



OX10 MOLLE BC

User manual

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Introduction

This user manual contains important safety, maintenance, and operation information. Read this manual thoroughly before diving.

Safety notice

This product, achieving neutral buoyancy for the user, has been tested in accordance with EN1809, and is to be used according to local regulations.

Manufacturer: Interspiro AB, Box 2853 18728 Täby Sweden

It is approved for use together with the Interspiro OX10 diving apparatus.

This is not a lifejacket: it does not guarantee a head up position of the wearer at the surface.

Interspiro is not responsible for:

- combinations of products, unless put to market by Interspiro
- changes or adaptations made to the product by a third party



Warning

Before using the Divator / OX10 / IS-Mix system, the user must have received full training in its use, have read and understood these operating instructions and demonstrated proficiency to a responsible trainer or supervisor. Failure to do so may result in injury or death for the user and can have serious consequences for people to be rescued and/or items of value to be saved.



Warning

All users of the Divator / OX10 / IS-Mix system must be certified by a nationally or internationally recognized scuba certification agency. Furthermore, all users of the Divator system must be adequately trained in its use by a certified diving instructor with knowledge and experience in the use of the Divator diving system.



Warning

All users of the Divator / OX10 / IS-Mix system must periodically undergo training in emergency procedures in shallow water to maintain preparedness in the event of an actual emergency.



Warning

High pressure gas systems must be handled with care. Damage to high pressure gas system components may result in injury or death. Interspiro is not liable for damages incurred as a consequence of failure to follow the instructions in this manual.



Warning

Before using the Divator / OX10 / IS-Mix system, the user must ensure that the system has been properly inspected and maintained.



Warning

The breathing gas shall meet the requirements for breathing gas according to EN 12021.

Safety terminology and symbols

In this document, the terms WARNING and NOTICE are used to indicate potential hazards. Read the accompanying information carefully and follow the safety instructions.



Warning

The WARNING type of hazard statement signifies that there is a risk of serious injury or death.



Notice

The Notice type of hazard statement signifies that there may be a risk of damage to equipment or property.

Technical description



1. Adjustable shoulder strap, left and right
2. Shoulder dump pipe
3. Rapid droppable weight pocket with yellow drop handle, left and right
4. Waist dump pipe
5. Cummerbund, left and right
6. OX10 attachment buckles
7. Front ballistic plate pocket
8. BCD inflator
9. Medium pressure quick release connector
10. Medium pressure hose
11. Upper sternum strap
12. Carry handle



1. Convoluted inflation hose with elbow dump
2. Inflation regulator
3. Inflation cylinder
4. Shoulder dump / over pressure valve
5. Weight pocket, left and right (optional)
6. Droppable weight pocket, left and right
7. Waist dump / over pressure valve
8. Cylinder pouch
9. Bungee hose retainer
10. Velcro protector (not shown) used to protect back from ballistic plate velcro on cummerband

Technical information

- Weight = approximately 5,5 kg with filled cylinder and inflation regulator (without weights).
- Cylinder = 0,35 litre x 300 bar, din 5/8" female connection, 1375 grams filled with air.
- Dimensions = 60 x 60 cm with connected cummerbund and straps. About 25 cm thick.
- Buoyancy M size = 21 litres or 205 N.
- 6 kg weights in two droppable weight pockets (3 kg each).
- 4 kg weights in two weight pockets (2 kg each).
- 2 Ballistic plate pockets with size L: 290-330 mm W: 250-260 mm H: 10-20 mm.
- BCD operating temperature:
Air: -10 to +50 °C
Water: -2 to +40 °C
- Inflator regulator medium pressure hose supply pressure = 6,5 to 7,5 bar.
- Shelf life of an unused BCD is 7 years.

Before use

Assembling

The Interspiro OX10 molle BC allows for fine tuning / adjustments between many different diver's sizes. This offers a "tailored" fit for the diver's unique body shape. The adjustments will take some time to do, but since this BCD is intended to be personal they will only be needed to be done once.

These mounting descriptions are for a basic size setting. If adjustments to these settings needs to be done, then just alter the threading up, down or sideways some molle bands to achieve a more correct size.

During the following fitting and sizing procedures, stop between procedures and try on the OX10 Molle BC to assure that a correct and good fit has been achieved before continuing with the next step.

Back worn ballistic plate pocket and velcro protector (optional)

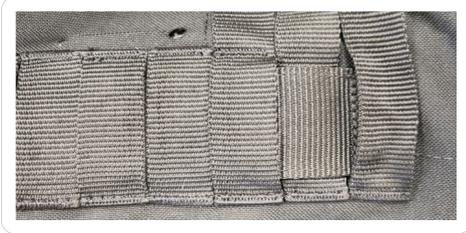
Ballistic plate pocket:

1. Thread the webbing on the ballistic plate pocket through all the molle bands but start by skipping one band, from the top, and then skip one at the end also.



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2. Thread back the plastic reinforced webbing over one band and then under as many bands as are needed.
Do the same for the other side.



3. Thread the webbing on the velcro protector through the ninth molle band counting from the lower band on the BCD.



4. Thread the webbing, using the plastic reinforced part, through molle bands on the BCD and on the velcro protector, one at a time, until the reinforced part goes through the last molle band on the BCD.



5. Pull on the webbing so that the velcro protector lies flat against the back part of the BCD. Tuck back the plastic reinforced part over some molle bands, in under the velcro protector. Do the same for the other side. Open the velcro flaps on the ballistic plate pocket.



6. Carefully position the velcro, on the ballistic plate pocket, over the corresponding velcro on the velcro protector. Now the ballistic plate pocket should be held firmly in place.



Velcro protector without ballistic plate

If not using the ballistic plate pockets the velcro protector is meant to be put over the cummerbund to protect and “cover” the velcro material when using the BCD.



Comfort pad (optional)

Use the molle bands on the back of the comfort pad to fasten it to the back of the ballistic plate pocket.



Front worn ballistic plate pocket (optional)

1. Start by undoing the side release buckles and pull back the 40 mm webbing. Undo the side release buckles and pull back the 50 mm webbing. Thread the ballistic plate pocket webbing under all but the last three molle bands starting from the lower end. Thread it back over one band and under three molle bands.



2. Thread the plastic reinforced webbing back over one band and under two molle bands.



3. Then thread the 50 mm webbing under the three top molle bands and over two bands and then under and over molle bands until the webbing sticks out when two molle bands remain.



4. Thread the female 50 mm side release buckle on the webbing and stick back the remaining part of the webbing under as many molle bands as are needed.



5. Thread the 40 mm webbing over one molle band and under two, put on the 40 mm tri-glide and thread the webbing through one more molle band.



- Put on the 40 mm side release buckle and thread the webbing back under one molle band, through the tri-glide and tuck the remaining webbing material under as many Molle bands as are needed. Repeat this process with the other shoulder.



Cylinder pouch

Thread the three bands under the lowest molle bands on the BCD and under the molle band on the cylinder pouch and then under the second molle band on the BCD. Fasten the velcro on the bands with the velcro on the cylinder pouch.



Droppable weight pockets

Stick in the two plastic cords from the Weight release handle in the two grommets you want to use “height wise”, under the protective cover, stick out the plastic cords in the grommets you want to use “sideways”. Lock the protective cover over the weight release handle with the push button. Take one plastic cord and “sew” it with the loops under a molle band and into one band on the droppable weight pocket, continue until all are done, stick in the rest of the plastic cord in the closest grommet and “hide” the remaining plastic cord. Repeat this process with the second droppable weight pocket on the other side of the BC.



Weight pockets (optional)



1. Thread the molle bands on the weight pocket under the molle bands, where you want to place the weight pocket on the back of the BCD.
2. Thread the bands under molles on the BCD and the weight pocket until all has been threaded.

3. Thread back the plastic reinforced molle band under bands on the weight pocket.



Elastic Y shaped crotch strap (optional)



1. Interlace the two loops from the elastic Y shaped crotch strap on both cummerbunds when inserting these in place.
2. Open the webbing at the Tri-glide and guide the webbing through the webbing at the lower inner back of the BCD.
3. Adjust the length to your liking.

Cummerbund



1. Thread back the molle bands on the cummerbund over one band and under the second band. Or as many or few as you want, to adjust the size of the cummerbund. Stick in the cummerbund through the first (outer) molle band on the inside of the BCD, over the second and under the third, over the fourth and then under the last, fifth, molle band. If using the Elastic Y shaped crotch strap insert the loops during this process.



2. Thread the molle bands over and under the molle bands on the BCD and cummerbund.
3. Thread back the plastic reinforced molle bands, under bands on the cummerbund.



Filling the buoyancy / emergency air cylinder

The cylinder is rated for 300 bar air according to EN12021.

Before you start filling, ensure that the cylinder has a valid periodic test date and are not damaged in any way.

Always close and open the cylinder valves lightly, “finger tight only”.



Warning

Never decant from a gas cylinder with an unknown content.



Warning

As a precaution always stand to one side when opening high pressure cylinder valves.

1. DIN 5/8": Fill the buoyancy air cylinder from an air compressor or decant from an air cylinder bank.
2. Slowly open the cylinder valves and listen for leaks.
3. When the cylinder is full or has equalised, close both valves and depressurize the filling hose.

Mounting the air cylinder in the cylinder pouch

1. Loosen the three velcro bands on the cylinder pouch.
2. Open the cylinder valve velcro holders. Insert the cylinder in the pocket.
3. First close the cylinder valve holder with velcro on both sides and then fasten the holder with velcro only on one side.
4. Tighten the three velcro bands on the cylinder pouch.



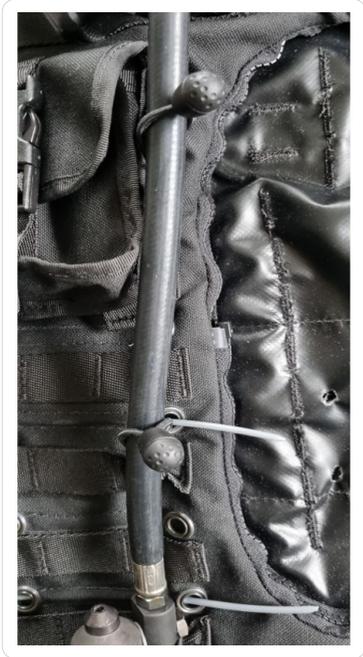
Inflation regulator and hose

1. Put the inflation regulator through one bungee retainer.
Assemble the regulator in the cylinders female 5/8" screw thread and tighten moderately



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2. Guide the medium pressure hose through two bungee retainers on the back of the BCD and then through the bungee hose holder on the inflation hose.



3. Guide the medium pressure hose through the two remaining bungee retainers on the left shoulder strap.
Connect the quick connect coupling to the power inflator, making sure it fastens. If needed, adjust the routing of the medium pressure hose.



Notice

Here you can decide if you want to "lock" the quick connect coupling by screwing on the locking ring so it will be secured or not secured to the power inflator. Be aware that if it is locked and the power inflator sticks open it will be more difficult to disconnect the quick coupling.

4. Slowly open the air inflation cylinder and see and listen that the power inflator works and that there are no leaks.
5. If you are not going to use the BCD immediately, close the cylinder valve.

Fitting weights and ballistic plates

The positioning of the weights in the different weight pockets on the BCD is extremely important to achieve a correct support and a good balance in the water.

When the weights are properly distributed, the BCD with the OX10 apparatus, will hold the diver in a perfect swimming position. If inflating the BCD, the diver will first just achieve further buoyancy and later with more inflation starting to float up with a more pronounced "heads up" position.

Once the ideal positions for the weights are found you should remember how many weights you were using and in what "slots" they were placed.

Never have all the weights you need in the weight pockets only, you should always have some weights placed in the droppable weight pockets.

With experience from earlier dives, always try to adjust your trim so that you will have as a comfortable dive as possible every time.

Weight

- Insert interspiro's system weights in the pockets you want to use. Each system weight is 0,5kg.
The droppable pockets can fit six system weights and the weight pockets can fit four system weights.
Make sure that the weights are distributed evenly on the BCD to achieve a good balance in the water.

Ballistic plates

- Open the molle and velcro closure on the ballistic weight pockets and slide in your ballistic plate. Lock the velcro and guide through the molle bands to further lock the closure.

Regular inspection

1. Visually inspect the BCD material and fittings for signs of damage or excessive wear.
2. Operate the quick release connector on the medium pressure hose. Make sure that the connector operates smoothly. Connect the quick release connector to the power inflator.
3. Inflate the BCD until the over pressure valves start to vent. Check that the speed of the inflation rate is satisfactory. Check for leaks, especially around the valves (once they have finished venting the excess pressure).
4. Operate all the dump valves, including the inflator dump and elbow dump on the convoluted inflation hose. Make sure that the valves opens and closes properly.
5. Inflate again until the over pressure valves start venting and leave the BCD for an hour to see that it is still "firm" in its inflation grade after that time. Don't leave it out in the sunshine.

Important: if you find any damage or problems, do not use the BCD, contact your service organization or interspiro for advice. Unauthorized repairs or modifications may be dangerous and could affect the functionality.

Donning

Donning the OX10 molle bc

1. Open the cylinder valve on the inflation cylinder.

2. Fully extend all the adjustment straps and clip one shoulder strap together. Lift the BCD over your head and stick in one arm in the shoulder strap you have connected and let the opening at the ballistic plate pocket slide over your head. Connect the other shoulder strap.
3. If not using the ballistic plate pockets, you can connect and extend the shoulder straps and then just slide in, in both shoulder straps and then tighten them. Or have one unconnected for easier donning.
4. Adjust, pull on both shoulder straps until they are in the position you want them to be. Connect both cummerbund's velcro flaps as tight as you want.
5. Open the velcro flap on the front ballistic pocket and "wrap" it over the velcro on the cummerbund's "inner" and "outer" velcro sides.
6. If not using the ballistic plate pockets, you can "wrap" the velcro protector over the cummerbund's "inner" and "outer" sides to protect the velcro from sand and seaweed.
7. If you are not attaching the OX 10 apparatus directly you can connect the male and female 40 mm side release buckles at the waist to stop them from "bouncing" around.

Donning the OX10 apparatus

1. Connect one side shoulder, 40 mm side release buckle, to the corresponding buckle on the OX 10 apparatus.
2. Connect the other side.
3. Connect both left and right waist side release buckles to the OX 10 apparatus, tighten the straps as much as you want.



Notice

Interspiro has deliberately put one male and one female 40 mm side release buckle, at the waist, on the BCD, so that they can be connected when the OX10 apparatus is not worn. Modify your OX10 apparatus and the original harness by exchanging one male and female side release buckle between each other.

During use

Pre-dive checks

Check that the BC has no obvious leaks, by inflating the bladder until the over pressure valve vents. Listen for air leaks. If any are found, then service is necessary by an certified service technician.

Deflating

- Push the exhaust button on the end of the power inflator while holding it at the highest point in the water
- or pull on the entire inflation hose while having the left shoulder at the highest point in the water
- or pull on the deflation pipe for the right shoulder dump valve
- or when diving down pull on the deflation pipe for the right waist dump valve.

Each dump valve is designed to vent air from the BCD at a faster rate than the power inflator can add air.

In the event of a free flow, the dump valves can be operated and/or the medium pressure hose on the power inflator can be disconnected to prevent an uncontrolled buoyant ascent.

Inflating with power inflator

For routine BCD inflation, press the blue dome button on the power inflator. This draws air directly from your air inflation cylinder. Air should be added in short bursts to avoid a buoyant ascent.

In the event of a free flow into the BCD from the power inflator, disconnect the medium pressure hose, thus cutting off the feed of air to the BCD.

Add and vent air from the BCD in short bursts to maintain a controlled decent, ascent and neutral buoyancy. Adjusting the BCD's buoyancy in large amounts will cause a see-saw effect dive profile and may cause an uncontrolled buoyant ascent.

Inflating with oral inflator

To orally inflate the BCD:

1. Close the mouthpiece on the OX10 apparatus.
2. Press the exhaust button at the end of the power inflator and blow into the oral inflation mouthpiece at the same time.

Rapid droppable weight pockets

Take a firm grip on the yellow weight pocket release handle and pull backwards and out. The plastic cords will pull out from the slots and release the weight pocket. The handle will most likely be pulled out completely from the BCD and in an emergency, these can be dropped.

Practise dropping the weights in a controlled environment, like a pool, where these parts can be retrieved by a fellow diver.



WARNING

Dropping weights while diving is dangerous and will alter your buoyancy and could cause a rapid rate of ascent. Only dump weights in an absolute emergency.

After use

Post-dive maintenance

1. Rinse the BCD with clean water after every diving session.
2. Remove the elbow joint connecting the convoluted inflation hose and pour in clean water to rinse inside the bladder.
Do not use household detergents, bleach, or other strong chemicals to clean the BCD.
3. Rinse the convoluted inflation hose with clean water.
4. Drain and hang up the BCD partly inflated.
Allow the BCD to dry naturally, ideally inside an enclosed, clean, and dry room with circulating air.
Do not dry the BCD in direct ultraviolet sunlight, close to a radiant heat source or close to an air conditioning device. All these factors will affect or possibly damage the BCD.
5. Before using the BCD again, drain more water from the inside of it by holding a dump valve at a low position and pull on the deflation pipe, most likely the right waist dump valve.
6. Make sure that the elbow o-ring is correctly located before reassembling the elbow joint connection.



7. Do a leak test by inflating the BCD.









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