

# 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 reverse side	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 reverse side

### Material

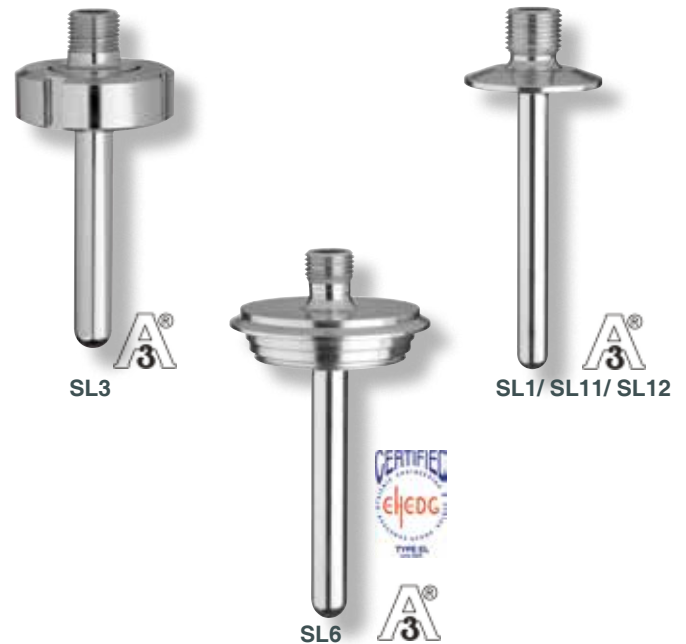
Stainless steel 1.4435 (316L)<sup>1)</sup>  
Wetted surface electropolished, Ra < 0.8 µm  
Thermowell end and shapes polished

### Process Temperature/Process Pressure

Maximum permissible process temperature: 400 °C  
Maximum permissible process pressure: see reverse side

The specific process conditions (medium, flow rate, pressure, temperature) and the thermowell version (dimension, material) might cause a reduction of the above mentioned 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, 3A certificates for SL1/SL11/SL12 and SL3

## Ordering Information

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

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

<sup>1)</sup> Remainers made of 1.4571 (316Ti)



Sales and Export South, West, North  
**ARMATURENBau GmbH**  
Manometerstraße 5 • D – 46487 Wesel-Ginderich  
Tel.: +49 2803 9130 – 0 • Fax: +49 2803 1035  
www.armaturenba.com • mail@armaturenba.com

Subsidiary Company, Sales and Export East  
**MANOTHERM Beierfeld GmbH**  
Am Gewerbepark 9 • D – 08344 Grünhain-Beierfeld  
Tel.: +49 3774 58 – 0 • Fax: +49 3774 58 – 545  
www.manotherm.com • mail@manotherm.com

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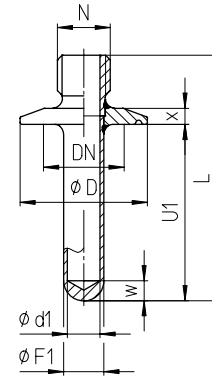
# Dimensional Data, Length Specifications, Corresponding Thermometer Stems

## Dimensional Data (mm)

### SL1/SL11/SL12

#### Process Connection: Clamp/Tri-Clamp

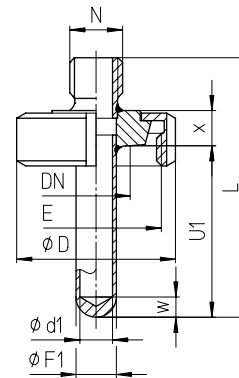
SL1 Clamp ISO 2852	DN	SL11 DIN 32 676 DIN 32 676 Series A for tubes acc. to DIN 11850	NPS SL12 Tri-Clamp for tubes acc. to BS 4825-3	PN <sup>1)</sup> bar	D mm	x mm
17.2		20		25	34	6.4
21.3		25		25	34	6.4
25		25	1"	25	50.5	6.4
33.7		32	1 1/2"	25	50.5	6.4
38		40		25	64	6.4
40		50		25	64	6.4
51		50	2"	25	64	6.4



### SL3

#### Process Connection: DN 11 851 Conical Coupling/Groove Nut

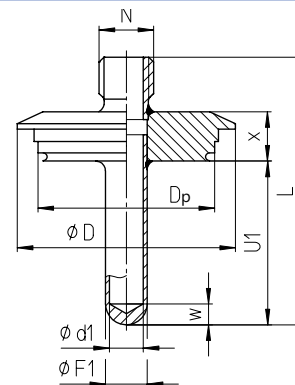
DN	PN <sup>1)</sup>	E	D	x
20	25	Rd 44x1/6	54	12
25	25	Rd 52x1/6	63	14
32	25	Rd 58x1/6	70	14
40	25	Rd 65x1/6	78	14
50	25	Rd 78x1/6	92	15



### SL6

#### Process Connection: Varivent® for Varinline® Case

Code letter	PN	Process bore Dp	D	x
F	25 <sup>1)</sup>	50	66	17
N	16 <sup>2)</sup>	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  $L = U1 + 21 + x$**

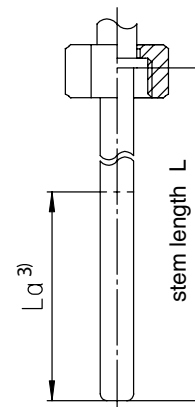
Length thermometer stem: **Stem length  $L = L \text{ (thermowell)} - w$**

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



<sup>1)</sup> PN is defined by thermowell

<sup>2)</sup> PN is defined by process connection

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