

Bourdon Tube Pressure Gauges

Crimped-on ring case stainless steel

RChg 80
RChgG 80

Standard Versions

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

Accuracy (EN 837-1)

Class 1.0

Class 1.6 for pressure ranges 0 – 600 and 0 – 1,000 bar

(0 – 10,000 and 0 – 15,000 psi)

Case

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

Case Protection Type (EN 60 529 / IEC 529)

IP 54

IP 65 for model RChgG with closed blow-out plug

Blow-out Device

Blow-out plug at the top of the case coverage

Case Ventilation

Via blow-out plug, ventilation required for internal pressure compensation for pressure ranges ≤ 10 bar and also recommended for other pressure ranges, provided that the operating conditions allow for this.

Case Filling

for model RChgG: glycerin

Nominal Case Size

80 mm (3")

Wetted Parts

Type – 3: Connection: stainless steel 316 SS
Bourdon tube: stainless steel 316 L, shielded arc welding, ≤ 60 bar (800 psi) c-form, ≥ 100 bar (1,500 psi) helical
O-ring-sealing: FPM (fluor caoutchouc)

Type – 1: Connection: brass
Bourdon tube: bronze, ≤ 40 bar (600 psi) soft-soldered, c-form, ≥ 60 bar (800 psi) silver brazed, helical
O-ring-sealing: NBR

Case Configuration

Connection: screwed

Position of the connection: bottom, optional centre back connection (**rm**)

Mounting device: no mounting device, optional back flange for surface mounting (**Rh**) / front flange for panel mounting (**Fr**), u-clamp for panel mounting (**BFr**), see page 2

Pressure Ranges (EN 837-1)

0 – 0.6 bar to 0 – 1,000 bar for type – 3

0 – 0.6 bar to 0 – 600 bar for type – 1

Process Connection

G ½ B (½" BSP)

Window

Laminated safety glass for type – 3

Instrument glass for type – 1

Movement

Stainless steel for type – 3

Brass/German silver for type – 1



Dial

Aluminum white, scaling black

Pointer

Aluminum, black

Safety Category according to EN 837-1

S1 pressure gauges with blow-out device

Ordering Information, Standard Pressure Ranges, Options:

see pages 3 and 4

Special Versions and Further Options Among Others

- Other process connections upon request
- Other pressure ranges and / or special scales, e.g. dual scale bar/psi, coloured fields or ranges, dial inscriptions, negative scale etc.
- Version as refrigeration gauge with temperature scale
- Increased case protection type, e.g. IP 65 without case filling, upon request
- Other case fillings upon request
- Model RChgG 80 – 3 bottom connection for ambient temperatures to -40 °C
- Position of connection radial at 3 o'clock, 9 o'clock or 12 o'clock (others upon request), or other than vertical installation (90°) for dry versions
- GOST-version for Russia, Ukraine, Kazakhstan

Accessory:

see catalogue-heading 11



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10/14

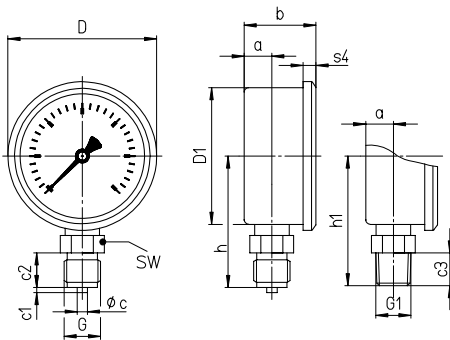
Case Configurations, Code Letters, Dimensional Data and Weights, Blow-out Device

Bottom Connection

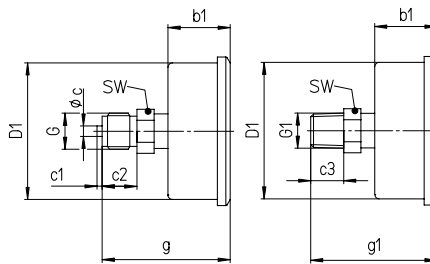
Centre Back Connection

No mounting device

(no additional code letters)

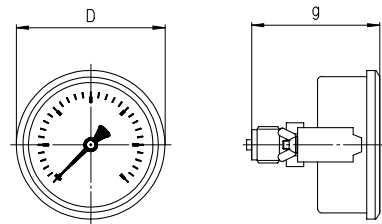


code letters: **rm**



U-clamp for panel mounting

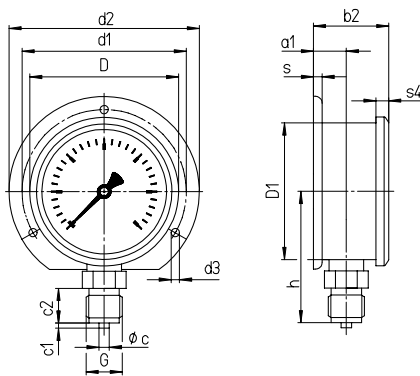
code letters: **rmBFr**



recommended panel cut out
 $\text{Ø } 81 \pm 0.5 \text{ mm (0.02")}$

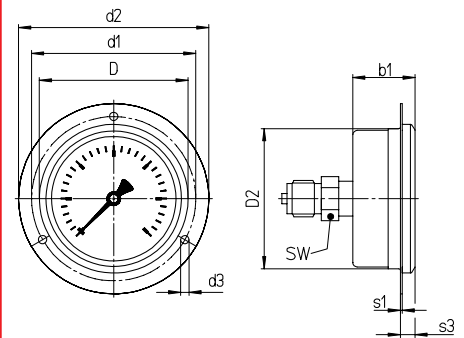
Back flange for surface mounting

code letters: **Rh**



Front flange for panel mounting

code letters: **rmFr**



recommended panel cut out
 $\text{Ø } 84 \pm 0.5 \text{ mm (0.02")}$

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

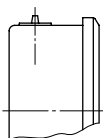
NCS	D	D1	D2	a	a1	b	b1	b2	c	c1	c2	c3	d1	d2	d3	G	G1
80 3"	86 3.39	79 3.11	81 3.18	16 .63	19 .75	41.5 1.63	36 1.42	44 1.73	6 .24	3 .12	20 .79	19 .75	95 3.74	110 4.33	4.8 .19	G 1/2 B 1/2" BSP M 20x1.5	1/2" NPT

NCS	g	g1	h	h1	s	s1	s3	s4	SW	approx. weight ¹⁾	
										RChg	RhgG
80 3"	74 2.91	73 2.87	76 2.99	75 2.95	5 .20	1 .04	9 .35	8 .31	22 .87	approx. 0.34 0.75	approx. 0.50 1.10

¹⁾Indications for versions without mounting device

Blow-out device

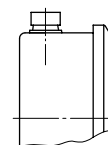
Blow-out plug 19



Optional:

Model RChgG, case configuration below, rm:

Blow-out plug 24
 (reclosable)



Ordering Information with Standard Pressure Ranges, Options

Basic Model:	Bourdon Tube Pressure Gauge, Crimped-on Ring		RChg
Case filling	no case filling glycerin fillable version		no code letters G (G)
Nominal case size:	case-Ø 80 mm (3")		80
Wetted material:	copper alloy stainless steel		- 1 - 3
Case configuration:	case / connection screwed		no code letters
	position of the connection:	bottom centre back connection	no code letters rm
	mounting device:	no mounting device back flange for surface mounting front flange for panel mounting u-clamp for panel mounting	no code letters Rh Fr BFr
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 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 – 100 bar 0 – 1,500 psi 0 – 160 bar 0 – 2,000 psi 0 – 250 bar 0 – 3,000 psi 0 – 400 bar 0 – 5,000 psi 0 – 600 bar 0 – 10,000 psi 0 – 1,000 bar for type – 3 0 – 15,000 psi		
Process connection:	standard thread	G ½ B (½" BSP)	G ½ B
	options:	½" NPT M 20x1.5	½" NPT M 20x1.5
Further options:	see page 4		
Example:	RChg 80 – 3 rmFr, 0 – 6 bar, G ½ B		

Ordering Information Further Options

Basic Model:	Bourdon Tube Pressure Gauge, Crimped-on Ring	RChg																																								
Model code:		see page 3																																								
Options:	<table border="0"> <tr> <td data-bbox="336 192 571 219">red mark</td> <td data-bbox="576 192 1209 219">on the dial</td> </tr> <tr> <td data-bbox="336 221 571 248">plastic clip</td> <td data-bbox="576 221 1209 248">red or green, external on crimped-on ring</td> </tr> <tr> <td data-bbox="336 250 866 277">receiver gauge 0.2 – 1 bar, scale 0 – 100 %</td> <td data-bbox="871 250 1209 277">linear</td> </tr> <tr> <td></td> <td data-bbox="871 280 1209 306">square</td> </tr> <tr> <td colspan="2" data-bbox="336 344 1209 371">special adjustment (reference points = odd values, e.g. 100 KN = 8.735 bar)</td> </tr> <tr> <td data-bbox="336 374 571 400">window</td> <td data-bbox="576 374 1209 400">laminated safety glass for type – 1</td> </tr> <tr> <td></td> <td data-bbox="576 403 1209 430">acrylic glass (PMMA)</td> </tr> <tr> <td data-bbox="336 468 571 495">movement</td> <td data-bbox="576 468 1209 495">stainless steel for type – 1 (for – 3 standard)</td> </tr> <tr> <td colspan="2" data-bbox="336 497 1209 524">blow-out plug 24 (reclosable)</td> </tr> <tr> <td colspan="2" data-bbox="336 526 1209 553">case ventilation no. 22 for outdoor installation</td> </tr> <tr> <td colspan="2" data-bbox="336 555 1209 582">case polished</td> </tr> <tr> <td data-bbox="336 584 571 638">density examination</td> <td data-bbox="576 584 1209 638">with helium leak detection up to 10⁻⁹ mbar l/s for type – 3 of the measuring unit</td> </tr> <tr> <td data-bbox="336 676 571 757">wetted parts, free of grease and oil, up to 0 – 600 bar (0 – 10,000 psi)</td> <td data-bbox="576 676 1209 757">adjustment ≤ 250 bar (3,000 psi) with dry air, ≥ 400 bar (5,000 psi) with distilled water, dial marking: symbol crossed out oil can</td> </tr> <tr> <td colspan="2" data-bbox="336 763 1209 790">silicone-free version</td> </tr> <tr> <td data-bbox="336 792 571 873">version: German Lloyd or Russian Sea Register</td> <td data-bbox="576 792 1209 873">dial marking with respective symbol</td> </tr> <tr> <td colspan="2" data-bbox="336 875 1209 902"> RChgG 80 copy of the certificate upon request </td> </tr> <tr> <td data-bbox="336 904 571 931">restrictor screw in</td> <td data-bbox="576 904 1209 931">orifice Ø 0.8 mm (0.03")</td> </tr> <tr> <td data-bbox="336 934 571 960">pressure inlet port</td> <td data-bbox="576 934 1209 960">orifice Ø 0.6 mm (0.02")</td> </tr> <tr> <td data-bbox="336 963 571 1016">material: just as process connection brass, stainless steel</td> <td data-bbox="576 963 1209 1016">orifice Ø 0.3 mm (0.01")</td> </tr> <tr> <td data-bbox="336 1032 571 1086">measuring point marking</td> <td data-bbox="576 1032 1209 1086">stainless steel plate 12 mm x 55 mm (0.47" x 2.17") with wire mounting or sticker on case coverage</td> </tr> </table>	red mark	on the dial	plastic clip	red or green, external on crimped-on ring	receiver gauge 0.2 – 1 bar, scale 0 – 100 %	linear		square	special adjustment (reference points = odd values, e.g. 100 KN = 8.735 bar)		window	laminated safety glass for type – 1		acrylic glass (PMMA)	movement	stainless steel for type – 1 (for – 3 standard)	blow-out plug 24 (reclosable)		case ventilation no. 22 for outdoor installation		case polished		density examination	with helium leak detection up to 10 ⁻⁹ mbar l/s for type – 3 of the measuring unit	wetted parts, free of grease and oil, up to 0 – 600 bar (0 – 10,000 psi)	adjustment ≤ 250 bar (3,000 psi) with dry air, ≥ 400 bar (5,000 psi) with distilled water, dial marking: symbol crossed out oil can	silicone-free version		version: German Lloyd or Russian Sea Register	dial marking with respective symbol	RChgG 80 copy of the certificate upon request		restrictor screw in	orifice Ø 0.8 mm (0.03")	pressure inlet port	orifice Ø 0.6 mm (0.02")	material: just as process connection brass, stainless steel	orifice Ø 0.3 mm (0.01")	measuring point marking	stainless steel plate 12 mm x 55 mm (0.47" x 2.17") with wire mounting or sticker on case coverage	<i>(order at present still in cleartext)</i>
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Special Versions: Please describe your requirements in cleartext