

# Bourdon Tube Pressure Gauges

## Crimped-on Ring Case Stainless Steel

**RChg 63**  
**RChgG 63**

### Standard Versions

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

#### Accuracy (EN 837-1)

Class 1.6

Class 2.5 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

By blow-out plug, ventilation required for internal pressure compensation for pressure ranges  $\leq 10$  bar and also recommended for other pressure ranges, as far as the operating conditions allow this.

#### Case Filling

for model RChgG: Glycerin

#### Nominal Case Size

63 (mm) (2½")

#### Wetted Parts

Type -3: Connection: 1.4571 (316 stainless steel)

Bourdon tube: 1.4571 (316 stainless steel),  
argon arc welding,  
 $\leq 60$  bar (800 psi) c-form,  
 $\geq 100$  bar (1,500 psi) helical

Type -1: Connection: brass

Bourdon tube: bronze,  
 $\leq 40$  bar (600 psi) soft-soldered, c-form,  
 $\geq 60$  bar (800 psi) silver brazed, helical

#### Case Configuration

Connection: screwed

Position of the connection: bottom connection,  
optional lower back connection (r) /  
centre back connection (rm)<sup>1)</sup>

Mounting device: without, optional back flange for  
surface mounting (Rh) / front flange  
for panel mounting (Fr) or u-clamp for  
panel mounting (BFr), see page 2

#### Pressure Ranges (EN 837-1)

0-0.6 bar (0-10 psi) to 0-1,000 bar (0-15,000 psi) for type -3  
0-0.6 bar (0-10 psi) to 0- 600 bar (0-10,000 psi<sup>1)</sup>) for type -1

#### Process Connection

G ¼ B (¼" 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

<sup>1)</sup> centre back connection (rm) in brass (type -1) max. 600 bar (not 10,000 psi)



#### Dial

Aluminum, black figures, white background

#### Pointer

Aluminum, black

#### Safety Category according to EN 837-1

S1 pressure gauges with blow-out device

S2 safety pressure gauge,

proved: RChg 63-3 up to 1,000 bar (15,000 psi),

RChgG 63-3 up to 600 bar (10,000 psi)

optional: Type -1, with laminated safety glass or polycarbonate

### 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. double scale bar/psi, coloured fields or areas, dial inscriptions, negative scale etc. .
- Version as refrigeration gauge with temperature scale
- Case parts 1.4404 (316 L stainless steel) upon request
- Increased case protection type, e. g. IP 65 without case filling, upon request
- Welded case / connection for lower back connection or centre back connection upon request
- Other case fillings upon request
- Model RChgG 63-3 bottom connection (lower back connection or centre back connection upon request) for ambient temperatures down to -40 °C (-40 °F); Model RChg 63-3 bottom connection (lower back connection or centre back connection upon request). for ambient temperatures down to -60 °C (-76 °F)
- 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 models without case filling and for filled models with pressure equalizing membrane;
  - for filled models without pressure equalizing membrane upon request
- GOST-version for Russia, Ukraine, Kazakhstan
- Sour gas-resistant version according to NACE

### Accessory:

see catalogue-heading 11



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

Bottom connection	Lower back connection	Centre back connection
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No mounting device		
<p>(no additional code letters)</p>	<p>code letter: <b>r</b></p>	<p>code letters: <b>rm</b></p>

Back flange for surface mounting		
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<p>code letters: <b>Rh</b></p>	<p>code letters: <b>rRh</b></p>	<p>code letters: <b>rmRh</b></p>
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Front flange for panel mounting	
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<p>code letters: <b>rFr</b></p> <p>recommended panel cut out for <math>\text{Ø } 67 \pm 0.3 \text{ mm (0.01")}</math></p>	<p>code letters: <b>rmFr</b></p> <p>recommended panel cut out for <math>\text{Ø } 67 \pm 0.3 \text{ mm (0.01")}</math></p>
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U-clamp for panel mounting	
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<p>code letters: <b>rBFr</b></p> <p>recommended panel cut out for <math>\text{Ø } 64 \pm 0.3 \text{ mm (0.01")}</math></p>	<p>code letters: <b>rmBFr</b></p> <p>recommended panel cut out for <math>\text{Ø } 64 \pm 0.3 \text{ mm (0.01")}</math></p>
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Dimensional data (mm / inches) and weights (kg / lb)																				
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NCS	a	a1	b	b1	b2	b3	c	c1	c2	c3	D	D1	D2	d1	d2	d3	e	G	G1
63	10	13	33	37	36	40	5	2	13	13	67	62	64	75	85	3.6	18	G ¼ B	½" NPT
2 ½"	.4	.51	1.30	1.46	1.42	1.57	.2	.08	.51	.51	2.63	2.44	2.52	2.95	3.35	.14	.71	¼" BSP	

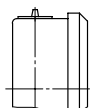
  

NCS	g	g1	h±1	h1±1	s	s1	s3	s4	SW	approx. weight <sup>1)</sup>	
										RChg	RChgG
63	60	60	54	54	5	1	9.5	8.5	14	0.18	0.25
2 ½"	2.36	2.36	2.13	2.13	.2	.04	.37	.33	.55	.40	.55

<sup>1)</sup> Information for version without mounting device

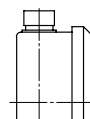
Blow-out device
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Blow-out plug 19



Optional:
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Blow-out plug 24 (reclosable)



## Ordering Information, Standard Pressure Ranges, Options

Basic Model:		Bourdon Tube Pressure Gauge, Crimped-on Ring Case		RChg
Case Filling	without			without code letters
	glycerine			<b>G</b>
	fillable version			<b>(G)</b>
Nominal Case Size:	case-Ø 63 (mm) (2½")		<b>63</b>	
Wetted Material:	copper alloy		<b>-1</b>	
	stainless steel		<b>-3</b>	
Case Configuration:	Monel, 0-1 bar (15 psi) to 0-1,000 bar (15,000 psi), movement stainless steel, laminated safety glass, bourdon tube Monel argon arc welding, ≤ 60 bar (1,000 psi) c-form, ≥ 100 bar (1,500 psi) helical, bottom connection, optional r (no rm), safety version S2 up to 0-600 bar (10,000 psi)		<b>-6</b>	
	case / connection	screwed	without code letters	
		welded (only type -3, bottom connection)	<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 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		
		30" Hg vac. – 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. <b>0-6 bar</b>	
	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 – 1,000 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 – 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 (¼"BSP)	<b>G ¼ B</b>
Optionen:		¼" NPT	<b>¼" NPT</b>	
		M 12 x 1.5	<b>M 12 x 1,5</b>	
		G ⅜ B (⅜"BSP)	<b>G ⅜ B</b>	
	⅜" NPT	<b>⅜" NPT</b>		
Options:	see page 4			
Example: RChg 63-3 rmFr, 0-6 bar, G ¼ B				

## Further Options regarding Ordering Information

Basic Model:	Bourdon Tube Pressure Gauge, Crimped-on Ring Case	RChg
Model Code:		see page 3
Options:	<p>red mark on the dial</p> <p>receiver gauge 0.2-1 bar, scale 0-100%</p> <p style="text-align: right;">linear square</p> <p>special adjustment (reference points = odd values, e. g. 100 KN = 8.735 bar)</p> <p>window laminated safety glass for type -1 (= S2 see below) acrylic glass (PMMA)<sup>1)</sup> polycarbonate (PC) (= S2 see below)</p> <p>movement stainless steel for type -1 (for -3 and -6 standard)</p> <p>pressure equalizing membrane for model RChgG with blow-out device Ø 1" (25 mm) in the back of the case when bottom and lower connection</p> <p>blow-out plug 24 (reclosable)</p> <p>case ventilation no. 22 for outdoor installation</p> <p>case polished</p> <p>density examination with helium leak detection up to of the measuring unit 10<sup>-9</sup> mbar l/s for types -3 and -6</p> <p>wetted parts, free of grease and oil, up to 0-600bar (0-10,000 psi) adjustment ≤ 250 bar (3,000 psi) with dry air, ≥ 400 bar (5,000 psi) with distilled water, dial marking: symbol cancelled oil can</p> <p>oxygen version up to 0-600 bar<sup>2)</sup> (0-10,000 psi) free of grease and oil, additional restrictor screw in the inlet port, orifice Ø 0.3 mm (0.01"), dial inscription: oxygen EN 837-1 in connection with oxygen version requires safety category S2<sup>3)</sup> or S3</p> <p>silicone-free version version: German Lloyd or Russian Sea Register <b>Model RChgG 63</b> dial marking: symbol copy of the certificate upon request</p> <p>safety category S2 for version -1 up to 0-600 bar (0-10,000 psi) window made of laminated safety glass or polycarbonate (PC)</p> <p>restrictor screw in pressure inlet port orifice Ø 0.8 mm (0.03") material: as process connection brass, stainless steel or Monel orifice Ø 0.6 mm (0.02") (not Monel) orifice Ø 0.3 mm (0.01") (not Monel)</p> <p>measuring point marking stainless steel-plate 12 mm x 55 mm (0.47" x 2.17"), wire mounting or sticker on case coverage</p>	(order at the moment still as cleartext)

**Special Versions:** Please describe your requirements clearly

<sup>1)</sup> not for S2

<sup>3)</sup> see "safety category" page

<sup>2)</sup> for instruments without case filling