# SURVITEC HALO LIFEJACKET - Q&A DOCUMENT

## HALO LIFEJACKET

### Who is Halo designed for?

The Halo lifejacket is a 'constant wear' lifejacket designed and approved for use on helicopters operating to or from helidecks located in a hostile sea area. There are three types of Halo lifejackets in our portfolio – Halo Passenger, Halo Crew and Halo Training. Each of which have been tailored to meet the demands of different applications and environments. The Halo Passenger and Halo Crew are primarily aimed at those travelling to and from offshore platforms and also for search and rescue (SAR) organisations who have an air-sea rescue division. Both of which are also suitable for private transfer. Alternatively, the Halo Training lifejacket has been developed to meet a market demand for lifejackets capable of withstanding the repetitive rigours of training programmes. Based on customer feedback from leading OPITO approved training providers, the training option is an authentic reproduction of the operational Halo (Passenger and Crew) lifejacket.

### What approvals does the Halo have?

The Halo Passenger lifejacket is approved in accordance with Commission Regulation (EU) No. 748/2012, Part 21, Section A, Subpart O and ETSO-2C504, C13f. In addition, since 2016, the Federal Aviation Administration (FAA) and EASA have reciprocal acceptance for TSOA and ETSOA approvals, meaning Survitec ETSO approved products can be supplied and used globally.

### Does the Halo have a twin chamber or single chamber?

Halo Passenger and Halo Crew are available in both single and twin chamber options. The single chamber is lighter - however, the twin chamber option is constructed from interlinking inflation chambers which provides a failsafe/redundancy inflation chamber if one is to puncture/deflate. This is inflated either using the second inflation mechanism or the oral inflation tube. The Halo Training lifejacket includes a single chamber but incorporates a modified inflation chamber with a "fake" secondary inflation mechanism. This simulates the operation of the actual Halo system but reduces rearming costs and simplifies the repacking process in the training environment.

### What happens if I pull both manual toggles in the water?

The lifejacket will not burst as pressure release valves in the oral inflation tubes will release any excess pressure.

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## Is Halo compatible with aviation immersion suits?

Yes – Halo has been rigorously tested and is compatible with Survitec's 1000 Series aviation immersion suits. We have also developed a training variant of these suits, the 1300 Series training immersion suit, for use with the Halo Training lifejacket.

## How is Halo designed to keep you safe in a ditching scenario?

As with all our lifejackets, the Halo's fundamental objectives is to a) protect your airway b) keep you afloat c) aid your visibility and recovery. As a company we have more than 160 years market-leading experience in flotation survival design. This experience, coupled with extensive industry insights, has meant that we have been able to design Halo and set a new standard in helicopter transfer safety.

A big part of someone's survival relies on the lifejacket's bladder. Integral to Halo's design has been the performance technology built into the lifejacket's 275N bladder to significantly increase the in-water safety of the user. Should Halo need to be activated in-water, a unique buoyancy distribution system has been built in the lifejacket to offer exceptional turning speeds and increased mouth freeboard. The inflation of the bladder is done via the beaded manual inflation toggles (each toggle capable of fully inflating the lifejacket). The 275N sculpted bladder rapidly rotates the wearer to a face-up position and increases mouth freeboard – which is the distance between the wearer's airway and the water. Further to this, the inflation chamber includes an inflated chin support that further protects the wearer's airway by minimising the amount of water channelling up between the lifejacket bladders. The highly visible lifejacket bladder combined with reflective tape means that by wearing a lifejacket you increase your chances of also being seen in the water.

Halo is available with a fully integrated Emergency Breathing System (EBS). The bespoke Survitec EBS has been designed to be deployed in one swift movement and features a carbon composite cylinder, braided low pressure hose and second stage with integrated nose clip.

There is an array of additional features included as standard that will further help to increase the wearer's survival. These include an integrated personal locator beacon (the AU10-HT), Halo hood system, an inflatable chin support, twin lifting beckets, water activated strobe, lifejacket light and whistle.

## What is the Halo hood system?

It has been proven that the addition of a spray hood inside a lifejacket can significantly enhance the wearer's safety. It increases visibility, retains heat and protects the airway from water inhalation. The Halo Hood System is an industry first design for enhanced airway protection. This is achieved through improved bladder and spray hood compatibility, and a new double halo construction. As a result, the spray hood is fully self-supporting once deployed and sits significantly higher above the face. It also includes a protected outlet for the AU10-HT's antenna to be positioned through for optimum positioning.

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### Does Halo come in different sizes?

No. Halo is a versatile universal adult size. The easy waist adjusters and ergonomic Fusion 3D shape accommodates a wide range of shapes and sizes.

### Does Halo inflate automatically?

No. All aviation lifejacket's (including Halo) primary means of inflation can only be by manual inflation - which needs to be activated by the wearer. This is to prevent the lifejacket inflating whilst inside the aircraft cabin, which could impede escape in an emergency. As with all lifejackets, Halo also includes an oral inflation tube to allow the wearer to top up the buoyancy if necessary.

### What cylinders are used in the Halo lifejacket for inflation?

1 x 60g CO2 cylinder (single chamber)
2 x 60g CO2 cylinder (twin chamber)

### Do Survitec offer any audio-visual supporting material?

Yes. Survitec Viscom, a globally recognised provider of passenger briefing and crew support material, is part of Survitec. Our Viscom team's extensive experience of aircraft types and survival equipment means we have the ability to take the lead in assisting you with your requirements. As part of your Halo package we can provide audio-visual resources such as animated safety briefing videos, safety onboard cards, donning posters and training materials in any language – plus much more!

## EMERGENCY BREATHING SYSTEM

### What does EBS stand for?

Emergency Breathing System. Previously this has been known as PSTASS, which stands for Passenger Short Term Air Supply System.

### What approvals does the EBS have?

The bespoke Survitec EBS is (EU) 2016/425 approved and is approved by the CAA for use with the Halo Passenger and Halo Training lifejackets. Halo Crew lifejacket is currently going through the approval process.

### How is the EBS deployed?

The EBS's second stage includes an integrated nose clip which allows the system to be deployed in one swift movement using just one hand.

### How heavy is the EBS?

The EBS features a carbon composite cylinder with a light braided low pressure hose. Weighing in at just 949g, the EBS is 43% lighter than our previous models and 30% lighter than competing products.

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### How much breathable air is in the cylinder?

The working pressure of the cylinder is 310 bar and has the capacity to hold 99.2lt of breathable air. This provides 80% more breathable air than the industry minimum standard.

### Does the EBS air supply need to be turned on?

No, the EBS is ready to use. You do not need to do anything, simply put the mouthpiece into your mouth as trained & breathe normally. The EBS features a colour coded contents gauge which will indicate the cylinder's pressure.

### What does the purge button do?

The purge button releases small puffs of air to clear out the mouthpiece. Pressing the purge button will deplete the amount of air in the cylinder. Do not press the purge button unless you are actually using the EBS in an emergency or during training.

### Can the EBS be topped up using a compressor or refill station?

Yes. We are able to supply a compressor or refill station as part of your Halo package. If you have an onsite system already then it must conform and meet the EN12021 standard for breathing air to be suitable for refilling PSTASS and EBS.

### Is there any training required in using the Halo lifejacket and EBS?

Yes - Survitec actually supported OPITO, the global, not-for-profit, skills body for the energy industry in developing the 'Compressed Air EBS – Initial Deployment Training'.
Now lifejacket and EBS training is included within the mandatory basic offshore safety induction and emergency training (BOSIET). OPITO is a global organization who sets the standards which are recognised globally and rolled out by an extensive network of training providers who we also closely work with in the supply and development of equipment.

## SERVICING

### What is the servicing and inspection requirement for the EBS?

The EBS is required to have an annual service as per the requirements set within the ETSO and the manufacturer's guidance. For EBS systems used in a training environment, this requirement is accelerated to every 200 uses or annually – whichever comes first. In addition, every 5$^{th}$ year the cylinder is required to undergo a hydrostatic test. Both the Halo lifejacket and EBS also requires daily checks as part of the required servicing methodology to ensure it remains in an action-ready condition.

### Where can the Halo lifejacket and EBS be serviced?

We can offer full OEM servicing for direct sales and rental contracts at our Part 145 centres of excellence in Scotland, Belgium and Australia. Alternatively, we can provide overseas customers who hold Part 145 (or equivalent approvals) with maintenance and servicing training on both lifejacket and EBS types, allowing you to service products in country - a great cost saving option.