

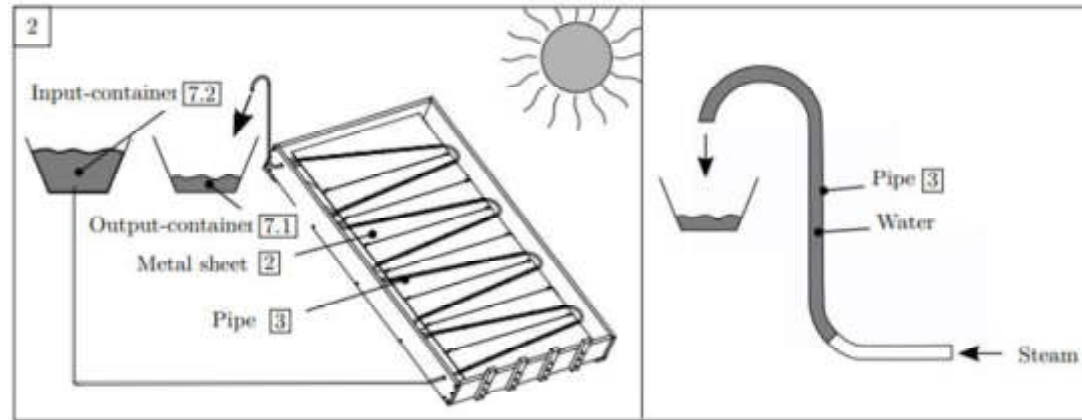
TECHNICAL NOTES

NOTES

How the system works


CONTENT

- The water flows from the input-container 7.2 into the pipe 3 . The sun heats up the metal sheets 2 and the water in the pipe. When the water is hot enough, it starts boiling and pathogens are killed. To isolate the front-side, two glass panes are placed on top of the pipe (this is not shown in the picture).
- When water boils, steam is produced. The steam needs much more room than the liquid water. Thus, the steam pushes some of the heated water out of the pipe into the output-container. Afterwards the boiled water flows out of the outlet and is collected in the output-container 7.1
- After enough water has flown out of the system cold, untreated water from inside of the input-container can pour in and the process restarts.



Considerations

- The pipe has to stick tight on the metal sheets.
- Glass panes on top of the absorber:
 - There must be two glass panes.
 - Do not replace glass with foil or acrylic glass!
- Wooden box has to be well insulated.
 - No water and only a bit of air should get inside

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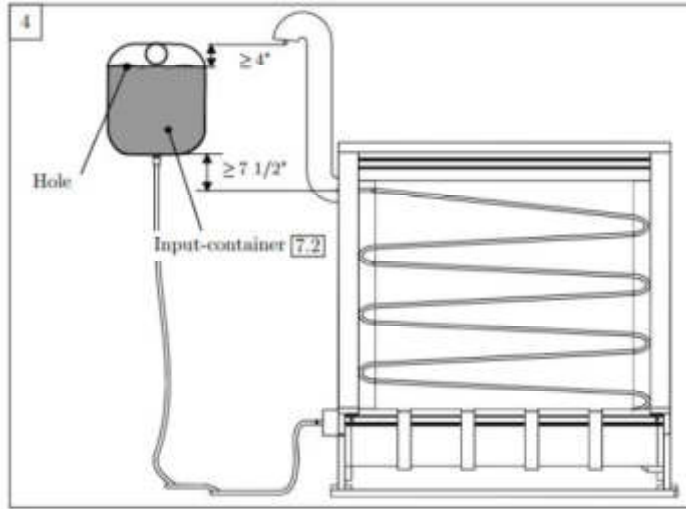
TECHNICAL NOTES

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Installation heights

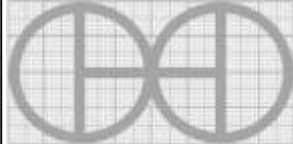
CONTENT

- The input-container 7.2 has to be on the correct height (see picture below)
- At least 4" between water-level (input-container) and the outlet
 - < 4" : Untreated water will leave the system. Make sure to drill a hole into the input-container at that height!
 - Much more than 4" : The system will produce less water.
- The difference in height of the bottom of the input-container and the point where the pipe leaves the wooden box has to be 7 1/2". This difference also may not be changed, otherwise the system will not work well either. Please note that the water-level in the input-container 7.2 will fall while the system is running. In order to keep this variation low, the input-container should have a large floor area.



Insulation

- Insulation material which is resistant up to at least 140°C. For example glass wool or hemp mat.
- Each part can be made out of several smaller parts.
- Strips in contact with glass are attached to these in order to absorb shocks and to prevent it from breaking. The material needs to be very soft. If it is soft enough, you can use the insulation material

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TECHNICAL NOTES

NOTES


Metal Bending Tools

CONTENT

Instructions can be found in the documentation on building a Metal Sheet Bending Tool and a Pipe-Bending Tool. In case you do not have the tools for metal bending.

Building the rack

- You will need at least two people and an area of at least 53.82 ft².
- The rack has to stand on even ground. If you do not have even ground, use bricks or wood to level the rack.
- The rack is designed for two 60 liter containers with the dimensions 65 cm x 35 cm x 40 cm. If you use other containers, you might need to change the design.
- All boards and rails are made of wood. You do not have to smooth or sand it.
- After every step, check that the angles and distances of the boards have not changed.
- You will only need nails. Screws are not necessary. The nails have to be three times as long as the thickness of the material to be nailed down

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