# Thermowell DIN 43 772 Form 4F

## For flanging
## for stem with male thread

**Model SF4F**

### Application

Thermowells are being applied to protect thermometer stems against process-related chemical and / or mechanical loads. Furthermore a thermowell, which remains at the measuring point, enables the unproblematic dismounting of the thermometer for maintenance or repair.

### Standard Versions

For thermometer stems with male thread, turnable or rigid, our models A4, B4, A4.1 and B4.1

**Construction Type**
Thermowell (identical with thermowell model SF4, that means solid drilled with cone), with welded process connection flange for high loads by the process (flows, pressures, temperatures and vibrations).

**Process Connection**
Connection flange according to DIN EN 1092-1.
sealing face Form B1,
nominal size DN / nominal pressure PN

| | |
|---|---|
| DN 25 | PN 10-40 |
| DN 50 | PN 10-16 |
| DN 50 | PN 25-40 |

**Connection to Thermometer Stem N**
Female thread M18 x 1.5, G ½ or G ¾
Details see reverse side.

**Internal Diameter d1**

| | | |
|---|---|---|
| Ø 7 mm | suitable for stem-Ø | dF 6 mm |
| Ø 9 mm | suitable for stem-Ø | dF 8 mm |
| Ø 11 mm | suitable for stem-Ø | dF 10 mm |
| Ø 13 mm | suitable for stem-Ø | dF 12 mm |

Available combinations for the connection to thermometer stem N and internal diameter d1, see reverse side.

**Total Length L (normed length)**
200, 260, 410 mm
Details and installation length U1, see reverse side.

**Material**
1.4571 (316 stainless steel)

**Process Temperature / Process Pressure**

| | |
|---|---|
| Maximum allowed procces temperature: | 500 °C |
| Maximal allowed process pressure: | corresponding to PN of the flange |

Concrete process conditions (medium, flow rate, pressure, temperature) and the thermowell version (dimensions, material) could cause a reduction of the above mentioned maximum allowed values, see **load diagrams 43 772**.
We can make a **thermowell calculation** for your concrete field of application (see special version and options) upon request.

### Special Versions and Options among others

- Connection thread to thermometer stem N M 20 x 1.5 (instead of G½), others upon request
- Suitable connection screw fitting, see data sheet 8.8201
- Suitable neck tube, see data sheet 8.8301
- Other thermowell-Ø upon request
- Other thermowell- / installation lengths L / U1 and cone length U upon request
- Flanges according to other norms or other nominal sizes upon request
- Other materials upon request
- Thermowell free of grease and oil
- Coating adjusted to medium and medium temperature upon request
- Test report 2.1
- Inspection certificate 2.2
- Test certificate 3.1 for the material
- Test certificate 3.1 for the pressure test upon request

### Ordering Information

| | |
|---|---|
| Model | **SF4F** |
| Process connection flange | **DN 25, PN 10-40**<br>**DN 50, PN 10-16** or<br>**DN 50, PN 25-40** |
| Nom. size / nom. pressure | **DN / PN** |
| Connection to thermometer stem N | **M 18 x 1,5; G½** or **G¾** |
| Internal-Ø d1 | **7, 9, 11** or **13 mm** |
| Total length | **L** |
| Installation length | **U1** |
| Material | **1.4571** |

**Example: SF4F, DN 50, PN 10-40, N=G¾, d1=11, L=200, U1=130, 1.4571**


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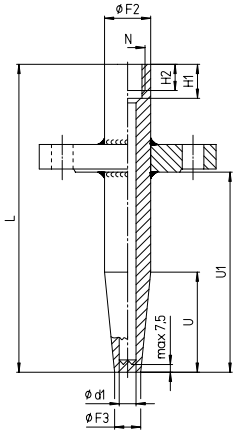
# Dimensions, Lengths, corresponding Thermometer Stems

## Dimensional Data (mm)

### SF4F

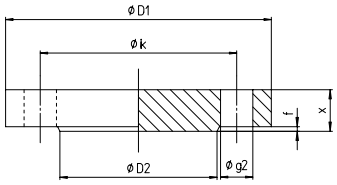
**Thermowell Diameter and Connection Dimensions**

| F2 | N | d1 | F3 | H1 | H2 |
|---|---|---|---|---|---|
| 24 h 7 | M 18 x 1.5 | 7 | 12.5 | 16 | 13 |
| 26 h 7 | G½ (M20x1.5) | 9 | 15 | 19 | 15 |
| | | 11 | 17 | | |
| 32 h11 | G¾ | 13 | 19 | 22 | 17 |




**Flange Dimensions DIN EN 1092-1: 2001**

| DN | PN | D1 | D2 | g2 | k | x | f |
|---|---|---|---|---|---|---|---|
| mm | bar | mm | mm | mm | mm | mm | mm |
| 25 | 10-40 | 115 | 68 | 4x Ø 14 | 85 | 18 | 2 |
| 50 | 10-16 | 165 | 102 | 4x Ø 18 | 125 | 18 | 2 |
| 50 | 25-40 | 165 | 102 | 4x Ø 18 | 125 | 20 | 2 |




## Thermowell Total Length, Installation Length and Thermometer Stem Length

### Normed thermowell lengths, suitable stem length L

| Normed thermowell length | | | Suitable stem length | | | |
|---|---|---|---|---|---|---|
| Total length | Install. length | Cone length | Model A4 / B4 | | | Model A 4.1 / B 4.1 |
| L+2 | U1+2 | U+2 | M 18 x 1.5 | G ½ B | G ¾ B | G ¾ B, G ½ B, M 18x1.5 |
| 200 | 130 | 65 | 176 | 173 | 170 | 192 |
| | 190 | 125 | | | | |
| 260 | | | 236 | 233 | 230 | 252 |
| 410 | 340 | 275 | 386 | 383 | 380 | 402 |

### Not normed thermowell lengths

**Calculation**

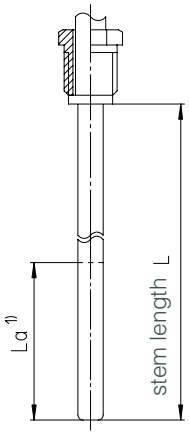
- Thermowell length when existent stem
  stem model A4/B4
  thermowell length L = L (stem)+H1+8 mm
  stem model A4.1/B4.1
  thermowell length L = L (stem)+8 mm

- Stem length when existent thermowell
  stem model A4/B4
  stem length L = L (thermowell)-H1-8 mm
  stem model A4.1/B4.1
  stem length L = L (thermowell)-8 mm

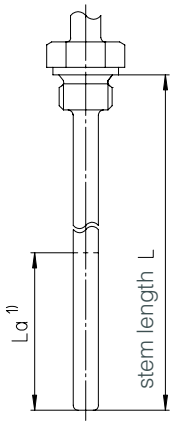
## Thermometer Stem

### Corresponding thermometer stem

Models A4 / B4
male thread, turnable
Form 4 DIN EN 13 190

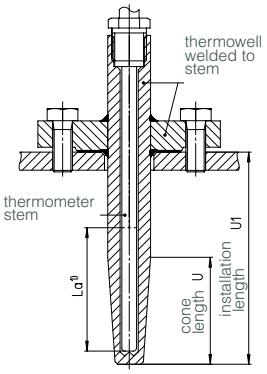



Models A4.1 / B4.1
male thread, rigid
Form 6 DIN EN 13 190

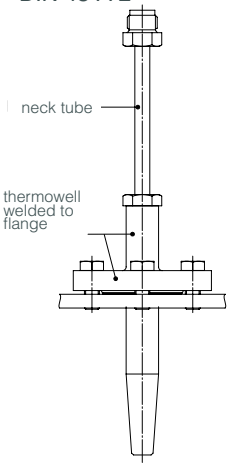



### Installation examples

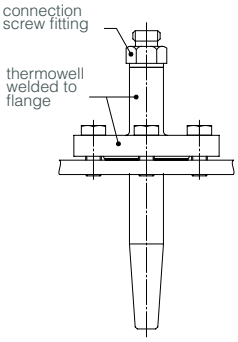
The installation length U1 of the thermowell has to be selected that the active length La is surrounded by the medium.




Combination with neck tube HR for stem A3 / B3 neck tube dimensions according to DIN 43 772




Combination with connection screw fitting AV1




[1)]La = active length
The active stem length La can be found on the thermometer data sheets.

Technical changes, replacement of materials and errors excepted