

Thermowell DIN 43 772 Form 9

SF9

Solid drilled for screwing-in
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, for high process-related loads (flows, pressures, temperatures and vibrations)

Process Connection E

Male thread
G ½B or G ¾B
½" NPT or ¾" NPT
Details see page 2

Connection to Thermometer Stem N

Male thread G ½B or G ¾B
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 connections E+N and internal diameter d1, see page 2

Total Length L (Standardised Length)

101, 138, 198, 288, 438 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).



Special Versions and Options

- Other combinations:
process connection E / connection to thermometer stem N:
M20x1.5 / M20x1.5
M27x2 / M20x1.5
M27x2 / M27x2
others upon request
- 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:

Model	SF9
Process connection E	G ½B or G ¾B ½" NPT or ¾" NPT
Connection to thermometer stem N	G ½B or G ¾B
Internal diameter d1	7, 9, 11 or 13 mm
Total length L	e.g. 138
Installation length U1	e.g. 110
Material	1.4571 or 1.7335

Example: SF9, E=G ½B, N=G ½B, d1=11, L=138, U1=110, 1.4571

www.armano-messtechnik.com

ARMANO

ARMANO Messtechnik GmbH

Location Beierfeld
Am Gewerbepark 9 • 08344 Grünhain-Beierfeld
Tel.: +49 3774 58 – 0 • Fax: +49 3774 58 – 545
mail@armano-beierfeld.com

Location Wesel
Manometerstraße 5 • 46487 Wesel-Ginderich
Tel.: +49 2803 9130 – 0 • Fax: +49 2803 1035
mail@armano-wesel.com

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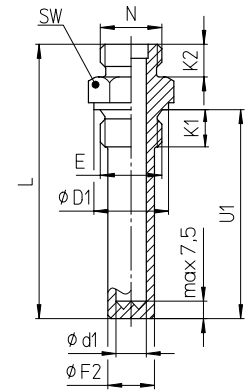
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Dimensional Data, Length Specifications, Corresponding Thermometer Stems

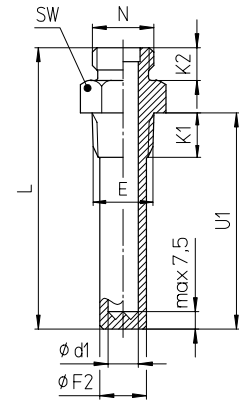
Dimensional Data (mm)							
SF9							
Thermowell Diameter and Fitting Dimensions							
E	N	d1	F2	D1	K1	K2	SW
G 1/2 B (M20x1.5)	G 1/2 B (M20x1.5)	7	17	26 (25)	14	12	27
		9					
		11					
G 3/4 B (M27x2)	G 1/2 B (M20x1.5)	7	17	32	16	12	32
		9					
		11					
	G 3/4 B (M27x2)	7	17			14	
		9					
		11					
1/2" NPT ¹⁾	G 1/2 B	7	17	-	19	12	27
		9					
		11					
3/4" NPT ¹⁾	G 1/2 B	7	17	-	19	12	27
		9					
		11					
		13					

Process Connection

Cylindrical thread



Conical thread



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 A3/B3
L ^{+1 2)}	U1 ⁺²⁾	
101	73	93
138	110	130
198	170	190
288	260	280
438	410	430

Non-standardised thermowell length

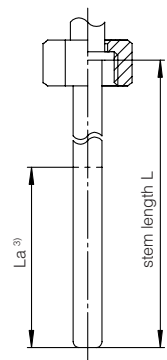
Calculation

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

Thermometer Stem

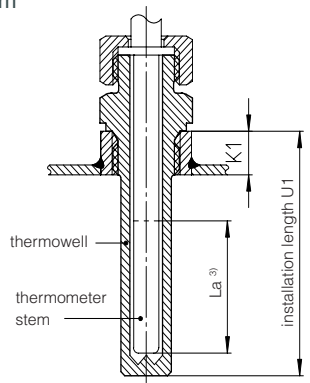
Corresponding thermometer stems

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



Installation example

the installation length U1 of the thermowell has to be selected so that the active stem length La is surrounded by the medium $U1 \geq La + K1 + 8\text{mm}$



¹⁾ standard designation 1/2 - 14 NPT or 3/4 - 14 NPT
²⁾ L = U1 + 28 mm
³⁾ La = active stem length. The active stem length La can be found in the thermometer data sheets.