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RG3500 Regulator

Product description

The RG3500 regulator is composed of a balanced diaphragm first stage and a balanced second stage with Venturi and sensitivity adjustments (dive/pre-dive mode).

The balanced diaphragm means that the effort to open and close the first stage valve is unaffected by changes in tank pressure. The balanced design allows for a larger first stage orifice, which improves regulator performance.

The design of the diaphragm does not allow water to enter the first stage, which means no salt, sand, or other contaminants will build up on the internal surfaces of the regulator.

There are two high-pressure ports and four low-pressure ports. The high-pressure ports are on the body of the first stage opposite of each other. The low-pressure ports are angled for ease of hose configuration. A 300-bar DIN connector is standard.



Specifications

European EN250 norms: Regulator meets the European EN 250 - 1999 norms.
Ports

Low pressure: 4 (3/8-24 UN)

High pressure: 2 (7/16-20 UNF/ISO263)

Connector: 200/300 bar - 3000/4400 psi (Ref.: 316 019)

Intermediate pressure: 145 PSI (9.5 bars)

O-rings: EPDM O-rings with oxygen-compatible lubricant

Internal second stage valve: Balanced downstream

Second stage adjustment knob: Fine-tunes inhalation effort

Hose: 28-inch (71 cm) low-pressure

Temperature rating: 36 to 95 °F (2 to 19 °C) (see "Cold water use" for more information)

Regulator features

First stage

The balanced diaphragm first stage reduces the high-pressure air in the cylinder to an adjustable intermediate pressure of 145 psi (9.5 bars) above ambient pressure. The first stage is balanced and delivers air at constant pressure even as the pressure decreases inside the cylinder. A low-pressure hose links the first stage to the second stage. The first stage features four 3/8-inch low-pressure (LP) ports to allow the direct connection of your BCD and dry suit hoses and two 7/16-inch high-pressure (HP) ports to connect your submersible pressure gauge.

Second stage

The second stage is a pneumatically balanced second stage, which offers optimum ease of breathing. An additional adjustment allows the diver to fine tune the Venturi effect to the dive or diver's conditions. A specially designed front cover offers

maximum protection to the diaphragm and minimizes the side effect of strong currents. The second stage comes from the factory with the adjustment knob and lever in the minus position.

Venturi lever

The lever, located on the side of the second stage housing, enables the diver to control the inhalation Venturi effect. When on the plus (+) position, the diver gets maximum Venturi assistance upon initial inhalation. The airflow is maintained without additional effort.

Note: To avoid free flow, keep the lever in the minus (-) position. This position should be maintained whenever the second stage is used as an octopus safe second stage.

At the beginning of the dive, push the Venturi lever in the plus (+) position to obtain optimum breathing performance. The plus (+) position is the “dive mode” position.

Inhalation resistance

The knob located on the left side of the second stage allows for the adjustment of the resistance of the spring inside the second stage, which alters the breathing resistance. The diver can choose any position between the minimum (turned completely counter clockwise) and the maximum (turned completely clockwise) depending on the conditions. Turning the knob clockwise increases the inhalation resistance. Turning the knob counter clockwise decreases the inhalation resistance.

Attaching high- and low-pressure hoses

There are two high-pressure and four low-pressure ports on the first stage. The high-pressure port is for attaching a pressure gauge. The low-pressure ports are for attaching an inflator hose and a primary and backup second stage regulator.

WARNINGS: Do not try to connect a low-pressure hose to a high-pressure port or vice versa. Do not open a cylinder valve unless you are certain that *all* hoses are correctly attached.

To attach high- and low-pressure hoses:

1. Check that the hose o-ring is in place.
2. Line up the hose connector with a port.
3. Hand tighten the hose to the regulator. Tighten further using an appropriate sized wrench. Do not over tighten.

DIN connector use

The regulator comes standard with a DIN connector, which can only be used with a DIN valve or manifold on your cylinder.

To attach the regulator to a DIN valve:

1. Make certain that both the DIN connector and valve are free from dirt, sand, or other contaminants.
2. Make sure the regulator o-ring is in place and in good condition.
3. Screw the connector into the DIN valve until the o-ring seats to the back of the valve. Only hand tighten the connector. Do not forcibly tighten the connector.

Note: Do not rotate the first stage once the connector is tightened. Doing so may cause the DIN connector to separate from the valve.

Maintenance

Your regulator will provide you years of service with proper care and maintenance. This involves post-dive care and regular professional service.

Before a dive: Remove the dust protector and install the first stage on the cylinder valve by tightening the DIN connector. Open the valve completely and check the cylinder pressure on the pressure gauge. Purge the second stage by depressing the purge button for a few seconds to ensure proper air delivery. Take several inhalations on the second stage while on the surface before starting the dive.

After a dive: After use, replace the dust cover. Thoroughly rinse the regulator in fresh water and allow it to thoroughly dry before storing it in a closed container.

Storage: Store the regulator by hanging it by the first stage, away from heat and direct sunlight. Do not hang or store the regulator in a manner that puts strain on the hoses. When storing it for an extended period of time, select a dry cool, clean place.

Professional service: Over time, mineral deposits and salt build-up will accumulate on your regulator, which can adversely affect its performance. Professional cleaning and service is the only way to remove these deposits and return the regulator to its proper working order. Other regulator breakdowns can also occur whether the regulator is used or not, such as spring tension and o-ring breakdown. These too will affect the performance of the regulator.

To keep your regulator working at its best performance, you should have your regulator serviced at least once every two years or 100 hours by a professionally trained technician.

CAUTIONS

- Do not leave your regulator exposed to direct sunlight when possible.
- Do not use the regulator first stage as a handle to carry the cylinder.
- After every dive, remove the regulator from the cylinder to preserve it from any shock damage.
- In every case, always handle your regulator with care.

Cold water use

Use of regulators in water temperature colder than 50 degrees F (10 degrees C) requires special equipment and precautions.

- Make sure that your air supply meets the EN 12021 quality norm requirements.
- Use a cylinder with a dual outlet Y- or H-valve and two independent breathing systems outfitted for coldwater use.
- Do not expose the regulator to cold air (colder than 32 F, 0 C). Place the regulator first stage in the cold water to bring its temperature up before use.
- Do not purge the second stage outside the water to avoid freezing incidence.
- During the dive, do not put unnecessary demands on your regulator (e.g. avoid using the regulator, octopus, and the BC and dry suit inflator all at once). Do not purge the regulator unless required.
- If the regulator were to freeze up accidentally and therefore free flow, switch to your second breathing system and abort the dive.

WARNING: Cold water diving requires special equipment and training. Failure to follow the above instructions and recommendations can result in serious injury or death. Certified instruction should be received and completed for cold water and ice diving from a certified instructor by a recognized training agency prior to attempting any cold water or ice dive.

WARNING: This regulator, in compliance with EN 250, is not intended for more than one diver to breathe from at the same time. If this regulator is configured and used by more than one diver at the same time, then cold water and breathing performance may not fulfill the requirements of EN 250.

Important notice

Before using your regulator system components, there are several things you must do. These include:

- Obtain a minimum of entry-level open-water scuba diver training and certification from a recognized diver-training organization.
- As part of this training, you must master all the basic skills of regulator use, including proper assembly and disassembly of complete scuba units, including regulator, cylinder and harness, regulator second stage recovery and clearing, continuous breathing while on scuba, and post dive regulator cleaning and storage.
- You must read and understand this owner's manual and all other warnings that accompany the product. If you do not understand some part of this manual, contact Dive Rite or your local authorized Dive Rite dealer.

In providing this manual, we make certain common sense assumptions about your knowledge, skills, experience, and abilities. These assumptions include:

- That you are a certified scuba diver, whose training met prevailing standards of practice and included the proper assembly, use, and care of scuba regulators.
- That you further understand that the assembly and disassembly of regulator system components, and any repairs to or internal maintenance of such components, should only be performed by a qualified technician who is working under the supervision of an authorized dealer. In other words, anything requiring the use of wrenches, screwdrivers, or other tools is something an authorized dealer should be doing, not you.

Additionally, before using your regulator system components in open water, you should:

- Read and understand this manual in its entirety. There is very little, if any, information here that does not pertain to you. Don't risk missing vital information by picking and choosing the information you think applies to you.
- Practice using your regulator in calm, shallow or confined water before using it in more challenging conditions.

If you have questions regarding any of the information you find in this manual or have questions pertaining to information about your regulator system that you cannot find in this manual, contact your local authorized Dive Rite dealer. If there is no authorized Dive Rite dealer in your area, contact Dive Rite directly, using the contact information appearing in this manual.

WARNING: Failure to follow the instructions given in this manual or to heed the warnings it provides can cause equipment loss or damage, serious personal injury, or death.

Warranty information

Dive Rite warrants this regulator against any and all defects in materials and workmanship throughout its useful life. This warranty does not apply to normal wear and tear, mouthpieces, hoses, o-rings, diaphragms, filters, valve seats, or any cosmetic damage and is extended only to its original owner.

Although this warranty is not contingent upon any annual service, it is highly recommended that any and all regulators receive an annual safety inspection performed by factory-authorized personnel. Factory or authorized dealer servicing is required every 200 hours of dive time or every 2 years whichever occurs first.

This warranty applies only to regulators purchased from authorized Dive Rite Dealers.

Misuse, neglect, unauthorized service, as well as any modifications voids this warranty.

Dive Rite shall not be liable for incidental or consequential damages incurred through the use of this regulator. Some states in the U.S. and certain foreign countries do not allow exclusions or limitations of liability for incidental or consequential damages so this may not apply to you.

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

To make a claim under this warranty, the owner must have registered his/her warranty using Dive Rite's website (www.diverite.com). All warranty repairs (international or domestic) *must* be accompanied by a copy of the purchase receipt. For warranty repairs (international or domestic) the product must be returned to the *store* where the item was purchased or directly to Dive Rite. A Return Authorization must be obtained by calling Dive Rite corporate offices (386-752-1087) to send items to Dive Rite. No warranty service will be performed for other than registered owners. Note: Local dealers and distributors are not responsible for service of items purchased from unauthorized dealers, internet dealers, or dealers from other territories.

Activating and Utilizing Your Warranty

1. To activate your warranty, you must register your regulator within 30 days of purchase through our online product warranty registration. This is located within our website at www.diverite.com/warranty.
2. Proof of original ownership is provided by your purchase receipt and should be retained for your records.
3. To maintain your original-owner lifetime warranty, you must have your regulator serviced within the prescribed 200 hours of usage or two year time frame as outlined above. This service can be done at your local authorized Dive Rite Dealer or directly by Dive Rite.
4. If you intend to receive your service directly from Dive Rite, you must first obtain a Return Merchandise Authorization (RMA) number by calling Dive Rite at 386-752-1087. Your RMA number is to be printed on the address label of your package.
5. Your owner's manual has a service log for you to record all your service history. This log is used to verify your adherence to the required service schedule to maintain your warranty.

