

⚠ WARNING

CAREFULLY READ THIS INSTRUCTION MANUAL BEFORE USE, AND KEEP IT FOR FUTURE REFERENCE.

• PRESSURE GAUGE

1. DESCRIPTION

Submersible pressure gauge, 50mm outer diameter; single-piece brass body; fluorescent dial with reserve indicator; shatterproof window with gasket, 7/16" UNF standard threaded fitting compliant with ISO 263; 90cm thermoplastic hose.

The pressure gauges described in this manual are manufactured by Mares SpA, Salita Bonsen 4, 16035 Rapallo, Italy

The accuracy of the pressure measurement is:

at 50bar	±	5bar
at 100bar	±	10bar
at 200bar	±	10bar
at 300bar	±	15bar
at 750psi	±	75psi
at 1500psi	±	150psi
at 3000psi	±	150psi
at 4350psi	±	220psi

Connecting port airflow: <100 liters/min. at a pressure of 100 bar.

2. CE CERTIFICATION - EN250

The pressure gauge is a Category III device as defined under European Regulation 2016/425, and complies with the specifications set out in the harmonized European Standard EN250 for use with air. It is compliant with the specifications set forth in the harmonized European Standard EN 13949:2003 for use with oxygen-rich mixtures (Nitrox).

The pressure gauge described in this instruction manual has been tested and CE certified to a maximum depth of 50m by Registered Test Center 0474 - RINA Via Calata Gadda, Genova, Italy. The certification pertains to the metric version only.

3. APPLICATION

The submersible pressure gauge is a safety device for monitoring residual pressure in the tank, designed to be used as part of a SCUBA set (open-circuit, self-contained underwater breathing apparatus).

The gauge can be used in cold water (below 10 °C / 50 °F).

The pressure gauge must not be used in conditions that preclude its use (e.g.: low or no visibility that makes it impossible to read the gauge) and under which it is necessary to use appropriate safety devices.

The pressure gauge is designed for use exclusively with Nitrox, up to 100% oxygen. The use of air (EN 12021) or any mixture other than Nitrox or oxygen would contaminate the equipment, requiring cleaning and servicing by a Qualified Technician at a Mares Lab Service Center before it can be used with nitrox or oxygen again.

It must be kept in mind that the depth and duration of the dive are strictly dependent on the percentage of oxygen in the breathable mixture.

⚠ WARNING

Training is compulsory before the device described in these instructions may be used. The user must have received adequate prior training on the use of SCUBA diving equipment, both for use with air and for use with Nitrox.

⚠ WARNING

Gaskets and o-rings for the Nitrox pressure gauge must be lubricated exclusively with oxygen-compatible grease; in the presence of oxygen-rich mixtures, the use of other types of lubricants may spark an explosion.

⚠ WARNING

In the event of use with mixtures contaminated with oil, the entire system must be cleaned and serviced by a Qualified Technician at a Mares Lab Service Center.

⚠ WARNING

If Nitrox mixtures are used, the HP hose should be replaced every two years.

⚠ WARNING

Under no circumstances replace the hose fitted on the pressure gauge with one of a different type; consult your dealer or Mares for information about the type of hose to be used.

4. ASSEMBLY

The pressure gauge must be assembled on the regulator first stage by means of the high pressure hose connected to the gauge.

Before assembly, the user must carefully ensure that the pressure gauge is compatible with the maximum working pressure of the regulator on which the device will be mounted. The nominal working pressure for the pressure gauge is shown on the back of the case.

- 1) Locate the high pressure ports on the regulator first stage (refer to the instruction manual of the regulator; the high pressure ports on the first stage may be marked with the letters "HP" or with the maximum pressure rating) and, following the instructions, remove the plug from the chosen port.
- 2) Remove the thread protection cap before connecting the hose to the regulator first stage.
- 3) Screw the hose fully into the high pressure port of the regulator first stage. Tighten firmly but carefully, using a 14-mm hex wrench.

The pressure gauge is ready for use.

5. CHECKS PRIOR TO USE, PREPARING FOR THE DIVE AND USE

Slowly open the tank valve to avoid the "water hammer" effect resulting from the high pressure entering the hose. Never look directly at the instrument dial when opening the tank valve. When using Nitrox or oxygen, always open the tank valve very slowly to reduce the risk of an

explosion.

Once the tank valve is open and the system is pressurized, close the valve and make sure there are no leaks, checking that the pressure indicated by the needle on the pressure gauge is stable and does not drop. If a drop in pressure is detected, do not dive and double check the entire system.

During the dive, remember to check the residual pressure frequently.

The pressure gauge features a reserve supply indicator (area between 50 and 0 bar / 1000psi and 0psi marked in red), designed to tell the diver when the tanks are nearly empty. If the gauge pointer reaches the red sector during the dive, it is necessary to start the ascent.

The pressure gauge is equipped with a hose long enough to avoid hindering the diver during use. It is in any case recommended to secure the instrument using fasteners on the harness or BC.

Protect the instrument from knocks.

The pressure gauge must only be used with CE-marked SCUBA components.

6. MARKING

The instrument markings are the following:

- EN250: tested and certified according to European Norm EN250;
- CE 0474:CE conformity and identification number of notified body controlling production in compliance with Module D of European Regulation 2016/425
- 300 bar (OXYGEN 200 bar max)
- Nitrox: identifies conformity to EN13949.

7. CARE, STORAGE AND TRANSPORT

Rinse your regulator and gauge thoroughly in fresh water after every dive. Ensure that the dust cap is installed on the first stage prior to doing so. Store the regulator and gauge in a dry place away from direct sunlight. When travelling with your equipment, it is best to use a padded bag such as is commonly used to transport diving equipment.

8. MAINTENANCE

The pressure gauge should be serviced by an authorized Mares dealer every other year or after 200 dives (whichever comes first).

- Avoid exposing the instrument to direct sunlight or sources of heat.
- Treat the gauge like a precision instrument and avoid bumps or knocks.
- Rinse in fresh water after every dive.

It is recommended that the 108 O-ring, located on the threads of the hose coupling which connects to the pressure reducer, be replaced periodically.

Any maintenance or repairs must obligatorily be performed by Mares or its authorized personnel.

• DEPTH GAUGE

1. DESCRIPTION

- Scale 0-70m / 0-200ft
- Maximum depth pointer
- Diameter: 42mm
- Case: high strength technopolymers
- Screen: polycarbonate

2. ACCURACY:

- 0-9m: $\pm 0.5m$
- 9-70m: $\pm 1m$
- 0-30ft: $\pm 2ft$
- 30-210ft: $\pm 3ft$

3. MAINTENANCE

- Avoid exposing the instrument to direct sunlight or sources of heat.
- Treat it like a precision instrument and avoid hitting it or dropping it.
- Rinse it in fresh water after every dive.

• COMPASS

1. DESCRIPTION

- Front and side reading.
- Oil bath system with temperature compensation.
- Maximum tilt angle: 20°
- Dual magnet for faster response.
- Diameter: 50mm
- Scale: bezel with numbering at 10° intervals.
- Case: high strength technopolymers.
- Screen: Polycarbonate.

2. MAINTENANCE

- Avoid exposing the instrument to direct sunlight or sources of heat.
- Treat it like a precision instrument and avoid hitting it or dropping it.
- Rinse in fresh water after every dive.

• WARRANTY

Terms and conditions of the warranty are described on the warranty certificate included with the product.