

# CAPSULE TYPE PRESSURE GAUGE

## MODEL M1.04



### PRODUCT DESCRIPTION

Low pressure and vacuum capsule gauges are manufactured with a bellows type element, instead of a bourdon tube, which enables the gauges to deal with the very low pressure and vacuum ranges more efficiently.



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### KEY FEATURES

- Stainless steel case & ring
- Available ranges : 10 mbar to 600 mbar
- Compact design
- Provision for zero adjustment
- Standard followed EN 837-3

### SPECIFICATIONS

|                           |                                                                                                                                                  |
|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| Design Standard:          | : According to EN 837-3                                                                                                                          |
| Sensing Element:          | : Capsule                                                                                                                                        |
| Accuracy:                 | : $\pm 1.6$ % of FS                                                                                                                              |
| Dial Size:                | : 100mm (4"), 160mm (6")                                                                                                                         |
| Range:                    | : -100...0...+6000 mmWC                                                                                                                          |
| Process Conn. Location:   | : Direct Bottom & Lower Back                                                                                                                     |
| Process Conn. Size & Type | : $\frac{1}{2}$ " NPT (M), Other on request                                                                                                      |
| Case                      | : SS 304 (Bayonet Type)                                                                                                                          |
| Ingress Protection        | : IP68                                                                                                                                           |
| Approvals                 | : ATEX: Conformity acc. to RL 2014/34/EU Article 13 paragraph 1 for mechanical equipment in potential hazardous areas II 2 GD Ex h T6 (Optional) |

### MATERIAL OF CONSTRUCTION

|                              |                                                  |
|------------------------------|--------------------------------------------------|
| Case & Bezel Ring            | : SS 304 (Optional SS 316)                       |
| Process Connection           | : SS 316                                         |
| Capsule                      | : SS 316                                         |
| Movement                     | : SS 304                                         |
| Pointer                      | : Aluminum, Black Color Fixed                    |
| Dial                         | : Aluminum, Black graduation on white background |
| Window                       | : Toughened Glass                                |
| Window gasket & Blowout disk | : Neoprene                                       |

### APPLICATION

- Food & Beverages
- Nuclear power plants
- Clean air
- Pharmaceutical
- Gaseous
- Low pressure measurement
- Low viscous liquid & non corrosive media

### PRESSURE LIMITS

|                    |                               |
|--------------------|-------------------------------|
| Operating pressure | : 75% of scale value          |
| Over pressure      | : 130% of maximum scale value |

### TEMPERATURE LIMITS

|                     |                    |
|---------------------|--------------------|
| Ambient temperature | : -25 °C to +65 °C |
| Process temperature | : Max 150 °C       |

### CERTIFICATION & APPROVALS

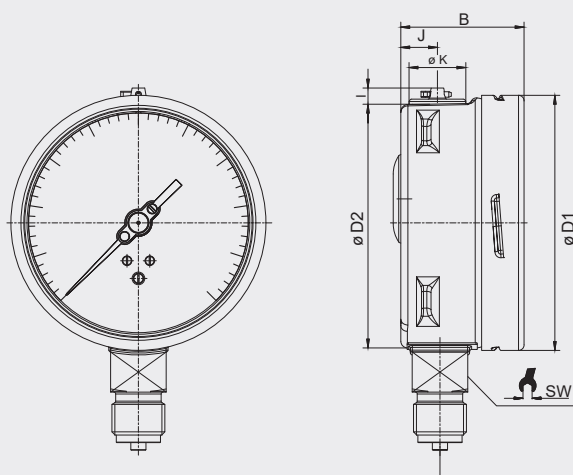
|                         |                                                                                                                            |
|-------------------------|----------------------------------------------------------------------------------------------------------------------------|
| Calibration Certificate | : Gauges are factory calibrated to full range by default 5/10-Point Calibration Cert. (Optional)                           |
| Material Certification  | : Available as per EN10204 3.1 for wetted parts (Optional)<br>Available as per EN10204 2.1 for non-wetted parts (Optional) |
| NACE Compliance         | : Available as per MR 01 75/ MR 01 03 (ISO 15156) for wetted parts (Optional)                                              |
| Approvals               | : ATEX: Conformity acc. to RL 2014/34/EU II 2 GD Ex h T6 (Optional)                                                        |

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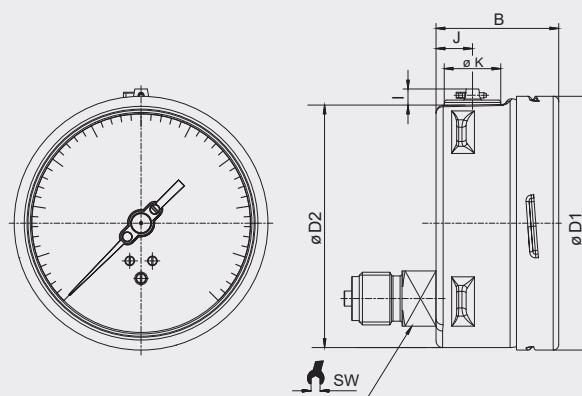
### DIMENSIONAL DRAWINGS

Direct, Bottom Connection - B



| NS  | Dimension in mm |      |      |     |      |      |    |
|-----|-----------------|------|------|-----|------|------|----|
|     | B               | ø D1 | ø D2 | I   | J    | K    | SW |
| 100 | 49.5            | 101  | 99   | 6.5 | 14.5 | 22.5 | 22 |
| 160 | 49.5            | 101  | 99   | 6.5 | 14.5 | 22.5 | 22 |

Direct, Lower Back Connection - L



| NS  | Dimension in mm |      |      |     |      |      |    |
|-----|-----------------|------|------|-----|------|------|----|
|     | B               | ø D1 | ø D2 | I   | J    | K    | SW |
| 100 | 49.5            | 101  | 99   | 6.5 | 14.5 | 22.5 | 22 |
| 160 | 49.5            | 101  | 99   | 6.5 | 14.5 | 22.5 | 22 |

**Important Notes:** Above drawings are not to scale. All Dimension are in mm. NS = Nominal size. Weights mentioned are approximate and for standard product. Weight can be different after selection of options.

### TABLE-1 PRESSURE RANGE

| Code  | mmWC   | Code  | kPa   | Code  | mbar  |
|-------|--------|-------|-------|-------|-------|
| WB010 | 0-100  | KP010 | 0-1   | MB010 | 0-10  |
| WB016 | 0-160  | KP016 | 0-1.6 | MB016 | 0-16  |
| WB025 | 0-250  | KP025 | 0-2.5 | MB025 | 0-25  |
| WB040 | 0-400  | KP040 | 0-4   | MB040 | 0-40  |
| WB060 | 0-600  | KP060 | 0-6   | MB060 | 0-60  |
| WB100 | 0-1000 | KP100 | 0-10  | MB100 | 0-100 |
| WB160 | 0-1600 | KP160 | 0-16  | MB160 | 0-160 |
| WB250 | 0-2500 | KP250 | 0-25  | MB250 | 0-250 |
| WB400 | 0-4000 | KP400 | 0-40  | MB400 | 0-400 |
| WB600 | 0-6000 | KP600 | 0-60  | MB600 | 0-600 |

**Important Notes:** All ranges in vacuum & compound.

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### MODEL CODING & ORDERING INFORMATION

| DESCRIPTION                                          | CODE  | M1.04 | 4 | 1 | B | 12NM | MB060 | X20 | S6 | SL | SL | S6 |
|------------------------------------------------------|-------|-------|---|---|---|------|-------|-----|----|----|----|----|
| <b>Model</b>                                         |       |       |   |   |   |      |       |     |    |    |    |    |
| CAPSULE TYPE PRESSURE GAUGE                          | M1.04 | M1.04 |   |   |   |      |       |     |    |    |    |    |
| <b>Dial Size</b>                                     |       |       |   |   |   |      |       |     |    |    |    |    |
| 100 mm (4")                                          | 04    |       | 4 |   |   |      |       |     |    |    |    |    |
| 160 mm (6")                                          | 06    |       |   |   |   |      |       |     |    |    |    |    |
| <b>Version</b>                                       |       |       |   |   |   |      |       |     |    |    |    |    |
| Dry (But Fillable)                                   | 1     |       |   | 1 |   |      |       |     |    |    |    |    |
| <b>Type of Mounting / Connection Orientation</b>     |       |       |   |   |   |      |       |     |    |    |    |    |
| Direct Bottom Connection                             | B     |       |   |   | B |      |       |     |    |    |    |    |
| Direct Lower Back Connection                         | L     |       |   |   |   |      |       |     |    |    |    |    |
| <b>Process Connection (Size and Type)</b>            |       |       |   |   |   |      |       |     |    |    |    |    |
| 1/2" NPT (M)                                         | 12NM  |       |   |   |   | 12NM |       |     |    |    |    |    |
| 1/2" BSP (M)                                         | 12BM  |       |   |   |   |      |       |     |    |    |    |    |
| 1/4" BSP (M)                                         | 14BM  |       |   |   |   |      |       |     |    |    |    |    |
| 1/4" NPT (M)                                         | 14NM  |       |   |   |   |      |       |     |    |    |    |    |
| 3/8" BSP (M)                                         | 38BM  |       |   |   |   |      |       |     |    |    |    |    |
| 3/8" NPT (M)                                         | 38NM  |       |   |   |   |      |       |     |    |    |    |    |
| M20X1.5(M)                                           | M20M  |       |   |   |   |      |       |     |    |    |    |    |
| <b>Range</b>                                         |       |       |   |   |   |      |       |     |    |    |    |    |
| To be selected from Table 1                          | XXXXX |       |   |   |   |      | MB060 |     |    |    |    |    |
| (Other Custom Ranges available on request)           |       |       |   |   |   |      |       |     |    |    |    |    |
| <b>Other Options</b>                                 |       |       |   |   |   |      |       |     |    |    |    |    |
| Window in Toughened Glass                            | EXO   |       |   |   |   |      |       |     |    |    |    |    |
| Tag no Marking on Dial                               | XTM   |       |   |   |   |      |       |     |    |    |    |    |
| Wetted Parts Complied To NACE                        | X20   |       |   |   |   |      |       | X20 |    |    |    |    |
| Custom Dial Design / Private Labeling                | X29   |       |   |   |   |      |       |     |    |    |    |    |
| <b>Quality Specific Requirement</b>                  |       |       |   |   |   |      |       |     |    |    |    |    |
| ATEX Conformity acc.to RL 2014/34/EU II 2 GD Ex h T6 | XAT   |       |   |   |   |      |       |     |    |    |    |    |
| IBR Certification                                    | X18   |       |   |   |   |      |       |     |    |    |    |    |
| Certificate for Oxygen Service                       | X21   |       |   |   |   |      |       |     |    |    |    |    |
| IGC Certificate                                      | X79   |       |   |   |   |      |       |     |    |    |    |    |
| Leak Test Certificates                               | XLC   |       |   |   |   |      |       |     |    |    |    |    |
| DP Test for Socket and Case Welding                  | XDP   |       |   |   |   |      |       |     |    |    |    |    |
| <b>Default Certification</b>                         |       |       |   |   |   |      |       |     |    |    |    |    |
| Calibration Certificates                             |       |       |   |   |   |      |       |     |    |    |    |    |
| MTC for Wetted Parts                                 |       |       |   |   |   |      |       |     |    |    |    |    |

| DEFAULT SELECTION |         |            |    |       |      |    |
|-------------------|---------|------------|----|-------|------|----|
| MOC SELECTON      | DEFAULT | ON REQUEST |    |       | CODE |    |
| CASE AND RING     | SS316L  | SL         | S6 | SS304 | S4   | SL |
| CAPSULE           | SS316L  | SL         | -  | -     | -    | SL |
| SOCKET            | SS316L  | SL         | -  | -     | -    | SL |
| MOVEMENT          | SS316   | S6         | -  | -     | -    | S6 |

### SAMPLE ORDERING CODE:

**M1.04-04-1-B-12NM-MB060-X20-S6-SL-SL-S6**

Note: Specifications and dimensions given in this product catalogue represents the state of engineering at the time of printing. Modifications may take place and material specified may be replaced by others without prior notice.