

# Differential Pressure Gauges

with 2 Bourdon Tubes and 1 Pointer for Direct Indication of Differential Pressure, Bezel Ring Case Black

Accuracy  
Class 1.6

Model

**DiRZ 160**

## Applications

Differential pressure gauges model DiRZ are cost-saving instruments with direct indication of the differential pressure value. This pressure gauge model is applied in particular at heating facilities (flow and return) or at filtering installations.

Suitable for fluid and gaseous media (compatible to the wetted materials), which are not highly viscous and do not tend to polymerize

## Construction

Differential pressure gauges model DiRZ have two independently working elastic elements, each with Bourdon tube and process connection. The pressure connections are marked with + for the higher pressure and – for the lower pressure. Both Bourdon tubes are connected with a subtracting movement that causes the direct indication of the differential pressure.

## Nominal Case Size (NCS)

160 mm (6")

## Accuracy (EN 837-1)

Class 1.6

## Pressure Ranges (EN 837-1)

0-1 up to 0-600 bar resp. 0-15 up to 0-10,000 psi

## Pressure Limitations

Differential pressure: max. full scale value

Static pressure: max. 1 pressure range higher than full scale value (dial inscription)

## Temperature Limitations

Storage Temperature: -40 °C to +70 °C (-40 to +158 °F)

Ambient Temperature: -40 °C to +60 °C (-40 to +140 °F)

Medium Temperature: Version -1: + 60 °C (+140 °F) soft soldered,  
+100 °C (+212 °F) silver brazed  
Version -3: +100 °C (+212 °F)

## Temperature Caused Error

The error caused by temperatures differering from +20 °C (+68 °F) is significant. In correspondence with EN 837-1 it can be up to .4 % per each 10 °C (18 °F).

## Protection Type (EN 60529 / IEC 529)

IP 43

## Standard Configuration

### Connections

316 stainless steel (1.4571), bottom connections parallel one behind the other, G ½ B (½" BSP / standard) or ½" NPT male

### Wetted Parts

Ordering Code – 1: Sockets = brass  
Bourdon tubes  
≤ 40 bar = bronze, C-form,  
(800 psi) soft soldered  
≥ 60 bar = 316 Ti stainl. steel (1.4571),  
(1,000 psi) helical, silver brazed

Ordering Code – 3: Sockets = 316 Ti stainl. steel (1.4571)  
Bourdon tubes = 316 Ti stainl. steel (1.4571),  
argon arc welded,  
≤ 40 bar (800 psi) = C-form,  
≥ 60 bar (1,000 psi) = helical

### Movement

Brass/German silver

### Dial

Aluminum alloy, black figures, white background



### Pointer

Aluminum alloy, black

### Case

Glass fiber reinforced polyamide 6B black

### Ring

Bezel ring carbon steel, black painted

### Lens

Single strength glass

## Optional Special Configurations

- Wetted parts monel, ordering code – 6
- Other connection threads upon request
- Inlet port restrictor screw brass or stainless steel
- Front flange chrome plated brass
- Acrylic glass lens or laminated safety glass lens
- 1" Blow-out (Ø 25 mm) in the back of the case
- Special scales
- Rubber gasket between window and bezel ring for splash water protection
- Version for higher static pressure (scale < 270° feasible)
- Electrical accessories (compare data sheets 9000 ff) upon request

For liquid filled versions see data sheet 5111, model DiRZChG 160.

## How to Order:

Model Code/NCS: **DiRZ 160**  
Wetted Parts: Ordering code: – 1 or – 3  
(please compare left)  
Case Configuration: Code letters **Rh** or **Fr**  
compare reverse side (standard version without mounting device =  
without code letters; )  
Pressure Range: According to EN 837-1  
**e.g. 0-10 bar or 0-160 psi**  
Static Pressure: Max. 1 pressure range higher  
than full scale value,  
e.g. scale 0-10 bar, max. stat.  
pressure 16 bar  
Connection Threads: ½" **BSP** (= standard) or ½" NPT  
Special Configurations: (see above)

### Examples for Ordering Information:

- DiRZ 160-1, 0-2.5 bar, static pressure 4 bar, ½" BSP
- DiRZ 160-3, Rh, 0-4 bar, stat. pressure 6 bar, ½" NPT



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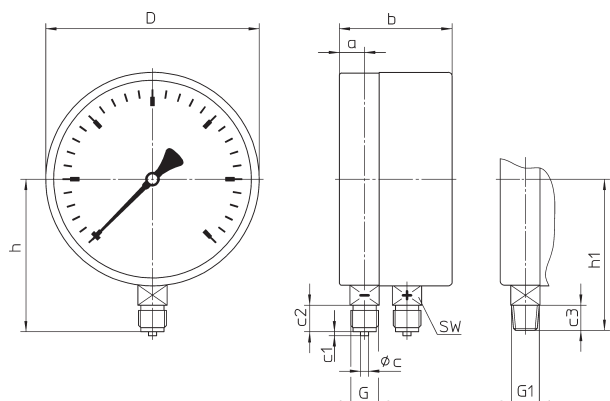
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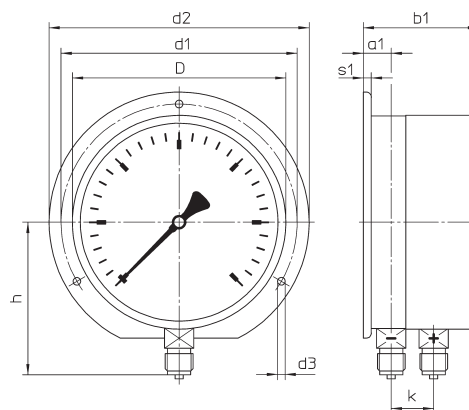
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# Case Configurations, Code Letters, Dimensional Data and Weight

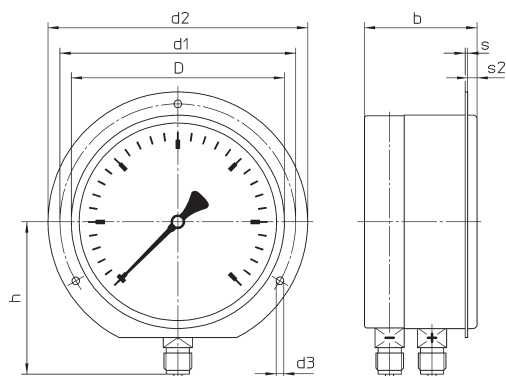
Bottom connections parallel one behind the other,  
without code letter



Bottom connections parallel one behind the other,  
rear mounting flange,  
code letters: **Rh**



Bottom connections parallel one behind the other,  
front mounting flange,  
code letters: **Fr**



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

D (= Nominal Case Size)	a	a1	b	b1	c	c1	c2	c3	d1	d2	d3	G	G1	h ±1	h1 ±1	k	SW	s	s1	s2	Weight (approx.)
160 6.3	19 .75	21 .83	85 3.35	87 3.43	6 .24	3 .12	20 .79	19 .75	178 7.01	196 7.72	5.8 .23	G ½ B ½" BSP	½" NPT	115 4.53	114 4.49	32 1.26	22 .87	2 .08	6 .24	7 .28	1.10 2.43

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