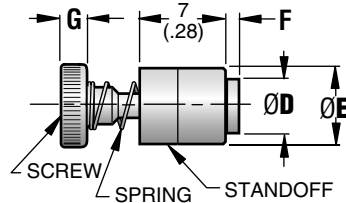
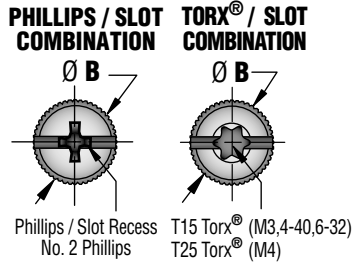


Southco® Captive Fasteners

Miniature Series, Flare-in Style

- Smaller footprint for limited space applications
- **NEW Features:**
- Heat treated steel screw for optimum strength
- Combination recesses for maximum tool options

M4 Now Available



Material and Finish

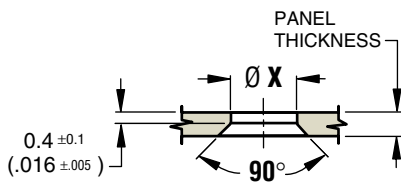
SCREW: Hardened carbon steel, zinc plate, chromate plus sealer
 SPRING: 300 series stainless steel, passivated.
 STANDOFF: Aluminum, natural
 Torx® is a registered trademark of the Camcar Division of Textron Inc.

Note: subtract 0.25 (.01) from ØB for smooth head style.

Installation

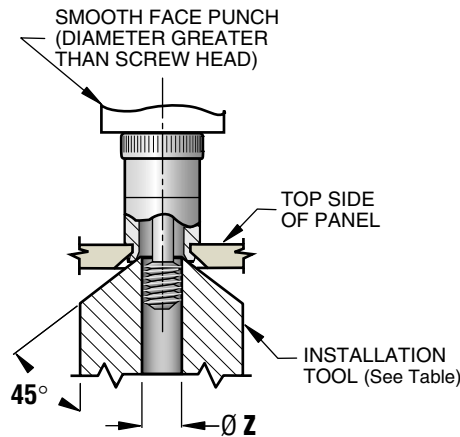
1. Prepare panel as shown.
2. Use **light pressure** to flare standoff, assuring parallel surfaces on the punch and installation tool.

For installation and product strength guidelines contact Southco or visit our web site at www.southco.com

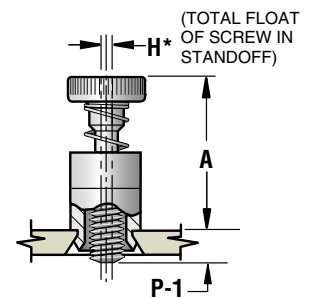


Installation Tool

1095 Steel, hardened, zinc plated plus bright chromate dip.

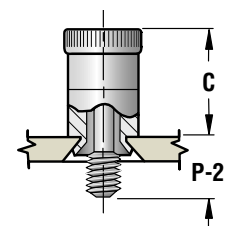


Unfastened



* Value represents float in unfastened position

Fastened



Note: P-1, P-2 measured from the top side of panel

For assemblies to accommodate thicker panels, or additional styles and sizes contact Southco.

THREAD SIZE	PANEL THICKNESS		PART NUMBERS				A	Ø B	C	Ø D	Ø E	F	G	H*	P-1	P-2	PANEL PREPARATION		TOOL PART NUMBER
			KNURLED HEAD		SMOOTH HEAD												Ø X	Ø Z	
			PHILLIPS / SLOTTED	TORX® / SLOTTED	PHILLIPS / SLOTTED	TORX® / SLOTTED													
4-40 UNC	0.8 (.031)	2.4 (.094)	52-19-11-4•	52-17-11-4•	52-1A-11-4•	52-18-11-4•	14 (.55)	7 (.28)	9.6 (.38)	4.6 (.183)	6.4 (.25)	1 (.041)	2.5 (.1)	0.5 (.018)	0.8 (.031)	5.3 (.21)	4.8 ^{+0.09} _{-0.04} (.187 ^{+0.003} _{-.000})	3 (.120)	47-104 •
6-32 UNC	1.5 (.058)	3.2 (.125)	52-29-21-4•	52-27-21-4•	52-2A-21-4•	52-28-21-4•	15 (.59)	8 (.31)	9.6 (.38)	5.3 (.209)	7 (.28)	1.8 (.071)	2.5 (.1)	0.7 (.028)	1.8 (.07)	6.8 (.27)	5.4 ^{+0.09} _{-0.04} (.213 ^{+0.003} _{-.000})	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•	14 (.55)	7 (.28)	9.6 (.38)	4.6 (.183)	6.4 (.25)	1 (.041)	2.5 (.1)	0.6 (.023)	0.8 (.031)	5.3 (.21)	4.8 ^{+0.09} _{-0.04} (.187 ^{+0.003} _{-.000})	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•	15.2 (.60)	9.4 (.37)	10.1 (.40)	6.7 (.26)	8.6 (.34)	1.8 (.07)	3 (.12)	0.7 (.028)	1.8 (.07)	6.8 (.27)	6.8 ^{+0.08} _{-0.04} (.266 ^{+0.005} _{-.000})	4.2 (.166)	47-108 •

millimeter (inch)
 millimeter (inch)

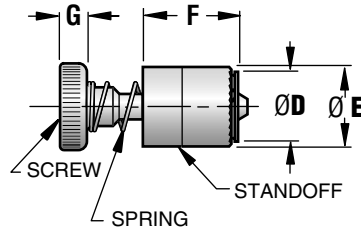
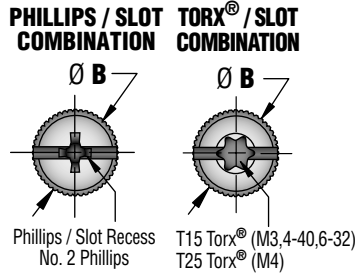
Dimensions without tolerances are for reference only.

Captive Fasteners
 Captive Screws

Southco® Captive Fasteners

Miniature Series, Press-in Style

- Smaller footprint for limited space applications
- **NEW Features:**
- Heat treated steel screw for optimum strength
- Combination recesses for maximum tool options
- Increased float in unfastened position



Material and Finish

SCREW: Hardened carbon steel, zinc plate, chromate plus sealer
 SPRING: 300 series stainless steel, passivated.
 STANDOFF: Carbon steel, zinc plate, chromate plus sealer

Torx® is a registered trademark of the Camcar Division of Textron Inc.

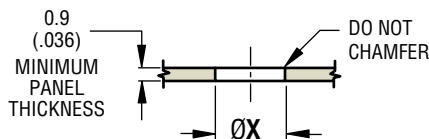
Note: subtract .25 (.01) from ØB for smooth head style.

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

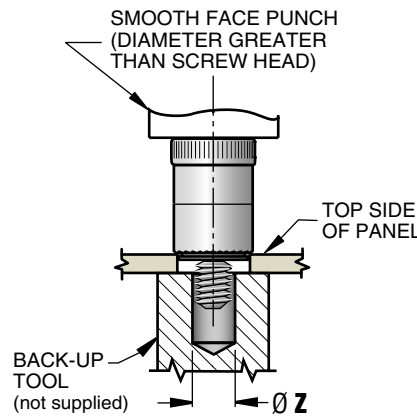
Installation

1. Prepare panel as shown. Outside edge of hole must be sharp.
2. Press the assembly into your panel, assuring parallel surfaces on the punch and back-up tool.

For installation and product strength guidelines contact Southco or visit our web site at www.southco.com



NOTE: Recommended minimum distance from edge of panel to centerline of hole is 1.5 x ØX for press-in version. Installation closer to panel edge is possible, contact Southco for guidelines.



Unfastened

(TOTAL FLOAT OF SCREW IN STANDOFF)
H*

* Value represents float in unfastened position

Fastened

Note: P-1, P-2 measured from the top side of panel

Captive Fasteners
Captive Screws

THREAD SIZE	PART NUMBERS				A	Ø B	C	Ø D	Ø E	F	G	H*	P-1	P-2	PANEL PREPARATION	
	KNURLED HEAD		SMOOTH HEAD												Ø X	Ø Z
	PHILLIPS / SLOTTED	TORX® / SLOTTED	PHILLIPS / SLOTTED	TORX® / SLOTTED												
4-40 UNC	52-19-51-4 •	52-17-51-4 •	52-1A-51-4 •	52-18-51-4 •	14 (.55)	7 (.28)	9.6 (.38)	5.5 (.217)	6.4 (.25)	7.9 (.31)	2.5 (.1)	0.5 (.018)	0.9 (.036)	5.3 (.21)	5.6 ^{+0.04} _(.219^{+0.03}_{-.000})	3 (.120)
	52-19-53-4 •	52-17-53-4 •	52-1A-53-4 •	52-18-53-4 •									2.5 (.1)	6.8 (.27)		
6-32 UNC	52-29-51-4 •	52-27-51-4 •	52-2A-51-4 •	52-28-51-4 •	15.5 (.61)	8 (.31)	10.4 (.41)	6.3 (.247)	7 (.28)	8.6 (.34)	2.5 (.1)	0.7 (.028)	0.9 (.036)	6.1 (.24)	6.4 ^{+0.04} _(.250^{+0.03}_{-.000})	3.7 (.144)
	52-29-53-4 •	52-27-53-4 •	52-2A-53-4 •	52-28-53-4 •									2.5 (.1)	7.6 (.30)		
M3 X 0.5	52-39-51-4 •	52-37-51-4 •	52-3A-51-4 •	52-38-51-4 •	14 (.55)	7 (.28)	9.6 (.38)	5.5 (.217)	6.4 (.25)	7.9 (.31)	2.5 (.1)	0.6 (.023)	0.9 (.036)	5.3 (.21)	5.6 ^{+0.04} _(.219^{+0.03}_{-.000})	3.2 (.126)
	52-39-53-4 •	52-37-53-4 •	52-3A-53-4 •	52-38-53-4 •									2.5 (.1)	6.8 (.27)		
M4 X 0.7	52-49-51-4 •	52-47-51-4 •	52-4A-51-4 •	52-48-51-4 •	16 (.63)	9.4 (.37)	10.8 (.43)	7.9 (.31)	8.7 (.34)	8.6 (.34)	3 (.12)	0.7 (.028)	0.9 (.036)	6.1 (.24)	8 ^{+0.00} _(.315^{+0.00}_{-.003})	4.4 (.173)
	52-49-53-4 •	52-47-53-4 •	52-4A-53-4 •	52-48-53-4 •									2.5 (.1)	7.6 (.30)		

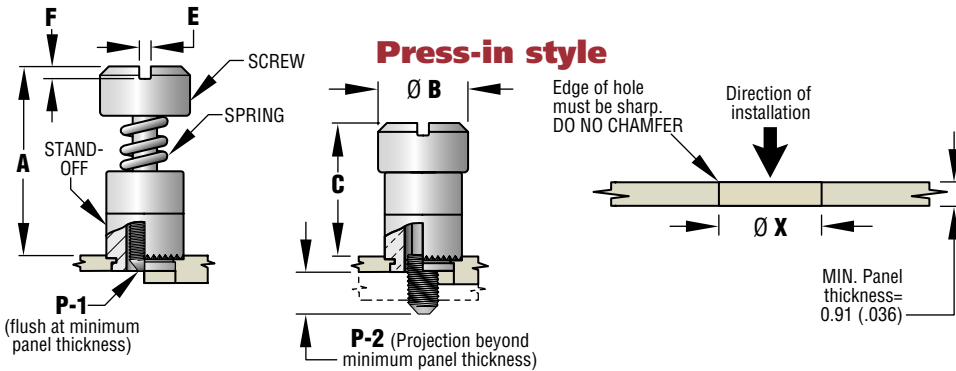
For additional styles and sizes contact Southco for details.

millimeter (inch)
 millimeter (inch)
 Dimensions without tolerances are for reference only.

Southco® Captive Fasteners

Miniature Polished Series

- Smaller footprint for limited space applications



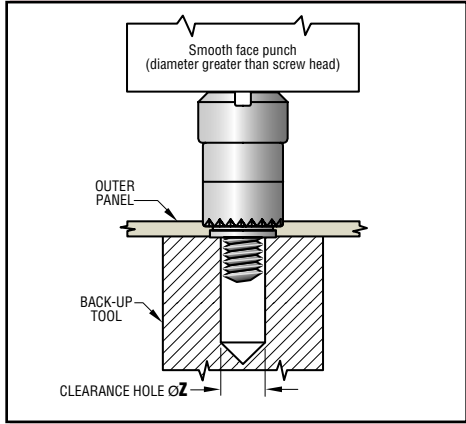
THREAD SIZE	A	Ø B	C	E&F	P-2	PART NUMBERS	Ø X $\begin{smallmatrix} \pm 0.04 \\ (+.003 \\ -.000) \end{smallmatrix}$	Ø Z	Float of screw in standoff Total Movement
4-40 UNC	15.5 (.61)	7 (.276)	11.1 (.43)	0.9 (.036)	4.6 (.18)	52-50-301-24 •	5.6 (.219)	3.1 (.120)	0.5 (.018)
6-32 UNC	17.3 (.68)	8 (.307)	11.9 (.47)	1.1 (.045)	5.3 (.21)	52-50-401-24 •	6.4 (.250)	3.7 (.144)	0.7 (.028)
M3X0.5	15.8 (.62)	7 (.276)	11.2 (.44)	0.9 (.036)	4.6 (.18)	52-50-601-24 •	5.6 (.219)	3.2 (.126)	0.6 (.023)

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



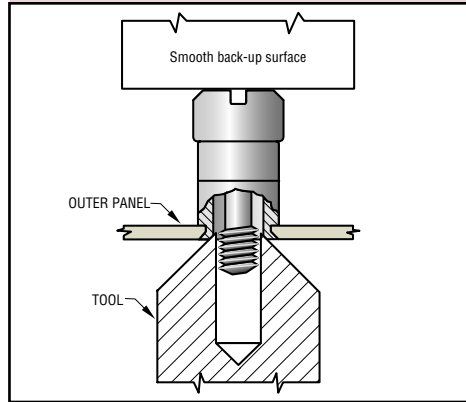
Installation

Press knurl into panel until only top of knurl is visible. To insure proper installation, punch surface and back-up tool surface must remain parallel during installation. A hardened steel back-up tool is recommended.



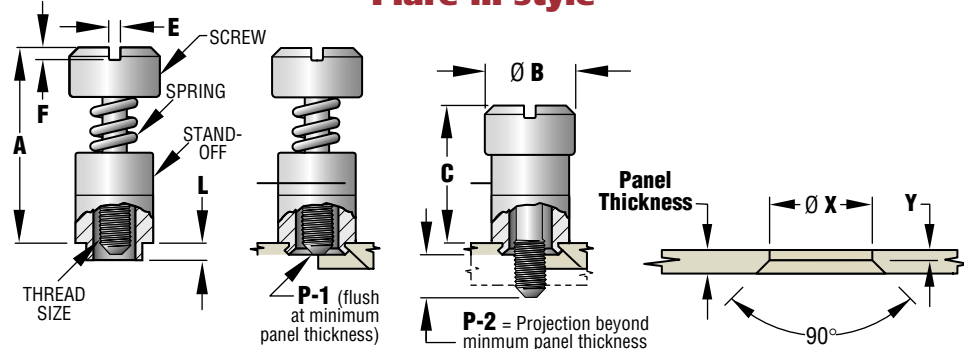
Material and Finish

SCREW: 300 Stainless steel, passivated.
 SPRING: 300 Stainless steel, passivated.
 STANDOFF: (Press-in) 300 Stainless steel, passivated. (Flare-in) 300 Stainless steel, passivated.

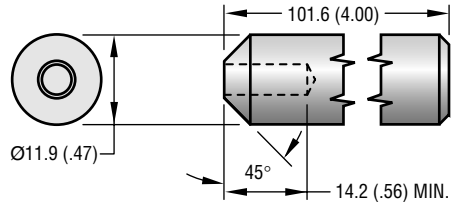


Captive Screws

Flare-in style



NOTE: Recommended minimum distance from edge of panel to centerline of hole is 1.5 x ØX.



Installation Tool
 1095 Steel, hardened.

Thread size	A	Ø B	C	E&F	P-2	L	PANEL THICKNESS		PART NUMBERS	Ø X $\begin{smallmatrix} \pm 0.09 \\ (+.003 \\ -.000) \end{smallmatrix}$	Y
							MIN.	MAX.			
4-40 UNC	15.8 (.62)	7 (.276)	11.2 (.44)	0.9 (.036)	4.6 (.18)	1 (.041)	.8 (.031)	2.4 (.094)	52-10-301-24 •	4.8 (.187)	0.4 (.016)
6-32 UNC	17.3 (.68)	8 (.307)	11.9 (.47)	1.1 (.045)	5.3 (.21)	1.8 (.070)	1.5 (.058)	3.2 (.125)	52-10-402-24 •	5.4 (.213)	0.4 (.016)
M3X0.5	15.8 (.62)	7 (.276)	11.2 (.44)	0.9 (.036)	4.6 (.18)	1 (.041)	0.8 (.031)	2.3 (.094)	52-10-601-24 •	4.8 (.187)	0.4 (.016)

Assemblies to accommodate thicker panels are available. Contact Southco for details.

For Thread size	USE TOOL PART NUMBER
4-40 UNC	47-104
6-32 UNC	47-106
M3X0.5	47-104

millimeter (inch)
 millimeter (inch)
 Dimensions without tolerances are for reference only.