

Capsule Gauges for Low Pressure

Bayonet Ring Case Stainless Steel

Accuracy Class 1.6

Model

Nom. Sizes 100 (4")
160 (6")

KPCh

Application

Measurement of positive or negative overpressure of air or other gaseous media, pressure ranges 2.5 mbar to 600 mbar

Nominal Case Size (NG)

100 mm (4"), 160 mm (6")

Accuracy Class (EN 837-3)

1.6 (i.e. max. $\pm 1.6\%$ of full span)

Pressure Ranges

0 ... 2.5 mbar up to 0 ... 600 mbar according to EN 837-3, and 0/1 "WC to 0/250 "WC (Water Column)
also all standard vacuum and compound ranges (compare table on the backside)

Pressure Limitations

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

Temperature Limitations

Ambient temperature: -20 / + 60 °C (-4 / +140 °F)
Medium temperature: max. + 80 °C (+176 °F) for version -1
max. +100 °C (+212 °F) for version -3

Temperature Caused Error

The accuracy error caused by media or ambient temperatures differing from +20 °C (+68 °F) is significant. It can be estimated with .6% per each 10 °C (+18 °F).

Protection Type (EN 60529 / IEC 529)

IP 54

Standard Configuration

Connection

½" BSP (G ½ B) bottom connection, optional center back (rm);
Version -1: brass
Version -3: 316 stainless steel 1.4571

Diaphragm Capsule

Version -1: Copper/beryllium CuBe₂
Version -3: Stainless steel 1.4571

O-Ring-Sealing

Version -1: NBR (nitrile rubber, "buna N")
Version -3: FPM (fluorocautchouc)

Movement

Version -1: Brass / German silver
Version -3: stainless steel

Dial

Aluminum alloy, black figures, white background

Pointer

Aluminum alloy black

Zero Adjustment

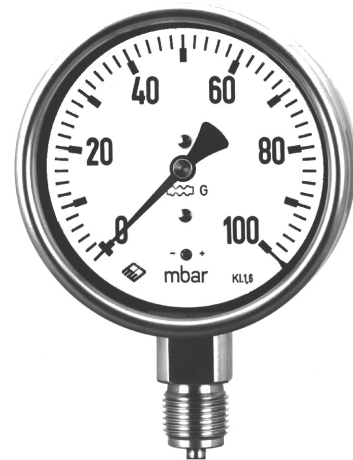
From the frontside

Case and Bayonet Ring

304 stainless steel (1.4301)

Window

Version -1: single strength glass
Version -3: laminated safety glass
Acrylic glass lens for case configurations rmFr, rmBFR resp. rmBFrg and sealed gauges (lens punched for zero adjustment), except nom. size 160 (6") ≤ 10 mbar (here: single strength glass)



Special Options

- Connection M 12x1.5, M 20x1.5, ½" NPT, ¼" NPT, others upon request
- Inlet port restrictor screw brass or stainless steel (Ø .3 mm)
- Acrylic glass lens (pressure ranges ≥ 25 mbar)
- Special scales like dual ranges or special units
- Stationary red pointer on the dial
- Stationary red pointer with external adjustment
- 3-times overrange- or vacuum protection
- 10-times overrange protection for ranges ≥ 40 mbar; for vacuum and compound ranges upon request
- Nom. sizes 63 and NG 250 upon request
- Version for higher medium temperature upon request

How to Order:

Please specify:

Model code	KPCh
Nominal size	100 or 160
Wetted parts	- 1 or - 3 (compare left)
Case configuration (see overleaf)	rm, Rh, rmFr, rmBFR (NG 160) resp. rmBFrg (NG 100) (standard = bottom connection = without additional code letter)
Pressure range	e.g. 0/100 mbar (see table overleaf)
Process connection	½" BSP resp. G ½ B (others see "Special Options")
Special options	(see above)

Examples for Ordering Information:

- KPCh 160-1, rmFr, 0/250 mbar, G ½ B
- KPCh 100-3, -40/0 mbar, ½" NPT



ARMATURENBAU GmbH

Manometerstraße • D-46487 Wesel - Ginderich
Phone: (0 28 03) 91 30-0 • Fax: (0 28 03) 10 35
armaturenbau.com • mail@armaturenbau.com



Subsidiary Company and Sales East Germany and Eastern Europe

MANOTHERM Beierfeld GmbH

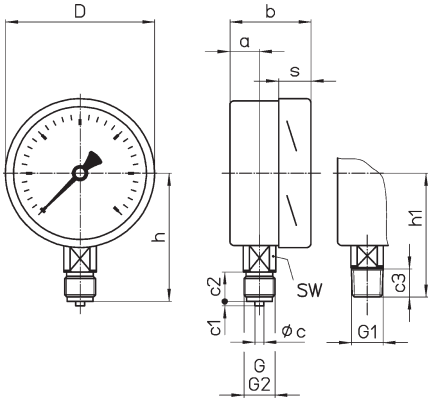
Am Gewerbestraße 9 • D-08340 Beierfeld
Phone: (0 37 74) 58 - 0 • Fax: (0 37 74) 58 - 545
manotherm.com • mail@manotherm.com

6201

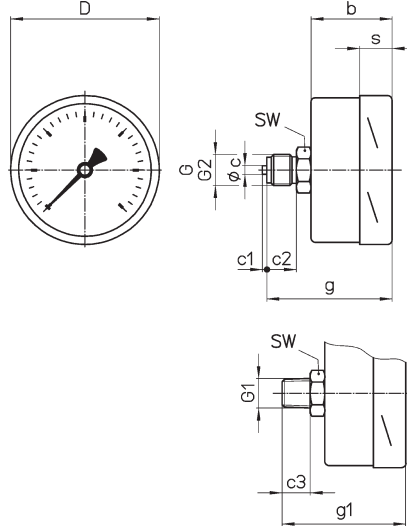
8/02

Case Configurations, Code Letters, Dimensions and Weight, Pressure Ranges

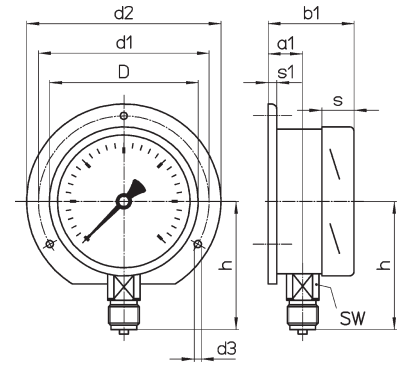
Bottom connection,
without additional code letter



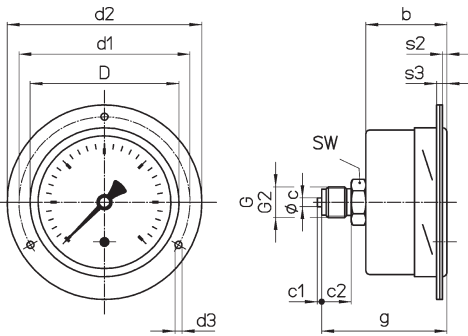
Center back connection,
code letters: **rm**



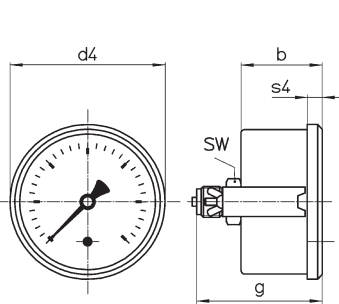
Bottom connection,
rear mounting flange,
code letters: **Rh**



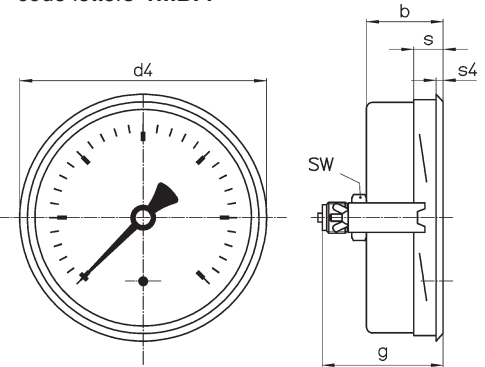
Center back connection,
front mounting flange¹⁾
(front flange with longholes attached to the case and a
separate cover front ring),
code letters: **rmFr**



NG 100 (4")
Center back connection,
u-clamp for panel mounting^{1) 2)},
crimped-on ring stainless steel,
code letters: **rmBFrg**



NG 160 (6")
Center back connection,
u-clamp for panel mounting^{1) 2)},
code letters **rmBFr**



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

Nominal Size (NG)	a	a1	b	b1	D	c	c1	c2	c3	d1	d2	d3	d4	G	G1	G2	g	g1
100 4"	20 .79	23.5 .93	55 2.17	58.5 2.30	101 3.98	6	3	20	19	116 4.57	132 5.20	4.8 .19	106 4.17	G ½ B ½" BSP	½"NPT	M 20x1.5	85	84
160 6"	15.5 .61	19 .75	51.5 ³⁾ 2.03	55 ³⁾ 2.17	161 6.34	.24	.12	.79	.75	178 7	196 7.72	5.8 .23	168 6.61				82 ³⁾	81 ³⁾

Standard Pressure Ranges

Vacuum	Compound	Pressure
in mbar		
- 2.5 / 0 ⁴⁾	- 1 / + 1.5 ⁴⁾ - 1.5 / + 1 ⁴⁾	0 / 2.5 ⁴⁾
- 4 / 0	- 1.5 / + 2.5 - 2.5 / + 1.5	0 / 4
- 6 / 0	- 2 / + 4 - 4 / + 2	0 / 6
- 10 / 0	- 4 / + 6 - 6 / + 4	0 / 10
- 16 / 0	- 6 / + 10 - 10 / + 6	0 / 16
- 25 / 0	- 10 / + 15 - 15 / + 10	0 / 25
- 40 / 0	- 15 / + 25 - 25 / + 15	0 / 40
- 60 / 0	- 20 / + 40 - 40 / + 20	0 / 60

Nominal Size (NG)	h ±1	h1 ±1	s	s1	s2	s3	s4	SW	Weight (approx.) kg / lb
100 4"	87	84	21	6	2	6	10 .39	22	0.5 1.10
160 6"	115	114	.83	.24	.08	.24	5 .20	.87	0.9 1.98

Vacuum	Compound	Pressure
in mbar		
-100 / 0	- 40 / + 60 - 60 / + 40	0 / 100
-160 / 0	- 60 / + 100 - 100 / + 60	0 / 160
-250 / 0	- 100 / + 150 - 150 / + 100	0 / 250
-400 / 0	- 150 / + 250 - 250 / + 150	0 / 400
-600 / 0	- 200 / + 400 - 400 / + 200	0 / 600

¹⁾ Recommended panel cut-out:

NG 100, rmBFrg Ø 101 + 1 mm (3.98" + .04")

NG 160, rmBFr Ø 162 + 1 mm (6.38" + .04")

NG 100, rmFr Ø 103 ± 1 mm (4.06" ± .04")

NG 160, rmFr Ø 162 + 1 mm (6.38" + .04")

²⁾ u-clamp stainless steel

³⁾ dimensions b, b1, g and g1 = +5 mm (.2") for NG 160 (6") with pressure ranges ≤ 16 mbar (10"WC)

⁴⁾ scale 180 degrees for NG 100 (4")

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