

QUALITY FASTENERS™

**MC/TC SERIES
RETRACTABLE CAPTIVE SCREWS
Designer's Guide**



RETRACTABLE CAPTIVE SCREWS

Installation Types

Choosing the right captivation style for your application.



Press-in Style

- Lower installed cost
- Thin sheet thickness applications
- For use in materials 85RB or softer
- Mounting hole centerline minimum 1.5x installation hole diameter from panel edge; closer installation requires restraining panel edge



Flare-in Style

- Used in materials including hardened steels and non-metallics
- Panel finish does not permit press-in
- Lower installation force than press-in
- Withstands higher side loading
- Installation hole preparation more tolerant
- Can be mounted closer to panel edge than press-in



Floating Style

- Higher radial float than flare-in with many of the same features and benefits
- Lower installation force than press-in
- Withstands higher side loading
- Installation hole preparation more tolerant.
- Installs in a wide range of materials, including hardened steels and plastics



PC Board Style

- Used for mounting in circuit boards and plastics
- Mounting hole centerline minimum 1.5 x installation hole diameter, from panel edge; Closer installation requires restraining panel edge (Consult Factory)

Custom Application Design



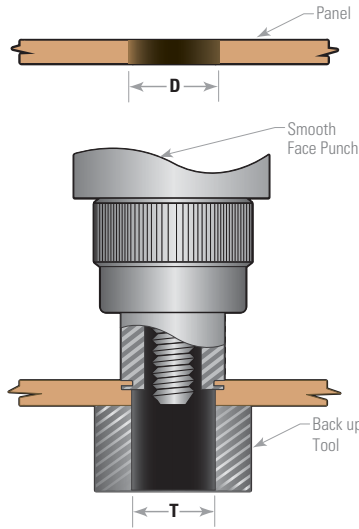
Captive screw modification examples include:

- Increased screw grip range
- Screw drive recess preferences
- Screw leader point - half or full dog point
- High radial float
- Colors for improved brand recognition
- Material and finish options to improve product performance

Panel Preparation and Installation

PRESS-IN STYLE/ PC BOARD

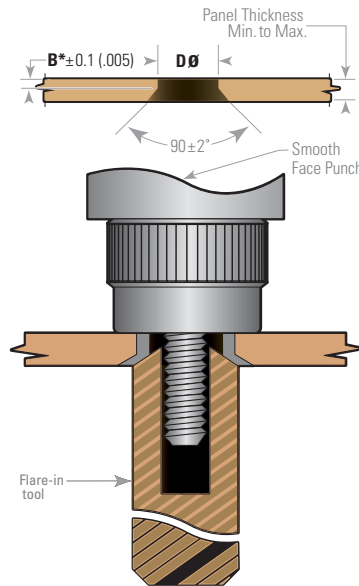
1. Prepare installation hole for correct thread size. Leave the hole edges sharp - do not chamfer.
2. Install captive screw as shown.
3. Place back-up tool behind panel with clearance hole shown.
4. Press assembly into panel. Press force depends on material hardness - 3000 lb. maximum.



Thread Size		Installation Hole D				Back-up Tool Hole T	
Metric	Unified	Metric		Unified		Metric +.2 -.1	Unified +.003 -.004
		Press-in	PC board	Press-in	PC board		
M3	4-40	5.6 ^{+.03} _{-.05}	5.6 ^{+.1} _{-.05}	.219 ^{+.003} _{-.000}	.219 ^{+.004} _{-.002}	3.2	.125
M3.5	6-32	6.4 ^{+.03} _{-.05}	6.4 ^{+.1} _{-.1}	.250 ^{+.003} _{-.000}	.250 ^{+.004} _{-.004}	3.7	.146
M4	8-32	8 ^{+0.0} _{-.08}	8 ^{+0.0} _{-.08}	.315 ^{+.003} _{-.000}	.315 ^{+.000} _{-.003}	4.4	.173
M5	10-32	8 ^{+0.0} _{-.08}	8 ^{+0.0} _{-.08}	.315 ^{+.003} _{-.000}	.315 ^{+.000} _{-.003}	5.2	.205
M6	1/4-20	9.5 ^{+.1} _{-.0.0}	9.5 ^{+.1} _{-.0.0}	.375 ^{+.003} _{-.000}	.375 ^{+.003} _{-.000}	6.2	.260

FLARE-IN STYLE

1. Prepare installation hole for correct thread size. Leave the hole edges sharp - do not chamfer.
2. Insert captive screw in panel
3. Install Flare-in tool into press.
4. Support top of screw and install captive screw as shown Installation force 300 lb. - 600 lb.

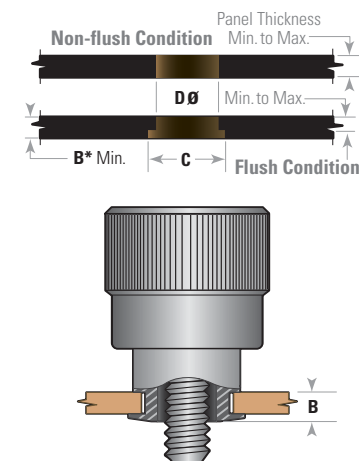


Thread Size		Installation Hole D		Installation Tool part number
Metric	Unified	Metric	Unified +.005 -.000	
M3	4-40	4.8 ^{+.08} _{-.05}	.187	MCF440
M3.5	6-32	5.4 ^{+.1} _{-.0.0}	.213	MCF632
M4	8-32	6.8 ^{+.08} _{-.04}	.266	MCF832
M5	10-32	6.8 ^{+.08} _{-.04}	.266	MCF1032
M6	1/4-20	8.2 ^{+.1} _{-.0.0}	.323	MCF1420

* For B dimensions see specifications table for that specific thread size.

FLOATING STYLE

1. Determine if flush or non-flush condition required.
2. Prepare installation hole for correct thread size.
3. Insert captive screw into panel
4. Place floating tool into press.
5. Support top of screw then roll the ferrule over the washer to captivate. Installation force depends on thread size.



Thread Size		Installation Hole D		Installation Tool part number	Counterbore C
Metric	Unified	Metric +.008 -.003	Unified +.003 -.001		
M3	4-40	6.4	.250	MCL440	9.4 (.375)
M3.5	6-32	7.2	.283	MCL632	10.5 (.413)
M4	8-32	8.8	.346	MCL832	12 (.469)
M5	10-32	8.8	.346	MCL1032	12 (.469)
M6	1/4-20	10.5	.413	MCL1420	13.5 (.531)

* For B dimensions see specifications table for that specific thread size.

RETRACTABLE CAPTIVE SCREWS 4-40 and M3 THREAD

Specifications

Installation Type	Panel Thickness		Total Float	A	B	Knob Height		Screw Projection P1	Screw Projection P2	Part Number <small>(See callout to select items in parenthesis)</small>
	Min.	Max				H1	H2			
Press-in	0.9 (.036)	—	0.8 (.031)	—	—	11.6 (.46)	8.4 (.33)	0.8 (.03)	4.0 (.16)	()CP-() ()0-1-() ()
								2.5 (.10)	5.5 (.22)	()CP-() ()1-1-() ()
								4.0 (.16)	7.1 (.28)	()CP-() ()2-1-() ()
								5.6 (.22)	8.6 (.35)	()CP-() ()3-1-() ()
PC Board	1.6 (.063)	—	0.8 (.031)	—	—	11.6 (.46)	8.4 (.33)	0.8 (.03)	4.0 (.16)	()CB-() ()0-1-() ()
								2.5 (.10)	5.5 (.22)	()CB-() ()1-1-() ()
								4.0 (.16)	7.1 (.28)	()CB-() ()2-1-() ()
								5.6 (.22)	8.6 (.35)	()CB-() ()3-1-() ()
Flare-in	0.8 (.031)	1.5 (.058)	0.8 (.031)	1.0 (.041)	0.4 (.015)	11.4 (.45)	8.1 (.32)	0.8 (.03)	4.0 (.16)	()CF-() ()0-1-() ()
	1.5 (.059)	2.5 (.066)		1.8 (.070)	0.4 (.015)			1.5 (.06)	4.7 (.19)	()CF-() ()0-2-() ()
	2.5 (.100)	4.0 (.156)		2.6 (.104)	0.8 (.031)			2.5 (.10)	5.7 (.22)	()CF-() ()0-3-() ()
	4 (.157)	5.6 (.219)		4.2 (.166)	2.4 (.093)			4.0 (.16)	7.1 (.28)	()CF-() ()0-5-() ()
	5.6 (.220)	7.1 (.281)		5.8 (.299)	4.0 (.156)			5.6 (.22)	8.8 (.35)	()CF-() ()0-7-() ()
	0.8 (.031)	1.5 (.058)		1.0 (.041)	0.4 (.015)			2.5 (.10)	5.7 (.22)	()CF-() ()1-1-() ()
	1.5 (.059)	2.5 (.099)		1.8 (.070)	0.4 (.015)			4.0 (.16)	7.1 (.28)	()CF-() ()2-1-() ()
				5.6 (.22)	8.8 (.35)			5.6 (.22)	8.8 (.35)	()CF-() ()3-1-() ()
				2.5 (.10)	5.7 (.22)			2.5 (.10)	5.7 (.22)	()CF-() ()1-2-() ()
				4.0 (.16)	7.1 (.28)			4.0 (.16)	7.1 (.28)	()CF-() ()2-2-() ()
				5.6 (.22)	8.8 (.35)			5.6 (.22)	8.8 (.35)	()CF-() ()3-3-() ()
				1.9 (.07)	5.1 (.20)			1.9 (.07)	5.1 (.20)	()CL-() ()0-0-() ()
Floating	--	0.8 (.031)	2.1 (.082)	2.6 (.104)	2.0 (.080)	11.9 (.47)	8.6 (.34)	3.4 (.13)	6.6 (.26)	()CL-() ()1-0-() ()
	0.8 (.031)	1.6 (.063)		3.4 (.132)	2.8 (.111)			5.0 (.19)	8.2 (.32)	()CL-() ()2-0-() ()
	1.6 (.063)	2.4 (.094)		4.2 (.164)	3.6 (.143)			1.9 (.07)	5.1 (.20)	()CL-() ()0-1-() ()
								3.4 (.13)	6.6 (.26)	()CL-() ()1-1-() ()
								5.0 (.19)	8.2 (.32)	()CL-() ()2-1-() ()
								3.4 (.13)	6.6 (.26)	()CL-() ()0-2-() ()
								5.0 (.19)	8.2 (.32)	()CL-() ()1-2-() ()
								5.0 (.19)	8.2 (.32)	()CL-() ()1-2-() ()

See page 3 for panel preparation details.

Part Number Callout

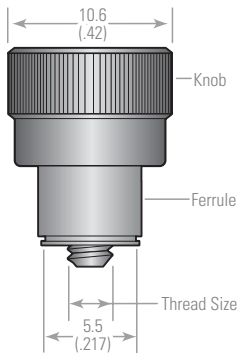
Series Code	Captivation Code	Thread Code	Drive Recess Code	Screw Length Code	Ferrule Length Code	Texture Code	Finish Code
MC Aluminum Knob	P Press-in	04 4-40	P Phillips	See Specification Chart	See Specification Chart	A 1/2 Knurl	N Natural
TC Plastic Knob	F Flare-in	06 6-32	S Slotted			S Smooth	B Black
	L Floating	08 8-32	T Six-lobe			K Full Knurl	
	B PC Board	10 10-32	C Combo Slot Phillips			D Diamond	
		14 1/4-20	E Combo Six-lobe/Slot			H 1/2 Diamond	
		M3 3m					
		35 3.5mm					
		M4 4mm					
		M5 5mm					
		M6 6mm					

Example Part Number: MCP-04C1-1-AN

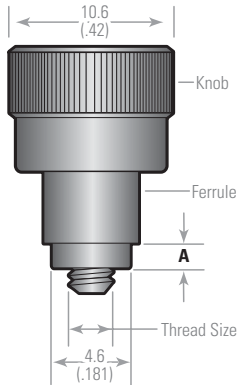
Also available with custom lengths, materials and sizes. Consult factory for details

General Dimensions

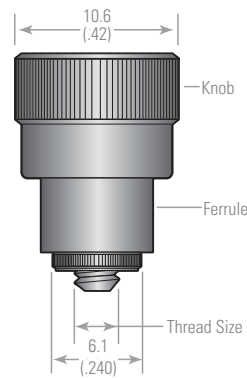
Press-in



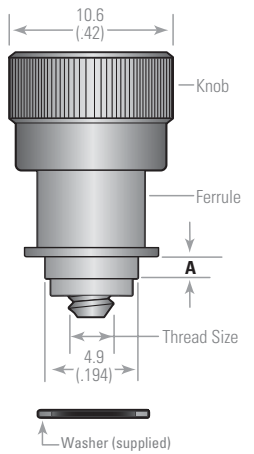
Flare-in



PC Board

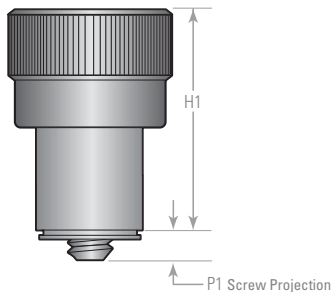


Floating

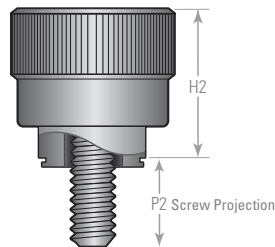


Knob Height and Screw Projections

Unfastened



Fastened



Material and Finish

MC SERIES

Press-in

Screw: 410 Series Stainless Steel, Natural Finish

Knob: 6000 Series Aluminum

Ferrule: Low Carbon Steel, Heat Treated, Zinc Plated, Chromate Plus Sealer

Spring: 300 Series Stainless Steel

Flare-in

Screw: 410 Series Stainless Steel, Natural Finish

Knob: 6000 Series Aluminum

Ferrule: 6000 Series Aluminum

Spring: 300 Series Stainless Steel

PC Board

Screw: 410 Series Stainless Steel, Natural Finish

Knob: 6000 Series Aluminum

Ferrule: 6000 Series Aluminum

Spring: 300 Series Stainless Steel

Floating

Screw: 410 Series Stainless Steel, Natural Finish

Knob: 6000 Series Aluminum

Ferrule: 6000 Series Aluminum

Spring: 300 Series Stainless Steel

Washer: 300 Series Stainless Steel

TC SERIES

Press-in

Screw: Hardened Carbon Steel, zinc plated, Chromate Plus Sealer

Knob: PC/ABS

Ferrule: Low Carbon Steel, Heat Treated, Zinc Plated, Chromate Plus Sealer

Spring: 300 Series Stainless Steel

Flare-in

Screw: Hardened Carbon Steel, zinc plated, Chromate Plus Sealer

Knob: PC/ABS

Ferrule: 6000 Series Aluminum

Spring: 300 Series Stainless Steel

PC Board

Screw: Hardened Carbon Steel, zinc plated, Chromate Plus Sealer

Knob: PC/ABS

Ferrule: Low Carbon Steel, Heat Treated, Zinc Plated, Chromate Plus Sealer

Spring: 300 Series Stainless Steel

Floating

Screw: Hardened Carbon Steel, zinc plated, Chromate Plus Sealer

Knob: PC/ABS

Ferrule: 6000 Series Aluminum

Spring: 300 Series Stainless Steel

Washer: 300 Series Stainless Steel

RETRACTABLE CAPTIVE SCREWS 6-32 and 3.5mm THREAD

Installation Types

Installation Type	Panel Thickness		Total Float	A	B	Knob Height		Screw Projection P1	Screw Projection P2	Part Number <small>(See callout to select items in parenthesis)</small>	
	Min.	Max				H1	H2				
Press-in	0.9 (.036)	—	0.8 (.031)	—	—	16 (.63)	11.2 (.44)	0.5 (.02)	5.3 (.21)	()CP-() ()0-1-() ()	
								2.1 (.09)	6.9 (.27)	()CP-() ()1-1-() ()	
								3.7 (.15)	8.5 (.33)	()CP-() ()2-1-() ()	
								5.3 (.21)	10.1 (.40)	()CP-() ()3-1-() ()	
PC Board	1.6 (.063)	—	0.8 (.031)	—	—	16 (.63)	11.2 (.44)	0.5 (.02)	5.3 (.21)	()CB-() ()0-1-() ()	
								2.1 (.09)	6.9 (.27)	()CB-() ()1-1-() ()	
								3.7 (.15)	8.5 (.33)	()CB-() ()2-1-() ()	
								5.3 (.21)	10.1 (.40)	()CB-() ()3-1-() ()	
Flare-in	1.5 (.058)	3.2 (.125)	0.8 (.031)	1.8 (.070)	0.4 (.015)	15.2 (.60)	10.2 (.40)	1.1 (.04)	6.1 (.24)	()CF-() ()0-2-() ()	
	3.2 (.126)	4.8 (.187)		3.4 (.135)	1.6 (.062)			2.7 (.11)	7.6 (.30)	()CF-() ()0-4-() ()	
	4.8 (.188)	6.4 (.250)		5 (.197)	3.2 (.125)			4.3 (.17)	9.2 (.36)	()CF-() ()0-6-() ()	
	6.3 (.251)	7.9 (.312)		6.6 (.260)	4.8 (.189)			5.9 (.23)	10.8 (.43)	()CF-() ()0-8-() ()	
	1.5 (.058)	3.2 (.125)	0.8 (.031)	1.8 (.070)	0.4 (.016)	15.2 (.60)	10.2 (.40)	2.7 (.11)	7.6 (.30)	()CF-() ()1-2-() ()	
	3.2 (.125)	4.8 (.189)		3.4 (.135)	1.6 (.062)			4.3 (.17)	9.2 (.36)	()CF-() ()2-2-() ()	
								5.9 (.23)	10.8 (.43)	()CF-() ()3-2-() ()	
	4.7 (.188)	6.4 (.250)		5 (.197)	2.8 (.11)			4.3 (.17)	9.2 (.36)	()CF-() ()1-4-() ()	
	Floating	—	0.8 (.031)	2.2 (.09)	2.9 (.113)	2.1 (.084)	15.5 (.61)	10.7 (.42)	2.4 (.09)	7.2 (.28)	()CL-() ()0-0-() ()
			1.6 (.063)		3.7 (.144)	2.9 (.115)			4.0 (.16)	8.8 (.35)	()CL-() ()1-0-() ()
		0.8 (.031)	1.6 (.063)		3.7 (.144)	2.9 (.115)			5.6 (.22)	10.4 (.41)	()CL-() ()2-0-() ()
									2.4 (.09)	7.2 (.28)	()CL-() ()0-1-() ()
1.6 (.063)		2.4 (.094)	4.5 (.176)	3.7 (.147)	4.0 (.16)	8.8 (.35)	()CL-() ()1-1-() ()				
					5.6 (.22)	10.4 (.41)	()CL-() ()2-1-() ()				
0.8 (.031)		1.6 (.063)	3.7 (.144)	2.9 (.115)	4.0 (.16)	8.8 (.35)	()CL-() ()0-2-() ()				
					5.6 (.22)	10.4 (.41)	()CL-() ()1-2-() ()				

See page 3 for panel preparation details.

Part Number Callout

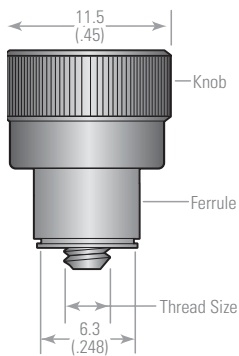
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MC	Aluminum Knob	P	Press-in	04	4-40	P	Phillips	See Specification Chart		See Specification Chart		A	1/2 Knurl	N	Natural
TC	Plastic Knob	F	Flare-in	06	6-32	S	Slotted					S	Smooth	B	Black
		L	Floating	08	8-32	T	Six-lobe					K	Full Knurl		
		B	PC Board	10	10-32	C	Combo Slot Phillips					D	Diamond		
				14	1/4-20	E	Combo Six-lobe/Slot					H	1/2 Diamond		
				M3	3mm										
				35	3.5mm										
				M4	4mm										
				M5	5mm										
				M6	6mm										

Example Part Number: MCP-06P1-1-AB

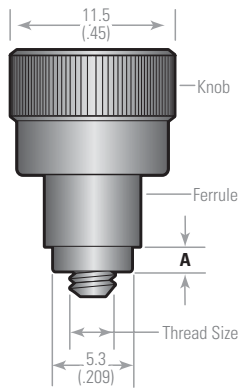
Also available with custom lengths, materials and sizes. Consult factory for details

General Dimensions

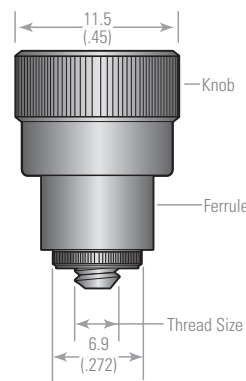
Press-in



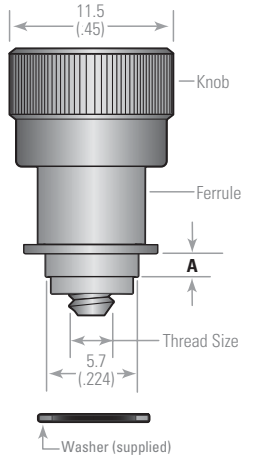
Flare-in



PC Board

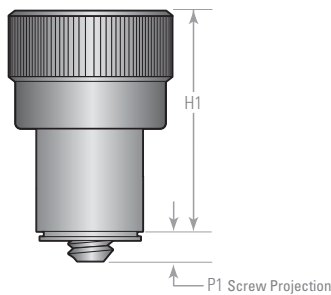


Floating

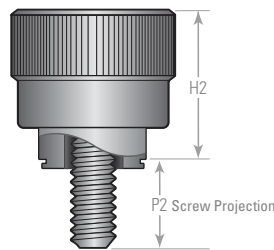


Knob Height and Screw Projections

Unfastened



Fastened



Material and Finish

MC SERIES			
Press-in Screw: 410 Series Stainless Steel, Natural Finish Knob: 6000 Series Aluminum Ferrule: Low Carbon Steel, Heat Treated, Zinc Plated, Chromate Plus Sealer Spring: 300 Series Stainless Steel	Flare-in Screw: 410 Series Stainless Steel, Natural Finish Knob: 6000 Series Aluminum Ferrule: 6000 Series Aluminum Spring: 300 Series Stainless Steel	PC Board Screw: 410 Series Stainless Steel, Natural Finish Knob: 6000 Series Aluminum Ferrule: 6000 Series Aluminum Spring: 300 Series Stainless Steel	Floating Screw: 410 Series Stainless Steel, Natural Finish Knob: 6000 Series Aluminum Ferrule: 6000 Series Aluminum Spring: 300 Series Stainless Steel Washer: 300 Series Stainless Steel
TC SERIES			
Press-in Screw: Hardened Carbon Steel, zinc plated, Chromate Plus Sealer Knob: PC/ABS Ferrule: Low Carbon Steel, Heat Treated, Zinc Plated, Chromate Plus Sealer Spring: 300 Series Stainless Steel	Flare-in Screw: Hardened Carbon Steel, zinc plated, Chromate Plus Sealer Knob: PC/ABS Ferrule: 6000 Series Aluminum Spring: 300 Series Stainless Steel	PC Board Screw: Hardened Carbon Steel, zinc plated, Chromate Plus Sealer Knob: PC/ABS Ferrule: Low Carbon Steel, Heat Treated, Zinc Plated, Chromate Plus Sealer Spring: 300 Series Stainless Steel	Floating Screw: Hardened Carbon Steel, zinc plated, Chromate Plus Sealer Knob: PC/ABS Ferrule: 6000 Series Aluminum Spring: 300 Series Stainless Steel Washer: 300 Series Stainless Steel

RETRACTABLE CAPTIVE SCREWS 8-32 and M4 THREAD

Installation Types

Type	Installation Type	Panel Thickness		Total Float	A	B	Knob Height		Screw Projection P1	Screw Projection P2	Part Number <small>(See callout to select items in parenthesis)</small>								
		Min.	Max				H1	H2											
8-32	Press-in	0.9 (.036)	—	0.8 (.031)	—	—	16 (.63)	11.2 (.44)	0.5 (.02)	5.3 (.21)	()CP-() ()0-1-() ()								
									2.1 (.09)	6.9 (.27)	()CP-() ()1-1-() ()								
									3.7 (.15)	8.5 (.33)	()CP-() ()2-1-() ()								
	PC Board	1.6 (.063)	—	0.8 (.031)	—	—	16 (.63)	11.2 (.44)	5.3 (.21)	10.1 (.40)	()CP-() ()3-1-() ()								
									0.5 (.02)	5.3 (.21)	()CB-() ()0-1-() ()								
									2.1 (.09)	6.9 (.27)	()CB-() ()1-1-() ()								
	Flare-in	1.5 (.058) 3.2 (.126) 4.8 (.188) 6.3 (.251) 1.5 (.058) 3.2 (.125) 4.7 (.188)	3.2 (.125) 4.8 (.187) 6.4 (.250) 7.9 (.312) 3.2 (.125) 4.8 (.189) 6.4 (.250)	0.8 (.031)	1.8 (.070) 3.4 (.135) 5 (.197) 6.6 (.260) 1.8 (.070) 3.4 (.135) 5 (.197)	0.4 (.015) 1.6 (.062) 3.2 (.125) 4.8 (.189) 0.4 (.016) 1.6 (.062) 3.2 (.125)	15.5 (.61)	10.4 (.41)	1.1 (.04)	6.1 (.24)	()CF-() ()0-2-() ()								
									2.7 (.11)	7.6 (.30)	()CF-() ()0-4-() ()								
									4.3 (.17)	9.2 (.36)	()CF-() ()0-6-() ()								
									5.9 (.23)	10.8 (.43)	()CF-() ()0-8-() ()								
									2.7 (.11)	7.6 (.30)	()CF-() ()1-2-() ()								
									4.3 (.17)	9.2 (.36)	()CF-() ()2-2-() ()								
									5.9 (.23)	10.8 (.43)	()CF-() ()3-2-() ()								
									4.3 (.17)	9.2 (.36)	()CF-() ()1-4-() ()								
									5.9 (.23)	10.8 (.43)	()CF-() ()2-4-() ()								
									5.9 (.23)	10.8 (.43)	()CF-() ()1-6-() ()								
									Floating	— 0.8 (.031) 1.6 (.063)	0.8 (.031) 1.6 (.063) 2.4 (.094)	2.2 (.09)	3.2 (.197) 4.0 (.158) 4.8 (.190)	2.3 (.090) 3.1 (.121) 3.9 (.153)	15.8 (.62)	10.9 (.43)	2.4 (.09)	7.2 (.28)	()CL-() ()0-0-() ()
																	4.0 (.16)	8.8 (.35)	()CL-() ()1-0-() ()
																	5.6 (.22)	10.4 (.41)	()CL-() ()2-0-() ()
																	2.4 (.09)	7.2 (.28)	()CL-() ()0-1-() ()
																	4.0 (.16)	8.8 (.35)	()CL-() ()1-1-() ()
	5.6 (.22)	10.4 (.41)	()CL-() ()2-1-() ()																

See page 3 for panel preparation details.

Part Number Callout

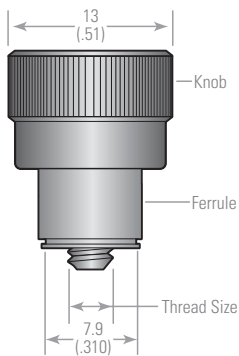
Series Code	Captivation Code	Thread Code	Drive Recess Code	Screw Length Code	Ferrule Length Code	Texture Code	Finish Code
MC Aluminum Knob	P Press-in	04 4-40	P Phillips	See Specification Chart	See Specification Chart	A 1/2 Knurl	N Natural
TC Plastic Knob	F Flare-in	06 6-32	S Slotted			S Smooth	B Black
	L Floating	08 8-32	T Six-lobe			K Full Knurl	
	B PC Board	10 10-32	C Combo Slot Phillips			D Diamond	
		14 1/4-20	E Combo Six-lobe/Slot			H 1/2 Diamond	
		M3 3mm					
		35 3.5mm					
		M4 4mm					
		M5 5mm					
		M6 6mm					

Example Part Number: MCP-08C2-1-SN

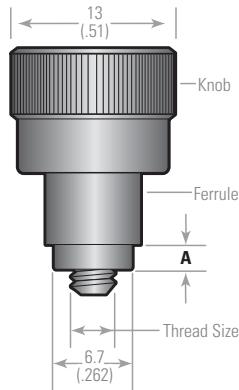
Also available with custom lengths, materials and sizes. Consult factory for details

General Dimensions

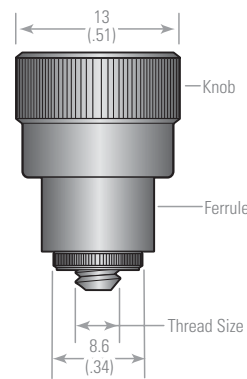
Press-in



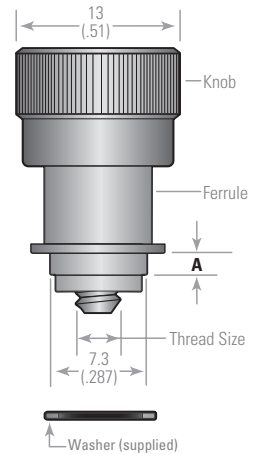
Flare-in



PC Board

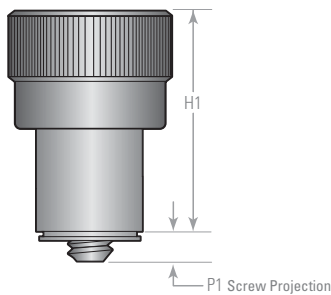


Floating

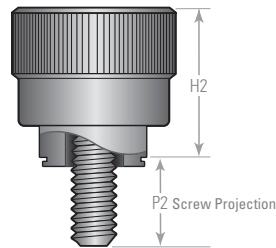


Knob Height and Screw Projections

Unfastened



Fastened



Material and Finish

MC SERIES

Press-in

Screw: 410 Series Stainless Steel, Natural Finish

Knob: 6000 Series Aluminum

Ferrule: Low Carbon Steel, Heat Treated, Zinc Plated, Chromate Plus Sealer

Spring: 300 Series Stainless Steel

Flare-in

Screw: 410 Series Stainless Steel, Natural Finish

Knob: 6000 Series Aluminum

Ferrule: 6000 Series Aluminum

Spring: 300 Series Stainless Steel

PC Board

Screw: 410 Series Stainless Steel, Natural Finish

Knob: 6000 Series Aluminum

Ferrule: 6000 Series Aluminum

Spring: 300 Series Stainless Steel

Floating

Screw: 410 Series Stainless Steel, Natural Finish

Knob: 6000 Series Aluminum

Ferrule: 6000 Series Aluminum

Spring: 300 Series Stainless Steel

Washer: 300 Series Stainless Steel

TC SERIES

Press-in

Screw: Hardened Carbon Steel, zinc plated, Chromate Plus Sealer

Knob: PC/ABS

Ferrule: Low Carbon Steel, Heat Treated, Zinc Plated, Chromate Plus Sealer

Spring: 300 Series Stainless Steel

Flare-in

Screw: Hardened Carbon Steel, zinc plated, Chromate Plus Sealer

Knob: PC/ABS

Ferrule: 6000 Series Aluminum

Spring: 300 Series Stainless Steel

PC Board

Screw: Hardened Carbon Steel, zinc plated, Chromate Plus Sealer

Knob: PC/ABS

Ferrule: Low Carbon Steel, Heat Treated, Zinc Plated, Chromate Plus Sealer

Spring: 300 Series Stainless Steel

Floating

Screw: Hardened Carbon Steel, zinc plated, Chromate Plus Sealer

Knob: PC/ABS

Ferrule: 6000 Series Aluminum

Spring: 300 Series Stainless Steel

Washer: 300 Series Stainless Steel

RETRACTABLE CAPTIVE SCREWS 10-32 and M5 THREAD

Installation Types

Type	Panel Thickness		Total Float	A	B	Knob Height		Screw Projection P1	Screw Projection P2	Part Number <small>(See callout to select items in parenthesis)</small>
	Min.	Max				H1	H2			
Press-in	0.9 (.036)	—	0.8 (.031)	—	—	16 (.63)	11.2 (.44)	0.5 (.02)	5.3 (.21)	()CP-() ()0-1-() ()
								2.1 (.09)	6.9 (.27)	()CP-() ()1-1-() ()
								3.7 (.15)	8.5 (.33)	()CP-() ()2-1-() ()
								5.3 (.21)	10.1 (.40)	()CP-() ()3-1-() ()
PC Board	1.6 (.063)	—	0.8 (.031)	—	—	16 (.63)	11.2 (.44)	0.5 (.02)	5.3 (.21)	()CB-() ()0-1-() ()
								2.1 (.09)	6.9 (.27)	()CB-() ()1-1-() ()
								3.7 (.15)	8.5 (.33)	()CB-() ()2-1-() ()
								5.3 (.21)	10.1 (.40)	()CB-() ()3-1-() ()
Flare-in	1.5 (.058)	3.2 (.125)	0.8 (.031)	1.8 (.070)	0.4 (.015)	15.5 (.61)	10.4 (.41)	1.1 (.04)	6.1 (.24)	()CF-() ()0-2-() ()
	3.2 (.126)	4.8 (.187)		3.4 (.135)	1.6 (.062)			2.7 (.11)	7.6 (.30)	()CF-() ()0-4-() ()
	4.8 (.188)	6.4 (.250)		5 (.197)	3.2 (.125)			4.3 (.17)	9.2 (.36)	()CF-() ()0-6-() ()
	6.3 (.251)	7.9 (.312)		6.6 (.260)	4.8 (.189)			5.9 (.23)	10.8 (.43)	()CF-() ()0-8-() ()
	1.5 (.058)	3.2 (.125)		1.8 (.070)	0.4 (.016)			2.7 (.11)	7.6 (.30)	()CF-() ()1-2-() ()
	3.2 (.125)	4.8 (.189)		3.4 (.135)	1.6 (.062)			4.3 (.17)	9.2 (.36)	()CF-() ()2-2-() ()
	4.7 (.188)	6.4 (.250)		5 (.197)	3.2 (.125)			5.9 (.23)	10.8 (.43)	()CF-() ()3-2-() ()
	1.5 (.058)	3.2 (.125)		1.8 (.070)	0.4 (.016)			4.3 (.17)	9.2 (.36)	()CF-() ()1-4-() ()
	3.2 (.125)	4.8 (.189)		3.4 (.135)	1.6 (.062)			5.9 (.23)	10.8 (.43)	()CF-() ()2-4-() ()
	4.7 (.188)	6.4 (.250)		5 (.197)	3.2 (.125)			5.9 (.23)	10.8 (.43)	()CF-() ()1-6-() ()
	1.5 (.058)	3.2 (.125)		1.8 (.070)	0.4 (.016)			2.4 (.09)	7.2 (.28)	()CL-() ()0-0-() ()
	3.2 (.125)	4.8 (.189)		3.4 (.135)	1.6 (.062)			4.0 (.16)	8.8 (.35)	()CL-() ()1-0-() ()
4.7 (.188)	6.4 (.250)	5 (.197)	3.2 (.125)	5.6 (.22)	10.4 (.41)	()CL-() ()2-0-() ()				
Floating	—	0.8 (.031)	2.2 (.09)	3.2 (.127)	2.3 (.090)	15.8 (.62)	10.9 (.43)	2.4 (.09)	7.2 (.28)	()CL-() ()0-1-() ()
	0.8 (.031)	1.6 (.063)		4.0 (.158)	3.1 (.121)			4.0 (.16)	8.8 (.35)	()CL-() ()1-1-() ()
	1.6 (.063)	2.4 (.094)		4.8 (.190)	3.9 (.153)			5.6 (.22)	10.4 (.41)	()CL-() ()2-1-() ()
	—	0.8 (.031)		3.2 (.127)	2.3 (.090)			2.4 (.09)	7.2 (.28)	()CL-() ()0-2-() ()
	0.8 (.031)	1.6 (.063)		4.0 (.158)	3.1 (.121)			4.0 (.16)	8.8 (.35)	()CL-() ()1-2-() ()
	1.6 (.063)	2.4 (.094)		4.8 (.190)	3.9 (.153)			5.6 (.22)	10.4 (.41)	()CL-() ()2-2-() ()

See page 3 for panel preparation details.

Part Number Callout

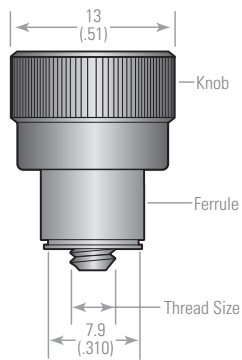
Series Code		Captivation Code		Thread Code		Drive Recess Code		Screw Length Code		Ferrule Length Code		Texture Code		Finish Code	
MC	Aluminum Knob	P	Press-in	04	4-40	P	Phillips	See Specification Chart		See Specification Chart		A	1/2 Knurl	N	Natural
TC	Plastic Knob	F	Flare-in	06	6-32	S	Slotted					S	Smooth	B	Black
		L	Floating	08	8-32	T	Six-lobe					K	Full Knurl		
		B	PC Board	10	10-32	C	Combo Slot Phillips					D	Diamond		
				14	1/4-20	E	Combo Six-lobe/Slot					H	1/2 Diamond		
				M3	3m										
				35	3.5mm										
				M4	4mm										
				M5	5mm										
				M6	6mm										

Example Part Number: TCF-10S0-6-AN

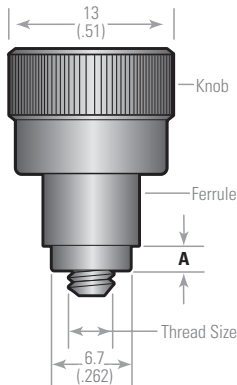
Also available with custom lengths, materials and sizes. Consult factory for details

General Dimensions

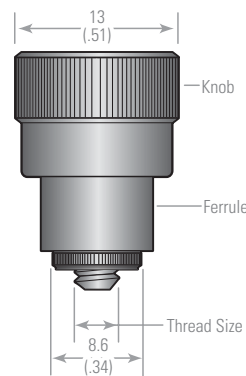
Press-in



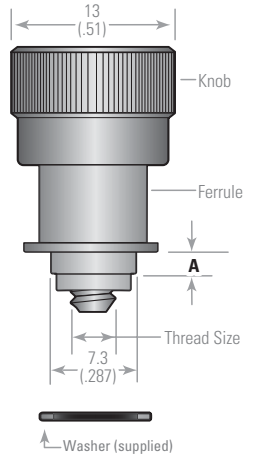
Flare-in



PC Board

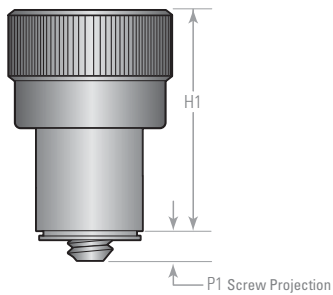


Floating

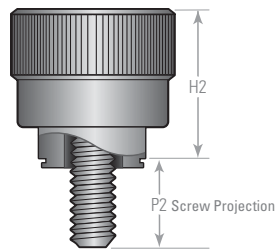


Knob Height and Screw Projections

Unfastened



Fastened



Material and Finish

MC SERIES

Press-in

Screw: 410 Series Stainless Steel, Natural Finish

Knob: 6000 Series Aluminum

Ferrule: Low Carbon Steel, Heat Treated, Zinc Plated, Chromate Plus Sealer

Spring: 300 Series Stainless Steel

Flare-in

Screw: 410 Series Stainless Steel, Natural Finish

Knob: 6000 Series Aluminum

Ferrule: 6000 Series Aluminum

Spring: 300 Series Stainless Steel

PC Board

Screw: 410 Series Stainless Steel, Natural Finish

Knob: 6000 Series Aluminum

Ferrule: 6000 Series Aluminum

Spring: 300 Series Stainless Steel

Floating

Screw: 410 Series Stainless Steel, Natural Finish

Knob: 6000 Series Aluminum

Ferrule: 6000 Series Aluminum

Spring: 300 Series Stainless Steel

Washer: 300 Series Stainless Steel

TC SERIES

Press-in

Screw: Hardened Carbon Steel, zinc plated, Chromate Plus Sealer

Knob: PC/ABS

Ferrule: Low Carbon Steel, Heat Treated, Zinc Plated, Chromate Plus Sealer

Spring: 300 Series Stainless Steel

Flare-in

Screw: Hardened Carbon Steel, zinc plated, Chromate Plus Sealer

Knob: PC/ABS

Ferrule: 6000 Series Aluminum

Spring: 300 Series Stainless Steel

PC Board

Screw: Hardened Carbon Steel, zinc plated, Chromate Plus Sealer

Knob: PC/ABS

Ferrule: Low Carbon Steel, Heat Treated, Zinc Plated, Chromate Plus Sealer

Spring: 300 Series Stainless Steel

Floating

Screw: Hardened Carbon Steel, zinc plated, Chromate Plus Sealer

Knob: PC/ABS

Ferrule: 6000 Series Aluminum

Spring: 300 Series Stainless Steel

Washer: 300 Series Stainless Steel

RETRACTABLE CAPTIVE SCREWS 1/4-20 and M6 THREAD

Installation Types

Type	Panel Thickness		Total Float	A	B	Knob Height		Screw Projection		Part Number <small>(See callout to select items in parenthesis)</small>			
	Min.	Max				H1	H2	P1	P2				
Press-in	0.9 (.036)	—	0.8 (.031)	—	—	19.8 (.78)	13.5 (.53)	0.7 (.03)	7.1 (.28)	()CP-()0-1-()			
								2.3 (.09)	8.6 (.34)	()CP-()1-1-()			
								3.7 (.15)	10.2 (.40)	()CP-()2-1-()			
								5.5 (.22)	11.9 (.47)	()CP-()3-1-()			
PC Board	1.6 (.063)	—	0.8 (.031)	—	—	19.8 (.78)	13.5 (.53)	0.7 (.03)	7.1 (.28)	()CB-()0-1-()			
								2.3 (.09)	8.6 (.34)	()CB-()1-1-()			
								3.7 (.15)	10.2 (.40)	()CB-()2-1-()			
								5.5 (.22)	11.9 (.47)	()CB-()3-1-()			
Flare-in	1.5 (.058)	3.2 (.125)	0.8 (.031)	1.8 (.070)	0.4 (.015)	19.3 (.76)	12.7 (.50)	1.2 (.05)	7.9 (.31)	()CF-()0-2-()			
	3.2 (.126)	4.8 (.187)		3.4 (.135)	1.6 (.062)			2.7 (.11)	9.4 (.37)	()CF-()0-4-()			
	4.8 (.188)	6.4 (.250)		5 (.197)	3.2 (.125)			4.3 (.17)	10.9 (.43)	()CF-()0-6-()			
	6.3 (.251)	7.9 (.312)		6.6 (.260)	4.8 (.189)			6.1 (.24)	12.7 (.50)	()CF-()0-8-()			
	1.5 (.058)	3.2 (.125)	1.8 (.070)	0.4 (.016)	2.7 (.11)			9.4 (.37)	()CF-()1-2-()				
	3.2 (.125)	4.8 (.189)	3.4 (.135)	1.6 (.062)	4.3 (.17)			10.9 (.43)	()CF-()2-2-()				
			6.1 (.24)	12.7 (.50)	()CF-()3-2-()								
			4.3 (.17)	10.9 (.43)	()CF-()1-4-()								
			6.1 (.24)	12.7 (.50)	()CF-()2-4-()								
	4.7 (.188)	6.4 (.250)	5 (.197)	3.2 (.125)	6.1 (.24)			12.7 (.50)	()CF-()1-6-()				
	Floating	—	0.8 (.031)	2.2 (.09)	3.2 (.127)			2.5 (.097)	19.8 (.78)	13.2 (.52)	2.3 (.09)	8.8 (.35)	()CL-()0-0-()
		0.8 (.031)	1.6 (.063)		4 (.158)			3.3 (.128)			3.7 (.15)	10.4 (.41)	()CL-()1-0-()
5.5 (.22)					12.2 (.48)	()CL-()2-0-()							
1.6 (.063)		2.4 (.094)	4.8 (.190)		4.1 (.160)	2.3 (.09)	8.8 (.35)	()CL-()0-1-()					
			3.7 (.15)		10.4 (.41)	()CL-()1-1-()							
			5.5 (.22)		12.2 (.48)	()CL-()2-1-()							
			3.7 (.15)		10.4 (.41)	()CL-()0-2-()							
5.5 (.22)		12.2 (.48)	()CL-()1-2-()										

See page 3 for panel preparation details.

Part Number Callout

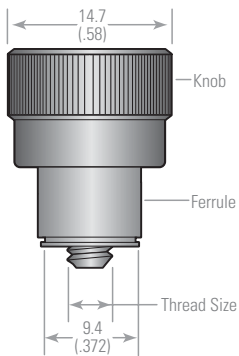
Series Code		Captivation Code		Thread Code		Drive Recess Code		Screw Length Code		Ferrule Length Code		Texture Code		Finish Code	
MC	Aluminum Knob	P	Press-in	04	4-40	P	Phillips	See Specification Chart		See Specification Chart		A	1/2 Knurl	N	Natural
TC	Plastic Knob	F	Flare-in	06	6-32	S	Slotted					S	Smooth	B	Black
		L	Floating	08	8-32	T	Six-lobe					K	Full Knurl		
		B	PC Board	10	10-32	C	Combo Slot Phillips					D	Diamond		
				14	1/4-20	E	Combo Six-lobe/Slot					H	1/2 Diamond		
				M3	3mm										
				35	3.5mm										
				M4	4mm										
				M5	5mm										
				M6	6mm										

Example Part Number: TCL-14P2-0-KN

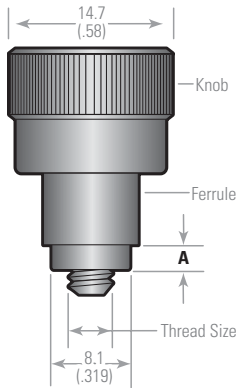
Also available with custom lengths, materials and sizes. Consult factory for details

General Dimensions

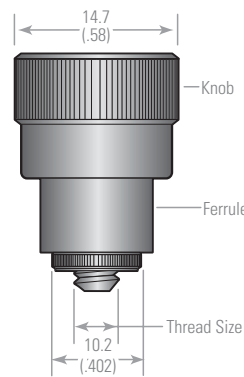
Press-in



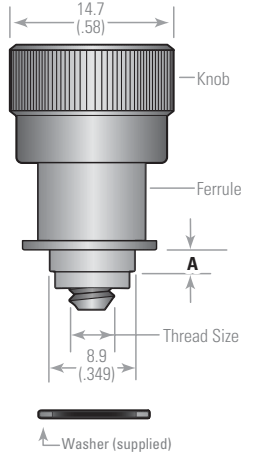
Flare-in



PC Board

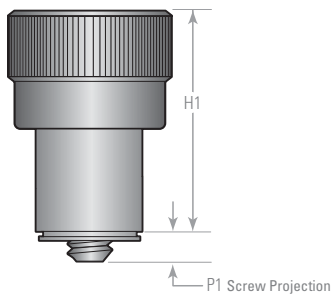


Floating

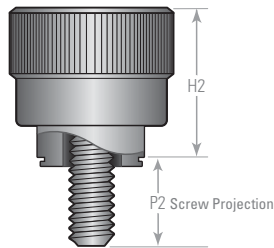


Knob Height and Screw Projections

Unfastened



Fastened



Material and Finish

MC SERIES

Press-in

Screw: 410 Series Stainless Steel, Natural Finish

Knob: 6000 Series Aluminum

Ferrule: Low Carbon Steel, Heat Treated, Zinc Plated, Chromate Plus Sealer

Spring: 300 Series Stainless Steel

Flare-in

Screw: 410 Series Stainless Steel, Natural Finish

Knob: 6000 Series Aluminum

Ferrule: 6000 Series Aluminum

Spring: 300 Series Stainless Steel

PC Board

Screw: 410 Series Stainless Steel, Natural Finish

Knob: 6000 Series Aluminum

Ferrule: 6000 Series Aluminum

Spring: 300 Series Stainless Steel

Floating

Screw: 410 Series Stainless Steel, Natural Finish

Knob: 6000 Series Aluminum

Ferrule: 6000 Series Aluminum

Spring: 300 Series Stainless Steel

Washer: 300 Series Stainless Steel

TC SERIES

Press-in

Screw: Hardened Carbon Steel, zinc plated, Chromate Plus Sealer

Knob: PC/ABS

Ferrule: Low Carbon Steel, Heat Treated, Zinc Plated, Chromate Plus Sealer

Spring: 300 Series Stainless Steel

Flare-in

Screw: Hardened Carbon Steel, zinc plated, Chromate Plus Sealer

Knob: PC/ABS

Ferrule: 6000 Series Aluminum

Spring: 300 Series Stainless Steel

PC Board

Screw: Hardened Carbon Steel, zinc plated, Chromate Plus Sealer

Knob: PC/ABS

Ferrule: Low Carbon Steel, Heat Treated, Zinc Plated, Chromate Plus Sealer

Spring: 300 Series Stainless Steel

Floating

Screw: Hardened Carbon Steel, zinc plated, Chromate Plus Sealer

Knob: PC/ABS

Ferrule: 6000 Series Aluminum

Spring: 300 Series Stainless Steel

Washer: 300 Series Stainless Steel

QUICK ACCESS FASTENERS



Q Series Quarter-Turn Fasteners

Quarter-turn fasteners quickly secure panels with simple turn to fastener.

- Offered as a set with receptacle, stud and retainer or sold separately
- Available in both tool and hand actuation styles
- Dozens of sizes, finishes, head styles and materials available

REPLACES	
SOUTHCO	PEM
81	-
82	-
85	-



MFL Series Speed Lead Fasteners & Receptacles

Unique, modified ACME square thread design allows for quick installation while dramatically improving misalignment.

- Offered as a set with receptacle, stud and retainer or sold separately
- Available in multiple sizes, drive types, finishes and head styles - many receptacle types
- Ideal for repeatedly accessed applications
- Multiple mating receptacles and retainers also available

REPLACES	
SOUTHCO	PEM
09	-
12	-
17	-



Captive Plungers

Provide quick release for easy removal of components, racks and drawers.

- Retractable pin allows for ease of locating into sliding components
- Available in press-in or thread-in installation styles
- Minimal retraction of knob ensures minimal effort of hand activation

REPLACES	
SOUTHCO	PEM
56	PTL2



MF Series Flush Mount Panel Fasteners

Flush mount design offers ideal solution when there is minimal or virtually no space above the panel.

- Tool access applications only
- Screw remains captive when disengaged
- Thread sizes #4 to 8-32 and M3 and M4

REPLACES	
SOUTHCO	PEM
F5	PF10



MTS Series Snap-In Panel Fasteners

Quick and easy snap-in installation.

- Minimal protrusion above panel
- Multiple ferrule material options, sizes and lengths to accommodate many applications



BCS Series Captive Screws

Polished, stainless steel screws offer a simple, basic captive solution.

- Slotted drive (standard)
- Available in custom sizes, materials lengths and drive types
- Large knob for hand actuation

REPLACES	
SOUTHCO	PEM
58	-

CAPTIVE FASTENERS



MC Series Retractable Panel Fasteners

Spring-loaded fasteners offering the convenience of hand or tool tightening/removal.

- Available in press-in, flare-in, floating and pc board installation styles
- Wide variety of drive recesses, knob texture and finishes
- Thread sizes #4 to 1/4 and M3 to M6

REPLACES

SOUTHCO	PEM
47	PF11
-	PF12
-	PF13
-	PF14

MM Series Miniature Panel Fasteners

Low-head miniature fasteners designed for installation in small "footprint" applications.

- Head design incorporates combination recesses and allows for finger or tool operation
- Available in press-in, flare-in or floating installation styles
- Thread sizes #4 to 1/4 and M3 to M6

REPLACES

SOUTHCO	PEM
52	PFS2
-	PFC2



MP Series Low-Profile Panel Fasteners

Low-profile design offers minimal protrusion above the face of the panel.

- Wide variety of drive recesses and finishes
- Available in press-in, flare-in or floating installation styles
- Thread sizes #4 to 1/4-20 and M3 to M6

REPLACES

SOUTHCO	PEM
-	PF30
-	PF31
-	PF32
-	PF50
-	PF60



Inserts

MSI Series Threaded Inserts

Offer a permanent steel thread that can be quickly installed into a wide variety of materials.

- Exterior knurls offer secure grip withstanding torque and pull-out
- Smooth, tapered lead assists to guide screws

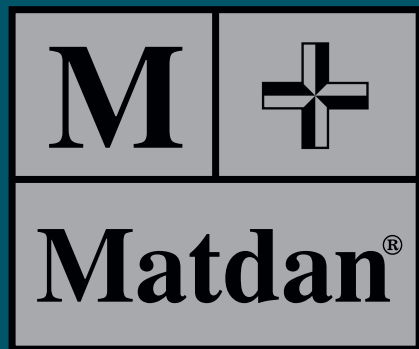
REPLACES

SOUTHCO	PEM
71	-
72	-



Custom Hardware

Unlike most industry competitors, Matdan Corporation welcomes the opportunity to develop custom hardware. Whether you require special material, a unique length of a standard item, or need assistance in designing an entire captive assembly, Matdan is happy to assist!



QUALITY FASTENERS™

Matdan Corporation, founded in 1992, is a worldwide supplier of standard and specialty fasteners. Since our inception, we have emerged as a market leader in the fastener industry, specializing in captive fasteners, engineered specialty fasteners and related hardware. As a customer-driven solutions provider, we earn credibility and establish successful relationships by exceeding expectations for professional service, quality products and on-time delivery.

Headquartered in Cincinnati, Ohio, Matdan Corporation operates manufacturing facilities in the United States and China to better serve our customers worldwide. Matdan's extensive manufacturing capabilities include modelling, technical experience to design special fasteners and hardware for unique and specific applications.

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<p>Headquarters: Matdan Corporation Cincinnati, Ohio 45242, USA Tel: 513 - 794 - 0500 Fax: 513 - 794 - 0651 E-mail: sales@matdanfasteners.com</p>	<p>China Division: Matdan (Ningbo) Specialty Hardware Co., Ltd. Ningbo, Zhejiang Province, China 315120 E-mail: sales_cn@matdanfasteners.com</p>
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