

# Test Gauges Bourdon Tube Type

## Solid Front and Blow-out Back

### Case and Bayonet Ring Stainless Steel

### Standard (RFSch) or Liquid Filled (RFSchG)

Models



NCS 160 (6")

Accuracy Class  
0.6 EN 837-1

# RFSch

# RFSchG

#### Applications

Testing and comparing process instruments, and measuring services where high accuracy and high safety standards are required. Pressure ranges up to 0-25 bar (400 psi) for gaseous media (dial marked with "G"), 0-40 bar (600 psi) and up for liquid media (dial marked with "F").

#### Nominal Case Size (NCS)

160 mm (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 RFSchG 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: temporary 130% of full scale value

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

IP 54 dry version / IP 65 filled version

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

## Standard Configuration

#### Process Connection

1/2" BSP (standard) or 1/2" NPT bottom connection

#### 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 Bayonet Ring

304 stainless steel (1.4301)

#### Case Filling

Model RFSchG 160 only: Glycerine

#### Lens

Laminated safety glass lens 6 mm (.24") thick, marked with "SAFETY GLASS"



#### Safety Features (S)

According to the safety standards S3 of EN 837-1: solid front between measuring system and dial and a full blow-out safety back, both 304 stainless steel (1.4301). Should the Bourdon tube rupture, the entire case back separates, allowing full relief.

## 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
- 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, (pressure ranges  $\geq 2.5$  bar or 30 psi) 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 side (right side from a viewer's perspective)
- Bleeding port at the tip of the Bourdon tube for models RFSch
- Version -1, pressure ranges  $\geq 100$  bar with Bourdon tube made of hardened, tempered alloy steel, C-form, screwed together
- Wetted parts monel (ordering code -6) up to range 0-400 bar (6,000 psi)
- Electrical accessories upon request

## How to Order:

Please specify:

Model code/NCS: **RFSch 160** = dry version  
**RFSchG 160** = filled version

Wetted parts: **-1** or **-3**,  
compare left side

Case configuration: **Rh, Fr**  
(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:

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



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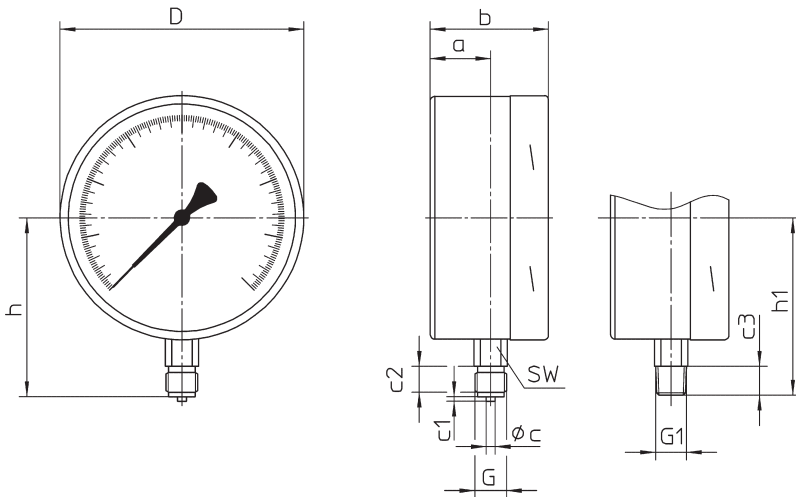
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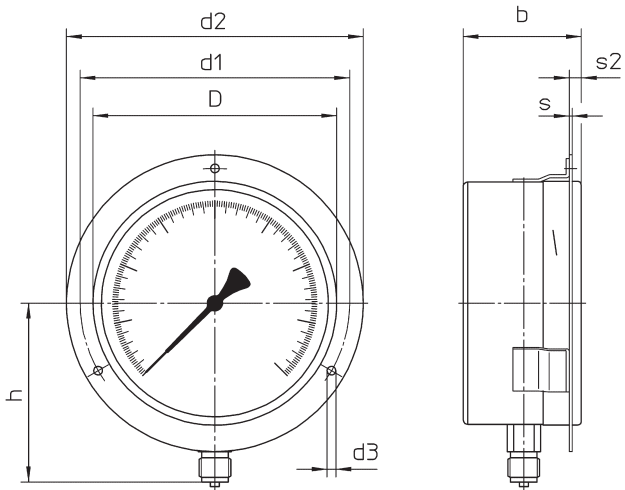
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# Case Configurations, Code Letters, Dimensional Data and Weight

Bottom connection,  
without code letter

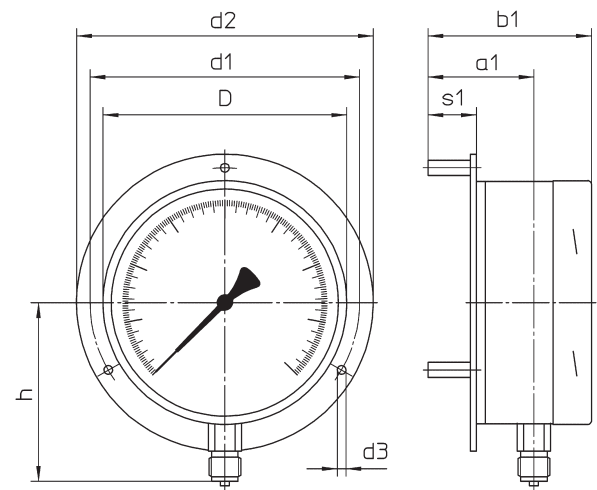


Bottom connection,  
front flange,  
code letters: **Fr**

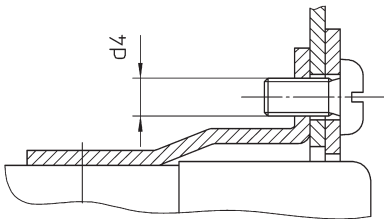


Case configuration Fr: with 3 mounting brackets welded to the case and a separate cover front ring

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



Case configuration "Rh" includes 3 separate mounting spacers



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

NCS	a	a1	b	b1	c	c1	c2	c3	D	d1	d2	d3	d4	G	G1	h <sup>+1</sup>	h <sup>±1</sup>	s	s1	s2	SW
160 6"	40 1.58	70 2.76	78 3.07	108 4.25	6 .24	3 .12	20 .79	19 .75	161 6.34	178 7.01	196 7.72	5.8 .23	M5	G ½ B ½" BSP	½" NPT	115 4.53	114 4.49	1.5 .06	32 1.26	8 .31	22 .87

Weight (approx.): RFSC 160: 1.53 kg / 3.37 lb  
RFSCG 160: 3.00 kg / 6.63 lb

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