

THE CERTIFICATION SERIES



SAFETY at SEA

A Guide To Safety Under Sail And Personal Survival

The National Standard for Quality Sailing Instruction

Published by the UNITED STATES SAILING ASSOCIATION Copyright © 2017 by the UNITED STATES SAILING ASSOCIATION.
All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise without prior written permission from the UNITED STATES SAILING ASSOCIATION.

Edition: One

ISBN: 978-1-938915-35-2

Printed in the United States of America.

UNITED STATES SAILING ASSOCIATION P.O. Box 1260, 15 Maritime Drive, Portsmouth, RI 02871-0907

www.ussailing.org

the people wearing life jackets appeared to be dead? With the correct rewarming techniques, those passengers could have been saved if they had been removed from the water and given medical treatment.

U.S. Coast Guard Life Jacket Classification Systems

In the 1980s, the Coast Guard created four wearable life jacket “types” and one throwable flotation “type” for recreational boaters. There is a ton of information about the range of Coast Guard-approved life jackets, but much of this is now out of date. In the fall of 2014, the Coast Guard announced that, beginning in 2016, life jackets would no longer be categorized by “type.” Newly introduced life jackets are to be classified by their “Level,” which corresponds approximately to the buoyancy in Newtons provided by the device. These levels closely follow the ISO standard known as ISO 12402; the new North American standard is known as UL 12402. The four consumer-oriented life jacket levels are 50, 70, 100, and 150.

This change has caused a lot of confusion, but the Coast Guard’s goal was to begin the process of “harmonization” between life jackets made to the ISO standard (used in Europe and the rest of the world), and those made to US standards. Ideally, life jackets built to one set of standards with one type of label to describe the life jacket’s attributes could be sold in multiple markets around the world. In theory, this will enable development of products that are more comfortable and have innovative designs and features. Consistent global labeling will also make it easier for consumers worldwide to determine the correct application and size of each life jacket.

While the US transitions from one life jacket standard to another, selecting the right one could be confusing. If you are unsure whether a life jacket is legal for use on a particular boat, read the label on the life jacket. The label should say something like “Legal for all recreational boats.”

Current System of Life Jacket Classification

As of this writing, the UL 12402 standard for life jackets has not yet been finalized. In order to compare the old and new rules for near-shore and offshore applications, we have made some educated guesses about what the new standards will say.

Offshore Life Jacket: Formerly known as “Type I” life jackets, these generally use foam for flotation, provide at least 22lbf (around 100N) buoyancy, and are most commonly used on commercial vessels. Despite adequate in-water performance, they are not very useful for recreational vessels because their bulky shape restricts mobility. There



Throwables are now considered a “throwable device” to distinguish from a “wearable device;” many of the other name changes are more confusing.



is a common thought that Offshore Life Jackets are what you want on a larger cruising boat "in case you sink," but they will not help save you from more common dangers (falling overboard or being ejected from the boat) if they are not worn.



Near-Shore Buoyant Vest: Formerly known as "Type II" life jackets, these have a minimum buoyancy of 15.5 lbf (around 70N) and the classic "horse collar" shape. The least expensive life jackets, these are intended to meet the letter of the law; they have few other redeeming qualities. For any boating activity, there is a life jacket that will work better than a Type II. They have no place on a racing yacht, whether nearshore or offshore.



Some non-harness inflatables with water-activated inflation are also considered Type II life jackets, and they can have up to 33.7lbf (150N) of buoyancy. While appropriate for daysailing, offshore sailors should select a model with an integrated harness.



Flotation Aids: Formerly known as "Type III" life jackets, these also have a minimum of 15.5 lbf of buoyancy. They are available in a wide variety of styles and should be selected with the end use in mind. Specialized models have been designed for paddling, sailing, tow sports (like wakeboarding and water skiing), fishing, etc. The sailing versions are comfortable to wear and provide some degree of hypothermia protection as well as moderate buoyancy. Although they may be appropriate for nearshore/day racing, they do not offer enough flotation to be suitable for offshore use.



This inflatable life jacket has a built-in safety harness, so it is a Special Use Device.

Some non-harness manually-activated inflatables are also considered Type IIIs. These can have up to 33.7lbf (150N) of buoyancy. Again, the offshore sailor should consider a model with an integral harness.

Special Use Device: Formerly known as "Type V" life jackets, this category includes everything that doesn't fit into the other three. A few Special Use Devices are useful to either inshore or offshore sailors. The first is the "dinghy" style vest that is designed for sailing a small dinghy or keelboat; many are hard to adjust or have some other feature that eliminate them from being categorized as a Type III Flotation Aid.

Special Use Devices also include any inflatable life jacket with a built-in safety harness, because using the harness demands additional training and/or instruction. And certain types of inflators may move their life jackets into this category, even if they are otherwise identical to similar inflatables.

All of this is quite confusing, but the point is that a life jacket categorized as a Special Use Device should not be considered somehow less desirable; it may have exactly the features that you need.

To further add to the confusion, many Type V life jackets (which all fall into the Special Use Devices category) have two designations: the legal "Type" and the performance "Type." So a life jacket that is technically a Type V might have the in-water performance of a Type II, or the performance "Type" may be determined by the type of inflator used by the manufacturer. Don't despair; even industry experts get mixed up by this nomenclature, which is part of why the Coast Guard is moving to a different system.

One final point: many Special Use Devices must be worn to be counted in the vessel's inventory. If you are boarded by the Coast Guard and you don't have your life jacket on, you could be subject to fines. To be both legal and safe, wear your life jacket.

The simple rule is "wear your life jacket" to be both legal and safe.

The Future: "Level" System of Classification

New North American life jacket standards are currently being introduced into the U.S. and Canada that will change many aspects of life jackets, including labels and designations. Without going into a lot of detail, future life jackets will be referred to as Level 50, Level 70, Level 100, Level 150 and Level 275, corresponding approximately to the buoyancy in Newtons provided by the device. This is similar to the ISO standard that uses the same performance levels.

Level 50: Intended for active watersports like water skiing and wakeboarding, these minimize bulk and restriction. They may also be used by dinghy sailors. Regulatory changes will have to be made in the U.S. and Canada for these to be legal, so their introduction appears to be many years off. They provide around 11.2lbf of buoyancy.



Level 70: Very similar to what we now think of as Type IIIs. Inherently buoyant, close fitting, and available in a variety of designs tailored to different types of boating. In the future, there may be inflatable versions of Level 70 devices, but this would require a change in Federal Regulations.

Level 100: These vests will have greater buoyancy for rougher waters. They may be either inherently buoyant or inflatable. Around 22.4lbf of buoyancy.



Level 150: These vests will be similar to our current offshore inflatable life jackets and may have integral harnesses. Intended for rough waters where rescue may not be immediate. Will also have inherently buoyant versions. Around 33.7lbf of buoyancy.

Level 275: These inflatable life jackets will be for extreme conditions, especially when the wearer might be carrying gear that adversely affects his/her buoyancy (like tools). They are generally intended for commercial users.

Types of Inflatable

There are three types of inflatable life jackets: Type I, Type II, and Type III. Type I is the most protective and is designed for offshore use. Type II is designed for near-shore use and Type III is designed for inland use.

is a common product that Offshore Life Jacket is what you want on a boat. It can be used in a variety of ways, but you must be aware of the dangers from this common danger. Inflatable life jackets are not worn on a boat if they are not worn.

Near-Shore Buoyant Vest: Formerly known as Type II, these jackets have a minimum buoyancy of 15.5 lbs (7.0 kg) and are designed for use in near-shore waters. The least expensive life jackets, these are intended to meet the latter of the law—they have few other redeeming qualities. For any boating activity, there is a life jacket that will work better than a Type II. They have no place on a racing yacht, whitewater rafting, or offshore.

Some non-harness inflatable with water-activated inflation are also considered Type II life jackets and they can have up to 22.7 lbs (10.3 kg) of buoyancy. While appropriate for cruising, offshore waters should select a model with an inflated harness.

Flotation Aids: Formerly known as "Type III" life jackets, these also have a minimum of 15.5 lbs (7.0 kg) of buoyancy. They are available in a wide variety of sizes and should be selected with the size of the user in mind. Specialized models have been designed for paddling, sailing, low speed wakeboarding and water skiing, fishing, etc. The sailing version are comfortable to wear and provide some degree of off-balance correction as well as moderate buoyancy. Although they may be selected for use in near-shore waters, they do not offer enough flotation to be selected for offshore use.

Some non-harness manually-activated inflatables are also considered Type III. These can have up to 22.7 lbs (10.3 kg) of buoyancy. A good alternative would consider a model with an inflated harness.

Special Use Device: Formerly known as "Type V" life jackets, this category includes everything that doesn't fit into the other three. The Special Use Device are useful in either inshore or offshore waters. The first is the "dingy" style vest that is designed for sailing a small dingy or headboat; many are hard to adjust or have some other feature that eliminate them from being categorized as a Type III Flotation Aid.

Special Use Device also include any inflatable life jacket with a device that is not a harness. Devices using the harness are considered Type I, II, or III. And devices using the harness are considered Type I, II, or III.

