

## Threaded or weld-in protection tube Models SWT52G, SWT52S

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 model 52 mechanical thermometer

### Special features

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



**Fig. left: Protection tube with thread, model SWT52G**  
**Fig. right: Protection tube with welding stud, model SWT52S**

### Description

Each thermowell/protection tube 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 designs or materials of the thermowell/protection tube. 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/protection tube, and those with flange connections.

Furthermore, one can differentiate between protection tube and thermowells. Protection tubes are constructed from a tube, that is closed at the tip by a welded solid tip. Thermowells are manufactured from barstock.

The SWT52x series of threaded or weld-in protection tubes <sup>1)</sup> are specifically adapted for use with model 52 mechanical thermometer.

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

<sup>1)</sup> For short insertion lengths (copper alloy) solid-machined version optionally

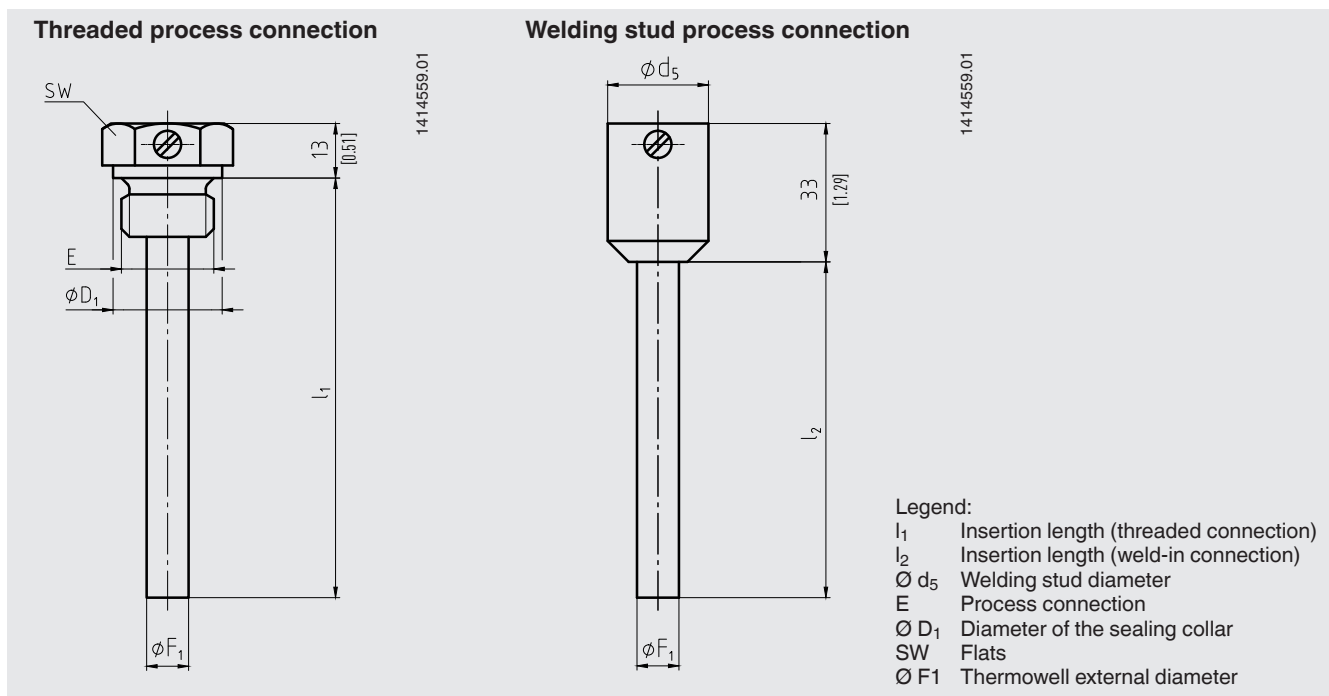
# Specifications

Threaded or weld-in protection tube, model SWT52x	
<b>Versions</b>	<ul style="list-style-type: none"> <li>■ Model SWT52G: Protection tube with thread</li> <li>■ Model SWT52S: Protection tube with welding stud</li> </ul>
<b>Protection tube material</b>	<ul style="list-style-type: none"> <li>■ Copper alloy</li> <li>■ St35 <sup>1)</sup></li> <li>■ Stainless steel</li> </ul>
<b>Process connection</b>	
Model SWT52G	G ½ B thread
Model SWT52S	Welding stud
<b>Connection to thermometer</b>	Suitable for thermometers with smooth connection (without threads) Collar Ø 18 mm [0.70 in] Fixing via M4 retaining screw
<b>Bore size</b>	Ø 8 mm [0.31 in], for thermometer model 52
<b>Insertion length U</b>	Suitable for the various standard insertion lengths, $l_1$ , of thermometer model 52
<b>Max. process temperature, process pressure</b>	Depending on: <ul style="list-style-type: none"> <li>■ Thermowell design               <ul style="list-style-type: none"> <li>- Dimensions</li> <li>- Material</li> </ul> </li> <li>■ Process conditions               <ul style="list-style-type: none"> <li>- Flow rate</li> <li>- Density of medium</li> </ul> </li> </ul>
Copper alloy (6 bar stat.)	160 °C
St35 or stainless steel (25 bar stat.)	500 °C

The material used for thermowells/protection tubes comes from global sources.  
The region of origin of the material can be defined on request.

1) Protection tube stem material: stainless steel

## Dimensions in mm [in]



### Threaded process connection

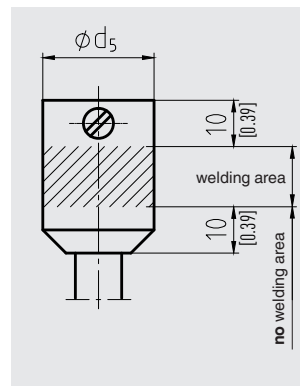
(Copper alloy, St35 or stainless steel)

Dimensions in mm [in]				
$l_1$	E	SW	$\varnothing F_1$	$\varnothing D_1$
45 [1.77]	G ½ B	27 [1.125 in]	10 [0.39]	26 [1.02]
63 [2.48]	G ½ B	27 [1.125 in]	10 [0.39]	26 [1.02]
100 [3.93]	G ½ B	27 [1.125 in]	10 [0.39]	26 [1.02]
160 [6.29]	G ½ B	27 [1.125 in]	10 [0.39]	26 [1.02]
200 [7.87]	G ½ B	27 [1.125 in]	10 [0.39]	26 [1.02]

### Welding stud process connection

(St35 or stainless steel)

Dimensions in mm [in]		
$l_2$	$\varnothing d_5$	$\varnothing F_1$
43 [1.69]	24 [0.94]	10 [0.39]
80 [3.14]	24 [0.94]	10 [0.39]
140 [5.51]	24 [0.94]	10 [0.39]
180 [7.08]	24 [0.94]	10 [0.39]



### Suitable for insertion lengths of model 52 thermometer

Process connection	Insertion length, $l_1$ , of the thermometer
Thread	$l_1$ = insertion length, $l_1$ , of the thermowell
Welding stud	$l_1$ = insertion length, $l_2$ , of the thermowell + 20 mm [0.8 in]

### Ordering information

Model / Material / Process connection / Insertion length / Options

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