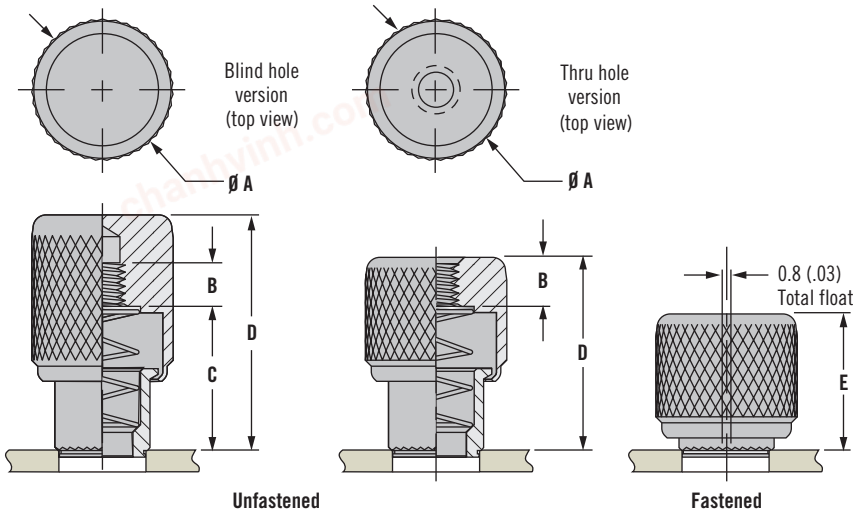
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N7 Captive Nut

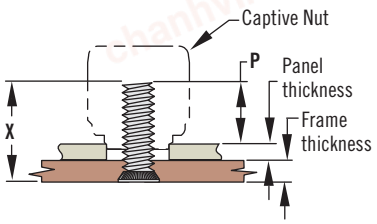
Thru hole and blind styles



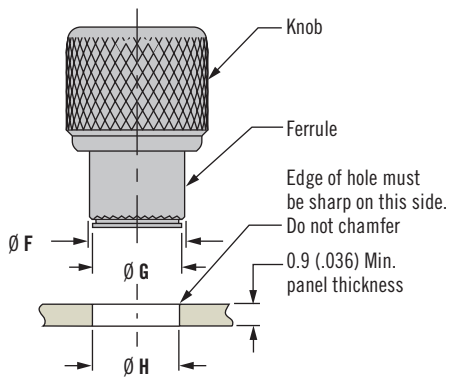


ACTUAL SIZE

Notes: For use in material hardnesses RB85 or less, such as low carbon steels that are half hard or softer, stainless steels in the annealed condition and aluminum.



Thread Size	P Min.	P Max.
M3	7.1 (.28)	9.5 (.37)
M4	10 (.40)	12.1 (.47)
M5	10.2 (.41)	12.2 (.48)
M6	12.4 (.49)	16.7 (.66)
4-40	7.3 (.29)	9.4 (.37)
6-32	9.9 (.39)	13.1 (.51)
8-32	10.1 (.40)	13.3 (.52)
10-32	10.3 (.41)	13.5 (.53)
1/4-20	13 (.51)	16.5 (.65)



See page 627 for additional installation guidelines

Notes: Recommended minimum distance from edge of panel to centerline of hole is 1.5 x Ø H.

Thread Size	Knob Style	Part Number		Ø A	B (Thread Length)	C	D	E	Ø F	Ø G	Ø H
	Min.	Metric Natural	Inch Natural								
M3 or 4-40	Thru hole	N7-02-10	N7-52-10	10.6 (.42)	3.6 (.14)	~	12.8 (.50)	9.3 (.37)	6.4 (.25)	5.5 (.22)	5.6±0.04 (.220±.002)
	Blind hole	N7-02-11	N7-52-11		4 (.16)	9.2 (.36)	16.8 (.66)	13.3 (.52)			
6-32 UNC	Thru hole	~	N7-62-10	11.4 (.45)	4.7 (.19)	~	17.7 (.70)	12.5 (.49)	7.1 (.28)	6.3 (.25)	$6.4\ ^{+0.03}_{-0.05}$ ($.252\ ^{+.001}_{-.002}$)
	Blind hole	~	N7-62-11		5.4 (.21)	13 (.51)	23 (.91)	17.9 (.70)			
M4 or 8-32	Thru hole	N7-22-10	N7-72-10	13 (.51)	4.5 (.180	~	17.7 (.70)	12.5 (.49)	8.7 (.34)	7.9 (.31)	$8\ ^{+0}_{-0.08}$ ($.315\ ^{+0}_{-.003}$)
	Blind hole	N7-22-11	N7-72-11		5.4 (.21)	13.2 (.52)	23 (.91)	17.9 (.70)			
M5 or 10-32	Thru hole	N7-32-10	N7-82-10	13 (.51)	4.5 (.180	~	17.7 (.70)	12.5 (.49)	9 (.35)	7.9 (.31)	$8\ ^{+0}_{-0.08}$ ($.315\ ^{+0}_{-.003}$)
	Blind hole	N7-32-11	N7-82-11		5.4 (.21)	13.2 (.52)	23 (.91)	17.9 (.70)			
M6 or 1/4-20	Thru hole	N7-42-10	N7-92-10	14.6 (.58)	6.4 (.25)	~	22.8 (.90)	16 (.63)	10 (.39)	9.4 (.37)	$9.5\ ^{+0.1}_{-0}$ ($.374\ ^{+.004}_{-0}$)
	Blind hole	N7-42-11	N7-92-11		7 (.28)	16.4 (.65)	29.5 (1.16)	23 (.91)			

- **Spring ejected**
- **Knurled knob provides solid grip**
- **Fastens to externally threaded studs**
- **Helps speed panel replacement**

Material and Finish

Knob: Aluminum, natural

Ferrule: Hardened steel, zinc plate, chromate plus sealer

Spring: 302 Stainless steel, passivated

Installation Notes

1. Prepare hole in panel as shown
2. Provide a solid back-up surface behind the panel
3. Press the assembly into the panel until only the top of the knurl on the ferrule is visible

Threadstud insert selection for blind hole applications

Frame thickness + panel thickness + P Minimum = X Minimum

Frame thickness + panel thickness + P Maximum = X Maximum

Threadstud insert length (L): X Minimum < "L" > X Maximum

"L" values greater than X Maximum must use the thru hole version

If a weld stud is used, omit the frame thickness from the calculations (see the table and diagram to the right)

*The above dimensions are for blind hole captive nuts

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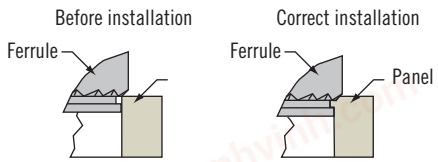
Installation Guidelines

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.

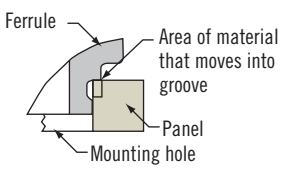


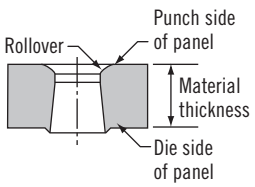
Successful press-in installations depend on:

Material:

The hardness of the panel material must not exceed *SOUTHCO®* recommendations. If the panel is too hard, the fastener will not install correctly.

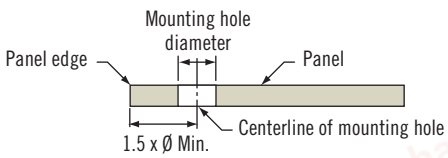
Installation Holes:





Mounting holes may be drilled, punched, or cast.

- 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.



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.

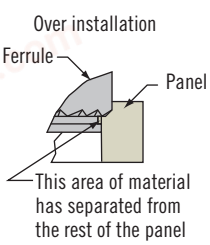
Installation is fast and easy if you follow these tips:

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.