

Thermowells

For food/bio/pharmaceutical industries
For stems with union nut



SL1/SL11/SL12
SL3/SL6

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

Fabricated, i.e. process connection welded to thermowell, for low to medium process-related loads (flows, pressures, temperatures and vibrations)

Process Connection

SL1	Clamp connection	ISO 2852, for tubes according to ISO 2037 and BS 4825
SL11	Clamp connection	DIN 32 676, series A, for tubes according to DIN 11 850
SL12	Tri-Clamp connection	Tri-Clamp, for tubes according to BS 4825 and O.D. tube, ASME BPE and ISO 1127
SL3	Conical coupling/ groove nut	DIN 11 851
SL6	Varivent® for Details see page 2	Varinline® case

Connection to Thermometer Stem N

Male thread G ½ B

Internal Diameter d1

Ø 11 mm suitable for stem Ø dF 10 mm
Ø 13 mm suitable for stem Ø dF 12 mm (only gas-actuated thermometers)

Installation Length U1

60 mm to 200 mm

Total Length L

Calculation see page 2

Material

Stainless steel 316L (1.4435)¹⁾
Wetted surface electropolished, Ra < 0.8 µm
Thermowell end and shapes polished

Process Temperature/Process Pressure

Maximum permissible process temperature: 400 °C
Maximum permissible process pressure: see page 2

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 installation lengths up to 400 mm
- Thermowells for stem diameters 6 and 8 mm upon request
- Other nominal widths upon request
- Other process connections upon request
- EHEDG hygiene certificate for SL6, 3-A certificates for SL1/SL11/SL12 and SL3
- Thermowell calculation for the specific case of application with certificate

Ordering Information

Please specify in your order:

Model	SL1, SL11, SL12, SL3 or SL6
Process connection/ nominal case size	DN or code letter
Connection to thermometer stem N	G ½ B
Internal diameter d1	11 or 13 mm
Installation length U1	e.g. 100
Material	1.4435

Example: SL6, F, G ½ B, d1=13, U1=100, 1.4435

¹⁾ Remainers made of 316Ti (1.4571)

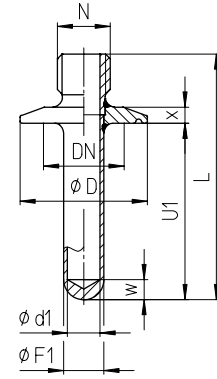
Dimensional Data, Length Specifications, Corresponding Thermometer Stems

Dimensional Data (mm)

SL1/SL11/SL12

Process Connection: Clamp/Tri-Clamp

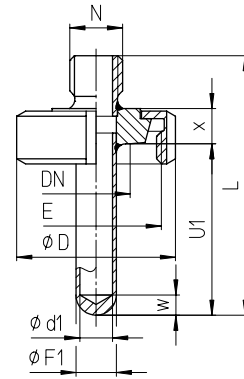
SL1 Clamp ISO 2852	DN	SL11 DIN 32 676 DIN 32 676 series A for tubes acc. to DIN 11 850	NPS SL12 Tri-Clamp for tubes acc. to BS 4825-3	PN ¹⁾ bar	D mm	x mm
17.2 21.3		20		25	34	6.4
25 33.7 38 40 51		25 32 40 50	1" 1 1/2" 2"	25	50.5 64	6.4



SL3

Process Connection: DN 11 851 Conical Coupling/Groove Nut

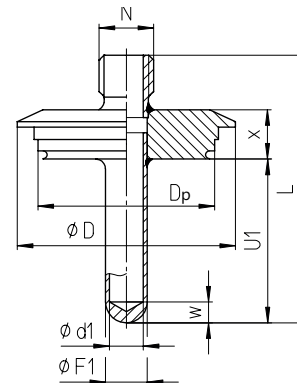
DN	PN ¹⁾	E	D	x
20	25	Rd 44x1/6	54	12
25	25	Rd 52x1/6	63	14
32	25	Rd 58x1/6	70	14
40	25	Rd 65x1/6	78	14
50	25	Rd 78x1/6	92	15



SL6

Process Connection: Varivent® for Varinline® Case

Code letter	PN	Process bore Dp	D	x
F	25 ¹⁾	50	66	17
N	16 ²⁾	68	84	17



SL1/SL11/SL12/SL3/SL6

Tube Dimensions

F1	d1	w
13	11	6.5
16	13	8

Total length thermowell, length thermometer stem, installation length

Calculation

Total length thermowell: **Thermowell length $L = U1 + 21 \text{ mm} + x$**

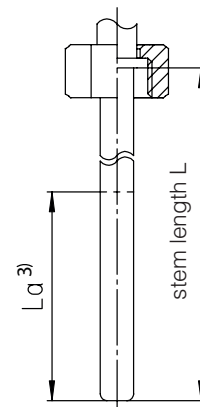
Length thermometer stem: **Stem length $L = L(\text{thermowell}) - w$**

Total length thermowell if stem is existent: **Thermowell length $L = L(\text{stem}) + w$**

Installation length if stem is existent: **Installation length $U1 = L(\text{stem}) - 21 \text{ mm} - x + w$**

Corresponding thermometer stems

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



¹⁾ PN is defined by thermowell

²⁾ PN is defined by process connection

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