901 SERIES

INSTRUCTIONS FOR USE

DIVE RITE®

INTRODUCTION

Congratulations on your purchase of the Dive Rite 901 series dry suit.

All of our dry suits are manufactured in Finland and each dry suit is pressure tested before delivery. Our dry suit will provide guaranteed comfort during your diving adventures.

Dry suit diving requires specific techniques and training. This dry suit is only to be used by individuals who have had specific training in its use or who are under the supervision of an industry recognized dry suit diving instructor.

All users, regardless of experience level, should thoroughly read and understand this manual before diving the dry suit. If for any reason you have questions that are not covered by this manual or your instructor, do not hesitate to contact us.

CE

Polarsafety guarantees that the designated products comply with CE requirements and that Polarsafety meets its obligations concerning the PPE Regulation (EU) 2016/425.

EN 14225-2:2017

Dive Rite/Polarsafety´s 901 series dry suits have been tested by an independent institution in accordance with the requirements of European standard EN14225-2:2017.

The EU type assessment was handled by:
Finnish Institute of Occupational Health
Topeliuksenkatu 41 b
FI-00250 Helsinki
Finland
Notified Body No. 0403

This standard is available in models Dive Rite 901exp, Dive Rite 901TST/ Combat, Dive Rite 901 Rescue, Dive Rite 901 Pro, Dive Rite 901MCM, Dive Rite 901 Woman, Polarsafety 901exp, Polarsafety 901TST/ Combat, Polarsafety 901 Pro, Polarsafety 901MCM, Polarsafety 901 Woman, Polarsuit 901, Polarsuit 901TST/ Combat, Polarsuit 901 Rescue, Polarsuit 901 Pro, Polarsuit 901MCM, Polarsuit 901 Woman.

ALL DIVERS MUST COMPLETE TRAINING AND FAMILIARISATION WITH A CERTIFIED INSTRUCTOR BEFORE USING THIS PRODUCT.

This dry suit is guaranteed to be free from defects in materials and workmanship for (6) six months from the date of purchase. This guarantee does not apply to damage or failure resulting from improper use, neglect, or normal wear and tear.

CONTENTS

SAFETY

The following are important safety guidelines every diver should adopt before diving in a dry suit:

- Complete a dry suit diving course with a certified instructor and from an industry recognized training agency.
- Always dive with a buoyancy compensator.
- Become familiar with all of your equipment before diving.
- Practice dry suit diving skills in safe conditions until confident of your ability. Ensure that your buddy/partner is completely familiar with and understands all functions of your dry suit.
- Weight should be added to achieve neutral buoyancy with an empty tank. Do not add more weight than required. You should be able to complete a 5-minute safety stop at 3 meters (10 feet), neutrally buoyant with a tank containing around 30 bar (500 psi) or less.
- Inspect the main zipper, seals and valves for damage before each dive.
- Perform regular preventative maintenance on the suit, valves, main zipper and seals.
- Only allow qualified technicians to perform service on the dry suit.
- Use tender line when diving in demanding conditions.
- Understand your personal diving limitations and do not exceed them.

APPLICATION

This dry suit is designed for diving in various environments and can be used in cold, icy water or in warm water by increasing or decreasing the insulation value of the undergarments.

Rinsing the dry suit thoroughly with fresh water and drying is recommended after diving in very salty or mineral rich waters.

A qualified and certified diver may use this dry suit to a maximum depth of 60 meters.

For this dry suit system, we recommend the use of air for the inflation gas.

DRY SUIT

Main zipper

We offer our dry suits with a YKK Aquaseal tm. main zipper as standard. A metal Dynat tm. main zipper is optional. The dry suit is available with a front main zipper (FZ) placement as standard and has the option of a back main zipper (BZ) placement.

An optional relief zipper can be provided with either a Aquaseal tm. or Dynat tm. zipper.

SERVICE OF MAIN ZIPPER

Models BZ and FZ have a cover flap to protect the main zipper. With proper service and cleaning the main zipper will last for several years, even under heavy use. After every use it is very important to clean the main zipper from dirt and other debris. Normally, rinsing with clean FRESH water is enough. When the main zipper is dry, it must be lubricated with the proper lubricant. Do not bend the main zipper.

Neck and wrist seals

Our durable latex neck and wrist seals will keep water out even when flexed and stretched. Standard dry suits are provided with a detached hood (SH) with neck warmer.

Neck seals are also available in neoprene, silicone, or latex with modular Quick-Change Solution.

As an option you can also select an attached hood (AH) made of 5mm neoprene with latex neck seal for instead of a detached hood (SH).

Wrist seals are also available in silicone or latex with modular Quick-Change Solution.

Attached gloves (AG) are also optional.

CHECKING THE SEALS

When trying on the dry suit, check for proper fitment of the neck and wrist seals. The seals should feel tight when they are dry and there should be no gap between your skin and the seal. If you are unsure about the size, ask for guidance from a knowledgeable retailer. If the seals are too tight, they may be trimmed with sharp scissors. Make sure that the edge is smooth after trimming to avoid leakage.

STORAGE AND MAINTENANCE

Store the dry suit so that the seals are dry, cool, and out of direct sunlight. To preserve the seals before long term storage, dust them inside and out with pure talcum powder.

POSSIBLE ALLERGY RISK

A small percentage of people have an allergic reaction to natural latex, the material from which the neck and wrist seals of some models are manufactured. This allergy can range from mild to severe skin rash and itching. It is the responsibility of the user to determine beforehand if he or she has a latex allergy, or to recognize it during use and discontinue using the suit until the problem can be rectified. This usually means removing the latex seals, and installing new seals made of an alternate material.

Before purchasing or using a dry suit with latex seals, make sure that you are not allergic to latex.

Inflation and exhaust valves and low-pressure inflator hose

Every dry suit system is delivered with inflation and exhaust valves.

As an option you can also choose a relief valve (RV) for your dry suit.

A low-pressure inflator hose is also included with this dry suit system.

FITTING THE DRY SUIT

Carefully read the user's and service guides and check your dry suit so that you understand it fully.

First remove any watches, rings, or jewelry that could tear the wrist seals. Please note that Dive Rite 901 series dry suits require the use of an additional undergarment to provide adequate thermal protection. The thickness of the undergarment depends on your diving environment. To ensure a good fit, it is recommended that you try the dry suit on while wearing the thickest undergarments that you intend to use with the dry suit. Make sure that you can raise both hands over your head, touch your toes, and squat to your knees without restriction while wearing the dry suit and undergarment.

If you will be using the dry suit with back-mounted cylinders, ensure that you can easily reach your valves.

NOTE: Proper fit of the dry suit is very important. Too loose of a fit will allow such hazards as excessive air in the dry suit, difficult buoyancy control, and if the legs are too long, the boots can slip off the divers' feet. Seals that are too loose will leak. Too tight of a fit can result in restriction of blood flow causing loss of feeling in the extremities or lack of oxygen to the brain.

WARNING: Do not use a dry suit that is too large or too small.

Before using this dry suit, verify the proper function of the inflation and exhaust valves. First, attach the low-pressure inflator hose to the inflation valve by pulling back on the collar, inserting the inflation valve stem into the hose coupling, and releasing the collar. Pull gently on the hose to ensure that it is locked onto the valve stem. Next, push the inflation button briefly to ensure the valve is working properly. Gas should enter the dry suit when the button is pressed, partially inflating it, and stop when the button is released. Once proper function of the inflation valve has been verified, disconnect the low-pressure inflator hose by pulling back on the collar and removing the hose from the valve stem. To check proper function of the exhaust valve, turn the valve counterclockwise to open it completely and crouch to your knees. This should force air out of the dry suit, and you should hear air escaping from the exhaust valve.

DONNING THE DRY SUIT

- First, remove any watches, rings, or jewelry that could tear the wrist seals.
- Check your dry suit to ensure that it is in good condition.
- Check that the main zipper is in good condition and completely open before donning. The main zipper should be free of debris and should be visually inspected for tears or other failures prior to each use. Ensure that the main zipper is properly lubricated.
- Check the condition of the neck and wrist seals. Seals should not be gummy or have any cracks or tears in the material. If using a modular Quick-Change Solution, ensure that the seals are properly secured to the dry suit.
- Check the valve retaining rings (on the inside of the dry suit) and the inflation and exhaust valves to ensure that they are in good condition.
- Step into the dry suit and pull the dry suit up to your chest.
- Put your hands into the sleeves and check that the wrist seals are tight on your wrists.
- Pull the neck seal over your head.
  WARNING! Rough handling can cause damage to the wrist and neck seals.
- Close the main zipper with a steady pull of the slider while ensuring that nothing becomes pinched between the main zipper's teeth. Confirm that the zipper is fully closed. Next, close the cover flap zipper fully. When using FZ or BZ styles, ask your diving buddy to ensure the zipper is fully closed.
- In models without cover flaps, close the main zipper with a steady pull of the slider while ensuring that nothing becomes pinched between the zipper's teeth and confirm that the zipper is fully closed.
- Open the cylinder valves according to the manufacturer's instructions and make sure that the cylinders are full of air.
- Don the equipment according to the manufacturer's instructions.
- Connect the low-pressure inflator hose, following the instructions provided previously, to the inflation valve on the chest of the dry suit.
- Press the inflation valve briefly 2-3 times to verify that it is functioning correctly.
- Squat down and press on the dry suit to verify that the exhaust valve is functioning correctly.

› Close the exhaust valve.

› Don the rest of your equipment according to the manufacturer's instructions.

› Always follow all applicable safety regulations.

DOFFING THE DRY SUIT

› Disconnect the low-pressure inflator hose from the inflation valve and doff the dive equipment.

› Open the cover flap zipper fully and then the main zipper completely by pulling the slider straight up over your shoulder. Be careful not to damage the teeth of the cover flap zipper. For models that do not have a cover flap just open the main zipper carefully.

› Pull the neck seal carefully over your head. Be careful with your fingertips and nails as they can easily damage the seal.

› Pull hands out of the sleeves turning them inside out. Use the thumbs to remove the seals.

› Remove your feet from the dry suit and service the suit according to instructions.

BEFORE DIVING

Safety precautions before using your suit

Make sure that all of your equipment is suitable to be used with your Dive Rite 901 series dry suit and you are aware of all risks associated with diving because:

- Even though your equipment is of superior quality, it cannot be held responsible for your safety.
- Even though your dive training may be the best possible, it cannot be held responsible for your safety.
- Even though your buddy may be a master diver with top class skills, he cannot be held responsible for your actions or your safety.
- A responsible diver avoids taking any unnecessary risks.

ONLY YOU ARE RESPONSIBLE FOR YOUR SAFETY!

THE CHECK LIST OF A RESPONSIBLE DIVER

- √ Your equipment is always in perfect condition and well maintained.
- √ You are aware of the conditions before diving.
- √ You have planned for the diving trip according to all local safety instructions and regulations and you follow this plan.
- √ You never dive while sick or while taking medication.
- √ You have analyzed the contents of your cylinders, marking them accordingly, and ensure that they are full.
- √ You always maintain an appropriate amount of air in the suit.
- √ You perform a safety stop before surfacing.
- √ You are always careful to not take unnecessary risks while diving, ascending and coming to the surface.
- √ You always follow all applicable safety protocols.

Pre-dive inspections

Before every dive, make sure the dry suit is in good condition:

- Visually inspect all of the materials and accessories, including fabric, seals, boots, inflation and exhaust valves, etc. Ensure, that there is no damage.
- Check that the inflation and exhaust valves are securely attached to the suit and that they are functioning properly.
- Check that the low-pressure inflator hose and fittings are intact, undamaged, and properly connected.
- Check that the main zipper is in good condition and properly lubricated.

WARNING - DO NOT

- √ Exceed the maximum depth to which you are currently certified.
- √ Use the dry suit in toxic or hydrocarbon-rich environments.
- √ Use the dry suit as a buoyancy-lifting device.
- √ Use the dry suit without a separate buoyancy control device.
- √ Use inflation gases other than air (except argon and only if you are qualified).
- √ Use the dry suit with any weight harness or other weight system that is not equipped with a quick-release system.
- √ Overexert yourself while wearing this dry suit.

DIVING

- Make sure that you have donned all of your equipment correctly and carefully.
- Close the exhaust valve and add some air into your dry suit before entering water.
- While in water, check the function of all of your equipment. Open the exhaust valve and lift your left arm so that the exhaust valve is raised to the highest point. Air should escape the from the exhaust valve and you can start descending.
- As you descend it will be necessary to add air into the dry suit to prevent it from squeezing your body. Only add enough air to the dry suit to maintain comfort and ease of mobility. Excessive air in the dry suit can make it difficult to maintain proper buoyancy and trim.
- While diving at the desired depth it should not be necessary to regulate the exhaust valve.
- As you ascend, the exhaust valve will automatically release the excess expanding air out of your dry suit. Ascend slowly at a rate not exceeding 10 m/min. Raise your left arm so that the exhaust valve is at the highest point to allow the expanding air to escape.
- When you reach the surface close the exhaust valve completely (clockwise) and add some air into the dry suit.
- To avoid being stuck in an upside-down position, do not allow excessive air to accumulate in the dry suit and maintain proper trim. Raise your left arm so that the exhaust valve is at the highest point to allow the excess air to escape.

POST-DIVE INSPECTIONS

- Check the materials of the dry suit carefully, including seals, boots, and inflation and exhaust valves.
- Repair any damage immediately or send the suit to Polarsafety for repair.

Inspection intervals

In addition to the checks listed above to be performed before and after every dive, the valves should be inspected and serviced on an annual basis. If the dry suit has been stored for a while, the dry suit must be inspected by the manufacturer or an authorized service technician before the first dive.

WARNING:
DO NOT DIVE IF YOU NOTICE ANY DAMAGE TO YOUR DRY SUIT!

Service of the suit

- Store your dry suit on a broad hanger in a cool, dry place and out of direct sunlight. Do not store the dry suit in a room with electric motors or other equipment that produce ozone.
- Keep the dry suit clean and rinse it thoroughly after each use.
- If the dry suit is excessively dirty it can be hand washed in a 40°C mild detergent solution, rinsed thoroughly, and allowed to dry completely. Make sure that the inside of the dry suit is also allowed to dry completely. Do not store the dry suit in the provided dry bag if the dry suit is wet or damp.
- Apply talcum powder to the latex seals of the dry suit after each use or wash. Lubricate the zipper following manufacturer's instructions. Keep the zipper clean and do not store the dry suit with the zipper bent.
- Keep the dry suit so that the face seal of the hood will not become creased.
- **WARNING!**
  Never use gasoline, petroleum, or similar solvents for cleaning the dry suit.

WARNINGS OF THE RISKS

Dry suit diving, as with any other aspect of advanced SCUBA diving, carries a degree of inherent risk, including:

TEMPERATURE CONDITIONS

Temperature conditions above and below the surface affect the use of dry suit. The dry suit itself does not provide any thermal protection. Different thicknesses of undergarment can be selected to adjust the insulation to match your diving environment. The suitable working temperature for the dry suit is from -2°C to 30°C with the appropriate undergarment.

WARNING: Test the undergarment combination together with the dry suit before the actual dive if the temperature conditions are different from your typical diving environment.

HYPER/HYPOTHERMIA

Dry suits are often used in extreme temperature conditions, where there may be combinations of cold surface conditions and cold water, or hot surface conditions and cold water. To avoid over heating or becoming chilled, it is important to know your own personal thermal safe range. While a dry suit and warm undergarment provide excellent thermal protection, they are still limited, and the amount of time that you can safely stay in the water is based on water temperature and condition, workload, and your own body type. Hyperthermia is the overheating of the body core to unsafe levels. Hyperthermia while using a dry suit is most often experienced during surface intervals in hot weather, or during periods of excessive workload in warm, shallow water. Hypothermia is the cooling of the body core to unsafe levels.

WARNING: Learn your own limitations and learn to recognize discomfort as a sign of danger. Both hyperthermia and hypothermia can be harmful or even fatal.

LOSS OF THERMAL INSULATION AT DEPTH

Dry suits provide thermal insulation by creating an air space between the diver and the water. The dry suit material itself does not provide much insulation value. When planning an extended range dive, divers must account for the additional time spent at depth and add suitable undergarments for protection against thermal loss.

WARNING: Always pay attention to thermal loss at depth when planning the dive.

CHANGE OF BUOYANCY WITH DEPTH

The dry suit´s material is like a membrane and lacks a closed cellular structure, so the dry suit itself does not change buoyancy with depth. However, the air trapped within the dry suit by the undergarment will be compressed during descent and the diver compensates for this by adding air to maintain the volume of air inside the dry suit. During ascent the air inside the dry suit will expand and the diver must vent air from the dry suit to prevent excessive buildup of air inside the dry suit.

WARNING: To maintain the proper volume of air in the dry suit, add and vent gas as required. It may also be necessary to adjust the exhaust valve periodically.

FITTING THE DRY SUIT

Proper fit of the dry suit is very important. Too loose of a fit will allow such hazards as excessive air in the dry suit, difficult buoyancy control, and if the legs are too long, the boots can slip off the divers' feet. Seals that are too loose will leak. Too tight of a fit can result in restriction of blood flow causing loss of feeling in the extremities or lack of oxygen to the brain.

VAROITUS: Do not use a dry suit that is too large or too small.

INFLATION GASES

Air is the recommended inflation gas. Properly trained divers can use argon. Do not use gas mixes with elevated oxygen levels, or gasses containing helium (Trimix, etc.).

WARNING: Use air for inflation. Only properly trained divers may use argon and oxygen enriched gas.

ALLERGIES

In addition to the possible allergic reaction to latex used in the neck and wrist seals, a small percentage of people are known to experience allergic reactions to neoprene. Be sure to determine you do not have these allergies or contact your retailer to find out about alternative options. Always use the dry suit with an undergarment.

WARNING: Before diving, be sure that you will not have an allergic reaction to any of the dry suit's materials.

MAINTENANCE

Maintenance, repair and modification

It is not within the scope of this manual to provide complete and detailed repair instructions for all situations that may occur.

Cleaning, disinfection and decontamination

After each use:
Rinse the outside of the dry suit with clean fresh water. Wipe seals clean with clean fresh water. Rinse valves with clean fresh water. Hang the dry suit upside down and allow to dry completely.

If the dry suit is wet on the inside:
Clean the inside with clean fresh water, or a disinfectant solution to prevent bacterial growth.

Latex seals:
Lightly dust with talcum powder (supplied in the maintenance kit).

Degreasing:
If the dry suit is exposed to oil or grease, clean with a mild grease cutting detergent and a soft brush. Rinse with clean fresh water.

WARNING: Never use gasoline, petroleum or similar solvents for cleaning the dry suit.

Decontamination:
Recreational divers should take care to avoid exposure to contaminated water and environments. Professional, commercial, rescue and military divers who may be forced to dive in contaminated conditions must identify the contaminant and take appropriate steps to remove the contaminant from the dry suit before it can be used again.

Testing the dry suit

- √ Close all the holes of the dry suit and fill the suit with water.
- √ Mark all leaks with a water-resistant marking pen.
- √ Allow the dry suit to dry completely

Repairing the dry suit

- √ After having marked the leak(s), clean the dry suit carefully with small amount of acetone.
- √ Open the repair kit.
- √ Apply two to three layers of glue from the repair kit onto the area of the leak(s) and onto the repair patch. The glue on the dry suit should cover an area slightly larger than the repair patch.
- √ Let the glue dry about 10-15 minutes after each layer.
- √ Warm up the glue surfaces with a hair dryer or hot-air fan and press the patch firmly over the area of the leak(s). Be careful not to use excessive heat during repair to avoid damage to the material.
- √ For repair of larger damages to your dry suit, contact the manufacturer.

Modification

Dry suit can be modified in several different ways. To ensure the safety of your dry suit, always contact your dealer or manufacturer prior to modification.

Packing

The dry suit comes complete with inflation and exhaust valves, low-pressure inflator hose, repair kit, and a 5mm neoprene hood (if ordered with a detached hood) and is packed in a dry bag. Do not store the dry suit in the dry bag if the dry suit is not completely dry.

Safe disposal

If you need to dispose your dry suit, follow local disposal instructions or contact local authorities.

MANUFACTURER

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Declaration of Conformity:
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CE

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