



Model: 112AC



Model: 113AA



Model: 111CF

InstruMate products in pressure industry comply with directive 97/23/EC.

### **Applied Standards on InstruMate pressure gauges:**

EN837-1: Bourdon tube pressure gauges, dimensions, metrology, requirements and testing

EN837-2: Selection and installation recommendations for pressure gauges

EN837-3: Diaphragm and capsule pressure gauges, dimensions, metrology, requirements and testing

For product specifications check technical data on website: [www.instrumate.com](http://www.instrumate.com)

Specifications are subject to modifications without prior notice. Always download the latest version from the website.

## **1- Safety**

### **Selecting proper Pressure Gauge for Your Application**

Technical experts shall select the proper gauge to withstand application pressure, temperature, media's chemical effects and environmental

conditions. The EN 837-2 or ASME B40 will be a road map for that selection. Only qualified personnel are allowed to select, install, maintain and service the pressure gauge and the user is solely responsible for properly installing and maintaining the instrument.

In order to find the proper pressure gauge for your application, you can also consult an InstruMate distributor in your area.

When there is vibration in the system, oil filled gauges are advised.

## 2. Working Pressure

Regarding the Steady, Cyclic, and Over-Pressure limitations, InstruMate technical data sheets for different models can be referred to.

Recommended steady working pressure is offered between 25% to 75% of scale division.




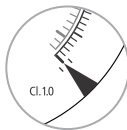
Steady pressure



Pulsating pressure

Example on a 100 bar pressure gauge

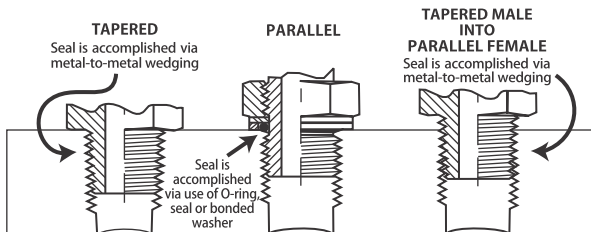
Meanwhile wherever you see the sign  at the end of the division, it means the gauge is suitable to work in steady pressure equal to maximum scale value.



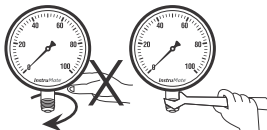
## 3. Installation

- A) If necessary an isolating valve shall be inserted to facilitate removal for maintenance.
- B) Pressure connections shall be leak tight:
  - Gauges with parallel threads: The pressure seal shall be made on the sealing face using sealing washers or rings which are compatible with the fluid.

- Gauges with tapered threads: The pressure seal is normally made by the mating of the thread, but it is common practice to apply jointing material to the male thread before assembly like PTFE tape.



- The tightening torque applied to the connection should be opposed by a spanner fitted to the flat on the shank of the gauge to prevent damaging the gauge. Do not tighten by grasping the case of the gauge as this may cause damage.



- C) When the gauge incorporates a blowout device or blow-out back, it must be ensured that the free space behind blow-out is at least 20mm.
- D) For pressures above 70 C, it is advised to use a syphon tube.

#### 4. Permissible Ambient and Operating Temperatures

The gauge is calibrated for the reference temperature of 20°C (+/- 2°C). Any deviation of ambient or process temperature from the reference temperature can affect the accuracy. Check datasheets for more details.

## 5. Storage

Gauges should be stored in dry, clean conditions within the temperature range of -30 °C to +60° C

## 6. Maintenance and Repair

Periodic tests can confirm the gauge accuracy. InstruMate mechanical pressure gauges are maintenance free. Technical experts or competent personnel can carry out recalibrations or verifications (if necessary) using appropriate test equipments.



### WARNINGS!

- Glycerin and Silicon oil must be avoided where Oxygen or other strong oxidizing agents are present. For such applications, highly fluorinated and chlorinated liquids can be used.
- Improper selection, installation or use of products can cause property damage or personal injury and the system designer and user have the sole responsibility for selecting products suitable for their special application requirements.

# InstruMate®

InstruMate Co., Limited

📍 15# Lane 777# Qingfeng Road, Cicheng town, Jiangbei district, Ningbo, China  
🌐 [www.instrumate.com](http://www.instrumate.com) | ✉ [info@instrumate.com](mailto:info@instrumate.com) | ☎ +86-574-87620997

02/2019