

# Bourdon Tube Pressure Gauges

Crimped-on ring case stainless steel

**RChg 63**  
**RChgG 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 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  $\leq 10$  bar ( $\leq 160$  psi), and also recommended for other pressure ranges if the operating conditions permit

### Case Filling

Model RChgG                      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
		$\leq 60$ bar (800 psi)    c-form
		$\geq 100$ bar (1 500 psi) helical form
Type – 1	connection	brass
	Bourdon tube	bronze
		$\leq 40$ bar (600 psi)    c-form
		$\geq 60$ 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)
- 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 ¼ B, ¼" NPT or M 12x1.5

### Window

Polycarbonate                      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

- S2 safety pressure gauge, proved RChg 63 up to 1 000 bar (15 000 psi), RChgG 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)
- 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 ( $90^\circ$ )
  - 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
- Other position of connection
- Certificates and approvals, e.g. GOST, DNV (see also website)

## Accessories

See catalogue heading 11

[www.armano-messtechnik.com](http://www.armano-messtechnik.com)

**ARMANO**

ARMANO Messtechnik GmbH

### Location Beierfeld

Am Gewerbepark 9 • 08344 Grünhain-Beierfeld  
Tel.: +49 3774 58 – 0 • Fax: +49 3774 58 – 545  
mail@armano-beierfeld.com

### Location Wesel

Manometerstraße 5 • 46487 Wesel-Ginderich  
Tel.: +49 2803 9130 – 0 • Fax: +49 2803 1035  
mail@armano-wesel.com

**1212**

07/22

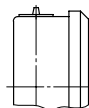
# Case Configurations, Code Letters, Dimensional Data and Weight, Blow-out Device

Bottom Connection	Lower Back Connection	Centre Back Connection
<b>without mounting device</b>		
without code letters 	code letter r 	code letters rm 
<b>with back flange for surface mounting</b>		
code letters Rh 	code letters rRh 	code letters rmRh 
<b>with front flange for panel mounting</b>		
code letters rFr 	code letters rmFr 	
recommended panel cut out $\varnothing 67 \pm 0.3$ mm (2.64 ± 0.012")	recommended panel cut out $\varnothing 67 \pm 0.3$ mm (2.64 ± 0.012")	
<b>with u-clamp for panel mounting</b>		
code letters rBFr 	code letters rmBFr 	
recommended panel cut out $\varnothing 64 \pm 0.3$ mm (2.52 ± 0.012")	recommended panel cut out $\varnothing 64 \pm 0.3$ mm (2.52 ± 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		
63	10	13	34	38	37	41	5	2	13	13	67	62	64	75	85	3.6	18	G 1/4 B	1/4" NPT		
2 1/2"	0.39	0.51	1.34	1.5	1.46	1.61	0.2	0.08	0.51	0.51	2.64	2.44	2.52	2.95	3.35	0.14	0.71	M 12x1.5			
											g	g1	h <sup>±1</sup>	h1 <sup>±1</sup>	s	s1	s3	s4	SW	approx. weight <sup>1)</sup>	
											61	61	54	54	5	1	10.5	9.5	14	RChg	RChgG
											2.4	2.4	2.13	2.13	0.2	0.04	0.41	0.37	0.55	0.18	0.25
																				0.4	0.55

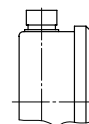
## Blow-out Device

Blow-out plug no. 19



## Optional

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



<sup>1)</sup> 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		<b>G</b>
	fillable version		<b>(G)</b>
Nominal case size	case Ø 63 mm (2½")		<b>63</b>
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, polycarbonate, 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)	<b>v</b>
	position of the connection	bottom connection	without code letters
		lower back connection	<b>r</b>
		centre back connection	<b>rm</b>
	mounting device	without	without code letters
back flange for surface mounting		<b>Rh</b>	
front flange for panel mounting		<b>Fr</b>	
	u-clamp for panel mounting	<b>BFr</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	for types - 3 and - 6 0 - 15 000 psi		
Process connection	standard thread	G ¼ B	<b>G ¼ B</b>
		¼" NPT	<b>¼" NPT</b>
		M 12x1.5	<b>M 12x1.5</b>
	options	G ½ B <sup>1)</sup> for type - 1	<b>G ½ B</b>
	½" NPT <sup>2)</sup> for type - 3	<b>½" NPT</b>	
Options	see page 4		
Example	<b>RChg 63 - 3 rmFr, 0 - 6 bar, G ¼ B</b>		

<sup>1)</sup> max. 0 - 400 bar (0 - 6 000 psi)

<sup>2)</sup> 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.**

<b>Red mark</b>	on the dial
<b>Receiver gauge</b> 0.2 – 1 bar (3 – 15 psi) scale 0 – 100 %	linear or square
<b>Special adjustment</b>	reference points = odd values, e.g. 100 KN = 8.735 bar
<b>Window</b>	laminated safety glass for type – 1 polycarbonate (PC) for type – 1
<b>Movement</b>	stainless steel for type – 1 (standard for – 3 and – 6)
<b>Pressure equalising membrane</b>	for model RChgG with blow-out device Ø 1" (25 mm) in the back of the case for bottom connection and lower back connection
<b>Blow-out plug no. 24</b>	reclosable, IP65
<b>Case ventilation no. 22</b>	for outdoor installation
<b>Case polished</b>	
<b>Leak test of the measuring unit</b>	with helium leak detection up to $10^{-9}$ mbar l/s for types – 3 and – 6
<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 Ø 0.3 mm (0.01"), dial inscription: oxygen DIN EN 837-1 in connection with oxygen version requires safety category S2 <sup>3)</sup> or S3
<b>Silicone-free version</b>	
<b>Restrictor screw</b> in the pressure inlet port material: brass, stainless steel or Monel	orifice Ø 0.8 mm (0.03") orifice Ø 0.6 mm (0.02") (not for Monel) orifice Ø 0.3 mm (0.01") (not for Monel)
<b>Instrument tag</b>	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!

<sup>1)</sup> for instruments without case filling  
<sup>2)</sup> see "Safety Category" page 1