

Badotherm thermowell model TW2x4 is a bar stock, solid machined type thermowell with a weld-in 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	AISI316(L)	6.5 mm	customer specific	weld-in

PROCESS CONNECTIONS

	size (Di)	tolerance	norm
3/4"	26.7		
1"	33.4		
1.5"	48.3		
24h7	24.0	h7	DIN 43772
26h7	26.0	h7	DIN 43772
32h11	32.0	h11	DIN 43772

All dimensions in mm

INSTRUMENT CONNECTIONS, CONSTRUCTION, AND BORE SIZE

size (F1)	thread		construction	bore size (d)
1/2"	NPT	female	straight (TW214)	6.2 10.0
1/2"	BSP	female	stepped (TW224)	6.5 10.5
3/4"	NPT	female	tapered (TW234)	7.0 11.0
3/4"	BSP	female		8.0 12.0
M18x1.5	METRIC	female		8.5 12.5
M20x1.5	METRIC	female		9.0
M27x2.0	METRIC	female		

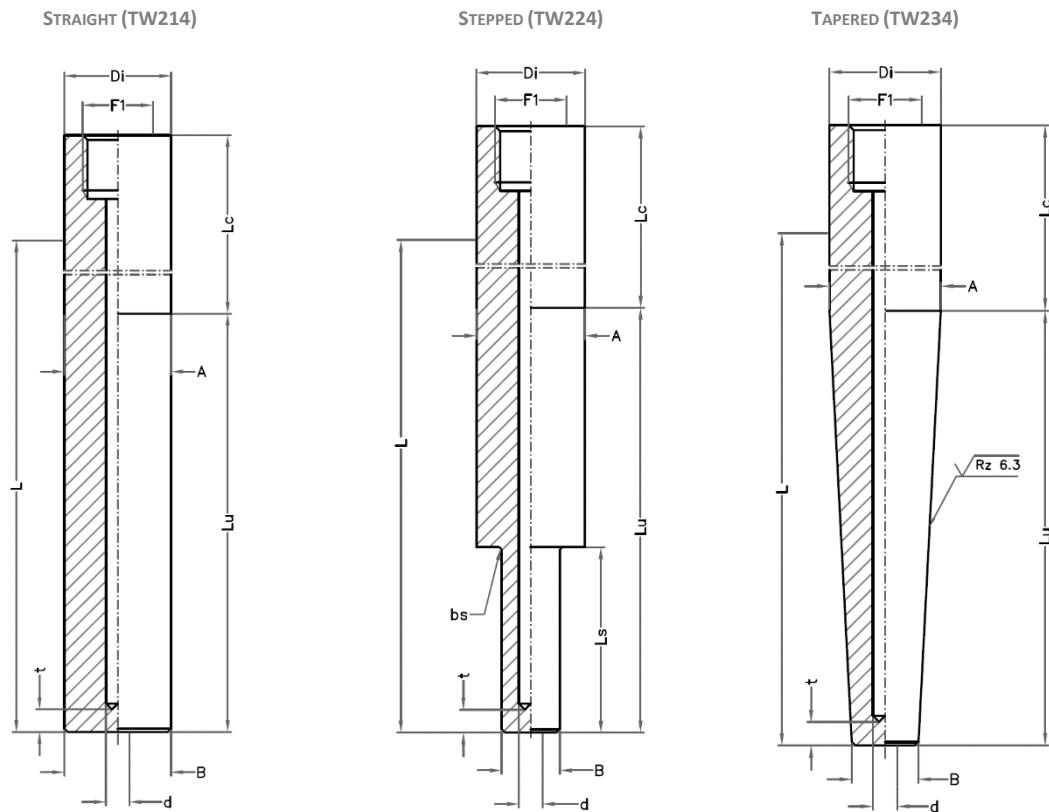
All dimensions in mm

WETTED PART MATERIALS

stem material
AISI 316(L)
AISI 321
Inconel 625
Inconel 825
Duplex 2205
Super Duplex 2507
Hastelloy C-276
Monel 400

OPTIONS

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

DRAWING AND DIMENSIONS STANDARD EXECUTIONS


size	A	B	min / max	Bs ¹	Di	d	L	Lr	Lu	Ls ¹	t
3/4"	16.0	12.6	12.6 / 26.7	3	26.7	6.5	various	50	various	various	8
1"	20.0	12.6	12.6 / 33.4	3	33.4	6.5	various	50	various	various	8
1.5"	29.0	12.6	12.6 / 48.3	3	48.3	6.5	various	50	various	various	8
24h7	14.4	12.6	12.6 / 24.0	3	24.0	6.5	various	50	various	various	8
26h7	15.6	12.6	12.6 / 26.0	3	26.0	6.5	various	50	various	various	8
32h11	19.2	12.6	12.6 / 32.0	3	32.0	6.5	various	50	various	various	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

DIMENSIONAL LIMITS FOR STRAIGHT, TAPERED, AND STEPPED THERMOWELLS
STRAIGHT AND TAPERED

description	symbol	minimum	maximum
unsupported length	L	63.5	610
bore diameter	d	6.1	21
tip diameter	B	12.6	46.5
taper ratio	B/A	0.6	1
bore ratio	d/B	0.2	0.7
aspect ratio	L/B	2	
minimum wall thickness	(B-d)/2	3	

All dimensions in mm

For tapered executions L > 240 mm; there will be a tapered section (max length of 240 mm) and a straight section (L – 240 mm)

¹ Step diameter ratio, for B=12.7

² Step diameter ratio, for B=22.23

STEPPED

description	symbol	minimum	maximum
unsupported length	L	127	610
bore diameter	D	6.1	6.7
tip diameter	B	12.7 and 22.2	
step diameter ¹	B/A	0.5	0.8
step diameter ²	B/A	0.6	0.9
length ratio	Ls/L	0	0.6
minimum wall thickness	(B-d)/2	3	