

Buoyancy compensators STREAM, CUB, STREAM RING and RING

Definition of Terms

Buoyancy compensator – a device for adjusting buoyancy that is comprised of a wing and a backplate.

Wing – a part of the buoyancy compensator comprised of a bladder inflation mechanism, and safety valve.

Backplate – usually a stainless steel, aluminium or plastic plate equipped with harness, D-rings, and other parts designed to carry the main cylinders.

Introduction

Before using the compensator, read the instructions thoroughly. Incorrect usage, maintenance, or damage to the compensator may render the warranty void, and may also result in a dangerous situation, injury or death.

Use the compensator only for the purposes for which it is designed. The STREAM Series compensators are designed for diving with double cylinders. The CUB/RING Series Compensators are for diving with single cylinders.

Make sure you always use a compensator of the appropriate size. A compensator that is too big can cause problems during deflation. One that is too small might not provide sufficient buoyancy. The maximum recommended size of cylinders to be used with the wing is written on a label on the wing, and in the compensator description.

The buoyancy compensator is not a life preserver. It does not maintain the diver in a face-up position. It is not designed to maintain the diver's face above the surface should he become unconscious or immobile. For this reason, it is important to follow the rules of safe diving, and always dive with a companion.

Do not inhale from your compensator. The inner bladder can be dirty, or contain contaminated air that could cause serious health problems.

Do not inflate the compensator to the maximum. This will shorten its lifespan. A failure of the safety valve may result in damage to the compensator, and injury to the diver.

Before each dive, it is critical to go through all safety procedures in order to detect possible damage to the compensator. A good instructor can acquaint you with these procedures.

Service and repair of the compensator must be provided only by factory trained personnel. Unauthorised service not only voids the warranty, but may also endanger the health and life of the user.

If you do not have sufficient experience in diving with this type of compensator, go through appropriate training, and then test the compensator in the controlled environment of a swimming pool or shallow water.

Warning: The manufacturer is not responsible for any damage or injury to a user of the buoyancy compensator that is caused by incorrect usage or inappropriate adjustment that affects its functioning.



compensator – single cylinder



compensator – double cylinders

Fitting the Harness

The backplate that forms part of the compensator is supplied with a high-quality harness that is threaded through in a way that ensures proper system functioning. Do not change the way the harness is fed through the backplate. If you do try to take the harness out, remember exactly how it is threaded through in order to prevent interference with the functioning of the whole system.

When fitting the crotch strap, the back D-ring must fit correctly as well. Adjust it by shifting it along the harness high enough so that it does not disturb you while swimming, but low enough to allow you to reach it even with the cylinder (or double cylinders) mounted on. When adjusting the D-ring, take into account the possibility of bigger and longer cylinders than the ones you usually use. Before using it for the first time, adjust the harness so that the buoyancy compensator is well fitted on your back, and does not move. The strap can be adjusted by gradually moving it across the stoppers placed on the back side of the backplate.

Once the harness is adjusted, the cylinder on your back should be in a position that allows you to tilt your head back, and to reach and control the cylinder valve (test this in the water). Proper placement of the cylinder results in the right trim. If the gear outweighs the lower parts of your body, slacken the crotch strap a bit and tighten the shoulder straps. This will push the cylinder closer to your head, and your centre of mass will be higher. If the gear outweighs the upper part of your body, do the opposite.

When fitting the main strap, ordinary clothes such as pants and a T-shirt are sufficient. Put the backplate (without the wing) on your back, and run the crotch strap between your legs. The belt buckle on the waist strap must pass through the crotch strap loop and rest on the right side of the crotch strap when fastened. The waist belt and crotch strap should be as snug as possible, but still comfortable.

Fit three fingers under the strap at the level of your collarbone. If there is not enough space, slacken the straps. If it is too loose, shorten the strap by moving it in front of the stoppers (buckles with two holes) on the back side of the backplate. Repeat the whole procedure until you can fit three fingers under the straps without force, but without the straps becoming too loose. At the same time, you should be able to pull your arms out. Check to see that both straps are the same length. Once the straps are adjusted, the backplate should be high enough to allow you to reach its upper edge; the top should be just below the second vertebra.

Once you fit the main straps, you must adjust the D-rings. The chest D-rings should be as low as possible, while still allowing you to cross your arms over your chest comfortably. The D-rings should be high enough for you to reach the left ring with your left thumb, and the right ring with your right thumb. The D-ring on the left side of the waist strap should be roughly on your hip.

Continue by passing the left side of the waist strap through the belt buckle in such a way that the belt buckle can pass through the crotch strap (see the picture). Guide the strap through each opening in the buckle, starting with the outside one. We recommend securing the strap by passing it again through the first opening.

Do not shorten the straps after the first fitting. Wait until you test your gear in the water. You will be doing additional adjustments for 3 to 5 dives until the gear is fitted properly on your back – as snug as is comfortable. Only then can you shorten them to leave an extra 10 to 15 cm on each side. We recommend finishing off the right side of the waist strap in an arc. When shortening straps do not forget to finish them off properly so that they do not fray. You can use a cigarette lighter or a candle to do this, but make sure that you do not create a thick layer on the end that would hinder threading the strap through the buckles and stoppers.

The backplate also includes a crotch strap with two D-rings. Its length is adjusted by moving the strap through the back D-ring. We also recommend tightening the strap securely at the back D-ring, making sure to prevent it from coming untied (especially in the case of frequent scootering). The crotch strap should be adjusted so that the cylinder does not slide on your back, while still being comfortable.



Use of the crotch strap and waist strap, positioning of the knife and belt buckle

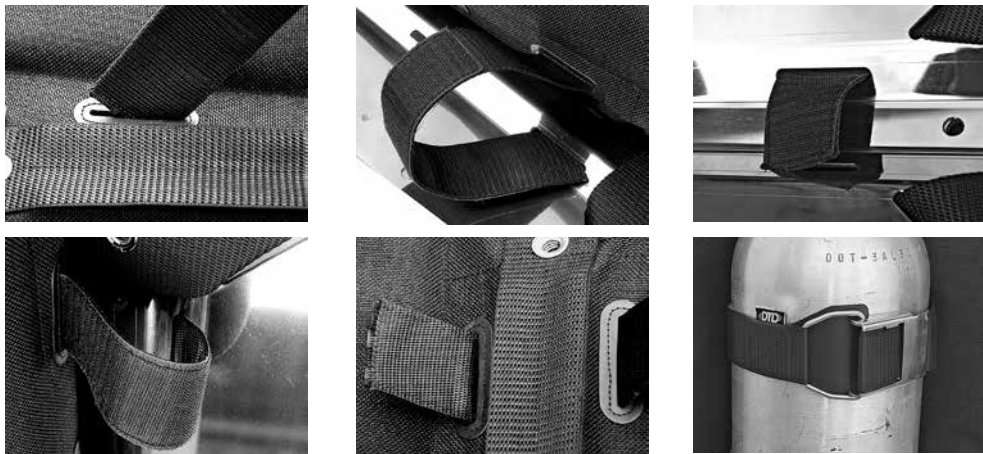
Initial Assembly of the Compensator

Assembly of the compensator with a single cylinder

We recommend first bolting the wing and the backplate loosely together. Run the bolt through the wing and then the backplate in such a way that the nut faces your back and the bolt head shows up on the wing. Do not tighten

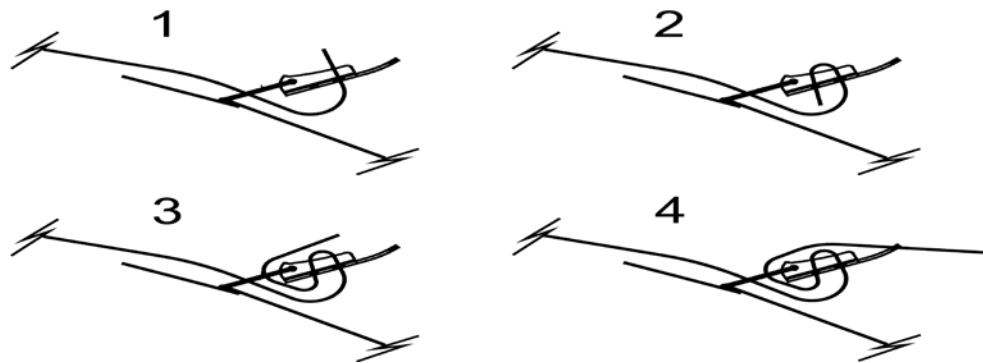
the bolt yet; the wing should be loose enough on the backplate to facilitate the assembly. Attach the wing in such a way that the logo can be seen while looking at the backplate; that is, the wrap hose joint is on the opposite side from the backplate.

Pass the straps with the buckle designed to hold the cylinder through a strap slot in the wing (1). The Velcro on the strap must be turned to the outside, in the direction of the wing's perimeter. Continue by threading the strap through a corresponding horizontal slot in the backplate (2), and then through a slot on the other side of the backplate's bending (3). Then thread the strap through a strap slot in the wing (4, 5). Move the strap so that the Velcro close to the fastener runs through both strap slots of the wing. At the fastener, leave about 10 cm of the strap without threading it through the wing. Follow the same procedure for the remaining strap and slots.



Passing the strap through the wing and the backplate:

After that pull the strap through the buckle in accordance with the following pictures:



Threading the strap through the belt buckle

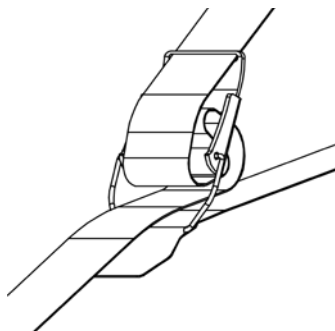
Thread the strap through every opening in the buckle, as shown above.

This will ensure that the strap points backward and cannot become loose spontaneously

When finished, both parts of the Velcro should line up and ensure that the fastener does not unfasten.

If you do not change the wings on the backplate, we recommend bolting them to the backplate. You have already used a bolt before threading the straps. Tighten it firmly, and do the same with the other one. The bolt head should protrude above the eyelet in the wing as little as possible so that the surface of the cylinder does not get damaged.

If you decide to use a buoy pocket, the next step is the installation of the pocket on the backplate. For the assembly, use the flat-headed bolts provided. Lay the backplate down in front of you, and place the pocket on it so that you can see the logo. The straps of the backplate should fit in the narrowing on the pocket. Continue by bolting the pocket to the backplate with the bolt head facing you, and with the nut on the other side of the backplate (by the wing). The padding provided goes under the bolt nuts. We recommend tightening the bolts firmly, and securing them by flattening. We recommend using all eight bolts on the pocket perimeter. This will prevent the pocket from creasing and causing discomfort, and the buoy will be well secured.



Assembly of the compensator using a double cylinder

Using a double cylinder requires only one adjustment – attaching a buoy pocket to the backplate. Follow the same procedure as in the case of single cylinder (described above). Before tightening the two lower bolts (close to the pocket opening), we recommend trying to attach the double cylinder to the compensator. It is important to determine whether you can bolt the wing nut on the bolt that comes through the double cylinder bands. If it is difficult (usually it is in the case of the lower bolt), we recommend not using one of the bolts on the lower edge of the backplate. Removing the unfastened side of the pocket allows you to reach the bolt, and attach the double cylinder to the backplate.

Tips

Gear fitting: Attach the cylinder to the compensator. The procedure depends on whether you use a single or double cylinder, and whether you use an adapter for a single cylinder or attach the cylinder directly to the compensator.

Attaching inflator: Pass the low-pressure inflator hose under the two rubber bands on the wrap hose. Continue by passing it under the rubber band on the left strap of the backplate above the D-ring, and attach it to the inflator. This will ensure that the inflator is oriented to your neck, close to the collarbone where it will not interfere with the rest of the gear, and where you can easily find it.

Adaptor for a single cylinder: The CUB/RING wings do not require using single-cylinder adaptors.



Correct attachment of the inflator hose

Inspection Before Each Use

We recommend an overall visual inspection before each use. It is good idea to check whether the safety valve and cap nut on the inflator's joint are well tightened. If not, tighten well. Check the function of inflating and deflating, and the overpressure valve. Test the sealing of the whole system in the water.

Maintenance

After diving in the ocean, rinse the gear thoroughly with fresh water. The salt crystals might damage the inflator or safety valve, and cause them to become non-functional. If the compensator is dirty, clean it while paying special attention to the inflation mechanism and safety valve. No other maintenance is necessary. After every dive, pour out the water that gets into the wing during deflation.

Storage

Store the buoyancy compensator in a dry, dark place in such a way that the wing cover and hoses are not strained in any way. We recommend laying the wing out on a flat board.

Inspections

We recommend doing the inspection described above before every use. We highly recommend having a thorough inspection performed once a year by factory trained personnel.

Compensator Description

Backplate: The material is stainless steel. The hole pitch for attaching a double cylinder or adaptor for one cylinder corresponds to the 11 inches standard (approximately 280 mm). The plate can be used with all types of DTD wings and some from other manufacturers as well.

Wing bladder: The material is CORDURA 560 with PU coating. It resists hydrolysis, low temperatures, and hydrocarbons, and has low gas permeability.



Safety valve



Simple joint

Wing cover: The material is CORDURA 2000

Inflator mechanism: Simple joint without a deflating valve. Wrap hose with inner lining prevents loosening and stretching of the hose. Inflator mechanism which allows 1) a regulated inflation by pressing an inflator button (placed on the side) with varying force, 2) fast deflating by pressing the button at the end of the inflator, and 3) inflating of the wing by mouth.

Safety valve: Overpressure valve preventing damage or destruction of the wing by over-filling.

The Buoyancy Compensator has the Certificates ES of revision type no. OOP-253/ES-003/2005, OOP-253/ES-004/2007 and complies with ČSN EN 1809. STREAM RING 20 and 23, STREAM 15, RING 14, 17 and 20 are trade marks of models P74-201, P74-202, P74-101, P74-102 and P74-103

The set contents

Both types:

- stainless steel backplate 3 mm
- harness, d-rings, SS buckle
- crotch strap
- pocket for buoy, knife with sheet
- compensators STREAM
- inflator hose 60 cm
- compensators CUB, RING
- inflator hose 51 cm
- 2 bottle strap with stainless steel buckle
- 2 SS screw with nut

Spare accessories

For attaching extra ballast it is possible to supply the BC with backplate weighting system or with weighting system for bottles.



weighting system for backplate



weighting system for backplate

Buoyancy and maximum size of the individual types of wings:

STREAM 15:	150 N	steel double cylinder 7 l
STREAM 20:	200 N	AL 80 double cylinder or steel double cylinder 12 l
STREAM RING 20	200 N	steel double cylinder 12 l
STREAM RING 23	220 N	steel double cylinder 15 l
STREAM 25:	250 N	steel double cylinder 18 l
CUB 15	170 N	steel cylinder 15 l
CUB 18	200 N	steel cylinder 18 l
RING 14	140 N	steel cylinder 12 l
RING 17	170 N	steel cylinder 15 l
RING 20	200 N	steel cylinder 18 l

Operating pressure of the inflator is 5-12 bars

Usage temperature range of the compensator

Min. water temperature: -1°C
Max temperature: 35°C

Warranty Information

The manufacturer provides a warranty on proper functioning of the buoyancy compensator limited in duration to a period ending 2 years from the date of purchase. The warranty applies to defects in material and individual parts of the compensator.

The warranty does not apply to:

- ordinary wear and tear
- damages caused by transport
- damages caused by using the compensator
- for purposes other than diving



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