

# Solid Machined, with Flange

## Wetted Parts made of Exotic Material

### Model SI450F

WIKA Data Sheet TW 90.80

#### Applications

- Chemical engineering, process engineering, apparatus engineering
- For high chemical loads
- For high process loads

#### Special Features

- Good price-performance ratio
- Wetted parts made of exotic material
- Non wetted flange made of SS 316L
- All parts of the thermowell welded to one unit

#### Description

##### Material of wetted parts

Hastelloy C4 (2.4610), Hastelloy C276 (2.4819),  
Monel 400 (2.4360), Titan Grade 2 (3.7035) <sup>2)</sup>

##### Washer disc of flange

to ASME B16.5 with flange facing form RF or RTJ

##### Nominal diameter

to ASME: 1", 1½", 2"

##### Pressure rating

to ASME: 150 lbs, 300 lbs, 600 lbs, 900/1500 lbs

##### Instrument connection

½" NPT female

##### Bore size

Ø 6,6 mm / Ø 8,5 mm

##### Insertion length U<sub>1</sub>

Inch 4, 7, 10, 13, 16, 22  
Approx. mm 100, 180, 255, 330, 450, 560

##### Total length L

Insertion length U<sub>1</sub> + connection length T



Thermowell with flange Model SI450F

##### Maximum process temperature <sup>1)</sup>

depend on material for thermowell

##### Maximum process pressure (static) <sup>1)</sup>

depend on pressure rating of flange

1) Ratings depends on below parameters:

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

2) For material Titanium Grade 2 (3.7035) a removeable cover flange will be used

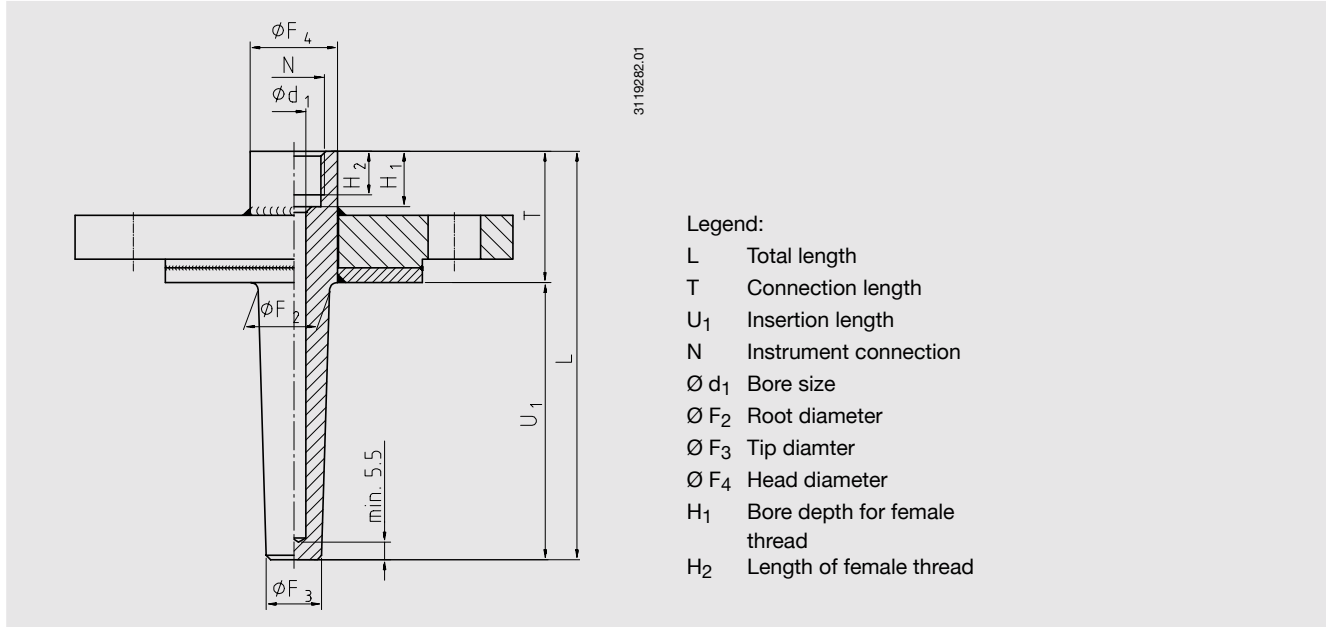
## Optional extras

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

Following process data are necessary for the calculation:

- Process pressure (in bar or psi)
- Process temperature (in °C or °F)
- Flow rate (in m/s)
- Density (in kg/m<sup>3</sup>)
- Dimensions and material of thermowell

## Dimensions in mm



Legend:

- L Total length
- T Connection length
- U<sub>1</sub> Insertion length
- N Instrument connection
- Ø d<sub>1</sub> Bore size
- Ø F<sub>2</sub> Root diameter
- Ø F<sub>3</sub> Tip diameter
- Ø F<sub>4</sub> Head diameter
- H<sub>1</sub> Bore depth for female thread
- H<sub>2</sub> Length of female thread

| DN  | PN<br>in lbs | Dimensions in mm |                  |                  |                  |                  |                | Weight in kg   |                    |                     |                     |
|-----|--------------|------------------|------------------|------------------|------------------|------------------|----------------|----------------|--------------------|---------------------|---------------------|
|     |              | T                | Ø F <sub>2</sub> | Ø F <sub>3</sub> | Ø d <sub>1</sub> | Ø F <sub>4</sub> | H <sub>1</sub> | H <sub>2</sub> | U <sub>1</sub> =4" | U <sub>1</sub> =13" | U <sub>1</sub> =22" |
| 1"  | 150          | 2¼" (ca. 57 mm)  | 22               | 16               |                  |                  |                |                | 1.6                | 2.1                 | 2.5                 |
|     | 300          |                  |                  |                  |                  |                  |                |                | 2.3                | 2.8                 | 3.2                 |
|     | 600          |                  |                  |                  |                  |                  |                |                | 2.5                | 3                   | 3.4                 |
|     | 1500         |                  |                  |                  |                  |                  |                |                | 4.7                | 5.2                 | 5.6                 |
| 1½" | 150          | 2¼" (ca. 57 mm)  | 25               | 19               | 6.6<br>or<br>8.5 | 30               | 19             | 15             | 2                  | 2.6                 | 3.2                 |
|     | 300          |                  |                  |                  |                  |                  |                |                | 3.5                | 4.1                 | 4.7                 |
|     | 600          |                  |                  |                  |                  |                  |                |                | 4.2                | 4.9                 | 5.5                 |
|     | 1500         |                  |                  |                  |                  |                  |                |                | 6.9                | 7.6                 | 8.2                 |
| 2"  | 150          | 2¼" (ca. 57 mm)  | 25               | 19               |                  |                  |                |                | 2.8                | 3.4                 | 4                   |
|     | 300          |                  |                  |                  |                  |                  |                |                | 4                  | 4.6                 | 5.2                 |
|     | 600          |                  |                  |                  |                  |                  |                |                | 4.5                | 5.2                 | 5.8                 |
|     | 1500         |                  |                  |                  |                  |                  |                |                | 11.7               | 12.3                | 13                  |

## Suitable stem lengths of mechanical thermometers

| Design of connection | Stem length l <sub>1</sub>  |
|----------------------|---|
| S / 4 / 5            | l <sub>1</sub> = L - 10 mm or l <sub>1</sub> = U <sub>1</sub> + T - 10 mm |
| 2                    | l <sub>1</sub> = L - 30 mm or l <sub>1</sub> = U <sub>1</sub> + T - 30 mm |

## Ordering information

Model / Material / Flange / Instrument connection / Bore size / Insertion length U<sub>1</sub> / Optional extras required

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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