

## 47 Captive Screws

Styled knob series - 4-40 thread size



### Features

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

### Material

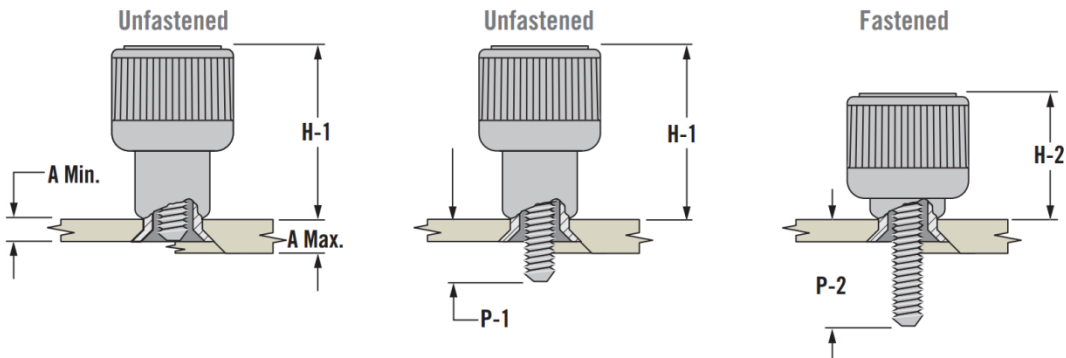
- Ferrule:
  - Press-in: Hardened carbon steel, zinc plated, chromate, plus sealer
  - Flare-in and floating: Aluminum, natural
  - P.C. board style: 300 Series stainless steel, passivated
- Knob: Aluminum, natural or black powder coated
- Screw: Hardened carbon steel, zinc plated, chromate, plus sealer

### Recess Styles

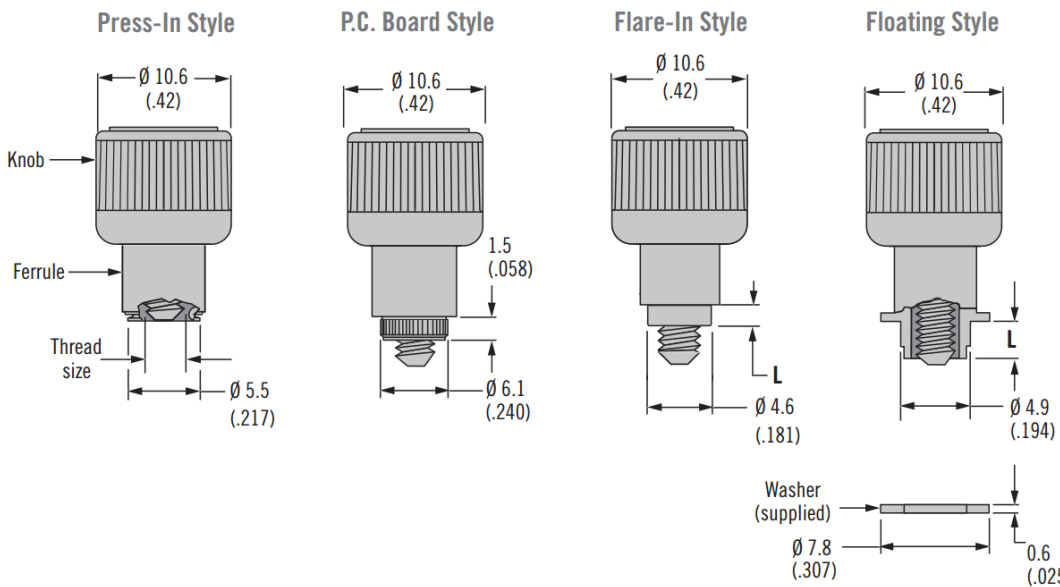


### Knob Height and Screw Projection

(Flare-in style shown)



### Installation Styles



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				
			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				
			Floating Style	11.4 (.45)	8.6 (.34)		~	0.8 (.031)	2 (.080)	2.1 (.08)	2.6 (.101)	1.9 (.07)	5.1 (.20)	47-10-110-14
0.8 (.031)	1.6 (.063)	2.8 (.111)				3.4 (.132)	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
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					
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					
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					

Notes

- 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

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

## 47 Captive Screws

Styled knob series · 6-32 thread size



### Features

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

### Material

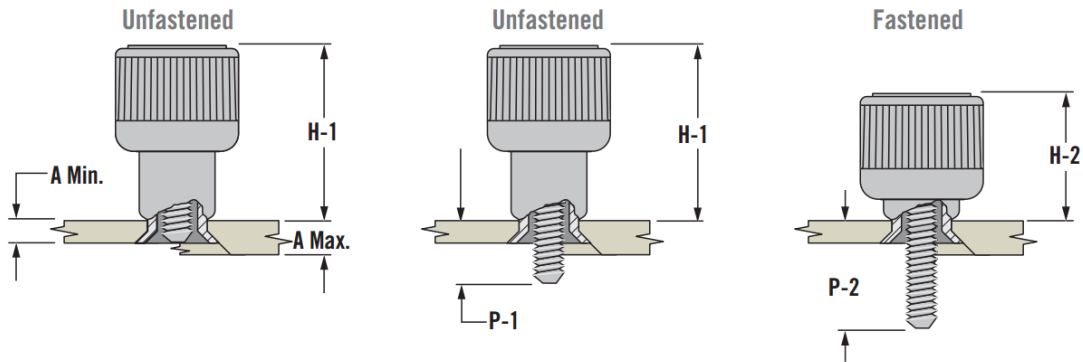
- Ferrule:
  - Press-in: Hardened carbon steel, zinc plated, chromate, plus sealer
  - Flare-in, floating and snap-in: Aluminum, natural
  - P.C. board style: 300 Series stainless steel, passivated
- Knob: Aluminum, natural or black powder coated
- Screw: Hardened carbon steel, zinc plated, chromate, plus sealer

### Recess Styles

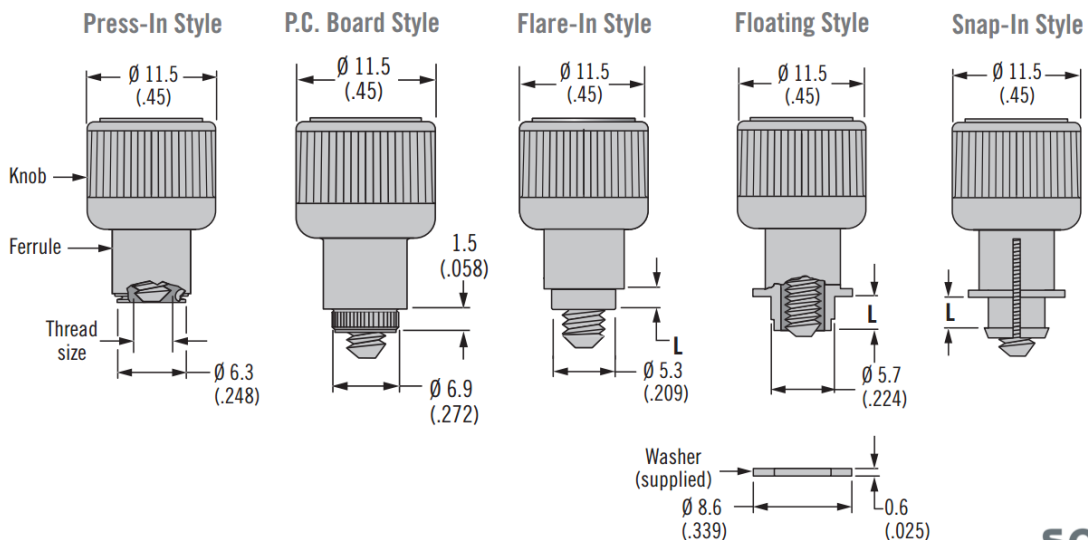


### Knob Height and Screw Projection

(Flare-in style shown)



### Installation Styles



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)	5.9 (.23)	10.8 (.43)	47-11-204-14	47-11-224-14	47-11-244-14	47-11-264-10	47-11-284-14
			1.5 (.058)	3.2 (.125)	0.4 (.015)		1.8 (.07)	2.7 (.11)	7.6 (.30)	47-12-204-14	47-12-224-14	47-12-244-14	47-12-264-10	47-12-284-14
			3.2 (.125)	4.8 (.189)	1.6 (.062)		3.4 (.135)	4.3 (.17)	9.2 (.36)	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
0.8 (.031)	1.6 (.063)	2.9 (.114)				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	
1.6 (.063)	2.4 (.094)	3.7 (.146)				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 (.094)	3.7 (.146)	4.5 (.176)				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	
3.7 (.144)	4 (.16)	8.8 (.35)				4.5 (.176)	5.6 (.22)	10.4 (.41)	47-11-211-14		47-11-231-14	47-11-251-14	47-11-271-10	47-11-291-14
4.5 (.176)	4 (.16)	8.8 (.35)				4.5 (.176)	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
1.1 (.044)	0.8 (.03)	5.6 (.22)				1.1 (.044)	0.8 (.03)	5.6 (.22)	47-10-212-14		47-10-232-14	47-10-252-14	47-10-272-10	47-10-292-14
1.1 (.044)	2.4 (.09)	7.2 (.28)				1.1 (.044)	2.4 (.09)	7.2 (.28)	47-11-212-14		47-11-232-14	47-11-252-14	47-11-272-10	47-11-292-14
1.1 (.044)	4 (.16)	8.8 (.35)				1.1 (.044)	4 (.16)	8.8 (.35)	47-12-212-14		47-12-232-14	47-12-252-14	47-12-272-10	47-12-292-14
1.1 (.044)	5.6 (.22)	10.4 (.41)				1.1 (.044)	5.6 (.22)	10.4 (.41)	47-60-210-14		47-60-230-14	47-60-250-14	47-60-270-10	47-60-290-14
1.1 (.044)	2.4 (.09)	7.2 (.28)				1.1 (.044)	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
1.1 (.044)	4 (.16)	8.8 (.35)				1.1 (.044)	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
1.1 (.044)	5.6 (.22)	10.4 (.41)	1.1 (.044)	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				
1.7 (.067)	2.4 (.09)	7.2 (.28)	1.7 (.067)	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				
1.7 (.067)	4 (.16)	8.8 (.35)	1.7 (.067)	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				
1.7 (.067)	5.6 (.22)	10.4 (.41)	1.7 (.067)	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				

Notes

- 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

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

# 47 Captive Screws

Styled knob series · 8-32 thread size



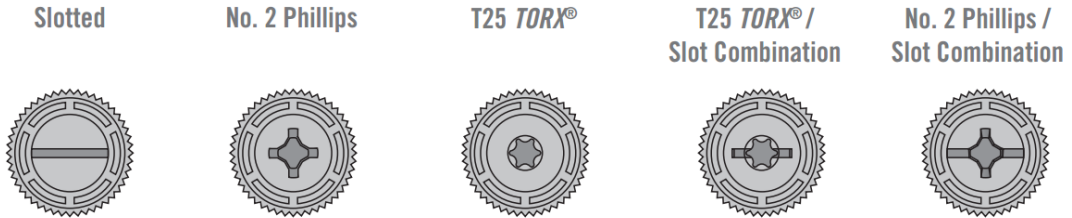
### Features

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

### Material

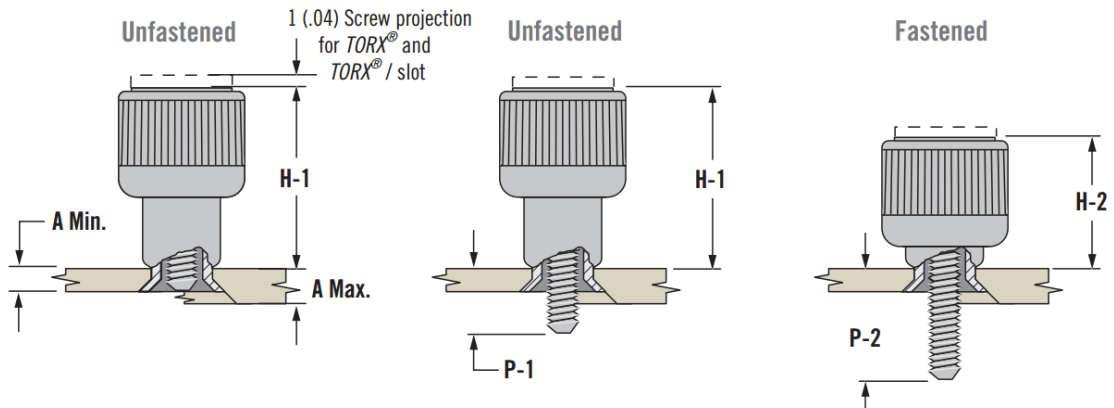
- Ferrule:
  - Press-in: Hardened carbon steel, zinc plated, chromate, plus sealer
  - Flare-in, floating and snap-in: Aluminum, natural
- Knob: Aluminum, natural or black powder coated
- Screw: Hardened carbon steel, zinc plated, chromate, plus sealer

### Recess Styles

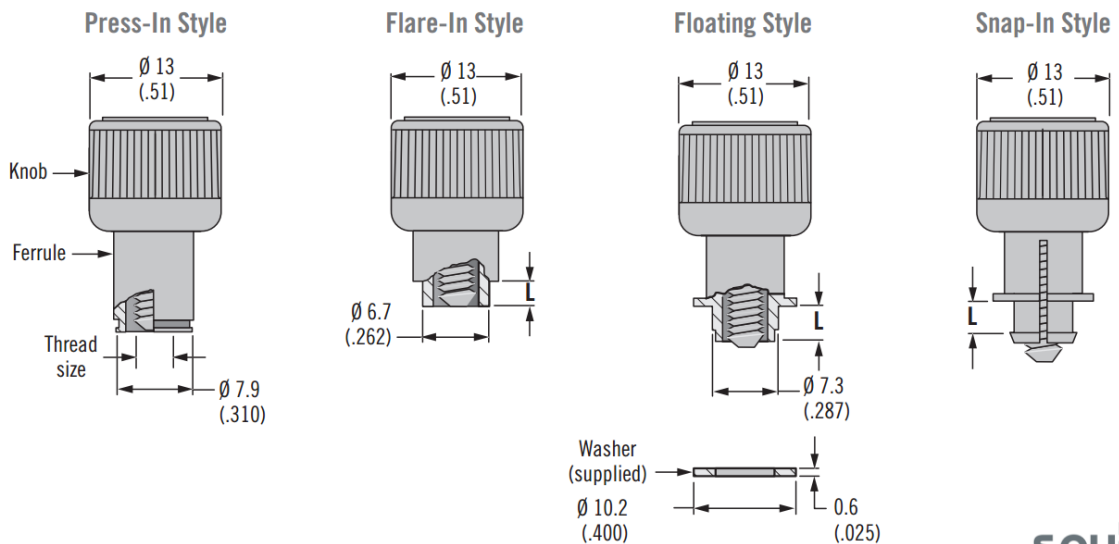


### Knob Height and Screw Projection

(Flare-in style shown)



### Installation Styles



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				
			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								
			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								
			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								
			3.2 (.126)	4.8 (.189)	1.6 (.062)		3.4 (.135)	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				
			4.8 (.189)	6.4 (.250)	3.2 (.125)		5 (.197)	5.8 (.23)	10.8 (.43)	47-11-306-14	47-11-326-14	47-11-346-10	47-11-366-10	47-11-386-10				
			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)		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	
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)	7.1 (.28)	47-10-311-14				47-10-331-14	47-10-351-10	47-10-371-10	47-10-391-10									
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									
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									
3.8 (.15)	8.9 (.35)	47-10-312-14				47-10-332-14	47-10-352-10	47-10-372-10	47-10-392-10									
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				
			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								
			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								
			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								
			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								
			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								
			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								
			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								
			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								
			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								

Notes

- 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

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

## 47 Captive Screws

Styled knob series - 10-32 thread size



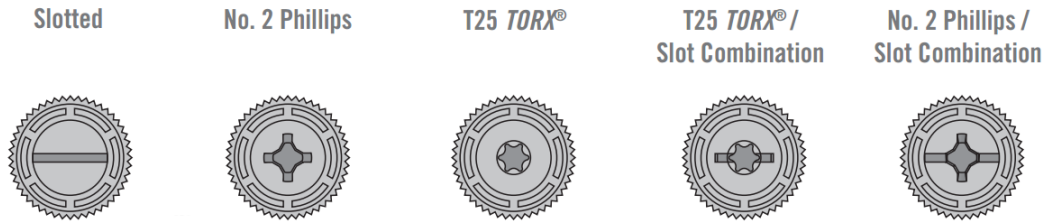
### Features

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

### Material

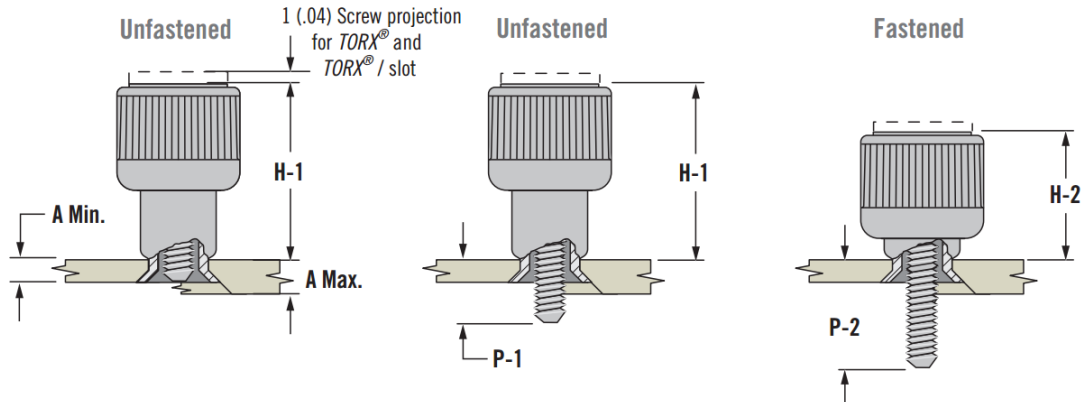
- Ferrule:
  - Press-in: Hardened carbon steel, zinc plated, chromate, plus sealer
  - Flare-in, floating and snap-in: Aluminum, natural
- Knob: Aluminum, natural or black powder coated
- Screw: Hardened carbon steel, zinc plated, chromate, plus sealer

### Recess Styles

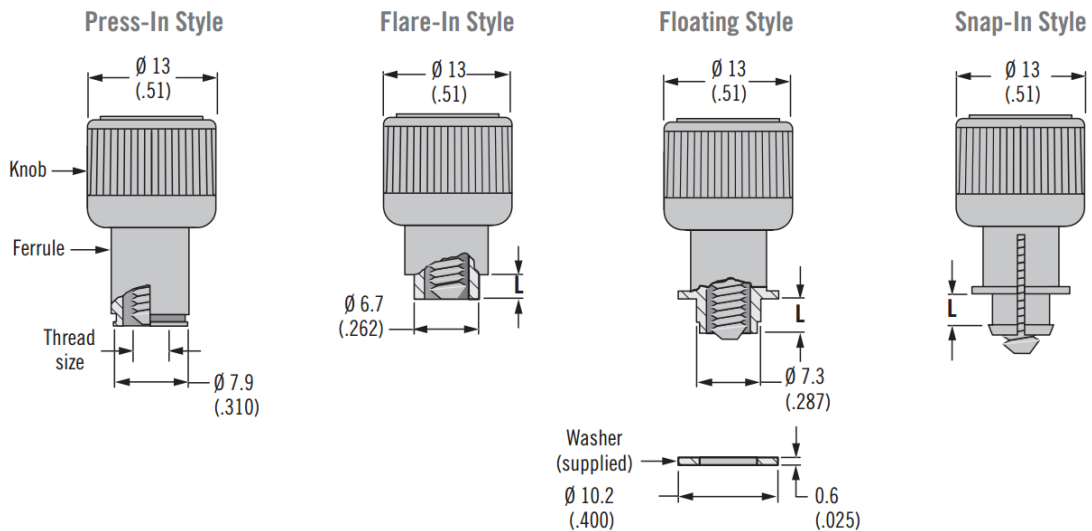


### Knob Height and Screw Projection

(Flare-in style shown)



### Installation Styles



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				
			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								
			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								
			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								
			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								
			3.2 (.125)	4.8 (.187)	1.6 (.062)		3.4 (.135)	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				
			4.8 (.189)	6.4 (.250)	3.2 (.125)		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				
			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	47-10-590-10
							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									
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									
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				
			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								
			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								

Notes

- 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

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

## 47 Captive Screws

Styled knob series - 1/4-20 thread size

### Features

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

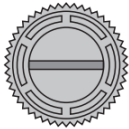
### Material

- Ferrule:
  - Press-in: Hardened carbon steel, zinc plated, 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



### RecessStyles

Slotted



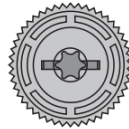
No. 2 Phillips



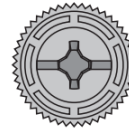
T30 TORX®



T30 TORX® /  
Slot Combination

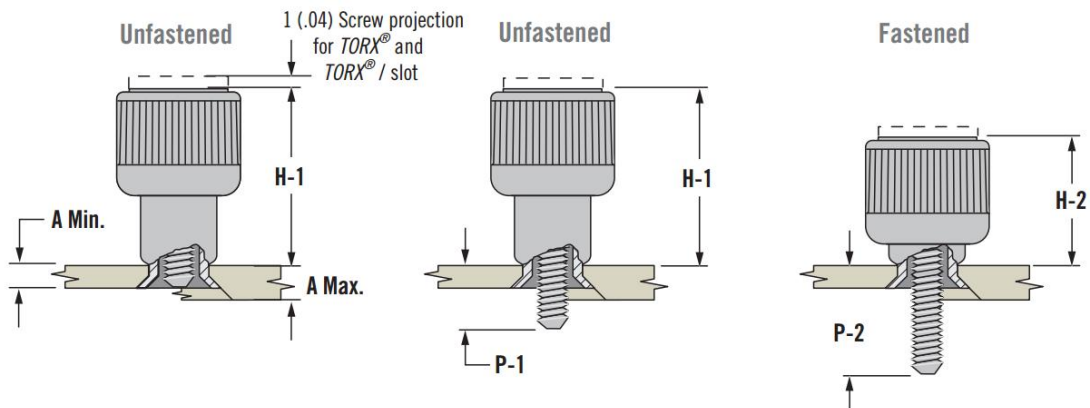


No. 2 Phillips /  
Slot Combination



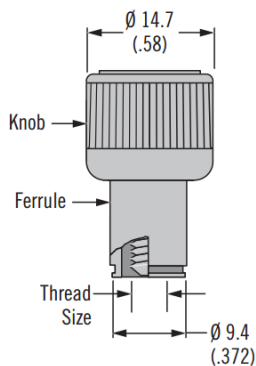
### Knob Height and Screw Projection

(Flare-in style shown)

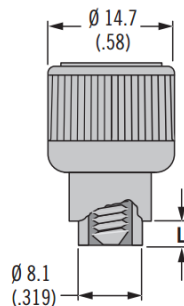


### Installation Styles

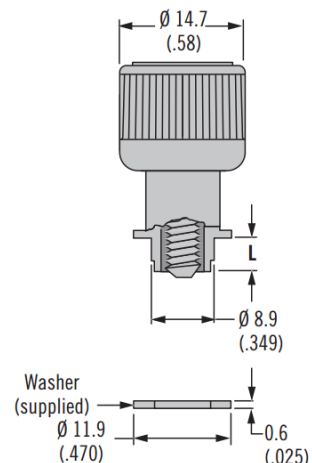
Press-In Style



Flare-In Style



Floating Style



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								
			3.4 (.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								
			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
							0.8 (.031)	1.6 (.063)	3.1 (.122)		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	
1.6 (.063)	2.4 (.094)	3.9 (.153)				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									
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									

Notes

- 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

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



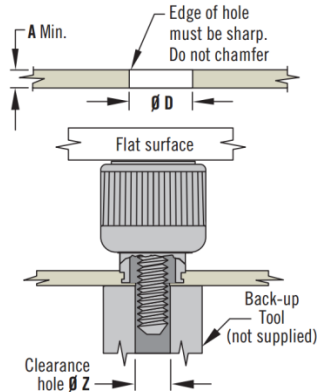
For a smooth knob, change the part number from the table as shown:

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

## 47/4C Captive Screws

### Panel preparation and installation

#### 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.

Thread Size	$\phi D$	Clearance Hole $\phi Z$ $+0.2 / +0.008$ $-0.1 / -.004$
M3 or 4-40	5.6 <sup>+0.03</sup> <sub>-0.05</sub> (.219 <sup>+0.003</sup> <sub>-0</sub> )	3.2 (.125)
M3.5 or 6-32	6.4 <sup>+0.03</sup> <sub>-0.05</sub> (.250 <sup>+0.003</sup> <sub>-0</sub> )	3.7 (.146)
M4 or 8-32	8 <sup>+0</sup> <sub>-0.08</sub> (.315 <sup>+0</sup> <sub>-0.003</sub> )	4.4 (.173)
M5 or 10-32	8 <sup>+0</sup> <sub>-0.08</sub> (.315 <sup>+0</sup> <sub>-0.003</sub> )	5.2 (.205)
M6 or 1/4-20	9.5 <sup>+0.1</sup> <sub>-0</sub> (.375 <sup>+0.003</sup> <sub>-0</sub> )	6.2 (.260)

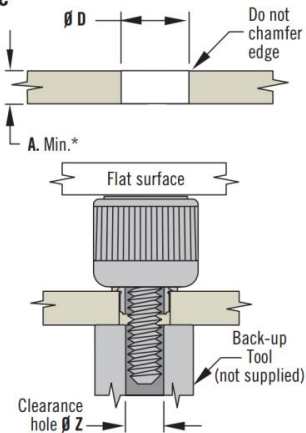
#### Installation Notes

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

#### Notes

- Installation closer to the panel edge requires a fixture to constrain the panel edges
- Recommended minimum distance from edge of panel to centerline of hole is  $1.5 \times \phi D$

#### P.C. Board Style



Thread Size	$\phi D$	Clearance Hole $\phi Z$ $+0.2 / +0.008$ $-0.1 / -.004$
M3 or 4-40	5.6 <sup>+0.1</sup> <sub>-0.05</sub> (.219 <sup>+0.004</sup> <sub>-0.002</sub> )	3.2 (.125)
M3.5 or 6-32	6.4 $\pm 1$ (.252 $\pm$ .004)	3.7 (.146)

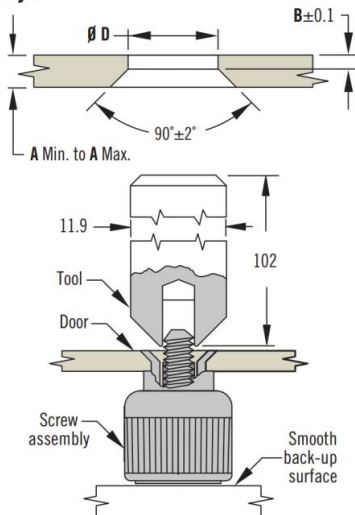
#### Installation Notes

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
- Pullout force: 360 N
- Side load against unfastened knob: 200 N

#### Flare-In Style



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

#### 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

#### Notes

- Installation force: 1,600 N to 2,500 N
- Installation force depends on thread size

### Installation Notes

- **Panel preparation 1:**
  - Requires space between inner and outer panels.
  - Specify the fastener for panel thickness A to fall between the range A Min. to A Max.:  $gap = B - A$  outer panel thickness
- **Panel preparation 2:**
  - Counter bore the panel (B = Min. panel thickness) to a thickness (A) between the range of A Min. and A Max.
- Minimum bore depth = panel thickness - A Max.
- For gap =  $\emptyset$ , panel thickness must be  $\geq$  to B value (before counterbore) for the given part number

### Notes

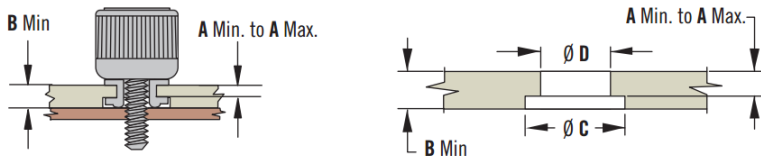
- B and A Max. values are provided in the corresponding fastener selection tables for each part number
- If holes are drilled, top edge of hole should be chamfered

### Floating Style

Panel preparation 1

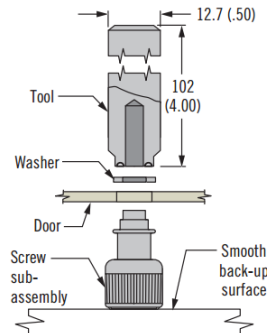


Panel preparation 2



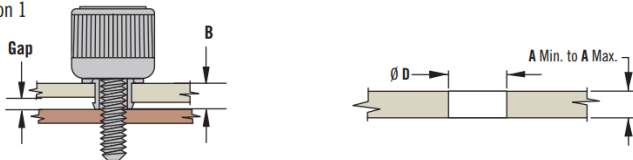
Thread Size	Tool Part Number
M3 or 4-40	47-04
M3.5 or 6-32	47-06
M4 or 8-32	47-08
M5	47-05
10-32	47-10
M6 or 1/4-20	47-25

Thread Size	$\phi D$ <small>+0.008 (+0.003) -0.03 (-0.001)</small>	Counterbore Min. $\phi C$
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)

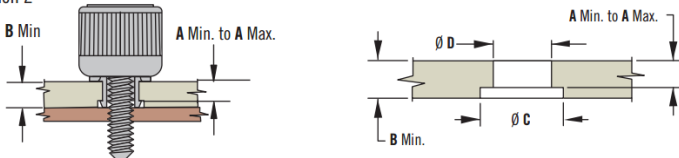


### Snap-In Style

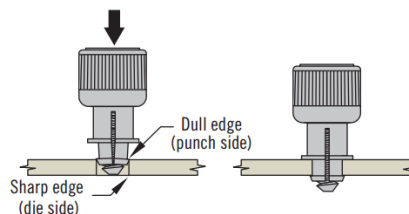
Panel preparation 1



Panel preparation 2



Thread Size	$\phi D$ <small>+0 -0.1 (± .002)</small>	Counterbore Min. $\phi C$
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)



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