

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)

IP 65

Case Filling

Silicone oil

Nominal Case Sizes

63, 80, 100 mm (2½, 3, 4")

Case Configuration

Connection temperature sensor (stem):

- capillary line

Capillary line position:

- vertical bottom position

- centre back position (**rm**)

Mounting device:

- for bottom capillary line position:

- back flange for surface mounting (**Rh**)

- mounting device for gauge holder bracket (**Mgh**)

- for centre back capillary line position:

- u-clamp for panel mounting (**rmBFr**)

- back flange for surface mounting (**rmRh**)

Capillary Line

1 m stainless steel \varnothing 2 mm

with buckle protection tube at both ends

capillary line length L_{FL} selectable from 1 m to 15 m

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 \varnothing dF: 10, 12 or 13 mm

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

Compression fitting for stem model A5.5: galvanised steel



Window

Instrument glass

Movement

Brass/German silver

Dial

Aluminum white, 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
- Capillary line $F_{FL} > 15$ m upon request
- 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

Thermowells

See data sheets 8.8110 ff.



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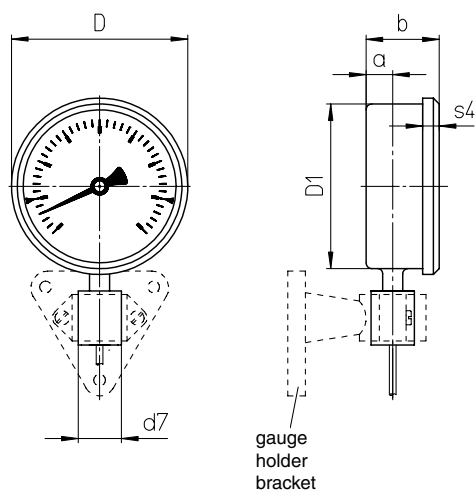
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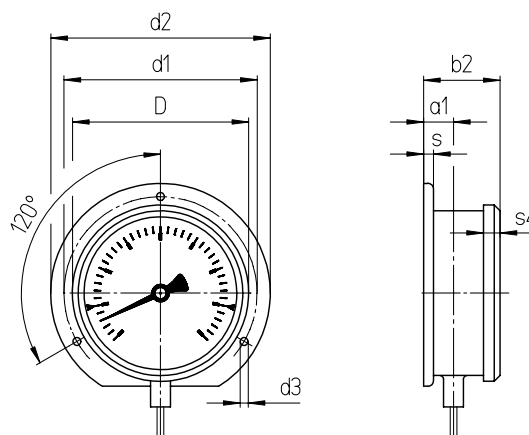
Capillary Line Position, Code Letters, Dimensional Data and Weights

Vertical Bottom Capillary Line Position

mounting device for gauge holder bracket¹⁾
code letters **Mgh**

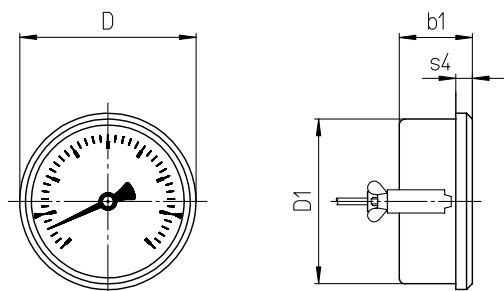


back flange for surface mounting
code letters **Rh**

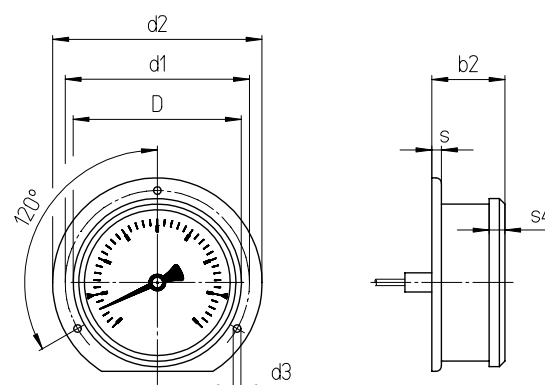


Centre Back Capillary Line Position

u-clamp for panel mounting
code letters **rmBFr**



back flange for surface mounting (except NCS 80)
code letters **rmRh**



Dimensional Data (mm) and Weights (kg)

NCS	a	a1	b	b1	b2	D	D1	d1	d2	d3	d7	s	s4	approx. weight ²⁾ TAF
63	12	15	39	39	42	67	62	75	85	3.6	26	5	8	0.45
80	15	18	42	42	45	86	79	95	110	4.8	26	5	8	0.6
100	15	18.5	43	43	46.5	106	99	116	112	4.8	26	6	10	0.78

¹⁾ Information concerning the gauge holder bracket can be found in the data sheets on accessories, heading 8.

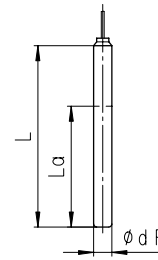
²⁾ The data are examples and relate to the version with mounting device for gauge holder bracket Mgh and stem A1.5, Ø 10 mm, length 200 mm.

Stem Models

Stem Models

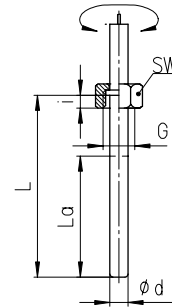
Process connection: Without screw fitting, plain stem

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

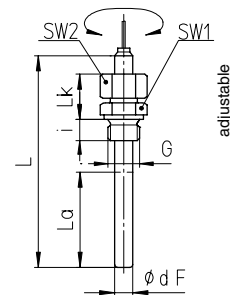
Stem model: A3.5
Form acc. to DIN EN 13 190: Form 5
Stem material: 1.4571
Stem Ø dF: 10, 12, 13 mm
Screw fitting material: 1.4571
Order length L (standard length): 150, 200, 250, 300, 350, 400 mm
Suitable thermowell models: SF4F (8.8112), SF4.1F (8.8113)
 (data sheet) SF9 (8.8131)



Thread (dimensional data in mm):	G	SW	i
	G½	27	10
	G¾	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
	G½B	27	14	35
	G¾B	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:	Capillary line incl. stem ≤ 5 m		Capillary line > 5 m	
	Length:		Length:	
	La	Lmin	La	Lmin
A1.5	80	150	120	175
A3.5	80	150	120	150
A5.5	80	150	120	175
others	upon request			

The minimum length Lmin/L1min 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 with Temperature and Measuring Ranges, Options

Basic Model: Diesel Exhaust Thermometer with Capillary Line		TAF	
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, mounting device for gauge holder bracket	Mgh	
	vertical bottom position, back flange for surface mounting	Rh	
	centre back position, back flange for surface mounting	rmRh	
	centre back position, u-clamp for panel mounting	rmBFr	
Temperature ranges:	0 – 120 °C	0 – 120 °C	
	50 – 650 °C		
Stem in jacket version:	A1.5	A1.5	
	A3.5	A3.5	
	A5.5	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	
Capillary line length:	L _{FL} ≥ 1 to 15 m	L_{FL} = 3 m	
Process connection:	see page 3	e.g. G ½ B	
Options:	red mark	on the dial	<i>(order at the moment still as cleartext)</i>
	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	
	protection hose for capillary line	spiral protection hose made of stainless steel	
	version:	dial marking with symbol	
	German Lloyd or Russian Sea Register	copy of the certificate upon request	
	model TAF 63, 80, 100		
measuring point marking	stainless steel plate 12 x 55 mm (0.47 x 2.17") with wire mounting or sticker upon the case		

Example:

TAF 100, bottom Mgh, 0 – 120 °C, A3.5, dF 8, L = 150 mm, L_{FL} = 3 m, G ½

Special Versions: Please describe your requirements in cleartext!