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# Immersion Sleeves for Heat Meter Temperature Probes

- For RTD temperature probes
- RTD temperature probes can be replaced without emptying the system
- Immersion sleeves made from various materials
- Compliant with magnetic inductive flow meters with identification marking
- Available with inspection certificate 3.1

## Brief description

Immersion sleeves are used when a replacement of the RTD temperature probes is required without emptying the system and/or pressure resistance. Shorter immersion sleeves are mostly screwed into T-pieces while longer design types are screwed into special welded sockets or welded directly in the pipe wall.

For nominal values up to DN 50, the immersion sleeve should dip above the middle. For larger diameters it should dip into the cross section of the pipe so that it is deep enough ( $\geq 50$  mm) to avoid heat conduction errors.

The minimum immersion depth of the probe being used must also be observed.

The specified dimensions for **EL** refer to the insertion length of the RTD temperature probe; the dimensions for **L** provide the insertion lengths of the immersion sleeves.

### Note:

We recommend the following installation in accordance with technical directive TR-K9 (current state of technology):

For heat/cold meters with nominal flows  $\leq q_p 6 \text{ m}^3/\text{h}$ , the temperature probes must only be installed directly immersed in the area of the measuring point with nominal pressures  $\leq 16$  bar when the pipeline section is newly installed. Temperature probes with immersion sleeves can also be installed under these circumstances, but only when under increased strain (for example pressure, temperature, flow velocity, or oscillation).



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## Technical data

Process connection	Screws G 1/4, G 3/8, G 1/2, G 3/4 or welding in
Protection tube Material	Stainless steel 1.4571 Stainless steel 1.4435 Brass
Insertion lengths Stainless steel Brass	L = 35 to 400 mm L = 35 to 120 mm

## Max. temperature of the immersion sleeves according to the type examination certificate

Basic type	Material	Internal diameter of protection tube D in mm	Insertion length L in mm	Thread	Max. temperature in °C
902440/40	Brass	5.0 to 6.0	28 to 115	M10 to G 1/4	105
902440/41					
902440/40	Brass	5.0 to 6.0	35 to 115	M10 to G 1/2	105
902440/41					
902440/40	Brass	5.0 to 5.2	47 to 115	M10 to G 1/4	150
902440/41					
902440/40	Brass	5.0 to 5.2	55 to 115	M14 to G 1/2	150
902440/41					
902440/40	Brass	5.0 to 6.0	75 to 165	G 1/4 to G 1/2	150
902440/41					
902440/42	Stainless steel	5.0 to 6.0	49 to 115	G 1/4 to G 1/2	150
902440/42	Stainless steel	5.0 to 6.0	75 to 285	G 1/4 to G 1/2	150
902440/42	Stainless steel	6.0	85 to 280	M10 to G 1/2	180
902440/43	Stainless steel	6.2	85 to 280	M10 to G 1/2	180
902440/44	Stainless steel	6.05	120 to 400	G 3/8 to G 3/4	180
902440/45	Stainless steel	6.2	85 to 280	M10 to G 1/2	180

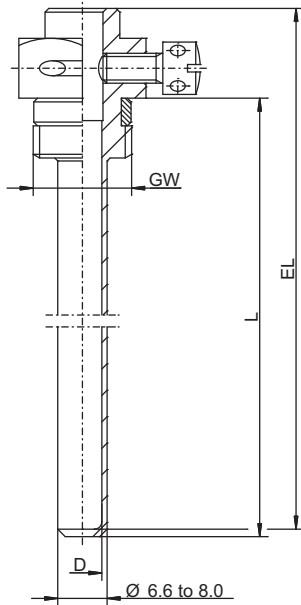
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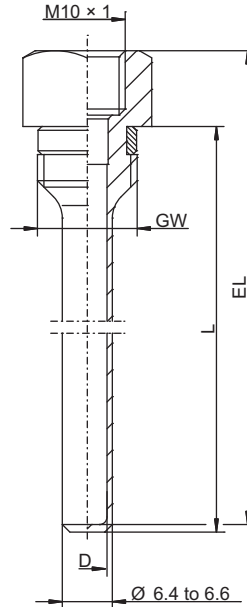
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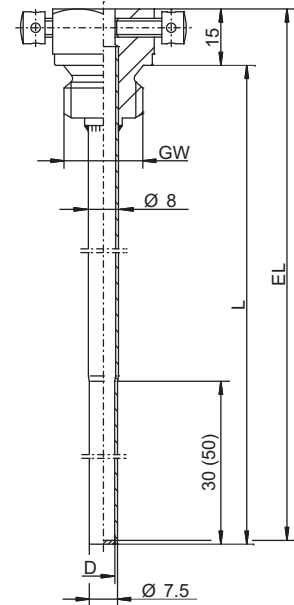
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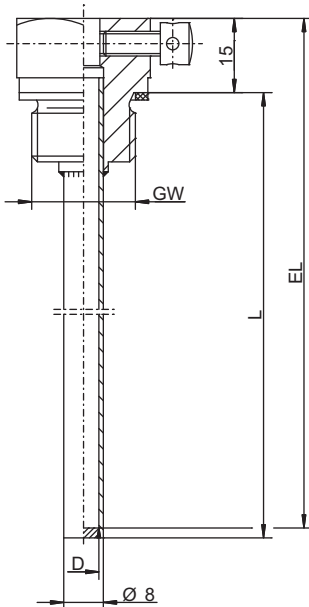
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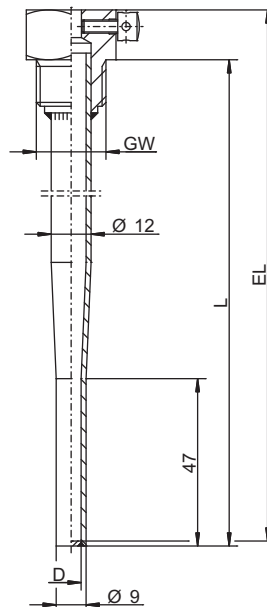
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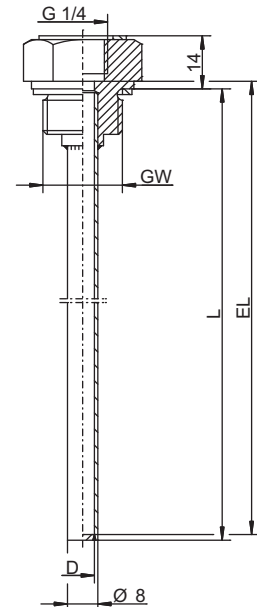
Basic type 902440/42



Basic type 902440/43



Basic type 902440/44



Basic type 902440/45

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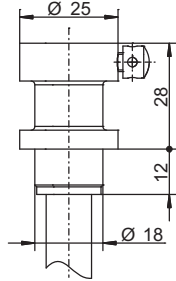
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Alternatively, process connection 790 for  
basic types 902440/42, 902440/43, and  
902440/44 with welded-on piece

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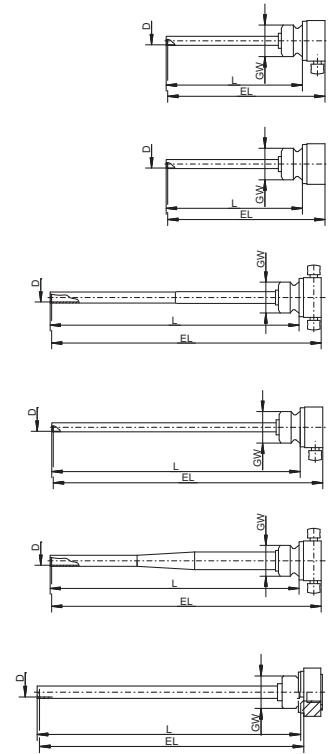
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## Order details

### (1) Basic type

	902440/40	Immersion sleeve with seal option, straight protection tube, outer diameter 6.6 to 8.0 mm, PN 25
	902440/41	Immersion sleeve with internal thread M10 × 1, straight protection tube, outer diameter 6.4 to 6.6 mm, PN 25
	902440/42	Immersion sleeve with seal option, offset protection tube, outer diameter 8 mm, fit tolerance H10, PN 40
	902440/43	Immersion sleeve with seal option, straight protection tube, outer diameter 8 mm, internal diameter 6.2 mm, PN 40
	902440/44	Immersion sleeve with seal option, offset protection tube, outer diameter 12 mm narrowing to 9 mm, internal diameter 6 mm, PN 40
	902440/45	Immersion sleeve with internal thread G 1/4 and seal option, straight protection tube, outer diameter 8 mm, internal diameter 6.15 mm, PN 40



### (2) Internal diameter of protection tube D in mm

x	x		5	Ø 5 mm
x	x	x	5.2	Ø 5.2 mm
x	x	x	6	Ø 6 mm
		x	6.2	Ø 6.2 mm

### (3) Insertion length L in mm (85 to 400 mm for basic type 902440/42 and 902440/43)

x			35	35 mm (EL = 46 mm)
x	x		40	40 mm (EL = 47 mm)
x	x		50	50 mm (EL = 57 mm)
	x	x	85	85 mm (EL = 98 mm, for basic type 902440/45 EL = 85.5 mm)
		x	92.5	92.5 mm (EL = 93 mm)
	x	x	120	120 mm (EL = 133 mm, for basic type 902440/45 EL = 120.5 mm)
		x	147.5	147.5 mm (EL = 148 mm)
	x	x	155	155 mm (EL = 168 mm)
	x	x	210	210 mm (EL = 223 mm)
			...	Specifications in plain text

### (4) Process connection GW

x	x		102	Screw connection G 1/4
x			103	Screw connection G 3/8
x	x	x	104	Screw connection G 1/2
		x	105	Screw connection G 3/4
	x	x	790	Weld-in sleeve according to AGFW

### (5) Material

	x	x	20	Stainless steel
x			46	Brass

