

# Bourdon Tube Pressure Gauges

## Bayonet Ring Case Stainless Steel

**RCh 63**  
**RChG 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

Bayonet ring, 1.4301 (304 stainless steel)

#### Case Protection Type (EN 60 529 / IEC 529)

IP 54,

IP 65 for model RChG 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 RChG: glycerine

#### 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**)

Mounting device: without, optional back flange for  
surface mounting (**Rh**) / front flange  
for panel mounting (**Fr**), see page 2

#### Pressure Range (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) 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

#### 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: RCh 63-3 up to 1,000 bar (15,000 psi),

RChG 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

- Special process connections, e. g. VCR-F VCR-M, VCR-M short (see technical information sheet T01-000-016) or cannula connection with needle for vacuum / pressure test for cans (see technical information sheet T01-000-022), others 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 RChG 63-3 bottom connection (lower back connection or centre back connection upon request) for ambient temperatures down to -40 °C (-40 °F). Our recommendation for ambient temperatures below -20 °C (-4 °F); pressure gauges with crimped-on ring case models RChg resp. RChgG
- Versions for medium temperatures up to 300 °C (572 °F), but without case filling upon request
- 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:

Chemical seals: see catalogue-heading 7

Other accessory: see catalogue-heading 11



Sales and Export South, West, North

**ARMATURENBAU GmbH**

Manometerstraße 5 • D-46487 Wesel - Ginderich  
Tel.: +49 (0)28 03/91 30-0 • Fax: +49 (0)28 03/10 35  
armaturenbau.com • mail@armaturenbau.com

Subsidiary Company, Sales and Export East

**MANOTHERM Beierfeld GmbH**

Am Gewerbepark 9 • D-08344 Grünhain-Beierfeld  
Tel.: +49 (0)37 74/58-0 • Fax: +49 (0)37 74/58-545  
manotherm.com • mail@manotherm.com

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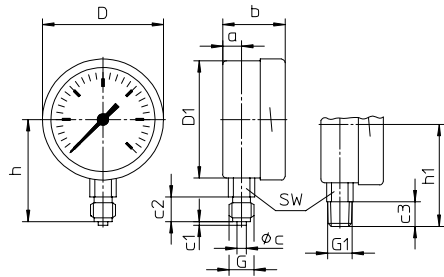
11/09

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

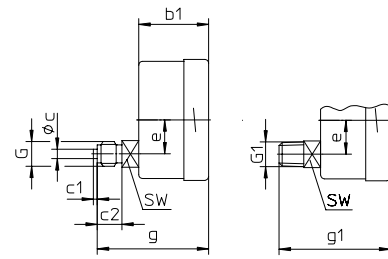
Bottom connection	Lower back connection	Centre back connection
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No mounting device		
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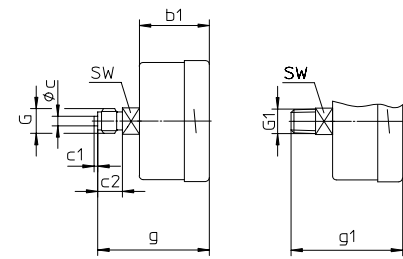
(no additional code letters)



code letter: r

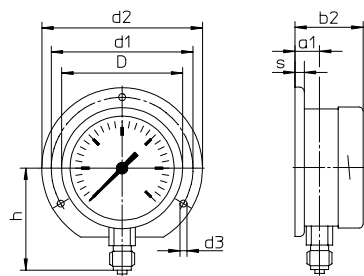


code letters: rm

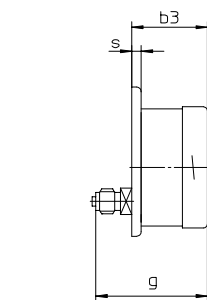


Back flange for surface mounting		
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code letters: Rh

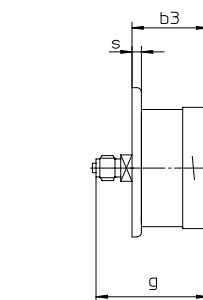


code letters: rRh



(available upon request, but according to EN 837-1 not recommended)

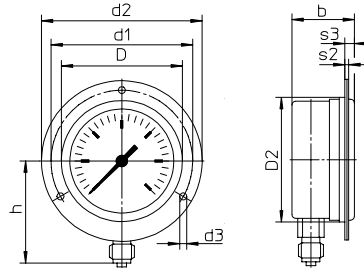
code letters: rmRh



(available upon request, but according to EN 837-1 not recommended)

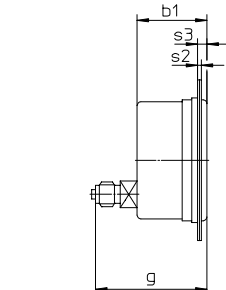
Front flange for panel mounting		
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code letters: Fr

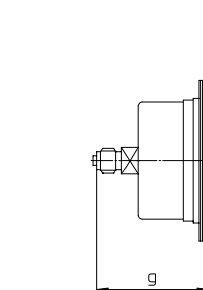


(available upon request, but according to EN 837-1 not recommended)

code letters: rFr



code letters: rmFr



**Front flange** for panel mounting with slotted holes, separate cover ring, recommended panel cut out:  $\varnothing 67 \pm 0.3 \text{ mm}$  (0.01")

## Dimensional data (mm / inches) and weights (kg / lb)

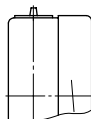
NCS	a	a1	b	b1	b2	b3	c	c1	c2	c3	D	D1	D2	d1	d2	d3	e	G	G1	g	g1	h <sup>±1</sup>	h1 <sup>±1</sup>
63	10	13	33	37	36	40	5	2	13	13	64	62	66	75	85	3.6	18	G 1/4 B 1/4" BSP M 12 x 1.5	1/4" NPT	59	59	54	54
2 1/2"	.39	.51	1.3	1.46	1.42	1.57	.20	.08	.51	.51	2.52	2.44	2.60	2.95	3.35	.14	.71			2.32	2.32	2.13	2.13

s	s2	s3	SW	approx. weight <sup>1)</sup> RCh	RChG
5	2	5.5	14	0.180	0.250
.20	.08	.22	.55	.400	.550

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

## Blow-out device

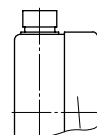
Blow-out plug 19



## Optional:

Model RChG, case configuration bottom connection, r, rm:

Blow-out plug 24 (reclosable)



## Ordering Information with Standard Pressure Ranges, Options

Basic Model:	Bourdon Tube Pressure Gauge, Bayonet Ring Case		RCh	
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>	
	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 Configuration:	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>	
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 – 4,000 psi		
	0 – 400 bar	0 – 5,000 psi		
	0 – 6,000 psi			
0 – 600 bar	0 – 10,000 psi			
0 – 1000 bar for type -3	0 – 15,000 psi			
Process Connection:	standard thread	G ¼ B (¼"BSP)	<b>G ¼" B</b>	
	options:	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:	<b>RCh 63-3 rmFr, 0-6 bar, G ¼ B</b>			

## Further Options regarding Ordering Information

Basic Model: Bourdon Tube Pressure Gauge, Bayonet Ring Case		RCh
Model Code:		see page 3
Options:	adjustable pointer	
	red mark on the dial	
	stationary red pointer on the dial	
	pointer adjustable when removable ring	
	stationary red pointer integrated into polycarbonate window	
	adjustable externally removable key	
	non-removable key	
	min.- or max.- drag indicator intergrated into polycarbonate window	
	adjustable externally removable key	
	2.5 bar (30 psi) and above non-removable key	
	receiver gauge 0.2-1 bar, scale 0-100%	linear square
	special adjustment (reference points = odd values, e. g. 100 KN = 8.735 bar)	
	window laminated safety glass for type -1 (= S2 see below)	
	acrylic glass (PMMA) <sup>1)</sup>	
	polycarbonate (PC) (= S2 see below)	
	movement stainless steel for type -1 (for -3 and -6 standard)	
	pressure equalizing membrane for model RChG with blow-out device	
	Ø 1" (25 mm) in the back of the case	
	when bottom and lower connection	
	blow-out plug 24 (reclosable)	
	case ventilation no. 22 for outdoor installation	
	case polished	
	bayonet ring polished	
	density examination with helium leak detection up to	<i>(order at the moment still as cleartext)</i>
	of the measuring unit 10 <sup>-9</sup> mbar l/s for types -3 and -6	
	wetted parts, free of grease and oil, to adjustment ≤ 250 bar (3,000 psi) with dry air, ≥ 400 bar (5,000 psi) with distilled water, dial marking: symbol cancelled oil can	
	0-600 bar (0-10,000 psi)	
	oxygen version free of grease and oil, additional restrictor screw in the inlet port, orifice Ø 0.3 mm (0.01"), dial inscription: oxygen	
	up to 0-600 bar <sup>2)</sup> (0-10,000 psi) EN 837-1 in connection with oxygen version requires safety category S2 <sup>3)</sup> or S3	
	silicone-free version	
	version: dial marking: symbol	
	German Lloyd or Russian Sea Register	
	<b>RChG 63</b> copy of the certificate upon request	
	safety category S2 for version -1 up to 0-600 bar (0-10,000 psi), window made of laminated safety glass or polycarbonate (PC)	
	restrictor screw in orifice Ø 0.8 mm (0.03")	
	pressure inlet port orifice Ø 0.6 mm (0.02") (not Monel)	
	material: as process orifice Ø 0.3 mm (0.01") (not Monel)	
	connection brass, stainless steel or Monel	
	measuring point stainless steel-plate 12 mm x 55 mm ( 0.47" x 2.17"), wire mounting	
	marking or sticker on case coverage	

### Special versions: Please describe your requirements clearly

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

<sup>3)</sup> see "safety category" page 1

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

Technical changes, replacement of materials and errors excepted