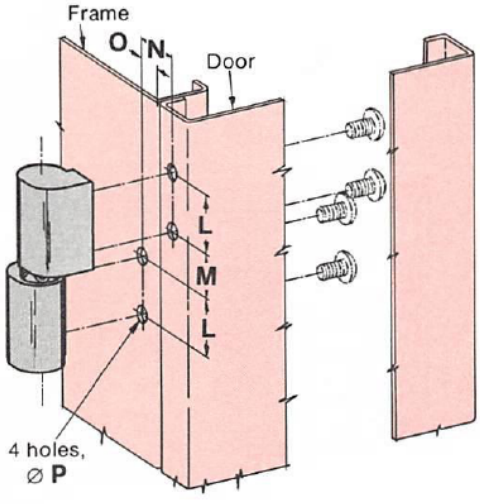
(Screws not supplied.)

For door to open a full 180°, one of the two dimensions, R or S, must be less than 19.1/.75 (for 300 series) or 25.4/1.00 (for 400 series).

IN-LINE KNUCKLE STYLE...Left hand



OFFSET KNUCKLE STYLE...Right hand



For 300 series:

screw length =
panel thickness +
6.4/.25 to 9.5/.38

For 400 series:

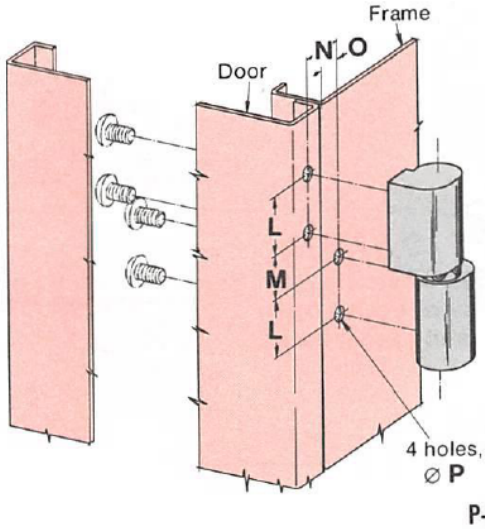
screw length =
panel thickness +
9.5/.38 to 12.7/.50

(Screws not supplied.)

MILLIMETER
INCH

MILLIMETER/INCH

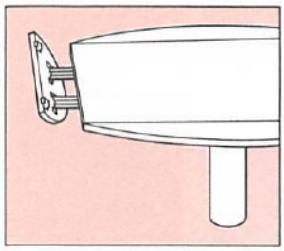
OFFSET KNUCKLE STYLE...Left hand



Slideaway™ Leaf Hinge

- **Expands working area**
- **Stores flush under table or work surface.**
- **Slides out *then* flips over!**

New hinge can be used in places where conventional hinging (leaf swinging in a downward arc from edge of table) would require clear and unusable space beneath table or shelf. Ideal for applications in the table top, work station, boating and recreational vehicle industries.

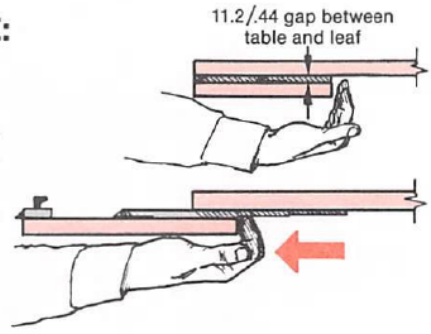




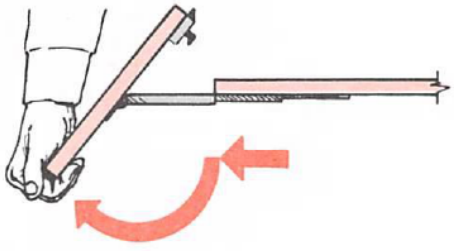


TO OPERATE:

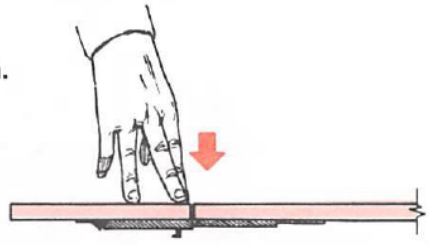
1. **Slide leaf from stored position.**



2. **Pivot leaf.**

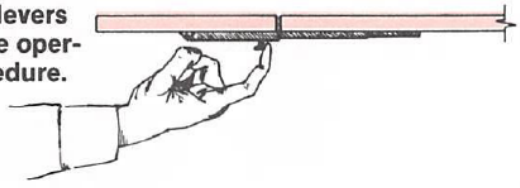


3. **Snap into expanded position.**

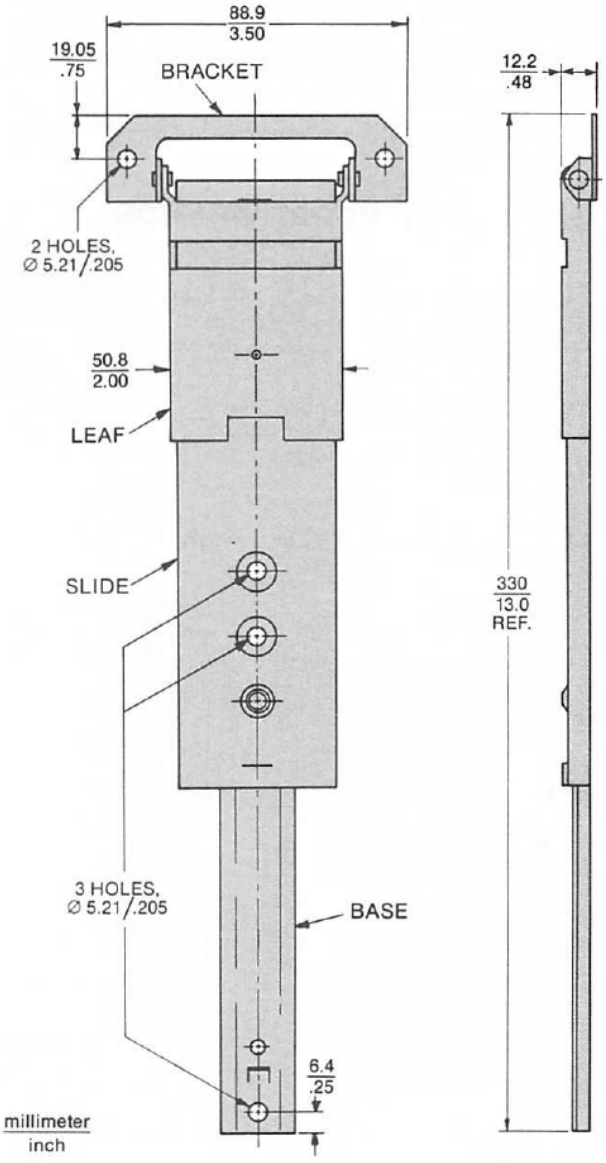


TO STORE:

Pull catch levers and reverse operating procedure.

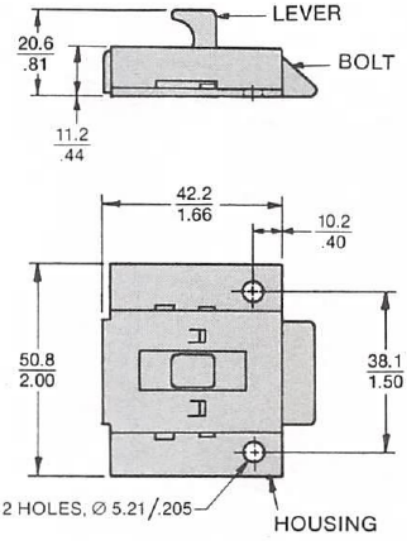


Hinge Assembly



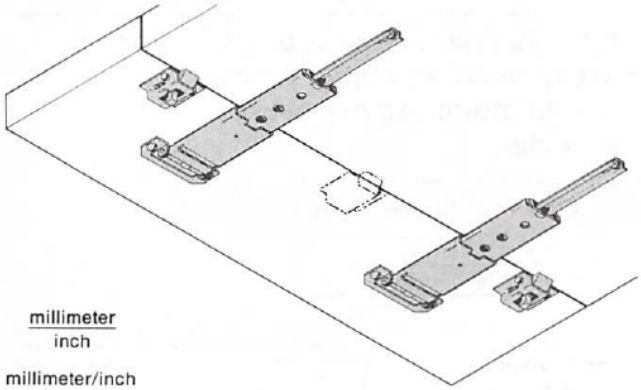
millimeter/inch

Catch Assembly



Slideaway™ Leaf Hinge SOUTHCO No. C4

Underside view



millimeter
inch

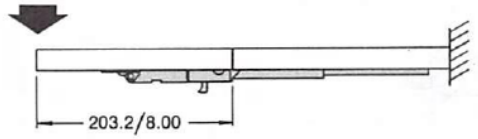
millimeter/inch

Includes 2 catch assemblies
and 2 hinge assemblies

Part Number C4-30-101-10 ■

Strength Guideline

Load applied between hinge centerlines:



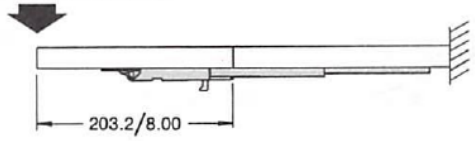
Max. working load 890 N/200 lbs.
Average ultimate load 1300 N/292 lbs.

for narrow leaves
Includes 1 catch assembly (center-mounted)
and 2 hinge assemblies

Part Number C4-30-103-10 ■

Strength Guideline

Load applied between hinge centerlines:



Max. working load 755 N/170 lbs.
Average ultimate load 1120 N/252 lbs.

MATERIAL and FINISH

HINGE SLIDE: 6063 aluminum, natural. BASE, LEAF and BRACKET: 1010 steel, zinc plated with bright chromate dip. SHOULDER RIVET: 1008 steel, zinc plated with bright chromate dip. SHELL and SLEEVE: low carbon steel, black organic coating. BUTTON: brass, natural. SPRING: 302 stainless steel, natural.

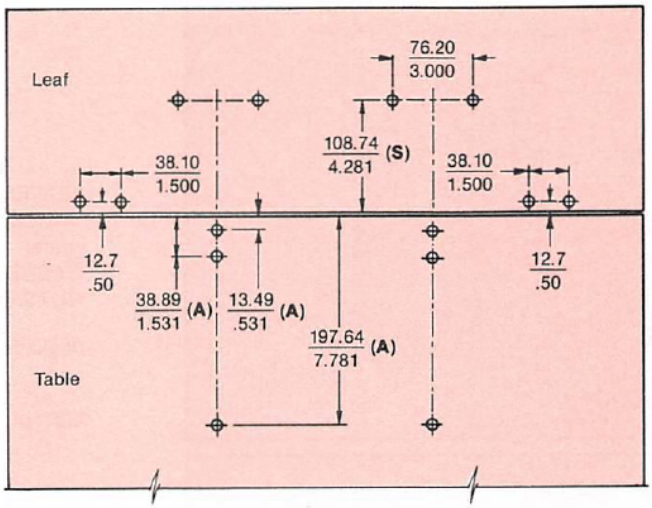
CATCH HOUSING: 1010 steel, zinc plated with bright chromate dip. SPRING: 302 stainless steel, natural. BOLT and LEVER: glass reinforced nylon, black.

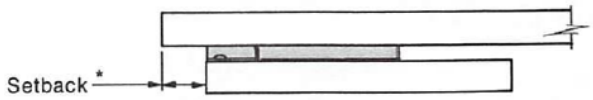
■ From stock, subject to prior sale.

Table/Leaf Preparation

Install with #10, 4.8 mm, or 5 mm pan head screws (not supplied). *Do not use type A self tapping screws.* For maximum stability, place hinges and catches as far apart as possible.

A leaf 203.2/8.00 in depth can be fully extended before it pivots so that no part of the leaf will extend under the table as it swings downward. Any depth over 203.2/8.00 will extend under the edge of the table during pivoting.

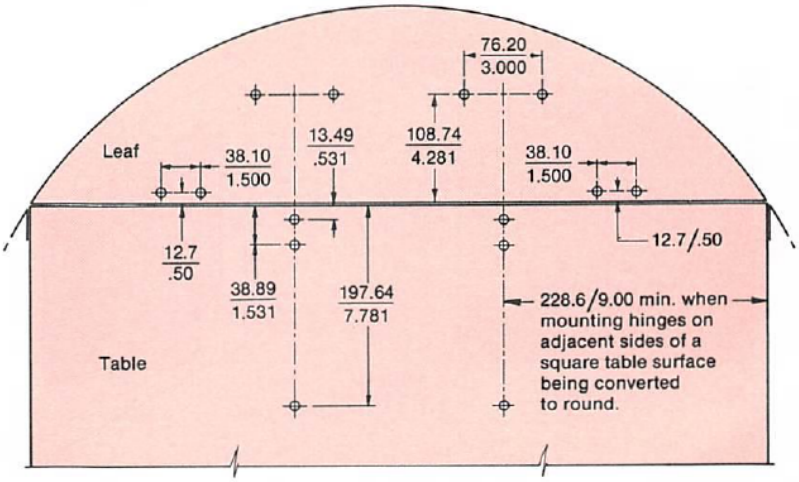




Reduced visibility of leaf in storage can be achieved by setting it back (to a maximum of 50.8mm/2 in.) beyond the edge of the surface to which it is attached. Subtract ½ the amount of desired setback from the (S) dimension and add the same amount to (A) dimensions.

When setback mounting is used, strength guideline figures will be reduced, as will the depth of leaf that can clear the edge of the surface during pivoting.

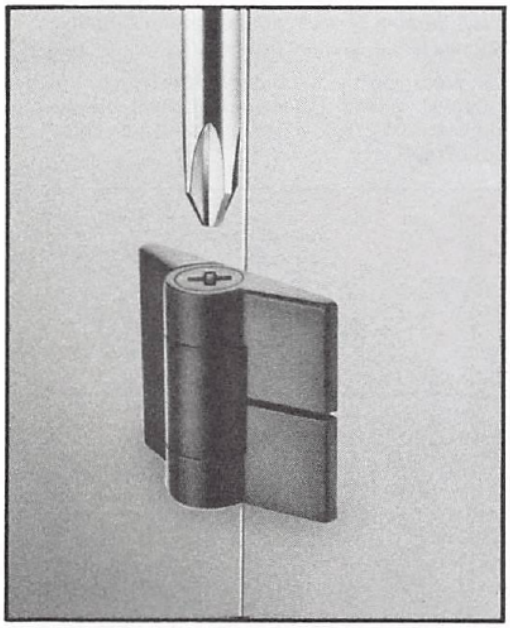
*Setback mounting cannot be used in square-to-round table applications.

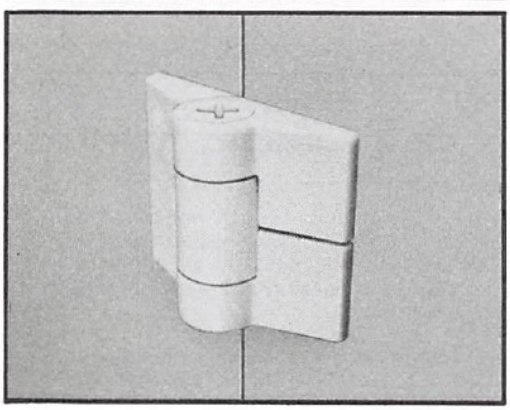


Adjustable Hinges

for free or dampened door swing . . . at the turn of a screw!

- **Hold doors open, closed, partially open**
- **Adjust speed of opening/closing**
- **No visible mounting hardware**
- **Smaller size**





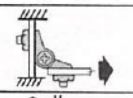
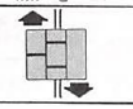
Color	Part Number	Series (size)
Black	E6-10-101-20 ■	100
Colonial White	E6-10-101-30 ■	

■ From stock, subject to prior sale.

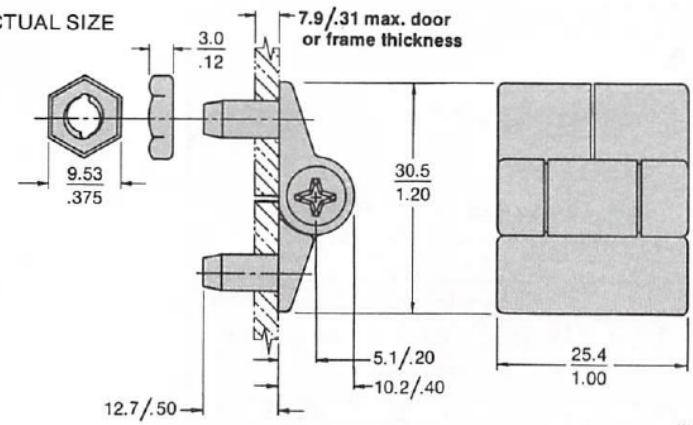
MATERIAL and FINISH

LEAVES, HINGE PIN and ADJUSTING SCREW: acetal, black or colonial white.
WASHER: nylon, black or natural.
NUTS: steel, black organic coating.

Packaged one hinge per bag.

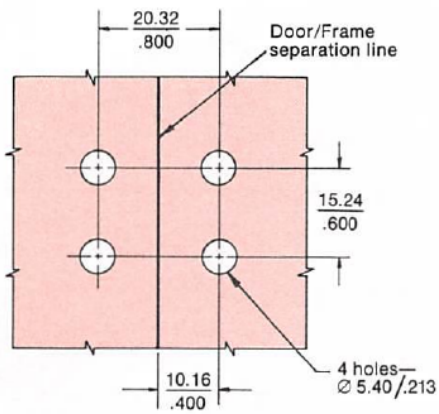
Strength Guideline	
	Ultimate tensile = 1390 N/312 lbs.
	Ultimate tensile = 675 N/152 lbs.
	Ultimate shear = 950 N/214 lbs.

ACTUAL SIZE

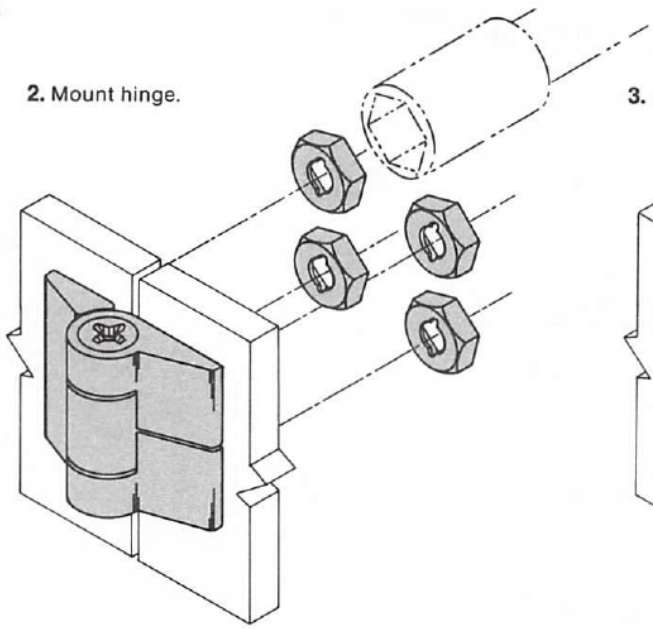


millimeter/inch
millimeter
inch

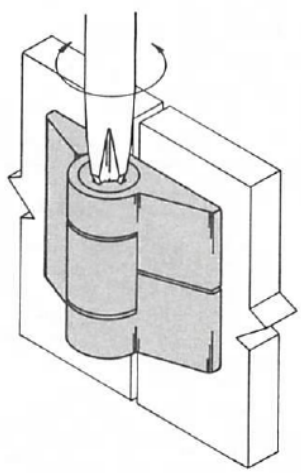
1. Prepare door and frame.



2. Mount hinge.



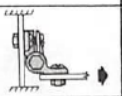
3. Adjust hinge friction.



Adjustable Hinges

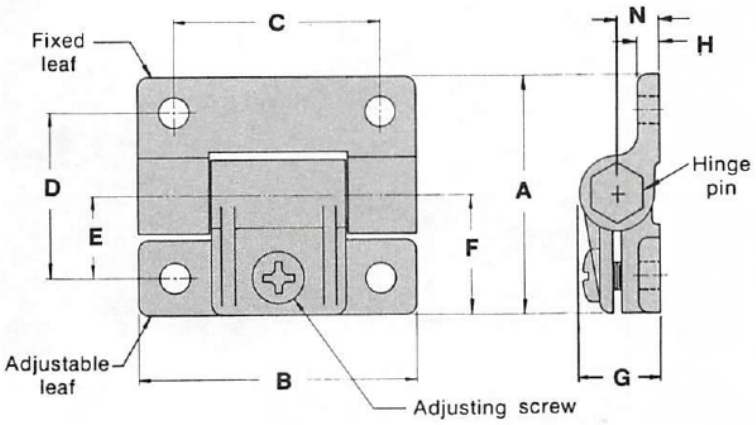
for free or dampened door swing . . . at the turn of a screw!

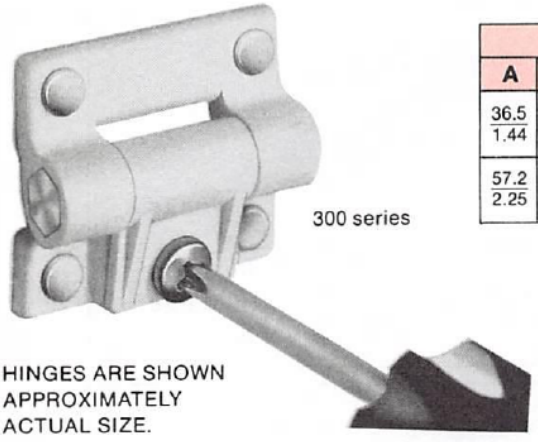
- **Hold doors open, closed, partially open**
- **Adjust speed of opening/closing**
- **2 sizes, black or white**

Strength Guideline		
Type of load	300 Series	500 Series
Ultimate tensile 	1670 N 375 lbs.	3985 N 896 lbs.
Ultimate tensile 	1270 N 286 lbs.	2980 N 670 lbs.
Ultimate shear 	810 N 182 lbs.	1855 N 417 lbs.



500 series





300 series

HINGES ARE SHOWN APPROXIMATELY ACTUAL SIZE.

MILLIMETER
INCH

Dimensions									Color	Part Number	series (size)
A	B	C	D	E	F	G	H	N			
36.5 1.44	42.9 1.69	31.8 1.25	25.4 1.00	12.7 .50	18.3 .72	12.7 .50	3.3 .13	6.7 .27	Colonial White	E6-10-301-10 ■	300
									Black	E6-10-301-20 ■	
57.2 2.25	63.5 2.50	47.8 1.88	38.1 1.50	19.1 .75	28.6 1.13	19.4 .77	5.2 .20	10.3 .41	Colonial White	E6-10-501-10 ■	500
									Black	E6-10-501-20 ■	

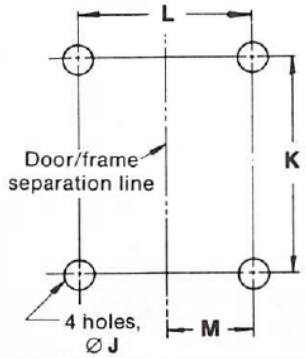
■ From stock, subject to prior sale.

MATERIAL and FINISH

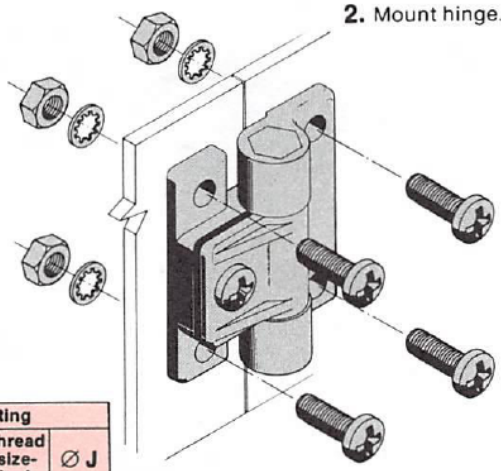
LEAVES: acetal, black or colonial white.
HINGE PIN: polycarbonate, clear.
ADJUSTING SCREW and NUT: 18-8 stainless steel, passivated (black oxide finish for black hinge).

Hinges are packages one complete unit per bag.

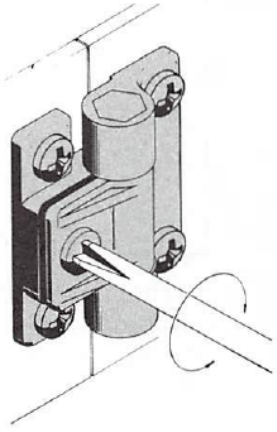
1. Prepare door and frame.



2. Mount hinge.



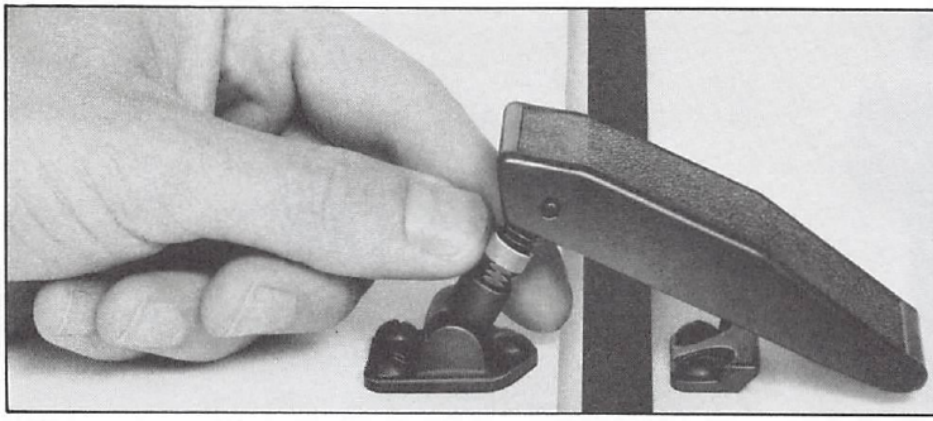
3. Adjust hinge friction.



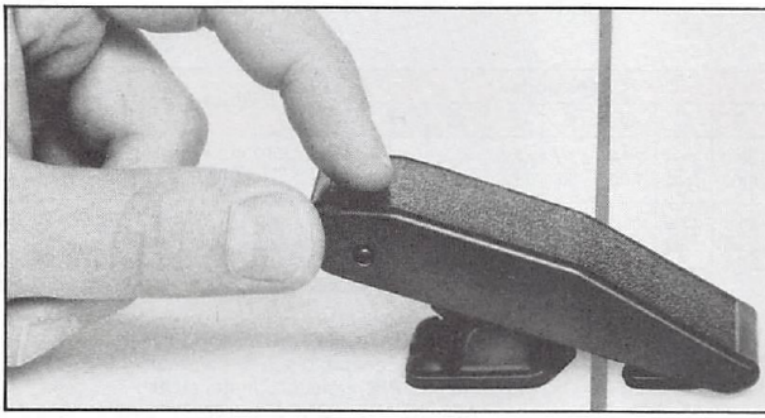
series (size)	K	L	M
300	31.75 1.250	25.40 1.000	12.70 .500
500	4.63 1.875	38.10 1.500	19.05 .75

for mounting			
thread size-metric	Ø J	thread size-inch	Ø J
M4	4.2	8-32	.171
M6	6.2	¼-20	.265

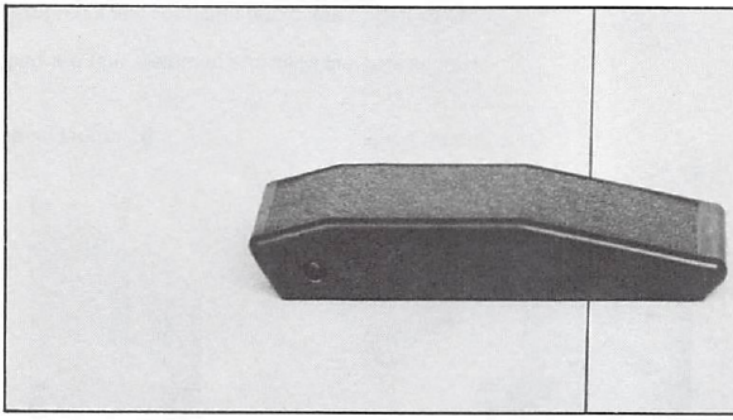
Quick, precise drawlatch adjustment, right at your fingertips.



To adjust, simply thread the stainless steel nut up or down the clevis to the desired position...



then, press the cover of the drawlatch and complete the latching action.



When secured, the latch conceals all of its working parts.

Southco's low-profile adjustable drawlatch with its acetal cover and stainless steel adjustment nut allows users to make fast, precise adjustments throughout a range of 7.9 mm or .31".

The adjustment nut also helps eliminate unintentional adjustments.

The lightweight yet durable latch also helps reduce heat transfer, resists corrosion, and is available in custom colors as well as standard black.

SOUTHCO®
fasteners

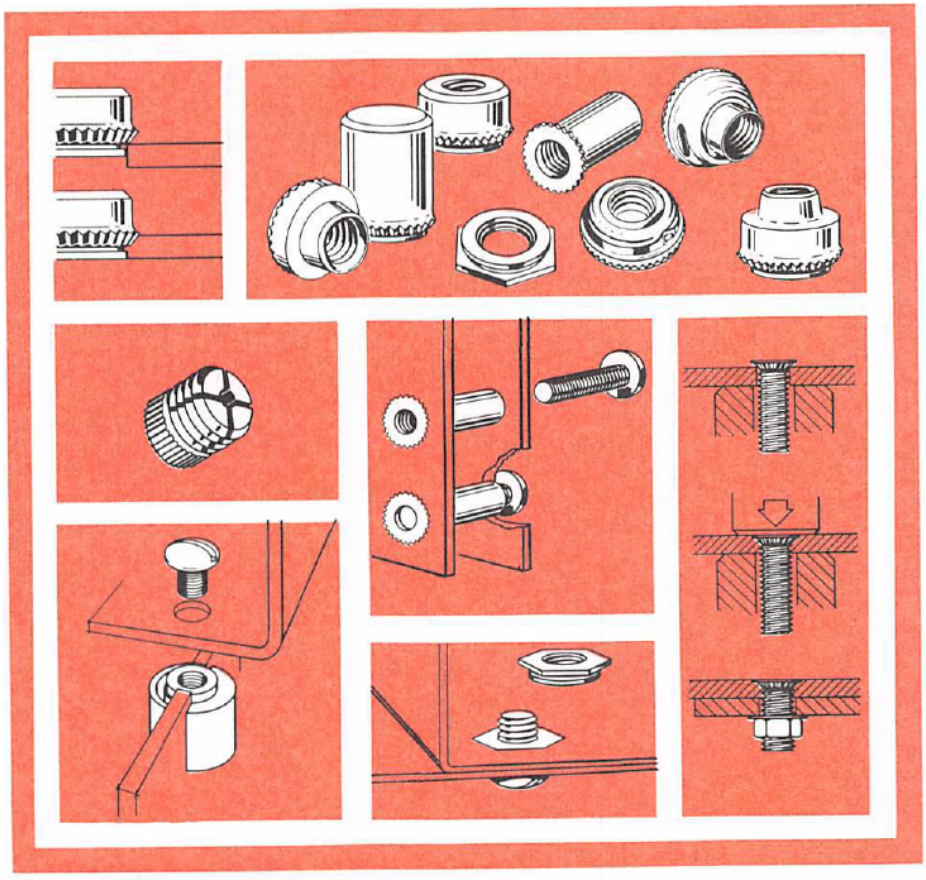
SOUTHCO, INC., 232 Brinton Lake Rd.
Concordville, PA 19331
(215) 459-4000 / TELEX: 83-1485
FAX: 215-459-4012

Section Q

Press-in Threds®, Spacers, Studs

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No. F1 Sheet-edge Fasteners	Q-5
No. 21 Anchor Nut	Q-11
No. 40 Thredspacers	Q-8
No. 55 Flush Threds®	Q-4
No. 71 Knurled Insert	Q-9
No. 73 & No. 74 Threds®	Q-2 & Q-3
No. 75 Driveserts®	Q-10
No. 77 Thredstuds®	Q-6 & Q-7



Section Q

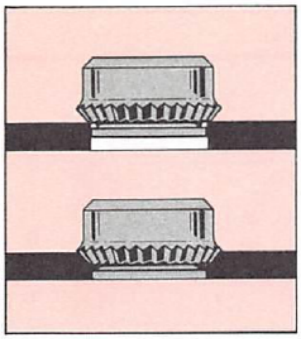
Press-in Threds®, Spacers, Studs

contents guide | **page**

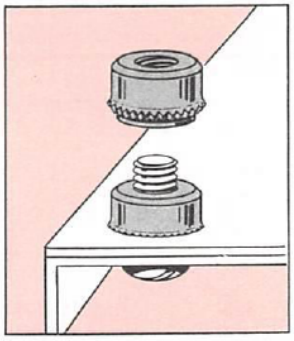
No. F1 Sheet-edge Fasteners	Q-5
No. 21 Anchor Nut	Q-11
No. 40 Thredspacers	Q-8
No. 55 Flush Threds®	Q-4
No. 71 Knurled Insert	Q-9
No. 73 & No. 74 Threds®	Q-2 & Q-3
No. 75 Driveserts®	Q-10
No. 77 Thredstuds®1	Q-6 & Q-7

Southco's full line of Press-in Threds®

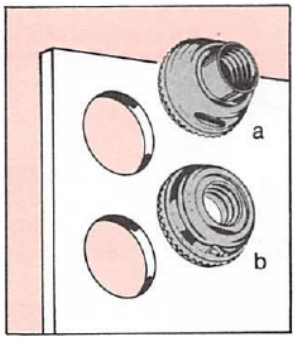
for threads in thin sheet metal



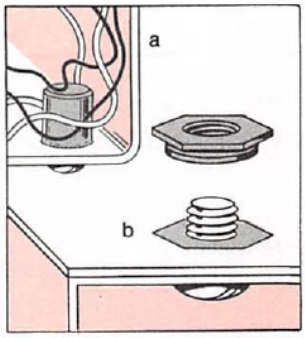
When a Southco Fastener is pressed into a prepared hole, knurls force a cold flow of metal into the locking groove. The Press-in Thred actually becomes part of the part.



Press-in Threds hold tight against spin-out or push-out; give you a hardened screw anchor in thin or heavy material.

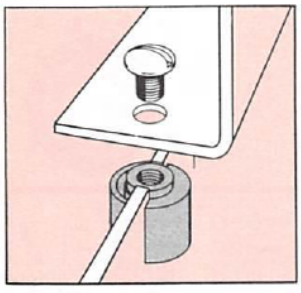


Compensate for poor hole alignment with prevailing-torque type (a) or free-running type (b) No. 73 Floating Threds.

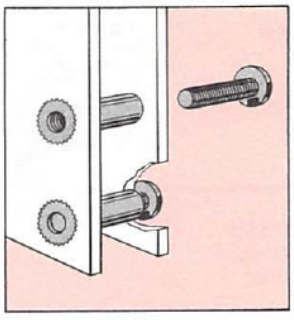


No. 74 Closed-end Threds (a) isolate the screw from wires, parts, dirt. No. 55 Flush Threds (b) offer flush surfaces on both sides; won't spin or push-out.

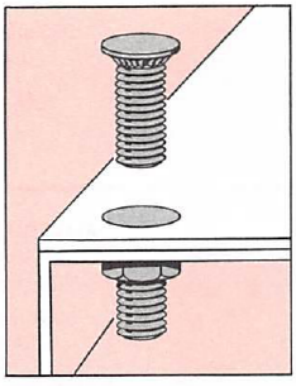
and now, for sheet edges, stacked panels, male threads, thicker and softer materials:



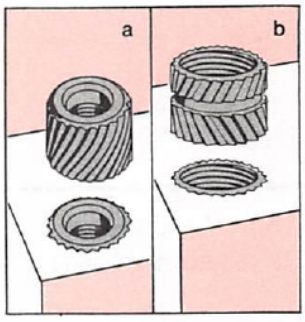
Simplify design by screwing directly into the edges of thin sheets. A No. F1 Sheet-edge Fastener snaps into a prepared notch and locks to make screw fastening easy.



No. 40 Thredspacers simplify assembly of stacked parts or panels. Pressed into sheet metal, they lock and hold.



A No. 77 Thredstud® fastens mechanically to thick or thin sheet metal. Press it in, and you have a screw that's locked in position.

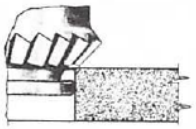


Put steel threads in wood, plastic or metal with No. 72 Inserts (a). For high strength threads in thick metal sections, use Southco's patented Driveserts® (b).

SOUTHCO®
fasteners

Southco Press-in THREDS® for thin sheet metal

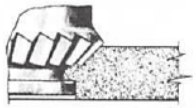
BEFORE INSTALLATION



ANGULAR KNURL
(Detail)

Teeth bite into edge of hole; force metal into locking groove at the base of the fastener.

AFTER INSTALLATION



When a screw is threaded into the Press-in Thred and torque increased, teeth of angular knurl are pulled more firmly against sheet, putting extra pressure on metal in locking groove.

Steel inserts:
For use in low carbon steels that are ½ hard or softer and for stainless steels in the annealed condition.

Stainless steel inserts:
For use in most aluminums or in low carbon steels that are ¼ hard or softer.

Aluminum inserts:
For use in grades of aluminum that are non-heat treatable or that have an "O" or "H" temper.

Ask for samples for testing.

One fastener will fit any sheet thickness (see minimum requirement, column T in table).

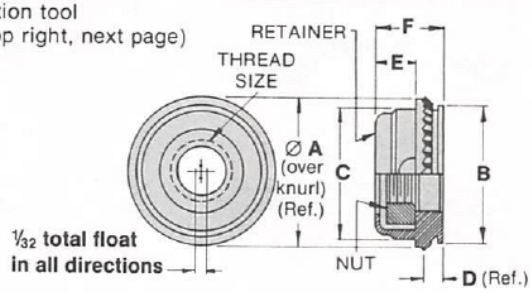
No. 73 Floating Threds Free-running type



Designed to permit float—up to 1/32" to compensate for misaligned holes in mating parts.

MATERIAL and FINISH
RETAINER: 12L14 steel.
NUT: 303 stainless steel.
Both are DACROTIZED†.
or
RETAINER and NUT: 303 stainless steel, passivated.

Use installation tool (see table, top right, next page)



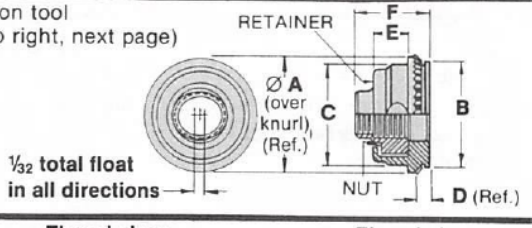
No. 73 Floating Threds Prevailing-torque type



Similar to No. 73 above, but also provide a drag fit.

MATERIAL and FINISH
RETAINER: 12L14 steel,
NUT: 303 stainless steel.
Both are DACROTIZED†.

Use installation tool (see table, top right, next page)

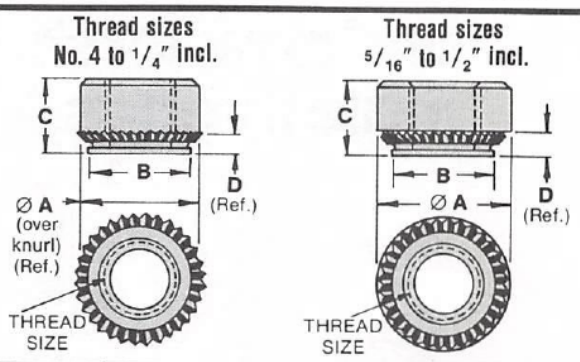


No. 74 Threds Free-running



Provide a strong, thread anchor for thin sheet metal (the equivalent of a tapped hole in thicker material). All thread lengths equal or exceed those of a standard nut.

MATERIAL and FINISH
Case hardened low carbon steel, zinc plated with yellow chromate dip,
or
303 stainless steel, passivated
or
7075 aluminum, natural.

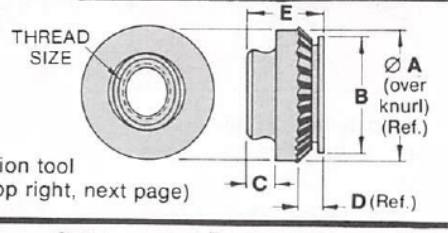


No. 74 Threds Prevailing-torque type



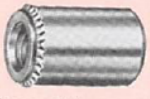
Similar to No. 74 above, but also provide a drag fit.

MATERIAL and FINISH
41 L40 steel, heat treated and DACROTIZED†
or
303 stainless steel, passivated.
NOTE: stainless steel screws must be lubricated.



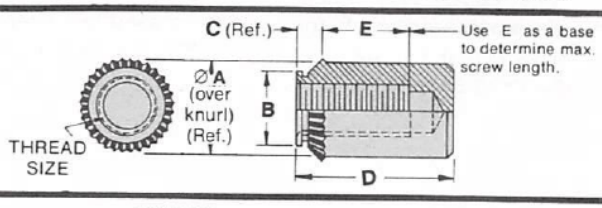
Use installation tool (see table, top right, next page)

No. 74 Threds Closed-end type



Protect internal components from dirt, moisture, chips; safeguard wiring from sharp screw threads.

MATERIAL and FINISH
Case hardened low carbon steel, zinc plated plus yellow chromate dip.

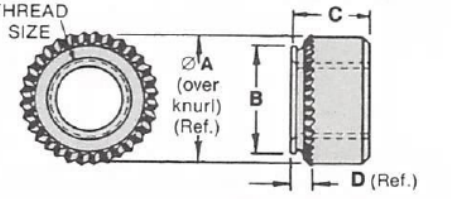


No. 74 Threds Thin shell type



Thin shell series permits installation in smaller diameter holes, affording savings in space and weight.

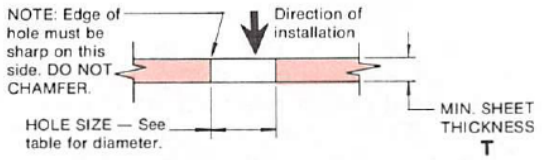
MATERIAL and FINISH
Case hardened low carbon steel, zinc plated plus yellow chromate,
or
303 stainless steel, passivated.



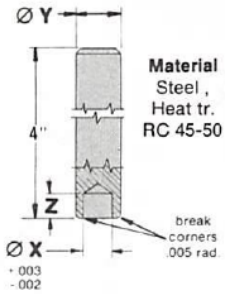
†Registered tradename of Metal Coatings International, Inc.

INSTALLATION

See installation data (table below right) for proper hole size. Press knurled end of Thred into hole until top of knurl is barely visible. (Exception: No. 74 free-running Threds, 5/16" through ½" and M8 thread sizes only, press until flange at top of knurl is firmly against panel). NOTE: Installation forces can vary from 1 to 5 tons depending on Thred size and your material.



Installation Tool

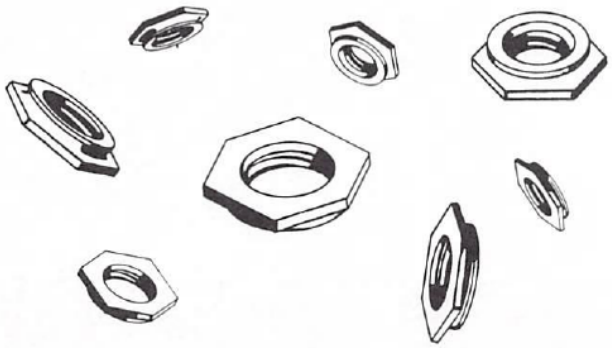


THREAD SIZE	TOOL PART NO.	Ø X	Ø Y	Z
FOR No. 73 — Both types				
No. 4	73-0-11771-04 ■	.302	.63	.250
No. 6	73-0-11771-06 ■	.339		
No. 8	73-0-11771-08 ■	.368		
No. 10	73-0-11771-10 ■	.397		
¼	73-0-11771-25 ■	.484		
FOR No. 74 — Prevailing torque type only				
No. 4	74-0-11304-04 ■	.166	.50	.158
No. 6	74-0-11304-06 ■	.191		
No. 8	74-0-11304-08 ■	.219		
No. 10	74-0-11304-10 ■	.246		
¼	74-0-11304-25 ■	.312		
5/16	74-0-11304-31 ■	.375		

SPECIFICATIONS

THREAD SIZE	PART NUMBERS			DIMENSIONS						Weight/M (lbs.) steel, s/s only	INSTALLATION TOOL	INSTALLATION DATA: THREAD SIZE	HOLE SIZE +.003 −.000	MIN. SHEET THICK. T
	STEEL	STAINLESS STEEL	ALUMINUM	Ø A (Ref.)	B	C	D	E	F					
4-40 UNC	73-10-104-18 ■	73-10-104-24 ■	—	.353	.288	.295	.04	.09	.168	2.3	To install use recessed installation tool (see above, right) and solid back up.	4-40	.290	.036
6-32 UNC	73-10-106-18 ■	73-10-106-24 ■	—	.383	.326	.323	.04	.13	.200	3.1		6-32	.328	.036
8-32 UNC	73-10-108-18 ■	73-10-108-24 ■	—	.415	.366	.359	.05	.13	.200	3.5		8-32	.368	.048
10-24 UNC	73-10-110-18 ■	73-10-110-24 ■	—	.447	.404	.389	.05	.13	.200	4.1		10-24	.406	.048
10-32 UNF	73-10-210-18 ■	73-10-210-24 ■	—	.447	.404	.389	.05	.13	.200	4.1		10-32	.406	.048
¼-20 UNC	73-10-125-18 ■	73-10-125-24 ■	—	.572	.513	.463	.06	.16	.247	7.7		¼-20	.515	.060
¼-28 UNF	73-10-225-18 □	73-10-225-24 □	—	.572	.513	.463	.06	.16	.247	7.7		¼-28	.515	.060
4-40 UNC	73-20-104-19 ■	—	—	.353	.288	.295	.04	.09	.218	2.4	To install use recessed installation tool (see above, right) and solid back up.	4-40	.290	.036
6-32 UNC	73-20-106-19 ■	—	—	.383	.326	.323	.04	.13	.250	3.4		6-32	.328	.036
8-32 UNC	73-20-108-19 ■	—	—	.415	.366	.359	.05	.13	.266	4.0		8-32	.368	.048
10-24 UNC	73-20-110-19 ■	—	—	.447	.404	.389	.05	.13	.266	4.6		10-24	.406	.048
10-32 UNF	73-20-210-19 ■	—	—	.447	.404	.389	.05	.13	.266	4.6		10-32	.406	.048
¼-20 UNC	73-20-125-19 ■	—	—	.572	.513	.463	.06	.16	.328	8.5		¼-20	.515	.060
¼-28 UNF	73-20-225-19 □	—	—	.572	.513	.463	.06	.16	.328	8.5		¼-28	.515	.060
4-40 UNC	74-11-104-13 ■	74-11-104-24 ■	74-11-104-33 ■	.223	.185	.16	.04	—	—	1.2	To install, use smooth faced setting punch and solid back up.	4-40	.187	.036
6-32 UNC	74-11-106-13 ■	74-11-106-24 ■	74-11-106-33 ■	.286	.247	.16	.04	—	—	2.0		6-32	.250	.036
8-32 UNC	74-11-108-13 ■	74-11-108-24 ■	74-11-108-33 ■	.321	.278	.19	.05	—	—	2.9		8-32	.281	.048
10-24 UNC	74-11-110-13 ■	74-11-110-24 ■	74-11-110-33 □	.321	.278	.19	.05	—	—	2.5		10-24	.281	.048
10-32 UNF	74-11-210-13 ■	74-11-210-24 ■	74-11-210-33 ■	.321	.278	.19	.05	—	—	2.5		10-32	.281	.048
12-24 UNC	74-11-112-13 □	74-11-112-24 □	74-11-112-33 □	.415	.372	.19	.06	—	—	4.6		12-24	.375	.060
¼-20 UNC	74-11-125-13 ■	74-11-125-24 ■	74-11-125-33 ■	.415	.372	.19	.06	—	—	4.3		¼-20	.375	.060
¼-28 UNF	74-11-225-13 ■	74-11-225-24 ■	74-11-225-33 □	.415	.372	.19	.06	—	—	4.3		¼-28	.375	.060
5/16-18 UNC	74-11-131-13 ■	74-11-131-24 ■	74-11-131-33 □	.562	.498	.25	.08	—	—	11.1		5/16-18	.500	.075
3/8-16 UNC	74-11-138-13 ■	74-11-138-24 ■	74-11-138-33 □	.562	.498	.25	.08	—	—	11.0		3/8-16	.500	.075
7/16-14 UNC	74-11-144-13 ■	74-11-144-24 □	74-11-144-33 □	.718	.654	.31	.09	—	—	18.6		7/16-14	.656	.090
½-13 UNC	74-11-150-13 ■	74-11-150-24 ■	74-11-150-33 □	.718	.654	.31	.09	—	—	18.0		½-13	.656	.090
4-40 UNC	74-12-104-15 ■	74-12-104-25 ■	—	.223	.185	.08	.04	.17	—	0.8	To install use recessed installation tool (see above, right) and solid back up.	4-40	.187	.036
6-32 UNC	74-12-106-15 ■	74-12-106-25 ■	—	.286	.248	.08	.04	.17	—	1.4		6-32	.250	.036
8-32 UNC	74-12-108-15 ■	74-12-108-25 ■	—	.321	.279	.09	.05	.20	—	2.0		8-32	.281	.048
10-24 UNC	74-12-110-15 ■	74-12-110-25 □	—	.321	.279	.09	.05	.20	—	1.9		10-24	.281	.048
10-32 UNF	74-12-210-15 ■	74-12-210-25 ■	—	.321	.279	.09	.05	.20	—	1.9		10-32	.281	.048
¼-20 UNC	74-12-125-15 ■	74-12-125-25 ■	—	.415	.373	.11	.06	.23	—	3.4		¼-20	.375	.060
5/16-18 UNC	74-12-131-15 ■	74-12-131-25 □	—	.562	.498	.13	.08	.29	—	8.1		5/16-18	.500	.075
4-40 UNC	74-21-104-13 ■	—	—	.223	.185	.04	.38	.19	—	3.3	To install, use smooth faced setting punch and solid back up.	4-40	.187	.036
6-32 UNC	74-21-106-13 ■	—	—	.286	.247	.04	.41	.19	—	5.7		6-32	.250	.036
8-32 UNC	74-21-108-13 ■	—	—	.321	.278	.05	.48	.25	—	7.9		8-32	.281	.048
10-24 UNC	74-21-110-13 ■	—	—	.321	.278	.05	.48	.25	—	7.3		10-24	.281	.048
10-32 UNF	74-21-210-13 ■	—	—	.321	.278	.05	.48	.25	—	7.1		10-32	.281	.048
¼-20 UNC	74-21-125-13 ■	—	—	.415	.372	.06	.63	.31	—	16.0		¼-20	.375	.060
4-40 UNC	74-13-104-13 ■	74-13-104-24 ■	—	.209	.164	.16	.04	—	—	1.0	To install, use smooth faced setting punch and solid back up.	4-40	.166	.036
6-32 UNC	74-13-106-13 ■	74-13-106-24 ■	—	.223	.185	.16	.04	—	—	1.1		6-32	.187	.036
8-32 UNC	74-13-108-13 ■	74-13-108-24 ■	—	.257	.211	.19	.05	—	—	1.5		8-32	.213	.048
10-24 UNC	74-13-110-13 ■	74-13-110-24 □	—	.304	.248	.19	.05	—	—	2.2		10-24	.250	.048
10-32 UNF	74-13-210-13 ■	74-13-210-24 ■	—	.304	.248	.19	.05	—	—	2.2		10-32	.250	.048
12-24 UNC	74-13-112-13 □	74-13-112-24 □	—	.335	.275	.19	.06	—	—	2.5		12-24	.277	.060
¼-20 UNC	74-13-125-13 ■	74-13-125-24 ■	—	.399	.342	.19	.06	—	—	3.7		¼-20	.344	.060
¼-28 UNF	74-13-225-13 ■	74-13-225-24 □	—	.399	.342	.19	.06	—	—	3.7		¼-28	.344	.060
5/16-18 UNC	74-13-131-13 ■	74-13-131-24 □	—	.479	.411	.25	.07	—	—	6.4		5/16-18	.413	.075

■ From stock, subject to prior sale. □ Up to 8 weeks. Minimum order required; setup charge may apply.



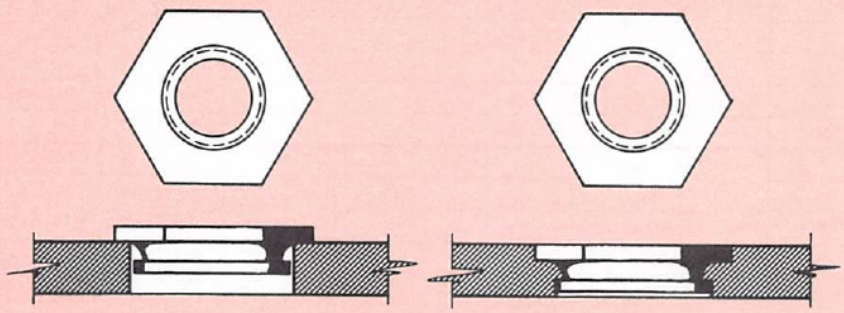
Flush THREDS®
flush on both sides of the sheet

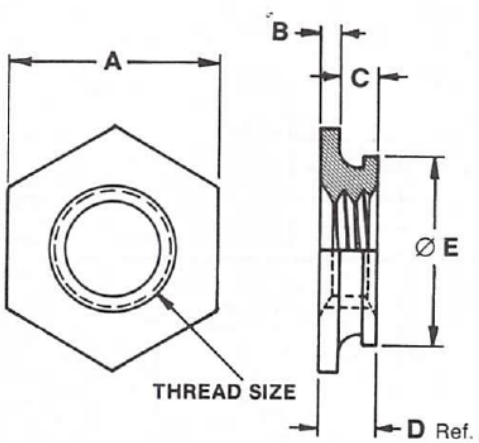
Southco stainless steel Flush Threds, pressed into sheet metals, supply strong non-corrosive screw threads that permit repeated attachment and removal of parts. Threds present a flush surface on both sides of the sheet in materials as thin as .059.

Installation is accomplished with standard shop presses as small as one ton capacity. High resistance to torque and pull-out.

Flush Threads are designed to resist stripping, spinning, pulling or tearing out.

They are stocked in thread sizes from No. 4 through No. 10 in two types; for sheets from .059 to .090 thick and for sheets .091 thick and up.





THREAD SIZE	DIMENSIONS A	B	C	D	∅E	HOLE SIZE +.003 −.000	PART NUMBER
For .059 to .090 thick sheets							
2-56 UNC	3/16	.021	.036	.057	.170	.173	55-11-**102**-24 ■
4-40 UNC	7/32	.021	.036	.057	.186	.189	55-11-**104**-24 ■
6-32 UNC	1/4	.021	.036	.057	.210	.213	55-11-**106**-24 ■
8-32 UNC	5/16	.021	.036	.057	.287	.290	55-11-**108**-24 ■
10-32 UNF	11/32	.021	.036	.057	.309	.316	55-11-**210**-24 ■
For .091 min. thick sheets							
4-40 UNC	7/32	.021	.061	.082	.186	.189	55-12-**104**-24 ■
6-32 UNC	1/4	.021	.061	.082	.210	.213	55-12-**106**-24 ■
8-32 UNC	5/16	.026	.061	.087	.287	.290	55-12-**108**-24 ■
10-32 UNF	11/32	.030	.061	.091	.309	.316	55-12-**210**-24 ■

■ From stock, subject to prior sale.

For use in most aluminums or in low carbon steels that are ¼ hard or softer. Ask for samples for testing.

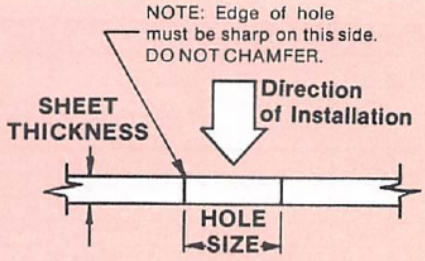
MATERIAL and FINISH
303 stainless steel, passivated.

INSTALLATION

Prepare hole by drilling or punching (see table for diameter).

Place pilot end of fastener into hole; use a solid back-up. Press until top of hexagonal head is flush with surface of sheet. Use any smooth faced setting punch of a diameter greater than the fastener.

NOTE: Installation force can vary from 1 ton to 3 tons depending on fastener size and material into which it is being installed.

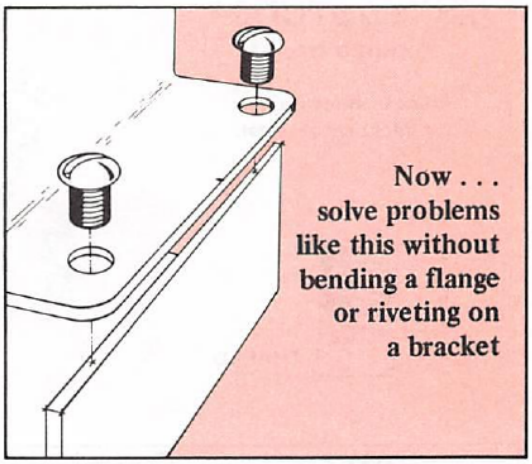


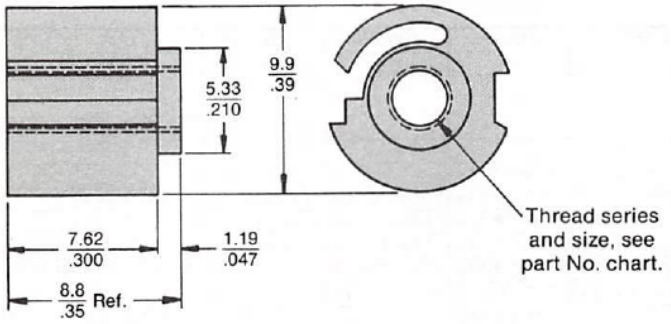
Note: If hole is punched, fastener should be installed on side of hole *opposite* to direction of punching.

Southco Sheet-edge Inserts

Fasten to the *edges* of thin sheets

- Quick installation
- Made from tough, lightweight thermoplastic polyester
- Color coded
- Interchangeable





Thread Series	Thread Size	Part Number	Color
American Standard	No. 4-40	F1-10-104-13 ■	Gray
	No. 6-32	F1-10-106-12 ■	Black
	No. 8-32	F1-10-108-11 ■	White

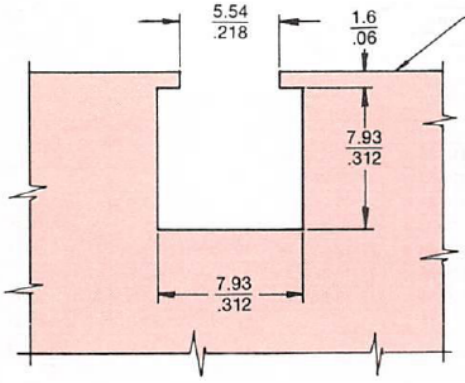
■ From stock, subject to prior sale.

MATERIAL and FINISH
Thermoplastic polyester (see table for color).

MILLIMETER
INCH

MILLIMETER | INCH

PANEL PREPARATION AND INSTALLATION INSTRUCTIONS



NOTE: When attachment is made, this edge of sheet and under surface of attached material must be in contact with each other.

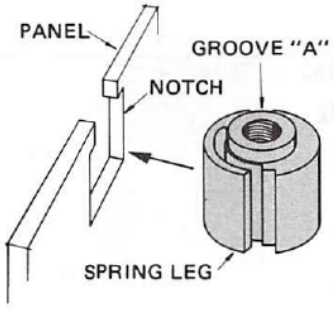
Range of material thickness in which fastener can be installed:

Minimum sheet thickness = 1.27/.050
Maximum sheet thickness = 2.41/.095

Prepare notch in panel as shown above. Note: notch dimensions are the same for all insert thread sizes.

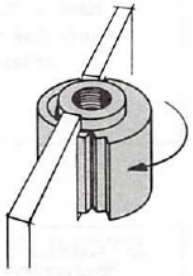
Refer to drawings at the right to install insert.

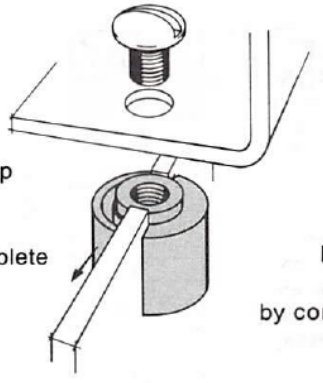
To determine proper length screw for attachment, add 9.50/.375 plus thickness of material to be attached — select next *shorter* standard length screw.



1. Install insert from the *side* of the panel. Orient insert as shown and engage groove "A" with edge of notch in panel.

2. Rotate insert toward panel, compressing spring-leg, permitting it to pass through notch.





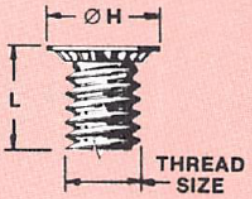
3. Spring-leg will snap back to its normal position and lock behind panel to complete installation.

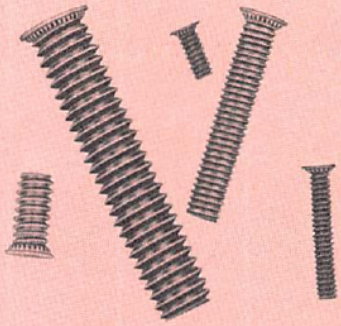
Insert can be quickly and easily removed by compressing spring-leg and rotating it back through notch.

THREDSTUDS®

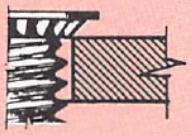
Southco No. 77

Press-in studs for thin (or thick) sheet metal.

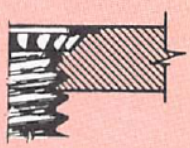




ANGULAR KNURLS
(Detail)



BEFORE INSTALLATION



AFTER INSTALLATION

Teeth bite into edges of hole, force metal into thread groove at base of knurl.

STEEL THREDSTUDS

No. 2-56 size: 1035 steel, hardened. OTHER SIZES: 10B21 steel, through hardened. All parts are zinc plated with yellow chromate dip.

For use in low carbon steels that are ½ hard or softer and for stainless steels in the annealed condition. Ask for samples for testing.

Thread size ▶	2-56 UNC	4-40 UNC	6-32 UNC	8-32 UNC	10-24 UNC	10-32 UNF	¼-20 UNC	5/16-18 UNC
⌀H ▶	9/64	11/64	7/32	¼	9/32	9/32	3/8	15/32
L ↓								
3/16	77-03-102-13 ■	77-03-104-13 ■						
¼	77-04-102-13 ■	77-04-104-13 ■	77-04-106-13 ■					
5/16	77-05-102-13 ■	77-05-104-13 ■	77-05-106-13 ■	77-05-108-13 ■				
3/8	77-06-102-13 ■	77-06-104-13 ■	77-06-106-13 ■	77-06-108-13 ■	77-06-110-13 ■	77-06-210-13 ■	77-06-125-13 ■	
7/16	77-07-102-13 ■	77-07-104-13 ■	77-07-106-13 ■	77-07-108-13 ■	77-07-110-13 ■	77-07-210-13 ■	77-07-125-13 ■	
½	77-08-102-13 ■	77-08-104-13 ■	77-08-106-13 ■	77-08-108-13 ■	77-08-110-13 ■	77-08-210-13 ■	77-08-125-13 ■	
5/8		77-10-104-13 ■	77-10-106-13 ■	77-10-108-13 ■	77-10-110-13 ■	77-10-210-13 ■	77-10-125-13 ■	77-10-131-13 ■
¾		77-12-104-13 ■	77-12-106-13 ■	77-12-108-13 ■	77-12-110-13 ■	77-12-210-13 ■	77-12-125-13 ■	77-12-131-13 ■
7/8		77-14-104-13 ■		77-14-108-13 ■			77-14-125-13 ■	77-14-131-13 ■
1"		77-16-104-13 ■	77-16-106-13 ■	77-16-108-13 ■	77-16-110-13 ■	77-16-210-13 ■	77-16-125-13 ■	77-16-131-13 ■
1 1/8							77-18-125-13 ■	77-18-131-13 ■
1 ¼							77-20-125-13 ■	77-20-131-13 ■
1 3/8							77-22-125-13 ■	
1 ½							77-24-125-13 ■	77-24-131-13 ■
1 5/8							77-26-125-13 ■	
1 ¾							77-28-125-13 ■	

6061 ALUMINUM THREDSTUDS

For use in grades of aluminum that are non-heat treatable or that have an "O" or "H" temper. Ask for samples for testing.

Thread Size ▶	4-40 UNC	6-32 UNC	8-32 UNC	10-24 UNC	10-32 UNF	¼-20 UNC	5/16-18 UNC
⌀H ▶	11/64	7/32	¼	9/32	9/32	3/8	15/32
L ↓							
¼	77-04-104-33 ■						
5/16	77-05-104-33 ■	77-05-106-33 ■					
3/8	77-06-104-33 ■	77-06-106-33 ■	77-06-108-33 ■	77-06-110-33 □	77-06-210-33 □		
7/16	77-07-104-33 ■	77-07-106-33 ■		77-07-110-33 □	77-07-210-33 □		
½	77-08-104-33 ■	77-08-106-33 ■	77-08-108-33 ■	77-08-110-33 □	77-08-210-33 □	77-08-125-33 □	
5/8	77-10-104-33 ■	77-10-106-33 ■		77-10-110-33 □	77-10-210-33 □	77-10-125-33 □	77-10-131-33 □
¾		77-12-106-33 ■	77-12-108-33 ■	77-12-110-33 □	77-12-210-33 □	77-12-125-33 □	77-12-131-33 □
7/8				77-14-110-33 □	77-14-210-33 □	77-14-125-33 □	77-14-131-33 □
1"			77-16-108-33 ■	77-16-110-33 □	77-16-210-33 □	77-16-125-33 □	77-16-131-33 □
1 1/8						77-18-125-33 □	77-18-131-33 □
1 ¼						77-20-125-33 □	77-20-131-33 □
1 3/8						77-22-125-33 □	77-22-131-33 □
1 ½						77-24-125-33 □	77-24-131-33 □

STAINLESS STEEL THREDSTUDS

¼-20 size: 18-9LW stainless steel, passivated. OTHER SIZES: 302 stainless steel, passivated.

For use in most aluminums or in low carbon steels that are ¼ hard or softer. Ask for samples for testing.

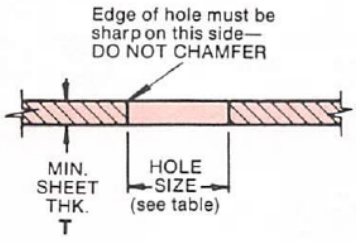
Thread Size ▶	4-40 UNC	6-32 UNC	8-32 UNC	10-24 UNC	10-32 UNF	¼-20 UNC	5/16-18 UNC
⌀H ▶	11/64	7/32	¼	9/32	9/32	3/8	15/32
L ↓							
¼	77-04-104-24 ■						
5/16	77-05-104-24 ■	77-05-106-24 ■					
3/8	77-06-104-24 ■	77-06-106-24 ■	77-06-108-24 ■	77-06-110-24 □	77-06-210-24 ■		
7/16	77-07-104-24 ■	77-07-106-24 ■	77-07-108-24 ■	77-07-110-24 □	77-07-210-24 ■		
½	77-08-104-24 ■	77-08-106-24 ■	77-08-108-24 ■	77-08-110-24 □	77-08-210-24 ■	77-08-125-24 ■	
5/8	77-10-104-24 ■	77-10-106-24 ■	77-10-108-24 ■	77-10-110-24 □	77-10-210-24 ■	77-10-125-24 ■	77-10-131-24 □
¾		77-12-106-24 ■	77-12-108-24 ■	77-12-110-24 □	77-12-210-24 ■	77-12-125-24 ■	77-12-131-24 □
7/8			77-14-108-24 ■	77-14-110-24 □	77-14-210-24 ■	77-14-125-24 ■	77-14-131-24 □
1"			77-16-108-24 ■	77-16-110-24 □	77-16-210-24 ■	77-16-125-24 ■	77-16-131-24 □
1 1/8						77-18-125-24 ■	77-18-131-24 □
1 ¼						77-20-125-24 ■	77-20-131-24 □
1 3/8							77-22-131-24 □
1 ½						77-24-125-24 ■	77-24-131-24 □

■ From stock, subject to prior sale. □ Up to 8 weeks. Minimum order required; setup charge may apply.

No. 77 THREDSTUDS® — Installation Instructions

(Applies to steel, stainless steel, and aluminum THREDSTUDS®)

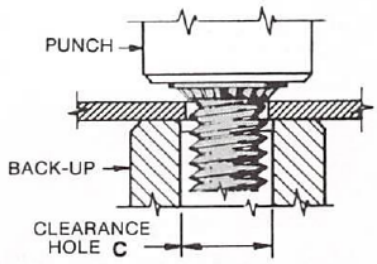
Test them in your material! We'll supply samples.



INSTALLATION

Prepare hole by drilling or punching. See table (below left) for proper hole size. Provide a solid back-up (steel, hardened to R.C. 50 min.) and apply pressure until top of Thredstud is flush with surface of sheet. Use a smooth faced setting punch of a diameter greater than head of Thredstud.

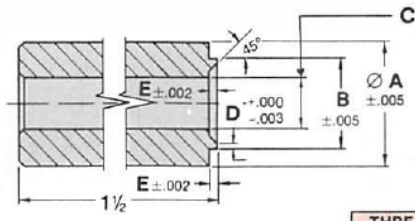
Note: Installation force can vary from 1 ton to 8 tons depending on Thredstud size and material into which it is being installed.



Thread Size	Min. Sheet Thickness "T"	Hole size and Clearance Hole C
2-56	.025	.086 $^{+.002}_{-.000}$
4-40	.028	.113 $^{+.003}_{-.001}$
6-32	.035	.140 $^{+.003}_{-.001}$
8-32	.041	.166 $^{+.003}_{-.001}$
10-24	.047	.191 $^{+.003}_{-.001}$
10-32	.047	.191 $^{+.003}_{-.001}$
¼-20	.062	.250 $^{+.004}_{-.001}$
5/16-18	.078	.312 $^{+.004}_{-.001}$

BACK-UP TOOL

FOR APPLICATIONS CLOSE TO THE EDGE OR FOR METALS OF UNUSUAL ALLOY, A BACK-UP TOOL CAN BE USED.



Material: Drill rod, 1095. Heat treat R. C. 50-55. Finish: zinc plate.

Note: All diameters to be concentric within .005 T.I.R.

Back-up Tool

THREAD SIZE	PART NUMBER	A	B	C	D	E
No. 2	77-0-14626-11 ■	.438	.156	.086	.016	.011
No. 4	77-0-11354-11 ■	.438	.187	.113	.016	.011
No. 6	77-0-11352-11 ■	.438	.218	.140	.016	.016
No. 8	77-0-11355-11 ■	.438	.250	.166	.016	.016
No. 10	77-0-11238-11 ■	.438	.296	.191	.016	.018
¼	77-0-11353-11 ■	.562	.375	.250	.016	.018
5/16	77-0-11356-11 ■	.562	.468	.312	.020	.020

■ From stock, subject to prior sale.

Weights (lbs.) of No. 77 Thredstuds®

According to thread size and length.

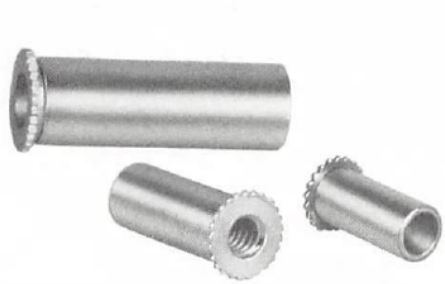
LENGTH	2-56 UNC	4-40 UNC		6-32 UNC		8-32 UNC		10-24 UNC		10-32 UNF		¼-20 UNC		5/16-18 UNC	
	Steel	Steel	Alum.	Steel	Alum.	Steel	Alum.	Steel	Alum.	Steel	Alum.	Steel	Alum.	Steel	Alum.
3/16	.0003														
¼	.0003	.0006	.0002												
5/16	.0004	.0007	.0002	.0010	.0003										
⅜	.0005	.0008	.0003	.0013	.0004	.0018	.0006	.0025	.0009	.0025	.0009				
7/16	.0006	.0009	.0003	.0015	.0005	.0021	.0007	.0028	.0010	.0029	.0010				
½	.0006	.0010	.0004	.0016	.0006	.0024	.0008	.0032	.0011	.0033	.0011	.0058	.0010		
⅝		.0013	.0004	.0020	.0007	.0029	.0010	.0039	.0013	.0041	.0014	.0071	.0024	.0114	.0039
¾				.0023	.0008	.0035	.0012	.0046	.0016	.0048	.0017	.0084	.0029	.0134	.0046
⅞						.0040	.0014	.0053	.0018	.0056	.0019	.0096	.0033	.0155	.0053
1"						.0046	.0016	.0060	.0020	.0064	.0022	.0109	.0037	.0176	.0060
1⅛												.0122	.0042	.0196	.0067
1¼												.0135	.0046	.0217	.0074
1⅜												.0148	.0051	.0238	.0082
1½												.0161	.0052	.0259	.0089

THREDSPACERS

Press-in spacers for stacked panels or components

A quick, sure means of applying threaded spacer posts to sheet metal panels or brackets. Pressed into a drilled or punched hole, the Thredspacer becomes an integral part of the metal it's installed in; is completely flush on the back side, will not be misplaced when unit is disassembled.

Thredspacers are stocked in two materials; case-hardened, zinc plated steel and passivated stainless steel. Thread sizes run from No. 4 through 1/4" in length increments of 1/16" (see table below).



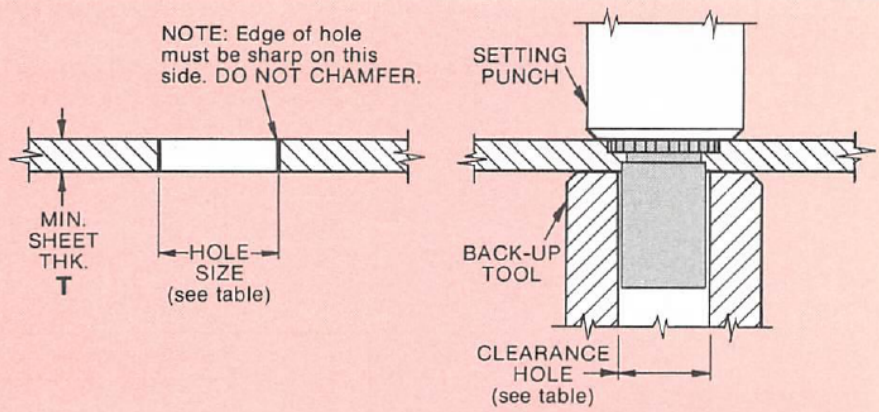


Thredspacers are also availabl in metric sizes. Call for details.

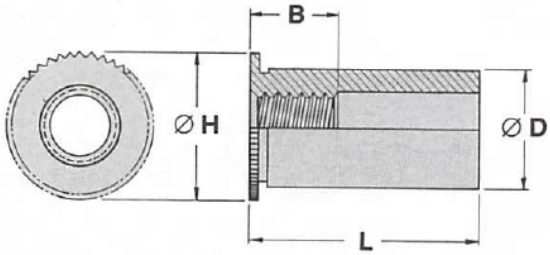
INSTALLATION

Prepare hole by drilling or punching (see table for diameter). Provide solid back-up with correct clearance hole and press knurled head flush with sheet, using a smooth-faced setting punch, larger than head of Thredspacer.

NOTE: For best results, back-up tool should be hardened and have little or no radius at edge of hole.



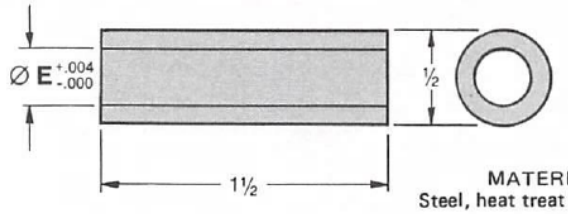
specifications



Steel inserts:
For use in low carbon steels that are ½ hard or softer and for stainless steels in the annealed condition. Ask for samples for testing.

Stainless steel inserts:
For use in most aluminums or in low carbon steels that are ¼ hard or softer. Ask for samples for testing.

BACK-UP TOOL



MATERIAL
Steel, heat treat R.C. 45-50

THREAD SIZE	THREAD LENGTH B	HEAD ØH	SHANK ØD	SEE INSTALLATION HOLE SIZE +.004 −.000	SEE INSTALLATION MIN. SHEET THK. T	SEE INSTALLATION CLEAR. HOLE +.004 −.000	BACK-UP TOOL TOOL PART NO.	BACK-UP TOOL ØE
4-40	3/16	1/4	.183	.187	.036	.187	40-0-12791-13 ■	.187
6-32	1/4	9/32	.215	.218	.036	.218	40-0-12791-17 ■	.218
8-32	1/4	11/32	.277	.281	.048	.281	40-0-12791-19 ■	.281
10-32	1/4	3/8	.308	.312	.048	.312	40-0-12791-22 ■	.312
1/4-20	3/8	7/16	.371	.375	.060	.375	40-0-12791-25 ■	.375

LENGTH L	PART NUMBERS — STEEL 4-40	6-32	8-32	10-32	1/4-20	PART NUMBERS — STAINLESS STEEL 4-40	6-32	8-32	10-32	1/4-20
3/16	40-13-103-13 ■					40-13-103-24 ■				
1/4	40-13-104-13 ■	40-17-104-13 ■	40-19-104-13 ■			40-13-104-24 ■	40-17-104-24 ■	40-19-104-24 ■		
5/16	40-13-105-13 ■	40-17-105-13 ■	40-19-105-13 ■			40-13-105-24 ■	40-17-105-24 ■	40-19-105-24 ■		
3/8	40-13-106-13 ■	40-17-106-13 ■	40-19-106-13 ■	40-22-106-13 ■		40-13-106-24 ■	40-17-106-24 ■	40-19-106-24 ■	40-22-106-24 ■	
7/16	40-13-107-13 ■	40-17-107-13 ■	40-19-107-13 ■	40-22-107-13 ■		40-13-107-24 ■	40-17-107-24 ■	40-19-107-24 ■	40-22-107-24 ■	
1/2	40-13-108-13 ■	40-17-108-13 ■	40-19-108-13 ■	40-22-108-13 ■	40-25-108-13 ■	40-13-108-24 ■	40-17-108-24 ■	40-19-108-24 ■	40-22-108-24 ■	40-25-108-24 ■
9/16		40-17-109-13 ■	40-19-109-13 ■	40-22-109-13 ■	40-25-109-13 ■		40-17-109-24 ■	40-19-109-24 ■	40-22-109-24 ■	40-25-109-24 ■
5/8		40-17-110-13	40-19-110-13 ■	40-22-110-13 ■	40-25-110-13 ■		40-17-110-24 ■	40-19-110-24 ■	40-22-110-24 ■	40-25-110-24 ■
11/16										
3/4		40-17-112-13 ■	40-19-112-13 ■	40-22-112-13 ■	40-25-112-13 ■		40-17-112-24 ■	40-19-112-24 ■	40-22-112-24 ■	40-25-112-24 ■

MATERIAL and FINISH
12L14 steel, case hardened and zinc plated plus yellow chromate dip, or 303 stainless steel, passivated.

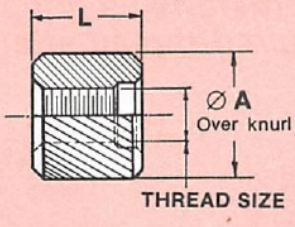
■ From stock, subject to prior sale.

KNURLED & THREADED INSERTS

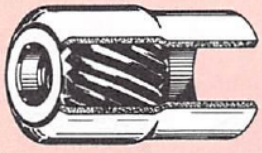
PROVIDE STEEL THREADS IN WOOD, PLASTIC, OR METAL.

Knurled inserts can be driven or pressed into materials ranging in density from wood to softer metals. The deep spiral knurling takes a firm grip in a drilled or molded hole, resisting both torque and pull-out. Screws are easily installed, guided into place by insert's counterbore.

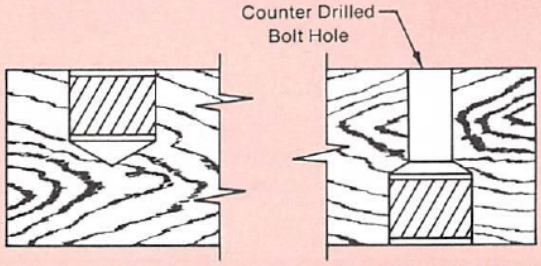
The insert can be driven into a blind hole from one side of the job. It can also be used with a through hole so that a bolt can come in from the opposite surface to engage with its threads.



MATERIAL and FINISH
Low carbon steel, zinc plated.



INSERT CAN BE SWAGED INTO END OF METAL TUBING



INSTALLATION METHOD A

INSTALLATION METHOD B

INSTALLATION INSTRUCTIONS

Method **A**
FOR NEAR SIDE APPLICATION—Drill proper size hole (see tables) to exact depth of insert. Drive insert flush with surface, with counterbored end up.

Method **B**
FOR FAR SIDE APPLICATION—Drill a through hole to proper bolt thread size. Counterbore from insert side as above. Drive insert flush with surface with counterbored end of insert toward bottom of hole.



SPECIFICATIONS No. 72

Thread Size	∅ A	Installation		Part Number
		L	Hole Size*	
4-40 NC	.202	.19	.166	72-1-**440**-13 ■
5-40 NC	.264	.25	.228	72-1-**540**-13 ■
6-32 NC	.264	.25	.228	72-1-**632**-13 ■
8-32 NC	.264	.25	.228	72-1-**832**-13 ■



SPECIFICATIONS No. 71

Thread Size	∅ A	Installation		Part Number
		L	Hole Size*	
6-32 NC	.455	.38	.413	71-1-**132**-13 ■
8-32 NC	.455	.38	.413	71-1-**232**-13 ■
10-24 NC	.455	.38	.413	71-1-**324**-13 ■
10-32 NF	.455	.38	.413	71-1-**332**-13 ■
¼-20 NC	.455	.38	.413	71-1-**520**-13 ■
¼-28 NF	.455	.38	.413	71-1-**528**-13 ■
5/16-18 NC	.518	.38	.468	71-1-**618**-13 ■
5/16-24 NF	.518	.38	.468	71-1-**624**-13 ■
⅜-16 NC	.580	.38	.531	71-1-**716**-13 ■

■ From stock, subject to prior sale.

***Hole sizes are for installation in wood. In material of higher density the hole sizes may require adjustment (slightly larger). Ask for samples for testing.**

SOUTHCO fasteners

DRIVESERTS®

FOR THICK SECTIONS

Where tapping is impractical, costly, or material is not suitable for required thread strength.

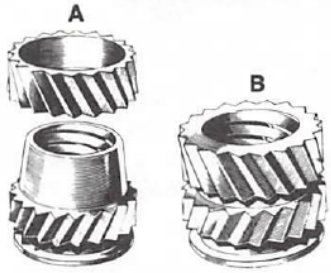


FREE-RUNNING TYPE



PREVAILING-TORQUE TYPE

Here's what DRIVESERTS are:



2-piece, stainless steel, high-strength inserts (A)

...shipped to you pre-assembled (B).

Here's why DRIVESERTS go in faster, hold better:



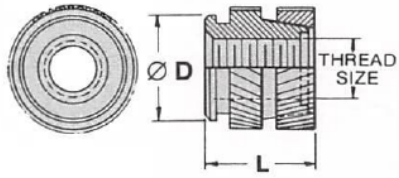
1. Rings move apart as driving force is applied to threads of base section.
2. Rings rotate in opposite directions as knurls track into the work.
3. Rings become a one-piece insert. Locking action of mating tapered surfaces increases in proportion to pull-out force applied.

THREAD SIZE	∅ D	L	PART NUMBERS	INSTALLATION DATA		
				HOLE		
				DIA. +.007 -.000	MIN. DEPTH	USE TOOL PART NO.
Free-running type						
6-32 NC	5/16	9/32	75-10-**106**-14 ■	.312	9/32	75-19-106-15
8-32 NC	5/16	9/32	75-10-**108**-14 ■	.312	9/32	75-19-108-15
10-32 NF	5/16	9/32	75-10-**210**-14 ■	.312	9/32	75-19-210-15
1/4-20 NC	3/8	11/32	75-10-**125**-14 ■	.375	11/32	75-19-125-15
5/16-18 NC	7/16	13/32	75-10-**131**-14 ■	.437	13/32	75-19-131-15
Prevailing-torque type						
6-32 NC	5/16	3/8	75-20-**106**-16 ■	.312	3/8	75-19-106-15
8-32 NC	5/16	3/8	75-20-**108**-16 ■	.312	3/8	75-19-108-15
10-32 NF	5/16	3/8	75-20-**210**-16 ■	.312	3/8	75-19-210-15
1/4-20 NC	3/8	7/16	75-20-**125**-16 ■	.375	7/16	75-19-125-15
5/16-18 NC	7/16	1/2	75-20-**131**-16 ■	.437	1/2	75-19-131-15

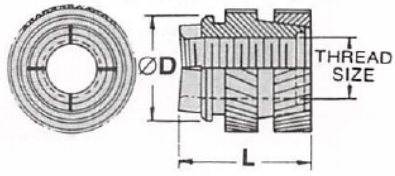
■ From stock, subject to prior sale.

specifications

FREE-RUNNING TYPE

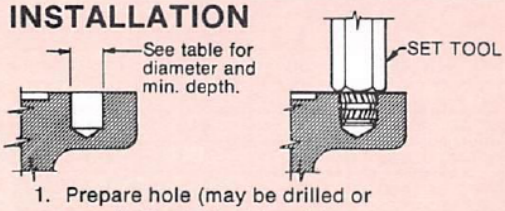


PREVAILING-TORQUE TYPE



MATERIAL and FINISH
416 stainless steel, heat treated, natural finish.

INSTALLATION



1. Prepare hole (may be drilled or cored). See table (above) for diameter and minimum depth.
2. Thread Drivesert completely onto set tool or cap screw (see cap screw note right), making certain pilot diameter (slotted and/or flanged) end of insert faces away from tool.
3. Press or drive Drivesert into hole until top of insert is flush with surface of material.

   NOTE: Installation forces can vary from 3 tons to 5 tons depending on Drivesert size and material into which it is being installed.

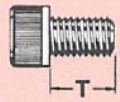
Note: Screw head must seat against insert for proper installation. If recommended screw lengths are not available, use a spacer (nut, washer, etc.) under head of screw.

NOTE: A cap screw or set tool must always be used to install Driveserts. The driving force, directed against the insert's internal threads, permits rotation of the rings during installation.

Never install Driveserts by applying pressure directly against upper ring.

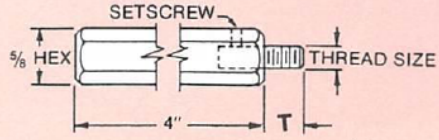
For use in most aluminums or in low carbon steels that are 1/4 hard or softer. Ask for samples for testing.

CAP SCREW
For press installation



For "T", see set tool chart below.

SET TOOL
For hammer installation



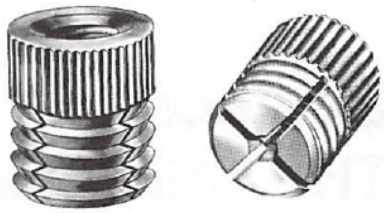
TOOL PART NO.	THREAD SIZE	T
75-19-**106**-15 ■	6-32 NC	9/32
75-19-**108**-15 ■	8-32 NC	9/32
75-19-**210**-15 ■	10-32 NF	9/32
75-19-**125**-15 ■	1/4-20 NC	11/32
75-19-**131**-15 ■	5/16-18 NC	13/32

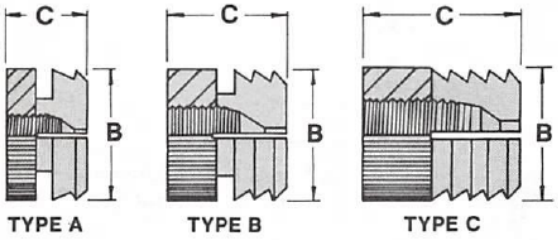
■ From stock, subject to prior sale.

ANCHOR NUTS

for removable fastening to wood and laminates

- Available in steel and aluminum.
- No marring of finished surfaces.
- Deep serrations and expanded barbs resist torque and pull-out.
- Sizes from No. 6 to 3/8"; Fine and Course threads.

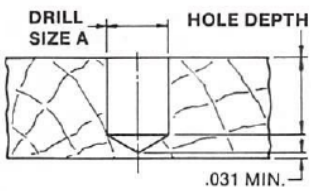




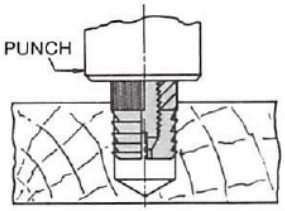
THREAD SIZE	PART NUMBERS		B	C	TYPE	MIN. MAT'L THICKNESS FOR EXPANSION	INSTALLATION	
	Low carbon steel zinc plated plus yellow chromate.	2017 Aluminum, natural.					DRILL SIZE A	HOLE DEPTH
6-32	21-40-110-16 ■		.395	.250	A	.375	.375	.25
8-32	21-40-310-16 ■	21-40-310-17 ■	.395	.375	B	.500	.375	.38
10-32	21-40-410-16 ■	21-40-410-17 ■						
10-24	21-40-510-16 ■	21-40-510-17 ■						
12-24	21-40-710-16 ■	21-40-710-17 ■	.395	.500	C	.625	.375	.50
1/4-28	21-40-810-16 ■	21-40-810-17 ■	.458	.562	C	.750	.437	.56
1/4-20	21-40-910-16 ■	21-40-910-17 ■						
5/16-24	21-41-010-16 ■	21-41-010-17 ■	.520	.562	C	.750	.500	.56
5/16-18	21-41-110-16 ■	21-41-110-17 ■						
3/8-24	21-41-210-16 ■		.582	.625	C	.750	.562	.63
3/8-16	21-41-310-16 ■							

INSTALLATION

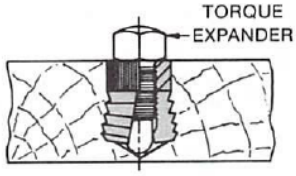
1. Drill a clean hole. (For best results use a standard twist drill with 118° point, high speed and low feed.



2. Drive Anchor Nut flush with wood surface.



3. Expand with Torque or Power-tool Torque expander. Alternate method—Use punch expander when material is hard or dense (all sizes).

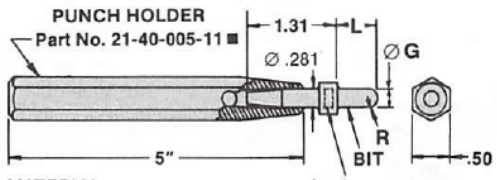


Screw length = **W** + thickness of part to be attached to anchor nut.

SCREW SIZE	W		
	Min.	RECOMMENDED	Max.
6	.13	.13 - .19	.25
8 & 10	.19	.25 - .31	.38
12	.25	.31 - .38	.44
1/4 & 5/16	.31	.38 - .44	.50
3/8	.38	.44 - .50	.56

EXPANDING TOOLS

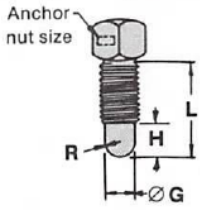
Punch Expander



MATERIAL: Steel, hardened

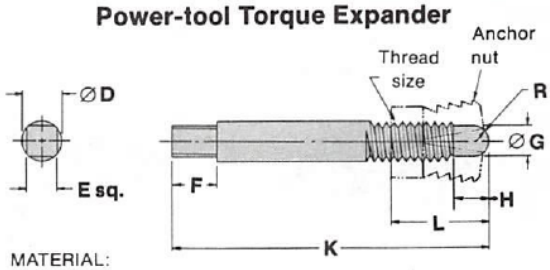
Anchor nut size

Torque Expander



MATERIAL: Steel, hardened

Power-tool Torque Expander



MATERIAL: Hardened steel, zinc plated plus yellow chromate dip.

Anchor nut size	TOOL PART NUMBERS			Ø D	E	F	Ø G	H	R	K	L	M*
	Punch Expander	Torque Expander	Power-tool Torque Expander									
6-32	21-40-114-11 ■	21-40-112-11 ■	21-40-117-11 ■	.188	.152	.25	.104	.100	.052	1.5	.30	.23
8-32	21-40-314-11 ■	21-40-312-11 ■	21-40-317-11 ■				.130	.150	.065		.44	.38
10-32	21-40-414-11 ■	21-40-412-11 ■	21-40-417-11 ■				.156		.078		.45	.39
10-24	21-40-514-11 ■	21-40-512-11 ■	21-40-517-11 ■				.144		.072			
12-24	21-40-714-11 ■	21-40-712-11 ■	21-40-717-11 ■	.250	.191	.28	.170	.210	.085	2.00	.59	.53
1/4-28	21-40-814-11 ■	21-40-812-11 ■	21-40-817-11 ■				.211	.230	.105		.65	.59
1/4-20	21-40-914-11 ■	21-40-912-11 ■	21-40-917-11 ■				.195		.097			
5/16-24	21-41-014-11 ■	21-41-012-11 ■	21-41-017-11 ■	.313	.238	.31	.267	.250	.133		.68	.63
5/16-18	21-41-114-11 ■	21-41-112-11 ■	21-41-117-11 ■				.252		.126			
3/8-24	—	21-43-612-11 ■	21-43-617-11 ■	.375	.286	.38	.330	.330	.165		.78	.72
3/8-16	—	21-42-612-11 ■	21-42-617-11 ■				.307		.153			

*When using torque expander with Porter Cable model 7520 portable tapper, use the depth stop provided and adjust so that nose extends **M** distance beyond depth stop.

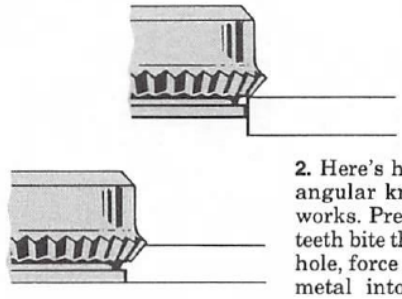
■ From stock, subject to prior sale.

SOUTHCO fasteners

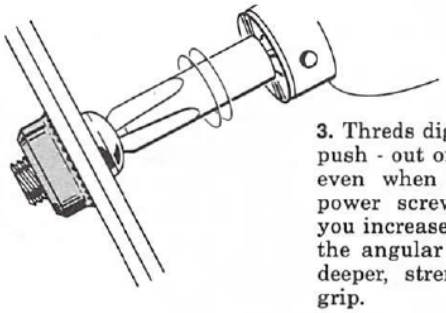
Southco PRESS-IN THREDS®...
THE SHEET METAL FASTENERS THAT BECOME PART OF THE PART



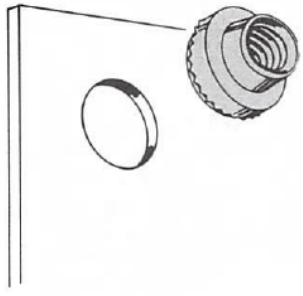
1. Now. . .everywhere your design calls for a self-clinching fastener or spacer, you can use angular knurl holding power to beat spin and push-out problems. Look at all these styles!



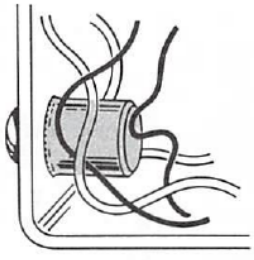
2. Here's how Southco's angular knurl principle works. Press it in; knurl teeth bite the *edges* of the hole, force a cold flow of metal into the locking groove.



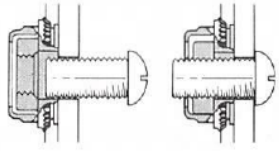
3. Threds dig in against push - out or spin - out, even when you use a power screwdriver. As you increase the torque, the angular knurl bites deeper, strengthens its grip.



4. Here's a Southco Press-in Thred that provides prevailing torque. You'll get a drag fit that makes lockwashers unnecessary.



5. You can turn a screw in or out of this Closed-end Thred without snagging anything on the other side. Internal parts are shielded from dirt and moisture even when the screw is removed.

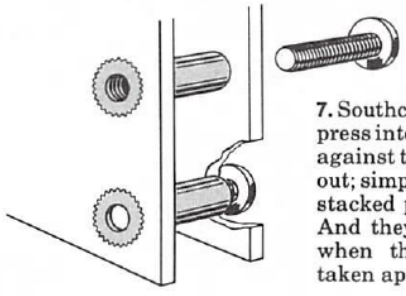


Floating THREDS, free-running type

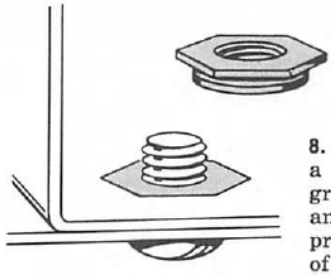


Floating THREDS, prevailing-torque type

6. Southco Floating Threds take care of the problem of poor hole alignment between mating parts. The threads move as much as 1/32" to compensate for misalignment. It's also stocked in a floating, prevailing torque style.



7. Southco Thred-Spacers press into one sheet, hold against torque and push-out; simplify assembly of stacked parts or panels. And they won't get lost when the assembly is taken apart.



8. Flush Threds give you a hex head and locking groove to prevent spin and push-out. There's no protrusion on either side of the sheet.

SOUTHCO fasteners

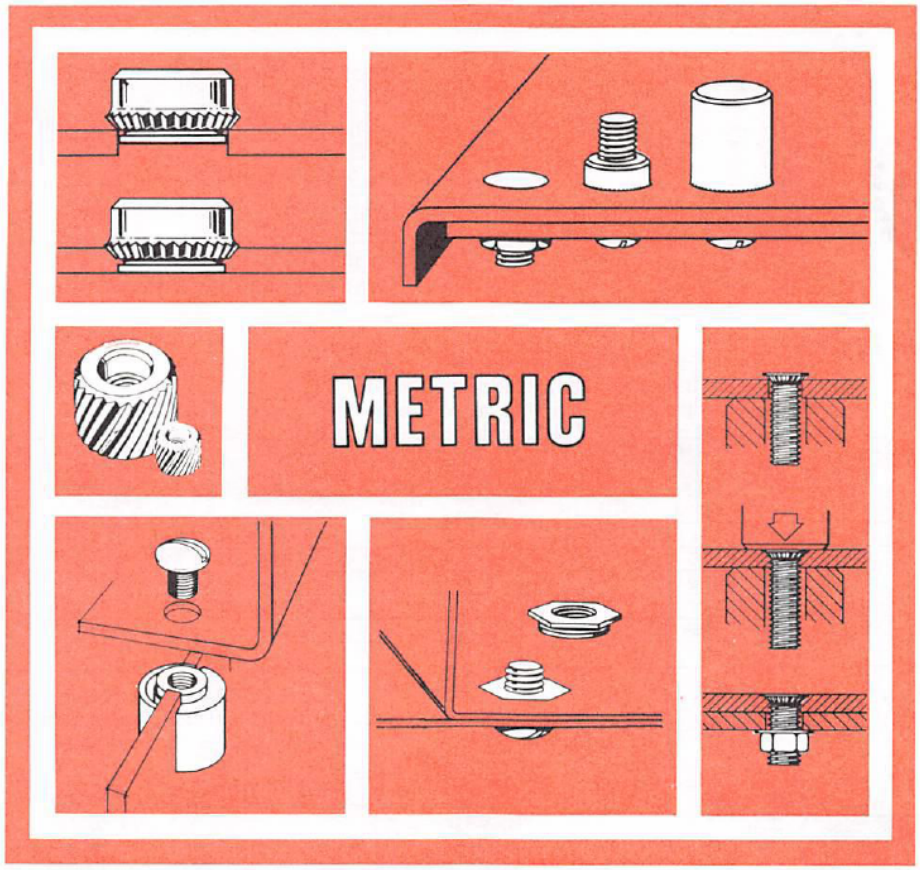
And—most important: with Southco PRESS-IN THREDS® you don't change fasteners when sheet thickness changes!

Section QQ

Metric Press-in Threds® and Studs

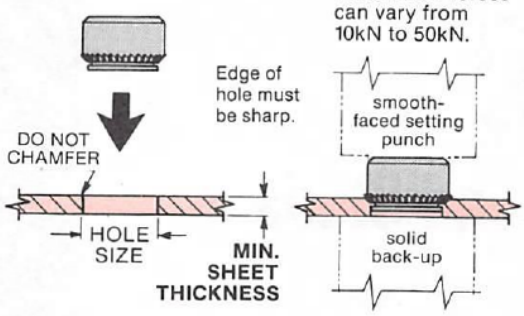
contents guide | **page**

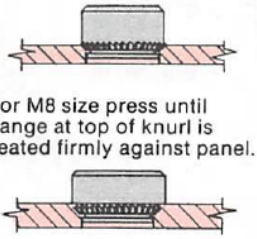
No. 74 Metric Threds® QQ-2
No. 55 Metric Flush Threds® QQ-3
No. 77, 71, 72 Knurled Inserts QQ-4



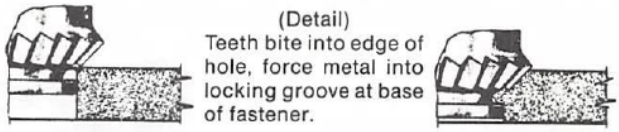
METRIC Press-in Threds®

INSTALLATION





ANGULAR KNURL



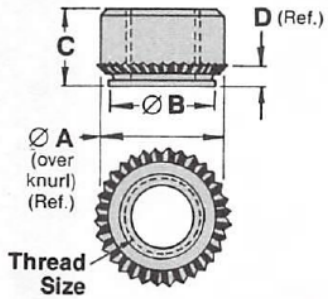
When a screw is threaded into the Press-in Thred and torque increased, teeth of angular knurl are pulled more firmly against sheet, putting extra pressure on metal in locking groove.
Note: Configuration of angular knurl and locking groove may vary slightly from illustration, depending on method of manufacture.

For use in low carbon steels that are ½ hard or softer and for stainless steels in the annealed condition. Ask for samples for testing.

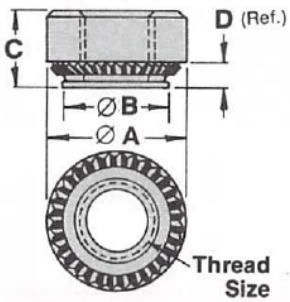
Free-running type

All dimensions are in millimeters.

Thread sizes M3 to M6 incl.



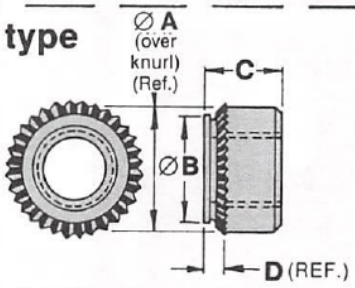
Thread size M8



MATERIAL and FINISH
Case hardened low carbon steel, zinc plated with yellow chromate dip.

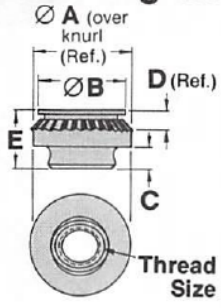
THREAD SIZE	DIMENSIONS Ø A (Ref.)	ØB	C	D (Ref.)	HOLE SIZE * +0.08 -0.00	MIN. SHEET THICK.*	PART NUMBERS
M3 x 0.5	5.66	4.70	4.0	1.2	4.75	0.92	74-11-530-13 ■
M3.5 x 0.6	7.26	6.27	4.0	1.2	6.35	0.92	74-11-535-13 ■
M4 x 0.7	8.15	7.06	4.7	1.2	7.14	1.22	74-11-540-13 ■
M5 x 0.8	8.15	7.06	4.7	1.2	7.14	1.22	74-11-550-13 ■
M6 x 1	10.54	9.45	4.7	1.6	9.53	1.53	74-11-560-13 ■
M8 x 1.25	14.27	12.65	6.4	2.0	12.70	1.91	74-11-580-13 ■

Thin-shell type



THREAD SIZE	DIMENSIONS Ø A (Ref.)	ØB	C	D (Ref.)	HOLE SIZE * +0.08 -0.00	MIN. SHEET THICK.*	PART NUMBERS
M3 x 0.5	5.31	4.17	4.0	1.2	4.22	0.92	74-13-530-13 ■
M4 x 0.7	6.53	5.36	4.7	1.2	5.41	1.22	74-13-540-13 ■
M5 x 0.8	7.72	6.30	4.7	1.2	6.35	1.22	74-13-550-13 ■
M6 x 1	10.13	8.69	4.7	1.6	8.74	1.53	74-13-560-13 ■
M8 x 1.25	12.17	10.44	6.4	2.0	10.49	1.91	74-13-580-13 ■

Prevailing-torque type

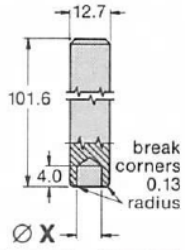


MATERIAL and FINISH
41L40 steel, heat treated, zinc plated plus phosphate dip plus dry film lubricant.

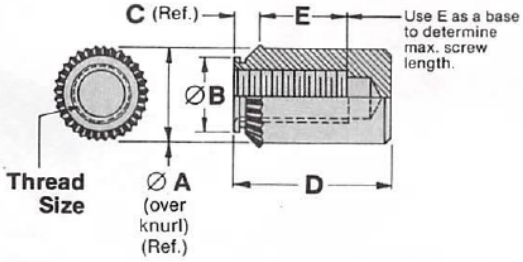
THREAD SIZE	DIMENSIONS Ø A (Ref.)	ØB	C	D (Ref.)	E	Hole Size * +0.08 -0.00	MIN. Sheet Thick.*	PART NUMBERS
M3 x 0.5	5.66	4.70	2.0	1.0	4.3	4.75	0.92	74-12-530-15 □
M4 x 0.7	8.15	7.09	2.4	1.3	5.1	7.14	1.22	74-12-540-15 □
M5 x 0.8	8.15	7.09	2.4	1.3	5.1	7.14	1.22	74-12-550-15 □
M6 x 1	10.54	9.47	2.8	1.5	5.8	9.53	1.53	74-12-560-15 □
M8 x 1.25	14.27	12.65	3.2	2.0	7.4	12.70	1.91	74-12-580-15 □

Installation Tool Part Number	Ø X +0.08 -0.05
74-0-11304-04 ■	4.22
74-0-11304-08 ■	5.56
74-0-11304-10 ■	6.25
74-0-11304-25 ■	7.92
74-0-11304-31 ■	9.53

Installation Tool Material
Steel, Heat tr. RC 45-50



Closed-end type



MATERIAL and FINISH
Case hardened low carbon steel, zinc plated with yellow chromate dip.

THREAD SIZE	DIMENSIONS Ø A (Ref.)	ØB	C	D	E	HOLE SIZE * +0.07 -0.00	MIN. SHEET THICK.*	PART NUMBERS
M3 x 0.5	5.6	4.70	1.2	9.5	8.3	4.75	0.92	74-21-530-13 ■
M4 x 0.7	7.9	7.06	1.2	12.3	10.3	7.14	1.22	74-21-540-13 ■
M5 x 0.5	7.9	7.06	1.2	12.3	10.7	7.14	1.22	74-21-550-13 ■
M6 x 1	10.3	9.45	1.6	15.9	13.4	9.53	1.53	74-21-560-13 ■

* Hole sizes and material thicknesses are converted from English sizes.

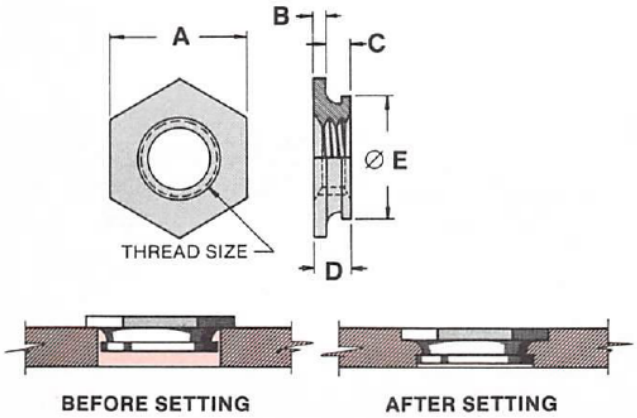
■ From stock, subject to prior sale. □ Up to 8 weeks. Minimum order required; setup charge may apply.

METRIC Flush THREDS®

Flush on both sides of sheet

- strong non-corrosive screw threads for repeated attachment and removal of parts.

For use in most aluminums or in low-carbon steels that are ¼ hard or softer. Ask for samples for testing.

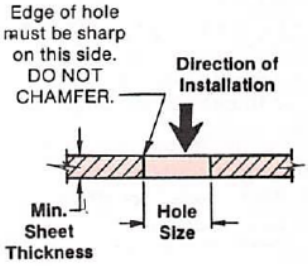


INSTALLATION

Prepare hole by drilling or punching (see table for diameter).

Place pilot end of fastener into hole; use a solid back-up. Press until top of hexagonal head is flush with surface of sheet. Use any smooth faced setting punch of a diameter greater than the fastener.

NOTE: Installation force can vary from 5 to 25 kN depending on fastener size and material into which it is being installed.



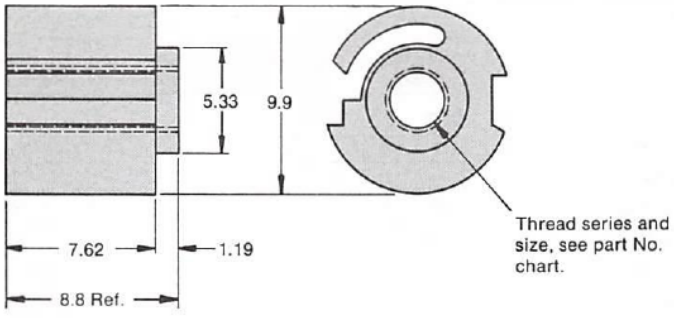
Note: If hole is punched, fastener should be installed on side of hole opposite to direction of punching.

MATERIAL and FINISH
303 stainless steel, passivated

THREAD SIZE	DIMENSIONS A	B	C	D	∅E	HOLE SIZE	PART NUMBER
For 1.50 to 2.29 thick sheets							
M2.5 x 0.45	4.7	0.53	0.91	1.45	4.32	4.40	55-11-525-24 □
M3 x 0.5	5.6	0.53	0.91	1.45	4.72	4.80	55-11-530-24 ■
M4 x 0.7	7.9	0.53	0.91	1.45	7.29	7.40	55-11-540-24 ■
M5 x 0.8	8.7	0.53	0.91	1.45	7.85	8.00	55-11-550-24 ■
For 2.30 min. thick sheets							
M2.5 x 0.45	4.7	0.53	1.55	2.08	4.32	4.40	55-12-525-24 □
M3 x 0.5	5.6	0.53	1.55	2.08	4.72	4.80	55-12-530-24 ■
M4 x 0.7	7.9	0.66	1.55	2.21	7.29	7.40	55-12-540-24 ■
M5 x 0.8	8.7	0.70	1.55	2.31	7.85	8.00	55-12-550-24 ■

Southco Sheet-edge inserts

Fasten to the edges of thin sheets

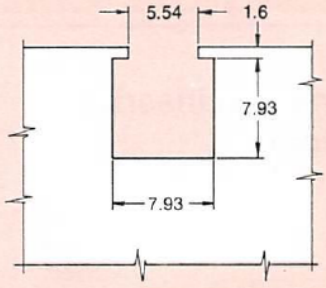


MATERIAL and FINISH
Thermoplastic polyester (see table for color).

Thread Series	Thread Size	Part Number	Color
Metric	M3 x 0.5	F1-10-530-14 ■	Light blue
	M3.5 x 0.6	F1-10-535-15 ■	Med. blue
	M4 x 0.7	F1-10-540-16 ■	Dark blue

Maximum screw length= 9.50 + thickness of material to be attached.

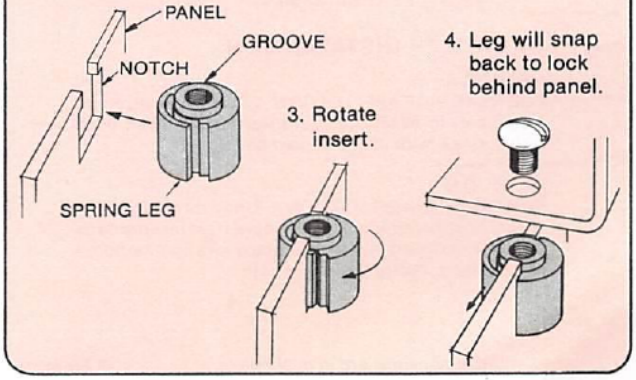
PANEL PREPARATION AND INSTALLATION



Note: When attachment is made, this edge of sheet and under surface of attached material must be in contact with each other.

Range of material thickness in which insert can be installed:
1.27 MIN.—2.41 MAX.

1. Prepare notch in panel as shown above. Note: notch dimensions are the same for all insert thread sizes.
2. Engage groove with edge of notch in panel.



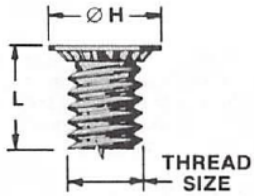
All dimensions are in millimeters. ■ From stock, subject to prior sale. □ Up to 8 weeks. Minimum order required; setup charge may apply.

METRIC

No. 77 THREDSTUDS®

Press-in studs for thin (or thick) sheet metal.

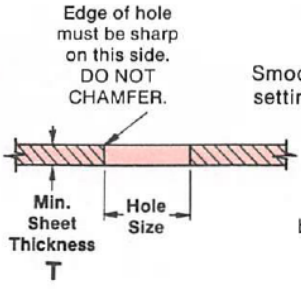
For use in low carbon steels that are ½ hard or softer and for stainless steels in the annealed condition. Ask for samples for testing.

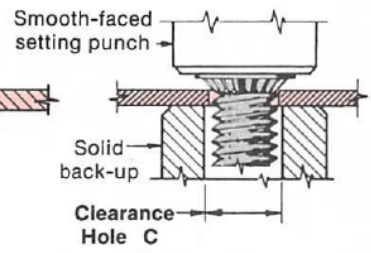


Thread Size ▸	M3 x 0.5	M4 x 0.7	M5 x 0.8	M6 x 1
⌀H ▸	4.8	6.2	7.8	9.2
L ▾				
5.0				
6.0	77-06-530-13□			
8.0	77-08-530-13■	77-08-540-13□		
10.0	77-10-530-13■	77-10-540-13■	77-10-550-13■	77-10-560-13□
12.0	77-12-530-13■	77-12-540-13■	77-12-550-13■	77-12-560-13■
14.0	77-14-530-13□	77-14-540-13□	77-14-550-13■	77-14-560-13■
16.0	77-16-530-13□	77-16-540-13□	77-16-550-13■	77-16-560-13■
18.0	77-18-530-13□	77-18-540-13□	77-18-550-13□	77-18-560-13■
20.0	77-20-530-13□	77-20-540-13□	77-20-550-13□	77-20-560-13■
25.0		77-25-540-13□	77-25-550-13□	77-25-560-13□
30.0				77-30-560-13□
35.0				77-35-560-13□
40.0				77-40-560-13□

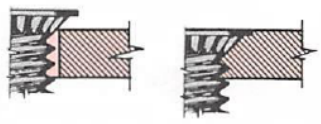
MATERIAL and FINISH
10B21 steel, hardened, zinc plated with yellow chromate dip.

Thread Size	Min. Sheet Thickness T	Hole Size	Clear Hole C
M3 x 0.5	0.80	3.00 $^{+0.08}_{-0.00}$	3.10
M4 x 0.7	1.05	4.00 $^{+0.08}_{-0.00}$	4.10
M5 x 0.8	1.20	5.00 $^{+0.10}_{-0.00}$	5.10
M6 x 1	1.55	6.00 $^{+0.10}_{-0.00}$	6.10

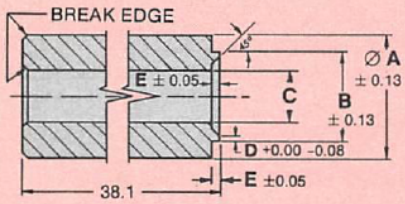




DETAIL



Teeth bite into edges of hole, force metal into thread groove at base of knurl.



FOR APPLICATIONS CLOSE TO THE EDGE OR FOR METALS OF UNUSUAL ALLOY, A BACK-UP TOOL CAN BE USED.

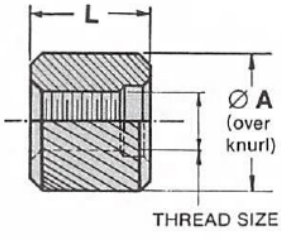
Material: Drill rod, 1095.
Heat treat R.C. 50-55.
Finish: Commercial zinc plate.

THREAD SIZE	PART NUMBER	⌀A	B	C	D	E
M3	77-0-21671-11■	11.13	4.75	3.10 $^{+0.05}_{-0.03}$	0.41	0.28
M4	77-0-21672-11■	11.13	6.35	4.09 $^{+0.05}_{-0.03}$	0.41	0.41
M5	77-0-21673-11■	11.13	7.52	5.18 ± 0.05	0.41	0.46
M6	77-0-21674-11■	14.27	9.12	6.10 ± 0.05	0.41	0.46

Note: All diameters to be concentric to within 0.13 T.I.R.

Nos. 71 and 72 Knurled and Threaded inserts

Provide steel threads in wood, plastic or metal





MATERIAL and FINISH
Low carbon steel, zinc plated.

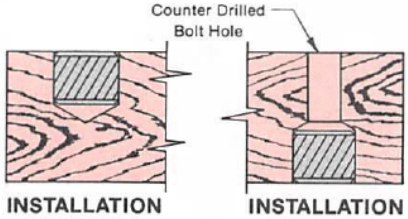
Thread Size	⌀A	L	Drill Size	Part Number
No. 71				
M3 x 0.5	11.56	9.5	10.5	71-20-030-13■
M4 x 0.7	11.56	9.5	10.5	71-20-040-13■
M5 x 0.8	11.56	9.5	10.5	71-20-050-13■
M6 x 1	11.56	9.5	10.5	71-20-060-13■
M8 x 1.25	13.16	9.5	12.0	71-20-080-13■
M10 x 1.5	14.73	9.5	13.5	71-20-100-13□
No. 72				
M3 x 0.5	6.71	6.4	5.8	72-20-030-13■
M4 x 0.7	6.71	6.4	5.8	72-20-040-13■

Hole sizes are for installation in wood. In material of higher density the hole sizes may require adjustment(slightly larger). Ask for samples for testing.

INSTALLATION

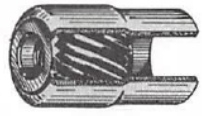
METHOD A
FOR NEAR SIDE APPLICATION — Drill proper size hole (see table) to exact depth of insert. Drive insert flush with surface, with counterbored end up.

METHOD B
FOR FAR SIDE APPLICATION — Drill a through hole to proper bolt thread size. Counterbore from insert side as above. Drive insert flush with surface with counterbored end of insert toward bottom of hole.



INSTALLATION METHOD A

INSTALLATION METHOD B



INSERT CAN BE SWAGED INTO END OF METAL TUBING

All dimensions are in millimeters.

■ From stock, subject to prior sale. □ Up to 8 weeks. Minimum order required; setup charge may apply.

Section R
Engineering Data

contents guide	page
Tap drill and clearance drill sizes for machine screws	R-2
Table of standard gauges and decimal equivalents of fractions....	R-3
Fractional inch to decimal to millimeter conversion chart.....	R-4

STANDARD PROTECTIVE FINISHES FOR FERROUS METAL PARTS

This information applies except where otherwise noted.

IMPORTANT NOTE: DACROTIZING†, with exceptions noted below, is Southco's standard finish for ferrous metal parts. However, some parts still being shipped from previously manufactured stock may have a cadmium or zinc finish.

Southco applies optimum commercial protective finishes to all steel parts.

Wherever practical, a DACROTIZED† finish is applied. Some of our products, and portions of others, may be supplied with a supplemental organic coating over the DACROTIZED† finish.

Where a DACROTIZED† finish is not practical (for functional reasons), steel parts are zinc plated, and may have a supplemental yellow or bright chromate coating over the zinc plate.

Springs and pins are stainless steel, unless otherwise specified.

DACROTIZING† is the name of the process that Southco uses to apply an immersion zinc flake/chromate dispersion coating to ferrous metal parts for outstanding corrosion protection. DACROTIZING† meets the specification Mil-C-87115.

DACROTIZED† parts are coated to withstand 240 hours of salt spray testing per ASTM B-117.

Many Southco products are offered in other finishes such as chromium plating, black organic finishes, etc. These finishes, if available, are listed on individual product pages.

†Registered tradename of Metal Coatings International, Inc.

FEDERAL SUPPLY CODE FOR MANUFACTURERS — 94222

MACHINE SCREWS—TAP DRILL & CLEARANCE DRILL SIZES

SCREW SIZE		THREADS PER INCH		DRILL SIZES	
NO.	O.D.	N.C.	N.F.	TAP*	CLEAR
0	.060		80	3/64	#51
1	.073	64		#53	#47
1	.073		72	#53	#47
2	.086	56		#50	#42
2	.086		64	#50	#42
3	.099	48		#47	#37
3	.099		56	#46	#37
4	.112	40		#43	#31
4	.112		48	3/32	#31
5	.125	40		#38	#29
5	.125		44	#37	#29
6	.138	32		#36	#27
6	.138		40	#33	#27
8	.164	32		#29	#18
8	.164		36	#29	#18
10	.190	24		#26	#9
10	.190		32	#21	#9
12	.216	24		#16	#2
12	.216		28	#15	#2

Fractional Sizes Start Here

1/4	.250	20		#7	17/64
1/4	.250		28	#3	17/64
5/16	.312	18		F	21/64
5/16	.312		24	I	21/64
3/8	.375	16		5/16	25/64
3/8	.375		24	Q	25/64
7/16	.437	14		U	29/64
7/16	.437		20	25/64	29/64
1/2	.500	13		27/64	33/64
1/2	.500		20	29/64	33/64
9/16	.562	12		31/64	37/64
9/16	.562		18	33/64	37/64
5/8	.625	11		17/32	41/64
5/8	.625		18	37/64	41/64
3/4	.750	10		21/32	49/64
3/4	.750		16	11/16	49/64
7/8	.875	9		49/64	57/64
7/8	.875		14	13/16	57/64
1	1.000	8		7/8	1-1/64
1	1.000		14	15/16	1-1/64

*Tap Drill Sizes shown give approximately 75% depth of thread.

DECIMAL EQUIVALENTS OF DRILL SIZES

Letter Sizes

Letter	Size in Inches
A	.234
B	.238
C	.242
D	.246
E	.250
F	.257
G	.261
H	.266
I	.272
J	.277
K	.281
L	.290
M	.295
N	.302
O	.316
P	.323
Q	.332
R	.339
S	.348
T	.358
U	.368
V	.377
W	.386
X	.397
Y	.404
Z	.413

Number Sizes

No.	Size in Inches	No.	Size in Inches
1	.2280	41	.0960
2	.2210	42	.0935
3	.2130	43	.0890
4	.2090	44	.0860
5	.2055	45	.0820
6	.2040	46	.0810
7	.2010	47	.0785
8	.1990	48	.0760
9	.1960	49	.0730
10	.1935	50	.0700
11	.1910	51	.0670
12	.1890	52	.0635
13	.1850	53	.0595
14	.1820	54	.0550
15	.1800	55	.0520
16	.1770	56	.0465
17	.1730	57	.0430
18	.1695	58	.0420
19	.1660	59	.0410
20	.1610	60	.0400
21	.1590	61	.0390
22	.1570	62	.0380
23	.1540	63	.0370
24	.1520	64	.0360
25	.1495	65	.0350
26	.1470	66	.0330
27	.1440	67	.0320
28	.1405	68	.0310
29	.1360	69	.0292
30	.1285	70	.0280
31	.1200	71	.0260
32	.1160	72	.0250
33	.1130	73	.0240
34	.1110	74	.0225
35	.1100	75	.0210
36	.1065	76	.0200
37	.1040	77	.0180
38	.1015	78	.0160
39	.0995	79	.0145
40	.0980	80	.0135

DECIMAL EQUIVALENTS OF FRACTIONS

FRACTION	DECIMAL
1/64	.0156
1/32	.0312
3/64	.0468
1/16	.0625
5/64	.0781
3/32	.0937
7/64	.1093
1/8	.125
9/64	.1406
5/32	.1562
11/64	.1718
3/16	.1875
13/64	.2031
7/32	.2187
15/64	.2343
1/4	.250
17/64	.2656
9/32	.2812
19/64	.2968
5/16	.3125
21/64	.3281
11/32	.3437
23/64	.3593
3/8	.375
25/64	.3906
13/32	.4062
27/64	.4218
7/16	.4375
29/64	.4531
15/32	.4687
31/64	.4843
1/2	.500
33/64	.5156
17/32	.5312
35/64	.5468
9/16	.5625
37/64	.5781
19/32	.5937
39/64	.6093
5/8	.625
41/64	.6406
21/32	.6562
43/64	.6718
11/16	.6875
45/64	.7031
23/32	.7187
47/64	.7343
3/4	.750
49/64	.7656
25/32	.7812
51/64	.7968
13/16	.8125
53/64	.8281
27/32	.8437
55/64	.8593
7/8	.875
57/64	.8906
29/32	.9062
59/64	.9218
15/16	.9375
61/64	.9531
31/32	.9687
63/64	.9843
1	1.000

TABLE OF STANDARD GAUGES

This table shows the standard gauges and the names of major commodities for which each is used. To determine the gauge used for any commodity, notice the number in parenthesis opposite the commodity named and find the gauge column below bearing the same number in parenthesis.

	Ga. No.	(1) Birmingham or Stubs	(2) American or Browne & Sharp	(3) U.S. Standard	(4) Washburn & Moen	(5) Music Wire (Std)	(6) Mfgrs. Std. Ga. for Sheet Metal
	1/0	.340	.3249	.3125	.3065	.009	
Aluminum (2) except Tubing (1)	1	.300	.2893	.2812	.2830	.010	
Bands (1)	2	.284	.2576	.2656	.2625	.011	
Brass Tubing (⅜" O.D. and larger) (1)	3	.259	.2294	.2500	.2437	.012	.2391
	4	.238	.2043	.2343	.2253	.013	.2242
Brass Tubing (smaller than ⅜" O.D.) (2)	5	.220	.1819	.2187	.2070	.014	.2092
	6	.203	.1620	.2031	.1920	.016	.1943
Brass Sheets (2)	7	.180	.1443	.1875	.1770	.018	.1793
	8	.165	.1285	.1718	.1620	.020	.1644
Brass Strips (2)	9	.148	.1144	.1562	.1483	.022	.1495
Brass Wire (2)	10	.134	.1019	.1406	.1350	.024	.1345
Copper Sheets (2)	11	.120	.0907	.1250	.1205	.026	.1196
Copper Wire (2)	12	.109	.0808	.1093	.1055	.029	.1046
Flat Wire (1)	13	.095	.0719	.0937	.0915	.031	.0897
Hoops (1)	14	.083	.0640	.0781	.0800	.033	.0747
Iron Wire (4)	15	.072	.0570	.0703	.0720	.035	.0673
Monel Metal Sheets (3)	16	.065	.0508	.0625	.0625	.037	.0598
Music Wire (5)	17	.058	.0452	.0562	.0540	.039	.0538
Nickel Sheets (3)	18	.049	.0403	.0500	.0475	.041	.0478
	19	.042	.0359	.0437	.0410	.043	.0418
Nickel Silver Sheets (2)	20	.035	.0319	.0375	.0348	.045	.0359
Nickel Silver Wire (2)	21	.032	.0284	.0343	.0317	.047	.0329
Phosphor Bronze Strip (2)	22	.028	.0253	.0312	.0286	.049	.0299
Spring Steel (1)	23	.025	.0225	.0281	.0258	.051	.0269
Stainless Steel (3)	24	.022	.0201	.0250	.0230	.055	.0239
Steel Plates (6)	25	.020	.0179	.0218	.0204	.059	.0209
Steel Sheets (6)	26	.018	.0159	.0187	.0181	.063	.0179
	27	.016	.0142	.0171	.0173	.067	.0164
Steel Tubing, seamless and welded (1)	28	.014	.0126	.0156	.0162	.071	.0149
	29	.013	.0112	.0140	.0150	.075	.0135
Steel Wire (4) Exceptions: Music Wire (5) Armature Binding Wire (2) Flat Wire (1)	30	.012	.0100	.0125	.0140	.080	.0120
	31	.010	.0089	.0109	.0132	.085	.0105
	32	.009	.0079	.0101	.0128	.090	.0097
	33	.008	.0071	.0093	.0118	.095	.0090
Strip Steel (1)	34	.007	.0063	.0085	.0104	.100	.0082
	35	.005	.0056	.0078	.0095	.106	.0075
	36	.004	.0050	.0070	.0090	.112	.0067
	37		.0044	.0066	.0085	.118	.0064
	38		.0039	.0062	.0080	.124	.0060

FRACTIONAL INCHES TO DECIMALS and MILLIMETERS

INCH	DECIMAL INCH	MILLIMETER
1/64	0.015625	0.396875
1/32	0.03125	0.79375
3/64	0.046875	1.190625
1/16	0.0625	1.5875
5/64	0.078125	1.984375
3/32	0.09375	2.38125
7/64	0.109375	2.778125
1/8	0.125	3.175
9/64	0.140625	3.571875
5/32	0.15625	3.96875
11/64	0.171875	4.365625
3/16	0.1875	4.7625
13/64	0.203125	5.159375
7/32	0.21875	5.55625
15/64	0.234375	5.953125
1/4	0.25	6.35
17/64	0.265625	6.746875
9/32	0.28125	7.14375
19/64	0.296875	7.540625
5/16	0.3125	7.9375
21/64	0.328125	8.334375
11/32	0.34375	8.73125
23/64	0.359375	9.128125
3/8	0.375	9.525
25/64	0.390625	9.921875
13/32	0.40625	10.31875
27/64	0.421875	10.715625
7/16	0.4375	11.1125
29/64	0.453125	11.509375
15/32	0.46875	11.90625
31/64	0.484375	12.303125
1/2	0.50	12.7

INCH	DECIMAL INCH	MILLIMETER
33/64	0.515625	13.096875
17/32	0.53125	13.49375
35/64	0.546875	13.890625
9/16	0.5625	14.2875
37/64	0.578125	14.684375
19/32	0.59375	15.08125
39/64	0.609375	15.478125
5/8	0.625	15.875
41/64	0.640625	16.271875
21/32	0.65625	16.66875
43/64	0.671875	17.065625
11/16	0.6875	17.4625
45/64	0.703125	17.859375
23/32	0.71875	18.25625
47/64	0.734375	18.653125
3/4	0.75	19.05
49/64	0.765625	19.446875
25/32	0.78125	19.84375
51/64	0.796875	20.240625
13/16	0.8125	20.6375
53/64	0.828125	21.034375
27/32	0.84375	21.43125
55/64	0.859375	21.828125
7/8	0.875	22.225
57/64	0.890625	22.621875
29/32	0.90625	23.01875
59/64	0.921875	23.415625
15/16	0.9375	23.8125
61/64	0.953125	24.209375
31/32	0.96875	24.60625
63/64	0.984375	25.003125
1	1.00000	25.4

The dimensions furnished in this handbook are presented for the purpose of enabling the user to determine envelope sizes and to make proper installation.

Southco fasteners are carefully inspected at our plant before shipment. The customer's inspection should be based solely on proper functioning, verification of part number, and suitability of the fastener for the purpose intended.

The right is reserved to make changes in dimensions, materials and specifications without notice.

SOUTHCO®
fasteners

General Performance Guidelines

The performance guidelines shown in this handbook were determined under one set of test conditions and are supplied as a general guide only, as conditions vary with each application. Ultimate strength data given is for failure of the product or for sufficient deformation to make the product inoperable. No safety factor has been applied. It is recommended that the user test the product for his particular application.

Patent Information

Southco patents its original designs.
Detailed information is available upon request.

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Southco Fasteners

Handbook 39

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