

Bourdon Tube Pressure Gauges

Process gauges according to US standard

RPG 4 1/2"

RPGG 4 1/2"

Application

For gaseous and liquid, aggressive media that are not highly viscous and do not tend to crystallise, especially for chemical and oil-processing industries.

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 (ASME B40.100)

Grade 2A (± 0.5 % of span)

Grade 1A (± 1 % of span) for pressure ranges $\geq 0 - 15,000$ psi

Case

With screw ring, PBTP (thermoplastic) black, flame-retardant and impact resistant, fire classification UL 94 V-0, case with integrated back flange for surface mounting

Degree of Protection (ANSI/IEC 60529-2020)

IP65

Blow-out Device

Blow-out back; when pressure increases in the case, the entire case back separates, allowing full relief

Case Ventilation

Without ventilation, but with internal pressure compensation via pressure equalizing membrane

Case Filling

Model RPGG glycerin

Nominal Case Size (NCS)

4 1/2"

Wetted Parts

Connection 316L stainless steel
Bourdon tube 316L stainless steel
 gas-shielded arc welding
 ≤ 600 psi / 40 bar c-form
 ≥ 800 psi / 60 bar helical form

Case Configuration

Connection screwed
Position of the connection bottom connection
Mounting device integrated back flange for surface mounting

Pressure Range (ASME B40.100)

0 - 10 psi to 0 - 35,000 psi
0 - 0.6 bar to 0 - 1,600 bar
also corresponding vacuum and compound ranges

Temperature Influence

In accordance with the ASME standards, the additional error per 28 °C / 50 °F temperature deviation from the reference temperature +20 °C / +68 °F can be up to ± 1 %.

Process Connection

1/2" MNPT



Window

Laminated safety glass

Movement

Stainless steel

Dial

Aluminum white, scale black

Pointer

Adjustable pointer, aluminum black, with aluminum mechanism

Safety Category

Safety version (similar to DIN EN 837-1, S3) with break-proof solid front between measuring system and dial and with blow-out back. When pressure increases in the case, the entire case back separates, allowing full relief. (Euro standard only)

Ordering Information, Standard Pressure Ranges, Options

See pages 3 and 4

Further Options

- Connection thread 1/4" MNPT or G 1/2 B
- Position of connection radial at 3 o'clock, 9 o'clock, 12 o'clock or other than vertical installation (90°)
- Assembly for panel mounting

Special Versions Upon Request

- Other connection threads, e.g. high pressure connections
- Other pressure ranges and / or special scales, e.g. dual scale bar / psi, color fields or ranges, dial inscriptions
- Other case fillings
- Other position of connection

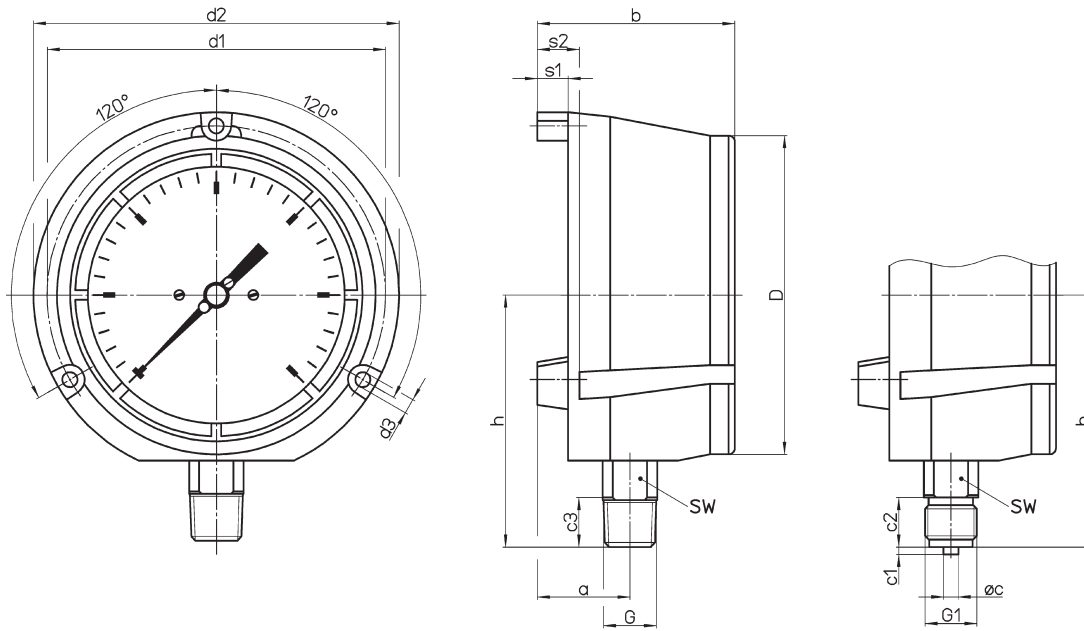
Accessories

Electrical see catalogue heading 9.1
Other accessory see catalogue heading 11

Case Configuration, Dimensional Data and Weights

Bottom Connection

integrated back flange for surface mounting



Dimensional Data (mm / inch) and Weights (kg / lb)

NCS	a	b	c	c1	c2	c3	D	d1	d2	d3	G	G1	h	s1	s2	SW	approx. weight	
																	RPG	RPGG
4 1/2"	38 1.5	80 3.15	6 0.24	3 0.12	20 0.79	19 0.75	129 5.08	137 5.39	148 5.83	6.1 0.24	1/2" NPT	G 1/2 B 1/2" BSP	102 4.02	12,5 0.49	17 0.67	22 0.87	0.85 1.87	1.25 2.76

Ordering Information

Basic Model	Bourdon Tube Pressure Gauge, Process Gauge according to US Standard		RPG
Case filling	without		without code letters
	glycerin		G
	fillable version		(G)
Nominal case size	case Ø 4 1/2"		4 1/2"
Wetted material	stainless steel		- 3
	Monel, 0 – 0.6 bar to 0 – 1,000 bar (0 – 10 psi to 0 – 15,000 psi), movement stainless steel, laminated safety glass, Bourdon tube Monel gas-shielded arc welding, ≤ 40 bar c-form, ≥ 60 bar helical form, bottom connection		- 6
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	
	0 – 1,600 bar	0 – 20,000 psi	
	0 – 25,000 psi		
	0 – 30,000 psi		
	0 – 35,000 psi		
Process connection	standard thread	1/2" MNPT	1/2" MNPT
	options	1/4" MNPT	1/4" MNPT
		G 1/2 B	G 1/2 B
		high pressure connection female thread (0 – 60 bar onwards) for 1/4" tube, with 60° cone	HP connection 1/16" – 18 UNF
		3/16" – 18 UNF	
Options	see page 4		
Example			RPG 4 1/2" – 3, 0 – 6 bar, G 1/2 B

Ordering Information, Further Options

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

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	acrylic glass (PMMA) polycarbonate (PC)
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 – 10,000 psi)	adjustment \leq 250 bar (3,000 psi) with dry air, $>$ 250 bar (3,000 psi) with distilled water dial marking: symbol crossed out oil can
Oxygen version up to 0 – 600 bar (0 – 10,000 psi) ¹⁾	free of grease and oil as above, additional restrictor screw in the inlet port, orifice \varnothing 0.3 mm (0.01"), dial inscription: oxygen no version according to DIN EN 837-1 ²⁾ (Euro standard only)
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

Special Versions Please describe your requirements in cleartext!

¹⁾ for instruments without case filling

²⁾ DIN EN 837-1 in connection with oxygen version requires safety category S3