

Bourdon Tube Pressure Gauges

Crimped-on ring case stainless steel

Safety category S3 according to DIN EN 837-1



RSChg 160 – 3v

RSChgG 160 – 3v

Standard Versions

Information on general and metrological features (e.g. load limits / temperature resistance) and standard pressure ranges / scale divisions can be found in model overview 1000.

Accuracy (DIN EN 837-1)

Class 1.0

Case

Crimped-on ring, 1.4301 (304 stainless steel)

Case Protection Type (DIN EN 60 529 / IEC 529)

IP 66 and IP 67

Blow-out Device

Blow-out back; when pressure increases in the case, the entire case back separates, allowing full relief

Case Ventilation

Without ventilation, but with internal pressure compensation via pressure equalising membrane

Case Filling

For model RSChgG: glycerin

Nominal Case Size

160 mm (6")

Wetted Parts

Connection: 316 L stainless steel
Bourdon tube: 316 L stainless steel shielded arc welding,
≤ 40 bar (600 psi) c-form
≥ 60 bar (800 psi) helical form
≥ 1,600 bar (20,000 psi) NiFe-alloy, helical form

Case Configuration

Connection: welded
Position of the connection: bottom connection

Mounting device: without, optional back flange for surface mounting (Rh), see page 2

Pressure Ranges (DIN EN 837-1)

0 – 0.6 bar to 0 – 2,500 bar ¹⁾ (0 – 10 psi to 0 – 30,000 psi)

Process Connection

G ½ B (½" BSP)

Window

Laminated safety glass

Movement

Stainless steel

Dial

Aluminum, black figures, white background

Pointer

Aluminum black



Safety Category according to DIN EN 837-1

S3, safety pressure gauge with break-proof solid front and blow-out back and hermetically sealed pressure equalising membrane, marking (S), see also sectional drawing overleaf

Ordering Information, Standard Pressure Ranges, Options

See pages 3 and 4

Special Versions and Further Options among others

- Other process connections upon request, e.g. high pressure connection with male thread (from 0 – 60 bar onwards)
- Other pressure ranges and / or special scales, e.g. dual scale bar / psi, coloured fields or ranges, dial inscriptions, negative scale
- Extended ambient temperature range up to -70 °C (-94 °F) with or without case filling (silicone oil)
- Other case fillings 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
- Sour gas resistant version according to NACE

Accessory

Chemical seals: see catalogue heading 7
Other accessories: see catalogue heading 11

¹⁾ 0 – 2,500 bar only with high pressure process connection



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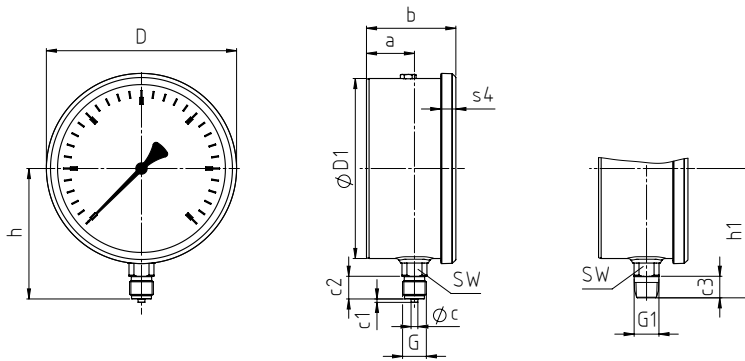
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Case Configurations, Code Letters, Dimensional Data and Weights, Blow-out Device

Bottom connection

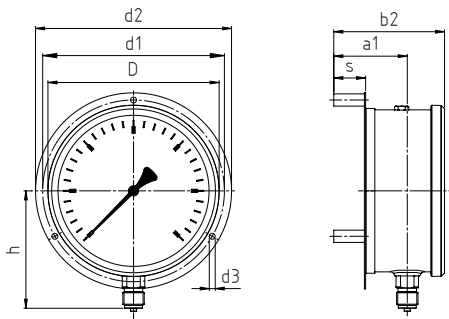
without mounting device

(without additional code letter)



back flange for surface mounting

code letter: Rh



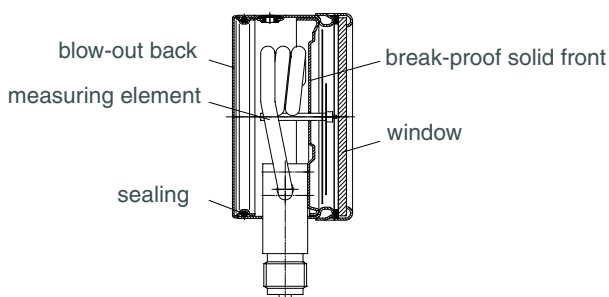
version Rh including 3 separate mounting spacers

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

NCS	a	a1	b	b2	c	c1	c2	c3	D	D1	d1	d2	d3	G	G1	h ^{±1}	h1 ^{±1}	s	SW	approx. weight ²⁾	
																				RSCh	RSChG
160	43	73	79	108	6	3	20	19	167	159	178	196	5.8	G ½ B ½" BSP M 20x1.5	½" NPT	115	114	31.5	22	1.35	2.35
6	1.69	2.88	3.11	4.25	.24	.12	.79	.75	6.57	6.26	7.01	7.72	.23			4.53	4.49	1.24	.87	2.98	5.18

²⁾ information for version without mounting device

Schematic Drawing



Ordering Information with Standard Pressure Ranges, Options

Basic Model	Bourdon Tube Pressure Gauge, Crimped-on Ring Case		RSChg
Case filling	without		without code letters
	glycerin		G
	fillable version		(G)
Nominal case size	case-Ø 160 mm (6")		160
Wetted material	stainless steel		- 3
Case configuration	case / process connection	welded	v
	position of the connection	bottom	without code letters
	mounting device	without	without code letters
		back flange for surface mounting	Rh
Pressure ranges	-1,200 – 0 mbar	30" Hg vac. – 0	
	-0.6 – 0 bar		
	-1 – 0 bar		
	-1 – 0.6 bar	30" Hg vac. – 15 psi	
	-1 – 1.5 bar	30" Hg vac. – 30 psi	
	-1 – 3 bar	30" Hg vac. – 60 psi	
	-1 – 5 bar	30" Hg vac. – 100 psi	
	-1 – 9 bar	30" Hg vac. – 160 psi	
	-1 – 15 bar	30" Hg vac. – 200 psi	
		30" Hg vac. 300 psi	
	0 – 0.6 bar	0 – 10 psi	
	0 – 1 bar	0 – 15 psi	
	0 – 1.6 bar		
	0 – 2.5 bar	0 – 30 psi	
	0 – 4 bar	0 – 60 psi	
	0 – 6 bar	0 – 100 psi	e.g. 0 – 6 bar
	0 – 10 bar	0 – 160 psi	
	0 – 16 bar	0 – 200 psi	
	0 – 25 bar	0 – 300 psi	
	0 – 40 bar	0 – 600 psi	
	0 – 60 bar	0 – 800 psi	
		0 – 1,000 psi	
	0 – 100 bar	0 – 1,500 psi	
	0 – 160 bar	0 – 2,000 psi	
	0 – 250 bar	0 – 3,000 psi	
		0 – 4,000 psi	
	0 – 400 bar	0 – 5,000 psi	
		0 – 6,000 psi	
	0 – 600 bar	0 – 10,000 psi	
0 – 1,000 bar	0 – 15,000 psi		
0 – 1,600 bar	0 – 20,000 psi		
0 – 2,500 bar	high pressure process connection 0 – 30,000 psi		
Process connection	standard thread	G ½ B (½" BSP) max. 0 – 1,600 bar	G ½ B
	options	½" NPT max. 0 – 1,600 bar	½" NPT
		M 20x1.5 max. 0 – 1,600 bar	M 20x1.5
		high pressure connection female thread (0 – 60 bar and above) for ¼" tube, with 60° cone	M 16x1.5 9/16" – 18 UNF
Options	see page 4		

Example: RSChg 160 – 3v, 0 – 6 bar, G ½ B

Ordering Information, Further Options

Basic Model	Bourdon Tube Pressure Gauge, Crimped-on Ring Case	RSChg
Model code		see page 3
Options	<p>adjustable pointer with aluminum mechanism</p> <p>red mark on the dial</p> <p>clip red, on the outside of the crimped-on ring</p> <p>receiver gauge 0.2 – 1 bar, scale 0 – 100 %</p> <p style="text-align: right;">linear square</p> <p>indication accuracy grade 2A ($\pm 0.5\%$) acc. to ASME B 40.1¹⁾</p> <p>special adjustment (reference points = odd values, e.g. 100 KN = 8.735 bar)</p> <p>case polished</p> <p>leak test of the measuring unit with helium leak detection up to 10^{-9} mbar l/s</p> <p>wetted parts free of oil and grease, up to 0 – 600 bar adjustment ≤ 250 bar with dry air, ≥ 400 bar with distilled water, dial marking: symbol crossed out oil can</p> <p>oxygen version up to 0 – 600 bar²⁾ free of oil and grease as above, additional restrictor screw in the inlet port, orifice $\varnothing 0.3$ mm, dial inscription: oxygen</p> <p>silicone free version</p> <p>German Lloyd version, for model RSChgG dial marking: GL-symbol copy of the GL-certificate upon request</p> <p>restrictor screw in the pressure inlet port</p> <p style="text-align: right;">orifice $\varnothing 0.8$ mm (0.03") orifice $\varnothing 0.6$ mm (0.02") orifice $\varnothing 0.3$ mm (0.01")</p> <p>measuring point marking</p> <p style="text-align: right;">stainless steel plate 12 mm x 55 mm, wire mounting or sticker on the case coverage</p> <p>flame arrester Adapt FS</p> <p style="text-align: right;">version 5 according to DS 11001</p>	<p>(order at the moment still as cleartext)</p>

Special Versions: Please describe your requirements in cleartext!

¹⁾ for pressure ranges ≤ 10000 psi
²⁾ for instruments without case filling