

# Bourdon Tube Pressure Gauges

Case Stainless Steel with Crimped-on Ring  
Standard (RChg) or Liquid Filled (RChgG)

Models **RChg 100**  
**RChgG 100**

## Application

For fluid and gaseous media which are not highly viscous and do not tend to crystallize. The medium must be compatible with brass and bronze and should not affect any copper alloy.  
Liquid filled version RChgG for services with high dynamic pressure, vibration or pulsation.

## Nominal Case Size

100 (4")

## Accuracy Class

1.0 according to EN 837-1 (i.e. max.  $\pm 1.0\%$  of full scale value)

## Pressure Ranges (EN 837-1)

0-0.6 up to 0-1000 bar (0-15 up to 0-15 000 psi)  
also all standard vacuum and compound ranges

## Pressure Limitations (EN 837-1)

Steady pressure: full scale value  
Cyclic pressure: 90% of full scale value  
Temporary: 130% of full scale value

## Temperature Limitations

### Ambient temperature:

Model RChg: -40 to +60 °C (-40...+140 °F)

Model RChgG: -20 to +60 °C (-4...+140 °F)

### Medium temperature:

Soft soldered: max. +60 °C (+140 °F)

Silver brazed: max. +100 °C (212 °F)

## Temperature Caused Error

The error caused by temperatures differing from the reference temperature of +20 °C (+68 °F) is significant. In correspondence with EN 837-1 it may be up to 0.4% per each +10 °C (+18 °F).

## Protection Type (EN 60529 / IEC 529)

Model RChg: IP 54 / Model RChgG: IP 65

## Standard Configuration

### Connection

1/2" BSP bottom connection or lower back connection (r), brass

### Bourdon Tube

- up to 40 bar (800 psi) = bronze, C-form, soft soldered
- $\geq 60$  bar (1,000 psi) = 316 stainless steel (1.4571), helical, silver brazed

### Movement

Brass / German silver

### Dial

Aluminum alloy, black figures, white background

### Pointer

Aluminum alloy black

### Case and Ring

304 stainless steel (1.4301), ring crimped-on

### Case Filling (Model RChgG only)

Glycerine

### Lens

Single strength glass

### Safety Features

Model RChg: 1" Blow-out ( $\varnothing$  25 mm) on the backside of the case;  
Model RChgG: Blow-out  $\varnothing$  approx. 40 mm (1.58") and pressure equalizing membrane on the backside of the case

Further information about advantages, applications, specifications and pressure ranges of Bourdon tube pressure gauges of accuracy class 1.0 to 2.5 can be found on **general information leaflet 1000**.



## Optional Special Configurations

- Process connection 1/2" NPT or M 20x1,5 (others upon request)
- Inlet port restrictor screw brass
- Special scales e.g. dual ranges, combination pressure and temperature ranges, fine division (with test gauge pointer)
- Red mark (plastic clip) attached on the outside of the ring
- Acrylic glass lens
- Model RChgG: other filling liquids, e.g. silicone oil for temperatures down to -40 °C (-40 °F)
- Wetted parts 316 stainless steel (1.4571), ordering code RChg 100-3 resp. RChgG 100-3, bottom or lower back connection (r)

## How to Order:

Please specify:

Model code: **RChg 100** = dry version  
**RChgG 100** = filled version,  
filling fluid glycerine  
**RChg(G) 100** = fillable version

Wetted parts: brass/bronze = ordering code -1

Case configuration: code letters: **r, Rh, rBFr**  
(see reverse side) (standard case = bottom connection; no code letter required)

Pressure range: according to EN 837-1, e.g. **0-6 bar**

Process connection: 1/2" **BSP** (= standard)  
or others (see above)

Special configurations: (see above)

### Examples for Ordering Information:

- RChg 100-1, 0-6 bar, 1/2" BSP
- RChgG 100-1, rBFr, -1/+9 bar, M 20x1,5



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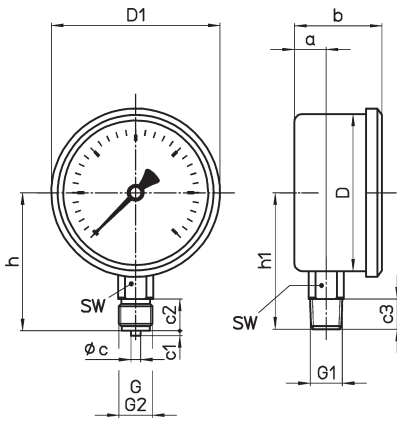
Am Gewerbepark 9 • D-08340 Beierfeld  
Phone: (0 37 74) 58 - 0 • Fax: (0 37 74) 58 - 545  
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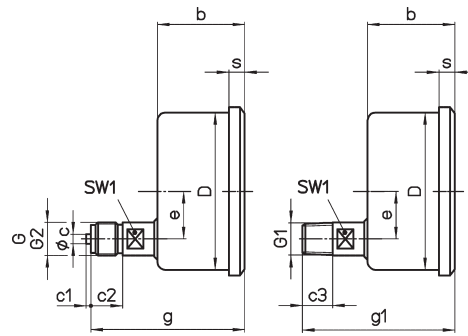
**2/05**

# Case Configurations, Code Letters, Dimensional Data and Weights

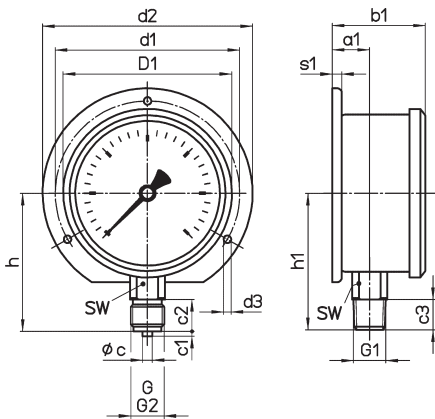
Bottom connection,  
without additional code letter



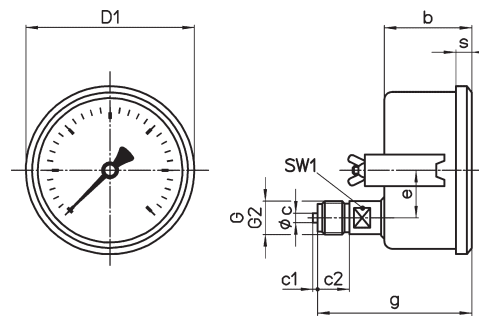
Lower back connection,  
code letter: **r**



Bottom connection,  
rear flange for surface mounting,  
code letters: **Rh**



Lower back connection,  
U-clamp for panel mounting<sup>1)</sup>,  
code letters: **rBFr**



## Dimensional Data (mm / inches) and Weight (kg / lb)

| Nominal Case Size | a         | a1          | b          | b1           | c        | c1       | c2        | c3        | D          | D1          | d1          | d2          | d3         | e          | G               |
|-------------------|-----------|-------------|------------|--------------|----------|----------|-----------|-----------|------------|-------------|-------------|-------------|------------|------------|-----------------|
| 100<br>4"         | 20<br>.79 | 23.5<br>.93 | 55<br>2.17 | 58.5<br>2.30 | 6<br>.24 | 3<br>.12 | 20<br>.79 | 19<br>.75 | 99<br>3.90 | 106<br>4.17 | 116<br>4.57 | 132<br>5.20 | 4.8<br>.19 | 30<br>1.18 | G ½ B<br>½" BSP |

| G1     | G2         | g          | g1         | h          | h1         | s         | s1       | SW        | SW1       | Weight (approx.) |             |
|--------|------------|------------|------------|------------|------------|-----------|----------|-----------|-----------|------------------|-------------|
|        |            |            |            |            |            |           |          |           |           | RChg             | RChgG       |
| ½" NPT | M 20 x 1.5 | 97<br>3.82 | 96<br>3.78 | 87<br>3.43 | 84<br>3.31 | 10<br>.39 | 6<br>.24 | 22<br>.87 | 17<br>.67 | .60<br>1.32      | .95<br>2.09 |

<sup>1)</sup> recommended panel cut-out:  
rBFr = 102 ± 1 mm (4.02" ± .04")

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