

Test Gauges Bourdon Tube Type

Bayonet Ring Case Stainless Steel, American Type with Wide Ring Standard (RFCha) or Liquid Filled (RFChaG)

NCS 160 (6")

Accuracy Class 0.6 EN 837-1

Models

RFCha
RFChaG

Application

Testing and comparing process instruments, and measuring services where high accuracy is required;
Stainless steel case with high chemical resistance;
Pressure ranges up to 0-25 bar (400 psi) calibrated for gaseous media, dial marked with "G";
Pressure ranges 0-40 bar (600 psi) and up calibrated for liquid media, dial marked with "F"

Nominal Case Size (NCS)

160 (6")

Accuracy

Class 0.6 according to EN 837-1

Pressure Ranges (EN 837-1)

Version -1* = 0-0.6 ... 0- 600 bar or 0-10 psi ... 0-10,000 psi
Version -3* = 0-0.6 ... 0-1,600 bar or 0-10 psi ... 0-30,000 psi
Model RFChaG 0-2.5 bar resp. 0-30 psi and up for all versions also vacuum and compound ranges (*see below)

Pressure Limitations

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

Protection Type (EN 60529 / IEC 529)

Model RFCha 160: IP 54 / Model RFChaG 160: IP 65

Further information about advantages, specifications, temperature limitations and pressure ranges of test gauges can be found in our **model overview 2000**.

Standard Configuration

Connection

G 1/2 B (1/2" BSP), optionally 1/2" NPT, bottom connection (standard) or lower back connection (code letter r)

Wetted Parts

Ordering Code -1: **Socket:** = brass
Bourdon tube:
≤ 40 bar (≤600 psi) = bronze, C-form, soft soldered
60 bar (≥800 psi) = copper/beryllium, C-form, silver brazed
≥ 100 bar (≥1,500 psi) = 316 stainless steel (1.4571), helical, silver brazed
Ordering Code -3: **Socket:** = 316 stainless steel (1.4571)
Bourdon tube:
≤ 40 bar (≤600 psi) = 316 stainless steel (1.4571), C-form, argon arc welded
≥ 60 bar (≥800 psi) = 316 stainless steel (1.4571), helical, argon arc welded
≥ 1000 bar (≥15,000 psi) = NiFe alloy, helical, argon arc welded

Movement

Brass/German silver, low friction

Dial

Aluminum alloy, black figures, white background

Pointer

Knife edge pointer aluminum alloy black

Case and Ring

304 stainless steel (1.4301), bayonet ring polished

Case Filling

Model RFChaG only: Glycerine



Window

Version -1: single strength glass,
Version -3: laminated safety glass, marked with "SAFETY GLASS"

Safety Features

Model RFCha: 1" blow-out in the back of the case
Model RFChaG: top blow-out assembly

Optional Special Configurations

- Test gauge Grade 3A ASME ($\pm 0.25\%$), parallax-free mirror scale
- Accuracy class 0.25 EN 837-1, with parallax-free mirror scale, upon request
- Zero adjustment by a turnable dial (± 5 scale graduations), knurled adjustment screw at the right side, for model RFCha 160
- Parallax-free mirror scale
- Case size 100 (4") upon request
- Process connection 1/4" NPT or M 20 x 1.5, others upon request
- Inlet port restrictor screw brass or stainless steel
- Movement stainless steel with jewel bearing
- Maximum indicating pointer, external adjustment, acrylic glass lens (pressure ranges ≥ 2.5 bar or 30 psi)
- Acrylic glass lens
- Special calibration up to 160 bar (2,000 psi) with air, or with oil for pressure ranges 0-4 bar (60 psi) and up upon request
- Special scales, such as dual scales, e.g. bar/psi
- Receiver gauge 0.2-1 bar or 3-15 psi
- Top or side connection or installation not vertical, e.g. 90° to the right
- Bleeding port at the tip of the Bourdon tube for model RFCha
- Version -1, pressure ranges ≥ 100 bar with Bourdon tube made of hardened, tempered alloy steel, C-form, screwed together
- Wetted parts monel (ordering code -6) up to 0-400 bar (6,000 psi)
- Electrical accessories upon request

How to Order:

Please specify:

Model code/nom. size: **RFCha 160** =dry version
RFChaG 160 =case filling glycerine
RFCha(G) 160 = fillable version

Wetted parts: ordering code -1 or -3 (compare left)

Case configuration: code letters: **r, Rh, rRh, rFr** or **rBFr**
(see reverse side) (standard = bottom connection, no code letter)

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

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

Special configurations: see above)

Examples for Ordering Information:

- RFCha 160-1, 0-6 bar, 1/2" BSP
- RFChaG 160-3, Fr, -1/+9 bar, 1/2" NPT



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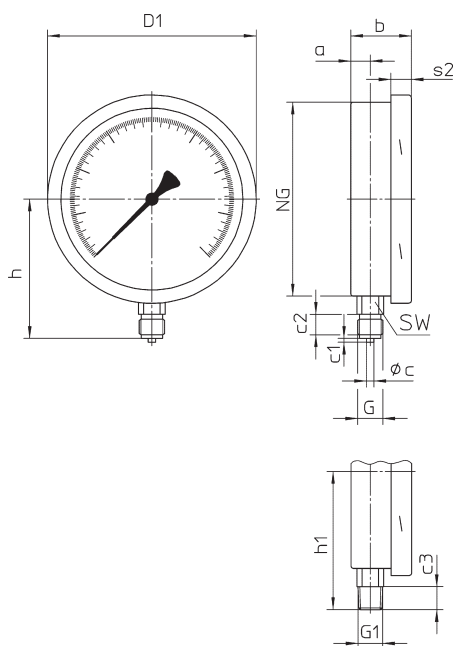
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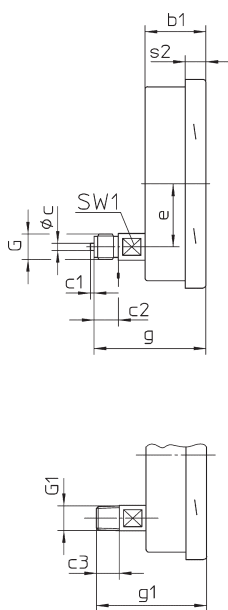
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Case Configurations, Code Letters, Dimensional Data, and Weight

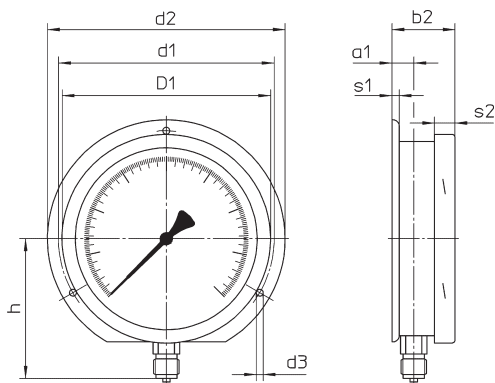
Bottom connection,
without code letter



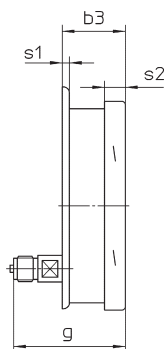
Lower back connection,
code letter: **r**



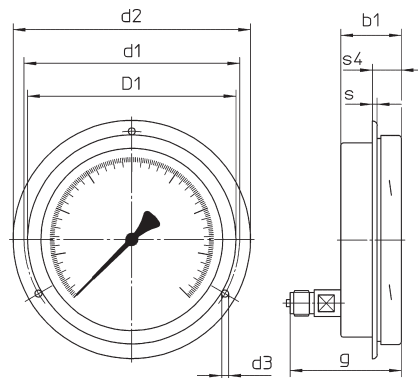
Bottom connection,
rear mounting flange,
code letters: **Rh**



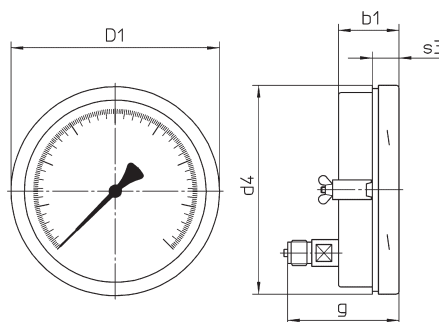
Lower back connection,
rear mounting flange,
code letters: **rRh**



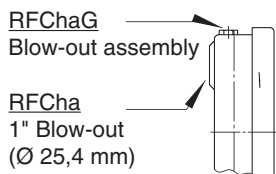
Lower back connection,
front mounting flange,
code letters: **rFr**



Lower back connection,
U-clamp for panel mounting,
code letters: **rBFr**



Safety Blow-Outs



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

| Nom. Size | a | a1 | b | b1 | b2 | b3 | c | c1 | c2 | c3 | D1 | d1 | d2 | d3 | d4 |
|------------|---------------------|-----------|------------|------------|-------------|-------------|----------|----------|-----------|-----------|-------------|-------------|-------------|------------------|----------------|
| 160 6" | 16 .63 | 18 .71 | 50 1.97 | | 52 2.05 | | 6 .24 | 3 .12 | 20 .79 | 19 .75 | 172 6.77 | 178 7.01 | 196 7.72 | 5.8 .23 | 172 6.77 |
| e | G | G1 | g | g1 | h±1 | h1±1 | s | s1 | s2 | s3 | s4 | SW | SW1 | Weight (approx.) | |
| 52 2.05 | G 1/2 B 1/2" BSP | 1/2" NPT | 92 3.62 | 91 3.58 | 115 4.53 | 114 4.49 | 4 .16 | 6 .24 | 17 .67 | 22 .87 | 24 .94 | 22 .87 | 17 .67 | RFCha 1.00 | RFChaG 1.85 |

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