



USER MANUAL DIVATOR RESCUE BC



CONTENTS

WARRANTY INFORMATION	5
OWNER'S RESPONSIBILITIES	5
LIMITED LIFETIME GUARANTEE TO THE ORIGINAL	
OWNER	6
SHELF LIFE	10
FUNCTION	11
PROPER FIT OF VEST (BC)	20
PRE-DIVE ASSEMBLY AND INSPECTION	21
LOADING THE INTEGRATED WEIGHT POCKET	
	LIMITED LIFETIME GUARANTEE TO THE ORIGINAL OWNER GENERAL INFORMATION AND SPECIFICATION IMPORTANT INFORMATION SCUBA CYLINDER SELECTION AND CONFIGURATION SURFACE BUOYANCY OF DIVATOR RESCUE BC OPERATING TEMPERATURE RANGE. SHELF LIFE FUNCTION. THE BUOYANCY CONTROL SYSTEM VEST (BC)

6.	DONNING PROCEDURE	25
7.	DIVING	28
	PRE-DIVE CHECK	
7.2	DIVING	28
0		00
	EMERGENCY PROCEDURES	
8.1	EMERGENCY ASCENT	33
8.2	PROBLEM MANAGEMENT	34
9	DOFFING PROCEDURE	36
10.	MAINTENANCE	37
10.1	1 POST DIVE DIVATOR RESCUE BC CLEANING	37
10.2	2 INSPECTION AND SERVICE INTERVAL	37
10.3	3 INSTALLATION OF NEW PARTS/ ALTERATIONS	38
11.	SERVICE RECORD	39

1 WARRANTY INFORMATION

1.1 Owner's Responsibilities

- Interspiro requires that the end user of this system be certified by a nationally or internationally recognized SCUBA certification agency and adequately trained in its use by a certified SCUBA instructor with thorough knowledge and experience in the use of Interspiro equipment.
- An annual inspection performed by an authorized person is required for the safe operation of this system.
- Your Divator Rescue BC (Buoyancy Compensator) is NOT a personal flotation device and should not be used as a life jacket. The BC does NOT under all weather conditions guarantee a heads up position of the wearer at the surface.
- All emergency procedures should be practised periodically in shallow water (3 m or 10 feet) to maintain preparedness in the event an actual emergency should occur.
- For assistance with preparation, questions or service, contact your local authorized Interspiro Dealer.

1.2 Limited Lifetime Guarantee to the Original Owner

Your Divator Rescue BC is guaranteed against defects in materials and workmanship. This guarantee does not cover damages from accident, abuse, neglect, alterations, improper usage, normal wear & tear or failure to provide reasonable care. All warranty claims will be handled through Interspiro, or an authorized Interspiro Dealer.

Note: Buoyancy Compensator (BC) and Buoyancy Control Device (BCD) are synonymous for the same piece of SCUBA diving equipment.

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2. GENERAL INFORMATION AND SPECIFICATIONS

2.1 Important Information

This Buoyancy Compensator's User's Manual contains important safety, maintenance, and operation information. Read this manual thoroughly before diving.

WARNING! SCUBA diving is an adventuresome activity and some risks are involved. Please be sure that you and your dive partner have current certifications and follow all of the recommendations of your certifying agency and that all equipment is used and maintained according to the manufacturer's recommendations. Failure to follow these guidelines can result in serious injury or death.

2.2 SCUBA Cylinder Selection and Configuration

Your over-all buoyancy depends on a combination of the buoyancy of all your diving equipment added to your own body's buoyancy. The Divator Rescue BC is designed to work with a variety of tank sizes and configurations.

WARNING! Failure to comply with the following information may result in an improper buoyancy configuration. You must maintain neutral buoyancy while diving to prevent injury or death.

The Divator Rescue BC is designed primarily for connection to all Interspiro diving cylinders.

The Cylinder dimensions and capacity are two quantities which are important to understand when configuring your equipment. Cylinder dimensions are the actual, outside dimensions of a SCUBA cylinder (also called the tank). The Divator Rescue BC is designed to fit the Divator Lite Composite 326,7 litre cylinder pack as its largest cylinder alternative and will fit the single 6 litre (4 litre) steel cylinder as its smallest cylinder alternative when mounted with Interspiro's "Single cylinder mounting kit".



Cylinder pictogram (example)

Consult your local authorized Interspiro dealer if you have any questions regarding cylinder options. Cylinder capacity is the volume of the SCUBA cylinder. When expressed in cubic feet, the volume is given for compressed gas. When expressed in liters, the volume is given for the actual volume of the cylinder based on the interior dimensions of the cylinder (water capacity). Maximum recommended cylinder capacity is 13,4 liters. Once again, if you have a question, consult your local authorized Interspiro dealer.

2.3 Surface Buoyancy of Divator Rescue BC

Your Divator Rescue BC's buoyancy has been rated by the manufacturer.

Buoyancy figures were measured in fresh water at sea level, and were rounded down to the nearest decimal.

Buoyancy is given in pounds and kilos as well as Newton but rounded down to the nearest lower multiple of 10 N.

The buoyancy of your Divator Rescue BC is printed on a label, located between the bladder and the outer front cover.

A typical label for a BC will look like the example below. This particular label indicates that the bladder is rated at 26 lbs / 12 kg and 120 N buoyancy.



BC label (example)

2.4 Operating Temperature Range

Air	-4° to +122° F	-20° to +50° C
Water	+28° to +104° F	-2° to +40° C

WARNING! Special Instruction in cold water diving methods, and the specific use of this product is required prior to cold water diving (temperatures below 10° C / 50° F). That instruction is beyond the scope of this User's Manual. Diving without proper instruction could result in injury or death. Consult your diving instructor for this instruction prior to using this product in cold water.

2.5 Shelf Life

The shelf life for a new, unused Divator Rescue BC when deflated and stored in a dry and dark place at room temperature, with no exposure to ultraviolet (UV) light, is seven years. Refer to storage and post dive Divator Rescue BC cleaning information.

3. FUNCTION

3.1 The Buoyancy Control System

The function of the buoyancy control system is to add to your diving enjoyment. It is designed to provide you with a comfortable way of "wearing" your SCUBA system, a resting platform while on the surface, and an easy means of controlling your buoyancy while diving.

3.2 Vest (BC)

The vest portion of the system should fit so that it wraps partially around the front of the diver. You should be able to tighten the waist strap so that the vest fits quite snugly around the waist, in order to prevent the Divator Rescue BC from shifting during the dive. If you can draw the two sides of the vest together and the fit is still not snug, you need a smaller size vest. If the vest is uncomfortably tight when the fully extended strap is fastened, you need a larger vest.

3.3 Waist strap

The waist strap should fit around the waist (top of the hip) NOT over your rib cage or diaphragm. The waist strap is adjusted by pulling on the D-rings. The adjusting straps can also be removed by unsliding them from the plastic tri-glide on the inner side of the vest. It is imperative that the Divator Rescue BC not be worn too high on the body as this will create an undesirably high center of gravity and could restrict the ability of your diaphragm to move freely, resulting in discomfort or shortness of breath.

3.4 Shoulders

Length of the shoulder strap depends on personal comfort and the length of your torso. Take into consideration different suits you may be wearing with the system, and be sure to allow enough length so the pack may be worn low as described above. The sternum strap should be just above the breast line. You should easily be able to reach the quick release buckles. The sternum straps have high and low attachment loops. The Divator Rescue BC leaves the factory with the sternum straps attached to the lower loops. If this position is covering a dry suit inflator, then the strap can be moved to other the attachment point or removed completely.

3.5 Integrated Bladder

The bladder is integrated in the design of the vest.



The Divator Rescue BC blader is inflated and drained of air during diving using the power inflator. The power inflator consists of an Oral Mouthpiece, a Dump Button and a Filling Button. The power inflator connects directly to the Remote Dump Valve via a steel cable inside the corrugated inflator hose. The Filling button operates over a pressure range of 6.5-13.8 bar (95-200 psi). To inflate the Divator Rescue BC using the Filling button, attach the supplied low pressure hose to the quick coupling and press the filling button.

On the water surface the diver can also inflate the bladder by breatheing into the Oral Mouthpiece with the dump button depressed.

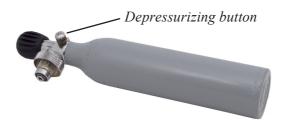
WARNING! NEVER breathe air from the bladder. The bladder was not designed as an auxiliary air source and may contain harmful contaminants, which if inhaled, may cause injury or death.

The bladder has three dump valves. One on the lower right back side (or left), and one on each shoulder. The lower back and the right shoulder dump valve is opened by pulling a knob/string. The left shoulder dump valve, also named the Remote Dump Valve, is opened by either pulling the inflator hose or pushing in the dump button on the power inflator. The right shoulder and the back side dump vales also functions as over pressure valves.

A rescue air inflation cylinder is attached to the back (left or right) of the bladder, which is used to quickly inflate the bladder for emergency ascent (buoyancy). The cylinder is held in place by an elastic "spare air pouch" that can be fastened to the BC by the zipper attachment.

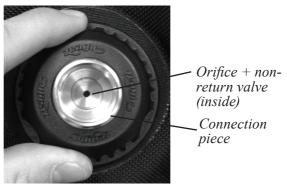


3.6 Rescue air inflation cylinder



The Divator Rescue BC is equipped with a Rescue air inflation cylinder of 300 bar, 0,35 l volume. The cylinder is made of aluminium.

The rescue air inflation cylinder is attached to the bladder with a threaded DIN 5/8 coupling. The rescue air inflation cylinder fills the BC in a controlled way through an orifice in the connection piece.



3.6.1 Removing the rescue air inflation cylinder for filling

1. Unscrew the rescue air inflation cylinder from the connection piece BC.



2. Remove the rescue air inflation cylinder by unzipping it from the BC.



- 3. Open the cylinder valve shortly to drain the inside connector piece from possible water contained in there.
- 4. Connect the rescue air inflation cylinder to a FULL cylinder (300 bar). Open both valves and let the pressure equalize. Close both valves and push the depressurizing button on the cylinder valve.
- 5. Re-attach the rescue air inflation cylinder on the BC.
- 6. Check the pressure in the donating cylinder. The pressure in the Rescue air inflation cylinder will be the same as in the donating cylinder.

3.7 Weight system

The Divator Rescue BC has four buoyancy pockets, two on the back side of the vest and two on the front.



The front weight pockets can be removed during emergency ascent, or before leaving the water after the dive, by pulling the black handles (red knobs) straight out.

NOTE: The back weight pockets are intended ONLY for trim adjustment and if used, it should ONLY contain a small amount of weight.

WARNING! If weights in the back pockets allow you to dive without having any weights in the removable front pockets, these weights must be transferred to the removable front pockets, in order to allow you to dump them in an emergency.

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3.8 Visibility equipment

The BC is equipped with two yellow colored removable badges on each shoulder that increase the visibility of the diver at the surface. The badges are attached with velcro.

NOTE: All four badges must be attached to the BC in order to fulfill the requirements of EN12628.



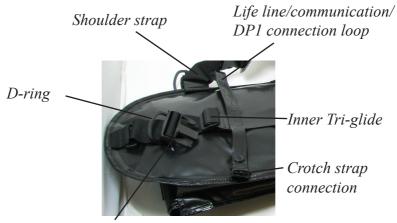
The BC is also equipped with a signalling mouth whistle.



4. FITTING AND ASSEMBLY

4.1 Adjusting the waist strap

Normally the waist strap is adjusted after connecting the side release buckles by pulling the D-rings. The waist strap can also be shortened by adjusting the webbing on the inner Tri-glide.



Side release buckle

4.2 Proper Fit of vest (BC)

The design of the vest (BC) allows the diver to size each component of the harness system independently within a size of a vest, for a true custom fit. For proper performance, please be sure that your choice of BC size is correct.

The Divator rescue BC comes in different sizes. To choose the BC that fits you the best, the BC must be tried on with full diving gear.

5. PRE-DIVE ASSEMBLY AND IN-SPECTION

WARNING! Before each dive, check all bands, straps, clips, and/or waist panels for wear and tear so that full function from the BC can be guaranteed. Adjust the Divator Rescue BC so that it does not restrict your breathing. Restriction of normal breathing while wearing your BC could result in injury or death.

5.1 Over Pressure Valve

The two over pressure valves (dump valves) are located on the lower (left or right) back side and the right shoulder of the bladder assembly. As its name implies, the overpressure valve prevents over inflation of the bladder. The valve automatically releases air when the internal bladder pressure exceeds the valve's spring pressure. The valve will automatically close when the internal bladder pressure becomes less than the valve's spring pressure. This valve may also be used to "dump" air when you are diving, by pulling the knob / string that is attached to the valve.

IMPORTANT! The function of the over pressure valve should be checked before every dive for proper operation.

5.2 Remote Dump Valve

The Divator Rescue BC is equipped with a remote dump valve. It is located on the upper left side, just behind the shoulder, on the bladder assembly. The Remote dump valve allows you to "dump" or exhaust air manually as you adjust for neutral buoyancy. The Remote Dump Valve operates by simply pulling the inflator handle.

IMPORTANT! The remote dump valve should be checked before every dive for proper operation. Check that the threaded cap on the remote dump valve is tightened securely. The remote dump valve has been designed to be possible to service when needed.

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5.3 Power Inflator/ Oral Inflator Mechanism

The Divator rescue BC is equipped with a power inflator/oral inflator mechanism.

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IMPORTANT! Check all mechanisms before every dive to assure proper operation and to find possible leaks.

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5.4 Loading the Integrated Weight Pocket

The weight pockets can be loaded after the diving system is donned to reduce the overall weight of the system, or the weight pockets can be loaded before the diving system is donned. Considerations when to do this include the amount of weight to be carried and the distance to enter the water, etc. Ask your buddy for help in either case.

To load the weight pockets:

1 Unfasten the buckles securing the weight pockets on each side of the vest and remove the weight pocket.



2 Load the weight pockets with an appropriate amount of weight and close the velcro flap on the pocket.





3 Re-insert and secure the weight pockets in the BC weight shafts, by fastening the weight pocket's velcro and the buckle.



If you are using a large amount of weight, it is recommended to re-insert the weight pockets after the donning procedure, immediately before the dive, to reduce the overall weight of the system being handled.

WARNING! Always check that the weight system is functioning correctly and that the weight pockets are held firmly in place. Inspect that the buckles/fastening mechanism is undamaged.

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6. DONNING PROCEDURE

WARNING! Diving equipment is heavy! To avoid injury or fatigue and to become familiar with each other's equipment, have your buddy assist you! Take this opportunity to be sure your buddy understands how your weight release system works.

Be sure you have read and performed the "Proper Fit" page in the Fitting and Assembly section of this manual.

- 1. Attach a controlled prepared Divator Rescue BC to a cylinder with the quick attachment rail. Align the rail key-holes, push towards the top of the cylinder until it closes with a click.
- 2. Assure that the Divator Rescue BC is properly attached to the cylinder.
- 3. Connect the Divator regulator to the cylinder valve and finish assembling the Divator system according to instructions in the Divator User Manual.
- 4. Inflate the BC with the power inflator filling button and check for leakages.
- 5. Deflate the BC.
- 6. Connect and loosen the shoulder straps. Undo and loosen the waist strap.

7. Don the Divator rescue BC like you would a jacket. Pull the shoulder straps tight and to a comfortable fit.



8. The BC should be worn low with the bottom of the vest at the top of your hips. Fasten the waist strap and tighten it snugly.



9. Fasten the sternum strap, if used. It should be just above the breast line. If you are wearing a dry suit, be sure that the sternum strap does not obstruct the function of the dry suit inflator. There are two sets of loops for the sternum strap for alternate position.



The sternum strap can be removed if not used.

10. Fasten the crotch strap, if used. It should be adjusted for a comfortable fit, but firmly enough to ensure that the vest does not slide up on the body when diving.



The crotch strap can be removed if not used.

11. If you are using a life line/communication line/DP 1 hose, connect the equipment to the two connection loops.



7. DIVING

7.1 Pre-Dive Check

Prior to each dive, always check to make certain your Divator Rescue BC has no obvious leaks by inflating the bladder until the over pressure valve opens. Listen for air leaks. If any leaks are found, then a service is necessary by an Interspiro authorized service technician. Check that the weight pockets are fastened correctly before entering the water.

7.2 Diving

7.2.1 Determine correct buoyancy

Your final buoyancy is primarily affected by your diving suit, your diving cylinder and your weights. All of this is adjusted with your Divator Rescue BC. Both too little and too much weight ballast can be dangerous. To determine the proper amount of weight ballast needed for your system, go (with another diver) to a shallow safe location with the type of (fresh or salt) water you will be diving in later. During the test, wear a near empty cylinder of the same size and material you will be using. With a safety diver present, carefully add or remove weights from your system until you float vertically with a full breath of air and a near empty cylinder with the surface of the sea at eye level. To this amount of weight must be added some

comfort weight for a dry suit user.

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IMPORTANT! A near empty cylinder is important. Many divers weight themselves with a full cylinder, and then have trouble staying down later in the dive as the cylinder gains buoyancy.

7.2.2 Descend with the Divator Rescue BC

Start your descent by releasing air slowly either through the power inflator by holding it over your head and pushing on the dump button or by pulling gently in the inflator hose to open the remote exhaust valve on the shoulder. *Do not use excessive force as this could damage the system*. Let out just enough air to start your descent.



As you descend and when you reach your desired depth you will need to add air to your Divator Rescue BC by pressing on the filling button of the power inflator to attain "neutral" buoyancy.



It may be necessary to adjust the waist strap during the dive due to the compression and expansion of your diving suit.

7.2.3 Adjusting the buoyancy

You will need to add air to the Divator Rescue BC as you descend and exhaust air from the BC as you ascend, to maintain neutral buoyancy throughout your dive.

• Push the air inlet button on the power inflator to increase the buoyancy



• Hold the power inflator over your head and push the exhaust button on the power inflator to decrease the buoyancy. (You can also pull the inflator hose to open the dump valve to exhaust air.)



Alternatively, use the dump valves knobs on the right side shoulder or the right (left) back side of the vest.



7.2.2 Ascend with the Divator Rescue BC

When you begin your ascent at the termination of your dive, **you must release air** from your Divator Rescue BC either through the exhaust on the inflator or through the remote exhaust. Be sure you are vertical with your left side slightly higher than your right side to vent the Divator Rescue BC. You should release air so as to maintain a rate of ascent according to the rate prescribed by the decompression tables you are using. To maintain a safe ascent rate you should assist by swimming to the surface. Do not use your Divator Rescue BC to pull you to the surface, as this may result in a fast ascent. **Carefully control your Ascent Rate!**

• Inflate your Divator Rescue BC when you reach the surface to attain a comfortable degree of buoyancy. Do not overinflate the BC.

• At the water surface it is also possible to inflate the bladder manually. Push the exhaust button on the power inflator and exhale into the mouth piece.



Release the pressure on the dump button before removing your mouth from the mouth piece.

8. EMERGENCY PROCEDURES

8.1 Emergency ascent

WARNING! If you are diving with a buoyant wet or drysuit, be aware that releasing weights at depth should only be done if absolutely necessary (for example, if your drysuit has flooded, making you extremely negative). Without weights, it may be very difficult to control your ascent rate as you near the surface. Weight release at depth should only be done according to the standards set by your certification agency.

• Grab and pull on the emergency handles on the weight pockets to release the pockets.



• Open the rescue air inflation cylinder on the left back side of the vest to inflate the vest with air.



Note: The vest will inflate until the vest is filled. All excess air from the rescue air inflation cylinder will be exhausted through the dump valves.

8.2 Problem Management

The scenarios described below are based on recreational no decompression diving. Decompression divers must have complete redundant systems to handle all problems underwater.

• Inflator problem

Inflators may fail due to foreign material in the mechanism, damage from impact by tanks or weights, or other causes. Practice the procedures below (in a safe location with your buddy) for your safety.

• Inflator fails to operate

Check to see that the low pressure hose is properly connected. Orally inflate the bladder if necessary to establish proper buoyancy. Carefully and controlled use the rescue air inflation cylinder to inflate the BC.

• Inflator valve sticks open

Should the inflator valve stick open, causing an uncontrolled filling of the bladder and/or excessive leakage of air at the inflator, hold exhaust valve open and over your head to vent excess air as you disconnect the low pressure hose from the inflator. Abort the dive.

• Exhaust valve or over pressure valve sticks open

If the exhaust valve on the inflator sticks open, hold the inflator in the lowest position possible, to allow the bladder to hold air from that level up. Abort the dive and attempt to swim slowly to the surface. Should excessive negative buoyancy be created, your weights may need to be released. Weight release at depth should only be done according to the standards set by your certification agency.

• Failure to hold air

If for any reason the system should fail to hold an adequate amount of air to provide necessary buoyancy, abort the dive and attempt to swim slowly to the surface. Should excessive negative buoyancy be created, your weights may need to be released. Weight release at depth should only be done according to the standards set by your certification agency.

In the above scenarios you can always try to find a position in the water where air will be kept in the BC.

IMPORTANT! If at any time abnormal performance or malfunction is experienced, the system must be serviced by an authorized Interspiro technician prior to any further use.

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9 DOFFING PROCEDURE

- 1. After the dive, possibly while still in the water, remove the weight pockets.
- 2. Undo the waist strap, by opening the side release buckle.
- 3. Open the sternum strap.
- 3. Disconnect the dry suit inflation hose (if used).
- 4. Open your left side shoulder side release buckle and "swing" the Divator system to your right to undress from it.

10.MAINTENANCE

The reliability and correct functioning of your equipment depends on the care it receives.

10.1 Post Dive Divator Rescue BC Cleaning

- Rinse the Divator Rescue BC thoroughly with fresh water after each use.
- Rinse the inside of the bladder by holding the exhaust button on the inflator system open and allowing fresh water to partially fill the bladder. "Slosh" the water around to dissolve any salt crystals (salt crystals can damage the bladder over time). Drain the bladder completely and repeat.
- Hang the Divator Rescue BC upside down and allow it to dry while partially inflated. Drain any residual water through the exhaust hose while the BC is hanging upside down.
- Store the Divator Rescue BC partially inflated in a cool dry place.

10.2 Inspection and Service Interval

Your Divator Rescue BC (including the inflator) should be inspected and maintained by an authorized dealer at least once a year, and more often if you dive frequently. This is a required action to keep your warranty in effect. There is a Service Record in the back of this manual for the Dealer to record the services performed.

10.3 Installation of New Parts/ Alterations

WARNING! Use of non-factory parts or accessories, or any change to the product not specifically authorized by Interspiro, or performed by an unauthorized repair facility, may cause improper operation, damage, or leakage of the Divator Rescue BC resulting in a loss of buoyancy control or air holding capability. This could result in injury or death, plus will void your warranty. Replace worn or damaged items with approved, factory supplied or specified parts ONLY.

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11. SERVICE RECORD

DATE	SERVICE PERFORMED	SERVICE CENTER	TECHNICIAN
	Owner Orientation:		
	Dealer Preparation:		

Locating Service and Support

The Interspiro dealer that sold you your Divator Rescue BC will be able to assist you with additional questions regarding product operation, warranty, and service.

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