

H₂O dyssey

Regulator Manual



RG1
First Stage

Sprint XL



Sprint XS



Sprint Octo

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Introduction

Congratulations on your purchase of a H2Odysey Regulator. This product is manufactured using “state of the art” materials and machining. It is a high performance underwater life support system. It is designed, manufactured and tested by experienced divers.

READ THIS MANUAL THOROUGHLY AND CAREFULLY BEFORE USING THIS REGULATOR

The use of S.C.U.B.A. (Self Contained Underwater Breathing Apparatus) equipment is hazardous for the untrained individual. Therefore, before attempting to use any S.C.U.B.A. and / or any related equipment, an individual must receive training and certification. Use of this equipment by untrained individuals is hazardous and can result in serious injury or death.

OPERATION

All H2Odysey Regulator combinations are made up of First Stage and Second Stage assemblies. The function of the First Stage is to reduce high pressure air output of the scuba cylinder to an intermediate air pressure of approximately 9.65 Bar, 140 P.S.I.G.. H2Odysey Second Stages are engineered to reduce the intermediate pressure 9.65 Bar, 140 P.S.I.G. to ambient pressure in the divers mouth. When the air flow in the Second Stage is activated, the First Stage immediately senses the intermediate air pressure drop, causing the high pressure seat to open and deliver the appropriate volume of air required by the Second Stage. On exhalation, the intermediate air pressure will return to 9.65 Bar, 140 P.S.I.G. over external pressure and the first stage valve closes.

H2Odysssey SCUBA Diving Regulators are designed to be used with CLEAN-FILTERED air. They may be used with “EANX” gas, commonly called “NITROX”, providing that the standards for purity are in conformance.

H2Odysssey Regulators may be used with oxygen enriched air where the oxygen content may be as high as 40% oxygen, 40% (nitrox). Do not use this equipment with any other gas or enriched oxygen mixture ABOVE 40%. Failure to adhere to this warning may result in serious injury due to fire and explosion or the serious deterioration or failure of the equipment.

Per the European Standard, EN 132 annex A, the following applies:

A.1 Composition of Air

Table 1. Composition of natural air

Components	Mass%	Vol%
Oxygen	2314	209476
Nitrogen	7552	78084
Argon	1288	0934
Carbon dioxide	0048	00314
Hydrogen	0000003	000005
Neon	000127	0001818
Helium	0000073	0000524
Krypton	0000030	0000114
Xenon	0000039	00000087

A.1 Composition of Air

- The breathable air shall meet the following standards of purity. If not specified otherwise the contaminants shall be kept to a minimum, but in any event shall not exceed the permissible exposure level.
- The mineral oil content shall be such that the air is without odor of oil.
- NOTE: The odor threshold is in the region of 0,3 mg/m³.
- In self-contained open-circuit compressed air breathing apparatus the water content shall not exceed 30 mg/m³ for 300 bar or 50 mg/m³ for 200 bar apparatus.
- In compressed air line breathing apparatus air should be used having a dew point sufficiently low to prevent internal freezing. When national or state regulations exist they shall be observed.

CAUTION

According to EN 250, S.C.U.B.A. shall be equipped with at least the following sub-assemblies:

- a) Air Cylinder(s) with cylinder valve(s) and carrying frame.
- b) Demand Regulator (First and Second Stage).
- c) Safety Device / pressure gauge.
- d) Carrying Systems / body harness.
- e) Facepiece: Mouthpiece assembly or full face mask or diving helmet.

H2Odysey Regulators

WARNING

DO NOT ATTACH A LOW PRESSURE HOSE TO A HIGH PRESSURE PORT (MARKED HP) OR A HIGH PRESSURE HOSE TO A LOW PRESSURE PORT.

WARNING: ONLY Second Stages DESIGNED TO OPERATE AT 135 +/- 10 p.s.i.g. INTERMEDIATE PRESSURE CAN BE USED with H2Odysey First Stage regulators.

FIRST STAGE REGULATORS

FEATURES:

- Totally balanced diaphragm mechanism.
- (4) Low Pressure Ports, standard thread on Swivel Head.
- (2) 7/16" High Pressure Ports.
- Intermediate pressure 9.65 Bar/140 P.S.I.G.

SECOND STAGE REGULATORS

FEATURES:

- Large Silicone Diaphragm
- Low Friction Roller Lever
- Large Silicone Exhaust Valve (XL& SE Octo)
- Large Dual Silicone exhaust valve (XS)
- User Adjustable Inhalation Knob (XLonly)
- User Adjustable Venturi Vane (XLonly)
- Large Purge Button
- Silicone Mouthpiece
- Compact Exhaust Manifold

CAUTION

Diving in cold water (below 10° C/50° F) without special equipment and training may cause serious injury or death.

Before attempting cold water or ice diving, you must receive training and certification in the techniques used in cold water or ice diving from a recognized certification agency and follow all recommended procedures. However, due to variables such as water temperature, salinity, depth, breathing rate, lung volume and moisture content in the compressed breathing air, the possibility of ice formation still exists. Ice formation can interfere with the proper operation of the regulator, causing free-flow or blockage of air which may result in personal injury or death.

DO NOT ATTEMPT A DIVE WITH A FREEFLOWING REGULATOR

WARNING: Do not connect Low Pressure hoses to High Pressure Ports.

NOTE: MAXIMUM RECOMMENDED OPERATING DEPTH FOR ALL H2Odysey REGULATORS IS 130 ft (40 m)

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PRE-DIVE PROCEDURE

1. Inspect Hose(s) and Hose Connections. Be certain the hoses do not have cuts, abrasions, or other signs of damage. Do not use the Regulator System if any problems are found, until the hose has been replaced. Inspect the hose(s), connections and plugs to make sure they are tight.

2. Inspect First Stage Regulator. The sintered filter, located where the first stage regulator seals to the cylinder valve, must be free of rust, corrosion, or other contaminants.

3. Mount the First Stage Regulator on the cylinder valve. (Note: For Yoke Valves, be certain the O-ring in the cylinder valve is in good condition). There is a small dimple on the body of the cylinder valve. Be certain the point of the yoke screw is fitted into this dimple. Hand tighten the yoke screw snugly so the sealing area the First Stage Regulator is properly seated on the cylinder valve O-ring. For DIN connection verify that the O-ring in the DIN connector on the First Stage Regulator is in place and useable. Screw the DIN Connector into the valve on the SCUBA cylinder CLOCKWISE until the knurled ring on the DIN Connector will not turn anymore. Verify DIN connection is tight and on properly.

4. Pressurize Regulator System. Open the cylinder valve (slowly, counter-clockwise) to prevent a sudden surge of air through the regulator. Be sure any gauges attached to the first stage are pointed away from you when opening the cylinder valve. The cylinder valve must be fully open before starting your dive.

5. Air Purge System. After the First Stage Regulator is mounted on the cylinder valve and the cylinder valve is open, depress the purge on the Second Stage Regulator two or three times to blow out any dust or foreign material. Take several breaths from the regulator second stage prior to entering the water to assure the Regulator is clear and operating correctly. Prior to diving, DO NOT operate Regulator out of water in cold air; avoid breathing from the Regulator or purging the Regulator when the ambient air is at or near freezing temperature.

6. Inspect Second Stage Regulator(s). Visually inspect the Second Stage Regulator(s) with careful attention to the mouthpiece area. Be sure there are no holes in the mouthpiece, and that the mouthpiece clamp is on and secure.

7. BCD Power Inflator. If you are using a Buoyancy Compensator (BC) Power Inflator, be sure the quick release connection from the hose to the inflatable device is properly joined.

8. It is recommended that to better drain any water in the SECOND STAGE you remain in the near HORIZONTAL position while diving, or, if in the VERTICAL position, tilt your head down to better exhaust any water that may be in the second stage.

POST-DIVE PROCEDURE

When the dive is completed, the cylinder valve must be closed, and the air remaining in the regulator system must be removed. Remove the residual air by depressing the Second Stage purge. Failure to remove air can result in damaged O-rings and make removal of the First Stage Regulator from the cylinder valve very difficult, or even impossible.

Follow these six steps after every dive:

- 1.** Close the air cylinder valve (turn clockwise). Drain the remaining air from the regulator systems by depressing the purge on the Second Stage Regulator(s).
- 2.** If you have a BC Power Inflator, disconnect the quick release coupling.
- 3.** Remove the First Stage Regulator from the cylinder valve, by turning the yoke screw counter clockwise, or if using a DIN Connector, unscrew the connector counter-clockwise until free from the valve.
- 4.** Dry off the dust cap and position it between the yoke screw and sealing area of the First Stage Regulator. Tighten the yoke screw to hold it in place. For DIN Connector, screw the Cover back onto the threaded portion of the DIN Connector.

5. Rinse the entire Regulator in clean, fresh water, preferably warm (not hot). Direct water through the mouthpiece and over the entire regulator. Remove any residual water and allow to air dry. **DO NOT** depress the purge on the Second Stage while cleaning the system. If the purge is depressed water will enter the system possibly causing damage to the First and Second Stages.

6. Keep your Regulator in a clean, dry area where it will not be exposed to rough handling, extreme heat or extreme cold. Storage temperature from 50°F to 80°F.

MAINTENANCE

H2Odysey recommends that your H2Odysey Diving Regulator and / or Octopus be inspected and serviced on a yearly basis by a H2Odysey Authorized Service Center to assure proper performance. For further information regarding H2Odysey Service Centers, please contact:

H2Odysey

975 Park Center Dr.

Vista, CA 92083

or

call 800-999-0019

8:00 am to 4:30 pm Pacific Standard Time.

Caution / Warning

- #1: This S.C.U.B.A. Diving Equipment should be used ONLY by properly trained individuals.
- #2: DO NOT use this equipment in environments it was not designed for.
- #3: Proper care and maintenance of this equipment is necessary for proper operation.
- #4: Use proper diving procedures while using this equipment.
- #5: Use this equipment in conjunction with other life support equipment while SCUBA diving.
- #6: Dive only to safe and accepted sport diving limits.
- #7: Have your H2Odyssey SCUBA equipment serviced annually by an authorized H2Odyssey Service Center.
- #8: DO NOT use this equipment if ANY unsafe or questionable situation arises.

LIMITED WARRANTY

WHAT IS COVERED:

This warranty covers to the original owner, all defects in material or workmanship in any Regulator sold by H2Odysey.

WHAT IS NOT COVERED:

This warranty does not cover damage, failure or loss caused by wear or tear, failure to perform normal maintenance on H2Odysey items, cosmetic damage such as scratches, nicks, dents or discoloration or any damage failure or loss caused by:

- 1: Accident, misuse, neglect, abuse, or improper maintenance.
- 2: Failure to follow instructions in the USERS GUIDE.
- 3: Rental, Training Class, Military, or Commercial usage.
- 4: Use by uncertified (ie. PADI, NAUI, SSI, etc.) persons.

FOR HOW LONG:

The warranty coverage has a two year Limited Warranty by H2Odysey.

WHAT H2Odysey WILL DO TO CORRECT DEFECTS:

Within the warranty period, H2Odysey will at its option, either repair or replace (with same or equivalent product) the defective in warranty product, part or accessory. Cost of labor for warranty is not covered by warranty. The product must be accompanied by a dated proof of purchase for warranty service. As a matter of warranty policy, H2Odysey will not refund the consumers purchase price.

NO LIABILITY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES

Repair or replacement of defective products, parts or accessories specified above are Your sole Remedy under this warranty and IN NO EVENT SHALL H2Odysey BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

Warranty

How you can get service

Contact your authorized H2Odysey Service Center or write to H2Odysey, 975 Park Center Dr., Vista, CA 92083, for the name and address of your nearest authorized H2Odysey Service Center or call 800-999-0019.

Important Note

This warranty gives you specific legal rights and you may also have other rights which may vary from state to state.

Your rights under the law

Product purchased in the United States, Canada, or Caribbean but serviced in other countries will be subject to the warranty conditions in effect in the country of use and service.

Model Number _____

Model Number _____

Model Number BCD _____

Date Purchased _____

Service Dates _____

Service Dates _____

Service Dates _____

Service Dates _____

