

OPERATING INSTRUCTIONS

01 09/2006



Manomer SK

Notes according to Pressure Equipment Directive 97/23/EC

- The pressure gauges are „pressure accessories“ in accordance with article 1, paragraph 2.1.4
- The volume of the pressure bearing housing of the pressure gauges is < 0,1 l
- The pressure gauges carry the CE marking for fluid group 1G in accordance with annex 2, table 1 when their permissible working pressure exceeds 200 bar
- Pressure gauges that do not carry the CE marking are manufactured in accordance with article 3, paragraph 3 „sound engineering practice“

Applied standard

- These devices comply with directive STN EN 837-1+AC and STN EN 837-3
- They must be marked Ex II2GDcIB T6 for use in ATEX in conformity with the directive 94/9/EC and standard STN EN 13463-1 non-electrical equipment for potentially explosive atmospheres.

WARNING:

Incorrect use of pressure gauges can cause damage and injuries. Under this Directive, the user must ensure that pressure gauges are installed and used in such a way that pressure-related hazards are eliminated to a maximum extent. The instructions in this leaflet must be strictly followed. MANOMER SK, a.s. declines all responsibility for any direct or indirect damage to property or persons as well as for the consequence, for example, of lost production resulting from failure to observe the instructions in this leaflet.

Before starting installation, follow the recommendations of standard EN 837-2:

Check that the pressure gauge, designed in compliance with standard EN 837-1/3, is suitable for the planned use in terms of:

- Operating pressure (OP): depending on models, OP= max. 75% of the maximum value of the dial scale for static pressure or 65% of the maximum value of dial scale for cyclic pressure
- Operating temperature (OT)
- Safety level of the pressure gauge
- Compatibility of materials in contact with the fluid to be considered
- Process connection
- Type of mounting
- Check the material indicated on the dial. If there is no indication, materials in contact with the fluid are copper alloys
- Check that the pressure gauge is compatible with environmental conditions, vibrations, shocks, pulses and the surrounding atmosphere

Special precautions are necessary with dangerous fluids, for instance: oxygen, acetylene, inflammable materials, or toxic products and for fluids for the refrigeration industry.

Use in an oxygen circuit

Check that the pressure gauge is designed for Such an application. The dial must have the word OXYGEN printed and the international symbol „Oil-free“ (a crossed-out oil can). The pressure gauge must not have been in contact with oil or grease that is incompatible with oxygen: RISK OF EXPLOSION. To avoid a rise in temperature produced by a adiabatic compression: to go up slowly in pressure.

Mounting:

A pressure gauge must be mounted in compliance with standard practice.

- We advise you to mount the gauge with an Isolation valve.
- In Atmosphere Explosive it is recommended to use of the tools not sparking, in the presence of gas of group IIC the use of steel tools is Completely prohibited (STN EN 1127-1).
- The user must check that the connections are perfectly sealed by using suitable seals that are compatible with the fluid to be measured. Use a correctly sized spanner to tighten connections. NEVER TWIST THE CASE IN ORDER TO TIGHTEN CONNECTIONS.
- Comply with the instructions given on the device When putting it into service.
- For pressure gauges fitted with a rear blow-out disc or blow-out back, ensure that there is a gap of at least 20 mm between the rear panel of the Casing and the surface immediately next to it.
- Likewise, for this type of rear blow-out disc and a casing filled with damping fluid, do not remove the disc from its location.
- Gauges constructed as a liquid filled require sealed cases to prevent the escape of the liquid.

- However, some means of venting the case must be provided
- After installation of the gauge please release vent cup

- Only re-use a pressure gauge if the fluid is the same as for its first use.

Use:

Warning:

The operating conditions must be such that the device can be used safely.

The pressure gauge must not be subjected to:

- mechanical shock: if there is a risk, install it remotely with a capillary connection
 - vibrations: if there is a risk, install it remotely with a capillary connection or use a pressure gauge fitted with an anti-vibration movement
 - pressure pulses: if there is a risk use a mount with restrictor screw or a damper
- Warning: pressure pulses cause a considerable shortening of the operating life of pressure gauges pressure greater than operating pressures (OP)

- Otherwise use a pressure relief valve temperatures greater or less than operating temperatures (OT).
- If there is a risk use a siphon mount or mount with capillary connection to give the correct temperature at the pressure gauge.

Note:

Failure to observe the conditions above may reduce pressure gauge safety. In such cases contact us.

Disassembly:

- During disassembly, check that the pressure gauge is no longer under pressure.
- As a precaution, disassemble it slowly.
- Check that the temperature of the pressure gauge body is not sufficient to cause burning.
- Check that residues of the product present in the tube and block of the pressure gauge are not dangerous for the operator and the environment.

Maintenance:

- The general safety of a facility often depends on the reliability of indications on the pressure gauges installed in the facility.
- Any pressure gauge that seems to be giving false readings must be removed immediately, then tested. If the tests prove it is unreliable, it must be replaced with a new device.
- Periodic verifications should be carried out to check the accuracy of pressure gauges.
- Any pressure gauge considered to have been subjected to abnormal conditions of use (e.g. fire, wrong fluid, blow-out, etc.) must not be used.
- Maintenance, verification or recalibration must be carried out by personnel approved by the manufacturer and using suitable equipment:

Consult your nearest sales office or our After Sales Service,

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