

Bourdon Tube Pressure Gauges

Crimped-on ring case stainless steel

RChg

RChgG

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

Degree of Protection (DIN EN 60529 / IEC 60529)

IP54

IP65 for model RChgG 100, 125 and

model RChgG 160 (measuring spans ≥ 2.5 bar (30 psi))

Blow-out Device

Model RChg blow-out plug in the back of the case, $\varnothing 1"$

Model RChgG 100, 125 blow-out plug in the back of the case, $\varnothing 40$ mm (1 1/2")

Model RChgG 160 blow-out device at the top of the case coverage

Case Ventilation

Model RChgG 100 without ventilation, but with internal pressure compensation via pressure equalising membrane

Model RChgG 160 via blow-out device

Case Filling

Model RChgG glycerin

Nominal Case Size

100, 125, 160 mm (4, 5, 6")

Wetted Parts

Type – 3	connection Bourdon tube	stainless steel 316L (1.4404)	
		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

Type – 1	connection Bourdon tube	brass	
		≤ 40 bar (600 psi)	bronze, c-form soft-soldered stainless steel 316L (1.4404) helical form silver brazed
		≥ 60 bar (800 psi)	

Case Configuration

Connection screwed

Position of the connection

- bottom connection
- lower back connection (r)

Mounting device

- without
- back flange for surface mounting (Rh)
- front flange for panel mounting (Fr)¹⁾
- u-clamp for panel mounting (BFr)

Pressure Range (DIN EN 837-1)

0 – 0.6 bar to 0 – 1 600 bar (0 – 10 psi to 0 – 20 000 psi) for type – 3

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



Process Connection

G 1/2 B, 1/2" 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, NCS 100 (4")

Ordering Information, Standard Pressure Ranges, Options

See pages 3 and 4

Further Options²⁾

- Version as refrigeration gauge with temperature scale (NCS 100) (see technical information sheet T01-000-015)
- Types – 3v for ambient temperatures down to -60 °C (-76 °F)
- Position of connection radial at 3 o'clock, 9 o'clock, 12 o'clock or other than vertical installation (90°) for unfilled models
- 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
- Case parts 316L (1.4404)
- Increased degree of protection, e.g. IP65 without case filling
- Other case fillings
- Other position of connection
- Certificates and approvals, e.g. GOST, DNV (see also website)

Accessories

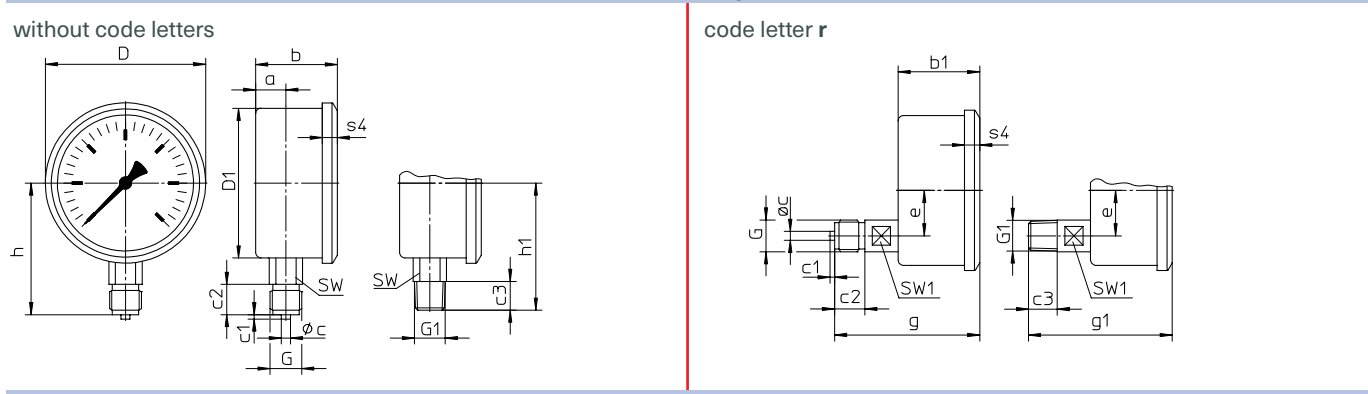
Chemical seals	mounting upon request
Other accessory	see catalogue heading 11

¹⁾ NCS 160 (6") upon request

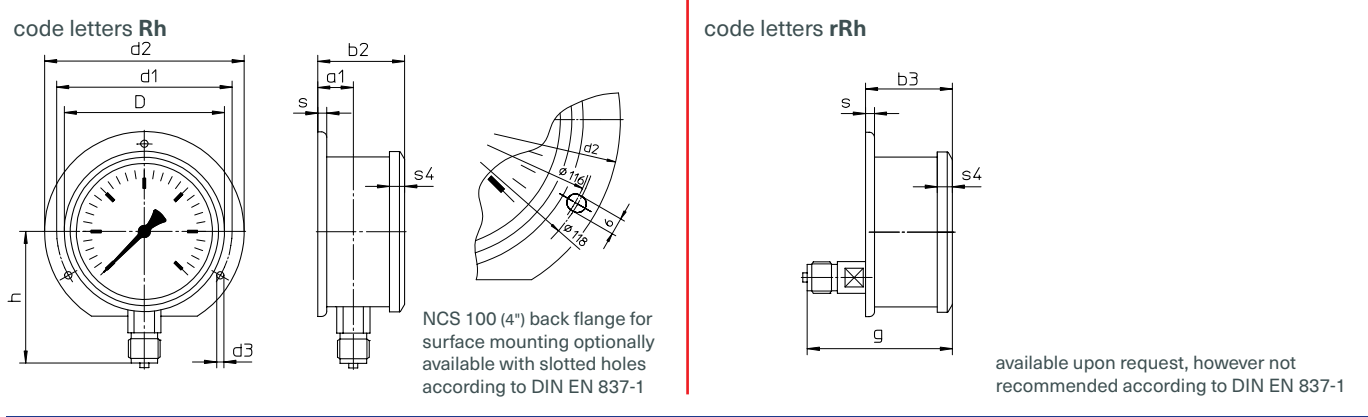
²⁾ for NCS 125 (5") upon request

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

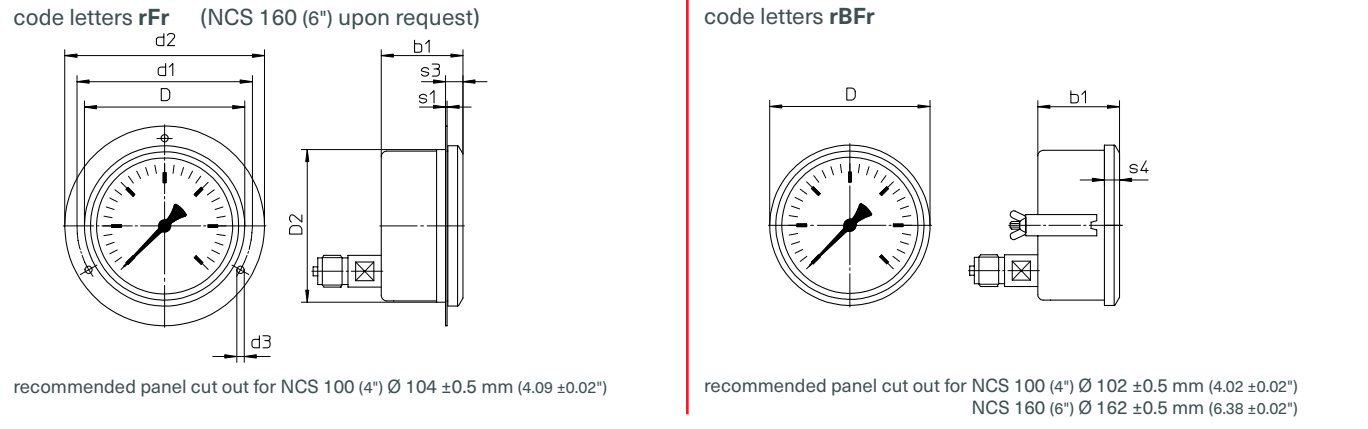
Bottom Connection Lower Back Connection



with back flange for surface mounting



Lower Back Connection



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

NCS	a	a1	b	b1	b2	b3	c	c1	c2	c3	D	D1	D2	d1	d2	d3	e	G	G1	g	g1	h ^{±1}
100 4"	20 0.79	23.5 0.93	55 2.17	55 2.17	58 2.28	58 2.28	6 0.24	3 0.12	20 0.79	19 0.75	106 4.17	99 3.9	101 3.98	116 4.57	132 5.2	4.8 0.19	30 1.18	G ½ B M20x1.5	½" NPT	97 3.82	96 3.78	87 3.43
125 5"	20 0.79	-	55 2.17	55 2.17	-	-	6 0.24	3 0.12	20 0.79	19 0.75	136 5.35	125 4.92	-	-	-	-	30 1.18	G ½ B M20x1.5	½" NPT	97 3.82	96 3.78	98 3.86
160 6"	15 0.59	18 0.71	50 1.97	55 2.17	53 2.09	58 2.28	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	30 1.18	G ½ B M20x1.5	½" NPT	97 3.82	96 3.78	115 4.53

Blow-out Device

Blow-out device for model RChgG 160
 pressure range ≤ 1.6 bar blow-out device no. 5
 ≥ 2.5 bar blow-out device no. 3

Blow-out plug
 Ø 1" (25 mm) for models RChg 100, 125, 160
 Ø 40 mm (1 ½") for models RChgG 100, 125
 with pressure equalising membrane

h1 ^{±1}	s	s1	s3	s4	SW	SW1	approx. weight ¹⁾	
							RChg	RChgG
84 3.31	6 0.24	1 0.04	11.5 0.45	10 0.39	22 0.87	17 0.67	0.60 1.32	0.90 1.98
97 3.82	-	-	-	11 0.43	22 0.87	17 0.67	0.67 1.48	1.33 2.93
114 4.49	6 0.24	-	-	11 0.43	22 0.87	17 0.67	1.10 2.43	1.80 3.97

¹⁾ data for version without mounting device

Ordering Information, Further Options

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

for NCS 125 all options upon request

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
Indication accuracy acc. to ASME B 40.1 ¹⁾	Grade 2A (± 0.5 %)
Special adjustment	reference points = odd values, e.g. 100 KN = 8.735 bar
Window	laminated safety glass for type – 1 acrylic glass (PMMA) polycarbonate (PC)
Movement	stainless steel for type – 1 (standard for – 3 and – 6) silicone damped axle brass / polyacetal
Case ventilation no. 22	for outdoor installation
Case polished	
Leak test of the measuring unit	with helium leak detection up to 10^{-9} mbar l/s for types – 3 and – 6
Wetted parts free of grease and oil up to 0 – 600 bar (0 – 10000 psi)	adjustment ≤ 250 bar (3000 psi) with dry air, > 250 bar (3000 psi) with distilled water dial marking: symbol crossed out oil can
Oxygen version up to 0 – 600 bar (0 – 10000 psi) ²⁾	free of grease and oil as above, additional restrictor screw in the inlet port, orifice $\varnothing 0.3$ mm (0.01"), dial inscription: oxygen no version according to DIN EN 837-1 ³⁾
Silicone-free version	
Restrictor screw in the pressure inlet port material: brass, stainless steel or Monel	orifice $\varnothing 0.8$ mm (0.03") orifice $\varnothing 0.6$ mm (0.02") (not for Monel) orifice $\varnothing 0.3$ mm (0.01") (not for Monel)
Instrument tag	stainless steel plate 12 x 55 mm (0.47 x 2.17"), wire mounting sticker on the case coverage
Flame arrester Adapt FS	variant 5 according to data sheet 11001

Special Versions: Please describe your requirements in cleartext!

¹⁾ for pressure ranges ≤ 10000 psi

²⁾ for instruments without case filling

³⁾ DIN EN 837-1 in connection with oxygen version requires safety category S2 or S3