

# Bourdon Tube Safety Pressure Gauges

Crimped-on ring case stainless steel

Safety category S3 according to DIN EN 837-1 up to 1 600 bar



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

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

### Degree of Protection (DIN EN 60529 / IEC 60529)

IP66

### Blow-out Device

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

### Case Ventilation

Not required, internal pressure compensation via pressure equalising membrane

### Case Filling

Model RSChgG glycerin

### Nominal Case Size

160 mm (6")

### Wetted Parts

Connection	stainless steel 316L (1.4404)
Bourdon tube	stainless steel 316L (1.4404)
	gas-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
	- back flange for surface mounting (Rh)

### Pressure Range (DIN EN 837-1)

0 – 0.6 bar to 0 – 1 600 bar (0 – 10 psi to 0 – 20 000 psi)<sup>1)</sup>

### Process Connection

G ½ B, ½" NPT or M20x1.5

### Window

Laminated safety glass

### Movement

Stainless steel

### Dial


Aluminum white, scale black

### Pointer

Aluminum black



### Safety Category According to DIN EN 837-1

S3, safety pressure gauge with break-proof solid front and blow-out back marking , see schematic drawing on page 2

## Ordering Information, Standard Pressure Ranges, Options

See pages 3 and 4

## Further Options

- Extended ambient temperature range down to –60 °C (–76 °F) with case filling silicone oil
- Position of connection radial at 3 o'clock, 9 o'clock, 12 o'clock or other than vertical installation (90°)
- Sour gas resistant version according to NACE

## Special Versions Upon Request

- Other process connections
- Other pressure ranges and/or special scales, e.g. dual scale bar / psi, coloured fields or ranges, dial inscriptions, negative scale
- Other case fillings
- Other position of connection
- Increased degree of protection IP67
- Certificates and approvals, e.g. GOST, DNV (see also website)

## Accessories

Chemical seals	see catalogue heading 7
Other accessory	see catalogue heading 11

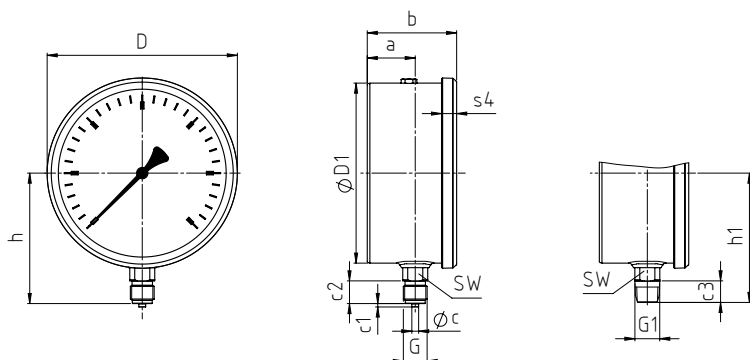
<sup>1)</sup> pressure ranges > 1 600 bar (> 20 000 psi) according to DIN 16001 see data sheet 1640

# Case Configurations, Code Letters, Dimensional Data and Weight, Schematic Drawing

## Bottom Connection

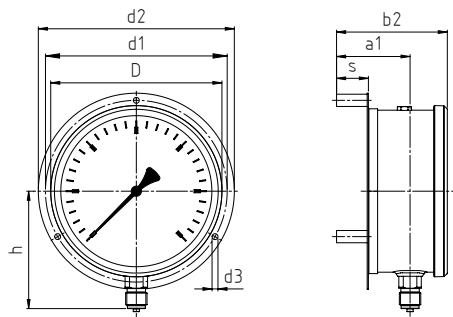
### without mounting device

without code letters



### with back flange for surface mounting

code letters Rh

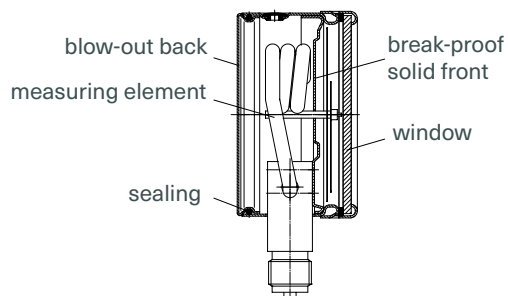


version Rh including 3 separate mounting spacers

## Dimensional Data (mm / inch) and Weight (kg / lb)

NCS	a	a1	b	b2	c	c1	c2	c3	D	D1	d1	d2	d3	G	G1	h <sup>±1</sup>	h1 <sup>±1</sup>	s	SW	approx. weight <sup>1)</sup>	
																				RSch	RSchG
160 6"	43 1.69	73 2.87	79 3.11	108 4.25	6 0.24	3 0.12	20 0.79	19 0.75	167 6.57	159 6.26	178 7.01	196 7.72	5.8 0.23	G ½ B M20x1.5	½" NPT	115 4.53	114 4.49	31.5 1.24	22 0.87	1.35 2.98	2.35 5.18

## Schematic Drawing



<sup>1)</sup> data for version without mounting device

## Ordering Information

Basic Model		Bourdon Tube Safety Pressure Gauge with Crimped-on Ring Case		RSChg
Case filling	without			without code letters
	glycerin			<b>G</b>
	fillable version			<b>(G)</b>
Nominal case size	case Ø 160 mm (6")		<b>160</b>	
Wetted material	stainless steel		<b>- 3</b>	
Case configuration	case / connection	welded		<b>v</b>
	position of the connection	bottom connection		without code letters
	mounting device	without		without code letters
		back flange for surface mounting		<b>Rh</b>
Pressure ranges	-1 200 / 0 mbar	-30" Hg	0 psi	
	-0.6 / 0 bar			
	-1 / 0 bar			
	-1 / +0.6 bar	-30" Hg	15 psi	
	-1 / +1.5 bar	-30" Hg	30 psi	
	-1 / +3 bar	-30" Hg	60 psi	
	-1 / +5 bar	-30" Hg	100 psi	
	-1 / +9 bar	-30" Hg	160 psi	
	-1 / +15 bar	-30" Hg	200 psi	
		-30" Hg	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	<b>e.g. 0 - 6 bar</b>
	0 - 10 bar	0	160 psi	
	0 - 16 bar	0	200 psi	
		0	300 psi	
	0 - 25 bar	0	400 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	3 000 psi	
	0 - 250 bar	0	4 000 psi	
		0	5 000 psi	
	0 - 400 bar	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		
Process connection	standard thread	G ½ B		<b>G ½ B</b>
		½" NPT		<b>½" NPT</b>
		M 20x1.5		<b>M 20x1.5</b>
		¼" NPT <sup>1)</sup>		<b>¼" NPT</b>
		high pressure connection, female thread (≥ 0 - 60 bar (≥ 0 - 800 psi)) for ¼" tube, with 60° cone	M 16x1.5 ¾" - 18 UNF	
Options				
Options	see page 4			
<b>Example</b>				<b>RSChgG 160 - 3v, 0 - 6 bar, G ½ B</b>

<sup>1)</sup> max. 0 - 1 000 bar (0 - 15 000 psi)

## Ordering Information, Further Options

**These options are to be ordered in written form. Please contact us to ensure compatibility when combining options.**

<b>Adjustable pointer</b>	with aluminum mechanism
<b>Red mark</b>	on the dial
<b>Plastic clip</b>	red or green, external at the crimped-on ring
<b>Receiver gauge</b> 0.2 – 1 bar (3 – 15 psi) scale 0 – 100 %	linear or square
<b>Indication accuracy</b> acc. to ASME B 40.1 <sup>1)</sup>	Grade 2A ( $\pm 0.5$ %)
<b>Special adjustment</b>	reference points = odd values, e.g. 100 KN = 8.735 bar
<b>Case polished</b>	
<b>Leak test of the measuring unit</b>	with helium leak detection up to $10^{-9}$ mbar l/s
<b>Wetted parts free of grease and oil</b> up to 0 – 600 bar (0 – 10000 psi)	adjustment $\leq 250$ bar (3000 psi) with dry air, $> 250$ bar (3000 psi) with distilled water dial marking: symbol crossed out oil can
<b>Oxygen version</b> up to 0 – 600 bar (0 – 10000 psi) <sup>2)</sup>	free of grease and oil as above, additional restrictor screw in the inlet port, orifice $\varnothing 0.3$ mm (0.01"), dial inscription: oxygen
<b>Silicone-free version</b>	
<b>Restrictor screw</b> in the pressure inlet port material: stainless steel	orifice $\varnothing 0.8$ mm (0.03") orifice $\varnothing 0.6$ mm (0.02") orifice $\varnothing 0.3$ mm (0.01")
<b>Instrument tag</b>	stainless steel plate 12 x 55 mm (0.47 x 2.17"), wire mounting sticker on the case coverage
<b>Flame arrester Adapt FS</b>	variant 5 according to data sheet 11001

**Special Versions:** Please describe your requirements in cleartext!

<sup>1)</sup> for pressure ranges  $\leq 10000$  psi

<sup>2)</sup> for instruments without case filling