E-CELL by HOTSABI

PLEASE READ INSTRUCTIONS CAREFULLY AND COMPLETELY BEFORE STARTING PROJECT.

ELECTROLYZER PARTS AND TOOLS LIST

1. 7” long x 3” ABS tubing cut square deburr edges
2. 3” ABS Plug clean out threaded cap
3. Threaded adapter DWV 3” HXFPT
4. 3” ABS cap
5. 4” Stainless steel cap screw ¼ 20
6. 2 Stainless steel 1” ¼ 20 cap screw
7. 1 1/8” stainless screw
8. 5 washers 8 Stainless steel nuts ¼ 20
9. Stainless steel shimstock 11” x 6” .003 thick
10. Stainless steel wire mesh 14 gauge 8” x 3”
11. 3/8 nylon plug
12. ¼ x ¼ NPT barbed fitting
13. Plumbers tape

Cut and fit shimstock into ABS tubing 11” works well. This gives 1” overlap.

Tools needed to assemble E-CELL

1. Hand drill
2. Cutters (for mesh and shimstock)
3. ¼ NPT tap and 5/16” drill bit
4. 3/8 NPT tap and ½ drill bit
5. 10/32 tap and 1/8 drill bit
6. Clamp and 1”x1” wood strip
7. Hex key “T” handle wrench to fit capscrew
8. Phillips screwdriver
9. Small adjustable wrench
For drilling use a strip of wood.
Be sure shimstock is flush with at least 1 edge of tube.
Use the flush side as the bottom.

Clamp securely and drill two .165” holes. 1 on either side.
Perpendicular to each other as best you can.
These holes will be tapped ¼ 20
The shimstock’s holes will need to be reamed to accept the capscrew.

Next assemble the electrode into the barrel.  
**Important** use SS nut inside to seat capscrew.
Final assembly for electrodes. Note capscrews each have SS nuts inside barrel to seat to shimstock. The screw on the left will be used for the neg. post of the cell. The right side capscrew merely seats the shimstock.

Prepare top cap and plug.
Drill and tap a 3/8 NPT in the center of threaded cap. (main fill plug)
Drill and tap a ¼ NPT on the side. (barbed fitting)

Note tube shown top side up. The shimstock is flush with the bottom of tube.

Shown here part # 2&3
Top;
Threaded adapter DWV 3” HXFPT
Bottom;
3”ABS Plug clean out threaded cap
Prepare bottom cap.
Drill and tap ¼ 20 hole in the center.
Install capscrew with SS nut. Tighten and install washer and SS nut outside.

This is the positive electrode.
Assemble unit with ABS glue.

Finished e-cell Shown here upside down.
Next prepare SS mesh. Cut to carefully fit inside threaded cap. Use at least 3 pieces.

After fitting mesh tightly into cap. Mount with a 10/32 stainless screw Opposite side of the ¼ tapped hole for the barbed fitting. This is a flame arrestor, so make CERTAIN that the entire Inside is covered tightly. Note the sides of the mesh wrap up. Turn each layer to cross the grain of the mesh.
Use white “plumbers tape on all threaded fittings.

Contact info
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use “e-cell” in subject line