

# Absolute Pressure Gauges

Compact Design

With Capsule Element • Model 516.11

With Bourdon Tube • Model 516.12

## Pressure Gauges

### Service intended

Measurement of absolute pressure excluding the effect of barometric pressure variation.

Suitable for all clean and dry gaseous media that will not attack copper alloy and aluminium parts.

### Design

Small compact design, varied possibility for installation,

WIKA trade pattern DT-GM 87 10 226

Variable pressure entry

### Nominal size

80 mm

### Accuracy class per EN 837-3 /6

1.6

### Scale ranges per EN 837-3 /5

Model 516.11: 0 ... 16 to 0 ... 1000 mbar absolute pressure

Model 516.12: 0 ... 1.6 to 0 ... 16 bar absolute pressure.

### Working pressure

Steady: full scale value

Fluctuating: 0.9 x full scale value

### Overpressure safety

Model 516.11: 1 bar absolute (atmospheric pressure) with all scale ranges

Model 516.12: full scale value

### Operating temperature

Ambient: -20 ... +60 °C

Medium: +70 °C maximum

### Temperature error

Additional error when temperature of the pressure element deviates from +20 °C

Rising temperature: +0.3%/10 K of true scale value

Falling temperature: -0.3%/10 K of true scale value

### Degree of protection

IP 66 per EN 60 529 / IEC 529

### Standard features

#### Pressure connection (exposed to pressure medium)

Threaded entry per EN 837-1 /7.3

G 1/8 female

#### Pressure element (exposed to pressure medium)

Model 516.11: Material Cu-alloy

Model 516.12: Material stainless steel

The pressure element is evacuated and constitutes pressure datum

#### Movement (exposed to pressure medium)

Material: Cu-alloy

#### Dial (exposed to pressure medium)

White aluminium with black lettering

#### Pointer (exposed to pressure medium)

Black aluminium pointer



### Zero adjustment

Adjusting provisions at case back (model 516.11)

### Case (exposed to pressure medium)

Black aluminium. Case retains process pressure

### Window (exposed to pressure medium)

Instrument glass

### Sealing rings (exposed to pressure medium)

NBR (Buna rubber)

### Bezel ring

Black aluminium

### Gauge mounting

Requires mounting by means of rigid tailpipes, optionally threaded studs at case back.

Panel mounting or surface mounting rings optionally available

### Optional extras

Other pressure connection

Mounting studs with bracket

Panel mounting ring

Surface mounting ring

Male thread pressure entry

Pressure entry with miniature flange DN 10/16 to DIN 28 403

Radial pressure entry other than bottom

### Operating principle

- The case machined from solid aluminium bar retains the system pressure, whereas the pressure element of either the capsule or the bourdon tube type constitutes the zero pressure datum.

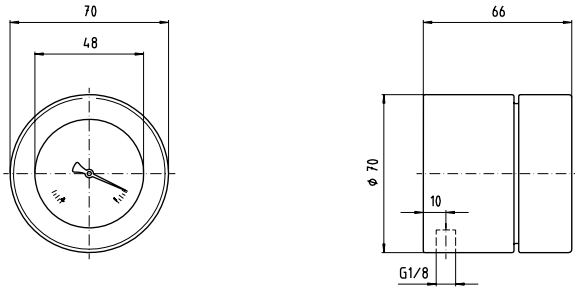
- The particularly shaped capsule fully collapses to provide over-pressure safety independent of the scale range.

- Any pressure applied is measured against the sealed pressure datum to exclude the effect of ambient pressure variation.

## Dimensions

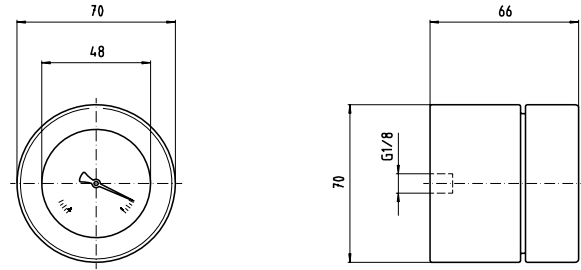
### Standard version

Bottom pressure entry



1035 193

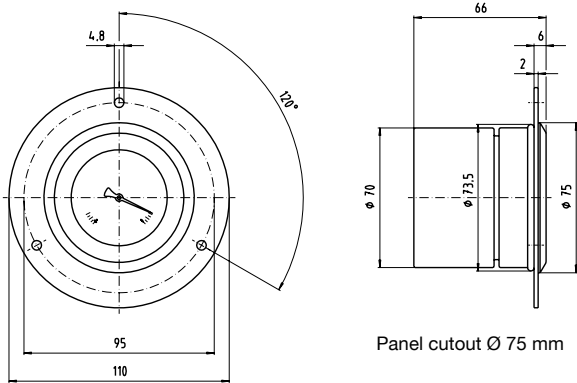
Back pressure entry



1035 207

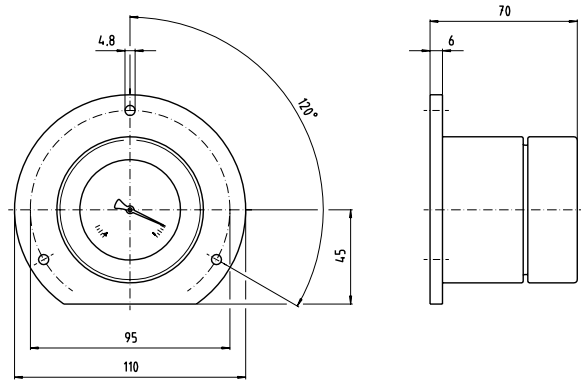
### Optional extras

3-hole panel mounting ring



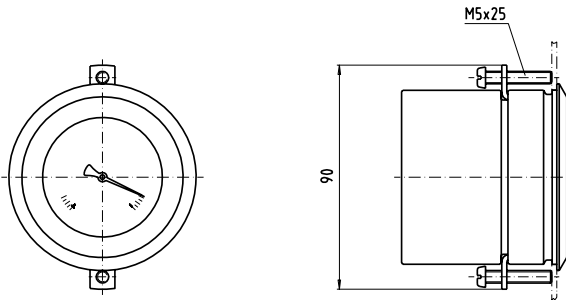
1037 056

Surface mounting flange



1037 048

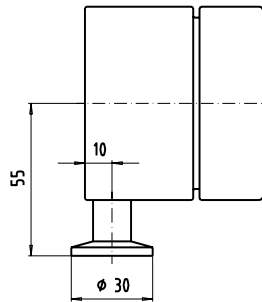
Narrow panel mounting bezel with fixing clamp



1037 064

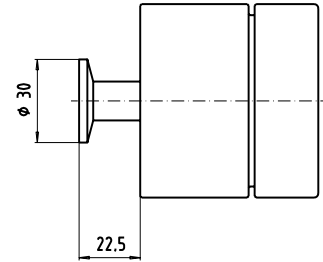
Panel cutout  $\varnothing$  72 mm

Miniature flange connection  
DN 10/16 DIN 28 403  
Bottom entry



1036 831

Back entry



Weight [kg]	
Typ 516.11	Typ 516.12
0.48	0.55

Standard pressure entry with parallel thread and seating to EN 837-3 / 7.3.

### Ordering information

State:

Model / Nominal size / Scale range / Size and location of connection / Optional extras required

Specifications and dimensions given in this leaflet represent the state of engineering at the time of printing. Modifications may take place and materials specified may be replaced by others without prior notice.



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