Personal Floatation Devices – Quick Tips



According to the Centers for Disease Control and Prevention (CDC), from 2005 – 2014, there were an average of 3,536 fatal unintentional non-boating related drownings annually in the United States – about ten deaths per day.

- Personal flotation devices, commonly referred to as PFDs (also called life jackets and vests), are life-saving devices used in play and work situations. Most people are familiar with use of PFDs in boating, and water sport activities. There are also other uses that are not commonly thought of including worker protection. Occupations that involve working on or near water include: Commercial fishing
- Shipbuilding and repair
- Lifeguarding and entertainment
- Construction (working on bridges, docks, decks, piers, etc.)
- Water sampling
- Enforcement/rescue operations

Established Occupational Safety and Health Administration (OSHA) standards exist for critical safety protocols such as confined space entry, electrical safety, machine guarding, etc., but very little has been written that specifically addresses water safety. Some guidance is offered in the 1910 General Industry Standards and the 1926 Construction Standards:

- 29 Code of Federal Regulations (CFR) 1910.132 requires that a hazard assessment be completed prior to the job and that a plan be developed that includes the selection of proper protective equipment
- 29 CFR 1926.106 specifically covers work on or near water and requires that U.S. Coast Guard (UscSCG) approved life jacket or buoyant work vests be provided to employees working over or near water, where the danger of drowning exists

PFDs work on the principle of buoyancy, and help keep a wearer’s head above water in case he/she physically cannot. Buoyancy is the tendency of a body to float or sink in water or any other fluid. Most people will naturally float in water especially if they fill their lungs with air. According to the USCG most people require only about 11 pounds of extra buoyancy to keep their head out of water. There are different ratings for different types of PFDs. The devices are rated as Type I, II, III, IV and V. Types I, II and III refer to wearable PFDs (intended to be worn or attached to the body) in decreasing order of

performance. Type IV refers to throwable PFDs (intended to be thrown to a person in the water), and Type V refers to any PFD conditionally approved as equivalent in performance to another Type. These PFDs are required and/or recommended by the USCG and state law enforcement agencies for different applications. The minimum amount of buoyancy that USCG specifies for each device type is listed below:

Type PFDs	Minimum Buoyancy (Pounds)
I - Inflatable	33.0
I - Buoyant	22.0
II - Inflatable	33.0
II - Buoyant	15.5
III - Inflatable	22.0
III - Buoyant	15.5
IV - Ring Buoys	16.5
IV - Boat Cushions	18.0
V - Hybrid Inflatables	22.0 (Fully Inflated) / 7.5 (Deflated)
V - Special Use Device - Inflatable	22.0 to 34.0
V - Special Use Device - Buoyant	15.5 - 22.0

Inflatable devices depend on flexible air chambers which can be filled with air or other gas (typically carbon dioxide) for flotation. Buoyant devices rely on

buoyant material such as “Kapok” (fiber produced from the seed of the ceiba tree) or flexible plastic foams for flotation.

The following list explains how the USCG recommends using each type of PFD, and when they are required.

Type I PFDs – Off-shore life jackets: These are the best devices for all waters, open ocean, rough seas or remote water where rescue may be slow in coming. This type of device is also used as abandon-ship life jackets for commercial vessels and all vessels carrying passengers for hire.

Type II PFDs – Near-shore buoyant vests: For general boating activities, calm inland waters or where there is a good chance for fast rescue.

Type III PFDs – Flotation aids: For general boating or specialized activity that is marked on the device (such as water skiing, canoeing, kayaking, hunting etc.). These devices are best for calm inland waters or where there is a good chance for fast rescue.

Type IV PFDs – Throwable devices: These devices are designed to be thrown to persons in distress. Often this type of device includes boat seat cushions, ring buoys and horseshoe buoys. These are not designed to be worn and should be supplemented by a wearable PFD. Both the throwable and wearable devices should be readily available for emergency situations.

Type V PFDs – Special use devices: Used only for special uses and conditions. Typically these are labeled with their limits of use. Commonly these flotation devices are used for canoeing/kayaking, boardsailing, deck suits, work vests for commercial vessels and man over-board situations and law enforcement. Also included in this classification are hybrid inflatables. Hybrid inflatables are deflated devices and can be inflated on demand. These devices can have a buoyancy of between 22 and 34 pounds.

An important part of having and using a PFD is the fit. PFDs should fit comfortably and snug. It is important to try the PFD on before use. It should not ride up your body. To test whether the PFD has the correct buoyancy for your weight, when lying on your back in water and relaxing, the PFD should keep your chin well above water. If it does not, a device with higher buoyancy is needed.

Commonly Asked Questions

When continuous fall protection is used when working on or near water are life jackets or buoyant work vests needed?

OSHA has determined by standard interpretation that “In general, when continuous fall protection is used (without exception) to prevent employees from falling into the water, the employer has effectively removed the drowning hazard, and life jackets or buoyant work vests are not needed.”

When using safety nets as fall protection when working on or near water are life jackets or buoyant work vests needed?

OSHA has determined by standard interpretation that “the use of safety nets as fall protection during marine construction activities usually will not eliminate the drowning hazard. In many cases (such as in bridge construction) there is a

risk that materials heavy enough to damage the nets may fall. In such cases the personal flotation device and the other applicable requirements of 1926.106 apply.”

Sources:

Centers for Disease Control and Prevention (CDC): Unintentional Drowning: Get the Facts

29 CFR 1910.132: Personal Protective Equipment General Requirements

29 CFR 1926.106: Working over or near water

Standard Interpretation September 28, 1999

United States Coast Guard: PFD Selection, Use, Wear & Use

The information contained in this article is intended for general information purposes only and is based on information available as of the initial date of publication. No representation is made that the information or references are complete or remain current. This article is not a substitute for review of current applicable government regulations, industry standards, or other standards specific to your business and/or activities and should not be construed as legal advice or opinion. Readers with specific questions should refer to the applicable standards or consult with an attorney.

Source: Grainger Know How – https://www.grainger.com/know-how