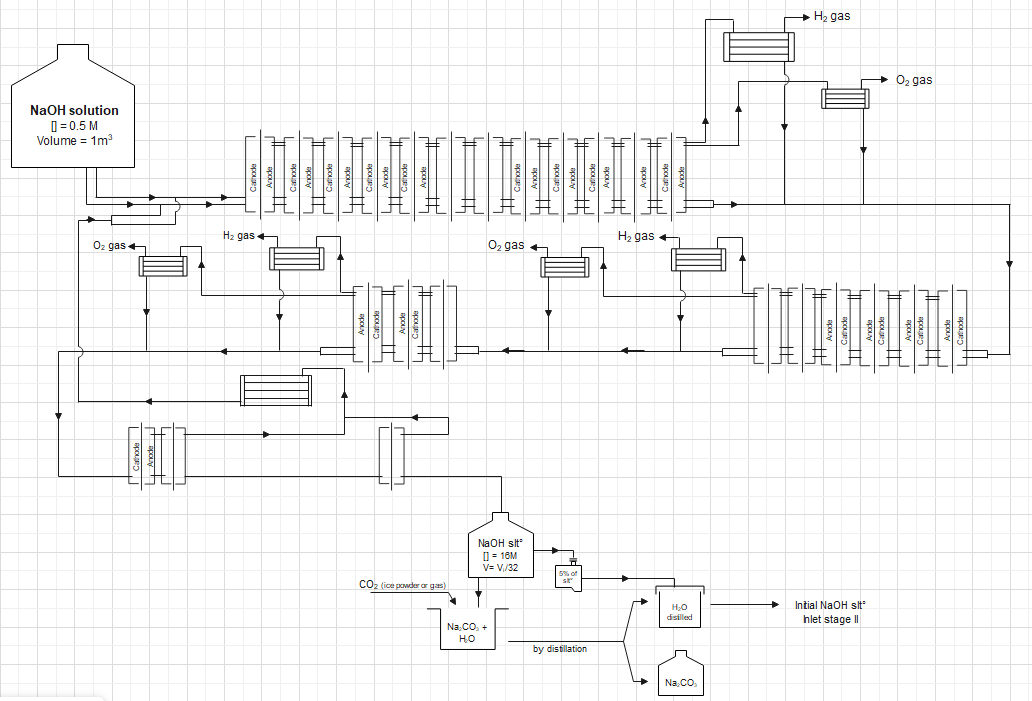
**Multistage electrolysis design by FreeCAD \_ Stage 1**

Stage 1 is divided for 3 parts:

* Part 1 : electrolysis
* Part2 : Add CO2 to the electrolyte solution
* Part 3 : distillation of mixture

Stage 1 \_ Overview





*\*N.B.: this Overview is not complete; it lacks pumps, compressors, sanitary installations for cooling water as well as electrical connections.*

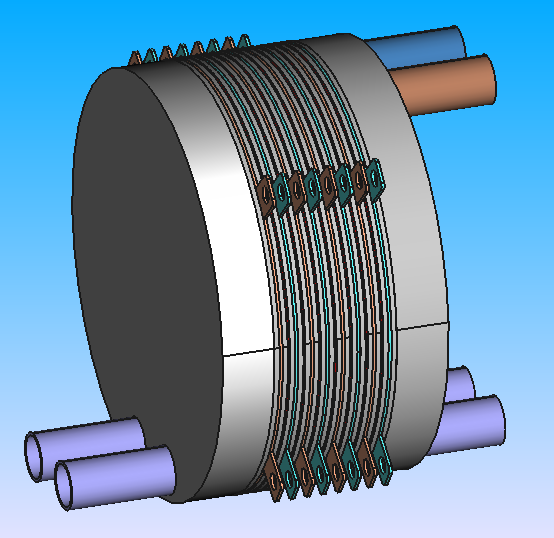
Part 1 : Electrolysis

Electrolysis in stage 1 is divided to 5 steps. Step 1, 2 & 3 the production of hydrogen & oxygen separately, while each step 4 & 5 in which produces hydrogen and oxygen mixture to be burned.

In this report, designs for each step of electrolysis multistage will be represented.

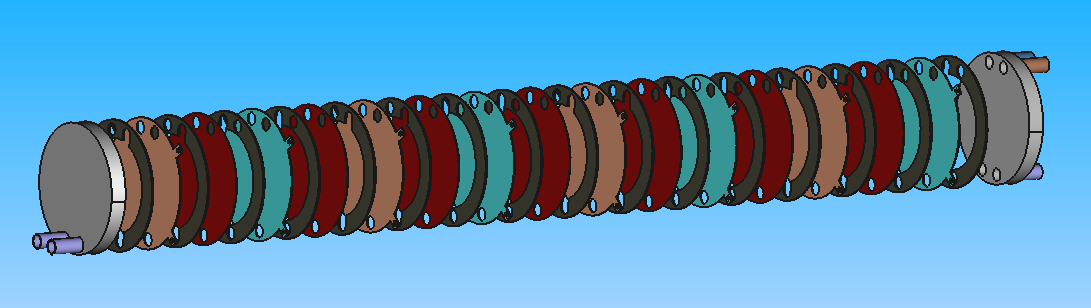
* Electrolysis step 1, 2 & 3 \_ All components -compressed-





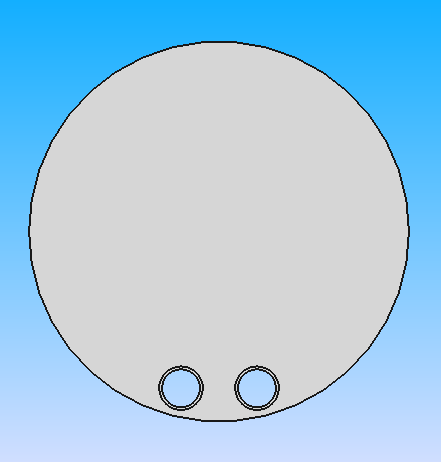
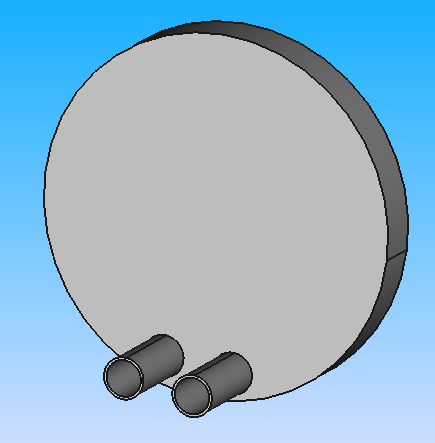
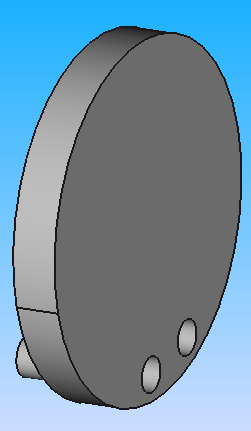
* Electrolysis step 1, 2 & 3 \_ All components -explosed-





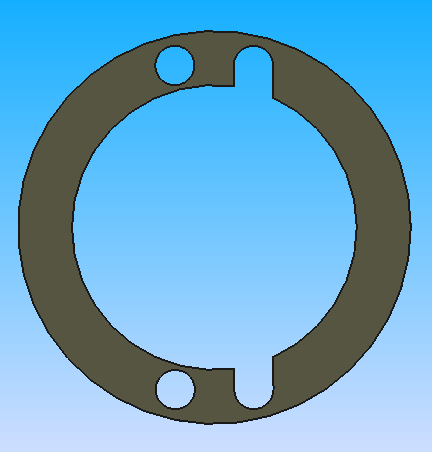
* Electrolysis step 1, 2 & 3 \_ End plate1 (inlet solution)



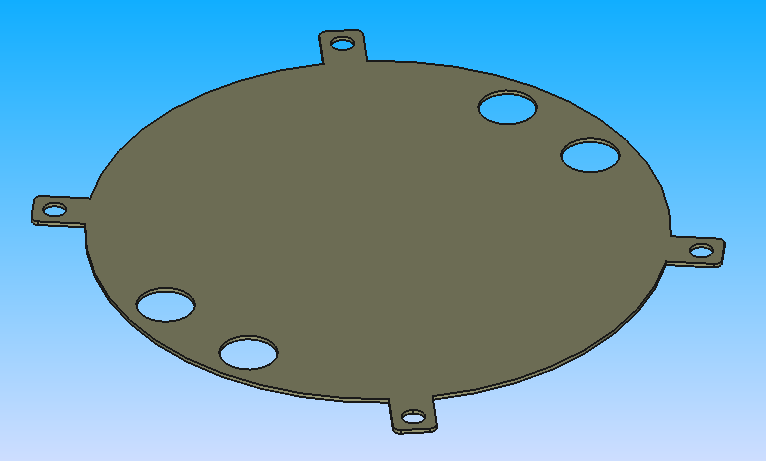
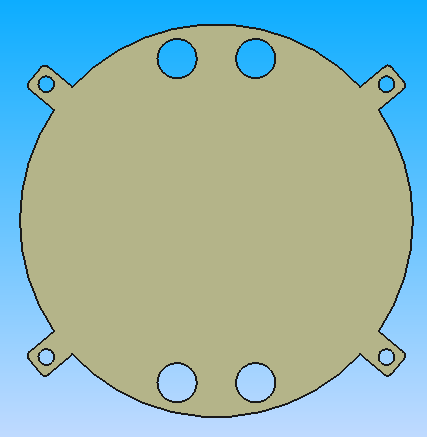
* Electrolysis step 1, 2 & 3 \_ Gasket



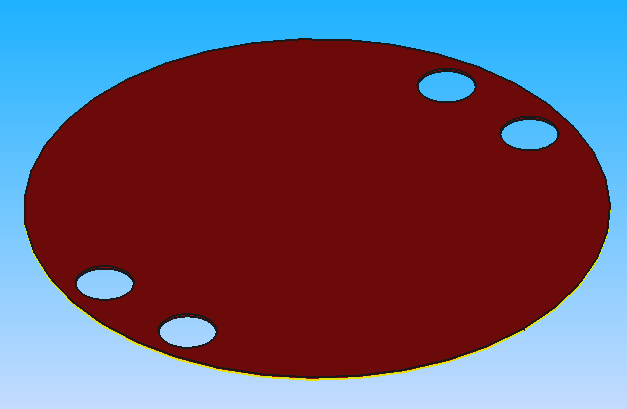
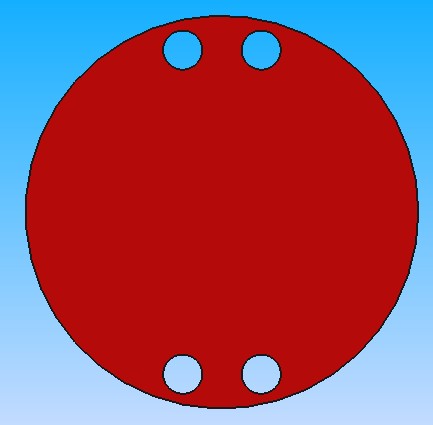
* Electrolysis step 1, 2 & 3 \_ Electrode



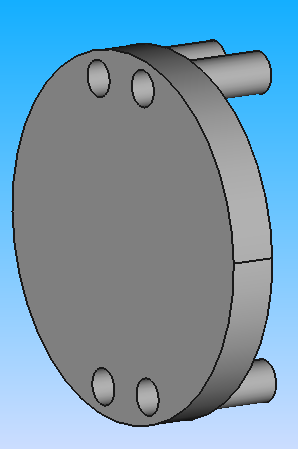
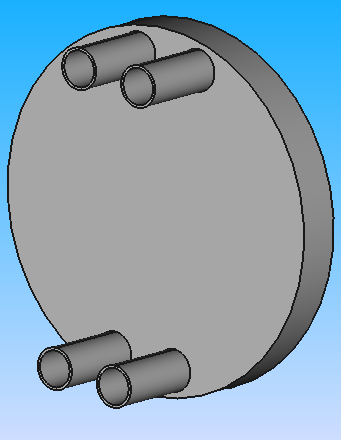
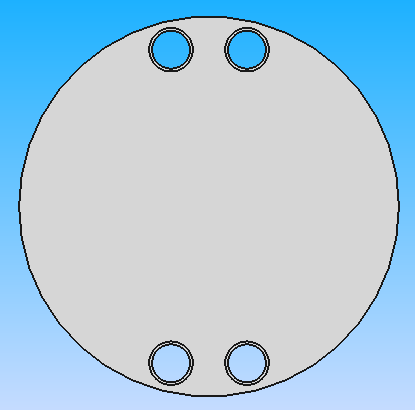
* Electrolysis step 1, 2 & 3 \_ Membrane



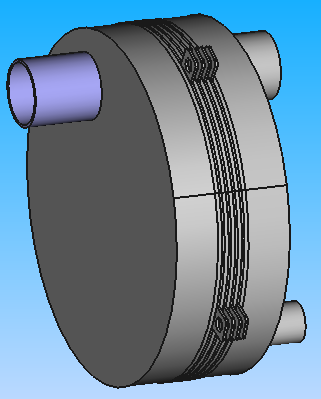
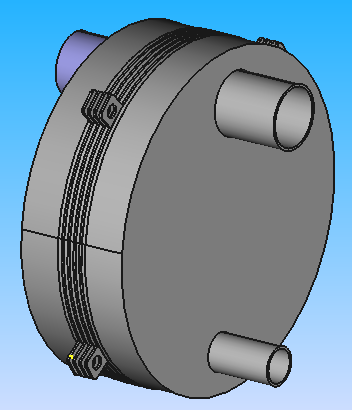
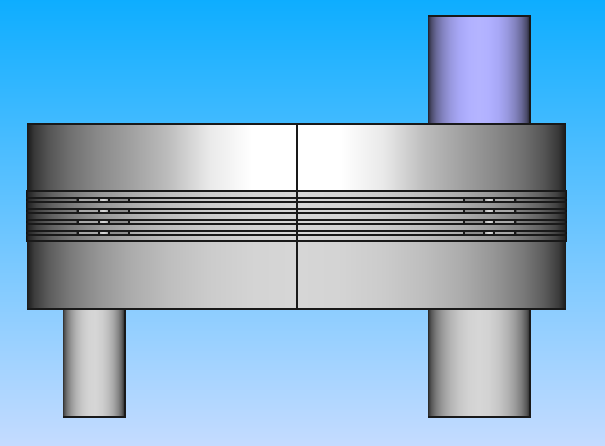
* Electrolysis step 1, 2 & 3 \_ End plate2 (Outlet solution)



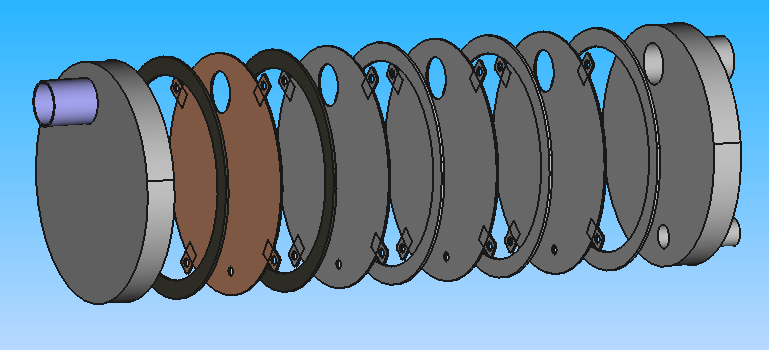
* Electrolysis step 4 & 5 \_ All components -compressed-



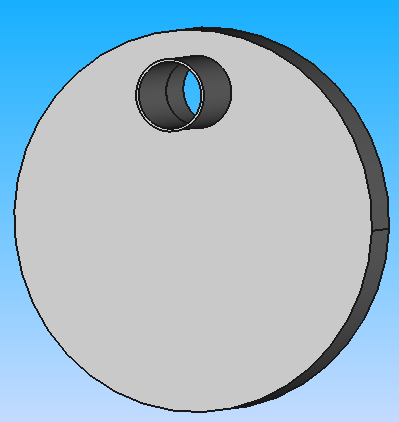
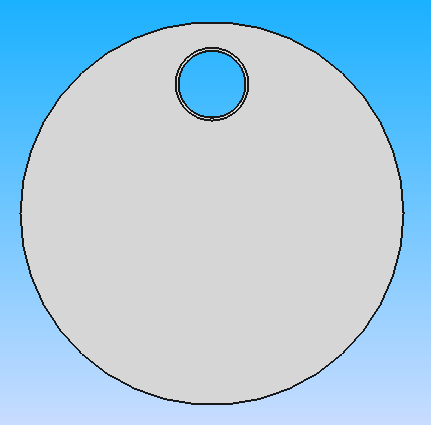
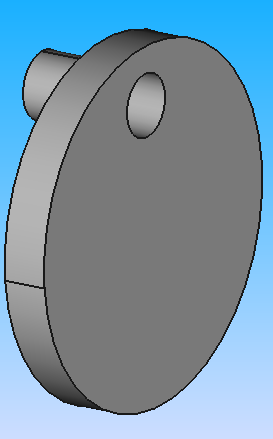
* Electrolysis step 4 & 5 \_ All components -Explosed-





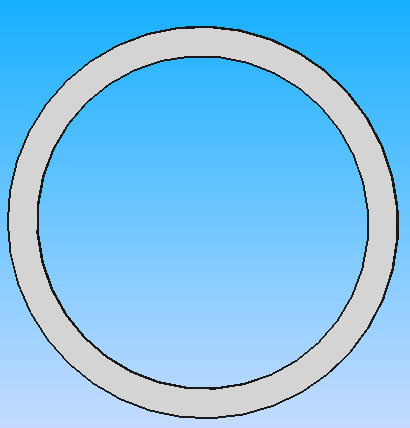
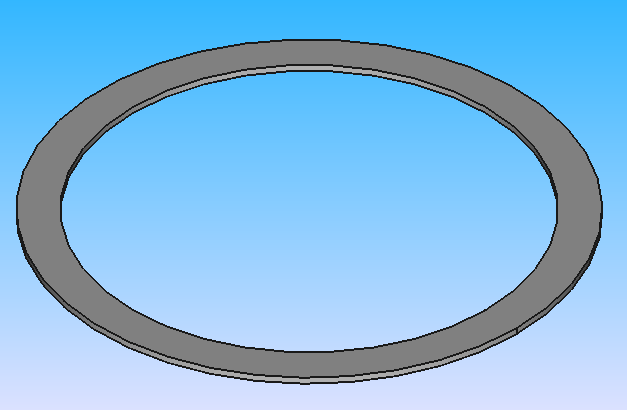
* Electrolysis step 4 & 5 \_ End plate1 (Intlet solution)



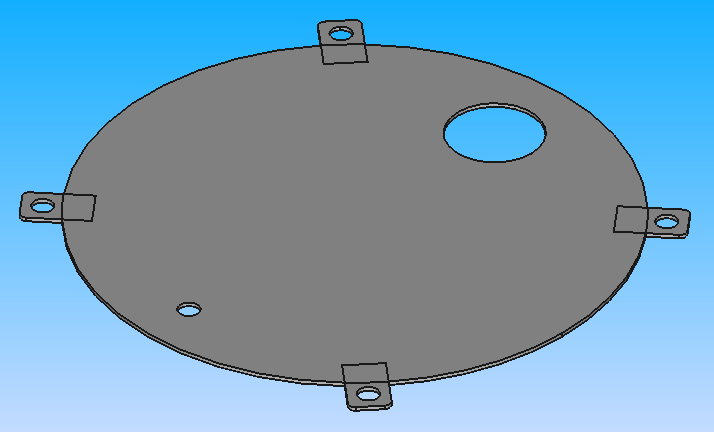
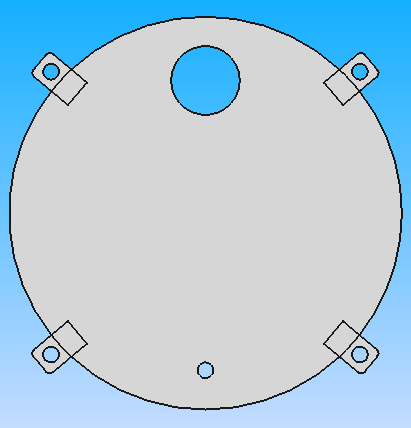
* Electrolysis step 4 & 5 \_ Gasket



* Electrolysis step 4 & 5 \_ Electrode



* Electrolysis step 4 & 5 \_ End plate2 (Outlet solution)



