

Thermowell DIN 43 772 Form 9

Solid drilled
for stem with union nut

Typ
SF9

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 union nut, our models A3 and B3

Construction Type

Solid drilled, that means completely manufactured of one for high loads by the process (flows, pressures, temperatures and vibrations).

Process Connection E

Male thread
G ½ B or G ¾ B;
½" NPT or ¾" NPT
Details see reverse side

Connection to Thermometer Stem N

Male thread G ½ B or G ¾ B
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 of the connections E + N and internal diameter d1, see reverse side

Total length L (normed Length)

101, 138, 198, 288, 438 mm
Details and installation length U1 see reverse side.

Material

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

Process Temperature / Process Pressure

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

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 DIN 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

- Other combinations:
Process connection E / connection to thermometer stem N:
M 20 x 1.5 M 20 x 1.5
M 27 x 2 M 20 x 1.5
M 27 x 2 M 27 x 2
others upon request
- Other thermowell-Ø upon request
- Other thermowell- / installation lengths L / U1 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
(copy of the material quality certificate of the basic material with re-stamping certificate)
- Test certificate 3.1 for the pressure test
(max. installation length U1=300 mm, pressure test with extrinsic water, max. 250 bar, 3 minutes)
- Thermowell calculation for the concrete case of application with certificate

Ordering Information

Model	SF9
Process connection E	G ½ B or G ¾ B; ½" NPT or ¾" NPT
Connection to thermometer stem N	G ½ B or G ¾ B
Internal-Ø d1	7, 9, 11 or 13 mm
Total length	L
Installation length	U1
Material	1.4571 or 1.7335

Example: SF9, E=G½B, N=G½B, d1=11, L=138, U1=110, 1.4571



Sales and Export South, West, North

ARMATURENBAU GmbH

Manometerstraße 5 • D-46487 Wesel - Ginderich
Tel.: +49 (0)28 03/91 30-0 • Fax: +49 (0)28 03/10 35
armaturenbau.com • mail@armaturenbau.com

Subsidiary Company, Sales and Export East

MANOTHERM Beierfeld GmbH

Am Gewerbepark 9 • D-08344 Grünhain-Beierfeld
Tel.: +49 (0)37 74/58-0 • Fax: +49 (0)37 74/58-545
manotherm.com • mail@manotherm.com

8.8131

02/11

Dimensions, Lengths, corresponding Thermometer Stems

Dimensional Data (mm)

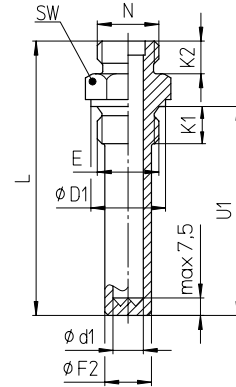
SF9

Thermowell Diameter and Connection Dimensions

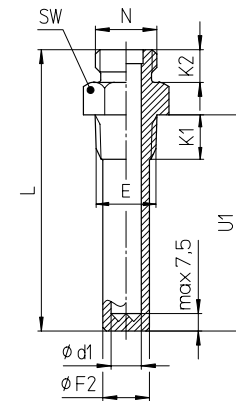
E	N	d1	F2	D1	K1	K2	SW
G ½ B (M20x1.5)		7	17	26 (25)	14	12	27
		9					
		11					
G ¾ B (M27x2)	G ½ B (M20x1.5)	7	17	32	16	14	32
		9					
		11					
	G ¾ B (M27x2)	7	17				
		9					
		11					
½" NPT ¹⁾		7	17	-	19	12	27
		9					
		11					
¾" NPT ¹⁾	G ½ B	7	17	-	19	12	27
		9					
		11					
		13	20				

¹⁾ Norm designation ½ - 14 NPT, resp. ¾ - 14 NPT

Process connection: cylindrical thread



Process connection: conical thread



Thermowell Total Length, Installation Length and Thermometer Stem Length

Normed thermowell length, suitable stem length L

Normed thermowell length		Suitable stem length Model A3 / B3
Total length $L^{+1)}$	Install. length $U1^{+2)}$	
101	73	93
138	110	130
198	170	190
288	260	280
438	410	430

¹⁾ $L = U1 + 28$ mm

Not normed thermowell lengths

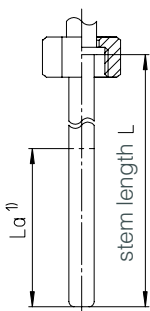
Calculation

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

Thermometer stem

Corresponding thermometer stem

Models A3 / B3
union nut,
Form 5 DIN 13 190

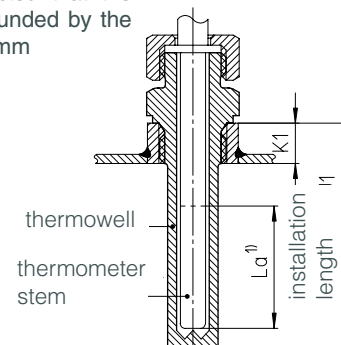


¹⁾ L_a = active stem length

The active stem length L_a can be found on the thermometer data sheets.

Installation example

The installation length $U1$ of the thermowell has to be selected that the active length L_a is surrounded by the medium. $U1 \geq L_a + K1 + 8$ mm



Technical changes, replacement of materials and errors excepted.