INSTRUCTIONS FOR USE

SUBMERSIBLE PRESSURE GAUGE

Instructions for use as approved by Notified Body No. 0426 ITALCERT S.r.l. - Viale Sarca, 336 — 20126 Milan, Italy, on the occasion of the release of the CE certificate, pursuant to European Directive 2016/425.

Contents comply with UNI 10913:2001 standards.

Please *carefully read, follow and keep these instructions for* use.

Category 3 Individual Protection Device (IPD) (Italian Legal Decree 475/92; E.D. 2016/425) Use subject to mandatory training and practicing

***Users should* be *previously and adequately trained on* the *use of SCUBAs for their use with* air, *Nitrox or* oxygen.**

PPE compliant to EN 250:2014 or EN 250:2014 + EN 13949:2003 (O2 versions) and to European Directive 2016/425.

Declarations of conformity are available for download at the following link:

https://www.termoindustria.it/documentation/

DESCRIPTION

Submersible pressure gauge with silver alloy welded spring pressure monitoring system; single-piece die print brass case; fluorescent dial with reserve indicator; splinterproof window with O-ring; 7/16" UNF standard threaded fitting, compliant with ISO 263 standard.

This submersible pressure gauge is available with conventional thermoplastic hoses.

MODEL

***SPG* 2K**	400 bar full scale (320 bar nominal pressure)
***SPG* 52 SLIM**	300, 360, 450 bar full scale (240, 300, 360 bar nominal pressure)
***SPG* 63 SLIM**	300, 360, 450 bar full scale (240, 300, 360 bar nominal pressure)

FEATURES

Where applicable, SPG gauge complies with specifications contained in EN 250:2014 harmonised European standard for use with air, while for some models it also complies with specifications contained in EN 13949:2003 harmonised European standard, for use with oxygen-enriched mixtures (i.e., Nitrox) or oxygen.

USE

SPG gauge is a safety device for monitoring residual pressure in tanks, to be used as a component of SCUBA equipments (open-circuit Self Contained Underwater Breathing Apparatus).

The gauge should be mounted on the pressure reducer of the demand regulator by mean of the high-pressure hose connected to it.

This gauge may be used in environments with cold water.

1	Compliance to the E.D 2016/425			22 Nov 2021
0	Amendments of IFU following technical standard updating			28 Nov 2016
Rev.	Item	**Compiled by**	**Approved by**	**Date**

ASSEMBLY

- Identify the high-pressure ports on the demand regulator (please refer to the regulator instruction manual — high pressure ports on the first stage may also be marked with “HP” or with the maximum nominal pressure of the device) and unscrew the plug of the selected port, following the instructions.
- Remove the thread protection plug before connecting the hose to the regulator.
- Fully hand-tight the hose into the first stage high pressure seat of the regulator.
- Firmly tighten by gently using a 15 mm hex key/Allen key.
- The pressure gauge is now ready for use.

WARNINGS

The user should carefully check the SPG compatibility with the values of the maximum nominal working pressure of the demand regulators on which the device will be mounted. The nominal working pressureof the SPG is shown on the back of the case.

After assembling the SCUBA, slowly open the tank valve to prevent the “air blast” due to high pressure entering the hose. In any case, point the pressure gauge dial away from your face while opening the valve.

In case of units designed for use with Nitrox or oxygen, always open the tank valves very slowly to minimize the risk of mixture combustion.

After opening the tank valve, check the system for leaks by verifying that the pressure indicated by the pressure gauge needle is steady and there are no pressure falls. When a tank pressure fall is detected,do not dive and recheck the complete system.

While diving, often check the pressure remaining in your tank.

The pressure gauge is equipped with a low air indicator (the area between 50 bars and 0 bar, marked with a different colour) designed to indicate when the air in your tank is close to empty. If the needle reaches this area while diving, start ascending immediately.

The pressure gauge is equipped with a hose long enough to prevent impediments for the user when using it. However, it is advisable to fix the device to the special connections provided on the harness or buoyancy compensator.

Do not pull the tank/regulator assembly by the hose

Avoid bumping the device. Special rubber protective covers are available to protect the device. The pressure gauge should be used with CE marked SCUBA components.

- Only SCUBA that complies to EN250 and marked as such can be used as escape devices while used simultaneously by multiple users.
- If SCUBA is being used simultaneously by multiple users, it must not pass 30mt depth and water temperature under 10°C.

LIMITS OF USE

Do not exceed the depth limit of 50 meters.

The pressure gauge as described in its instructions for use has been designed and tested to the maximum depth limit of 50 meters.

Models designed for use with air. The air in the tanks should comply with the European Standard EN 12021. For safety reasons, the use of mixtures other than that indicated is not permitted.

Models designed for use with Nitrox or oxygen (marked O_2 on the dial).

The pressure gauge is exclusively designed for use with Nitrox or oxygen. for safety reasons, the use of air (EN 12021) or mixtures other than Nitrox or oxygen that could contaminate the device is strictly prohibited.

Please consider that both depth and duration of diving are strictly dependent on the percentage of oxygen in the breathable mixture.

With models designed for the use with Nitrox or oxygen, always open the tank valve/s very slowly to minimise the risk of mixture combustion.

Do not use the pressure gauge in adverse environmental conditions (i.e., poor or no visibility that make reading the pressure gauge impossible).

MARKING

Please refer to the device marking on the back of the case for the following details:

Manufacture's *logo* TERMO INDUSTRIA
Model SPG …
Nominal working pressure ... bar .. psi
Reference Standard EN 250:2014
Conformity Marking CE 0426
Specific Marking O_2 (specific marking for Nitrox or oxygen models only)

The Conformity marking indicates that the device meets the essential health and safety requirements as per Annex II of E.D. 2016/425. The number next to the CE marking identifies the Notified Body No. 0426 ITALCERT S.r.l. — Viale Sarca, 336 — 20126 Milan, Italy — in charge for the control of the finished product, pursuant to Annex VII of European Regulation (EU) 2016/425.

NOTE: a rubber cover on the pressure gauge may partially hide the marking. Please remove the coverto fully read the marking.

PERFORMANCE

Accuracy: the pressure gauge accuracy meets the following tolerances measured at decreasing pressure:

@ 50 bar ± 5 bar
@ 100 bar ± 10 bar
@ 200 bar ± 10 bar
@ 300 bar ± 15 bar

Connection port flow: < 100 lt/min, at 100 bar pressure

STORAGE

We recommend you to gently rinse your pressure gauge in fresh water after diving, when it is stillmounted on the scuba demand regulator, to prevent water entering the hose.

Let it air dry completely and store it while taking care to cover the hose thread by its protecting cover.

Please store your pressure gauge in a dry place, far from heat sources and out of direct sunlight.
When storing, please allow the hoses to form large curves rather than tight loops or bends (20 cm diameter max). When travelling with your equipment, it is best to use a padded bag such as is commonly used to transport diving equipment.

MAINTENANCE

Your pressure gauge does not need special maintenance. We recommend to periodically verify and change when needed the O-ring on the threading of the hose fitting to the pressure reducer and to control the good conditions of the hose by avoiding any sort of damage.

We also recommend to change the gauge and/or the hose in case they present visible damages, due also to the aging of materials.

Maintenance / repairing service should be carried out by TERMO INDUSTRIA S.r.l. or by authorised personnel. **Replacing the hose mounted on the pressure gauge with one of a different type is strictly prohibited** (please refer to your authorised representative or TERMO INDUSTRIA S.r.l. for details about the type of hose to be used).

The rubber safety valve on the back of the case of models type 52 and 63 **MUST NOT be tampered with or covered.** The OPV (Over Pressure Valve) comes into operation whenever the copper beryllium bourdon tube breaks down and the pressure inside the gauge exceed the 2.5 bar. In case this happens do not use the gauge and bring it back to your dealer

Please always keep Nitrox or oxygen designed models thoroughly cleaned, in order to prevent contact with agents that may react with oxygen or cause combustion when in use.

Warning: your pressure gauge with all attachments should be cleaned by a dive professional in case of use of contaminated mixture.

LIABILITY

The company denies all liabilities for damages derived from improper use/maintenance/storage or from use/maintenance/storage not compliant with these instructions. Liabilities deriving from use with SCUBA component not bearing CE marking are also excluded.

WARRANTY

The pressure gauge is guaranteed according to the current laws in the country of purchase (Italy) from the date of purchase, in compliance with the use it was developed for:

- Two years if the use is intended for the single diver
- One year if the use is intended for diving centers

The warranty covers parts recognized as defective by our technical services, and manufacturing and material defects with exception of part worn by use.
The warranty does not cover damages caused by rough handling, dropping or incorrect use at the surface or while diving.
The warranty does not cover defects in appearance or function that are due to normal wear of the product or to its ageing.
The warranty shall be not valid if the product was opened or maintenance by a person lacking adequate technical training and not using the proper maintenance equipment.
The responsibility resulting from the sale of our product is limited exclusively to the above warranty and excludes all possibility of recourse to penalties or damages.
NOTE: the date of production is laser etched on the back of the gauge's housing; the two numbers in the middle stand for the month (by inverting them) and the two on the sides stand for year (by inverting them).