56 Spring-Loaded Plunger
Flare-in style – Miniature, Small and Large

- **Simplified positioning of sliding components**
- **Quick-release hinge for removable door**
- **Designate access with color**

Material and Finish

End cap: Steel, zinc plated, chromate, plus sealer

Ferrule: Aluminum, natural

Stud: Steel, hardened, zinc plated, chromate, plus sealer

Knob: (Prism plungers only) PC/ABS, UL94-V0 Rated

Spring: 300 series stainless steel, passivated

Installation Notes

Press with approximately 2,000 N (562 lbf) until ferrule is flared into the countersink in the panel.

A solid back-up tool must be used for proper installation

Install Tool

Part number: 47-110 (Miniature)
56-7-TOOL (Large and Small)

Flaring tool

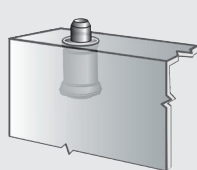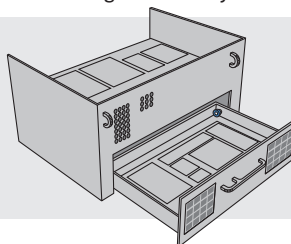Ø 13 (.50)   90°

102 (4.00)
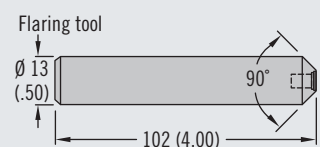
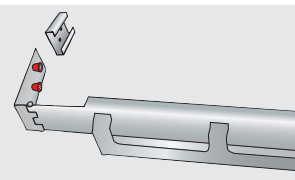### Part Number

See table

Applications

Retractable Hinge

Positioning / Secondary Catch

Quick Installation

Flare-in style

Bright - Miniature and Small
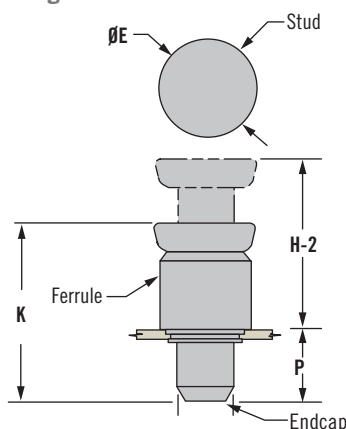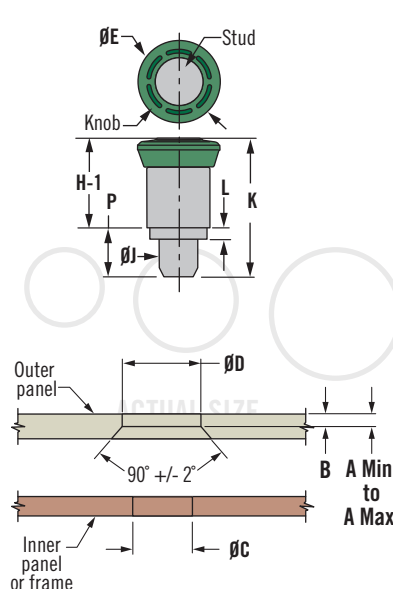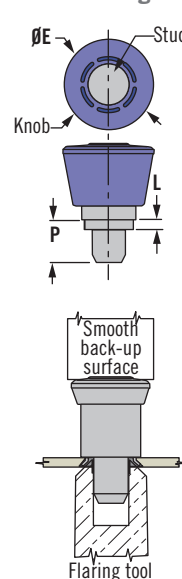
ØE — Stud — Ferrule — Endcap
H-2, K, P

Prism - Miniature and Small

ØE — Stud — Knob
H-1, P, L, K, ØJ

Outer panel — ØD — 90° +/- 2° — B — A Min. to A Max.
Inner panel or frame — ØC

Prism - Large

ØE — Stud — Knob
L, P

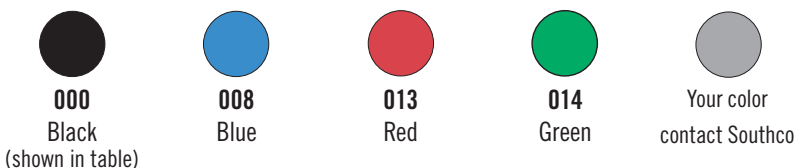Smooth back-up surface — Flaring tool

Specifying Prism Color

To indicate color, change the last three digits of the part number.
Example: 56-161-**000**, black; 56-161-**013**, red

| **000** Black (shown in table) | **008** Blue | **013** Red | **014** Green | Your color contact Southco |

Outer Panel Thickness		P	Size	Knob Style	Part Number		H-1	H-2	Ø E	K	L	B	Ø J	Ø D	Ø C
A Min.	A Max.				Hold-Open	Without									
0.8 (.031)	1.5 (.06)	4.4 (.17)	Mini	Bright	56-21-1-15	56-20-1-15	9.9 (.39)	13.6 (.54)	8.5 (.33)	14.3 (.56)	1.0 (.04)	0.41 (.016)	4.29 (.169) Max	6.76 +0.1 -0.0 (.266 +.004 -.000)	4.3 +0.13 -0.0 (.17 +.005 -.000)
				Prism	56-121-1-000	56-120-1-000	10.6 (.42)	14.3 (.56)	9 (.35)	15 (.59)					
1.5 (.06)	2.3 (.09)	5.2 (.20)		Bright	56-21-2-15	56-20-2-15	9.1 (.36)	12.8 (.50)	8.5 (.33)	14.3 (.56)	1.8 (.07)				
				Prism	56-121-2-000	56-120-2-000	9.8 (.39)	13.5 (.53)	9 (.35)	15 (.59)					
1.52 (.06)	3.17 (.125)	7.9 (.31)	Small	Bright	56-71-1-15	56-70-1-15	13.7 (.54)	19.8 (.78)	11.5 (.45)	21.5 (.85)	1.78 (.07)	0.41 (.016)	6.33 (.249)	9.19 +0.7 -0.0 (.362 +.003 -.000)	6.4 +0.1 -0.0 (.250 +.005 -.000)
				Prism	56-171-1-000	56-170-1-000	14.5 (.57)	20.5 (.81)	13.3 (.52)	22.2 (.87)					
			Large	Prism	56-271-1-000	56-270-1-000	14.5 (.57)	20.5 (.81)	17 (.67)	22.2 (.87)					
3.17 (.125)	4.7 (.185)	9.4 (.37)	Small	Bright	56-71-2-15	56-70-2-15	12.2 (.48)	18.2 (.72)	11.5 (.45)	21.5 (.85)	3.3 (.13)	1.52 (.06)			
				Prism	56-171-2-000	56-170-2-000	12.9 (.51)	19 (.75)	13.3 (.52)	22.2 (.87)					
			Large	Prism	56-271-2-000	56-270-2-000	12.9 (.51)	19 (.75)	17 (.67)	22.2 (.87)					

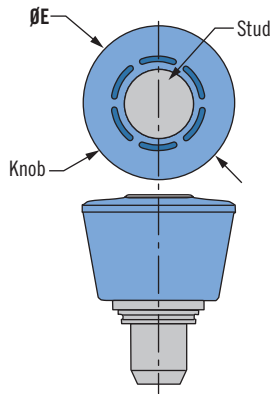Dimensions in millimeters (inch) unless otherwise stated

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Press-In Style

Prism - Small and Miniature
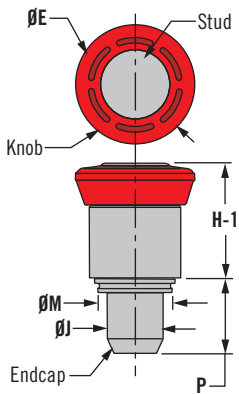
Prism - Large

Bright - Small and Miniature
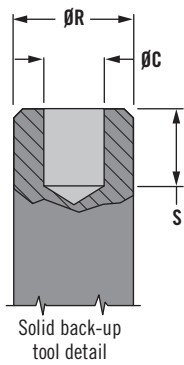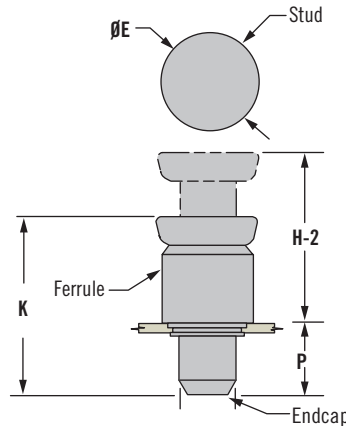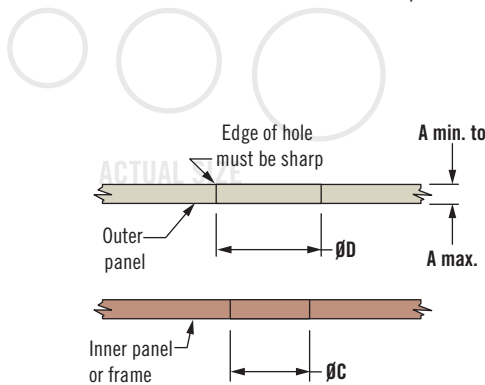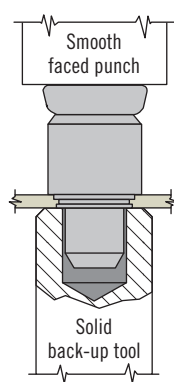
Solid back-up tool detail
(Customer Supplied)

Smooth faced punch

Solid back-up tool

Edge of hole must be sharp

Outer panel

A min. to

A max.

Inner panel or frame

ACTUAL SIZE

- **Simplified positioning of sliding components**
- **Quick-release hinge for removable door**
- **Designate access with color**

Material and Finish

End cap: Steel, zinc plated, chromate, plus sealer

Ferrule and stud: Steel, hardened, zinc plated, chromate, plus sealer

Knob: (Prism plungers only) PC/ABS, black, UL94-V0 Rated

Spring: 300 series stainless steel, passivated

Installation Notes

Press knob with approximately 9500 N (3000 lbf.) (Mini) for steel, 5000 N (1500 lbf.) (Mini) for aluminum panels until ferrule sits flush with panel. A solid back-up tool must be used for proper installation.

Recommended minimum distance from edge of panel to center line of hole is 9.6 (1.14).

For use in material hardnesses RB70 or less, such as low carbon steels that are half hard or softer, stainless steel in the annealed condition and aluminum.

Part Number

See table

Specifying Prism Color

To indicate color, change the last three digits of the part number.
Example: 56-161-**000**, black; 56-161-**013**, red

000 Black (shown in table)

008 Blue

013 Red

014 Green

Your color contact Southco

Outer Panel Thickness		P	Size	Knob Style	Part Number		H-1	H-2	Ø E	K	Ø J	Ø M	Ø D	Ø C	Ø R	Ø S
A Min.	A Max.				Hold-Open	Without										
0.8 (.031)	1.5 (.06)	4.4 (.17)	Mini	Bright	56-11-15	56-10-15	9.2 (.36)	12.9 (.51)	8.5 (.33)	13.6 (.54)	4.29 (.169) Max.	6.6 (.26)	6.7 +0.08 -0.0 (.264 +.003 -.000)	4.3 +0.13 -0.0 (.17 +.005 -.000)	9 (.35) Min.	4.5 (.18) Min.
				Prism	56-111-000	56-110-000	9.9 (.39)	13.6 (.54)	9 (.354)	14.3 (.56)						
1.52 (.06)	3.81 (.15)	8.2 (.32)	Small	Bright	56-61-15	56-60-15	12.2 (.48)	19.3 (.76)	11.5 (.45)	20.4 (.80)	6.33 (.249)	8.26 (.325)	8.4 +0.0 -0.1 (.328 +.003 -.000)	6.4 +0.1 -0.0 (.250 +.005 -.000)	13 (.50) Min.	8.26 (.325) Min.
				Prism	56-161-000	56-160-000	13 (.51)	20 (.79)	13.3 (.52)	21.1 (.83)						
			Large	Prism	56-261-000	56-260-000	13 (.51)	20 (.79)	17 (.67)	21.1 (.83)						

Dimensions in millimeters (inch) unless otherwise stated

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56 Spring-Loaded Plunger
Thread-in style

- **Simplified positioning of sliding components**
- **Quick-release hinge for removable door**
- **Fast installation and removal of components**

Material and Finish

Knob: Aluminum

Stud: Low carbon steel, case hardened, zinc plated, chromate plus sealer

Shell and sleeve: Steel, zinc plated, chromate plus sealer

Spring: Stainless steel, passivated

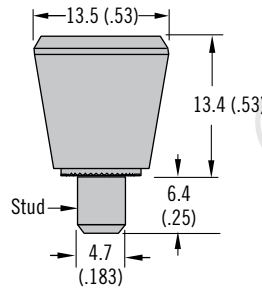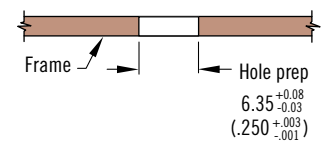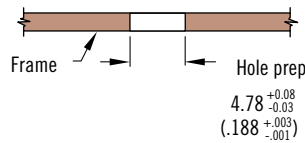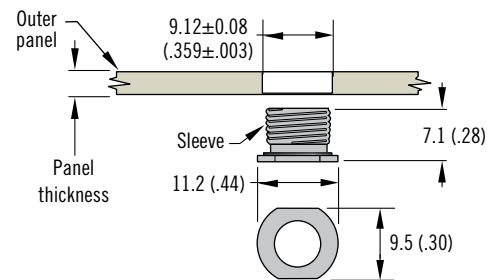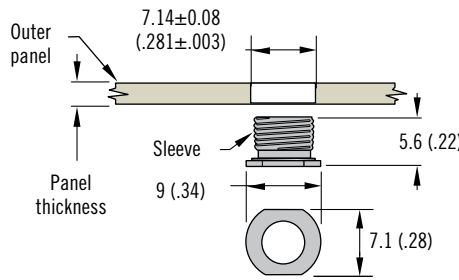Detent washer: Steel, zinc plated (Hold-open only)

Part Number

See table

300 Series

13.5 (.53)
13.4 (.53)
Stud
6.4 (.25)
4.7 (.183)

ACTUAL SIZE

400 Series

17.5 (.69)
18.3 (.72)
Stud
7.9 (.31)
6.2 (.245)

Outer panel
7.14±0.08 (.281±.003)
Sleeve
5.6 (.22)
Panel thickness
9 (.34)
7.1 (.28)
Frame
Hole prep
4.78 $^{+0.08}_{-0.03}$ (.188 $^{+.003}_{-.001}$)

Outer panel
9.12±0.08 (.359±.003)
Sleeve
7.1 (.28)
Panel thickness
11.2 (.44)
9.5 (.30)
Frame
Hole prep
6.35 $^{+0.08}_{-0.03}$ (.250 $^{+.003}_{-.001}$)
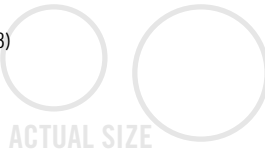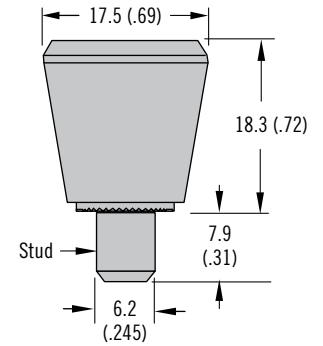
Series	Panel Thickness		Part Number	
	Min.	Max.	With Hold Open Feature	Without Hold Open Feature
300	0.64 (.025)	1.52 (.060)	56-10-301-20	56-99-196-20
400	0.79 (.031)	3.18 (.125)	56-10-401-20	56-99-197-20

Installation tool

29 (1.13)
130 (5.13)
36.5 (1.44)
13 (.50)
X

Knob assembly
Sleeve tighten with open-end wrench
0.8 (.03) both sizes

Part Number

See table
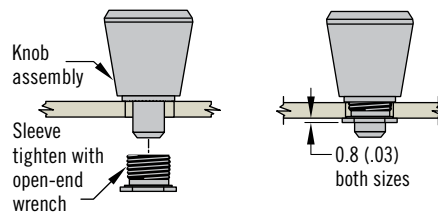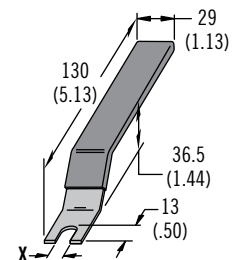
Series	X (Tool)	Tool Part Number
300	7.1 (.28)	56-0-22041-03
400	9.5 (.38)	56-0-22041-04

Dimensions in millimeters (inch) unless otherwise stated

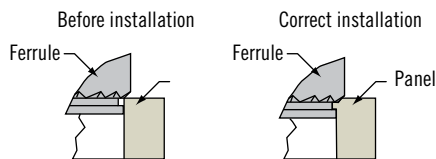**southco®**
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Installation Guidelines
for *SOUTHCO*® Self-Clinching products

Self-clinching product installation is offered on these *SOUTHCO*® products, making them easy-to-use captive panel fasteners:

- **Captive Screws**
- **Receptacles for Quarter-turn Fasteners**
- **Receptacles for Fast-lead Thread Screws**

- **Spring-loaded Plungers**
- **Captive Nuts**
- **Threaded Inserts**

When pressed into a properly prepared hole, self-clinching captive fasteners cold-flow (move) the panel material into the retaining groove of the fastener. This material then retains the fastener in the panel.
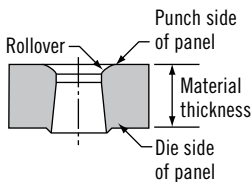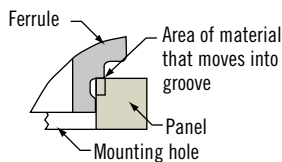
Before installation   Correct installation

Ferrule   Ferrule   Panel

Successful press-in installations depend on:

Material:
The hardness of the panel material must not exceed *SOUTHCO*® recommendations. If the panel is too hard, the fastener will not install correctly.
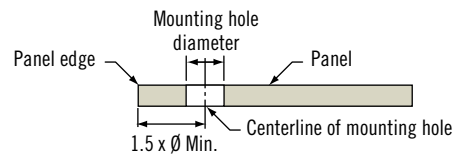
Installation Holes:
Mounting holes may be drilled, punched, or cast.

Ferrule   Area of material that moves into groove   Panel   Mounting hole

Punch side of panel   Rollover   Material thickness   Die side of panel

- **Hole edge:** the top hole edge must be sharp but with no broken edges. Do not chamfer or debur edge.
- **Punched holes:** use a punch and die with a small clearance to minimize the rollover and fracture angle.
- **Hole diameter:** measure the hole diameter at the panel surface on the side on which the fastener will be installed. The diameter must be within *SOUTHCO*® specifications for that product.

- If the hole is too large, not enough material will flow into the retaining groove and the fastener may not be retained adequately.
- If the hole is too small, the fastener will not fit and installation may become difficult and unsafe.
- Hole distance from the edge of panel: the minimum recommended distance is 1.5 x the diameter of the mounting hole, unless otherwise indicated.

- Installing too close to the edge will cause the material to flow in the opposite direction, deforming the edge of the panel. To install closer to the edge, you may need to restrain the panel edge.

Mounting hole diameter   Panel edge   Panel   1.5 x Ø Min.   Centerline of mounting hole

Panel Thickness:
The thickness of the panel at the mounting hole location must meet or exceed Southco's stated minimum recommendations.
If the material is too thin, panel deformation and/or damage to the fastener may result.

Installation is fast and easy if you follow these tips:
How to install: Use the recommended force where noted and a proper back-up tool.
- use any parallel-acting press
- use a punch whose diameter is larger than the head of the fastener

Installation Force: Proper installation requires an even distribution of adequate force. It does not depend on the distance the fastener is pressed into the panel.
- Southco does not recommend using a hammer. The impact force does not provide an even distribution of force to allow the panel material to completely flow into the fastener's retaining groove.
- Installation force varies from application to application, depending on the criteria noted above.
- On parts without a collar to provide a hard stop, press-in until the edge of the knurl is just barely visible.

When to Install:
Installation is recommended after plating or finishing has been applied to the panel.
The hole diameter must meet specifications before finish or plating is applied.
- Do not over-install parts. This interupts the material and will reduce the retention strength.

Over installation   Ferrule   Panel   This area of material has separated from the rest of the panel