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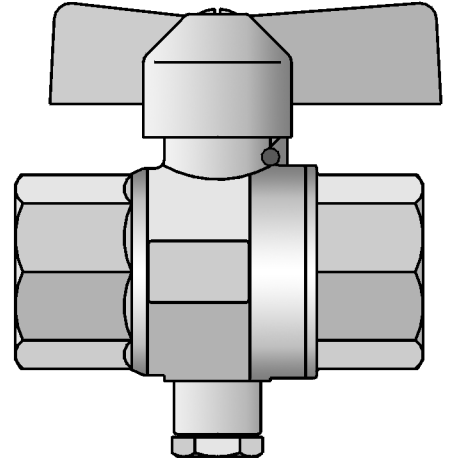


Installation locations for temperature probes

- ball valves
- tees
- pockets
- adapter screw fittings
- mounting accessories

When measuring temperatures in pipelines, it is absolutely essential to choose the correct installation location, to enable acquisition of the temperature prevailing on site.

Wrong installation often means losing the high accuracy of the temperature probe, which is then interpreted as poor probe quality. The correct installation location is, therefore, the first step towards a correct temperature measurement.



Technical data

Pocket

Pockets are employed when direct mounting of the temperature probe is not intended, or technically impermissible or impossible. Short pockets are screwed into tees, longer forms into special welding nipples, or welded directly to the pipe wall. With nominal values up to DN 50, the protection tube should be immersed into the pipe cross-section by more than half, with larger diameters sufficiently deep (at least 50mm), to eliminate heat transfer errors.

Ball valve

Ball valves are a combination of a shut-off device with an integral location for a direct-measuring temperature probe. They meet the requirements of integrated environmental protection for avoiding or reducing damage at the point of origin. The pipe systems need not be drained when the temperature probe has to be fitted or replaced. The location for the type 902425/2x temperature probe in the ball valve provides the best temperature measurement available today in pipelines with small nominal sizes.

Tee

Tees are ideally suited as mounting locations for pockets, especially when the optimum immersion depth has been ensured by design. When using the intended temperature probe, a location with the maximum immersion depth is available for the corresponding pipe cross-section. A minimum heat conduction error can only be achieved in this way.

Adapter screw fitting

Adapter screw fittings are used to adapt process connection threads to the threads of the pockets or temperature probes. The correct choice eliminates stacking, which has the effect of moving the measurement-active part of the temperature probe away from the center of the pipe.

Mounting accessories

Mounting accessories, such as welding nipples, round off the range available for adapting the installation location to the temperature probe or the pocket.

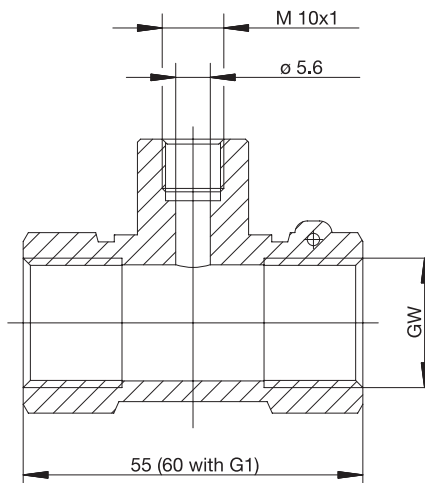
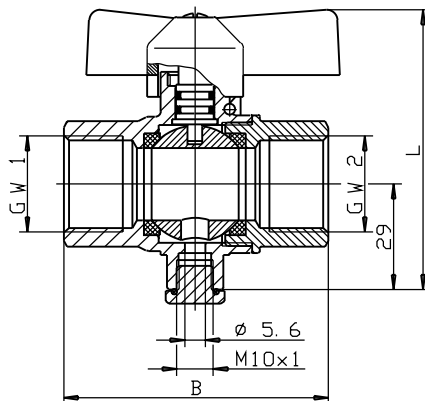
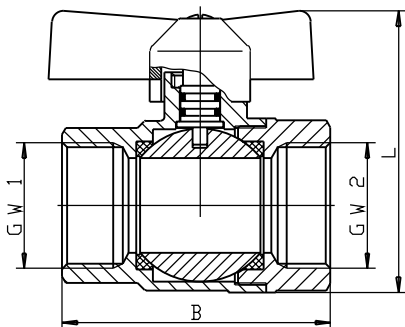
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Dimensions



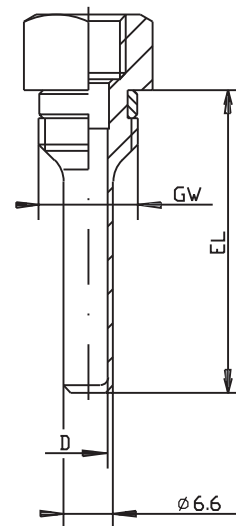
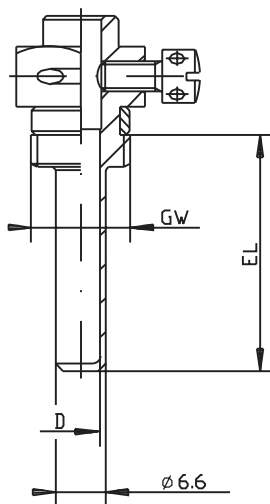
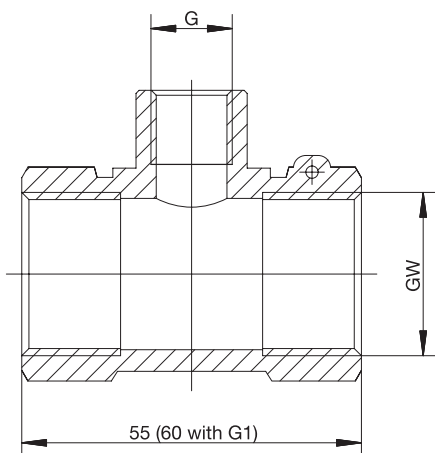
| | | | |
|---|------|------|----|
| | G1/2 | G3/4 | G1 |
| L | 67 | 67 | 74 |
| B | 64 | 64 | 71 |

| | | | |
|---|------|------|-------|
| | G1/2 | G3/4 | G1 |
| L | 77 | 77 | 84 |
| B | 64 | 73 | 85, 5 |

Type 902440/10

Type 902440/11

Type 902440/30



Type 902440/31

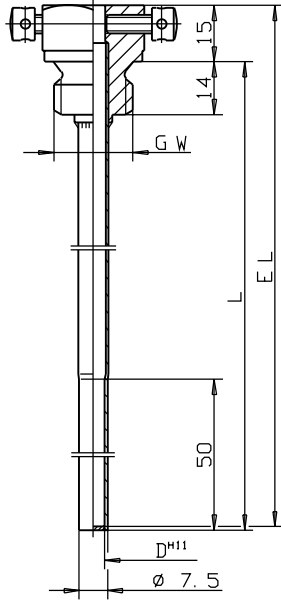
Type 902440/40

Type 902440/41

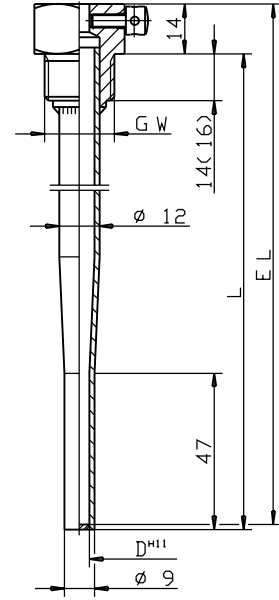
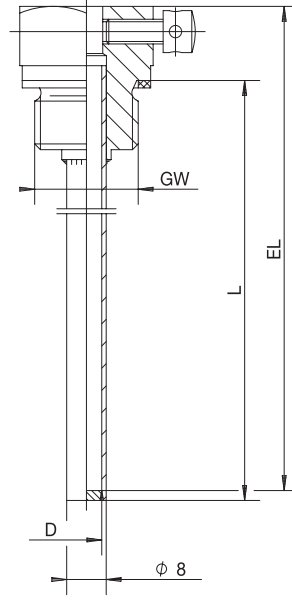
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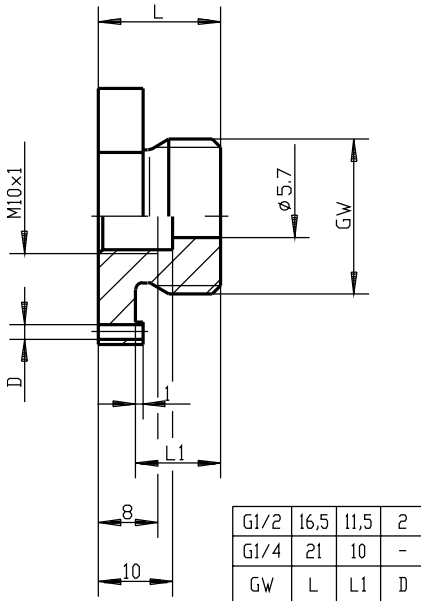
| | | |
|------|-----|-----|
| 3 | 210 | 223 |
| 2 | 120 | 133 |
| 1 | 85 | 98 |
| Pos. | L | EL |



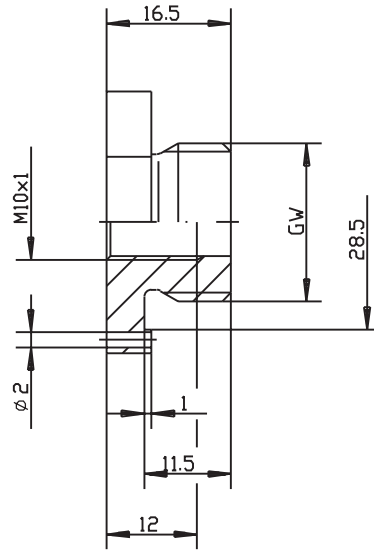
Type 902440/42

Type 902440/43

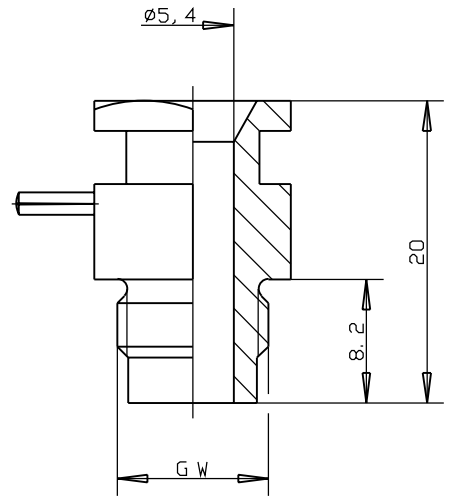
Type 902440/44



Type 902440/50



Type 902440/51

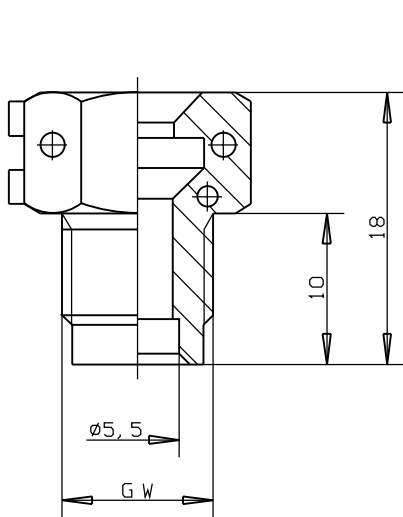


Type 902440/60

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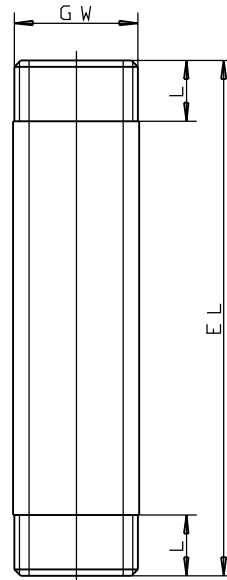
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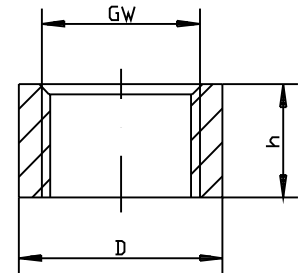


| | L |
|--------|----|
| G3/4 | 13 |
| G1 | 16 |
| G1 1/4 | 18 |
| G2 | 20 |

Type 902440/61



Type 902440/65



| | | |
|------|------|----|
| G1/4 | 18,5 | 25 |
| G1/2 | 27 | 15 |
| GW | D | h |

Type 902440/67

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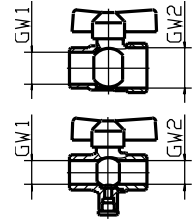
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Order details: Installation locations for temperature probes

(1) Basic version

| | |
|------------------------------------|---|
| 902440/10 | Ball valve with 2 process connections, no measurement nipple, nickel-plated brass, T _{max.} = 150°C, PN = 16bar |
| 902440/11 | Ball valve with 2 process connections, measurement nipple M10 x 1 to EN 14 34, for fitting type DS temperature probes, nickel-plated brass, T _{max.} = 150°C, PN = 16bar |
| (2) Process connection GW 1 | |
| x x | 104 female thread G 1/2 (1/2" pipe) |
| x x | 105 female thread G 3/4 (3/4" pipe) |
| x x | 106 female thread G 1 (1" pipe) |
| (3) Process connection GW 2 | |
| x | 104 female thread G 1/2 (1/2" pipe) |
| x | 105 female thread G 3/4 (3/4" pipe) |
| x x | 106 female thread G 1 (1" pipe) |
| x | 165 union nut 3/4" pipe |
| x | 166 union nut G 1 (1" pipe) (cannot be combined with G 1/2) |
| x | 167 union nut G 1 1/4 (1 1/4" pipe) (cannot be combined with G 1/2 and G 3/4) |

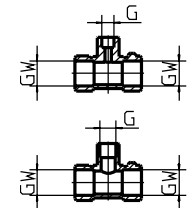


Order code (1) - (2) - (3)
 Order example 902440/11 - 105 - 105

Order details: Installation locations for temperature probes

(1) Basic version

| | |
|----------------------------------|--|
| 902440/30 | Tee with identical female thread at both ends, measurement nipple M10 x 1 to EN 14 34, for fitting type DS temperature probes, brass |
| 902440/31 | Tee with identical female thread at both ends, measurement nipple with thread throughout, brass |
| (2) Process connection GW | |
| x x | 104 female thread G 1/2 (1/2" pipe) |
| x x | 105 female thread G 3/4 (3/4" pipe) |
| x x | 106 female thread G 1 (1" pipe) |
| (3) Measurement nipple G | |
| x | 102 G 1/4 (1/4" pipe) |
| x | 104 G 1/2 (1/2" pipe) |
| x x | 114 M 10 x 1 |



Order code (1) - (2) - (3)
 Order example 902440/30 - 105 - 114

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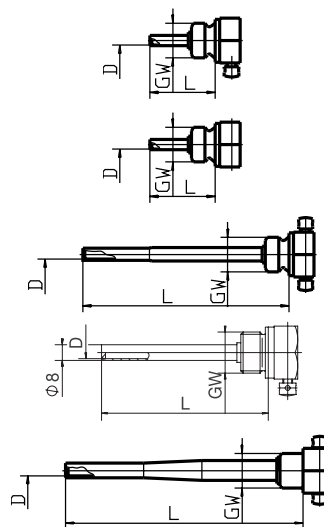
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Order details: Installation locations for temperature probes

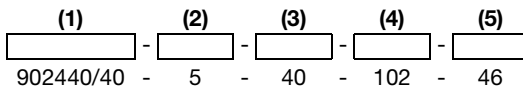
(1) Basic version

| | | |
|---|---|--|
| | 902440/40 | Screw-in pocket with screw for lead sealing, straight protection tube, approved up to 90°C, PN = 16bar |
| | 902440/41 | Screw-in pocket with M 10 x 1 thread, straight protection tube, approved up to 130°C, PN = 16bar |
| | 902440/42 | Screw-in pocket to EN 14 34 with screw for lead sealing, external dia. 8mm stepped down to 7.5mm, internal dia. 6mm, fitting tolerance H10, approved up to 200°C, PN = 16bar |
| | 902440/43 | Screw-in pocket with screw for lead sealing, external dia. 8mm, internal dia. 6.2mm max., approved up to 200°C, PN = 16bar |
| | 902440/44 | Screw-in pocket with screw for lead sealing, external dia. 12mm stepped down to 9mm, internal dia. 6mm, fitting tolerance H12, PN = 25bar |
| | (2) Internal diameter of protection tube in mm | |
| x | 5 | 5mm |
| x | 5.2 | 5.2mm |
| x | x | 6 |
| | (3) Fitting length EL in mm (85 ≤ EL ≤ 400 for Types 902440/42, 902440/43) | |
| x | 35 | 35mm |
| x | x | 40 |
| x | | 50 |
| | x | 85 |
| | x | x |
| | x | 120 |
| | x | 155 |
| | x | x |
| | x | 210 |
| | (4) Process connection GW | |
| x | 102 | male thread G 1/4 (1/4" pipe) |
| x | 103 | male thread G 3/8 (3/8" pipe) |
| x | x | 104 |
| | x | x |
| | x | 105 |
| | (5) Material | |
| | 20 | stainless steel |
| x | x | 46 |



Order code

Order example



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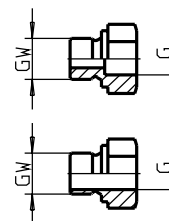
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Order details: Installation locations for temperature probes

(1) Basic version

| | | |
|-----|----------------------------------|---|
| | 902440/50 | Adapter screw fitting, measurement nipple M10 x 1 to EN 14 34, for fitting type DS temperature probes |
| | 902440/51 | Adapter screw fitting, measurement nipple thread throughout |
| | (2) Process connection GW | |
| x | 102 | male thread G 1/4 (1/4" pipe) |
| x x | 104 | male thread G 1/2 (1/2" pipe) |
| | (3) Measurement nipple G | |
| x x | 114 | M 10 x 1 |
| | (4) Material | |
| x | 20 | stainless steel |
| x x | 46 | brass |



Order code **(1)** **(2)** **(3)** **(4)**
Order example 902440/50 - 102 - 114 - 46

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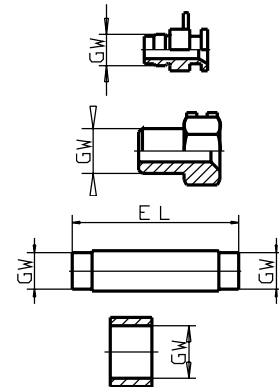
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Order details: Installation locations for temperature probes

(1) Basic version

| | |
|------------------------------------|---|
| 902440/60 | Adapter screw fitting set, for temperature probe conversion to direct installation in EN 14 34 location |
| 902440/61 | Screw-fitting, folding, for fitting the temperature probe in type 902440/41 pocket |
| 902440/65 | Twin nipple (meter substitution unit) |
| 902440/67 | Welding nipple |
| (2) Fitting length EL in mm | |
| 000 | no fitting length |
| 105 | 105mm (with 1" pipe) |
| 110 | 110mm (with 3/4" pipe) |
| 130 | 130mm (with 1" pipe) |
| 135 | 135mm (with 1 1/4" pipe) |
| 150 | 150mm (with 2" pipe) |
| 190 | 190mm (with 1" pipe) |
| 260 | 260mm (with 1 1/4" pipe) |
| 300 | 300mm (with 2" pipe) |
| (3) Process connection GW | |
| 102 | G 1/4 (1/4" pipe) |
| 104 | G 1/2 (1/2" pipe) |
| 105 | G 3/4 (3/4" pipe) |
| 106 | G 1 (1" pipe) |
| 107 | G 1 1/4 (1 1/4" pipe) |
| 110 | G 2 (2" pipe) |
| 114 | M 10 x 1 |
| (4) Material | |
| 01 | steel |
| 46 | brass |
| 85 | plastic |



Order code - - -
 Order example 902440/60 - 000 - 114 - 46

Stock versions:

| (1) | (2) | (3) | Sales No. |
|-----------|-----|-----|-------------|
| 902440/10 | 104 | 106 | 90/00364318 |
| 902440/10 | 105 | 106 | 90/00364323 |
| 902440/10 | 106 | 106 | 90/00364331 |
| 902440/11 | 104 | 104 | 90/00349813 |
| 902440/11 | 105 | 105 | 90/00349814 |
| 902440/11 | 106 | 106 | 90/00349816 |
| 902440/31 | 104 | 102 | 90/00329064 |
| 902440/31 | 105 | 102 | 90/00329067 |
| 902440/31 | 106 | 102 | 90/00329068 |

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Stock versions:

| (1) | (2) | (3) | (4) | (5) | Sales No. |
|-----------|-----|-----|-----|-----|-------------|
| 902440/40 | 5 | 35 | 102 | 46 | 90/00340460 |
| 902440/40 | 5.2 | 35 | 102 | 46 | 90/00330518 |
| 902440/40 | 5.2 | 50 | 103 | 46 | 90/00330497 |
| 902440/40 | 5.2 | 50 | 104 | 46 | 90/00326403 |
| 902440/41 | 5.2 | 40 | 102 | 46 | 90/00362827 |
| 902440/42 | 6 | 85 | 104 | 20 | 90/00081683 |
| 902440/42 | 6 | 120 | 104 | 20 | 90/00081684 |
| 902440/43 | 6 | 85 | 104 | 20 | 90/00349100 |
| 902440/43 | 6 | 120 | 104 | 20 | 90/00352465 |

Stock versions:

| (1) | (2) | (3) | (4) | Sales No. |
|-----------|-----|-----|-----|-------------|
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Stock versions:

| (1) | (2) | (3) | (4) | Sales No. |
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| 902440/61 | 000 | 114 | 85 | 90/00362826 |