

Flange mounting component (solid-machined) According to 2014/68/EU PED Model TW55-V

WIKA data sheet SP 95.55

Applications

- Assemblies with pressure accessories for pipelines and vessels, used as components for temperature measuring locations
- Chemical industry, process technology, apparatus construction
- For high process loads

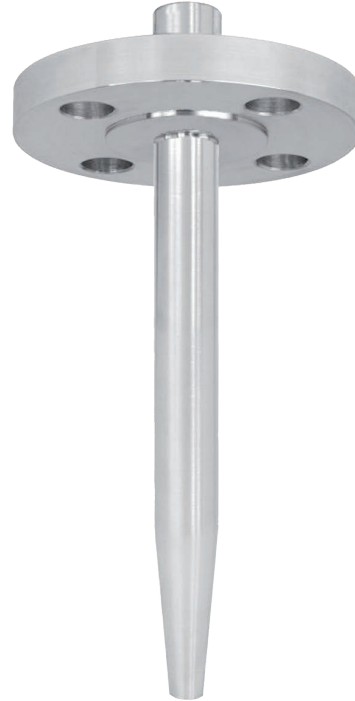
Special features

- Risk analysis in accordance with pressure equipment directive (PED)
- External hydrostatic testing in accordance with the requirements of the pressure equipment directive
- Dye penetrant testing of all weld seams
- Static and dynamic investigation of the component

Description

Each flange mounting component is an important part of any temperature measuring 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 different designs of the flange welded assembly or materials. The type of process connection and the basic method of manufacture are important design differentiation criteria.



Flange mounting component, model TW55-V

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

The TW55-V series of solid-machined flange mounting components with flange connection are suitable for use with numerous electrical and mechanical thermometers from WIKA.

Due to the design proven over many years, this component for high process loads is suitable for use in the chemical industry, process technology and equipment manufacturing.

Standard version

Material

Stainless steel 1.4571, 1.4401, 1.4404

Steel 1.0460, 1.5415, 1.7335, 1.7380

Process connection > DN 25 / 1"

Flanges to valid national or international standards like e.g.

EN 1092-1, DIN 2527, ASME

Connection to thermometer

M14 x 1.5, M18 x 1.5, G ½, G ¾ female

Bore size

Ø 3.5 mm, Ø 7 mm, Ø 9 mm, Ø 11 mm

Insertion length U_1 , cone length U and overall length L

Version combinations see table on page 4

Coating

■ PFA

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

■ ECTFE (Halar®)

Coat thickness min. 0.6 mm

Calculation of the flange mounting component

The strength of the weld seam and static and also dynamic loading

Required process data are:

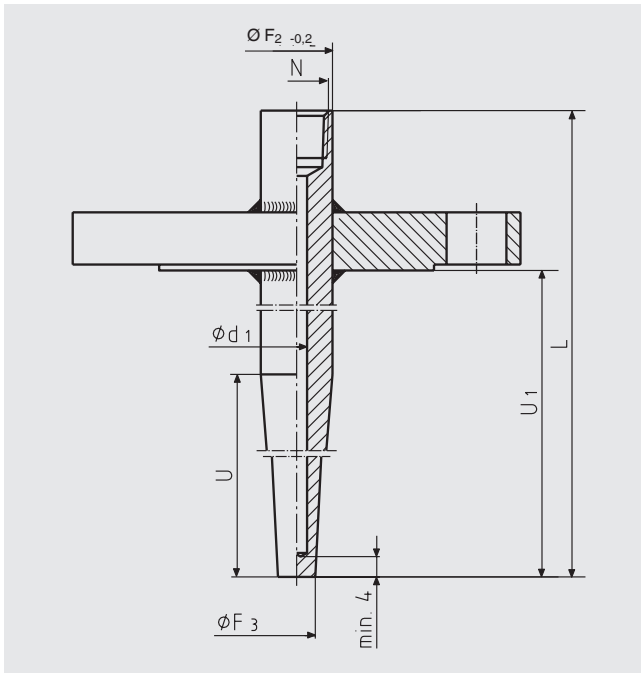
- Temperature
- Pressure
- Density
- Flow rate

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

Options

- Other dimensions and materials
- Certificates

Dimensions in mm



Legend:

- L Overall length
- U_1 Insertion length
- U Cone length
- N Connection to thermometer
- $\text{Ø } d_1$ Bore size
- $\text{Ø } F_2$ Outer diameter of flange mounting component (head diameter)
- $\text{Ø } F_3$ Tip diameter
- M Neck tube length

Standard lengths

Dimensions in mm			Weight in kg	
L	U	U_1	DN 25, PN 40	DN 50, PN 40
200	65	130	1.9	3.8
260	125	190	2.1	4.0
410 ¹⁾	275	340	2.3	4.2

Standard connection thread

Dimensions in mm					
N	$\text{Ø } d_1$	$\text{Ø } F_2$	$\text{Ø } F_3$	H_1	H_2
M14 x 1.5	3.5	18	9	16	13
M18 x 1.5	7	24	12.5	16	13
G 1/2	7	26	12.5	19	15
G 1/2	9	26	15	19	15
G 3/4	11	32	17	22	17

Suitable stem lengths

■ Dial thermometers

Connection design	Stem length l_1	
	without neck tube	with neck tube
S, 4, 5	$l_1 = L - 10 \text{ mm}$	-
2	$l_1 = L - 30 \text{ mm}$	-
3	-	$l_1 = L + M - 10 \text{ mm}^{2)}$

■ Machine glass thermometer

Connection design	Stem length l_1	
	without neck tube	with neck tube
E	$l_1 = L - 10 \text{ mm}$	-
3	-	$l_1 = L + M - 10 \text{ mm}^{2)}$

Version combinations insertion length U_1 , cone length U and overall length L in mm

Flange mounting component	Insertion length	Cone length	Overall length
Model	U_1	U	L
TW55-V (form 4F with flange)	130, 190, 340	65, 125, 275	200, 260, 410

1) Not with bore size $\text{Ø } d_1 = 3.5 \text{ mm}$

2) Standard of the neck tube length $M = 165 \text{ mm}$

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

Approvals

Logo	Description	Country
	EU declaration of conformity Pressure equipment directive 2014/68/EU	European Union

Approvals and certificates, see website

Ordering information

Model / Flange mounting component form / Material / Head diameter $\varnothing F_2$ / Connection to the thermometer / Bore size $\varnothing d_1$ / Nominal width DN / Pressure rating PN / Sealing face / Tip diameter $\varnothing F_3$ / Insertion length U_1 / Cone length U / Overall length L / Coating / Assembly with thermometer / Certificates / Options

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