



# GÜNTHER<sup>GmbH</sup>

Temperaturmesstechnik



**Product category 12-THD**  
**Thermocouple Assemblies for Welding**  
**with Thermowell Form 4 (Formerly D-Sleeve)**

## 12-THD

### Thermocouple Assemblies for Welding with Thermowell Form 4 (Formerly D-Sleeve)



#### Application Examples for Thermocouple Assemblies for Welding with Thermowell Form 4 :

-  Waste Recycling / Incineration
-  Plant and Machine Construction
-  Steel and Iron Industry
-  Automobile Industry
-  Chemical Industry
-  Laboratories
-  Energy Production

#### 12-THD

#### Thermocouple Assemblies for Welding with Thermowell Form 4 (Formerly D-Sleeve) pursuant to DIN 43772

Thermocouple assemblies for welding (12-THD) are used in gaseous or liquid media such as air, steam, water, oil, etc. with high current speeds and pressure. The thermowell's material defines the operating temperature. Specialized assemblies for welding are suitable for up to 700 bar of pressure. The mountings of this product line are fitted with exchangeable gauge slides.

The main component is a thermowell crafted from high-grade or pressure-vessel steel, with which the thermocouple assembly is welded to the respective machine or measuring location.

Selection of the thermowell is dependent on spatial proportions at the point of installation, as well as demands as dictated by temperature, pressure, current flow and chemical attack.

Standard values for stress capacity can be found in the diagrams of DIN 43772.

In particular the question of chemical stress capacity must be examined carefully for each individual scenario. Often times, only field testing will yield authoritative information, as even minor impurities in the ambient media can have significant impact on the performance of the thermowell within the application environment.

Thermoelectric voltages and tolerances of our thermocouples and gauge slides are pursuant to DIN EN60584, class 1.

**Further technical information for this product line is available on our website.**

<http://www.guenther.eu/en/products/thermocouples/12-thd/welding-in-thermocouples-with-d-sleeves>



Visit us online at: [www.guenther.eu](http://www.guenther.eu)



① Connection Head

B (M24 x 1,5) BBK
BUS            BUSH
BUZ            BUZH

② Connection Tube Pursuant to DIN 43767

with threading:
M24 x 1,5/M18 x 1,5    Zinc Coated Steel
M24 x 1,5/M14 x 1,5    or High-Grade Steel
also available without threading

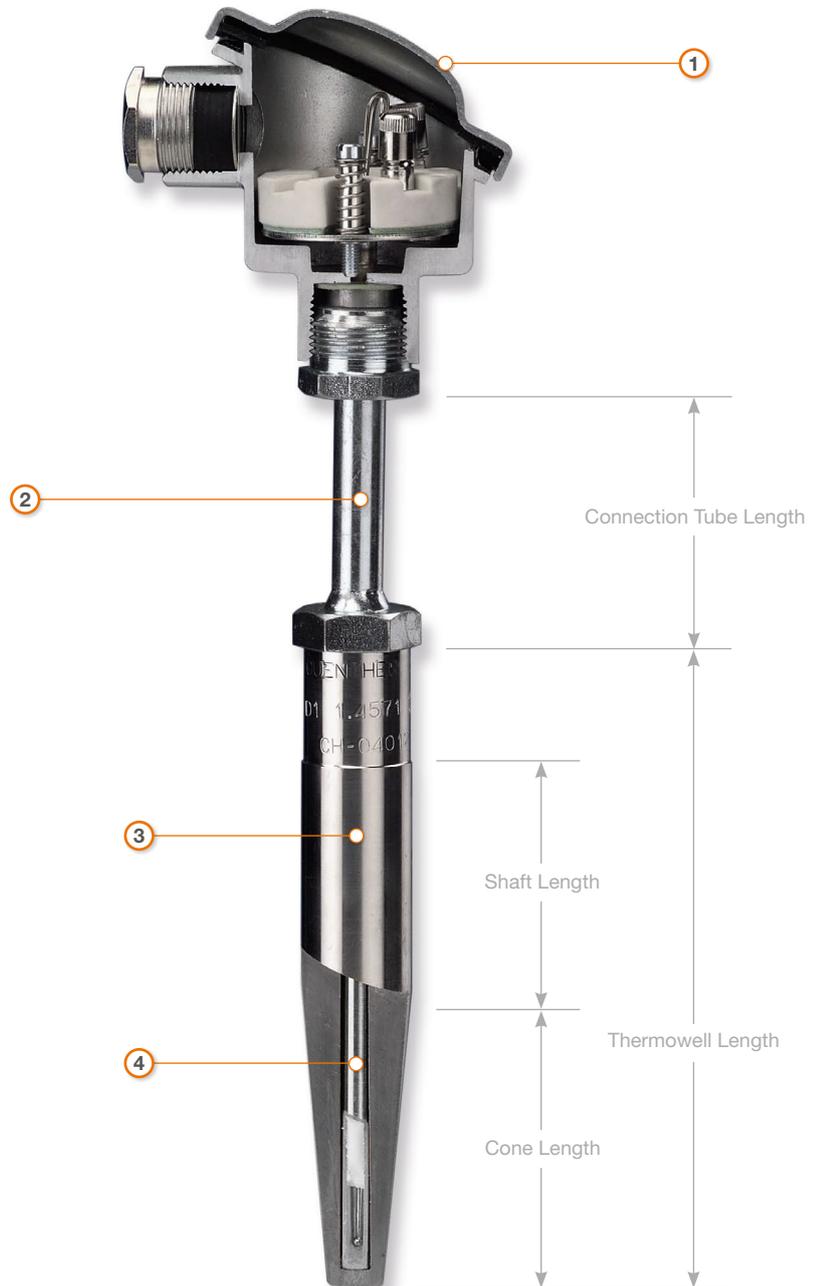
③ Thermowell Pursuant to DIN 43772

Cone Length:	40 - 125 mm
Shaft Length:	50 or 110 mm
Thermowell Length:	115 - 260 mm
Diameter:	18 or 24 mm
Material:	1.7335
	1.4571
	1.5415

④ Gauge Slide

Sheath Material:	Inconel 2.4816
	Mat. No. 1.4541
Thermocouple:	NiCr-Ni / K
	Fe-CuNi / L
	Fe-CuNi / J
	Nicrosil-Nisil / N
Diameter:	2 - 8 mm
	Single or Double

Example of a common implementation in this product line



Individual Solutions such as, for example materials, process connectors, accessories, etc. not listed here, are often viable.

Please contact us for further information!

# 12-THD

## Product Number Code

### 12 - THD // Welding-in thermocouples with a measuring insert and D-sleeves

Thermocouples, metal + sheath   -           /

Installation length / Neck pipe length in mm

#### Connection head

B (M24 x 1.5)	1	BUSH	6
BUS	2	BUZH	7
BUZ	3		8
BBK	4		9

**Blank flange in acc. with DIN 2527** St37-2 1.4571 C22.8

DN 10 PN 16	10	20	30	None
DN 15 PN 16	11	21	31	
DN 20 PN 16	12	22	32	00
DN 25 PN 16	13	23	33	
DN 32 PN 16	14	24	34	
DN 40 PN 16	15	25	35	
DN 50 PN 16	16	26	36	Other
DN 65 PN 16	17	27	37	
DN 80 PN 16	18	28	38	99
DN 100 PN 16	19	29	39	

#### Neck tube in acc. with DIN 43767

With M24 x 1.5 / M18 x 1.5 screw fittings,	galvanised steel	1
With M24 x 1.5 / M18 x 1.5 screw fittings,	stainless steel	2
With M24 x 1.5 / M14 x 1.5 screw fittings,	galvanised steel	3
With M24 x 1.5 / M14 x 1.5 screw fittings,	stainless steel	4
None		0
Other		9

#### Welding-in protection tubes in acc. with DIN 43763

<b>D1</b>	Cone length = 65 mm, Shaft length = 50 mm, Thermowell length = 140 mm, ø 24 mm	<b>10 20 30</b>
<b>D2</b>	Cone length = 125 mm, Shaft length = 50 mm, Thermowell length = 200 mm, ø 24 mm	<b>11 21 31</b>
<b>D4</b>	Cone length = 65 mm, Shaft length = 110 mm, Thermowell length = 200mm, ø 24 mm	<b>12 22 32</b>
<b>D5</b>	Cone length = 125 mm, Shaft length = 110 mm, Thermowell length = 260 mm, ø 24 mm	<b>13 23 33</b>
<b>DS</b>	Cone length = 65 mm, Shaft length = 50 mm, Thermowell length = 140 mm, ø 18 mm	<b>15 25 35</b>
<b>DS</b>	Cone length = 40 mm, Shaft length = 50 mm, Thermowell length = 115 mm, ø 18 mm	<b>16 26 36</b>
	No thermowell (sheath freely protruding)	<b>00</b>
	Other	<b>99</b>

1.7335  
1.4571  
1.5415



**GÜNTHER GmbH**  
Temperaturmesstechnik

**Bauhofstraße 12**  
**D-90571 Schwaig**

**Tel.**  
+49 (0)911 / 50 69 95-0

**Fax**  
+49 (0)911 / 50 69 95-55

**E-Mail**  
info@guenther.eu

**Internet**  
www.guenther.eu

#### Sheath element (type/number of thermocouples/sheath material/diameter)

Thermocouple Sheath material Mat. no.	NiCr-Ni/K Alloy 600 2.4816		Fe-CuNi/L 1.4541		Fe-CuNi/J 1.4541		Nicrosil-Nisil/N Alloy 600 2.4816	
	Standard	Double	Standard	Double	Standard	Double	Standard	Double
Sheath ø / mm								
2	04	14	-	-	-	-	-	-
3	05	15	25	35	45	55	65	75
4,5	06	16	26	36	46	56	66	76
6	07	17	27	37	47	57	67	77
8	08	18	-	-	-	-	-	-
SG*: 3.5	09	19	-	-	-	-	-	-

\* Special size/special material 00

Custom designs:   -         -     /

Consecutive no.

Installation length / Neck pipe length in mm