

Bourdon Tube Pressure Gauges

Crimped-on ring case stainless steel

RChg 80
RChgG 80

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 1.6

Class 2.5 for pressure ranges 0 – 600 bar and 0 – 1 000 bar
(0 – 10 000 psi and 0 – 15 000 psi)

Case

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

Degree of Protection (DIN EN 60529 / IEC 60529)

IP54

IP65 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 for internal pressure compensation, required for measuring spans ≤ 10 bar (≤ 160 psi), and also recommended for other pressure ranges if the operating conditions permit

Case Filling

Model RChgG glycerin

Nominal Case Size

80 mm (3")

Wetted Parts

Type – 3	connection	stainless steel 316L (1.4404)
	Bourdon tube	stainless steel 316L (1.4404) gas-shielded arc welding ≤ 60 bar (800 psi) c-form ≥ 100 bar (1 500 psi) helical form
Type – 1	O-ring sealing	FPM
	connection	brass
	Bourdon tube	bronze ≤ 40 bar (600 psi) c-form ≥ 60 bar (800 psi) soft-soldered helical form silver brazed
	O-ring sealing	NBR

Case Configuration

Connection screwed

Position of the connection

- bottom connection
- centre back connection (rm)

Mounting device

- without
- back flange for surface mounting (Rh)
- front flange for panel mounting (Fr)
- u-clamp for panel mounting (BFr)

Pressure Range (DIN EN 837-1)

0 – 0.6 bar to 0 – 1 000 bar (0 – 10 psi to 0 – 15 000 psi) for type – 3
0 – 0.6 bar to 0 – 600 bar (0 – 10 psi to 0 – 10 000 psi) for type – 1

Process Connection

G ½ B, ½" NPT or M20x1.5

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, scale black

Pointer

Aluminum black

Safety Category According to DIN EN 837-1

S1 pressure gauges with blow-out device

Ordering Information, Standard Pressure Ranges, Options

See pages 3 and 4

Further Options

- Increased measurement accuracy
- Version as refrigeration gauge with temperature scale (see technical information sheet T01-000-015)
- Degree of protection IP65
- Model RChg 80 – 3, bottom connection for ambient temperatures down to -40 °C (-40 °F)
- Position of connection radial at 3 o'clock, 9 o'clock, 12 o'clock or other than vertical installation (90°) for unfilled models

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
- Certificates and approvals, e.g. GOST, DNV (see also website)

Accessories

See catalogue heading 11

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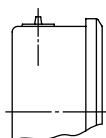
Case Configurations, Code Letters, Dimensional Data and Weight, Blow-out Device

Bottom Connection								Centre Back Connection							
without mounting device															
without code letters								code letters rm							
with back flange for surface mounting								with front flange for panel mounting							
code letters Rh								code letters rmFr							
								recommended panel cut out $\varnothing 84 \pm 0.5 \text{ mm}$ ($3.31 \pm 0.02''$)							
								with u-clamp for panel mounting							
								code letters rmBFr							
								recommended panel cut out $\varnothing 81 \pm 0.5 \text{ mm}$ ($3.19 \pm 0.02''$)							

Dimensional Data (mm / inch) 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 3.19	16 0.63	19 0.75	41.5 1.63	36 1.42	44 1.73	6 0.24	3 0.12	20 0.79	19 0.75	95 3.74	110 4.33	4.8 0.19	G 1/2 B M 20x1.5	1/2" NPT							
										approx. weight ¹⁾														
										RChg		RhGg												
										g	g1	h	h1	s	s1	s3	s4	SW						
										74 2.91	73 2.87	76 2.99	75 2.95	5 0.2	1 0.04	9 0.35	8 0.31	22 0.87	0.34 0.75	0.50 1.1				

Blow-out Device

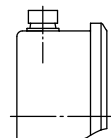
Blow-out plug no. 19



Optional

Model RChgG,
case configurations bottom, rm

Blow-out plug no. 24 (reclosable, IP65)



¹⁾ data for version without mounting device

Ordering Information

Basic Model	Bourdon Tube Pressure Gauge with Crimped-on Ring Case		RChg
Case filling	without		without code letters
	glycerin		G
	fillable version		(G)
Nominal case size	case Ø 80 mm (3")		80
Wetted material	copper alloy		- 1
	stainless steel		- 3
Case configuration	case / connection	screwed	without code letters
	position of the connection	bottom connection	without code letters
		centre back connection	rm
	mounting device	without	without code letters
back flange for surface mounting		Rh	
front flange for panel mounting		Fr	
u-clamp for panel mounting		BFr	
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	e.g. 0 - 6 bar
	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 for type - 3	0 - 15 000 psi		
Process connection	standard thread	G ½ B	G ½ B
		½" NPT	½" NPT
		M 20x1.5	M 20x1.5
options	¼" NPT	¼" NPT	
Options	see page 4		
Example			RChg 80 - 3 rmFr, 0 - 6 bar, G ½ B

Ordering Information, Further Options

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

Red mark	on the dial
Plastic clip	red or green, external at the crimped-on ring
Receiver gauge 0.2 – 1 bar (3 – 15 psi) scale 0 – 100 %	linear or 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 (standard for – 3)
Blow-out plug no. 24	reclosable, IP65
Case polished	
Leak test of the measuring unit	with helium leak detection up to 10^{-9} mbar l/s for type – 3
Wetted parts free of grease and oil 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
Silicone-free version	
Restrictor screw in the pressure inlet port material: brass or stainless steel	orifice \varnothing 0.8 mm (0.03") orifice \varnothing 0.6 mm (0.02") orifice \varnothing 0.3 mm (0.01")
Instrument tag	stainless steel plate 12 x 55 mm (0.47 x 2.17"), wire mounting sticker on the case coverage

Special Versions: Please describe your requirements in cleartext!