

Threaded thermowell or for push-in/weld-in (fabricated)

Design per DIN 43772 form 2, 3, 2G, 3G

Model TW35

WIKA data sheet TW 95.35

Applications

- Chemical industry, process technology, equipment manufacturing
- For low and medium process loads

Special features

- Designs per DIN 43772
- Design TW35-2: Form 2 (straight)
- Design TW35-3: Form 3 (tapered)
- Design TW35-4: Form 2G (straight)
- Design TW35-5: Form 3G (tapered)
- With integrated neck tube
- Designs TW35-3, TW35-5: fast-response design

Description

Each thermowell is an important component of any temperature measuring location. 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 probe 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.



Fig. left: Threaded thermowell, design TW35-4 (form 2G)
Fig. right: Push-in/weld-in thermowell, design TW35-3 (form 3)

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 solid bar stock.

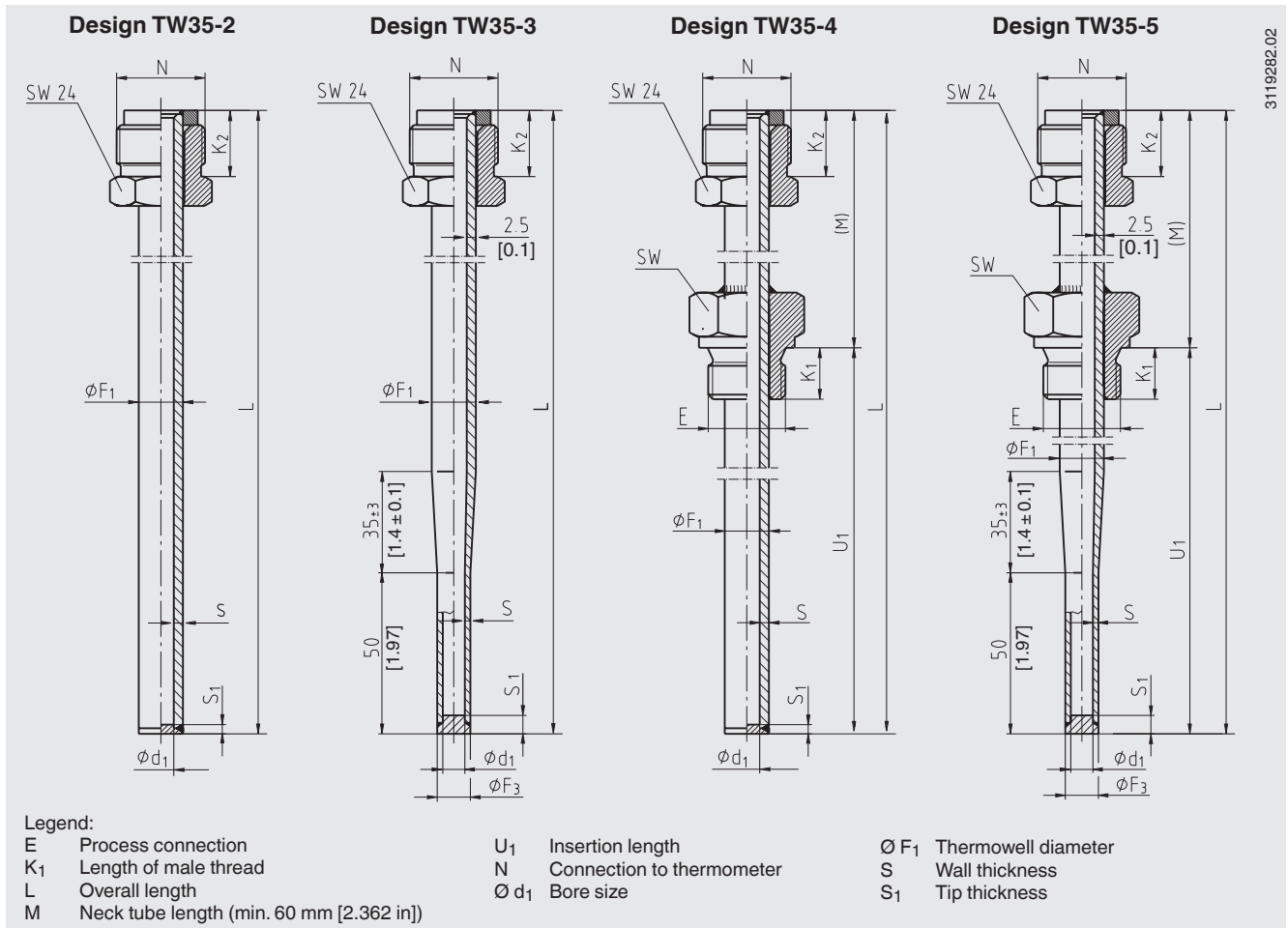
The TW35 series of fabricated screw-in or weld-in thermowells are suitable for use with numerous electrical and mechanical thermometers from WIKA.

Due to their design to DIN 43772, these thermowells for low and medium process loads are suitable for use in the chemical industry, process technology and equipment manufacturing.

Specifications

Threaded thermowell or for push-in/weld-in (fabricated), model TW35	
Designs per DIN 43772	<ul style="list-style-type: none"> ■ Design TW35-2: Form 2 (straight) ■ Design TW35-3: Form 3 (tapered), fast response ■ Design TW35-4: Form 2G (straight) ■ Design TW35-5: Form 3G (tapered), fast response
Thermowell materials	Stainless steel 1.4571
Process connection	<ul style="list-style-type: none"> ■ G ½ male thread ■ G 1 B male thread ■ M20 x 1.5 male thread ■ ½ NPT male thread ■ Threaded for push-in/weld-in Other threads on request
Connection to thermometer	M24 x 1.5 pressure screw Other threads on request
Bore size	<ul style="list-style-type: none"> ■ Ø 6.1 mm [0.24 in] ■ Ø 7 mm [0.28 in] ■ Ø 9 mm [0.35 in]
Insertion length U₁	To DIN 43772 or customer specification
Overall length L	
Design TW35-4	Insertion length U ₁ + 145 mm [5.7 in]
Design TW35-5	Insertion length U ₁ + 147 mm [5.8 in]
Max. process temperature, process pressure	Depending on: <ul style="list-style-type: none"> ■ Load diagram DIN 43772 ■ Thermowell design <ul style="list-style-type: none"> - Dimensions - Material ■ Process conditions <ul style="list-style-type: none"> - Flow rate - Medium density
Wake frequency calculation	For critical applications, is recommended in accordance with Dittrich/Klotter as a WIKA engineering service For further information, see Technical information IN 00.15 "Wake frequency calculation".

Dimensions in mm [in]



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Dimensions in mm [in]					Weight in kg [lbs]
Ø d ₁	Ø F ₁	S	S ₁	E	L = 305 mm [12 in]
7 [0.38]	11 [0.43]	2 [0.08]	3 [0.12]	<ul style="list-style-type: none"> ■ G ½ B ■ G 1 B ■ M20 x 1.5 ■ ½ NPT 	0.23 [0.51]
7 [0.28]	12 [0.47]	2.5 [0.1]	3.5 [0.14]	<ul style="list-style-type: none"> ■ G ½ B ■ G 1 B ■ M20 x 1.5 ■ ½ NPT 	0.35 [0.77]
9 [0.35]	14 [0.55]	2.5 [0.1]	3.5 [0.14]	<ul style="list-style-type: none"> ■ G ½ B ■ G 1 B ■ M20 x 1.5 ■ ½ NPT 	0.23 [0.51]
6.1 [0.24]	12 [0.47]	2.5 [0.1]	5 [0.2]	<ul style="list-style-type: none"> ■ G ½ B ■ G 1 B ■ M20 x 1.5 ■ ½ NPT 	0.23 [0.51]

Suitable stem lengths of mechanical dial thermometers

Connection design	Stem length l_1
S, 3, 4 or 5	$l_1 = L - 10 \text{ mm [0.4 in]}$ or $l_1 = U_1 + M - 10 \text{ mm [0.4 in]}$
2	$l_1 = L - 30 \text{ mm [1.2 in]}$ or $l_1 = U_1 + M - 30 \text{ mm [1.2 in]}$

Certificates (option)

- 2.2 test report
- 3.1 inspection certificate

Ordering information

Model / Thermowell form / Thermowell material / Process connection / Connection to thermometer / Insertion length U_1 / Overall length L / Dimension of pipe / Assembly with thermometer / Certificates / Options

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WIKA 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