

DIVING KIT USER INSTRUCTIONS



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We would like to thank you for buying this cylinder or equipped tank (cylinders + valve) made by ROTH MIONS SAS.

RECOMMENDATIONS

THIS EQUIPMENT SHOULD BE USED BY PEOPLE WHO HAVE BEEN TRAINED BY AN APPROVED ORGANIZATION SUCH AS: CERTIFIED INSTRUCTORS, APPROVED DIVING CENTRES, ETC... ANY USE BY A PERSON WHO IS INEXPERIENCED AND INCOMPETENT WILL INVALIDATE THE GUARANTEE ON THIS PRODUCT.

ROTH DISCLAIMS ALL LIABILITY FOR THE INCORRECT KNOWLEDGE, USE, OR MAINTENANCE OF THIS EQUIPMENT. PLEASE REMEMBER THAT THESE TANKS ARE MEANT TO BE FILLED WITH BREATHABLE GAZ. THE USE OF THESE TANKS WITH ANY OTHER TYPE OF GAZ IS STRICTLY PROHIBITED.

VALVES HAVE BEEN TESTED WITH SUCCESS TO WHOLE REQUIRED TESTS OF THE NORM EN250, INVOLVING CERTIFICATION FOR USE. THE MAXIMUM DEPTH REQUIRED BY THE NORM FOR CERTIFICATION IS 50M.

TECHNICAL DESCRIPTION

The Tank set includes:

- One or two steel cylinders,
- One or two outlet valves.

The following items are available as options:

- PVC boot,
- Carry handle,
- Protective nylon mesh,
- Straps.

There is no safety system on this equipment (e.g. safety valve). The user must check that a safety system is installed on the cylinder filling unit.

THE CYLINDER

The cylinders are available in range of volumes from 1 to 20 litres with a maximal allowable pressure of 200, 230 bar and 300 bar.

The cylinders are made by ROTH MIONS SAS, MIONS, France, in compliance with the requirements of the European regulations (directive 2014/68/UE). The manufacture of our cylinder is guaranteed by an ISO9001 certified quality assurance system.

The cylinders are protected against external corrosion by a layer of hot zinc-spraying, one primer coat and two coats of polyurethane paint.

The regulatory information is engraved on the neck of the cylinder. The stamping includes the following:

ROTH logo: manufacturer's name or logo
AAAA: year of manufacture
XXXX: cylinder serial number
PS XXX BAR: max. service pressure
TS -XX/+XX°C: service temperature
Type of thread
GX: Fluid group G1 or G2

PT XXX BAR: Test pressure
AAAA/MM: test date / year/month
V XX L: capacity in litres
XX.X KG: weight of empty cylinder
Used gas: BREATHING GAS, AIR OR NITROX+O₂
CE XXXX: notified body reference number

Any other marking, such as the re-testing inscription, must be done in the reinforced area on the hemispheric part of the cylinder.

Any marking by stamping of the cylindrical part will lead to the cylinder being taken out of service.

It is strictly forbidden to modify the structure of the cylinder (by welding, riveting or drilling...), to remove material parts or to submit the cylinders to extremely high temperatures (maximum 300°C).

VALVES

The tanks are delivered with valves in compliance with directive 2014/68/UE and standard EN250.

The valve is connected to the cylinder with thread type M25 x 2 (or M18x1.5) and the seal is provided by an O-ring in accordance with the EN144-1 Standard. The valve is tightened to a torque of 80 N.m (8 m.Kg) to 100 N.m (10 m.kg).

Each valve is equipped with:

- one or two hand-wheels for opening and closing (inflation or diving)
- one or two outlets for connecting to a regulator with two connection options:
 - Yoke connection 230 bars
 - DIN type, fitting 230 by removing the intermediate adapter
 - DIN type M26 or 300 bar.

- a dip tube.

The valve is closed by turning the hand-wheel clockwise to tighten moderately; it is opened by gradually turning the hand-wheel in the anticlockwise direction.

The valve alone is not considered as safety component ; it is not pre-equipped with a safety device such as burst disk or other.

OTHER ACCESSORIES

The PVC boot fits the cylinder diameter and allows it to stand upright. A hole at the bottom drains any residual water and makes it easier to remove.

The carry handle is made in two parts so that it can be fitted and removed without having to unscrew the valve.

USE AND MAINTENANCE

RECOMMENDATIONS:

- Never inflate a lifting bag with bare valve gear (without regulator).
- Never leave a cylinder empty with the valve open.
- Never leave a cylinder exposed to sea spray or waves, or standing in water in the bottom of the boat.
- Keep residual air pressure in the cylinder in order to drain any water that has entered by the valve orifice. If the cylinder was fully emptied when diving, leave the regulator in place until it is under cover.
- Always empty cylinders slowly to prevent the valve gear from frosting and significant condensation inside the cylinder.
- If using a double outlet valve, connect a regulator to each outlet to avoid water entering the valve.
- Empty the cylinder before unscrewing the valve or carrying out maintenance.

HANDLE WITH CARE

Impacts shall be avoided as they can flake the paint, or even dent the metal to a greater or lesser extent. Suitable protection can be provided, for example, by using a nylon net.

Paint areas flaked by impacts or abrasion must be touched up immediately.

Cylinders shall not be exposed to full sun or left in overheated vehicles.

Before filling the cylinder

This operation shall be carried out by a person recognized as competent by the supervisory authorities :

Check the cylinder's test date, service pressure and good overall condition.

Check the condition of the decanters and the compressor filters to prevent oil and water condensates from entering the cylinder.

Fill the cylinder only with breathable gas : air or breathable dry mixture non dangerous of the Group 2 stamping G2, or with a gaseous mixture (e.g. Nitrox, O₂...) of Group 1 marking G1 provided that the name of the mixture is mentioned on the bottle..

Release air before connecting the cylinder to the filling manifold.

NEVER EXCEED THE SERVICE PRESSURE FOR WHICH THE CYLINDER WAS DESIGNED.

Fill the cylinder slowly to prevent unwanted heating (maximum 50°C)

FIGHTING CORROSION

Remember that the number one enemy of your cylinder is corrosion. It shortens a cylinder's life and can make it dangerous. Everything should be done to:

- Delay the start of corrosion,
- Detect and remove corrosion,
- Discard dangerous cylinders in time.

DAY-TO-DAY MAINTENANCE

After each diving session, rinse the tank with fresh water, not forgetting the bottom (special hole for this in the boot), to remove sea water and clear off sand, and thus prevent paint abrasion and early corrosion.

PERIODIC INSPECTION AND CONTROL UNDER THE RESPONSIBILITY OF THE USER

This material is subject to periodic inspections and controls. It is the user's responsibility to carry out these operations in accordance with the applicable regulatory requirements.

STORAGE

Before extended storage, it is a good idea to carry out the maintenance operations described above and rinse the inside of the cylinder with unsalted water and dry it carefully (e.g. with a hair dryer).

Clean the valves with a cloth soaked in white vinegar.

It is also strongly advisable:

- To store the cylinder upright in a cool, clean, dry place,
 - To keep low residual pressure inside the cylinder to clear any dust or condensation that might have entered via the valve orifice.
- It may be dangerous to breathe the air from a cylinder that has remained filled for several months.

WARRANTY

The equipment is guaranteed for one year from its date of purchase against all original and latent defects.

The guarantee does not cover damage to the product resulting from incorrect use, negligence, incorrect maintenance, or normal wear and tear (cf chapters on USE AND MAINTENANCE above).

The guarantee also becomes null and void if the user dismantles the product. All work on the tank must be carried out only by an approved specialist.

If you have any complaints, please contact your retailer who will forward your request.

LIABILITIES

FOR BARE CYLINDERS: Responsibility of the documentation and CE stamping goes to the Manufacturer of the cylinder, it means Roth. The unit/company that assembles the tank (cylinder + valve) is responsible for the conformity of the assembly. The entity that assembles the tank must check the valve's mechanical compatibility and technical specifications. Roth supplies the EC documentation for the bare cylinder only.

FOR CYLINDERS WITH A VALVE FITTED BY ROTH: Responsibility of the documentation and CE stamping goes to the Manufacturer of the complete tank assembly, it means Roth. Roth supplies the EC documentation for the whole unit (bare cylinder + valve).