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FAQs - English

In general

What is RESTUBE?

RESTUBE is a product for better water safety, where no similar lifejackets have previously been used.

... in a little more detail:

RESTUBE is an inflatable backup when you're in water. Small and light, your RESTUBE is always there. Easily attached around your waist or on a harness and off you go. When necessary, pull hard on the trigger and the float inflates. Now you have time. Perfect for use in a lake or in the ocean. Reusable through replacing the gas cartridge.

Where is RESTUBE developed and produced?

The company's headquarters and manufacturing facilities are located in Berghausen, near Karlsruhe, Germany. This is where RESTUBE is developed and produced.

Where can I buy RESTUBE?

RESTUBE can be bought in many sports stores. If you like the idea of RESTUBE, you may endorse us as a young company – just ask your local dealer for RESTUBE. You can also buy RESTUBE directly on our online shop.

History

Short:

In 2012, the startup RESTUBE was founded by two mechanical engineering graduates from Karlsruhe who have always loved water sports. While kitesurfing in open waters, Christopher Fuhrhop found himself in a tricky situation in which he wished he had some small, lightweight, and personal water rescue equipment. The rest is history: Both he and Marius Kunkis wrote their theses on the new product and were promptly awarded by the federal government and the EU "Exist" grant. Many successes followed and soon they were finalists for the founder competition

sponsored by the German magazine *Wirtschaftswoche*, the James Dyson Award, the ISPO Brand New Award, and the ISPO Gold Award 2014/15 and 2016/17.

Long:

The incentive for RESTUBE was from being in a critical situation in the water. A fall while doing water sports and the disorientation and panic that comes with it. How can such a situation be avoided? Founder Christopher Fuhrhop came across this question when he had experienced such a situation.

"It all started as an idea during my studies, and I couldn't get rid of it!" Studying mechanical engineering suddenly made sense. Soon, a team formed between Marius Kunkis, Christian Schwarzkopf, and Christopher Fuhrhop. The idea grew with support from the University of Karlsruhe and many others who believed in the project.

Since fall 2010, full-time work led to a small and handy water rescue system. "RESTUBE sports" was released in the summer of 2012. The product was awarded the "brand new award" at the sports trade fair ISPO as well as by the federal government. RESTUBE was named one of the best startups by *Wirtschaftswoche* and won the James Dyson Award.

The rest is history: From long distance swimmer Bruno Baumgartner, windsurfer Florian Jung, professional stand up paddler Sonni Hönscheid to kitesurf instructors and lifeguards at DLRG (the German lifesaving organization) – the simple idea created freedom and enthusiasm. And the RESTUBE team continues to grow.

In 2014, two versions were available (classic and sports). Since 2015, four different versions are now available. Three for self-rescue (basic, classic, sports) and one for rescuing others (lifeguard).

The "basic" has the fundamental functions and is therefore perfect for all water activities, e.g., with the family, as backup on a boat, or while fishing and kayaking. The "classic" can be worn vertically and has almost no drag while swimming. It is perfect for swimming, triathlons, or any type of water activity. The "sports" version was developed for high impact sports and is therefore perfect for kitesurfing, windsurfing, surfing, or SUP. It can of course also be used for any water related activity.



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Plans and ideas for the future are vast, and the possibilities are endless: Whether for personal use as a safety backup in the water, as an extra form of safety during water sports, as demonstration equipment at safety training and workshops, or as a basic companion on excursions and tours.

The young RESTUBE team is scanning the market and diligently running tests at their own development facilities to further design, sew, and connect.

The aim is to raise awareness of the issue of security in the water and providing more freedom to swimmers.

Facts

Is it true that over 30.000 people drown every year in Europe and up to 500.000 people worldwide?

Even with these estimations, the World Health Organization (WHO) believes that drowning is a more serious problem than it is reported by official sources. Drowning incidents are often not reported in vacation areas so that their reputation is not damaged.

In addition, it should be noted that this number does not include natural disasters, suicide, or refugees.

Each year, up to 40,000 people drown in Europe, including many athletes. Approximately 100 people die in the water every day.

Around 80 percent of all drownings could be prevented by quick or early intervention. Most cases relate to some degree of panic attacks. When panicking, an adult is left with one minute of air until he or she drowns. If you calm yourself or, even better, do not panic at all, you have enough time to get the situation under control. Already in this case, a small float like RESTUBE is enough to keep the airway clear.

In Germany, a total of 438 people drowned in 2010.

80% men, 5% in preschool – more than 50% were older than 50.

How many people drown trying to help others?

Around 1/4 of drowning victims die trying to save other people. They put themselves in danger, quickly reach their physical limits, and don't forget: even children can become an enormous force and bring adults into a life-threatening situation.

Do I need to be anxious in the water?

Water poses numerous hazards. With well-considered actions and responsibilities, one can usually remain safe and comfortable. However, unpredictable situations can always occur: a cramp, equipment breaks when you're far away from the shore... It is exactly in these situations where it is best to be prepared with a RESTUBE.

Usage

How can RESTUBE help me?

Those who panic in the water can drown in less than a minute. Even if you would still have sufficient reserves of energy, you may not be able to coordinate your swimming movements during a panic and can start to swallow water. This is the beginning of the drawing process.

RESTUBE intervenes early on, almost as a first aid. By pulling the trigger, RESTUBE inflates as a flotation device and takes the panic away from an emergency situation or prevents it from happening at all.

You can hold on to it, relax, and then save yourself with a clear head or wait for others to help. And the best part is that your time in the water is better and you can feel free with RESTUBE. Try it out and you'll see what makes RESTUBE so special.

Why do I need RESTUBE?

RESTUBE is not a substitute for a lifejacket or water wings – it is for all the water activities in which one carries little or no security.

How does RESTUBE work?

If you are in a precarious situation in the water, you pull the trigger, the float inflates within seconds, and you can then hold on to the float.

Does RESTUBE pull me upwards?

Yes, with a force of 75 N. For each 10 m of water depth, the pull upwards is cut in half.



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What is the maximal, personal weight limit to use RESTUBE?

Theoretically, it is unlimited. It depends on the volume needed to be kept afloat (upper body plus part of the shoulders). This is about the same for most people. That is, RESTUBE always provides enough buoyancy for the head or to hold the airways above the water surface.

Is RESTUBE, regardless of their build intended for everyone?

RESTUBE has a buoyancy of 75 newton and a volume capacity of 7.5 liters. In an emergency situation, it is most important that the head remains above water.

Since the average human head weighs about 6 kg, the buoyancy of RESTUBE is sufficient. As small as possible, as large as necessary.

Can you reuse RESTUBE?

Yes, by simply replacing the 16 g CO₂ cartridge, RESTUBE can be used again. The package includes RESTUBE and an already attached 16g CO₂ cartridge.

CAUTION:

Only the original RESTUBE CO₂ cartridges are 100% quality tested, seawater resistant, rust-proof, and the inflating force is adapted to the RESTUBE trigger. Other CO₂ cartridges cannot be used. Please be aware that there is no guarantee that a RESTUBE actually inflates in an emergency.

How do I change the CO₂ cartridge?

Please note: RESTUBE can only guarantee functionality when using an original RESTUBE CO₂ cartridge.

Please remove any dirt (e.g., sand) and the protective cover from the CO₂ cartridge before unscrewing. Now unscrew the empty CO₂ cartridge and dispose of it with residual waste. Fold away release lever to avoid piercing the new CO₂ cartridge and place the new green securing clip on the red indentation of the trigger mechanism. Now screw on the new original RESTUBE CO₂ cartridge tightly, up to the marking of the trigger mechanism. Finally, slide the protective cover over the CO₂ cartridge.

How long can a RESTUBE be used after the CO₂ cartridge is inserted?

Even if a cartridge is already installed in the RESTUBE, it is ready for use. The only important thing is that there is no puncture in the cartridge.

Can I dive under waves with a triggered RESTUBE?

Yes, similar to the BAYWATCH buoy being shifted to one's back. Extremely useful in the water. Then hold onto it again.

Can I give RESTUBE to my children?

The use of RESTUBE is recommended starting at the age of 10. Children have to understand that they need to pull on the trigger and hold on to the float in dangerous situations. Our first tests with 6-7 year olds showed that they can handle a RESTUBE.

How can I help other people with RESTUBE?

A person close to you is in trouble? This is a critical situation in which you have to be very careful. Without a float, you cannot swim to the person under any circumstances. They might otherwise drag you down with them. Even with a float, you should be in good physical shape and trained to rescue other people.

Yes, inflated or packed in its bag, it can be directly passed to "the victim". However, it is not advised to tow a person using the safety line. This decreases its long term durability.

Product description

What is the difference between RESTUBE basic, classic, sports and lifeguard ?

For the exact differences, please refer to this page: <https://www.restube.com/produkte/produktvergleich/>

In which languages is the user manual available?

English, Spanish, French, Italian, German & Dutch. Ask for other languages.



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What are the dimensions?

Packed: 14x7x5 cm

Inflated: approx. 67 cm long buoy, 13 cm in diameter

How long is the provided waist strap?

The length of the waist strap depends on the model. The different RESTUBE versions have the following strap lengths:

RESTUBE basic: 120 cm (25 mm wide)

RESTUBE classic: 120 cm (25 mm wide)

RESTUBE sports: 120 cm (30 mm wide)

Harness strap (included with RESTUBE sports): 60 cm (30 mm wide)

RESTUBE XL belt: 155 cm (25 mm wide)

How is RESTUBE classified in terms of security?

Inflatable buoy.

Is the float certified?

All components used for the float (fabric, trigger, mouth valve, gas cartridge) are certified by the lifejacket standard EN ISO 12402.

RESTUBE is in the process of being certified.

Is RESTUBE a substitute for a lifejacket?

No, because RESTUBE is not safe when unconscious.

Why is RESTUBE no personal protective equipment (PPE)?

The basic requirement for PPE is:

- The product is permanently attached to the body (the RESTUBE is not, because there is a safety line)
- By attachment alone, the product offers protection against danger (in this case: from drowning). This does not apply to RESTUBE, as it requires additional movements (triggering, holding) by the user.
- RESTUBE does not fall within the EU Directive 89/686/EEC (guidelines on personal protective equipment)
- RESTUBE requires a CE marking, which would testify that it complies with the guidelines

- RESTUBE cannot use the CE marking, because it does not fall under a category that is regulated by the EU

Can I bring a RESTUBE on the plane?

Yes, RESTUBE can be brought onto planes. The original RESTUBE CO₂ cartridges contain 16 g CO₂ and are pressurized. In aviation, they are considered dangerous. According to IATA, however, up to 4 CO₂ cartridges may be brought onto the airplane. The RESTUBE CO₂ cartridges should be registered by phone before starting your trip. At the airport, show the supplied green flyer. As a safety measure, put a copy of the flyer around your RESTUBE and into your checked baggage. The built-in CO₂ cartridge from RESTUBE has to be unscrewed prior to the flight.

What is the green clip for?

The green securing clip allows you to see if the trigger is closed and secured. Before activating your RESTUBE, the trigger should be closed and secured with the green clip. The red marker on the trigger should not be visible. Only then is it possible to screw a new, full CO₂ cartridge on to the trigger mechanism.

The buoy loses air. What should I do?

CO₂ diffuses through the fabric of the float, not normal air. When inflated, approximately ¼ of the total volume escapes from the CO₂ cartridge. Upon inflation with normal air, the float should remain firm.

CO₂ Cartridges

Can I use other cartridges such as use the bicycle pump cartridge as a replacement?

No. Only our RESTUBE replacement cartridges are certified: 16 g capacity, compatibility with the trigger mechanism, and a special alloy for fresh and salt water resistance.

What kind of gas is in the cartridge?

CO₂ gas, not to be confused with the gas from cream dispenser cartridges (N₂O gas = nitrous oxide).



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How much content does a cartridge have?

16 g or 21 ml CO₂ -> one inflation equals 8-9 l volume

How much pressure is in the cartridge?

The pressure of the CO₂ cartridge is 57.3 bar at 20°C.

How much does a cartridge weigh?

approx. 60 g

Where are the cartridges produced?

The cartridge is produced in Austria.

Maintenance

How should I clean my RESTUBE?

After use in salt water or, e.g., marshes, the RESTUBE should be taken out of its bag and rinsed with clean water. Briefly lay it out and then pack it back into the bag. Nothing else is necessary!

How to dry my RESTUBE?

After using a RESTUBE, simply take it out of its bag and leave out to dry. It will dry very quickly and ready to be packed again. Replacing the cartridge is only necessary after it is triggered.

Do I have to check the product over like with a lifejacket?

Generally no, but check it regularly for damage. For added durability, empty the bag after each use and rinse it with clear water. Details can be found in the manual.

If RESTUBE gets wet without use, do I have to unpack the bag and dry ?

RESTUBE only has to be rinsed with fresh water after use in salt water and then let it dry. After using it in fresh water, you can let your RESTUBE dry in its bag.

Does I have to test its functionality and tightness similar to lifejackets with gas? What kind of a lifespan can I expect?

You should check the RESTUBE once per season. So check whether the float is still tight, the mouth valve is functioning, the bag and strap are free of damage, and the CO₂ cartridge is properly inserted. Under special conditions (for example, long-term use, use in other climates, or frequent wearing >1 time/week or frequent triggering), the

product should be checked more frequently and the service life may be shortened accordingly. RESTUBE basic and classic are designed to be triggered 40 time, RESTUBE sports and lifeguard approx. 80 times.

Before each use, the operational readiness of the product has to be checked. Make sure the green safety clip is laterally located on the trigger mechanism and whether or not the float is still properly placed in its bag.

What do I do with RESTUBE after triggering?

After use/application:

1. Drain
2. Rinse with clear water
3. Allow for it to dry
4. Insert new cartridge
5. Fold float
6. Stow away in the bag
7. Dry



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