

Assembly Manual

2' x 6' Floating Raft Frame
(and optional extension kit)



Introduction

Thank you for purchasing this high quality RaftMaster™ deep water culture frame for your hydroponic and aquaponic growing needs. Please completely review these instructions before starting assembly. Proper installation will provide years of maintenance-free use.

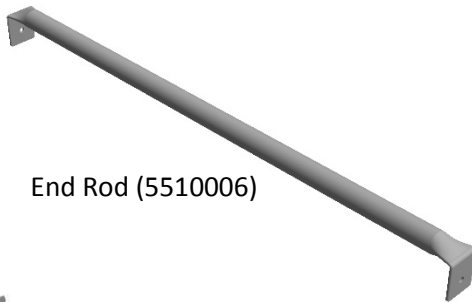
Parts Guide



5/8" Screw (550002)



Nut (550003)



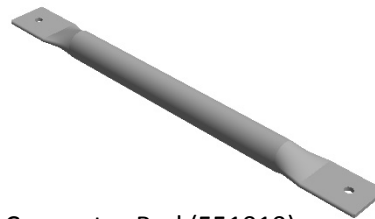
End Rod (5510006)



2' Connector Rod (5510003)



Rib (551005)



1' Connector Rod (551010)



Loop Clamp (550006)



Liner Clamp (550004)

Required Tools



Flat-head Screw Driver



7/16" Wrench or Nut Driver

Site Preparation

The RaftMaster™ bed is designed to be installed on a clean and level surface. The liner that you install will be resting directly on the surface. Therefore, the entire area should be completely clear of any debris that may puncture the liner. If the site is not level, sand can be used to level the area. Sand that is manufactured through a crushing process is not recommended since it may contain sharp pieces.

The liner should be puncture-resistant such as Dura-Skrim or Ultra-Skrim liners. Plastic films that do not contain reinforcement fiber should not be used.

Assembly

1. Take a rib, end connector rod, and two 2' connector rods. Set them as shown in Figure 1.

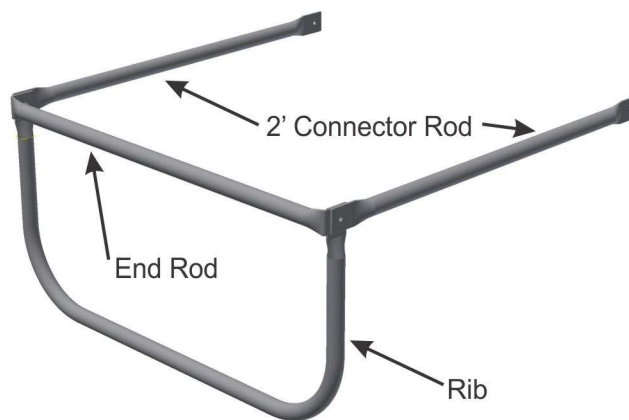


Figure 1

2. The end connector should be the innermost piece, then the rib in the center, then the 2' connector rod. Position the screw through the three sections and tighten the nut. **Note: The nuts should always be facing away from the liner to minimize the risk of puncturing the liner.**

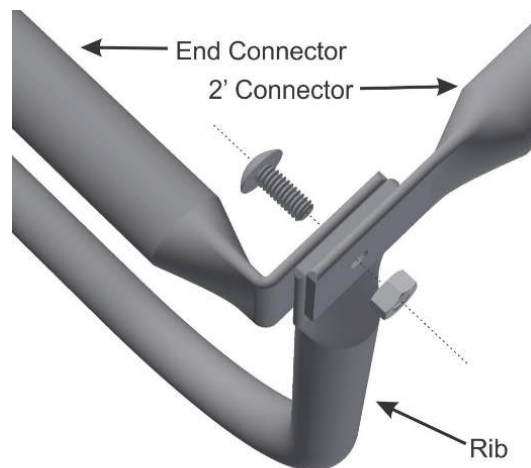


Figure 2

3. Add another end rib and fasten with the screws and nuts. Note: These nuts will be removed in a future step.

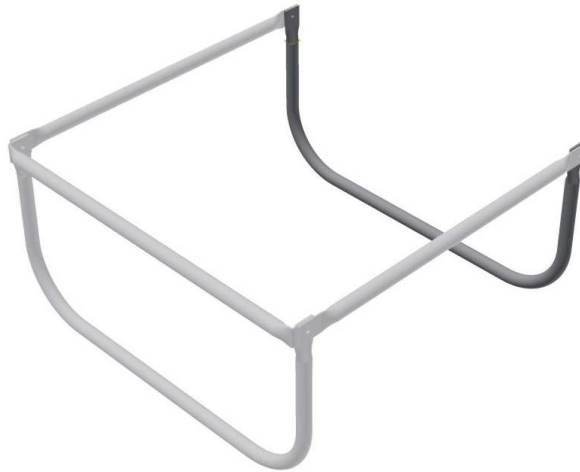


Figure 3

4. Place 4 loop clamps onto the frame as shown. The clamps on the ribs should be placed where the bend starts, and the clamps on the 2' connectors are near the center. Make sure that the "flat" side of the clamp is facing the outside of the frame.

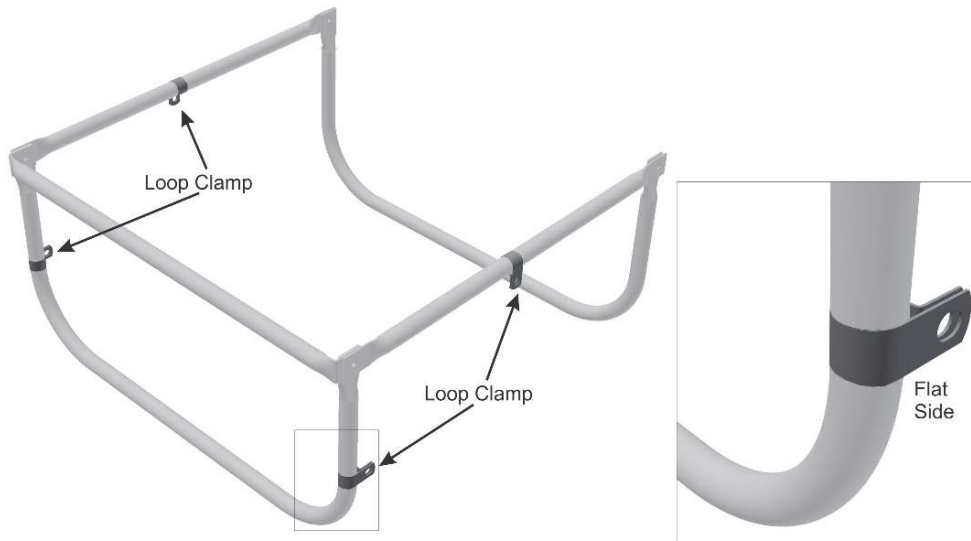


Figure 4

5. Fasten the two 1' connector rods to the loop clamps. It is best to secure the leg area first, then slide the loop clamp along the 2' connector rod until it meets properly with the diagonal 1' connector rod. Once each leg is square, tighten all the fasteners.

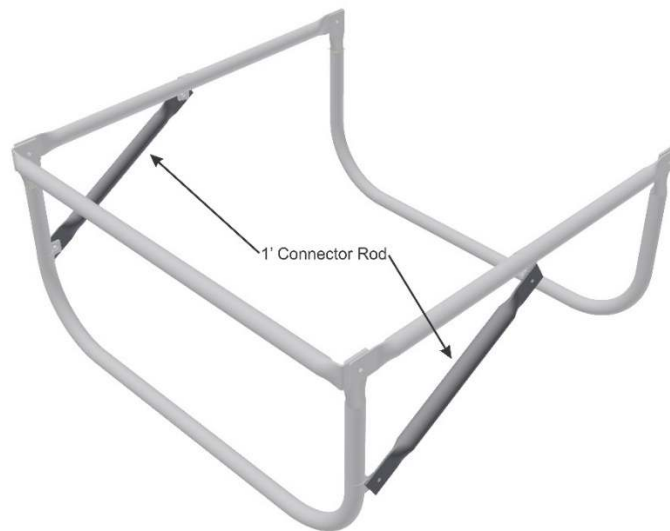


Figure 5

6. Repeat steps 1 through 5 to build the second end section.

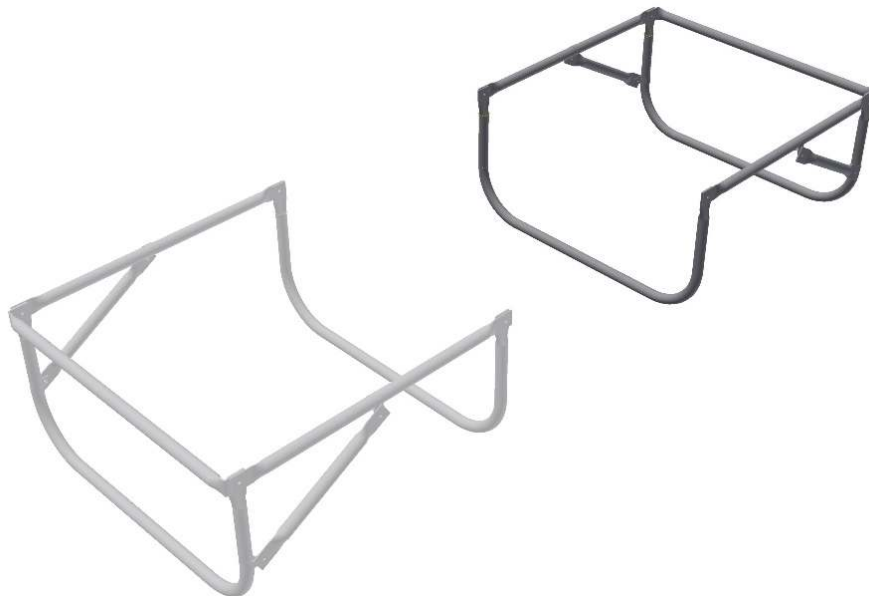


Figure 6

7. If you have any extension kits, please skip to the next section "Extension Kits".

8. Add the last two connecting rods and tighten all the nuts.

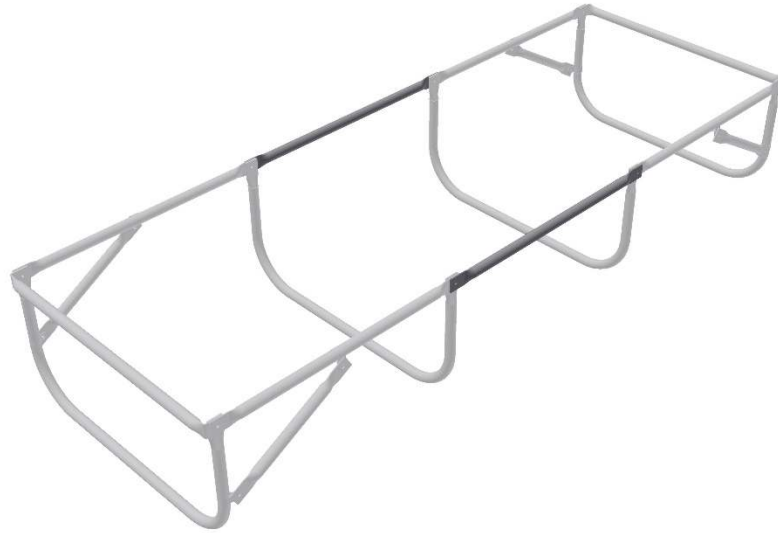


Figure 7

Extension Kits (optional)

9. Remove any temporary holding nuts and fasten a set of connector rods and rib.

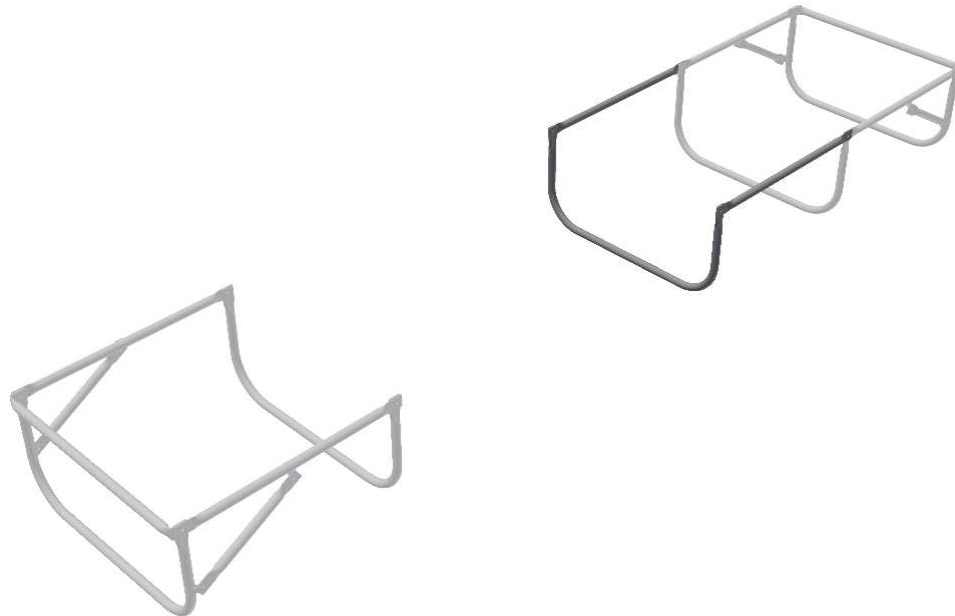


Figure 8

10. Repeat this process for the entire length of the frame.

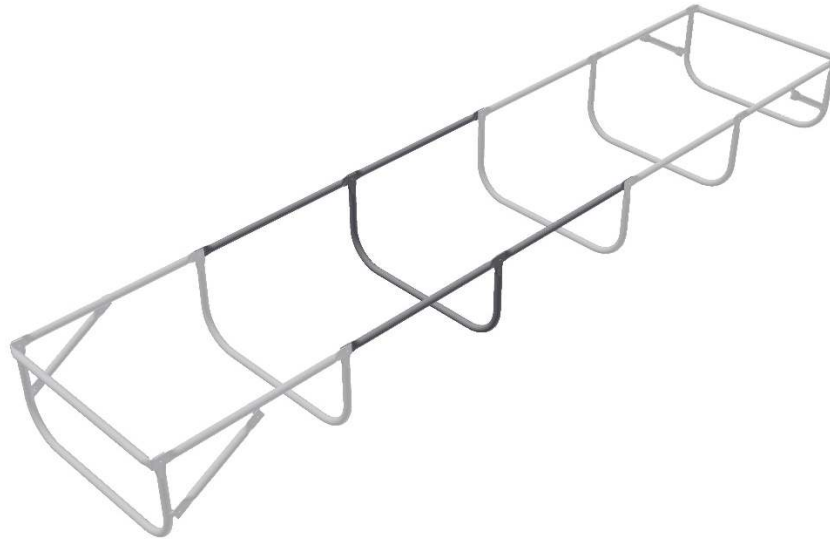


Figure 9

11. Add the last two connecting rods and tighten all the nuts throughout the entire frame.

Liner Installation

12. Inspect the entire area to make sure there are no items or debris that could puncture the liner. Also thoroughly inspect the entire frame for sharp corners or edges.

13. If the frame and liner are being placed directly on a concrete floor, it is recommended that you place a protective material (such as a tarp) along the bottom of the frame. If the frame is set on sand, it is possible to submerge the bottom of the frame into the sand to provide a completely smooth bottom and reduce stress on your liner.

14. The liner dimensions should be:

Width: The width of the bed plus two feet. For example, a 4 foot wide bed will need 6 feet of liner, or an 8 foot wide bed will need 10 feet.

Length: The length of the bed plus 4 feet. For example, a 12 foot long bed will need 16 feet of liner. (It is possible to use less liner, but we recommend having extra.)

NOTICE: The following instructions are recommended guidelines. Because there are several styles of liners, the frame manufacturer doesn't make any warranties with the installation, durability, or life-span of the liner. The installer/purchaser is responsible for all aspects of the liner.

15. Spread the liner down the entire length of the frame. Make sure there is extra material hanging over each end and that the liner is not stretched over the ribs. There should be a “bump” over each rib to alleviate any stress against the liner.



Figure 10

16. The liner should have a smooth corner transition from the floor to the sides. If it is too sharp, the liner walls will bow out past the frame when it is filled with water.

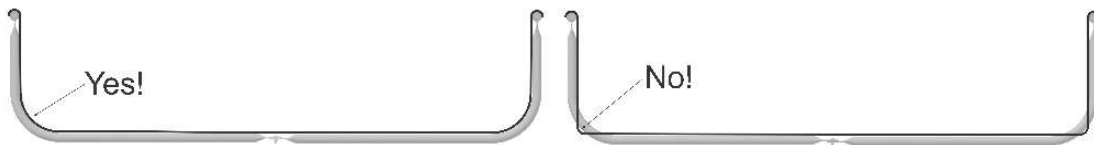


Figure 11

17. Once an area of liner is in the proper location, snap on a liner clamp. When complete, there should be 3 clamps on each connector rod.

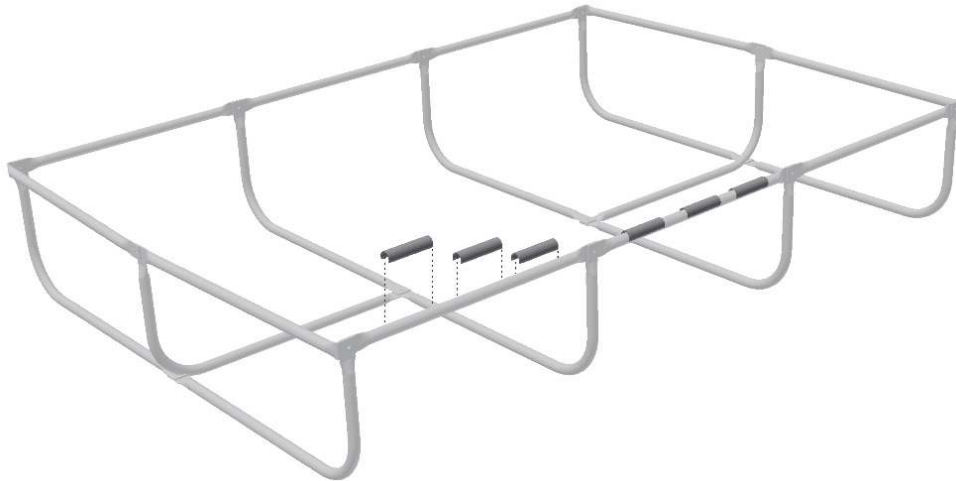


Figure 12

18. When complete, the liner should go around at least half of the rail to insure the clamp provides enough grasping force to hold it in place.

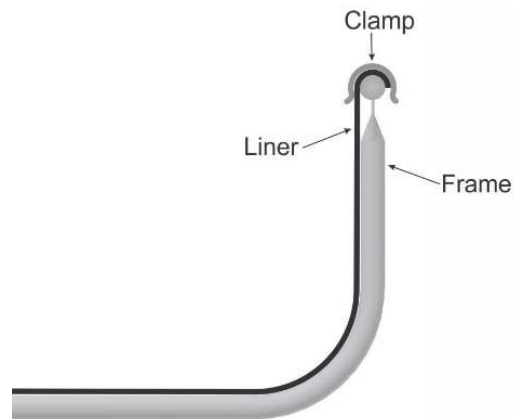


Figure 13

19. There are a few different techniques for folding a liner around the corners. The most common method is to take each corner and crease it inward (along the diagonal lines shown in Figure 14), then fold it against the end wall of the frame. Two clips should be used to secure it into place. If you are not familiar with folding the liner, we recommend practicing on a piece of paper and make a small “tray” with it.

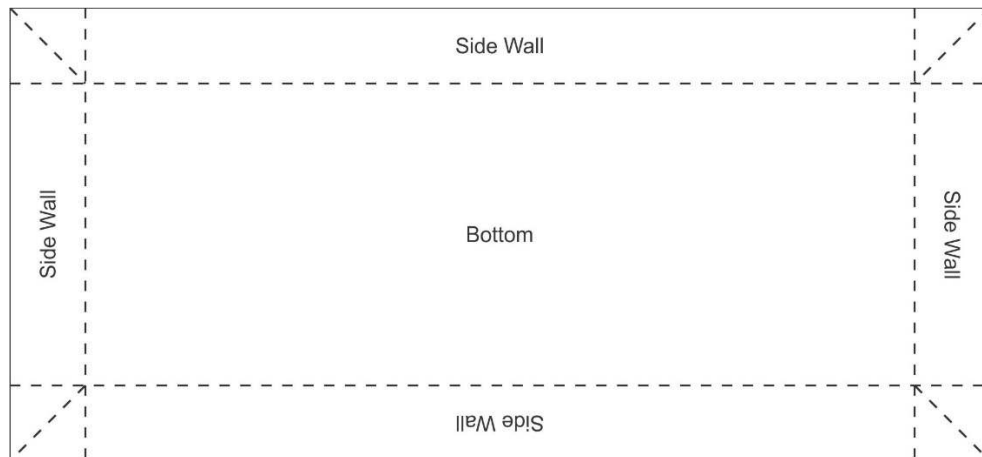


Figure 14

20. When complete, the folded lap will rest against the end wall. Make sure that no liner edges are located below the final water level or the water will pour out of the bed.



Figure 15

Bulkhead Fitting Installation (optional)

Notice: The manufacturer does not provide warranty support for improper installation of fittings. The installer/purchaser is responsible for all aspects of the liner and fitting installations. Read and understand all of the instructions before proceeding.

21. Find a location that will stay relatively flat (not near the bottom at the curvature). With a sharp razor knife, carefully cut a hole into the liner that is the same size as the fitting. Using the fitting as a template, it may be helpful to trace a circle onto the liner as a guide.



Figure 16

22. Make sure the rubber gasket is on the bulkhead fitting and insert it through the new hole.



Figure 17

23. Add the washer and nut and tighten. Do not overtighten or the rubber gasket may bulge and not seal properly between the liner and the bulkhead fitting. Note: Some fittings are not shipped with washers.

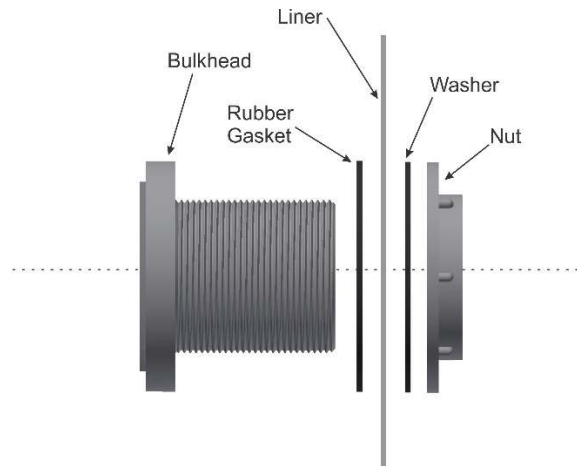


Figure 18

24. When the final plumbing is connected to the bulkhead fitting, it should not apply any stress against the liner. Depending on where the fitting was placed, it may not be perfectly level. The remaining plumbing should be installed to meet the angle of the fitting. Do not force the fitting to match the plumbing!

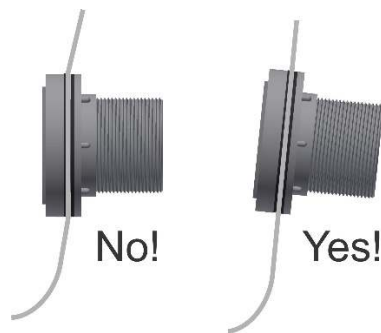


Figure 19