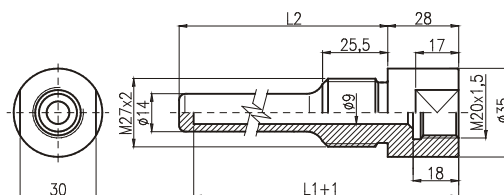


Thermowell for Screwing

- Nominal pressure PN160.
- Inner bore diameter 9 mm.

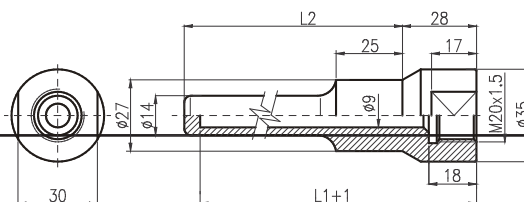


| Type | Description | | |
|---------------------|--|--|----------------|
| • WT70 C 01 | Temperature cylindrical thermowell for screwing, PN160 | | |
| Code | Inner bore diameter [mm] | | |
| • V900 | 9 | | |
| Code | Inner thread | | |
| • Z01 | M20x1.5 | | |
| Code | Process connection | | |
| • P02 | M27x2 | | |
| Code | Nominal length L [mm] | Length L1 [mm] | Length L2 [mm] |
| • L100 | 100 | 101+1 | 76 |
| • L160 | 160 | 161+1 | 136 |
| • L250 | 250 | 251+1 | 226 |
| • L400 | 400 | 401+1 | 376 |
| • L630 | 630 | 631+1.5 | 606 |
| L... | Other (fill nominal length and other required dimensions in mm) | | |
| Code | Thermowell material | Tmax | |
| • M01 ¹⁾ | 1.0570 | 400 °C | |
| • M03 | 1.4541 | 600 °C | |
| • M04 | 1.4571 | 500 °C | |
| M99 | Other | | |
| Code | OPTIONAL ACCESSORIES | | |
| | Protective coating | Tmax (with spray) | |
| X01 | Polyamide PA11 | 100 °C (depending on measured medium) | |
| X02 | Ethylene-chlorotrifluorethylene E-CTFE "Halar" | 170 °C (depending on measured medium) | |
| X03 | Perfluoralkoxy - copolymer tetrafluorethylene and perfluorated vinyl ether PFA | 260 °C (depending on measured medium) | |
| X04 | Ethylentetrafluorethylene ETFE "Hyflon" | 130 °C (depending on measured medium) | |
| X05 | Polytetrafluorethylene PTFE | 260 °C (depending on measured medium) | |
| X08 | Corundum spray for extremely abrasive media | according to specific composition of coating | |
| X09 | Other | | |

Example of order: WT70 C 01 V900 Z01 P02 L160 M03

Thermowell for Welding

- Nominal pressure PN160.
- Inner bore diameter 9 mm.



| Type | Description | | |
|---------------------|---|----------------|----------------|
| • WT70 C 02 | Temperature cylindrical thermowell for welding, PN160 | | |
| Code | Inner bore diameter [mm] | | |
| • V900 | 9 | | |
| Code | Inner thread | | |
| • Z01 | M20x1.5 | | |
| Code | Process connection | | |
| • P31 | Diameter 27 mm | | |
| Code | Nominal length L [mm] | Length L1 [mm] | Length L2 [mm] |
| • L100 | 100 | 101+1 | 76 |
| • L160 | 160 | 161+1 | 136 |
| • L250 | 250 | 251+1 | 226 |
| • L400 | 400 | 401+1 | 376 |
| • L630 | 630 | 631+1.5 | 606 |
| L... | Other (fill nominal length and other required dimensions in mm) | | |
| Code | Thermowell material | Tmax | |
| • M01 ¹⁾ | 1.0570 | 400 °C | |
| • M03 | 1.4541 | 600 °C | |
| • M04 | 1.4571 | 500 °C | |
| M99 | Other | | |

Example of order: WT70 C 02 V900 Z01 P31 L160 M03

Архангельск (8182)63-90-72
 Астана +7(7172)727-132
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 Волгоград (844)278-03-48
 Вологда (8172)26-41-59
 Воронеж (473)204-51-73
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 Иваново (4932)77-34-06
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 Казань (843)206-01-48

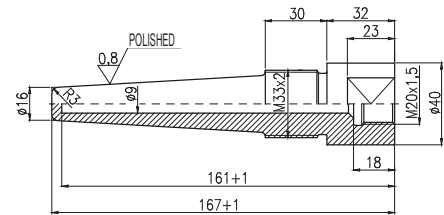
Калининград (4012)72-03-81
 Калуга (4842)92-23-67
 Кемерово (3842)65-04-62
 Киров (8332)68-02-04
 Краснодар (861)203-40-90
 Красноярск (391)204-63-61
 Курск (4712)77-13-04
 Липецк (4742)52-20-81
 Магнитогорск (3519)55-03-13
 Москва (495)268-04-70
 Мурманск (8152)59-64-93
 Набережные Челны (8552)20-53-41

Нижний Новгород (831)429-08-12
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 Пенза (8412)22-31-16
 Пермь (342)205-81-47
 Ростов-на-Дону (863)308-18-15
 Рязань (4912)46-61-64
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 Тверь (4822)63-31-35
 Томск (3822)98-41-53
 Тула (4872)74-02-29
 Тюмень (3452)66-21-18
 Ульяновск (8422)24-23-59
 Уфа (347)229-48-12
 Челябинск (351)202-03-61
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Heavy Duty Thermowell

- Nominal pressure PN400.
- Inner bore diameter 9 mm.



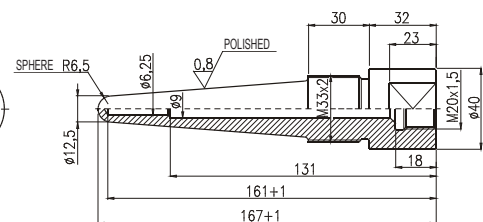
| Type | Description | |
|-------------|--|----------------|
| • WT70 T 21 | Temperature conical thermowell for screwing, PN400 | |
| Code | Inner bore diameter [mm] | |
| • V900 | 9 | |
| Code | Inner thread | |
| • Z01 | M20x1.5 | |
| Code | Process connection | |
| • P01 | M33x2 | |
| Code | Nominal length L [mm] | Length L1 [mm] |
| • L160 | 160 | 161+1 |
| Code | Thermowell material | |
| • M02 | 1.7715 | |
| • M03 | 1.4541 | |
| • M99 | Other | |

Example of order: WT70 T 21 V900 Z01 P01 L160 M03

- ... Ex stock version

Heavy Duty Thermowell

- Nominal pressure PN400.
- Inner bore diameter 6.25 mm.



| Type | Description | |
|-------------|--|----------------|
| • WT70 T 21 | Temperature conical thermowell for screwing, PN400 | |
| Code | Inner bore diameter [mm] | |
| • V625 | 6.25 | |
| Code | Inner thread | |
| • Z01 | M20x1.5 | |
| Code | Process connection | |
| • P01 | M33x2 | |
| Code | Nominal length L [mm] | Length L1 [mm] |
| • L160 | 160 | 161+1 |
| Code | Thermowell material | |
| • M02 | 1.7715 | |
| • M03 | 1.4541 | |
| • M99 | Other | |

Example of order: WT70 T 21 V625 Z01 P01 L160 M03

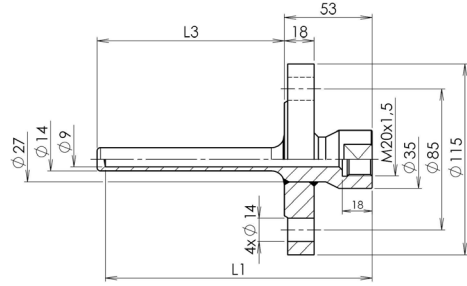
- ... Ex stock version

Thermowells from special materials

Thermowells from nickel, titanium, tantalum, Monel, etc. for corrosive conditions can be delivered.

Thermowell with Flange and Optional Protective Coating

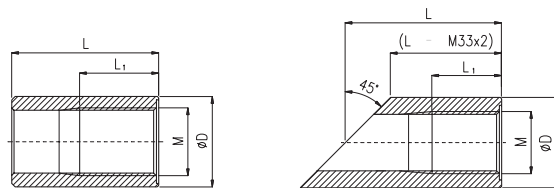
- High chemical resistance.
- Suitable mechanical properties.
- Nominal pressure PN40.
- Mounting with suitable resistance and thermocouple temperature sensors into thermowells.



| Type | Description | | |
|--|--|--|----------------|
| WT70 C 03 | Temperature cylindrical thermowell with flange | | |
| Code | Inner bore diameter [mm] | | |
| V900 | 9 | | |
| Code | Inner thread | | |
| Z01 | M20x1.5 | | |
| Code | Process connection | | |
| P54 | flange DN 25/PN 40 according to EN 1092-1, form B1 | | |
| Code | Nominal length L [mm] | Length L1 [mm] | Length L2 [mm] |
| L100 | 100 | 101+1 | 50 |
| L160 | 160 | 161+1 | 110 |
| L250 | 250 | 251+1 | 200 |
| L400 | 400 | 401+1 | 350 |
| L630 | 630 | 631+1.5 | 580 |
| L... | Other (fill nominal length and other required dimensions in mm) | | |
| Code | Thermowell material | Tmax | |
| M01 ¹⁾ | 1.0570 | 400 °C | |
| M03 | 1.4541 | 600 °C | |
| M04 | 1.4571 | 500 °C | |
| M99 | Other | | |
| Code | OPTIONAL ACCESSORIES | | |
| | Protective coating | Tmax (with spray) | |
| X01 | Polyamide PA11 | 100 °C (depending on measured medium) | |
| X02 | Ethylene-chlorotrifluorethylene E-CTFE "Halar" | 170 °C (depending on measured medium) | |
| X03 | Perfluoralkoxy - copolymer tetrafluorethylene and perfluorated vinyl ether PFA | 260 °C (depending on measured medium) | |
| X04 | Ethylentetrafluorethylene ETFE "Hyflon" | 130 °C (depending on measured medium) | |
| X05 | Polytetrafluorethylene PTFE | 260 °C (depending on measured medium) | |
| X08 | Corundum spray for extremely abrasive media | according to specific composition of coating | |
| X09 | Other | | |
| Example of order: WT70 C 03 V900 Z01 P54 L160 M03 | | | |

¹⁾ ... Only for nominal length max. 250 mm.

Welded-on Pieces for Thermowells WT70 C and WT70 T

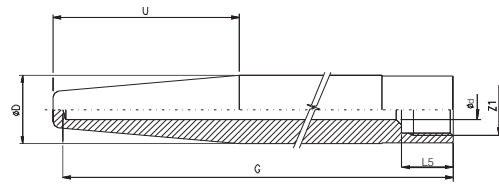


| Type | Description | | |
|------------------------------------|---|------------------|-------------------------------|
| • NV | Welded-on piece for thermowells WT70 C and WT70 T | | |
| Code | Thread dimension M | Nominal pressure | L / L1 / D [mm] ¹⁾ |
| • M20 | M20x1.5 | PN160 | 50 / 25 / 30 (28) |
| • M27 | M27x2 | PN160 | 65 / 30 / 40 (35) |
| • M30 | M30x2 | PN160 | 65 / 35 / 40 (38) |
| • M33 | M33x2 | PN250 | 40 / 35 / 55 |
| 99 | Other (specify thread in the order) | | |
| Code | Version | | |
| • P | Straight | | |
| • S | Oblique 45° | | |
| J | Other (specify angle in the order) | | |
| Code | Material | Tmax | |
| • 0 | 1.0308, (PN40 only) | 300 °C | |
| • 1 | 1.0570 | 400 °C | |
| • 2 | 1.7715 | 575 °C | |
| • 4 | 1.4541 | 550 °C | |
| • 5 | 1.4903 | 620 °C | |
| 9 | Other | | |
| Example of order: NV M27 P1 | | | |

• ... Ex stock version ¹⁾ ... Other length of the welded-on piece specify in brackets of ordering code, in brackets are information for material 1.0308.

Thermowell for Welding according to DIN 43772

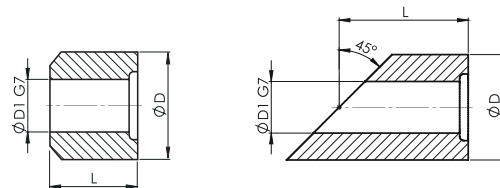
- Nominal pressure PN250.
- ES Certification of control test type acc. to Directive 97/23/ES, issued by TÜV.
- Certified as pressure accessories of energetic equipment, category III acc. to European Directive PED.



| Type | Description | | | |
|--|---|----------------|-------------------------------|--------------------------|
| • WT70 D | Temperature conical thermowell for welding according to DIN 43772 | | | |
| Code | Version | Design | Process connection diameter D | Inner bore diameter [mm] |
| • 31 | conical for welding | 4 | diameter 18h7 | 3,5 - only for code Z4 |
| • 32 | conical for welding | 4 | diameter 24h7 | 7 - only for code Z2 |
| • 33 | conical for welding | 4 | diameter 26h7 | 7 |
| • 34 | conical for welding | 4 | diameter 26h7 | 9 |
| • 99 | Other | | | |
| Code | Inner thread | Length L5 [mm] | | |
| • Z01 | M20x1.5 | 15 | - not for codes 31,32 | |
| • Z02 | M18x1.5 | 15 | - only for code 32 | |
| • Z04 | M14x1.5 | 13 | - only for code 31 | |
| • Z99 | Other | | | |
| Code | Nominal length L [mm] | Length U [mm] | Length G [mm] | Length U1 [mm] |
| • L200 | 200 | 65+2 | 195+1 | 130±2 |
| L... | Other (fill nominal length and other required dimensions in mm) | | | |
| Code | Thermowell material | Tmax | | |
| • M11 | 1.0425, P265GH | 450 °C | | |
| • M02 | 1.7715 | 575 °C | | |
| • M03 | 1.4541 | 600 °C | | |
| • M05 | 1.4903 | 620 °C | | |
| • M99 | Other specific thermowell consult with the manufacturer | | | |
| Code | OPTIONAL ACCESSORIES | | | |
| | Protective coating | | | |
| • P64 | Flange DN 40/PN 160 according to EN 1092-1 | | | |
| • P67 | Flange DN 40/PN 250 according to EN 1092-1 | | | |
| • P99 | Other | | | |
| Example of order: WT70 D 32 V900 Z02 L200 M03 | | | | |

- ... Ex stock version

Welded-on Pieces for Thermowells WT70 D



| Type | Description | |
|---------------------------------------|--|--|
| • NV | Welded-on piece for thermowells WT70 D | |
| Code | Inner diameter of welded-on piece | Length / outer diameter D [mm] ¹⁾ |
| • D18 | 18G7 | 40 / 39 |
| • D24 | 24G7 | 40 / 49 |
| • D26 | 26G7 | 40 / 49 |
| • D99 | Other | |
| Code | Version | |
| • P | Straight | |
| • S | Oblique 45° | |
| • J | Other (specify angle in the order) | |
| Code | Material | |
| • M01 | 1.0570 | |
| • M11 | 1.0425, P265GH | |
| • M02 | 1.7715 | |
| • M03 | 1.4541 | |
| • M04 | 1.4571 | |
| • M05 | 1.4903 | |
| • M99 | Other | |
| Example of order: NV D26 P M03 | | |

- ... Ex stock version ¹⁾ ... Other length of the welded-on piece specify in brackets of ordering code.

Seals for Temperature Sensors



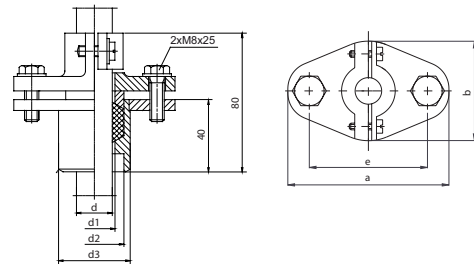
| Type | Description | |
|------|------------------------------|---|
| • TT | Seal for temperature sensors | |
| Code | For thread | Dimensions (diameter D/ diameter d - t) |
| • 20 | M20x1.5 | d. 24/ d. 20 - 1.5 |
| • 21 | G1/2" | d. 25/ d. 21 - 1.5 |
| • 27 | M27x2, G3/4" | d. 32/ d. 27 - 2 |
| • 30 | M30x2 | d. 36/ d. 30 - 2 |
| • 33 | M33x2, G1" | d. 39/ d. 33 - 2 |
| 99 | Other | |
| Code | Material | Tmax |
| • CU | Copper (annealed) | 300 °C |
| • AL | Aluminium | 300 °C |
| • MP | Metalloplastic | 300 °C |
| 9 | Other | |

Example of order: TT 21 CU

- ... Ex stock version

Fixing Shift Flanges

- For fixing of temperature sensor by protective tube
- Sealing element: ceramic ligament.
- Maximal operating pressure 100 kPa, maximal operation temperature 400 °C.



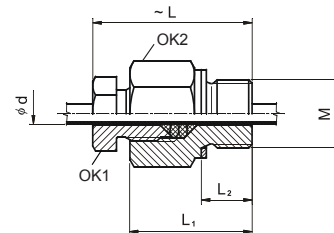
| Type | Dimensions [mm] | | d ₁ | | d ₂ | d ₃ | b | a | e |
|---------|-----------------|--------|----------------|--------|----------------|----------------|----|----|----|
| | Nominal | Actual | Nominal | Actual | | | | | |
| • UP 01 | 14 | 15 | 14 | 16 | 28 | 34 | 50 | 75 | 55 |
| • UP 02 | 15 | 16 | 15 | 17 | 28 | 34 | 50 | 75 | 55 |
| • UP 03 | 22 | 24 | 22 | 23 | 36 | 45 | 65 | 90 | 70 |
| • UP 04 | 32 | 33 | 26 | 28 | 36 | 45 | 65 | 90 | 70 |
| • UP 05 | 32 | 33 | 32 | 33 | 42 | 51 | 65 | 90 | 70 |

Example of order: UP 02

- ... Ex stock version

Fixing Shift Pipe Union

- For fixing of temperature sensor by stem or protective tube.
- Sealing element: Teflon seal.
- Maximal operating pressure 100 kPa, maximal operation temperature 400 °C.



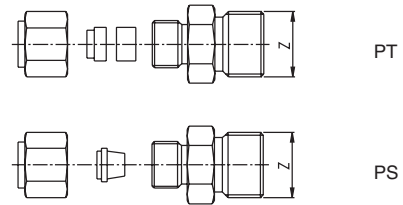
| Type ¹⁾ | Dimensions [mm] | | Connection thread | L | L ₁ | L ₂ | OK1 | OK2 |
|--------------------|---------------------|--------|-------------------|----|----------------|----------------|-----|-----|
| | Nominal | Actual | | | | | | |
| • UPS 3 M12 | 3 | 3.5 | M12x1.5 | 36 | 27 | 10 | 14 | 19 |
| • UPS 4.5 M12 | 4.5 | 5 | M12x1.5 | 36 | 27 | 10 | 14 | 19 |
| • UPS 6 M20 | 6 | 6.5 | M20x1.5 | 47 | 35 | 15 | 19 | 27 |
| • UPS 8 M20 | 8 | 8.5 | M20x1.5 | 47 | 35 | 15 | 19 | 27 |
| • UPS 11 M20 | 11 | 11.5 | M20x1.5 | 47 | 35 | 15 | 22 | 27 |
| • UPS 14 M27 | 14 | 14.5 | M27x2 | 61 | 43 | 20 | 27 | 32 |
| • UPS 15 M27 | 15 | 15.5 | M27x2 | 61 | 43 | 20 | 27 | 32 |
| • UPS 20 M30 | 20 | 20.5 | M30x2 | 72 | 50 | 24 | 32 | 36 |
| • UPS 22 M33 | 22 | 22.5 | M33x2 | 72 | 50 | 24 | 36 | 41 |
| Code | Material | | | | | | | |
| • 0 | 1.0308 (galvanized) | | | | | | | |
| 9 | Other | | | | | | | |

Example of order: UPS 6 M20 0

- ... Ex stock version

¹⁾ ... It is suitable only for mounting of temperature sensors in non-flowing gas medium, free of mechanical stress including impacts and vibrations, where adjustable nominal length is required and it is impossible to use fixing pipe unions PT because of high temperature.

Fixing Shift Pipe Union for Sheath Temperature Sensors



| Type | Description | | |
|-------------------|---|---|------------------|
| • P | Fixing shift pipe union for sheath temperature sensors | | |
| Code | Version | Tmax | Pmax |
| • S ¹⁾ | With stainless steel cutting ring, pipe union of stainless steel material | 600 °C / 0.1 MPa | 4 MPa / 100 °C |
| T ²⁾ | With PTFE sealing ring, pipe union of stainless steel material | 200 °C / 0.1 MPa | 0.6 MPa / 100 °C |
| Code | Connection thread Z | | |
| • M01 | M8x1 | - only for sensors with diameter sheath 1 to 3 mm | |
| • M02 | M12x1.5 | - only for sensors with diameter sheath 3 to 6 mm | |
| M03 | M16x1.5 | - only for sensors with diameter sheath 3 to 6 mm | |
| • M04 | M20x1.5 | - only for sensors with diameter sheath 3 to 6 mm | |
| G01 | G1/8" | - only for sensors with diameter sheath 1 to 3 mm | |
| G02 | G1/4" | - only for sensors with diameter sheath 3 to 6 mm | |
| G03 | G3/8" | - only for sensors with diameter sheath 3 to 6 mm | |
| • G04 | G1/2" | - only for sensors with diameter sheath 3 to 6 mm | |
| N01 | 1/8" NPT | - only for sensors with diameter sheath 1 to 3 mm | |
| N02 | 1/4" NPT | - only for sensors with diameter sheath 3 to 6 mm | |
| N03 | 3/8" NPT | - only for sensors with diameter sheath 3 to 6 mm | |
| N04 | 1/2" NPT | - only for sensors with diameter sheath 3 to 6 mm | |
| Code | Outside diameter of stem sensor | | |
| D15 | 1.5 mm | | |
| D20 | 2 mm | | |
| • D30 | 3 mm | | |
| D45 | 4.5 mm | | |
| • D60 | 6 mm | | |

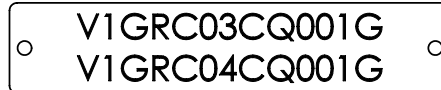
Example of order: PS M04 D30

- ... Ex stock version
- ¹⁾ ... Adjustable immersion length of temperature sensor only for first time of mounting.
- ²⁾ ... Always adjustable immersion length of temperature sensor.

BZS Stainless steel tag

Suitable for:

- KKS codes (TAG).
- Name of the measuring point.
- Cable identification numbers etc.



| Type | Description | | |
|------|------------------------------------|----------|--|
| BZS | Stainless steel tag for attachment | | |
| Code | Dimensions [mm] | Material | Number of holes for mounting |
| 1 | 70x15x1 | 1.4401 | 1 - max. 1 line of text with height 5 mm, length 58 mm |
| 2 | 70x20x1 | 1.4401 | 1 - max. 2 lines of text with height 5 mm, length 58 mm |
| 3 | 135x42x1 | 1.4301 | 2 - max. 4 lines of text with height 5 mm, length 115 mm |
| 4 | 195x67x1 | 1.4301 | 2 - max. 7 lines of text with height 5 mm, length 160 mm |
| 5 | 88x18x1 | 1.4401 | 2 - max. 2 lines of text with height 5 mm, length 76 mm |
| 9 | Other | | |
| Code | Character height | | |
| 5 | 5 mm (standard) | | |
| ... | Other | | |

Example of order: BZS2 5

Архангельск (8182)63-90-72
Астана +7(7172)727-132
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