

MODEL X7.04



#### PRODUCT DESCRIPTION

These Thermowells are machined from solid bar stock and mounted between mating flanges for process insertion. This design is suitable for all type of RTD's, Thermocouples, mechanical as well as digital thermometers. Vanstone type thermowell is produced without any welding process by processing the whole round bar. Since it does not involve any welding process, it is used when high pressure, high velocity fluid and corrosive process media such as penetrating gas exist, and serving to isolate and protect from any leakage.













MODEL X7.04

#### **KEY FEATURES**

- Design as per PTC 19.3
- These thermowell are machine from solid bar stock & Welded to nozzle
- This design is suitable for all type of RTD's ,Thermocouples, mechanical as well as digital thermometer
- Different shank style- Straight, Straight Reduced Tip, Partial Taper, Full taper

#### **APPLICATION**

- Chemical Plants
- Petrochemical Plants
- Engineering Plants
- On shore
- Off shore & other similar process industries

#### **SPECIFICATIONS**

Design : ASME PTC 19.3
Instrument Connection : ½" NPT (F)
Bore diameter : Ø7 mm
Tip thickness : 6.35 mm
Lagging extension : 50 mm

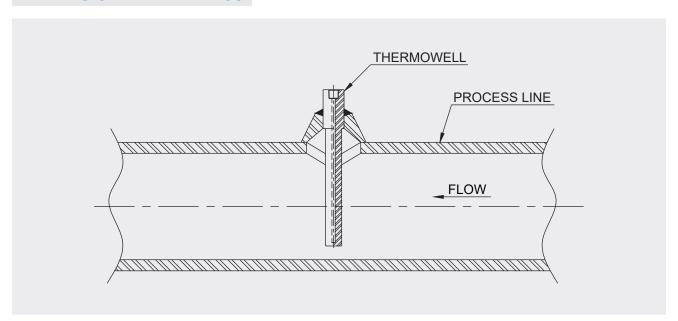
Shank Style : Straight, Taper, Reduced Tip,

**Partial Taper** 

#### **MATERIAL OF CONSTRUCTION**

Well material : Stainless Steel

#### **DIMENSIONAL DRAWINGS**



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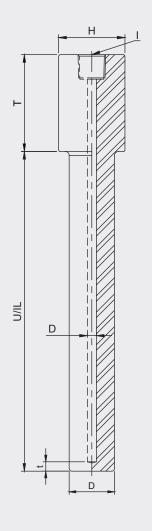




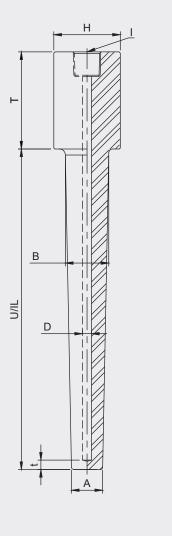
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#### **DIMENSIONAL DRAWINGS**

#### Straight



Taper



A - Minor Diameter B - Major Diameter D - Bore Diameter H - Head Size I - Instrument Connection T - Extension Length P - Process Connection t - Tip Thickness

TL - Taper Length RL - Reduced Tip Length U/IL - Insertion Length

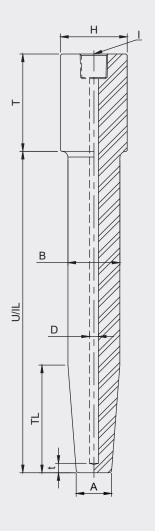
Important Notes: • Above drawings are not to scale • All Dimension are in mm



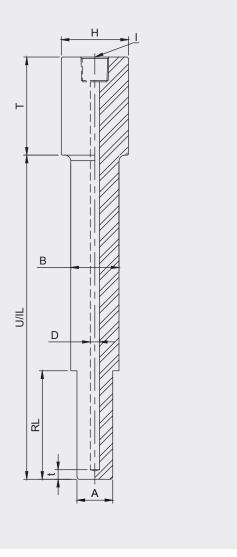
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#### **DIMENSIONAL DRAWINGS**

#### Reduced tip



**Partial Taper** 



A - Minor Diameter B - Major Diameter D - Bore Diameter H - Head Size
I - Instrument Connection T - Extension Length P - Process Connection t - Tip Thickness

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TL - Taper Length RL - Reduced Tip Length U/IL - Insertion Length

Important Notes: • Above drawings are not to scale • All Dimension are in mm



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#### **MODEL CODING & ORDERING INFORMATION**

| DESCRIPTION  | CODE         | X7.04 | ST | CS | 12NF  | RH | T50 | D07 | XX | t5 | XXX |
|--|--------------|-------|----|----|-------|----|-----|-----|----|----|-----|
| <b>Model</b><br>Bar Stock Socket Weld                  | X7.04        | X7.04 |    |    |       |    |     |     |    |    |     |
| Version  | 77.04        | 77.04 |    |    |       |    |     |     |    |    |     |
| Straight   | ST           |       | ST |    |       |    |     |     |    |    |     |
| Straight Reduced Tip Partial Taper                     | SR<br>PT     |       |    |    |       |    |     |     |    |    |     |
| Full taper   | FT FT        |       |    |    |       |    |     |     |    |    |     |
| Material   |              |       |    |    |       |    |     |     |    |    |     |
| Carbon Steel   | CS           |       |    | CS |       |    |     |     |    |    |     |
| SS 304   | S4           |       |    |    |       |    |     |     |    |    |     |
| SS 310   | S1           |       |    |    |       |    |     |     |    |    |     |
| SS 316   | S6           |       |    |    |       |    |     |     |    |    |     |
| SS 316L<br>SS 316 / SS 316L                            | SL<br>DC     |       |    |    |       |    |     |     |    |    |     |
| Duplex SS 2205   | DU           |       |    |    |       |    |     |     |    |    |     |
| ASTM A350 LF2  | F2           |       |    |    |       |    |     |     |    |    |     |
| Monel 400  | M4           |       |    |    |       |    |     |     |    |    |     |
| Inconel 625  | 15           |       |    |    |       |    |     |     |    |    |     |
| Inconel 825  | 12           |       |    |    |       |    |     |     |    |    |     |
| Hast C-276   | HC           |       |    |    |       |    |     |     |    |    |     |
| Instrument Connection 1/2" NPT (F)                     | 12NF         |       |    |    | 12NF  |    |     |     |    |    |     |
| ½" BSP (F)   | 12NF<br>12BF |       |    |    | IZINF |    |     |     |    |    |     |
| 3/4" NPT (F)   | 34NF         |       |    |    |       |    |     |     |    |    |     |
| 3/4" BSP (F)   | 34BF         |       |    |    |       |    |     |     |    |    |     |
| M20 × 1.5 (F)  | M20F         |       |    |    |       |    |     |     |    |    |     |
| Types of Head  |              |       |    |    |       |    |     |     |    |    |     |
| Round Headed   | RH           |       |    |    |       | RH |     |     |    |    |     |
| Lagging Extension 'T' 50 mm                            | TEO          |       |    |    |       |    | TEO |     |    |    |     |
| Customer Specific                                      | T50<br>TXX   |       |    |    |       |    | T50 |     |    |    |     |
| Bore Diameter 'D'                                      | IAA          |       |    |    |       |    |     |     |    |    |     |
| 7 mm   | D07          |       |    |    |       |    |     | D07 |    |    |     |
| Customer Specific                                      | XXX          |       |    |    |       |    |     |     |    |    |     |
| Finished Head Size 'A'                                 |              |       |    |    |       |    |     |     |    |    |     |
| Specify in mm  | XX           |       |    |    |       |    |     |     | XX |    |     |
| Tip Thickness 't' 6.35 mm                              | +5           |       |    |    |       |    |     |     |    | 45 |     |
| 6.35 mm<br>Customer Specific                           | t5<br>XXX    |       |    |    |       |    |     |     |    | t5 |     |
| Insertion Length 'U/IL'                                | ^^^          |       |    |    |       |    |     |     |    |    |     |
| Please specify in 'mm' e.g. for 200 mm mention IL200mm | XXX          |       |    |    |       |    |     |     |    |    | XXX |

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#### TABLE - 1

| STRAIGHT   | STRAIGHT REDUCED TIP  | PARTIAL   | FULL TAPER   |
|--|---|---|--|
| <b>Major Diameter 'B'</b> Please Specify in 'mm' e.g. for 22 mm, mention B22 | Major Diameter of Step 'B' Please Specify in 'mm' e.g. for 22 mm, mention B22  Minor Diameter of Step 'A' Please Specify in 'mm' e.g. for 18 mm, mention A18  Length of Step 'RL' Please Specify in 'mm' e.g. for 100 mm, Step Length from tip, Specify RL100 | Major Diameter of Taper 'B' Please Specify in 'mm' e.g. for 22 mm, mention B22  Minor Diameter of Taper 'A' Please Specify in 'mm' e.g. for 18 mm, mention A18  Length of Taper 'T' Please Specify in 'mm' e.g. For Taper length from Tip, from tip of 150mm, Specify LT150 | Major Diameter of Taper 'B' Please Specify in 'mm' e.g. for 22 mm, mention B22  Minor Diameter of Taper 'A' Please Specify in 'mm' e.g. for 18 mm, mention A18 |

#### **MODEL CODING & ORDERING INFORMATION**

| DESCRIPTION                        | CODE | X18 |
|------------------------------------|------|-----|
| Other Options                      |      |     |
| IBR Certification                  | X18  | X18 |
| Tested to NACE Standards           | X20  |     |
| Certification for Oxygen Service   | X21  |     |
| Plug & chain in SS                 | X77  |     |
| IGC Test                           | X79  |     |
| Certification for Hydrogen Service | X81  |     |
| WFC as per PTC 19.3TW:2010         | X82  |     |
| Radiography for Bore Concentricity | X84  |     |
| Ultrasonic Test                    | X85  |     |
| Chemical Composition Test          | X86  |     |
| PMI Test                           | X89  |     |
| Electropolishing                   | X91  |     |

#### **SAMPLE ORDERING CODE:**

X7.04-ST.CS.12NF.RH.T50.D07.XX.t5.XXX.X18

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

