

SCHAFFER DIAPHRAGM PRESSURE GAUGE

MODEL
M1.05



PRODUCT DESCRIPTION

The schaffer diaphragm gauge is used for measurement of gas or liquids, and is well suited for use on corrosive, polluted or highly viscous mediums. These instruments are more reliable and easy to protect against overpressure than the Bourdon tube type. The measuring element consists of one circular diaphragm clamped between a pair of flanges. It has a diaphragm which displacement is transferred via a link to the movement.



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KEY FEATURES

- Stainless steel case & measuring system
- Flanged or Screw connection
- Optional ATEX approved II 2 GD Ex h T6
- Standard followed in general EN 837-3

SPECIFICATIONS

| | |
|---------------------------|--|
| Design Standard: | : According to EN 837-3 |
| Sensing Element: | : Diaphragm |
| Accuracy: | : ± 1.6 % of FS |
| Dial Size: | : 100mm (4"), 150mm (6") |
| Range: | : -6000 to 0 & 0 to 6000 mmWC |
| Process Conn. Location: | : Direct Bottom |
| Process Conn. Size & Type | : $\frac{1}{2}$ " NPT Male / $\frac{1}{2}$ " BSP Male |
| Weld Joints: | : TIG Argon Arc Welding |
| Case | : 304 SS (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 | : $\frac{1}{2}$ " NPT (M) |
| Diaphragm | : Wetted: SS 316L |
| Movement | : SS 304 |
| Pointer | : Aluminum, Black colored Micrometer zero adjustable |
| Dial | : Aluminum, Black graduation on white background |
| Window | : Shatter proof safety |
| Window gasket & Blowout disk | : Neoprene |

APPLICATION

- Liquid & gaseous medium
- Corrosive/hazardous
- Oil & gas application
- Food & Beverages
- Nuclear power plants
- Chemical/Petrochemical, Power stations

PRESSURE LIMITS

| | |
|--------------------|--------------------------|
| Operating pressure | : 75% of scale value |
| Over pressure | : 125% of scale value °C |

TEMPERATURE LIMITS

| | |
|---------------------|--------------------|
| Ambient temperature | : -25 °C to +65 °C |
| Process temperature | : Max 100 °C |

CERTIFICATION & APPROVALS

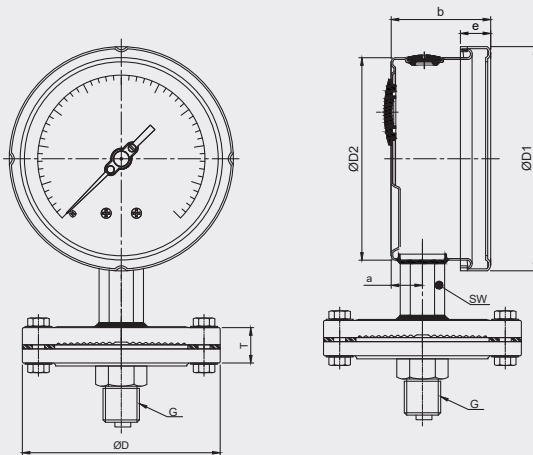
| | |
|-------------------------|--|
| Calibration Certificate | : Gauges are factory calibrated to full range by default 5/10-Point Calibration Cert. (Optional) |
| Material Certification | : Available as per EN10204 3.1 for wetted parts (Optional) Available as per EN10204 2.1 for non-wetted parts (Optional) |
| 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

Bottom Connection



| NS | Dimensions in mm | | | | | | | | | Weight in gm |
|-----|------------------|----|-----|-----|----|------|----|-----|----|--------------|
| | a | b | ØD1 | ØD2 | e | G | SW | ØD | T | Dry Version |
| 100 | 16 | 50 | 111 | 100 | 15 | 1/2" | 22 | 150 | 18 | 640 |
| 150 | 16 | 50 | 166 | 150 | 15 | 1/2" | 22 | 150 | 18 | 1020 |

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.

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TABLE-1 PRESSURE RANGE

| Code | mmWC | Code | mBar |
|------|-----------|-------|----------|
| CB36 | 0...250 | MB36 | 0...25 |
| CB38 | 0...400 | MB 38 | 0...40 |
| CB40 | 0...600 | MB 40 | 0...60 |
| CB42 | 0...1000 | MB 42 | 0...100 |
| CB45 | 0...1600 | MB 45 | 0...160 |
| CB50 | 0...2500 | MB 50 | 0...250 |
| CB54 | 0...4000 | MB 54 | 0...400 |
| BR01 | 0...6000 | MB 01 | 0...600 |
| BR04 | -6000...0 | MB 04 | -600...0 |
| BR31 | -4000...0 | MB 31 | -400...0 |
| BR35 | -2500...0 | MB 35 | -250...0 |
| BR36 | -1600...0 | MB 36 | -160...0 |
| BR38 | -1000...0 | MB 38 | -100...0 |
| BR40 | -600...0 | MB 40 | -60...0 |
| BR42 | -400...0 | MB 42 | -40...0 |
| BR45 | -250...0 | MB 45 | -25...0 |

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MODEL CODING & ORDERING INFORMATION

| DESCRIPTION | CODE | M1.05 | 4 | 1 | B | 12BM | XXX | S4 | HC | SL | X16 |
|---|--|-------|---|---|---|------|-----|----|----|----|-----|
| Model Schaffer Diaphragm Pressure Gauge | M1.05 | M1.05 | | | | | | | | | |
| Dial Size 100 mm (4") 150mm (6") | 4 6 | | 4 | | | | | | | | |
| Version Dry | 1 | | | 1 | | | | | | | |
| Type of Mounting Direct, Bottom connection | B | | | | B | | | | | | |
| Process Connection (Size & Type) 1/4" BSP (M) 3/8" BSP (M) 1/2" BSP (M) 1/4" NPT (M) 3/8" NPT (M) 1/2" NPT (M) M20 x 1.5 (M) | 14BM 38BM 12BM 14NM 38NM 12NM M20M | | | | | 12BM | | | | | |
| Range To be selected from Table 1 (Other custom ranges available on request) | XXX | | | | | | XXX | | | | |
| Top Chamber SS 304 SS 316 SS 316L | S4 S6 SL | | | | | | | S4 | | | |
| Diaphragm Hast C-276 Monel 400 SS 316L | HC M4 SL | | | | | | | | HC | | |
| Bottom Chamber SS 316 SS 316L Hast C-276 Monel 400 | S6 SL HC M4 | | | | | | | | | SL | |
| Other Options Window in Toughened glass Tag number marking on Dial ATEX Conformity acc. to RL 2014/34/EU II 2 GD Ex h T6 CE Marking Movement in SS 316 Over range protection 150% FSD Calibration Certificate Material test certificate Wetted parts complied to NACE Certificate for Oxygen Service Certificate of De-greasing Custom Dial Design / Private labeling Case & Bezel ring in SS 316 PTFE lining on flange or screwed connection PTPE protection on diaphragm PTPE coating on diaphragm PTPE gasket up to 200°C Enclosure Protection - IP65 | XWT XTM XAT XCE X06 X10 X16 X17 X20 X21 X25 X29 X31 X32 X33 X34 X35 I65 | | | | | | | | | | X16 |

SAMPLE ORDERING CODE:

M1.05-4.1.B.12BM.XXX.S4.HC.SL.X16

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.