

Diesel Exhaust Thermometer, Rigid Mount

TAS

Crimped-on ring case stainless steel

Diesel exhaust thermometers are primarily used for the measurement of exhaust and cooling water temperatures at diesel engines. They are specially designed for these high mechanical and technical loads, among others due to the "stem in jacket version" and the standard case filling with highly viscous silicone oil. To increase their durability, diesel exhaust thermometers should always be applied in combination with a thermowell.

Standard Versions

This data sheet contains detailed information on our standard versions and available options. In overview 8000 you will find additional information on selection, metrological features, permissible ambient and storage temperatures as well as error limits, etc. Information on the metrologically optimal design of thermometers can be found in our technical information sheet T08-000-031.

Measuring Unit

With nitrogen filling (inert gas, physiologically safe)

Accuracy (DIN EN 13 190)

Class 1

Case

With polished crimped-on ring, stainless steel 1.4301 (304)

Degree of Protection (DIN EN 60 529/IEC 529)

IP65

Case Filling

Silicone oil

Nominal Case Sizes

63, 80, 100 mm (2½, 3, 4")

Case Configuration

Connection temperature sensor (stem):

- rigid mount with neck tube

Stem position:

- vertical bottom position

- centre back position (rm)

Temperature Ranges

0 – 120 °C

50 – 650 °C

Temperature Sensor (Stem)

Made of stainless steel 1.4571 (316Ti)

Max. static operating pressure: 25 bar

Stem models (jacket version): A5.5, A1.5 or A3.5

Stem Ø dF: 10, 12 or 13 mm

Stem length (standard): 150, 200, 250, 300 or 400 mm

Lmin = 150 mm

Compression fitting

for stem model A5.5: galvanised steel

Window

Instrument glass

Movement

Brass/German silver



Dial

0 – 120 °C aluminum white, scale black

50 – 650 °C aluminum natural finish, scale black

Pointer

Aluminum black

Indication Adjustment (±6 %)

Externally via screw

Ordering Information, Standard Ranges, Options

See page 4

Special Versions and Further Options

- Other stem lengths and connection threads upon request
- Version for particularly extreme loads
- Other temperature ranges and/or special scales, e.g. dual scale °C/°F, coloured fields or ranges, dial inscriptions
- Case parts stainless steel 1.4404 (316L) upon request
- Position of connection radial at 3 o'clock, 9 o'clock, 12 o'clock, others upon request or other than vertical installation (90°)
- GOST version for Russia, Ukraine, Kazakhstan, Belarus

Thermowells

See data sheets 8.8110 ff.



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Stem Position, Code Letters, Dimensional Data and Weights

Vertical Bottom Stem Position

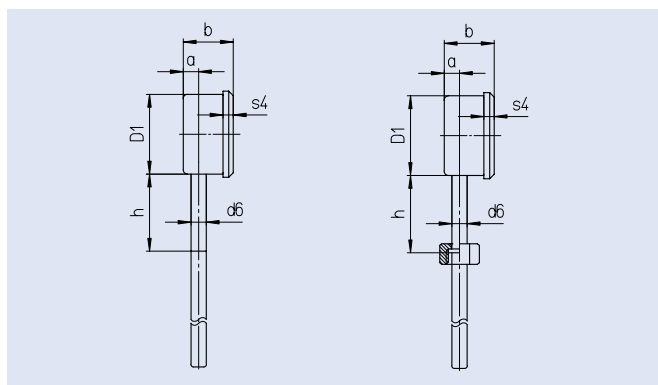
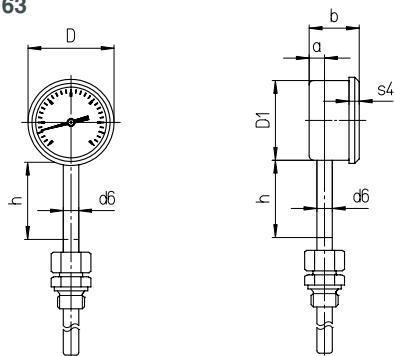
Stem model A5.5

Stem model A1.5

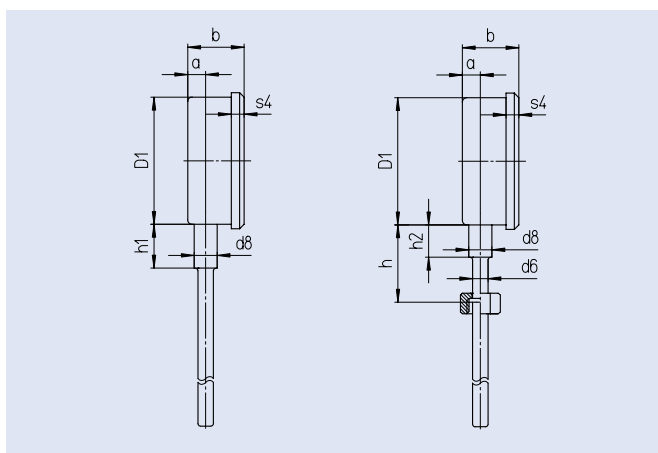
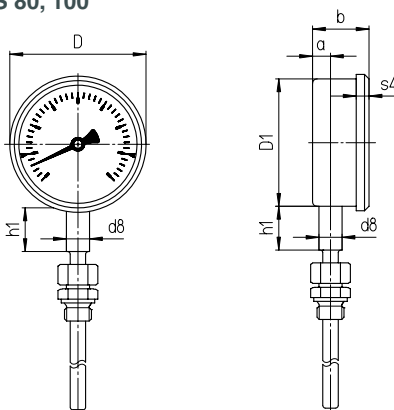
Stem model 3.5

without additional code letter

TAS 63



TAS 80, 100



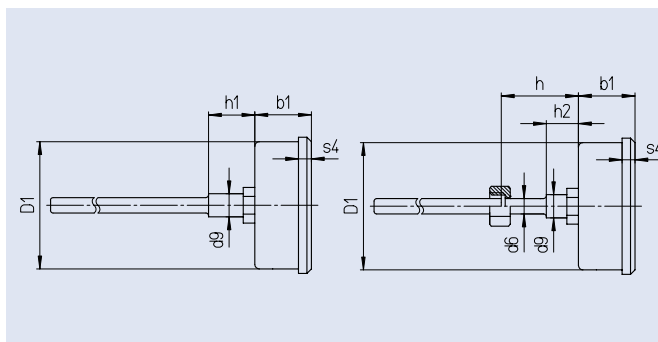
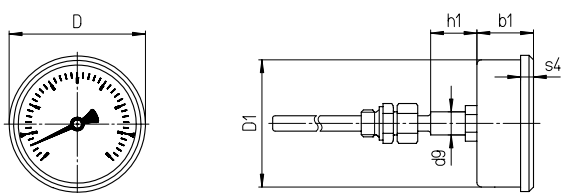
Centre Back Stem Position

Stem model A5.5

Stem model A1.5

Stem model 3.5

code letters rm



Dimensional Data (mm) and Weights (kg)

| NCS | a | b | b1 | D | D1 | d6 | d8 | d9 | h | h1 | h2 | s4 | approx. weight ¹⁾ TAS |
|-----|----|----|----|-----|----|----|----|----|----|----|----|----|-------------------------------------|
| 63 | 12 | 39 | 39 | 67 | 62 | 12 | 18 | 18 | 60 | 34 | 25 | 8 | 0.33 |
| 80 | 15 | 42 | 42 | 86 | 79 | 12 | 18 | 18 | 60 | 34 | 25 | 8 | 0.5 |
| 100 | 15 | 43 | 43 | 106 | 99 | 12 | 18 | 18 | 60 | 34 | 25 | 10 | 0.7 |

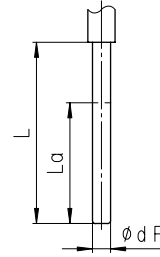
¹⁾ The data are examples and relate to the version with stem A1.5, Ø 10 mm, length 200 mm.

Stem Models

Stem Models

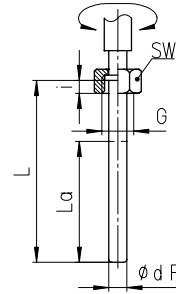
Process connection: Without screw fitting, plain stem

Stem model: A1.5
Form acc. to DIN EN 13 190: Form 1
Stem material: 1.4571
Stem Ø dF: 10, 12, 13 mm
Order length L (standard length): 150, 200, 250, 300, 350, 400 mm
Suitable thermowell models: SK2 (8.8141)
 (data sheet)



Process connection: Union nut

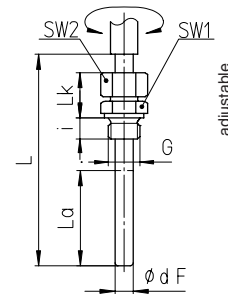
Stem model: A3.5
Form acc. to DIN EN 13 190: Form 5
Stem material: 1.4571
Stem Ø dF: 10, 12, 13 mm
Screw fitting material: 1.4571
Order length L (standard length): 150, 200, 250, 300, 350, 400 mm
Suitable thermowell models: SF4F (8.8112), SF4.1F (8.8113)
 (data sheet) SF9 (8.8131)



| Thread (dimensional data in mm): | G | SW | i |
|-------------------------------------|---------|----|----|
| | G 1/2 | 27 | 10 |
| | G 3/4 | 32 | 12 |
| | M20x1.5 | 27 | 10 |
| | M27x2 | 32 | 12 |

Process connection: Male thread/compression fitting

Stem model: A5.5
Form acc. to DIN EN 13 190: Form 2
Stem material: 1.4571
Stem Ø dF: 10, 12, 13 mm
Screw fitting material: galvanised steel
Order length L (standard length): 150, 200, 250, 300, 350, 400 mm
Suitable thermowell models: SF4 (8.8110), SF4F (8.8112)
 (data sheet) SF6, SF7 (8.8121)



| Thread (dimensional data in mm): | G | SW1 | i | Lk |
|-------------------------------------|---------|-----|----|----|
| | G 1/2 B | 27 | 14 | 35 |
| | G 3/4 B | 32 | 16 | 37 |
| | M20x1.5 | 27 | 14 | 35 |
| | M27x2 | 32 | 16 | 37 |

| Stem Ø | SW2 |
|--------|-----|
| 10 | 19 |
| 12 | 22 |
| 13 | 24 |

Minimum Stem Length and Active Length (mm)

| Stem model: | Length: | |
|-------------|--------------|------|
| | La | Lmin |
| A1.5 | 80 | 150 |
| A3.5 | 80 | 150 |
| A5.5 | 80 | 150 |
| others | upon request | |

The minimum length Lmin is the smallest feasible stem length. Important: Please note the technical information sheet T08-000-031 on the metrologically optimal stem length.

The active length La is the temperature-sensitive part of the stem.

Ordering Information

| Basic Model: Diesel Exhaust Thermometer with Rigid Mount | | TAS |
|--|---|---|
| Case filling: | silicone oil | without code letters |
| Nominal case size: | case Ø 63, 80, 100 mm (2½, 3, 4") | 63, 80, 100 |
| Stem position/ case configuration: | vertical bottom position centre back position | without code letters rm |
| Temperature ranges: | 0 – 120 °C 50 – 650 °C | 0–120 °C |
| Stem in jacket version: | A1.5 A3.5 A5.5 | A1.5 A3.5 A5.5 |
| Stem Ø dF: | 10, 12 or 13 mm | dF 10, 12, 13 |
| Stem length: | L 150, 200, 250, 300, 350, 400 mm | e.g. L = 150 mm |
| Process connection: | see page 3 | e.g. G ½ B |
| Options: | <ul style="list-style-type: none"> red mark on the dial plastic clip red or green, external at crimped-on ring for NCS 80, 100 window tempered safety glass for NCS 80 and 100 movement stainless steel case polished compression fitting stainless steel versions: DNV GL dial marking with symbol and Russian Sea Register copy of the certificate upon request model TAS 63, 80, 100 instrument tag stainless steel plate 12 x 55 mm (0.47 x 2.17") with wire mounting or sticker upon the case | |

Example:

TAS 80, 0–120 °C, A5.5, dF 12, L = 150 mm, G ½ B

Special Versions: Please describe your requirements in cleartext!