

CAPTIVE SCREWS

Metric/Unified Threaded Fasteners

Pages 436-481, 490



Captivating fasteners to panels prevents the loss of hardware and the potential damage caused by dropping fasteners into operating equipment. Captive screws are especially useful for applications requiring repetitive fastening. Numerous Southco styles are available to suit specific space and access requirements.

SOUTHCO® Captive Screws are available in a variety of panel mounting styles and head styles to suit industry-standard and application requirements. The overmolded 4C Captive Screws are available in several screw sizes and feature colored molded polycarbonate / ABS knobs that enable you to coordinate color to design schemes or to differentiate access points for quick identification.

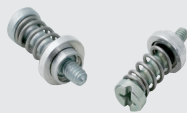
- High strength screws for use with high torque drivers
- Increased strength and corrosion-resistance
- Standard and custom colors available
- Variety of installation styles
- Tool or hand operation
- Modifications and custom solutions are available to suit individual application requirements



F5



N7



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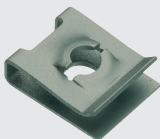
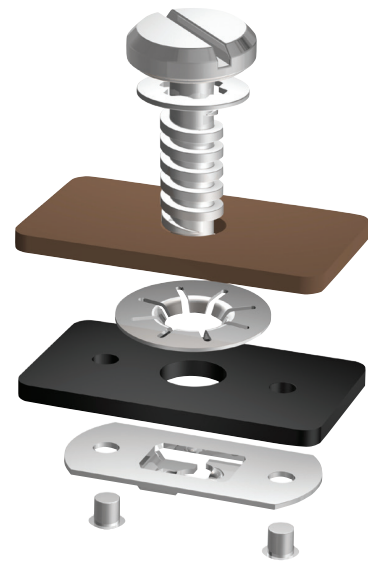
<https://www.AngicGlobal.com> Sales@AngicGlobal.com

When flexibility is of the utmost importance, Southco's line of fast-lead screw fasteners provide access in just a few turns. The coarse pitch of the fast-lead screw, when matched with the broad range of receptacles, provides built in vibration resistance over a wide range of panel thicknesses.

- ➔ High strength fastening system
- ➔ Vibration resistant
- ➔ Fast access in just a few turns
- ➔ Tolerant of material variation

Fast-Lead Screws

Pages 482-489



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Captive Screws

Metric/Unified threaded fasteners selection guide

Use this selection guide to help make the right choice of captive screw for your application

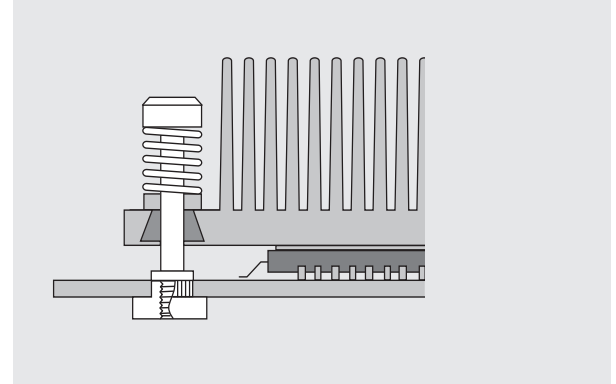


Contact Southco

Design Considerations:

- Panel Material
- Panel Thickness
- Environment
- Alignment Tolerance
- Space Available
- Recess Requirements
- Strength Required

Heat Sink Installation



		THREADED SIZE										TOOL RECESS						
		Product Class	M3	M3.5	M4	M5	M6	4-40	6-32	8-32	10-32	1/4-20	Slot	Phillips	TORX®	TORX® / Slot	Phillips / Slot	
PAGES 440-459, 470		47	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
PAGES 460-463, 471		4C	✓		✓	✓		✓	✓		✓			✓			✓	✓
PAGES 464-467		47 Restricted access			✓	✓		✓	✓	✓	✓		✓	✓	✓			
PAGES 472, 474-475		52	✓		✓			✓	✓								✓	✓
PAGE 480		5T	✓	✓				✓	✓								✓	✓
PAGE 479		F5	✓		✓			✓	✓	✓			✓	✓				
PAGE 481		N7 Captive Nut	✓		✓	✓	✓	✓	✓	✓	✓							

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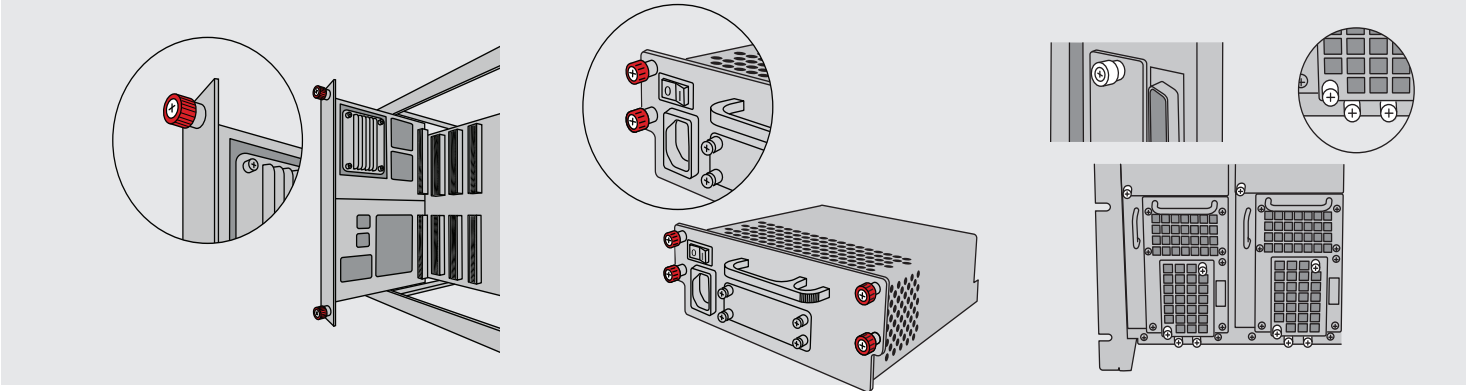
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Rapid Assembly Serviceability

Color Coded

Restricted Access

Limited Space



INSTALLATION						APPLICATION REQUIREMENTS										
Self Clinching (Press-In)	Flare-In	Floating	PCB	SMT	Snap-In	Stainless Steel	Low Profile	Flush	Hand Operable	Black Finish	Color Coded Knob	Restricted Access UL-1950	ATCA Compliant	High Strength Screw	Fixed Spring Preload	
✓	✓	✓	✓	✓	✓				✓	✓		Smooth knob ✓	Page 480 ✓	✓		
✓	✓	✓	✓	✓					✓	Knob only as standard	✓	Smooth knob ✓	Page 480 ✓	✓		
✓	✓	✓							✓	✓		✓		✓		
✓	✓			✓			✓		✓			Smooth knob ✓		✓		
	✓													✓	✓	
✓						✓		✓								
✓									✓	✓						



Captive Screws Specification

Metric/Unified threaded fasteners selection guide

How to specify SOUTHCO® Captive Screws

1. Choose the product type that best suits your application using the product benefits table.
2. Select your product features: Recess, installation style, color, size.
3. Specify the final part numbers using the tables found with each product style.
4. You can also specify your SOUTHCO® hardware on the web. Simply enter your product type into the search engine and configure online.

SOUTHCO® Captive Screws are available in a variety of sizes and configurations to give you endless options to control or enable access in your applications. Specifying SOUTHCO® Captive Screws is easy. Just follow the instructions below or go to www.southco.com.

Product benefits table: Determine the product that best fits your application requirements. Additional information is available in the selection table on page 436-437.






47	<ul style="list-style-type: none"> • Stylized designer knob • Installation for a wide variety of material configurations • Knurled knob for easy, hand operation • Custom powder coat color matching 		
4C	<ul style="list-style-type: none"> • Define access points with color • Color match to your industrial design 		
47	<ul style="list-style-type: none"> • Restrict access to service areas with tighten by hand, tool to release options • Meets service access standards 		
52	<ul style="list-style-type: none"> • Lower profile knob for tight spaces • High strength screw for fast assembly 		
5T	<ul style="list-style-type: none"> • Maximize heat transfer • Screw sets defined preload • Maintain contact under vibration • Allows for thermal expansion while maintaining preload to defined range 		
F5	<ul style="list-style-type: none"> • Flush recessed captive design • Tool only access • All stainless steel design 		
N7	<ul style="list-style-type: none"> • Fastens to thread stud for a flush panel configuration • Available with blind threaded hole for a finished appearance 		




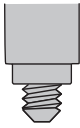
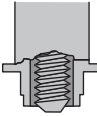
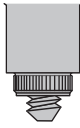
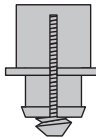
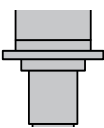
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Select the product features that you need

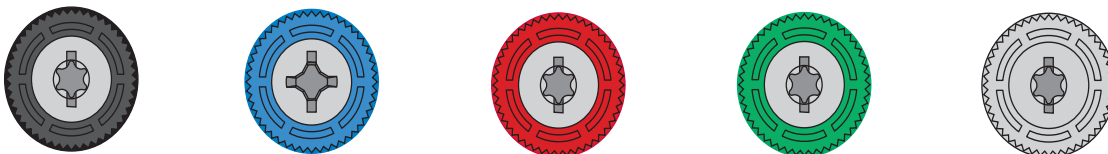
Tool Recess

Which access is best for your application?				
<p>Slotted: Common recess</p> 	<p>Phillips: Better tool retention Meets certain limited-access restrictions</p> 	<p>Phillips / Slot: Combine the better tool retention of Phillips with the convenience of a slotted recess</p> 	<p>TORX®: Higher torque transfer Reduced cam-out and end load High speed assembly Longer tool life</p> 	<p>TORX® / Slot: Combine the benefits of TORX® with the convenience of a slotted recess</p> 

Installation Style

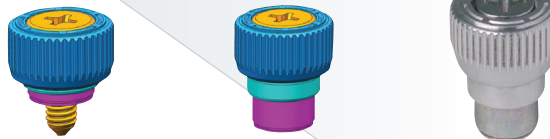
Which installation method is best for your application?					
<p>Self-Clinching, Press-In: One-step press operation</p> 	<p>Flare-In: Near edge installation in plastics, castings and any material</p> 	<p>Floating: Provides additional radial float to accommodate a significant amount of misalignment</p> 	<p>P.C. Board: Designed for use in P.C. boards and other composites such as fiberglass</p> 	<p>Snap-In: Install by hand, no special tools required</p> 	<p>SMT: For installation to PC Board material utilizing surface mount technology</p> 

Color

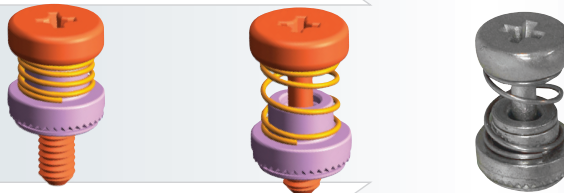


When an off-the-shelf design doesn't quite meet your needs...

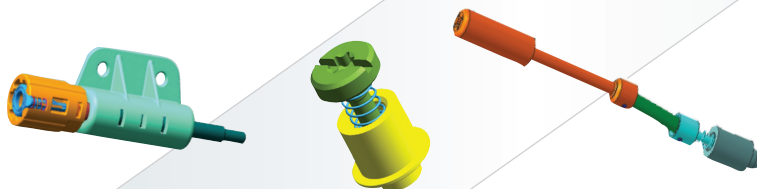
Lower profile, ergonomic, extended reach, small space envelope...no problem!



Speed up service and decrease assembly time in tight spaces!



Have a wish list?
Southco can give you the solution.



southco
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otherwise stated



47 Captive Screws

Styled knob series · M3 thread size

- Smooth knob meets UL-1950
- Designed for hand operation
- Spring ejected
- Wide variety of sizes, recesses and installation options

Material and Finish

Ferrule:

Press-in: Hardened carbon steel, zinc plated, chromate, plus sealer
 Flare-in and Floating:

Aluminum, natural

P.C. board style: 300 Series stainless steel, passivated

Knob:

Aluminum, natural or black powder coated

Screw: Hardened carbon steel, zinc plated, chromate, plus sealer

Installation Notes

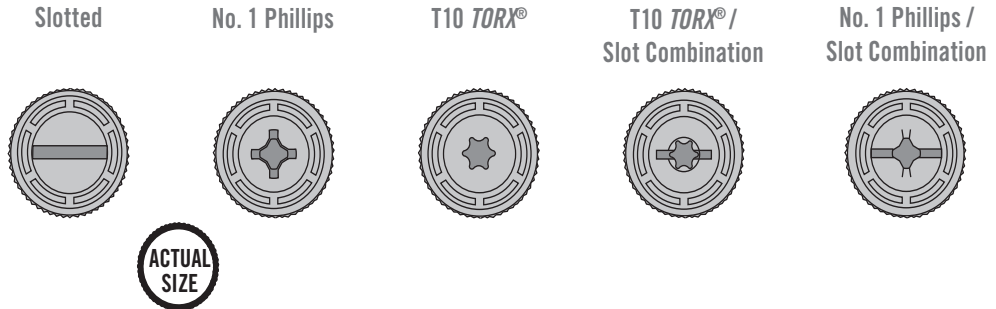
See pages 468-469, 543

Notes



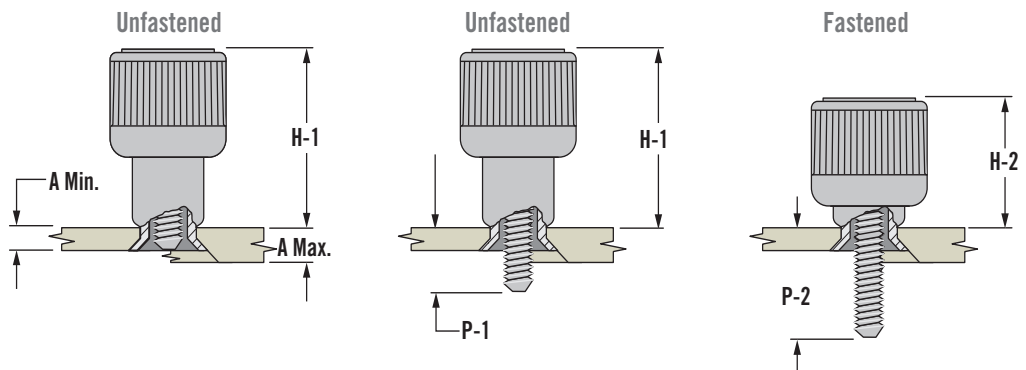
To ensure you receive **SOUTHCO®** quality parts, look for the segmented circle

Recess Styles



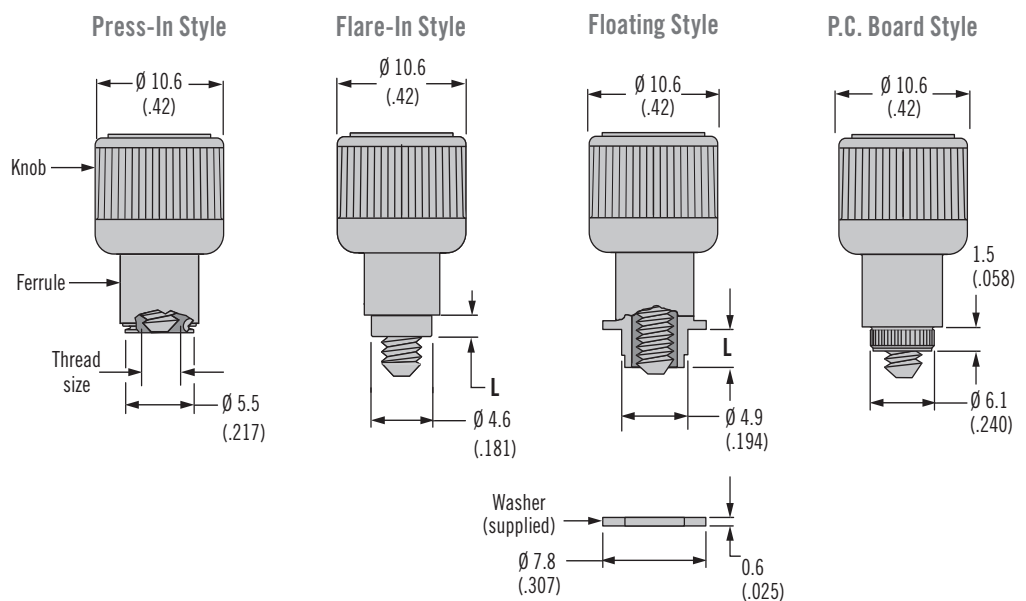
Knob Height and Screw Projection

(Flare-in style shown)



Dimensions in millimeters (inch) unless otherwise stated

Installation Styles



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Dimensions in millimeters (inch) unless otherwise stated

Installation Style	Knob Height		Outer Panel Dimensions		B	Total Float	Flange Length L	Screw Projection Beyond Outer Surface of Panel		Part Number				
	H-1	H-2	A Min.	A Max.				P-1	P-2	Slotted Recess	Phillips Recess	TORX® Recess	TORX® / Slot Combination	Phillips / Slot Combination
Press-In Style	11.3 (.45)	8.3 (.33)	0.9 (.036)	~	~	0.7 (.03)	~	0.8 (.03)	3.8 (.15)	47-90-101-24	47-90-121-24	47-90-141-24	47-90-161-20	47-90-181-24
								2.5 (.10)	5.5 (.22)	47-91-101-24	47-91-121-24	47-91-141-24	47-91-161-20	47-91-181-24
								4 (.16)	7 (.28)	47-92-101-24	47-92-121-24	47-92-141-24	47-92-161-20	47-92-181-24
								5.6 (.22)	8.6 (.34)	47-93-101-24	47-93-121-24	47-93-141-24	47-93-161-20	47-93-181-24
P.C. Board Style	11.5 (.45)	8.3 (.33)	1.6 (.061)	~	~	0.7 (.03)	~	1.5 (.06)	4.5 (.18)	47-95-101-34	47-95-121-34	47-95-141-34	47-95-161-30	47-95-181-34
Flare-In Style	11.5 (.45)	8.1 (.32)	0.8 (.031)	1.5 (.058)	0.4 (.015)	0.7 (.03)	1.0 (.041)	0.8 (.03)	4 (.16)	47-80-101-14	47-80-121-14	47-80-141-14	47-80-161-10	47-80-181-14
			1.5 (.059)	2.5 (.098)	0.4 (.015)		1.8 (.070)	1.5 (.06)	4.7 (.19)	47-80-102-14	47-80-122-14	47-80-142-14	47-80-162-10	47-80-182-14
			2.5 (.098)	4 (.156)	0.8 (.031)		2.6 (.104)	2.5 (.10)	5.7 (.22)	47-80-103-14	47-80-123-14	47-80-143-14	47-80-163-10	47-80-183-14
			4 (.157)	5.6 (.219)	2.4 (.093)		4.2 (.166)	4 (.16)	7.2 (.28)	47-80-105-14	47-80-125-14	47-80-145-14	47-80-165-10	47-80-185-14
			5.6 (.220)	7.1 (.281)	4 (.156)		5.8 (.299)	5.6 (.22)	8.8 (.35)	47-80-107-14	47-80-127-14	47-80-147-14	47-80-167-10	47-80-187-14
			0.8 (.031)	1.5 (.058)	0.4 (.015)		1.0 (.041)	2.5 (.10)	5.7 (.22)	47-81-101-14	47-81-121-14	47-81-141-14	47-81-161-10	47-81-181-14
			4 (.157)	5.6 (.219)	2.4 (.093)		4.2 (.166)	4 (.16)	7.2 (.28)	47-82-101-14	47-82-121-14	47-82-141-14	47-82-161-10	47-82-181-14
			5.6 (.220)	7.1 (.281)	4 (.156)		5.8 (.299)	5.6 (.22)	8.8 (.35)	47-83-101-14	47-83-121-14	47-83-141-14	47-83-161-10	47-83-181-14
			1.5 (.058)	2.5 (.098)	0.4 (.015)		1.8 (.070)	3.2 (.13)	6.4 (.25)	47-81-102-14	47-81-122-14	47-81-142-14	47-81-162-10	47-81-182-14
			4.7 (.19)	7.9 (.31)	47-82-102-14		47-82-122-14	47-82-142-14	47-82-162-10	47-82-182-14				
			6.3 (.25)	9.5 (.37)	47-83-102-14		47-83-122-14	47-83-142-14	47-83-162-10	47-83-182-14				
			Floating Style	11.4 (.45)	8.6 (.34)		~	0.8 (.031)	2 (.080)	2.0 (.08)	2.6 (.101)	1.9 (.07)	5.1 (.20)	47-80-110-14
0.8 (.031)	1.6 (.063)	2.8 (.111)				3.4 (.132)	3.4 (.13)	6.6 (.26)	47-81-110-14		47-81-130-14	47-81-150-14	47-81-170-10	47-81-190-14
1.6 (.063)	2.4 (.094)	3.6 (.143)				4.2 (.164)	3.4 (.13)	6.6 (.26)	47-81-111-14		47-81-131-14	47-81-151-14	47-81-171-10	47-81-191-14
5 (.19)	8.2 (.32)	47-82-110-14				47-82-130-14	47-82-150-14	47-82-170-10	47-82-190-14					
1.9 (.07)	5.1 (.20)	47-80-111-14				47-80-131-14	47-80-151-14	47-80-171-10	47-80-191-14					
3.4 (.13)	6.6 (.26)	47-81-111-14				47-81-131-14	47-81-151-14	47-81-171-10	47-81-191-14					
5 (.19)	8.2 (.32)	47-82-111-14				47-82-131-14	47-82-151-14	47-82-171-10	47-82-191-14					
3.4 (.13)	6.6 (.26)	47-80-112-14				47-80-132-14	47-80-152-14	47-80-172-10	47-80-192-14					
5 (.19)	8.2 (.32)	47-81-112-14				47-81-132-14	47-81-152-14	47-81-172-10	47-81-192-14					

Part numbers in shaded rows (shown in table) are fully retracting in minimum panel thickness



To add a black powder coated finish, change the part number from the table as shown:

- Change 1 to 5: 47-80-102-14
47-80-102-54
- Change 2 to 6: 47-80-102-24
47-80-102-64
- Change 3 to 7: 47-80-102-34
47-80-102-74



For a smooth knob, change the part number from the table as shown:

- Change 0 to 1: 47-90-161-20
47-90-161-21
- Change 4 to 5: 47-90-101-24
47-90-101-25

Part Number

See table

All screw part numbers shown in table are for a natural knob finish and a knurled knob

For black finish and smooth knob options, minimums may apply



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47 Captive Screws

Styled knob series · M3.5 thread size

- Smooth knob meets UL-1950
- Designed for hand operation
- Spring ejected
- Wide variety of sizes, recesses and installation options

Material and Finish

Ferrule:

Press-in: Hardened carbon steel, zinc plate, chromate, plus sealer

P.C. board: 300 Series stainless steel, passivated

Flare-in, floating and snap-in:

Aluminum, natural

Knob: Aluminum, natural or black powder coated

Screw: Hardened carbon steel, zinc plated, chromate, plus sealer

Installation Notes

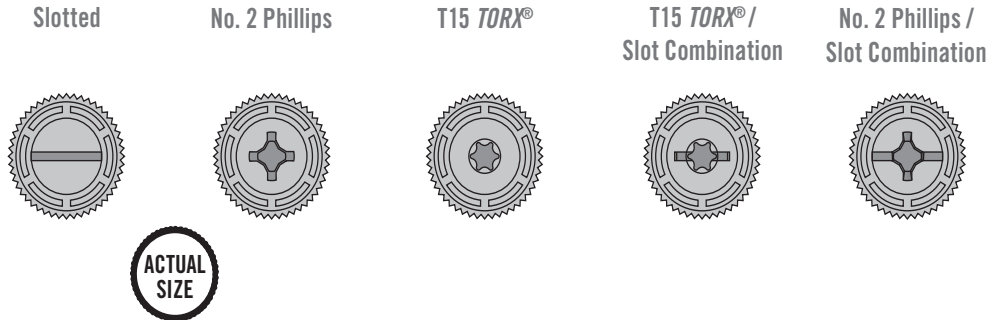
See pages 468-469, 543

Notes



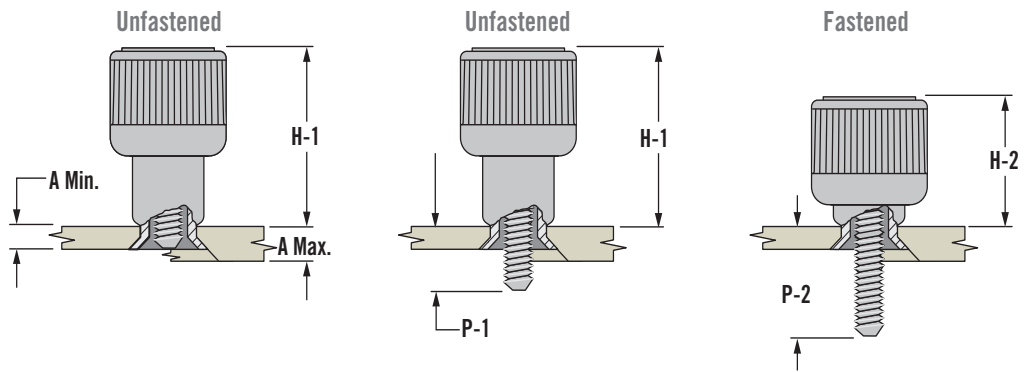
To ensure you receive **SOUTHCO®** quality parts, look for the segmented circle

Recess Styles



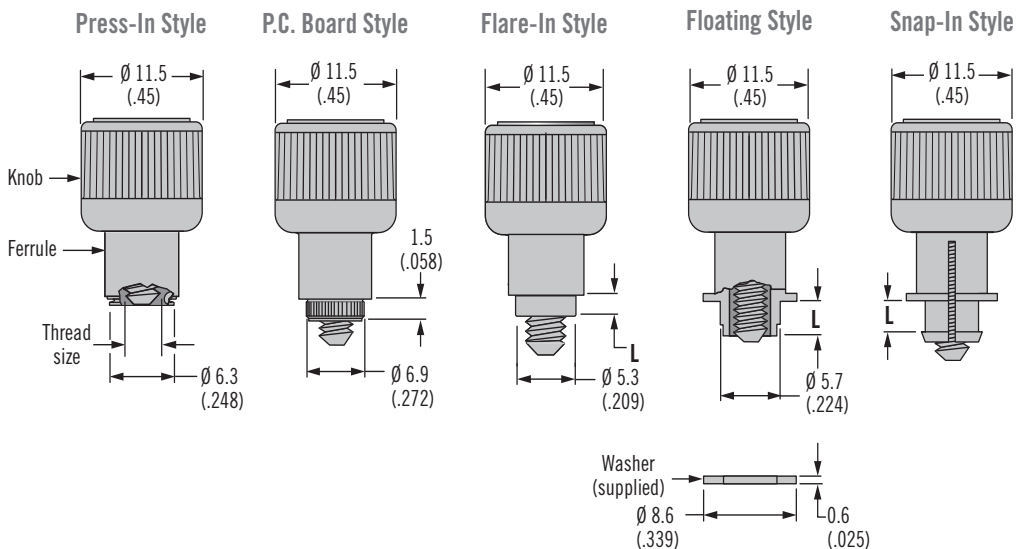
Knob Height and Screw Projection

(Flare-in style shown)



Dimensions in millimeters (inch) unless otherwise stated

Installation Styles



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Dimensions in millimeters (inch) unless otherwise stated

Installation Style	Knob Height		Outer Panel Dimensions		B	Total Float	Flange Length L	Screw Projection Beyond Outer Surface of Panel		Part Number					
	H-1	H-2	A Min.	A Max.				P-1	P-2	Slotted Recess	Phillips Recess	TORX® Recess	TORX® / Slot Combination	Phillips / Slot Combination	
Press-In Style	15.9 (.63)	11.2 (.44)	0.9 (.036)	~	~	0.8 (.03)	~	0.5 (.02)	5.3 (.21)	47-90-201-24	47-90-221-24	47-90-241-24	47-90-261-20	47-90-281-24	
								2.1 (.09)	6.9 (.27)	47-91-201-24	47-91-221-24	47-91-241-24	47-91-261-20	47-91-281-24	
								3.7 (.15)	8.5 (.33)	47-92-201-24	47-92-221-24	47-92-241-24	47-92-261-20	47-92-281-24	
								5.3 (.21)	10.1 (.40)	47-93-201-24	47-93-221-24	47-93-241-24	47-93-261-20	47-93-281-24	
P.C. Board Style	14.8 (.58)	10 (.39)	1.6 (.061)	~	~	0.8 (.03)	~	1.4 (.06)	6.2 (.24)	47-95-201-34	47-95-221-34	47-95-241-34	47-95-261-30	47-95-281-34	
Flare-In Style	15.3 (.60)	10.4 (.41)	1.5 (.058)	3.2 (.125)	0.4 (.015)	0.8 (.03)	1.8 (.07)	1.1 (.04)	6 (.24)	47-80-202-14	47-80-222-14	47-80-242-14	47-80-262-10	47-80-282-14	
			3.2 (.126)	4.8 (.189)	1.6 (.062)		3.4 (.135)	2.7 (.11)	7.6 (.30)	47-80-204-14	47-80-224-14	47-80-244-14	47-80-264-10	47-80-284-14	
			4.8 (.188)	6.4 (.250)	3.2 (.125)		5 (.197)	4.3 (.17)	9.2 (.36)	47-80-206-14	47-80-226-14	47-80-246-14	47-80-266-10	47-80-286-14	
			6.4 (.252)	7.9 (.312)	4.8 (.189)		6.6 (.26)	5.9 (.23)	10.8 (.43)	47-80-208-14	47-80-228-14	47-80-248-14	47-80-268-10	47-80-288-14	
			1.5 (.058)	3.2 (.125)	0.4 (.015)		1.8 (.07)	2.7 (.11)	7.6 (.30)	47-81-202-14	47-81-222-14	47-81-242-14	47-81-262-10	47-81-282-14	
			3.2 (.126)	4.8 (.189)	1.6 (.062)		3.4 (.135)	4.3 (.17)	9.2 (.36)	47-82-202-14	47-82-222-14	47-82-242-14	47-82-262-10	47-82-282-14	
			4.8 (.188)	6.4 (.250)	3.2 (.125)		5 (.197)	5.9 (.23)	10.8 (.43)	47-83-202-14	47-83-222-14	47-83-242-14	47-83-262-10	47-83-282-14	
			6.4 (.252)	7.9 (.312)	4.8 (.189)		6.6 (.26)	5.9 (.23)	10.8 (.43)	47-83-204-14	47-81-224-14	47-81-244-14	47-81-264-10	47-81-284-14	
			1.5 (.058)	3.2 (.125)	0.4 (.015)		3.4 (.135)	4.3 (.17)	9.2 (.36)	47-81-204-14	47-81-224-14	47-81-244-14	47-81-264-10	47-81-284-14	
			3.2 (.126)	4.8 (.189)	1.6 (.062)		5 (.197)	5.9 (.23)	10.8 (.43)	47-82-204-14	47-82-224-14	47-82-244-14	47-82-264-10	47-82-284-14	
			4.8 (.189)	6.4 (.250)	3.2 (.125)		5 (.197)	5.9 (.23)	10.8 (.43)	47-81-206-14	47-81-226-14	47-81-246-14	47-81-266-10	47-81-286-14	
			Floating Style	15.4 (.60)	10.6 (.42)		~	0.8 (.031)	2.1 (.083)	2.2 (.09)	2.9 (.113)	2.4 (.09)	7.2 (.28)	47-80-210-14	47-80-230-14
0.8 (.031)	1.6 (.063)	2.9 (.114)				3.7 (.144)	4 (.16)	8.8 (.35)	47-81-210-14		47-81-230-14	47-81-250-14	47-81-270-10	47-81-290-14	
1.6 (.063)	2.4 (.094)	3.7 (.146)				4.5 (.176)	5.6 (.22)	10.4 (.41)	47-82-210-14		47-82-230-14	47-82-250-14	47-82-270-10	47-82-290-14	
2.4 (.094)	3.7 (.146)	4.5 (.176)				5.6 (.22)	10.4 (.41)	47-81-212-14	47-81-232-14		47-81-252-14	47-81-272-10	47-81-292-14		
0.5 (.02)	1 (.039)	2 (.079)				1.1 (.044)	0.8 (.03)	5.6 (.22)	10.4 (.41)		47-90-210-14	47-90-230-14	47-90-250-14	47-90-270-10	47-90-290-14
1 (.039)	1.6 (.063)	2.6 (.103)				1.7 (.067)	2.4 (.09)	7.2 (.28)	47-91-210-14		47-91-230-14	47-91-250-14	47-91-270-10	47-91-290-14	
2.6 (.103)	3.7 (.146)	4.5 (.176)				5.6 (.22)	10.4 (.41)	47-92-210-14	47-92-230-14		47-92-250-14	47-92-270-10	47-92-290-14		
3.7 (.146)	4.5 (.176)	5.6 (.22)				10.4 (.41)	47-93-210-14	47-93-230-14	47-93-250-14		47-93-270-10	47-93-290-14			
4.5 (.176)	5.6 (.22)	10.4 (.41)				47-90-212-14	47-90-232-14	47-90-252-14	47-90-272-10		47-90-292-14				
5.6 (.22)	10.4 (.41)	47-91-212-14				47-91-232-14	47-91-252-14	47-91-272-10	47-91-292-14						
10.4 (.41)	47-92-212-14	47-92-232-14				47-92-252-14	47-92-272-10	47-92-292-14							

Part numbers in shaded rows (shown in table) are fully retracting in minimum panel thickness



To add a black powder coated finish, change the part number from the table as shown:

- Change 1 to 5: 47-80-102-14
47-80-102-54
- Change 2 to 6: 47-80-102-24
47-80-102-64
- Change 3 to 7: 47-80-102-34
47-80-102-74



For a smooth knob, change the part number from the table as shown:

- Change 0 to 1: 47-90-161-20
47-90-161-21
- Change 4 to 5: 47-90-101-24
47-90-101-25

Part Number

See table

All screw part numbers shown in table are for a natural knob finish and a knurled knob

For black finish and smooth knob options, minimums may apply



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47 Captive Screws

Styled knob series · M4 thread size

- Designed for hand operation
- Spring ejected
- Wide variety of sizes, recesses and installation options

Material and Finish

Ferrule:

Press-in: Hardened carbon steel, zinc plate, chromate, plus sealer

Flare-in, floating and snap-in:

Aluminum, natural

Knob: Aluminum, natural or black powder coated

Screw: Hardened carbon steel, zinc plated, chromate, plus sealer

Installation Notes

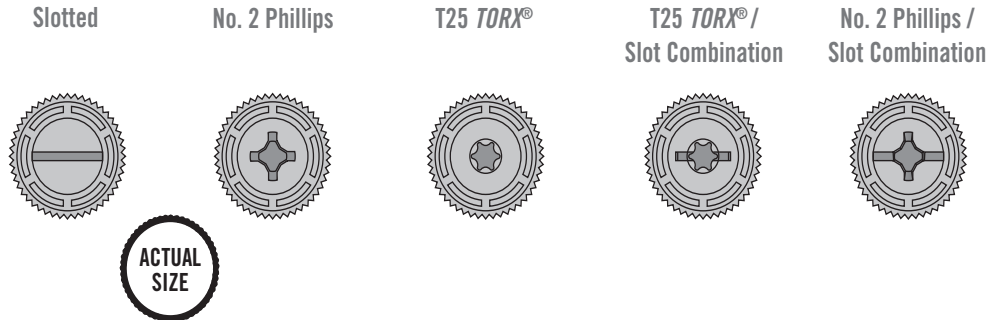
See pages 468-469, 543

Notes



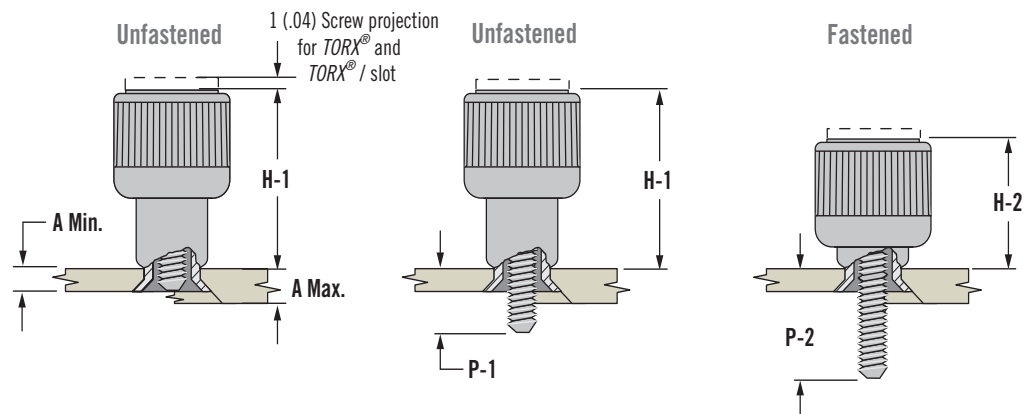
To ensure you receive **SOUTHCO®** quality parts, look for the segmented circle

Recess Styles



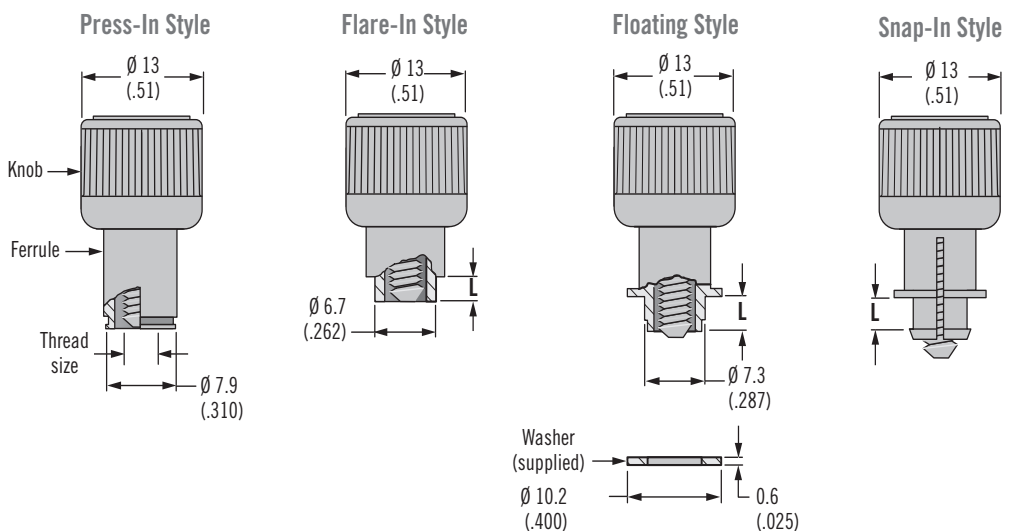
Knob Height and Screw Projection

(Flare-in style shown)



Dimensions in millimeters (inch) unless otherwise stated

Installation Styles



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Dimensions in millimeters (inch) unless otherwise stated

Installation Style	Knob Height		Outer Panel Dimensions		B	Total Float	Flange Length L	Screw Projection Beyond Outer Surface of Panel		Part Number								
	H-1	H-2	A Min.	A Max.				P-1	P-2	Slotted Recess	Phillips Recess	TORX® Recess	TORX® / Slot Combination	Phillips / Slot Combination				
Press-In Style	16.2 (.64)	11.3 (.45)	0.9 (.036)	~	~	0.8 (.03)	~	0.6 (.02)	5.6 (.22)	47-90-301-24	47-90-321-24	47-90-341-20	47-90-361-20	47-90-381-20				
								2.2 (.09)	7.2 (.28)	47-91-301-24	47-91-321-24	47-91-341-20	47-91-361-20	47-91-381-20				
								3.8 (.15)	8.7 (.34)	47-92-301-24	47-92-321-24	47-92-341-20	47-92-361-20	47-92-381-20				
								5.4 (.21)	10.3 (.41)	47-93-301-24	47-93-321-24	47-93-341-20	47-93-361-20	47-93-381-20				
Flare-In Style	15.6 (.61)	10.5 (.41)	1.5 (.058)	3.2 (.125)	0.4 (.015)	0.9 (.03)	1.8 (.070)	1.2 (.05)	6.3 (.25)	47-80-302-14	47-80-322-14	47-80-342-10	47-80-362-10	47-80-382-10				
			3.2 (.126)	4.8 (.189)	1.6 (.062)		3.4 (.135)	2.8 (.11)	7.9 (.31)	47-80-304-14	47-80-324-14	47-80-344-10	47-80-364-10	47-80-384-10				
			4.8 (.189)	6.4 (.251)	3.2 (.125)		5 (.197)	4.4 (.17)	9.5 (.37)	47-80-306-14	47-80-326-14	47-80-346-10	47-80-366-10	47-80-386-10				
			6.4 (.251)	7.9 (.312)	4.8 (.187)		6.6 (.26)	6 (.24)	11.1 (.44)	47-80-308-14	47-80-328-14	47-80-348-10	47-80-368-10	47-80-388-10				
			1.5 (.058)	3.2 (.125)	0.4 (.015)		1.8 (.07)	2.8 (.11)	7.9 (.31)	47-81-302-14	47-81-322-14	47-81-342-10	47-81-362-10	47-81-382-10				
			4.8 (.189)	6.4 (.251)	3.2 (.125)			4.4 (.17)	9.5 (.37)	47-82-302-14	47-82-322-14	47-82-342-10	47-82-362-10	47-82-382-10				
			6.4 (.251)	7.9 (.312)	4.8 (.187)			6 (.24)	11.1 (.44)	47-83-302-14	47-83-322-14	47-83-342-10	47-83-362-10	47-83-382-10				
			3.2 (.126)	4.8 (.189)	1.6 (.062)		3.4 (.135)	4.4 (.17)	9.5 (.37)	47-81-304-14	47-81-324-14	47-81-344-10	47-81-364-10	47-81-384-10				
			4.8 (.189)	6.4 (.250)	3.2 (.125)			6 (.24)	11.1 (.44)	47-82-304-14	47-82-324-14	47-82-344-10	47-82-364-10	47-82-384-10				
			4.8 (.189)	6.4 (.250)	3.2 (.125)		5 (.197)	6 (.24)	11.1 (.44)	47-81-306-14	47-81-326-14	47-81-346-10	47-81-366-10	47-81-386-10				
			Floating Style	16.2 (.64)	11.2 (.44)		~	0.8 (.031)	2.3 (.09)	2.3 (.09)	3.2 (.127)	2.4 (.09)	7.2 (.28)	47-80-310-14	47-80-330-14	47-80-350-10	47-80-370-10	47-80-390-10
							0.8 (.031)	1.6 (.063)	3.1 (.121)		4 (.16)	8.8 (.35)	47-81-310-14	47-81-330-14	47-81-350-10	47-81-370-10	47-81-390-10	
5.6 (.22)	10.4 (.41)	47-82-310-14				47-82-330-14					47-82-350-10	47-82-370-10	47-82-390-10					
2.4 (.09)	7.2 (.28)	47-80-311-14				47-80-331-14					47-80-351-10	47-80-371-10	47-80-391-10					
1.6 (.063)	2.4 (.094)	3.9 (.153)				4 (.158)	4 (.16)	8.8 (.35)	47-81-311-14		47-81-331-14	47-81-351-10	47-81-371-10	47-81-391-10				
							5.6 (.22)	10.4 (.41)	47-82-311-14		47-82-331-14	47-82-351-10	47-82-371-10	47-82-391-10				
4.8 (.190)	4 (.16)	7.2 (.28)				47-80-312-14	47-80-332-14	47-80-352-10	47-80-372-10		47-80-392-10	4.8 (.190)	8.8 (.35)	47-81-312-14	47-81-332-14	47-81-352-10	47-81-372-10	47-81-392-10
												5.6 (.22)	10.4 (.41)	47-82-312-14	47-82-332-14	47-82-352-10	47-82-372-10	47-82-392-10
Snap-In Style	15.7 (.62)	11.2 (.44)	0.5 (.02)	1 (.039)	2 (.079)	0.9 (.03)	1.1 (.044)	1.1 (.04)	5.6 (.22)	47-90-310-14	47-90-330-14	47-90-350-10	47-90-370-10	47-90-390-10				
								2.7 (.11)	7.2 (.28)	47-91-310-14	47-91-330-14	47-91-350-10	47-91-370-10	47-91-390-10				
								4.3 (.17)	8.8 (.35)	47-93-310-14	47-92-330-14	47-92-350-10	47-92-370-10	47-92-390-10				
								5.8 (.23)	10.4 (.41)	47-93-310-14	47-93-330-14	47-93-350-10	47-93-370-10	47-93-390-10				
			1 (.039)	1.6 (.063)	2.6 (.102)		1.7 (.068)	2.7 (.11)	7.2 (.28)	47-90-312-14	47-90-332-14	47-90-352-10	47-90-372-10	47-90-392-10				
								4.3 (.17)	8.8 (.35)	47-91-312-14	47-91-332-14	47-91-352-10	47-91-372-10	47-91-392-10				
								5.9 (.23)	10.4 (.41)	47-92-312-14	47-92-332-14	47-92-352-10	47-92-372-10	47-92-392-10				
								2.7 (.11)	7.2 (.28)	47-90-314-14	47-90-334-14	47-90-354-10	47-90-374-10	47-90-394-10				
			1.6 (.063)	2.5 (.098)	3.5 (.138)		2.6 (.103)	4.3 (.17)	8.8 (.35)	47-91-314-14	47-91-334-14	47-91-354-10	47-91-374-10	47-91-394-10				
								5.9 (.23)	10.4 (.41)	47-92-314-14	47-92-334-14	47-92-354-10	47-92-374-10	47-92-394-10				

Part numbers in shaded rows (shown in table) are fully retracting in minimum panel thickness



To add a black powder coated finish, change the part number from the table as shown:

- Change 1 to 5: 47-80-102-14
47-80-102-54
- Change 2 to 6: 47-80-102-24
47-80-102-64



For a smooth knob, change the part number from the table as shown:

- Change 0 to 1: 47-90-161-20
47-90-161-21
- Change 4 to 5: 47-90-101-24
47-90-101-25

Part Number

See table

All screw part numbers shown in table are for a natural knob finish and a knurled knob

For black finish and smooth knob options, minimums may apply



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47 Captive Screws

Styled knob series · M5 thread size

- Designed for hand operation
- Spring ejected
- Wide variety of sizes, recesses and installation options

Material and Finish

Ferrule:

Press-in: Hardened carbon steel, zinc plate, chromate, plus sealer

Flare-in, floating and snap-in:

Aluminum, natural

Knob: Aluminum, natural or black powder coated

Screw: Hardened carbon steel, zinc plated, chromate, plus sealer

Installation Notes

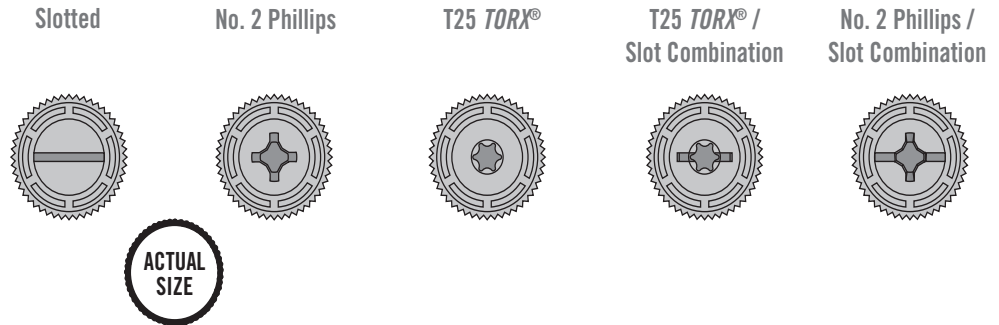
See pages 468-469, 543

Notes



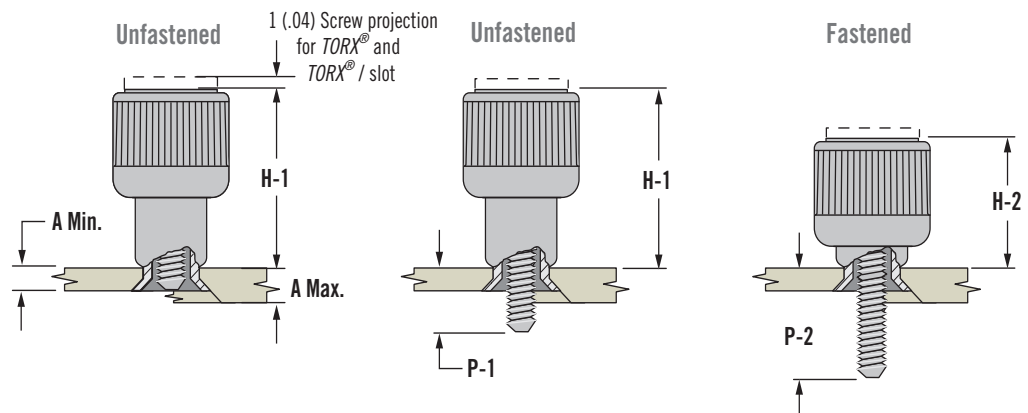
To ensure you receive **SOUTHCO®** quality parts, look for the segmented circle

Recess Styles



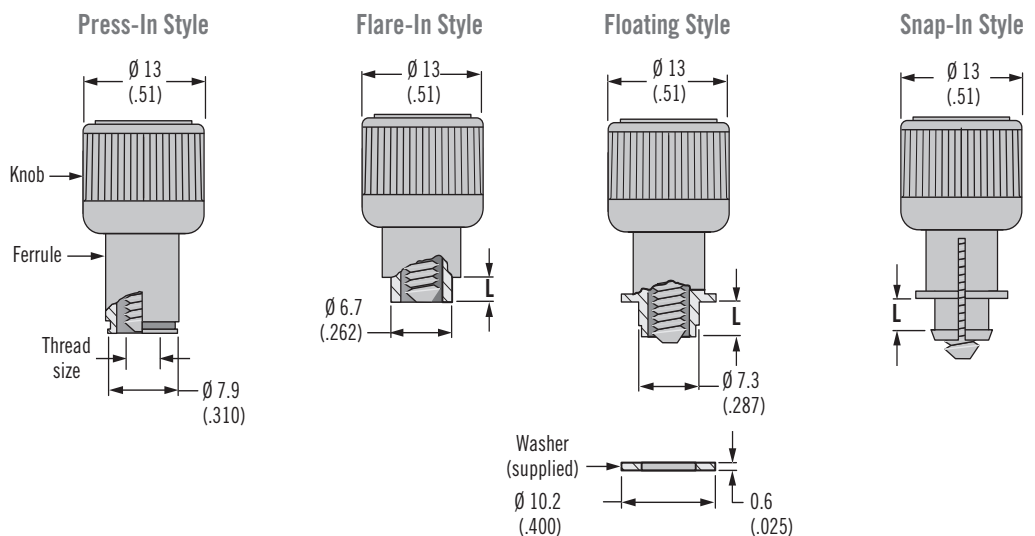
Knob Height and Screw Projection

(Flare-in style shown)



Dimensions in millimeters (inch) unless otherwise stated

Installation Styles



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Dimensions in millimeters (inch) unless otherwise stated

Installation Style	Knob Height		Outer Panel Dimensions			Total Float	Flange Length L	Screw Projection Beyond Outer Surface of Panel		Part Number				
	H-1	H-2	A Min.	A Max.	B			P-1	P-2	Slotted Recess	Phillips Recess	TORX® Recess	TORX® / Slot Combination	Phillips / Slot Combination
Press-In Style	16.2 (.64)	11.3 (.45)	0.9 (.036)	~	~	0.6 (.02)	~	0.6 (.024)	5.5 (.22)	47-90-501-24	47-90-521-24	47-90-541-20	47-90-561-20	47-90-581-20
								2.2 (.087)	7.1 (.28)	47-91-501-24	47-91-521-24	47-91-541-20	47-91-561-20	47-91-581-20
								3.8 (.15)	8.7 (.34)	47-92-501-24	47-92-521-24	47-92-541-20	47-92-561-20	47-92-581-20
								5.4 (.21)	10.3 (.41)	47-93-501-24	47-93-521-24	47-93-541-20	47-93-561-20	47-93-581-20
Flare-In Style	15.6 (.61)	10.5 (.41)	1.5 (.058)	3.2 (.125)	0.4 (.015)	0.6 (.02)	1.8 (.070)	1.2 (.05)	6.3 (.25)	47-80-502-14	47-80-522-14	47-80-542-10	47-80-562-10	47-80-582-10
			3.2 (.126)	4.8 (.189)	1.6 (.062)		3.4 (.135)	2.8 (.11)	7.9 (.31)	47-80-504-14	47-80-524-14	47-80-544-10	47-80-564-10	47-80-584-10
			4.8 (.189)	6.4 (.250)	3.2 (.125)		5 (.197)	4.4 (.17)	9.5 (.37)	47-80-506-14	47-80-526-14	47-80-546-10	47-80-566-10	47-80-586-10
			6.3 (.251)	7.9 (.312)	4.8 (.189)		6.6 (.260)	6 (.24)	11.1 (.44)	47-80-508-14	47-80-528-14	47-80-548-10	47-80-568-10	47-80-588-10
			1.5 (.058)	3.2 (.125)	0.4 (.015)		1.8 (.070)	2.8 (.11)	7.9 (.31)	47-81-502-14	47-81-522-14	47-81-542-10	47-81-562-10	47-81-582-10
			3.2 (.126)	4.8 (.189)	1.6 (.062)		3.4 (.135)	4.4 (.17)	9.5 (.37)	47-82-502-14	47-82-522-14	47-82-542-10	47-82-562-10	47-82-582-10
			4.8 (.189)	6.4 (.250)	3.2 (.125)		5 (.197)	6 (.24)	11.1 (.44)	47-83-502-14	47-83-522-14	47-83-542-10	47-83-562-10	47-83-582-10
			6.3 (.251)	7.9 (.312)	4.8 (.189)		6.6 (.260)	6 (.24)	11.1 (.44)	47-81-504-14	47-81-524-14	47-81-544-10	47-81-564-10	47-81-584-10
			1.5 (.058)	3.2 (.125)	0.4 (.015)		1.8 (.070)	4.4 (.17)	9.5 (.37)	47-82-504-14	47-82-524-14	47-82-544-10	47-82-564-10	47-82-584-10
			3.2 (.126)	4.8 (.189)	1.6 (.062)		3.4 (.135)	6 (.24)	11.1 (.44)	47-81-506-14	47-81-526-14	47-81-546-10	47-81-566-10	47-81-586-10
			4.8 (.189)	6.4 (.250)	3.2 (.125)		5 (.197)	6 (.24)	11.1 (.44)	47-81-506-14	47-81-526-14	47-81-546-10	47-81-566-10	47-81-586-10
			Floating Style	16 (.63)	11.2 (.44)		~	0.8 (.031)	2.3 (.090)	2.3 (.09)	3.2 (.127)	2.4 (.09)	7.2 (.28)	47-80-510-14
0.8 (.031)	1.6 (.063)	3.1 (.121)				4 (.158)	4 (.16)	8.8 (.35)	47-81-510-14		47-81-530-14	47-81-550-10	47-81-570-10	47-81-590-10
0.8 (.031)	1.6 (.063)	3.1 (.121)				4 (.158)	5.6 (.22)	10.4 (.41)	47-82-510-14		47-82-530-14	47-82-550-10	47-82-570-10	47-82-590-10
0.8 (.031)	1.6 (.063)	3.1 (.121)				4 (.158)	2.4 (.09)	7.2 (.28)	47-80-511-14		47-80-531-14	47-80-551-10	47-80-571-10	47-80-591-10
0.8 (.031)	1.6 (.063)	3.1 (.121)				4 (.158)	4 (.16)	8.8 (.35)	47-81-511-14		47-81-531-14	47-81-551-10	47-81-571-10	47-81-591-10
0.8 (.031)	1.6 (.063)	3.1 (.121)				4 (.158)	5.6 (.22)	10.4 (.41)	47-82-511-14		47-82-531-14	47-82-551-10	47-82-571-10	47-82-591-10
0.8 (.031)	1.6 (.063)	3.1 (.121)				4 (.158)	4 (.16)	8.8 (.35)	47-80-512-14		47-80-532-14	47-80-552-10	47-80-572-10	47-80-592-10
0.8 (.031)	1.6 (.063)	3.1 (.121)				4 (.158)	5.6 (.22)	10.4 (.41)	47-81-512-14		47-81-532-14	47-81-552-10	47-81-572-10	47-81-592-10
Snap-In Style	15.7 (.62)	11.2 (.44)	0.5 (.020)	1 (.039)	2 (.079)	.9 (.04)	1.1 (.044)	1.1 (.04)	5.6 (.22)	47-90-510-14	47-90-530-14	47-90-550-10	47-90-570-10	47-90-590-10
			0.5 (.020)	1 (.039)	2 (.079)		1.1 (.044)	2.7 (.11)	7.2 (.28)	47-91-510-14	47-91-530-14	47-91-550-10	47-91-570-10	47-91-590-10
			0.5 (.020)	1 (.039)	2 (.079)		1.1 (.044)	4.3 (.17)	8.8 (.35)	47-92-510-14	47-92-530-14	47-92-550-10	47-92-570-10	47-92-590-10
			0.5 (.020)	1 (.039)	2 (.079)		1.1 (.044)	5.9 (.23)	10.4 (.41)	47-93-510-14	47-93-530-14	47-93-550-10	47-93-570-10	47-93-590-10
			1 (.039)	1.6 (.063)	2.6 (.103)		1.7 (.068)	2.7 (.11)	7.2 (.28)	47-90-512-14	47-90-532-14	47-90-552-10	47-90-572-10	47-90-592-10
			1 (.039)	1.6 (.063)	2.6 (.103)		1.7 (.068)	4.3 (.17)	8.8 (.35)	47-91-512-14	47-91-532-14	47-91-552-10	47-91-572-10	47-91-592-10
			1 (.039)	1.6 (.063)	2.6 (.103)		1.7 (.068)	5.9 (.23)	10.4 (.41)	47-92-512-14	47-92-532-14	47-92-552-10	47-92-572-10	47-92-592-10
			1 (.039)	1.6 (.063)	2.6 (.103)		1.7 (.068)	2.7 (.11)	7.2 (.28)	47-90-514-14	47-90-534-14	47-90-554-10	47-90-574-10	47-90-594-10
			1 (.039)	1.6 (.063)	2.6 (.103)		1.7 (.068)	4.3 (.17)	8.8 (.35)	47-91-514-14	47-91-534-14	47-91-554-10	47-91-574-10	47-91-594-10
			1 (.039)	1.6 (.063)	2.6 (.103)		1.7 (.068)	5.9 (.23)	10.4 (.41)	47-92-514-14	47-92-534-14	47-92-554-10	47-92-574-10	47-92-594-10
			1.6 (.063)	2.5 (.098)	3.5 (.138)		2.6 (.103)	2.7 (.11)	7.2 (.28)	47-90-514-14	47-90-534-14	47-90-554-10	47-90-574-10	47-90-594-10
			1.6 (.063)	2.5 (.098)	3.5 (.138)		2.6 (.103)	4.3 (.17)	8.8 (.35)	47-91-514-14	47-91-534-14	47-91-554-10	47-91-574-10	47-91-594-10
1.6 (.063)	2.5 (.098)	3.5 (.138)	2.6 (.103)	5.9 (.23)	10.4 (.41)	47-92-514-14	47-92-534-14	47-92-554-10	47-92-574-10	47-92-594-10				

Part numbers in shaded rows (shown in table) are fully retracting in minimum panel thickness



To add a black powder coated finish, change the part number from the table as shown:

- Change 1 to 5: 47-80-102-14
- 47-80-102-54
- Change 2 to 6: 47-80-102-24
- 47-80-102-64



For a smooth knob, change the part number from the table as shown:

- Change 0 to 1: 47-90-161-20
- 47-90-161-21
- Change 4 to 5: 47-90-101-24
- 47-90-101-25

Part Number

See table

All screw part numbers shown in table are for a natural knob finish and a knurled knob

For black finish and smooth knob options, minimums may apply



47 Captive Screws

Styled knob series · M6 thread size

- Designed for hand operation
- Spring ejected
- Wide variety of sizes, recesses and installation options

Material and Finish

Ferrule:

Press-in: Hardened carbon steel, zinc plate, chromate, plus sealer

Flare-in and Floating:

Aluminum, natural

Knob: Aluminum, natural or black powder coated

Screw: Hardened carbon steel, zinc plated, chromate, plus sealer

Installation Notes

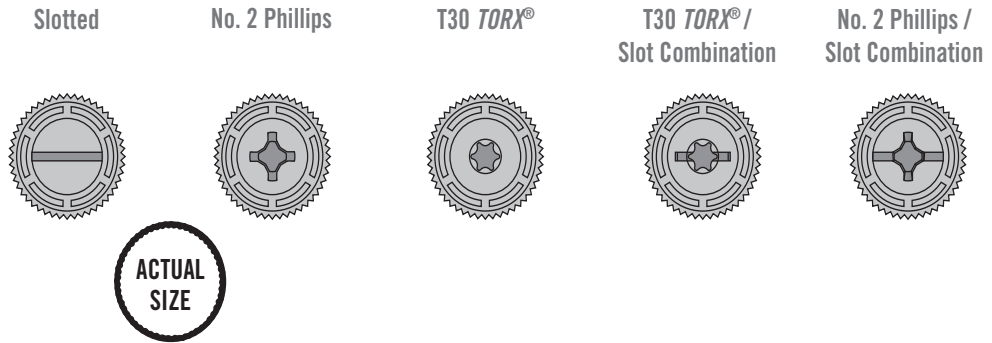
See pages 468-469, 543

Notes



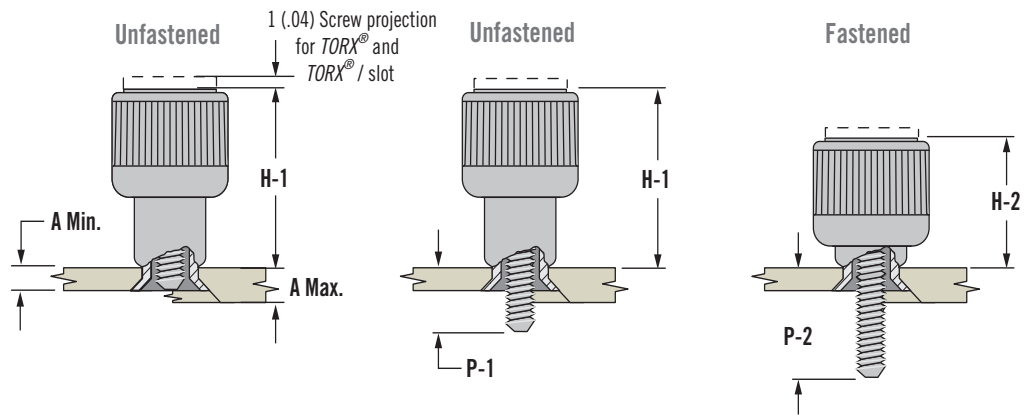
To ensure you receive **SOUTHCO** quality parts, look for the segmented circle

Recess Styles



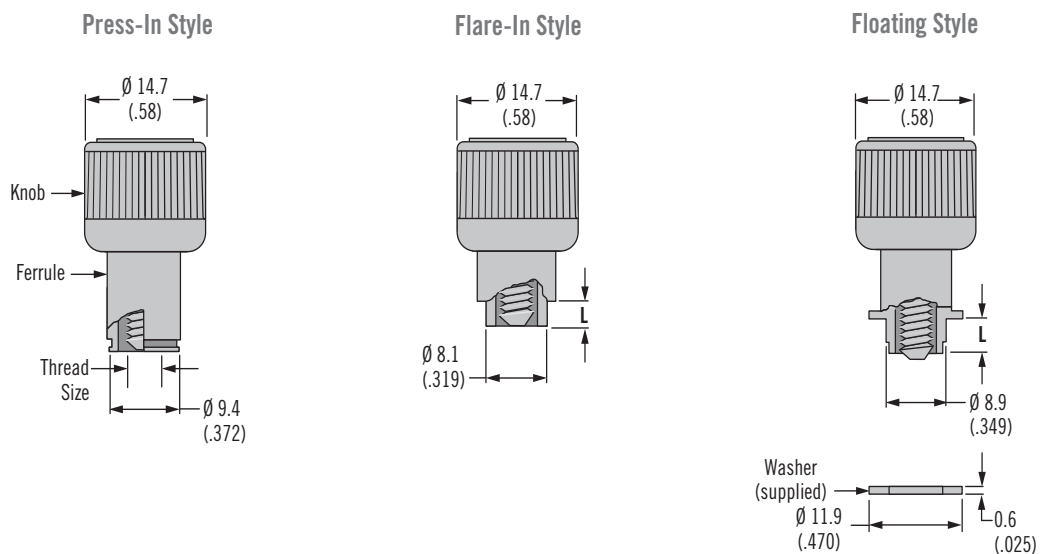
Knob Height and Screw Projection

(Flare-in style shown)



Dimensions in millimeters (inch) unless otherwise stated

Installation Styles



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Dimensions in millimeters (inch) unless otherwise stated

Installation Style	Knob Height		Outer Panel Dimensions		B	Total Float	Flange Length L	Screw Projection Beyond Outer Surface of Panel		Part Number								
	H-1	H-2	A Min.	A Max.				P-1	P-2	Slotted Recess	Phillips Recess	TORX® Recess	TORX® / Slot Combination	Phillips / Slot Combination				
Press-In Style	20 (.79)	13.4 (.53)	0.9 (.036)	~	~	0.8 (.03)	~	0.5 (.02)	7.1 (.28)	47-90-601-24	47-90-621-24	47-90-641-20	47-90-661-20	47-90-681-20				
								2.1 (.08)	8.7 (.34)	47-91-601-24	47-91-621-24	47-91-641-20	47-91-661-20	47-91-681-20				
								3.7 (.15)	10.3 (.41)	47-92-601-24	47-92-621-24	47-92-641-20	47-92-661-20	47-92-681-20				
								5.3 (.21)	11.9 (.47)	47-93-601-24	47-93-621-24	47-93-641-20	47-93-661-20	47-93-681-20				
Flare-In Style	19.3 (.76)	12.7 (.50)	1.5 (.058)	3.2 (.125)	0.4 (.015)	0.9 (.03)	1.8 (.070)	1.2 (.05)	7.8 (.31)	47-80-602-14	47-80-622-14	47-80-642-10	47-80-662-10	47-80-682-10				
			3.2 (.126)	4.8 (.189)	1.6 (.062)		3.4 (.135)	2.8 (.11)	9.4 (.31)	47-80-604-14	47-80-624-14	47-80-644-10	47-80-664-10	47-80-684-10				
			4.8 (.189)	6.4 (.250)	3.2 (.125)		5 (.197)	4.4 (.17)	11 (.43)	47-80-606-14	47-80-626-14	47-80-646-10	47-80-666-10	47-80-686-10				
			6.4 (.251)	7.9 (.312)	4.8 (.189)		6.6 (.260)	6 (.24)	12.6 (.50)	47-80-608-14	47-80-628-14	47-80-648-10	47-80-668-10	47-80-688-10				
			1.5 (.058)	3.2 (.125)	0.4 (.015)		1.8 (.070)	2.8 (.11)	9.4 (.37)	47-81-602-14	47-81-622-14	47-81-642-10	47-81-662-10	47-81-682-10				
			4.4 (.17)	11 (.43)	47-82-602-14		47-82-622-14	47-82-642-10	47-82-662-10	47-82-682-10								
			6 (.24)	12.6 (.50)	47-83-602-14		47-83-622-14	47-83-642-10	47-83-662-10	47-83-682-10								
			3.2 (.126)	4.8 (.189)	1.6 (.062)		3.4 (.135)	4.4 (.17)	11 (.43)	47-81-604-14	47-81-624-14	47-81-644-10	47-81-664-10	47-81-684-10				
			6 (.24)	12.6 (.50)	47-82-604-14		47-82-624-14	47-82-644-10	47-82-664-10	47-82-684-10								
			4.8 (.189)	6.4 (.250)	3.2 (.125)		5 (.197)	6 (.24)	12.6 (.50)	47-81-606-14	47-81-626-14	47-81-646-10	47-81-666-10	47-81-686-10				
			Floating Style	20 (.79)	13.3 (.52)		~	0.8 (.031)	2.5 (.097)	2.3 (.09)	3.2 (.127)	2.1 (.08)	8.8 (.35)	47-80-610-14	47-80-630-14	47-80-650-10	47-80-670-10	47-80-690-10
							0.8 (.031)	1.6 (.063)	3.3 (.128)		3.7 (.15)	10.4 (.41)	47-81-610-14	47-81-630-14	47-81-650-10	47-81-670-10	47-81-690-10	
5.3 (.21)	12 (.47)	47-82-610-14				47-82-630-14	47-82-650-10	47-82-670-10	47-82-690-10									
2.1 (.08)	8.8 (.35)	47-80-611-14				47-80-631-14	47-80-651-10	47-80-671-10	47-80-691-10									
3.7 (.15)	10.4 (.41)	47-81-611-14				47-81-631-14	47-81-651-10	47-81-671-10	47-81-691-10									
5.3 (.21)	12 (.47)	47-82-611-14				47-82-631-14	47-82-651-10	47-82-671-10	47-82-691-10									
3.7 (.15)	10.4 (.41)	47-80-612-14				47-80-632-14	47-80-652-10	47-80-672-10	47-80-692-10									
5.3 (.21)	12 (.47)	47-81-612-14				47-81-632-14	47-81-652-10	47-81-672-10	47-81-692-10									

Part numbers in shaded rows (shown in table) are fully retracting in minimum panel thickness



To add a black powder coated finish, change the part number from the table as shown:

- Change 1 to 5: 47-80-102-14
47-80-102-54
- Change 2 to 6: 47-80-102-24
47-80-102-64



For a smooth knob, change the part number from the table as shown:

- Change 0 to 1: 47-90-161-20
47-90-161-21
- Change 4 to 5: 47-90-101-24
47-90-101-25

Part Number

See table

All screw part numbers shown in table are for a natural knob finish and a knurled knob
For black finish and smooth knob options, minimums may apply



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47 Captive Screws

Styled knob series · 4-40 thread size

- Smooth knob meets UL-1950
- Designed for hand operation
- Spring ejected
- Wide variety of sizes, recesses and installation options

Material and Finish

Ferrule:

Press-in: Hardened carbon steel, zinc plate, chromate, plus sealer

P.C. board style:

300 Series stainless steel

Flare-in and Floating:

Aluminum, natural

Knob: Aluminum, natural or black powder coated

Screw: Hardened carbon steel, zinc plated, chromate, plus sealer

Installation Notes

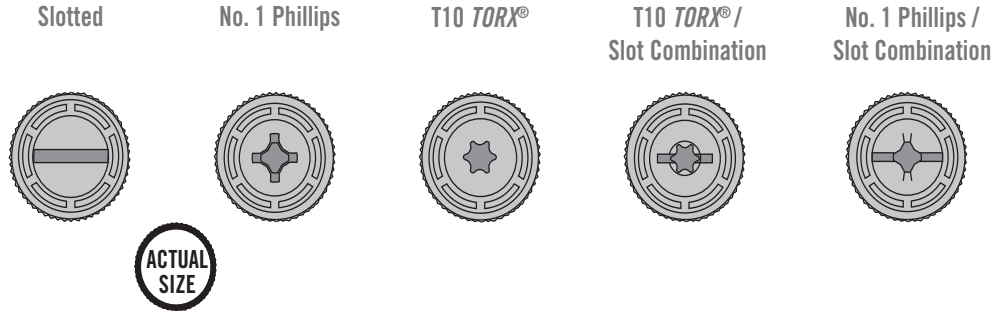
See pages 468-469, 543

Notes



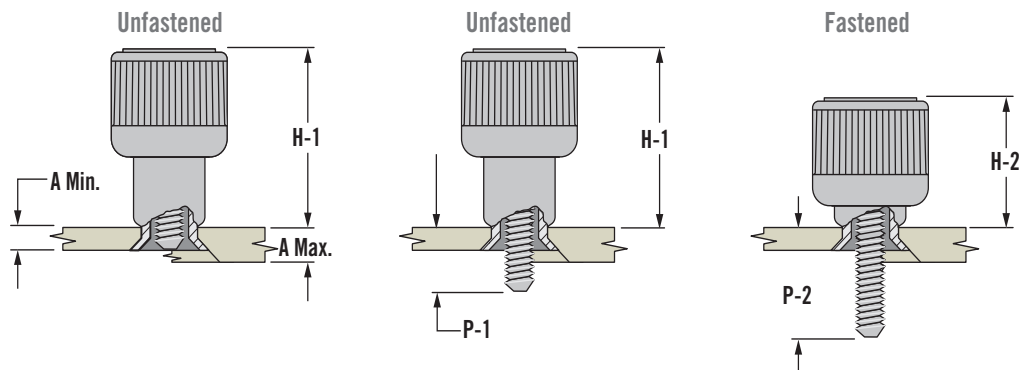
To ensure you receive SOUTHCO® quality parts, look for the segmented circle

Recess Styles



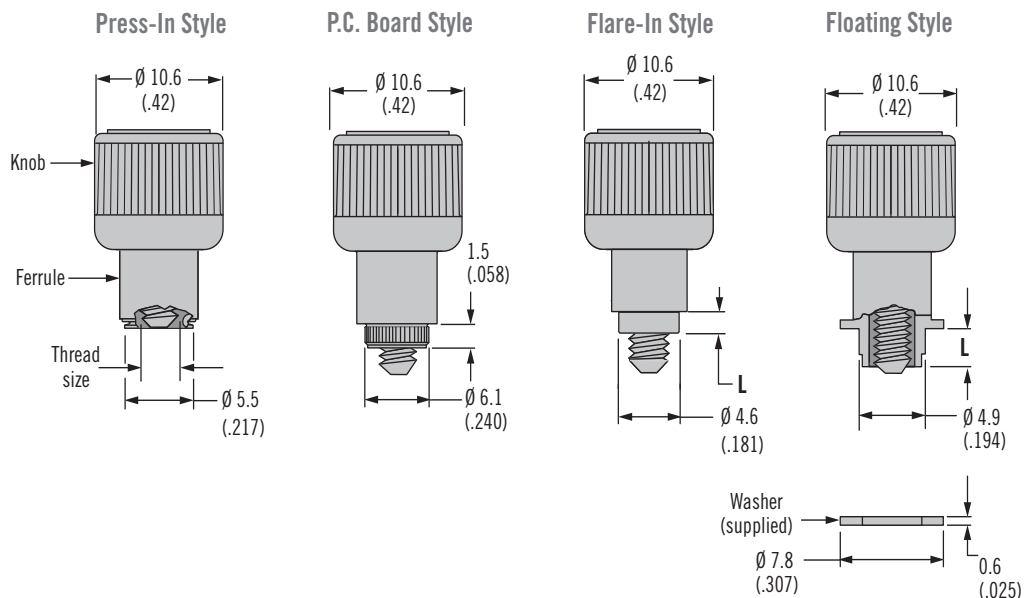
Knob Height and Screw Projection

(Flare-in style shown)



Dimensions in millimeters (inch) unless otherwise stated

Installation Styles



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Dimensions in millimeters (inch) unless otherwise stated

Installation Style	Knob Height		Outer Panel Dimensions		B	Total Float	Flange Length L	Screw Projection Beyond Outer Surface of Panel		Part Number				
	H-1	H-2	A Min.	A Max.				P-1	P-2	Slotted Recess	Phillips Recess	TORX® Recess	TORX® / Slot Combination	Phillips / Slot Combination
Press-In Style	11.3 (.45)	8.3 (.33)	0.9 (.036)	~	~	0.8 (.03)	~	0.8 (.03)	3.8 (.15)	47-60-101-24	47-60-121-24	47-60-141-24	47-60-161-20	47-60-181-24
								2.5 (.10)	5.5 (.22)	47-61-101-24	47-61-121-24	47-61-141-24	47-61-161-20	47-61-181-24
								4 (.16)	7 (.28)	47-62-101-24	47-62-121-24	47-62-141-24	47-62-161-20	47-62-181-24
								5.6 (.22)	8.6 (.34)	47-63-101-24	47-63-121-24	47-63-141-24	47-63-161-20	47-63-181-24
P.C. Board Style	11.5 (.45)	8.3 (.33)	1.6 (.061)	~	~	0.8 (.03)	~	1.5 (.06)	4.5 (.18)	47-65-101-34	47-65-121-34	47-65-141-34	47-65-161-30	47-65-181-34
Flare-In Style	11.5 (.45)	8.1 (.32)	0.8 (.031)	1.5 (.058)	0.4 (.015)	0.6 (.03)	1 (.041)	0.8 (.03)	4 (.16)	47-10-101-14	47-10-121-14	47-10-141-14	47-10-161-10	47-10-181-14
			1.5 (.059)	2.5 (.100)	0.4 (.015)		1.8 (.070)	1.5 (.06)	4.7 (.19)	47-10-102-14	47-10-122-14	47-10-142-14	47-10-162-10	47-10-182-14
			2.5 (.1)	4 (.156)	0.8 (.031)		2.6 (.104)	2.5 (.10)	5.7 (.22)	47-10-103-14	47-10-123-14	47-10-143-14	47-10-163-10	47-10-183-14
			4 (.157)	5.6 (.219)	2.4 (.093)		4.2 (.166)	4 (.16)	7.2 (.28)	47-10-105-14	47-10-125-14	47-10-145-14	47-10-165-10	47-10-185-14
			5.6 (.220)	7.1 (.281)	4 (.156)		5.8 (.229)	5.6 (.22)	8.8 (.35)	47-10-107-14	47-10-127-14	47-10-147-14	47-10-167-10	47-10-187-14
			0.8 (.031)	1.5 (.058)	0.4 (.015)		1 (.041)	2.5 (.10)	5.7 (.22)	47-11-101-14	47-11-121-14	47-11-141-14	47-11-161-10	47-11-181-14
			4 (.16)	7.2 (.28)	47-12-101-14			47-12-121-14	47-12-141-14	47-12-161-10	47-12-181-14			
			5.6 (.22)	8.8 (.35)	47-13-101-14			47-13-121-14	47-13-141-14	47-13-161-10	47-13-181-14			
			1.8 (.070)	3.2 (.13)	6.4 (.25)		47-11-102-14	47-11-122-14	47-11-142-14	47-11-162-10	47-11-182-14			
				4.7 (.19)	7.9 (.31)		47-12-102-14	47-12-122-14	47-12-142-14	47-12-162-10	47-12-182-14			
				6.3 (.25)	9.5 (.37)		47-13-102-14	47-13-122-14	47-13-142-14	47-13-162-10	47-13-182-14			
				1.9 (.07)	5.1 (.20)		47-10-110-14	47-10-130-14	47-10-150-14	47-10-170-10	47-10-190-10			
Floating Style	11.4 (.45)	8.6 (.34)	~	0.8 (.031)	2 (.080)	2.1 (.08)	2.6 (.101)	3.4 (.13)	6.6 (.26)	47-11-110-14	47-11-130-14	47-11-150-14	47-11-170-10	47-11-190-14
				5 (.19)	8.2 (.32)			47-12-110-14	47-12-130-14	47-12-150-14	47-12-170-10	47-12-190-14		
				1.9 (.07)	5.1 (.20)			47-10-111-14	47-10-131-14	47-10-151-14	47-10-171-10	47-10-191-14		
			0.8 (.031)	1.6 (.063)	2.8 (.111)		3.4 (.132)	3.4 (.13)	6.6 (.26)	47-11-111-14	47-11-131-14	47-11-151-14	47-11-171-10	47-11-191-14
				5 (.19)	8.2 (.32)			47-12-111-14	47-12-131-14	47-12-151-14	47-12-171-10	47-12-191-14		
				3.4 (.13)	6.6 (.26)			47-10-112-14	47-10-132-14	47-10-152-14	47-10-172-10	47-10-192-14		
			1.6 (.063)	2.4 (.094)	3.6 (.143)		4.2 (.164)	5 (.19)	8.2 (.32)	47-11-112-14	47-11-132-14	47-11-152-14	47-11-172-10	47-11-192-14

Part numbers in shaded rows (shown in table) are fully retracting in minimum panel thickness



To add a black powder coated finish, change the part number from the table as shown:

- Change 1 to 5: 47-80-102-14
- 47-80-102-54
- Change 2 to 6: 47-80-102-24
- 47-80-102-64
- Change 3 to 7: 47-80-102-34
- 47-80-102-74



For a smooth knob, change the part number from the table as shown:

- Change 0 to 1: 47-90-161-20
- 47-90-161-21
- Change 4 to 5: 47-90-101-24
- 47-90-101-25

Part Number

See table

All screw part numbers shown in table are for a natural knob finish and a knurled knob

For black finish and smooth knob options, minimums may apply



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47 Captive Screws

Styled knob series · 6-32 thread size

- Smooth knob meets UL-1950
- Designed for hand operation
- Spring ejected
- Wide variety of sizes, recesses and installation options

Material and Finish

Ferrule:

Press-in: Hardened carbon steel, zinc plate, chromate, plus sealer

P.C. board style: 300 Series stainless steel, passivated

Flare-in, floating and snap-in: Aluminum, natural

Knob: Aluminum, natural or black powder coated

Screw: Hardened carbon steel, zinc plated, chromate, plus sealer

Installation Notes

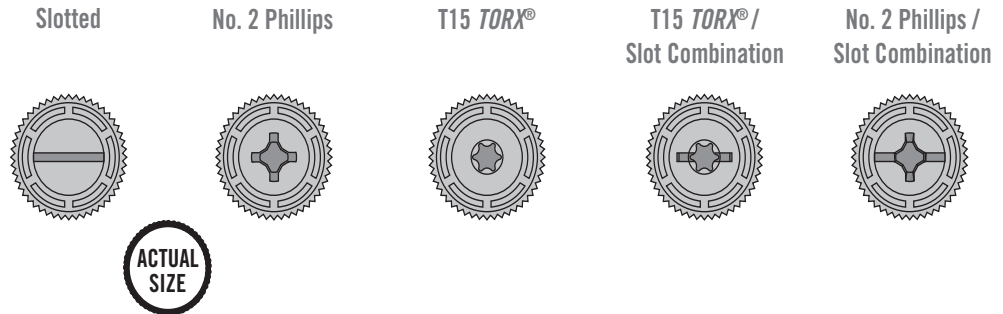
See pages 468-469, 543

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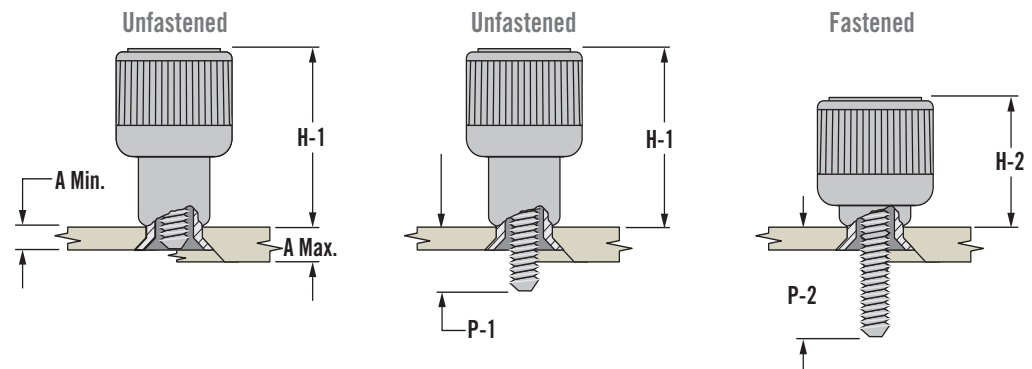
To ensure you receive **SOUTHCO®** quality parts, look for the segmented circle

Recess Styles



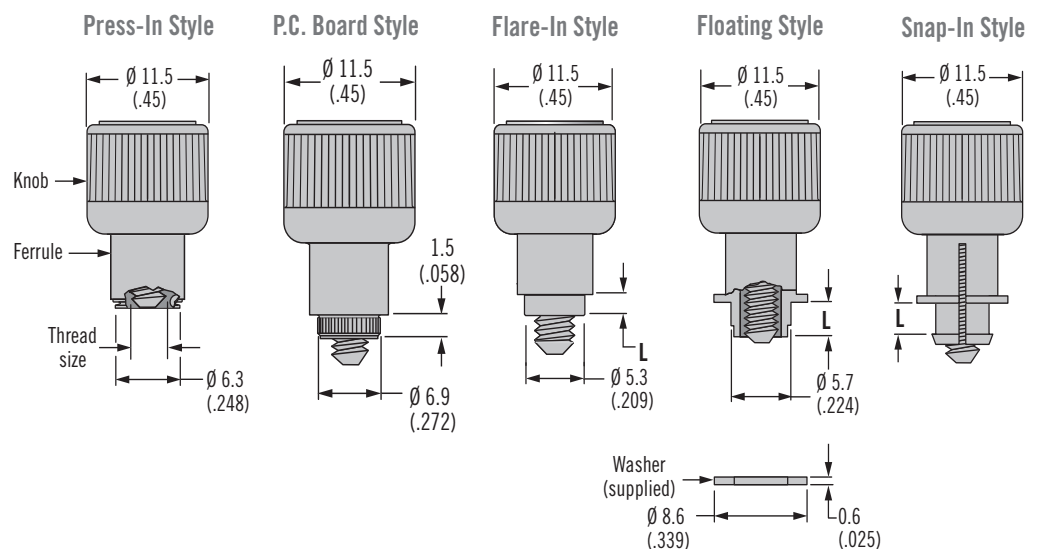
Knob Height and Screw Projection

(Flare-in style shown)



Dimensions in millimeters (inch) unless otherwise stated

Installation Styles



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Dimensions in millimeters (inch) unless otherwise stated

Installation Style	Knob Height		Outer Panel Dimensions		B	Total Float	Flange Length L	Screw Projection Beyond Outer Surface of Panel		Part Number				
	H-1	H-2	A Min.	A Max.				P-1	P-2	Slotted Recess	Phillips Recess	TORX® Recess	TORX® / Slot Combination	Phillips / Slot Combination
Press-In Style	15.9 (.63)	11.2 (.44)	0.9 (.036)	~	~	0.8 (.03)	~	0.5 (.02)	5.3 (.21)	47-60-201-24	47-60-221-24	47-60-241-24	47-60-261-20	47-60-281-24
								2.1 (.08)	6.9 (.27)	47-61-201-24	47-61-221-24	47-61-241-24	47-61-261-20	47-61-281-24
								3.7 (.15)	8.5 (.33)	47-62-201-24	47-62-221-24	47-62-241-24	47-62-261-20	47-62-281-24
								5.3 (.21)	10.1 (.40)	47-63-201-24	47-63-221-24	47-63-241-24	47-63-261-20	47-63-281-24
P.C. Board Style	14.8 (.58)	10 (.39)	1.6 (.061)	~	~	0.8 (.03)	~	1.4 (.06)	6.1 (.24)	47-65-201-34	47-65-221-34	47-65-241-34	47-65-261-30	47-65-281-34
Flare-In Style	15.3 (.60)	10.4 (.41)	1.5 (.058)	3.2 (.125)	0.4 (.015)	0.8 (.03)	1.8 (.07)	1.1 (.04)	6 (.24)	47-10-202-14	47-10-222-14	47-10-242-14	47-10-262-10	47-10-282-14
			3.2 (.125)	4.8 (.189)	1.6 (.062)		3.4 (.135)	2.7 (.11)	7.6 (.30)	47-10-204-14	47-10-224-14	47-10-244-14	47-10-264-10	47-10-284-14
			4.8 (.189)	6.4 (.250)	3.2 (.125)		5 (.197)	4.3 (.17)	9.2 (.36)	47-10-206-14	47-10-226-14	47-10-246-14	47-10-266-10	47-10-286-14
			6.4 (.250)	7.9 (.312)	4.8 (.189)		6.1 (.26)	5.9 (.23)	10.8 (.43)	47-10-208-14	47-10-228-14	47-10-248-14	47-10-268-10	47-10-288-14
			1.5 (.058)	3.2 (.125)	0.4 (.015)		1.8 (.07)	2.7 (.11)	7.6 (.30)	47-11-202-14	47-11-222-14	47-11-242-14	47-11-262-10	47-11-282-14
			3.2 (.125)	4.8 (.189)	1.6 (.062)		3.4 (.135)	4.3 (.17)	9.2 (.36)	47-12-202-14	47-12-222-14	47-12-242-14	47-12-262-10	47-12-282-14
			4.8 (.189)	6.4 (.250)	3.2 (.125)		5 (.197)	5.9 (.23)	10.8 (.43)	47-13-202-14	47-13-222-14	47-13-242-14	47-13-262-10	47-13-282-14
			6.4 (.250)	7.9 (.312)	4.8 (.189)		6.1 (.26)	6.9 (.27)	11.8 (.46)	47-11-204-14	47-11-224-14	47-11-244-14	47-11-264-10	47-11-284-14
			1.6 (.062)	4.8 (.189)	1.6 (.062)		3.4 (.135)	5.9 (.23)	10.8 (.43)	47-12-204-14	47-12-224-14	47-12-244-14	47-12-264-10	47-12-284-14
			4.8 (.189)	6.4 (.250)	3.2 (.125)		5 (.197)	5.9 (.23)	10.8 (.43)	47-11-206-14	47-11-226-14	47-11-246-14	47-11-266-10	47-11-286-14
Floating Style	15.3 (.60)	10.6 (.42)	~	0.8 (.031)	2.1 (.083)	2.2 (.09)	2.9 (.113)	2.4 (.09)	7.2 (.28)	47-10-210-14	47-10-230-14	47-10-250-14	47-10-270-10	47-10-290-14
			4 (.16)	8.8 (.35)	47-11-210-14		47-11-230-14	47-11-250-14	47-11-270-10	47-11-290-14				
			5.6 (.22)	10.4 (.41)	47-12-210-14		47-12-230-14	47-12-250-14	47-12-270-10	47-12-290-14				
			2.4 (.09)	7.2 (.28)	47-10-211-14		47-10-231-14	47-10-251-14	47-10-271-10	47-10-291-14				
			4 (.16)	8.8 (.35)	47-11-211-14		47-11-231-14	47-11-251-14	47-11-271-10	47-11-291-14				
			5.6 (.22)	10.4 (.41)	47-12-211-14		47-12-231-14	47-12-251-14	47-12-271-10	47-12-291-14				
			4 (.16)	8.8 (.35)	47-10-212-14		47-10-232-14	47-10-252-14	47-10-272-10	47-10-292-14				
			5.6 (.22)	10.4 (.41)	47-11-212-14		47-11-232-14	47-11-252-14	47-11-272-10	47-11-292-14				
			0.8 (.03)	5.6 (.22)	47-60-210-14		47-60-230-14	47-60-250-14	47-60-270-10	47-60-290-14				
			2.4 (.09)	7.2 (.28)	47-61-210-14		47-61-230-14	47-61-250-14	47-61-270-10	47-61-290-14				
4 (.16)	8.8 (.35)	47-62-210-14	47-62-230-14	47-62-250-14	47-62-270-10	47-62-290-14								
5.6 (.22)	10.4 (.41)	47-63-210-14	47-63-230-14	47-63-250-14	47-63-270-10	47-63-290-14								
Snap-In Style	15.3 (.60)	10.6 (.42)	0.5 (.020)	1 (.039)	2 (.079)	0.8 (.03)	1.1 (.044)	0.8 (.03)	5.6 (.22)	47-60-210-14	47-60-230-14	47-60-250-14	47-60-270-10	47-60-290-14
			2.4 (.09)	7.2 (.28)	47-61-210-14		47-61-230-14	47-61-250-14	47-61-270-10	47-61-290-14				
			4 (.16)	8.8 (.35)	47-62-210-14		47-62-230-14	47-62-250-14	47-62-270-10	47-62-290-14				
			5.6 (.22)	10.4 (.41)	47-63-210-14		47-63-230-14	47-63-250-14	47-63-270-10	47-63-290-14				
			2.4 (.09)	7.2 (.28)	47-60-212-14		47-60-232-14	47-60-252-14	47-60-272-10	47-60-292-14				
			4 (.16)	8.8 (.35)	47-61-212-14		47-61-232-14	47-61-252-14	47-61-272-10	47-61-292-14				
5.6 (.22)	10.4 (.41)	47-62-212-14	47-62-232-14	47-62-252-14	47-62-272-10	47-62-292-14								

Part numbers in shaded rows (shown in table) are fully retracting in minimum panel thickness



To add a black powder coated finish, change the part number from the table as shown:

- Change 1 to 5: 47-80-102-14
47-80-102-54
- Change 2 to 6: 47-80-102-24
47-80-102-64
- Change 3 to 7: 47-80-102-34
47-80-102-74



For a smooth knob, change the part number from the table as shown:

- Change 0 to 1: 47-90-161-20
47-90-161-21
- Change 4 to 5: 47-90-101-24
47-90-101-25

Part Number

See table

All screw part numbers shown in table are for a natural knob finish and a knurled knob

For black finish and smooth knob options, minimums may apply



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47 Captive Screws

Styled knob series · 8-32 thread size

- Designed for hand operation
- Spring ejected
- Wide variety of sizes, recesses and installation options

Material and Finish

Ferrule:

Press-in: Hardened carbon steel, zinc plate, chromate, plus sealer

Flare-in, floating and snap-in: Aluminum, natural

Knob: Aluminum, natural or black powder coated

Screw: Hardened carbon steel, zinc plated, chromate, plus sealer

Installation Notes

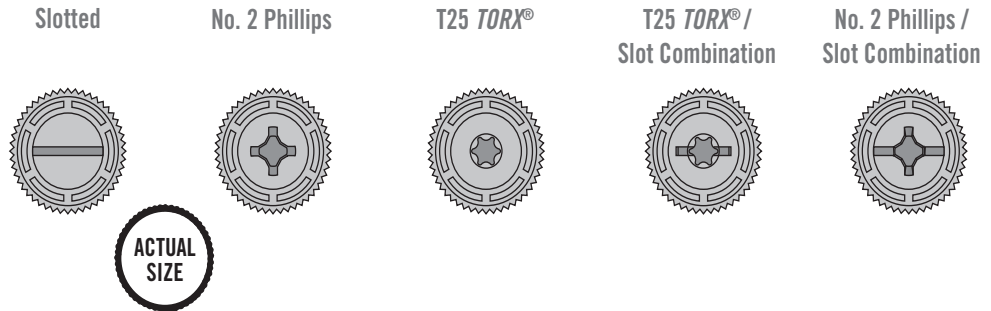
See pages 468-469, 543

Notes



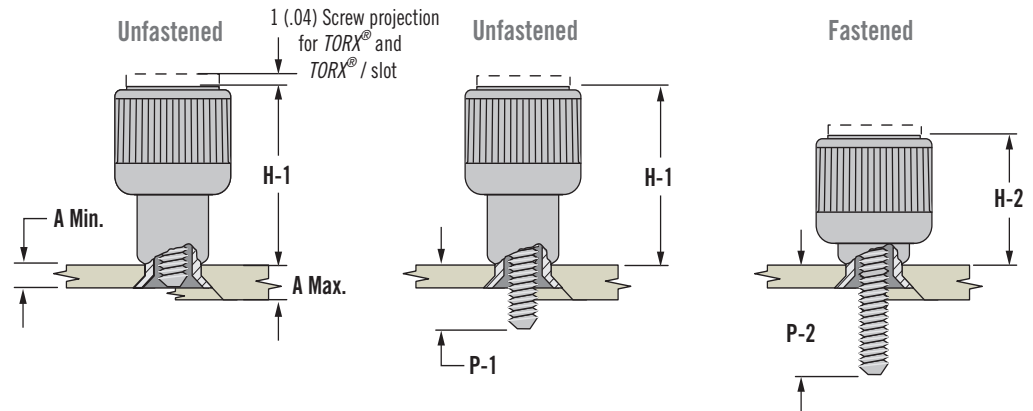
To ensure you receive **SOUTHCO®** quality parts, look for the segmented circle

Recess Styles



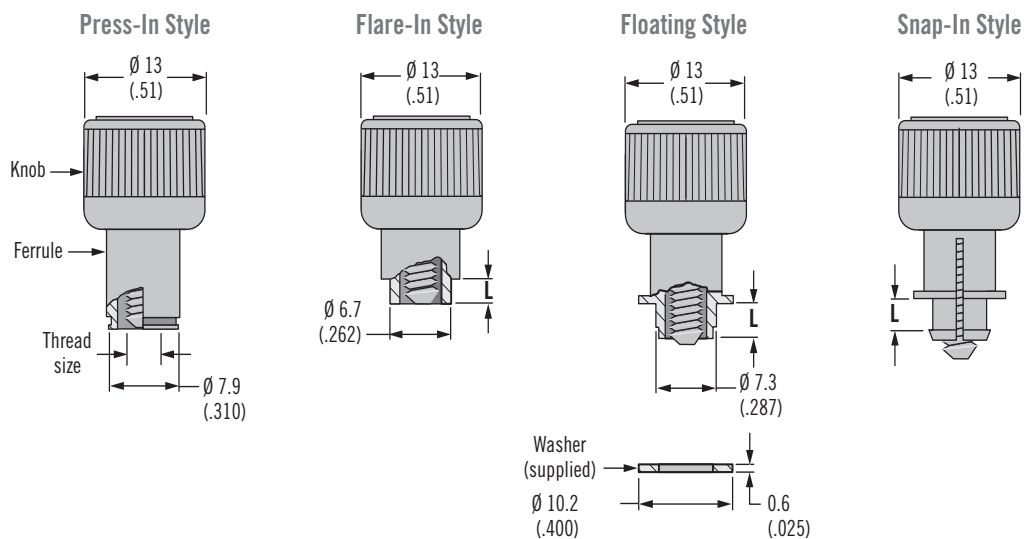
Knob Height and Screw Projection

(Flare-in style shown)



Dimensions in millimeters (inch) unless otherwise stated

Installation Styles



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Dimensions in millimeters (inch) unless otherwise stated

Installation Style	Knob Height		Outer Panel Dimensions		B	Total Float	Flange Length L	Screw Projection Beyond Outer Surface of Panel		Part Number				
	H-1	H-2	A Min.	A Max.				P-1	P-2	Slotted Recess	Phillips Recess	TORX® Recess	TORX® / Slot Combination	Phillips / Slot Combination
Press-In Style	16.2 (.64)	11.2 (.44)	0.9 (.036)	~	~	0.8 (.03)	~	0.5 (.02)	5.6 (.22)	47-60-301-24	47-60-321-24	47-60-341-20	47-60-361-20	47-60-381-20
								2 (.08)	7.1 (.28)	47-61-301-24	47-61-321-24	47-61-341-20	47-61-361-20	47-61-381-20
								3.8 (.15)	8.9 (.35)	47-62-301-24	47-62-321-24	47-62-341-20	47-62-361-20	47-62-381-20
								5.3 (.21)	10.4 (.41)	47-63-301-24	47-63-321-24	47-63-341-20	47-63-361-20	47-63-381-20
Flare-In Style	15.6 (.61)	10.5 (.41)	1.5 (.058)	3.2 (.125)	0.4 (.015)	0.9 (.03)	1.8 (.070)	1 (.04)	6 (.24)	47-10-302-14	47-10-322-14	47-10-342-10	47-10-362-10	47-10-382-10
			3.2 (.126)	4.8 (.189)	1.6 (.062)		3.4 (.135)	2.8 (.11)	7.6 (.3)	47-10-304-14	47-10-324-14	47-10-344-10	47-10-364-10	47-10-384-10
			4.8 (.189)	6.4 (.250)	3.2 (.125)		5 (.197)	4.3 (.17)	9.2 (.36)	47-10-306-14	47-10-326-14	47-10-346-10	47-10-366-10	47-10-386-10
			6.3 (.251)	7.9 (.312)	4.8 (.189)		6.6 (.260)	5.8 (.23)	10.8 (.43)	47-10-308-14	47-10-328-14	47-10-348-10	47-10-368-10	47-10-388-10
			1.5 (.058)	3.2 (.125)	0.4 (.015)		1.8 (.07)	2.8 (.11)	7.6 (.3)	47-11-302-14	47-11-322-14	47-11-342-10	47-11-362-10	47-11-382-10
			3.2 (.126)	4.8 (.189)	1.6 (.062)		3.4 (.135)	4.3 (.17)	9.2 (.36)	47-12-302-14	47-12-322-14	47-12-342-10	47-12-362-10	47-12-382-10
			4.8 (.189)	6.4 (.250)	3.2 (.125)		5 (.197)	5.8 (.23)	10.8 (.43)	47-13-302-14	47-13-322-14	47-13-342-10	47-13-362-10	47-13-382-10
			3.2 (.126)	4.8 (.189)	1.6 (.062)		3.4 (.135)	4.3 (.17)	9.2 (.36)	47-11-304-14	47-11-324-14	47-11-344-10	47-11-364-10	47-11-384-10
			4.8 (.189)	6.4 (.250)	3.2 (.125)		5 (.197)	5.8 (.23)	10.8 (.43)	47-12-304-14	47-12-324-14	47-12-344-10	47-12-364-10	47-12-384-10
			1.5 (.058)	3.2 (.125)	0.4 (.015)		1.8 (.07)	2.8 (.11)	7.6 (.3)	47-11-302-14	47-11-322-14	47-11-342-10	47-11-362-10	47-11-382-10
			3.2 (.126)	4.8 (.189)	1.6 (.062)		3.4 (.135)	4.3 (.17)	9.2 (.36)	47-12-302-14	47-12-322-14	47-12-342-10	47-12-362-10	47-12-382-10
			4.8 (.189)	6.4 (.250)	3.2 (.125)		5 (.197)	5.8 (.23)	10.8 (.43)	47-13-302-14	47-13-322-14	47-13-342-10	47-13-362-10	47-13-382-10
Floating Style	16 (.63)	11.2 (.44)	~	0.8 (.031)	2.3 (.09)	2.3 (.09)	3.2 (.127)	2.3 (.09)	7.1 (.28)	47-10-310-14	47-10-330-14	47-10-350-10	47-10-370-10	47-10-390-10
			0.8 (.031)	1.6 (.063)	3.1 (.121)		4 (.158)	3.8 (.15)	8.9 (.35)	47-11-310-14	47-11-330-14	47-11-350-10	47-11-370-10	47-11-390-10
			1.6 (.063)	2.4 (.094)	3.9 (.153)		4 (.158)	5.6 (.22)	10.4 (.41)	47-12-310-14	47-12-330-14	47-12-350-10	47-12-370-10	47-12-390-10
			2.3 (.09)	3.1 (.121)	3.9 (.153)		4.8 (.190)	2.3 (.09)	7.1 (.28)	47-10-311-14	47-10-331-14	47-10-351-10	47-10-371-10	47-10-391-10
			3.1 (.121)	3.9 (.153)	3.9 (.153)		4.8 (.190)	3.8 (.15)	8.9 (.35)	47-11-311-14	47-11-331-14	47-11-351-10	47-11-371-10	47-11-391-10
			3.9 (.153)	3.9 (.153)	3.9 (.153)		4.8 (.190)	5.6 (.22)	10.4 (.41)	47-12-311-14	47-12-331-14	47-12-351-10	47-12-371-10	47-12-391-10
			3.9 (.153)	3.9 (.153)	3.9 (.153)		4.8 (.190)	3.8 (.15)	8.9 (.35)	47-10-312-14	47-10-332-14	47-10-352-10	47-10-372-10	47-10-392-10
			3.9 (.153)	3.9 (.153)	3.9 (.153)		4.8 (.190)	5.6 (.22)	10.4 (.41)	47-11-312-14	47-11-332-14	47-11-352-10	47-11-372-10	47-11-392-10
Snap-In Style	15.7 (.62)	11.2 (.44)	0.5 (.020)	1 (.039)	2 (.079)	0.9 (.03)	1.1 (.044)	1 (.04)	3 (.22)	47-60-310-14	47-60-330-14	47-60-350-10	47-60-370-10	47-60-390-10
			1 (.039)	1.6 (.063)	2.6 (.103)		1.1 (.044)	2.8 (.11)	7.1 (.28)	47-61-310-14	47-61-330-14	47-61-350-10	47-61-370-10	47-61-390-10
			1.6 (.063)	2.5 (.098)	3.5 (.138)		1.1 (.044)	4.3 (.17)	8.9 (.35)	47-62-310-14	47-62-330-14	47-62-350-10	47-62-370-10	47-62-390-10
			1.6 (.063)	2.5 (.098)	3.5 (.138)		1.1 (.044)	5.8 (.23)	10.4 (.41)	47-63-310-14	47-63-330-14	47-63-350-10	47-63-370-10	47-63-390-10
			1.6 (.063)	2.5 (.098)	3.5 (.138)		1.7 (.068)	2.8 (.11)	7.1 (.28)	47-60-312-14	47-60-332-14	47-60-352-10	47-60-372-10	47-60-392-10
			1.6 (.063)	2.5 (.098)	3.5 (.138)		1.7 (.068)	4.3 (.17)	8.9 (.35)	47-61-312-14	47-61-332-14	47-61-352-10	47-61-372-10	47-61-392-10
			1.6 (.063)	2.5 (.098)	3.5 (.138)		1.7 (.068)	5.8 (.23)	10.4 (.41)	47-62-312-14	47-62-332-14	47-62-352-10	47-62-372-10	47-62-392-10
			1.6 (.063)	2.5 (.098)	3.5 (.138)		1.7 (.068)	2.8 (.11)	7.1 (.28)	47-60-314-14	47-60-334-14	47-60-354-10	47-60-374-10	47-60-394-10
			1.6 (.063)	2.5 (.098)	3.5 (.138)		1.7 (.068)	4.3 (.17)	8.9 (.35)	47-61-314-14	47-61-334-14	47-61-354-10	47-61-374-10	47-61-394-10
			1.6 (.063)	2.5 (.098)	3.5 (.138)		1.7 (.068)	5.8 (.23)	10.4 (.41)	47-62-314-14	47-62-334-14	47-62-354-10	47-62-374-10	47-62-394-10
			1.6 (.063)	2.5 (.098)	3.5 (.138)		1.7 (.068)	5.8 (.23)	10.4 (.41)	47-62-314-14	47-62-334-14	47-62-354-10	47-62-374-10	47-62-394-10

Part numbers in shaded rows (shown in table) are fully retracting in minimum panel thickness



To add a black powder coated finish, change the part number from the table as shown:

- Change 1 to 5: 47-80-102-14
47-80-102-54
- Change 2 to 6: 47-80-102-24
47-80-102-64



For a smooth knob, change the part number from the table as shown:

- Change 0 to 1: 47-90-161-20
47-90-161-21
- Change 4 to 5: 47-90-101-24
47-90-101-25

Part Number

See table

All screw part numbers shown in table are for a natural knob finish and a knurled knob

For black finish and smooth knob options, minimums may apply



47 Captive Screws

Styled knob series · 10-32 thread size

- Designed for hand operation
- Spring ejected
- Wide variety of sizes, recesses and installation options

Material and Finish

Ferrule:

Press-in: Hardened carbon steel, zinc plate, chromate, plus sealer

Flare-in, floating and snap-in:

Aluminum, natural

Knob: Aluminum, natural or black powder coated

Screw: Hardened carbon steel, zinc plated, chromate, plus sealer

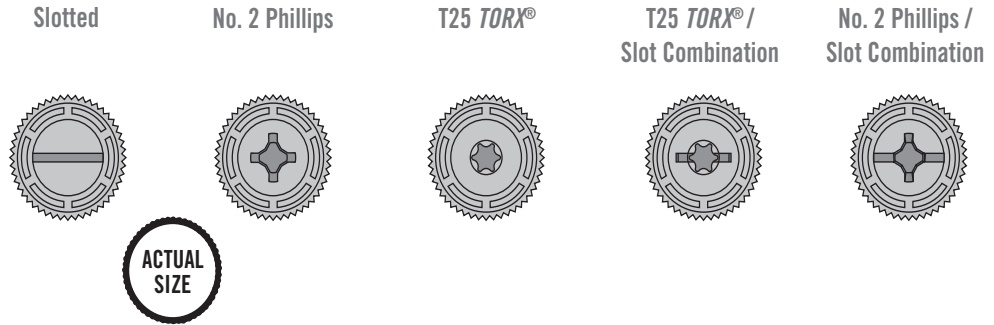
Installation Notes

See pages 468-469, 543

Notes

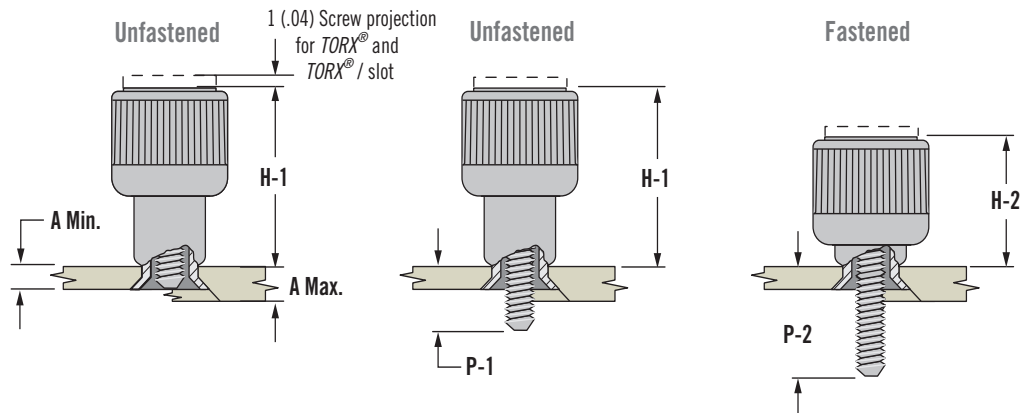
To ensure you receive **SOUTHCO**® quality parts, look for the segmented circle

Recess Styles



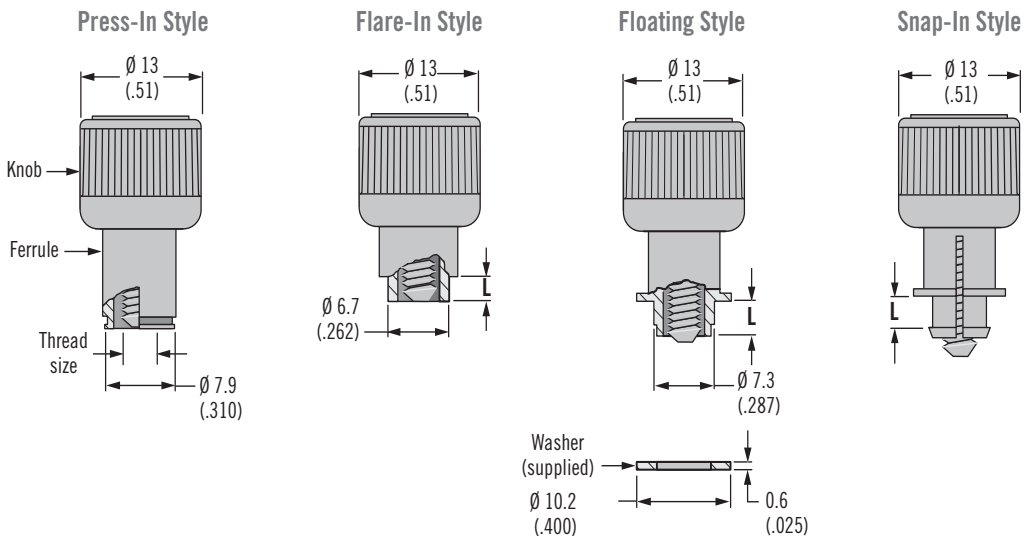
Knob Height and Screw Projection

(Flare-in style shown)



Dimensions in millimeters (inch) unless otherwise stated

Installation Styles



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Dimensions in millimeters (inch) unless otherwise stated

Installation Style	Knob Height		Outer Panel Dimensions		B	Total Float	Flange Length L	Screw Projection Beyond Outer Surface of Panel		Part Number									
	H-1	H-2	A Min.	A Max.				P-1	P-2	Slotted Recess	Phillips Recess	TORX® Recess	TORX® / Slot Combination	Phillips / Slot Combination					
Press-In Style	16.2 (.64)	11.2 (.44)	0.9 (.036)	~	~	0.6 (.02)	~	0.6 (.02)	5.5 (.22)	47-60-501-24	47-60-521-24	47-60-541-20	47-60-561-20	47-60-581-20					
								2.2 (.09)	7.2 (.28)	47-61-501-24	47-61-521-24	47-61-541-20	47-61-561-20	47-61-581-20					
								3.8 (.15)	8.9 (.35)	47-62-501-24	47-62-521-24	47-62-541-20	47-62-561-20	47-62-581-20					
								5.4 (.21)	10.3 (.41)	47-63-501-24	47-63-521-24	47-63-541-20	47-63-561-20	47-63-581-20					
Flare-In Style	15.6 (.61)	10.5 (.41)	1.5 (.058)	3.2 (.125)	0.4 (.015)	0.6 (.02)	1.8 (.070)	1.2 (.05)	6.3 (.25)	47-10-502-14	47-10-522-14	47-10-542-10	47-10-562-10	47-10-582-10					
			3.2 (.125)	4.7 (.187)	1.6 (.062)			3.4 (.135)	2.8 (.11)	7.9 (.31)	47-10-504-14	47-10-524-14	47-10-544-10	47-10-564-10	47-10-584-10				
			4.8 (.189)	6.4 (.250)	3.2 (.125)			5 (.197)	4.4 (.17)	9.5 (.37)	47-10-506-14	47-10-526-14	47-10-546-10	47-10-566-10	47-10-586-10				
			6.3 (.251)	7.9 (.312)	4.8 (.187)			6.6 (.260)	6 (.24)	11.1 (.44)	47-10-508-14	47-10-528-14	47-10-548-10	47-10-568-10	47-10-588-10				
			1.5 (.058)	3.2 (.125)	0.4 (.015)			1.8 (.070)	2.8 (.11)	7.9 (.31)	47-11-502-14	47-11-522-14	47-11-542-10	47-11-562-10	47-11-582-10				
			3.2 (.125)	4.8 (.187)	1.6 (.062)				4.4 (.17)	9.5 (.37)	47-12-502-14	47-12-522-14	47-12-542-10	47-12-562-10	47-12-582-10				
			4.8 (.189)	6.4 (.250)	3.2 (.125)				6 (.24)	11.1 (.44)	47-13-502-14	47-13-522-14	47-13-542-10	47-13-562-10	47-13-582-10				
			6.3 (.251)	7.9 (.312)	4.8 (.187)				4.4 (.17)	9.5 (.37)	47-11-504-14	47-11-524-14	47-11-544-10	47-11-564-10	47-11-584-10				
			1.5 (.058)	3.2 (.125)	0.4 (.015)				6 (.24)	11.1 (.44)	47-12-504-14	47-12-524-14	47-12-544-10	47-12-564-10	47-12-584-10				
			3.2 (.125)	4.8 (.187)	1.6 (.062)				5 (.197)	6 (.24)	11.1 (.44)	47-11-506-14	47-11-526-14	47-11-546-10	47-11-566-10	47-11-586-10			
			4.8 (.189)	6.4 (.250)	3.2 (.125)														
			Floating Style	16 (.63)	11.2 (.44)				~	0.8 (.031)	2.3 (.090)	2.3 (.09)	3.2 (.127)	2.3 (.09)	7.1 (.28)	47-10-510-14	47-10-530-14	47-10-550-10	47-10-570-10
0.8 (.031)	1.6 (.063)	3.1 (.122)				4 (.16)	8.8 (.35)		47-11-510-14	47-11-530-14	47-11-550-10			47-11-570-10	47-11-590-10				
						5.6 (.22)	10.4 (.41)		47-12-510-14	47-12-530-14	47-12-550-10			47-12-570-10	47-12-590-10				
						2.4 (.09)	7.1 (.28)		47-10-511-14	47-10-531-14	47-10-551-10			47-10-571-10	47-10-591-10				
						4 (.16)	8.8 (.35)		47-11-511-14	47-11-531-14	47-11-551-10			47-11-571-10	47-11-591-10				
1.6 (.063)	2.4 (.094)	3.9 (.153)				5.6 (.22)	10.4 (.41)	47-12-511-14	47-12-531-14	47-12-551-10	47-12-571-10			47-12-591-10					
						4 (.16)	8.8 (.35)	47-10-512-14	47-10-532-14	47-10-552-10	47-10-572-10			47-10-592-10					
						5.6 (.22)	10.4 (.41)	47-11-512-14	47-11-532-14	47-11-552-10	47-11-572-10			47-11-592-10					
						4 (.16)	8.8 (.35)	47-10-512-14	47-10-532-14	47-10-552-10	47-10-572-10			47-10-592-10					
Snap-In Style	15.7 (.62)	11.2 (.44)				0.5 (.020)	1 (.039)	2 (.079)	.9 (.04)	1.1 (.044)	1.2 (.04)			5.6 (.22)	47-60-510-14	47-60-530-14	47-60-550-10	47-60-570-10	47-60-590-10
											2.8 (.11)			7.1 (.28)	47-61-510-14	47-61-530-14	47-61-550-10	47-61-570-10	47-61-590-10
											4.3 (.17)			8.8 (.35)	47-63-510-14	47-62-530-14	47-62-550-10	47-62-570-10	47-62-590-10
			5.9 (.23)	10.4 (.41)	47-63-510-14						47-63-530-14	47-63-550-10	47-63-570-10	47-63-590-10					
			1 (.039)	1.6 (.063)	2.6 (.103)	2.8 (.11)	7.1 (.28)	47-60-512-14			47-60-532-14	47-60-552-10	47-60-572-10	47-60-592-10					
						4.3 (.17)	8.8 (.35)	47-61-512-14			47-61-532-14	47-61-552-10	47-61-572-10	47-61-592-10					
						5.9 (.23)	10.4 (.41)	47-62-512-14			47-62-532-14	47-62-552-10	47-62-572-10	47-62-592-10					
						2.8 (.11)	7.1 (.28)	47-60-514-14			47-60-534-14	47-60-554-10	47-60-574-10	47-60-594-10					
			1.6 (.063)	2.5 (.098)	3.5 (.138)	4.3 (.17)	8.8 (.35)	47-61-514-14			47-61-534-14	47-61-554-10	47-61-574-10	47-61-594-10					
						5.9 (.23)	10.4 (.41)	47-62-514-14			47-62-534-14	47-62-554-10	47-62-574-10	47-62-594-10					

Part numbers in shaded rows (shown in table) are fully retracting in minimum panel thickness



To add a black powder coated finish, change the part number from the table as shown:

- Change 1 to 5: 47-80-102-14
47-80-102-54
- Change 2 to 6: 47-80-102-24
47-80-102-64



For a smooth knob, change the part number from the table as shown:

- Change 0 to 1: 47-90-161-20
47-90-161-21
- Change 4 to 5: 47-90-101-24
47-90-101-25

Part Number

See table

All screw part numbers shown in table are for a natural knob finish and a knurled knob
For black finish and smooth knob options, minimums may apply



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Angic Global Solutions

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47 Captive Screws

Styled knob series · 1/4-20 thread size

- Designed for hand operation
- Spring ejected
- Wide variety of sizes, recesses and installation options

Material and Finish

Ferrule:

Press-in: Hardened carbon steel, zinc plate, chromate, plus sealer

Flare-in and Floating: Aluminum, natural

Knob: Aluminum, natural or black powder coated

Screw: Hardened carbon steel, zinc plated, chromate, plus sealer

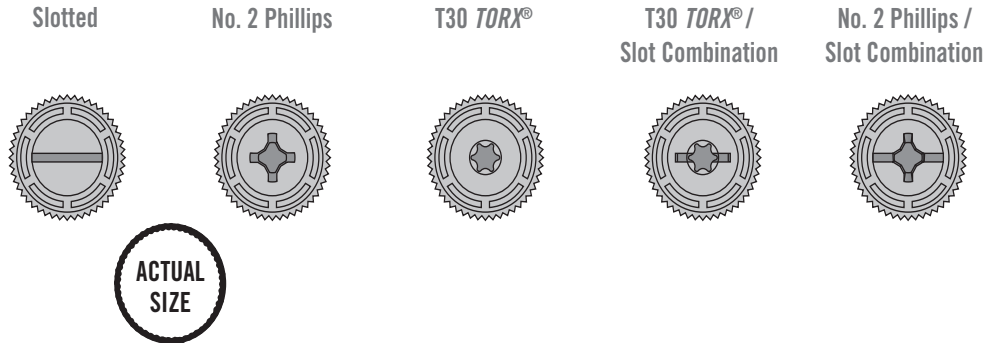
Installation Notes

See pages 468-469, 543

Notes

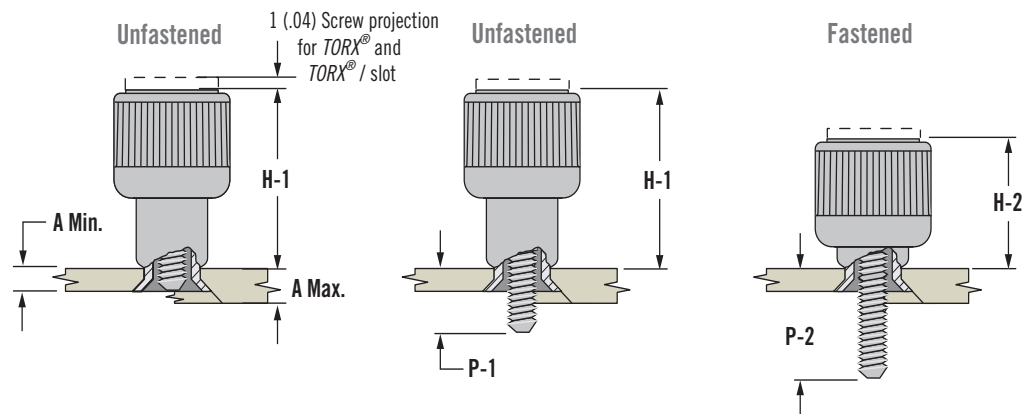
To ensure you receive **SOUTHCO** quality parts, look for the segmented circle

RecessStyles



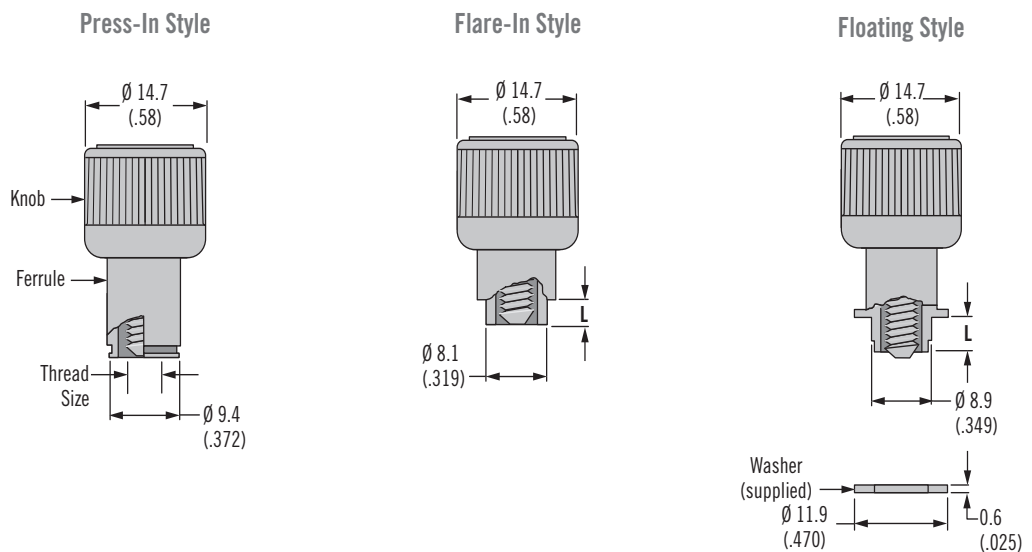
Knob Height and Screw Projection

(Flare-in style shown)



Dimensions in millimeters (inch) unless otherwise stated

Installation Styles



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Dimensions in millimeters (inch) unless otherwise stated

Installation Style	Knob Height		Outer Panel Dimensions		B	Total Float	Flange Length L	Screw Projection Beyond Outer Surface of Panel		Part Number								
	H-1	H-2	A Min.	A Max.				P-1	P-2	Slotted Recess	Phillips Recess	TORX® Recess	TORX® / Slot Combination	Phillips / Slot Combination				
Press-In Style	20 (.79)	13.4 (.53)	0.9 (.036)	~	~	0.8 (.03)	~	0.5 (.02)	7.1 (.28)	47-60-601-24	47-60-621-24	47-60-641-20	47-60-661-20	47-60-681-20				
								2.1 (.08)	8.7 (.34)	47-61-601-24	47-61-621-24	47-61-641-20	47-61-661-20	47-61-681-20				
								3.7 (.15)	10.3 (.41)	47-62-601-24	47-62-621-24	47-62-641-20	47-62-661-20	47-62-681-20				
								5.3 (.21)	11.9 (.47)	47-63-601-24	47-63-621-24	47-63-641-20	47-63-661-20	47-63-681-20				
Flare-In Style	19.3 (.76)	12.7 (.50)	1.5 (.058)	3.2 (.125)	0.4 (.015)	0.9 (.03)	1.8 (.070)	1.2 (.05)	7.8 (.31)	47-10-602-14	47-10-622-14	47-10-642-10	47-10-662-10	47-10-682-10				
			3.2 (.126)	4.8 (.189)	1.6 (.062)		3.4 (.135)	2.8 (.11)	9.4 (.37)	47-10-604-14	47-10-624-14	47-10-644-10	47-10-664-10	47-10-684-10				
			4.8 (.188)	6.4 (.250)	3.2 (.125)		5 (.197)	4.4 (.17)	11 (.43)	47-10-606-14	47-10-626-14	47-10-646-10	47-10-666-10	47-10-686-10				
			6.4 (.251)	7.9 (.312)	4.8 (.189)		6.6 (.260)	6 (.24)	12.6 (.50)	47-10-608-14	47-10-628-14	47-10-648-10	47-10-668-10	47-10-688-10				
			1.5 (.058)	3.2 (.125)	0.4 (.015)		1.8 (.070)	2.8 (.11)	9.4 (.37)	47-11-602-14	47-11-622-14	47-11-642-10	47-11-662-10	47-11-682-10				
			4.4 (.17)	11 (.43)	47-12-602-14		47-12-622-14	47-12-642-10	47-12-662-10	47-12-682-10								
			6 (.24)	12.6 (.50)	47-13-602-14		47-13-622-14	47-13-642-10	47-13-662-10	47-13-682-10								
			3.2 (.126)	4.8 (.189)	1.6 (.062)		3.4 (.135)	4.4 (.17)	11 (.43)	47-11-604-14	47-11-624-14	47-11-644-10	47-11-664-10	47-11-684-10				
			6 (.24)	12.6 (.50)	47-12-604-14		47-12-624-14	47-12-644-10	47-12-664-10	47-12-684-10								
			4.8 (.189)	6.4 (.250)	3.2 (.125)		5 (.197)	6 (.24)	12.6 (.50)	47-11-606-14	47-11-626-14	47-11-646-10	47-11-666-10	47-11-686-10				
			Floating Style	20 (.79)	13.3 (.52)		~	0.8 (.031)	2.3 (.090)	2.3 (.09)	3.2 (.127)	2.1 (.08)	8.8 (.35)	47-10-610-14	47-10-630-14	47-10-650-10	47-10-670-10	47-10-690-10
											3.7 (.15)	10.4 (.41)	47-11-610-14	47-11-630-14	47-11-650-10	47-11-670-10	47-11-690-10	
5.3 (.21)	12 (.47)	47-12-610-14				47-12-630-14					47-12-650-10	47-12-670-10	47-12-690-10					
2.1 (.08)	8.8 (.35)	47-10-611-14				47-10-631-14	47-10-651-10	47-10-671-10	47-10-691-10									
3.7 (.15)	10.4 (.41)	47-11-611-14				47-11-631-14	47-11-651-10	47-11-671-10	47-11-691-10									
5.3 (.21)	12 (.47)	47-12-611-14				47-12-631-14	47-12-651-10	47-12-671-10	47-12-691-10									
4.8 (.190)	3.7 (.15)	10.4 (.41)				47-10-612-14	47-10-632-14	47-10-652-10	47-10-672-10		47-10-692-10							
5.3 (.21)	12 (.47)	47-11-610-14				47-11-632-14	47-11-652-10	47-11-672-10	47-11-692-10									

Part numbers in shaded rows (shown in table) are fully retracting in minimum panel thickness



To add a black powder coated finish, change the part number from the table as shown:

- Change 1 to 5: 47-80-102-14
47-80-102-54
- Change 2 to 6: 47-80-102-24
47-80-102-64



For a smooth knob, change the part number from the table as shown:

- Change 0 to 1: 47-90-161-20
47-90-161-21
- Change 4 to 5: 47-90-101-24
47-90-101-25

Part Number

See table

All screw part numbers shown in table are for a natural knob finish and a knurled knob
For black finish and smooth knob options, minimums may apply



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4C Captive Screws

Prism series · M3, M4 and M5 thread size

Dimensions in millimeters (inch) unless otherwise stated

- Designate access points with color
- Color match captive screws to your industrial design
- High strength screw for use with high torque drivers
- Knurled and smooth knobs available

Material and Finish

Knob: PC/ABS

Screw: Hardened carbon steel, zinc plate, chromate, plus sealer

Spring: 300 series stainless steel, passivated

Standoff:

Press-in: Carbon steel, zinc plate, chromate, plus sealer

PCB: Stainless steel

Flare-in and Floating:

Aluminum, natural

Performance Details

Flammability Rating: UL94-V0

Installation Notes

See pages 468-469, 543

Notes

Press-in: Maximum panel hardness 170 HV (85 HRB)

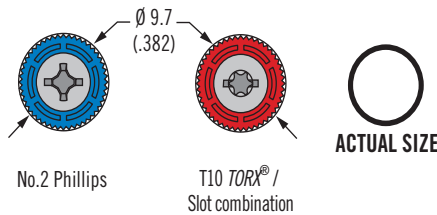
See page 480 for details on ATCA compliant captive screws.



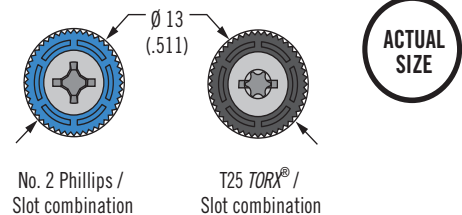
To ensure you receive **SOUTHCO**® quality parts, look for the segmented circle.

Recess Styles

M3

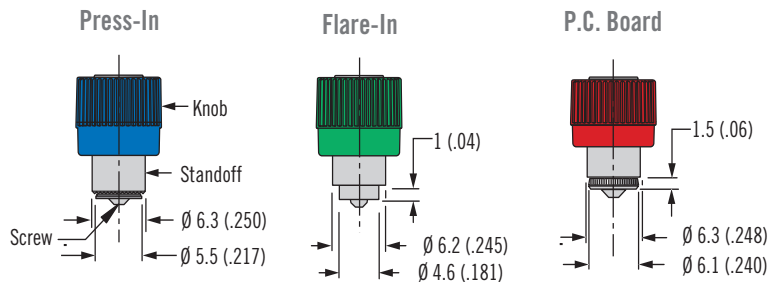


M4 and M5

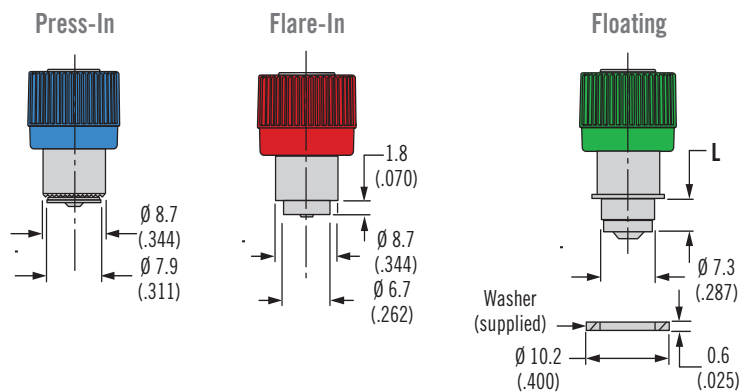


Installation Styles

M3

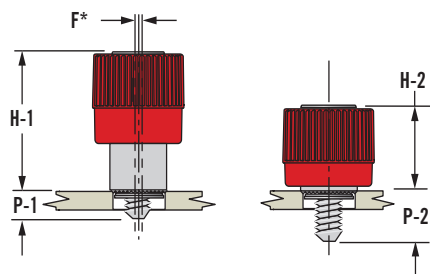


M4 and M5



Knob Height and Screw Projection

(Press-in style shown)



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Dimensions in millimeters (inch) unless otherwise stated

M3 Thread Size

Installation Style	Outer Panel Dimensions		B	Part Number		Screw Projection Beyond Outer Surface of Panel		Knob Height†		Total Float	Panel Preparation	
	A Min.	A Max.		Phillips Recess	TORX® / Slot Combination	P-1	P-2	H-1	H-2		F*	∅ D
Press-In Style	0.9 (.036)	~	~	4C-PH-M3-1P0-K000	4C-TS-M3-1P0-K000	0.8 (.03)	3.7 (.15)	11.5 (.45)	8.6 (.34)	0.7 (.03)	5.6 ^{+0.04} _{-0.04}	3.2 ^{+0.2} _{-0.1}
				4C-PH-M3-2P0-K000	4C-TS-M3-2P0-K000	2.5 (.10)	5.4 (.21)				(.219 ^{+0.03} ₋₀)	(.125 ^{+0.08} _{-0.04})
P.C. Board Style	1.6 (.063)	~	~	4C-PH-M3-1B0-K000	4C-TS-M3-1B0-K000	1.5 (.06)	3.8 (.15)	10.9 (.43)	8.5 (.33)	0.7 (.03)	5.6 ^{+0.1} _{-0.05}	3.2 ^{+0.2} _{-0.1}
Flare-In Style	0.8 (.031)	1.5 (.058)	0.4 (.016)	4C-PH-M3-1F1-K000	4C-TS-M3-1F1-K000	0.8 (.03)	3.7 (.15)	11.5 (.45)	8.6 (.34)	0.7 (.03)	4.8 ^{+0.08} _{-0.05}	3.0 ^{+0.2} _{-0.1}
				4C-PH-M3-2F1-K000	4C-TS-M3-2F1-K000	1.5 (.06)	5.4 (.21)				(.189 ^{+0.03} _{-0.02})	(.125 ^{+0.08} _{-0.04})

M4 Thread Size

Installation Style	Outer Panel Dimensions		B	L	Part Number		Screw Projection Beyond Outer Surface of Panel		Knob Height†		Total Float	Panel Preparation	
	A Min.	A Max.			Phillips / Slot Combination	TORX® / Slot Combination	P-1	P-2	H-1	H-2		F*	∅ D
Press-In Style	0.9 (.036)†	~	~	~	4C-PS-M4-1P0-K000	4C-TS-M4-1P0-K000	0.5 (.02)	5.6 (.22)	16.3 (.64)	11.3 (.45)	0.7 (.03)	8 ⁺⁰ _{-0.08}	4.4 ^{+0.2} _{-0.1}
					4C-PS-M4-2P0-K000	4C-TS-M4-2P0-K000	2 (.08)	7.1 (.28)				(.315 ⁺⁰ _{-0.03})	(.173 ^{+0.08} _{-0.04})
Flare-In Style	1.5 (.060)	3.2 (.058)	0.4 (.016)	~	4C-PS-M4-1F1-K000	4C-TS-M4-1F1-K000	0.6 (.02)	5.6 (.22)	16.3 (.64)	11.3 (.45)	0.6 (.02)	6.8 ^{+0.08} _{-0.04}	4.2 ^{+0.05} ₋₀
					4C-PS-M4-2F1-K000	4C-TS-M4-2F1-K000	2.1 (.08)	7.1 (.28)				(.266 ^{+0.05} ₋₀)	(.165 ^{+0.02} ₋₀)
Floating Style	0.8 (.031)	1.6 (.063)	3.1 (.122)	4 (.158)	4C-PS-M4-3T2-K000	4C-TS-M4-3T2-K000	3.8 (.15)	8.8 (.35)	16.2 (.64)	11.2 (.44)	2.3 (.09)	8.8 ^{+0.08} _{-0.03}	~
					4C-PS-M4-4T2-K000	4C-TS-M4-4T2-K000	5.4 (.21)	10.4 (.41)					
	1.6 (.063)	2.4 (.094)	3.9 (.153)	4.8 (.190)	4C-PS-M4-3T3-K000	4C-TS-M4-3T3-K000	3.8 (.15)	8.8 (.35)					
					4C-PS-M4-4T3-K000	4C-TS-M4-4T3-K000	5.4 (.21)	10.4 (.41)					

M5 Thread Size

Installation Style	Outer Panel Dimensions		B	L	Part Number		Screw Projection Beyond Outer Surface of Panel		Knob Height†		Total Float	Panel Preparation	
	A Min.	A Max.			Phillips / Slot Combination	TORX® / Slot Combination	P-1	P-2	H-1	H-2		F*	∅ D
Press-In Style	0.9 (.036)†	~	~	~	4C-PS-M5-1P0-K000	4C-TS-M5-1P0-K000	0.4 (.2)	5.6 (.22)	16.4 (.65)	11.3 (.45)	0.8 (.03)	8 ⁺⁰ _{-0.08}	5.2 ^{+0.2} _{-0.1}
					4C-PS-M5-2P0-K000	4C-TS-M5-2P0-K000	2 (.08)	7.2 (.28)				(.315 ⁺⁰ _{-0.03})	(.205 ^{+0.08} _{-0.04})
Flare-In Style	1.5 (.06)	3.2 (.058)	0.4 (.016)	~	4C-PS-M5-1F1-K000	4C-TS-M5-1F1-K000	0.5 (.02)	5.6 (.22)	16.4 (.65)	11.3 (.45)	0.7 (.03)	6.8 ^{+0.08} _{-0.04}	4.9 ^{+0.05} ₋₀
					4C-PS-M5-2F1-K000	4C-TS-M5-2F1-K000	2.1 (.08)	7.2 (.28)				(.266 ^{+0.05} ₋₀)	(.191 ^{+0.02} ₋₀)
Floating Style	0.8 (.031)	1.6 (.063)	3.1 (.122)	4 (.158)	4C-PS-M5-3T2-K000	4C-TS-M5-3T2-K000	3.7 (.15)	8.9 (.35)	16.3 (.64)	11.2 (.44)	2.3 (.09)	8.8 ^{+0.08} _{-0.03}	~
					4C-PS-M5-4T2-K000	4C-TS-M5-4T2-K000	5.3 (.21)	10.5 (.41)				(.346 ^{+0.03} _{-0.01})	

(shown in table)



000
Black



008
Blue



013
Red



014
Green



Your Color
Contact Southco

Notes: *F indicates the maximum float in the unfastened position.
† For panels thinner than 0.9 (.036), contact Southco.

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Part Number

See table

To indicate color, change the last three digits of the part number. For knob style, K = knurled and N = smooth. For smooth knob change K to N. Example:
4C-PS-06-1P0-K000, black, knurled
4C-PS-06-1P0-N013, red, smooth



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4C Captive Screws

Prism series · 4-40, 6-32 and 10-32 thread size

Dimensions in millimeters (inch) unless otherwise stated

- Designate access points with color
- Color match captive screws to your industrial design
- High strength screw for use with high torque drivers
- Knurled and smooth knobs available

Material and Finish

Knob: PC/ABS

Screw: Hardened carbon steel, zinc plate, chromate, plus sealer

Spring: 300 series stainless steel, passivated

Standoff:

Press-in: Carbon steel, zinc plate, chromate, plus sealer

PCB: Stainless steel

Flare-in and Floating: Aluminum, natural

Performance Details

Flammability Rating: UL94-V0

Installation Notes

See pages 468-469, 543

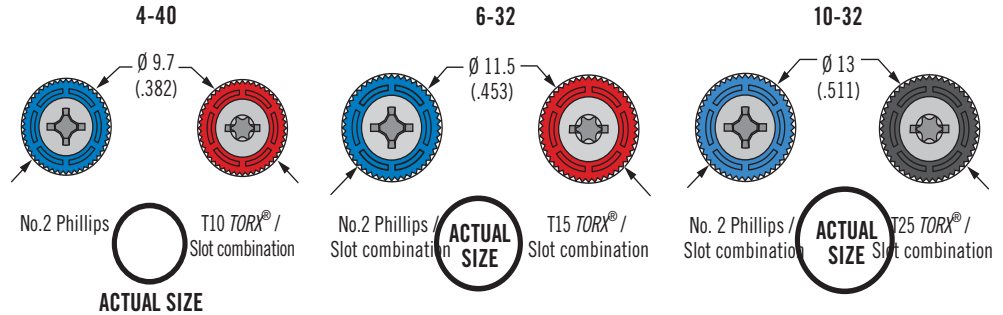
Notes

Press-in: Maximum panel hardness 170 HV (85 HRB)



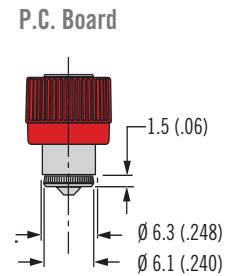
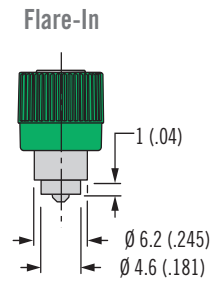
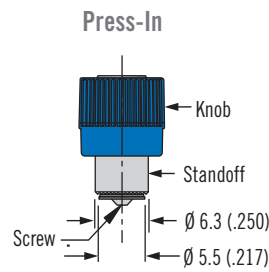
To ensure you receive **SOUTHCO**® quality parts, look for the segmented circle.

Recess Styles

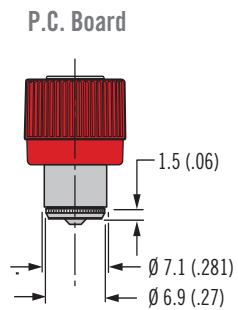
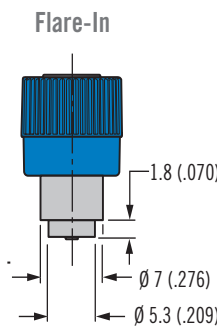
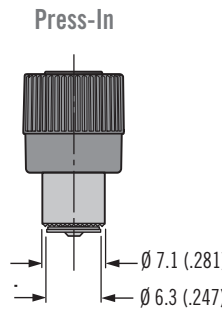


Installation Styles

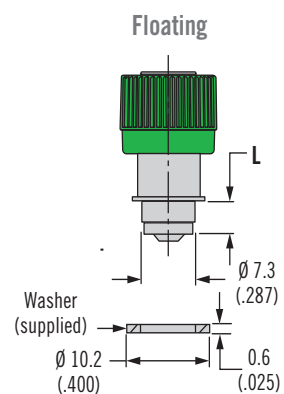
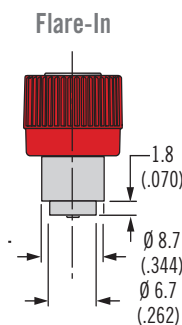
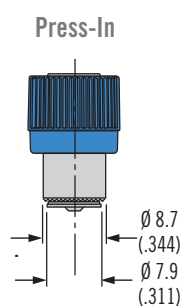
4-40



6-32

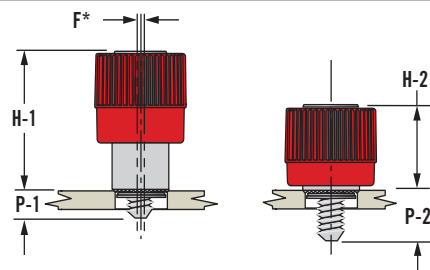


10-32



Knob Height and Screw Projection

(Press-in style shown)



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Dimensions in millimeters (inch) unless otherwise stated

4-40 Thread Size

Installation Style	Outer Panel Dimensions		B	Part Number		Screw Projection Beyond Outer Surface of Panel		Knob Height†		Total Float	Panel Preparation	
	A Min.	A Max.		Phillips Recess	TORX® / Slot Combination	P-1	P-2	H-1	H-2		F*	∅ D
Press-In Style	0.9† (.036)	~	~	4C-PH-04-1P0-K000	4C-TS-04-1P0-K000	0.8 (.03)	3.8 (.15)	11.5 (.45)	8.6 (.34)	0.7 (.03)	5.6 ^{+0.04} _{-0.04} (.219 ^{+0.003} ₋₀)	3.2 ^{+0.2} _{-0.1} (.125 ^{+0.008} _{-0.004})
				4C-PH-04-2P0-K000	4C-TS-04-2P0-K000	2.5 (.10)	5.3 (.21)					
P.C. Board Style	1.6 (.063)	~	~	4C-PH-04-1B0-K000	4C-TS-04-1B0-K000	1.5 (.06)	3.8 (.15)	10.9 (.43)	8.5 (.33)	0.7 (.03)	5.6 ^{+0.1} _{-0.05} (.220 ^{+0.004} _{-0.002})	3.2 ^{+0.2} _{-0.1} (.220 ^{+0.008} _{-0.004})
				4C-PH-04-2B0-K000	4C-TS-04-2B0-K000	3.3 (.13)	5.5 (.22)					
Flare-In Style	0.8 (.031)	1.5 (.059)	0.4 (.016)	4C-PH-04-1F1-K000	4C-TS-04-1F1-K000	0.8 (.03)	3.7 (.15)	11.5 (.45)	8.6 (.34)	0.7 (.03)	4.8 ^{+0.08} _{-0.05} (.187 ^{+0.005} _{-0.000})	3.0 ^{+0.2} _{-0.1} (.125 ^{+0.008} _{-0.004})
				4C-PH-04-2F1-K000	4C-TS-04-2F1-K000	2.5 (.10)	5.4 (.21)					

6-32 Thread Size

Installation Style	Outer Panel Dimensions		B	Part Number		Screw Projection Beyond Outer Surface of Panel		Knob Height†		Total Float	Panel Preparation	
	A Min.	A Max.		Phillips / Slot Combination	TORX® / Slot Combination	P-1	P-2	H-1	H-2		F*	∅ D
Press-In Style	0.9† (.036)	~	~	4C-PS-06-1P0-K000	4C-TS-06-1P0-K000	0.7 (.03)	5 (.20)	15.5 (.61)	11.3 (.44)	0.7 (.03)	6.4 ^{+0.03} _{-0.05} (.250 ^{+0.003} ₋₀)	3.7 ^{+0.2} _{-0.1} (.146 ^{+0.008} _{-0.004})
				4C-PS-06-2P0-K000	4C-TS-06-2P0-K000	2.3 (.09)	6.6 (.26)					
P.C. Board Style	1.5 (.06)	~	~	4C-PS-06-1B0-K000	4C-TS-06-1B0-K000	1.7 (.07)	6.2 (.25)	14.5 (.57)	10 (.39)	0.7 (.03)	6.4 ± 0.1 (.252 ± .004)	3.7 ^{+0.2} _{-0.1} (.146 ^{+0.008} _{-0.004})
Flare-In Style	1.5 (.059)	3.2 (.125)	0.4 (.016)	4C-PS-06-1F1-K000	4C-TS-06-1F1-K000	0.8 (.03)	5 (.20)	15.5 (.61)	11.3 (.44)	0.7 (.03)	5.4 ^{+0.1} ₋₀ (.213 ^{+0.005} _{-0.000})	3.7 ^{+0.2} _{-0.1} (.146 ^{+0.008} _{-0.004})
				4C-PS-06-2F1-K000	4C-TS-06-2F1-K000	2.3 (.09)	6.6 (.26)					

10-32 Thread Size

Installation Style	Outer Panel Dimensions		B	L	Part Number		Screw Projection Beyond Outer Surface of Panel		Knob Height†		Total Float	Panel Preparation	
	A Min.	A Max.			Phillips / Slot Combination	TORX® / Slot Combination	P-1	P-2	H-1	H-2		F*	∅ D
Press-In Style	0.9† (.036)	~	~	~	4C-PS-10-1P0-K000	4C-TS-10-1P0-K000	0.5 (.02)	5.6 (.22)	11.3 (.45)	11.3 (.45)	0.6 (.02)	8 ⁺⁰ _{-0.08} (.315 ⁺⁰ _{-0.003})	5.2 ^{+0.2} _{-0.1} (.205 ^{+0.008} _{-0.004})
					4C-PS-10-2P0-K000	4C-TS-10-2P0-K000	2 (.08)	7.1 (.28)					
Flare-In Style	1.5 (.058)	3.2 (.125)	0.4 (.016)	1.8 (.070)	4C-PS-10-1F1-K000	4C-TS-10-1F1-K000	0.6 (.02)	5.6 (.22)	16.3 (.64)	16.3 (.64)	0.6 (.02)	6.8 ^{+0.08} _{-0.04} (.266 ^{+0.005} ₋₀)	4.9 ^{+0.05} ₋₀ (.191 ^{+0.002} ₋₀)
					4C-PS-10-2F1-K000	4C-TS-10-2F1-K000	2.1 (.08)	7.1 (.28)					
Floating Style	0.8 (.031)	1.6 (.063)	3.1 (.122)	4	4C-PS-10-3T2-K000	4C-TS-10-3T2-K000	3.8 (.15)	8.8 (.35)	11.2 (.44)	11.2 (.44)	2.3 (.09)	8.8 ^{+0.08} _{-0.03} (.346 ^{+0.003} _{-0.001})	~
	1.6 (.063)	2.4 (.094)	3.9 (.153)	4.8 (.190)	4C-PS-10-4T2-K000	4C-TS-10-4T2-K000	5.4 (.21)	10.4 (.41)					
					4C-PS-10-3T3-K000	4C-TS-10-3T3-K000	3.8 (.15)	8.8 (.35)					
					4C-PS-10-4T3-K000	4C-TS-10-4T3-K000	5.4 (.21)	10.4 (.41)					

(shown in table)



000
Black



008
Blue



013
Red



014
Green



Your Color
Contact Southco

Notes: *F indicates the maximum float in the unfastened position.
† For panels thinner than 0.9 (.036), contact Southco.

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Part Number

See table

To indicate color, change the last three digits of the part number.

For knob style, K = knurled and N = smooth. For smooth knob change K to N. Example:

4C-PS-06-1P0-K000, black, knurled
4C-PS-06-1P0-N013, red, smooth



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47 Captive Screws

Restricted access series · M4 and M5 thread size

- Reduces risk of unauthorized access
- Meets UL-1950, IEC 950 and EN-60950
- Hand operation to secure with tool-only removal

Material and Finish

Ferrule:

Press-in: Hardened carbon steel, zinc plate, chromate, plus sealer

Flare-in and Floating: Aluminum, natural

Knob: Aluminum, natural or black organic coating

Screw: Hardened carbon steel, zinc plate, chromate, plus sealer

Installation Notes

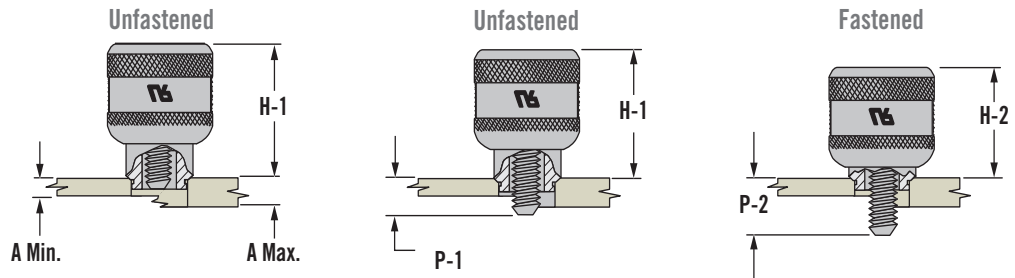
See pages 468-469, 543

Recess Styles



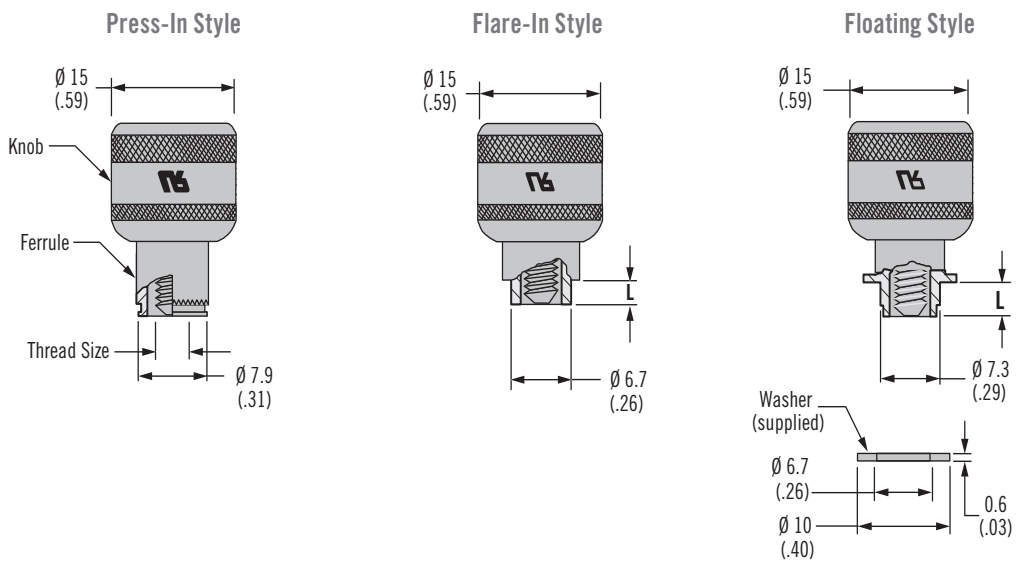
Knob Height and Screw Projection

(Press-in style shown)



Dimensions in millimeters (inch) unless otherwise stated

Installation Styles



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47 Captive Screws

Restricted access series · M4 and M5 thread size

- Reduces risk of unauthorized access
- Meets UL-1950, IEC 950 and EN-60950
- Hand operation to secure with tool-only removal

Material and Finish

Ferrule:

Press-in: Hardened carbon steel, zinc plate, chromate, plus sealer

Flare-in and Floating: Aluminum, natural

Knob: Aluminum, natural or black organic coating

Screw: Hardened carbon steel, zinc plate, chromate, plus sealer

Installation Notes

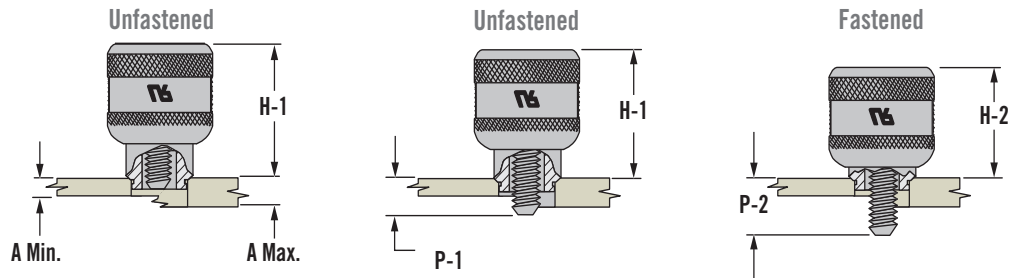
See pages 468-469, 543

Recess Styles



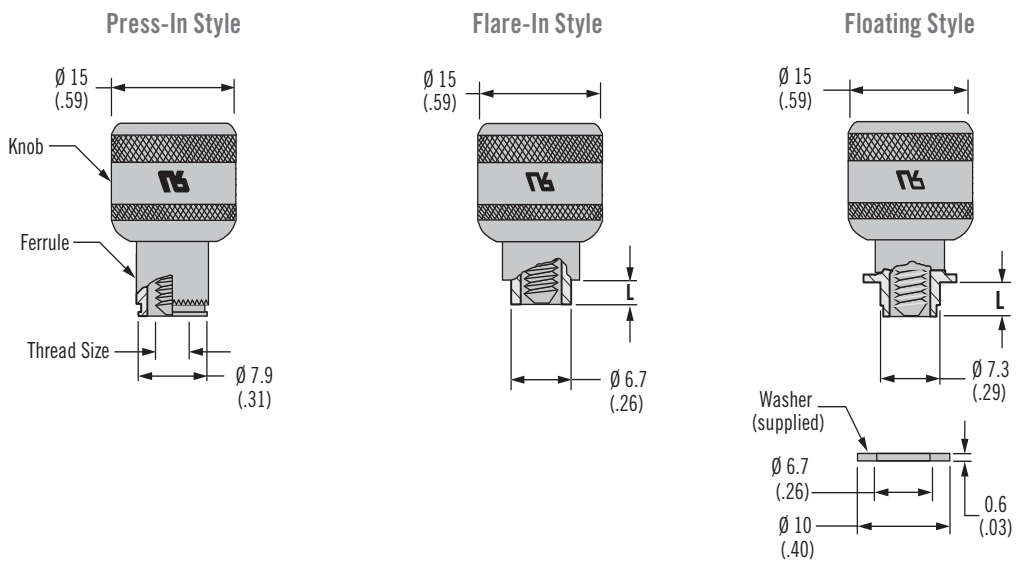
Knob Height and Screw Projection

(Press-in style shown)



Dimensions in millimeters (inch) unless otherwise stated

Installation Styles



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Dimensions in millimeters (inch) unless otherwise stated

M4 Thread Size

Installation Style	Knob Height		Outer Panel Dimensions		Dimension B*	Flange Length L	Screw Projection Beyond Outer Surface of Panel		Part Number		
	H-1	H-2	A Min.	A Max.			P-1	P-2	Slotted Recess	Phillips Recess	TORX® Recess
Press-In Style	18.5 (.73)	14 (.55)	0.9 (.036)	~	~	~	0.7 (.03)	5.6 (.22)	47-90-301-22	47-90-321-22	47-90-341-22
							2.3 (.09)	7.2 (.28)	47-91-301-22	47-91-321-22	47-91-341-22
							3.8 (.15)	8.7 (.34)	47-92-301-22	47-92-321-22	47-92-341-22
							5.4 (.21)	10.3 (.41)	47-93-301-22	47-93-321-22	47-93-341-22
Flare-In Style	18 (.70)	13 (.51)	1.5 (.058)	3.2 (.125)	0.6 (.023)	1.8 (.07)	1.4 (.06)	6.2 (.24)	47-80-302-22	47-80-322-22	47-80-342-22
			3.2 (.125)	4.8 (.188)	1.6 (.062)	3.4 (.14)	3.1 (.12)	7.9 (.31)	47-80-304-22	47-80-324-22	47-80-344-22
			1.5 (.058)	3.2 (.125)	0.6 (.023)	1.8 (.07)	3.1 (.12)	7.9 (.31)	47-81-302-22	47-81-322-22	47-81-342-22
			4.1 (.16)	8.9 (.35)	1.6 (.062)	3.4 (.14)	4.1 (.16)	8.9 (.35)	47-82-302-22	47-82-322-22	47-82-342-22
			6.1 (.24)	10.9 (.43)	1.6 (.062)	3.4 (.14)	6.1 (.24)	10.9 (.43)	47-83-302-22	47-83-322-22	47-83-342-22
			3.2 (.125)	4.8 (.188)	1.6 (.062)	3.4 (.14)	3.1 (.12)	7.9 (.31)	47-81-502-22	47-81-522-22	47-81-542-22
Floating Style	18 (.70)	14 (.55)	0.1 (.001)	0.8 (.031)	2.3 (.09)	3.2 (.13)	2.4 (.09)	7.2 (.28)	47-80-310-22	47-80-330-22	47-80-350-22
			3.4 (.13)	8.2 (.32)	2.3 (.09)	3.2 (.13)	3.4 (.13)	8.2 (.32)	47-81-310-22	47-81-330-22	47-81-350-22
			5.4 (.21)	10.2 (.40)	2.3 (.09)	3.2 (.13)	5.4 (.21)	10.2 (.40)	47-82-310-22	47-82-330-22	47-82-350-22
			0.8 (.031)	1.6 (.063)	3.1 (.12)	4 (.16)	2.4 (.09)	7.2 (.22)	47-80-311-22	47-80-331-22	47-80-351-22
			3.4 (.13)	8.2 (.32)	3.1 (.12)	4 (.16)	3.4 (.13)	8.2 (.32)	47-81-311-22	47-81-331-22	47-81-351-22
			5.4 (.21)	10.2 (.40)	3.1 (.12)	4 (.16)	5.4 (.21)	10.2 (.40)	47-82-311-22	47-82-331-22	47-82-351-22
			2.4 (.09)	7.2 (.28)	3.1 (.12)	4 (.16)	2.4 (.09)	7.2 (.28)	47-80-510-22	47-80-530-22	47-80-550-22
			3.4 (.13)	8.2 (.32)	3.1 (.12)	4 (.16)	3.4 (.13)	8.2 (.32)	47-81-510-22	47-81-530-22	47-81-550-22

M5 Thread Size

Press-In Style	18.5 (.73)	14 (.55)	0.9 (.036)	~	~	~	0.7 (.03)	5.6 (.22)	47-90-501-22	47-90-521-22	47-90-541-22
							2.3 (.09)	7.2 (.28)	47-91-501-22	47-91-521-22	47-91-541-22
							3.8 (.15)	8.7 (.34)	47-92-501-22	47-92-521-22	47-92-541-22
							5.4 (.21)	10.3 (.41)	47-93-501-22	47-93-521-22	47-93-541-22
Flare-In Style	18 (.70)	13 (.51)	1.5 (.058)	3.2 (.125)	0.6 (.023)	1.8 (.07)	1.4 (.06)	6.2 (.24)	47-80-502-22	47-80-522-22	47-80-542-22
			3.2 (.125)	4.8 (.188)	1.6 (.062)	3.4 (.14)	3.1 (.12)	7.9 (.31)	47-80-504-22	47-80-524-22	47-80-544-22
			1.5 (.058)	3.2 (.125)	0.6 (.023)	1.8 (.07)	3.1 (.12)	7.9 (.31)	47-81-502-22	47-81-522-22	47-81-542-22
			4.1 (.16)	8.9 (.35)	1.6 (.062)	3.4 (.14)	4.1 (.16)	8.9 (.35)	47-82-502-22	47-82-522-22	47-82-542-22
			6.1 (.24)	10.9 (.43)	1.6 (.062)	3.4 (.14)	6.1 (.24)	10.9 (.43)	47-83-502-22	47-83-522-22	47-83-542-22
			3.2 (.125)	4.8 (.188)	1.6 (.062)	3.4 (.14)	3.1 (.12)	7.9 (.31)	47-81-504-22	47-81-524-22	47-81-544-22
Floating Style	18 (.70)	14 (.55)	0.1 (.001)	0.8 (.031)	2.3 (.09)	3.2 (.13)	2.4 (.09)	7.2 (.28)	47-80-510-22	47-80-530-22	47-80-550-22
			3.4 (.13)	8.2 (.32)	2.3 (.09)	3.2 (.13)	3.4 (.13)	8.2 (.32)	47-81-510-22	47-81-530-22	47-81-550-22
			5.4 (.21)	10.2 (.40)	2.3 (.09)	3.2 (.13)	5.4 (.21)	10.2 (.40)	47-82-510-22	47-82-530-22	47-82-550-22
			0.8 (.031)	1.6 (.063)	3.1 (.12)	4 (.16)	2.4 (.09)	7.2 (.28)	47-80-511-22	47-80-531-22	47-80-551-22
			3.4 (.13)	8.2 (.32)	3.1 (.12)	4 (.16)	3.4 (.13)	8.2 (.32)	47-81-511-22	47-81-531-22	47-81-551-22
			5.4 (.21)	10.4 (.40)	3.1 (.12)	4 (.16)	5.4 (.21)	10.4 (.40)	47-82-511-22	47-82-531-22	47-82-551-22
			3.4 (.15)	8.2 (.35)	3.9 (.15)	4.8 (.19)	3.4 (.15)	8.2 (.35)	47-80-512-22	47-80-532-22	47-80-552-22
			5.4 (.21)	10.2 (.40)	3.9 (.15)	4.8 (.19)	5.4 (.21)	10.2 (.40)	47-81-512-22	47-81-532-22	47-81-552-22

Part numbers in shaded rows (shown in table) are fully retracting in minimum panel thickness



To add a black finish, change the part number from the table as shown:

Change 2 to 6: 47-80-102-22
47-80-102-62

Part Number

See table

All screw part numbers shown in table are for a natural finish

For black finish minimums may apply



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47 Captive Screws

Restricted access series · 6-32 and 10-32 thread size

- Reduces risk of unauthorized access
- Meets UL-1950, IEC 950 and EN-60950
- Hand operation to secure with tool-only removal

Material and Finish

Ferrule:

Press-in: Hardened carbon steel, zinc plate, chromate, plus sealer
 Flare-in and Floating: Aluminum, natural

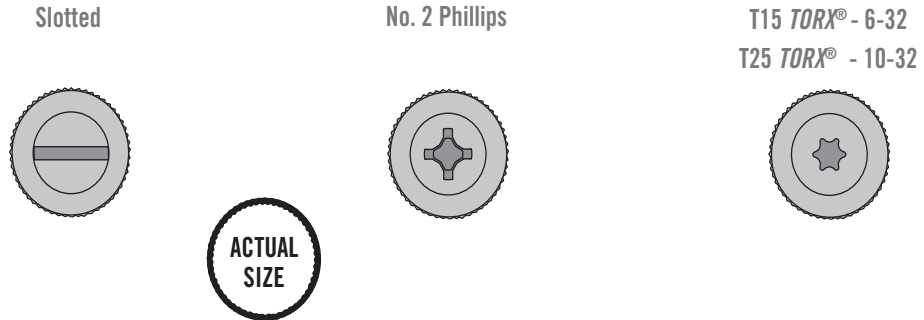
Knob: Aluminum, natural or black organic coating

Screw: Hardened carbon steel, zinc plate, chromate, plus sealer

Installation Notes

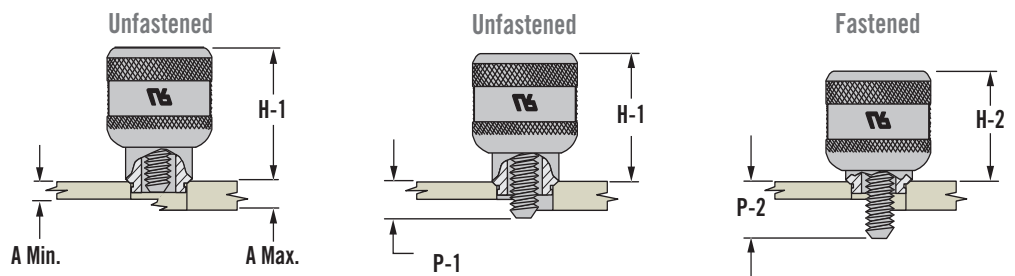
See pages 468-469, 543

Recess Styles



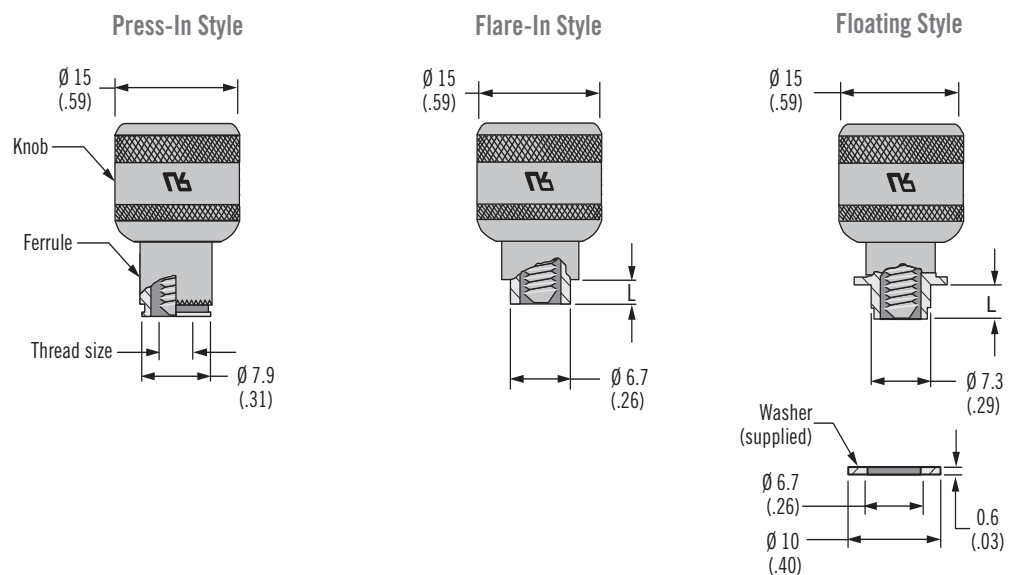
Knob Height and Screw Projection

(Press-in style shown)



Dimensions in millimeters (inch) unless otherwise stated

Installation Styles



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47 Captive Screws

Restricted access series · 6-32 and 10-32 thread size

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Material and Finish

Ferrule:

Press-in: Hardened carbon steel, zinc plate, chromate, plus sealer
 Flare-in and Floating: Aluminum, natural

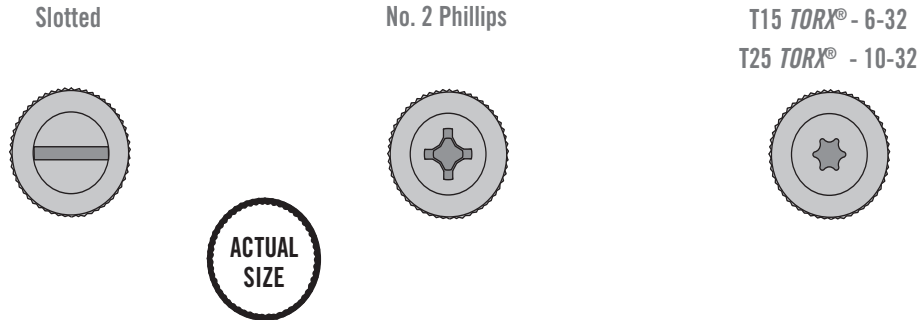
Knob: Aluminum, natural or black organic coating

Screw: Hardened carbon steel, zinc plate, chromate, plus sealer

Installation Notes

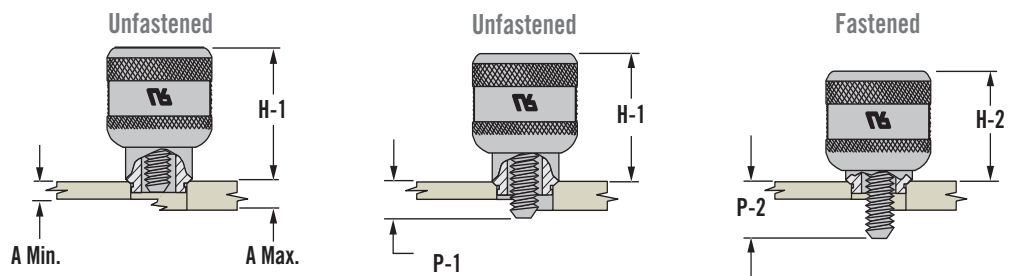
See pages 468-469, 543

Recess Styles



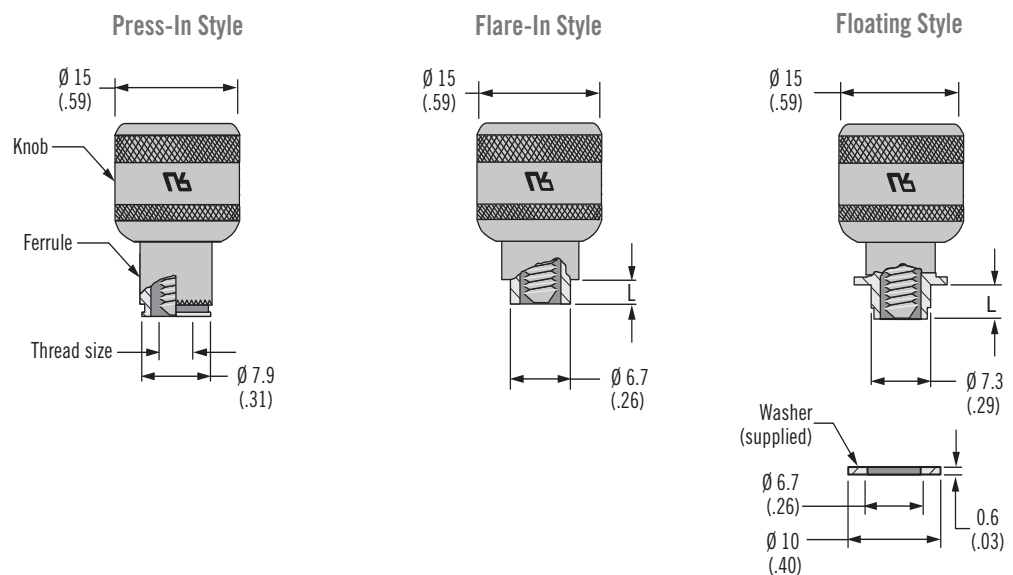
Knob Height and Screw Projection

(Press-in style shown)



Dimensions in millimeters (inch) unless otherwise stated

Installation Styles



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Dimensions in millimeters (inch) unless otherwise stated

6-32 Thread Size

Installation Style	Knob Height†		Outer Panel Dimensions		Dimension B*	Flange Length L	Screw Projection Beyond Outer Surface Of Panel		Part Number		
	H-1	H-2	A Min.	A Max.			P-1	P-2	Slotted Recess	Phillips Recess	TORX® Recess
Press-In Style	18.5 (.73)	14 (.54)	0.9 (.036)	~	~	~	0.5 (.02)	5.3 (.21)	47-60-201-22	47-60-221-22	47-60-241-22
							2.3 (.09)	6.9 (.27)	47-61-201-22	47-61-221-22	47-61-241-22
							3.8 (.15)	8.3 (.33)	47-62-201-22	47-62-221-22	47-62-241-22
							5.3 (.21)	10.1 (.41)	47-63-201-22	47-63-221-22	47-63-241-22
Flare-In Style	18 (.70)	13 (.51)	1.5 (.058)	3.2 (.125)	0.6 (.023)	1.8 (.07)	1.4 (.06)	6.2 (.24)	47-10-202-22	47-10-222-22	47-10-242-22
			3.2 (.125)	4.8 (.189)	1.6 (.062)	3.4 (.14)	3.1 (.12)	7.9 (.31)	47-10-204-22	47-10-224-22	47-10-244-22
			1.5 (.058)	3.2 (.125)	0.6 (.023)	1.8 (.07)	3.1 (.12)	7.9 (.31)	47-11-202-22	47-11-222-22	47-11-242-22
			4.1 (.16)	8.9 (.35)	47-12-202-22	47-12-222-22	47-12-242-22				
			6.1 (.24)	10.9 (.43)	47-13-202-22	47-13-222-22	47-13-242-22				
			4.1 (.16)	8.9 (.35)	47-11-204-22	47-11-224-22	47-11-244-22				
			6.1 (.24)	10.9 (.43)	47-12-204-22	47-12-224-22	47-12-244-22				
			3.2 (.125)	4.8 (.189)	1.6 (.062)	3.4 (.14)	4.1 (.16)	8.9 (.35)	47-11-204-22	47-11-224-22	47-11-244-22
6.1 (.24)	10.9 (.43)	47-12-204-22	47-12-224-22	47-12-244-22							
Floating Style	18 (.70)	14 (.54)	0.1 (.001)	0.8 (.031)	2.3 (.09)	3.2 (.13)	2.4 (.09)	7.2 (.28)	47-10-210-22	47-10-230-22	47-10-250-22
							3.4 (.13)	8.2 (.32)	47-11-210-22	47-11-230-22	47-11-250-22
							5.4 (.21)	10.2 (.40)	47-12-210-22	47-12-230-22	47-12-250-22
			0.8 (.031)	1.6 (.063)	3.1 (.12)	4 (.16)	2.4 (.09)	7.2 (.22)	47-10-211-22	47-10-231-22	47-10-251-22
							3.4 (.13)	8.2 (.32)	47-11-211-22	47-11-231-22	47-11-251-22
							5.4 (.21)	10.2 (.40)	47-12-211-22	47-12-231-22	47-12-251-22
			1.6 (.063)	2.4 (.094)	3.9 (.15)	4.8 (.19)	3.4 (.13)	8.2 (.32)	47-10-212-22	47-10-232-22	47-10-252-22
							5.4 (.21)	10.2 (.40)	47-11-212-22	47-11-232-22	47-11-252-22

10-32 Thread Size

Press-In Style	18.5 (.73)	14 (.54)	0.9 (.036)	~	~	~	0.7 (.03)	5.6 (.22)	47-60-501-22	47-60-521-22	47-60-541-22
							2.3 (.09)	7.2 (.28)	47-61-501-22	47-61-521-22	47-61-541-22
							3.8 (.15)	8.7 (.34)	47-62-501-22	47-62-521-22	47-62-541-22
							5.4 (.21)	10.3 (.41)	47-63-501-22	47-63-521-22	47-63-541-22
Flare-In Style	18 (.70)	13 (.51)	1.5 (.058)	3.2 (.125)	0.6 (.023)	1.8 (.07)	1.4 (.06)	6.2 (.24)	47-10-502-22	47-10-522-22	47-10-542-22
			3.2 (.125)	4.8 (.189)	1.6 (.062)	3.4 (.14)	3.1 (.12)	7.9 (.31)	47-10-504-22	47-10-524-22	47-10-544-22
			1.5 (.058)	3.2 (.125)	0.6 (.023)	1.8 (.07)	3.1 (.12)	7.9 (.31)	47-11-502-22	47-11-522-22	47-11-542-22
			4.1 (.16)	8.9 (.35)	47-12-502-22	47-12-522-22	47-12-542-22				
			6.1 (.24)	10.9 (.43)	47-13-502-22	47-13-522-22	47-13-542-22				
			4.1 (.16)	8.9 (.35)	47-11-504-22	47-11-524-22	47-11-544-22				
			6.1 (.24)	10.9 (.43)	47-12-504-22	47-12-524-22	47-12-544-22				
			3.2 (.125)	4.8 (.189)	1.6 (.062)	3.2 (.14)	4.1 (.16)	8.9 (.35)	47-11-504-22	47-11-524-22	47-11-544-22
6.1 (.24)	10.9 (.43)	47-12-504-22	47-12-524-22	47-12-544-22							
Floating Style	18 (.70)	14 (.54)	0.1 (.001)	0.8 (.031)	2.3 (.09)	3.2 (.13)	2.4 (.09)	7.2 (.28)	47-10-510-22	47-10-530-22	47-10-550-22
							3.4 (.13)	8.2 (.32)	47-11-510-22	47-11-530-22	47-11-550-22
							5.4 (.21)	10.2 (.40)	47-12-510-22	47-12-530-22	47-12-550-22
			0.8 (.031)	1.6 (.063)	3.1 (.12)	4 (.16)	2.4 (.09)	7.2 (.28)	47-10-511-22	47-10-531-22	47-10-551-22
							3.4 (.13)	8.2 (.32)	47-11-511-22	47-11-531-22	47-11-551-22
							5.4 (.21)	10.2 (.40)	47-12-511-22	47-12-531-22	47-12-551-22
			1.6 (.063)	2.4 (.094)	3.9 (.15)	4.8 (.19)	3.4 (.13)	8.2 (.32)	47-10-512-22	47-10-532-22	47-10-552-22
							5.4 (.21)	10.2 (.40)	47-11-512-22	47-11-532-22	47-11-552-22

Part numbers in shaded rows (shown in table) are fully retracting in minimum panel thickness



To add a black finish, change the part number from the table as shown:

Change 2 to 6: 47-80-102-22
47-80-102-62

Part Number

See table

All screw part numbers shown in table are for a natural finish

For black finish minimums may apply



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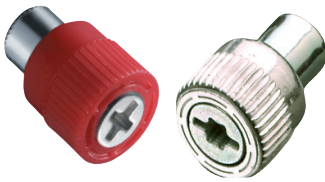


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47/4C Captive Screws

Panel preparation and installation

Installation Notes

1. Prepare panel as shown. Top edge of hole should be sharp
2. Press captive screw into panel until ferrule is installed as shown

Installation closer to the panel edge requires a fixture to constrain the panel edges

Notes

Recommended minimum distance from edge of panel to centerline of hole is $1.5 \times \phi D$

Performance Details

Pullout force: 360 N (80 lbf)
 Side load against unfastened knob: 200 N (45 lbf)

Installation Notes

1. Prepare panel as shown.
2. Use pilot lead-in to guide assembly into hole and press knurl into panel until ferrule shoulder contacts surface

Notes

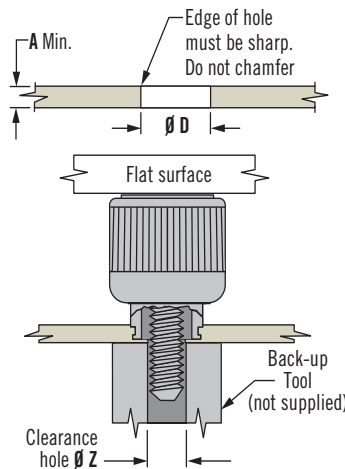
Strength data based on drilled holes in G-10 P.C. Board

Installation Notes

1. Prepare panel as shown.
2. Install tool in suitable press. Only LIGHT pressure will be required
3. Insert screw assembly into prepared hole in panel
4. Place work under press, center tool over screw thread and flare ferrule into counter-sink in panel. Use LIGHT pressure

Installation Force:
 1600 N (350 lbf) to 2500 N (550 lbf)
 Installation force depends on thread size

Press-In Style



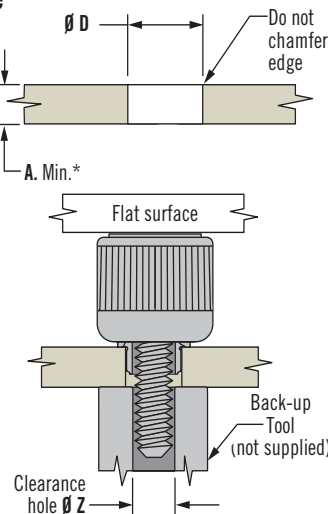
See page 543 for additional installation guidelines

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.

Dimensions in millimeters (inch) unless otherwise stated

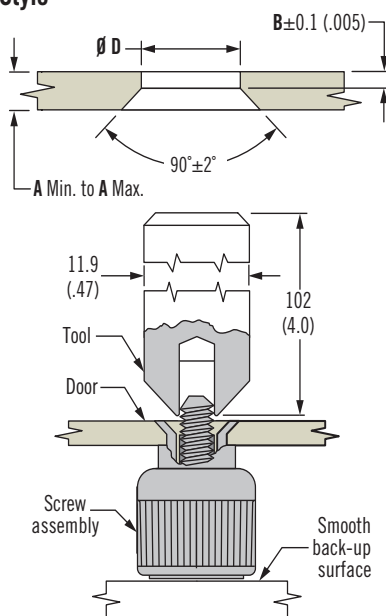
Thread Size	ϕD	Clearance Hole ϕZ $+0.2 \begin{smallmatrix} +.008 \\ -.1 \end{smallmatrix}$ $(\begin{smallmatrix} -.004 \end{smallmatrix})$
M3 or 4-40	$5.6 \begin{smallmatrix} +0.03 \\ -0.05 \end{smallmatrix}$ (.219 $\begin{smallmatrix} +0.003 \\ -0 \end{smallmatrix}$)	3.2 (.125)
M3.5 or 6-32	$6.4 \begin{smallmatrix} +0.03 \\ -0.05 \end{smallmatrix}$ (.250 $\begin{smallmatrix} +0.003 \\ -0 \end{smallmatrix}$)	3.7 (.146)
M4 or 8-32	$8 \begin{smallmatrix} +0 \\ -0.08 \end{smallmatrix}$ (.315 $\begin{smallmatrix} +0 \\ -0.003 \end{smallmatrix}$)	4.4 (.173)
M5 or 10-32	$8 \begin{smallmatrix} +0 \\ -0.08 \end{smallmatrix}$ (.315 $\begin{smallmatrix} +0 \\ -0.003 \end{smallmatrix}$)	5.2 (.205)
M6 or 1/4-20	$9.5 \begin{smallmatrix} +0.1 \\ -0 \end{smallmatrix}$ (.375 $\begin{smallmatrix} +0.003 \\ -0 \end{smallmatrix}$)	6.2 (.260)

P.C. Board Style



Thread Size	ϕD	Clearance Hole ϕZ $+0.2 \begin{smallmatrix} +.008 \\ -.1 \end{smallmatrix}$ $(\begin{smallmatrix} -.004 \end{smallmatrix})$
M3 or 4-40	$5.6 \begin{smallmatrix} +0.1 \\ -0.05 \end{smallmatrix}$ (.219 $\begin{smallmatrix} +0.004 \\ -.002 \end{smallmatrix}$)	3.2 (.125)
M3.5 or 6-32	6.4 ± 1 (.252 $\pm .004$)	3.7 (.146)

Flare-In Style



Thread Size	ϕD	Tool Part Number
M3 or 4-40	$4.8 \begin{smallmatrix} +0.08 \\ -0.05 \end{smallmatrix}$ (.187 $\begin{smallmatrix} +0.005 \\ -0 \end{smallmatrix}$)	47-104
M3.5 or 6-32	$5.4 \begin{smallmatrix} +0.1 \\ -0 \end{smallmatrix}$ (.213 $\begin{smallmatrix} +0.005 \\ -0 \end{smallmatrix}$)	47-106
M4 or 8-32	$6.8 \begin{smallmatrix} +0.08 \\ -0.04 \end{smallmatrix}$ (.266 $\begin{smallmatrix} +0.005 \\ -0 \end{smallmatrix}$)	47-108
10-32	$6.8 \begin{smallmatrix} +0.08 \\ -0.04 \end{smallmatrix}$ (.266 $\begin{smallmatrix} +0.005 \\ -0 \end{smallmatrix}$)	47-110
M5	$6.8 \begin{smallmatrix} +0.08 \\ -0.04 \end{smallmatrix}$ (.266 $\begin{smallmatrix} +0.005 \\ -0 \end{smallmatrix}$)	47-115
M6 or 1/4-20	$8.2 \begin{smallmatrix} +0.1 \\ -0 \end{smallmatrix}$ (.323 $\begin{smallmatrix} +0.005 \\ -0 \end{smallmatrix}$)	47-125



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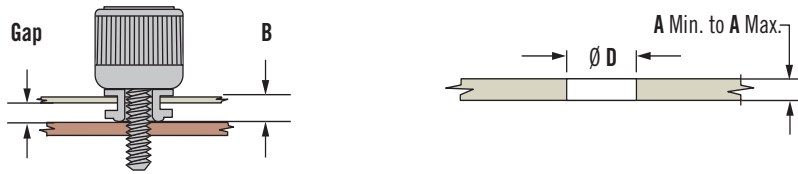
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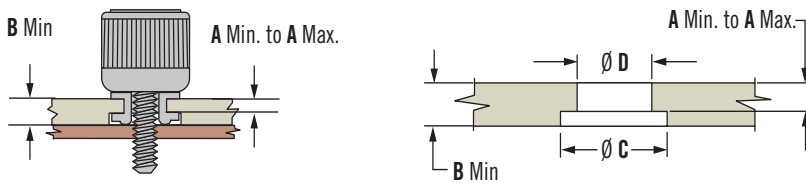


Floating Style

Panel preparation 1



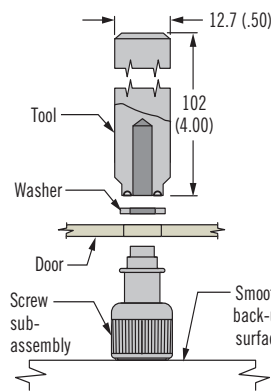
Panel preparation 2



Dimensions in millimeters (inch) unless otherwise stated

Thread Size	Tool Part Number
M3 or 4-40	47-04
M3.5 or 6-32	47-06
M4 or 8-32	47-08
M5	47-05
10-32	47-10
M6 or 1/4-20	47-25

Thread Size	Ø D <small>+0.08 (+.003) -0.03 (-.001)</small>	Counterbore Min. Ø C
M3 or 4-40	6.4 (.250)	9.4 (.375)
M3.5 or 6-32	7.2 (.283)	10.5 (.413)
M4 or 8-32	8.8 (.346)	12 (.469)
M5 or 10-32	8.8 (.346)	12 (.469)
M6 or 1/4-20	10.5 (.413)	13.5 (.531)



Installation Notes

Floating and Snap-in style:

Panel preparation 1:

Requires space between inner and outer panels.

Specify the fastener for panel thickness A to fall between the range A Minimum to A Maximum:

gap = B - A outer panel thickness

Panel preparation 2:

Counter bore the panel

(B = Minimum panel thickness) to a thickness (A) between the range of A Minimum and A Maximum

Minimum bore depth =

panel thickness - A Maximum

For gap = Ø, panel thickness must be ≥ to B value (before counterbore) for the given part number

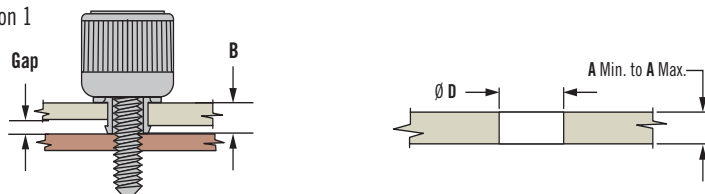
Notes

B and A Maximum values are provided in the corresponding fastener selection tables for each part number

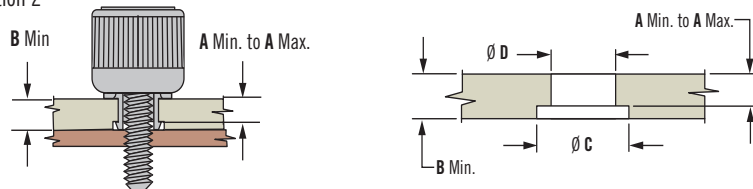
If holes are drilled, top edge of hole should be chamfered

Snap-In Style

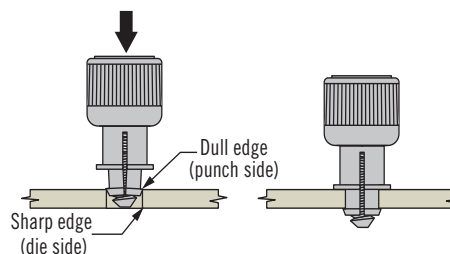
Panel preparation 1



Panel preparation 2



Thread Size	Ø D <small>+0 -0.1 (± .002)</small>	Counterbore Min. Ø C
M3.5 or 6-32	6.4 (.250)	7.5 (.295)
M4 or 8-32	6.4 (.250)	7.5 (.295)
M5 or 10-32	6.4 (.250)	7.5 (.295)





47-SM Captive Screws

Styled knob series · Surface Mount Technology (SMT) Style

- For installation to PC Board material utilizing surface mount technology
- Smooth knob meets UL-1950
- Designed for hand operation
- Spring ejected
- Variety of sizes, recesses

Material and Finish

Ferrule: Steel, Tin plated

Knob: Aluminum, natural

Screw: Hardened carbon steel, zinc plated, chromate, plus sealer

Internal spring: 300 series stainless steel passivated

Plug: Silicone rubber

Installation Notes

Visit www.southco.com for additional installation guidelines

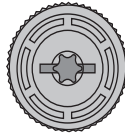
To ensure you receive **SOUTHCO®** quality parts, look for the segmented circle.

Part Number

See table

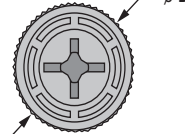
Recess Styles

TORX® / Slot Combination

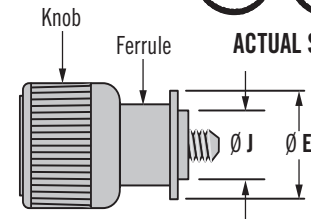


T10 TORX® / Slot Combination (M3,4-40)
T15 TORX® / Slot (6-32)

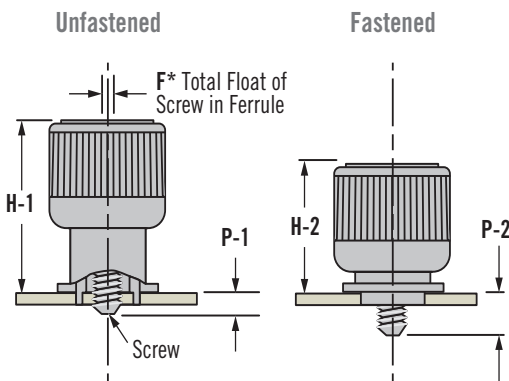
Phillips / Slot Combination



No. 1 Phillips / Slot Recess (M3,4-40)
No. 2 Phillips / Slot Recess (6-32)

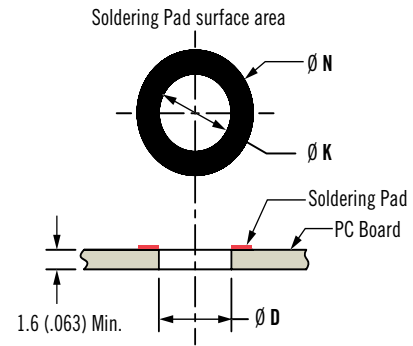


Knob Height and Screw Projection



* Value represents float in unfastened position
Notes: P-1, P-2 Screw Projection measured from the top side of panel

PC Board Preparation



47 Captive Screws Styled knob series - SMT Style

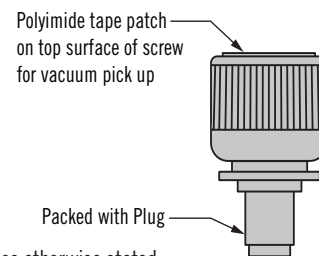
Part Number

Specify Package
Indicate package option with last digit of the part number

Example

47-SM-1311-K-R: Reel Package (as shown in table)
47-SM-1311-K-T: Tray Package

Screw as Shipped in Reel Pack or Tray Pack



Dimensions in millimeters (inch) unless otherwise stated

Thread Size	Part Number (Reel package shown)				H-1	H-2	P-1	P-2	ØB	ØJ	ØE	F*	ØK	ØN	Panel Preparation
	Knurled Head		Smooth Head												ØD
	Phillips / Slotted	TORX® / Slotted	Phillips / Slotted	TORX® / Slotted											
M3 x 0.5	47-SM-3311-K-R	47-SM-3411-K-R	47-SM-3311-N-R	47-SM-3411-N-R	11.4 (.45)	8.4 (.33)	1.4 (.05)	4.4 (.17)	10.7 (.42)	5.5 (.217)	7.6 (.30)	0.7 (.03)	5.6 (.22)	8.6 (.34)	5.6 +0.08/-0 (.220 +.003/-0.000)
	47-SM-3321-K-R	47-SM-3421-K-R	47-SM-3321-N-R	47-SM-3421-N-R			2.2 (.09)	5.2 (.20)							
4-40	47-SM-1311-K-R	47-SM-1411-K-R	47-SM-1311-N-R	47-SM-1411-N-R	15.5 (.61)	10.7 (.42)	1.4 (.05)	4.4 (.17)	11.4 (.45)	6.2 (.244)	8.1 (.32)	0.7 (.03)	6.4 (.25)	10.2 (.40)	6.4 +0.08/-0 (.252 +.003/-0.000)
	47-SM-1321-K-R	47-SM-1421-K-R	47-SM-1321-N-R	47-SM-1421-N-R			2.2 (.09)	5.2 (.20)							
6-32	47-SM-2311-K-R	47-SM-2411-K-R	47-SM-2311-N-R	47-SM-2411-N-R	15.5 (.61)	10.7 (.42)	0.8 (.03)	5.6 (.22)	11.4 (.45)	6.2 (.244)	8.1 (.32)	0.7 (.03)	6.4 (.25)	10.2 (.40)	6.4 +0.08/-0 (.252 +.003/-0.000)
	47-SM-2321-K-R	47-SM-2421-K-R	47-SM-2321-N-R	47-SM-2421-N-R			2.3 (.09)	7.1 (.28)							

Other options available. For complete details on variety, part numbers, installation and specification, go to

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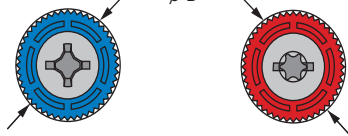


4C-SM Captive Screws

Prism series - Surface Mount Technology (SMT) Style

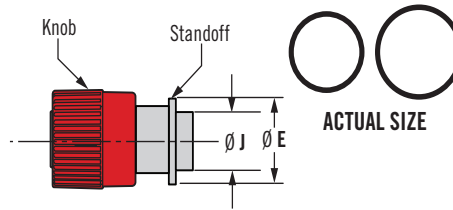


Recess Styles



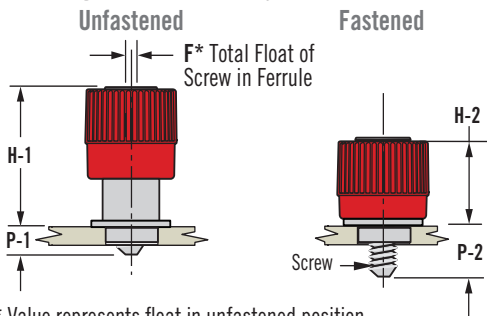
No. 2 Phillips Recess (M3,4-40)
No. 2 Phillips / Slot Recess (6-32)

T10 TORX® / Slot Combination (M3,4-40)
T15 TORX® / Slot Combination (6-32)



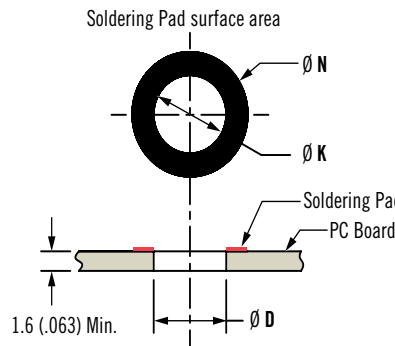
ACTUAL SIZE

Knob Height and Screw Projection

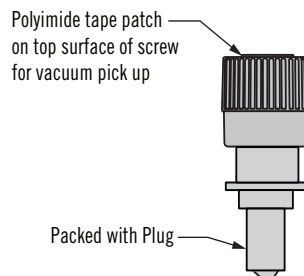


* Value represents float in unfastened position
Notes: P-1, P-2 Screw Projection measured from the top side of panel

PC Board Preparation



Screw as Shipped in Reel Pack or Tray Pack



4C Captive Screws Prism series - SMT Style

Part Number

Specify Package

Indicate package option with last digit of the part number

Example

4C-SM-1111-N000-R, Reel Package (as shown in table)

4C-SM-1111-N000-T, Tray Package

Part Number

Specify Color

To indicate Color, change the three digits of the part number indicated below

Example

4C-SM-1111-K000-R, black

4C-SM-1111-K008-R, blue

Dimensions in millimeters (inch) unless otherwise stated

- For installation to PC Board material utilizing surface mount technology
- Designate access points with color
- Color match captive screws to your industrial design
- High strength screw for use with high torque drivers

Material and Finish

Standoff: Steel, Tin plated

Knob: High heat resistant plastic

Screw: Hardened carbon steel, zinc plated, chromate, plus sealer

Internal spring: 300 series stainless steel passivated

Plug: Silicone rubber

Installation Notes

Visit www.southco.com for additional installation guidelines

To ensure you receive



SOUTHCO® quality parts, look for the segmented circle

Part Number

See table

Thread Size	Part Number (Reel package shown)													Panel Preparation Ø D	
	Knurled Head		Smooth Head		H-1	H-2	P-1	P-2	Ø B	Ø J	Ø E	F*	Ø K		Ø N
	Phillips	TORX® / Slotted	Phillips	TORX® / Slotted											
M3 x 0.5	4C-SM-3111-K000-R	4C-SM-3411-K000-R	4C-SM-3111-K000-R	4C-SM-3411-N000-R	10.8 (.43)	8.6 (.34)	1.5 (.06)	3.7 (.15)	9.7 (.38)	5.5 (.22)	7.6 (.30)	0.7 (.03)	5.6 (.22)	8.6 (.34)	5.6 +0.08/-0 (.220 +.003/-0.000)
	4C-SM-3121-K000-R	4C-SM-3421-K000-R	4C-SM-3121-K000-R	4C-SM-3421-N000-R			1.5 (.06)	3.7 (.15)							
4-40	4C-SM-1111-K000-R	4C-SM-1411-K000-R	4C-SM-1111-K000-R	4C-SM-1411-N000-R	16.3 (.64)	11.7 (.46)	1.5 (.06)	3.7 (.15)	11.4 (.45)	6.2 (.244)	8.1 (.32)	0.8 (.03)	6.4 (.25)	10.2 (.40)	6.4 +0.08/-0 (.252 +.003/-0.000)
	4C-SM-1121-K000-R	4C-SM-1421-K000-R	4C-SM-1121-K000-R	4C-SM-1421-N000-R			1.5 (.06)	3.7 (.15)							
6-32	4C-SM-2311-K000-R	4C-SM-2411-K000-R	4C-SM-2311-K000-R	4C-SM-2411-N000-R	16.3 (.64)	11.7 (.46)	1.5 (.06)	3.7 (.15)	11.4 (.45)	6.2 (.244)	8.1 (.32)	0.8 (.03)	6.4 (.25)	10.2 (.40)	6.4 +0.08/-0 (.252 +.003/-0.000)
	4C-SM-2321-K000-R	4C-SM-2421-K000-R	4C-SM-2321-K000-R	4C-SM-2421-N000-R			1.5 (.06)	3.7 (.15)							

Other options available. For complete details on variety, part numbers, installation and specification, go to



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52-SM Captive Screws

Miniature series · Surface Mount Technology (SMT) Style

- For installation to PC Board material utilizing surface mount technology
- Smaller footprint for limited space applications
- Heat treated steel screw for optimum strength

Material and Finish

Screw: Hardened carbon steel, zinc plated, chromate, plus sealer
 Internal spring: 300 series stainless steel, passivated
 Standoff: Steel, Tin plated
 Plug: Silicone rubber

Installation Notes

Visit www.southco.com for additional installation guidelines

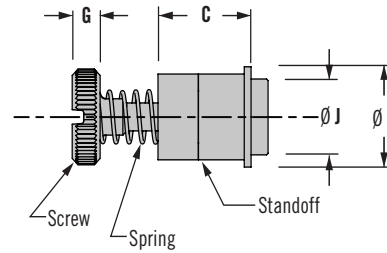
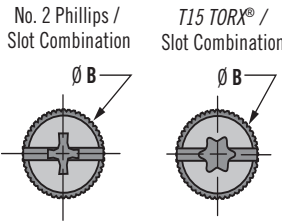


To ensure you receive **SOUTHCO®** quality parts, look for the segmented circle.

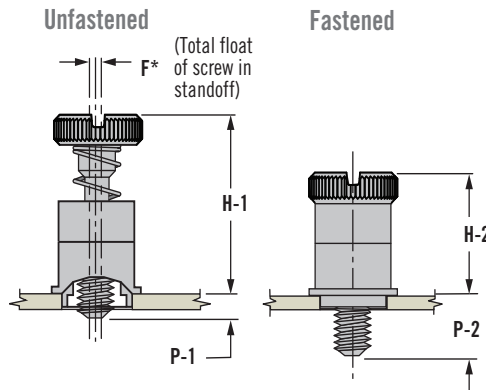
Part Number

See table

Recess Styles

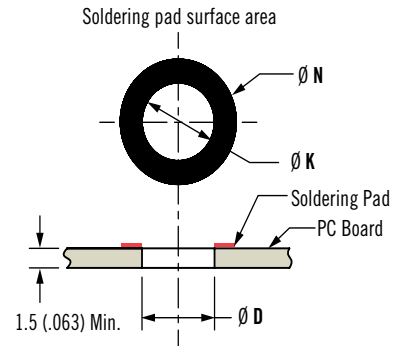


Screw Height and Screw Projection

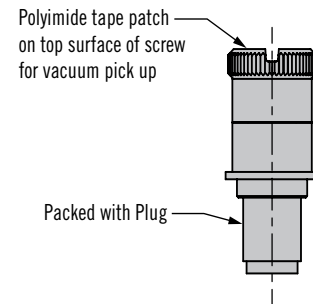


* Value represents float in unfastened position
 Notes: P-1, P-2 Screw Projection measured from the top side of panel

PC Board Preparation



Screw as Shipped in Reel Pack or Tray Pack



Dimensions in millimeters (inch) unless otherwise stated

Thread Size	Part Number (Reel package shown)				H-1	H-2	P-1	P-2	Ø B Knurled Head	Ø B Smooth Head	Ø J	Ø E	C	G	F*	Ø K	Ø N	Panel Preparation Ø D
	Knurled Head		Smooth Head															
	Phillips / Slotted	TORX®/Slotted	Phillips / Slotted	TORX®/Slotted														
M3 x 0.5	52-SM-3311-K-R	52-SM-3411-K-R	52-SM-3311-N-R	52-SM-3411-N-R	14	9.6	0.8 (.03)	5.3 (.21)	7	6.8	5.5	7.6	7	2.5	0.5	5.6	8.6	5.6+0.08/-0 (.220+.003/-0.000)
	52-SM-3321-K-R	52-SM-3421-K-R	52-SM-3321-N-R	52-SM-3421-N-R	(.55)	(.38)	2.3 (.09)	6.8 (.27)	(.28)	(.27)	(.217)	(.30)	(.28)	(.1)	(.02)	(.22)	(.34)	
4-40	52-SM-1311-K-R	52-SM-1411-K-R	52-SM-1311-N-R	52-SM-1411-N-R	14	9.6	0.8 (.03)	5.3 (.21)	7	6.8	5.5	7.6	7	2.5	0.5	5.6	8.6	5.6+0.08/-0 (.220+.003/-0.000)
	52-SM-1321-K-R	52-SM-1421-K-R	52-SM-1321-N-R	52-SM-1421-N-R	(.55)	(.38)	2.3 (.09)	6.8 (.27)	(.28)	(.27)	(.217)	(.30)	(.28)	(.1)	(.02)	(.22)	(.34)	
6-32	52-SM-2311-K-R	52-SM-2411-K-R	52-SM-2311-N-R	52-SM-2411-N-R	15.7	10.7	0.7 (.028)	5.8 (.23)	7.9	7.6	6.2	8.1	8.1	2.5	0.8	6.4	10.2	6.4+0.08/-0 (.252+.003/-0.000)
	52-SM-2321-K-R	52-SM-2421-K-R	52-SM-2321-N-R	52-SM-2421-N-R	(.62)	(.42)	2.2 (.087)	7.4 (.29)	(.31)	(.30)	(.244)	(.32)	(.32)	(.1)	(.03)	(.25)	(.40)	

Other options available. For complete details on variety, part numbers, installation and specification, go to

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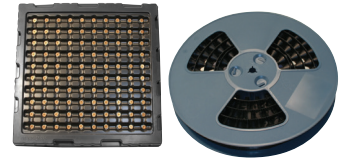


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Installation Guidelines



Southco Surface Mounted Technology (SMT) Captive Screws include installation and packaging features for installation onto PC Boards during the Reflow Process as a surface mounted device (SMD).

<p>SMT product installation is offered on these Southco Captive Screws for 4-40, 6-32 and M3 thread sizes:</p> <ul style="list-style-type: none"> • 47 Styled Knob Series • 4C Prism Series • 52 Miniature Series 	
<p>Installation Features Each Southco SMT style captive screw includes a polyimide patch covering the screw head tool recess allowing for vacuum pick up during placement on the PC Board. The screw threads are protected from excess solder during the reflow process by a plug pre-assembled to the screw by Southco. The patch and plug are then removed after the final cool down phase.</p>	<p>Screw as Shipped in Reel or Tray Pack</p> <p>Polyimide tape patch on top surface of screw for vacuum pick up</p> <p>Packed with Plug</p>
<p>Preparing the PC Board to accept SMT Captive Screws</p> <ul style="list-style-type: none"> • See literature for optimum soldering pad surface area for the specific Southco Captive Screw being utilized 	<p>Soldering Pad</p> <p>PC Board</p>
<p>Packaging Features/Options</p> <ul style="list-style-type: none"> • Tray Pack • Reel Pack 	<p>Tray Pack</p> <p>Reel Pack</p>
<p>Reflow Process</p> <ul style="list-style-type: none"> • Reflow of Solder <ul style="list-style-type: none"> - Pre-heat - Soak - Reflow - Cooling • Cleaning <ul style="list-style-type: none"> - Remove excess solder paste 	



52 Captive Screws

Miniature series · Flare-in style

- Smaller footprint for limited space applications
- Heat treated steel screw for optimum strength

Material and Finish

Screw: Hardened carbon steel, zinc plated, chromate, plus sealer

Spring: 300 series stainless steel, passivated

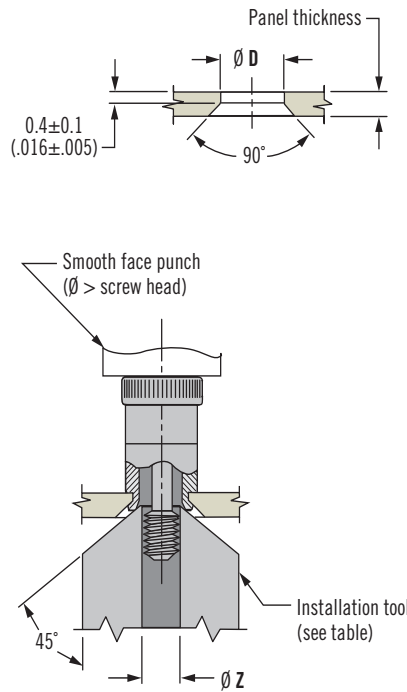
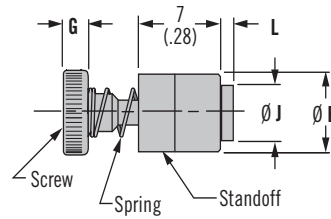
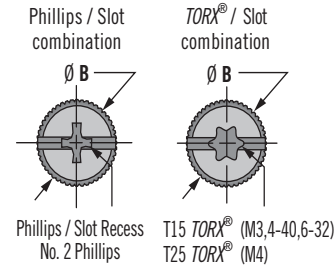
Standoff: Aluminum natural

Installation tool: Hardened carbon steel, zinc plated, chromate, plus sealer

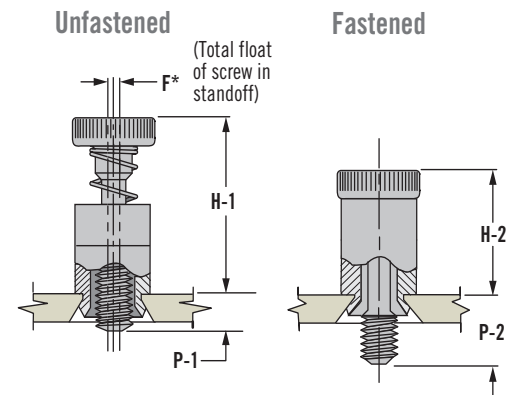
Installation Notes

1. Prepare panel as shown
2. Use light pressure to flare standoff, assuring parallel surfaces on the punch and installation tool

Recess Styles



Knob Height and Screw Projection



H* - Value represents float in unfastened position
Notes: P-1, P-2 measured from the top side of panel

Part Number

See table

Dimensions in millimeters (inch) unless otherwise stated

Thread Size	Panel Thickness		Part Number				Ø B	Ø E	F	G	H-1	H-2	Ø J	L	P-1	P-2	Panel Preparation		Tool Part No.
			Knurled Head		Smooth Head												Ø D	Ø Z	
	Min.	Max.	Phillips / Slotted	TORX® / Slotted	Phillips / Slotted	TORX® / Slotted													
4-40	0.8 (.031)	2.4 (.094)	52-19-11-4	52-17-11-4	52-1A-11-4	52-18-11-4	7 (.28)	6.2 (.245)	0.5 (.018)	2.5 (.1)	14 (.55)	9.6 (.38)	4.6 (.183)	1 (.041)	0.8 (.031)	5.3 (.21)	4.75 ^{+0.08} ₀ (.187 ^{+0.003} ₀)	3 (.120)	47-104
6-32	1.5 (.058)	3.2 (.125)	52-29-21-4	52-27-21-4	52-2A-21-4	52-28-21-4	8 (.31)	7 (.28)	0.7 (.028)	2.5 (.1)	15 (.59)	9.6 (.38)	5.3 (.209)	1.8 (.07)	1.8 (.07)	6.8 (.27)	5.41 ^{+0.08} ₀ (.213 ^{+0.003} ₀)	3.6 (.141)	47-106
M3 x 0.5	0.8 (.031)	2.4 (.094)	52-39-11-4	52-37-11-4	52-3A-11-4	52-38-11-4	7 (.28)	6.2 (.245)	0.6 (.023)	2.5 (.1)	14 (.55)	9.6 (.38)	4.6 (.183)	1 (.041)	0.8 (.031)	5.3 (.21)	4.75 ^{+0.08} ₀ (.187 ^{+0.003} ₀)	3 (.120)	47-104
M4 x 0.7	1.5 (.058)	3.2 (.125)	52-49-21-4	52-47-21-4	52-4A-21-4	52-48-21-4	9.4 (.37)	8.7 (.34)	0.7 (.028)	3 (.12)	15.2 (.60)	10.1 (.40)	6.7 (.26)	1.8 (.07)	1.8 (.07)	6.8 (.27)	6.76 ^{+0.1} ₀ (.266 ^{+0.009} ₀)	4.2 (.166)	47-108

Note: Subtract .25 (.01) from Ø B for smooth head style.

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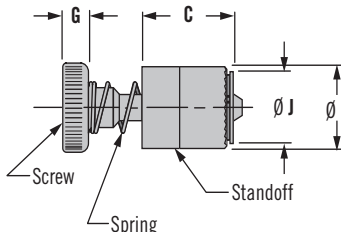
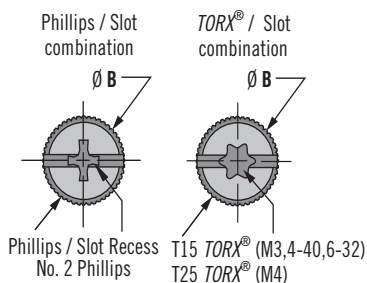


52 Captive Screws

Miniature series · Press-in style

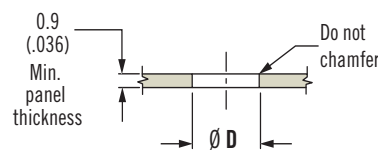
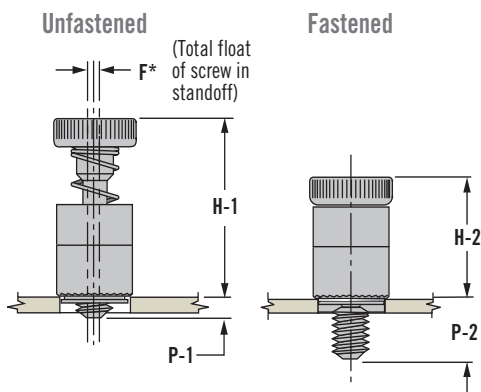


Recess Styles

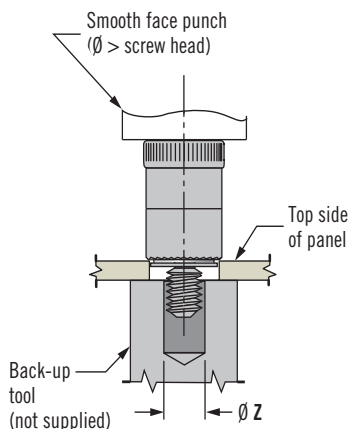


Dimensions in millimeters (inch) unless otherwise stated

Knob Height and Screw Projection



Notes: Recommended minimum distance from edge of panel to centerline of hole is 1.5 x Ø D for press-in version.



* Value represents float in unfastened position
 Notes: P-1, P-2 measured from the top side of panel



ACTUAL SIZE

See page 543 for additional installation guidelines

- Smaller footprint for limited space applications
- Heat treated steel screw for optimum strength

Material and Finish

Screw: Hardened carbon steel, zinc plated, chromate, plus sealer

Spring: 300 series stainless steel, passivated

Standoff: Carbon steel, zinc plated, chromate, plus sealer

Installation Notes

For use in most aluminum or in low carbon steels that are 1/4 hard or softer

Part Number

See table

Thread Size	Part Number				Ø B	C	Ø E	F*	G	H-1	H-2	Ø J	P-1	P-2	Panel Preparation	
	Knurled Head		Smooth Head												Ø D	Ø Z
	Phillips / Slotted	TORX® / Slotted	Phillips / Slotted	TORX® / Slotted												
4-40	52-19-51-4	52-17-51-4	52-1A-51-4	52-18-51-4	7	7.9	6.4	0.5	2.5	14	9.6	5.5	0.9 (.036)	5.3 (.21)	5.56 ^{+0.08} ₋₀	3
	52-19-53-4	52-17-53-4	52-1A-53-4	52-18-53-4	(.28)	(.31)	(.25)	(.018)	(.1)	(.55)	(.38)	(.217)	2.5 (.1)	6.8 (.27)	(.219 ^{+0.003} ₋₀)	(.120)
6-32	52-29-51-4	52-27-51-4	52-2A-51-4	52-28-51-4	8	8.6	7	0.7	2.5	15.5	10.4	6.3	0.9 (.036)	6.1 (.24)	6.35 ^{+0.08} ₋₀	3.7
	52-29-53-4	52-27-53-4	52-2A-53-4	52-28-53-4	(.31)	(.34)	(.28)	(.028)	(.1)	(.61)	(.41)	(.247)	2.5 (.1)	7.6 (.30)	(.250 ^{+0.003} ₋₀)	(.144)
M3 X 0.5	52-39-51-4	52-37-51-4	52-3A-51-4	52-38-51-4	7	7.9	6.4	0.6	2.5	14	9.6	5.5	0.9 (.036)	5.3 (.21)	5.56 ^{+0.08} ₋₀	3.2
	52-39-53-4	52-37-53-4	52-3A-53-4	52-38-53-4	(.28)	(.31)	(.25)	(.023)	(.1)	(.55)	(.38)	(.217)	2.5 (.1)	6.8 (.27)	(.219 ^{+0.003} ₋₀)	(.126)
M4 X 0.7	52-49-51-4	52-47-51-4	52-4A-51-4	52-48-51-4	9.4	8.6	8.7	0.7	3	16	10.8	7.9	0.9 (.036)	6.1 (.24)	8 ⁺⁰ _{-0.08}	4.4
	52-49-53-4	52-47-53-4	52-4A-53-4	52-48-53-4	(.37)	(.34)	(.34)	(.028)	(.12)	(.63)	(.43)	(.31)	2.5 (.1)	7.6 (.30)	(.315 ⁺⁰ _{-0.003})	(.173)



52 Overmold Captive Screws

Miniature series · Flare-in style

- Smaller footprint for limited space applications
- Heat treated steel screw for optimum strength
- Designate access points with color
- Color match captive screws to your industrial design

Material and Finish

Screw: Hardened carbon steel, zinc plated, chromate, plus sealer

Spring: 300 series stainless steel, passivated

Standoff: Aluminum natural

Knob: PC/ABS

Installation tool: Hardened carbon steel, zinc plated, chromate, plus sealer

Performance Details

Flamability Rating: UL94-V0

Installation Notes

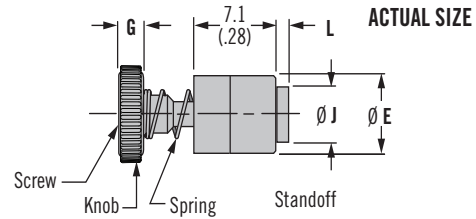
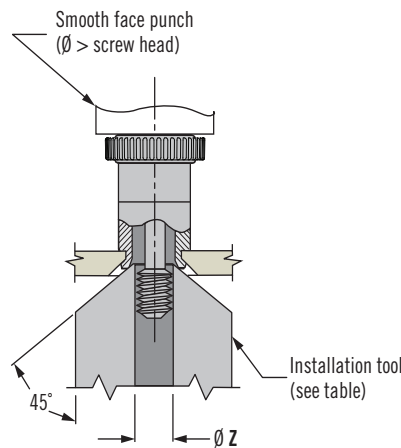
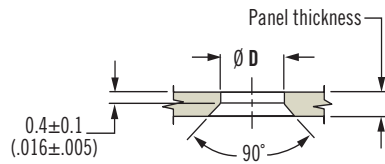
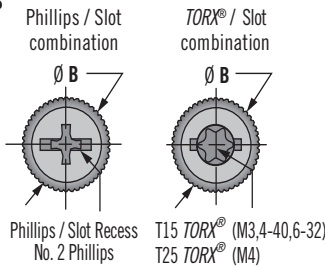
1. Prepare panel as shown
2. Use light pressure to flare standoff, assuring parallel surfaces on the punch and installation tool

Part Number

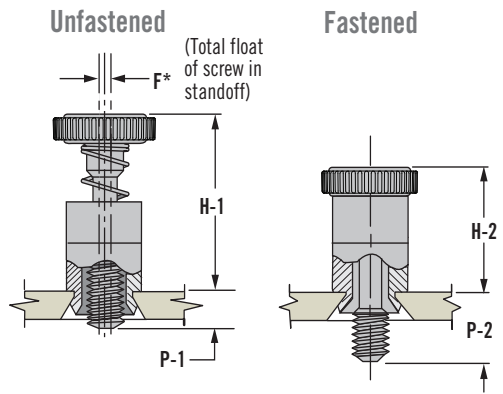
See table

Dimensions in millimeters (inch) unless otherwise stated

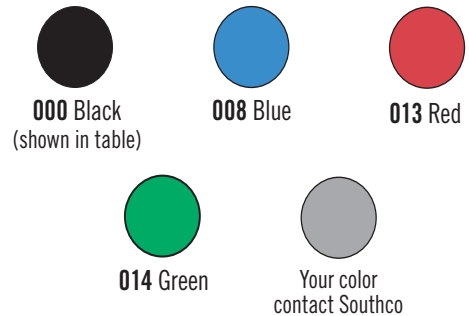
Recess Styles*



Knob Height and Screw Projection



F* - Value represents float in unfastened position
Notes: P-1, P-2 measured from the top side of panel



Specifying Color: To indicate color, change the last three digits of the part number

Example: 52-11-11-4-000 Black, 52-11-11-4-013 Red

Thread Size	Panel Thickness		Part Number						B Knurled Head	B Smooth Head	Ø E	F	G	H-1	H-2	Ø J	L	P-1	P-2	Panel Preparation		Tool Part No.
			Knurled Head		Smooth Head		Ø D	Ø Z														
	Min.	Max.	Phillips / Slotted	TORX® / Slotted	Phillips / Slotted	TORX® / Slotted																
4-40	0.8 (.031)	2.4 (.094)	52-11-11-4-000 *	52-15-11-4-000 *	52-13-11-4-000 *	52-16-11-4-000 *	8.1 (.32)	7.8 (.31)	6.2 (.245)	0.5 (.018)	2.5 (.1)	14 (.55)	9.6 (.38)	4.6 (.183)	1 (.041)	0.8 (.031)	5.3 (.21)	4.75 ^{+0.08} ₋₀ (.187 ^{+0.03} ₋₀)	3 (.120)	47-104		
6-32	1.5 (.058)	3.2 (.125)	52-29-21-4-000	52-27-21-4-000	52-2A-21-4-000	52-28-21-4-000	8.8 (.35)	8.5 (.33)	7 (.28)	0.7 (.028)	2.5 (.1)	15 (.59)	9.6 (.38)	5.3 (.209)	1.8 (.07)	1.8 (.07)	6.8 (.27)	5.41 ^{+0.08} ₋₀ (.213 ^{+0.03} ₋₀)	3.6 (.141)	47-106		
M3 x 0.5	0.8 (.031)	2.4 (.094)	52-31-11-4-000 *	52-35-11-4-000 *	52-33-11-4-000 *	52-36-11-4-000 *	8.1 (.32)	7.8 (.31)	6.2 (.245)	0.6 (.023)	2.5 (.1)	14 (.55)	9.6 (.38)	4.6 (.183)	1 (.041)	0.8 (.031)	5.3 (.21)	4.75 ^{+0.08} ₋₀ (.187 ^{+0.03} ₋₀)	3 (.120)	47-104		
M4 x 0.7	1.5 (.058)	3.2 (.125)	52-49-21-4-000	52-45-21-4-000 *	52-4A-21-4-000	52-46-21-4-000 *	10.3 (.41)	10 (.39)	8.7 (.34)	0.7 (.028)	3 (.12)	15.2 (.60)	10 (.40)	6.7 (.26)	1.8 (.07)	1.8 (.07)	6.8 (.27)	6.76 ^{+0.1} ₋₀ (.266 ^{+0.05} ₋₀)	4.2 (.166)	47-108		

*Part Numbers not available with combination head styles; Phillips or TORX® only

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REATE · INNOVATE

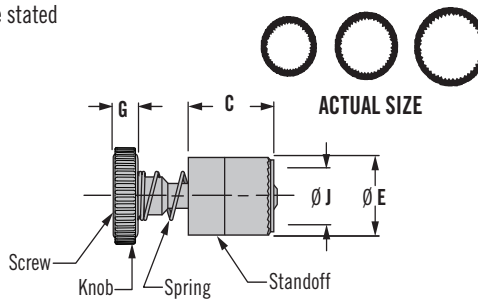
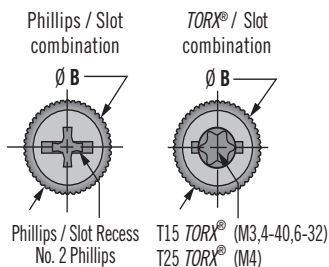
52 Overmold Captive Screws

Miniature series · Press-in style

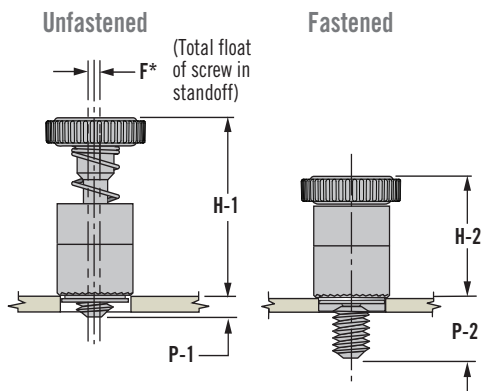


Dimensions in millimeters (inch) unless otherwise stated

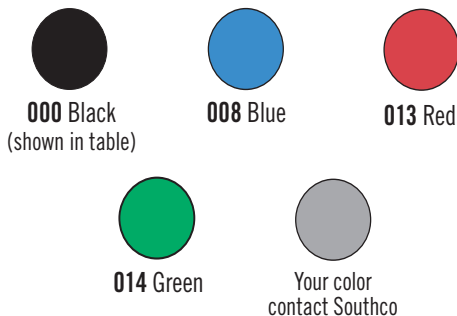
Recess Styles*



Knob Height and Screw Projection

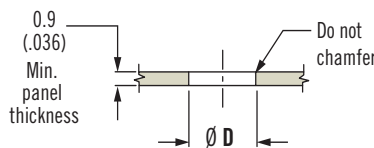


F* Value represents float in unfastened position
Notes: P-1, P-2 measured from the top side of panel

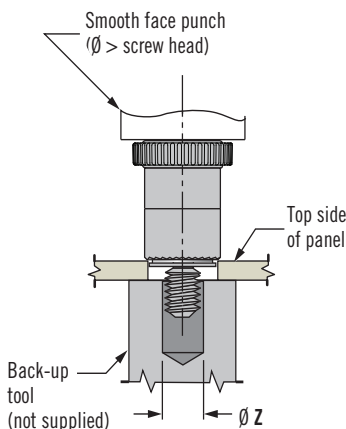


Specifying Color: To indicate color, change the last three digits of the part number

Example: 52-11-11-4-000 Black, 52-11-11-4-013 Red



Notes: Recommended minimum distance from edge of panel to centerline of hole is 1.5 x Ø D for press-in version.



- Smaller footprint for limited space applications
- Heat treated steel screw for optimum strength
- Designate access points with color
- Color match captive screws to your industrial design

Material and Finish

Screw: Hardened carbon steel, zinc plated, chromate, plus sealer

Spring: 300 series stainless steel, passivated

Standoff: Carbon steel, zinc plated, chromate, plus sealer

Knob: PC/ABS

Performance Details

Flamability Rating: UL94-V0

Installation Notes

For use in most aluminum or in low carbon steels that are 1/4 hard or softer. Visit www.southco.com for more information.

Part Number

See table

Visit www.southco.com for additional installation guidelines

Thread Size	Part Number				B Knurled Head	B Smooth Head	C	Ø E	F*	G	H-1	H-2	Ø J	P-1	P-2	Panel Preparation	
	Knurled Head		Smooth Head													Ø D	Ø Z
	Phillips / Slotted	TORX® / Slotted	Phillips / Slotted	TORX® / Slotted													
4-40	52-11-51-4-000*	52-15-51-4-000*	52-13-51-4-000*	52-16-51-4-000*	8.1 (.32)	7.8 (.31)	7.9 (.31)	6.4 (.25)	0.5 (.018)	2.5 (.1)	14 (.55)	9.6 (.38)	5.5 (.217)	0.9 (.036)	5.3 (.21)	5.56 ^{+0.08} ₋₀ (.219 ^{+0.03} _{-.003})	3 (.120)
	52-11-53-4-000*	52-15-53-4-000*	52-13-53-4-000*	52-16-53-4-000*										2.5 (.1)	6.8 (.27)		
6-32	52-29-51-4-000	52-27-51-4-000	52-2A-51-4-000	52-28-51-4-000	8.8 (.35)	8.5 (.33)	8.6 (.34)	7 (.28)	0.7 (.028)	2.5 (.1)	15.5 (.61)	10.4 (.41)	6.3 (.247)	0.9 (.036)	6.1 (.24)	6.35 ^{+0.03} _{-0.00} (.250 ^{+0.03} _{-.003})	3.7 (.144)
	52-29-53-4-000	52-27-53-4-000	52-2A-53-4-000	52-28-53-4-000										2.5 (.1)	7.6 (.30)		
M3 X 0.5	52-31-51-4-000*	52-35-51-4-000*	52-33-51-4-000*	52-36-51-4-000*	8.1 (.32)	7.8 (.31)	7.9 (.31)	6.4 (.25)	0.6 (.023)	2.5 (.1)	14 (.55)	9.6 (.38)	5.5 (.217)	0.9 (.036)	5.3 (.21)	5.56 ^{+0.08} ₋₀ (.219 ^{+0.03} _{-.003})	3.2 (.126)
	52-31-53-4-000*	52-35-53-4-000*	52-33-53-4-000*	52-36-53-4-000*										2.5 (.1)	6.8 (.27)		
M4 X 0.7	52-49-51-4-000	52-45-51-4-000*	52-4A-51-4-000	52-46-51-4-000*	10.3 (.41)	10 (.39)	8.6 (.34)	8.7 (.34)	0.7 (.028)	3 (.12)	16 (.63)	10.8 (.43)	7.9 (.31)	0.9 (.036)	6.1 (.24)	8 ⁺⁰ _{-0.08} (.315 ^{+0.03} _{-.003})	4.4 (.173)
	52-49-53-4-000	52-45-53-4-000*	52-4A-53-4-000	52-46-53-4-000*										2.5 (.1)	7.7 (.30)		

Note: *Part Numbers not available with combination head styles; Phillips or TORX® only

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47/4C Captive Screws

ATCA captive screws

- M3 thread
- No. 2 Phillips recess
- Color match available

Material and Finish

Screw, ferrule and internal spring stainless steel, knob aluminum or PC/ABS

Performance Details

Flammability rating: UL94-V0
ATCA R3.0 compliant screw

Installation Notes

Please refer to installation drawings on www.southco.com for reference on dimensions **B***, \varnothing **D*** and \varnothing **Z***

F* indicates maximum float in the unfastened position

Part Number

See table

Specifying Color:

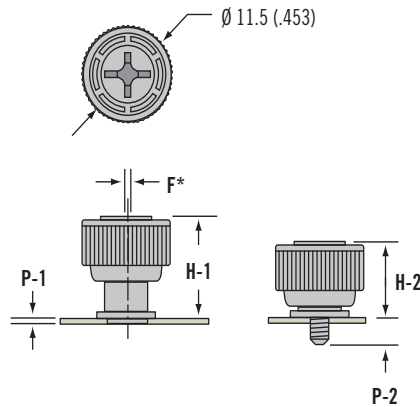
To indicate color, change the last three digits of the part number.

Example:

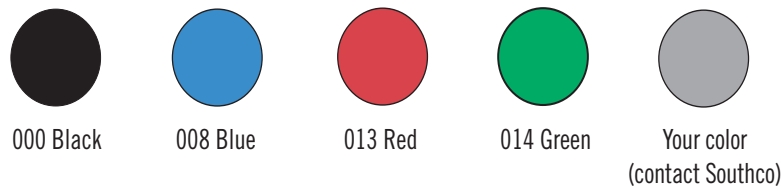
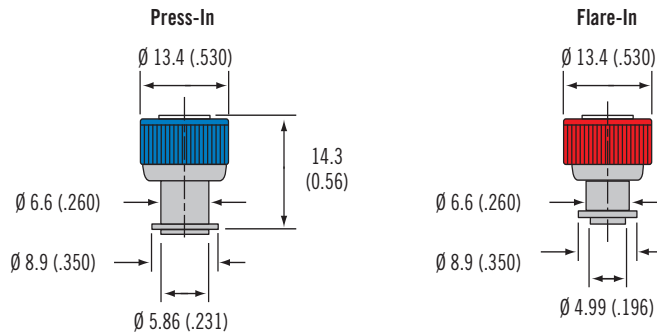
47-99-945-1P0-K000, black

47-99-945-1P0-K013, red

Metal Version



Overmolded Version



Dimensions in millimeters (inch) unless otherwise stated

Series	Installation Method	Panel Thickness			Part Number	H-1	H-2	P-1	P-2	F*	Panel Preparation	
		A Min.	A Max.	B*							\varnothing D*	\varnothing Z*
ATCA compliant (Metal Version)	Press-in	0.9 (.036)	~	~	47-99-945-1P0	14.3 (.56)	10.1 (.40)	1.0 (.39)	5.0 (.20)	1 (.039)	5.95 ± 0.04 (.234 ± .002)	3.2 ^{+0.2} _{-0.1} (.125 ^{+0.008} _{-.004})
	Flare-in	0.8 (.031)	1.5 (.060)	0.4 (.016)	47-99-944-1F1	14.3 (.56)	10.1 (.40)	1.0 (.39)	5.0 (.20)	1 (.039)	5.1 ^{+0.1} ₋₀ (.20 ^{+0.004} ₋₀)	3.0 ^{+0.1} ₋₀ (.118 ^{+0.004} _{-.000})
ATCA compliant (Overmolded Version)	Press-in	0.9 (.036)	~	~	47-99-945-1P0-K000	14.3 (.56)	10.1 (.40)	1.0 (.39)	5.0 (.20)	1 (.039)	5.95 ± 0.04 (.234 ± .002)	3.2 ^{+0.2} _{-0.1} (.125 ^{+0.008} _{-.004})
	Flare-in	0.8 (.031)	1.5 (.060)	0.4 (.016)	47-99-944-1F1-K000	14.3 (.56)	10.1 (.40)	1.0 (.039)	5.0 (.20)	1 (.039)	5.1 ^{+0.1} ₋₀ (.20 ^{+0.004} ₋₀)	3.0 ^{+0.1} ₋₀ (.118 ^{+0.004} _{-.000})

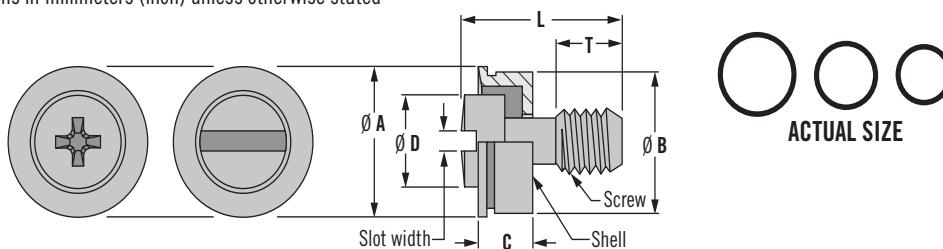


F5 Captive Screws

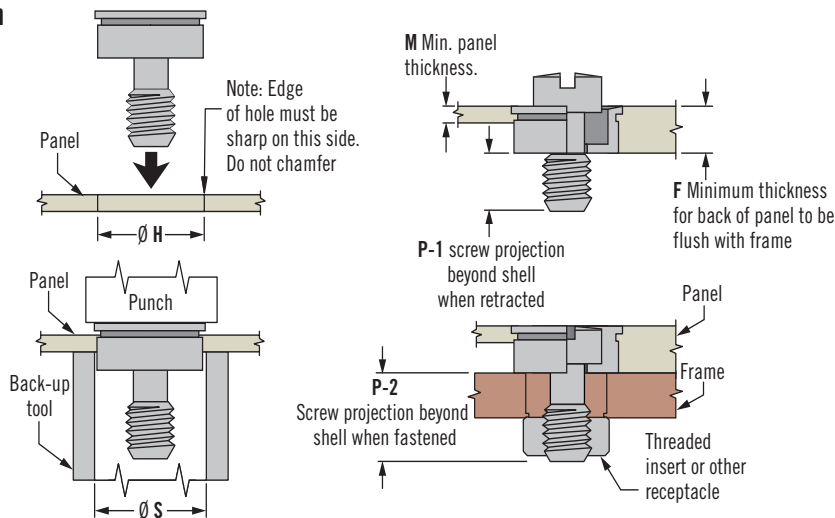
Flush series



Dimensions in millimeters (inch) unless otherwise stated



Installation



- Flush when fastened

Material and Finish

Shell: 303 Stainless steel, passivated

Screw:

Slotted: 303 stainless steel, passivated.

Phillips: 430 stainless steel, passivated

Notes

For use in most aluminums or in low carbon steels that are 1/4 hard or softer

Screws will float 0.5 (.02) total movement

Shipped assembled

Part Number

See table

Thread Size	Max. Recommended Tightening Torque
M3/ 4-40	0.6 N·m (5in·lbf)
6-32	1.6 N·m (14in·lbf)
M4/ 8-32	2.8 N·m (25in·lbf)

See page 543 for additional installation guidelines

Recess Style	Thread Size	Screw Dimensions					Slot Width	Screw Length L	Part Number		Screw Projection Beyond Outer Surface of Panel		Installation Dimensions			
		Ø A	Ø B	C	Ø D	T			Metric	Imperial	P-1	P-2	Ø H	M	F	Ø S
Phillips	M4 x 0.7 or UNC 8-32	10.1 (.40)	9.45 (.373)	3.1 (.122)	6.4 (.25)	4.3 (.17)	~	8.6 (.34)	F5-M4-P2	F5-832-P2	4.3 (.17)	5.6 (.22)	9.5 ^{+0.08} ₋₀ (.375 ^{+0.003} ₋₀)	1.5 (.060)	3.2 (.125)	9.6 ^{+0.1} _{-0.05} (.379 ^{+0.004} _{-0.002})
								9.6 (.38)	F5-M4-P4	F5-832-P4		6.6 (.26)				
								10.6 (.42)	F5-M4-P6	F5-832-P6		7.6 (.30)				
								11.6 (.46)	F5-M4-P8	F5-832-P8		8.6 (.34)				
Slotted	M3 x 0.5 or UNC 4-40	7.1 (.28)	6.45 (.254)	1.7 (.067)	4 (.16)	3.8 (.15)	0.9 (.035)	5.8 (.23)	F5-90-402-20	F5-60-402-20	3.8 (.15)	4.1 (.16)	6.5 ^{+0.08} ₋₀ (.257 ^{+0.002} _{-0.001})	1.3 (.050)	1.8 (.070)	6.6 ^{+0.1} _{-0.05} (.260 ^{+0.004} _{-0.002})
								7.9 (.31)	F5-90-406-20	F5-60-406-20		6.1 (.24)				
	UNC 6-32	8.1 (.32)	7.44 (.293)	2 (.082)	4.8 (.19)	3.8 (.15)	1 (.039)	6.4 (.25)	~	F5-60-602-20	3.8 (.15)	4.3 (.17)	7.5 ^{+0.08} ₋₀ (.295 ^{+0.003} ₋₀)	1.4 (.055)	2.2 (.085)	7.6 ^{+0.1} _{-0.05} (.299 ^{+0.004} _{-0.002})
								8.4 (.33)	~	F5-60-606-20		6.4 (.25)				
								9.4 (.37)	~	F5-60-608-20		7.4 (.29)				
								~	~	~		~				
	M4 x 0.7 or UNC 8-32	10.1 (.40)	9.45 (.373)	2.34 (.092)	6.4 (.25)	5.1 (.20)	1.1 (.045)	8.9 (.35)	F5-M40-14	F5-832-14	5.1 (.20)	6.6 (.26)	9.5 ^{+0.08} ₋₀ (.375 ^{+0.003} ₋₀)	1.5 (.060)	2.4 (.095)	9.6 ^{+0.1} _{-0.05} (.379 ^{+0.004} _{-0.002})
								9.9 (.39)	F5-M40-16	F5-832-16		7.6 (.30)				
10.9 (.43)								F5-M40-18	F5-832-18	8.6 (.34)						



5T Captive Screws

Heat sink series

Dimensions in millimeters (inch) unless otherwise stated

- Maximize heat transfer from components to heatsink
- Positive fastening under shock and vibration
- Fastener allows for thermal expansion of components under a set preload

Material and Finish

Screw: Hardened carbon steel, zinc plate, chromate plus sealer

Spring: 300 series stainless steel, passivated

Ferrule: Aluminum, natural

Performance Details

M3/4-40 Recommended Torque: 0.6 N·m (5.3 in·lbf)

M3.5/6-32 Recommended Torque: 1.08 N·m (9.6 in·lbf)

Installation Notes

1. Drill then countersink according to the required dimensions.
2. Insert screw assembly into prepared hole in panel. Place back-up tool as shown.
3. Place work under press, center tool over screw thread and flare ferrule into countersink in panel. Recommended load 2200 N.

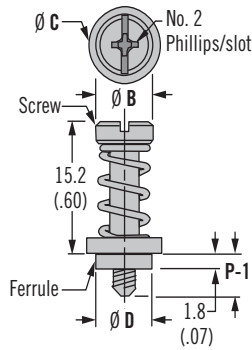
Notes

Load applied by each screw:
 [3.4 (.13) * K] + 7.57 N (1.7 lb)
 Standard K value shown in the table. Load at given deflection *shown in the fastened position above.

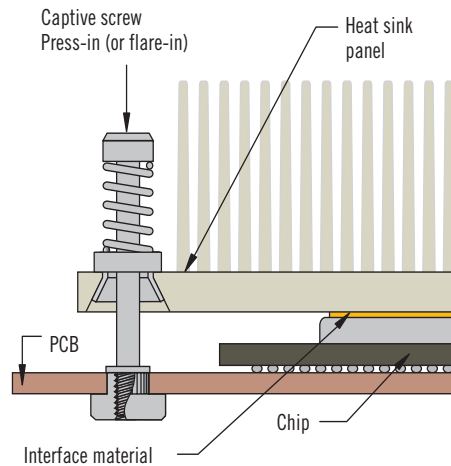
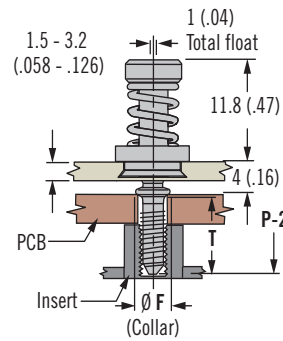
Part Number

See table

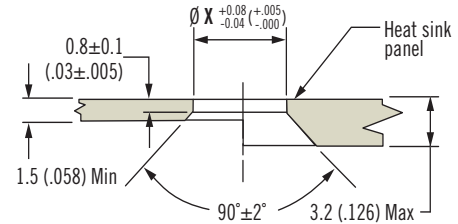
Unfastened



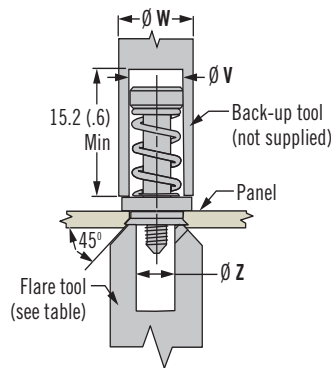
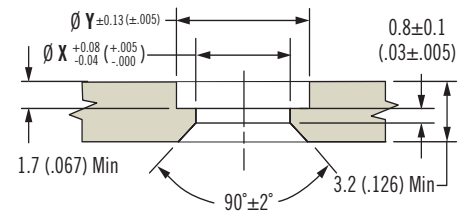
Fastened



Standard



Alternate



Thread Size	Ø V	Ø X	Ø Y	Ø W Min.	Ø Z	Tool Part Number
M3 or 4-40	7.1 (.28)	6.8 (.27)	9.5 (.37)	9.5 (.37)	5.1 (.2)	47-115
M3.5 or 6-32	7.9 (.31)	7.1 (.28)	10.7 (.46)	10.7 (.42)	5.6 (.22)	5T-06-Tool

Thread Size	Part Number	Panel Thickness		Screw Projection		T	Ø B	Ø C	Ø D	Ø F	Spring Rate K N/mm (lbf/in)	Load Max.* N (lbf)	
		Min.	Max.	P1	P-2								
M3	5T-11-M3-222-5	1.5 (.058)	3.2 (.126)	5.9 (.232)	8.4 (331)	5 (.197)	6.8 (.27)	9 (.35)	6.7 (.294)	4.7 (.185)	4.45 (25.4)	22.5 (5)	
4-40	5T-11-04-222-5			6.6 (.26)	9.9 (.39)	5.7 (.224)	7.6 (.30)	10.4 (.41)	7 (.275)	5 (.2)			
M3.5	5T-11-M35-222-5												
6-32	5T-11-06-222-5												

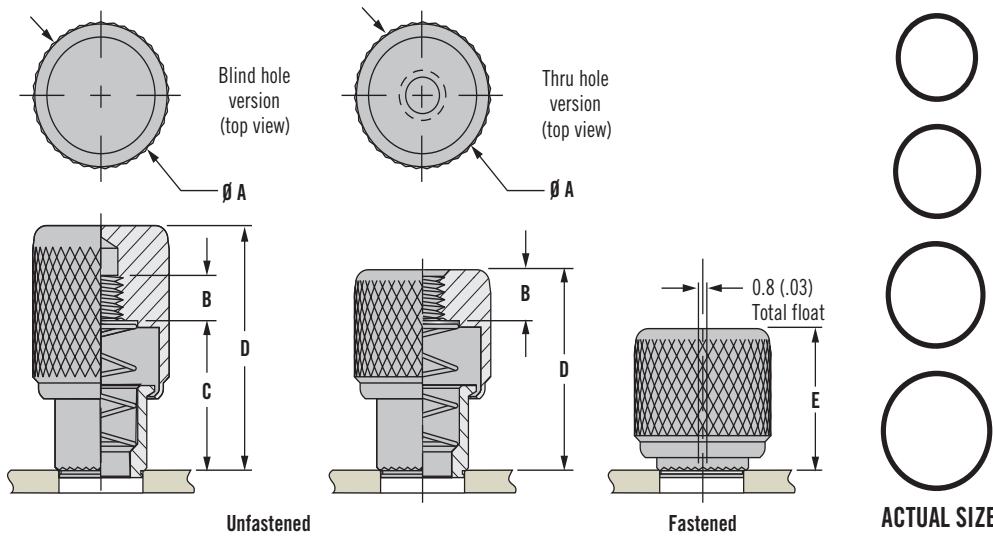


N7 Captive Nut

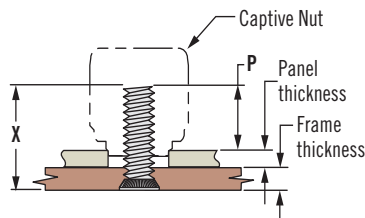
Thru hole and blind styles



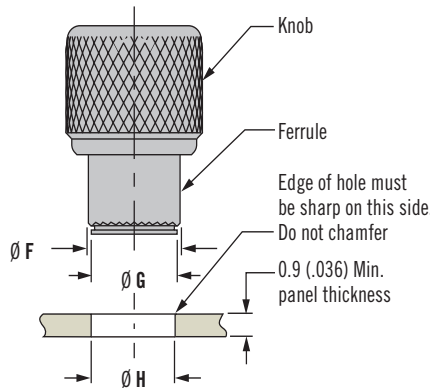
Dimensions in millimeters (inch) unless otherwise stated



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 543 for additional installation guidelines

Notes: Recommended minimum distance from edge of panel to centerline of hole is $1.5 \times \text{ø H}$.

- 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

Thread Size	Knob Style	Part Number		ø A	B (Thread Length)	C	D	E	ø F	ø G	ø H
		Metric	Inch								
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 ^{+0.001} _{-0.002})
	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 _{-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 _{-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 ^{+0.004} ₋₀)
	Blind hole	N7-42-11	N7-92-11		7 (.28)	16.4 (.65)	29.5 (1.16)	23 (.91)			



09 Series Fast-Lead Screws

Studs · Small

Material and Finish

Low carbon steel, case hardened, zinc plated, chromate plus sealer or stainless steel

How to Specify:

- Determine your outer panel and frame thicknesses:
Outer panel P =
Frame thickness F =
- Choose your receptacle
- Choose the retainer style
- Find the correct constant in table opposite using the receptacle and retainer selected
- Add outer panel thickness (P), frame thickness (F), and the constant found in step 4 to determine your total material thickness (TMT)
TMT = P+F+Constant
- Find the TMT value in the ranges given in Column 1 in the part number table
- Confirm that the outer panel thickness P does not exceed the value given in Column 2. This will confirm that your retainer will install properly beyond the last thread and retain your screw to the outer panel
- Going across the row in the part number table, find the part number that matches your desired head style

Part Number

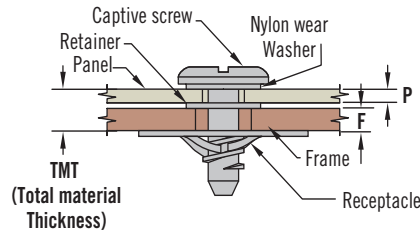
See table

Notes

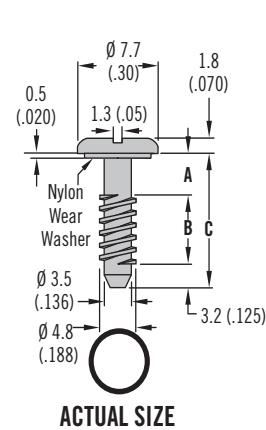
For full screw retraction, **B** must be less than frame thickness plus receptacle height

For stainless steel screw (slotted, and knurled ONLY) replace last 2 digits of part number with "26".
Example: 09-11-102-26

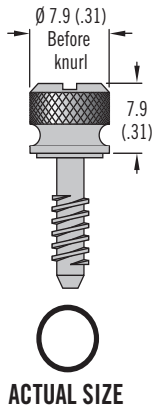
Dimensions in millimeters (inch) unless otherwise stated



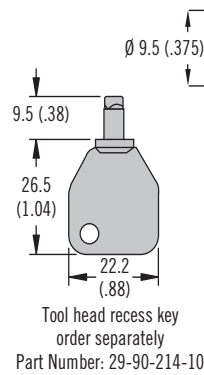
Slot



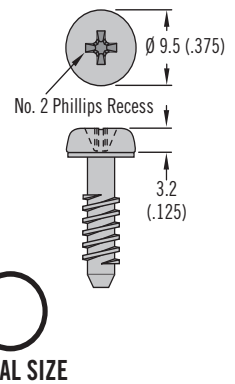
Knurled Head



Tool head Recess



Phillips Recess



Constant Table				
Retainer Type	Receptacle Type			
	Flat Rivet or Weld	Clip	Saddle	Press-In
Stainless steel	0.3 (.012)	1.0 (.032)	4.5 (.177)	-1.3 (-.050)
Nylon	1.1 (.043)	1.6 (.063)	5.3 (.208)	-0.5 (-.020)

Column 1		Column 2	Screw Assembly Part Number				Dimensions		
TMT		Outer Panel P	Slotted	Knurled	Tool Head Recess	Phillips Recess	A	B	C
Min.	Max.								
1.3 (.050)	3.2 (.125)	0.9 (.035)	09-11-102-11	09-13-102-11	09-T-102	09-P-102	2.5 (.100)	5.0 (.197)	10.7 (.422)
2.5 (.100)	3.2 (.125)	2.2 (.085)	09-11-103-11	09-13-103-11	09-T-103	09-P-103	3.8 (.150)	3.7 (.147)	
1.3 (.050)	6.4 (.250)	0.9 (.035)	09-11-202-11	09-13-202-11	09-T-202	09-P-202	2.5 (.100)	8.2 (.322)	13.9 (.547)
2.5 (.100)	6.4 (.250)	2.2 (.085)	09-11-203-11	09-13-203-11	09-T-203	09-P-203	3.8 (.150)	6.9 (.272)	
3.8 (.150)	6.4 (.250)	3.4 (.135)	09-11-204-11	09-13-204-11	09-T-204	09-P-204	5.1 (.200)	5.6 (.222)	
5.1 (.200)	6.4 (.250)	4.7 (.185)	09-11-205-11	09-13-205-11	09-T-205	09-P-205	6.4 (.250)	4.4 (.172)	
1.3 (.050)	9.5 (.375)	0.9 (.035)	09-11-302-11	09-13-302-11	09-T-302	09-P-302	2.5 (.100)	11.4 (.447)	17.1 (.672)
2.5 (.100)	9.5 (.375)	2.2 (.085)	09-11-303-11	09-13-303-11	09-T-303	09-P-303	3.8 (.150)	10.1 (.397)	
3.8 (.150)	9.5 (.375)	3.4 (.135)	09-11-304-11	09-13-304-11	09-T-304	09-P-304	5.1 (.200)	8.8 (.347)	
5.1 (.200)	9.5 (.375)	4.7 (.185)	09-11-305-11	09-13-305-11	09-T-305	09-P-305	6.4 (.250)	7.3 (.297)	
7.6 (.300)	9.5 (.375)	7.2 (.285)	09-11-307-11	09-13-307-11	09-T-307	09-P-307	8.9 (.350)	5.0 (.197)	



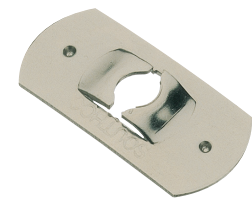
Angic Global Solutions

<https://www.AngicGlobal.com> Sales@AngicGlobal.com

1-888-872-0690

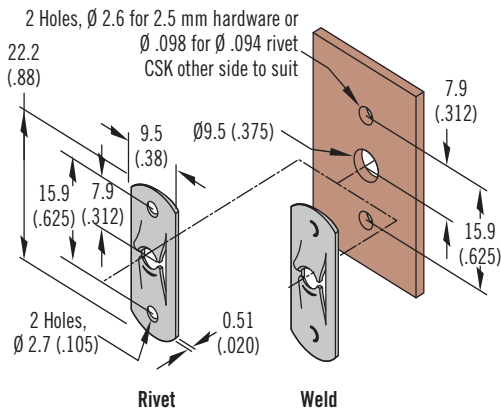


09 Series Fast-Lead Screws Receptacles / retainers · Small

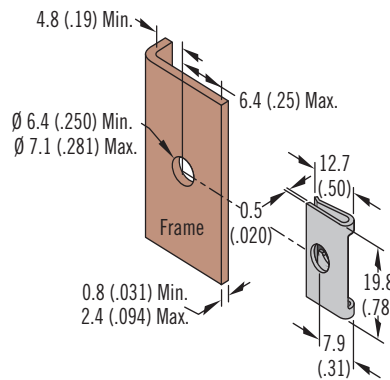


Dimensions in millimeters (inch) unless otherwise stated

Flat Type Receptacle

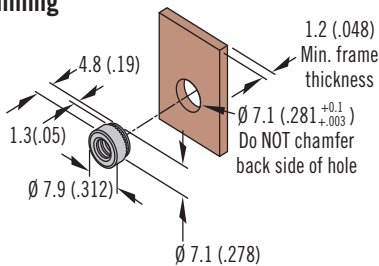


Clip-On Type Receptacle

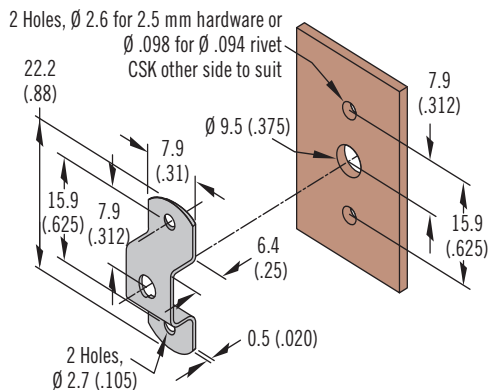


Self-Clinching Receptacle

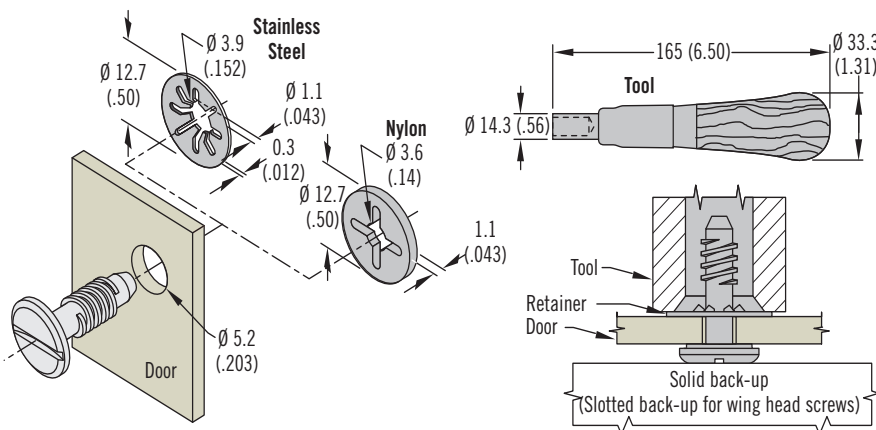
Free Running



Saddle Type Receptacle



Retainers



Type	Receptacle Part Number	
	Steel	Stainless steel
Flat receptacle rivet-on	09-41-101-11	09-41-101-24
Flat receptacle weld-on	~	09-41-103-24
Clip-on receptacle	09-43-101-11	09-43-101-24
Press-in receptacle	09-44-101-11	~
Saddle type receptacle	09-42-101-11	09-42-101-24

Retainer Style	Retainer Part Number	Tool Part Number
302 Stainless steel, passivated	09-6-1	12-0-20980-11
Nylon, black	09-49-102-42	

Material and Finish

Steel, zinc immersion coating or stainless steel

Installation Notes

See page 543 for self-clinching installation guidelines



12 Series Fast-Lead Screws

Studs · Medium

Material and Finish

Low carbon steel, case hardened, zinc plate, chromate plus sealer or stainless steel

How to Specify:

1. Determine your outer panel and frame thicknesses:

Outer panel P =

Frame thickness F =

2. Choose your receptacle

3. Choose the retainer style

4. Find the correct constant in table opposite using the receptacle and retainer selected

5. Add outer panel thickness (P), frame thickness (F), and the constant found in step 4 to determine your total material thickness (TMT)

$$TMT = P + F + \text{Constant}$$

6. Find the TMT value in the ranges given in Column 1 in the part number table

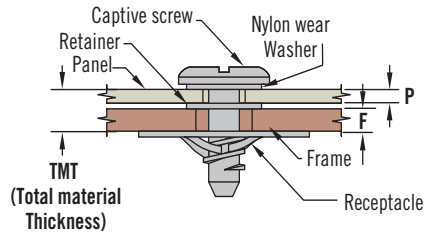
7. Confirm that the outer panel thickness P does not exceed the value given in Column 2. This will confirm that your retainer will install properly beyond the last thread and retain your screw to the outer panel

8. Going across the row in the part number table, find the part number that matches your desired head style

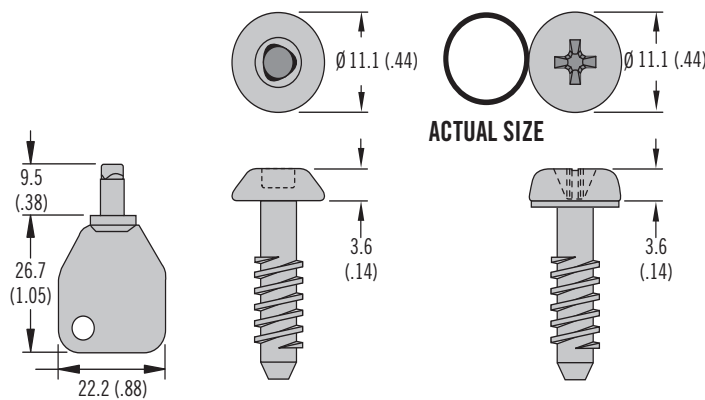
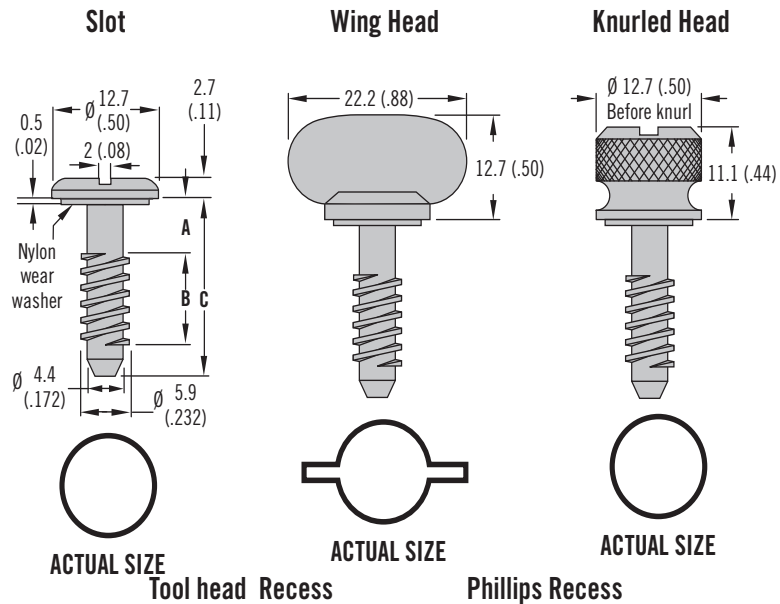
Notes

For full screw retraction, **B** must be less than inner panel thickness plus receptacle height

For stainless steel screw (slot, wing and knurled ONLY) replace last 2 digits of part number with "12".
Example: 12-11-102-12



Dimensions in millimeters (inch) unless otherwise stated



Tool head recess key order separately
Part number 29-90-214-10



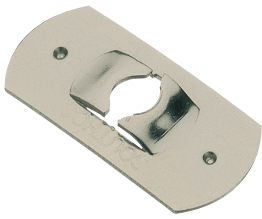
Dimensions in millimeters (inch) unless otherwise stated

Constant Table					
Retainer type	Receptacle Type				
	Flat	Clip	Saddle	Side	Press-In
Stainless steel	0.38 (.015)	1.1 (.045)	4.0 (.156)	1.5 (.060)	-1.3 (-.050)
Nylon	1.4 (.054)	2.0 (.079)	5.31 (.210)	1.5 (.060)	-0.5 (-.020)

Part Number

See table

Column 1		Column 2	Screw Assembly Part Number					Dimensions		
TMT to be Fastened		Max. Thickness of Outer Panel P	Slotted	Wing	Knurled	Tool Head Recess	Phillips Recess	A	B	C
Min.	Max.									
1.3 (.050)	3.2 (.125)	0.6 (.025)	12-11-102-11	12-12-102-11	12-13-102-11	12-T-102	12-P-102	2.5 (.100)	5.8 (.228)	12.3 (.486)
2.5 (.100)		1.9 (.075)	12-11-103-11	12-12-103-11	12-13-103-11	12-T-103	12-P-103	3.8 (.150)	4.5 (.178)	
1.3 (.050)	6.4 (.250)	0.6 (.025)	12-11-202-11	12-12-202-11	12-13-202-11	12-T-202	12-P-202	2.5 (.100)	9.0 (.353)	15.5 (.611)
2.5 (.100)		1.9 (.075)	12-11-203-11	12-12-203-11	12-13-203-11	12-T-203	12-P-203	3.8 (.150)	7.7 (.303)	
3.8 (.150)		3.2 (.125)	12-11-204-11	12-12-204-11	12-13-204-11	12-T-204	12-P-204	5.1 (.200)	6.4 (.253)	
5.1 (.200)		4.5 (.175)	12-11-205-11	12-12-205-11	12-13-205-11	12-T-205	12-P-205	6.4 (.250)	5.2 (.203)	
1.3 (.050)	9.5 (.375)	0.6 (.025)	12-11-302-11	12-12-302-11	12-13-302-11	12-T-302	12-P-302	2.5 (.100)	12.1 (.478)	18.7 (.736)
2.5 (.100)		1.9 (.075)	12-11-303-11	12-12-303-11	12-13-303-11	12-T-303	12-P-303	3.8 (.150)	10.9 (.428)	
3.8 (.150)		3.2 (.125)	12-11-304-11	12-12-304-11	12-13-304-11	12-T-304	12-P-304	5.1 (.200)	9.6 (.378)	
5.1 (.200)		4.5 (.175)	12-11-305-11	12-12-305-11	12-13-305-11	12-T-305	12-P-305	6.4 (.250)	8.3 (.328)	
7.6 (.300)		7.0 (.275)	12-11-307-11	12-12-307-11	12-13-307-11	12-T-307	12-P-307	8.9 (.350)	5.8 (.228)	
2.5 (.100)	12.7 (.500)	1.9 (.075)	12-11-403-11	12-12-403-11	12-13-403-11	12-T-403	12-P-403	3.8 (.150)	14.1 (.553)	21.9 (.861)
3.8 (.150)		3.2 (.125)	12-11-404-11	12-12-404-11	12-13-404-11	12-T-404	12-P-404	5.1 (.200)	12.8 (.503)	
5.1 (.200)		4.5 (.175)	12-11-405-11	12-12-405-11	12-13-405-11	12-T-405	12-P-405	6.4 (.250)	11.5 (.453)	
7.6 (.300)		7.0 (.275)	12-11-407-11	12-12-407-11	12-13-407-11	12-T-407	12-P-407	8.9 (.350)	9.0 (.353)	
10.2 (.400)		9.5 (.375)	12-11-409-11	12-12-409-11	12-13-409-11	12-T-409	12-P-409	11.4 (.450)	6.4 (.253)	
2.5 (.100)	15.9 (.625)	1.9 (.075)	12-11-503-11	12-12-503-11	12-13-503-11	12-T-503	12-P-503	3.8 (.150)	17.2 (.678)	25 (.986)
3.8 (.150)		3.2 (.125)	12-11-504-11	12-12-504-11	12-13-504-11	12-T-504	12-P-504	5.1 (.200)	16.0 (.628)	
5.1 (.200)		4.5 (.175)	12-11-505-11	12-12-505-11	12-13-505-11	12-T-505	12-P-505	6.4 (.250)	14.7 (.578)	
7.6 (.300)		7.0 (.275)	12-11-507-11	12-12-507-11	12-13-507-11	12-T-507	12-P-507	8.9 (.350)	12.1 (.478)	
10.2 (.400)		9.5 (.375)	12-11-509-11	12-12-509-11	12-13-509-11	12-T-509	12-P-509	11.4 (.450)	9.6 (.378)	
12.7 (.500)		12.1 (.475)	12-11-511-11	12-12-511-11	12-13-511-11	12-T-511	12-P-511	14 (.550)	7.1 (.278)	
2.5 (.100)	19.1 (.750)	1.9 (.075)	12-11-603-11	12-12-603-11	12-13-603-11	12-T-603	12-P-603	3.8 (.150)	20.4 (.803)	28.2 (1.111)
3.8 (.150)		3.2 (.125)	12-11-604-11	12-12-604-11	12-13-604-11	12-T-604	12-P-604	5.1 (.200)	19.1 (.753)	
5.1 (.200)		4.5 (.175)	12-11-605-11	12-12-605-11	12-13-605-11	12-T-605	12-P-605	6.4 (.250)	17.9 (.703)	
7.6 (.300)		7.0 (.275)	12-11-607-11	12-12-607-11	12-13-607-11	12-T-607	12-P-607	8.9 (.350)	15.3 (.603)	
10.2 (.400)		9.5 (.375)	12-11-609-11	12-12-609-11	12-13-609-11	12-T-609	12-P-609	11.4 (.450)	12.8 (.503)	
12.7 (.500)		12.1 (.475)	12-11-611-11	12-12-611-11	12-13-611-11	12-T-611	12-P-611	14 (.550)	10.2 (.403)	
15.3 (.600)		14.6 (.575)	12-11-613-11	12-12-613-11	12-13-613-11	12-T-613	12-P-613	16.5 (.650)	7.7 (.303)	
17.8 (.700)		17.2 (.675)	12-11-615-11	12-12-615-11	12-13-615-11	12-T-615	12-P-615	19.1 (.750)	5.2 (.203)	



12 Series Fast-Lead Screws

Receptacles · Medium

Dimensions in millimeters (inch) unless otherwise stated

Material and Finish

Steel, zinc immersion coating or stainless steel

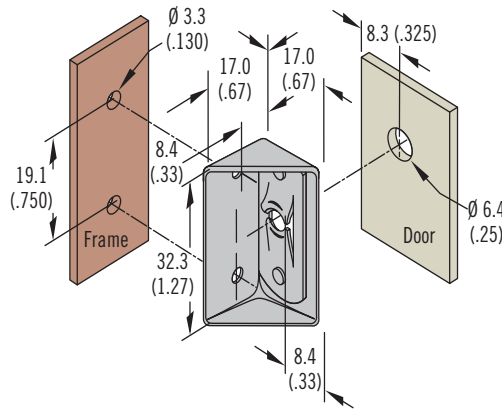
Side mount receptacle: 1064 steel, zinc immersion coating

Press-in receptacle: low carbon steel, case hardened and zinc plate, chromate plus sealer

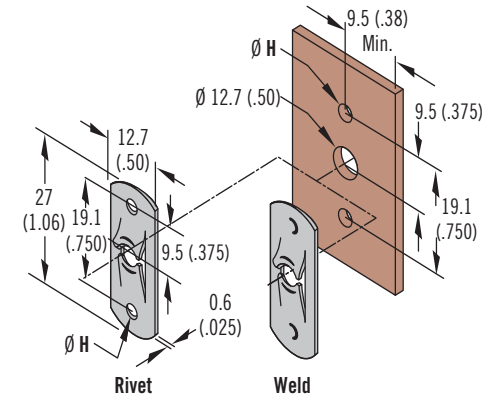
Installation Notes

See page 543 for self-clinching installation guidelines

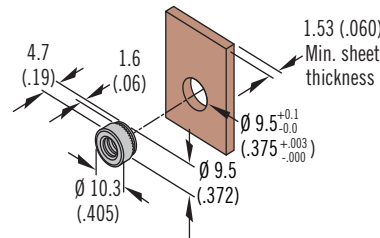
Side Mount Receptacle



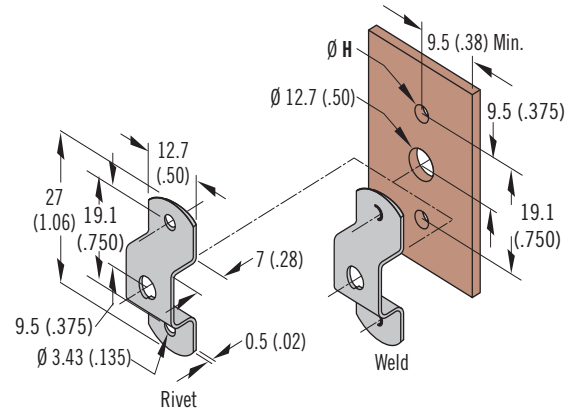
Flat Type Receptacle



Self-Clinching Receptacle Free Running



Saddle Type Receptacle



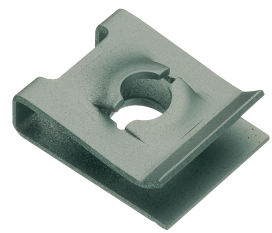
Part Number

See table

Type	Ø H	Receptacle Part Number	
		Steel	Stainless steel
Side mount receptacle	~	12-90-101-10	~
Flat receptacle rivet	2.7 (.105)	12-11015-13	12-11015-14
	3.4 (.135)	12-11020-11	12-11020-13
Flat receptacle weld-on	~	~	12-11016-11
Press-in receptacle	~	12-44-101-11	~
Saddle receptacle rivet	3.4 (.135)	12-11043-11	12-11043-12
Saddle receptacle weld-on	~	~	12-11044-12

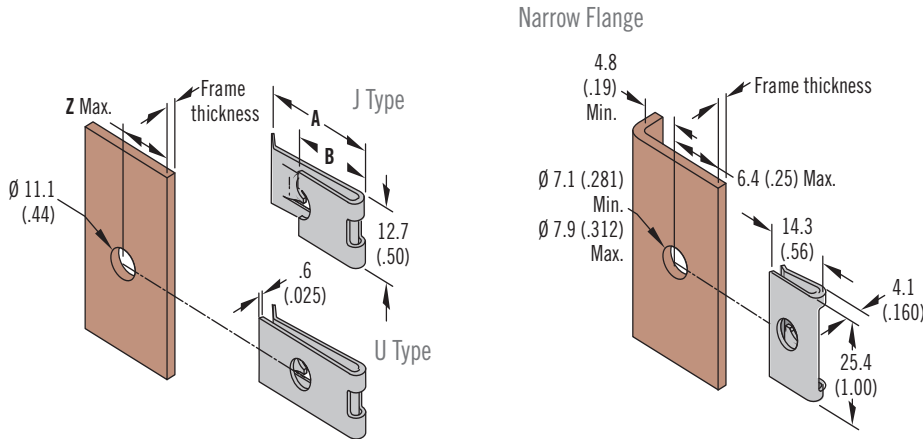


12 Series Fast-Lead Screws Receptacles / retainers · Medium



Dimensions in millimeters (inch) unless otherwise stated

Clip-On Type Receptacle



Type	Frame Thickness	A	B	Z Max.	Receptacle Part Number	
					Steel	Stainless steel
Clip-on receptacle - J	0.8 (.031) to 2.8 (.109)	24.8 (.98)	14.2 (.56)	12.7 (.50)	12-11025-11	~
Clip-on receptacle - U	0.8 (.031) to 2.8 (.109)	25.9 (1.02)			11.9 (.47)	12-11017-11
	2.8 (.109) - 4.1 (.161)		~	12-11027-11		~
	2.8 (.109) - 4.1 (.161)	24.8 (.98)	13.5 (.53)	~	12-11027-12	
	4.1 (.161) - 5.5 (.213)			11.1 (.44)	12-11029-11	~
	5.4 (.213) - 6.7 (.265)	24.5 (.97)	13.01 (.51)	~	12-11031-11	~
Clip-on receptacle - Narrow flange	0.8 (.031) - 2.8 (.109)	~	~	~	12-11050-27	~

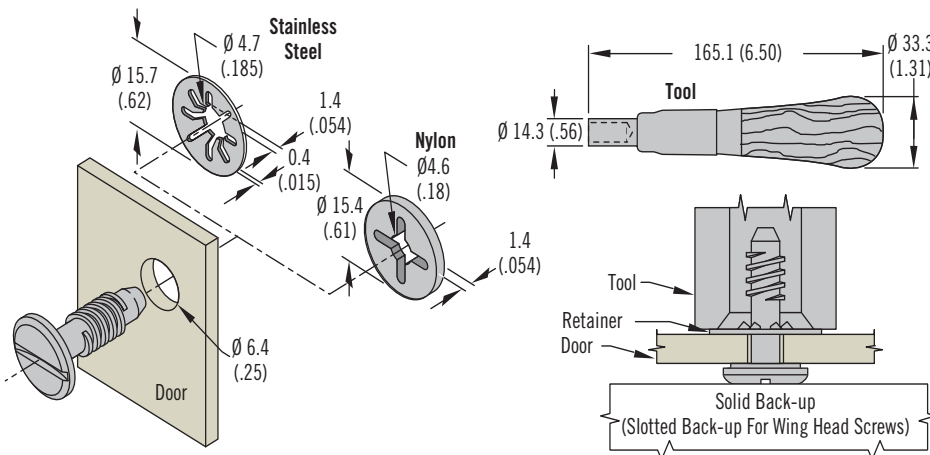
Material and Finish

Steel, zinc immersion coating or stainless steel

Part Number

See table

Retainers



Retainer Style	Retainer Part Number	Tool Part Number
304 Stainless steel, passivated	12-6-1	12-0-20980-11
Nylon, black	12-11064-42	

Part Number

See table



17 Series Fast-Lead Screws

Studs · Large

Dimensions in millimeters (inch) unless otherwise stated

Material and Finish

Low carbon steel, case hardened, zinc plated, chromate plus sealer or stainless steel

1. Determine your outer panel and frame thicknesses:

Outer panel P =

Frame thickness F =

2. Choose your receptacle

3. Choose the retainer style

4. Find the correct constant in table opposite using the receptacle and retainer selected

5. Add outer panel thickness (P), frame thickness (F), and the constant found in step 4 to determine your total material thickness (TMT)

TMT = P+F+Constant

6. Find the TMT value in the ranges given in Column 1 in the part number table

7. Confirm that the outer panel thickness P does not exceed the value given in Column 2. This will confirm that your retainer will install properly beyond the last thread and retain your screw to the outer panel

8. Going across the row in the part number table, find the part number that matches your desired head style

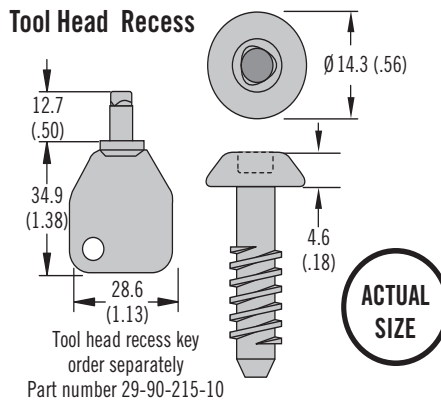
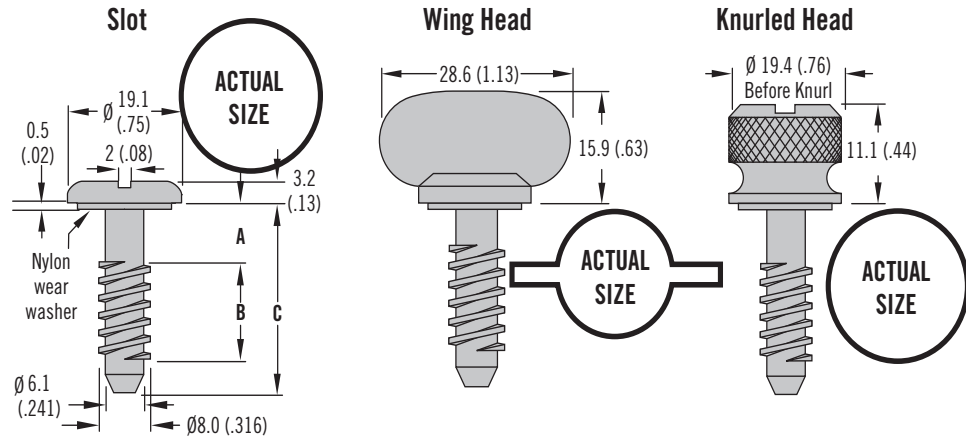
Notes

For full screw retraction, **B** must be less than inner panel thickness plus receptacle height

For stainless steel screw (slotted, wing and knurled ONLY) replace last 2 digits of part number with "12". Example: 17-11-104-12

Part Number

See table

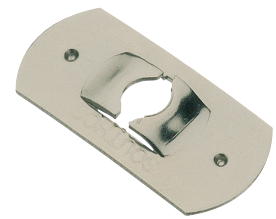


Constant Table			
Retainer type	Receptacle Type		
	Flat	Clip	Side
Stainless steel	0.38 (.015)	2.2 (.086)	1.5 (.060)
Nylon	1.9 (.076)	3.5 (.137)	1.5 (.060)

Column 1		Column 2	Screw Assembly Part Number				Dimensions		
TMT to be Fastened		Max. Thickness Of Outer Panel P	Slotted	Wing	Knurled	Tool Head Recess	A	B	C
Min.	Max.								
2.5 (.100)	6.4 (.250)	3.1 (.120)	17-11-104-11	17-12-104-11	17-13-104-11	17-T-104	5.1 (.200)	9.1 (.360)	19.1 (.751)
5.1 (.200)		5.6 (.220)	17-11-106-11	17-12-106-11	17-13-106-11	17-T-106	7.6 (.300)	6.6 (.260)	
2.5 (.100)	9.5 (.375)	3.1 (.120)	17-11-204-11	17-12-204-11	17-13-204-11	17-T-204	5.1 (.200)	12.3 (.485)	22.3 (.876)
5.1 (.200)		5.6 (.220)	17-11-206-11	17-12-206-11	17-13-206-11	17-T-206	7.6 (.300)	9.8 (.385)	
7.6 (.300)		8.1 (.320)	17-11-208-11	17-12-208-11	17-13-208-11	17-T-208	10.2 (.400)	7.2 (.285)	
2.5 (.100)	12.7 (.500)	3.1 (.120)	17-11-304-11	17-12-304-11	17-13-304-11	17-T-304	5.1 (.200)	15.5 (.610)	25.4 (1.001)
5.1 (.200)		5.6 (.220)	17-11-306-11	17-12-306-11	17-13-306-11	17-T-306	7.6 (.300)	13 (.510)	
7.6 (.300)		8.1 (.320)	17-11-308-11	17-12-308-11	17-13-308-11	17-T-308	10.2 (.400)	10.4 (.410)	
10.2 (.400)		10.7 (.420)	17-11-310-11	17-12-310-11	17-13-310-11	17-T-310	12.7 (.500)	7.9 (.310)	
2.5 (.100)	15.9 (.625)	3.1 (.120)	17-11-404-11	17-12-404-11	17-13-404-11	17-T-404	5.1 (.200)	18.7 (.735)	28.6 (1.126)
5.1 (.200)		5.6 (.220)	17-11-406-11	17-12-406-11	17-13-406-11	17-T-406	7.6 (.300)	16.1 (.635)	
7.6 (.300)		8.1 (.320)	17-11-408-11	17-12-408-11	17-13-408-11	17-T-408	10.2 (.400)	13.6 (.535)	
10.2 (.400)		10.7 (.420)	17-11-410-11	17-12-410-11	17-13-410-11	17-T-410	12.7 (.500)	11.1 (.435)	
12.7 (.500)		13.2 (.520)	17-11-412-11	17-12-412-11	17-13-412-11	17-T-412	15.2 (.600)	8.5 (.335)	
15.2 (.600)		15.8 (.620)	17-11-414-11	17-12-414-11	17-13-414-11	17-T-414	17.8 (.700)	6.0 (.235)	

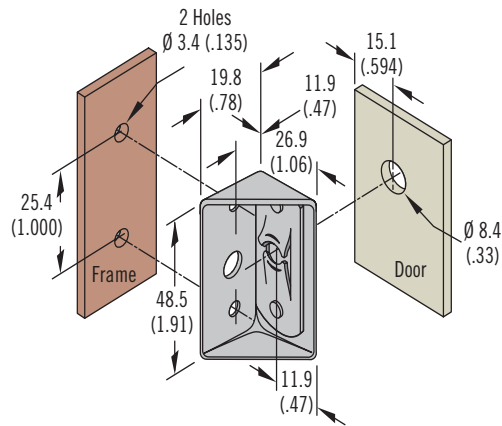


17 Series Fast-Lead Screws Receptacles / retainers · Large

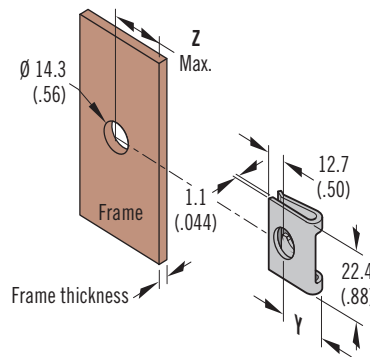


Dimensions in millimeters (inch) unless otherwise stated

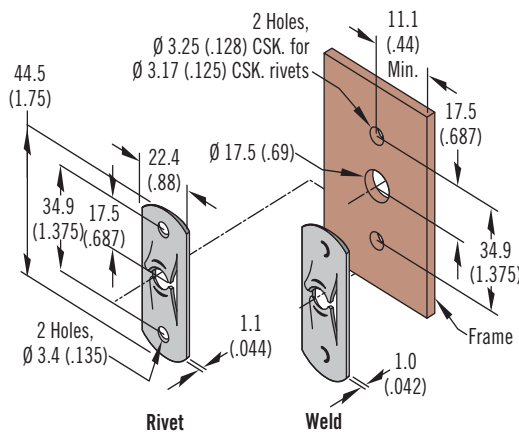
Side Mount Receptacle



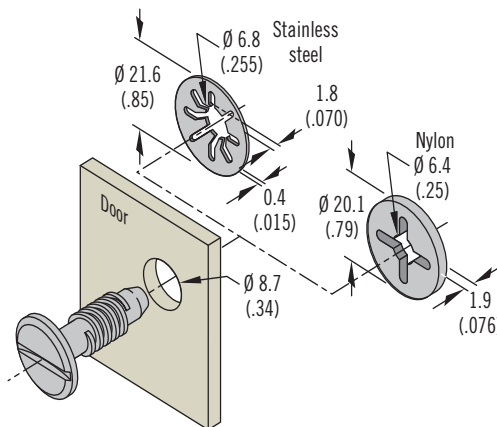
Clip-On Type Receptacle



Flat Type Receptacle



Retainers



Material and Finish

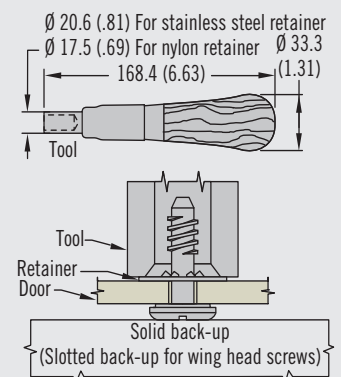
Steel, zinc immersion coating or stainless steel

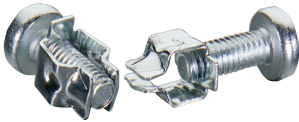
Type	Frame Thickness	Y	Z Max.	Receptacle Part Number	
				Steel	Stainless steel
Side mount receptacle	~	~	~	17-90-101-10	~
Clip-on type receptacle	1.1 - 2.4 (.045 - .093)	15.7 (.62)	15.0 (.59)	17-10017-11	~
	2.4 - 3.6 (.093 - .142)	14.7 (.58)	14.2 (.56)	17-10027-11	~
	3.6 - 4.9 (.142 - .191)	13.7 (.54)		17-10029-11	~
	4.9 - 6.1 (.191 - .240)	13.5 (.53)	13.5 (.53)	17-10031-11	~
	6.1 - 7.3 (.240 - .289)	13.0 (.51)	12.7 (.50)	17-10033-11	~
Flat type receptacle - Rivet	~	~	~	17-10015-13	17-10015-14
Flat type receptacle - Weld	~	~	~	~	17-10016-11

Retainer Style	Retainer Part Number	Tool Part Number
302 Stainless steel, passivated	17-6-1	17-0-24585-11
Nylon, black	17-10054-42	17-0-21333-11

Part Number

See table





DM Inserts

Monosert rack attach

- Front install insert for rack attach applications

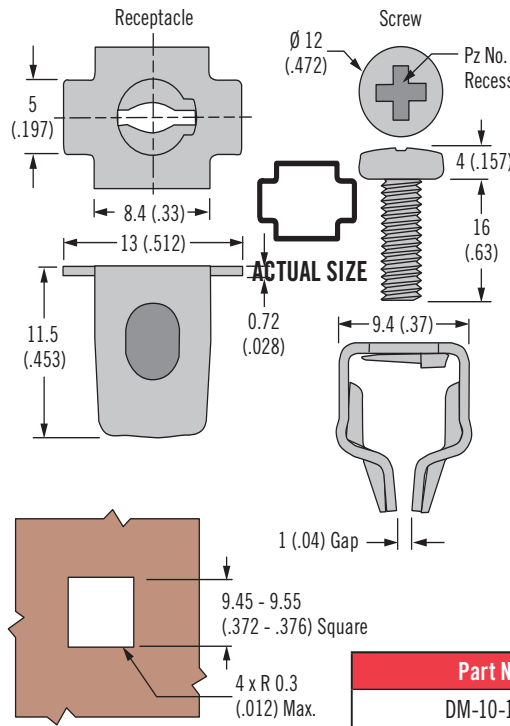
Material and Finish

Steel, zinc plated

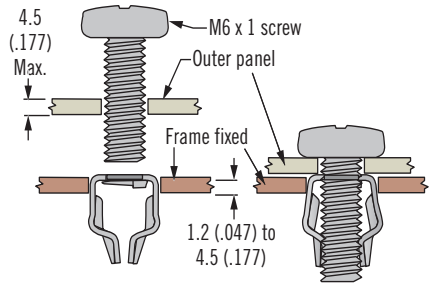
Installation Notes

Max. tightening torque:
2 N•m (17.7 in•lbf)

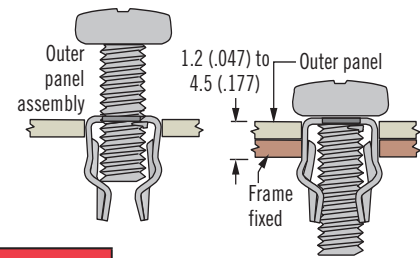
Dimensions in millimeters (inch) unless otherwise stated



Standard Installation



Alternative Installation



Part Number
DM-10-10216-10



DM Inserts

Duosert rack attach

- Front install insert for rack attach applications

Material and Finish

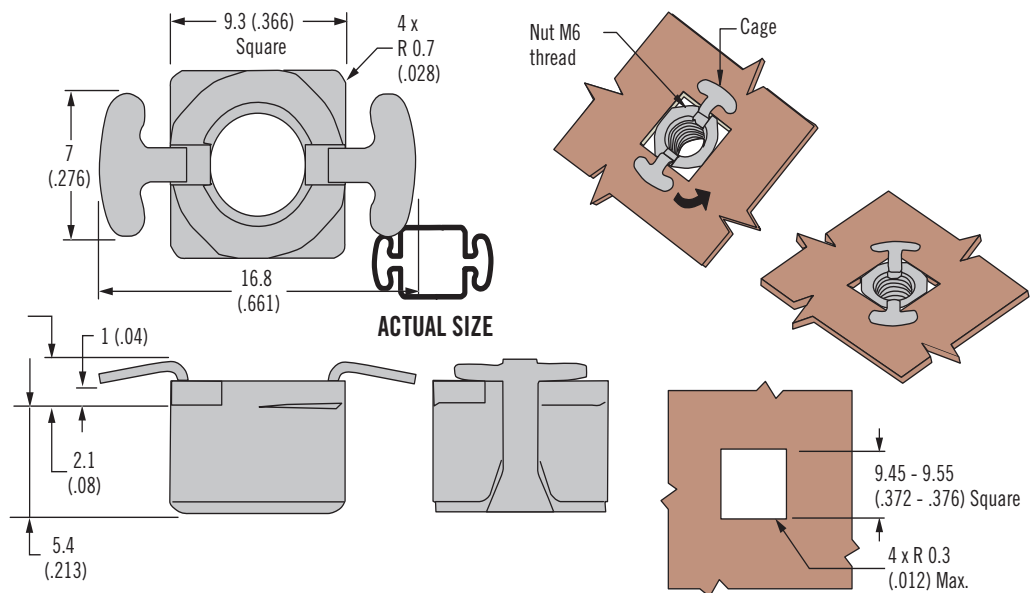
Zinc alloy and stainless steel, natural

Installation Notes

Max. tightening torque:
10 N•m (88.5 in•lbf)

Max. panel thickness:
1 - 1.2 (.039 - .047)

Recommended installation tool
requires a flat blade screwdriver



Part Number
DM-95-10-12-11

Receptacle only. (Screw not supplied)



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