

Before you build your boat, you need to determine what style of boat you are going to build. There are many styles of boat and each style is designed for a specific purpose.

- Displacement hull
- Flat bottom
- V-hull
- Multi hull

Displacement hull – This type of hull stays afloat completely due to its buoyancy. The speed of this type of boat is defined by the length of its waterline. Vessels of this design are large and some of the most common types are: commercial fishing boats, tug boats, container boats and ferries.



Flat bottom hull – They are very stable and great for fishing and other uses on calm sheltered inshore waters. They have a high amount of drag and are generally narrow which leads to poor stability for sailboats. Some of the most common types are: recreational fishing boats, ferries and to be used as a hunting platform.



V-hull - V bottom boats have a V shape angled bottom, which is called the deadrise angle. The flatter shape of the deadrise the hull will plane with less power but will pound more in the waves. So, the greater the angle the more horsepower required to plane, but the hull will be better suited for rougher weather. The most popular styles of this hull design are: Ocean Racing Motor Boats, offshore sport fishing boats.



Multi hull – Sometimes created by joining two boat hulls together. They are very stable and travel through rough water very well. Popular uses for this type of design are: ferries and sport fishing boats.



What type of hull did you decide to use? What style hull is the Johnie Finn? That's correct it's the v-hull.

Next you need some plans, you could order them online, you could buy a book from a book store. To find the plans that suit you wishes, you should pay a visit to your local library, so why not visit the library?

There are many different materials of which you could use to build your boat:

- Steel
- Wood
- Aluminum
- Fiberglass
- Cement
- Polyethylene

Steel - Steel is far stronger than wood or fiberglass. Unlike wood and fiberglass, which gain their strength when their grain or fibers are orientated along preset load paths, steel is equally strong in any direction. The hull must be kept thin or your boat will be too heavy. A steel boat must be insulated as metal conducts sound and heat. Being in an un insulated boat would be uncomfortable, the interior would be much to hot when hot outside and much to cold when cold outside. Also, any sound outside

would be amplified inside and it would be unbearably noisy. Special tools, cutters and welders are required to work with steel.

Wood - Wood is a traditional boat building material and is a popular material for small boats. If the hull of your wooden boat is not protected it can deteriorate if organisms are allowed to penetrate its surface. The hull of a wooden boat is traditionally made out of planking attached to an inner wooden frame. Plywood is popular for beginner boat builders, but only marine plywood, special glues and epoxies should be used.

Aluminum - Aluminum is the most common metal found within the earth's crust (8 percent). Aluminum, due to its properties, the metal is light in weight, nonmagnetic and noncombustible and it is 100 percent recyclable. Special tools, cutters and welders are required to work with aluminum. Corrosion is a problem for aluminum, aluminum and salt water don't mix so proper boat maintenance must be followed.

Fiberglass - Fiberglass is the most common type of boating material to consider. Fiberglass is quite malleable, can be molded into any shape. It is stronger than many metals by weight and is non-magnetic and non-conductive. Fiberglass is relatively easy to clean which means you have less boat maintenance. In order to build a fiberglass boat, you would need a mold in which to form the fiberglass.

Cement - Cement is a binder used in construction to set, harden and bind other materials together. Cement is mixed with sand and gravel and is the main ingredient in concrete. When you think of concrete you can look no farther than the building you live in, the foundation (base) is most likely built with concrete. During WWI and WWII due to the lack of steel, concrete ships were constructed to haul cargo.

Polyethylene - Polyethylene is extremely impact-resistant, and some say poly boats are virtually indestructible when used for recreational boating. Poly boats are molded like fiberglass boats, they can have hulls with complex shapes and compound curves. Polyethylene boats are considered more environmentally-friendly, than fiberglass, since they can be recycled.

I decided on fiberglass over plywood construction. The fiberglass and epoxy seals the plywood keeping moisture out, moisture is the one thing that can deteriorate plywood faster than anything else.

Design vs Weight - Naval architects tell me that hull design has less of an effect on fuel economy than does weight. The heavier the boat the more fuel it burns. An aluminum boat built of a similar size to the Johnie Finn would weigh 1.5 times as much. A fiberglass boat would weigh 2.5 times as much. Not to mention cost, an aluminum-built boat would cost 1.5 times as much as the Johnie Finn and a fiberglass boat twice as much. And then you have to figure in the cost of special molds, jigs and tools required. The Johnie Finn was built with the most common tools found in your house. I did not have to buy any special tools to build her.

The design I settled on was the Tolman Alaskan Skiff, designed by Renn Tolman of Homer Alaska. The Tolman Alaskan Skiff is stitch and glue construction with an 8-degree dead rise. Renn designed three

models and I built the Widebody, which is 6858mm (22'-6") long. There is a website devoted to the Alaskan Skiff <https://www.fishyfish.com>, say hi to Steveoh for me.

Now building a boat may seem like a large task to take on, but it's not really that hard if you break it down into manageable pieces. You need plans, drawings and pictures. Read your plans carefully and ask questions to the designer. Follow directions carefully, epoxies and glues have special instructions and must be followed carefully, like making a cake. If you do not mix the ingredients correctly the cake could fall. When using epoxies or glues a full-face respirator is a must have piece of equipment, you do not want to get a sensitivity to epoxy which could cause an allergic reaction. You should already be comfortable wearing a mask, this is just a larger one. If one exists join a web forum that is devoted to your boat design so you will have a resource for answers to your questions and pictures of other boats for comparison. You can also get ready made kits, which will have most of the pieces minus the fasteners and glues required to assemble them. They are similar to boat model kits, just enlarged so you can enjoy riding in them.

If your plans come with a book, read the entire book from cover to cover first and take notes along the way to items you are not sure of so you can follow up on them later. Read the plans and familiarize yourself with them before you cut your first piece of wood. If you need to ask questions do so, there are no wrong questions, just wrong answers.

Now that you have built your boat, you have to name it, naming a boat is probably the best part of the boat building process. It means you are nearing the completion stages of the process and you are thinking of launching your boat. The name of your boat could be anything you desire, a funny name or word, a catch phrase or a person's name. We named the Johnie Finn after my wife's father's and mother's names. Johnie was her father and Josephine (Finn) was her mother's name.

So, you are ready to launch your boat, you should pick a special day and have family and friends on hand to witness all your hard work and the launching of your boat.

Make sure before you go boating you contact the Office of Boating Safety, Transport Canada and apply for a Pleasure Craft Licence. Boating is meant to be fun and safe, carry the proper safety supplies as defined by Transport Canada.

Mandatory Safety Equipment

- An appropriately sized, Canadian-approved personal flotation device (PFD) or lifejacket, for each person on board.
- A buoyant heaving line (15 meters in length)
- Manual propelling device or anchor with at least 15 meters of rope, cable or chain
- Bailer or hand pump
- Sound-signaling device
- Navigation lights if the craft is used between sunset and sunrise or during periods of reduced visibility, i.e., mist and rain;
- A class 5BC fire extinguisher for any craft equipped with an inboard motor, fixed fuel tank, and/or any fuel-burning cooking, heating or refrigeration units
- A waterproof flashlight or 3 Canadian approved flares (type A, B or C flares)

- A vessel license if your craft is outfitted, even temporarily, with any motor of 10 hp (7.5 kW) or more. Ensure your vessel is properly marked and you carry a copy of the vessel license.

Other items are required as the type of use your boat is used for and length increases. You can Contact Transport Canada for additional resources.

Some additional items to consider especially if you will be travelling for an extended time and so you have an enjoyable time on the water:

- spare clothing in a waterproof bag (weather can change without notice)
- drinking water and snacks
- tools and spare parts
- a first aid kit.

Check the weather before you venture out, as Frankie MacDonald says “Be Prepared”! Tell a friend or family member of your plans, in the event you are not back at a reasonable time and cannot call for help someone will be able to send help to your known location.

You can use your boat in fresh water or salt water, you just need a way to get your boat to the water. Joining a yacht club in one way and another is to trailer your boat and use public boat launches. There are many public boat launches in our area and each launch creates a new adventure. Where are you going to use your boat?

Have Fun.