

Badotherm thermowell model TW2x1 is a bar stock, solid machined type thermowell with a threaded process connection. The construction is available with straight, stepped, or tapered stem. The standard material is AISI 316(L) and optionally various exotic materials are available. Thermowells are designed to protect the temperature bulb from corrosive effect, extreme pressure, or other process conditions. It also allows replacing the temperature instrument without disturbing the process.



STANDARD EXECUTION

TYPE	THERMOWELL	BORE SIZE	LENGTH	PROCESS CONNECTION
bar stock	AISI 316(L)	6.5 mm	customer specific	threaded

PROCESS CONNECTIONS

size (F)	thread		gasket surface
1/2"	BSP	male	ISO 1179-4
1/2"	NPT	male	
3/4"	BSP	male	ISO 1179-4
3/4"	NPT	male	
1"	BSP	male	ISO 1179-4
1"	NPT	male	
M20x1.5	METRIC	male	ISO 9974-3
M27x2.0	METRIC	male	ISO 9974-3
M32x2.0	METRIC	male	ISO 9974-3

INSTRUMENT CONNECTIONS, CONSTRUCTION, AND BORE SIZE

size (F1)	thread		construction	bore size (d)	
1/2"	NPT	female	straight (TW211)	6.2	10.0
1/2"	BSP	female	stepped (TW221)	6.5	10.5
M20x1.5	METRIC	female	tapered (TW231)	7.0	11.0
				8.0	12.0
				8.5	12.5
				9.0	

All dimensions in mm

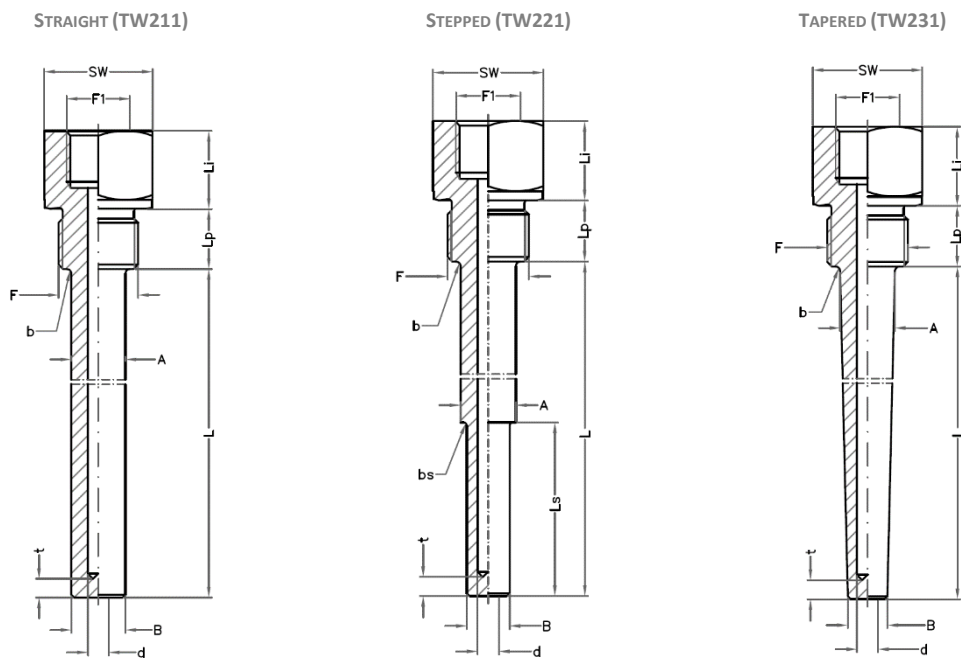
WETTED PART MATERIALS AND THREADS

stem material	threads	norms
AISI 316(L)	NPT	ANSI B1.20.1
AISI 321	BSP	ISO 228
Inconel 625	METRIC	ISO 965
Inconel 825		
Duplex 2205		
Super Duplex 2507		
Monel 400		
Hastelloy C-276		
Titanium Gr. 2		

OPTIONS

- inside or outside pressure test
- stainless steel plug & chain
- tantaline treatment
- thermowells > 610 mm
- wake frequency calculation per ASME PTC 19.3 TW-2010

DRAWING AND DIMENSIONS STANDARD EXECUTION



B1.20.1

F	F1	A	B	min / max	b	bs ¹	d	L	Li	Lp	Ls ¹	SW	t
1/2"NPT	1/2"NPT	17.8	12.6	12.6 / 17.8	1	1	6.5	various	26	20	various	22	8
3/4"NPT	1/2"NPT	23.1	12.6	12.6 / 23.1	3	3	6.5	various	26	20	various	27	8
1"NPT	1/2"NPT	29.0	12.6	12.6 / 29.0	3	3	6.5	various	26	25	various	36	8

All dimensions in mm
 Dimensions based on standard execution d=6.5
 For restrictions see table dimensional limits
¹ only applicable for stepped executions

ISO 228 – WITH ISO 1179-4 GASKET SURFACE

F	F1	A	B	min / max	b	bs ¹	d	L	Li	Lp	Ls ¹	SW	t
1/2"BSP	1/2"BSP	17.8	12.6	12.6 / 17.8	1	1	6.5	various	26	25	various	22	8
3/4"BSP	1/2"BSP	23.1	12.6	12.6 / 23.1	3	3	6.5	various	26	25	various	27	8
1"BSP	1/2"BSP	29.0	12.6	12.6 / 29.0	3	3	6.5	various	26	25	various	36	8

All dimensions in mm
 Dimensions based on standard execution d=6.5
 For restrictions see table dimensional limits
¹ only applicable for stepped executions

ISO 1179-4 – WITH ISO 9974-3 GASKET SURFACE

F	F1	A	B	min / max	b	bs ¹	d	L	Li	Lp	Ls ¹	SW	t
M20x1.5	M20x1.5	17.8	12.6	12.6 / 17.8	1	1	6.5	various	26	25	various	22	8
M27x2.0	M20x1.5	23.1	12.6	12.6 / 23.1	3	3	6.5	various	26	25	various	27	8
M32x2.0	M20x1.5	29.0	12.6	12.6 / 29.0	3	3	6.5	various	26	25	various	36	8

All dimensions in mm
 Dimensions based on standard execution d=6.5
 For restrictions see table dimensional limits
¹ only applicable for stepped executions