ARTIBC

ARTIBC is a an ARTI Style system using two IBCs (International Bulk Container). It was developed by Solar CITIES Martin Funk, TH Culhane and Nick Chase in 2015 in Tamera. It's main purpose is gas storage.

Parts list

• 2 IBCs *black or white* 	• 1x tank connector with rubber ring • 1x valve 1/2" for gas outlet  
• Silicon to seal the threaded cover 	• 4x tank connector with rubber ring • 4m wire 2-3mm with plastic insulation or copper wire  
• 2-3 meter 1/2” hose and hose clamp connection to the digester 	•

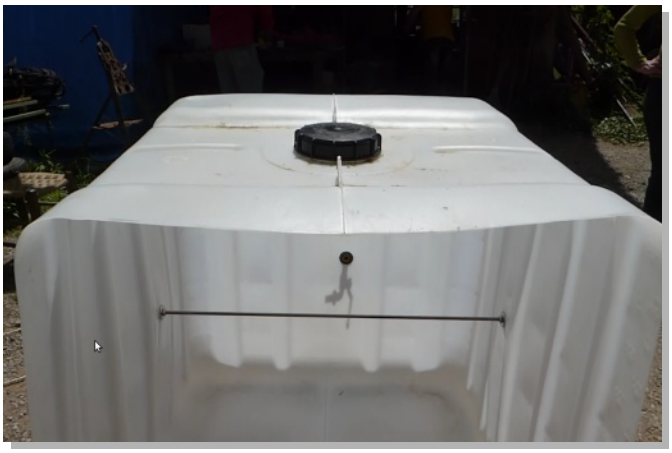
Tools

- 1/2" hole saw
- Knife, grinder or saw to cut plastic
- pipe wrench
- Sand paper

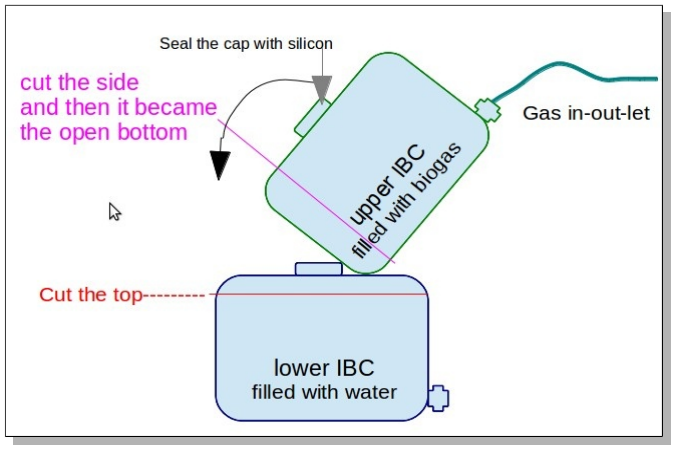
Step by Step

Lower IBC: In order to have a bucket within a bucket, cut the top of one IBC right below the curve.

Upper IBC(floating drum): Lift the second IBC out of its metal cage. Open one side of the container for the water in/outlet. Cut it also a bit shorter (-3”) to fit better into the lower IBC. Test if the upper IBC slides into the lower IBC easily. If you still feel tension cut a little more of the sides.



To stabilize the floating drum add a stainless steel threaded bar with two nuts, waver and rubber ring on each side. Make the bar a bit shorter, that the tank is pulled together (2”).



Seal the cap using Silicon. Make sure it is airtight. Lift the upper IBC, rotate 90° and put it inside of the lower IBC.

Now create the gas outlet on the top of the emerged IBC. Connect the bulkhead and the valve. Make sure everything is airtight.

Then put the second cage on the top of the lower and fix it with cable stripper or pipe clamps.

Use a palette on top of the upper IBC. Give some weight, with sand bags or stones to have some pressure in the gas storage. 10Kg on 1m² give you 1mbar; 150kg/m²=15mbar, that's a good pressure!

Connect the gas outlet of the digester with the in/outlet of the floating drum.
OTIONAL you can add a bottle with iron sponges (not stainless) in the pipe to remove the sulphur.

Fill the lower IBC with water and let the upper tank emerge into it. Stop in the middle and test if he keeps the pressure for 1day, to be sure it is gas tide.

If your digester is producing gas, it will lift up the floating drum.

The first gas you have produced release into the air, because it is mixed with oxygen and could explode!

Enjoy your blue flame.

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