

# ALL SS THERMOWELLS



IPS-TW-01

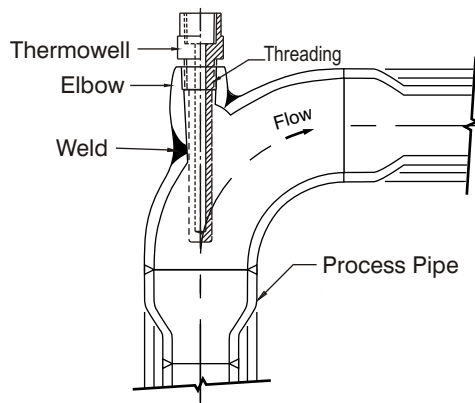
## FABRICATED



## Special Features

- Design as per PTC 19.3.
- These Thermowells are manufactured from solid bar stock and installed into the process with the help of threaded process connection.
- This 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.

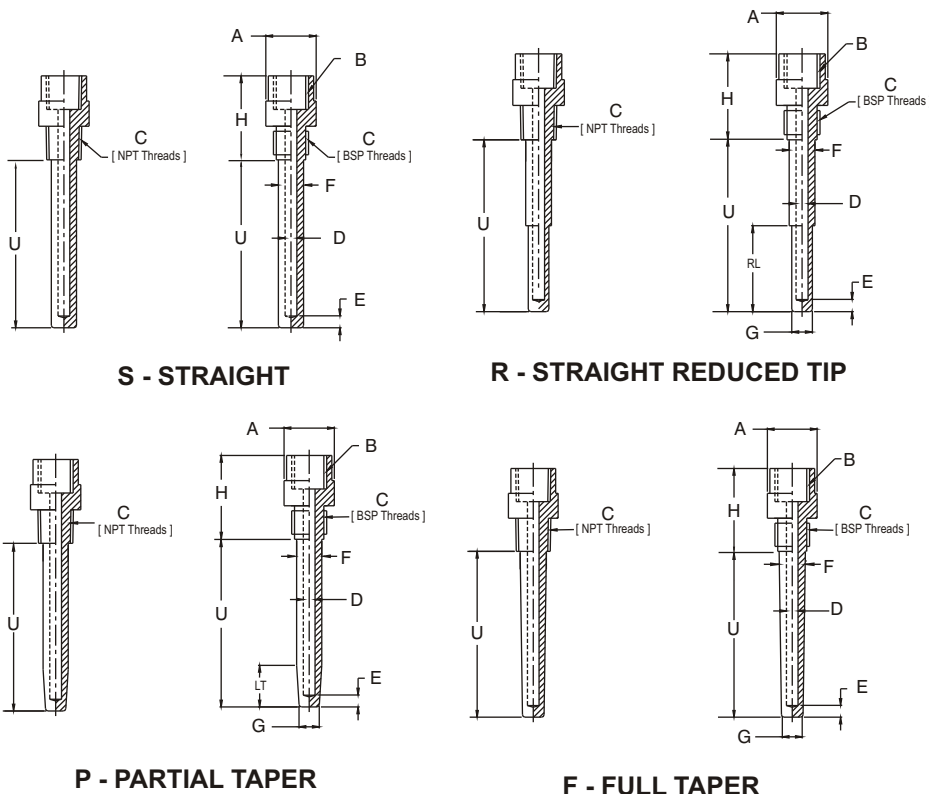
## Thermowell Installation



## Applications

Chemical plants, Petrochemical Plants, Engineering Plants, On shore, Offshore & other similar process industries.

## Thermowell Drawings



- A - Finished Head Size
- B - Instrument Connection
- C - Process Connection
- D - Bore Diameter
- E - Tip Thickness
- F - Major Diameter
- G - Minor Diameter
- H - Extension Length
- U - Insertion Length
- RL - Reduced Tip Length
- LT - Taper Length



# HOW TO ORDER

## BASIC MODEL

### TYPE

**S** - STRAIGHT      **R** - STRAIGHT REDUCED TIP      **P** - PARTIAL TAPER      **F** - FULL TAPER

### MATERIAL

<b>LQ</b> Carbon Steel	<b>EP</b> AISI 410 SS	<b>LT</b> Monel	<b>LV</b> Titanium
<b>LP</b> AISI 304 SS	<b>EQ</b> AISI 347 SS	<b>LU</b> Inconel 600	<b>LW</b> Tantalum
<b>LM</b> AISI 316 SS	<b>LO</b> AISI 316Ti SS	<b>ES</b> Inconel 625	<b>LX</b> Nickel
<b>LN</b> AISI 316L SS	<b>ER</b> AISI 304L SS	<b>ET</b> Incolloy 800	<b>LY</b> HRS 446
<b>EN</b> AISI 321 SS	<b>LR</b> Hastelloy B	<b>EU</b> Incolloy 825	<b>LZ</b> Alloy 20
<b>EO</b> AISI 310 SS	<b>LS</b> Hastelloy C	<b>MQ</b> Brass	<b>EV</b> Kanthal

Note : Other Materials are available on request.

### INSTRUMENT CONNECTION "B"

<b>3BF</b> 3/8" BSP (F)	<b>4BF</b> 1/2" BSP (F)	<b>5BF</b> 3/4" BSP (F)	<b>3MF</b> M18 x 1.5 (F)
<b>3NF</b> 3/8" NPT (F)	<b>4NF</b> 1/2" NPT (F)	<b>5NF</b> 3/4" NPT (F)	<b>4MF</b> M20 x 1.5 (F)
<b>3TF</b> 3/8" BSPT (F)	<b>4TF</b> 1/2" BSPT (F)	<b>5TF</b> 3/4" BSPT (F)	<b>5MF</b> M22 x 1.5 (F)
<b>3PF</b> 3/8" G (F)	<b>4FF</b> 1/2" PF (F)	<b>6BF</b> 1" BSP (F)	<b>6MF</b> M24 x 1.5 (F)
	<b>4YF</b> 1/2" R (F)	<b>6NF</b> 1" NPT (F)	<b>7MF</b> M27 x 2 (F)
	<b>4PM</b> 1/2" G (M)	<b>6TF</b> 1" BSPT (F)	<b>9MF</b> M33 x 2 (F)

Note : Other Connections are available on request.

### PROCESS CONNECTION

<b>3BM</b> 3/8" BSP (M)	<b>4BM</b> 1/2" BSP (M)	<b>5BM</b> 3/4" BSP (M)	<b>6BM</b> 1" BSP (M)	<b>4MM</b> M 20 x 1.5 (M)
<b>3NM</b> 3/8" NPT (M)	<b>4NM</b> 1/2" NPT (M)	<b>5NM</b> 3/4" NPT (M)	<b>6NM</b> 1" NPT (M)	<b>6MM</b> M 24 x 1.5 (M)
<b>3TM</b> 3/8" BSPT (M)	<b>4TM</b> 1/2" BSPT (M)	<b>5TM</b> 3/4" BSPT (M)	<b>6TM</b> 1" BSPT (M)	<b>7MM</b> M 27 x 2 (M)
<b>3PM</b> 3/8" G (M)	<b>4FM</b> 1/2" PF (M)	<b>5FM</b> 3/4" PF (M)	<b>6FM</b> 1" PF (M)	<b>9MM</b> M 33 x 2 (M)
	<b>4YM</b> 1/2" R (M)	<b>5YM</b> 3/4" R (M)	<b>6YM</b> 1" R (M)	
	<b>4PM</b> 1/2" G (M)	<b>5PM</b> 3/4" G (M)	<b>6PM</b> 1" G (M)	

Note : Other Connections are available on request.

### FINISHED HEAD SIZE<sup>A</sup> (Refer Table 1.1 for selection of Head Size for Thermowell.)

Please Specify in mm

e.g. : For 28 mm Finished head Size, specify **A28**

### TYPE OF HEAD

**K** HEX HEADED\*      **M** ROUND HEADED WITH SPANNER SLOTS.

\* Maximum "U" Length below thread will be 250 mm.

### EXTENSION / LAGGING LENGTH "H"

H50 (Standard)

For e.g. : for length 75 mm, mention **H75**

### BORE DIAMETER "D"

<b>A</b> 6.6 mm	<b>B</b> 7 mm	<b>C</b> 8.5 mm	<b>D</b> 9 mm
<b>E</b> 10.5 mm	<b>F</b> 11 mm	<b>G</b> 13 mm	<b>H</b> 13.5 mm

Note : Refer Table 1.3 of Thermowell Design Procedure for dimensions as per PTC 19.3

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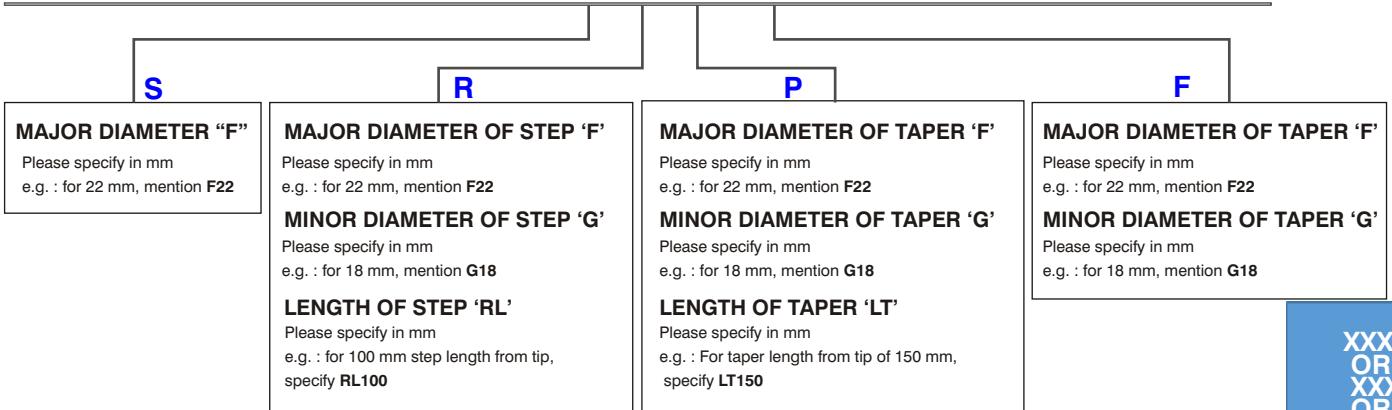
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**MAJOR DIAMETER "F"**



Note : Refer Table 1.3 of Thermowell Design Procedure for dimensions as per PTC 19.3

**TIP THICKNESS "E"**

Standard Tip Thickness is 5 mm.  
 For others, please specify in mm.  
 e.g. : Specify **E5** for 5 mm Tip Thickness

**INSERTION LENGTH "U"**

Please specify in mm  
 e.g. : for 250 mm, mention **U250**

Note : Refer Table 1.4 of Thermowell Design Procedure for dimensions as per PTC 19.3

**OPTIONS**

<b>GG</b>	Plug and chain in SS	<b>SX</b>	SS Tag Plate	<b>CX</b>	Marking by Engraving
<b>FW</b>	Electro polishing	<b>CW</b>	Marking by Laser		

**TESTS & CERTIFICATION**

<b>C1</b>	Radiography for Bore Concentricity	<b>C7</b>	Wake Frequency Calculations as per PTC 19.3*
<b>C2</b>	IBR Certification	<b>C8</b>	Certification for Hydrogen Service
<b>C3</b>	Mechanical Test	<b>C9</b>	Certification for Oxygen Service
<b>C4</b>	Ultrasonic Test	<b>T1</b>	Chemical Composition Test
<b>C5</b>	PMI Test	<b>T2</b>	3.1B Material Conformity Certificate
<b>C6</b>	IGC Test	<b>TF</b>	Tested to NACE Standard

\* Please Specify Fluid, Max. Pressure, Temperature & Flow velocity for wake frequency calculations as per PTC 19.3

Note : Specifications and dimensions given in this product catalogue represents the state of engineering at the time of printing.  
 Modifications may take place and materials specified may be replaced by others without prior notice.

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OR  
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OR  
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