

# Differential pressure gauge

Cryo Gauge, copper alloy or stainless steel

BBO-D



## SPECIAL FEATURES

- CASE & MEASURING SYSTEM IN SS
- STATIC PRESSURE UP TO 50 kg/cm<sup>2</sup>
- SINGLE SIDE STATIC PRESSURE SUSTAINABLE
- DRY OR LIQUID FILLED
- ACCURACY UP TO 1.0% F.S.
- STANDARD FOLLOWED IN GENERAL EN 837-1

## APPLICATIONS

CHEMICALS/REFINERY/NUCLEAR/AEROSPACE/FERTILIZER  
/PETROCHEMICALS/PHARMACEUTICAL/POWER/CEMENT/  
SUGAR/FOOD & BEVERAGES/PULP/PAPER & ALLIED  
PROCESS INDUSTRIES.



## SPECIFICATIONS

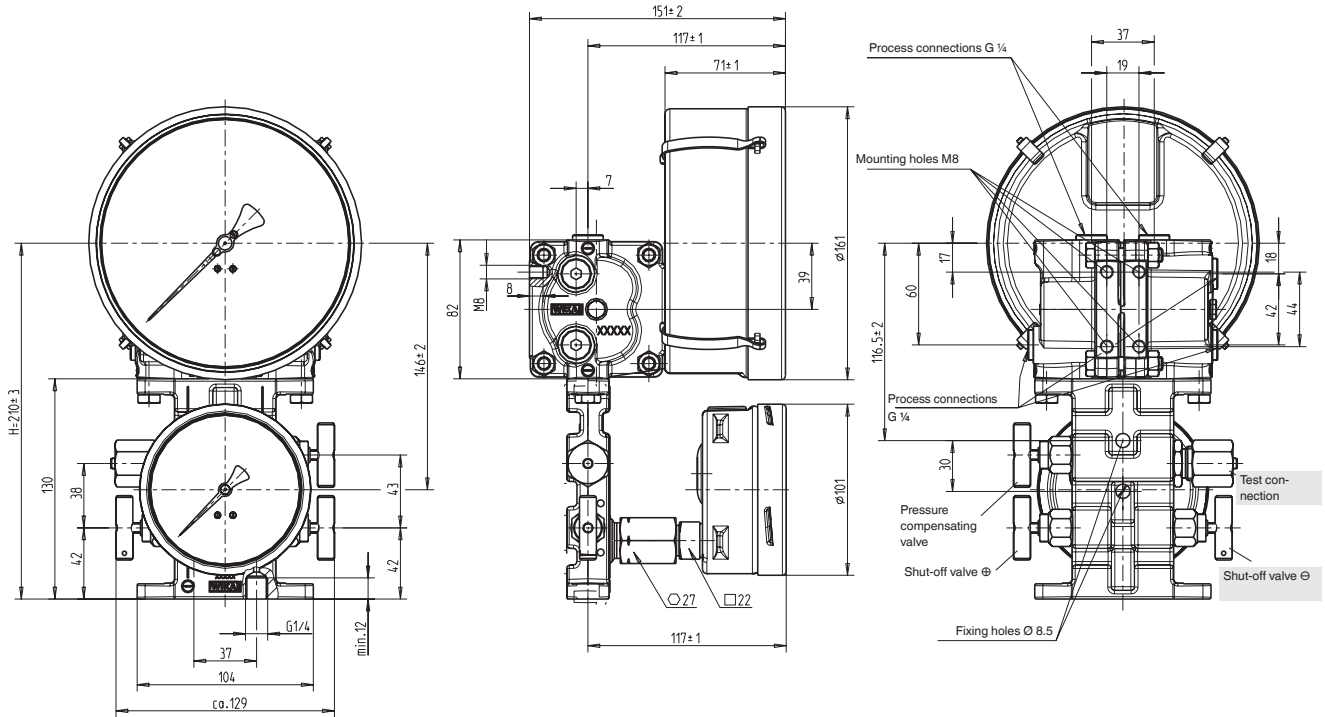
### STANDARD VERSION: 100mm, 150mm

|                       |                         |
|-----------------------|-------------------------|
| Accuracy              | : ±1.0% Of F.S.         |
| Ambient temperature   | : -40 ... +80 °C        |
| Process temperature   | : Max. 120 C            |
| High working pressure | : 50 kg.cm <sup>2</sup> |

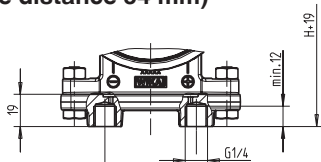
|                      |   |
|----------------------|---|
| Case                 | : AIS I304 SS, 316 SS   |
| Ring                 | : AIS I304 SS   |
| Separating diaphragm | : NBR   |
| Nuts & Bolts         | : AISI 304 SS, 316 SS, CU   |
| Purging Port Plug    | : 2*1/4"NPT(F) AISI 304 S   |
| Chamber              | : AISI 316 Stainless Steel  |
| Movement             | : AISI 316 Stainless Steel With Internal Limits<br>stops for Min. & Max. Pressure |

|                          |   |
|--------------------------|---|
| Protection               | : IP65  |
| Dial                     | : Aluminium, black graduation on white background   |
| Pointer                  | : Aluminium, black coloured, micrometer<br>Zero Adjustable  |
| Window                   | : Shatter proof/Sheet Glass   |
| Case Gasket              | : Neoprene  |
| Case Gasket              | : Neoprene  |
| Element Chamber Filling  | : Silicon Oil (Others as Optional)  |
| Diaphragm Sealing Gasket | : Viton   |
| Scale Amplitude          | : 1800 to 2700 (Depends on Range)   |
| Temperature Error:       | -When the temperature of the pressure element deviates from +20 C,<br>Rising temperature: +0.6%/10 C of true scale value<br>Falling temperature: -0.6%/10 C of true scale value |

**Dimensions in mm**



**Drawing with optional mounted adapter  
(centre distance 54 mm)**



**Option**

**Adapter for process connection**



The adapters can be flange-mounted either directly to the differential pressure gauge or to the valve manifold.

| Specifications                      |   |
|-------------------------------------|---|
| <b>Material</b>                     | <ul style="list-style-type: none"> <li>■ Copper alloy CW614N (CuZn39Pb3) for model 712.15</li> <li>■ Stainless steel 316L for model 732.15</li> </ul> |
| <b>Process connections (wetted)</b> | 2 x G 1/4, female, centre distance 31 mm or 54 mm or<br>2 x 1/4 NPT, female, centre distance 31 mm or 54 mm   |

All parts necessary for installation are included in the scope of delivery:

- 2 x hexagon screws M8 x 16
- 2 x hexagon screws M8 x 28
- 2 x nut M8
- 2 x O-ring sealing

## RANGE TABLE

|                            |  |
|----------------------------|--|
| Measuring cell 140 mbar:   | Setting range 0 ... 40 mbar to 0 ... 140 mbar      |
| Measuring cell 280 mbar:   | Setting range 0 ... 80 mbar to 0 ... 280 mbar      |
| Measuring cell 560 mbar:   | Setting range 0 ... 160 mbar to 0 ... 560 mbar     |
| Measuring cell 1,130 mbar: | Setting range 0 ... 320 mbar to 0 ... 1,130 mbar   |
| Measuring cell 2,300 mbar: | Setting range 0 ... 650 mbar to 0 ... 2,300 mbar   |
| Measuring cell 4,000 mbar: | Setting range 0 ... 1,150 mbar to 0 ... 4,000 mbar |

Note: Other Scales are available on customer request.

## ACCESSORIES †

DIAPHRAGM SEALE(WITH/WITHOUT CAPILLARY) \* NEEDLE VALVE.

† Refer Datasheet for complete specifications \* Refer catalogue for Valves & Manifolds

## HOW TO ORDER

### BASIC MODEL

| CODE                    | D   | F   |
|-------------------------|-----|-----|
| <b>NOMINAL SIZE(mm)</b> | 100 | 150 |

### TYPE OF MOUNTING

- A4 SURFACE MOUNTING WITH BOTTOM ENTRY
- A1 DIRECT BOTTOM ENTRY
- A6 FLUSH PANEL BACK ENTRY WITH FRONT FLANGE
- A7 2" PIPE/YOKEMOUNTING BOTTOM ENTRY

### GAUGE CONNECTION

- |                                      |   |
|--------------------------------------|---|
| <b>B23</b> 1/4"NPT(F)X2 NOS.STANDARD | <b>B25</b> 2 x G ¼, female, centre distance 37 mm   |
| <b>B24</b> 3/8"BSP(F)X2 NOS.         | <b>B26</b> 2 x ¼ NPT, female, centre distance 37 mm |

Note: Connections like PT/PF/F laired/UNF/G/R ect.can be provided on request.  
Non standard connections can be provided through adaptors.

### RANGE

REFER TABLES

### OPTIONS

FOR NON STANDARD PRODUCTS/OPTIONAL ITEMS,PLEASE CONTACT FACTORY FOR DELIVERY AND MINIMUM QUANTITY OF ORDER.

- |   |                                      |
|---|--------------------------------------|
| <b>C12</b> AISI 316 SS CASE & BEZEL   | <b>C16</b> SHATTERPROOF/SAFETY GLASS |
| <b>C1</b> FIVE POINT CALIBRATION CERTIFICATE  | <b>C19</b> TOUGHENED GLASS           |
| <b>C4</b> DAMPENING LIQUID GLYCERINE  | <b>C3</b> CUSTOM DESIGNED DIAL       |
| <b>C5</b> DAMPENING LIQUID SILICON OIL (GASKET & FILLING PLUG OF NBR/VITON)                     | <b>C30</b> PLEXI GLASS               |
| <b>C62</b> DIAPHRAGM CHAMBER IN AISI SS 316   | <b>C35</b> DIAL TAG MARKING          |
| <b>C63</b> DIAPHRAGM CHAMBER IN MONEL (WITH MONEL DIAPHRAGM)                                    | <b>C9</b> SS TAG PLATE               |
| <b>C64</b> DIAPHRAGM IN MONEL   | <b>C46</b> TESTED TO NACE STANDARDS  |
| <b>C65</b> Valve manifold (wetted) with working pressure indication Bourdon tube pressure gauge |                                      |

**ELECTRIC CONTACTS:(WITH IP PROTECTION UPTO IP 55,DAMPENING LIQUID OPTIONS ARE NOT AVAILABLE)**

**A)MAGNETIC SNAP ACTION TYPE(230V AC 1Amp.)**  
(48V DC 0.5Amp.)

- AVAILABLE ONLY ABOVE 6000 mmWC
- D1** Single;NORMALLY CLOSED
  - D2** Double;NORMALLY CLOSED+NORMALLY OPEN
  - D3** Single;NORMALLY OPEN
  - D4** Double;NORMALLY CLOSED+NORMALLY CLOSED
  - D5** Double;NORMALLY CLOSED
  - D6** Double; NORMALLY OPEN
  - D7** BOOSTER FOR CURRENT UPTO 5Amp
  - D8** SPDT
  - D9** DPDT

**B)INDUCTIVE TYPE(220V AC 0.4Amp)**  
AVAILABLE ONLY ABOVE 400mm WC

- D10** Single;NORMALLY OPEN
- D11** Single;NORMALLY CLOSED
- D12** Double;NORMALLY CLOSED+NORMALLY OPEN
- D13** Double; NORMALLY OPEN
- D14** Double;NORMALLY CLOSED
- D15** Double;NORMALLY CLOSED+NORMALLY CLOSED

### Ordering Example:

**BBO-D-F-A4-B23-0-250mmWc-C12**

Note: ● Due to continuous improvement, the specification may vary from time to time.