



GÜNTHER^{GmbH}

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>





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	

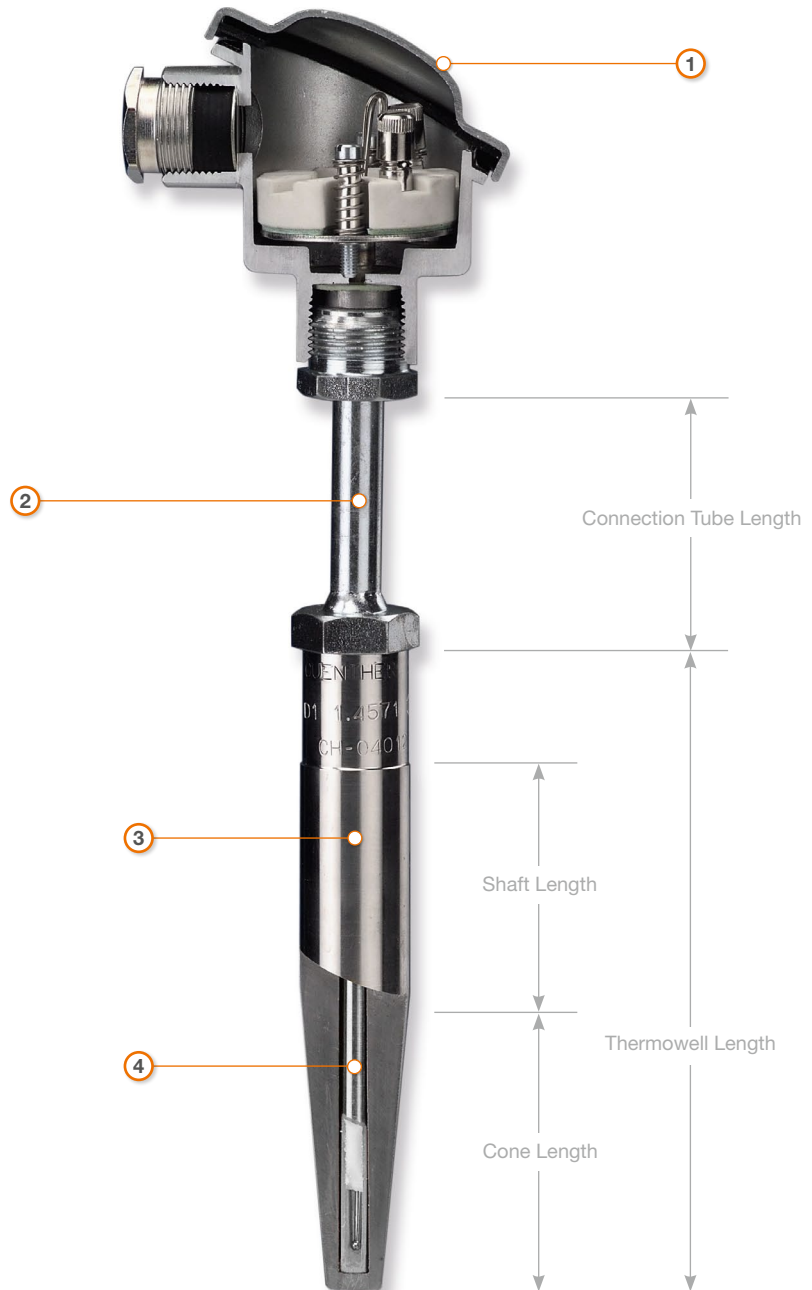
③ Thermowell Pursuant to DIN 43772

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

Thermocouples, metal + sheath

1	2	-																	
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Connection head

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

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

DN 10	PN 16	1 0	2 0	3 0	None
DN 15	PN 16	1 1	2 1	3 1	
DN 20	PN 16	1 2	2 2	3 2	0 0
DN 25	PN 16	1 3	2 3	3 3	
DN 32	PN 16	1 4	2 4	3 4	
DN 40	PN 16	1 5	2 5	3 5	
DN 50	PN 16	1 6	2 6	3 6	Other
DN 65	PN 16	1 7	2 7	3 7	
DN 80	PN 16	1 8	2 8	3 8	9 9
DN 100	PN 16	1 9	2 9	3 9	

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

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

1.7335
1.4571
1.5415

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

Thermocouple	NiCr-Ni/K		Fe-CuNi/L		Fe-CuNi/J		Nicrosil-Nisil/N	
Sheath material	Alloy 600 2.4816		1.4541		1.4541		Alloy 600 2.4816	
Mat. no.	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

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Custom designs:

1	2	-	9	9	1	2	x	x	x	x								
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Consecutive no.

Installation length / Neck pipe length in mm