

ALL SS PRESSURE GAUGE

WAAREE

BOURDON TYPE (DIN CASE)

BE

SPECIAL FEATURES

- STAINLESS STEEL CASE & MEASURING SYSTEM
- SOCKET DIRECTLY WELDED TO CASE
- PROTECTION IP 65 / IP 66
- DRY OR FILLABLE VERSION
- ACCURACY UPTO 0.5%
- STANDARD FOLLOWED IN GENERAL EN 837-1

APPLICATIONS

FOOD & BEVERAGE, PHARMACEUTICAL, CRYOGENICS, CHEMICAL & PETROCHEMICAL INDUSTRIES, CONVENTIONAL & NUCLEAR POWER PLANTS, PUMPS, HYDRO-CLEANING MACHINES, PRESSES, ENGINE COMPRESSORS, TURBINES, DIESEL ENGINES & REFRIGERATING PLANTS. SUITABLE FOR CORROSIVE ENVIRONMENTS & GASEOUS OR MEDIA THAT WILL NOT OBSTRUCT THE PRESSURE SYSTEM.



SPECIFICATIONS

STANDARD VERSION : 63 mm, 100 mm & 150mm

| | |
|---------------------|--|
| Accuracy | : ±1.0% of F. S. |
| Ambient temperature | : - 25°C to + 65°C |
| Process temperature | : Max 300°C |
| Operating pressure | : 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 316L SS (Directly Welded to Case) |
| 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 | : Sheet Glass |
| Blow off Disc | : Neoprene |
| Gasket & Filling Plug | : Neoprene |

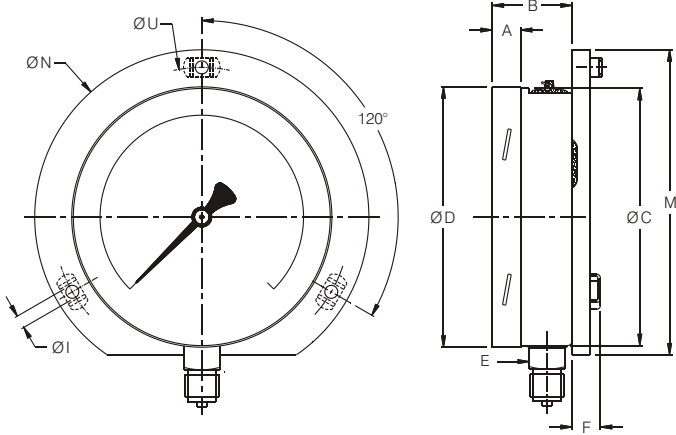
DRY BUT FILLABLE VERSION (OPTION FG)

| | |
|---------------------------|---|
| Fillable Dampening Liquid | : Glycerine 98% (Option - FG) |
| Process Temperature | : Maximum 65°C |
| Window | : Plexi Glass |
| Other Features | : Refer Specification of Standard Version |

GLYCERINE FILLED VERSION (OPTION PY)

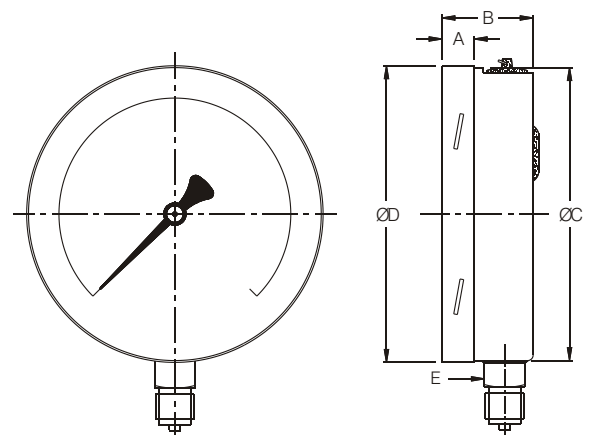
| | |
|---------------------|--|
| Accuracy | : ±1.0% of F.S. |
| Ambient Temperature | : Maximum 65°C |
| Process Temperature | : Maximum 65°C |
| Window | : Plexi Glass |
| Dampening Liquids | : Glycerine 98% (others available as option) |
| Other Features | : Refer Specification of Standard Version |

TYPE 1



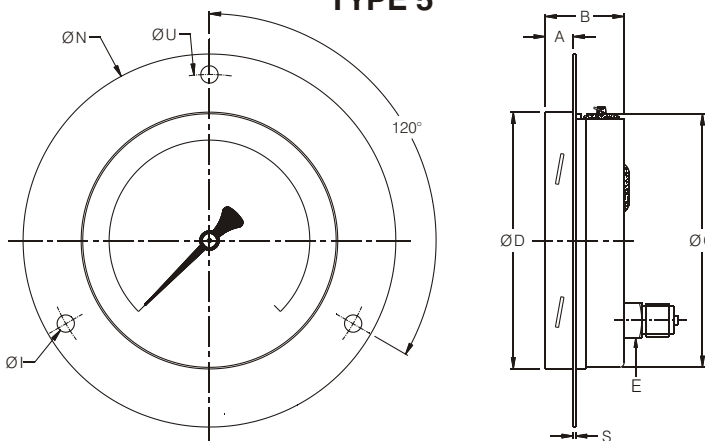
| NS | A | B | ØC | ØD | E | F | ØI | ØN | ØU | M | Weight in gram (With Box) |
|-----|------|------|-----|-----|----|----|-----|-----|-----|-----|------------------------------|
| 63 | | | | | | | | | | | |
| 100 | 17.5 | 49 | 99 | 101 | 22 | 15 | 4.8 | 132 | 116 | 128 | 645.0 |
| 150 | 17.5 | 51.5 | 159 | 162 | 22 | 15 | 5.8 | 196 | 178 | 188 | 1280.0 |

TYPE 2



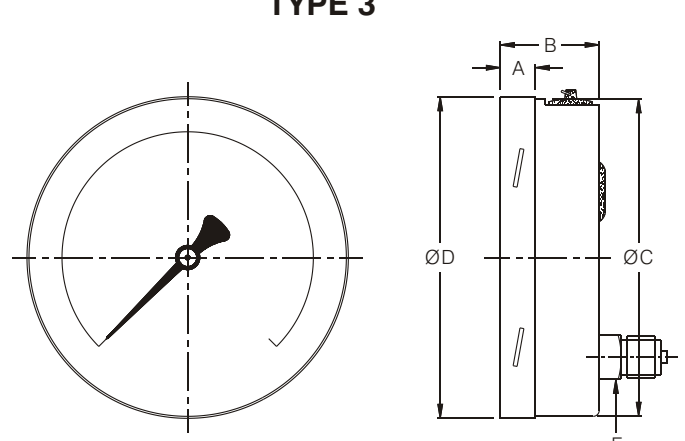
| NS | A | B | ØC | ØD | E | Weight in gram (With Box) |
|-----|------|------|-----|-----|----|------------------------------|
| 63 | | | | | | |
| 100 | 17.5 | 49 | 99 | 101 | 22 | 560.0 |
| 150 | 17.5 | 51.5 | 159 | 162 | 22 | 1100.0 |

TYPE 5



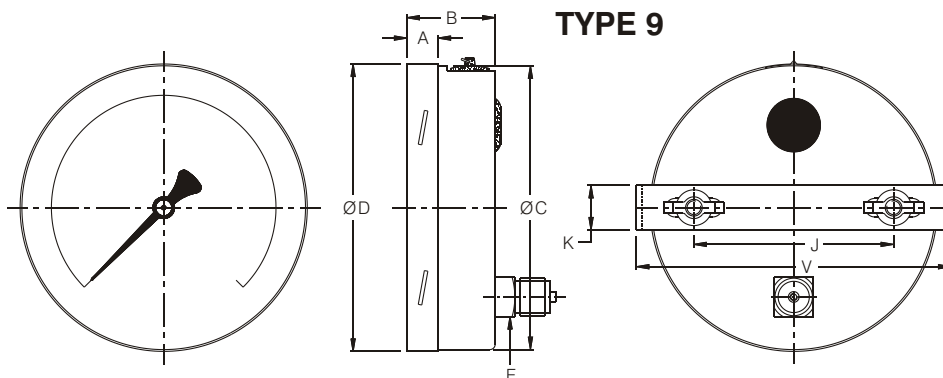
| NS | A | B | ØC | ØD | E | ØI | ØN | ØU | S | Weight in gram (With Box) |
|-----|------|------|-----|-----|----|-----|-----|-----|---|------------------------------|
| 63 | | | | | | | | | | |
| 100 | 17.5 | 49 | 99 | 101 | 22 | 4.8 | 132 | 116 | 1 | 630.0 |
| 150 | 17.5 | 51.5 | 159 | 162 | 22 | 5.8 | 196 | 178 | 1 | 1180.0 |

TYPE 3



| NS | A | B | ØC | ØD | E | Weight in gram (With Box) |
|-----|------|------|-----|-----|----|------------------------------|
| 63 | | | | | | |
| 100 | 17.5 | 49 | 99 | 101 | 22 | 550.0 |
| 150 | 17.5 | 51.5 | 159 | 162 | 22 | 1060.0 |

TYPE 9



| NS | A | B | ØC | ØD | E | J | K | V | Weight in gram (With Box) |
|-----|------|------|-----|-----|----|-------|----|-----|------------------------------|
| 63 | | | | | | | | | |
| 100 | 12.5 | 49 | 99 | 101 | 22 | 66.5 | 16 | 106 | 760.0 |
| 150 | 17.5 | 51.5 | 159 | 162 | 22 | 103.5 | 16 | 158 | 1400.0 |

RANGE TABLE

Note : Waaree offers 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/cm ² 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/cm ²) or PSI with bar | | | | | |
|--|--------------------|--------|--------------------|---------|--------------------|
| 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 | 0/400 |
| 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 | | |

VACUUM & COMPOUND

| SINGLE SCALE (kg/cm ²) | | | |
|------------------------------------|---------|-------|--------|
| - 1/0 | - 1/1.5 | - 1/5 | - 1/15 |
| - 1/0.6 | - 1/3 | - 1/9 | - 1/24 |

| DUAL SCALE (inHg with PSI & mmHg with kg/cm ²) | | | | | |
|--|------------------------------|---------------|------------------------------|---------------|------------------------------|
| 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 | - 760/3 | - 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 |

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)

Note : For temperature scales, please provide refrigerant name.

AMMONIA (WITH TEMPERATURE SCALE)

| RANGE (PSI) | | (kg/cm ²) | (psi) |
|----------------|-------|------------------------|----------------|
| -30 inHg - 150 | 0-300 | -1 to 12.5 | -30 inHg - 150 |
| -30 inHg - 300 | 0-500 | -1 to 16 | -30 inHg - 300 |
| | | -1 to 25 | 0 - 300 |

ACCESSORIES (Refer Datasheet for complete specifications)

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

* Refer catalogue for Valves & Manifolds



HOW TO ORDER

BASIC MODEL

CODE

NOMINAL SIZE

D F H
63 mm 100 mm 150 mm

TYPE OF MOUNTING

- 1 WALL / SURFACE / PROJECTION MOUNTING WITH BOTTOM ENTRY
- 2 DIRECT BOTTOM ENTRY
- 3 DIRECT LOWER BACK ENTRY
- 5 FLUSH PANEL BACK ENTRY WITH FRONT FLANGE
- 9 BACK ENTRY WITH MOUNTING BRACKET

GAUGE CONNECTION (* Applicable for NS 63 mm.)

2BM 1/4" BSP (M)* 2NM 1/4 " NPT (M)* 4TM 1/2" BSPT (M)
3BM 3/8" BSP (M) STANDARD 4NM 1/2" NPT (M) STANDARD 4MM M 20 x 1.5 (M)
4BM 1/2" BSP (M) STANDARD

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

RANGE

REFER RANGE TABLE

OPTIONAL EXTRAS

| | |
|--|---|
| OA ACCURACY $\pm 0.5\%$ OF F.S. (DRY VERSION & MAXIMUM READING POINTER) | SX SS TAG PLATE |
| TI MONEL BOURDON & SOCKET (MONEL VERSION)** | SW DIAL TAG MARKING |
| FL INTEGRAL DAMPENING SCREW (MONEL)** | TB HELIUM LEAK TEST |
| FS FILLABLE LIQUID SILICON OIL* | TF TESTED TO NACE STANDARDS |
| FG FILLABLE LIQUID GLYCERINE | PW FIVE POINT FACTORY CALIBRATION CERTIFICATE |
| PZ DAMPENING LIQUID MINERAL LIQUID FILLED | SG OXYGEN SERVICE (DRY VERSION) |
| PX DAMPENING LIQUID FLOUROLUBE FILLED | RH CUSTOM DESIGNED DIAL |
| PY DAMPENING LIQUID GLYCERINE FILLED | QB INTEGRAL DAMPENING SCREW (AISI 316 SS) |
| QA DAMPENING LIQUID SILICON OIL FILLED* | SA INTERNAL OVERPRESSURE STOP |
| RR ENCLOSURE PROTECTION IP 66 | SB INTERNAL VACUUM STOP |
| RE ENCLOSURE PROTECTION IP 67 | ZB RECEIVER RANGE |
| RW PLEXI GLASS | ZC FREON RANGE (WITH TEMPERATURE SCALE) |
| RX SHATTERPROOF/SAFETY GLASS | ZD AMMONIA RANGE (WITH TEMPERATURE SCALE) |
| RZ TOUGHENED GLASS | PS AISI 316 SS CASE & BEZEL |
| SF MOVEMENT WITH DAMPENING JELLY | SD AISI 316 SS MOVEMENT |
| SI KNIFE EDGE POINTER | ZZ EPOXY PAINTED CASE & BEZEL |
| SJ MAXIMUM READING POINTER (ONLY FOR DRY VERSION) | ZM ELECTRO POLISHED CASE & BEZEL |
| SH FIXED POINTER | ZF CASE WITH BALL BURNISHING FINISH |
| SL ZERO ADJUSTABLE POINTER | ZK CASE WITH BUFFING FINISHING |
| ZL OVER RANGE PROTECTION 150% OF F. S. | KA CASE WITH ROLLING TYPE BEZEL |
| | SQ ON - OFF TYPE VENT PLUG |

* Gasket, BOD & Filling plug of VITON / NBR.

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

Ordering Example: BE - X - X - XXX - 0/10 kg/cm² - XX

FOR OTHER OPTIONAL ITEMS, PLEASE CONTACT FACTORY FOR DELIVERY AND MINIMUM QUANTITY OF ORDER.

Note : Specifications and dimensions given in this product catalogue represents the state of engineering at the time of printing.

Modifications may take place and materials specified may be replaced by others without prior notice.



Example

BE

X

X

XXX

0-10
kg/cm²

XX