

### Thermowells

## Thermowell for screw-in or weld-in (fabricated) Models SWT52G, SWT52S, SWT71G, SWT71S

WIKA data sheet TW 90.11

### Applications

- Wide range of applications in vessel, tubing and apparatus construction, machine building and industrial heating
- For use with models 52 and 73 mechanical thermometers

### Special features

- Cost-effective design
- Quick adjustability and replaceability of thermometers



Fig. left: Thermowell with thread  
Fig. right: Thermowell with weld cones

### Description

Each thermowell is an important component of any temperature measurement point. It is used to separate the process from the surrounding area, thus protecting the environment and operating personnel and keeps aggressive media, high pressures and flow rates from the temperature sensor itself and thereby enables the thermometer to be exchanged during operation.

Based on the almost limitless application possibilities, there are a large number of variants, such as thermowell designs or materials. The type of process connection and the basic method of manufacture are important design differentiation criteria. A basic differentiation can be made between threaded and weld-in thermowells, and those with flange connections.

Furthermore, one can differentiate between fabricated and solid-machined thermowells. Fabricated thermowells are constructed from a tube, that is closed at the tip by a welded solid tip. Solid-machined thermowells are manufactured from barstock.

The SWTxx series of fabricated <sup>1)</sup> screw-in or weld-in thermowells are specifically adapted for use with the models 52 and 73 mechanical thermometers.

Due to the cost-effective design and fast adjustment and exchange of the thermometer, these are the thermowells of choice for use in machine building and heating technology.

1) For short insertion lengths (copper alloy) solid-machined version optionally

**Standard version**

**Thermowell material process connection**  
Copper alloy, St35 <sup>2)</sup> or stainless steel

**Process connection**  
Models SWT52G, SWT71G: G 1/2 B thread  
Models SWT52S, SWT71S: weld cones

**Connection to thermometer**  
Suitable for thermometers with smooth connection (without threads), collar Ø 18 mm;  
Fixing via M4 retaining screw

**Bore size**  
Suitable for 8 mm insertion diameter (model 52 thermometer) or 13 mm (model 73 thermometer)

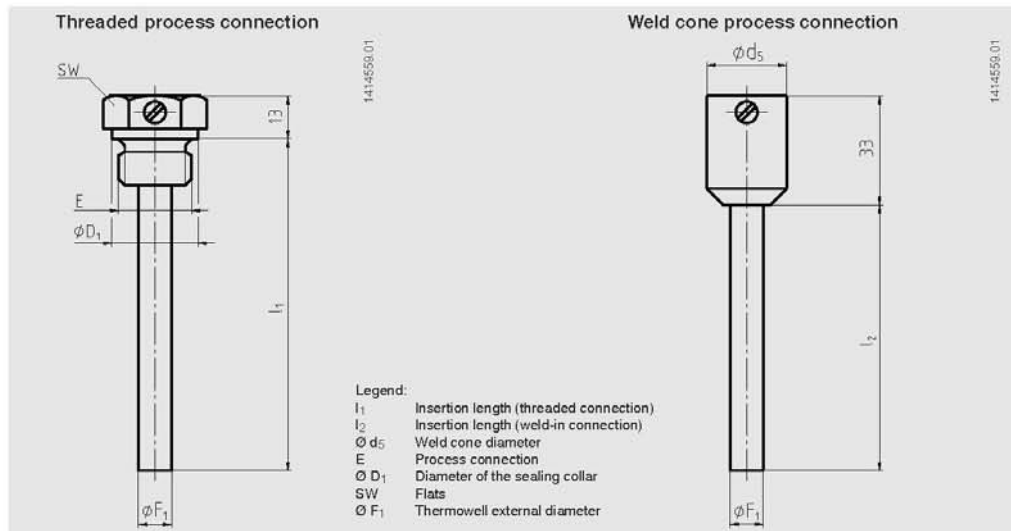
**Insertion length**  
Suitable for the various standard insertion lengths,  $l_1$ , of models 52 and 73 thermometers

**Max. process temperature, process pressure**  
160 °C with copper alloy as thermowell material (6 bar stat.)  
500 °C with St35, stainless steel as thermowell material (25 bar stat.)

- Depending on
- Thermowell design
    - Dimensions
    - Material
  - Process conditions
    - Flow rate
    - Density of medium

<sup>2)</sup> Thermowell stem material: stainless steel

**Dimensions in mm**

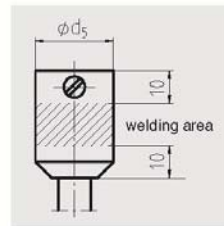


**Threaded process connection**  
(Copper alloy, St35 or stainless steel)

Thermometer	Dimensions in mm				
	l <sub>1</sub>	E	SW	Ø F <sub>1</sub>	Ø D <sub>1</sub>
Model 52	45	G ½ B	27	10	26
	63	G ½ B	27	10	26
	100	G ½ B	27	10	26
	160	G ½ B	27	10	26
	200	G ½ B	27	10	26
Model 73	63	G ½ B	27	16	26
	100	G ½ B	27	16	26
	160	G ½ B	27	16	26
	200	G ½ B	27	16	26

**Weld cone process connection**  
(St35 or stainless steel)

Thermometer	Dimensions in mm		
	l <sub>2</sub>	Ø d <sub>5</sub>	Ø F <sub>1</sub>
Model 52	43	24	10
	80	24	10
	140	24	10
	180	24	10
Model 73	43	24	16
	80	24	16
	140	24	16
	180	24	16



**Suitable for insertion lengths of models 52 and 73 thermometers**

Process connection	Insertion length, l <sub>1</sub> , of the thermometer
Thread	l <sub>1</sub> = insertion length, l <sub>1</sub> , of the thermowell
Weld cones	l <sub>1</sub> = insertion length, l <sub>2</sub> , of the thermowell + 20 mm

**Ordering information**

Model / Material / Process connection / Insertion length / Options

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The specifications given in this document represent the state of engineering at the time of publishing.  
We reserve the right to make modifications to the specifications and materials.

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**WIK A Alexander Wiegand SE & Co. KG**  
Alexander-Wiegand-Straße 30  
63911 Klingenberg/Germany  
Tel. +49 9372 132-0  
Fax +49 9372 132-406  
info@wika.de  
www.wika.de

**Thermowells**

Art. No. 102810 to 102815 and 102816 to 102818  
Type No. SR 01 to SR 13 and SR 21 to SR 23

<b>Art. No.</b>	<b>Type No.</b>
102810	SR 01
102811	SR 02
102812	SR 03
102813	SR 11
102814	SR 12
102815	SR 13
102816	SR 21
102817	SR 22
102818	SR 23