

# Thermowells DIN 43 772 Forms 6 and 7

Solid drilled for screwing-in  
For stems with male thread

SF6

SF7

## 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 male thread, turnable or rigid, our models A4, B4, A4.1 and B4.1

## Construction Type

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

## Process Connection E

Male thread

SF6: G $\frac{1}{2}$ B or G $\frac{3}{4}$ B

SF7:  $\frac{1}{2}$ " NPT or  $\frac{3}{4}$ " NPT

Details see page 2

## Connection to Thermometer Stem N

Female thread G $\frac{1}{2}$  or G $\frac{3}{4}$

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

Ø 14 mm suitable for stem Ø dF 13 mm

Available combinations for the connections E+N and internal diameter d1, see page 2

## Total Length L (Standardised Length)

110, 170, 260, 410 mm

Details and installation length U1 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).



SF6

SF7

## Special Versions and Options

- Other combinations:  
process connection E / connection to thermometer stem N:  
M20x1.5 / M20x1.5  
M27x2 / M20x1.5  
M27x2 / M27x2  
others, also for SF7, 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 lengths/installation lengths L/U1 upon request
- Other materials upon request
- Thermowell free of grease and oil
- 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
- Thermowell calculation for the specific case of application with certificate

## Ordering Information

Please specify in your order:

<b>Model</b>	SF6 or SF7
<b>Process connection E</b>	SF6: G $\frac{1}{2}$ B or G $\frac{3}{4}$ B SF7: $\frac{1}{2}$ " NPT or $\frac{3}{4}$ " NPT
<b>Connection to thermometer stem N</b>	G $\frac{1}{2}$ or G $\frac{3}{4}$
<b>Internal diameter d1</b>	7, 9, 11, 13 or 14 mm
<b>Total length L</b>	e.g. 170
<b>Installation length U1</b>	e.g. 142
<b>Material</b>	1.4571 or 1.7335

**Example:** SF6, E=G $\frac{1}{2}$ B, N=G $\frac{1}{2}$ , d1=11, L=170, U1=142, 1.4571

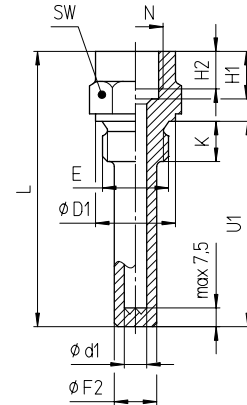
# Dimensional Data, Length Specifications, Corresponding Thermometer Stems

## Dimensional Data (mm)

### SF6

#### Thermowell Diameter and Fitting Dimensions

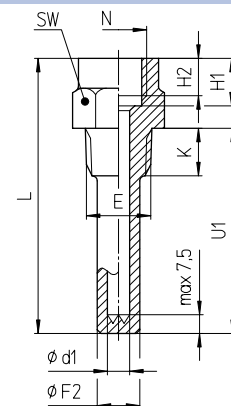
E	N	d1	F2	D1	H1	H2	K	SW			
G ½ B (M20x1.5)	G ½ (M20x1.5)	7	17	26 (25)	19	15	14	27			
		9									
		11									
G ¾ B (M27x2)	G ½ (M20x1.5)	7	17	32	19	15	16	32			
		9									
		11									
		13									
		14									
	G ¾ (M27x2)	7	17		22	22			17	16	32
		9									
		11									
		13									
14											



### SF7

#### Thermowell Diameter and Fitting Dimensions

E	N	d1	F2	H1	H2	K	SW
½" NPT <sup>1)</sup>	G ½	7	17	19	15	19	27
		9					
		11					
¾" NPT <sup>1)</sup>	G ½	7	17	19	15	19	27
		9					
		11					
		13					
		14					



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

### Standardised thermowell lengths, suitable stem lengths L

Standardised Thermowell Length		Suitable Stem Length		
Total length	Installation length	Model A4/B4		Model A4.1/B4.1
L <sup>+2,2)</sup>	U1 <sup>+2)</sup>	N = G ½ B	N = G ¾ B	
110	82	83	80	102
170	142	143	140	162
260	232	233	230	252
410	382	383	380	402

### Non-standardised thermowell length

#### Calculation

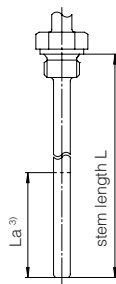
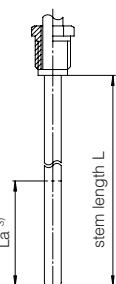
- Thermowell length if stem is existent  
stem model A4/B4  
thermowell length  $L = L(\text{stem}) + H1 + 8 \text{ mm}$   
stem model A4.1/B4.1  
thermowell length  $L = L(\text{stem}) + 8 \text{ mm}$
- Stem length if thermowell is existent  
stem model A4/B4  
stem length  $L = L(\text{thermowell}) - H1 - 8 \text{ mm}$   
stem model A4.1/B4.1  
stem length  $L = L(\text{thermowell}) - 8 \text{ mm}$

## Thermometer Stem

### Corresponding thermometer stems

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

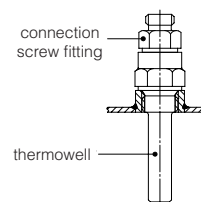
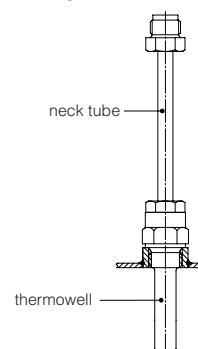
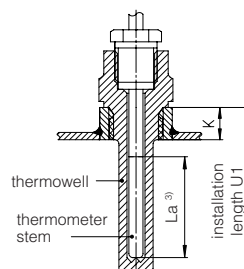


### Installation examples

the installation length U1 of the thermowell has to be selected so that the active stem length La is surrounded by the medium  
 $U1 \geq La + K + 8 \text{ mm}$

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

combination with connection screw fitting AV1



<sup>1)</sup> standard designation ½ - 14 NPT or ¾ - 14 NPT

<sup>2)</sup>  $L = U1 + 28 \text{ mm}$

<sup>3)</sup> La = active stem length. The active stem length La can be found in the thermometer data sheets.