

Solid Machined, with Flange

Model TW10-F in Full Penetration-Welded Construction

Model TW10-P, TW10-R with Partial Penetration Welding

WIKA Data Sheet TW 95.10

Applications

- Petrochemical, On/Offshore, plant engineering
- For high process loads

Special Features

- Heavy construction
- TW10-F: Flanged connection thermowell with full penetration-welded construction
- TW10-P, TW10-R: Flanged connection thermowell with partial penetration welding
 - TW10-P: Thickness of weld seam $a = 3 \text{ mm}$
 - TW10-R: Thickness of weld seam $a = 6 \text{ mm}$
- Available thermowell style: tapered, straight and stepped
- Welding certification acc. to ASME Sec. IX

Description

Thermowell material

Stainless steel 304/304L, 316/316L, A105, 1.4571, 1.4404, special materials

Flange

Blind flange acc. to ASME / EN 1092-1 / DIN 2527

Instrument connection

1/2 NPT, G 1/2 female

Bore size

Ø 6.6 mm, Ø 8.5 mm

Insertion length U

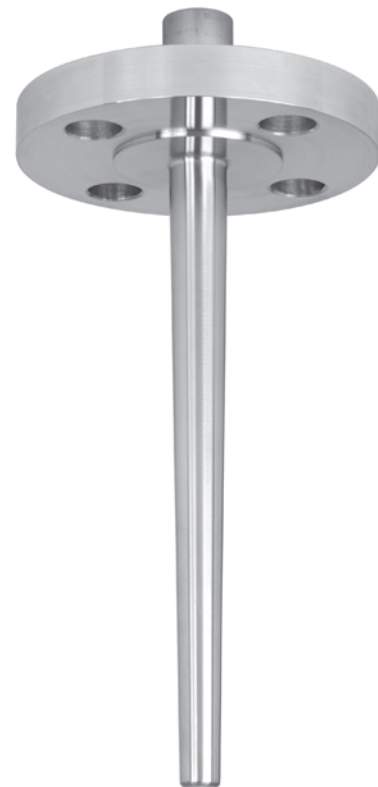
To customer specification

Connection length H

To customer specification (standard 57 mm, 83 mm)

Maximum process temperature 1)

Dependent upon thermowell material



Flanged Thermowell Model TW10

Maximum process pressure

Dependent upon pressure rating of flange

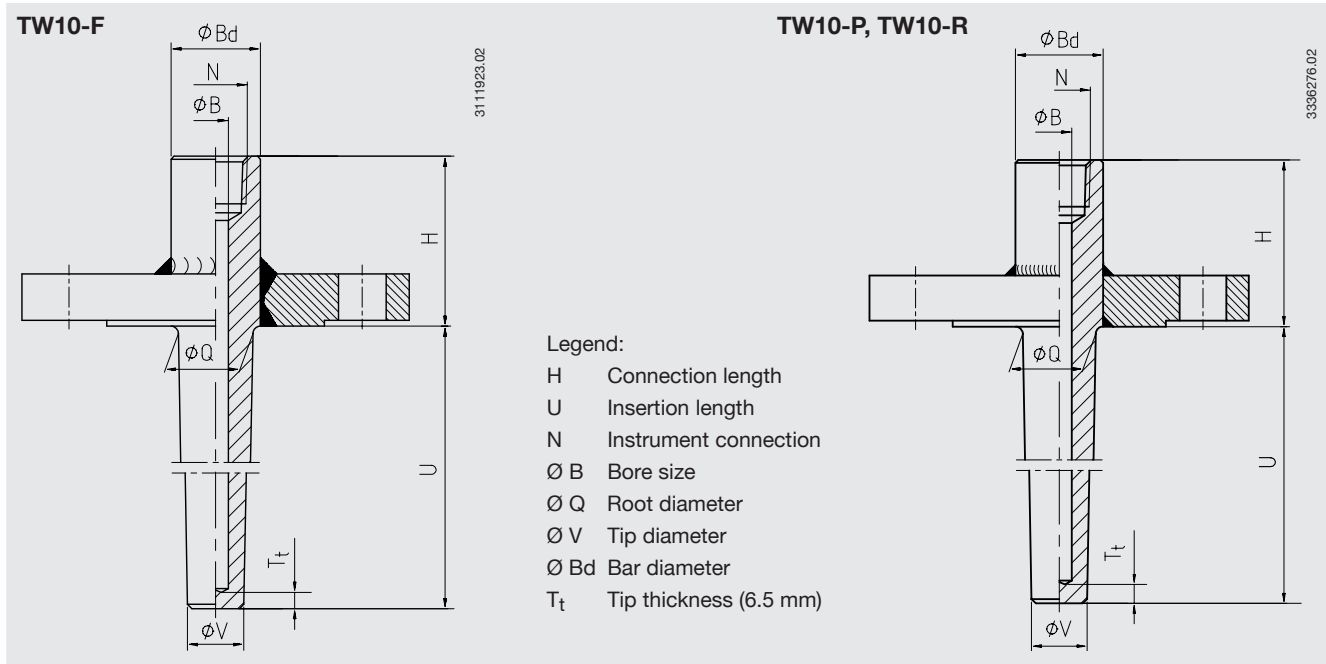
Optional extras

- Other flanges, 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



Dimensions for ASME flanges, thermowell style tapered

DN	PN in lbs	Dimensions in mm					Weight in kg		
		H	Ø Q	Ø V	Ø B	Ø Bd	U = 4"	U = 13"	U = 22"
1"	150	2 1/4" (ca. 57 mm)	22	16	6.6 or 8.5	30	1.4	1.9	2.3
	300						2.1	2.6	3
	600						2.3	2.8	3.2
	1500						4.3	4.8	5.2
1 1/2"	150	2 1/4" (ca. 57 mm)	25	19	6.6 or 8.5	30	1.8	2.4	3
	300						3.3	3.9	4.5
	600						4	4.7	5.3
	1500						6.4	7.1	7.7
2"	150	2 1/4" (ca. 57 mm)	25	19	6.6 or 8.5	30	2.5	3.1	3.7
	300						3.7	4.3	4.9
	600						4.2	4.9	5.5
	1500						11	11.6	12.3

Dimensions for EN/DIN flanges, thermowell style tapered

(only for versions with partial penetration welding a = 3 or 6 mm)

DN	PN in bar	Dimensions in mm					Weight in kg	
		H	Ø Q	Ø V	Ø B	Ø Bd	U = 160 mm	U = 500 mm
25	40	45	22	16	6.2 - 10.2	30	1.94	2.62
	63/64						3.24	3.92
	100						3.24	3.92
40	40	45	22	16	6.2 - 10.2	30	3.06	4.0
	63/64						4.76	5.7
	100						4.76	5.7
50	40	45	22	16	6.2 - 10.2	30	3.86	4.8
	63/64						5.16	6.1
	100						6.56	7.5
80	40	60	25	19	6.2 - 10.2	30	6.56	7.5
	63/64						7.56	8.5
	100						10.16	11.1
100	40	60	25	19	6.2 - 10.2	30	8.26	9.2
	63/64						10.86	11.8
	100						14.96	15.9

Suitable stem lengths for mechanical thermometers

Connection design	Stem length l_1
S / 4 / 5	$l_1 = U + H - 10 \text{ mm}$
2	$l_1 = U + H - 30 \text{ mm}$

Sealing surface roughness

Flange standard		AARH in μinch	Ra in μm	Rz in μm
ASME	Stock finish	125-250	3.2 - 6.3	-
B 16.5	Smooth finish	< 125	< 3.2	-
	RTJ	< 63	< 1.6	-
	Tongue/Groove	< 125	< 3.2	-
EN 1092	Form B1	-	3.2 - 12.5	12.5 - 50
	Form B2	-	0.8 - 3.2	3.2 - 12.5
DIN 2527	Form C	-	-	40 - 160
	Form E	-	-	< 16

Modifications may take place and materials specified may be replaced by others without prior notice.
Specifications and dimensions given in this leaflet represent the state of engineering at the time of printing.

