

**ORDERING INFORMATION - MODEL IW200**

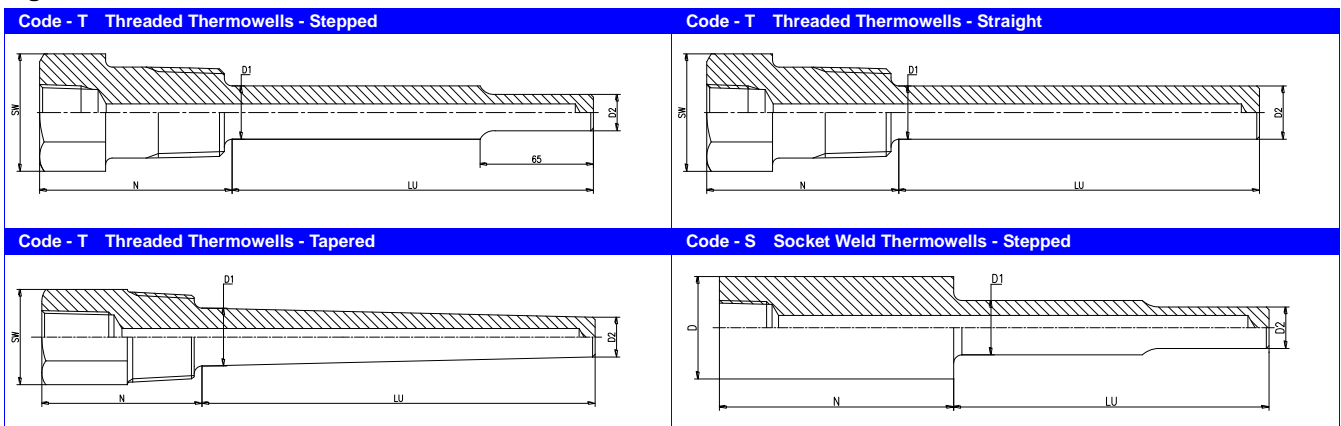
Model	Product Description		
IW200	Series IW200 Thermowells from Bar Stock		
Code	Assembly Type		
T	Threaded Thermowells		
F	Flanged Thermowell		
V	Van Stone Thermowell		
K	Socket Weld Thermowell		
W	Weld-In Thermowell, Only Tapered and Stepped Shape		
Code	Shape Type	Max. Flange Rating	
2	Stepped	ANSI 600lbs	
3	Straight	ANSI 600lbs	
4	Tapered	ANSI 2500lbs	
Code	Process Connection	Min. N [mm]	Max. D1 [mm] <sup>(1)</sup>
N11	1/2" NPT (max. D1≤ 10mm, SW=27)	50	15
N12	3/4" NPT (max. D1≤ 15mm, SW=27)	50	22
N13	1" NPT (max. D1≤ 22mm, SW=36)	50	27
N14	1-1/4" NPT (max. D1≤ 29mm, SW=41)	50	35
N15	1-1/2" NPT (max. D1≤ 29mm, SW=54)	50	35
U11	1" ANSI150 LBS	50	19
U12	1" ANSI 300 LBS	50	19
U13	1" ANSI600 LBS	50	19
U21	1-1/2" ANSI 150 LBS	50	32
U22	1-1/2" ANSI 300 LBS	50	32
U23	1-1/2" ANSI 600 LBS	50	32
U24	1-1/2" ANSI 900 LBS	70	32
U25	1-1/2" ANSI 1500 LBS	70	32
U26	1-1/2" ANSI 2500 LBS	70	32
U31	2" ANSI 150 LBS	50	35
U32	2" ANSI 300 LBS	50	35
U33	2" ANSI 600 LBS	50	35
U34	2" ANSI 900 LBS	100	35
U35	2" ANSI 1500 LBS	100	35
U36	2" ANSI 2500 LBS	100	35
NN	No Selection for Socket Weld and Welded – in Type		
XXX	Other		
Code	Flange Finish		
RF	Raise Face		
FF	Flat Face		
RJ	Ring Joint Face		
NN	No Selection for Socket Weld and Welded – in Type		
XX	Other		
Code	Insertion Length, LU [mm]		
0050	50		
0250	250		
XXXX	Other		
Code	Lag Extension Length, N [mm]		
050	50		
070	70		
100	100		
000	Equal to Flange Thickness		
Code	Instrument Connection		
N1	1/2" NPT		
N2	3/4" NPT		
XX	Other		
Code	Lag Diameter, D [mm], for Flange & Weld connection	SW [mm], for Threaded connection	
30	30	27	
32	32	36	
35	35	41	
52	52	54	
NN	Only for Welded in Type		
00	Without Lag Extension		
Code	Bore Diameter, d [mm]	Sensor Diameter [mm]	
B45	4.5	3	
B55	5.5	4.5	
B70	7	6	
B90	9	8	
XXX	Other		
Code	Root Diameter, D1 [mm]		
D115	15		
D119	19		
D122	22		
D125	25		
D127	27		
D132	32		
D135	35		
XXXX	Other		

Code	Tip Diameter, D2 [mm]
D211	11
D215	15
D217	17
D219	19
D221	21
EEEE	Equal to Root Diameter for Straight Shape
XXXX	Other
Code	Material of Well
A10	AISI 316(DIN1.4401)
A11	AISI 316Ti(DIN1.4571)
A12	AISI 316L(DIN1.4404)
A13	AISI 316H
A14	AISI 321(DIN1.4541)
A15	AISI 314(DIN1.4841)
A16	AISI 347(DIN1.4550)
A17	AISI 347H(DIN1.4550)
A18	AISI 310(DIN1.4845)
A19	AISI 317L
A20	AISI 446(DIN1.4762)
A21	AISI 416
A22	INCONEL 600(DIN2.4816)
A23	INCOLOY 800(DIN1.4876)
A24	Hastelloy C-276
A25	Hastelloy B
A26	Hastelloy C-4
A27	Monel 400
A28	Duplex
A29	Titanium
A30	Alloy 20
A31	Nickel 200
A32	A182 F11
A33	A105
A34	A182 F22
A35	Pyrosil
A53	Alloy C3
XXX	Other
Code	Material of Flange
E10	Equal to Well
A10	AISI 316(DIN1.4401)
A33	A 105
NNN	No selection
XXX	Other
Code	Additional Options
MP	Mirror Polished Only "LU" Length
SC	Stellite Coating 1 to 1,5 mm Thickness
AC	Metco 101 Alumina Coating
CP	PTFE Coating 2,5 mm Thickness
CT	With Tantalum Coating 0.4 - 0,5 mm Thickness
CC	With Cobalt Chrome Tungsten Coating
WP	With welded Disc Under Flange
XX	Other

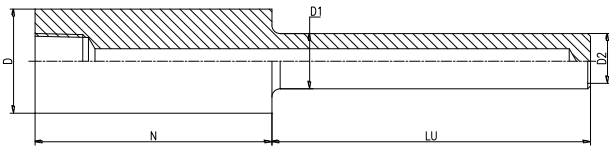
Typical Model Number: IW200 F 4 U23 RF 0250 050 N1 32 B90 D125 D215 A10 E10

(1) The Root diameter D1, depends on Internal Diameter of Nozzle

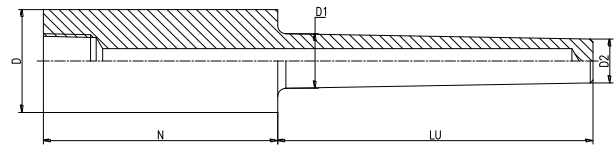
Figure for Thermowell from Solid Bar Stock



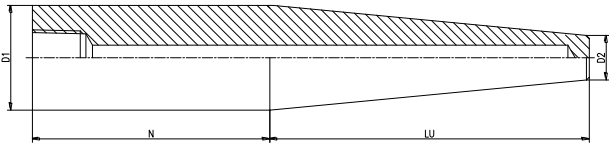
Code - S Socket Weld Thermowells - Straight



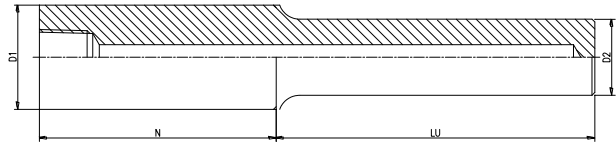
Code - S Socket Weld Thermowells - Tapered



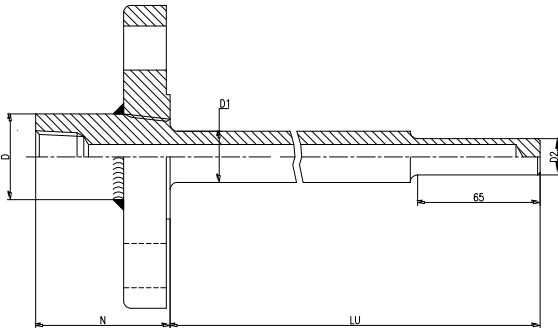
Code - W Welded-In Thermowells - Tapered



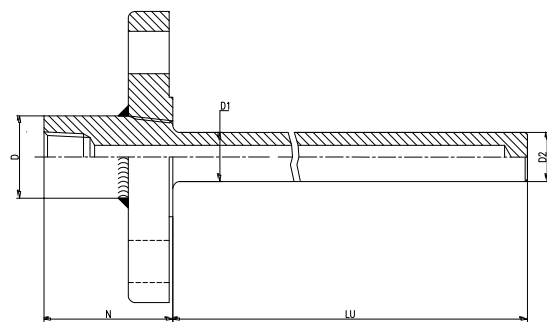
Code - W Welded-In Thermowells - Straight



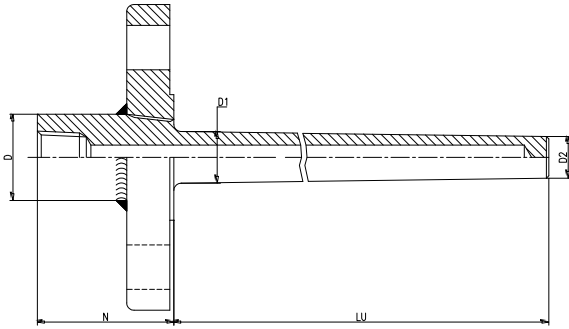
Code - F Flange Thermowells - Stepped



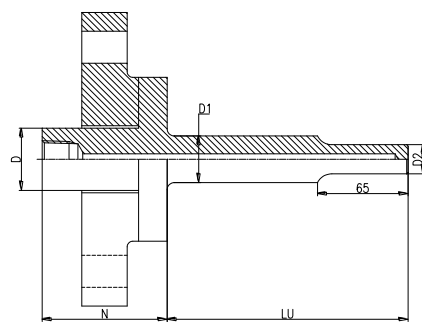
Code - F Flange Thermowells - Straight



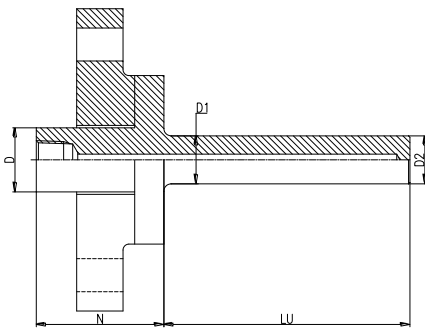
Code - F Flange Thermowells - Tapered



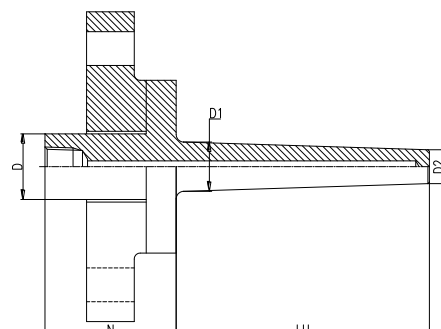
Code - V Van Stone Thermowells - Stepped



Code - V Van Stone Thermowells - Straight



Code - V Van Stone Thermowells - Tapered



**Thermowell Material Selection Guide**

The follow information is offered as guide to selection of material.

**HEAT TREATING**

Annealing(<740°C)	304SS
Annealing (>740°C)	INC601,446S
Carburizing	INC601
Hardening(<815°C)	304SS
Hardening(<1090°C)	INC601,446SS
Hardening (>1090°C)	Alumina
Lead Hardening	446SS
Salt Bath(Cyanide)	Pyrosil,INC601,446SS
Salt Bath(Neutral)	Pyrosil,INC601,446SS
Salt Bath(High Speed)	Alumina
Quench Oil	Carbon Steel,304SS

**IRON & STEEL**

Billet Heating (<1100°C)	INC601,446SS
Billet Heating (>1100°C)	Alumina
Blast Furnace	
Downcomer	INC601,446SS
Stove Dome	SiC, Hexoloy SA
Hot Blast-Main	INC601,Hex,310SS
Stove Trunk	INC601,310SS
Stove Outlet Flue	Hexoloy SA
Brazing	Alumina
Bright Anneal (Batch)	INC601, Pyrosil,310SS
Bright Anneal (Continuous)	INC601,Alumina,310SS
Forge Furnaces	Alumina,SiC
Galvanizing	Carbon Steel,SiC
Palm Oil	304LSS
Pickling Tanks	Lead,SiC,Teflon,Hastelloy C-22
Soaking Pits (<1100°C)	INC601,SiC,LT-1,446SS
Soaking Pits (>1100°C)	Alumina,SiC,LT-1
Tinning	Carbon Steel,446SS
Vacuum Melting (<1750°C)	Alumina
Vacuum Melting (>1750°C)	Beryllium Oxide
Waste Heat Boilers	INC601,446SS,Pyrosil,310SS

**CEMENT KILN**

Hot End (Clinker) (<1400°C)	Alumina
Cool End - Flue (<1100°C)	LT-1,446SS,310SS
Clinker Cooler (<650°C)	INC601

**POWER**

Boiler Tubes	310SS,446SS
Flue Gas	446SS, Pyrosil,C22
Preheaters	446SS
Steam Lines	316SS
Water Lines	Carbon Steel

**GLASS**

Forehearth & Feeders	Pt Thimble on Alumina
Lehrs	340SS,316SS,INC601
Roof	Alumina,LT-1
Tank Roof & Walls	Alumina
Tank Flues	446SS

**NON-FERROUS METALS**

Aluminum (Molten)	Sialon, Lava Coated, Hexoloy SA, Ceramic
Aluminum (Heat Treating)	Carbon Steel,304LSS
Aluminum (Annealing)	Carbon Steel
Aluminum (Billet Heating)	INC 601,446SS,310SS
Babbitt	446SS
Brass,Bronze (Molten)	LT-1,SiC
Copper	LT-1,SiC,Kanthal
Lead	446SS,SiC
Tin	Carbon Steel,SiC
Smelting & Ore	INC601,446SS,SiC
Zinc	446SS,SiC,Sialon,310SS,Hexoloy SA

**CERAMICS**

Dryers (<450°C)	304LSS
Kilns-Brick (<1200°C)	Alumina,SiC,Mullite
Vitreous Enamelling (<1100°C)	INC601,310SS
Grinding Wheels	304SS
Abrasive Grits (<1250°C)	Alumina,Mullite
Porcelain Pottery (<1300°C)	Alumina,Mullite

**FOOD / MEAT**

Baking Ovens	304LSS,316LSS
Char,Kilns,Sugar	446SS
Cooking - Fruits,Veg,Meats	304LSS,316LSS
Smokehouses	304LSS,316LSS

**GAS**

Producer Gas	INC601,446SS
Water Gas (Carburator)	INC601,446SS
Water Gas (Superheater)	INC601,446SS
Tar Stills	Carbon Steel,304LSS

**PETROLEUM**

Bridgwall	446SS,INC601
Sulphur Burners	446SS,LT-1
Dewaxing	310SS,316SS
Fractionating Columns	310SS,316SS
Reaction Chambers	310SS,316SS
Thermal Catalytic Units	310SS,316SS,Pyrosil
Towers	310SS,316SS
Transfer Lines	310SS,316SS

**MISC**

Incineration	LT-1,SiC, Hastelloy C-22
Reactors	LT-1,Hex
Asphalt Mixing	C.Stl,446SS
Sulphur Burners	446SS,LT-1
Ore Roasters	INC601,446SS,310SS
Carbon Anode Baking	Pyrosil
Paper Digesters	316SS,446SS