

Thermowell with flange (fabricated) Version per DIN 43772 form 2F, 3F Models TW40-8, TW40-9

WIKA data sheet TW 95.40

Applications

- Chemical industry, process technology, apparatus construction
- For low and medium process loads

Special features

- Version per DIN 43772
- Model TW40-8: form 2F
Model TW40-9: form 3F
- For highly corrosion-resistant coating
- With integrated neck tube
- Model TW40-9: fast-response design



Fig. left: Thermowell with flange, model TW40-8

Fig. right: Thermowell with flange, model TW40-9

Description

Each thermowell is an important component of any temperature measurement point. It is used to separate the process from the surrounding area, thus protecting the environment and operating personnel and keeps aggressive media, high pressures and flow rates from the temperature sensor itself and thereby enables the thermometer to be exchanged during operation.

Based on the almost limitless application possibilities, there are a large number of variants, such as thermowell designs or materials. The type of process connection and the basic method of manufacture are important design differentiation criteria. A basic differentiation can be made between threaded and weld-in thermowells, and those with flange connections.

Furthermore, one can differentiate between fabricated and solid-machined thermowells. Fabricated thermowells are constructed from a tube, that is closed at the tip by a welded solid tip. Solid-machined thermowells are manufactured from barstock.

The TW40 series of fabricated thermowells with flange connection are suitable for use with numerous electrical and mechanical thermometers from WIKA.

Due to their design to DIN 43772, these thermowells for low and medium process loads are suitable for use in the chemical industry, process technology and equipment manufacture.

Standard version

Thermowell material

Stainless steel 1.4571

Process connection

Flanges to valid national or international standards like e.g. EN 1092-1, DIN 2527, ASME B 16.5

Connection to thermometer

M24 x 1.5 male nut rotatable or G 1/2, 1/2 NPT female

Bore size

Ø 6.1 mm, Ø 7 mm, Ø 9 mm, Ø 11 mm

Insertion length U_1

To customer specification

Overall length L

Model TW40-8: insertion length U_1 + 80 mm

Model TW40-9: insertion length U_1 + 82 mm

Coating

■ PFA

Coat thickness min. 0.4 mm (standard) or min. 0.6 mm (optional)

■ ECTFE (Halar®)

Coat thickness min. 0.6 mm

Halar® ECTFE is a registered trademark of the company Solvay Solexis.

Max. process temperature, process pressure

Depending on

■ Load diagram DIN 43772

■ Thermowell design

- Dimensions
- Material
- Coating

■ Process conditions

- Flow rate
- Density of medium

Options

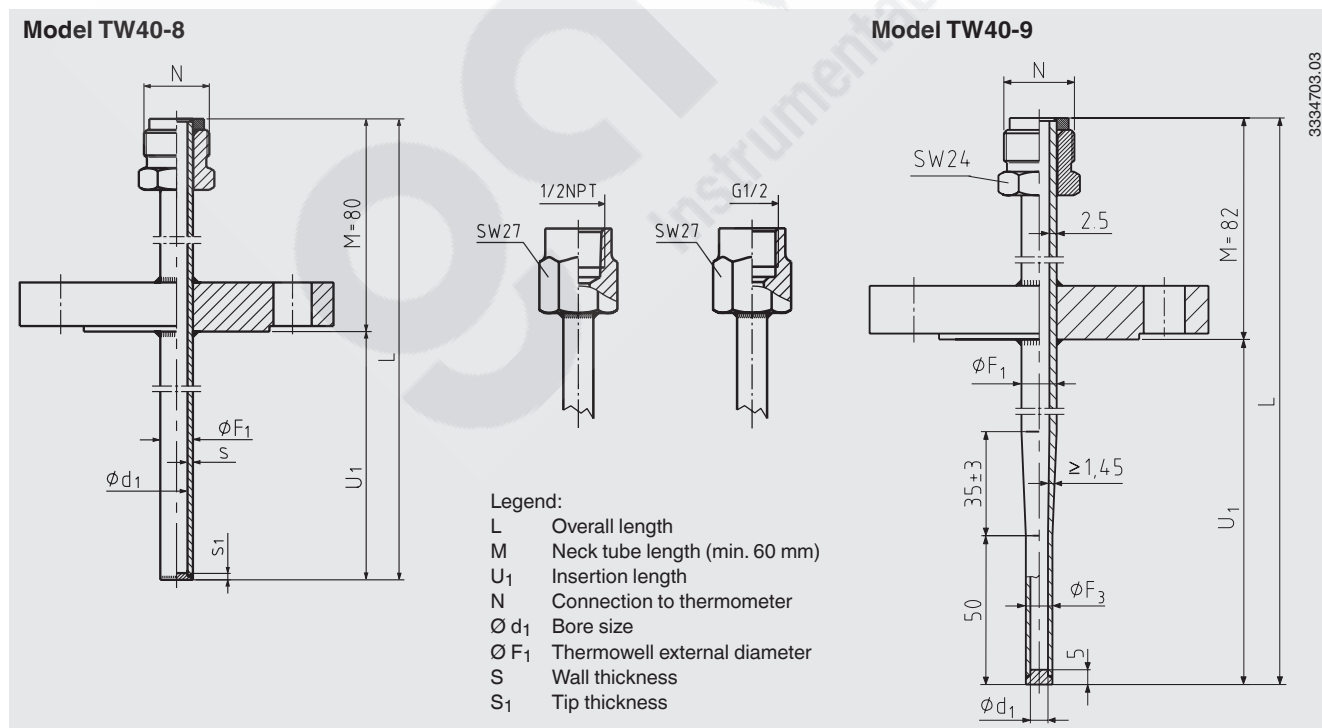
■ Other dimensions and materials

■ Quality certificates

■ Thermowell calculation to Dittrich/Klotter is recommended in critical applications as a WIKA engineering service.

For further information, see Technical Information IN 00.15 "Strength calculation for thermowells".

Dimensions in mm



Dimensions in mm					Weight in kg
Ø d ₁	Ø F ₁	S	S ₁	N	Flange DN 25 PN 16 ... 40 U ₁ = 225 mm
7	9	1	3	M24 x 1.5, G ½, ½ NPT	1.39
7	11	2	3	M24 x 1.5, G ½, ½ NPT	1.55
7	12	2.5	3.5	M24 x 1.5, G ½, ½ NPT	1.64
9	14	2.5	3.5	M24 x 1.5, G ½, ½ NPT	1.71
6.1	12	2.5	5	M24 x 1.5, G ½, ½ NPT	1.64
11	15	2	3	M24 x 1.5, G ½, ½ NPT	1.41

Additional weight with other flanges		
DN 40	PN 16 ... 40	+0.76 kg
DN 50	PN 16 ... 40	+1.63 kg
1"	150 lbs	-0.46 kg
1"	300 lbs	+0.04 kg
1"	600 lbs	+0.22 kg
1 ½"	150 lbs	+0.22 kg
1 ½"	300 lbs	+1.34 kg
1 ½"	600 lbs	+1.85 kg

Suitable stem lengths of mechanical dial thermometers

Connection type	Stem length l ₁
S, 3, 4, 5	l ₁ = L - 10 mm or l ₁ = U ₁ + M - 10 mm
2	l ₁ = L - 30 mm or l ₁ = U ₁ + M - 30 mm

Sealing face roughness

Flange standard		AARH in µinch	Ra in µm	Rz in µm
ASME B16.5	Stock finish	125 ... 250	3.2 ... 6.3	-
	Smooth finish	< 125	< 3.2	-
	RTJ	< 63	< 1.6	-
	Tongue / Groove	< 125	< 3.2	-
EN 1092-1	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

Ordering information

Model / Thermowell form / Thermowell material / Dimension of thermowell stem / Connection to the thermometer / Bore Ø d₁ / Nominal width DN / Pressure rating PN / Sealing face / Insertion length U₁ / Overall length L / Coating / Assembly with thermometer / Certificates / Options

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