



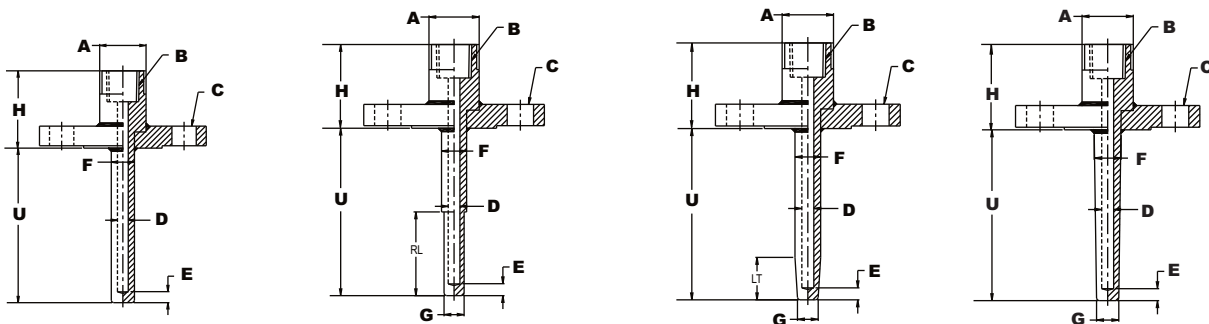
### Special Features

- Design as per PTC 19.3
- These Thermowells are manufactured from solid bar stock and installed into the process by using a flanged connection
- This design is suitable for all type of RTD's, Thermocouples, Mechanical as well as digital thermometers
- Full penetration welded
- Available in various shapes like Straight, Straight with reduced tip, partial taper & full taper
- All type of flanges and flange facings are available as per ANSI / DIN / JIS & BS

### Applications

- Chemical plants
- Petrochemical plants
- Engineering plants
- On shore
- Off shore
- Other similar process industries

### Thermowell Drawings



**S - Straight**

**R - Straight Reduced Tip**

**P - Partial Taper**

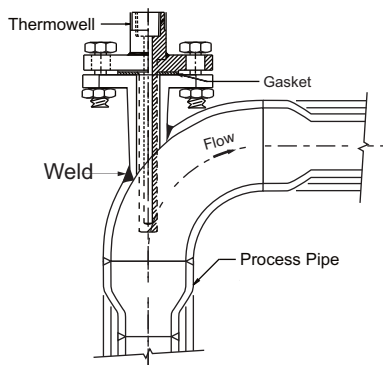
**F - Full Taper**

A - Finished Head Size  
B - Instrument Connection  
C - Flange  
D - Bore Diameter

E - Tip Thickness  
F - Major Diameter  
G - Minor Diameter  
H - Extension Length

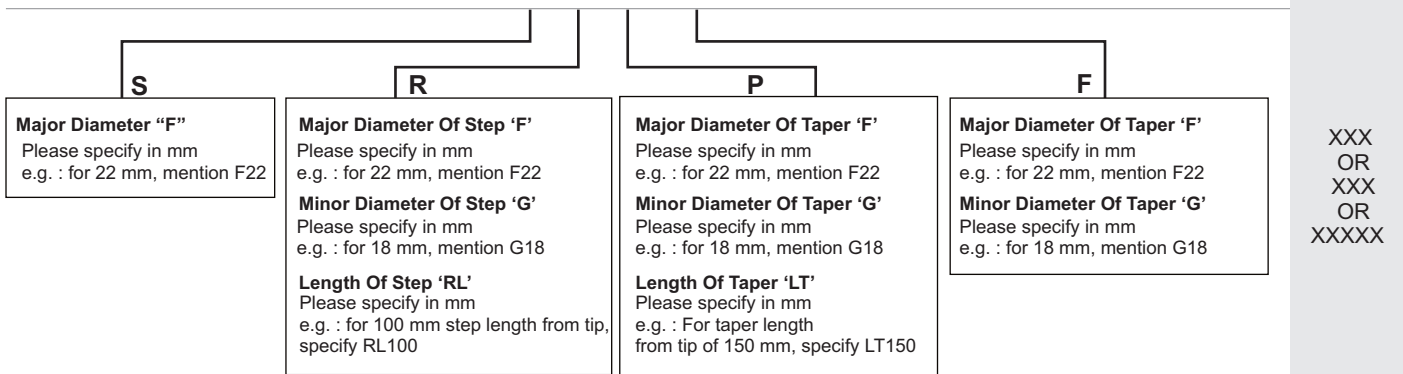
U - Insertion Length  
RL - Reduced Tip Length  
LT - Taper Length

### Thermowell Installation



How To Order					Example
<b>Basic Model</b>					TW2
<b>Type</b>					
<b>S</b> - Straight	<b>R</b> - Straight Reduced Tip	<b>P</b> - Partial Taper	<b>F</b> - Full Taper		X
<b>Well Material</b> (It is recommended that the well material and flange material (wetted area) should be same.)					
<b>S64</b> AISI 304 SS	<b>S10</b> AISI 310 SS	<b>I60</b> Inconel 600	<b>CST</b> Carbon Steel		XXX
<b>S66</b> AISI 316 SS	<b>HST</b> Hastelloy C	<b>A20</b> Alloy 20			
<b>S6L</b> AISI 316L SS	<b>S21</b> AISI 321 SS	<b>NIK</b> Nickel			
Note : Other Materials are available on request.					
<b>Flange Material</b>					
<b>S64</b> AISI 304 SS	<b>S10</b> AISI 310 SS	<b>I60</b> Inconel 600	<b>CST</b> Carbon Steel		XXX
<b>S66</b> AISI 316 SS	<b>HST</b> Hastelloy C	<b>A20</b> Alloy 20			
<b>S6L</b> AISI 316L SS	<b>S21</b> AISI 321 SS	<b>NIK</b> Nickel			
Note : Other Materials are available on request.					
<b>Instrument Connection</b>					
<b>4BF</b> ½" BSP (F)	<b>5TF</b> ¾" BSPT (F)	<b>6NF</b> 1" NPT (F)	<b>M18</b> M18 x 1.5 (F)	<b>M24</b> M24 x 1.5 (F)	XXX
<b>4NF</b> ½" NPT (F)	<b>5NF</b> ¾" NPT (F)	<b>6BF</b> 1" BSP (F)	<b>M20</b> M20 x 1.5 (F)	<b>M27</b> M27 x 2 (F)	
<b>4TF</b> ½" BSPT (F)	<b>5BF</b> ¾" BSP (F)	<b>6TF</b> 1" BSPT (F)	<b>M22</b> M22 x 1.5 (F)	<b>M33</b> M33 x 2 (F)	
Note : Other Connections are available on request.					
<b>Flange Type</b>					
<b>1</b> Blind Flange	<b>2</b> SORF Flange				X
<b>Flange "C" (size &amp; Rating)</b> Refer Flange table for code selection.					XXX
<b>Flange Facing Type</b>					
<b>RF</b> Raised Face	<b>FF</b> Flat Face	<b>RJ</b> Ring type joint		XX	
<b>Flange Finish</b>					
<b>1</b> - 125 AARH (Standard)	<b>2</b> - 63 AARH				X
Note : Other Flange finish are available on request.					
Extension / Lagging Length "H" (In case of welding neck flange & threaded flange, consult factory.)					
Please specify in mm For e.g. : for length 65 mm, mention <b>H65</b>					XXX
<b>Finished Head Size "A"</b> (Refer Table 1.1 for selection of Head Size for Thermowell.)					
Please Specify in mm e.g. : For 28 mm Finished head Size, Specify <b>A28</b>					XXX
<b>Type Of Head</b>					
<b>H</b> Hex Headed*	<b>R</b> Round Headed	<b>S</b> Round Headed With Spanner Slots.		X	
* Maximum "U" Length below Flange will be 500 mm.					
<b>Bore Diameter "D"</b>					
<b>A</b> 6.6 mm	<b>B</b> 7 mm	<b>C</b> 8.5 mm	<b>D</b> 9 mm		X
<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					

**How to Order** **Example**



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

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

**INSERTION LENGTH "U"** XXXX  
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** XXX

<b>PAC</b> Plug and chain in SS	<b>CFL</b> Counter flange with studs, nuts & gasket
<b>EPL</b> Electro polishing	<b>LAM</b> Marking by Laser
<b>ENM</b> Marking by Engraving	<b>STG</b> SS Tag Plate

Lining & Coatings (User to specify thickness during enquiry)

<b>PL</b> PTFE Lining*	XXX
<b>PC</b> PTFE Coating	
<b>RL</b> Rubber Lining*	

\* Lining will be on wetted area of straight type wells only.

**Tests & Certification** XXX

<b>RBC</b> Radiography for Bore Concentricity	<b>WFC</b> Wake Frequency Calculations as per PTC 19.3*
<b>IBR</b> IBR Certification	<b>CCT</b> Chemical Composition Test
<b>MET</b> Mechanical Test	<b>31B</b> 3.1B Material Conformity Certificate
<b>ULT</b> Ultrasonic Test	<b>CNS</b> Conformity as per NACE Standard
<b>PMI</b> PMI Test	

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

**Ordering Example:** XXX  
**TW2 . X . XXX . XXX . XXX . X . XXX . XX . X . XXX . XXX . X . X . XXX OR XXX OR XXXXX . XX . XXXX . XXX . XXX**

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.  
For Any Custom / Non Standard / Special Requirement Consult Factory..

**Flange Table With Connection Code**

**AS PER DIN 2527**

DN	PN	CODE
10	6	A01
	10	A02
	16	A03
	25	A04
	40	A05
	64	A06
	100	A07
	160	A08
	250	A09
	400	A10
15	6	A11
	10	A12
	16	A13
	25	A14
	40	A15
	64	A16
	100	A17
	160	A18
	250	A19
	400	A20
20	6	A21
	10	A22
	16	A23
	25	A24
	40	A25
	6	A26
25	10	A27
	16	A28
	25	A29
	40	A30
	64	A31
	100	A32
32	160	A33
	250	A34
	400	A35
	6	A36
	10	A37
	16	A38
40	25	A39
	40	A40
	6	A41
	10	A42
	16	A43
	25	A44
50	40	A45
	64	A46
	100	A47
	160	A48
	250	A49
	400	A50
60	6	A51
	10	A52
	16	A53
	25	A54
	40	A55
	64	A56
	100	A57
	160	A58
	250	A59
	400	A60

DN	PN	CODE
65	6	A61
	10	A62
	16	A63
	25	A64
	40	A65
	64	A66
	100	A67
	160	A68
	250	A69
	400	A70
80	6	A71
	10	A72
	16	A73
	25	A74
	40	A75
	64	A76
	100	A77
	160	A78
	250	A79
	400	A80

**AS PER JIS - B 2210**

NOMINAL SIZE	RATING /CLASS	CODE
10A	5K	B57
	10K	B58
	40K	B59
15A	5K	B60
	10K	B61
	40K	B62
20A	5K	B63
	10K	B64
	40K	B65
25A	5K	B66
	10K	B67
	40K	B68
32A	5K	B69
	10K	B70
	40K	B71
40A	5K	B72
	10K	B73
	40K	B74
50A	5K	B75
	10K	B76
	40K	B77
65A	5K	B78
	10K	B79
	40K	B80
80A	5K	B81
	10K	B82
	40K	B83

**AS PER DIN 2642**

DN	PN	CODE
10	10	A90
15		A91
20		A92
25		A93
32		A94
40		A95
50		A96
65		A97
80		A98

**AS PER DIN 2633**

DN	PN	CODE
10	16	A81
15		A82
20		A83
25		A84
32		A85
40		A86
50		A87
65		A88
80		A89

**AS PER DIN 2635**

DN	PN	CODE
10	40	A99
15		B01
20		B02
25		B03
32		B04
40		B05
50		B06
65		B07
80		B08

**AS PER ANSI B 16.5**

NOMINAL SIZE	RATING/CLASS	CODE
1/2"	150	B09
	300	B10
	600	B11
	900	B12
	1500	B13
	2500	B14
	3000	B15
3/4"	600	B16
	900	B17
	1500	B18
	2500	B19
3000	B20	

NOMINAL SIZE	RATING /CLASS	CODE
1"	150	B21
	300	B22
	600	B23
	900	B24
	1500	B25
1 1/4"	2500	B26
	150	B27
	300	B28
	600	B29
	900	B30
1 1/2"	1500	B31
	2500	B32

NOMINAL SIZE	RATING /CLASS	CODE
1 1/2"	150	B33
	300	B34
	600	B35
	900	B36
	1500	B37
2"	2500	B38
	150	B39
	300	B40
	600	B41
	900	B42
2 1/2"	1500	B43
	2500	B44

NOMINAL SIZE	RATING /CLASS	CODE
2 1/2"	150	B45
	300	B46
	600	B47
	900	B48
	1500	B49
3"	2500	B50
	150	B51
	300	B52
	600	B53
	900	B54
3 1/2"	1500	B55
	2500	B56

**AS PER BS - 10**

NOMINAL SIZE	TABLE	CODE
1/2"	D	B84
	E	B85
	F	B86
	H	B87
	J	B88
	K	B89
3/4"	D	B90
	E	B91
	F	B92
	H	B93
	J	B94
	K	B95

NOMINAL SIZE	TABLE	CODE
1"	D	B96
	E	B97
	F	B98
	H	B99
	J	C01
1 1/4"	K	C02
	D	C03
	E	C04
	F	C05
	H	C06
1 1/2"	J	C07
	K	C08

NOMINAL SIZE	TABLE	CODE
1 1/2"	D	C09
	E	C10
	F	C11
	H	C12
	J	C13
	K	C14
	2"	D
E		C16
F		C17
H		C18
J		C19
2 1/2"	K	C20

NOMINAL SIZE	TABLE	CODE
2 1/2"	D	C21
	E	C22
	F	C23
	H	C24
	J	C25
	K	C26
3"	D	C27
	E	C28
	F	C29
	H	C30
	J	C31
	K	C32

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