

Solid machined, to screw in Design to DIN 43772 form 6, 7, 9 Models TW50-H, TW50-I, TW50-J

WIKA data sheet TW 95.50

Applications

- Chemical industry, process technology, apparatus construction
- For high process loads

Special features

- Design per DIN 43772
- Thermowell model TW50-H: Form 6
model TW50-I: Form 7
model TW50-J: Form 9

Description

Thermowell material

Stainless steel 1.4571

Process connection

Model TW50-H, TW50-J: G ½ B, G ¾ B male
Model TW50-I: ½ NPT, ¾ NPT, 1 NPT male

Instrument connection

Model TW50-H: G ½, G ¾ female
Model TW50-I: G ½ female
Model TW50-J: G ½ B, G ¾ B female

Bore size

Ø 7 mm, Ø 9 mm, Ø 11 mm

Insertion length U₁

Model TW50-H, TW50-I: 82, 142, 182, 232, 382 mm
Model TW50-J: 73, 110, 170, 260, 410 mm

Total length L

Insertion length U₁ + 28 mm



Fig. left: thermowell to screw in model TW50-H
Fig. right: thermowell to screw in model TW50-J

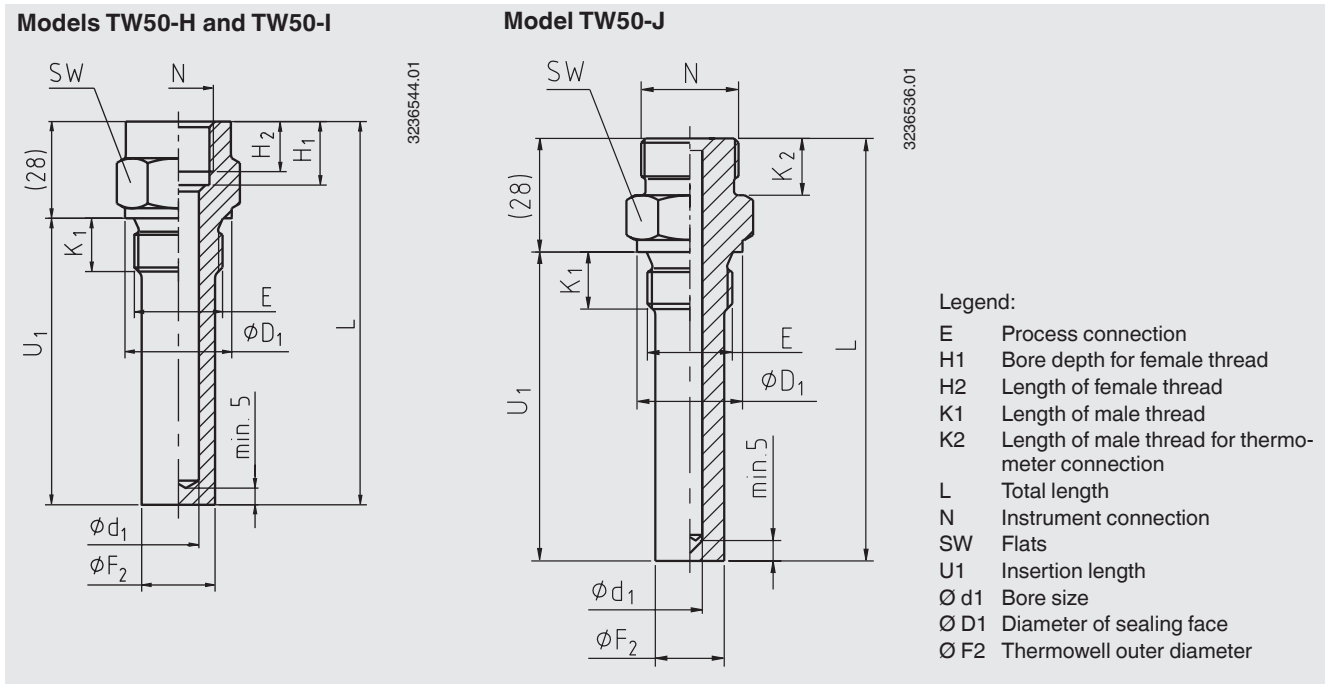
Options

- Other dimensions and materials
- Quality certificates
- Wake frequency calculations in accordance with ASME PTC 19.3 are recommended in critical applications. WIKA offer this as an engineering service.

Please find further information in our separate technical information sheet, IN 00.15 "Strength calculation for thermowells"

- 1) Rating depends on the parameters below:
- Process medium
 - Process pressure and temperature
 - Flow rate
 - Design of thermowell (dimensions, material)

Dimensions in mm



Model TW50-H and Model TW50-I

Model	Dimensions in mm								Weight in kg		
	E	N	Ø d ₁	Ø D ₁	Ø F ₂	H1	H ₂	K ₁	SW	U ₁ = 82 mm	U ₁ = 382 mm
TW50-H	G ½ B	G ½ B	7	26	17	19	15	14	27	0.22	0.67
			9							0.21	0.59
			11							0.19	0.50
	G ¾ B	G ¾ B	7	32	19	22	17	16	32	0.28	0.72
			9							0.27	0.65
		11	0.25		0.63						
		G ¾ B	7		0.31	0.82					
			9		0.30	0.75					
11	0.29	0.74									
TW50-I	½ - 14 NPT	G ½ B	7	17	19	15	≈ 20	27	0.22	0.67	
			9						0.21	0.59	
			11						0.19	0.50	
	¾ - 14 NPT	G ½ B	7	-	19	15	≈ 21	36	0.24	0.69	
			9						0.23	0.61	
			11						0.21	0.52	
			7						0.32	0.85	
	1-11.5 NPT	G ½ B	9	20	17	15	≈ 25	36	0.30	0.75	
			11						0.29	0.74	
			7						0.29	0.74	

Model TW50-J

Dimensions in mm								Weight in kg	
E	N	Ø d ₁	Ø D ₁	Ø F ₂	K ₁	K ₂	SW	U ₁ = 73 mm	U ₁ = 410 mm
G ½ B	G ½ B	7	26	17	14	12	27	0.22	0.72
		9						0.20	0.64
		11						0.18	0.53
G ¾ B	G ¾ B	7	32	19	16	14	32	0.31	0.79
		9						0.29	0.71
		11						0.29	0.78

Suitable stem lengths for mechanical thermometers

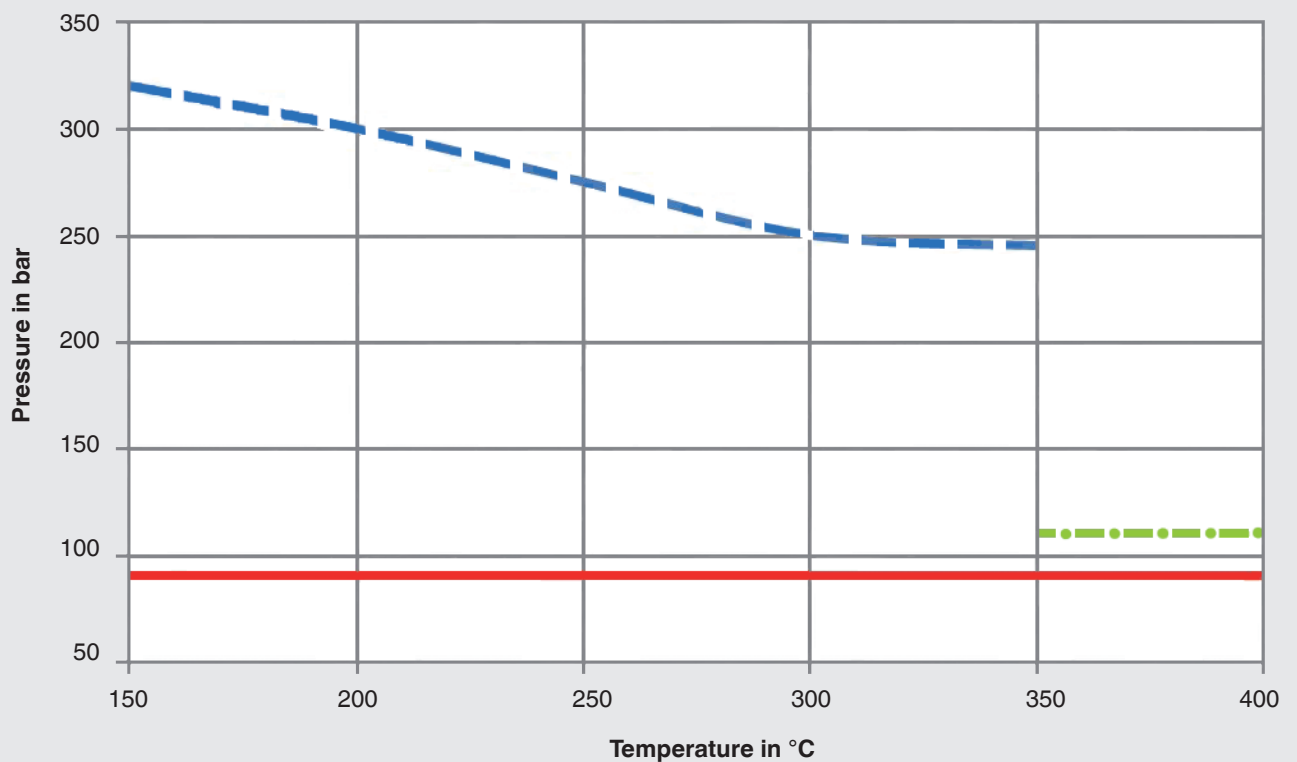
Thermowell Model	Design of connection	Stem length l_1
TW50-H	S / 4 / 5	$l_1 = L - 10 \text{ mm}$ or $l_1 = U_1 + 18 \text{ mm}$
TW50-H	2	$l_1 = L - 30 \text{ mm}$ or $l_1 = U_1 - 2 \text{ mm}$
TW50-J	3	$l_1 = L - 12 \text{ mm}$ or $l_1 = U_1 + 16 \text{ mm}$

Suitable stem lengths for machine glass thermometers

Thermowell Model	Design of connection	Instrument connection	Stem length l_1
TW50-H	E	all	$l_1 = L - 10 \text{ mm}$ or $l_1 = U_1 + 18 \text{ mm}$
TW50-J	3	G ½	$l_1 = L - 12 \text{ mm}$ or $l_1 = U_1 + 16 \text{ mm}$
TW50-J	3	G ¾	$l_1 = L - 8 \text{ mm}$ or $l_1 = U_1 + 20 \text{ mm}$

Pressure-temperature-diagram 1)

Thermowell model TW50 made of stainless steel 1.4571



Legend:

- water 3 m/s $U_1 = 232 \text{ mm}$ with ID $\varnothing 17 \text{ mm}$
- air 40 m/s $U_1 = 232 \text{ mm}$ with ID $\varnothing 17 \text{ mm}$
- vapour 40 m/s $U_1 = 232 \text{ mm}$ with ID $\varnothing 17 \text{ mm}$

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- Process medium
- Process pressure and temperature
- Flow rate
- Design of thermowell (dimensions, material)

The specifications given in this document represent the state of engineering at the time of publishing.
We reserve the right to make modifications to the specifications and materials.



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