

Bourdon tube pressure gauges for refrigeration applications with glycerine filling



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- Can be used in case of heavy vibrations and high, dynamic pressure loads
- Longer service life due to less wear and corrosion protection of the measuring system
- Various refrigerants measurable with multiple scales
- DNV- and GOSSTANDART-certified



Application For simultaneous measurement of vapour pressures and temperatures in refrigeration engineering.
! For measuring gas or vapour, these gauges must be used in accordance with the table "Selection Criteria as per EN 837-2" (see appendix)!

Technical specifications

Type
D 7/D 8

Nominal size
63 – 80 – 100 (D 7)
100 (D 8)

Accuracy class (EN 837-1/6)
NG 63: 1.6
NG 80/NG 100: 1.0

Ranges
-1/+ 9 bar -1/+12.5 bar
-1/+15 bar -1/+24 bar
-1/+30 bar
each with temperature scale

Temperature scales
For refrigerants:
R 134a R 290
R 407A R 404A
R 744 R 717 (NH₃)
R 507

Standard version

Connection
Brass, bottom or centre back
NG 63 – 100 D 7 centre back
NG 100 D 8 bottom back
7/16-20 UNF SAE J514 / ISO 8434-2 (37°), G $\frac{1}{4}$ B,
G $\frac{1}{2}$ B (for R 717 stainless steel 316 Ti/316 L)

Measuring element
Bourdon tube, copper alloy
"C" type tube (for R 717 stainless steel
316 Ti/316 L)

Movement
Brass

Dial
Aluminium, white
Pressure dial marking black

Application area

Static load: $\frac{3}{4}$ x full scale value
Dynamic load: $\frac{2}{3}$ x full scale value
Short-term: full scale value

Operating temperature range

Medium: according to refrigerant
Ambient: $T_{min} = -20\text{ °C}$
 $T_{max} = +60\text{ °C}$

Temperature performance

Indication error when the temperature of the measuring system deviates from the normal temperature of 20 °C:
rising temperature approx. $\pm 0.4\%$ /10 K
falling temperature approx. $\pm 0.4\%$ /10 K
of full scale value

Degree of protection

IP 65 (EN 60529), with housing vent
(≤ 25 bar) IP 54

Temperature dial marking coloured
(see appendix for examples)

Pointer
Aluminium, black

Housing
Stainless steel 304 with blow-out

Bezel
D 7 – NG 63 – 80 – 100: crimped bezel stainless steel 304
D 8 – NG 100: bayonet bezel stainless steel 304

Window
Plastic

Filling liquid
Glycerine (99.5 %)

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See page 92
for prices.

- Options**
- Temperature scales for other refrigerants
 - Back flange
 - Clamp fixing
 - 3-hole fixing, panel mounting bezel (NG 63/100)

- Damping screw
- Special scales
- Other process connections
- 7/16 – 20 UNF SAE J513 (45°)

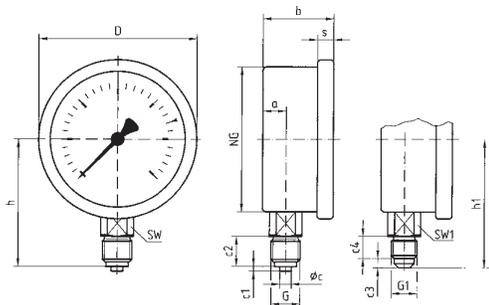
Bourdon tube pressure gauges for refrigeration applications

Type D 7/D 8 – NG 63/80/100

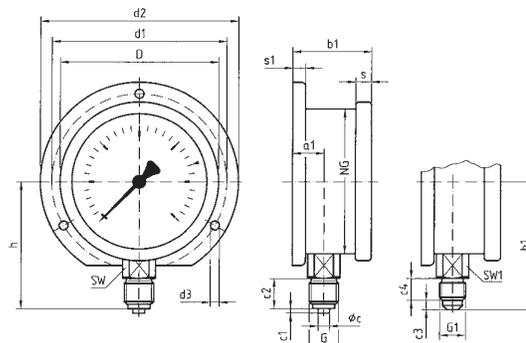
Housing types and dimensions

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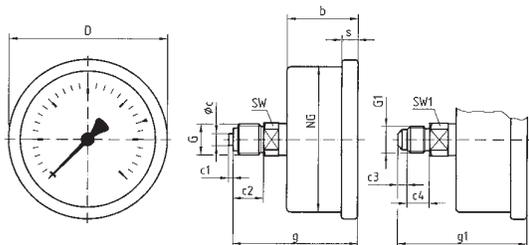
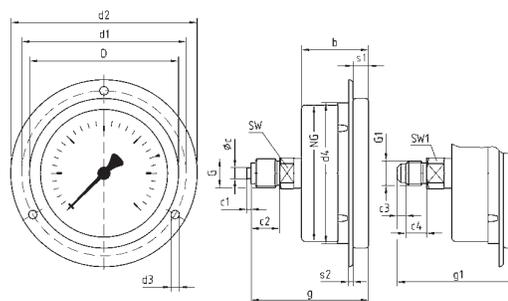
Type D 7 – bottom connection



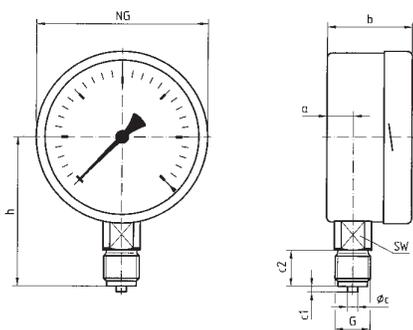
Type D 7 – bottom connection, back flange



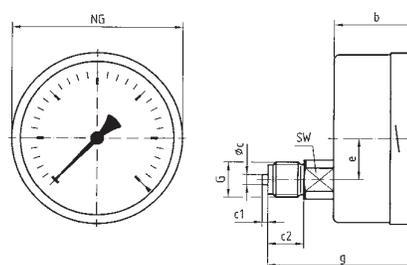
Type D 7 – centre back connection

Type D 7 – centre back connection,
3-hole fixing, panel mounting bezel (NG 63/100)

Type D 8 – bottom connection



Type D 8 – centre back connection



Dimensions (mm)

| Nominal size (NG) | a | a1 | b | b1 | Øc | c1 | c2 | c3 | c4 | d1* | d2* | d3* | d4 | D | e | g | g1 | G | G1 | h | h1 |
|-------------------|------|------|------|------|------------------|----|----|----|-----|-----|-----|-----|-----|------|----|------|-------|-------|-------------|----|------|
| 63 (D 7) | 9.5 | 13 | 30.5 | 34 | 5 | 2 | 13 | 4 | 9.5 | 75 | 85 | 3.6 | 64 | 68 | - | 53.5 | 55.5 | G1/4B | 7/16-20 UNF | 53 | 55 |
| 80 (D 7) | 12.2 | 15.2 | 33.5 | 36.5 | 6 | 3 | 20 | 4 | 9.5 | 95 | 110 | 5 | - | 85 | - | 65.5 | 58.5 | G1/2B | 7/16-20 UNF | 71 | 62.5 |
| 100 (D 7) | 12.2 | 15.7 | 33.5 | 37 | 6 | 3 | 20 | 4 | 9.5 | 116 | 132 | 4.8 | 101 | 106 | - | 65.5 | 58.5 | G1/2B | 7/16-20 UNF | 81 | 72.5 |
| 100 (D 8) | 15.6 | 19.1 | 49 | 52.5 | 6 | 3 | 20 | - | - | - | - | - | - | 26.5 | 81 | - | G1/2B | - | 86 | - | - |
| Nominal size (NG) | s | s1 | s2 | SW | Spanner size SW1 | | | | | | | | | | | | | | | | |
| 63 (D 7) | 7 | 5.5 | 2 | 14 | 14 | | | | | | | | | | | | | | | | |
| 80 (D 7) | 7 | 5.5 | - | 22 | 14 | | | | | | | | | | | | | | | | |
| 100 (D 7) | 7 | 5.5 | 3.8 | 22 | 14 | | | | | | | | | | | | | | | | |
| 100 (D 8) | - | 5.5 | 2 | 22 | - | | | | | | | | | | | | | | | | |

* Dimensions as per DIN 16063 (NG 63) and 16064 (NG 80/100).

Bourdon tube pressure gauges for refrigeration applications with glycerine filling

1 DG: M

| Type | RF63KTGly, D701 | RF63KTGly, D711 | RF80KTGly, D701 | RF80KTGly, D711 | RF100KTGly, D701 | RF100KTGly, D711 | RF100KTGly, D802 | RF100KTGly, D812 | |
|----------------------------|--|-----------------|-----------------|-----------------|------------------|------------------|--|------------------|--|
| Version | | | | | | | | | |
| Housing Ø | 63 | 63 | 80 | 80 | 100 | 100 | 100 | 100 | |
| Housing | Stainless steel 304 with crimped bezel | | | | | | Stainless steel 304 with bayonet bezel | | |
| Measuring element | Bourdon tube, copper alloy | | | | | | Bourdon tube, stainless steel 316 Ti/316 L | | |
| Scale | according to selection table | | | | | | Temperature scale R 717 | | |
| Accuracy class | 1.6 | 1.6 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | |
| Connection | 7/16-20 UNF | 7/16-20 UNF | 7/16-20 UNF | 7/16-20 UNF | 7/16-20 UNF | 7/16-20 UNF | G½B | G½B | |
| PG | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | |
| Range (bar) | Part no. | Part no. | Part no. | Part no. | Part no. | Part no. | Part no. | Part no. | |
| Price € | | | | | | | | | |
| -1/+9 | 85130701 | 85130711 | 85180701 | 85180711 | 85230701 | 85230711 | - | - | |
| -1/+12.5 | 85131701 | 85131711 | 85181701 | 85181711 | 85231701 | 85231711 | 85231802 | 85231812 | |
| -1/+15 | 85132701 | 85132711 | 85182701 | 85182711 | 85232701 | 85232711 | 85232802 | 85232812 | |
| -1/+24 | 85133701 | 85133711 | 85183701 | 85183711 | 85233701 | 85233711 | 85233802 | 85233812 | |
| -1/+30 | 85134701 | 85134711 | 85184701 | 85184711 | 85234701 | 85234711 | - | - | |
| Extra charges | PG | Price € | | | | | | | |
| Wetted parts 316 Ti/316 L* | 3 | | | | | | | - | |

* Wetted parts stainless steel connection NG 63/80 = G½B – NG 100 = G½B.

Blue part no. = in-stock items



See pages 72 and 117 for other extra charges.

Selection table – temperature scales for refrigerants (see appendix for examples)

Please specify the code of the required temperature scale along with the part number of the basic gauge. Temperature scales for other refrigerants on request.

| Temperature scale for refrigerant | Code |
|--|------|
| R 134a | A |
| R 404a/R 134a | B |
| R 502 | C |
| R 404A | E |
| R 717 (NH3) – stainless steel with wetted parts only | F |
| R 407A | G |
| R 410A | H |

Minimum order quantity = 10 pieces.