

## INSTALLING A NEW AND IMPROVED ICE BOX IN AN '83 RHODES 22



**Old Icebox**

1. I removed the old ice box and along with the small plywood bulkhead forward of the icebox itself.

2. I purchased 4' X 8' X 1 ½" polyethylene coated insulating foam board. I then used the new ice box as a template and traced a panel for each side, cut them out

and attached them using construction adhesive / silicon caulk and a couple of screws with washers. (don't make them too long!)

3. I then laid the box on its back and traced out the panels for the back. Do not put on any extra insulation on the bottom 6 inches or so. I attached the foam board to the back in the same manner as the



**Side View after Mylar Wrapping**

sides, sealing all joints with silicon seal. I cut out a 2<sup>nd</sup> panel for the upper half of the back and attached that to the existing back panel in the same manner. Now the box has double insulation on the back top half, and single insulation on the lower part except for the last 6 inches or so.

4. I then placed the bottom of the box on the foam panel and traced 2 panels and then cut them out and attached both of them to the bottom. Again I sealed all seams with silicon caulk.



**Completed box with Double Thick Panels on Bottom and Back**

5. Finally I traced out a top panel for the box and attached that in the manner as described above. I had a lot of insulating material left over for future projects.

6. I removed the two sliding door tracks. I then tried to placed the box into the space pushing it all the way back and found in my case, I had to thin out the top foam panel by about a  $\frac{1}{4}$  inch in order to smoothly get it in without forcing anything. I also had to bevel the bottom of the back two insulation panels. Be sure to check the door to see that it can open and not touch the step down. When every thing was tested and marked so I could orient the box in the same successful manner, I removed the box.

7. Using a spray adhesive on the box I covered it with Mylar (use the inexpensive Mylar sheets that make "Survival" or "Emergency" blankets that you can buy at any outdoor store).

8. Next I made a cardboard template for the open area where the aft plywood bulkhead is installed just aft of where the box goes. Since the bulkhead (on mine anyway) is square it doesn't follow the curve of the hull. I then used some  $\frac{1}{4}$  inch scrap plastic I had (but marine grade  $\frac{1}{4}$  inch plywood would do fine) to fill in the gap outboard of the starboard edge of the bulkhead and the hull and attached it with screws to the bulkhead.



8. Next I lined the base, and newly expanded aft bulkhead with Mylar. I DID NOT use spray adhesive but instead used only a few blue masking tape tabs to temporarily hold each sheet in place. Lastly I lined the hull behind where the box was to

**Note the Pieces of Blue and Black  $\frac{1}{4}$  inch Plastic** be installed but had it reach about a foot further forward than the area occupied by the box. The Mylar installed in this manner will allow the removal of the icebox if it is necessary in the future plus it will reflect some of the infrared heat from the warmer areas of the boat.



9. Using a spray bottle, I liberally sprayed the Mylar surfaces with water. (water is a catalysts for the foam) I then carefully slid the box into place making sure I did not mess up the Mylar. There now was a gap behind

**Box Area covered in Mylar, note the blue tape**

the box and the hull in a couple of places. I tested the door again to see that it opened OK. Using some scrap wood I braced the box in the proper orientation so it would not move during the next step.

10. Using "Expando-Foam Insulation" , I added a small piece of tubing so I could direct the foam and proceeded to fill in the aft-most areas against the hull. Keep in mind that the foam expands many times its original size so do not over fill the voids. I worked my way up and forward. When I thought I had about the right amount of foam, I ran a bead on the outside edge of the extra Mylar that projected forward of where the box would go. This I then folded up against the forward side of the box. The next day I had to add a bit more water from the top to properly catalyze the foam. I then replaced the forward plywood bulkhead under the sink and reinstalled the sliding door tracks.

11. When the foam was set up to my satisfaction I caulked around any gaps between the box and the bulkheads. I then trimmed out the box using assorted moldings that I had pre-painted gloss white.



12. There remained only two other things. First I installed a second self-adhesive neoprene gasket around the door. Because this model of ice box is shorter and broader it does not have the same footprint. As a result there was a gap behind the sliding door and the front edge of the box. I went to Home Depot and purchased a 6' long piece of PVC flat drip edged and cut it to the proper width and length and attached it to the front edge of the forward

**PVC Drip Edge** under-sink bulkhead, in effect increasing the width of the bulkhead to meet the back of the aft sliding door. It is flexible so if the door on the box is opened too far the PVC bends and doesn't damage the door like wood would. Also when the forward most sliding door is pushed way aft it slips right past the flexible strip.

### **Post Script:**

Previously the icebox had a warped door and could not keep 5 pounds of block ice longer than two days in 80° temperatures.

The replacement ice box now keeps a 5 pound block of Ice for 5 days; 2 blocks of ice last a full week. Temps were in the low 80's but the water was for the most part in the mid 60's. Even considering this, the new icebox is a great improvement over the old one. Total cost including shipping and extra insulation, under \$250. Total work time was about 5 hours spread out over 3 days. Below are some links to sellers of iceboxes, Be sure to check your size to find the best fit.

<http://tweetys.com/search.aspx?find=ice+box>

<http://www.adventurerv.net/ice-box-p-1256.html>