



# **BUOYANCY COMPENSATORS OWNER'S MANUAL**

## INTRODUCTION

### OMS BUOYANCY COMPENSATORS OWNER'S MANUAL



Thank you for choosing OMS.

OMS Buoyancy Compensators have been constructed from rugged materials with unique features adaptable to advanced underwater environments. The general design philosophy allows for complete system integration of a number of components achieving high lift capacities, low drag, and increased safety through redundancy. With a selection of different harnesses, different air cells and accessories, a diver can configure his or her system for the specific environment for which they are operating.

OMS equipment is intended for use by Certified SCUBA divers and individuals with the training and experience to dive these environments safely. Loss of buoyancy control can result in an uncontrolled descent or an uncontrolled rapid ascent resulting in drowning, decompression sickness, or lung overpressure injuries.

Do not use this product until you have read, understood, and followed all instructions and safety precautions in this owner's manual and practiced emergency drills. If the owner's manual is unavailable or lost, another copy may be downloaded at [WWW.OMSDIVE.COM](http://WWW.OMSDIVE.COM).

If any portion of this manual is unclear, or if you are unable to obtain satisfactory answers from your dive store or instructor, contact

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## DEFINITION OF IMPORTANT SIGNAL WORDS USED IN THIS MANUAL

Throughout this manual we will use certain words to call your attention to conditions, practices, or techniques that may directly affect your safety. Pay particular attention to information introduced by the following signal words.

### **!!! DANGER !!!**

*Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.*

### **!! WARNING !!**

*Indicates a potentially hazardous situation which, if not avoided, can result in death or serious injury.*

**! CAUTION !**

*Indicates a potentially hazardous situation which, if not avoided,  
may result in minor or moderate injury.  
It may also be used to alert against unsafe practices.*

**TECHNICAL SUPPORT**

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If you lose this manual, please contact your dealer or OMS for another copy. A copy may be downloaded at [WWW.OMSDIVE.COM](http://WWW.OMSDIVE.COM).

## **SAFETY**

### **IMPORTANT SAFETY INFORMATION**

OMS Buoyancy Compensators are intended for use by certified SCUBA divers who have successfully completed training under the supervision of a qualified instructor.

#### **!! WARNING !**

*Follow all instructions and heed these safety precautions. Improper use or misuse of the buoyancy compensator could result in serious injury or death.*

#### **!! WARNING !!**

*This owner's manual is NOT a substitute for instruction by a qualified instructor and training agency. DO NOT USE this equipment until you have practiced and mastered practical diving skills, including emergency skills, in a controlled environment under the supervision of a dive instructor, certified by a nationally recognized instructional organization and knowledgeable in the use of this type of equipment.*

#### **!! WARNING !!**

*Improper use or misuse of this buoyancy compensator could result in loss of buoyancy control, including uncontrolled descents and uncontrolled rapid ascents, resulting in drowning, decompression sickness, or air embolism.*

This OMS Buoyancy Compensator does not qualify as a U.S. Coast Guard approved life jacket or life preserver. Do not depend upon this system to save your life under any circumstances. It is not designed to float you face up in the water if you are unconscious.

#### **!!! DANGER !!!**

*This buoyancy compensator will not float you face up if you are unconscious in the water. If you become unconscious on the surface while wearing this system you will drown if you are face down.*

#### **! CAUTION !**

*Operating temperature range of the OMS BC system is -20 °C (-4 °F) to 70 °C (158 °F). All prudent/known safeguards and procedures should be observed when diving in near or sub-freezing temperatures on the surface and below*

#### **CAUTION**

*The BCD is only designed to be used as buoyancy compensation system for use in diving . Please don't use for anything else.*

#### **CAUTION**

*The normal service life of of a BC under normal use is 10 years. At which time please contact your waste disposal provider regarding proper disposal.*

#### **CAUTION**

*Factory prescribed service of this BC should be performed at least once annually by a authorized OMS Dealer. Annual service consist of the a complete overhaul of the power inflator, and general leak inspection of the bladder(s) and valve connections.*

**CAUTION**

*The buoyancy compensator is not a breathing system and the gas should not be inhaled from the buoyancy compensator bladder*

You should be weighted to allow yourself to remain neutrally buoyant throughout all depths of your dive.

Do not depend solely upon this buoyancy compensator to lift you to the surface. If it is damaged it may not hold air. In certain situations, dropping your weight belt or dropping a portion or all of the integrated weights may be the best method of establishing positive buoyancy to remain on the surface.

Before every dive, inspect and test this buoyancy compensator for leakage. Leaks may not be apparent just by visually inspecting the buoyancy compensator. If the buoyancy compensator is damaged in any way, it must not be used until it is repaired.

You should have the ability to use the oral inflation function of the power inflator to add air to the buoyancy compensator in the event the power inflator mechanism fails. This is a critical skill

Never over inflate the buoyancy compensator. Over inflation of the buoyancy compensator while you are underwater can cause you to experience a rapid ascent.

**!! WARNING !!**

*Rapid ascents are dangerous and can lead to lung overpressure injuries and/or decompression sickness. Either of these conditions can cause serious injury or death.*

You must control your ascents and descents by adjusting your buoyancy. Be sure to follow the recommended ascent rate specified by the dive tables or dive computer you are using.

If you are using a weight belt, it must have a clear drop path. If your buoyancy compensator is equipped with a crotch strap, the weight belt must be put on last. If you are using the integrated weight system, the weight pockets must be properly attached to the harness.

Never use your buoyancy compensator to lift heavy objects underwater. The buoyancy compensator is not designed to be used for this purpose, whether or not you are wearing it. The buoyancy compensator is not a lift bag. If you are wearing the buoyancy compensator and have inflated it to lift a heavy object, if you drop the object the excess buoyancy may cause you to suffer a rapid ascent.

**!! WARNING !!**

*Rapid ascents are dangerous and can lead to lung overpressure injuries and/or decompression sickness. Either of these conditions can cause serious injury or death.*

Do not attempt to breathe the air in the buoyancy compensator. The air in the wing may be contaminated with high levels of bacteria.

The buoyancy compensator must be properly assembled and adjusted for you. If you disassemble

the system to change components, and are unsure if you have properly reassembled it, see your OMS dealer to ensure that the buoyancy compensator is functioning correctly.

You should never be weighted so heavily with your diving system that you cannot establish immediate positive buoyancy at the surface by ditching your weights. If your buoyancy compensator fails and you cannot establish positive buoyancy at the surface by ditching your weights alone, you may drown.

Before each use, be sure to soak the tank bands in water before attaching the buoyancy compensator to the cylinder. After you have attached the tank bands to the cylinder, check the tension to ensure that the cylinder will not fall out of the bands. Tighten the bands as needed. Failure to follow this procedure can cause the cylinder to fall out of the bands, either underwater or on the surface. This can result in injury to you or to other divers close by.

## **INTENDED USE AND APPLICATIONS FOR OMS BUOYANCY COMPENSATORS**

OMS Buoyancy Compensators are intended for use by Certified SCUBA divers or individuals in training that are under the direct supervision of a certified instructor. It is designed to perform the following functions:

**Surface Flotation:** By adding air to the buoyancy compensator, you can establish positive buoyancy at the surface. This makes surface swimming much easier.

**Assistance in Controlling Descents:** By dumping or adding air to the buoyancy compensator you can help control your descent. You should never start a dive either excessively negatively buoyant or positively buoyant. Keep one hand on your power inflator mechanism continuously during the descent to help control your movement through the water column. Be prepared to add air to stop your descent.

### **!! WARNING !!**

*Rapid descents are dangerous and can lead to pressure injuries and/or drowning. Either of these conditions can result in serious injury or death.*

**Assistance in Establishing Neutral Buoyancy at Depth:** You can establish neutral buoyancy at depth by adding just enough air to the buoyancy control system to allow you to hover. However, if you ascend or descend even a few feet, you may need to readjust the amount of air in the BCS.

**Assistance in Controlling Ascents:** Keep one hand on your power inflator/deflator mechanism continuously during the ascent to help control your movement through the water column. As the air expands inside the buoyancy compensator during the ascent you must be prepared to vent air in order to avoid a rapid ascent.

### **!! WARNING !!**

*The deflator must be the highest point in order to dump air properly. Not properly positioning the deflator can cause a rapid ascent which is dangerous and can lead to lung overpressure injuries and/or decompression sickness. Either of these conditions can cause serious injury or death.*

## **LOW PRESSURE HOSE INSTALLATION**

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Your OMS wing comes with an accessory low-pressure (LP) hose to provide LP air to the BCS's power inflator. The hose needs to be installed by a qualified individual in one of your regulator's LP 3/8" (9.5mm) ports. Care should be taken in selecting an LP port that will allow the hose to be routed to the power inflator with the best/shortest route to the inflator assembly.

Notes to Installer:

**!! WARNING !!**

*Never connect the low-pressure inflator hose to a high-pressure port on your regulator. If the hose is connected to a high-pressure port, it may fail without warning causing severe personal injury.* Regulator first stages have LP ports which are 3/8" (9.5mm) and are smaller than the high-pressure (HP) port(s) which are 7/16" (11 mm). However, care must be taken with older regulators where the HP and LP ports are all 3/8" (9.5mm). In most cases, HP ports are marked HP. However, if the output pressure of the port is in question it should be checked. The maximum output pressure of a LP port should be 200psi (13.8 bar).

Once an LP port has been located and the plug removed, check that the O-ring is present and in good condition on the hose. The O-ring should be lubricated with the appropriate lubricant (silicone for air use or an oxygen compatible lubricant for Nitrox use). Also check hose fitting to ensure the threads and O-ring are free from dirt or debris. Install the threaded end of the hose into the port using a 9/16" (14 mm) wrench. Do not over tighten. The fitting should be tightened to approximately 3.3 ft-lb (14.7 N

**! CAUTION !**

Recommended working pressure of the OMS BC inflator is 120 psi (8.3 bar) to 160 psi (11 bar)

## **INTRODUCTION TO OMS BUOYANCY COMPENSATORS**

OMS Buoyancy Control Systems are built around a modular design that allows a diver to customize their system. Typically, a complete system consists of a harness, an air cell (wing), and a system to attach cylinders. Accessory pockets can also be added.

It is important for a diver to configure a system that fits properly and has enough lift to comfortably support the diver and cylinders at the surface. Tools and emergency items (marker buoys, signal devices, etc.) should be secured such that they are easily available yet do not pose an entanglement hazard to guidelines and mooring ropes. All this is possible with OMS products.

### **HARNESSES**

OMS have 5 different harness styles

available. **IQ Lite Pack**



The IQ Pack is a soft pack harness system that can be used as part of a light weight travel rig or can be fitted with a metal back plate for use with high capacity dual cylinders. It has padded shoulder straps with a side release buckle on both sides, sternum strap and an aluminum steel waist buckle.



The following sizing information is provided as guidelines. The IQ Lite Pack is extremely adjustable and many people can fit into more than one size.

IQ Lite Pack		Chest		Height		Weight	
Part #	Size	in	cm	in	cm	lbs.	kg
A11518064	XS	24 - 34	61 - 86	60 - 66	152 - 168	100 - 150	45 - 68
A11518065	S	26 - 46	66 - 117	64 - 70	163 - 178	130 - 180	59 - 82
A11518066	M / L	30 - 50	76 - 127	68 - 74	173 - 188	160 - 210	73 - 95
A11518067	XL	35 - 55	89 - 140	72 - 78	183 - 198	190 - 240	86 - 109

### IQ Lite Pack Cumber bun

The IQ Pack is a soft pack harness system that can be used as part of a light weight travel rig or can be fitted with a metal back plate for use with high capacity dual cylinders. It has padded shoulder straps with a side release buckle on both sides, sternum strap and an aluminum steel waist buckle. The Cumberbun is waist strap that is 3" (7.62 cm) with a velcro attachment.

The following sizing information is provided as guidelines. The IQ Lite Pack Cumber bund is available in these sizes:

IQ Lite Pack CB		Chest		Height		Weight	
Part #	Size	in	cm	in	cm	lbs.	Kg
A11518068	S	26 - 46	66 - 117	64 - 70	163 - 178	130 - 180	59 - 82
A11518069	XS	24 - 34	61 - 86	60 - 66	152 - 168	100 - 150	45 - 68
A11518070	M / L	30 - 50	76 - 127	68 - 74	173 - 188	160 - 210	73 - 95
A11518071	XL	35 - 55	89 - 140	72 - 78	183 - 198	190 - 240	86 - 109

## COMFORT HARNESS II

The Comfort Harness II is a full featured harness with padded shoulder straps with a side release buckle on both sides, sternum strap and an aluminum waist buckle. It also includes adjustable D-ring attachment points. The Comfort Harness II can be assembled with OMS stainless steel or aluminum backplate.



Comfort Harness II Aluminum Back Plate		Chest		Height		Weight	
Part #	Size	in	cm	in	cm	lbs.	kg
A11518025	S - M	26 - 46	66 - 117	64 - 70	163 - 178	130 - 180	59 - 82
A11518026	L	30 - 50	76 - 127	68 - 74	173 - 188	160 - 210	73 - 95
A11518027	XL	35 - 55	89 - 140	72 - 78	183 - 198	190 - 240	86 - 109

The following sizing information is provided as guidelines. The Comfort Harness II is extremely adjustable and many people can fit into more than one

Available with Stainless Steel or Aluminum back plate

Comfort Harness II also available without the back plate

### Aluminum Backplate Continuous weave (DIR) A11518033

The Continuous Weave Harness is a simple harness that uses one piece of webbing that weaves through the backplate. It has no sternum strap or shoulder release buckles. It is a minimal harness for maximum reliability.

Sizing: One size fits all

Also Available:

Stainless Steel Backplate # A11518034

Stainless Steel with Chemical Resistant Webbing (CR) A11518034

## SMARTSTREAM HARNESS

SmartStream was developed to alleviate configuration challenges which may arise while donning a heavy rig. By pulling the waist stapes forward the shoulder straps secure to the diver's shoulders and back – proper adjustment is instantly achieved. This uniquely adjustable OMS system allows the use of OMS weight pockets or place to hold a canister light. The harness use 11.5 ft. (3.5 m) of 2" (50 mm) webbing and 316 Stainless Steel D-rings with stops to prevent slippage. OMS Stainless Steel waist belt buckle, 2" (50 mm) crotch strap with DPV D-ring

Sizing: One size fits all

Available Styles:

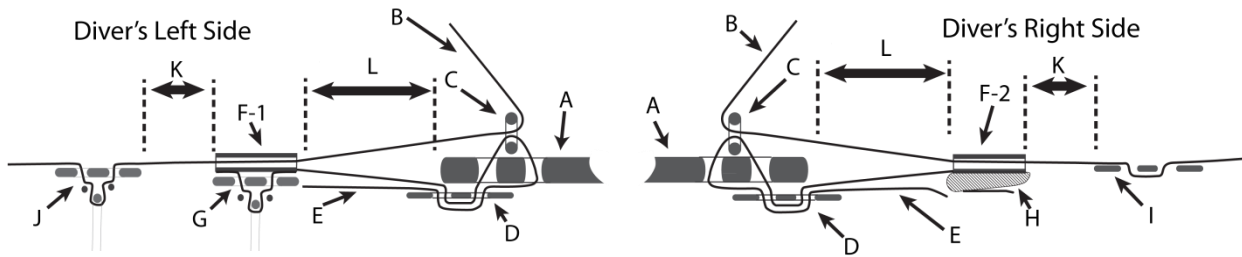
Smart Stream Harness, Stainless Steel Backplate A11518078

Smart Stream Harness, Aluminum Backplate A11518072

Smart Stream Harness, Stainless Steel Backplate and Chemical Resistant webbing (CR) A11518088



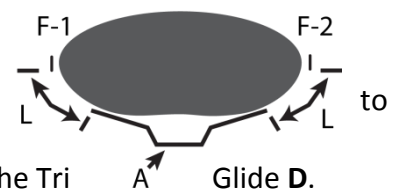
## Adjusting the Smartstream Harness



A-BACK PLATE SS OR AL	B-SHOULDER WAIST STRAP	C-SS SLIP RING
D-SS TRI GLIDE	E-WAIST STRAP RETAINER	F-1 WAIST STRAP LIMITER RIGHT
F-2 WAIST STRAP LIMITER LEFT	G-W/S LIMITER D-RING	H-W/S LIMITER SS BUCKLE
I-WAIST STRAP TRI GLIDE	J-D-RING & TRI GLIDE	k-LIMITER DISTANCE
L-SHOULDER		

The Smartstream adjustable shoulder/waist strap alleviates the fixed shoulder/waist strap lengths typically found on most DIR harness.

- Adjustment starts with the shoulder/waist strap travel limiter assembly consisting of limiters **F-1** or **F-2**, webbing **E** and Tri Glide **D**. Ideally starting point is placing the limiters **F-1** and **F-2** sit on the outboard side of the diver's waist. Adjustments to length **K** is made by taking up or letting out webbing **E** through the Tri



- Once **F-1** and **F-2** are in position put the harness assembly on and adjust the shoulder waist strap **B** by pulling the waist strap ends and buckling it.
- Look at the positions of Tri Glide **I** and D-Ring & Tri Glide **J**. Distance **K** the distance between **J** and **F-1** and **I** and **F-2** determines the amount of slack that can be pulled into the shoulder straps **B** when the waist belt buckle is undone. Example a distance **K** of 3 in (7.6 cm) will allow the shoulder straps to loosen up that much.

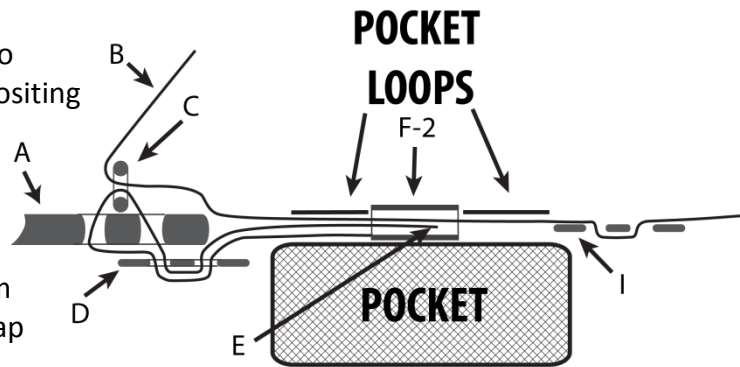
- Each diver needs to work out the distance of **L** and **K** to best meet their needs.

On the diver's right side of the harness **F-2** is equipped with a buckle **H**. Buckle **H** can be used to secure the end of webbing **E**. This provides a mounting point for a canister light or accessory pocket

## Installation of Weight Pocket Smartstream Harness

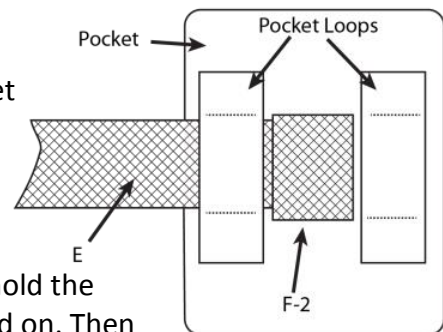
This illustration show the right side installation however the process outlines below applies to both sides

1. If the harness has been adjusted to proper fit, it is helpfully to mark posing **D, I & J** on the Shoulder Waist Strap **B**. A wax marker or bar of soap can be used to mark critical placements points.
2. Remove the waist belt buckle from the left end of Shoulder Waist Strap **B**



3. Remove **I** and **J** from the Shoulder Waist Strap **B**
4. Pull the Shoulder Waist Strap **B** back through **(F-1 & F-2)** and loop **C**
5. Remove the Waist Strap Retainer assembly **E** by unthreading it from **D, A** and **C**

6. Remove Buckle **H** from **F-2** by unthreading it from **E**
7. Position **(F-1 & F-2)** of the Waist Strap Retainer **E** between the loops located on the back of the pocket then thread **E** though the center of the pocket loop checking that the pocket is oriented correctly. On Vertical Weight Pocket the weight release pulls while on the Horizontal Weight Pocket the weight pulls forward. A simple final check can be done by hold the and webbing assembly up to the hip it is to mounted on. Then checking that webbing of **E** raps around to the back of the body and the weight pocket release handles pulls are properly aligned to the direction of pull.



8. Retread **E** though **D, A, C** and back though **D** and tucking the loss end of **E** through the loops on the back of the pocket
9. Rethread **B** passing it through **C** the pocket loops and **(F-1, F-2)** and **(J, I)**. Then attach the waist belt buckle on the left end of **B**

## PUBLIC SAFETY (PS) HARNESS

The PUBLIC SAFETY (PS) HARNESS built around a proprietary Stainless Steel backplate. The backplate allows the adjustment of the harness to the torso length of the diver. Stainless Steel waist and shoulder strap adjustable buckles. Compatible with the full range of OMS Air Cells and when using optional rail system, the Interspiro Drivatar System and the Deviator DP! Surface Supply System

Public Safety (PS) Harness A11518079

Sizing: One size fits all

Shown with optional Public Safety Weight Pockets (20 lbs. (9.1 kg) per pocket A11918079



## IQ Chemically Resistant Backpack

This is the same design as the IQ backpack but manufactured with chemically resistant materials and designed for the Public Safety Diver (PSD) for use in HAZMAT environments. The IQ Pack will distribute weight across the hips and back to evenly disperse the weight of single or double tanks. The comfortable adjustable ergonomic padded shoulder straps help the diver attain the ideal snug fit in and out of the water. The OMS soft pack design adds substantial comfort over the traditionally more stable design of a hard backplate but the IQ pack offers BOTH features in one system. It offers a truly unique rear pocket located behind the lumbar pad to accommodate an optional hard backplate to increase harness stability if desired offering multiple cylinder mounting options.



The CRIQ backpack also uses flaps with fasteners in lieu of Velcro to hold the backplate in place to minimize contaminant adherence. Epaulets on each shoulder pad assist with hose routing of both the corrugated hose (left side) and your regulator hoses (right side) to keep a streamlined profile in the water and eliminate "entanglement hazards". The Epaulets utilizes snaps for closure, this eliminates areas for contaminants. The waist strap is equipped with a latch-style stamped stainless steel buckle and the adjustable torso chest (sternum) and crotch straps are equipped with squeeze-style slide-release plastic buckles for easy donning and doffing. Harness system includes (2) chest mounted D-rings, (2) waist strap D-rings, a crotch strap O-ring, and multiple statically placed small D-rings, all made from corrosion resistant stainless steel. Used with OMS 45 lbs. (20 N) Deep Ocean Wing

IQ Lite Pack		Chest		Height		Weight	
Part #	Size	in	cm	in	cm	lbs.	kg
A11518066	M - L	30 - 50	76 - 127	68 - 74	173 - 188	160 - 210	73 - 95
A11518067	L - XL	35 - 55	89 - 140	72 - 78	183 - 198	190 - 240	86 - 109

## SIDESTREAM27

The SIDESTREAM27 side mount harness with 27 lbs. (120 N) air cell utilizes a split-pack pack design and is a minimalist side mount style the harness will fit anyone simply by adjusting the 2" (50 mm) webbing to match the divers torso length. The SIDESTREAM27 incorporates a spine weight pocket system which can hold up to 15 lbs. (17 kg). A Buttplate consisting of 2 offset D-rings for cylinder clips and 2 waste D-rings. Includes a redundant air-cell with an oral inflator and dedicated OPV.

Sizing: One size fits all



## OMS AIR CELL OPTIONS

OMS air cells, often referred to as wings, are available in different configurations and lift capacities. It is extremely important that the air cell you select has enough buoyancy to support the diver and cylinders at the surface.

Some of the features of the different OMS air cells include redundant internal bladders, elastomeric retraction bands to help minimize the volume of the uninflated BC, or a Donut (circular) shape to move air more efficiently.

OMS air cells are constructed from 1000 denier Cordura® backed with 5-ounce urethane. The inner bladder is made of virgin urethane for superior durability. OMS air cells are available in several different lift capacities with single and double internal bladders. Inflator mechanisms and dump valves are standardized making them interchangeable and completely serviceable.

OMS air cells can be attached to any OMS backplate system using the bolts from a set of steel bands for doubles or the bolts from a single tank adapter. Nylon tank bands can be used to attach it to the IQ Pack.



Deep Ocean Wing



Ocean Wing



Performance Mono Wing



Performance Double Wing



Deep Ocean Wing CR



Ocean Wing CR



## Air Cell Descriptions and lifts

OMS Wing Description			Lift	Features			
Name	Part#	EAN#		Single Tank	Double Tank	Retraction Bands	Redundant Air Cell
PM (Performance Mono) Wing RED	A11518074	4251088254717	27 lbs (~12. kg) 118N	X			
PM (Performance Mono) Wing BLACK	A11518073	4251088254700	27 lbs (~12. kg) 118N	X			
PM (Performance Mono) Wing GREY / BLACK	A11518084	4251088258746	27 lbs (~12. kg) 118N	X			
PM (Performance Mono) Wing PINK / BLACK	A11518085	4251088258722	27 lbs (~12. kg) 118N	X			
PM (Performance Mono) Wing RED / BLACK	A11518086	4251088258739	27 lbs (~12. kg) 118N	X			
PM (Performance Mono) Wing RED	A11518015	4251088250153	32 lbs (~14.7 kg) 144N	X			
PM (Performance Mono) Wing BLACK	A11518016	4251088250160	32 lbs (~14.7 kg) 144N	X			
PM (Performance Mono) Wing GREY / BLACK	A11518081	4251088258685	32 lbs (~14.7 kg) 144N	X			
PM (Performance Mono) Wing PINK / BLACK	A11518082	4251088258692	32 lbs (~14.7 kg) 144N	X			
PM (Performance Mono) Wing RED / BLACK	A11518083	4251088258708	32 lbs (~14.7 kg) 144N	X			
Deep Ocean Wing Black	A11518001	4251088250016	45 lbs (~21.8 kg) 214N	X	X	X	
Deep Ocean Wing Black	A11518002	4251088250023	60 lbs (~23.8 kg) 233N	X	X	X	
Deep Ocean Wing Red	A11518075	4251088254724	94 lbs (~38.8 kg) 381N	X	X	X	
Deep Ocean Wing Black Vintage	A11518003	4251088250030	94 lbs (~38.8 kg) 381N	X	X	X	
Deep Ocean Wing Red Vintage	A11518004	4251088250047	94 lbs (~38.8 kg) 381N	X	X	X	
Deep Ocean Wing Chemically Resistant	A11518080	4251088258678	60 lbs (~23.8 kg) 233N	X	X	X	
Tesseract Wing Vintage	A11518009	4251088250092	60 lbs (~23.8 kg) 233N	X	X	X	X
Trieste Wing Black Vintage	A11518005	4251088250054	60 lbs (~23.8 kg) 233N	X	X	X	X
Trieste Wing Red Vintage	A11518006	4251088250061	60 lbs (~23.8 kg) 233N	X	X	X	X
Trieste Wing Black Vintage	A11518007	4251088250078	94 lbs (~38.8 kg) 381N	X	X	X	X
Trieste Wing Red Vintage	A11518008	4251088250085	94 lbs (~38.8 kg) 381N	X	X	X	X
Ocean Wing Black Vintage	A11518011	4251088250115	60 lbs (~27.4kg) 269N		X		
Ocean Wing Red Vintage	A11518012	4251088250122	60 lbs (~27.4kg) 269N		X		

Ocean Wing Chemically Resistant Vintage	A11518013	4251088250139	60 lbs (~27.4kg) 269N		X		
Performance Double Wing Black	A11518017	4251088250177	45 lbs (~25.4 kg) 249N		X		
Performance Double Wing Red	A11518018	4251088250184	45 lbs (~25.4 kg) 249N		X		
Performance Double Wing BLACK	A11518089	4251088260084	45 lbs (~25.4 kg) 249N		X		
Performance Double Wing PINK / Black	A11518090	4251088260091	45 lbs (~25.4 kg) 249N		X		
Performance Double Wing GREY / Black	A11518091	4251088260107	45 lbs (~25.4 kg) 249N		X		
Performance Double Wing Black	A11518057	4251088251921	45 lbs (~27.3 kg) 268N		X		
Performance Double Wing Red	A11518058	4251088251938	45 lbs (~27.3 kg) 268N		X		
SideStream 27	A11518087	4251088259439	27 lbs (~12. kg) 118N	X	X		X

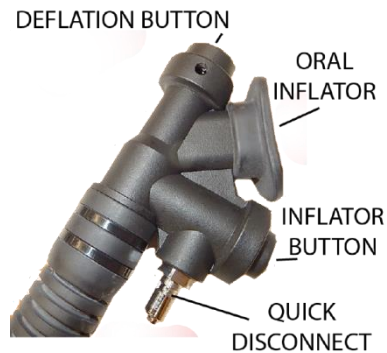
## INFLATORS AND DUMP VALVES

### OMS INFLATORS

The threaded end of the Quick Disconnect hose attaches to a low-pressure port of the diver's first stage. The Quick Disconnect end is attached to the inflator mechanism by pulling back on the collar and pressing it onto the Quick Disconnect nipple.

Inflate the BC by pressing the power inflation button. Use short bursts to control the amount of air entering the BC. The oral inflation mouthpiece allows for oral inflation by exhaling into the mouth piece while completely depressing the deflate button.

Air can be vented by depressing the deflate button or by using the pull dump.



### OMS DUMP VALVES

Air can also be vented from the BC by gently pulling on the pull dump cord. OMS BCDs are available with a lower dump valve located at the bottom of the BC or upper dump valves on the diver's shoulder. Some models are equipped with both.



**!! WARNING !!**

*The deflator must be the highest point in order to dump air properly.  
Not properly positioning the deflator can cause a rapid ascent which is dangerous and can lead to lung overpressure injuries and/or decompression sickness.*

*Either of these conditions can cause serious injury or death.*

Pull dumps should be inspected regularly by fully inflating the BC to insure they vent properly. Also, be sure to thoroughly rinse them after each dive to prevent debris from becoming trapped in the seal causing air to leak from the BC.

**!!WARNING!!**

*Repeated improper use of the oral inflation/deflation mechanism or dump valves assemblies may allow water to enter the BC with a subsequent reduction in buoyancy.*

*Reduced buoyancy can cause a loss of buoyancy control resulting in personal injury or death.*

## **ASSEMBLY OF THE MOST POPULAR OMS BUOYANCY COMPENSATORS**

OMS have multiple harness and wing options available. The following are the most popular combinations:

### **THE IQ HARNESS SYSTEM**

#### **Attaching the Wing and Single Tank**

A wing can be attached to the IQ Lite Pack or IQ Pack with two nylon tank bands. Locate the sewn webbing slots sewn onto the back of the IQ Lite or IQ Pack. Thread a nylon tank band through the top slot and another through the bottom slot. Next, thread the free ends of the tank bands through the corresponding slots in the wing. As the tank bands are tightened onto the tank the bladder and harness will be securely sandwiched together against the tank.

### **ATTACHING THE STAINLESS STEEL SINGLE TANK ADAPTOR (PART# A16918001)**

The OMS single tank adaptor may be used to secure a single tank to an IQ Lite Pack that has a backplate installed.

To install a backplate, grasp the top of the IQ Lite's Pack's back pad and open the bottom of the pad where the Velcro encloses the inner pocket. Slide a backplate up into the slot aligning the grommet holes with the bolt holes in the backplate. Insert the bolt studs of the Single Tank Adaptor through the grommet holes in the back of the wing through the bolt holes of the backplate and through the corresponding holes in the harness. Hold the adaptor, wing and harness together and place the large washer over the bolt stud then the split lock washer followed by the wing nut. Tighten the wing nut securely then press close the bottom of the pad with the attached Velcro® flap.



#### ATTACHING THE CYLINDERS TO THE SINGLE TANK ADAPTOR

The OMS single tank adaptor may be used to allow a single tank to be attached to an OMS harness equipped with a metal back plate.

This makes switching back and forth between double and single tanks easier and faster. It also provides a more stable mount for larger, heavier high capacity tanks.

The Single Tank Adaptor is installed by passing the bolts of the adaptor through the grommet holes of the BC then through the matching holes on the back plate. Be sure that the BC is oriented with the warning label against the diver's back.



Install the flat washer first (against the backplate or harness) then the split lock washer. Thread the wing nuts onto the bolts and tighten securely by hand. Next install two nylon cam bands through the slots on the Single Tank Adaptor. Weave the webbing of the tank band through the cam buckle, Utilizing the weave outlined on page 16. Remember, all nylon webbing stretches when wet so be sure to soak the nylon tank bands in water before tightening.

## INSTALLING THE SOFT SINGLE TANK ADAPTER (PART# A16918003)

The Soft Single Tank Adapter is ideal for the traveling diver. Lightweight and easy to manage, this adapter will work on the IQ Pack when use of a hard plate is not required. Additionally, it can be used on a Stainless Steel or Aluminum Backplate if the traveling diver needs to reduce luggage weight.

The tank bands are routed through either the slots of the IQ Lite Pack or the slots in the Stainless Steel or Aluminum backplate. Book screws keep the air cell and tank adapter in place allowing it to be handled as one unit.

The soft single tank adapter and stainless steel single tank adapter will work with all of the OMS Wings except for the Performance Mono and Performance Double Wing to achieve the best possible performance.



Single Tank Adapter Uninstalled

Single Tank Adapter Installed

## OMS PERFORMANCE MONO WING 27lb (120 N) or 32lb (142 N)

The Performance Mono Wing is a donut-style wing allowing quick and easy movement of air from one side of the air cell to the other. This is the ideal wing for the traveling diver as it is small, lightweight and easy to pack. The air cell has stabilizing bars built into the wing to reduce tank shifting during the dive. The stabilizing bars eliminate the need for an additional single tank adapter.

### Threading the cylinder strap (Tank Band)

Single tanks are usually attached using nylon “cam” buckles. The nylon strap weaves through a buckle that secures the strap against the tank. It is important that the strap is correctly woven through the buckle otherwise there will be insufficient tension to securely hold the tank. Also,



remember that the nylon stretches when wet so it is important to soak the nylon strap in water before tightening the cam band. The slots on the cam buckle are numbered to aid in threading the strap.

### Threading the Cylinder Strap

1. Lay the buckle on the cylinder so the numbers are facing up.



2. Thread the strap up from the bottom through hole



3. Thread the strap through hole 2. Pull to tighten around the cylinder.



Pull the strap back over the buckle to tighten.



NOTE: This procedure to thread the strap through the buckle is the same for a plastic buckle.

### Weight Pocket Accessories



PUBLIC SAFETY HORIZONTAL  
20 lb (9 kg) per side



Vertical Weight Pocket  
5 lb (2.3 kg) per side

### The Weight Pocket Install on each of the Harnesses' in the same manner (Smartstream, IQ Lite, Public Safety, and Sidemount Adapter):

Each of the Weight Pockets have a webbing strap on the back side that the waist strap of each harness will slip through allowing the Weight Pocket to slide back and forth to get the best placement for the weight. This applying to the left and right side waist strap of each harness unit

### PRE-DIVE CHECKS

Connect the power inflator to an air source. Depress and release the inflation button intermittently to ensure that the airflow is unobstructed, and that airflow stops completely when the button is released.

Fully inflate the buoyancy compensator until the overpressure relief function of the Overpressure-Relief / Pull-to-Dump (OPR/PD) valve starts to relieve pressure by venting air. Stop inflating the buoyancy compensator and the OPR/PD valve should stop venting air and reseal. The buoyancy compensator air cell should be rigid and fully inflated.

Manually operate the OPR/PD valve by pulling on the pull cord assembly. Pull for a second then let go ensuring that valve reseals after each pull.

Fully Inflate the BCS and let it sit for 5-10 minutes. If the bladder shows any signs of deflation within

the 5-10 minute period, DO NOT USE THE BUOYANCY COMPENSATOR.

Check the two-cylinder bands to ensure they are properly tensioned and the cylinder is held firmly.

If your system includes weight pockets, check that the weight pockets are secure and that the weight pockets are not overloaded.

If you are using a weight belt, it must have a clear drop path. If your buoyancy compensator is equipped with a crotch strap, the weight belt must be put on last. If you are using the integrated weight system, the weight pockets must be properly attached to the harness.

**!!WARNING!!**

*Donning the crotch strap over the weight belt will prevent the weight from being pulled free in an emergency which can result in serious injury or death.*

Check the operation of all buckles. Check all fittings and connections for damaged components (cracks, tears, etc.)

On dual bladder models test each bladder separately (Do not inflate both bladders at the same time)

On wings with elastomeric retraction bands, with the BC fully inflated check that pull dump cord or folds in the BC are not trapped by the retraction bands.

After entry, inspect units for bubbles indicating leaks.

Test pull dumps for smooth operation and positive seal.

## **OPERATING THE BUOYANCY COMPENSATOR**

**!! WARNING!!**

*Before using this buoyancy compensator (BC), you must receive instruction and certification in SCUBA diving and buoyancy control from a recognized training agency. Use of SCUBA equipment by uncertified or untrained persons is dangerous and can result in injury or death.*

On dual bladder models, the bladder against the diver's back is the primary bladder. Do not inflate both bladders at the same time. This could decrease the overall lift provided by the jacket.

**!!WARNING!!**

*Repeated improper use of the Oral Inflation/ Deflation mechanism or dump valves assemblies may allow water to enter the BC with a subsequent reduction in buoyancy. Reduced buoyancy can cause a loss of buoyancy control resulting in personal injury or death.*

## **POST DIVE AND MAINTENANCE**



With proper care, your OMS Buoyancy Compensator will provide years of service. The following care and maintenance must be performed after each diving outing.

Thoroughly rinse the BCS with fresh water to remove salt, sand, etc. Once the outside has been completely rinsed, rinse out the inside of the bladder.

Connect an air source to inflator.

To thoroughly rinse the interior of the air cell, using a hose, direct water into the bladder via the oral inflator.

Completely drain the bladder via the oral inflator or OPR valve.

Inflate the BCS and allow it to dry inside and out.

Avoid prolonged exposure to direct sunlight or temperature extremes. Ultraviolet rays will not only fade the materials, but will reduce the strength of the materials.

Use in heavily chlorinated water will cause the buoyancy compensator fabric to discolor and deteriorate.

Store in a cool dry place.

## **OMS WINGS WITH RETRACTION BANDS**

OMS Deep Ocean, Tesseract and Trieste wings include elastomeric retraction bands that keep the BC compact when not fully inflated. They also aid in deflation by preventing localized air trapping.

### **!!WARNING!!**

*Failure to follow these assembly instructions can cause BCD failure resulting in personal injury or death!*

### **REPLACEMENT OF ELASTOMERIC BANDED WINGS**

Replacement sets of Elastomeric Retraction Bands include 12 bands. Pre-stretch the bands to their limit before installation (repeat this 2-3 times for each band). This process makes the stringing and tying the elastomeric bands easier.



Lay the wing flat with the OMS logo upward. Thread each band individually through the grommet tabs around the outer edge of the BC.



Once all the bands have been threaded, fully inflate the wing until the dump valve vents. It is extremely important that the wing is fully inflated while the bands are tied into place! Installing the bands on an uninflated BC can compromise the BCD's lift capacity! Thread the top of each band through the inner rows of grommet holes and stretch them around to tie the ends together in a SQUARE KNOT on the tank side of the wing (opposite the side with a warning label). Make sure the bands are tied snugly against the BC. You should be able to easily slide your finger between the wing and the band.

Once all the knots are tied, pull each of them around so that it is safely tucked near the backside of each inner grommet (tank side/no-label side). Deflate the wing and check that it deflates evenly around the entire circumference. Orally inflate the wing to be sure the bands are not too snug. You should be able to orally inflate the BC with little effort. If there is excessive resistance to oral inflation loosen the bands.



Deflated OMS Wing with Retraction Bands

Inflated OMS Wing with Retraction Bands



## **WARRANTY**

### **OMS LIMITED WARRANTY**

OMS warrants that your OMS Buoyancy Compensator will be free from defects in materials and workmanship for a period of two (2) years from the date of the original retail purchase.

Any product determined by OMS to be defective in materials or workmanship in accordance with the above warranties will be repaired or replaced at the option of OMS, free of charge, when received at the factory freight prepaid, together with proof of purchase. The original warranty date applies regardless of whether the item is repaired or replaced.

This warranty is expressly in lieu of all other warranties. Any implied warranties of merchantability or fitness for a particular purpose are limited to the same duration as this express warranty.

This warranty does not cover, and OMS shall not be liable for incidental or consequential damages. Some states do not allow the exclusion or limitation of implied warranties, incidental or consequential damages, so the above limitations and exclusions may not apply to you.

This warranty does not cover fading or any damage resulting from misuse, abuse, neglect, alteration, failure to perform maintenance as instructed, damage caused by contaminants, or unauthorized repair or service.

This warranty does not cover any representation or warranty made by dealers beyond the provisions of this warranty.

This warranty does not cover costs incurred for normal repair, inspection and preventative maintenance.

This warranty is a consumer warranty extended only to the original retail purchaser, and does not apply to equipment used for commercial purposes.

You must establish proof of purchase to obtain warranty service or replacement.

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

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## SERVICE

OMS have extensive service facilities in Europe and the USA offering the highest quality repair services for your equipment:

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