

## Diaphragm

**MIEPL** make SS Pressure Gauges are based on the diaphragm arrangement for Isolation of liquid & widely used for high viscous & corrective area media.



## FEATURES

- ⇒ All SS measuring system
- ⇒ Socket-case, direct welded
- ⇒ Threaded / Flanged connection
- ⇒ External zero adjustment

## APPLICATION

- ⇒ Liquid & gaseous mediums
- ⇒ Corrosive environments
- ⇒ Oil & Gas applications
- ⇒ Chemical & Petrochemical
- ⇒ Food & Beverages

## REFERENCE

- ⇒ EN 837-3

## STANDARD SPECIFICATIONS

|                    |  |
|--------------------|--|
| Dial size          | : DN100 / DN150  |
| Range              | : -1...0...25 bar (type 1)<br>: 60...600 mbar (type 2)<br>: 6...40 mbar (type 3) |
| Mounting pattern   | : Direct, Bottom connection  |
| Process connection | : ½" NPT (M) / ½" BSP (M)  |
| Ingress protection | : IP 54  |
| Execution          | : Dry  |

## STANDARD PARAMETERS

|                     |  |
|---------------------|--|
| Accuracy            | : CL 1.6   |
| Ambient Temperature | : -40...+65°C  |
| Service Temperature | : 100°C max.   |
| Pressure limits     | : Steady pressure up to FS value<br>: Fluctuating pressure up to 90% of FS value |
| Weld joints         | : TIG argon arc welding  |

## MATERIAL OF CONSTRUCTION

|                                       |   |
|---------------------------------------|---|
| Sensing Element                       | : Diaphragm                                       |
| Case & Ring material                  | : AISI 304 SS (Bayonet type)                      |
| Diaphragm                             | : AISI 316 SS                                     |
| Shank                                 | : AISI 316L SS (Welded directly to case)          |
| Movement mechanism                    | : AISI 304 SS                                     |
| Dial                                  | : Aluminum, black graduation on white background  |
| Pointer                               | : Micro-adjustable, aluminum, black powder coated |
| Gaskets, Blow off disc & filling plug | : Neoprene / NBR                                  |
| Window                                | : Sheet glass                                     |

## STANDARD SPECIFICATIONS : DAMPENING LIQUID FILLED, GLYCERIN

|                  |   |
|------------------|---|
| Window           | : Safety glass                                    |
| Dampening liquid | : Glycerin 99.7% [Service temperature up to 65°C] |

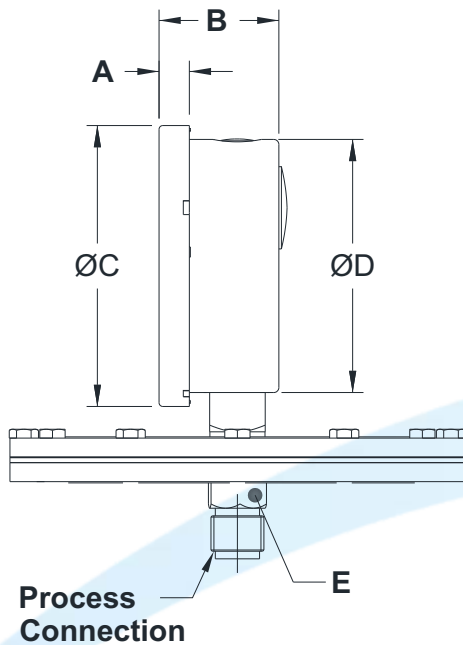
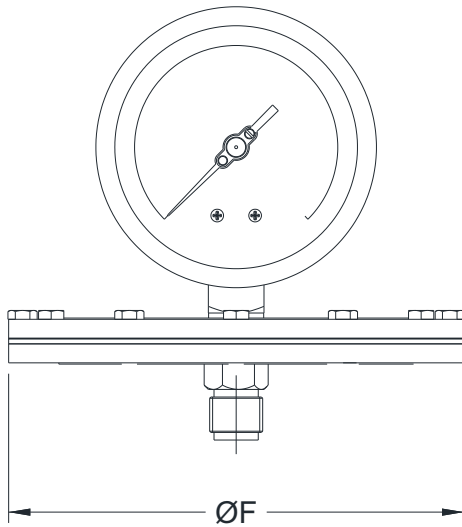
## TEMPERATURE EFFECT

Please refer clause no 9.3 of EN 837-1

## DRAWING

DIMENSIONAL DRAWING

### Type 1A



All dimensions are in mm.

#### RANGE : 1 to 25 Bar

|             |        |        |
|-------------|--------|--------|
| DN          | 100    | 150    |
| A           | 12     | 15     |
| B           | 48     | 48     |
| ØC          | 111    | 161    |
| ØD          | 100    | 149    |
| E           | A/F 22 | A/F 22 |
| ØF          | 98     | 98     |
| Weight (gm) | 1570   | 1960   |

#### RANGE : Below 40mbar to 6mbar

|             |        |        |
|-------------|--------|--------|
| DN          | 100    | 150    |
| A           | 12     | 15     |
| B           | 48     | 48     |
| ØC          | 111    | 161    |
| ØD          | 100    | 149    |
| E           | A/F 22 | A/F 22 |
| ØF          | 180    | 180    |
| Weight (gm) | 2930   | 3320   |

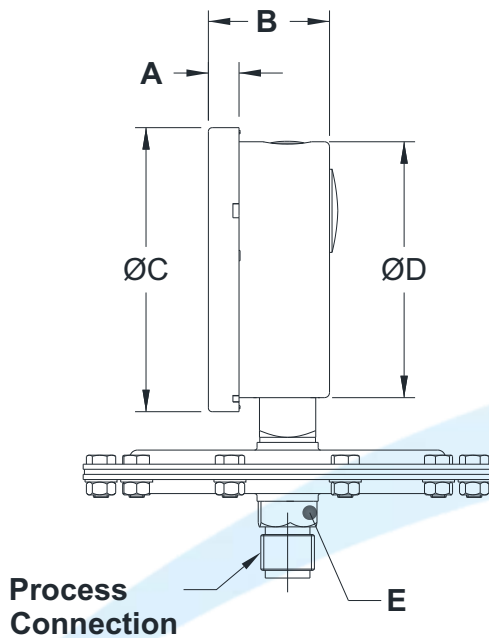
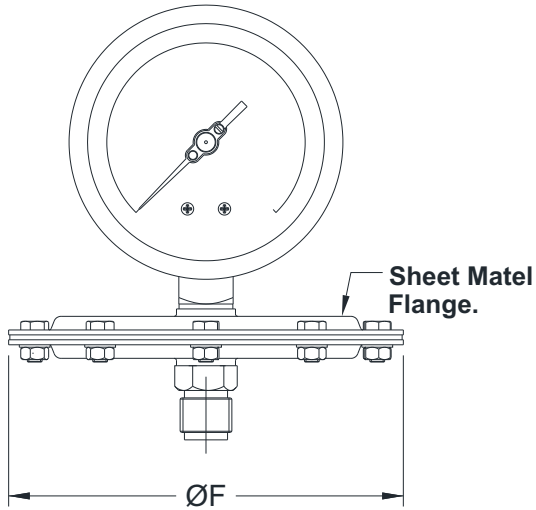
#### RANGE : 40mbar to 60mbar

|             |        |        |
|-------------|--------|--------|
| DN          | 100    | 150    |
| A           | 12     | 15     |
| B           | 48     | 48     |
| ØC          | 111    | 161    |
| ØD          | 100    | 149    |
| E           | A/F 22 | A/F 22 |
| ØF          | 150    | 150    |
| Weight (gm) | 2260   | 2640   |

## DRAWING

DIMENSIONAL DRAWING

### Type 1A



RANGE : 1 to 25 Bar

|             |        |        |
|-------------|--------|--------|
| DN          | 100    | 150    |
| A           | 12     | 15     |
| B           | 48     | 48     |
| ØC          | 111    | 161    |
| ØD          | 100    | 149    |
| E           | A/F 22 | A/F 22 |
| ØF          | 98     | 98     |
| Weight (gm) | 830    | 1220   |

RANGE : Below 40mbar to 6mbar

|             |        |        |
|-------------|--------|--------|
| DN          | 100    | 150    |
| A           | 12     | 15     |
| B           | 48     | 48     |
| ØC          | 111    | 161    |
| ØD          | 100    | 149    |
| E           | A/F 22 | A/F 22 |
| ØF          | 180    | 180    |
| Weight (gm) | 1480   | 1820   |

RANGE : 40mbar to 600mbar

|             |        |        |
|-------------|--------|--------|
| DN          | 100    | 150    |
| A           | 12     | 15     |
| B           | 48     | 48     |
| ØC          | 111    | 161    |
| ØD          | 100    | 149    |
| E           | A/F 22 | A/F 22 |
| ØF          | 150    | 150    |
| Weight (gm) | 1600   | 1990   |

All dimensions are in mm.

### ORDERING CODE

MP21 - D - XXX - 1A - 4NM - IP1 - E1

|  |   |     |                                   |    |                                  |    |
|--|---|-----|-----------------------------------|----|----------------------------------|----|
| 1. DIAL SIZE   | 100 mm  | D   |                                   |    |                                  |    |
|  | 150 mm  | F   |                                   |    |                                  |    |
| 2. RANGE   | Refer "Range Table"                               | XXX |                                   |    |                                  |    |
| 3. MOUNTING PATTERN  | Direct Bottom connection                          | 1A  |                                   |    |                                  |    |
| 4. PROCESS CONNECTION  | 3/8" BSP (M)                                      | 3BM |                                   |    |                                  |    |
|  | 1/2" BSP (M)                                      | 4BM |                                   |    |                                  |    |
|  | M20 X 1.5 mm (M)                                  | 4MM |                                   |    |                                  |    |
|  | 1/2" NPT (M)                                      | 4NM |                                   |    |                                  |    |
|  | 2" RF 150# as per ANSI B 16.5                     | A31 |                                   |    |                                  |    |
|  | 3" RF 150# as per ANSI B 16.5                     | A43 |                                   |    |                                  |    |
|  | 4" RF 150# as per ANSI B 16.5                     | A49 |                                   |    |                                  |    |
|  | 2" RF 300# as per ANSI B 16.5                     | A32 |                                   |    |                                  |    |
|  | 3" RF 300# as per ANSI B 16.5                     | A44 |                                   |    |                                  |    |
|  | 4" RF 300# as per ANSI B 16.5                     | A50 |                                   |    |                                  |    |
| Other thread size and standards available on request. <sup>1</sup> |   |     |                                   |    |                                  |    |
| 5. INGRESS PROCESS   | IP 54   | IP1 |                                   |    |                                  |    |
|  | IP 65   | IP2 |                                   |    |                                  |    |
| 6. EXECUTION   | Dry <sup>2</sup>                                  | E1  |                                   |    |                                  |    |
|  | Dampening liquid filled, glycerine                | E4  |                                   |    |                                  |    |
|  | Dampening liquid filled, silicon oil <sup>3</sup> | E5  |                                   |    |                                  |    |
| 9. OTHER OPTIONS   | Case & Ring in AISI 316 SS (1A)                   | AA  | AISI 316 SS movement              | FL | Certification for Oxygen service | SO |
|  | Case & Ring in AISI 316 SS (1C)                   | AC  | External zero adjustment          | FZ | SS tag plate, AISI 304 SS        | WF |
|  | Case & Ring in AISI 316 SS (2A)                   | AG  | Rubber parts, Viton               | QA | SS tag plate, AISI 316 SS        | WG |
|  | Dampening screw, AISI 316 SS                      | DN  | 5 - point calibration certificate | SA | Custom designed dial             | WR |
|  | Plexi glass                                       | FB  | Material test certificate 3.1     | SC | Dial tag marking                 | WT |
|  | Shatterproof safety glass                         | FC  | Material test certificate 2.2     | SM |                                  |    |

Ordering Example : **MP21 - D - XXX - 1A - 4NM - IP1 - E1**

1. For other connections, please contact factory.
2. Available with Ingress Protection IP54 (Dust proof).
3. Rubber parts shall Viton.