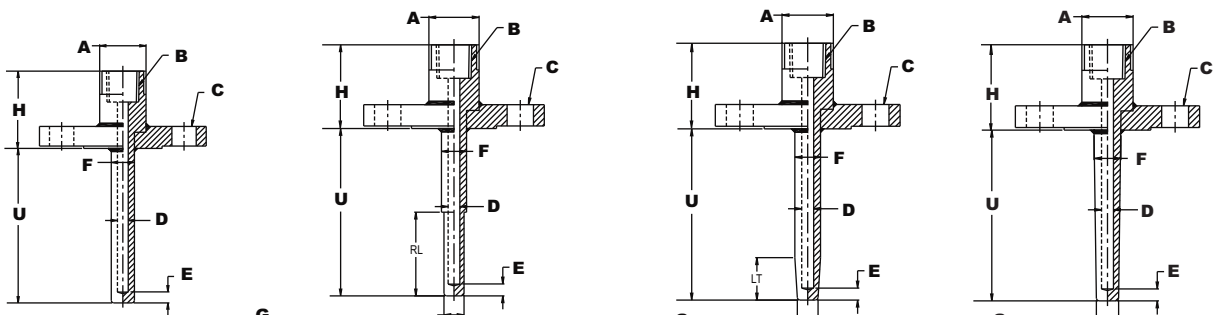



Special Features

- 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

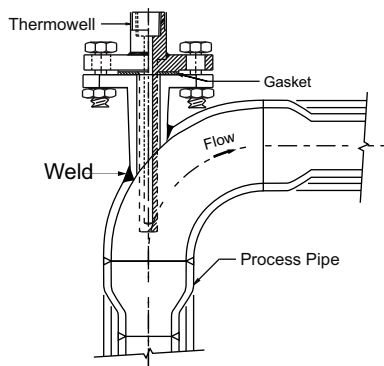
- Chemical plants
- Petrochemical plants
- Engineering plants
- On shore
- Off shore
- Other similar process industries

Thermowell Drawings

S - Straight
R - Straight Reduced Tip
P - Partial Taper
F - Full Taper

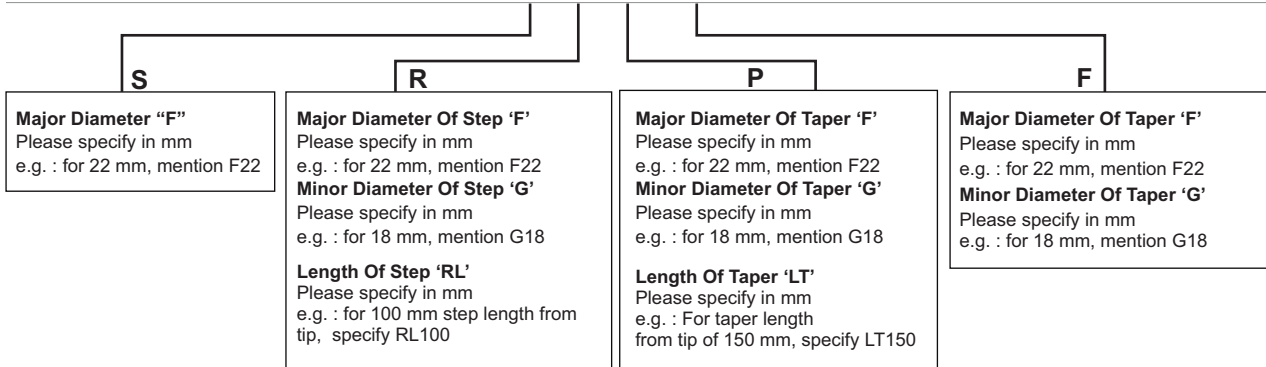
A - Finished Head Size
B - Instrument Connection
C - Flange
D - Bore Diameter

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
Basic Model					W2
Type					
S - Straight	R - Straight Reduced Tip	P - Partial Taper	F - Full Taper		X
Well Material (It is recommended that the well material and flange material (wetted area) should be same.)					
LM AISI 316 SS	EP AISI 410 SS	LT Monel	LV Titanium		XX
LN AISI 316L SS	LO AISI 316Ti SS	LU Inconel 600	LX Nickel		
LP AISI 304 SS	EO AISI 310 SS	ES Inconel 625	LY HRS 446		
ER AISI 304L SS	LQ Carbon Steel	ET Incolloy 800	LZ Alloy 20		
EN AISI 321 SS		EU Incolloy 825	LS Hastelloy		
Note : Other Materials are available on request.					
Flange Material					
LM AISI 316 SS	EN AISI 321 SS	LT Monel	LV Titanium		XX
LN AISI 316L SS	LO AISI 316Ti SS	LU Inconel 600	LX Nickel		
LP AISI 304 SS	EO AISI 310 SS	ES Inconel 625	LZ Alloy 20		
ER AISI 304L SS	LQ Carbon Steel	LS Hastelloy C			
Note : Other Materials are available on request.					
Instrument Connection					
4BF 1/2" BSP (F)	5TF 3/4" BSPT (F)	6NF 1" NPT (F)	3MF M18 x 1.5 (F)	6MF M24 x 1.5 (F)	XXX
4NF 1/2" NPT (F)	5NF 3/4" NPT (F)	6BF 1" BSP (F)	4MF M20 x 1.5 (F)	7MF M27 x 2 (F)	
4TF 1/2" BSPT (F)	5BF 3/4" BSP (F)	6TF 1" BSPT (F)	5MF M22 x 1.5 (F)	9MF M33 x 2 (F)	
4FF 1/2" PF (F)	5PF 3/4" G (F)	6PF 1" G (F)			
4PF 1/2" G (F)					
Note : Other Connections are available on request.					
Flange Type					
1 Blind Flange	2 SORF Flange				X
Flange "C" (size & Rating) Refer Flange table for code selection.					XXX
Flange Facing Type					
R Raised Face	F Flat Face	J Ring type joint			X
Flange Finish					
1 - 125 AARH (Standard)	2 - 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 50 mm, mention H50					XXX
Finished Head Size "A" (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					XXX
Type Of Head					
K Hex Headed*	L Round Headed	M Round Headed With Spanner Slots.			X
* Maximum "U" Length below Flange will be 250 mm.					
Bore Diameter "D"					
A 6.6 mm	B 7 mm	C 8.5 mm	D 9 mm		X
E 10.5 mm	F 11 mm	G 13 mm	H 13.5 mm		
Note : Refer Table 1.3 of Thermowell Design Procedure for dimensions as per PTC 19.3					

Major Diameter “F”
Example

 XXX
 OR
 XXX
 OR
 XXXXX

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

XX

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

XXXX

Options

GG Plug and chain in SS	TC Counter flange with studs, nuts & gasket
FW Electro polishing	CW Marking by Laser
CX Marking by Engraving	SX SS Tag Plate

XX

Lining & Coatings (User to specify thickness during enquiry)

FI PTFE Lining*	EW Zirconium Oxide Coating
FM Silicon Carbide Coating	EX Stellite Coating
GK Rubber Lining*	EY PTFE Coating
GJ Tungsten Carbide Coating	

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

Overlay On Flange RF (User to specify thickness during enquiry)

LS Hastelloy ‘C’	LT Monel	LV Titanium	LX Nickel
LR Hastelloy ‘B’	LU Inconel 600	LW Tantalum	LZ Alloy 20

Sleeve Material (Wall Thickness : 1 mm)

GM Hastelloy ‘C’	FQ Monel	FT Tantalum (0.4 mm)
FO Hastelloy ‘B’	FR Inconel 600	FV Alloy 20
FP Nickel	FJ Titanium	

Tests & Certification

C1 Radiography for Bore Concentricity	C9 Certification for Oxygen Service
C2 IBR Certification	T1 Chemical Composition Test
C3 Mechanical Test	T2 3.1B Material Conformity Certificate
C4 Ultrasonic Test	T3 Radiography for Welding
C5 PMI Test	T4 Dye Penetration Test
C6 IGC Test	TF Conformity as per NACE standard
C7 Wake Frequency Calculations as per PTC 19.3#	H1 Hydro Test
C8 Certification for Hydrogen Service	

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

Ordering Example:
W2 . X . XX . XX . XXX . X . XXX . X . X . XXX . XXX . X . X . XXX OR XXX OR XXXXX . XX . XXXX . XX
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.

Flange Table With Connection Codes

As Per EN 1092-1			AS PER JIS - B 2239			AS PER ANSI B 16.5			AS PER BS - 10				
DN	PN	CODE	NOMINAL SIZE	RATING /CLASS	CODE	NOMINAL SIZE	RATING /CLASS	CODE	NOMINAL SIZE	TABLE	CODE		
10	6	A01	10A	5K	B57	1/2"	150	B09	1/2"	D	B84		
	10	A02		10K	B58		300	B10		E	B85		
	16	A03		40K	B59		600	B11		F	B86		
	25	A04	5K	B60	900		B12	H		B87			
	40	A05	10K	B61	1500		B13	J		B88			
	64	A06	40K	B62	2500	B14	K	B89					
	100	A07	15A	5K	B63	3/4"	150	B15	3/4"	D	B90		
	160	A08		10K	B64		300	B16		E	B91		
	250	A09		40K	B65		600	B17		F	B92		
	400	A10	5K	B66	900		B18	H		B93			
6	A11	15	10K	B67	1"		1500	B19		1"	J	B94	
10	A12		40K	B68		2500	B20	K	B95				
16	A13		25A	5K		B69	1 1/4"	150	B21		1 1/4"	D	B96
25	A14			10K		B70		300	B22			E	B97
40	A15			40K		B71		600	B23			F	B98
64	A16		5K	B72	900	B24		H	B99				
100	A17		10K	B73	1500	B25		J	C01				
160	A18		40K	B74	2500	B26	K	C02					
250	A19		32A	5K	B75	1 1/2"	150	B27	1 1/2"	D	C03		
400	A20			10K	B76		300	B28		E	C04		
6	A21	40K		B77	600		B29	F		C05			
10	A22	5K	B78	900	B30		H	C06					
16	A23	10K	B79	1500	B31		J	C07					
25	A24	40K	B80	2500	B32	K	C08						
40	A25	40A	5K	B81	2"	150	B33	2"	D	C09			
6	A26		10K	B82		300	B34		E	C10			
10	A27		40K	B83		600	B35		F	C11			
16	A28	50A	5K	B78		900	B36		H	C12			
25	A29		10K	B79		1500	B37		J	C13			
40	A30		40K	B80	2500	B38	K	C14					
64	A31	65A	5K	B81	2 1/2"	150	B39	2 1/2"	D	C15			
100	A32		10K	B82		300	B40		E	C16			
160	A33		40K	B83		600	B41		F	C17			
250	A34	5K	B81	900		B42	H		C18				
400	A35	10K	B82	1500		B43	J		C19				
6	A36	25	40K	B83	2500	B44	K	C20					
10	A37		50A	5K	B78	3"	150	B51	3"	D	C21		
16	A38			10K	B79		300	B52		E	C22		
25	A39			40K	B80		600	B47		F	C23		
40	A40		5K	B78	900		B48	H		C24			
6	A41		10K	B79	1500		B49	J		C25			
10	A42		40K	B80	2500	B50	K	C26					
16	A43		65A	5K	B81	3"	150	B51	3"	D	C27		
25	A44			10K	B82		300	B52		E	C28		
40	A45			40K	B83		600	B53		F	C29		
64	A46	5K	B81	900	B54		H	C30					
100	A47	10K	B82	1500	B55		J	C31					
160	A48	40K	B83	2500	B56	K	C32						
250	A49	80A	5K	B81	2 1/2"	150	B51	2 1/2"	D	C21			
400	A50		10K	B82		300	B52		E	C22			
6	A51		40K	B83		600	B47		F	C23			
10	A52	5K	B78	900		B48	H		C24				
16	A53	10K	B79	1500		B49	J		C25				
25	A54	40K	B80	2500	B50	K	C26						
40	A55	50A	5K	B78	3"	150	B51	3"	D	C27			
64	A56		10K	B79		300	B52		E	C28			
100	A57		40K	B80		600	B53		F	C29			
160	A58	5K	B81	900		B54	H		C30				
250	A59	10K	B82	1500		B55	J		C31				
400	A60	40K	B83	2500	B56	K	C32						

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