

## GENERAL PRESSURE GAUGES

### 113 series

#### APPLICATIONS

Used with the liquid and gas process media not corrosive, not crystallizing and not highly viscous. Avoid using in vibration and highly dynamic pressure load. Air-conditioning system, pneumatics and hydraulics are the most common applications.



#### SPECIFICATIONS

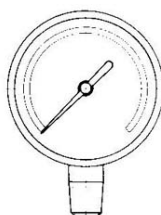
<b>Dial diameter Ø</b>	1-3/8" (36mm) ; 1½" (40mm) ; 2" (50mm) ; 2½" (63mm) ; 3" (75mm) ; 3½" (90mm) ; 4" (100mm) ; 5" (125mm) ; 6" (150mm) ; 8" (200mm) ; 10" (250mm)
<b>Case</b>	Steel with black enamel, except Ø5" is stainless steel 304 case, IP32 Without bezel or with push-on bezel for dial Ø1-3/8" ~ Ø2½" Bezel with 2~3 screws for dial Ø3" ~ Ø10"
<b>Lens</b>	Plastic or glass Push-in plastic lens available for dial Ø1½" ~ Ø2½" without bezel
<b>Dial</b>	Aluminum, black and red markings on white background, dial arc 270°
<b>Measuring principle</b>	Bourdon Tube, brass 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
<b>Connection</b>	Male thread 1/8", 1/4", 3/8", 1/2" PT(BSPT) / NPT / PF(BSP), brass
<b>Filling</b>	Not available
<b>Adjustment</b>	Only Ø3½" and Ø5" have the adjustment screw on the dial, others not available
<b>Accuracy</b>	$\pm 3-2-3\%$ F.S. for Ø1-3/8" ~ Ø2½" ; $\pm 1.5\%$ F.S. for Ø3" ~ Ø10"
<b>Temperature limits</b>	Medium +60°C ; Ambient -20 to +60°C < Available for medium +180°C if the bourdon tube is silver soldered. This is special custom-made type upon request. >
<b>Ranges</b>	positive 0 / 1 ~ 0 / 350 kg/cm <sup>2</sup> negative 0 / -76 cmHg (relative vacuum) compound -76cmHg / 0 / 1 ~ -76cmHg / 0 / 20 kg/cm <sup>2</sup> < other units available, e.g. psi, bar, MPa...etc. >

#### OPTIONS

- Electroplated case or stainless steel 304 case for Ø1-3/8" , Ø1½" or Ø2"
- 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

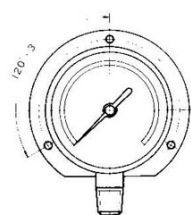
## MOUNTING TYPES AND DIAL SIZES

**TYPE B**



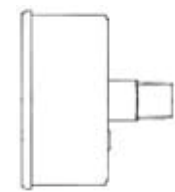
Dial Ø1½", 2", 2½", 3",  
3½", 4", 5", 6"  
Direct mounting  
Bottom connection  
without flange

**TYPE W**



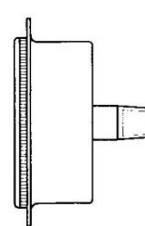
Dial Ø3", 4", 6", 8", 10"  
Surface mounting  
Bottom connection  
with back flange  
(Wall mounting)

**TYPE D**



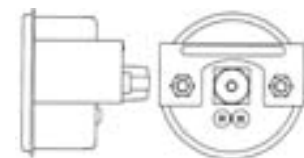
Dial Ø1-3/8", 1½", 2", 2½"  
Direct mounting  
Centric back connection  
without flange

**TYPE P**



Dial Ø2", 2½", 3", 4", 6"  
Flush panel mounting  
Centric back connection  
with front flange

**TYPE U**



Dial Ø1½", 2", 2½"  
Flush panel mounting  
Centric back connection  
with U-clamp

## STANDARD CONNECTION

Dial diameter	Thread size	Dial diameter	Thread size
Ø 1-3/8" (36mm)	1/8"	Ø 3½" (90mm)	1/4" ; 3/8"
Ø 1½" (40mm)	1/8"	Ø 4" (100mm)	3/8"
Ø 2" (50mm)	1/4"	Ø 6" (125mm)	1/2" ; 3/8"
Ø 2½" (63mm)	1/4"	Ø 8" (200mm)	1/2"
Ø 3" (75mm)	3/8"	Ø 10" (250mm)	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: 113 B 25 2 P - 0/10 kg/cm<sup>2</sup>

Mounting Type		Dial Size				Thread Size		Range	Unit
B	bottom	14	Ø 1-3/8"	40	Ø 4"	1	1/8"	Thread Spec. P PT (BSPT) N NPT F PF (BSP) O others	
W	surface (wall)	15	Ø 1½"	50	Ø 5"	2	1/4"		
D	centric back	20	Ø 2"	60	Ø 6"	3	3/8"		
P	panel-flange	25	Ø 2½"	80	Ø 8"	4	1/2"		
U	panel-U clamp	30	Ø 3"	100	Ø 10"	0	others		
		35	Ø 3½"						