

Bourdon Tube Pressure Gauges

Polyamide Screw Ring Case

RK 100
RKG 100

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 1.0

Case

Screw ring, rugged plastic,
glass fiber reinforced polyamide 6B

Case Protection Type (EN 60 529 / IEC 529)

IP 54,
IP 65 for model RKG with closed blow-out plug

Blow-out Device

Model RK Blow-out plug in the back of the case,
1" (Ø 25mm)
Model RKG Blow-out plug at the top of the
case coverage

Case Ventilation

Model RKG by blow-out plug, ventilation required for internal pressure compensation for pressure ranges ≤ 10 bar and also recommended for other pressure ranges, as far as the operating conditions allow this.

Case Filling

for model RKG: glycerine

Nominal Case Size

100 (mm) (4")

Wetted Parts

Type -3: Connection: 1.4571 (316 stainless steel)
Bourdon tube: 1.4571 (316 stainless steel),
argon arc welding,
 ≤ 40 bar (600 psi) c-form
 ≥ 60 bar (800 psi) helical
1,600 bar (20,000 psi) NiFe-alloy, helical

Type -1: Connection: brass
Bourdon tube: ≤ 40 bar (600 psi) bronze, c-form
soft-soldered
 ≥ 60 bar (800 psi) 1.4571 (316 stainless steel), helical
silver brazed

Case Configuration

Connection: screwed
Position of the connection: bottom connection,
optional lower back connection (r)
without, optional back flange for
surface mounting (Rh) or u-clamp
for panel mounting (T), see page 2

Pressure Ranges (EN 837-1)

0-0.6 bar (0-10 psi) to 0-1,600¹⁾ bar (0-20,000 psi) for type -3
0-0.6 bar (0-10 psi) to 0-1,000 bar (0-15,000 psi) for type -1

Process Connection

G 1/2 B (1/2" 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

Ordering Information, Standard Pressure Ranges, Options:

see pages 3 and 4

Special Versions and further options among others

- Other process connections upon request, e.g. high pressure connection with external male thread (0-60 bar / 0-800 psi and above)
- 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
- Increased case protection type, e. g. IP 65 without case filling, upon request
- Other case fillings upon request
- Model RKG for ambient temperatures down to -40 °C (-40 °F) upon request. Our recommendation for ambient temperatures below -20 °C (-4 °F); models RChg resp. RChgG
- 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 dry version
- GOST-version for Russia, Ukraine, Kazakhstan
- Sour gas-resistant version according to NACE

Accessory:

Chemical seals: see catalogue-heading 7
Electrical: limit switch contact assembly DS 1390 and
catalogue-heading 9.1
Other accessory: see catalogue-heading 11



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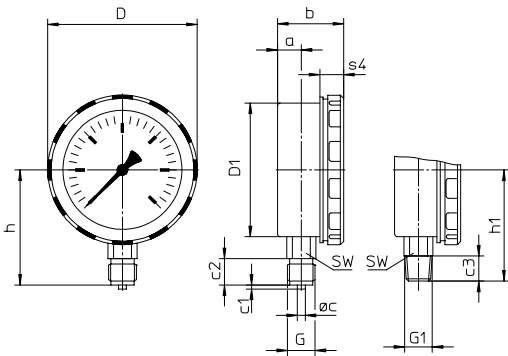
Case Configurations, Code Letters, Dimensional Data and Weights, Blow-out Device

Bottom connection

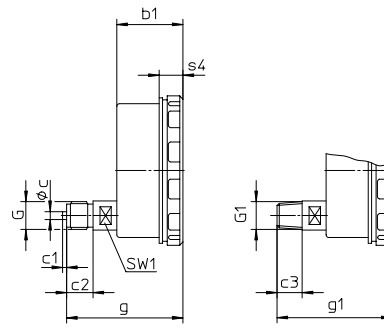
Lower back connection

No mounting device

(no additional code letter)

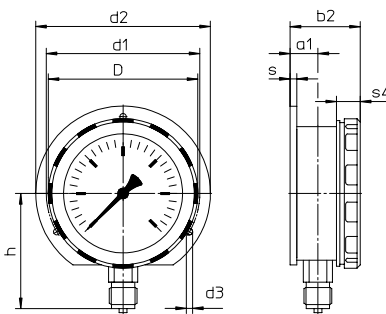


code letter: r

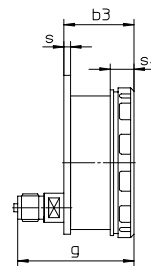


Back flange for surface mounting

code letters: Rh



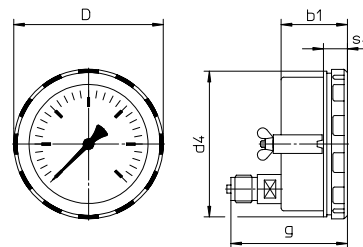
code letters: rRh



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

U-clamp for switch panel mounting

code letters: rT



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

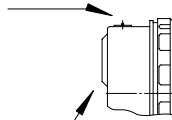
NCS	a	a1	b	b1	b2	b3	c	c1	c2	c3	D	D1	D2	d1	d2	d3	d4	e	G	G1	g	g1	h ^{±1}	h1 ^{±1}
100	18	21	50	53	53	53	6	3	20	19	113	101	-	116	132	4.8	110	34	G 1/2 B 1/2" BSP M 20 x 1.5	1/2" NPT	88	87	87	84
4"	.71	.83	1.97	2.09	2.09	2.09	.24	.12	.79	.75	4.45	3.98	-	4.57	5.2	.19	4.33	1.34			3.46	3.43	3.43	3.31

s	s1	s2	s3	s4	SW	SW1	approx. weight ¹⁾	
							RK	RKG
5	-	-	-	18	22	17	0.45	0.75
.2	-	-	-	.71	.87	.67	1.0	1.70

¹⁾ Information for version without mounting device

Blow-out device

Blow-out plug 19
for model RKG 100



Blow-out plug
Ø 1" (25 mm) for model RK 100

Ordering Information, Standard Pressure Ranges, Options

Basic Model:	Bourdon Tube Pressure Gauge, Polyamide Screw Ring Case		RK	
Case Filling	without		without code letters	
	glycerine		G	
	fillable version		(G)	
Nominal Case Size:	case- Ø 100 (mm) (4")		100	
Wetted Material:	copper alloy		-1	
	stainless steel		-3	
	Monel, 0-0.6 bar (10 psi) to 0-1,000 bar (15,000 psi), movement stainless steel, laminated safety glass, bourdon tube Monel argon arc welding, ≤ 40 bar (0-600 psi) c-form, ≥ 60 bar (1,000 psi) helical, bottom connection, optional r		-6	
Case Configuration:	case / connection	screwed	without code letters	
	position of the connection:	bottom connection	without code letters	
		lower back connection	r	
	mounting device:	without		without code letters
back flange for surface mounting		Rh		
u-clamp for switch panel mounting		T		
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. 0-6 bar	
	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 – 6,000 psi		
0 – 600 bar	0 – 10,000 psi			
0 – 1000 bar	0 – 15,000 psi			
0 – 1600 bar	for model -3 0 – 20,000 psi			
Process Connection:	standard thread	G ½ B (½"BSP)	G ½ B	
	options:	½" NPT	-1 and -6 max. 0-1,000 bar;	½" NPT
		M 20 x 1.5	-3 max. 0-1,600 bar	M 20 x 1,5
		G ¼ B	-1 max. 0- 600 bar;	G ¼ B
		¼" NPT	-3 and -6 max. 0-1,000 bar	¼" NPT
		M 12 x 1.5		M 12 x 1,5
		high pressure connection female thread (0-60 bar and above) for ¼" tube, with 60° cone		
		M 16 x 1.5	HD-Anschluss M 16x1,5	
		9/16" - 18 UNF	HD-Anschluss 9/16" - 18 UNF	
Options:	see page 4			
Example:	RK 100-3 rT, 0-6 bar, G ½ B			

Further Options regarding Ordering Information

Basic Model: Bourdon Tube Pressure Gauge, Polyamide Screw Ring Case		RK
Model Code:		see page 3
Options:	adjustable pointer, aluminum mechanism	
	red mark on the dial	
	stationary on the dial	
	red pointer adjustable when removable ring	
	stationary adjusting mechanism brass, nickelplated	
	red pointer with convex window made of acrylic glass, screwed	
	adjustable externally removable key	
	non-removable key	
	adjusting mechanism stainless steel	
	with convex window made of acrylic glass, screwed	
	adjustable externally removable key	
	non-removable key	
	min.- or max.- drag indicator	
	2.5 bar (30 psi) and above adjusting mechanism brass, nickelplated	
	with convex window made of acrylic glass, screwed	
	adjustable externally removable key	
	non-removable key	
	adjusting mechanism stainless steel	
	with convex window made of acrylic glass, screwed	
	adjustable externally removable key	
	non-removable key	
	receiver gauge 0.2-1 bar, scale 0-100%	linear
		square
	indication accuracy grade 2A ($\pm 0.5\%$) according to ASME B 40.1 ¹⁾	
	special adjustment (reference points = odd values, e. g. 100 KN = 8.735 bar)	
	window laminated safety glass ²⁾ for type -1	<i>(order at the moment still as cleartext)</i>
	polycarbonate (PC) ²⁾	
	movement stainless steel for type -1 (for -3 and -6 standard)	
	movement silicone damped brass / polyacetal	
	screw ring ABS chrome-plated	
	density examination with helium leak detection up to	
	of the measuring unit 10^{-9} mbar l/s for types -3 and -6	
	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
	oxygen version, up to 0-600 bar ³⁾ (0-10,000 psi)	free of grease and oil, additional restrictor screw in the inlet port, orifice $\varnothing 0.3$ mm (0.01"), dial inscription: oxygen no version according to EN 837-1 ⁴⁾
	silicone-free version	
	restrictor screw in pressure inlet port	orifice $\varnothing 0.8$ mm (0.03")
	material: as process connection brass, stainless steel or Monel	orifice $\varnothing 0.6$ mm (0.02") (not Monel)
		orifice $\varnothing 0.3$ mm (0.01") (not Monel)
	measuring point marking	stainless steel-plate 12 mm x 55 mm (0.47" x 2.17"), wire mounting or sticker on case coverage
	deflagration volume protection Adapt FS	version 5 according DS 11001

Special Versions: Please describe your requirements clearly

¹⁾ for pressure ranges $\leq 10,000$ psi

²⁾ not for stationary pointer resp. drag indicator

³⁾ for instruments without case filling

⁴⁾ EN 837-1 in connection with oxygen version requires safety category S3

Technical changes, replacement of materials and errors excepted.