

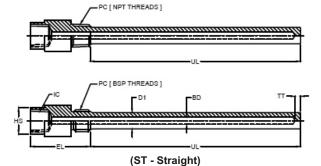
## **BAR STOCK (SCREWED)**

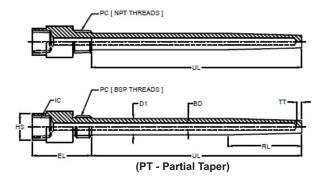
## Model - TW1

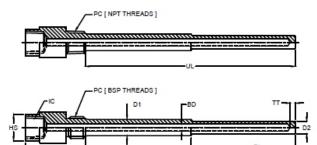
#### Special Features:

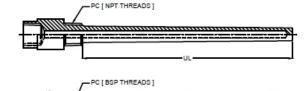
- Design as per PTC 19.3.
- These Thermowells are manufactured from solid bar stock and installed Into the process with the process with the help of threaded process connection.
- The design is suitable for all type of RTD's, Thermocouples, Mechanical as well as digital Thermometers.
- Available in various shapes like Straight, Straight with reduced tip, partial taper & full taper.

#### Thermowell Drawings:









(FT - Full Taper)

(SR - Straight Reduced Tip)

Note: Drawings are not to scale. All Dimensions are in mm.

HS - Finished Head Size

IC - Instrument Connection

PC - Process Connection

BD - Bore Diameter

TT - Tip Thickness

D1 - Major Diameter

D2 - Minor Diameter

EL - Extension Length

UL - Insertion Length

RL - Reduced Tip Length

LT - Taper Length

## **SELECTION OF MODEL**

#### (1) MODEL CODE

#### (2) TYPE

Straight	ST
Straight Reduced Tip	SR

Note: Other Materials are available on Request.

Partial Taper	PT
Full Taper	FT

#### (3) MATERIAL

Carbon Steel	CS
AISI 304 SS	S4
AISI 316 SS	S6
AISI 316L SS	S6L

AISI 321 SSI	S21
AISI 310 SS	S10
Hastelloy C	HT
Monel	MN

Inconel 625	IN
Brass	BR
Titanium	TI
Nickel	NI



TW1

**S6** 

#### (4) INSTRUMENT CONNECTION "IC"

3/8" BSP(F)	3BF
3/8" NPT(F)	3NF
3/8" R(F)	3RF
3/8" G(F)	3GF
1/2" BSP(F)	4BF
1/2"NPT(F)	4NF

1/2" G(F)	4GF
1/2" R(F)	4RF
3/4" BSP(F)	5BF
3/4" NPT(F)	5NF
3/4" G(F)	5GF

3/4" R(F)	5RF
1" BSP(F)	6BF
1" NPT(F)	6NF
1" G(F)	6GF
1" R(F)	6RF

M18 x 1.5(F)	3MF
M20 x 1.5(F)	4MF
M22 x 1.5(F)	5MF
M24 x 1.5(F)	6MF
M27 x 1.5(F)	7MF
M33 x 1.5(F)	9MF

Note: Other Connections are available on Request.

#### (5) PROCESS CONNECTION "PC"

3/8" BSP(M)	3BM
3/8" NPT(M)	3NM
3/8" R(M)	3RM
3/8" G(M)	3GM
1/2" BSP(M)	4BM
1/2"NPT(M)	4NM

1/2" G(M)	4GM
1/2" R(M)	4RM
3/4" BSP(M)	5BM
3/4" NPT(M)	5NM
3/4" G(M)	5GM

3/4" R(M)	5RM
1" BSP(M)	6BM
1" NPT(M)	6NM
1" G(M)	6GM
1" R(M)	6RM

M18 x 1.5(M)	3MM
M20 x 1.5(M)	4MM
M22 x 1.5(M)	5MM
M24 x 1.5(M)	6MM
M27 x 1.5(M)	7MM
M33 x 1.5(M)	9MM

Note: Other Connections are available on Request.

#### (6) FINISHED HEAD SIZE "HS"

PLEASE SPECIFY IN mm

e.g.: For 28mm Finished head size, Specify HS28

#### (7) TYPE OF HEAD

Hex Headed	НН
Round Headed with Spanner Slots*	RS
Round Headed	RH

<sup>\*</sup> Not Applicable for option BR.

#### (8) EXTENSION / LAGGING LENGTH "EL"

EL50 (Standard)

e.g.: For length 50mm, mention EL50.

#### (9) BORE DIAMETER "BD"

PLEASE SPECIFY IN mm

e.g.: For length 9mm, mention BD9.

Note: Refer Thermowell design procedure for dimension as per PTC 19.3

#### (10) MAJOR DIAMETER

ST

Major Diameter "D1"
Please specify in mm
e.g. For 22mm mention D122

**Major Diameter of Taper "D1"** Please specify in mm e.g. For 22mm mention D122

Minor Diameter of Taper "D2" Please specify in mm e.g. For 18mm mention D218 рт

**Major Diameter of Step "D1"** Please specify in mm e.g. For 22mm mention D122

**Minor Diameter of Step "D2"** Please specify in mm e.g. For 18mm mention D218

Length of Step "RL" Please specify in mm e.g. For 100mm step length from tip, specify RL100 PT

Major Diameter of Taper "D1" Please specify in mm e.g. For 22mm mention D122

**Minor Diameter of Taper "D2"** Please specify in mm e.g. For 18mm mention D218

Length of Step "TL"
Please specify in mm
e.g. For taper length from tip of 150mm, specify TL150

Note: Refer Thermowell design procedure for dimension as per PTC 19.3

#### (11) TIP THICKNESS "TT"

TT5 (Standard)

e.g.: For Tip Thickness 5mm, specify TT5.

4NF

4NM

HS28

HH

EL50

BD9

XX

TT5

## SELECTION OF MODEL

#### (12) INSERTION LENGTH "UL"

PLEASE SPECIFY IN mm

e.g.: For 800mm, mention UL800.

Note: Refer Thermowell design procedure for dimension as per PTC 19.3

#### (13) OPTIONS

Plug & Chain in SS	CP
SS Tag Plate	TS
Marking by Laser	LM

#### (14) TESTS & CERTIFICATION

Radiography fo Bore Concentricity	TC1
IBR Certification	TC2
Mechanical Test	TC3
Ultrasonic Test	TC4
PMI Test	TC5
IGC Test	TC6

Wake Frequency Calculations as [per PTC 19.3*	TC7
Certification for Hydrogen Service	TC8
Certification for Oxygen Service	TC9
Chemical Composition Test	TT1
3.1B Material Conformity Certificate	TT2
Conformity as per NACE Standard	TNC

**UL800** 

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<sup>\*</sup>Please specify Fluid, Max. Pressure, Temperature & Flow velocity for wake frequency calculations as per PTC 19.3.

Example	1	2	3	4	5	6	7	8	9
SELECTION OF MODEL	TW1	ST	S6	4NF	4NM	HS28	нн	EL75	3D9
Evample	10	11	12	13	1/				

Example	10	11	12	13	14
SELECTION XX OF MODEL		TT5	UL800	xx	xx

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