

Fabricated, with Flange

Model TW40-D Tantalum Cover

Model TW40-E Wetted Parts made of Special Material

WIKA Data Sheet TW 95.41

Applications

- Petrochemical, On/Offshore, plant engineering
- For high chemical loads
- For low and medium process loads

Special Features

- Good price-performance ratio
- Wetted parts made of special material
- Non wetted parts (flange, connection parts) made of stainless steel
- Model TW40-E: All parts of the thermowell welded to one unit ²⁾
- Model TW40-D: Tantalum cover removeable

Description

Material of wetted parts

Hastelloy C4 (2.4610), Hastelloy C276 (2.4819),
Monel 400 (2.4360), Titan Grade 2 (3.7035) ²⁾, Tantalum

Washer disc of flange

acc. to EN 1092-1 with flange facing form B1,
acc. to DIN 2527 with flange facing form C nach DIN 2526,
acc. to ASME B16.5 with flange facing form RF
(with tantalum smooth flange facing)

Nominal diameter

acc. to EN/DIN: DN 25, DN 40, DN 50
acc. to ASME: 1", 1½", 2"

Pressure rating

acc. to EN/DIN: PN 16-40
acc. to ASME: 150 lbs, 300 lbs, 600 lbs

Instrument connection

M24 x 1.5 running nut or G ½, ½ NPT female

Tube / Bore size

Ø 13.7 x 2.2 mm / Ø 9.3 mm

Tantalum cover / Bore size

12 x 0.4 mm sheet thickness for bore 7 mm
16 x 0.4 mm sheet thickness for bore 9 mm
13 x 0.4 mm sheet thickness for bore 6.1 mm



Fig. left: Flanged Thermowell Model TW40-D
Fig. right: Flanged Thermowell Model TW40-E

Insertion length U_1

To customer specification

Total length L

Insertion length U_1 + 80 mm

Maximum process temperature ¹⁾

Dependent upon material

Maximum process pressure

Dependent upon pressure rating of flange

1) Rating depends on the parameters below:

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

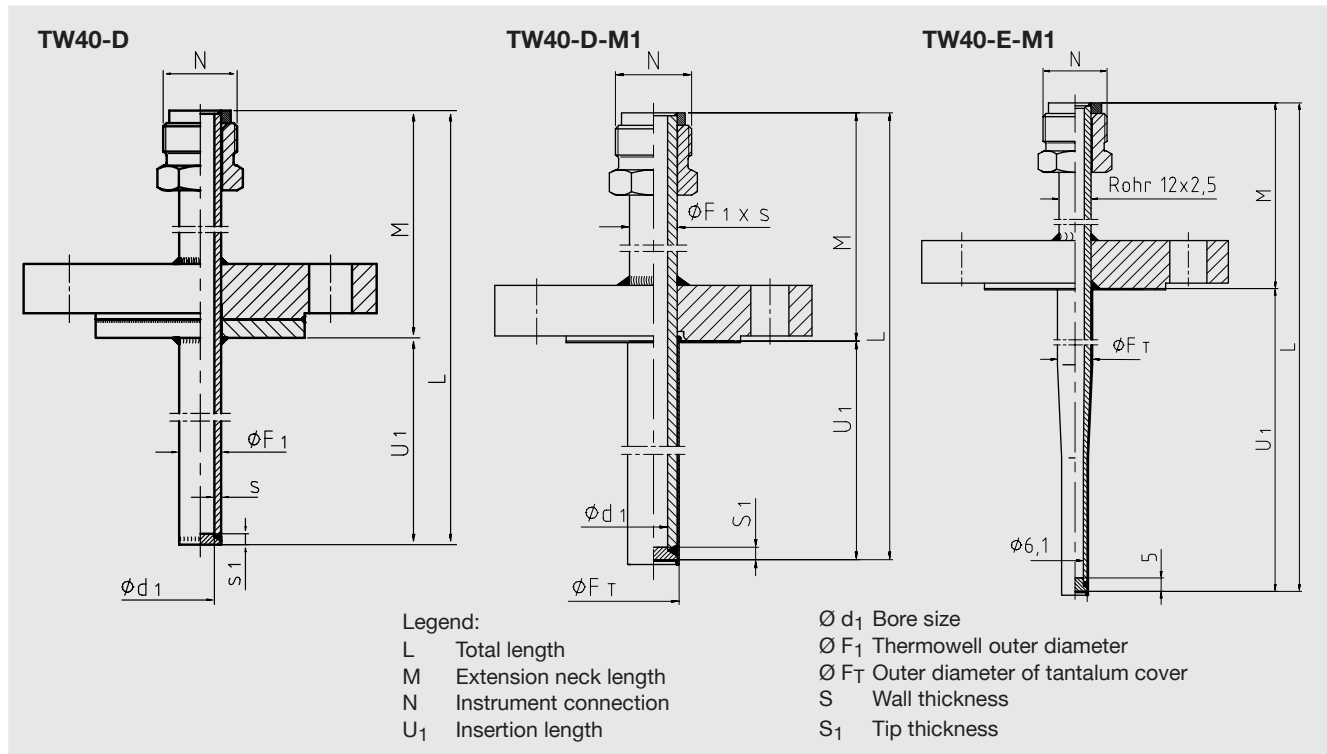
2) For Titan Grade 2 (3.7035) material, the flange with connection components is designed to be a loose pressure flange.

Optional extras

- 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"

Dimensions in mm



| Dimensions in mm | | | | Weight in kg | |
|------------------|------------------|-----|----|------------------------|------------------------|
| N | Ø F ₁ | S | M | Flansch DN 25 PN 16-40 | |
| | | | | U ₁ =100 mm | U ₁ =500 mm |
| M24 x 1.5 | 13.7 | 2.2 | 80 | 1.50 | 1.90 |
| G ½ | 13.7 | 2.2 | - | 1.50 | 1.90 |
| ½ NPT | 13.7 | 2.2 | - | 1.50 | 1.90 |

| Dimensions in mm | | | | | |
|------------------|------------------|------------------|----------------------|----------------|----|
| N | Ø F _T | Ø d ₁ | Ø F ₁ x S | S ₁ | M |
| M24 x 1.5 | 12 x 0.4 | 7 | 11 x 2 | 2.5 | 80 |
| M24 x 1.5 | 16 x 0.4 | 9 | 16 x 3 | 3.5 | 80 |
| M24 x 1.5 | 13 x 0.4 | 6.1 | 12 x 2.5 | 5 | 82 |

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

Suitable stem lengths for mechanical thermometers

| Connection design | 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 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 | - |
| 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.



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