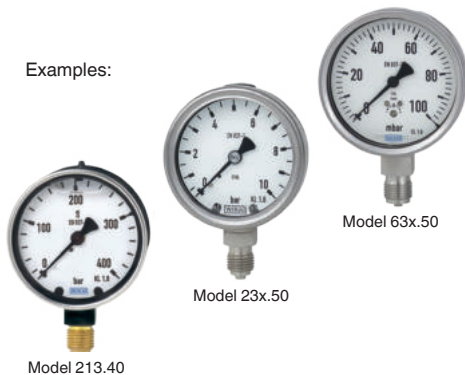


Pressure measuring instruments

Examples:



Notes per current pressure equipment directive

- The pressure gauges are defined as “pressure accessories”
- The volume of the “pressure-bearing housings” of WIKA pressure gauges is $< 0.1 \text{ L}$
- The pressure gauges carry CE marking for fluid group 1 per annex II, diagram 1 when their permissible working pressure is $> 200 \text{ bar}$

Instruments that do not carry the mark are manufactured per article 4, paragraph 3 “sound engineering practice”.

Applicable standards (depending on model)

- EN 837-1 Bourdon tube pressure gauges, dimensions, metrology, requirements and testing
- EN 837-2 Selection and installation recommendations for pressure gauges
- EN 837-3 Diaphragm and capsule pressure gauges, dimensions, metrology, requirements and testing

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1. Safety



WARNING!

Before installation, commissioning and operation, ensure that the appropriate pressure gauge has been selected in terms of measuring range, design and suitable wetted material (corrosion) for the specific measuring conditions. In order to guarantee the measurement accuracy and long-term stability specified, the corresponding load limits must be observed.

The pressure measuring instruments may only be mounted by skilled personnel and after authorisation of the plant manager.

For hazardous media such as oxygen, acetylene, flammable or toxic gases or liquids, and refrigeration plants, compressors, etc., in addition to all standard regulations, the appropriate existing codes or regulations must also be followed.

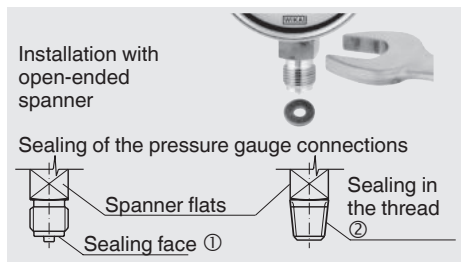
From pressure gauges which do not correspond to a safety version per EN 837 highly pressurised media might leak out through the possibly bursting window in case of a component failure. For gaseous media and working pressures $> 25 \text{ bar}$ a pressure gauge with safety version S3 is recommended per EN 837-2.

After an external fire, pressure media can leak out, particularly at soft solder joints. All instruments must be checked and, if necessary, replaced before recommissioning the plant.

Non-observance of the respective regulations can cause serious injuries and/or damage to the equipment.

2. Mechanical connection

In accordance with the general technical regulations for pressure gauges (e.g. EN 837-2). When screwing the instruments in, the force required to do this must not be applied through the case, but only through the spanner flats provided for this purpose, and using a suitable tool. For parallel threads, use flat gaskets, lens-type sealing rings or WIKA profile sealings at the



sealing face ①. With tapered threads (e.g. NPT threads), sealing is made in the threads ② using additional sealing materials, e.g. PTFE tape (EN 837-2).

The torque depends on the sealing used. In order to orientate the measuring instrument so that it can be read as well as possible, a connection with clamp socket or union nut should be used.

When a blow-out device is fitted to a pressure gauge, it must be protected against being blocked by debris and dirt. With safety pressure gauges (see ⑤) there must be a free space of $> 20 \text{ mm}$ behind the blow-out back.



After installation, open the vent valve (if available) or set from CLOSE to OPEN. The version of the vent valve depends on the model and can

deviate from the above illustration!

Requirements for the installation point

If the line to the measuring instrument is not adequately stable, a measuring instrument holder should be used for fastening (and possibly via a flexible capillary). If vibrations cannot be avoided by means of suitable installation, instruments with liquid filling should be used. The instruments should be protected against coarse dirt and wide fluctuations in ambient temperature.

3. Permissible ambient and operating temperatures

When mounting the pressure gauge it must be ensured that, taking into consideration the influence of convection and heat radiation, no deviation above or below the permissible temperature limits can occur. Observe the influence of temperature on the indication accuracy!

4. Storage

To protect the pressure gauges from mechanical damage keep them in the original packaging until installation.

Protect the measuring instruments from humidity and dust.

Storage temperature range: $-40 \dots +70 \text{ °C}$

Storage temperature range model PG23LT: $-70 \dots +70 \text{ °C}$

5. Maintenance and repairs

The pressure gauges are maintenance-free. Regular checks should be carried out to ensure the measurement accuracy.

In the case of pressure measuring instruments with blow-out devices or safety pressure gauges, the safety elements (e.g. blow-out plug or blow-out back) must be replaced after 10 years. The replacement may only be carried out by skilled personnel using original parts and after authorisation of the plant manager.

When dismantling, close the vent valve (if available).



WARNING! Residual media in dismantled pressure gauges can result in a risk to persons, the environment and equipment. Take sufficient precautionary measures.