

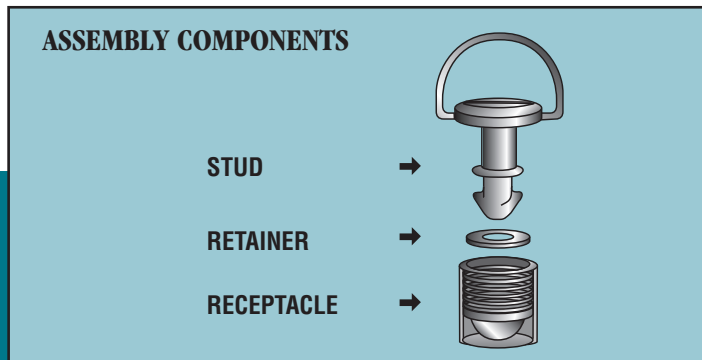
Southco® Quarter-turn Fasteners

How to Choose a Quarter-turn Fastener Assembly

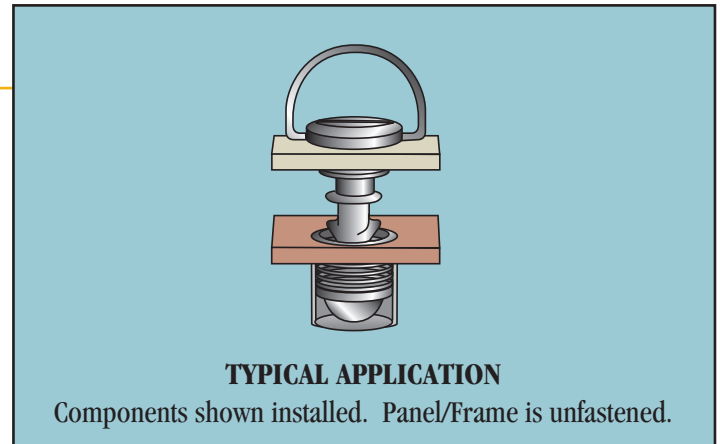
To Select a Quarter-turn Assembly:

- 1.) Choose your receptacle first
- 2.) Choose your stud
- 3.) Choose your retainer

In a typical application, the stud is installed into the outer panel and held captive with the retainer. The receptacle is permanently secured to the frame or inner panel.



To fasten, turn the stud one quarter-turn. The stud engages with the installed receptacle and efficiently secures the panels together.



A quarter-turn in the opposite direction disengages the assembly. After disengaging from the receptacle, the stud remains captive to the outer panel, ready for use again.

Southco offers three sizes of quarter-turn fasteners with multiple head styles and shank diameters. Stud lengths are available in 0.5 mm increments.

Headstyles available



Available accessories include:

Wear Washers: use to protect the panel surface from the turning stud. Cupped style helps align ejector spring.

Ejector Spring: use to provide a visual indication of whether or not the stud is fastened or unfastened.

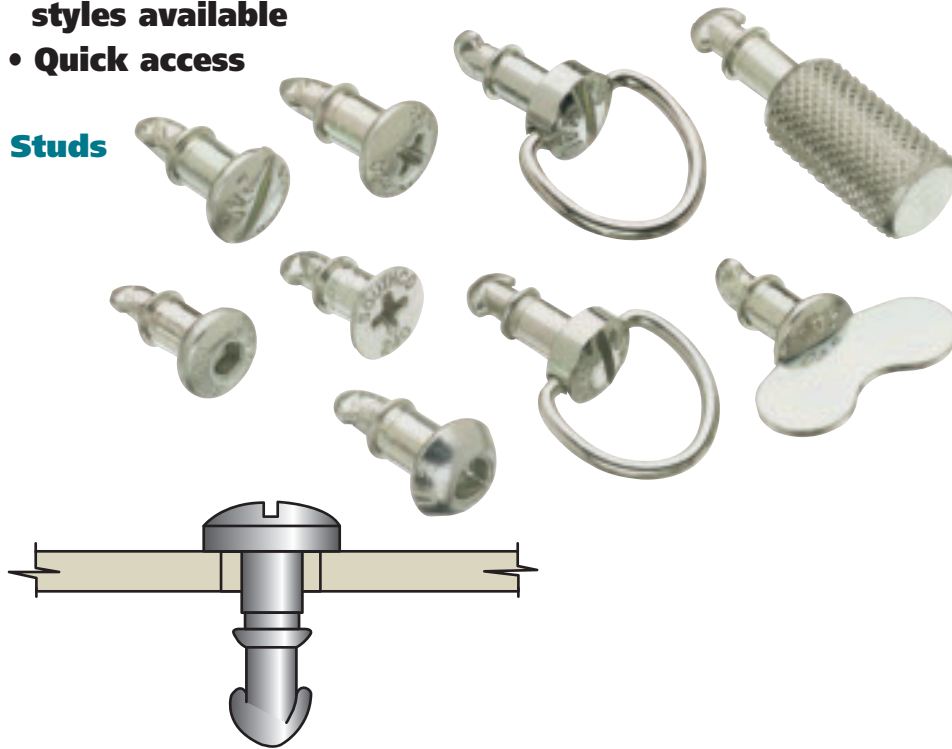
Sealing Washer: use to provide a seal under the head of the quarter-turn stud.

Southco® Quarter-turn Fasteners

Medium Series

- Widest variety of assemblies
- Snap-in studs, spring-ejected, and full-retraction styles available
- Quick access

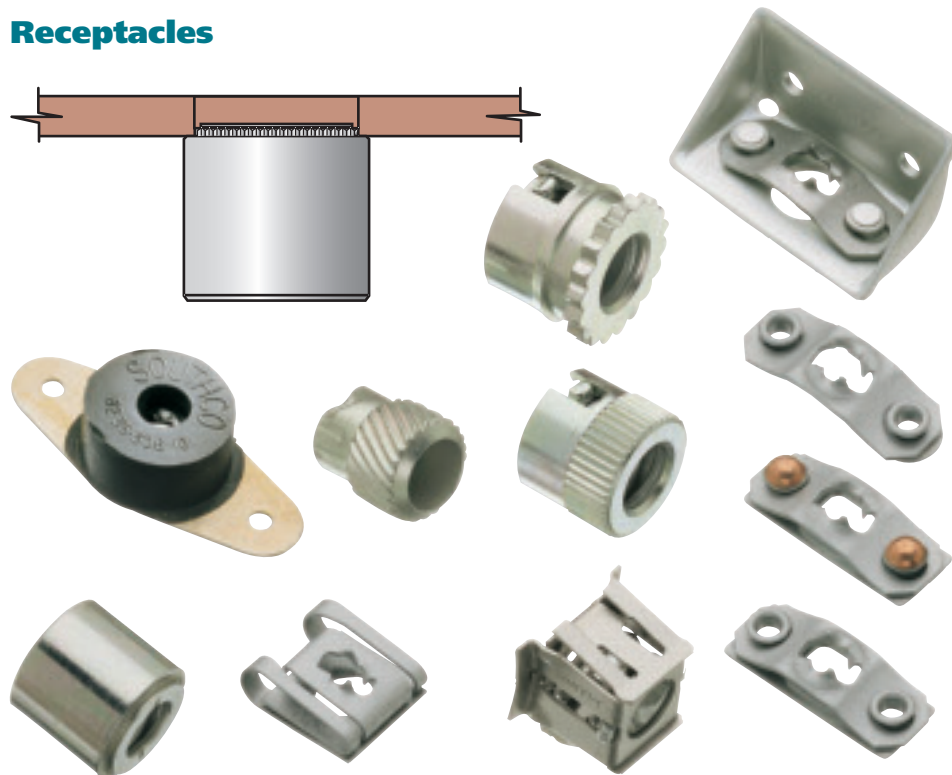
Studs



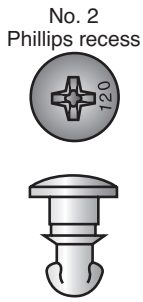
Retainers



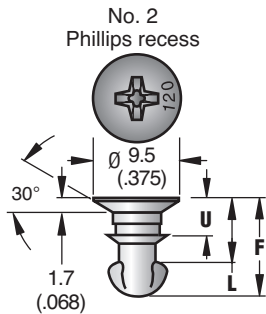
Receptacles



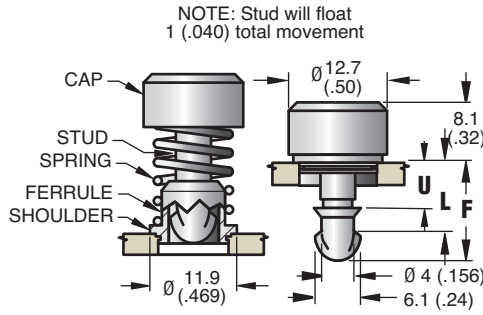
**Oval
Phillips
Recess**



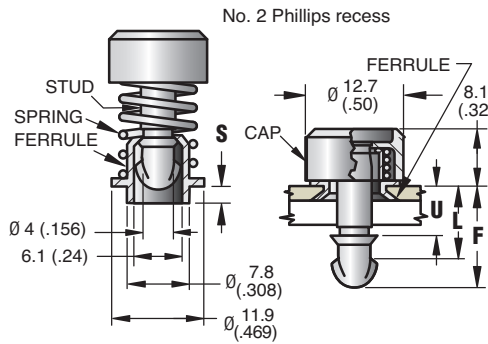
**Flush
Phillips
Recess**



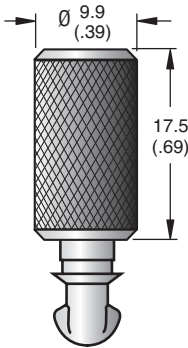
Press-in Stud Assembly



Flare-in Stud Assembly

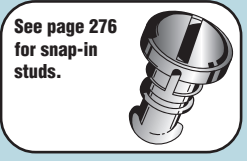
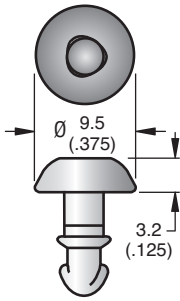


Knurled Head



Toolhead Recess

Key Part # 29-90-214-10 •



Material and Finish

- WING HEAD STUD: 1008 Steel.
- WING: 1010 Steel.
- BAIL HEAD STUD: 1008 Steel.
- BAIL: 1008 or 1010 Steel.
- OVAL SLOTTED AND OVAL PHILLIPS HEAD STUDS: 1008 Steel or 302 stainless steel, passivated. KNURLED HEAD STUD: 12L14 Steel.
- OTHER STYLES: 1008 Steel.
- All studs are case hardened.

For Fully Retracting Stud Assemblies

- CAP and STUD: Low carbon steel, case hardened zinc plate, chromate plus sealer, or with black organic coating.
- SPRING: 302 Stainless steel, nickel plate.
- FERRULE: (Press-in) 303 Stainless steel, passivated. (Flare-in) 6061 Aluminum, natural.
- TOOL: Hardened steel.

STUD PART NUMBER						STUD ASSEMBLIES				DIMENSIONS		
Zinc plate, chromate plus sealer.						PRESS-IN STYLE		FLARE-IN STYLE		U	L	F REF.
						BRIGHT	BLACK	BRIGHT				
OVAL PHILLIPS RECESS	FLUSH PHILLIPS RECESS	BAIL STYLE RB	BAIL STYLE RA	KNURLED HEAD	TOOLHEAD RECESS			I S = 1.5 (.058)	II S = 2.6 (.104)			
82-19-100-16	82-28-100-16			82-13-100-16	82-T-100	82-56-105-60	82-56-105-50			3.2 (.127)	6.2 (.245)	10 (.395)
82-19-120-16	82-28-120-16	82-16-120-16	82-15-120-16	82-13-120-16	82-T-120	82-56-125-60	82-56-125-50	82-56-121-60	82-56-122-60	3.7 (.147)	6.7 (.265)	10.5 (.415)
82-19-140-16	82-28-140-16	82-16-140-16	82-15-140-16	82-13-140-16	82-T-140	82-56-145-60	82-56-145-50	82-56-141-60	82-56-142-60	4.2 (.167)	7.2 (.285)	11.1 (.435)
82-19-160-16	82-28-160-16	82-16-160-16	82-15-160-16	82-13-160-16	82-T-160	82-56-165-60	82-56-165-50	82-56-161-60	82-56-162-60	4.8 (.187)	7.8 (.305)	11.6 (.455)
82-19-180-16	82-28-180-16	82-16-180-16	82-15-180-16	82-13-180-16	82-T-180	82-56-185-60	82-56-185-50	82-56-181-60	82-56-182-60	5.3 (.207)	8.3 (.325)	12.1 (.475)
82-19-200-16	82-28-200-16	82-16-200-16	82-15-200-16	82-13-200-16	82-T-200	82-56-205-60	82-56-205-50	82-56-201-60	82-56-202-60	5.8 (.227)	8.8 (.345)	12.6 (.495)
82-19-220-16	82-28-220-16	82-16-220-16	82-15-220-16	82-13-220-16	82-T-220	82-56-225-60	82-56-225-50	82-56-221-60	82-56-222-60	6.3 (.247)	9.3 (.365)	13.1 (.515)
82-19-240-16	82-28-240-16	82-16-240-16	82-15-240-16	82-13-240-16	82-T-240	82-56-245-60	82-56-245-50	82-56-241-60	82-56-242-60	6.8 (.267)	9.8 (.385)	13.6 (.535)
82-19-260-16	82-28-260-16	82-16-260-16	82-15-260-16	82-13-260-16	82-T-260	82-56-265-60	82-56-265-50	82-56-261-60	82-56-262-60	7.3 (.287)	10.3 (.405)	14.1 (.555)
82-19-280-16	82-28-280-16	82-16-280-16	82-15-280-16	82-13-280-16	82-T-280	82-56-285-60	82-56-285-50	82-56-281-60	82-56-282-60	7.8 (.307)	10.8 (.425)	14.6 (.575)
82-19-300-16	82-28-300-16	82-16-300-16	82-15-300-16	82-13-300-16	82-T-300	82-56-305-60	82-56-305-50	82-56-301-60	82-56-302-60	8.3 (.327)	11.3 (.445)	15.1 (.595)
82-19-320-16	82-28-320-16	82-16-320-16	82-15-320-16	82-13-320-16	82-T-320	82-56-325-60	82-56-325-50	82-56-321-60	82-56-322-60	8.8 (.347)	11.8 (.465)	15.6 (.615)
82-19-340-16	82-28-340-16	82-16-340-16	82-15-340-16	82-13-340-16	82-T-340	82-56-345-60	82-56-345-50	82-56-341-60	82-56-342-60	9.3 (.367)	12.3 (.485)	16.1 (.635)
82-19-360-16	82-28-360-16	82-16-360-16	82-15-360-16	82-13-360-16	82-T-360	82-56-365-60	82-56-365-50	82-56-361-60	82-56-362-60	9.8 (.387)	12.8 (.505)	16.6 (.655)
82-19-380-16	82-28-380-16	82-16-380-16	82-15-380-16	82-13-380-16	82-T-380	82-56-385-60	82-56-385-50	82-56-381-60	82-56-382-60	10.3 (.407)	13.3 (.525)	17.2 (.675)
82-19-400-16	82-28-400-16	82-16-400-16	82-15-400-16	82-13-400-16	82-T-400	82-56-405-60	82-56-405-50	82-56-401-60	82-56-402-60	10.9 (.427)	13.8 (.545)	17.7 (.695)
82-19-420-16	82-28-420-16	82-16-420-16	82-15-420-16	82-13-420-16	82-T-420	82-56-425-60	82-56-425-50			11.4 (.447)	14.4 (.565)	18.2 (.715)
82-19-440-16	82-28-440-16	82-16-440-16	82-15-440-16	82-13-440-16	82-T-440	82-56-445-60	82-56-445-50			11.9 (.467)	14.9 (.585)	18.7 (.735)
82-19-460-16	82-28-460-16	82-16-460-16	82-15-460-16	82-13-460-16	82-T-460	82-56-465-60	82-56-465-50			12.4 (.487)	15.4 (.605)	19.2 (.755)
82-19-480-16	82-28-480-16	82-16-480-16	82-15-480-16	82-13-480-16	82-T-480	82-56-485-60	82-56-485-50			12.9 (.507)	15.9 (.625)	19.7 (.775)
82-19-500-16	82-28-500-16	82-16-500-16	82-15-500-16	82-13-500-16	82-T-500	82-56-505-60	82-56-505-50			13.4 (.527)	16.4 (.645)	20.2 (.795)
82-19-520-16	82-28-520-16	82-16-520-16	82-15-520-16	82-13-520-16	82-T-520	82-56-525-60	82-56-525-50			13.9 (.547)	16.9 (.665)	20.7 (.815)
82-19-540-16	82-28-540-16	82-16-540-16	82-15-540-16	82-13-540-16	82-T-540	82-56-545-60	82-56-545-50			14.4 (.567)	17.4 (.685)	21.2 (.835)
82-19-560-16	82-28-560-16	82-16-560-16	82-15-560-16	82-13-560-16	82-T-560	82-56-565-60	82-56-565-50			14.9 (.587)	17.9 (.705)	21.7 (.855)
82-19-580-16	82-28-580-16	82-16-580-16	82-15-580-16	82-13-580-16	82-T-580	82-56-585-60	82-56-585-50			15.4 (.607)	18.4 (.725)	22.2 (.875)

millimeter (inch)

millimeter
(inch)

Dimensions without tolerances are for reference only.

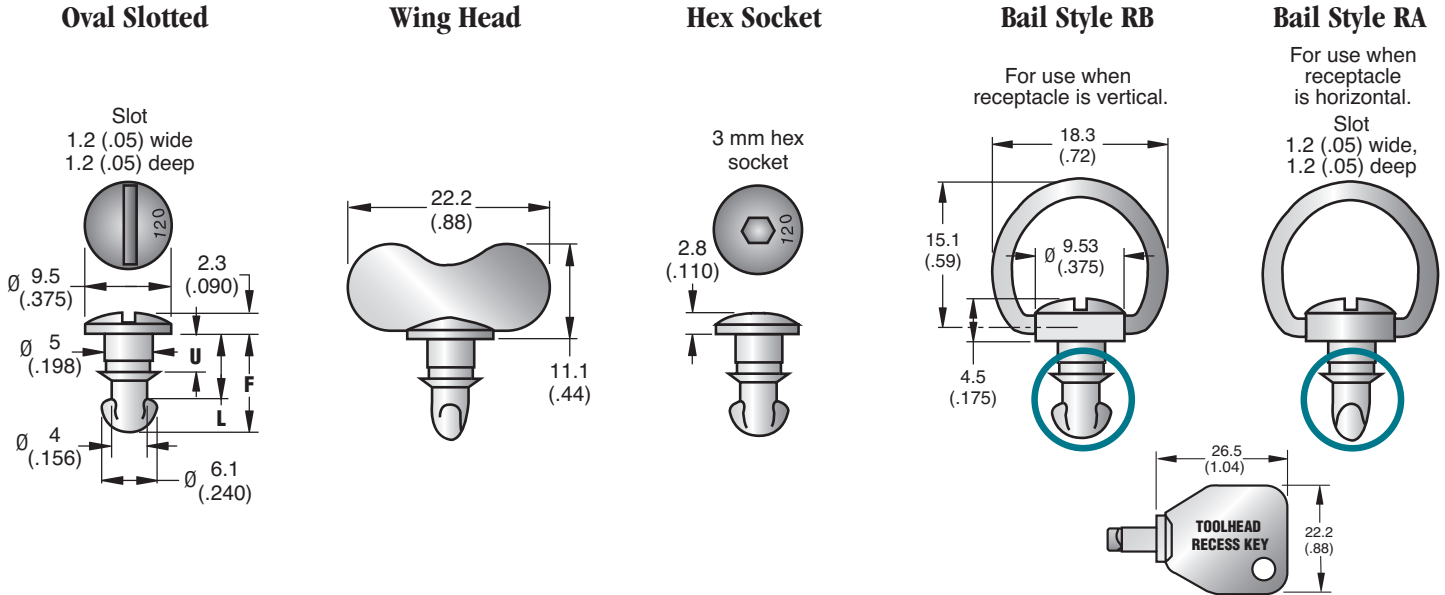
Southco® Quarter-turn Fasteners

Medium Series, Stud Selection

Available in Steel and Stainless Steel

NOTE: To select a Stainless Steel part, substitute the suffix -20 where the -16 is seen in the part number table.

Example: 82-11-100-16 becomes 82-11-100-20.



FOR: Part No. 82-35-306-10		FOR: Part No. 82-99-205-15		FOR: Press-in Part Nos. 82-35-308-55, 82-35-313-55 and Ultrasonic Part No. 82-35-310-55		FOR: Part No. 82-35-315-55		FOR: ALL OTHER RECEPTACLES*		STUD PART NUMBER		
										Zinc plate, chromate plus sealer		
OUTER PANEL THICKNESS ‡		OUTER PANEL THICKNESS ‡		OUTER PANEL THICKNESS ‡		TOTAL MATERIAL THICKNESS ‡		TOTAL MATERIAL THICKNESS ‡		OVAL SLOTTED	WING HEAD	HEX SOCKET
MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.			
0.7 (.026)	1.2 (.045)	—	—	—	—	—	—	2.3 (.090)	2.8 (.109)	82-11-100-16 •	82-12-100-16 •	—
1.2 (.046)	1.7 (.065)	—	—	—	—	—	—	2.8 (.110)	3.3 (.129)	82-11-120-16 •	82-12-120-16 •	82-78-120-16
1.7 (.066)	2.2 (.085)	—	—	—	—	—	—	3.3 (.130)	3.8 (.149)	82-11-140-16 •	82-12-140-16 •	82-78-140-16
2.2 (.086)	2.7 (.105)	—	—	0 (.000)	0.5 (.019)	1.3 (.050)	1.8 (.069)	3.8 (.150)	4.3 (.169)	82-11-160-16 •	82-12-160-16 •	82-78-160-16
2.7 (.106)	3.2 (.125)	—	—	0.5 (.020)	1 (.039)	1.8 (.070)	2.3 (.089)	4.3 (.170)	4.8 (.189)	82-11-180-16 •	82-12-180-16 •	82-78-180-16
3.2 (.126)	3.7 (.145)	—	—	1 (.040)	1.5 (.059)	2.3 (.090)	2.8 (.109)	4.8 (.190)	5.3 (.209)	82-11-200-16 •	82-12-200-16 •	82-78-200-16
3.7 (.146)	4.2 (.165)	—	—	1.5 (.060)	2 (.079)	2.8 (.110)	3.3 (.129)	5.3 (.210)	5.8 (.229)	82-11-220-16 •	82-12-220-16 •	82-78-220-16
4.2 (.166)	4.7 (.185)	—	—	2 (.080)	2.5 (.099)	3.3 (.130)	3.8 (.149)	5.8 (.230)	6.3 (.249)	82-11-240-16 •	82-12-240-16 •	82-78-240-16
4.7 (.186)	5.2 (.205)	0.5 (.020)	1.5 (.060)	2.5 (.100)	3 (.119)	3.8 (.150)	4.3 (.169)	6.4 (.250)	6.9 (.269)	82-11-260-16 •	82-12-260-16 •	82-78-260-16
5.2 (.206)	5.7 (.225)	1 (.040)	2 (.080)	3 (.120)	3.5 (.139)	4.3 (.170)	4.8 (.189)	6.9 (.270)	7.4 (.289)	82-11-280-16 •	82-12-280-16 •	82-78-280-16
5.7 (.226)	6.2 (.245)	1.5 (.060)	2.5 (.100)	3.6 (.140)	4.1 (.159)	4.8 (.190)	5.3 (.209)	7.4 (.290)	7.9 (.309)	82-11-300-16 •	82-12-300-16 •	82-78-300-16
—	—	2 (.080)	3 (.120)	4.1 (.160)	4.6 (.179)	5.3 (.210)	5.8 (.229)	7.9 (.310)	8.4 (.329)	82-11-320-16 •	82-12-320-16 •	82-78-320-16
—	—	2.5 (.100)	3.6 (.140)	4.6 (.180)	5.1 (.199)	5.8 (.230)	6.3 (.249)	8.4 (.330)	8.9 (.349)	82-11-340-16 •	82-12-340-16 •	82-78-340-16
—	—	3 (.120)	4.1 (.160)	5.1 (.200)	5.6 (.219)	6.4 (.250)	6.9 (.269)	8.9 (.350)	9.4 (.369)	82-11-360-16 •	82-12-360-16 •	82-78-360-16
—	—	3.6 (.140)	4.6 (.180)	5.6 (.220)	6.1 (.239)	6.9 (.270)	7.4 (.289)	9.4 (.370)	9.9 (.389)	82-11-380-16 •	82-12-380-16 •	82-78-380-16
—	—	4.1 (.160)	5.1 (.200)	6.1 (.240)	6.6 (.259)	7.4 (.290)	7.9 (.309)	9.9 (.390)	10.4 (.409)	82-11-400-16 •	82-12-400-16 •	82-78-400-16
—	—	4.6 (.180)	5.6 (.220)	6.6 (.260)	7.1 (.279)	7.9 (.310)	8.4 (.329)	10.4 (.410)	10.9 (.429)	82-11-420-16 •	82-12-420-16 •	82-78-420-16
—	—	5.1 (.200)	6.1 (.240)	7.1 (.280)	7.6 (.299)	8.4 (.330)	8.9 (.349)	10.9 (.430)	11.4 (.449)	82-11-440-16 •	82-12-440-16 •	82-78-440-16
—	—	5.6 (.220)	6.6 (.260)	7.6 (.300)	8.1 (.319)	8.9 (.350)	9.4 (.369)	11.4 (.450)	11.9 (.469)	82-11-460-16 •	82-12-460-16 •	82-78-460-16
—	—	6.1 (.240)	7.1 (.280)	8.1 (.320)	8.6 (.339)	9.4 (.370)	9.9 (.389)	11.9 (.470)	12.4 (.489)	82-11-480-16 •	82-12-480-16 •	82-78-480-16
—	—	6.6 (.260)	7.6 (.300)	8.6 (.340)	9.1 (.359)	9.9 (.390)	10.4 (.409)	12.5 (.490)	12.9 (.509)	82-11-500-16 •	82-12-500-16 •	82-78-500-16
—	—	7.1 (.280)	8.1 (.320)	9.1 (.360)	9.6 (.379)	10.4 (.410)	10.9 (.429)	13 (.510)	13.5 (.529)	82-11-520-16 •	82-12-520-16 •	82-78-520-16
—	—	7.6 (.300)	8.6 (.340)	9.6 (.380)	10.1 (.399)	10.9 (.430)	11.4 (.449)	13.5 (.530)	14 (.549)	82-11-540-16 •	82-12-540-16 •	82-78-540-16
—	—	8.1 (.320)	9.1 (.360)	10.2 (.400)	10.7 (.419)	11.4 (.450)	11.9 (.469)	14 (.550)	14.5 (.569)	82-11-560-16 •	82-12-560-16 •	82-78-560-16
—	—	8.6 (.340)	9.6 (.380)	10.7 (.420)	11.2 (.439)	11.9 (.470)	12.4 (.489)	14.5 (.570)	15 (.589)	82-11-580-16 •	82-12-580-16 •	82-78-580-16

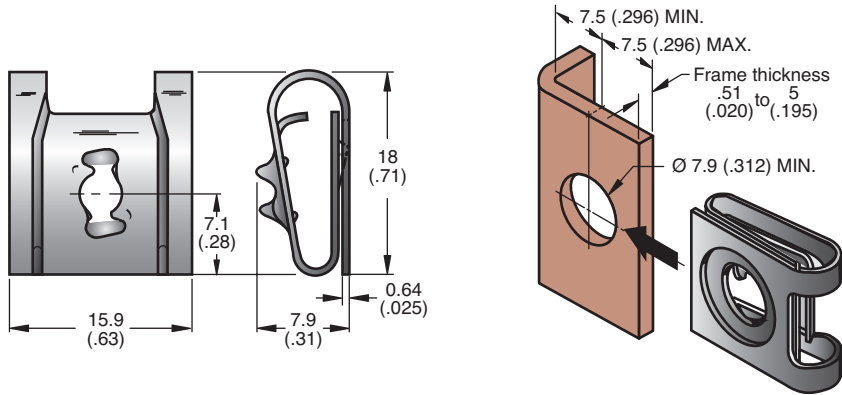
* Please check for any special conditions, or constant required by your specific receptacle on the receptacle description pages.

‡ If using ejector spring, sealing washer or nylon wear washer, see page 284.

Southco® Quarter-turn Fasteners

Medium Series, Receptacles

Clip-on



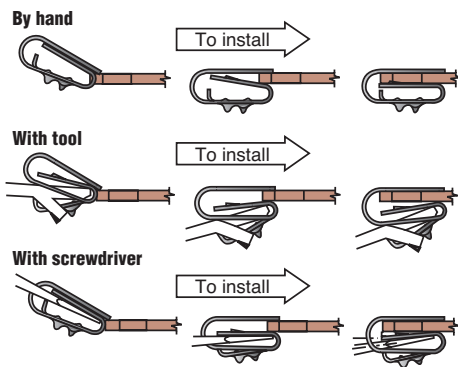
Material and Finish

1064 Steel, DACROTIZED† or 17-7PH stainless steel, passivated.

†Registered tradename of Metal Coatings International, Inc.

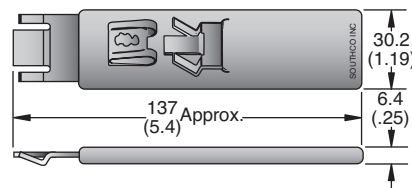
PART NUMBER	
Steel	82-47-113-15 •
Stainless	82-47-113-20 •

Installation



Installation Tool

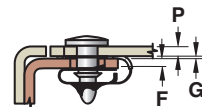
PART NUMBER
29-82-101-10 •



Adjustment Formula:

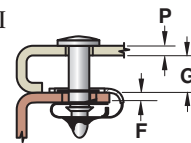
To enter Stud Selection Table determine your Total Material Thickness by calculating:

Figure I



$P + F + 1.40 (.055)$ (constant) when G is $0.64 (.025)$.

Figure II



$P + F + G + 0.76 (.030)$ (constant) when G is $0.65 (.026)$ or greater.

When using snap-in studs see step **d** on page 276.

millimeter (inch)
millimeter
(inch)

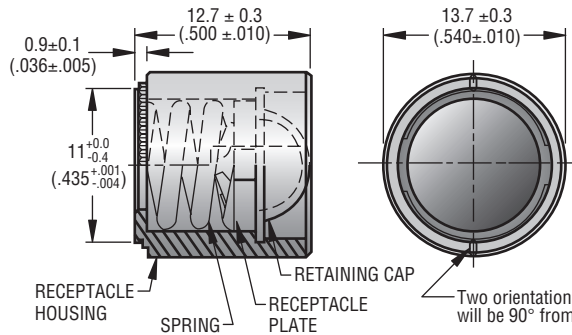
Dimensions without tolerances are for reference only.

Southco® Quarter-turn Fasteners

Medium Series, Receptacles

Shielded Press-In

- Provides RFI-EMI shielding



NOTE: For use in low carbon steels, aluminium and stainless steels in the annealed condition that are R_B85 or softer.

Material and Finish

RECEPTACLE: 1010 Steel, hardened and zinc plate, chromate plus sealer. SHELL: Low carbon steel, hardened and zinc plate, chromate plus sealer. SPRING: 302 Stainless steel, DACROTIZED†

†Registered trademark of Metal Coatings International, Inc.

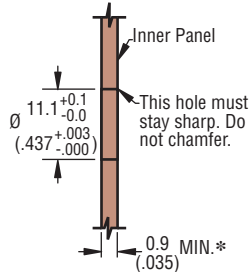
PART NUMBER

82-35-315-55 •

Adjustment Formula: To enter Stud Selection Table determine your Total Material Thickness. Substitute 1.3 (.051) (constant) for frame thickness if frame thickness is less than 1.3 (.051).

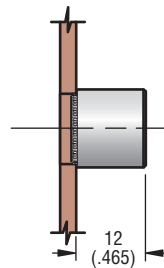
Installation

1. Drill or punch hole in inner panel.

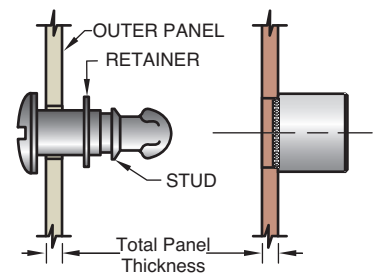


*Note: for inner panels less than 1.3 (.051) thick, the retainer will create a slight gap between the panels. For proper stud selection in these cases, assume the inner panel thickness as 1.3 (.051).

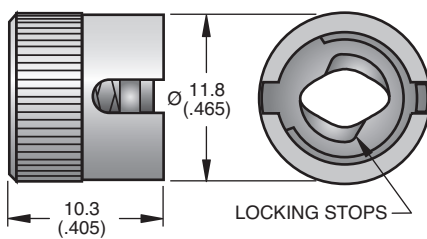
2. Press receptacle into hole until the shoulder on the receptacle bottoms out on the panel's surface.



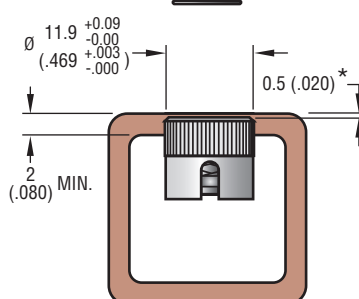
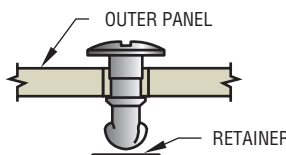
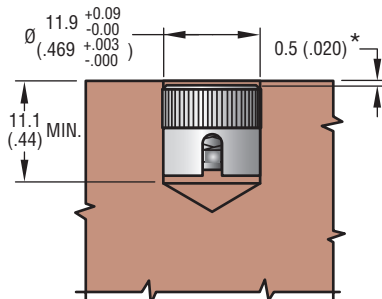
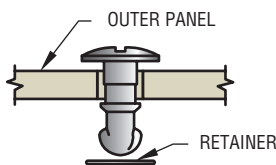
3. To select the proper grip of stud, determine total panel thickness (both panels) and refer to appropriate stud selection table on page 282.



Press-in for blind applications and solid materials



*0.8±0.1 (.035±.005) when the 82-56-XXX-XX, fully retracting studs are used.



Material and Finish

RECEPTACLE: 1010 Steel, hardened and zinc plate, chromate plus sealer. SHELL: Low carbon steel, hardened and zinc plate, chromate plus sealer. RETAINER and SPRING: 302 Stainless steel, DACROTIZED†.

†Registered trademark of Metal Coatings International, Inc.

PART NUMBER

with 90° locking stops	82-35-308-55 •
without 90° locking stops	82-35-313-55 •

To enter Stud Selection Table determine your Outer Panel Thickness.

millimeter (inch)
millimeter (inch)

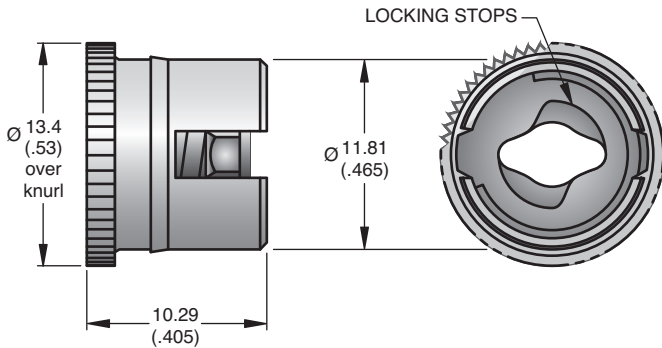
Dimensions without tolerances are for reference only.

Southco® Quarter-turn Fasteners

Medium Series, Receptacles

For ultrasonic installation in thermoplastics

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



Material and Finish

RECEPTACLE: 1010 Steel, case hardened and zinc plate, chromate plus sealer.
 SHELL: Low carbon steel, zinc plate, chromate plus sealer.
 SPRING: 302 Stainless steel, DACROTIZED †.
 RETAINER: 302 Stainless steel, zinc plate, chromate plus sealer.

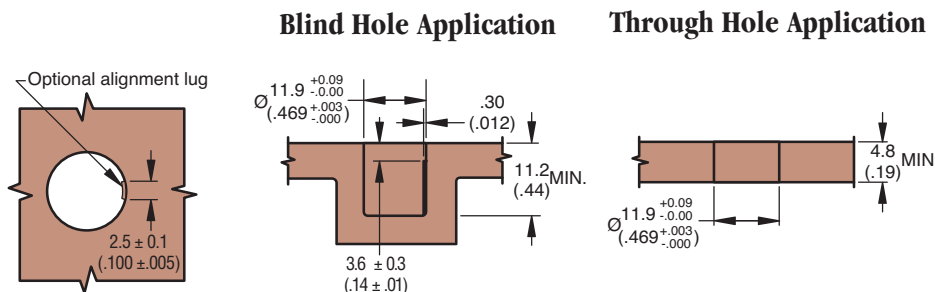
†Registered tradename of Metal Coatings International, Inc.

PART NUMBER
 82-35-310-55 •

Enter the No. 82 Stud Selection Table on page 282 with your Outer Panel Thickness using column for Part Numbers:
 82-35-308-55 and 82-35-313-55.

Installation

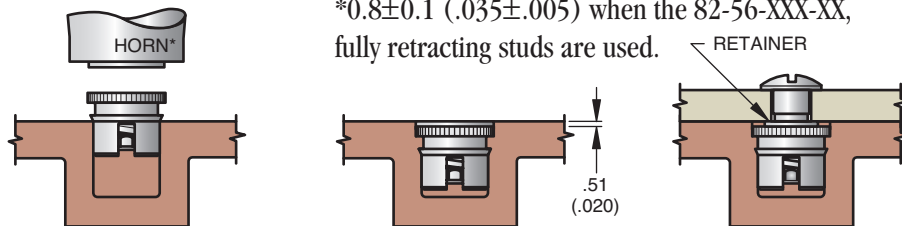
1. Prepare hole.



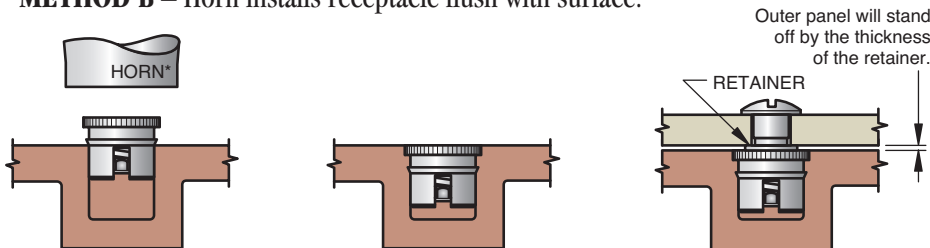
2. Use one of the methods shown.

METHOD A – Horn recesses receptacle to a 0.5 (.020)* depth.

* 0.8 ± 0.1 (.035 ± .005) when the 82-56-XXX-XX, fully retracting studs are used.



METHOD B – Horn installs receptacle flush with surface.



*Horn design may vary with material and application.

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

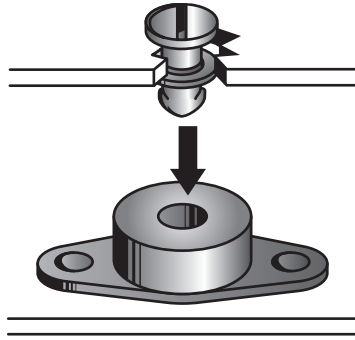
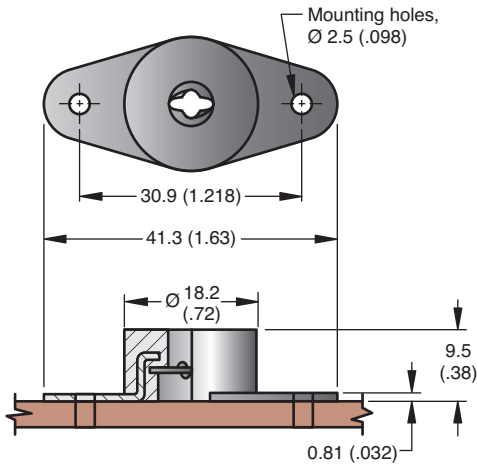
millimeter (inch)
 millimeter
 (inch)

Dimensions without tolerances are for reference only.

Southco® Quarter-turn Fasteners

Medium Series, Receptacles

Vibration isolating



Material and Finish

RECEPTACLE: 1050-1070 Steel, zinc plate, chromate plus sealer.

PLATE: 6061 Aluminum, zinc chromate.

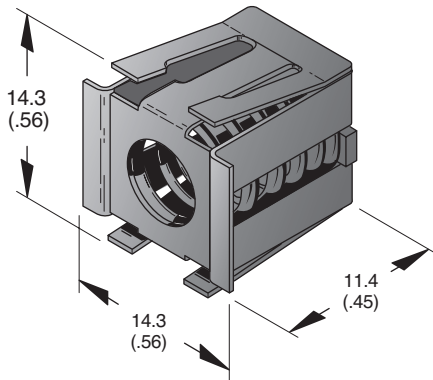
BOSS: Neoprene, black.

PART NUMBER

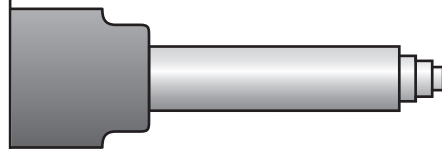
82-35-306-10 •

To enter Stud Selection Table determine your Outer Panel Thickness.

Snap-in



Installation Tool



TOOL PART NUMBER

29-8125-309 •

Material and Finish

HOUSING: 301 Stainless steel, natural. RECEPTACLE: 1010 Steel, case hardened and zinc plate, chromate plus sealer.

SPRING: 302 Stainless steel, passivated.

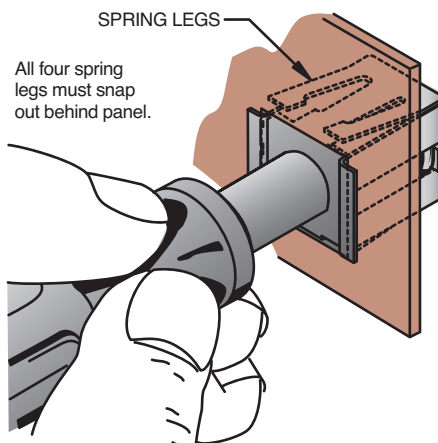
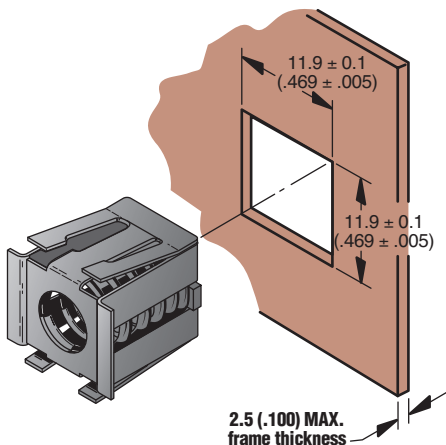
RETAINER: 301 Stainless steel, natural.

TOOL: 12L14 Steel, zinc plated plus bright chromate dip.

PART NUMBER

82-35-309-56 •

Push only on the center area of the receptacle as shown until all four spring legs snap out behind your panel.



Adjustment Formula

To enter Stud Selection Table calculate:

Outer Panel Thickness + 5.08 (.200) but use Total Material Thickness column.

millimeter (inch)
millimeter
(inch)

Dimensions without tolerances are for reference only.

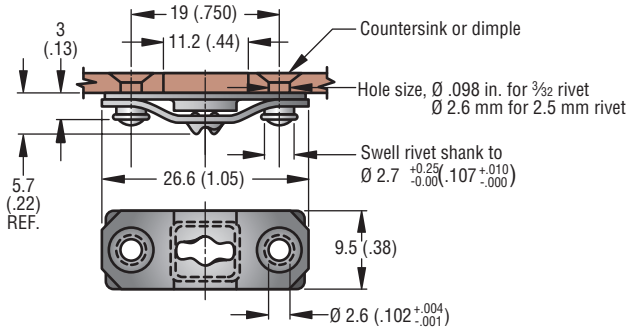
Quarter-turn Fasteners
Medium

Southco® Quarter-turn Fasteners

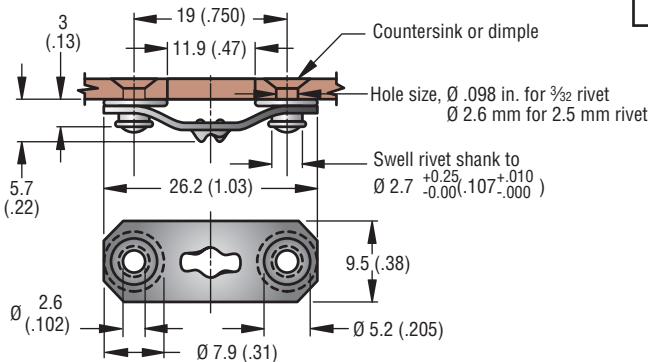
Medium Series, Receptacles

Leaf Spring Receptacles

For riveting - with base

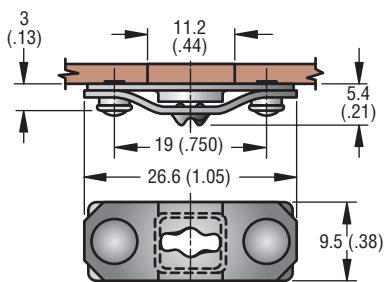


For riveting—without base

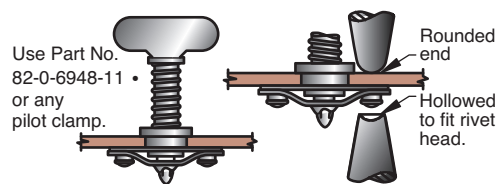


PART NUMBER	
Steel	Stainless Steel
82-35-295-15 •	82-35-295-20 •

For welding

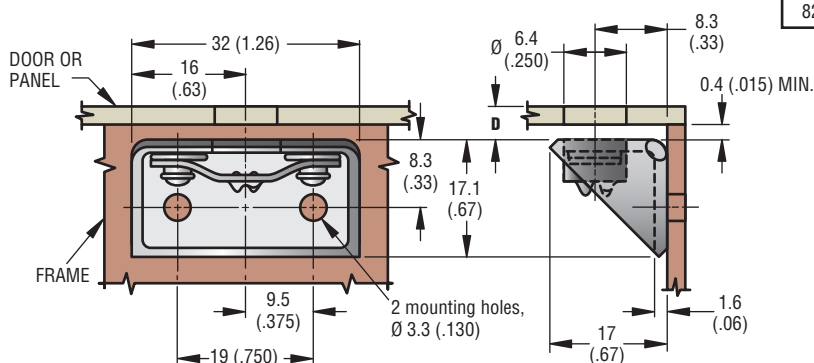


PART NUMBER
82-35-303-15 •

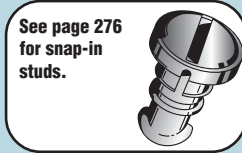


Rivet must not melt over onto spring.

Side Mount



PART NUMBER
82-45-101-15 •



See page 276 for snap-in studs.

Material and Finish

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

†Registered trademark of Metal Coatings International, Inc.

To enter Stud Selection Table determine your Total Material Thickness.

SPRING MUST FLOAT FREELY AS BEFORE RIVETING.

Material and Finish

SPRING: 1064 Steel, DACROTIZED† or 17-7PH stainless steel, passivated (see table). EYELET: Steel, DACROTIZED† or 302/305 stainless steel, passivated (see table).

†Registered trademark of Metal Coatings International, Inc.

To enter Stud Selection Table determine your Total Material Thickness.

SPRING MUST FLOAT FREELY AS BEFORE RIVETING.

Material and Finish

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

†Registered trademark of Metal Coatings International, Inc.

To enter Stud Selection Table determine your Total Material Thickness.

SPRING MUST FLOAT FREELY AS BEFORE RIVETING.

Material and Finish

SPRING: 1064 Steel, DACROTIZED†.
ANGLE BRACKET: 1010 Steel, zinc plate, chromate plus sealer.
EYELET: Steel, DACROTIZED†.

†Registered trademark of Metal Coatings International, Inc.

Adjustment Formula

To enter Stud Selection Table calculate: $D + 1.5 (.060)$ and use Total Material Thickness column.
millimeter (inch)
millimeter (inch)

Dimensions without tolerances are for reference only.

Southco® Quarter-turn Fasteners

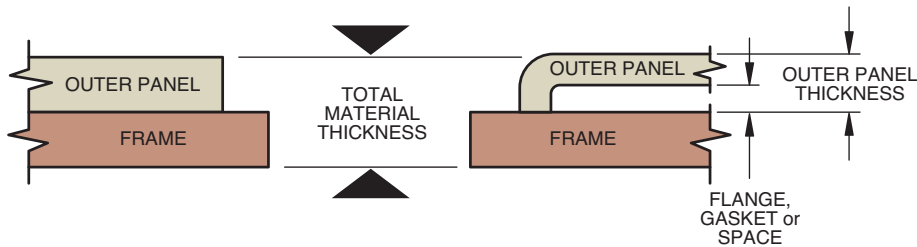
Medium Series, 1/4-turn Studs, Snap-in Studs and Fully Retracting Stud Assemblies

1/4-turn and Snap-in Studs

To select correct fastener

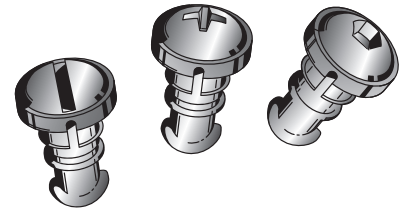
1. Choose a receptacle. (Note any frame thickness limitations).
2. To select a stud,
 - a) measure your Outer Panel Thickness or Total Material Thickness (note under receptacle part number will tell you which to measure).
 - b) if adjustment formula is shown under receptacle part number, apply this formula to your measurement.
 - c) if sealing washers, stud ejector springs or wear washers will be used, apply proper adjustment formulas to your measurement.
3. Choose a retainer.

NOTE: Snap-in stud assemblies do not require a separate retainer.
4. Review the stud installation procedure.
5. Order each component and tool (if required) separately by part number.



No. 82 Snap-in Stud Assemblies

- Speeds installation
- Reduces inventory



To order, add a -1 suffix;
Example: 82-11-180-16 **"-1"**

Outer Panel Thickness for Snap-in Studs 1.5 (.060) MIN. 3.2 (.125) MAX.
Minimum stud grip range is 4.5 (.180) Grip.

Fully-retracting

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



To select correct fastener

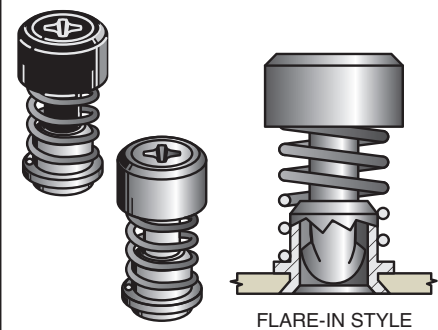
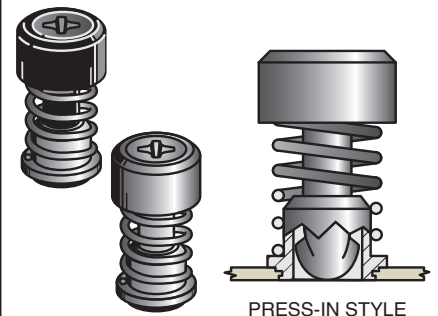
1. Choose a receptacle (note any panel or frame thickness limitations).
2. Select one of the following stud assemblies:

Press-in

- a) Use your Outer Panel Thickness or measure your Total Material Thickness, as required by your choice of receptacle.
- b) If an adjustment formula is shown under the receptacle part number, apply this formula to your measurement.
- c) Use measurement (or adjusted measurement) to find stud part number in the table on page 282.

Flare-in

- Measure your Outer Panel Thickness and use Table located at bottom of page 284 to determine which column (I or II) you will need in table on page 283.
- Follow steps a) and b) at left and use your measurement (or adjusted measurement) to find stud part number in table on page 282.
3. Review the stud installation procedure. Order each fastener component and installation tool (if required) separately by part number.

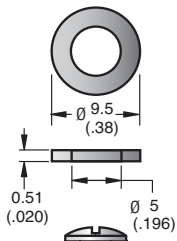


millimeter (inch)
millimeter
(inch)

Dimensions without tolerances are for reference only.

Southco® Quarter-turn Fasteners

Sealing Washer



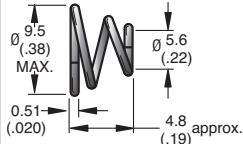
PART NUMBER
82-43-201-38 •

Material

Nitrile fibre core rubber, black.

Adjustment Formula:
Add 0.51 (.020) to your Outer Panel Thickness or Total Material Thickness.

Ejector Spring



PART NUMBER
43-13-1-24 •

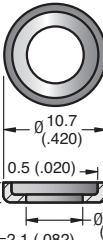
Material

302 Stainless steel, passivated.

Adjustment Formula: When using a stud ejector (ejector spring and wear washer), add 1 (.040) to your Outer Panel Thickness or Total Material Thickness.

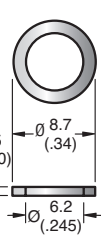
Nylon Wear Washers

Cupped



PART NUMBER
82-46-101-41 •
Black
82-46-101-39 •
White

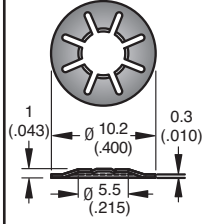
Flat



PART NUMBER
82-46-103-39 •
White

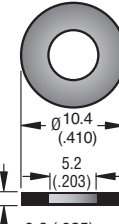
Adjustment Formula: When using a wear washer, add 0.5 (.020) to your Outer Panel Thickness or Total Material Thickness.

Retainers-Tool Installation



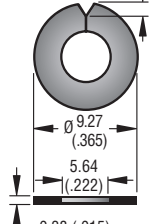
Material
304 Stainless steel, passivated.

PART NUMBER
82-32-201-20 •



Material
Nylon, black.

PART NUMBER
82-32-301-12 •

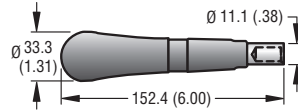


Material
302 Stainless steel, passivated.

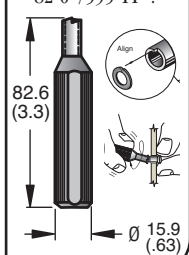
PART NUMBER
82-32-101-20 •

To install, use tool, part number 82-0-7595-11 •.

To install, use tool.

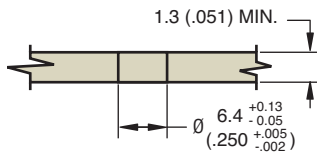


PART NUMBER
82-0-22542-11 •

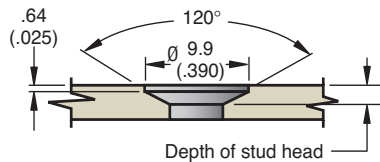


For: Flush head styles - When outer panel is 1.3 (.050) or greater.

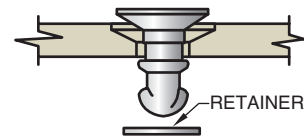
1. Drill.



2. Countersink to depth of stud head.

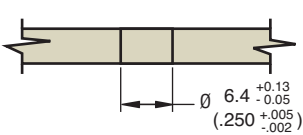


3. Insert stud and add retainer.

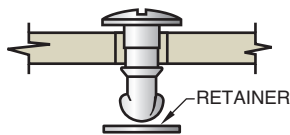


For: Above-surface styles - For any panel thickness.

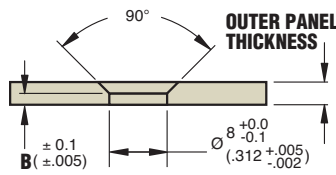
1. Drill.



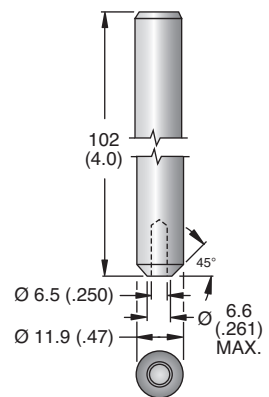
2. Insert stud and add retainer.



For: Flare-in Fully-retracting styles.



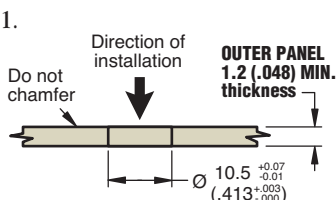
OUTER PANEL THICKNESS		B ±0.1 (±.005)	Select Stud from Column:
MIN.	MAX.		
1.2 (.048)	2.4 (.094)	0.4 (.016)	I
2.4 (.095)	4 (.156)	2.6 (.104)	II



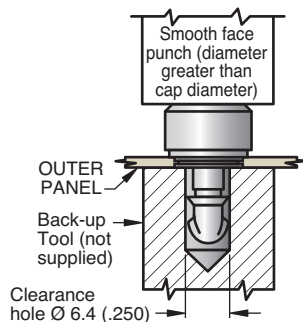
Flaring Punch
47-125 • Order separately.

For: Press-in Fully-retracting styles.

1.

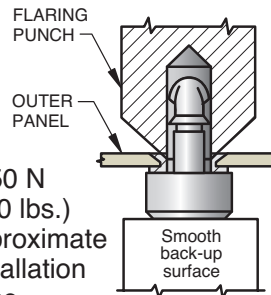


2. Press assembly into panel until shoulder contacts panel surface.



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

3550 N
(800 lbs.)
approximate
installation
force.



Dimensions without tolerances are for reference only.

millimeter (inch)
millimeter
(inch)