

Threaded Thermowells

FEATURES

- One piece bar stock construction
- Large selection of mill traceable materials
- All stamped with material and heat number
- Wake Frequency Calculations available per ASME PTC 19.3-2016
- Standard or customized shank dimensions

TYPICAL USES

- Chemical and petrochemical plants
- Water and wastewater temperature control
- Pharmaceutical / Biotech
- Food and beverage



SPECIFICATIONS

Thermowell Type: Threaded

Shank Style: Tapered, straight, or stepped

Bore Size:	mm	inch
	6,6	
7,0		
9,8 (N/A for stepped)		0,385
10,5 (N/A for stepped)		
12,5 (N/A for stepped)		

Bore diameter is available from 6 to 18 mm in 0,1 mm steps

Material:

Stainless steel:	Other materials:
1.4301 (304)	2.4617 Hastelloy B
1.4306 (304L)	2.4819 Hastelloy C-276
1.4401 (316)	2.4816 Inconel 600
1.4404 (316L)	1.4462 Duplex 220
1.4571 (316Ti)	Carbon steel, Brass,
1.4541 (321)	Nickel, Monel,
	Titanium, Tantalum

more materials and coatings on request

Instrument Connection: ½ NPSM, ½ NPT Female, G ½ Female or M20x1,5 Female
others on request

Surface Finish: Ra: 0,4 - 0,8 µm (16-32 µinch)

Process Connection Size: ½, ¾ or 1 NPT Male according ANSI/ASME B1.20.1
G ½, ¾ or 1 A Male according ISO 228-1
M20x1,5 Male
others on request

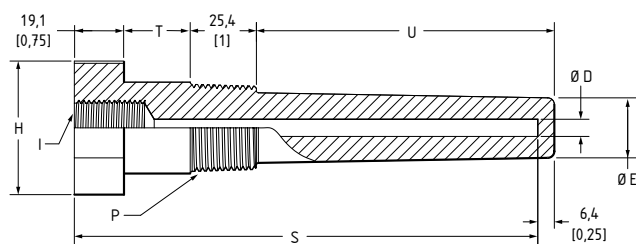
Lagging: 2" if U-dimension is <3"
3" if U-dimension is >3"
Customized lagging on request

KEY BENEFITS

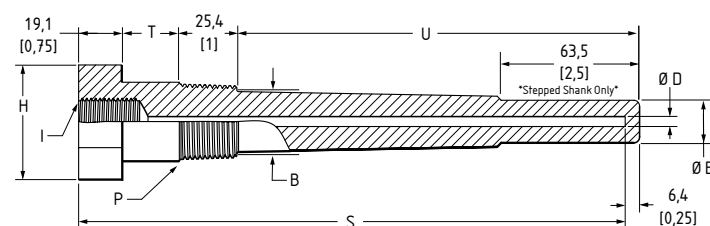
- Protects instrument against corrosive effects
- Permits instrument interchange or calibration check
- Testing and certifications including wake frequency calculations

DIMENSIONS [] in inch

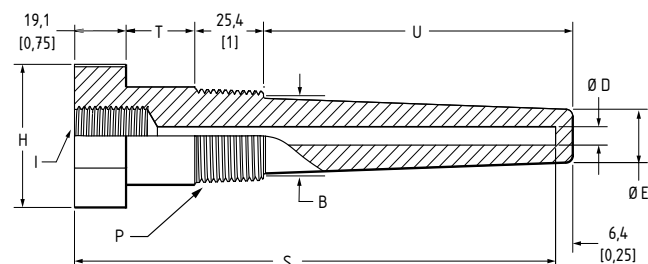
For reference only, consult Ashcroft for specific dimensional drawings

Threaded Straight Thermowell

Threaded Straight ØD = 6,6 mm & 9,8 mm Bore

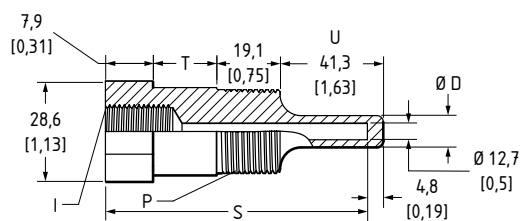
P	H	E 6,6 mm Bore	E 9,8 mm Bore
½"	28,6 mm 1.125"	12,7 mm 0.50"	15,9 mm 0.625"
¾"	28,6 mm 1.125"	12,7 mm 0.50"	19,4 mm 0.765"
1"	34,9 mm 1.375"	12,7 mm 0.50"	19,4 mm 0.765"

Threaded Stepped Thermowell

Threaded Stepped ØD = 6,6 mm & 9,8 mm Bore

P	H	B	E 6,6 mm Bore	E 9,8 mm Bore
½"	28,6 mm 1.125"	15,9 mm 0.625"	12,7 mm 0.50"	—
¾"	28,6 mm 1.125"	19,1 mm 0.75"	12,7 mm 0.50"	15,9 mm 0.625"
1"	34,9 mm 1.375"	22,2 mm 0.875"	12,7 mm 0.50"	15,9 mm 0.625"

Threaded Tapered Thermowell

Threaded Tapered ØD = 6,6 mm & 9,8 mm

P	H	B	E 6,6 mm Bore	E 9,8 mm Bore
½"	28,6 mm 1.125"	15,9 mm 0.625"	12,7 mm 0.50"	—
¾"	28,6 mm 1.125"	22,2 mm 0.875"	15,9 mm 0.625"	19,5 mm 0.766"
1"	34,9 mm 1.375"	26,9 mm 1.06"	15,9 mm 0.625"	19,5 mm 0.766"

Limited Space

Thermowell Legend

- I - Instrument connection
- P - Process connection
- T - Lag dimension when required
- B - Root outer diameter
- E - Tip outer diameter
- D - Bore diameter
- U - Insertion depth
- S - Instrument stem length or bore depth

Pressure rating for standard thermowell material 1.4404 (316L)

Temperature		Shank style				Tapered			
		Straight / Stepped		Tapered		Straight / Stepped		Tapered	
°C	°F	BAR	PSI	BAR	PSI	BAR	PSI	BAR	PSI
		P = ¾ and 1		P = ½		P = ½		P = ¾ and 1	
21	70	448	6500	413	6000	413	6000	620	9000
93	200	379	5500	358	5200	358	5200	531	7700
204	400	345	5000	310	4500	310	4500	462	6700
316	600	275	4000	275	4000	275	4000	400	5800
427	800	262	3800	241	3500	241	3500	365	5300
538	1000	241	3500	227	3300	227	3300	345	5000
649	1200	172	2500	172	2500	172	2500	255	3700

These data don't apply to other materials



Threaded Thermowell

ORDERING CODE Example		75	W	150MM	=	=	H	T	8MM
Process Connection Size									
10	1" NPT Male								
75	¾" NPT Male	75							
50	½" NPT Male								
11	G 1 A Male								
76	G ¾ A Male								
51	G ½ A Male								
16	M20x1,5 Male								
Thermowell									
W	Thermowell		W						
Process Insertion Length (U-length)									
Standard length in inch:									
0162	1 5/8" (Available only with "M" Process Connection Type & N/A with ½" NPT or G ½")								
250	2 ½"								
450	4 ½"								
750	7 ½"								
1050	10 ½"								
1350	13 ½"								
1650	16 ½"								
1950	19 ½"								
2250	22 ½"								
U-length in mm:									
40...3000MM	U-length in 1 mm steps								150MM
Instrument Connection									
=	½" NPSM Female								
2	½" NPT Female								
51	G ½ Female								
90	M20x1,5								
Lagging Option									
=	Without Lagging								
L	With Lagging								
Shank Style									
H	Tapered								
R	Stepped								
S	Straight								
Connection Style									
M	Limited space threaded								
T	Threaded								
Bore Diameter									
260	0,260" (6,6 mm)								
385	0,385" (9,8 mm)								
6...18MM	From 6 to 18 mm in 0,1 mm steps								8MM
For more standard bore diameter check table at page 1									



Threaded Thermowell

Example:

75

W

150MM

=

=

H

T

8MM

SL

X

C3

Thermowell Material

AA	Brass
B	Carbon steel
C	Stainless steel 304 (1.4301)
CL	Stainless steel 304L (1.4306)
D	Carpenter 20 (Alloy 20, 2.4660)
FA	A182 F11 Chrome Moly
FB	A180 F11 Chrome Moly (1.7380)
G	Hastelloy B (2.4617)
H	Hastelloy C-276 (2.4819)
J	Duplex 220 (1.4462, UNS 31803, A 182 F 51)
M	Monel
N	Nickel
S	Stainless steel 316 (1.4401)
SD	Stainless steel 321
SL	Stainless steel 316L (1.4404)
STI	Stainless steel 316Ti (1.4571)
TI	Titanium
US	Tantalum sheath over stainless steel 316
W	Inconel 600 (2.4816)
X	special material

Additional Options

X	See following options
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Cap and chain

1	Brass cap and chain
2	Stainless steel cap and chain

Other Options

PT	Increased surface finish of 4-12 Ra / 0,1-0,3 µm Ra (outside shank)
DQ	Non standard stem diameter

Material Origin Options

WO	Western origin of all wetted parts
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Cleaning Options

6B	Cleaned for gaseous Oxygen or other strong oxidizing agents
6W	Cleaned for oxidizing processes other than Oxygen

Marking And Tagging Options

NF	Stamp tag numbers on thermowell
NH	Stainless steel tagging wired
NH1	Extra large (120 x 30 x 1 mm) stainless steel tagging wired

Material Certificate Options

CD2	Certificate according to EN 10204 2.2
C3	Certificate according to EN 10204 3.1
CD5	Certificate according to NACE for Oilfields MR0175 / ISO 15156-2015 and Refineries MR0103 / ISO 17945:2015
MQ	Positive material identification (PMI) test

C3



Threaded Thermowell

Example: 75 W 150MM = = H T 8MM SL C3

Test Certificate Options

W2	Liquid dye penetrant test
W4	Hydrostatic test, specific customer requirements for pressure and time in order
W5	Wake frequency calculations ASME PTC 19.3
W9	Hydrostatic test to 3000 psi, for one minute
YR_CONC	X-ray photo of bore concentricity

