

Bourdon Tube Pressure Gauges

Case and Bayonet Ring Carbon Steel Black
Standard (RB) or Liquid Filled (RBG)

NCS 160 mm (6")
250 mm (10")

Accuracy Class 1.0

Models

RB
RBG

Application

For fluid and gaseous media (compatible to the wetted materials), which are not highly viscous and do not tend to polymerize.

Nominal Case Sizes (NCS):

RB: 160, 250 mm (6", 10"); **RBG:** 160 mm (6")

Accuracy Class

1.0 according to EN 837-1

Pressure Ranges (EN 837-1)

Version – 1*: 0-0.6 to 0-1000 bar resp. 0-10 to 0-15,000 psi
Version – 2*: 0-1600 bar resp. 0-20,000 to 0-25,000 psi
Version – 3*: 0-0.6 to 0-1600 bar resp. 0-10 to 0-25,000 psi
also corresponding vacuum and compound pressure ranges
(*see below)

Pressure Limitations

Steady pressure: full scale value
Cyclic pressure: 90% of full scale value
Overpressure: 130% of full scale value

Protection Type (EN 60 529 / IEC 529)

Model RB = IP 54 / Model RBG = IP 65

Further information about advantages, applications, specifications, temperature limitations and pressure ranges of Bourdon tube pressure gauges with accuracy class 1.0 and 1.6 (acc. to EN) can be found on **general information leaflet 1000**.

Standard Configuration

Process Connection

½" BSP¹⁾ bottom (standard) or lower back (ordering code letter: r)

Wetted Parts

Ordering code –1 : Socket²⁾ = brass
Bourdon tube:
≤ 40 bar = bronze, C-form,
≤ 800 psi soft soldered
≥ 60 bar = 316 st.st. (1.4571), helical³⁾,
≥ 1,000 psi silver brazed

Ordering code –2 : (1600 bar, 20,000 to 25,000 psi)
Socket²⁾ : = 316 stainless steel (1.4571)
Bourdon tube = alloy steel, helical³⁾,
argon arc welded

Ordering code –3: Socket²⁾ = 316 stainless steel (1.4571)
Bourdon tube:
≤ 40 bar = 316 st. st. (1.4571), C-form,
≤ 800 psi argon arc welded
≥ 60 bar = 316 st. st. (1.4571), helical³⁾,
≥ 1,000 psi argon arc welded
1600 bar = NiFe-alloy, helical³⁾,
≥ 20,000 psi argon arc welded

Movement

Brass/German silver

Dial:

Aluminum alloy, black figures, white background

Pointer:

Aluminum black

Case and Ring

Carbon steel black, bayonet ring

Window

Single strength glass,
pressure range 0-1600 bar (≥ 20,000 psi): laminated safety glass

Case Filling

Model RBG only: Glycerine

Safety Features

RBG 160: Top blow-out device

RB 160 and 250: 0-1600 bar (≥ 20,000 psi): 1" Blow-out on the back



Special Options

- Wetted parts **monel** = ordering code: – 6:
pressure ranges 0-0.6 to 0-600 bar and 0-10 psi to 0-10,000 psi,
stainless steel movement, Bourdon tube argon arc welded
- Process connection M 20 x 1.5, ½" NPT, high-pressure connections;
others upon request
- Inlet port restrictor screw brass, stainless steel, or monel
- Acrylic glass window or laminated safety glass
- Movement stainless steel (wear and corrosion resistant), or
movement silicone dampened
- RB 160, 250 (< 1600 bar): Blow-out 1" in the back of the case
- Pressure ranges 0-2500 bar, 0-30,000 psi, or 35,000 psi, version
–2 or –3 (pressure limitation at steady pressure: full scale value, at cyclic
pressure: 65% of full span), HP-connection with M16x1.5 female and
sealing cone, for ¼" pipe; optional with 9/16–18 UNF female or
9/16–18 UNF (left-handed) male; others upon request
- Special scales, such as dual ranges, special units, fine division
(with knife edge pointer) etc.
- Receiver gauges 0.2 – 1 bar or 3 – 15 psi
- Stationary red pointer on the dial or adjustable from outside
- Micro-adjustable pointer, mechanism aluminum
- Maximum-indicating pointer (pressure ranges ≥ 0-2.5 bar) or
stationary red pointer with external adjustment, acrylic glass resp.
polycarbonate lens
- Other than vertical installation; top or side connection
- Other case fillings for RBG 160, e.g. silicone oil for low temperatures
down to -40 °C and others upon request
- Electrical accessories, see data sheets 1191 and 9000 ff

How to Order:

Model code/nom. size: **RB 160, RB 250** (IP 54)
RBG 160 (glycerine filled, IP 65)
RB(G) 160 (fillable case, IP 65)

Wetted parts: –1, –2 or –3 (see left side)

Case configuration: **r, Rh, rRh, Fr, rFr, rBFr**,
compare reverse side
(standard case = bottom connection =
without additional code letter)

Pressure range: according to EN 837-1
e.g. 0-4 bar or 0-60 bar
(compare general information leaflet 1000)

Process connection: ½" **BSP** (= standard) or ½" **NPT**
(others: see above)

Special options: (see above)

Examples for Ordering Information:

- RB 160–1, 0-6 bar, ½" BSP¹⁾
- RBG 160–3, rRh, -1/+9 bar, ½" NPT

¹⁾ = G ½ B ²⁾ = shank (EN 837-1); ³⁾ = coiled (EN 837-1)



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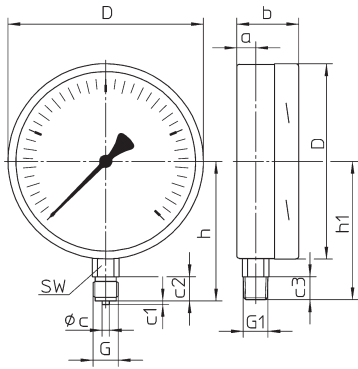
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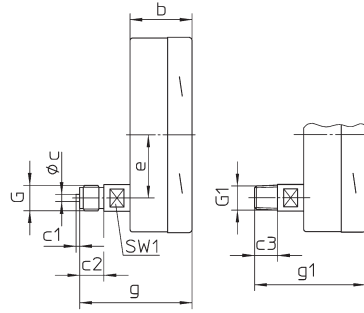
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Case Configuration, Code Letters, Dimensional Data and Weight

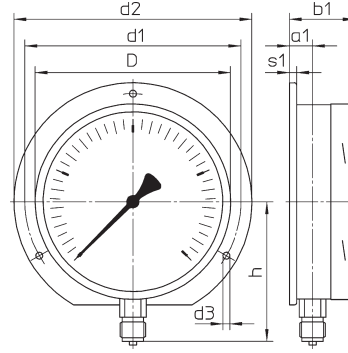
Bottom connection,
without additional code letter



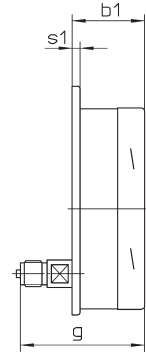
Lower back connection,
code letter: **r**



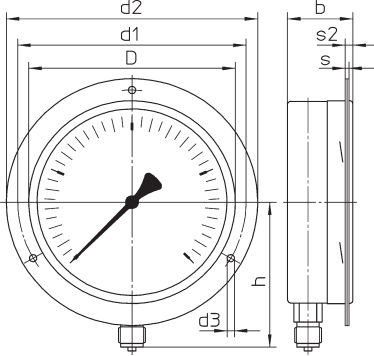
Bottom connection,
rear mounting flange¹⁾,
code letters: **Rh**



Lower back connection,
rear mounting flange¹⁾,
code letters: **rRh**

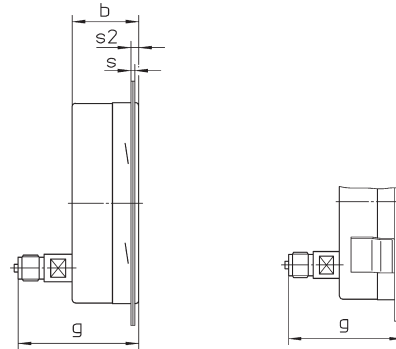


Bottom connection, front mounting flange,
code letters: **Fr**



Dry case version, model RB:
Front flange with longholes attached to the case, and a separate cover front flange

Lower back connection, front mounting flange,
code letters: **rFr**

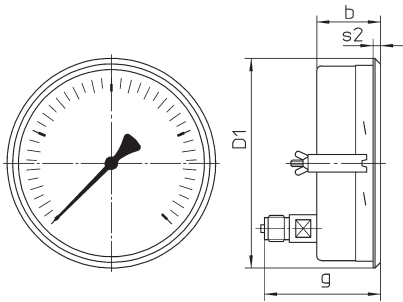


Filled case version, model RBG 160:
Mounting brackets welded to the case, and a separate front flange

Dry case version, model RB:
Front flange with longholes attached to the case and a separate cover front flange

Filled case version, RBG 160:
Mounting brackets welded to the case and a separate front flange

Model RB 160 (dry version) only:
Lower back connection,
U-clamp for panel mounting,
code letters: **rBFr**



Safety blow-outs:

Top blow-out device
model RBG 160

Option:
Blow-out Ø 1" (25,4 mm)
for models RB 160, 250



Dimensional Data (mm / inches) and Weight in (kg / lb)

NCS	a	a1	b	b1	c	c1	c2	c3	D	D1	d1	d2	d3	e	g	g1
160 6"	15.5 .75	19 .75	51 2.01	54 2.13	6	3	20	19	6.34 161	6.57 167	7.08 178	7.72 196	5.8	52	92.5 3.64	91.5 3.6
250 10"	.61	17.5 .69	58 2.28	60 2.36	.24	.12	.79	.75	251 9.88	—	270 10.63	285 11.22	.23	2.05	97 3.82	96 3.78

NCS	G	G1	h	h1	s	s1	s2	s3	SW	SW1	Weight (approx.)	
											RB	RGB
160 6"	G ½ B ²⁾ ½" BSP	½" NPT	115	114	2.5	6	6	1.5	22	17	1.10	1.95
250 10"			165	164	2	2	7	2			2.10	—
			6.50	6.46	.08	.08	.28	.08			4.63	

¹⁾ RB 250 with mtg. brackets welded to the case ²⁾ optionally M 20 x 1,5

The information in this leaflet is given in good faith, but we reserve the right to make changes without notice.