In 2013, TOGA started to build flip floats with reinforced (or overlapped) seams. This results in a stronger device with a longer life. The end product is a wire-mesh box that is 39” long, 23” wide, and 6” deep. It will hold up to 300 3” oysters. When sitting vertical, the cage should not be more than 1/3 full of oysters. Flip every few weeks to minimize fouling. Occasional spraying down may also be required.
# How to Build a Flip Float with Reinforced Seams

## Tools and Supplies Required

<table>
<thead>
<tr>
<th>Item</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>5' by 4' piece of 16 gauge vinyl-coated wire mesh.</td>
<td>OPR*</td>
</tr>
<tr>
<td>½ lb. stainless pig rings, ½ or ¾ in.</td>
<td>OPR or hardware store</td>
</tr>
<tr>
<td>Pig ring tool</td>
<td>same</td>
</tr>
<tr>
<td>4 24” or 18” cable ties</td>
<td>same or home store</td>
</tr>
<tr>
<td>2 ft. length of 1/4” bungee cord or similar</td>
<td>same</td>
</tr>
<tr>
<td>Crab pot hook or similar</td>
<td>same</td>
</tr>
<tr>
<td>Wire bender**</td>
<td>TOGA</td>
</tr>
<tr>
<td>Wire cutter</td>
<td>hardware, home store or similar</td>
</tr>
<tr>
<td>10’ length of thin-wall sewer pipe, 4” dia. ***</td>
<td>same</td>
</tr>
<tr>
<td>4 4” sewer pipe caps</td>
<td>same</td>
</tr>
<tr>
<td>Purple primer for PVC</td>
<td>same</td>
</tr>
<tr>
<td>Heavy duty PVC cement</td>
<td>same</td>
</tr>
<tr>
<td>Saw to cut 4” PVC sewer pipe</td>
<td>same</td>
</tr>
</tbody>
</table>

* Ocean Products Research, Diggs (Mathews County), VA

** Wire can also be bent on a table edge with a board and rubber hammer.

*** Pipe comes in 10' pieces. Hardware store may cut it into 38" lengths if requested. 2 38" pieces are required for each float.
How to Build a Flip Float with Reinforced Seams

The diagram shows the cut lines and fold (or bend) lines for the 5 ft. by 4 ft. piece of wire mesh.
How to Build a Flip Float with Reinforced Seams

Start with a 5' length of wire mesh that is cut from a 4' wide roll. TOGA buys 16 gage vinyl-coated wire from Ocean Products Research in Diggs (Mathews), VA.
How to Build a Flip Float with Reinforced Seams

Cut out lower left panel leaving the dimensions shown. Be sure to remove all nubs in the finish pieces (They can cut skin if not trimmed closely). The 23” by 9” panel left attached will become the bottom of the box. The 37” by 9” panel cut out will be further cut to become the lid.

From the panel removed above, cut out the lid (24” by 8”). Note that the lid is 1” wider than the box.
How to Build a Flip Float with Reinforced Seams

Bend a 2” lip along the leading edge of the lid.
How to Build a Flip Float with Reinforced Seams

Start bending the wire into a box, starting with the long edges as shown in the photos. Save the bottom for last. The diagram shows the sequence of bends. Imagine looking at the plane of the wire from the bottom edge.
How to Build a Flip Float with Reinforced Seams

Third bend.

Continue with the the bending. The fourth bend creates the 2 in. overlap.

Fourth bend.
How to Build a Flip Float with Reinforced Seams

Now bend the attached 23” by 9” panel to create the bottom. The 5th bend creates the overlap lip on the bottom, the 6th bend closes the bottom.
How to Build a Flip Float with Reinforced Seams

Pig ring all seams, roughly 5 to 6 in. apart. Note that the bottom seam and side seam are overlapped, and therefore reinforced.

The pig rings along the back edge of the lid create a hinge.
Cut a 23” length of bungee cord. Attach one end as shown with 2 pig rings.
Thread the bungee cord through the hook and attach the other end. This is the basic box that can be made into a flipfloat or bottom cage.
How to Build a Flip Float with Reinforced Seams

PVC drain or sewer pipe comes in 10 ft. lengths. Cut 2 38” pieces. You will have an extra piece for your next flipfloat. You can cut with a chop saw, jigsaw, circular saw or hand saw.

Note that this is 4” diameter thin-wall sewer pipe. It is cheaper and lighter than schedule 40. The 4” caps shown are sold in the same section of most building product stores.
How to Build a Flip Float with Reinforced Seams

Prime the pipe ends and cap walls with purple primer.

Coat the pipe ends and cap walls with heavy-duty PVC cement. Push the caps all the way on the pipe with a $\frac{1}{4}$ turn. When placing the cap on the opposite end, hold down for 15 seconds so the air pressure will not push the cap out.
How to Build a Flip Float with Reinforced Seams

Attach the floats to the sides of the box using 24” or 18” cable ties. The cable ties should be near the ends to keep the PVC floats from sliding back and forth.

Voila, you're done! Happy oyster gardening.