

Building A Trailer

There are many configurations of trailers. Most trailers have the boats exposed and not enclosed. External trailers make it easier to get to any boat at any time. Enclosed trailers have the advantage of protecting your boat and equipment from the weather and theft. They can be expensive, require some creative engineering and must be special ordered with added width and height because of the size of the optimist. McLaughlin's internal trailers have the boats standing on end with two side by side.



I have also seen Optimist stacked in one row inside an enclosed 4-foot wide 8-foot long U-haul type trailer with 2 X 4's between each boat. Depending on the height you can fit about 4 Opti's inside.

We recommend buying the trailer bed independent of the rack system that will hold the boats. The reason is there are companies that build trailers in high volume and low cost. If you ask a welder to build you a trailer and rack system you maybe shocked at the price. Fear of the unknown seems to jack up the cost.

Ordering a trailer bed

All you want is the flat trailer bed without all the rollers, pads and wenches. It is very simple and will cost from about \$400 to \$1500 depending on the length (number of boats you want to transport). Use about 200 pounds per boat as the weight in determining what capacity trailer you need. This accounts for the 77-pound Optimist, the storage rack and a little fudge for safety. To determine the trailer length multiple 50 inches times the number of stacks of boats you intend to have on the trailer. This gives you the needed dimension from the trailer nose (where the side rails become parallel) to the trailer lights at the back of the frame. Choose a tire size 12 inches or above. Low fender height above the frame and a low frame height make it easier to get the upper Opti's off and lowers wind age giving you better mileage.



The bed frame width (width between wheels) should 48 to 50 inches wide. This width works well with the rack size we recommend and it is wide enough to prevent any chance of rolling over. A wider bed will not hurt and is needed if you plan on having a dual-purpose trailer that can also handle Lasers or 420's. A 40-inch bed is too narrow.

A galvanized or aluminum trailer keeps down maintenance costs especially if the trailer is stored near salt water. In many cases a galvanized trailer may not cost much more then a painted one.

Companies that make Opti trailers:

Trailex Incorporated
60 Industrial Park Dr.
Canfield Ohio 44406
800 282 5042
216 533 6814
Aluminum Trailers

Extreme Trailers
180 Ruth St
810 639 7431
Aluminum Trailers



Designing your rack system.

The first McLaughlin trailer was made of 2 X 4's bolted together and held 8 Optimist on an old Snipe trailer. This worked fine but required constant inspection of joints. Seitech makes aluminum racks, which can be assembled in many configurations. They are comparable in price to a welded rack but do not have many of the features that can be designed into a welded one.

Seitech Products
300 High Point Ave
Portsmouth RI 02871
401 683 6898



Entire storage area built with the Seitech System.

First decide how many boats you want to carry and if you want a gear storage compartment. There is a basic box size that holds one optimist. In making your design you are going to stack as many of these boxes as boats you want to haul. This system is simple and most welders will not charge you a lot to build them. If you or a friend can weld you can really save money, as the material are inexpensive.

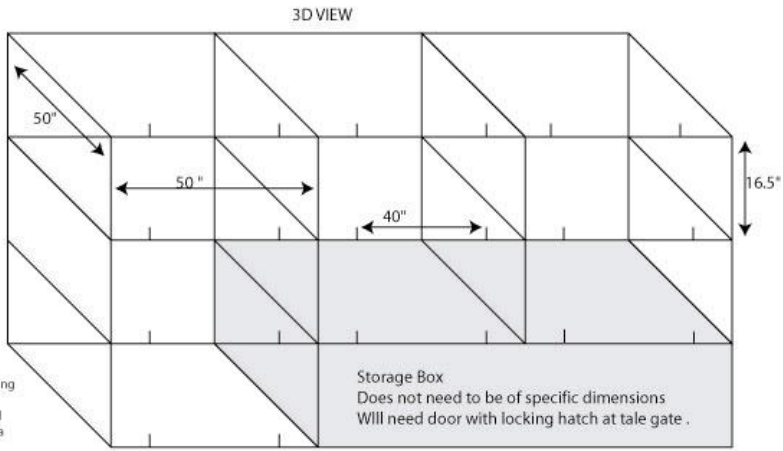
The box frame size is 50 X 50 X 16.5 inches. Inside dimensions. This works well whether the boats are to ride fore and aft or cross wise to the hi-way. A foot can be put of the stack to clear fenders or adjust to a smaller or larger frame size. This foot to clear fenders is often used to build a storage compartment under the boats. Bolt or welded an angle iron system to secure the frame to the trailer bed.

If you add a storage compartment consider placing a piece of inexpensive corrugated roof fiberglass panel on the floor of the compartment so that wet gear does not get rust stains. These panels are available for about \$10 each from Home Depot and Lowe's.

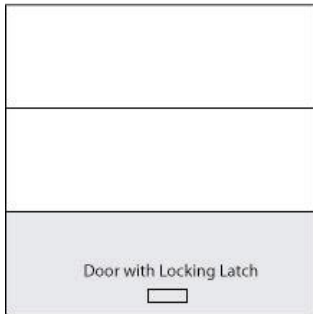
Look at these different configurations and see how this box is use to support different quantities of boats.

10 Opti Trailer with Storage
11/05

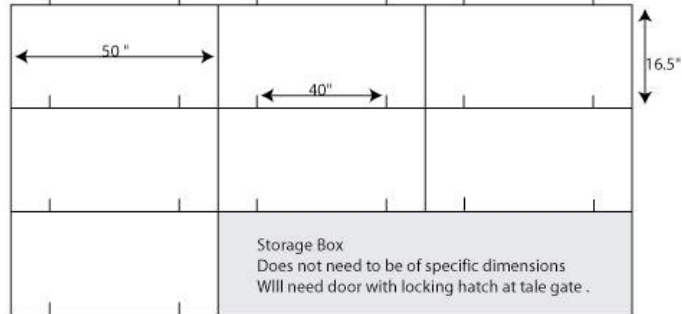
All marked dimensions are to the inside
Tire size needs to be 12 inches or above
Use 1inch or 11/8inch square aluminum tubing
(DO NOT USE THIN WALL)
Pegs are 1/2" dia rods cut to 3 in. and welded
No pegs on the top row as they want to put a
coach boat there.
Pegs only on driver side to catch bow of boats.



Back View

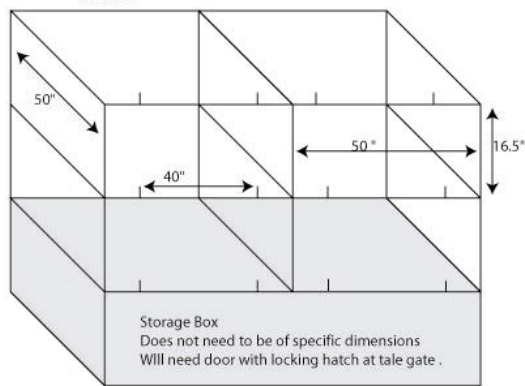


SIDE VIEW



6 Opti Trailer with Storage
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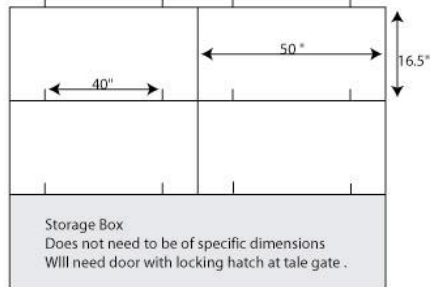
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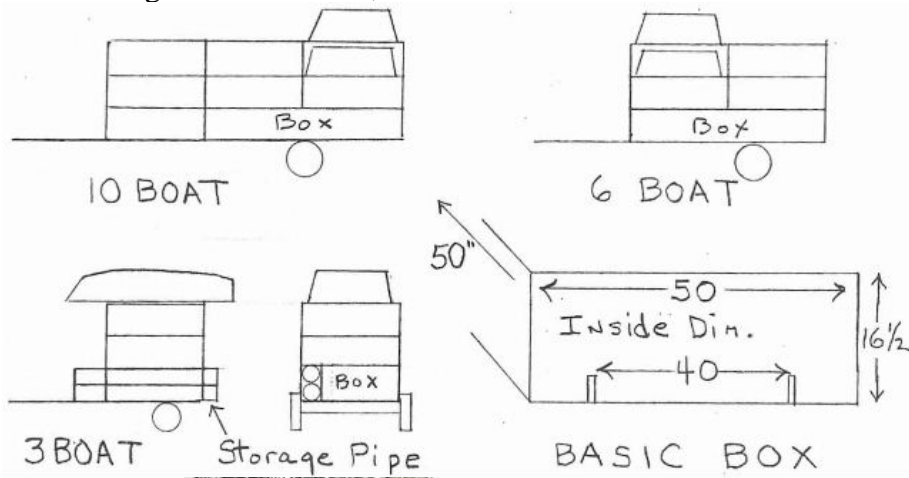
Back View



SIDE VIEW



Show a diagram of a 10 boat, 6 boat and 3 boats.



Notice the storage area on the front of this 24-boat and 16-boat trailer.

Materials

Use 1 inch or 1 1/8 inch square tubing with a 1/8 Th inch wall. Thin wall tubing will self-destruct the welds as the unit sways going down the road. We tried it and were continually re weld joints and adding gussets.

To capture the bow of the boat we place 2 each 1/2 inch diameter rods cut 3 inches long 40 inches apart. These align the boats so they all stick out the same distance. These should be placed on the driver's side of the trailer. So the boats are removed from the passenger side.



For insulation protection use 1/2 inch heavy-duty double wall hose which is available from an industrial supply house. Ordinary garden hose wears through very quickly. Cut each piece 2 1/2 inches long. Spray a little contact cement on the rod and on the tube.

To protect the boats from the bars see your local Opti Dealer for foam pads. Larsen Marketing also can sell you these pads. A combination of air conditioning foam and carpet will also work. Dock bumper material will also work.

To tie the boats down we use 2" seat belt webbing or similar material. You can pop rivet one end down and shock cord the other end. Roping both ends is also an option. Regular tie down straps or rope work equally as well.

While our current trailer uses straps to hold the boats in place we are working on an idea to lock the boats in place with a bar across the stern. No straps would be used. To prevent the bow from jumping over the pegs when you hit a bump we propose to run plastic PVC double wall gray pipe as the chocks running from top to bottom. The stern side of the trailer would have supports sticking out that would accept the lockable closure bars entrapping the boats.



