

# Capsule Gauges for Low Pressure

## Bayonet Ring Case Stainless Steel, Crimped-on Ring

Accuracy Class 1.6

Nom. Sizes 50 (2")  
80 (3")

# KPChg

### Application

Measurement of positive or negative overpressure of air or other gaseous media. These models with crimped-on ring made of stainless steel are often preferable for panel mounting.

### Nominal case size (NCS)

50 mm (2"), 80 (3")

### Accuracy Class (EN 837-3)

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

### Pressure Ranges ( EN 837-3)

NCS 50: 0-160 mbar to 0-600 mbar  
0- 60 "WC to 0-250 "WC (Inch Water Column)  
NCS 80: 0- 2.5 mbar to 0-600 mbar  
0-1 "WC to 0-250 "WC (Inch Water Column)

also vacuum and compound ranges  
(compare table overleaf)

### Pressure Limitations

Steady pressure: full scale value  
Cyclic pressure: 90% of full scale value  
Overpressure withstanding: 130% of full scale value

### Temperature Limitations

Ambient temperature: -20 / +60 °C (-4/+140 °F)  
Medium temperature: max. +100 °C (+212 °F)

### Temperature Caused Error

The accuracy error caused by media or ambient temperatures differing from +20 °C (+68 °F) is significant. In accordance with EN 837-3 it may be up to .6% per each 10 °C (+18 °F).

### Protection Type (EN 60529 / IEC 529)

IP 54, but IP 44 for NCS 50 with bottom connection

## Standard Configuration

### Connection

Bottom connection, optional center back connection (rm)  
NCS 50: G ¼ B (¼" BSP), version -1, brass  
NCS 80: G ½ B (½" BSP), version -1: brass,  
version -3: 316 stainless steel (1.4571)

### Diaphragm Capsule

Version -1: Copper alloy  
Version -3: 316 stainless steel (1.4571) (not NCS 50)

### O-Ring-Sealing

Version -1: NBR (nitrile rubber, "buna N")  
Version -3: FPM (fluorocautchouc) (not NCS 50)

### Movement

Version -1: Brass / German silver  
Version -3: Stainless steel (not NCS 50)

### Dial

Aluminum alloy, black figures, white background

### Pointer

Aluminum alloy black

### Zero Adjustment

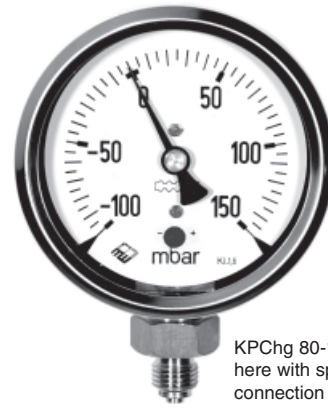
From outside through the window

### Case and Ring

304 stainless steel (1.4301), ring crimped-on

### Window

punched for zero adjustment, with closing plug NBR,  
NCS 80: acrylic glass lens (PMMA), NCS 50: polycarbonate



KPChg 80-1,  
here with special option  
connection ¼" BSP



KPChg 50-1, rm  
connection ¼" BSP

## Special Options

- Connection ¼" NPT, M12x1.5, NCS 80 also G ¼ B (¼" BSP), ½" NPT or M 20x1.5; others upon request
- Inlet port restrictor screw brass or stainless steel (Ø .3 mm / .01")
- Special scales like dual scales or special units
- Other pressure ranges upon request
- NCS 80: red mark as movable clip on the outside of the ring
- NCS 80: single strength glass lens or laminated safety glass upon request
- Overrange / vacuum protection:
  - 3-times overrange or vacuum protected;
  - NCS 80 (for NCS 50 upon request):
    - Version -1: 10-times overrange or vacuum protected or combination 10-times overrange and vacuum protected, only pressure ranges  $\geq 40$  mbar;
    - Version -3: 10-times overrange protected for pressure ranges  $\geq 40$  mbar;  
10-times vacuum protected for pressure ranges  $\geq 100$  mbar;  
Combination 10-times overrange and 3-times vacuum protected for pressure ranges  $\geq 40$  mbar, combination of 10 times overrange protection with a higher vacuum protection for pressure ranges  $\geq 100$  mbar upon request

## How to Order:

Please specify:

Model code: **KPChg**  
Nominal case size: **50 (2"), 80 (3")**  
Wetted parts: NCS 50: - 1  
NCS 80: - 1 or - 3 (compare left)  
Case configuration: NCS 50: **rm, rmBFr, rmFr**  
(compare overleaf) NCS 80: **Rh, rm, rmRh, rmBFr, rmFr**  
(standard = bottom connection = without additional code letter)  
Pressure range: see table overleaf, e.g. **0-100 mbar**  
Process connection: NCS 50: **G ¼ B (¼" BSP)**  
NCS 80: **G ½ B (½" BSP)**  
(others see "Special Options")  
Special options: (see above)

## Examples for Ordering Information:

- KPChg 50-1 rm, 0-250 mbar, G¼ B
- KPChg 80-3, -60/+100 mbar, ½" BSP



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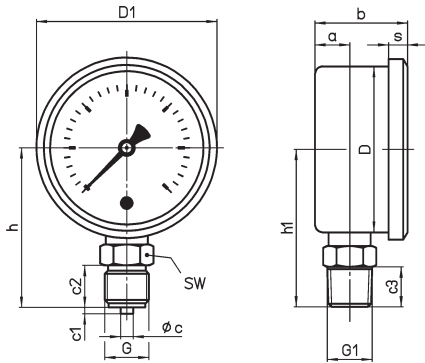
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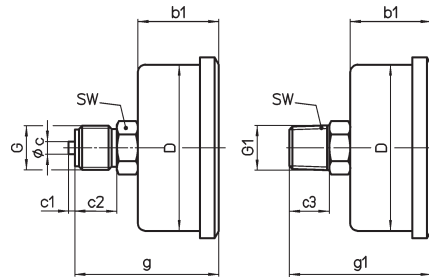
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# Case Configurations, Code Letters, Dimensions and Weight, Pressure Ranges

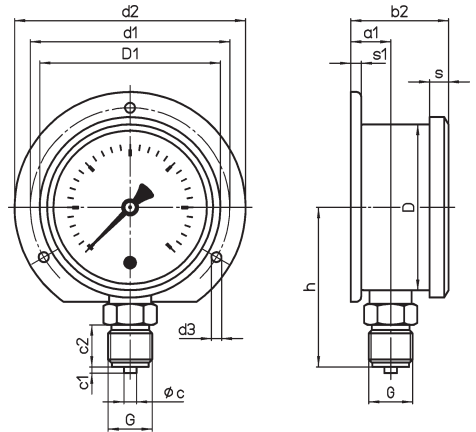
Bottom connection,  
without additional code letter



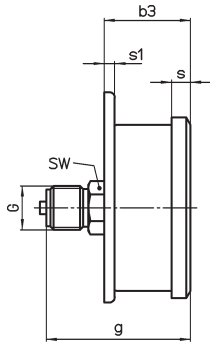
Center back connection,  
code letters: **rm**



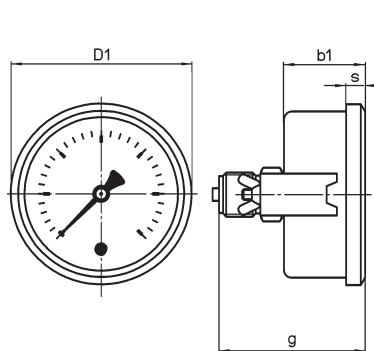
Bottom connection,  
rear mounting flange (not for NCS 50),  
code letters: **Rh**



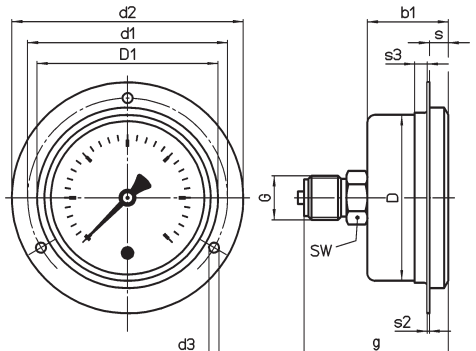
Center back connection,  
rear mounting flange (not for NCS 50),  
code letters: **rmRh**



Center back connection,  
u-clamp for panel mounting  
(clamps stainless steel),  
code letters **rmBFr**



Center back connection,  
front mounting flange,  
code letters: **rmFr**



## Dimensions (mm / inches) and Weight (kg / lb)

NCS	a	a1	b	b1	b2	b3	c	c1	c2	c3	D1	d1	d2	d3	g	g1	G	G1	h±1	h1±1	s	s1	s2	s3	SW
50 2"	10 .39	-	36 1.42	31 1.22	-	-	5 .2	2 .08	13 .51	13 .51	54 2.12	60 2.36	71 2.79	3.6 .14	54 2.12	-	G ¼ B ¼" BSP	¼" NPT	45 1.77	75 2.95	6.5 .25	-	1 .04	4 .16	14 .55
80 3"	16 .63	20 .79	43 1.69	37 1.46	47 1.85	41 1.61	6 .24	3 .12	20 .79	19 .75	86 3.39	95 3.74	110 4.33	4.8 .19	67 2.64	66 2.6	G ½ B ½" BSP	½" NPT	76 2.99	75 2.95	9 .35	6 .24	1 .04	6 .24	22 .87

### Recommended panel cut-out:

**rmBFr** NCS 50:  $\varnothing 50 \pm 0,5 \text{ mm}$  (1.97" + .02")  
 NCS 80:  $\varnothing 81 \pm 0,5 \text{ mm}$  (3.19" + .02")  
**rmFr** NCS 50:  $\varnothing 52 \pm 0,5 \text{ mm}$  (2.05" + .02")  
 NCS 80:  $\varnothing 84 \pm 0,5 \text{ mm}$  (3.31" + .02")

## Pressure Ranges (EN 837-3)

Vacuum	Compound	Pressure
mbar		
- 2.5 / 0 <sup>1)</sup>	- 1 / + 1,5 <sup>1)</sup> - 1.5 / + 1 <sup>1)</sup>	0 / 2,5 <sup>1)</sup>
- 4 / 0 <sup>1)</sup>	- 1.5 / + 2.5 <sup>1)</sup> - 2.5 / + 1.5 <sup>1)</sup>	0 / 4 <sup>1)</sup>
- 6 / 0 <sup>1)</sup>	- 2 / + 4 <sup>1)</sup> - 4 / + 2 <sup>1)</sup>	0 / 6 <sup>1)</sup>
-10 / 0 <sup>1)</sup>	- 4 / + 6 <sup>1)</sup> - 6 / + 4 <sup>1)</sup>	0 / 10 <sup>1)</sup>
-16 / 0 <sup>1)</sup>	- 6 / +10 <sup>1)</sup> -10 / + 6 <sup>1)</sup>	0 / 16 <sup>1)</sup>
-25 / 0 <sup>1)</sup>	-10 / +15 <sup>1)</sup> -15 / +10 <sup>1)</sup>	0 / 25 <sup>1)</sup>
-40 / 0 <sup>1)</sup>	-15 / +25 <sup>1)</sup> -25 / +15 <sup>1)</sup>	0 / 40 <sup>1)</sup>
-60 / 0 <sup>1)</sup>	-20 / +40 <sup>1)</sup> -40 / +20 <sup>1)</sup>	0 / 60 <sup>1)</sup>

Vacuum	Compound	Pressure
mbar		
-100 / 0 <sup>1)</sup>	- 40 / + 60 <sup>1)</sup> - 60 / + 40 <sup>1)</sup>	0 / 100 <sup>1)</sup>
-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

<sup>1)</sup> not NCS 50

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