

# Capsule Gauges for Low Pressure

Crimped-on ring case stainless steel

KPChg

KPChgG

## 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 6000.

**Accuracy** (DIN EN 837-3)  
Class 1.6

### Case

With polished crimped-on ring, stainless steel 304 (1.4301)

**Degree of Protection** (DIN EN 60529 / IEC 60529)

IP54

IP65 for model KPChgG

### Case Ventilation

Model KPChgG 100 case ventilation closable  
ventilation required for internal  
pressure compensation

Model KPChgG 160 via blow-out device

### Case Filling

Model KPChgG glycerin

### Nominal Case Size

100, 160 mm (4, 6")

### Wetted Parts

Type – 1 connection brass  
diaphragm capsule CuBe alloy  
O-ring sealing NBR

Type – 3 connection stainless steel 316L (1.4404)  
diaphragm capsule stainless steel 316L (1.4404)  
O-ring sealing FKM

### Case Configuration

Connection screwed

Position of the connection - bottom connection  
- centre back connection (**rm**)

Mounting device - without  
- back flange for surface mounting (**Rh**)  
- front flange for panel mounting (**Fr**)  
- u-clamp for panel mounting (**BFr**)

### Pressure Ranges

 (DIN EN 837-3)

Model KPCh 0 – 2.5 mbar to 0 – 600 mbar  
(0 – 1 inH<sub>2</sub>O to 0 – 250 inH<sub>2</sub>O)

Model KPChG 0 – 100 mbar to 0 – 600 mbar  
(0 – 40 inH<sub>2</sub>O to 0 – 250 inH<sub>2</sub>O)

### Process Connection

G ½ B (½" BSP)

### Window

Instrument glass pressure ranges ≤ 16 mbar (≤ 6.4 inH<sub>2</sub>O)

Acrylic glass pressure ranges ≥ 25 mbar (≥ 10 inH<sub>2</sub>O)  
(with punched hole for zero adjustment)

### Movement

Brass / German silver for type – 1

Stainless steel for type – 3

### Dial

Aluminum white, scale black



### Pointer

Aluminum black

### Zero Adjustment

On the front side

## Ordering Information, Standard Pressure Ranges, Options

See pages 3 and 4

## Further Options

- Position of connection radial at 3 o'clock, 9 o'clock, 12 o'clock or position of connection other than vertical installation (90°) for models without case filling

## Special Versions Upon Request

- Other process connections
- Other pressure ranges and / or special scales, e.g. dual scale mbar / kPa, coloured fields or ranges, dial inscriptions, negative scale
- Case parts 316L (1.4404)
- Increased degree of protection, e.g. IP65 (without case filling)
- Wetted parts free of grease and oil for type – 3
- Oxygen version for type – 3 (without case filling)
- Version for higher medium temperatures
- Other position of connection
- Model KPChg: increased measurement accuracy (without case filling)
- Certificates and approvals, e.g. GOST (see also website)

## Accessories

See catalogue heading 11

[www.armano-messtechnik.com](http://www.armano-messtechnik.com)

**ARMANO**

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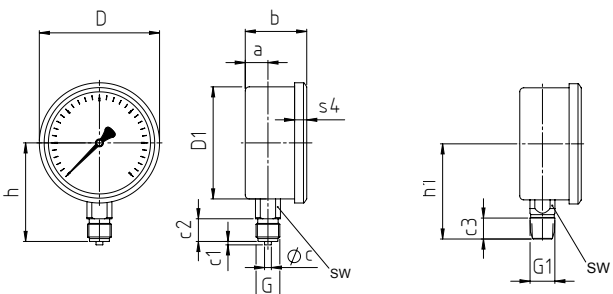
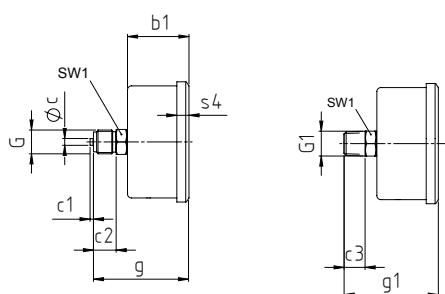
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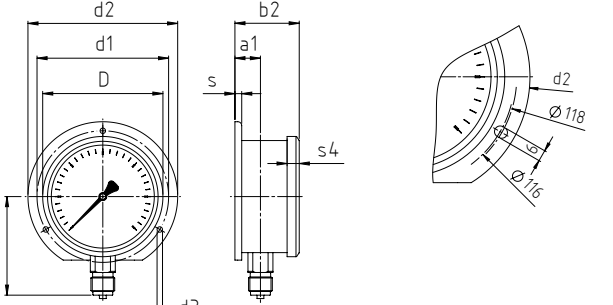
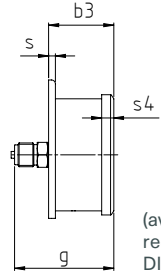
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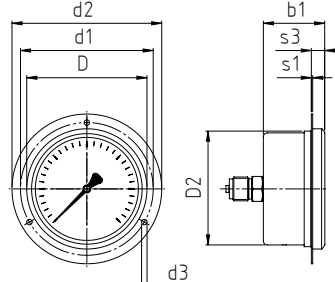
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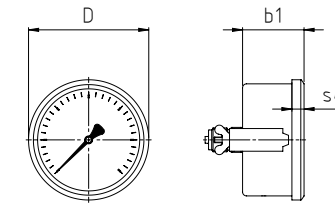
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# Case Configurations, Code Letters, Dimensional Data and Weight, Case Ventilation

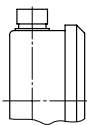
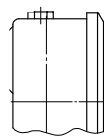
Bottom Connection	Centre Back Connection
without mounting device	
without code letters 	code letters <b>rm</b> 

with back flange for surface mounting	
code letters <b>Rh</b> 	code letters <b>rmRh</b>  <p>(available upon request, but not recommended according to DIN EN 837-3)</p>

with front flange for panel mounting	
code letters <b>rmFr</b> 	recommended panel cut out NCS 100 (4") $\varnothing 104 \pm 0.5$ mm (4.09 ± 0.02") NCS 160 (6") $\varnothing 164 \pm 0.5$ mm (6.46 ± 0.02")

with u-clamp for panel mounting	
code letters <b>rmBFr</b> 	recommended panel cut out NCS 100 (4") $\varnothing 102 \pm 0.5$ mm (4.02 ± 0.02") NCS 160 (6") $\varnothing 162 \pm 0.5$ mm (6.38 ± 0.02")

Dimensional Data (mm / inch) and Weight (kg / lb)																						
NCS	a	a1	b	b1	b2	b3	c	c1	c2	c3	D	D1	D2	d1	d2	d3	G	G1	g	g1	h <sup>±1</sup>	h1 <sup>±1</sup>
100 ≤16 mbar	15.5 <b>0.61</b>	19 <b>0.75</b>	55 <b>2.17</b>	55 <b>2.17</b>	58.5 <b>2.3</b>	59 <b>2.32</b>	6 <b>0.24</b>	3 <b>0.12</b>	20 <b>0.79</b>	19 <b>0.75</b>	106 <b>4.17</b>	99 <b>3.9</b>	103 <b>4.06</b>	116 <b>4.57</b>	132 <b>5.2</b>	4.8 <b>0.19</b>	G ½ B M20x1.5	½" NPT	85 <b>3.35</b>	84 <b>3.31</b>	87 <b>3.43</b>	84 <b>3.31</b>
100 ≥25 mbar	15.5 <b>0.61</b>	23 <b>0.91</b>	55 <b>2.17</b>	55 <b>2.17</b>	58.5 <b>2.3</b>	59 <b>2.32</b>	6 <b>0.24</b>	3 <b>0.12</b>	20 <b>0.79</b>	19 <b>0.75</b>	106 <b>4.17</b>	99 <b>3.9</b>	103 <b>4.06</b>	116 <b>4.57</b>	132 <b>5.2</b>	4.8 <b>0.19</b>	G ½ B M20x1.5	½" NPT	85 <b>3.35</b>	84 <b>3.31</b>	87 <b>3.43</b>	84 <b>3.31</b>
160 ≤16 mbar	15 <b>0.59</b>	18 <b>0.71</b>	55 <b>2.17</b>	55 <b>2.17</b>	58 <b>2.28</b>	58 <b>2.28</b>	6 <b>0.24</b>	3 <b>0.12</b>	20 <b>0.79</b>	19 <b>0.75</b>	167 <b>6.57</b>	159 <b>6.26</b>	163 <b>6.42</b>	178 <b>7.01</b>	196 <b>7.72</b>	5.8 <b>0.23</b>	G ½ B M20x1.5	½" NPT	85 <b>3.35</b>	84 <b>3.31</b>	115 <b>4.53</b>	114 <b>4.49</b>
160 ≥25 mbar	15 <b>0.59</b>	18 <b>0.71</b>	51 <b>2.01</b>	51 <b>2.01</b>	54 <b>2.13</b>	54 <b>2.13</b>	6 <b>0.24</b>	3 <b>0.12</b>	20 <b>0.79</b>	19 <b>0.75</b>	167 <b>6.57</b>	159 <b>6.26</b>	163 <b>6.42</b>	178 <b>7.01</b>	196 <b>7.72</b>	5.8 <b>0.23</b>	G ½ B M20x1.5	½" NPT	81 <b>3.19</b>	80 <b>3.15</b>	115 <b>4.53</b>	114 <b>4.49</b>

Case Ventilation	
Model KPChgG 100 case ventilation no. 26 (reclosable, IP65)	
Model KPChgG 160 blow-out device	

s	s1	s3	s4	SW	SW1	approx. weight <sup>1)</sup>	
						KPChg	KPChgG
6 <b>0.24</b>	1 <b>0.04</b>	11.5 <b>0.45</b>	10.5 <b>0.41</b>	22 <b>0.87</b>	22 <b>0.87</b>	0.55 <b>1.21</b>	0.85 <b>1.87</b>
6 <b>0.24</b>	1 <b>0.04</b>	11.5 <b>0.45</b>	10.5 <b>0.41</b>	22 <b>0.87</b>	22 <b>0.87</b>	0.55 <b>1.21</b>	0.85 <b>1.87</b>
6 <b>0.24</b>	1.5 <b>0.06</b>	12.5 <b>0.49</b>	11.5 <b>0.45</b>	22 <b>0.87</b>	22 <b>0.87</b>	0.95 <b>2.09</b>	1.80 <b>3.97</b>
6 <b>0.24</b>	1.5 <b>0.06</b>	12.5 <b>0.49</b>	11.5 <b>0.45</b>	22 <b>0.87</b>	22 <b>0.87</b>	0.90 <b>1.98</b>	1.75 <b>3.86</b>

<sup>1)</sup> data for versions without mounting device

## Ordering Information

Basic Model		Capsule Gauge for Low Pressure with Crimped-on Ring Case				KPChg
Case filling	without					without code letters
	glycerin					<b>G</b>
Nominal case size	case Ø 100, 160 mm (4, 6")				<b>100, 160</b>	
Wetted material	copper alloy					- 1
	stainless steel					- 3
Case configuration	case / connection	screwed		without code letters		
	position of the connection	bottom connection		without code letters		
		centre back connection		<b>rm</b>		
	mounting device	without		without code letters		
	back flange for surface mounting		<b>Rh</b>			
	front flange for panel mounting		<b>Fr</b>			
	u-clamp for panel mounting		<b>BFr</b>			
Pressure ranges	mbar			inH <sub>2</sub> O		
	vacuum	compound	pressure	vacuum	compound	pressure
	-2.5 / 0 <sup>1)</sup>	-1 / +1.5 <sup>1)</sup> -1.5 / +1 <sup>1)</sup>	0 - 2.5 <sup>1)</sup>	-1 / 0 <sup>1)</sup>	-0.4 / +0.6 <sup>1)</sup> -0.6 / +0.4 <sup>1)</sup>	0 - 1 <sup>1)</sup>
	-4 / 0	-1.5 / +2.5 -2.5 / +1.5	0 - 4	-1.6 / 0	-0.6 / +1 -1 / +0.6	0 - 1.6
	-6 / 0	-2 / +4 -4 / +2	0 - 6	-2.5 / 0	-1 / +1.5 -1.5 / +1	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
Process connection	standard thread	G½ B		G½ B		
	options	½" NPT		½" NPT		
		M20x1.5		M20x1.5		
		G¼ B		G¼ B		
		¼" NPT		¼" NPT		
		M12x1.5		M12x1.5		
Options	see page 4					
Example					<b>KPChg 100 - 1, 0 - 60 mbar, G½ B</b>	

<sup>1)</sup> for NCS 100 (4"): 180 angular degrees

## Ordering Information, Further Options

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

<b>Red mark</b>	on the dial		
<b>Plastic clip</b>	red or green, external at the crimped-on ring		
<b>Special adjustment</b>			
<b>Window</b>	acrylic glass (PMMA) polycarbonate (PC) instrument glass		
<b>Blow-out device Ø 1" (25 mm)</b>	in the back of the case		
<b>Case ventilation no. 22</b>	for outdoor installation		
<b>Case polished</b>			
<b>Silicone-free version</b>			
<b>Restrictor screw</b> in the pressure inlet port material: brass or stainless steel	orifice Ø 0.3 mm (0.01")		
<b>Overrange protection (üs)</b> and / or <b>Vacuum protection (us)<sup>1)</sup></b>	for types – 1 (copper alloy)	3-fold üs <sup>2)</sup> or us	
		10-fold üs	from 0 – 25 mbar
	combination 10-fold üs and 10-fold us only for compound ranges from measuring span 100 mbar	10-fold us	
		from –100 / 0 mbar	
	for types – 3 (stainless steel)	3-fold üs <sup>2)</sup> or us	
		10-fold üs	from 0 – 25 mbar
	combination 10-fold üs and 3-fold us only for compound ranges from measuring span 40 mbar	10-fold us	
		from –100 / 0 mbar	
<b>Instrument tag</b>	stainless steel plate 12 x 55 mm (0.47 x 2.17"), wire mounting sticker on the case		

**Special Versions:** Please describe your requirements in cleartext!

<sup>1)</sup> max. –1000 mbar

<sup>2)</sup> only for unfilled devices