

Bourdon Tube Pressure Gauges

Bayonet ring case stainless steel

RCh 63

RChG 63

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 bayonet ring, stainless steel 304 (1.4301)

Degree of Protection (DIN EN 60529 / IEC 60529)

IP54

IP65 for model RChG 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 RChG glycerin

Nominal Case Size

63 mm (2½")

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	connection	brass
	Bourdon tube	bronze
		≤ 40 bar (600 psi) c-form
		≥ 60 bar (800 psi) soft-soldered
		helical form
		silver brazed

Case Configuration

Connection screwed

Position of the connection

- bottom connection
- lower back connection (r)
- centre back connection (rm)

Mounting device

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

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 ¼ B, ¼" NPT or M 12x1.5

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

- Ultrapure gas version (see technical information sheet T01-000-033)
- Cannula connection with needle for vacuum / pressure test of cans (see technical information sheet T01-000-022)
- S2 safety pressure gauge, proved RCh 63 up to 1 000 bar (15 000 psi), RChG 63 up to 600 bar (10 000 psi), with laminated safety glass or polycarbonate
- Increased measurement accuracy
- Version as refrigeration gauge with temperature scale (see technical information sheet T01-000-015)
- Model RChG 63 – 3, bottom connection for ambient temperatures down to -40 °C (-40 °F)
For ambient temperatures below -20 °C (-4 °F) we recommend: pressure gauges with crimped-on ring case models RChg or RChgG
- Position of connection radial at 3 o'clock, 9 o'clock, 12 o'clock or other than vertical installation (90°):
 - for unfilled models
 - for filled models with pressure equalising membrane
- 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
- Case / connection welded for lower or centre back connection
- Other case fillings
- Model RChG 63 – 3, lower or centre back connection for ambient temperatures down to -40 °C (-40 °F)
- Versions for medium temperatures up to $+300$ °C ($+572$ °F), without case filling only
- Other position of connection
- Certificates and approvals, e.g. GOST, DNV (see also website)

Accessories

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

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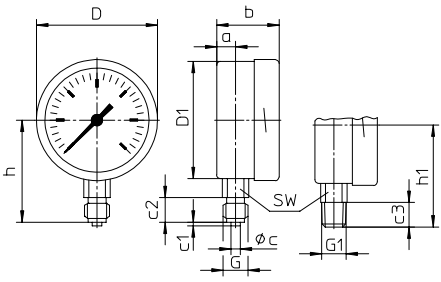
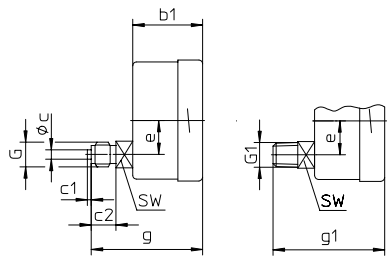
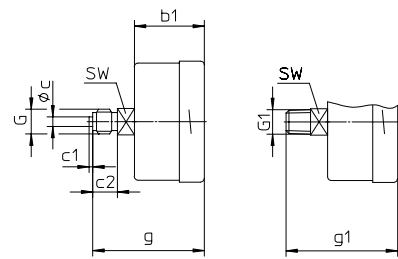
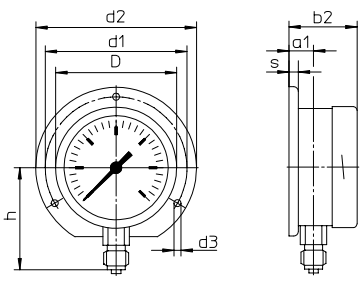
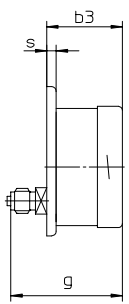
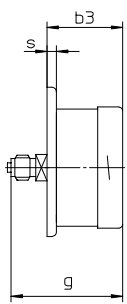
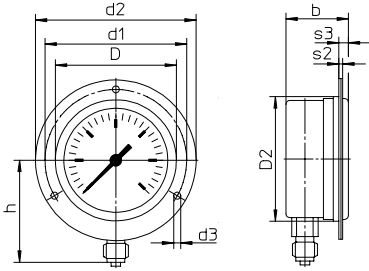
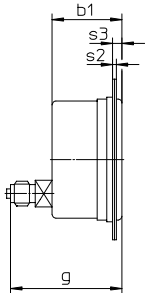
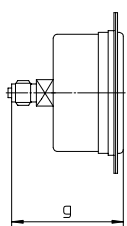
Location Wesel

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

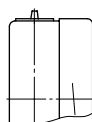
Bottom Connection	Lower Back Connection	Centre Back Connection
without mounting device		
without code letters 	code letter r 	code letters rm 
with back flange for surface mounting		
code letters Rh 	code letters rRh 	code letters rmRh 
	available upon request, however not recommended according to DIN EN 837-1	available upon request, however not recommended according to DIN EN 837-1
with front flange for panel mounting		
code letters Fr 	code letters rFr 	code letters rmFr 
available upon request, however not recommended according to DIN EN 837-1		

front flange with slotted holes, separate cover ring, recommended panel cut out $\varnothing 67 \pm 0.3$ mm (2.64 ± 0.012 ")

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}	h1 ^{±1}								
63	10	13	33	37	36	40	5	2	13	13	64	62	66	75	85	3.6	18	G ¼B	¼" NPT	59	59	54	54								
2½"	0.39	0.51	1.3	1.46	1.42	1.57	0.2	0.08	0.51	0.51	2.52	2.44	2.6	2.95	3.35	0.14	0.71	M 12x1.5	¼" NPT	2.32	2.32	2.13	2.13								
																		s		s2		s3		SW		approx. weight ¹⁾		RCh		RChG	
																		5		2		5.5		14		0.18		0.4		0.25	
																		0.2		0.08		0.22		0.55		0.4		0.55			

Blow-out Device

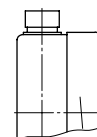
Blow-out plug no. 19



Optional

Model RChG,
case configurations bottom, r, rm

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



¹⁾ data for version without mounting device

Ordering Information

Basic Model	Bourdon Tube Pressure Gauge with Bayonet Ring Case		RCh
Case filling	without		without code letters
	glycerin		G
	fillable version		(G)
Nominal case size	case Ø 63 mm (2½")		63
Wetted material	copper alloy		- 1
	stainless steel		- 3
	Monel, 0 – 1 to 0 – 1 000 bar (0 – 15 to 0 – 15000 psi), movement stainless steel, laminated safety glass, Bourdon tube Monel gas-shielded arc welding, ≤ 60 bar (≤ 800 psi) c-form, ≥ 100 bar (≤ 1500 psi) helical form, bottom connection, optional r (no rm), safety version S2 up to 0 – 600 bar (0 – 10000 psi)		- 6
Case configuration	case / connection	screwed	without code letters
		welded (for type – 3)	v
	position of the connection	bottom connection	without code letters
		lower back connection	r
		centre back connection	rm
	mounting device	without	without code letters
back flange for surface mounting		Rh	
	front flange for panel mounting	Fr	
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	0 – 15 000 psi		
Process connection	standard thread	G ¼ B	G ¼ B
		¼" NPT	¼" NPT
		M 12x1.5	M 12x1.5
	options	G ⅜ B ¹⁾ for type – 1	G ⅜ B
	⅜" NPT ²⁾ for type – 3	⅜" NPT	
Options	see page 4		
Example	RCh 63 – 3 rmFr, 0 – 6 bar, G ¼ B		

¹⁾ max. 0 – 400 bar (0 – 6 000 psi)

²⁾ max. 0 – 600 bar (0 – 10 000 psi)

Ordering Information, Further Options

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

Adjustable pointer	
Red mark	on the dial
Stationary red pointer	on the dial
	adjustable with removable ring
	integrated in polycarbonate window
adjustable externally	removable key non-removable key
Min. / max. drag indicator measuring spans ≥ 2.5 bar (30 psi)	integrated in polycarbonate window
	adjustable externally
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) ¹⁾
	polycarbonate (PC) for type – 1
Movement	stainless steel for type – 1 (standard for – 3 and – 6)
Pressure equalising membrane	for model RChG with blow-out device $\varnothing 1"$ (25 mm) in the back of the case for bottom connection and lower back connection
Blow-out plug no. 24	reclosable, IP65
Case ventilation no. 22	for outdoor installation
Case polished	
Bayonet ring 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 DIN EN 837-1 in connection with oxygen version requires safety category S2 ³⁾ or S3
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

Special Versions: Please describe your requirements in cleartext!

¹⁾ not for S2

²⁾ for instruments without case filling

³⁾ see "Safety Category" page 1