C.O.W.

construction manual

for your own bio-digester!

important things to know before start building:

_as a starter get yourself manure from your lokal farmer. any manure can be used.

_any organic waste from your household is suitable for the fermentation process, exept garlic and citrus fruits.

_bacteria are your friends, so take care of them. don´t stress them with a complex energy source. bacteria need some time to adapt to new kinds of foods so increase the diversity of your biomass slowly.

_the smaller you chopp your waste, the better the bacteria produce methan.

_make sure that the ratio between solids and water should be 1 to 4.

_keep the temperature of your bio-digester at around 35 degrees. if you use your digester indoor, place it near a heat source (e.g. the heating system in the basement). outside your digester should be isolated.

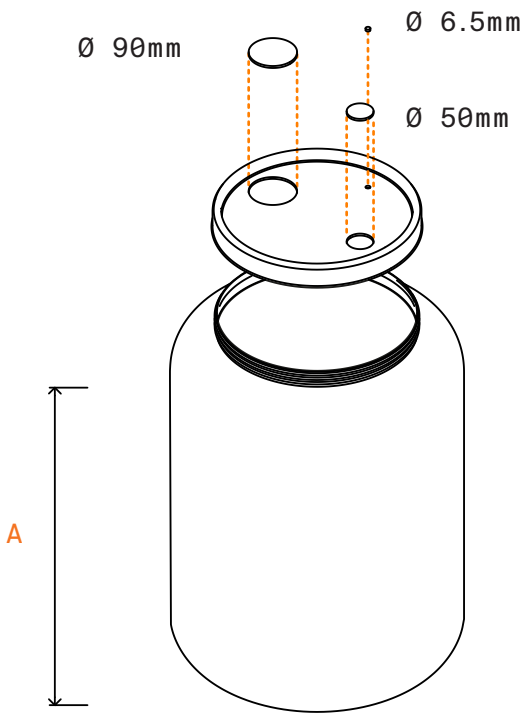
_avoid direct sun on the digester. temperature inside can quickly increase over 60 degrees which is lethal for your bacteria culture.

_UV radiation also suppresses growth of your methan bacteria.

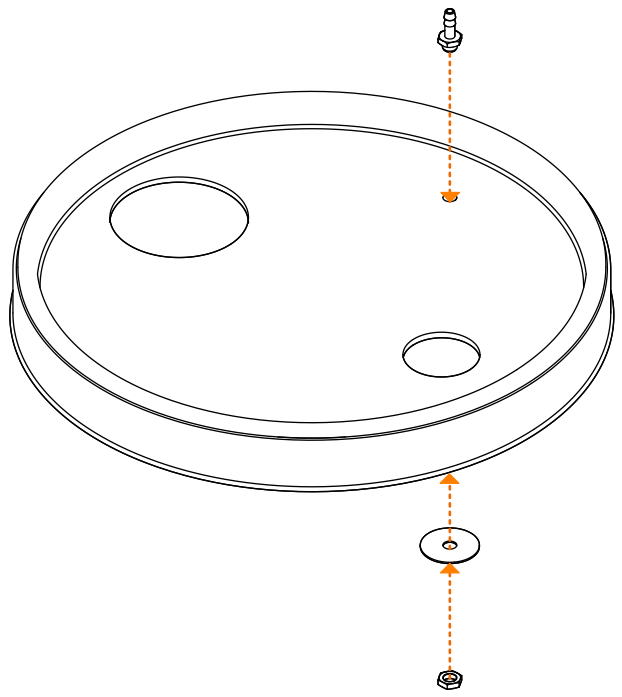
_make sure your gas storage is under mechanical pressure. you need a constant gas flow to avoid a ignition of your storage.

_you are dealing with a flammable gas, so be careful using and producing it indoors! make a test setup outside if you are new to this.

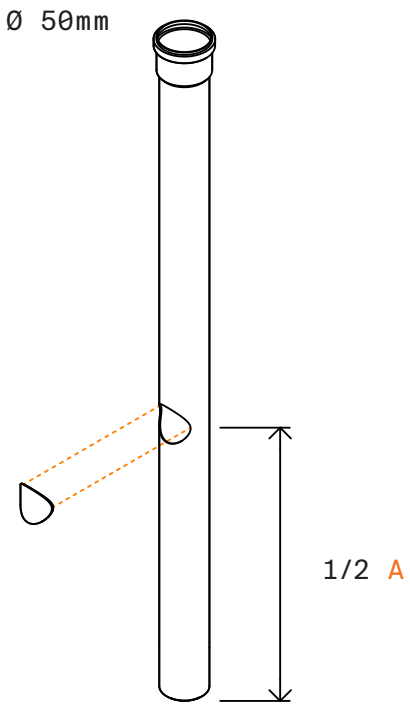
drill holes in the lit



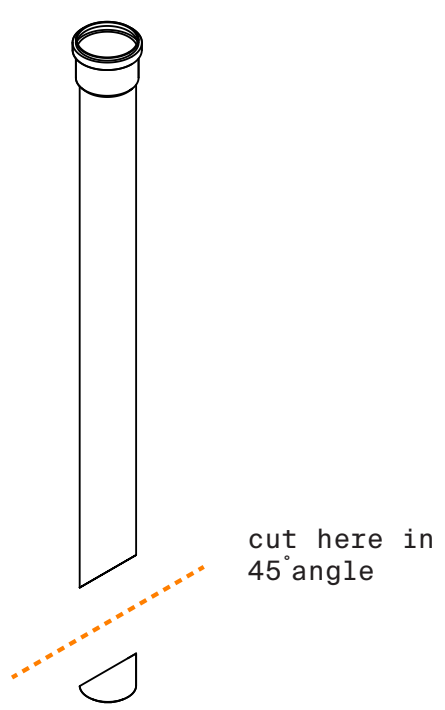
install hose connector to the lit



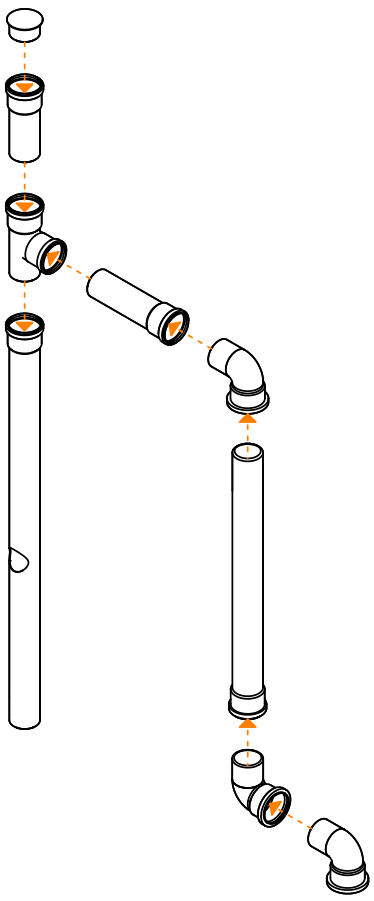
drill the overflow-tube



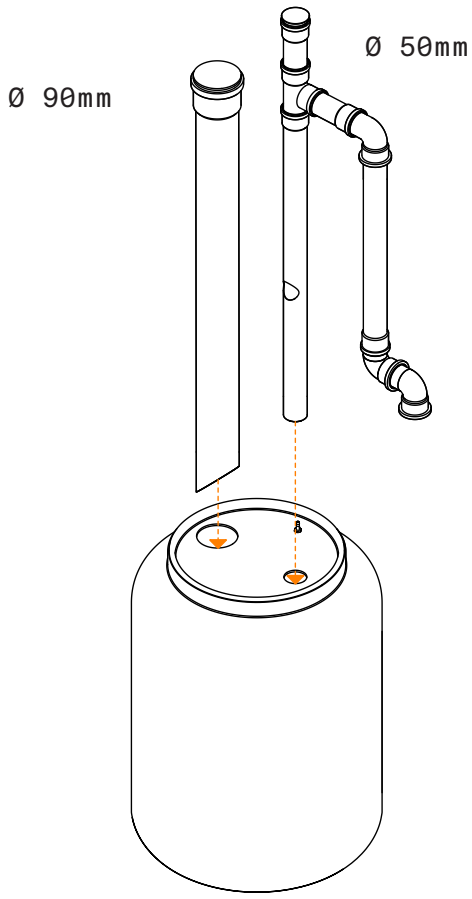
prepare the feeder-tube



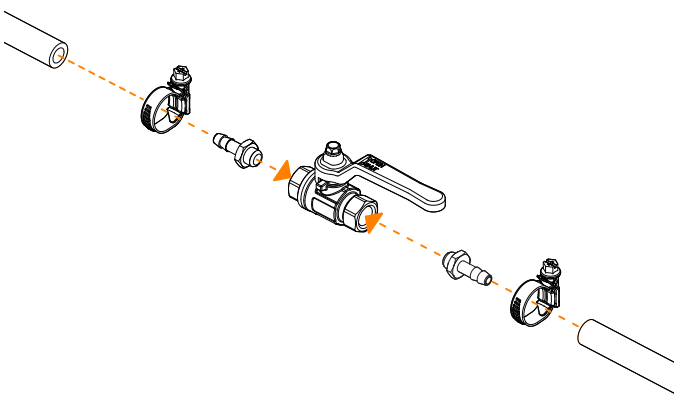
combine all 50mm tubes



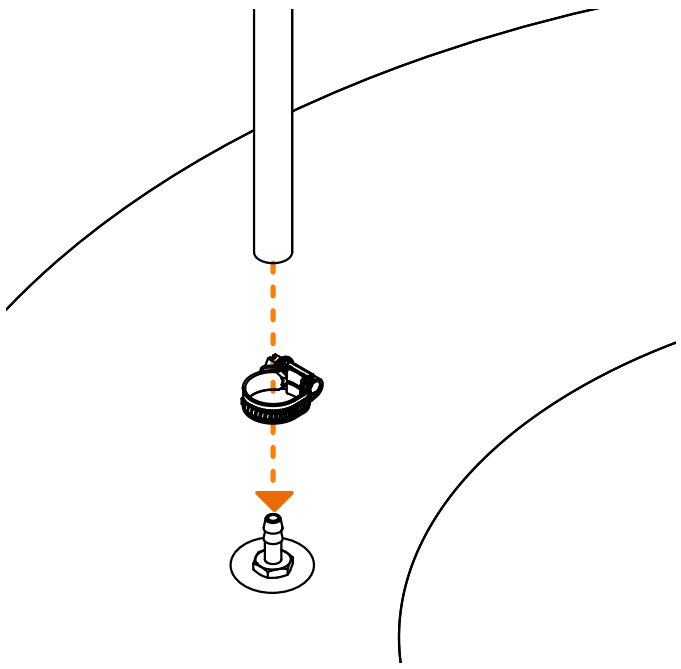
combine with the barrel



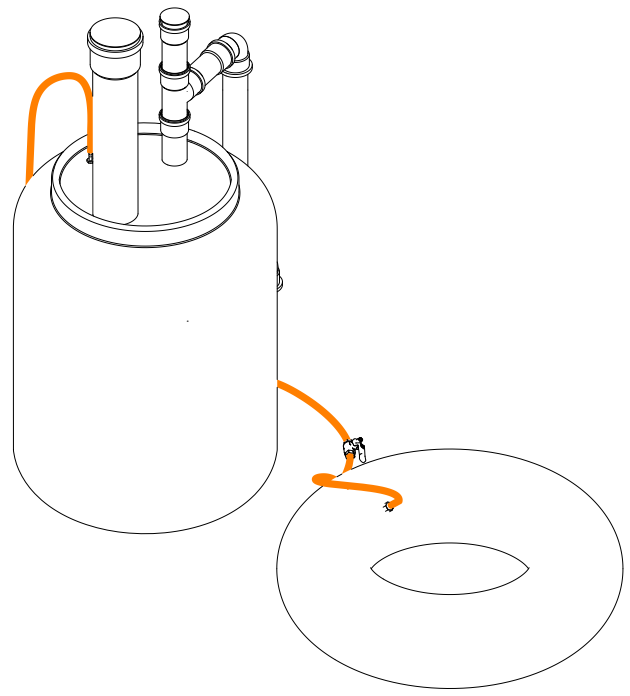
cut gas hose and connect to ball valve



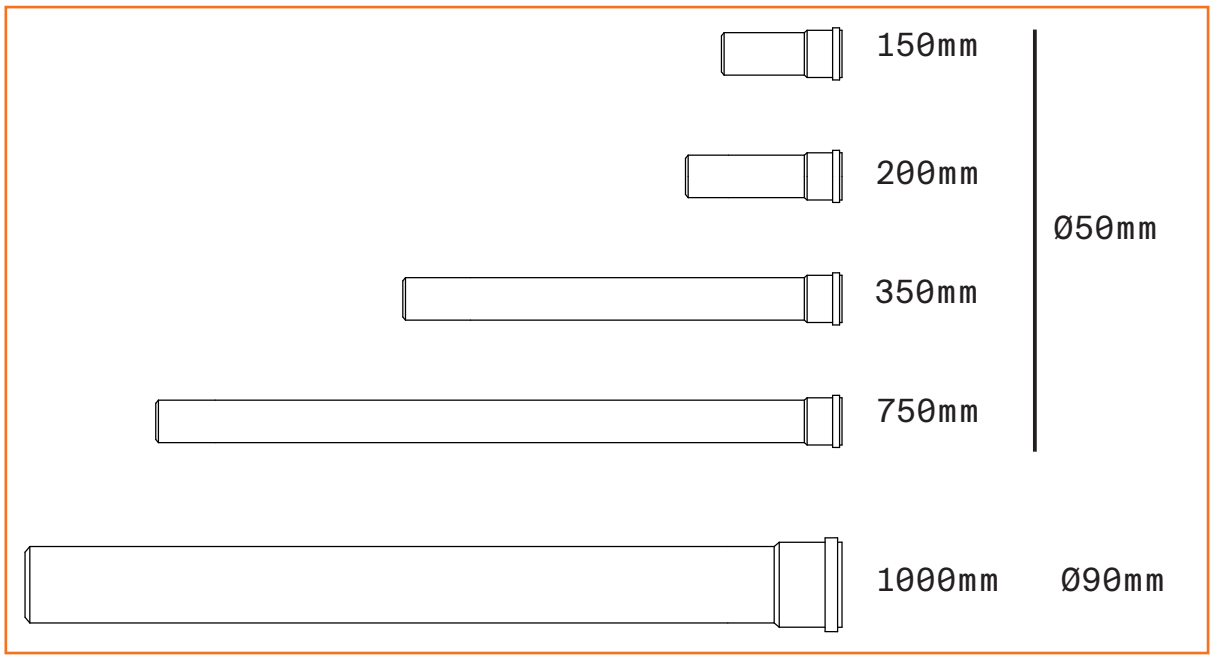
connect gas hose with the deflated tire



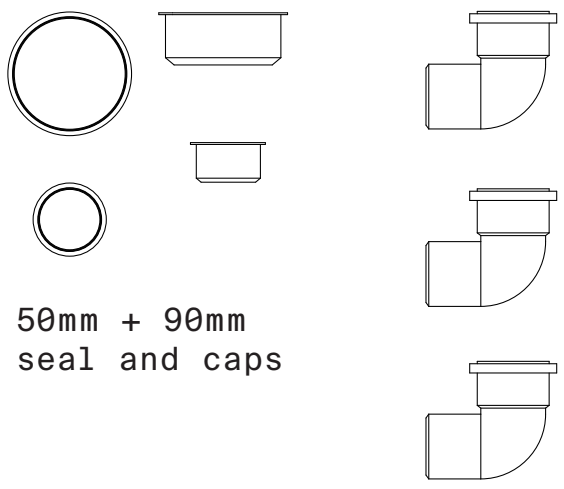
done!



HT Tubes



HT Fittings

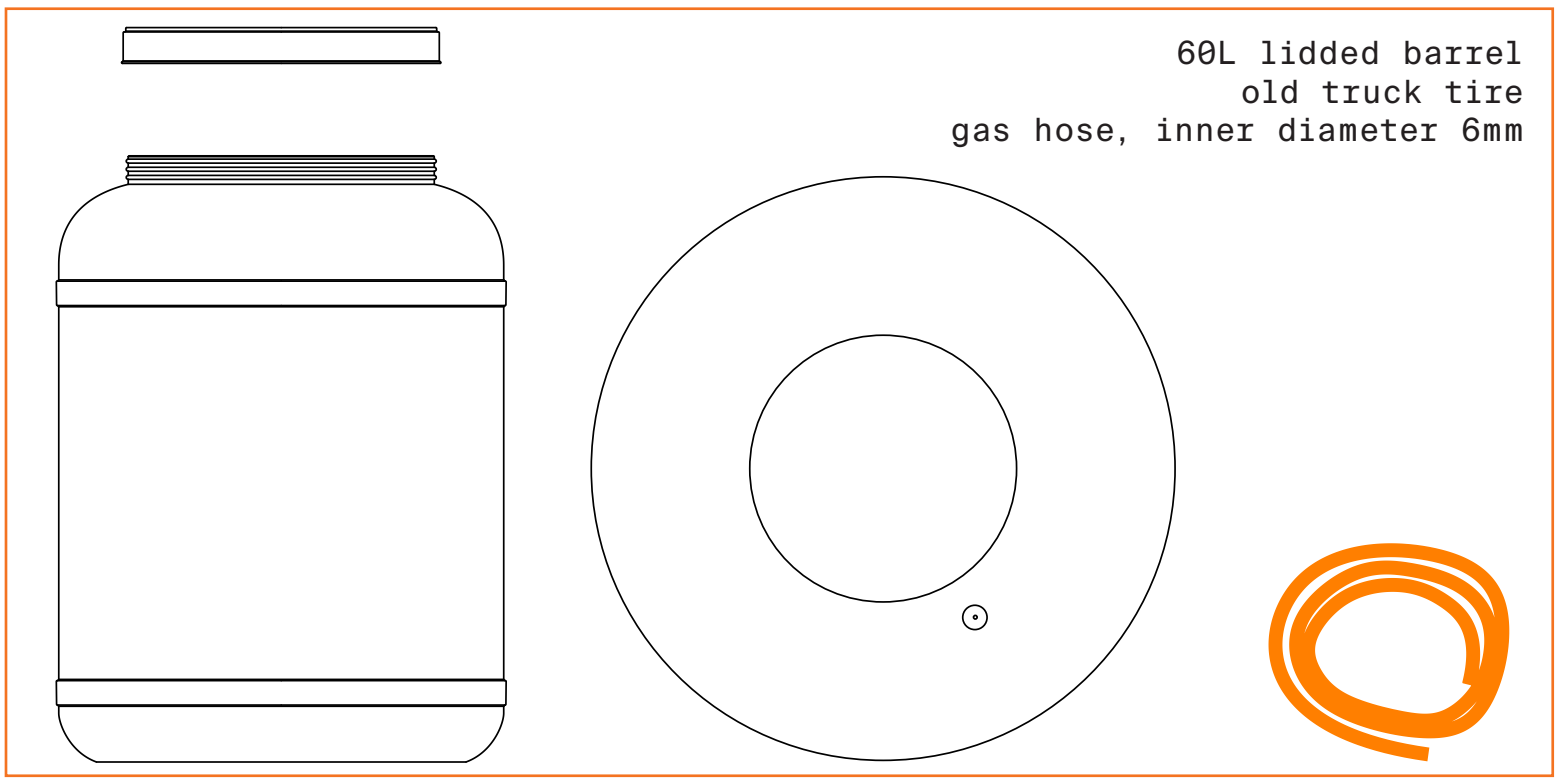


Fittings

- threaded brass grommet 1/4´´ to 6mm
- female threaded brass nipple for 6mm diameter
- threaded nut 1/4´´
- 4x close clamps
- ball-valve
- t-piece

C.O.W. circular organic waste

Partlist



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