

SPG1

All SS (SS 316 Wetted Parts) Pressure Gauge
Bourdon type



Standard Version

Special Features

- Stainless steel case & measuring system
- Socket directly welded to case
- Dry and liquid filled version
- Standard followed EN 837-1 (for NS 100, 150 & 250 mm)

Application

- Food & beverage
- Pharmaceutical
- Cryogenics
- Pumps
- Diesel engines & Refrigerating plants
- Chemical & Petrochemical industries
- Conventional & nuclear power plants
- Environments & gaseous or liquid media that will not obstruct the pressure system.
- Hydro-cleaning machines
- Presses
- Engine compressors
- Turbines
- Suitable for corrosive

Specifications

Standard Version : 100 mm, 125 mm, 150 mm, 200 mm & 250 mm

| | | |
|--------------------------|---|--|
| Accuracy | : | ±1.0% of F. S. |
| Ambient temperature | : | - 25°C to + 65°C |
| Process temperature | : | Max 300°C |
| Operating pressure range | : | 75% of Scale Value |
| Over pressure limit | : | < 100 bar : 125% of Max. Scale Value |
| | : | > 100 to < 600 bar : 115% of Max. Scale Value |
| | : | > 600 to < 1600 bar : 110% of Max. Scale Value |

| | | |
|--------------|---|---------------------------------------|
| Case & Bezel | : | AISI 304 SS (Bayonet Type) |
| Bourdon | : | AISI 316L SS |
| Socket | : | AISI 316 SS (Directly Welded to Case) |
| Movement | : | AISI 30 SS |
| Joints | : | Tig Argon Arc Welding |

| | | |
|-----------------------|---|--|
| Protection | : | IP 68 |
| Dial | : | Aluminium, black graduation on white background |
| Pointer | : | Aluminium, black coloured Micrometer zero adjustable |
| Window | : | Toughened Glass |
| Blow off Disc | : | Neoprene |
| Gasket & Filling Plug | : | Neoprene |

Dry But Fillable Version

| | | |
|---------------------------|---|---|
| Fillable Dampening Liquid | : | Glycerine 99.7% (Option - DFG) |
| Ambient Temperature | : | Maximum 65°C |
| Process Temperature | : | Maximum 100°C |
| Window | : | Toughened Glass |
| Other Features | : | Refer Specification of Standard Version |

Glycerine Filled Version

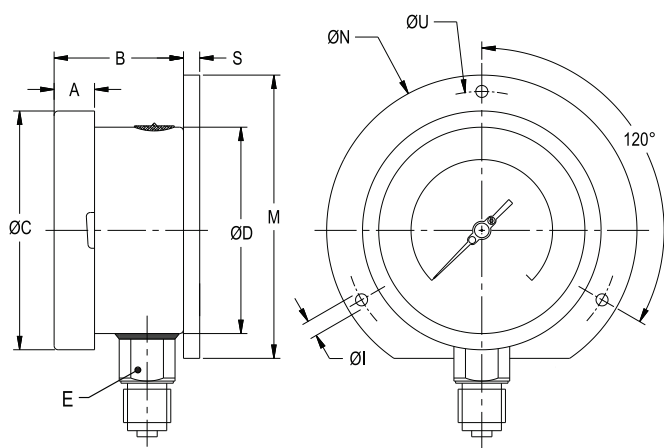
| | | |
|---------------------|---|--|
| Accuracy | : | ±1.0% of F.S. |
| Ambient Temperature | : | Maximum 65°C |
| Process Temperature | : | Maximum 100°C |
| Window | : | Toughened Glass |
| Dampening Liquids | : | Glycerine 99.7% (others available as option) |
| Other Features | : | Refer Specification of Standard Version |

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 : $\pm 0.04 \times (t_2 - t_1) \% \text{ of F. S.}$ where t_1 = reference temperature (+20°C) and t_2 = ambient temperature in °C.

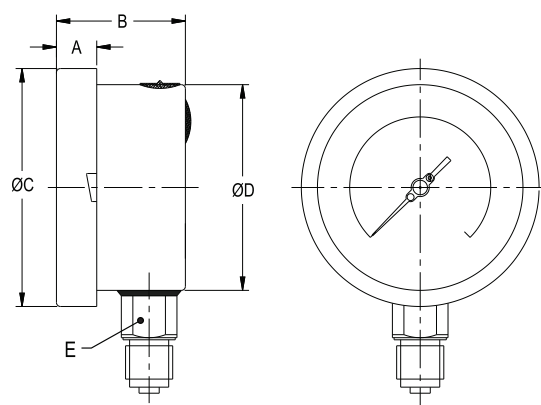
Dimensions - Standard Version

TYPE 1



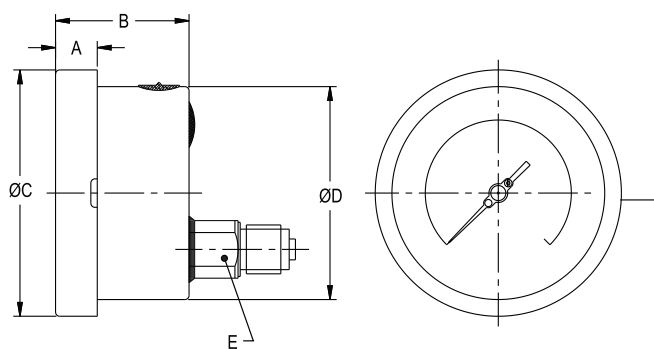
| NS | A | B | ØC | ØD | E | M | S | ØI | ØN | ØU | Weight in gram (With Box) | Weight in gram (With Glycerin & Box) |
|-----|------|----|-----|-----|----|-------|-----|----|-----|-----|------------------------------|---|
| 100 | 12.5 | 45 | 111 | 100 | 22 | 128 | 5 | 6 | 134 | 118 | 720.0 | 1025.0 |
| 125 | 15 | 46 | 129 | 119 | 22 | 143 | 5 | 6 | 150 | 137 | 845.0 | 1165.0 |
| 150 | 15 | 47 | 161 | 149 | 22 | 174.5 | 5 | 6 | 186 | 168 | 1160.0 | 1895.0 |
| 200 | 18 | 49 | 216 | 200 | 22 | 229 | 1.5 | 7 | 245 | 230 | 2020.0 | 2780.0 |
| 250 | 18 | 55 | 262 | 247 | 22 | 286.5 | 1.5 | 7 | 290 | 276 | 2400.0 | 3220.0 |

TYPE 2



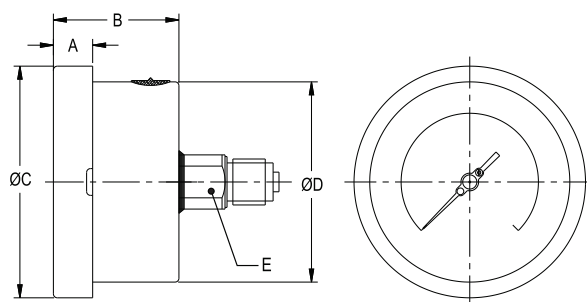
| NS | A | B | ØC | ØD | E | Weight in gram (With Box) | Weight in gram (With Glycerin & Box) |
|-----|------|----|-----|-----|----|------------------------------|---|
| 100 | 12.5 | 48 | 111 | 100 | 22 | 640.0 | 935.0 |
| 125 | 15 | 48 | 129 | 119 | 22 | 750.0 | 1070.0 |
| 150 | 15 | 49 | 161 | 149 | 22 | 1020.0 | 1755.0 |
| 200 | 18 | 49 | 216 | 200 | 22 | 1720.0 | 2480.0 |
| 250 | 18 | 55 | 263 | 248 | 22 | 2000.0 | 2820.0 |

TYPE 3



| NS | A | B | ØC | ØD | E | Weight in gram (With Box) | Weight in gram (With Glycerin & Box) |
|-----|------|----|-----|-----|----|------------------------------|---|
| 100 | 12.5 | 47 | 111 | 100 | 22 | 640.0 | 935.0 |
| 125 | 15 | 48 | 129 | 119 | 22 | 750.0 | 1070.0 |
| 150 | 15 | 49 | 161 | 149 | 22 | 1000.0 | 1735.0 |
| 200 | 18 | 49 | 216 | 200 | 22 | 1500.0 | 2260.0 |
| 250 | 18 | 52 | 263 | 248 | 22 | 1800.0 | 2620.0 |

TYPE 4

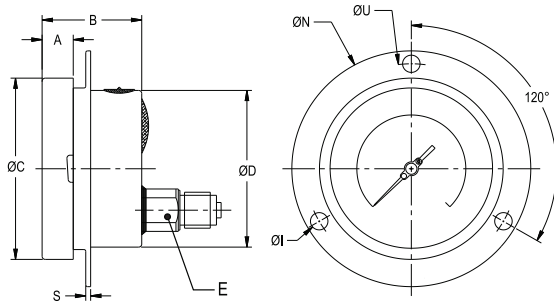


| NS | A | B | ØC | ØD | E | Weight in gram (With Box) | Weight in gram (With Glycerin & Box) |
|-----|------|----|-----|-----|----|------------------------------|---|
| 100 | 12.5 | 47 | 111 | 100 | 22 | 640.0 | 935.0 |

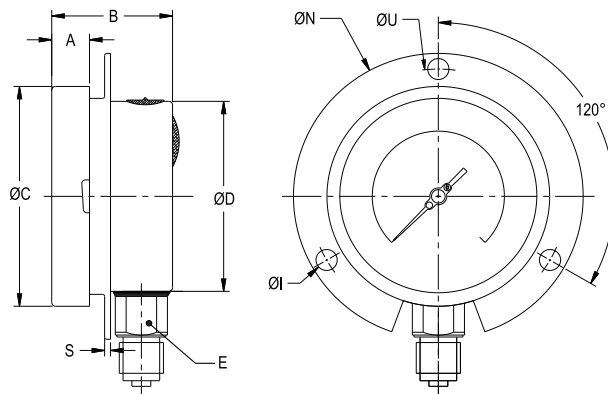
Note : For Type 4 Back Side Blow Out Disc is Not Available

Dimensions - standard version

TYPE 5



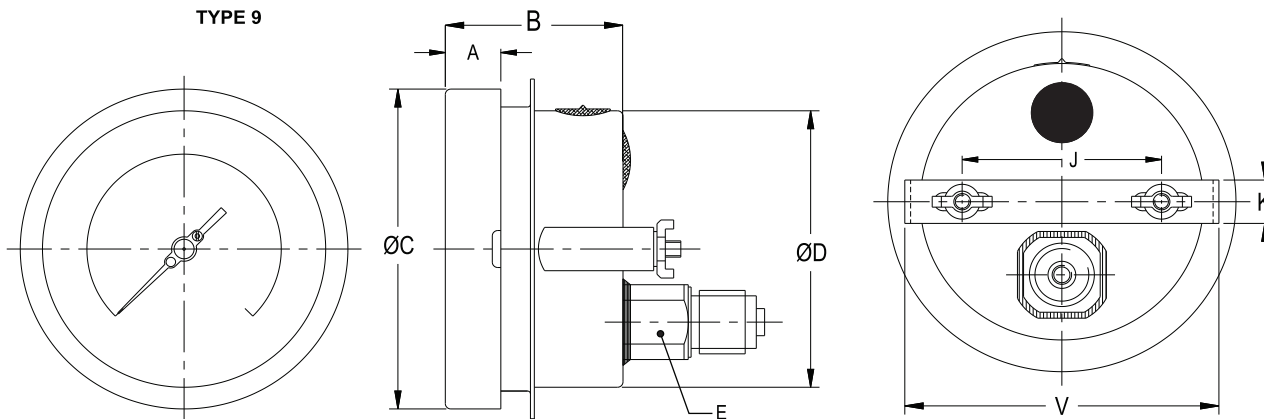
TYPE 11



| NS | A | B | ØC | ØD | E | S | ØI | ØN | ØU | Weight in gram (With Box) | Weight in gram (With Glycerin & Box) |
|-----|------|----|-----|-----|----|-----|----|-----|-----|------------------------------|---|
| 100 | 12.5 | 48 | 111 | 100 | 22 | 1 | 6 | 134 | 118 | 695.0 | 990.0 |
| 125 | 15 | 48 | 129 | 119 | 22 | 1 | 6 | 150 | 137 | 850.0 | 1170.0 |
| 150 | 15 | 49 | 161 | 149 | 22 | 1 | 6 | 186 | 168 | 1100.0 | 1835.0 |
| 200 | 18 | 49 | 216 | 200 | 22 | 1.5 | 7 | 245 | 230 | 2000.0 | 2760.0 |
| 250 | 18 | 52 | 263 | 248 | 22 | 1.5 | 7 | 290 | 276 | 2250.0 | 3070.0 |

| NS | A | B | ØC | ØD | E | S | ØI | ØN | ØU | Weight in gram (With Box) | Weight in gram (With Glycerin & Box) |
|-----|------|----|-----|-----|----|---|----|-----|-----|------------------------------|---|
| 100 | 12.5 | 48 | 111 | 100 | 22 | 1 | 6 | 134 | 118 | 730.0 | 1025.0 |
| 125 | 15 | 48 | 129 | 119 | 22 | 4 | 6 | 150 | 137 | 815.0 | 1135.0 |
| 150 | 15 | 49 | 161 | 149 | 22 | 5 | 6 | 186 | 168 | 1100.0 | 1835.0 |

TYPE 9



| NS | A | B | ØC | ØD | E | J | K | V | Weight in gram (With Box) | Weight in gram (With Glycerin & Box) |
|-----|------|----|-----|-----|----|-----|----|-----|------------------------------|---|
| 100 | 12.5 | 48 | 111 | 100 | 22 | 62 | 16 | 108 | 740.0 | 1035.0 |
| 125 | 15 | 48 | 129 | 119 | 22 | 65 | 16 | 125 | 890.0 | 1210.0 |
| 150 | 15 | 49 | 161 | 149 | 22 | 100 | 16 | 166 | 1100.0 | 1835.0 |
| 200 | 18 | 49 | 216 | 200 | 22 | 165 | 16 | 208 | 1920.0 | 2680.0 |
| 250 | 18 | 52 | 263 | 248 | 22 | 180 | 30 | 270 | 2300.0 | 3120.0 |

Notes : • Drawings are not to scale. • All Dimensions are in mm . • NS = Nominal size
• Weights mentioned are approximate and for standard product. Weight can be different after selection of options.

Range Table

Note : We offer National / International Scales like kPa, MPa, bar, psi, kg/cm² & Dual Scale like kPa with psi, kPa with bar, bar with psi or Equivalent scales as per the requirement can be provided on request. Following are the example tables for kg/cm² & psi scales.

Pressure

Single Scale (kg/cm² 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 | |
| 0/2.5 | 0/16 | 0/100 | 0/600 | |

Dual Scale (psi with kg/cm²)

| psi | kg/cm ² | psi | kg/cm ² | psi | kg/cm ² |
|-------|--------------------|--------|--------------------|---------|--------------------|
| 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 | 0/420 |
| 0/100 | 0/7 | 0/1000 | 0/70 | 0/10000 | 0/700 |
| 0/150 | 0/10 | 0/1500 | 0/100 | 0/15000 | 0/1000 |
| 0/230 | 0/16 | 0/2300 | 0/160 | 0/23000 | 0/1600 |
| 0/300 | 0/20 | 0/3000 | 0/200 | | |

Vacuum & Compound

Dual Scale (inHg with psi & mmHg with kg/cm²)

| inHg with psi | mmHg with kg/cm ² | inHg with psi | mmHg with kg/cm ² | inHg with psi | mmHg with kg/cm ² |
|---------------|------------------------------|---------------|------------------------------|---------------|------------------------------|
| - 30/0 | - 760/0 | - 30/60 | - 760/4 | - 30/200 | - 760/14 |
| - 30/15 | - 760/1 | - 30/100 | - 760/7 | - 30/300 | - 760/21 |
| - 30/30 | - 760/2 | - 30/150 | - 760/10 | - 30/350 | - 760/25 |

Single Scale (kg/cm²)

| | | | |
|---------|---------|-------|--------|
| - 1/0 | - 1/1.5 | - 1/5 | - 1/15 |
| - 1/0.6 | - 1/3 | - 1/9 | - 1/24 |

Receiver

| Linear scale | Square root scale |
|--|--|
| (0 - 100% Internal Scale) | (0 - 10 Sq - Root Internal Scale) |
| External Scale | External Scale |
| 0.2 - 1 kg/cm ² or 3 - 15 psi | 0.2 - 1 kg/cm ² or 3 - 15 psi |
| (0-100% linear scale) | (0.2 - 1 kg/cm ²) |

Freon (with temperature scale)

Ammonia (with temperature scale)

Note : For temperature scales, please provide refrigerant name.

| Range (psi) | (kg/cm ²) | (psi) |
|----------------|------------------------|----------|
| -30 inHg - 150 | 0-300 | -1to12.5 |
| -30 inHg - 300 | 0-500 | -1to16 |
| | | -1to25 |
| | | 0 - 300 |

Accessories (refer datasheet for complete specifications)

| | | |
|-------------------------|---|-------------------|
| CT Cooling tower | GS Over load protector (gauge saver)** | SN Snubber |
| GC Gauge cock | * Needle valve | SP Siphon |

* Refer catalogue for Valves & Manifolds.

** For Pressure Ranges.

Note : For Any Non Standard or Special Scale Marking Consult Factory