

Diesel Exhaust Thermometer, Rigid Stem

TAS

Crimped-on ring case stainless steel

Diesel exhaust thermometers are particularly being used for the measurement of exhaust-and cooling water temperatures at diesel engines.

They are particularly construed for this high mechanical and technical loads, amongst others by the "jacket version" and the standard case filling with a highly viscous silicone oil.

For a longer service life, diesel exhaust thermometers should always be applied in combination with a thermowell.

Standard Versions

Information on general and metrological features (e.g temperature resistance) and temperature ranges / error limits / smallest subdivision can be found in model overview 8000.

Measuring Unit

with nitrogen filling
(inert gas, physiological harmless)

Accuracy (EN 13 190)

Class 1

Case

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

Case Protection Type (EN 60 529 / IEC 529)

IP 65

Case filling

Silicone oil

Nominal Case Sizes

63, 80, 100 (mm) (2½", 3", 4")

Case Configuration

Connection temperature sensor (stem): rigid stem with neck tube

Stem position: vertical bottom position,
optional: centre back position (rm),
see page 2

Temperature Ranges

0 - 120 °C
50 - 650 °C

Temperature Sensor (Stem)

1.4571 (316 stainless steel),
max. static operating pressure: 25 bar
Stem model (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: steel galvanised

Window

Instrument glass

Movement

Brass/German silver

Dial

Aluminum, black figures, white background



Pointer

Aluminum, black

Zero Adjustment (± 6%)

Externally by a screw

Ordering Information, Standard Temperature Ranges, Options

See page 4

Special Versions and further Options among others

- Other stem length and connection threads upon request
- Version for extreme loads
- Other temperature ranges and/or special scales, e.g. double scale °C/°F, coloured fields or areas, dial inscriptions, etc.
- Case parts 1.4404 (316 stainless steel) upon request
- Position of the connection 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

Thermowells

See DS 8.8110 ff

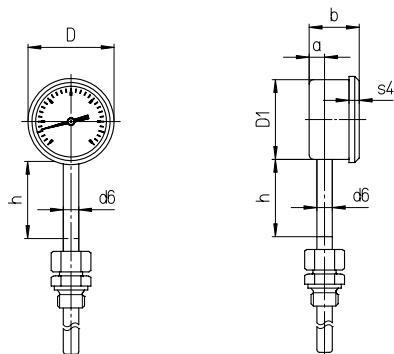
Stem Position / Case Configurations, Code Letters, Dimensional Data and Weights

Vertical Bottom Stem Position

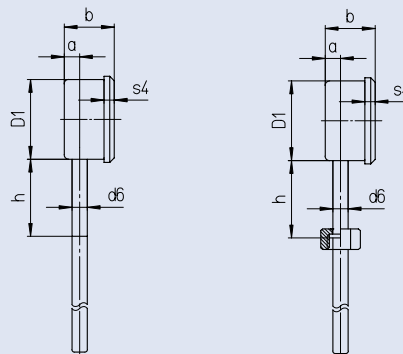
Further Stem Models

TAS 63

without additional code letter



A5.5

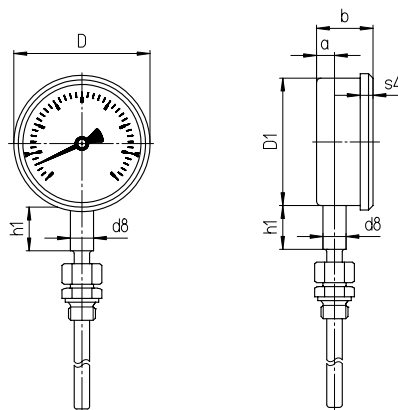


A1.5

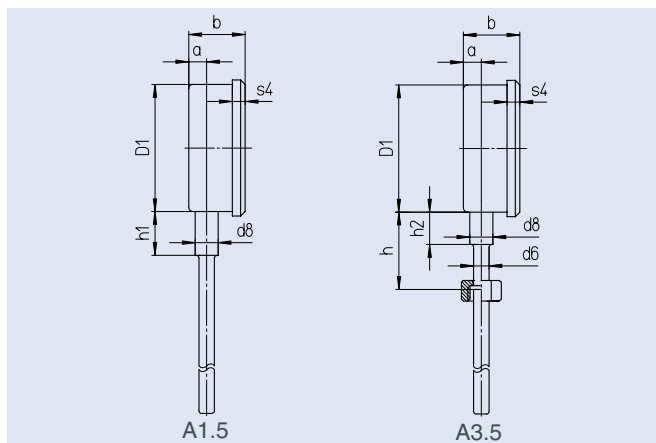
A3.5

TAS 80, 100

without additional code letter



A5.5

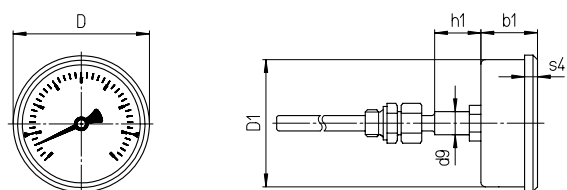


A1.5

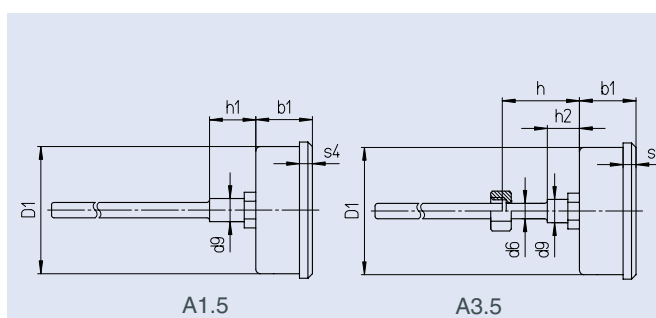
A3.5

Centre Back Stem Position

code letters rm



A5.5



A1.5

A3.5

Dimensional Data (mm / inches) and Weights (kg / lb)

NCS	a	b	b1	D	D1	d6	d8	d9	h	h1	h2	s4	Masse ¹⁾ ca. TAS
63	12	39	39	67	62	12	18	18	60	34	25	8	0.33
2½"	.47	1.54	1.54	2.63	2.44	.47	.71	.71	2.36	1.34	.98	.31	0.73
80	15	42	42	86	79	12	18	18	60	34	25	8	0.5
3"	.59	1.65	1.65	3.39	3.11	.47	.71	.71	2.36	1.34	.98	.31	1.10
100	15	43	43	106	99	12	18	18	60	34	25	10	0.7
4"	.59	1.70	1.70	4.17	3.90	.47	.71	.71	2.36	1.34	.98	.40	1.54

¹⁾ The information is an example and relates on version with stem A1.5, Ø 10 mm (0.4"), length 200 mm (8").

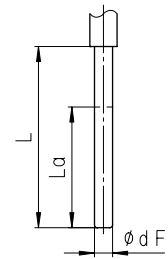
Stem Models

Stem Models

Process connection: without screw fitting, plain stem

Stem model: A1.5
Form according to DIN 13 190: Form 1
Stem material: 1.4571
Stem-Ø dF: 10, 12, 13
Order length L: 150, 200, 250
 (standard length) 300, 350, 400

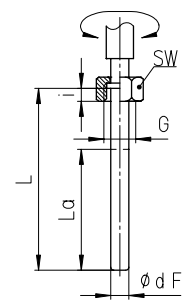
Data sheet (suitable thermowell models): 8.8141 (SK2)



Process connection: Union nut

Stem model: A3.5
Form according to DIN 13 190: Form 5
Stem material: 1.4571
Stem-Ø dF: 10, 12, 13
Screw fitting material: 1.4571
Order length L (standard length): 150, 200, 250, 300, 350, 400

Data sheet (suitable thermowell models): 8.8112 (SF4F), 8.8113 (SF4.1F)
8.8131 (SF9)



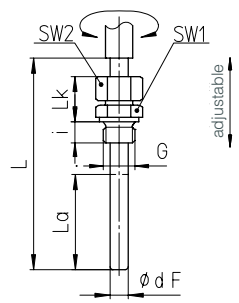
Thread (dimension in mm):

G	SW	i
G 1/2	27	10
G 3/4	32	12
M 20 x 1.5	27	10
M 27 x 2	32	12

Process connection: Male thread / compression fitting

Stem material: A5.5
Form according to DIN 13 190: Form 2
Stem material: 1.4571
Stem-Ø dF: 10, 12, 13
Screw fitting material: steel galvanised
Order length L (standard length): 150, 200, 250, 300, 350, 400

Data sheet (suitable thermowell models): 8.8110 (SF4), 8.8112 (SF4F)
8.8121 (SF6+SF7)



Thread (dimensions in mm):

G	SW1	i	Lk
G 1/2 B	27	14	35
G 3/4 B	32	16	37
M 20 x1.5	27	14	35
M 27 x 2	32	16	37

Stem-Ø	SW2
10	19
12	22
13	24

Minimum Stem Length, Active Length and maximum realisable Stem Length

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

The minimum length Lmin of the stem is the smallest possible stem length.
The active length La of the stem (vessel) has to immerse completely into the medium, to grant a measuring result, which corresponds to the accuracy class.
 The **maximum realisable stem length** is 400 mm.

Ordering Information with Indication- and Temperature Ranges, Options

Basic Model: Diesel exhaust thermometer with rigid stem		TAS
Case filling:	silicone oil	G
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 (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	e. g. L = 150 mm
Process connection:	see page 3	e. g. G ½ B
Options:	red mark on the dial plastic clip red or green external at crimped-on ring for NCS 80 and 100 window tempered safety glass for NCS 80 and 100 movement stainless steel case polished compression fitting stainless steel Version: dial marking with symbol German Lloyd or Russian Sea Register Typ TAS 63, 80, 100 copy of the certificate upon request measuring point stainless steel-plate 12 mm x 55 mm (0.47" x 2.17"), wire mounting or marking sticker on case coverage	(order at the moment still as cleartext)

Example:

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

Special Versions: Please describe your requirements clearly

Technical changes, replacement of materials and errors excepted.