

### Description & Features

- Stepped, Tapered or straight construction
- Different dimensions for standardised welding sockets
- Economical

### Applications

- Petrochemical industry, on-/offshore, plant construction
- For high process loads
- Tanks or feed water system on boilers where no internal threads are available

### Specifications

#### Construction

Stepped construction standard;  
Tapered or straight construction available upon request

#### Thermowell Material

AISI 304 stainless steel, AISI 316 stainless steel,  
AISI 316L stainless steel, and Duplex stainless steel,  
Other materials are available upon requests

#### Instruments Connection

1/2" NPT female standard,  
other thread size are available upon request

#### Stem Length

4" (100mm), 6" (150mm), 9" (229mm), 12" (305mm)  
other thread size are available upon request

#### Length "H" Dimension

45mm standard  
Others , please specify the length in mm

#### Tip Diameter

16mm, 18mm, 20mm, 22mm, 24mm  
Others , please specify the length in mm

#### Immersion Length (Excluded Thread Length)

2.5" (63mm), 4" (100mm)  
Others , please specify the length in mm

#### Bore Diameter

7mm standard  
Others , please specify the length in mm

#### Option

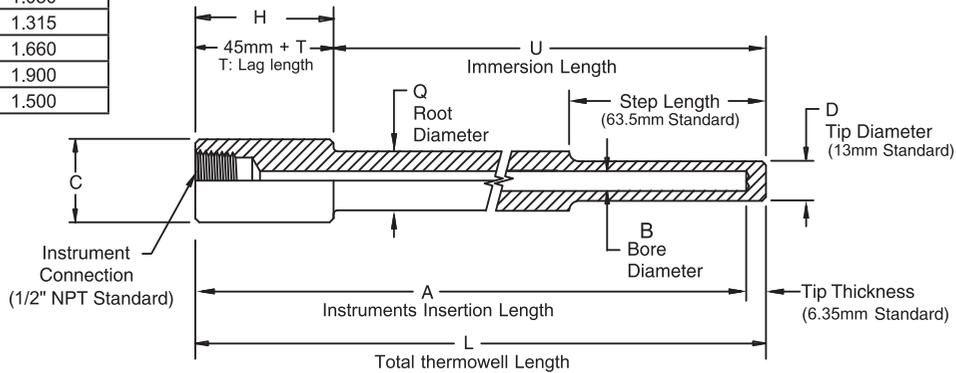
Oxygen service  
NACE MR 0175-2002  
Please specify the length in mm for step length M  
stepped style not 2.5"



## Dimensions (Unit: mm)

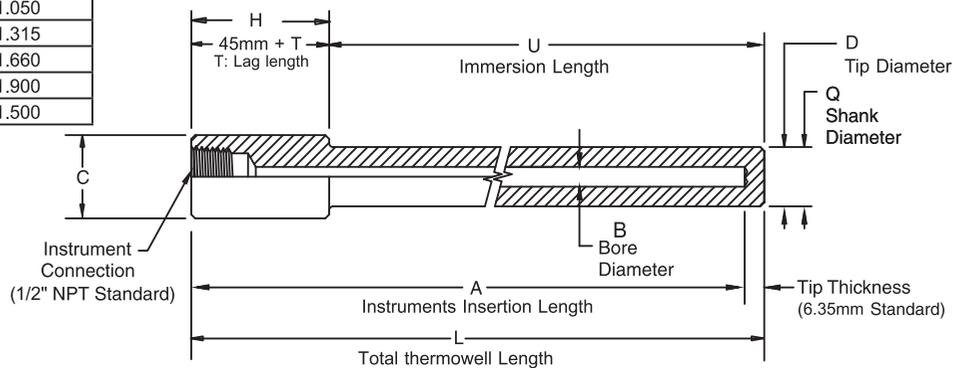
### Stepped ( Code: SM)

Pipe Size (in inches)	Head Diameter "C" (in inches)
3/4	1.050
1	1.315
1-1/4	1.660
1-1/2	1.900
1-1/2 Actual	1.500



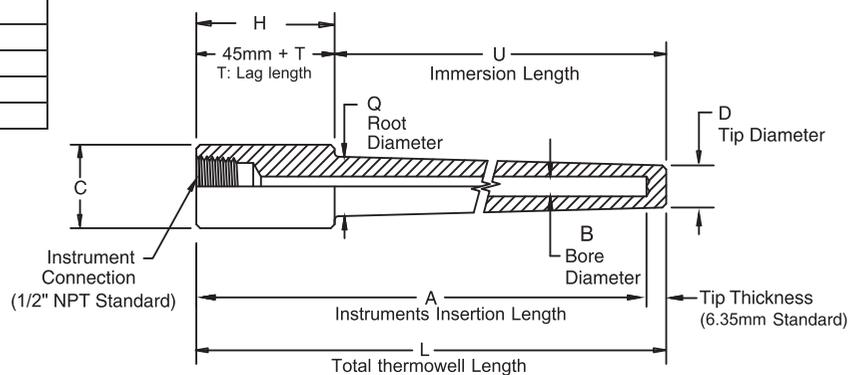
### Straight ( Code: SH)

Pipe Size (in inches)	Head Diameter "C" (in inches)
3/4	1.050
1	1.315
1-1/4	1.660
1-1/2	1.900
1-1/2 Actual	1.500



### Tapered ( Code: ST)

Pipe Size (in inches)	Head Diameter "C" (in inches)
3/4	1.050
1	1.315
1-1/4	1.660
1-1/2	1.900
1-1/2 Actual	1.500



### Ordering Code TWS Series

Field No.	Code	Specifications
1.	TWS	Series
2.		<b>Shank Style</b>
	SM	Stepped
	SH	Straight
	ST	Tapered
3.		<b>Material</b>
	T	304 SS
	S	316 SS
	L	316L SS
	V	Alloy 800
	C	Inconel 600
	D	Duplex 2205
	M	Monel
	H	Hastelloy C
	A	Tantalum
	Q	Titanium
	Z	Special request
4.		<b>Instruments Connection Size</b>
	4	1/4"
	2	1/2"
	5	3/4"
	3	3/8"
	Z	Special request
5.		<b>Instruments Connection Threaded Standard</b>
	N	NPT
	G	G B
	T	BSPT
	P	BSPP
	M	M20X1.5
	Z	Special request
6.		<b>Overall Length "L" in mm</b>
	120	120mm
	150	150mm
	ZZZ	Others , please specify the length in mm
7.		<b>Length "H" Dimension in mm</b>
	45	45mm, standard, lag length "T" = 0
	ZZ	Others please specify "H" in mm with wrench allowance length "W" = 45mm add lag length "T" in mm
8.		<b>Immersion Length "U" (Excluded Thread Length) in mm</b>
	063	2.5" ( 63mm)
	100	4" (100mm)
	150	6" (150mm)
	ZZZ	Other, please specify the length in mm

**NOTE**

Only when U≤1500mm, a thermowell is machined from one bar stock  
 U>1500mm, a thermowell is welded from two components

### Ordering Code TWS Series

Field No.	Code	Specifications
9.		<b>Bore Diameter "B" in mm</b>
	07	7mm standard
	09	9mm
	11	11mm
	ZZ	Others , please specify the length in mm
10.		<b>Root Outside Diameter "Q" in mm</b>
	16	16mm
	18	18mm
	20	20mm
	22	22mm
	ZZ	Others , please specify the length in mm
11.		<b>Tip Outside Diameter "D" in mm</b>
	16	16mm
	18	18mm
	20	20mm
	22	22mm
	ZZ	Others , please specify the length in mm
12.		<b>Option</b>
	VN	Oxygen service
	RR	NACE MR 0175-2002
	ZZ	Please specify the length in mm for step length M stepped style not 2.5"

#### NOTE - USER RESPONSIBILITY

For most industrial applications. A properly selected thermowell must be based on application parameters: fluid type, temperature, pressure, and fluid velocity. Most thermowell failures are due to vibration induced by fluid flow.