

# SOLID FRONT PROCESS PRESSURE GAUGE (4 1/2")

## POLYPROPYLENE (PHENOL) CASE



IPS-PG-13



### SPECIAL FEATURES

- POLYPROPYLENE CASE WITH SS MEASURING SYSTEM
- WETTED PARTS AISI 316L STAINLESS STEEL
- ACCURACY  $\pm 0.5\%$  F. S.
- SOLID FRONT DESIGN FEATURES BAFFLE WALL INTERPOSED BETWEEN THE SENSING SYSTEM, THE WINDOW AND A PRESSURE RELIEVING BACK FOR INCREASED SAFETY
- STANDARD FOLLOWED ANSI/ASME - B 40.100

### APPLICATIONS

SUITABLE FOR HIGH PRESSURE GAS, CORROSIVE / HAZARDOUS ENVIRONMENT THAT WILL NOT OBSTRUCT THE PRESSURE SYSTEM.

### SPECIFICATIONS

#### STANDARD VERSION : 4 1/2"

|                          |   |
|--------------------------|---|
| Accuracy                 | : $\pm 0.5\%$ F. S. (As per ANSI B40.100)               |
| Ambient temperature      | : - 20°C to + 65°C                                      |
| Process temperature      | : Max 150°C   |
| Operating pressure range | : 75 % of Scale Value                                   |
| Over pressure limit      | : $\leq 100$ bar : 125% of Max. Scale Value             |
|                          | : $> 100$ to $\leq 600$ bar : 115% of Max. Scale Value  |
|                          | : $> 600$ to $\leq 1600$ bar : 110% of Max. Scale Value |

|          |  |
|----------|--|
| Case     | : Fibre Glass Reinforced Polypropylene |
| Bourdon  | : AISI 316L SS                         |
| Socket   | : AISI 316L SS                         |
| Movement | : AISI 304 SS                          |
| Joints   | : Tig Argon Arc Welding                |

|               |   |
|---------------|---|
| Protection    | : IP 65   |
| Dial          | : Aluminium, black graduation on white background       |
| Pointer       | : Aluminium, black Coloured, Micrometer Zero Adjustable |
| Window        | : Plexi Glass   |
| Blow off Disc | : AISI 304 SS   |
| Gasket        | : Neoprene  |

#### DRY BUT FILLABLE VERSION (OPTION FG)

|                           |   |
|---------------------------|---|
| Fillable Dampening Liquid | : Glycerine 99.7%                         |
| Ambient Temperature       | : Maximum 65°C                            |
| Process Temperature       | : Maximum 65°C                            |
| Other Features            | : Refer Specification of Standard Version |

#### GLYCERINE FILLED VERSION (OPTION PY)

|                     |  |
|---------------------|--|
|                     | : $\pm 1.0\%$ of F. S.                         |
| Ambient Temperature | : Maximum 65°C                                 |
| Process Temperature | : Maximum 65°C                                 |
| Dampening Liquids   | : Glycerine 99.7% (Others available as Option) |
| Other Features      | : Refer Specification of Standard Version      |
| Protection          | : IP 65  |

#### Temperature effect:

The variation of indication caused by effects of temperature is to be calculated by below formula; which is to be added in the specified accuracy while measurement :-

Formula :  $\pm 0.04 \times (t_2 - t_1) \%$  of F. S.

where  $t_1$  = reference temperature (+20°C) and  $t_2$  = ambient temperature in °C.



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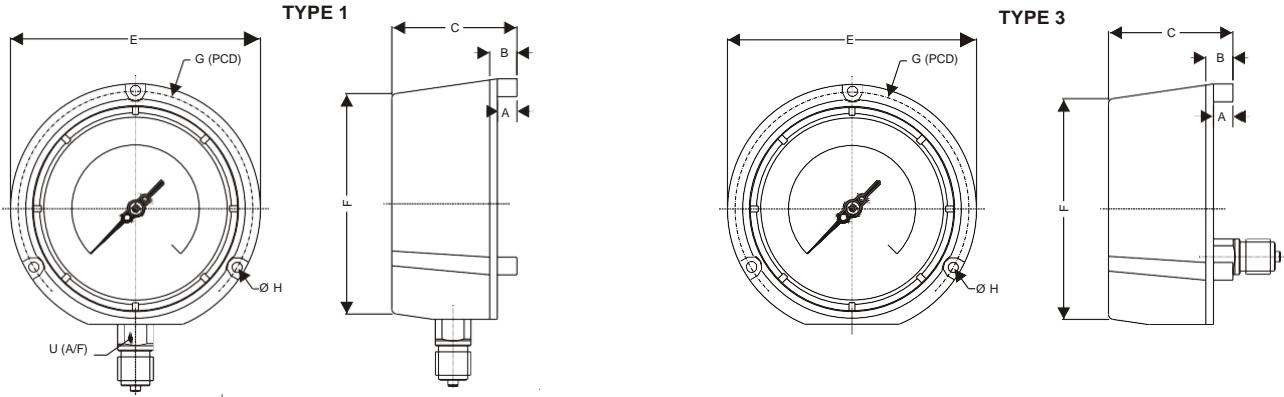
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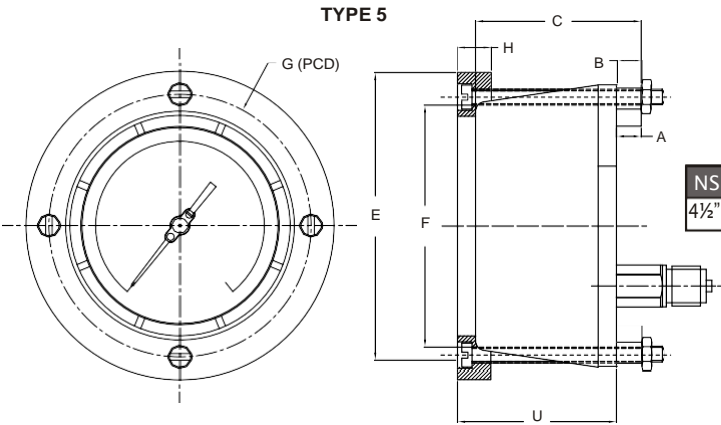
CIN : U52399MH2021PTC368555

## DIMENSIONS - STANDARD VERSION



| NS  | A    | B    | C    | E   | F   | G     | H | U  | Weight in gram (with BOX) | Weight in gram (With Glycerin & Box) |
|-----|------|------|------|-----|-----|-------|---|----|---------------------------|--------------------------------------|
| 4½" | 12.5 | 24.5 | 73.5 | 148 | 130 | 137.5 | 6 | 22 | 900.00                    | 1300.00                              |

| NS  | A    | B    | C    | E   | F   | G     | H | U  | Weight in gram (With BOX) |
|-----|------|------|------|-----|-----|-------|---|----|---------------------------|
| 4½" | 12.5 | 24.5 | 73.5 | 148 | 130 | 137.5 | 6 | 22 | 850.00                    |



| NS  | A   | B    | C    | E   | F   | G     | H | U  | Weight in gram (with BOX) |
|-----|-----|------|------|-----|-----|-------|---|----|---------------------------|
| 4½" | 2.5 | 24.5 | 73.5 | 148 | 130 | 137.5 | 6 | 22 | 1000.00                   |

- Notes :
- Drawings are not to scale.
  - All Dimensions are in mm.
  - NS = Nominal Size
  - H - Arrangement for Mounting type 1
  - Weights mentioned are approximate and for standard product. Weight can be different after selection of options.

### RANGE TABLE

**Note :** IP SPL offers National / International Scales like kPa, MPa, bar, psi, kg/cm<sup>2</sup> kPa with bar, bar with psi or Equivalent scales as per the requirement can be provided on request.

& Dual Scale like kPa with psi,

Following are the example tables for kg/cm<sup>2</sup> & psi scales

### PRESSURE RANGE

| SINGLE SCALE (kg/cm <sup>2</sup> or bar) |      |       |       |        |  |
|--|------|-------|-------|--------|--|
| 0/0.6                                    | 0/4  | 0/25  | 0/160 | 0/1000 |  |
| 0/1                                      | 0/6  | 0/40  | 0/250 | 0/1600 |  |
| 0/1.6                                    | 0/10 | 0/60  | 0/400 | 0/2100 |  |
| 0/2.5                                    | 0/16 | 0/100 | 0/600 |        |  |

| DUAL SCALE (kg/cm <sup>2</sup> with psi) |                    |        |                    |         |                    |
|--|--------------------|--------|--------------------|---------|--------------------|
| psi                                      | kg/cm <sup>2</sup> | psi    | kg/cm <sup>2</sup> | psi     | kg/cm <sup>2</sup> |
| 0/15                                     | 0/1                | 0/400  | 0/28               | 0/4000  | 0/280              |
| 0/30                                     | 0/2                | 0/500  | 0/35               | 0/5000  | 0/350              |
| 0/60                                     | 0/4                | 0/600  | 0/40               | 0/6000  | 0/400              |
| 0/100                                    | 0/7                | 0/1000 | 0/70               | 0/10000 | 0/700              |
| 0/150                                    | 0/10               | 0/1500 | 0/100              | 0/15000 | 0/1000             |
| 0/220                                    | 0/16               | 0/2200 | 0/160              | 0/22000 | 0/1600             |
| 0/300                                    | 0/20               | 0/3000 | 0/200              | 0/30000 | 0/2000             |



### VACUUM & COMPOUND RANGE

| DUAL SCALE                         |                              |               |                              |               |                              |
|------------------------------------|------------------------------|---------------|------------------------------|---------------|------------------------------|
| inHg with psi                      | mmHg with kg/cm <sup>2</sup> | inHg with psi | mmHg with kg/cm <sup>2</sup> | inHg with psi | mmHg with kg/cm <sup>2</sup> |
| - 30/0                             | - 760 / 0                    | - 30/60       | - 760 / 3                    | - 30/200      | - 760 / 15                   |
| - 30/15                            | - 760 / 1                    | - 30/100      | - 760 / 6                    | - 30/300      | - 760 / 20                   |
| - 30/30                            | - 760 / 2                    | - 30/150      | - 760 / 9                    | - 30/350      | - 760 / 24                   |
| SINGLE SCALE (kg/cm <sup>2</sup> ) |                              |               |                              |               |                              |
| - 1/0                              | - 1/1.5                      | - 1/5         | - 1/15                       |               |                              |
| - 1/0.6                            | - 1/3                        | - 1/9         | - 1/24                       |               |                              |

### ACCESSORIES (Refer Datasheet for complete specifications)

|    |                                     |    |              |
|----|-------------------------------------|----|--------------|
| EB | COOLING TOWER                       | *  | NEEDLE VALVE |
| EC | GAUGE COCK                          | EG | SNUBBER      |
| ED | OVER LOAD PROTECTOR (GAUGE SAVER)** | EH | SIPHON       |

\* Refer catalogue for Valves & Manifolds. \*\* For Pressure Ranges.

### HOW TO ORDER

#### BASIC MODEL

#### CODE

#### NOMINAL SIZE

G

4 1/2"

#### TYPE OF MOUNTING

- 1 WALL / SURFACE / PROJECTION MOUNTING WITH BOTTOM ENTRY
- 3 DIRECT LOWER BACK ENTRY (NEVER FILLABLE)
- 5 LOWER BACK ENTRY WITH FRONT FLANGE

#### GAUGE CONNECTION

|     |                       |     |                       |
|-----|-----------------------|-----|-----------------------|
| 3BM | 3/8" BSP (M)          | 2NM | 1/4" NPT (M) STANDARD |
| 4BM | 1/2" BSP (M) STANDARD | 4NM | 1/2" NPT (M) STANDARD |

Note : Connections like Metric/ PT/ PF/ Flaired/ UNF/ G/ R etc can be provided on request.

#### RANGE

#### REFER RANGE TABLE

##### OPTIONAL EXTRAS

|    |   |    |  |
|----|---|----|--|
| OB | ACCURACY 1.0% OF F.S.   | RX | SHATTERPROOF / SAFETY GLASS            |
| TI | MONEL BOURDON & SOCKET (MONEL VERSION)**                                  | TF | CONFORMITY AS PER NACE MR 0175         |
| PW | FIVE POINT CALIBRATION CERTIFICATE  | FS | FILLABLE LIQUID SILICON OIL*           |
| PU | CALIBRATION CERTIFICATE TRACEABLE TO NATIONAL/<br>INTERNATIONAL STANDARDS | FG | FILLABLE LIQUID GLYCERINE              |
| RH | CUSTOM DESIGNED DIAL  | SF | MOVEMENT WITH DAMPENING JELLY          |
| SG | OXYGEN SERVICE (FOR DRY VERSION)  | QB | INTEGRAL DAMPENING SCREW (AISI 316 SS) |
| SW | DIAL TAG MARKING  | FL | INTEGRAL DAMPENING SCREW (MONEL)**     |
| SX | SS TAG PLATE  | PZ | DAMPENING LIQUID MINERAL LIQUID FILLED |
| TB | HELIUM LEAK TEST  | PX | DAMPENING LIQUID FLOUROLUBE FILLED     |
| RR | ENCLOSURE PROTECTION IP 66  | PY | DAMPENING LIQUID GLYCERINE FILLED      |
| ST | FIBRE GLASS REINFORCED POLYPROPYLENE BOD                                  | QA | DAMPENING LIQUID SILICON OIL FILLED*   |
| SD | AISI 316 SS MOVEMENT  | ZL | OVER RANGE PROTECTION 150% OF F. S.    |
|    |   | GH | MATERIAL TEST CERTIFICATES***          |

\* Gasket & Filling plug of NBR. Refer Price List for Viton.

\*\*INTEGRAL DAMPENING SCREW WILL BE IN MONEL IF ORDERED. REFER OPTION FL.

\*\*\* MATERIAL TEST CERTIFICATES WILL BE PROVIDED FOR WETTED PARTS ONLY WITH CHEMICAL COMPOSITION TESTING. FOR OTHERS, PLEASE CONSULT FACTORY.

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X

X

XXX

0-10  
kg/cm<sup>2</sup>

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