

Capsule Gauges for Low Pressure

Bayonet ring case stainless steel

KPCh
KPChG

Standard Versions

Information on general and metrological features (load limits / temperature-resistance among others) and standard pressure ranges / scale divisions can be found in model overview 6000.

Accuracy (EN 837-3)

Class 1.6

Case

With bayonet ring, stainless steel 1.4301 (304)

Case Protection Type (EN 60 529 / IEC 529)

IP 54

Case Ventilation

Model KPChG 100 Case ventilation closable
Ventilation required for internal pressure compensation
Model KPChG 160 Blow-out device

Case Filling

For model KPChG: glycerine

Nominal Case Size

Model KPCh: 100, 160, 250 mm (4", 6", 10")
Model KPChG: 100, 160 mm (4", 6")

Wetted Parts

Type – 1: Connection: brass
Diaphragm capsule: CuBe-alloy
O-ring sealing: NBR

Type – 3: Connection: stainless steel 316 SS
Diaphragm capsule: stainless steel 316 SS
O-ring sealing: FPM

Case Configuration

Connection: screwed
Position of the connection: bottom connection,
optional centre back connection (rm)
without, optional back flange for
surface mounting (Rh) / front flange
for panel mounting (Fr), see page 2
Mounting device:

Pressure Ranges (EN 837-3)

KPCh 0 – 2.5 mbar (0 – 1.0 "WC) to 0 – 600 mbar (0 – 250 "WC)
KPChG 0 – 100 mbar (0 – 40 "WC) to 0 – 600 mbar (0 – 250 "WC)

Process Connection

G ½ B (½" BSP)

Window

KPCh Instrument glass for type – 1 and KPCh 250 – 3
Laminated safety glass for type – 3
Specifics for case configuration Fr
Pressure ranges ≤ 16 mbar (6.4 "WC): instrument glass
(punched for zero adjustment)
Pressure ranges ≥ 25 mbar (10 "WC): acrylic glass
(punched for zero adjustment)
KPChG Acrylic glass (punched for zero adjustment)

Movement

Brass / German silver for type – 1
Stainless steel for type – 3



Dial

Aluminium white, scaling black

Pointer

Aluminium black

Zero Adjustment

Frontsided

Ordering Information, Standard Pressure Ranges, Options

See pages 3 and 4

Special Versions and further Options among others

- Other process connections upon request
- Other pressure ranges and / or special scales, e.g. dual scale mbar/kPa, coloured fields or ranges, dial inscriptions, negative scale etc.
- Case parts 316 L stainless steel (1.4404) upon request
- Increased case protection type, e.g. IP 65 upon request
- Wetted parts free of grease and oil for type – 3 upon request
- Oxygen version for type – 3 without case filling upon request
- Version for higher medium temperatures upon request
- Position of the connection radial at 3 o'clock, 9 o'clock, 12 o'clock (others upon request) or position of connection other than vertical installation (90°) for types without case filling
- Increased precision upon request
- GOST-version for Russia, Ukraine, Kazakhstan

Accessory

See catalogue heading 11



Sales and Export South, West, North

ARMATURENBAU GmbH

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Subsidiary Company, Sales and Export East

MANOTHERM Beierfeld GmbH

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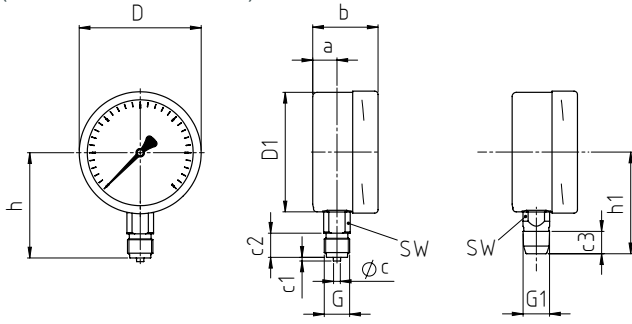
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Case Configurations, Code Letters, Dimensional Data and Weights, Blow-out Device

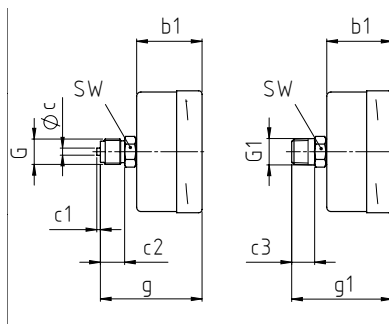
Bottom Connection Centre Back Connection

no mounting device

(no additional code letter)

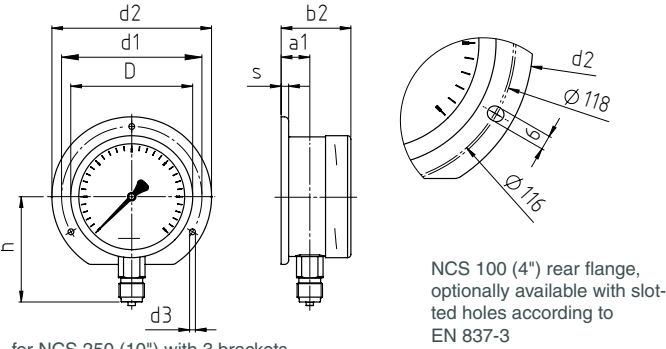


code letters: **rm**

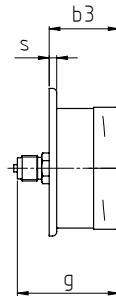


with back flange for panel mounting

code letters: **Rh**



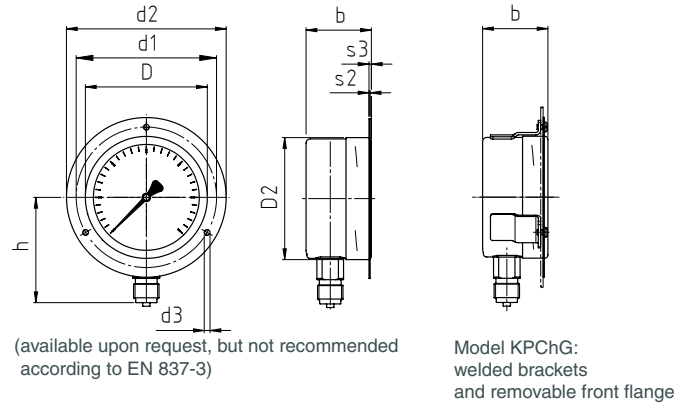
code letters: **rmRh**



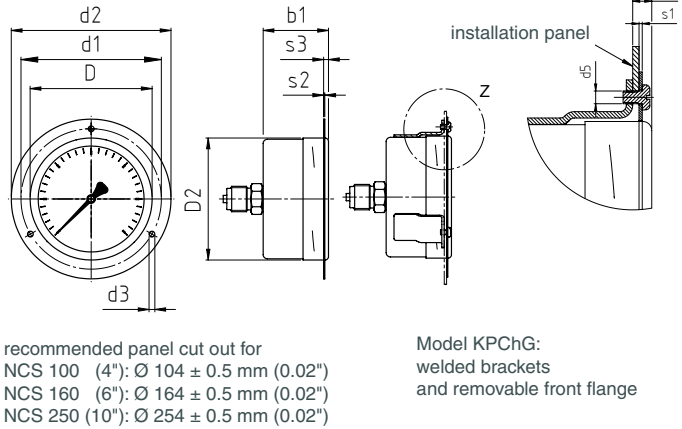
(available upon request, but not recommended according to EN 837-3)
for NCS 250 (10") with 3 brackets

with front flange for panel mounting

code letters: **Fr**



code letters: **rmFr**



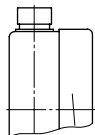
Dimensional Data (mm/ inches) and Weights (kg/ lb)

| NCS | a | a1 | b | b1 | b2 | b3 | c | c1 | c2 | c3 | D | D1 | D2 | d1 | d2 | d3 | G | G1 | g | g1 | h ^{±1} | h1 ^{±1} |
|-----------------------|-------------|-------------|------------|------------|------------|------------|----------|----------|-----------|-----------|-------------|-------------|-------------|--------------|-------------|------------|----------------------------|--------|------------|------------|-----------------|------------------|
| 100 (4") ≤ 16 mbar | 15.5 .61 | 19 .75 | 55 2.17 | 55 2.17 | 59 2.32 | 59 2.32 | 6 .24 | 3 .12 | 20 .79 | 19 .75 | 101 3.98 | 99 3.9 | 103 4.06 | 116 4.57 | 132 5.2 | 4.8 .19 | G ½ B (½" BSP) M 20x1.5 | ½" NPT | 85 3.35 | 84 3.31 | 87 3.43 | 84 3.31 |
| 100 (4") ≥ 25 mbar | 20 .79 | 23 .91 | 55 2.17 | 55 2.17 | 59 2.32 | 59 2.32 | 6 .24 | 3 .12 | 20 .79 | 19 .75 | 101 3.98 | 99 3.9 | 103 4.06 | 116 4.57 | 132 5.2 | 4.8 .19 | G ½ B (½" BSP) M 20x1.5 | ½" NPT | 85 3.35 | 84 3.31 | 87 3.43 | 84 3.31 |
| 160 (6") ≤ 16 mbar | 15 .59 | 18 .71 | 55 2.17 | 55 2.17 | 58 2.28 | 58 2.28 | 6 .24 | 3 .12 | 20 .79 | 19 .75 | 161 6.34 | 159 6.26 | 163 6.42 | 178 7.01 | 196 7.72 | 5.8 .23 | G ½ B (½" BSP) M 20x1.5 | ½" NPT | 85 3.35 | 84 3.31 | 115 4.53 | 114 4.49 |
| 160 (6") ≥ 25 mbar | 15 .59 | 18 .71 | 51 2.01 | 51 2.01 | 54 2.13 | 54 2.13 | 6 .24 | 3 .12 | 20 .79 | 19 .75 | 161 6.34 | 159 6.26 | 163 6.42 | 178 7.01 | 196 7.72 | 5.8 .23 | G ½ B (½" BSP) M 20x1.5 | ½" NPT | 81 3.18 | 80 3.15 | 115 4.53 | 114 4.49 |
| 250 (10") | 15.5 .61 | 17.5 .69 | 58 2.28 | 58 2.28 | 60 2.36 | 60 2.36 | 6 .24 | 3 .12 | 20 .79 | 19 .75 | 251 9.88 | 249 9.8 | - | 270 10.63 | 285 11.2 | 5.8 .23 | G ½ B (½" BSP) M 20x1.5 | ½" NPT | 88 3.46 | 87 3.43 | 165 6.5 | 164 6.46 |

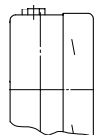
| s | s1 | s2 | s3 | s5 | SW | approx. Weight ¹⁾ | |
|-----|-----|-----|-----|-----|-----|------------------------------|-------|
| | | | | | | KPCh | KPChG |
| 6 | 1 | 2 | 5.5 | 7 | 22 | 0.60 | 0.95 |
| .24 | .04 | .08 | .22 | .28 | .87 | 1.32 | 2.09 |
| 6 | 1 | 2 | 5.5 | 7 | 22 | 0.60 | 0.95 |
| .24 | .04 | .08 | .22 | .28 | .87 | 1.32 | 2.09 |
| 6 | 1.5 | 2.5 | 6 | 8 | 22 | 1.00 | 1.80 |
| .24 | .06 | .1 | .24 | .31 | .87 | 2.2 | 3.97 |
| 6 | 1.5 | 2.5 | 6 | 8 | 22 | 0.95 | 1.80 |
| .24 | .06 | .1 | .24 | .31 | .87 | 2.09 | 3.97 |
| 2 | - | 2 | 8.5 | - | 22 | 2.00 | - |
| .08 | - | .08 | .33 | - | .87 | 4.41 | - |

Case Ventilation

Model KPChG 100
Case ventilation
no. 26 closable



Model KPChG 160
Blow-out device



¹⁾ Indications for versions without mounting device

Ordering Information with Standard Pressure Ranges, Options

| Basic Model: | | Capsule Gauge for Low Pressure, Bayonet Ring Case | | | | KPCh |
|---------------------|---------------------------------------|--|--|----------|--------------------------|---|
| Case filling: | without glycerine | | | | | no code letters G |
| Nominal case size: | case-Ø 100, 160, 250 mm (4", 6", 10") | | | | 100, 160, 250 | |
| Wetted material: | copper alloy stainless steel | | | | - 1 - 3 | |
| Case configuration: | case / connection | screwed | | | | no code letters |
| | position of the connection | bottom centre back | | | | no code letters rm |
| | mounting device | without back flange for panel mounting front flange for surface mounting | | | | no code letters Rh Fr |
| Pressure ranges: | mbar | | | inchWC | | |
| | Vacuum | Compound ranges | Pressure | Vacuum | Compound ranges | Pressure |
| | -2.5 – 0 ¹⁾ | -1 – 1.5 ¹⁾ -1.5 – 1 ¹⁾ | 0 – 2.5 ¹⁾ | -1.0 – 0 | -0.4 – 0.6 -0.6 – 0.4 | 0 – 1.0 |
| | -4 – 0 | -1.5 – 2.5 -2.5 – 1.5 | 0 – 4 | -1.6 – 0 | -0.6 – 1.0 -1.0 – 0.6 | 0 – 1.6 |
| | -6 – 0 | -2 – 4 -4 – 2 | 0 – 6 | -2.5 – 0 | -1.0 – 1.5 -1.5 – 1.0 | 0 – 2.5 |
| | -10 – 0 | -4 – 6 -6 – 4 | 0 – 10 | -4 – 0 | -1.5 – 2.5 -2.5 – 1.5 | 0 – 4 |
| | -16 – 0 | -6 – 10 -10 – 6 | 0 – 16 | -6 – 0 | -2 – 4 -4 – 2 | 0 – 6 |
| | -25 – 0 | -10 – 15 -15 – 10 | 0 – 25 | -10 – 0 | -4 – 6 -6 – 4 | 0 – 10 |
| | -40 – 0 | -15 – 25 -25 – 15 | 0 – 40 | -16 – 0 | -6 – 10 -10 – 6 | 0 – 16 |
| | -60 – 0 | -20 – 40 -40 – 20 | 0 – 60 | -25 – 0 | -10 – 15 -15 – 10 | 0 – 25 |
| | -100 – 0 | -40 – 60 -60 – 40 | 0 – 100 | -40 – 0 | -15 – 25 -25 – 15 | 0 – 40 |
| | -160 – 0 | -60 – 100 -100 – 60 | 0 – 160 | -60 – 0 | -20 – 40 -40 – 20 | 0 – 60 |
| | -250 – 0 | -100 – 150 -150 – 100 | 0 – 250 | -100 – 0 | -40 – 60 -60 – 40 | 0 – 100 |
| | -400 – 0 | -150 – 250 -250 – 150 | 0 – 400 | -160 – 0 | -60 – 100 -100 – 60 | 0 – 160 |
| | -600 – 0 | -200 – 400 -400 – 200 | 0 – 600 | -250 – 0 | -100 – 150 -150 – 100 | 0 – 250 |
| | | | | | | e.g. 0 – 60 mbar |
| | Process connection: | standard thread options | G ½ B (½" BSP) ½" NPT M 20x1.5 G ¼ B (¼" BSP) ²⁾ ¼" NPT ²⁾ M 12x1.5 ²⁾ | | | |
| Options: | see page 4 | | | | | |

Example: KPCh 100 – 1, 0 – 60 mbar, G ½ B

¹⁾ for NCS 100: 180 angular degrees ²⁾ not for NCS 250

Ordering Information further Options

| Basic Model: | Capsule Gauge for Low Pressure, Bayonet Ring Case | | KPCh |
|--------------|---|--|--|
| Model code: | | | see page 3 |
| Options: | adjustable pointer | aluminium | <i>(order at present still in cleartext)</i> |
| | red mark | on the dial | |
| | plastic clip | red or green, external on bayonet ring (not NCS 250) | |
| | stationary red pointer | on the dial, adjustable with removable ring | |
| | stationary red pointer ¹⁾ | adjusting mechanism brass, nickelplated screwed to acrylic glass window | |
| | | adjustable externally removable key non-removable key | |
| | | adjusting mechanism stainless steel screwed to acrylic glass window | |
| | | adjustable externally removable key non-removable key | |
| | maximum drag indicator ¹⁾ | adjusting mechanism brass, nickelplated screwed to acrylic glass window | |
| | measuring span | adjustable externally removable key | |
| | NCS 100 250 mbar | non-removable key | |
| | NCS 160 400 mbar | | |
| | clockwise rotary pointer motion, for vibration-free application | adjusting mechanism stainless steel screwed to acrylic glass window | |
| | | adjustable externally removable key non-removable key | |
| | special adjustment window | laminated safety glass for type – 1 acrylic glass (PMMA) polycarbonate (PC) instrument glass | |
| | blow-out device Ø 1" (25 mm) in the back of the case | | |
| | case ventilation no. 22 for outdoor installation | | |
| | case polished | | |
| | bayonet ring polished | | |
| | silicone-free version | | |
| | restrictor screw in pressure inlet port | orifice Ø 0.3 mm (0.01") | |
| | material: as process connection, brass or stainless steel | | |
| | overrange protection (üs) and / or vacuum protection (us)²⁾ | | |
| | for types – 1 (copper alloy) | 3-fold üs ³⁾ or us 10-fold üs 0 – 25 mbar and above 10-fold us -100 – 0 mbar and above | |
| | | combination 10-fold üs and 10-fold us only for compound ranges for spans of 100 mbar (40 "WC) and above | |
| | for types –3 (stainless steel) | 3-fold üs ³⁾ or us 10-fold üs 0 – 25 mbar and above 10-fold us -100 – 0 mbar and above | |
| | | combination 10-fold üs and 3-fold us only for compound ranges for spans of 40 mbar (16 "WC) and above | |
| | measuring point marking | stainless steel plate 12 mm x 55 mm (0.47" x 2.17"), wire mounting or sticker on case coverage | |

Special Versions: Please describe your requirements in cleartext

¹⁾ not for NCS 250

³⁾ only for dry versions

²⁾ max. -1000 mbar