

# STAINLESS STEEL CASE PRESSURE GAUGES

## 112 series

### APPLICATIONS

Used with the liquid and gas process media not corrosive, not crystallizing and not highly viscous. The glycerin / silicon oil filled type is especially used for measuring points subject to vibration and highly dynamic pressure load. Particularly used in hydraulics, compressors, general mechanical engineering, pumps, water treatment plants, etc.






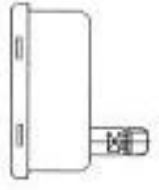
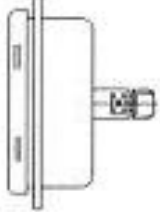
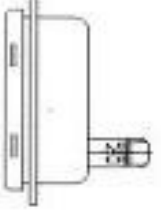
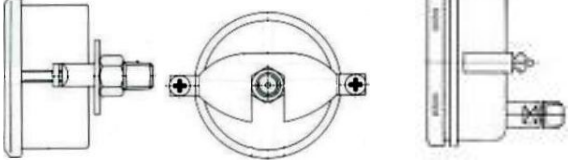
### SPECIFICATIONS

|                            |   |
|----------------------------|---|
| <b>Dial diameter Ø</b>     | 1½" (40mm) ; 2" (50mm) ; 2½" (63mm) ; 3" (75mm) ; 4" (100mm) ; 6" (150mm)   |
| <b>Case</b>                | Stainless steel 304, IP65<br>Crimp bezel for dial Ø1½" ~ Ø4" ; Bayonet bezel for dial Ø2½" ~ Ø6"  |
| <b>Lens</b>                | Acrylic or glass for dial Ø1½" ~ Ø4" ; Safety glass for dial Ø 4" and Ø6"   |
| <b>Dial</b>                | Aluminum, black and red markings on white background, dial arc 270°   |
| <b>Measuring principle</b> | Bourdon Tube, brass<br>C form tube for $\leq 70 \text{ kg/cm}^2$ ; Helical form tube for $>70 \text{ kg/cm}^2$  |
| <b>Movement</b>            | Brass   |
| <b>Pointer</b>             | Aluminum, black, adjustable pointer available for dial Ø4" and Ø6"  |
| <b>Connection</b>          | Male thread 1/8", 1/4", 3/8", 1/2" PT(BSPT) / NPT / PF(BSP), brass  |
| <b>Filling</b>             | Without (dry) ; glycerin filled ; silicon oil filled  |
| <b>Accuracy</b>            | $\pm 2\%$ F.S. for Ø1½" & Ø2" ; $\pm 1.5\%$ F.S. for Ø2½" ~ Ø6"   |
| <b>Temperature limits</b>  | Dry: medium $+60^\circ\text{C}$ ; ambient $-20$ to $+60^\circ\text{C}$<br>Glycerin filled: medium $+60^\circ\text{C}$ ; ambient $+10$ to $+60^\circ\text{C}$<br>Silicon oil filled: medium $+60^\circ\text{C}$ ; ambient $-45$ to $+60^\circ\text{C}$<br>< Available for medium $+180^\circ\text{C}$ if the bourdon tube is silver soldered. This is special custom-made type upon request. > |
| <b>Ranges</b>              | positive 0 / 1 ~ 0 / 1000 $\text{kg/cm}^2$<br>negative 0 / -76 cmHg (relative vacuum)<br>compound -76cmHg / 0 / 1 ~ -76cmHg / 0 / 20 $\text{kg/cm}^2$<br>< other units available, e.g. psi, bar, MPa...etc. >   |

### OPTIONS

- Safety glass lens for dial Ø2-1/2" & Ø3"
- Blow-out disk by back for dial Ø4"
- Special male or female thread connections
- Cleanness for oxygen, acetylene, hydrogen...etc. dangerous media service
- Restrictor on connection to alleviate pressure pulsation
- Device of red pointer which can leave behind on max. pressure
- Device of diaphragm, electrical contacts or accessories

## MOUNTING TYPES AND DIAL SIZES

|   |   |  |   |
|---|---|--|---|
| <p><b>TYPE B</b></p>  <p>Dial Ø1½", 2", 2½",<br/>3", 4", 6"<br/>Direct mounting<br/>Bottom connection<br/>without flange</p> | <p><b>TYPE W</b></p>  <p>Dial Ø2½", 3", 4", 6"<br/>Surface mounting<br/>Bottom connection<br/>with back flange<br/>(Wall mounting)</p> | <p><b>TYPE D</b></p>  <p>Dial Ø1½", 2", 2½",<br/>3", 4", 6"<br/>Direct mounting<br/>Centric back<br/>connection</p>                | <p><b>TYPE DE</b></p>  <p>Dial Ø2½", 4", 6"<br/>Direct mounting<br/>Eccentric back<br/>connection<br/>without flange</p> |
| <p><b>TYPE P</b></p>  <p>Dial Ø2", 2½", 3",<br/>4", 6"<br/>Flush panel mounting<br/>Centric back<br/>connection</p>          | <p><b>TYPE PE</b></p>  <p>Dial Ø2½", 4", 6"<br/>Flush panel mounting<br/>Eccentric back<br/>connection<br/>with front flange</p>       | <p><b>TYPE U</b></p>  <p>Dial Ø1½", 2", 2½"      Dial Ø4"</p> <p>Flush panel mounting<br/>Centric back connection with U-clamp</p> |   |

## STANDARD CONNECTION

| Dial diameter                                 | Thread size                           | Dial diameter | Thread size |
|---|---------------------------------------|---------------|-------------|
| Ø 1½"   | 1/8"                                  | Ø 3"          | 3/8"        |
| Ø 2"  | 1/4"                                  | Ø 4"          | 1/2" ; 3/8" |
| Ø 2½"   | 1/4"                                  | Ø 6"          | 1/2"        |
| <b>Thread specification</b>                   | PT (=BSPT) ; NPT ; PF (=BSP) ; others |               |             |
| Custom-made connection available upon request |                                       |               |             |

## HOW TO ORDER

(Please specify additionally the special custom-made specifications or option items)

Example: 112 L B 40 4 P - 0/10 kg/cm<sup>2</sup>

|                   |                         |                  |                    |                     |                    |
|-------------------|-------------------------|------------------|--------------------|---------------------|--------------------|
| <b>Filling</b>    | <b>Mounting Type</b>    | <b>Dial Size</b> | <b>Thread Size</b> | <b>Range</b>        | <b>Unit</b>        |
| L glycerin        | B bottom                | 15 Ø 1½"         | 1 1/8"             | 0/10                | kg/cm <sup>2</sup> |
| S silicon oil     | W surface (wall)        | 20 Ø 2"          | 2 1/4"             |                     |                    |
| N use no oil      | D centric back          | 25 Ø 2½"         | 3 3/8"             |                     |                    |
| O without filling | DE eccentric back       | 30 Ø 3"          | 4 1/2"             |                     |                    |
|                   | P panel-centric back    | 40 Ø 4"          | 0 others           |                     |                    |
|                   | PE panel-eccentric back | 60 Ø 6"          |                    |                     |                    |
|                   | U panel-U clamp         |                  |                    |                     |                    |
|                   |                         |                  |                    | <b>Thread Spec.</b> |                    |
|                   |                         |                  |                    | P PT (BSPT)         |                    |
|                   |                         |                  |                    | N NPT               |                    |
|                   |                         |                  |                    | F PF (BSP)          |                    |
|                   |                         |                  |                    | O others            |                    |