

Life rafts

How much do you know about your life raft? **Heather Francis** explores a world she hopes she never has to visit.

A decision that could save your life



Fully inflated and sitting in the middle of the workshop floor our life raft looked rather small. This was not the first time I had seen a Viking RescYou four person life raft in all its glory, but it was the first time ours had been unpacked from its tidy black valise.

We had gone way past the recommended service interval, but certified life raft service centres are not that easy to come by in the South Pacific. Blown up, the raft reminded me of a children's bouncy castle, all gaudy colours and rounded corners.

The air was heady with the smell of new rubber like a freshly opened packet of balloons but I felt no excitement as I crawled over the air-filled pontoons and into our escape pod. I sat in the strange orange glow with my legs fully extended in front of me, imagining three other people sharing the space. It would be cozy, to say the least.

Even with only Steve and I, the ditch bag and any other items we might manage to grab on the way out or fish out of the debris, it would be tight.

I tried to imagine what it would feel like afloat; the floor constantly undulating, the sound of the ocean crashing around us, the slick, sticky feeling of salty skin and damp clothing. I struggled with the concept that my survival would depend solely on this small inflatable chamber and a few electronic gadgets. I closed my eyes and hoped that day would never come.

What to look for

Spending time in a life raft is probably not on anybody's bucket list, but any sailor who has spent a night or two at sea has no doubt stopped to consider the possibility.

Like an EPRIB, SART, a sea anchor and a good medical kit a life raft is a vital piece of safety equipment that should be on board every boat. Some may think that life rafts are only the concern of the offshore sailor but bad weather, accidents and human errors are not just hazards encountered after you lose sight of land. A simple hop from port to port can be as treacherous as a three week passage if you are not prepared.

With so many brands on the market it is difficult to know which life raft to choose. Unfortunately talking to fellow sailors might not steer you in

the right direction. Boat owners are reluctant to foot the somewhat hefty expense of buying a new life raft if the one on board, when the vessel is purchased, is in serviceable condition.

Trolling the internet you are not likely to find many first-hand user opinions on the matter as, thankfully, few boat owners have had the pleasure of fully testing the limits of their equipment. There are several things to consider when buying a life raft and the first should be the maximum number of people regularly onboard.

The capacity of the life raft you carry is not determined on length of your vessel but the number of crew that will need to use the raft in case of emergency. It is often recommended that you carry a life raft a size larger than number of people onboard. In our case we sail almost exclusively as couple so we purchased a four person raft.

How the life raft performs at sea is somewhat dependant on the number of people inside it, the body weight of the passengers providing extra ballast. Although it may be tempting for us to carry a six or eight man raft it could actually be dangerous. An under-weighted raft is more prone to flipping if caught in a gust or when surfing down waves. A larger raft also means a larger space to keep warm, so maintaining core body temperature could become problematic. Large vessels will often carry more than one smaller life raft to accommodate varying numbers of crew and passengers.

The physical dimensions and weights of life rafts vary from brand to brand but are mainly dependent on one thing; how it is packed. The soft valise versus hard canister option is perhaps the most debated point in the life raft discussion. By far the canister packed life raft is the most popular option. Out of the 20 boats that I surveyed 15 vessels carried canisters.

Like any good debate there are passionate arguments for and against both options. A hard canister is considered to be better protection from the harsh marine environment, but a valise can be stowed below decks out of the weather completely. People also argue that storing a valise down below negates the possibility of theft. I personally have never heard of a canister life raft being stolen off a yacht, never the less, even thieves can be safety conscious too.

A life raft packed in a valise is lighter than a canister, most weighing in between 24 to 34 kilograms instead of 30 to 40kgs. However a smaller crew member may not be able to lift that much deadweight up the companionway, especially if the boat is heaving.

A canister may weigh more but is usually deployed directly from its storage location.



There are a few companies that offer ultra-light life rafts packed in pelican cases, or will custom pack a raft to your storage specifications, but like anything light, small and customised in the boating world those options cost more.

The way the life raft is packed also determines where it is stored. The perfect storage spot for a canister life raft is a purpose-built compartment, as is often found in the transom of a catamaran. This type of system does not take up valuable deck space and ensures the raft is easily accessible, if davits and a dinghy are not obstructing the storage area.

The more common method of stowing a canister is in a custom mounting bracket, usually stainless steel or aluminium, which can be bolted to the deck or vertically on the rail. Although many cite canisters as being better protection against the elements, they can be prone to leakage. So mounting your life on the foredeck may not be the best option.

Canisters are often fitted with a hydrostatic release. This automatic device activates when submerged and inflates the raft if the vessel suddenly sinks. A weak-link in the painter will part under stress allowing the raft to float to the surface.

CLOCKWISE FROM TOP LEFT: Checking out the emergency rations; Out of the valise and still in its metallic vacuum sealed bag; All packed up back in its valise; Ready to expand with its CO2 tank visible.

MAIN: Showing the ballast bags to restrict flipping and swivelling.



In the process of inflation.

It is important to consider what obstructions might hinder the automatic inflation or release of the raft when choosing where to mount the bracket. Many boats have canisters mounted on the cabin top. This might seem like a good idea as it keeps it out from under foot and away from the majority of heavy wave action. However during deployment it could easily get caught in the standing rigging, be punctured by a sharp cotter pin or get tangled in loose lines. Before you drill the holes for the mounting screws take a look around for potential hazards.

A highly recommended spot for a life raft is mounting it on the rails of the push pit. Locating the raft here will allow a mostly unobstructed deployment and make it easier for crew members to depart the foundering vessel from the cockpit. Wherever you decide to put the mounting bracket it is important to use heavy bolts, lock nuts and a backing plate when necessary to prevent the raft from being accidentally wash overboard.

The most important consideration for storing a valise type life raft is whether you have the space to put the raft in a locker or below deck.

A valise packed raft is much more prone to water damage and chaff so where to store it is a serious consideration. Many smaller vessels opt for a canister simply because they cannot accommodate storing a life raft down below.

A dedicated locker in the cockpit would be the ideal spot for a valise, that is if you can guarantee the locker is free of leaks, sharp edges and is always accessible underway.

If you store a raft in a locker it must be made clear to all crew members that nothing is to be placed on top of or around the raft that might hinder excavating it during an emergency. The minutes that you spend digging your way to the escape craft might just cost you your life.

A couple of the yachts I interviewed that carried valise-packed rafts stored them in the cabin while anchorage hopping but moved them on deck while on passage. Both vessels had sunbrella covers made, which provide excellent UV protection, but only moderate protection against water.

This system works in theory as most life rafts, both valise and canister models, are now vacuum packed in heavy metallic bags to prevent water ingress. But it is not recommended.

On board *Kate* we store our life raft down below, just to starboard of the companionway, behind the nav table in a little nook that the designers considered a sea berth. From here it is an easy grab and hoist up the stairs into the cockpit. Located nearby is our ditch bag, a pelican case with boat documents and passports, the satellite phone and an empty extra-large dry bag. It is one stop shopping in case of emergency.

I admit that I feel a bit like a Scotsman at a caber toss when maneuvering the beast up the companionway stairs, but I can do it without assistance or adrenaline.

What is often overlooked, and is of the utmost importance is serviceability. After all what good is carrying a life raft onboard if you cannot get regular safety checks and maintenance done on it?

Most manufacturers recommend having your

TOP FIVE POPULAR LIFE RAFTS

BRAND	VALISE	CANISTER
RFD Seasava Plus	24kg, 79cmX46cmX33cm	30kg, 86cmX51cmX29cm
Avon Ocean	34kg, 67cmX45cmX22cm	36kg, 69cmX49cmX23cm
Viking RescYou	29kg, 74cmX33cmX33cm	35kg, 79cmX45cmX29cm
RescYou Pro	34kg, 74cmX33cmX33cm	40kg, 79cmX57cmX29cm
Plastimo TransOcean 24hr pack	n/a	33.5kg, 74cmX47.5cmX26.5cm
Plastimo TransOcean extended pack	n/a	40kg, 74cmX47.5cmX26.5cm
Winslow super light No valise 23kg, 53cmX41cmX25cm Offer valise, canister and pelican case for 4 or 6 man raft, or custom packing for any size raft		

HANDY LIFE RAFT TIPS

If you are a weekend warrior or occasional coastal cruiser and are not ready to foot the bill for a life raft that is only required sporadically, you can rent one.

Many inspectors will let you add a few small personal items to the life raft's emergency pack. An extra pair of reading glasses, regular prescription medications, some paper and a pencil, even a deck of cards might come handy.

Another great way to get more familiar with life rafts is to take a sea survival course. Students interact with a life raft in the water and required to right, enter and help a disabled victim into the life raft.

If you have a suspicion of water ingress past the protective vacuum bag take your raft to a service agent ASAP. Left alone water can cause serious damage and render your life raft inoperable.



TOP RIGHT:
A place I hope I
never have to be.

The raft is usually inflated using an air compressor and left for several hours so that any pinholes or punctures have time to present themselves. During this waiting period most service centres will invite you to get up close and personal with your life raft.

You should also get a chance to inspect the rations and safety gear included inside your raft. The inspector will have a check list and should review that all items included in your raft are accounted for. They are required to check the expiry dates of medicines and rations and replace expired items with the same or equivalent item as compliant to manufacturer's standards. They will also inspect flares and replace those that have expired. They service centre should have proper methods of disposing of any flares they remove from the raft.

The contents of the onboard emergency packs vary by brand but should include seasick tablets, water rations, raft repair kit, manual pump, bailer and sponge, torch and extra batteries, signal mirror, flares, whistle and a pair of paddles. Items that are standard on some brands but must be added for an additional cost on other brands are; food rations, first aid pack, fishing kit, rain collection and storage bags, a drogue anchor, extra water rations and flares.

One manufacturer classifies their emergency packs as 'Under 24 hours' and 'Over 24 hours', while another states that what is included in the standard or extended emergency pack is "depending on expected time that casualties may spend in the raft until they get rescued." I, for one, am not expecting to be in my life raft all at, so knowing the duration of my stay in such a situation is impossible. In my opinion it is only prudent to purchase for all the extras to make sure that the time spent in a life raft is as safe and comfortable as can be.

A reputable service agent will ensure that all inspection tags that needed to be broken to service the raft are replaced. There is usually a sticker or tag affixed to the canister or valise where they will record their agent specific ID number, date of service and next required service interval.

The cost of servicing your life raft will fluctuate from port to port. The bill is usually broken down into a base service charge that will include unpacking, inflating, inspecting and repacking your raft.

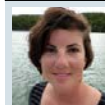
Any components that are required or supplies that are replaced are priced individually and then added to the base cost. When we got our raft serviced in Fiji in 2015 it ran to US\$400. We had minimal items that needed to be replaced- seasick tabs, water and flares. But flares are considered hazardous goods when shipped so can be quite expensive when not purchased in their country of origin.

Buying a life raft is neither a cheap nor easy exercise. Then again the important affairs in life rarely are. There are many essential factors to consider, least of all the chance that you might actually have to use the thing one day. Yachties are often said to be frugal but this is not really the place to be pinching pennies.

After all, how can you put a price on saving the lives of your loved ones?

ch

cruisinghelmsman Heather Francis



Heather Francis is originally from Nova Scotia, Canada and has been living and working on boats around the world for the past decade. In 2008 she and her Aussie partner Steve bought *Kate*, a Newport 41', in California and have been sailing her full-time since. They plan to do a lap around the planet, albeit slowly. To follow their adventures log on to www.yachtkate.com.