

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

Manometerstraße 5 • D-46487 Wesel-Ginderich
Tel.: +49 (0) 28 03/91 30-0 • Fax: +49 (0) 28 03/ 10 35
armaturenbaum.com • mail@armaturenbaum.com

Subsidiary Company, Sales and Export East

MANOTHERM Beierfeld GmbH

Am Gewerbepark 9 • D-08344 Grünhain-Beierfeld
Tel.: +49 (0) 37 74/ 58-0 • Fax: +49 (0) 37 74/ 58-545
manotherm.com • mail@manotherm.com

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02/14

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

Bottom Connection										Centre Back Connection									
no mounting device										no mounting device									
(no additional code letter)										code letters: rm									
with back flange for panel mounting										with back flange for panel mounting									
code letters: Rh										code letters: rmRh									
NCS 100 (4") rear flange, optionally available with slot holes according to EN 837-3 for NCS 250 (10") with 3 brackets										(available upon request, but not recommended according to EN 837-3) for NCS 250 (10") with 3 brackets									
with front flange for panel mounting										with front flange for panel mounting									
code letters: Fr										code letters: rmFr									
(available upon request, but not recommended according to EN 837-3) Model KPChG: welded brackets and removable front flange										recommended panel cut out for NCS 100 (4"): Ø 104 ± 0.5 mm (0.02") NCS 160 (6"): Ø 164 ± 0.5 mm (0.02") NCS 250 (10"): Ø 254 ± 0.5 mm (0.02") Model KPChG: welded brackets and removable front flange									

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						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					no code letters	
	glycerine					G	
Nominal case size:	case-Ø 100, 160, 250 mm (4", 6", 10")					100, 160, 250	
Wetted material:	copper alloy					– 1	
	stainless steel					– 3	
Case configuration:	case / connection	screwed				no code letters	
	position of the connection	bottom				no code letters	
		centre back				rm	
	mounting device	without				no code letters	
		back flange for panel mounting				Rh	
	front flange for surface mounting				Fr		
Pressure ranges:	mbar			inchWC			
	Vacuum	Compound ranges	Pressure	Vacuum	Compound ranges	Pressure	
	-2.5 – 0 ¹⁾	-1 – 1.5 ¹⁾	0 – 2.5 ¹⁾	-1.0 – 0	-0.4 – 0.6	0 – 1.0	
		-1.5 – 1 ¹⁾			-0.6 – 0.4		
	-4 – 0	-1.5 – 2.5	0 – 4	-1.6 – 0	-0.6 – 1.0	0 – 1.6	
		-2.5 – 1.5			-1.0 – 0.6		
	-6 – 0	-2 – 4	0 – 6	-2.5 – 0	-1.0 – 1.5	0 – 2.5	
		-4 – 2			-1.5 – 1.0		
	-10 – 0	-4 – 6	0 – 10	-4 – 0	-1.5 – 2.5	0 – 4	
		-6 – 4			-2.5 – 1.5		
	-16 – 0	-6 – 10	0 – 16	-6 – 0	-2 – 4	0 – 6	
		-10 – 6			-4 – 2		
	-25 – 0	-10 – 15	0 – 25	-10 – 0	-4 – 6	0 – 10	
		-15 – 10			-6 – 4		
	-40 – 0	-15 – 25	0 – 40	-16 – 0	-6 – 10	0 – 16	
		-25 – 15			-10 – 6		
	-60 – 0	-20 – 40	0 – 60	-25 – 0	-10 – 15	0 – 25	
		-40 – 20			-15 – 10		
	-100 – 0	-40 – 60	0 – 100	-40 – 0	-15 – 25	0 – 40	
		-60 – 40			-25 – 15		
	-160 – 0	-60 – 100	0 – 160	-60 – 0	-20 – 40	0 – 60	
		-100 – 60			-40 – 20		e.g. 0 – 60 mbar
	-250 – 0	-100 – 150	0 – 250	-100 – 0	-40 – 60	0 – 100	
		-150 – 100			-60 – 40		
	-400 – 0	-150 – 250	0 – 400	-160 – 0	-60 – 100	0 – 160	
		-250 – 150			-100 – 60		
	-600 – 0	-200 – 400	0 – 600	-250 – 0	-100 – 150	0 – 250	
		-400 – 200			-150 – 100		
Process connection:	standard thread	G ½ B (½" BSP)				G ½ B	
	options	½" NPT				½" NPT	
		M 20x1.5				M 20x1.5	
		G ¼ B (¼" BSP) ²⁾				G ¼ B	
		¼" NPT ²⁾				¼" NPT	
		M 12x1.5 ²⁾				M 12x1.5	
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
	red mark	on the dial
	plastic clip	red or green, external on bayonet ring (not NCS 250)
	stationary	on the dial,
	red pointer	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
		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
	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

(order at present still in cleartext)

Special Versions: Please describe your requirements in cleartext

¹⁾ not for NCS 250

³⁾ only for dry versions

²⁾ max. -1000 mbar