

# Thermowell Form 4.1

SF4.1

**Solid drilled for welding**  
**For stems with union nut**

## Application

Amongst others, thermowells are used to protect the thermometer stem from process-related chemical and/or mechanical loads. In addition, a thermowell remaining at the measuring point allows for easy dismantling of the thermometer for maintenance or repair.

## Standard Versions

For thermometer stems with union nut, our models A3 and B3

## Construction Type

Solid drilled, i.e. made completely out of one piece, with cone, for high process-related loads (flows, pressures, temperatures and vibrations)

## Process Connection

For welding  
Details see page 2

## Connection to Thermometer Stem N

Male thread G $\frac{1}{2}$ B or G $\frac{3}{4}$ B  
Details see page 2

## 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 the thermometer stem N and internal diameter d1, see page 2

## Total Length L (Standard)

110, 140, 170, 200, 260, 320 mm  
Details and installation length U see page 2

## Material

Stainless steel 316Ti (1.4571) or 1.7335 (13 CrMo 4-5)

## Process Temperature/Process Pressure

Maximum permissible process temperature: 500 °C  
Maximum permissible process pressure: 150 bar

The specific process conditions (medium, flow rate, pressure, temperature) and the thermowell version (dimension, material) might cause a reduction of the aforementioned maximum permissible values, see **load diagrams DIN 43 772**.

Upon request, we perform a **thermowell calculation** for your individual case (see Special Versions and Options).



## Special Versions and Options

- Connection thread to thermometer stem N M20x1.5 (instead of G $\frac{1}{2}$ B), others upon request
- Other thermowell Ø upon request
- Other thermowell lengths/installation lengths L/U upon request
- Other materials upon request
- Thermowell free of grease and oil
- Coating fitted to medium and medium temperature upon request
- Certificate of compliance with the order 2.1
- Test report 2.2
- Inspection certificate 3.1 for the material
- Inspection certificate 3.1 for the pressure test upon request
- Thermowell calculation for the specific case of application with certificate

## Ordering Information

Please specify in your order:

|   |  |
|---|--|
| <b>Model</b>                            | SF4.1                                  |
| <b>Connection to thermometer stem N</b> | G $\frac{1}{2}$ B or G $\frac{3}{4}$ B |
| <b>Internal diameter d1</b>             | 7, 9, 11 or 13 mm                      |
| <b>Total length L</b>                   | e.g. 170                               |
| <b>Installation length U</b>            | e.g. 133                               |
| <b>Material</b>                         | 1.4571 or 1.7335                       |

**Example:** SF4.1, N=G $\frac{3}{4}$ B, d1=11, L=170, U=133, 1.4571

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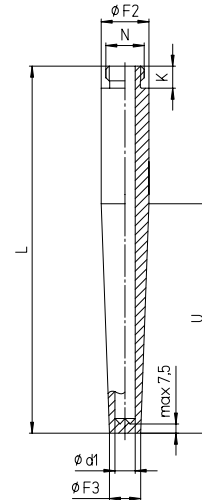
# Dimensional Data, Length Specifications, Corresponding Thermometer Stems

## Dimensional Data (mm)

SF4.1

### Thermowell Diameter and Fitting Dimensions

| F2      | N                    | d1 | F3   | K  |
|---------|----------------------|----|------|----|
| 26 h 7  | G 1/2 B<br>(M20x1.5) | 7  | 12.5 | 12 |
|         |                      | 9  | 15   |    |
|         |                      | 11 | 17   |    |
| 32 h 11 | G 3/4 B              | 11 | 17   | 14 |
|         |                      | 13 | 19   |    |



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

Standard thermowell lengths, suitable stem lengths L

| Thermowell Length (Standard) |                     | Suitable Stem Length |
|------------------------------|---------------------|----------------------|
| Total length                 | Installation length | Model A3/B3          |
| $L^{+2}$                     | $U^{+2}$            |                      |
| 110                          | 65                  | 102                  |
|                              | 73                  |                      |
| 140                          | 65                  | 132                  |
| 170                          | 133                 | 162                  |
| 200                          | 65                  | 192                  |
|                              | 125                 |                      |
| 260                          | 125                 | 252                  |
| 320                          | 245                 | 312                  |

Other thermowell length

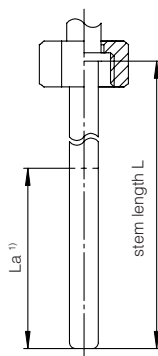
### Calculation

- Thermowell length if stem is existent  
stem model A3/B3  
thermowell length  $L = L(\text{stem}) + 8 \text{ mm}$
- Stem length if thermowell is existent  
stem model A3/B3  
stem length  $L = L(\text{thermowell}) - 8 \text{ mm}$

## Thermometer Stem

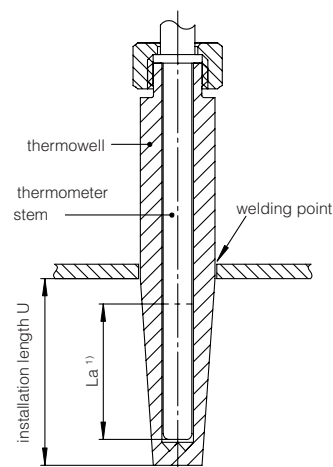
### Corresponding thermometer stems

models A3/B3  
union nut  
form 5 DIN EN 13 190



### Installation example

the installation length U of the thermowell has to be selected so that the active stem length La is surrounded by the medium



<sup>1)</sup> La = active stem length. The active stem length La can be found in the thermometer data sheets.