## Miniature and Standard Protection Tubes

✓ 316 Stainless Steel
✓ Inconel<sup>®</sup> 600

Opened or Closed Ends

OMEGA® miniature and standard protection tubes are available in 316 stainless steel and Inconel 600 nickel alloy. Tubes are available either opened at both ends or with one end closed. Standard length available from stock is 150 mm (6"); however, practically any length tube is available on short delivery.

OMEGA's protection tubes are intended for use with OMEGA's fine or heavy gage thermocouples and ceramic insulators, as well as OMEGA's standard thermocouples made from OMEGACLAD® thermocouple wire. These items are shown in Section A of this catalog. Bare wire thermocouples can be insulated using OMEGATITE® ceramic insulators as well as the insulators used in replacement elements.

OMEGA's protection tubes can be conveniently secured into pipes, vessels, and chambers by using OMEGALOK<sup>®</sup> compression fittings.

## Compression fitting (e.g., SSLK-14-14) shown on tube, sold separately. All products shown smaller than actual size.

To Order							
Model No.	Material	OD* mm (inch)	ID* mm (inch)				
SS-116-□□	316 Stainless Steel	1.5 (1/16)	1.32 (0.052)				
SS-18 -□□		3.0 (1/8)	1.78 (0.070)       3.35 (0.132)       4.93 (0.194)				
SS-316-□□		<b>4.5</b> (¾6)					
SS-14 -□□		6.0 (¼)					
SS-516-□□		8.0 (5/16)	6.60 (0.260)				
SS-38 -□□		9.5 (%)	8.13 (0.320) 9.40 (0.370)				
SS-716-□□		11.0 (7/16)					
SS-12 -□□		12.5 (½)	10.9 (0.430)				
INC-116-□□		1.5 (1/16)	1.32 (0.052)				
INC-18 -□□		3.0 (1/8)	1.78 (0.070)				
INC-316-00	Inconel 600	4.5 (¾6)	3.35 (0.132)				
INC-14 -□□		6.0 (¼)	5.33 (0.210)				
INC-516-□□		8.0 (5/16)	6.27 (0.247)				
INC-38 - 🗆 🗆		9.5 (%)	7.75 (0.305) 9.32 (0.367)				
INC-716-□□		11.0 (7/16)					
INC-12 - 🗆 🗆		12.5 (½)	10.9 (0.430)				
Closed one end "CLOSED": Opened "OPEN"							

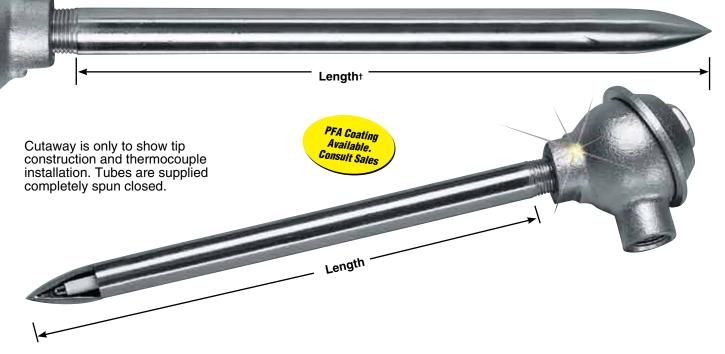
Closed one end "CLOSED"; Opened "OPEN — Length in inches, 6" standard

\* Tolerance of OD is  $\pm 0.13$  mm (0.005"). Tolerance of ID is the same as the tolerance of OD  $\pm 15\%$  of the wall thickness.

**Ordering Example: SS-14-6CLOSED**, closed end 6.0 mm (¼") OD 316 SS protection tube, 150 mm (6") long.

## **Metal Protection Tubes**

Thread (Either ¾ or ½ NPT)



To Order								
Nominal <sup>3</sup> / <sub>4</sub> " Schedule 40 Black Steel Pipe (0.824" ID x 1.050" OD)				Nominal ½" Schedule 40 Black Steel Pipe (0.622" ID x 0.840" OD)				
Thread	Length mm (inc	h) Mod	el Number	Thread	Length mm (inch)		Model Number	
¾ NPT	300 (12)	3/4 -	PTBS-12	½ NPT	300 (12	2) 1/2-PTBS-12		
¾ NPT	450 (18)	3/4 -	PTBS-18	½ NPT	450 (18)		1/2-PTBS-18	
<sup>3</sup> ⁄4 NPT	600 (24)	3/4 -	PTBS-24	½ NPT	600 (24)		1/2-PTBS-24	
Nominal ¾" Schedule 40-304 SS Pipe     Nominal ½" Schedule 40-304 SS Pipe       (0.824" ID x 1.050" OD)     (0.622" ID x 0.840" OD)						ipe		
Thread	Length mm (inc	h) Mod	el Number	Thread	Length mm (inch)		Model Number	
34 NPT	300 (12)	3/4	-PTSS-12	<b>SS-12</b> ½ NPT 300 (12)		)	1/2-PTSS-12	
<sup>3</sup> 4 NPT	450 (18)	3/4	-PTSS-18	½ NPT	450 (18)		1/2-PTSS-18	
34 NPT	600 (24)	3/4	-PTSS-24	½ NPT	600 (24)		1/2-PTSS-24	
Technical Data Male NPT thread on one end, spun closed on the other end								
	Max Continuous	Mech. S	trength					
Material	Operating Temp	Cold	Hot	Applications		Remarks		
304SS	900°C (1650°F)	Excellent	Fair	Food processing, dairy products, petroleum products, mild acids, alkalies		Embrittles in 425°C (800°F) to 760°C (400°F) range		
Black Steel	650°C (1200°F)	Excellent	Good	Molten babbit, tin, lead and magnesium		Low cost		

*†* Other lengths and materials available, consult Sales Department.

**Ordering Example: 3/4-PTSS-12**, 300 mm (12") long metal protection tube of 304 stainless steel with a <sup>4</sup>/<sub>4</sub>" thread. Mounting Flanges and Bushings with standard NPT thread available upon request. Consult Sales for pricing.

Discount Schedule					
1–10 Units.     Net       11–24 Units.     10%       25–100 Units.     20%       101 and up     Consult Sales	to like tubes. Other sizes,				