

USER'S MANUAL FOR MARES DRY SUITS

1. INTRODUCTION

Congratulations on your purchase of a Mares dry suit. All Mares products are the result of over 70 years of experience and relentless research in new materials and technologies. We hope you will enjoy many great dives with your new equipment.

WARNING

You must read and understand this manual in its entirety before using this product. Keep the manual for future reference.

WARNING

As with all SCUBA equipment, Mares products are designed to be used by trained, certified divers only. Failure to fully understand the risks of using such equipment may result in serious injury or death. Do not use this or any other piece of SCUBA equipment unless you are a trained, certified SCUBA diver. You must have passed a dry suit specialty course from an internationally recognized training agency in order to use this product. Always follow all rules and guidelines as taught by your training agency on all dives.

WARNING

Carefully follow these and all other instructions concerning Mares products. Failure to do so may result in serious injury or death. If the instructions provided in the manual are unclear or difficult to understand, please contact your authorized Mares dealer before using the product.

2. CE CERTIFICATION – EN14225-2:2017

All dry suits described in this manual have undergone an EC type examination, which is the procedure whereby the approved inspection body establishes and certifies that the PPE (Personal Protective Equipment) model in question satisfies the relevant provisions of European Regulation 2016/425.

Said regulation lays down the conditions governing the placing on the market and free movement within the Community and the basic safety requirements which PPE must satisfy in order to ensure the health protection and safety of users. SCUBA dry suits are PPE of category II and are tested according to European Norm EN14225-2: 2017.

All Mares dry suits described in this manual have passed the EC type examination described above and obtained the corresponding CE certification. The examinations are carried out by RINA, notified body 0474, located in Via Corsica 12, 16128 Genova, Italy. CE conformity is denoted by the "CE" marking.

The dry suits described in this manual are manufactured by Mares SpA located in Salita Bonsen 4, 16035 Rapallo (GE), Italy.

3. APPLICATION

The dry suits described in this manual are intended for use in recreational SCUBA diving activities. There is no inherent depth or water temperature limitation due to the suit, but rather considerations about your own skill and comfort level, breathing gas, inflation gas and passive or active thermal protection will dictate the field of application for the suit. The dry suits described in this manual are not meant for diving in contaminated waters. EN14225-2 specifies that air should be used as inflation gas.

4. ASSEMBLY

The dry suits described in this manual consist of the dry suit itself, a low pressure inflation hose, and a hood. The low pressure hose has a quick disconnect feature for connecting it to the inflation valve of the dry suit. The other end of the low pressure hose has to be connected to a low pressure port

of a first stage regulator. Use a 4mm allen wrench to remove the port plug on the first stage, then screw the threaded end of the dry suit hose into the open port and tighten by hand using a 14mm wrench without using excessive force. Ensure that the hose can easily be connected to the inflation valve when you are fully geared up.

WARNING

The dry suits described in this manual provide little or no thermal protection. Their main purpose is to keep the diver dry. Thermal protection has to be provided in the form of passive or active undergarments and gloves, not provided with the suit. The hood enclosed with the dry suit provides sufficient thermal comfort for most applications, but a thicker or thinner hood may be required for dives in very cold or temperate waters, respectively.

WARNING

The wrong choice of undergarments and/or gloves and hoods may lead to hypothermia (critical decrease of body core temperature) or hyperthermia (critical increase of body core temperature). This may lead to severe injury or death.

WARNING

No dry suit can provide total mobility and freedom of movement. This fact combined with the effect of breathing compressed gases while moving through water leads us to recommend that you don't exert yourself beyond your own comfort level while diving with this suit.

5. ASSESSMENT OF RISK

A dry suit provides protection from the risk of cold exposure. Cold water, low visibility and strenuous workload are all elements which can increase the risk of an accident during a dive. If you plan to dive in cold water, low visibility or while performing strenuous work, make sure that you have been trained specifically for these conditions by an internationally recognized training agency. Failure to do so may result in serious injury or death.

5.1 COLD WATER DIVING

In addition to the guidelines from your cold water diving specialty class, for dives in temperatures below 10°C/50°F we recommend the following as it relates to the use of your dry suit: during the initial descent, descend slowly and inflate your dry suit in short controlled bursts. Inflating continuously over a long time might cause regulator freeze-up and consequent malfunctioning.

6. CHECKS PRIOR TO USE AND PREPARING FOR THE DIVE

WARNING

- This suit is only to be used by an individual who has had specific training in its use or who is under the supervision of an industry recognized diving instructor.
- The use of this suit has the potential to cause buoyancy changes with depth.
- The use of this suit could cause allergic reactions in some individuals.
- The thermal insulation provided by the suit and undergarment may diminish as depth increases due to the combined effect of compression of materials and addition of expanding compressed gas.
- The underwear used under the dry suit must allow for free passage of air to the exhaust valve.

WARNING

- The use of argon as inflation gas presents risks: the first stage on the argon tank should have an overpressure relief valve and it should not have a second stage since one might inadvertently breathe from it, which would lead to immediate death.
- The use of oxygen or oxygen enriched nitrox as inflation gas presents risks: high partial pressures of oxygen lead to accelerated wear of all materials in contact with it and could also lead to a combustion event.
- Ensure that when worn with the undergarment, the dry suit fits properly allowing you to move arms and legs with a certain degree of freedom. The legs need to be able to perform the type of kicks you use when diving (flutter kick, frog kick etc) while the hands must be able to reach the valves on the suit, the face, the pockets etc.
- Ensure that the suit is not too large as this might cause fastidious wrinkles and overlaps of fabric which might lead to discomfort during the dive.
- Before every dive, ensure that the valves work by first inflating some air into the suit and then deflating the suit by compressing it with your arms around your torso and legs.
- Before every dive, inspect the hose visually for signs of wear and damage.

Before your first dive, ensure that the wrist and neck seals are not too tight. These seals are conical and can be cut to become wider. There are rings of raised material along the cone which help in the cutting process. Try them on as they are and if you find them too tight, cut across the first raised line then continue between two parallel raised rings. Use very sharp scissors and don't cut across the next raised ring, since that might propagate a cut across the entire seal when you try to put on the suit. Once you have removed one ring check the fit again. If still too tight, remove one more ring. Keep in mind that you can always remove one more ring at a later time, but if you cut too much, you will have to take the suit to an Authorized Mares Dealer to have a new seal installed.

7. DONNING

Make sure that the crotch strap is disconnected. Don the suit by putting in your legs first, then position the suspenders, adjusting them in length as necessary. Now pull the sleeves over your arms, then pull the suit over your head. Close the zipper completely and close also the cover over the zipper. Connect the strap from the lower back by pulling it between the legs and connecting it to the front. The suit fits correctly when you can easily kneel down and you have normal freedom of movement in your arms. There is a small bungee strap on the inside of the suit, in the waist area, which you can tighten or loosen to adjust the fit around your waist.

8. USE AND REMOVAL

While on the surface, before and after the dive, inflate the BC to attain positive buoyancy. As you descend, inflate the suit to prevent a squeeze and to compensate for the change in buoyancy due to depth. Inflate and deflate throughout the dive as necessary to maintain neutral buoyancy. Whenever you ascend, ensure that you can deflate the suit sufficiently so as not to lose control of your ascent rate.

After the dive, remove the suit by opening the zippers, then pulling the suit over your head and over your arms. Inspect the suit and the undergarment for water and overall wet spots which might indicate a leak in the suit.

9. CARE, STORAGE AND TRANSPORT

Use of the suit in a pool or in presence of chlorine in general is not advised. The flexible hose of your dry suit must be checked prior to each use for integrity and presence of bubbles. Any leakage or sign of damage, cracking, deformation, heavy abrasion or cut is an indication of wear and of obsolescence of the hose assembly and indicates the need for its replacement.

In order to limit and remove water or contaminants from the flexible hoses of your dry suit you should, after every dive, rinse your regulator assembly in fresh water, dry it thoroughly, attach the regulator to a pressurized cylinder and repeatedly actuate the dry suit inflation valve after having connected it to its hose.

After this operation disconnect the flexible hose from the inflation valve and rinse your dry suit thoroughly in fresh water after every dive. Avoid contact with solvents and detergents. Ensure that the dust cap is installed on the inflation valve connection prior to doing so. Dry the suit inside first and then outside. Do not leave it to dry in direct sunlight. Store the dry suit on a hanger in a dry place away from direct sunlight. Do not store it near sources of heat and never allow the flexible hose to be crushed. When travelling with your equipment, it is best to use a padded bag such as is commonly used to transport diving equipment. At the end of its useful life, dispose of the suit with your household garbage.

10. MAINTENANCE

Mares recommends a visual inspection every year or 100 dives. If the suit should develop a leak or other malfunction, please take it to an Authorized Mares Dealer for repair.

NOTE

At the latest after five years of operation the flexible hose of your dry suit should be taken out of service.

11. WARRANTY

The warranty of this dry suit does not cover effects of or damage caused by normal wear or obsolescence of the flexible hose assembly and of any other part of this dry suit. Terms and conditions of the warranty are described on the warranty certificate included with the dry suit.