

## 4C-SM Captive Screws

Styled knob series · Surface mount technology (SMT) style



### Features

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

### Material

- Ferrule: Steel, tin plated
- Knob: Aluminum, natural
- Screw: Hardened carbon steel, zinc plated, chromate, plus sealer
- Internal spring: 300 series stainless steel passivated
- Plug: Silicone rubber

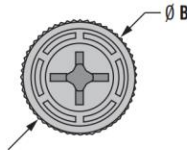
### Recess Styles

TORX® / Slot  
Combination

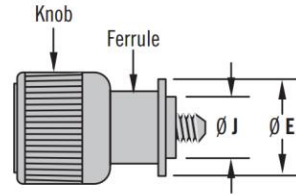


T10 TORX® / Slot Combination (M3,4-40)  
T15 TORX® / Slot (6-32)

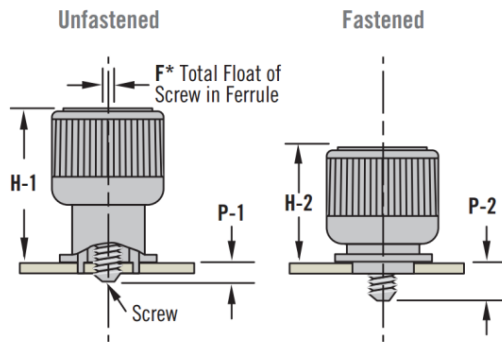
Phillips / Slot  
Combination



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

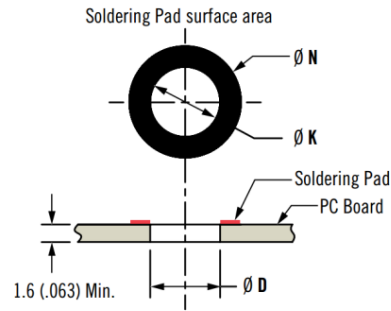


### Knob Height and Screw Projection



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

### PC Board Preparation



### 47 Captive Screws

Styled knob series - SMT Style

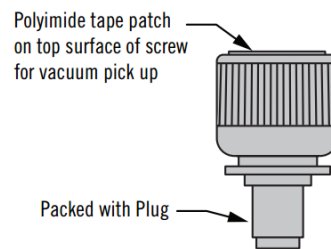
#### Part Number

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

#### Example

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

### Screw as Shipped in Reel Pack or Tray Pack



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

## 4C-SM Captive Screws

Prism series · Surface mount technology (SMT) style

### Features

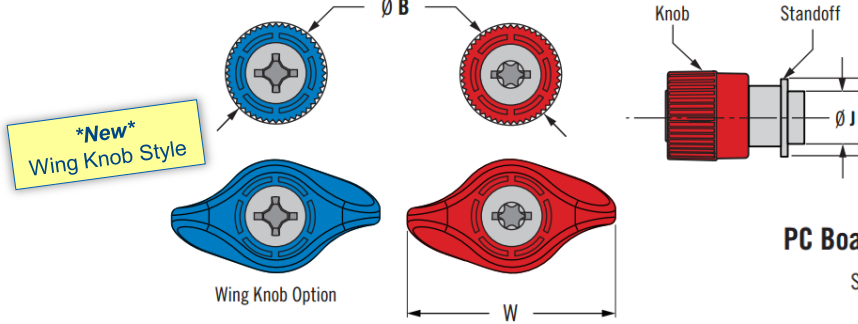
- For installation to PC board material utilizing surface mount technology
- Designate access points with color
- Color match captive screws to your industrial design
- High strength screw for use with high torque drivers

### Material

- Standoff: Steel, Tin plated
- Knob: High heat resistant plastic
- Screw: Hardened carbon steel, zinc plated, chromate, plus sealer
- Internal spring: 300 series stainless steel passivated
- Plug: Silicone rubber

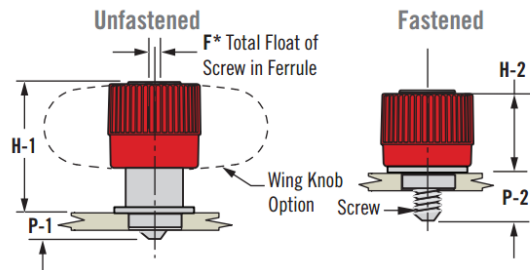


### Recess Styles



No. 2 Phillips Recess (M3,4-40) T10 TORX® / Slot Combination (M3,4-40)  
No. 2 Phillips / Slot Recess (6-32) T15 TORX® / Slot Combination(6-32)

### Knob Height and Screw Projection

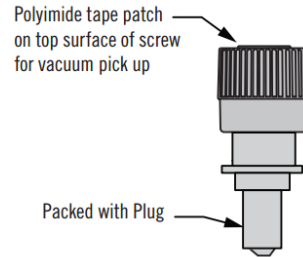
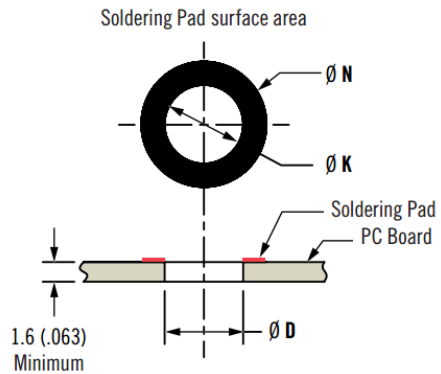


F\* Value represents float in unfastened position  
Notes: P-1, P-2 Screw Projection measured from the top side of panel



**000 Black    008 Blue    013 Red    014 Green    Your Color**  
Contact Gripwell

### PC Board Preparation



### Part Number

Specify Package

Indicate package option with last digit of the part number

### Example

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

### Part Number

Specify Color

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

### Example

4C-SM-1111-K000-R, black  
4C-SM-1111-K008-R, blue

### Part Number

Specify Wing Knob Option

To indicate Wing Knob, change the K or N to W of the part number

### Example

4C-SM-1111-K000-R, Round Knob  
4C-SM-1111-W008-R, Wing Knob

southco®

Thread Size	Part Number (Reel package shown)													Panel Preparation Ø D		
	Knurled Head		Smooth Head		H-1	H-2	P-1	P-2	Ø B	Ø J	Ø E	F*	Ø K		Ø N	W
	Phillips	TORX® / Slotted	Phillips	TORX® / Slotted												
M3 x 0.5	4C-SM-3111-K000-R	4C-SM-3411-K000-R	4C-SM-3111-N000-R	4C-SM-3411-N000-R	10.8 (.43)	8.6 (.34)	1.5 (.06)	3.7 (.15)	9.7 (.38)	5.5 (.217)	7.6 (.30)	0.7 (.03)	5.6 (.22)	8.6 (.34)	20 (.7878)	5.6 +0.08/-0 (.220 +.003/-0.000)
	4C-SM-3121-K000-R	4C-SM-3421-K000-R	4C-SM-3121-N000-R	4C-SM-3421-N000-R			3.3 (.13)	5.5 (.22)								
4-40	4C-SM-1111-K000-R	4C-SM-1411-K000-R	4C-SM-1111-N000-R	4C-SM-1411-N000-R	10.8 (.43)	8.6 (.34)	1.5 (.06)	3.7 (.15)	9.7 (.38)	5.5 (.217)	7.6 (.30)	0.7 (.03)	5.6 (.22)	8.6 (.34)	20 (.7878)	5.6 +0.08/-0 (.220 +.003/-0.000)
	4C-SM-1121-K000-R	4C-SM-1421-K000-R	4C-SM-1121-N000-R	4C-SM-1421-N000-R			3.3 (.13)	5.5 (.22)								
6-32	4C-SM-2311-K000-R	4C-SM-2411-K000-R	4C-SM-2311-N000-R	4C-SM-2411-N000-R	16.3 (.64)	11.7 (.46)	0.1 (.004)	4.6 (.18)	11.4 (.45)	6.2 (.244)	8.1 (.32)	0.8 (.03)	6.4 (.25)	10.2 (.40)	24 (.945)	6.4 +0.08/-0 (.252 +.003/-0.000)
	4C-SM-2321-K000-R	4C-SM-2421-K000-R	4C-SM-2321-N000-R	4C-SM-2421-N000-R			1.8 (.07)	6.1 (.24)								

## 52-SM Captive Screws

Miniature series - Surface Mount Technology (SMT) Style



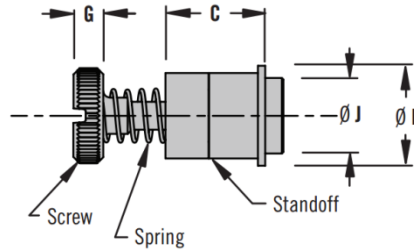
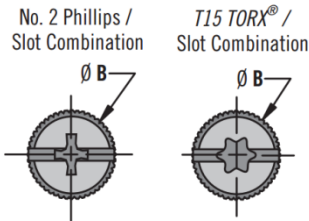
### Features

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

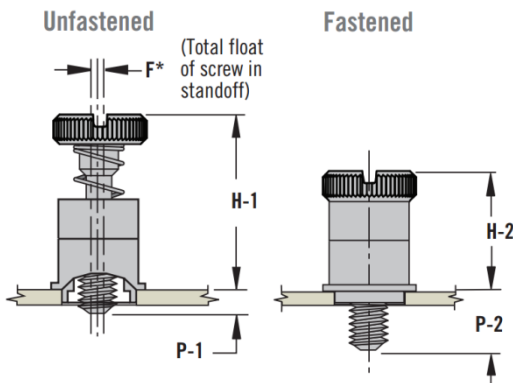
### Material

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

### Recess Styles

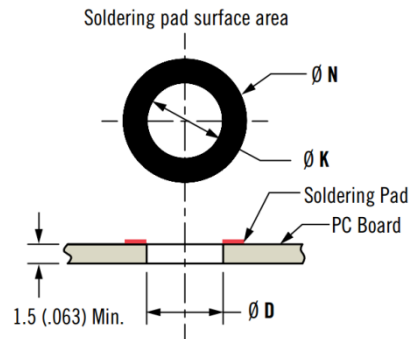


### Screw Height and Screw Projection



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

### PC Board Preparation



### 52 Captive Screws

Miniature Series - SMT Style

#### Part Number

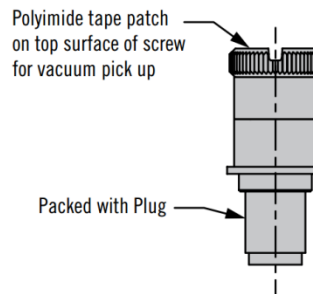
Specify Package  
Indicate package option with last digit of the part number

#### Example

52-SM-1311-K-R: Reel Package (as shown in table)

52-SM-1311-K-T: Tray Package

### Screw as Shipped in Reel Pack or Tray Pack



Thread Size	Part Number (Reel package shown)				H-1	H-2	P-1	P-2	Ø B Knurled Head	Ø B Smooth Head	Ø J	Ø E	C	G	F*	Ø K	Ø N	Panel Preparation Ø D
	Knurled Head		Smooth Head															
	Phillips / Slotted	TORX®/Slotted	Phillips / Slotted	TORX®/Slotted														
M3 x 0.5	52-SM-3311-K-R	52-SM-3411-K-R	52-SM-3311-N-R	52-SM-3411-N-R	14	9.6	0.8 (.03)	5.3 (.21)	7	6.8	5.5	7.6	7	2.5	0.5			5.6 +0.08/-0
	52-SM-3321-K-R	52-SM-3421-K-R	52-SM-3321-N-R	52-SM-3421-N-R	(.55)	(.38)	2.3 (.09)	6.8 (.27)	(.28)	(.27)	(.217)	(.30)	(.28)	(.1)	(.02)	5.6	8.6	(.220 +.003/-0.00)
4-40	52-SM-1311-K-R	52-SM-1411-K-R	52-SM-1311-N-R	52-SM-1411-N-R	14	9.6	0.8 (.03)	5.3 (.21)	7	6.8	5.5	7.6	7	2.5	0.5	(.22)	(.34)	5.6 +0.08/-0
	52-SM-1321-K-R	52-SM-1421-K-R	52-SM-1321-N-R	52-SM-1421-N-R	(.55)	(.38)	2.3 (.09)	6.8 (.27)	(.28)	(.27)	(.217)	(.30)	(.28)	(.1)	(.02)			(.220 +.003/-0.00)
6-32	52-SM-2311-K-R	52-SM-2411-K-R	52-SM-2311-N-R	52-SM-2411-N-R	15.7	10.7	0.7 (.028)	5.8 (.23)	7.9	7.6	6.2	8.1	8.1	2.5	0.8	6.4	10.2	6.4 +0.08/-0
	52-SM-2321-K-R	52-SM-2421-K-R	52-SM-2321-N-R	52-SM-2421-N-R	(.62)	(.42)	2.2 (.087)	7.4 (.29)	(.31)	(.30)	(.244)	(.32)	(.32)	(.1)	(.03)	(.25)	(.40)	(.252 +.003/-0.00)

## Installation Guidelines

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

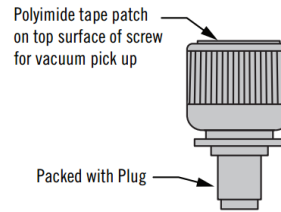
SMT product installation is offered on these Southco Captive Screws for 4-40, 6-32 and M3 thread sizes:

- 47 Styled Knob Series
- 4C Prism Series
- 52 Miniature Series

### Installation Features

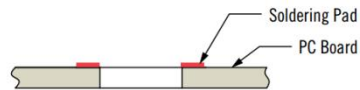
Each Southco SMT style captive screw includes a polyimide patch covering the screw head tool recess allowing for vacuum pick up during placement on the PC Board. The screw threads are protected from excess solder during the reflow process by a plug pre-assembled to the screw by Southco. The patch and plug are then removed after the final cool down phase.

Screw as Shipped in Reel or Tray Pack



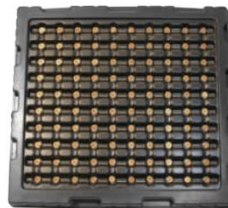
### Preparing the PC Board to accept SMT Captive Screws

- See literature for optimum soldering pad surface area for the specific Southco Captive Screw being utilized



### Packaging Features/Options

- Tray Pack
- Reel Pack



Tray Pack



Reel Pack

### Reflow Process

- Reflow of Solder
  - Pre-heat
  - Soak
  - Reflow
  - Cooling
- Cleaning
  - Remove excess solder paste