

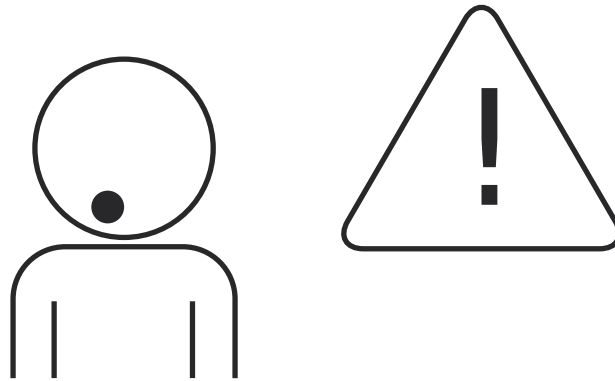


**Fridge Grow**

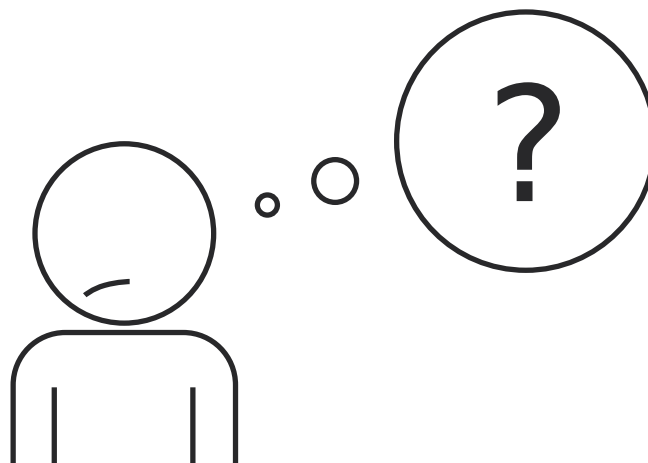
# Fridge Conversation Guide



# Attention!



All modifications must be in accordance with all locally applicable laws and regulations. This especially applies to but is not limited to electrical works - if in doubt, modifications must be approved by a locally authorized engineer before commissioning. All components used as well as the overall system must be certified for the intended use. We do not accept any liability for any damage.

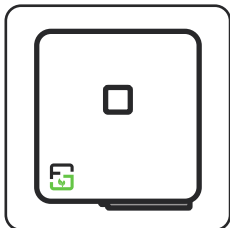


If you need help, don't hesitate to contact us through one of the following channels:

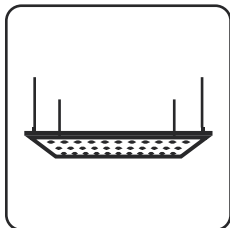
- Fridge Grow Telegram: <https://t.me/fridgeGrowPublic>
- Fridge Grow Forum: <https://forum.fridgegrow.com/>
- E-Mail: [info@fridgegrow.com](mailto:info@fridgegrow.com)

# Scope of delivery

FG-Controller



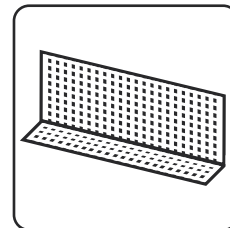
Lamp



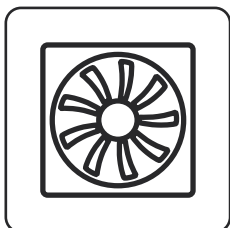
Heater



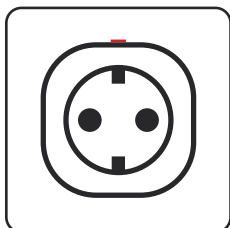
Perforated Sheet



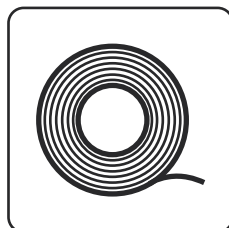
3x Fan



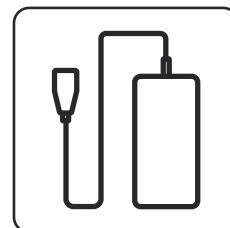
3x Remote Controlled Sockets



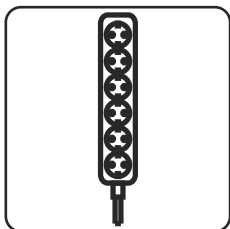
Tape



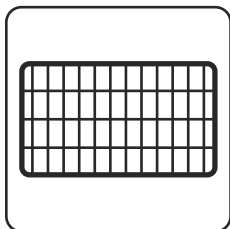
Power supply



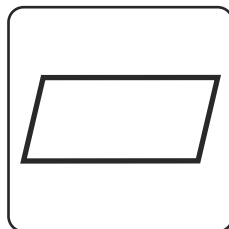
Power distributor



Grid



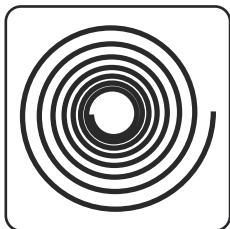
Aluminium sheet



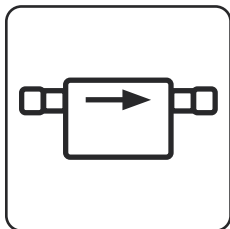
Micro nutrients



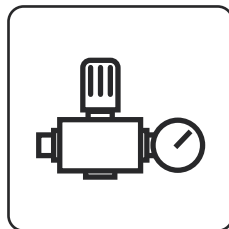
Tube



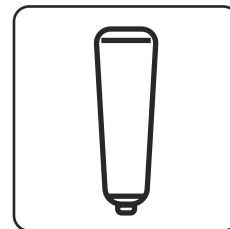
Valve



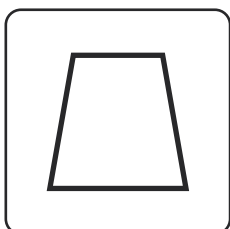
Pressure reducer



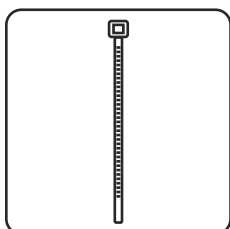
Sealant



Stand

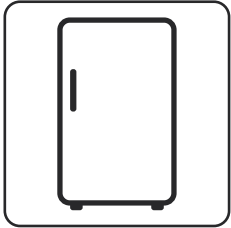


Cable ties

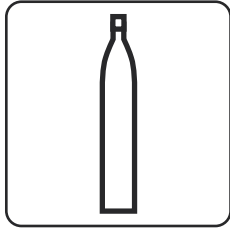


## What else do you need (out scope of delivery)

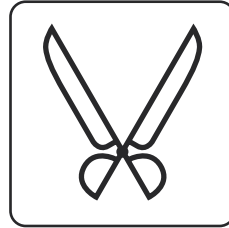
Fridge



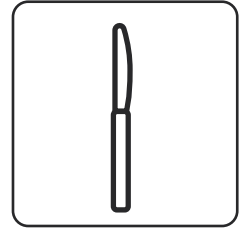
CO2-Cylinder



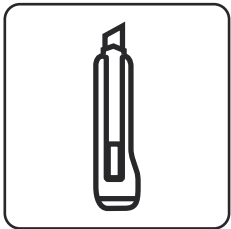
Scissors



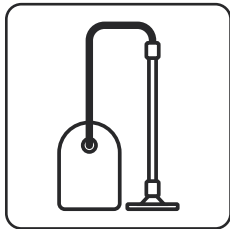
Butter knife



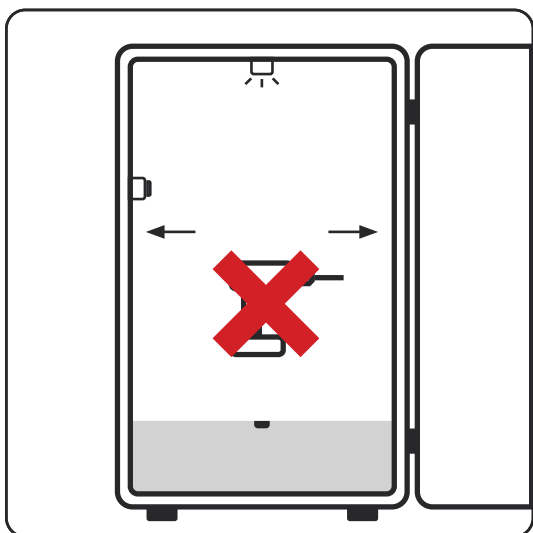
Box cutter



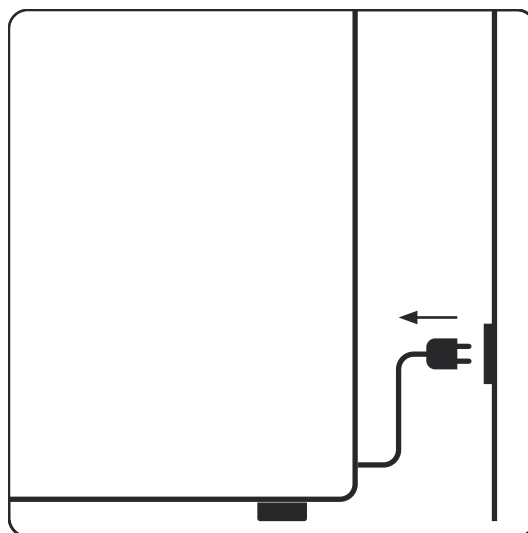
Vacuum cleaner



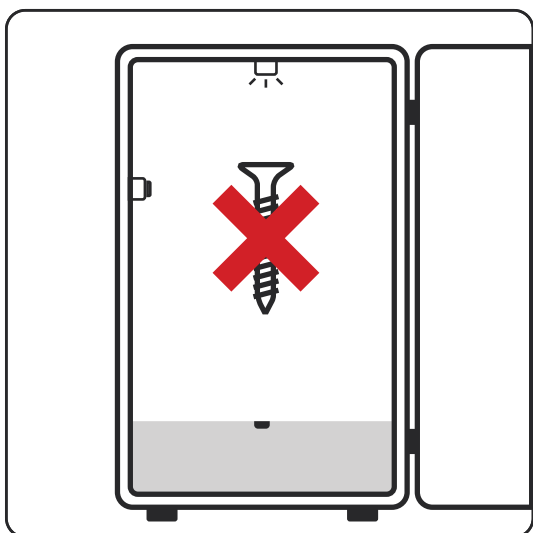
## Important Instructions!



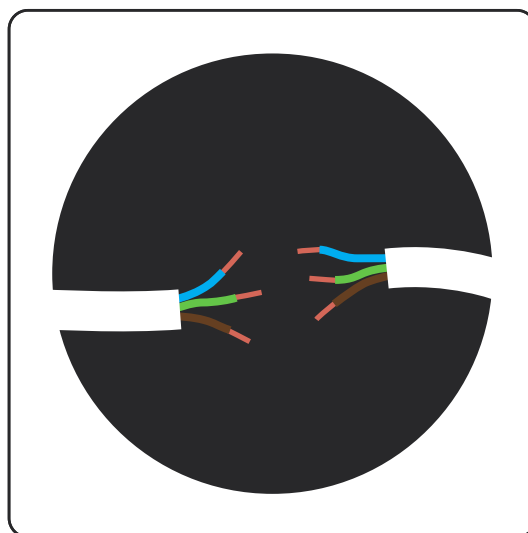
Do not drill into walls!



Disconnect the refrigerator from the power supply during the conversion!

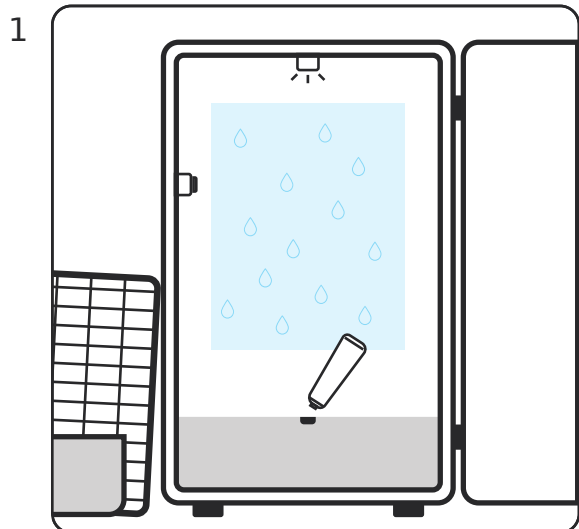


Do not screw anything into the inner walls!

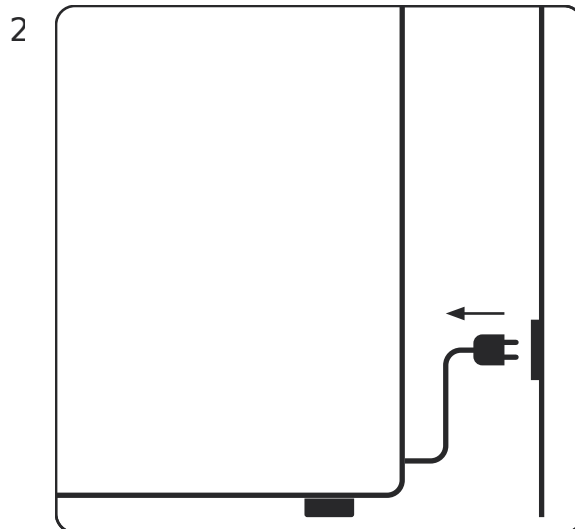


Before you plug the refrigerator back in, check that none of your steps have damaged any cables.

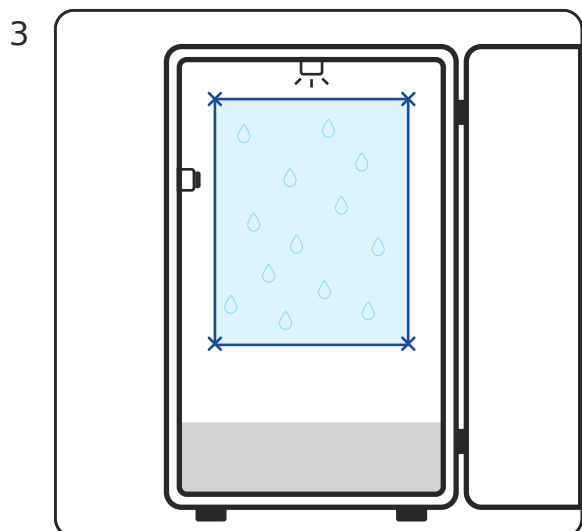
# Preparation



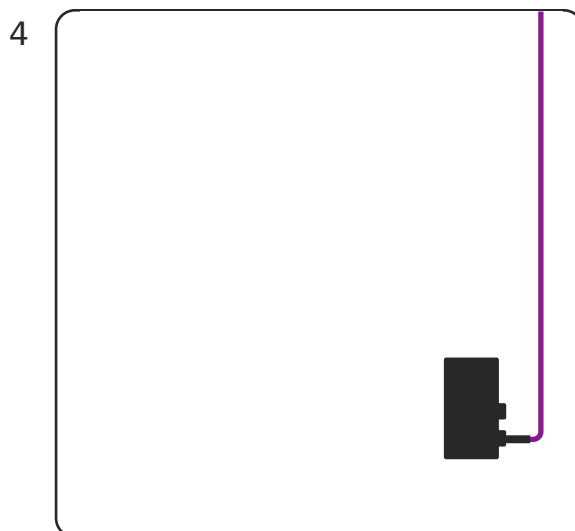
Remove the inside of your refrigerator and seal the drain hole, with the enclosed sealant. Switch it on and leave the door open for about 5 minutes until moisture forms on the back.



Now disconnect the refrigerator from the power supply.



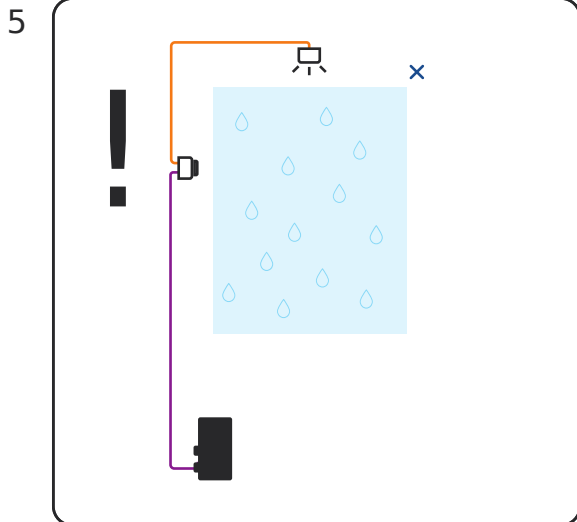
Mark the boundaries of the area where moisture condenses on the back wall. Where it remains dry, mark the place where you want to make the duct.



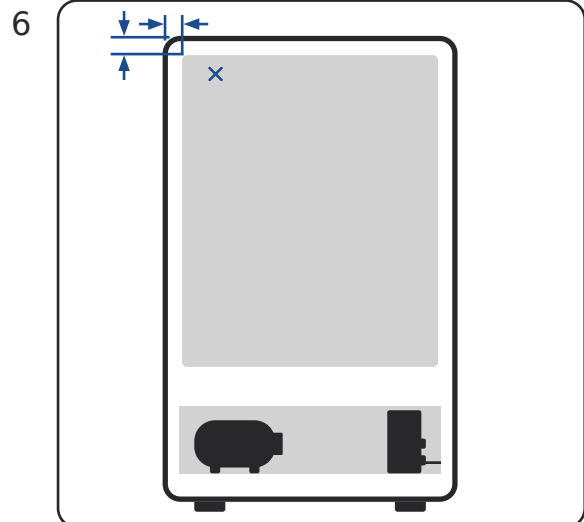
Attention! There may be cables in the walls. Usually these run only on one side from the thermostat and light to a junction box near the compressor. The cables are usually run in a tube, which often makes them hard to recognize as such.

## Variant 1 – feed-through hole in the rear wall

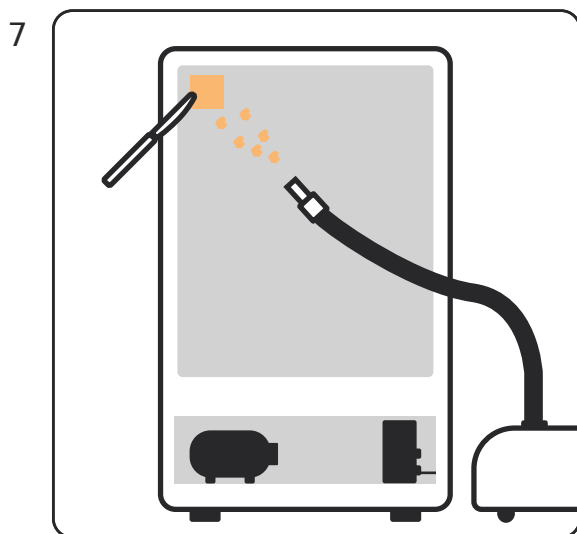
Next you need to make a hole to pass the cable and CO2 hose. There are two options where you can make the hole - either on the back wall or in the ceiling. Read through both options first and then decide which is better for your model.



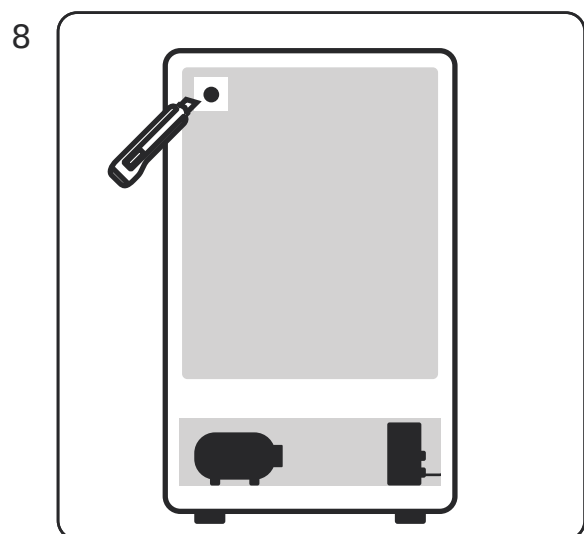
Basically, you can assume that there is a cable from both the light and the thermostat to an electrical box. If at all possible, place your feed-through hole on the opposite side. Mark the same place on the back wall of your refrigerator as on the inside.



Note that the refrigerator has a wall thickness - mark the position of the hole by piercing through the fridge with a screwdriver. If the foam at the back of your model is covered with e. g. a plastic plate, you can carefully cut it out with a box cutter.

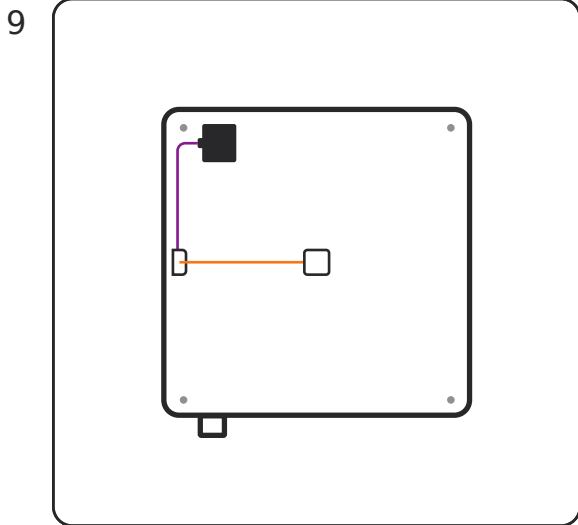


There is foam under the cover. You can remove this carefully with a blunt object, such as a butter knife. This produces a lot of dirt - use a vacuum cleaner.

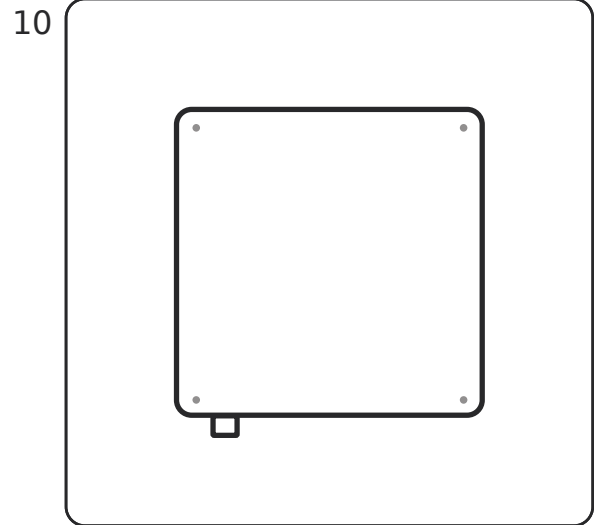


When you have worked your way up to the inside wall of the refrigerator with the butter knife, you will now need the box cutter again to make a hole. Note that the connectors of the heater and lamp must also fit through this hole.

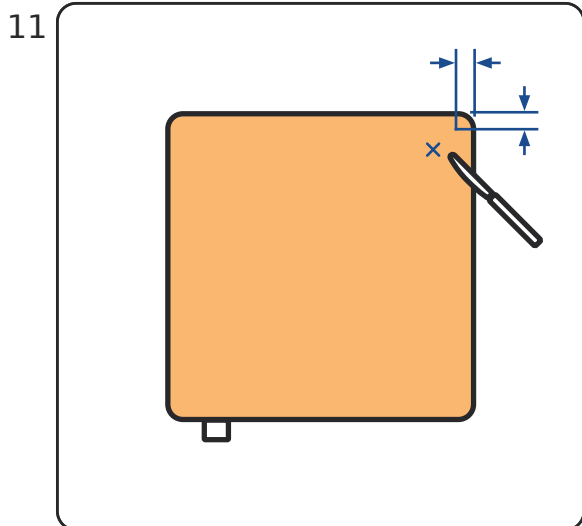
## Variant 2 – feed-through hole in the ceiling



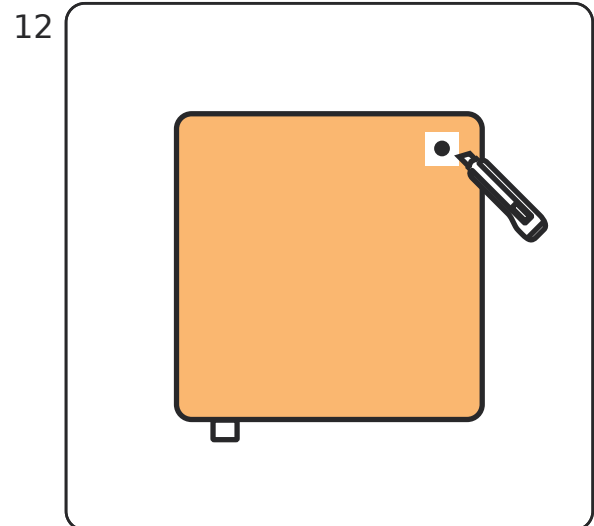
At the back is the compressor compartment, where the compressor and other technical components are located. On one side, cables come out at the bottom, which are often guided in a plastic tube.



Some refrigerators have a cover on the top, which you can easily remove, usually with 4 screws. This variant is suitable for making the hole for the cables on the top.



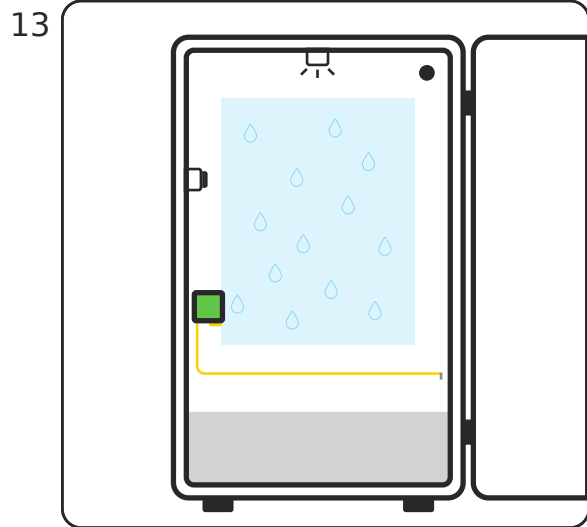
There is foam under the cover. You can carefully remove it with a blunt object, such as a butter knife. Note that the refrigerator has a wall thickness - choose the position of the hole so that you pierce the interior of the refrigerator and do not get lost in the side wall.



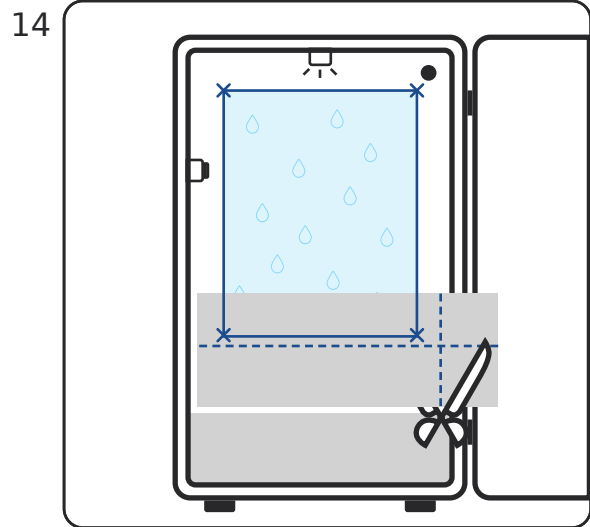
When you have worked your way up to the inside wall of the refrigerator with the butter knife, you will now need the box cutter again to make a hole. Note that the connectors from the heater and lamp must also fit through this hole.



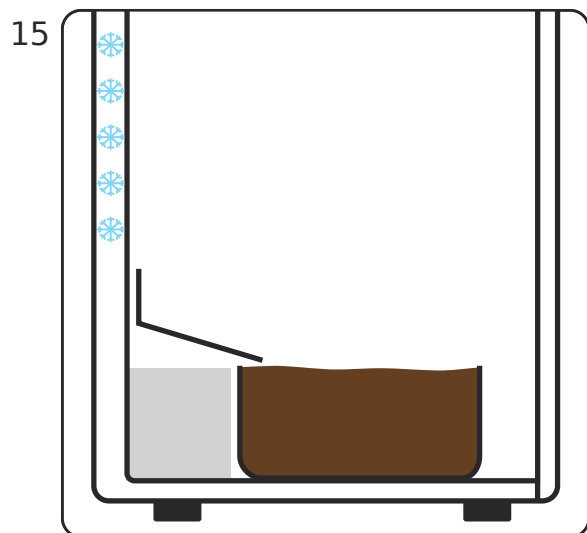
## Conversion



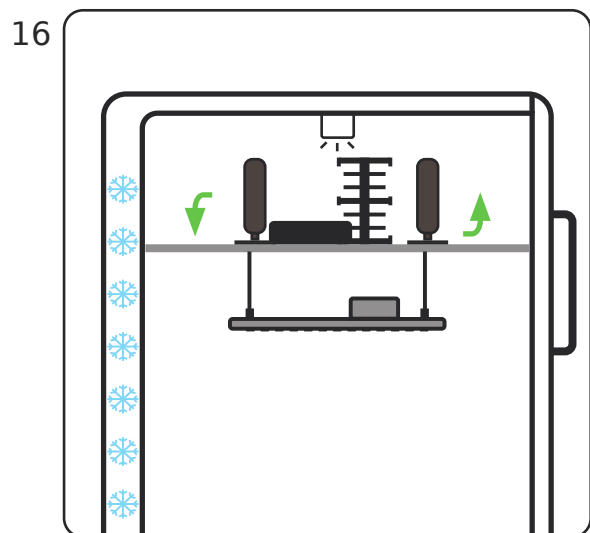
In order for the water to be directed from the back wall into your plant pot, you'll need to cut the included aluminum sheet to size - as high as necessary, as wide as possible.



When cutting, make sure that your plant pot fits under the sheet. The sheet should be wider than the marked area so that the water does not run past the sides.



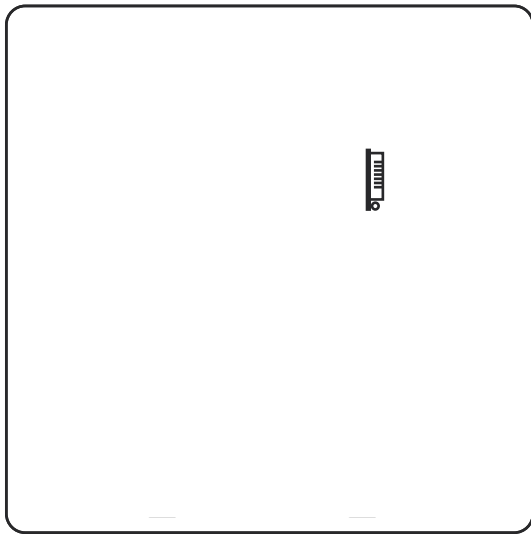
Use the enclosed tape to attach the sheet below the area where moisture forms. Bend the corners of the sheet so that the water is directed into the plant pot.



Now you can place the lamp, fan, heater and power supply for the fan and controller in the refrigerator. Place the fans so that the air can circulate. Feed the CO2 hose and cable from the back through the hole into the fridge. Point the third fan at your plant.

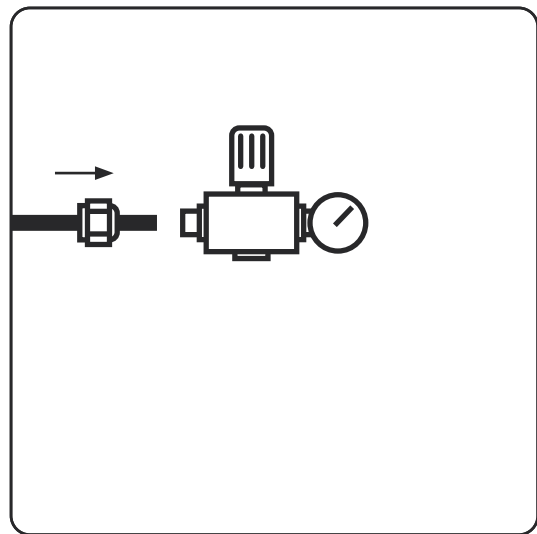
## CO<sub>2</sub>

17



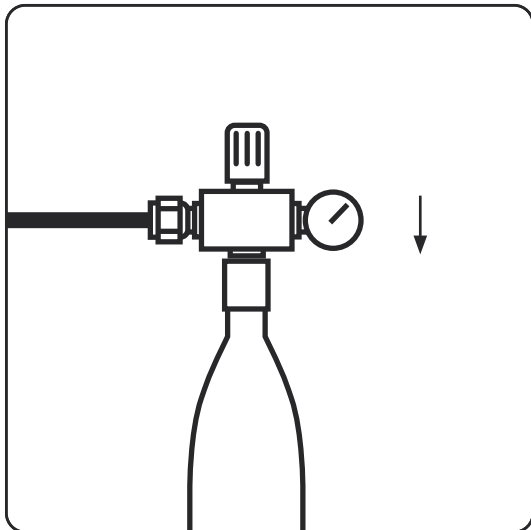
You have several options for placing the controller in your fridge. We recommend hanging it on the rack with cable ties.

18



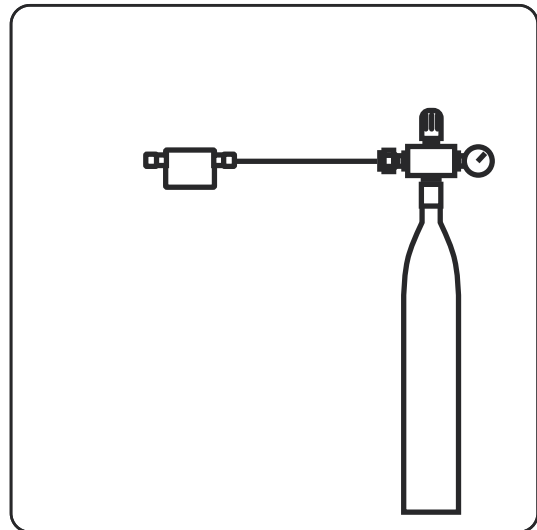
Now for the CO<sub>2</sub> supply: Make sure that everything is screwed shut. Put the union nut from the pressure reducer over the hose and attach it to the pressure reducer.

19



Now you can mount the pressure reducer on the CO<sub>2</sub> cylinder. Screw the cylinder quickly onto the pressure reducer so that no CO<sub>2</sub> escapes.

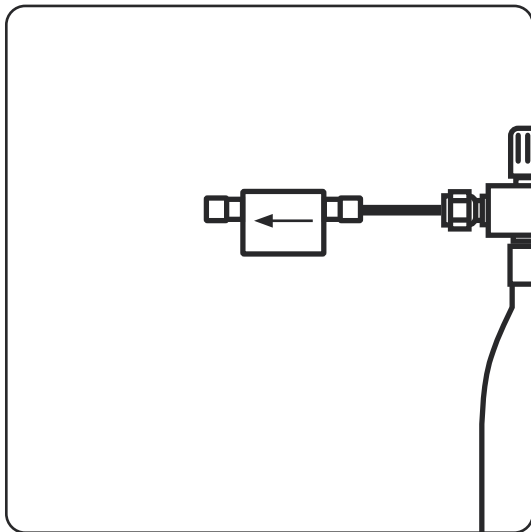
20



Now attach the CO<sub>2</sub> valve to the other end of the hose.

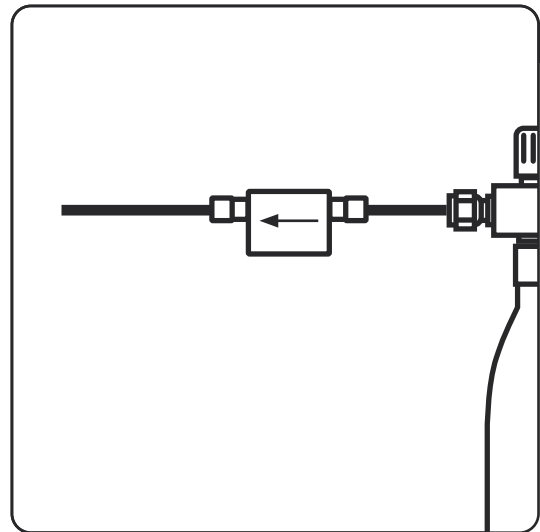
## CO<sub>2</sub>

21



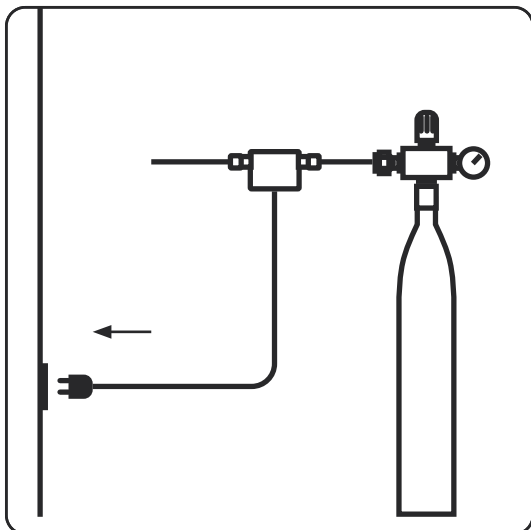
Pay attention to the direction of the arrow on the valve - the arrow must lead away from the CO<sub>2</sub> cylinder.

22



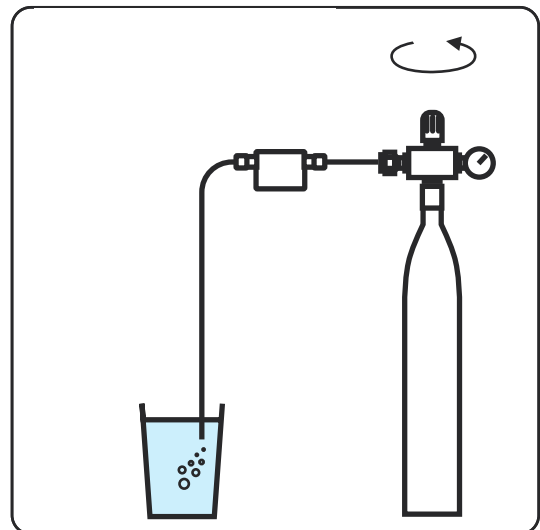
On the free side of the valve you attach another piece of hose, which you then lead into the refrigerator.

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Now supply the CO<sub>2</sub> valve with power.

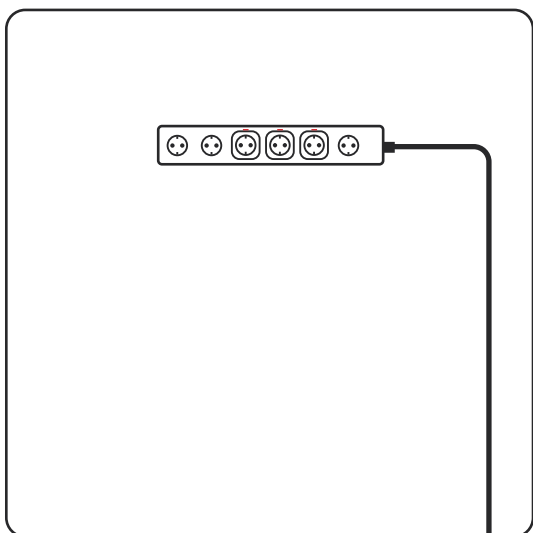
24



To adjust the amount of CO<sub>2</sub>, place the hose in a glass of water. Turn the valve carefully until small bubbles form in the water. The CO<sub>2</sub> setting should be selected so that CO<sub>2</sub> flows out as slowly as possible, but reliably - one to two bubbles per second is a good point of reference.

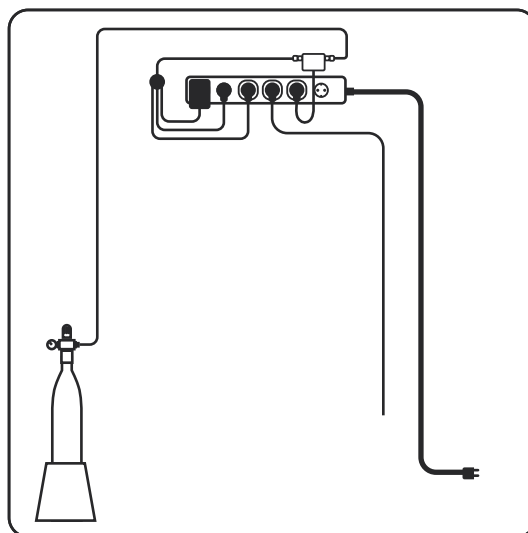
## Completion

25



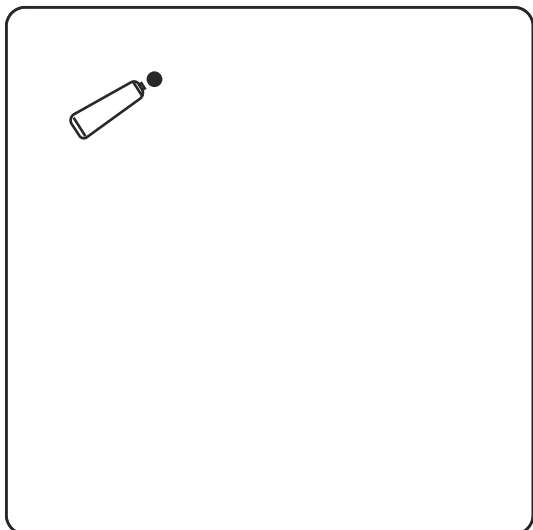
Next, attach the supplied mounting bracket to the top of the refrigerator with adhesive tape. You can mount the power distributor to it with cable ties and then plug in the radio sockets.

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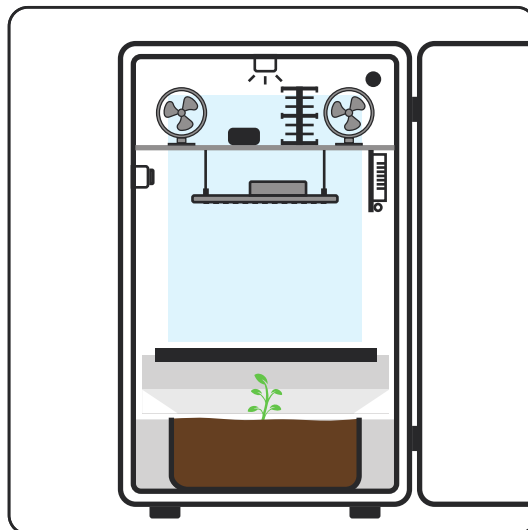
Plug the heater, refrigerator and CO2 valve into the radio sockets. Connect lamp and supply for controller and fan.

27



When everything is connected, you can close the hole again with the enclosed sealant.

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The conversion is done!

## Commissioning – controller

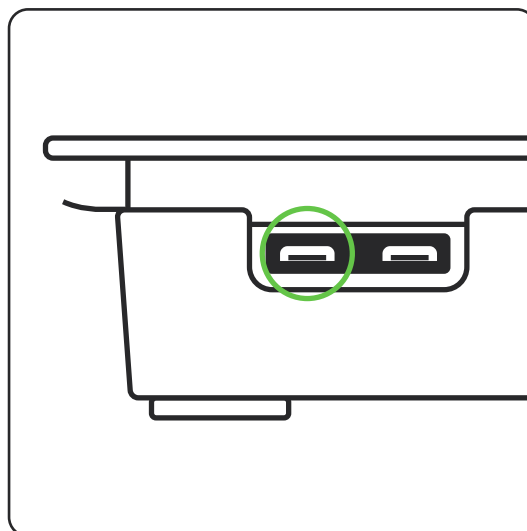
You have successfully converted your refrigerator into a climate chamber. Now all you need to do is download the Fridge Grow app and follow the wizard to set up your controller. Before you get started, please read the setup instructions on the next page.

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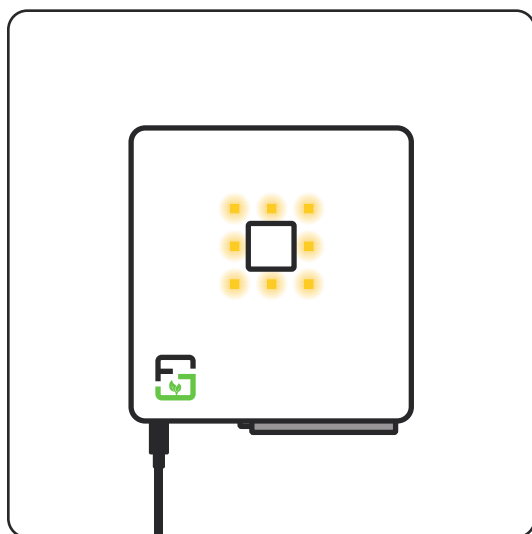
Download and install the Fridge Grow app from either the Google Playstore or the Apple App Store. Scan the QR code to be redirected to the download.

30



Supply the controller with power via a micro USB cable. As soon as the controller is connected to the power supply, the boot process starts automatically. You can see this when the LEDs start to glow green.

31



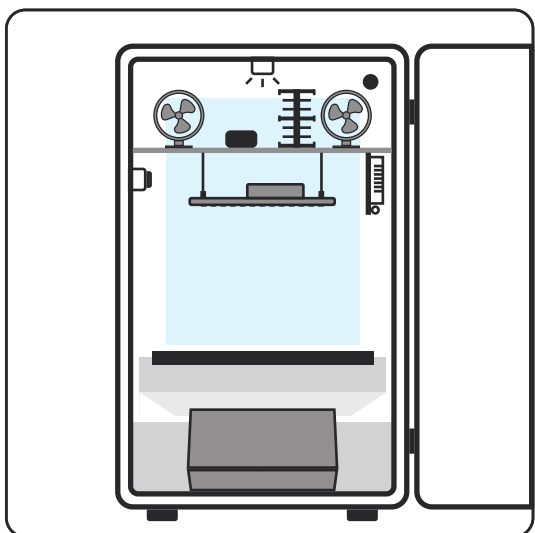
As soon as the boot process is completed, the LEDs light up yellow or green continuously. Yellow means that the controller is set to factory settings - green that it has already been configured.

32

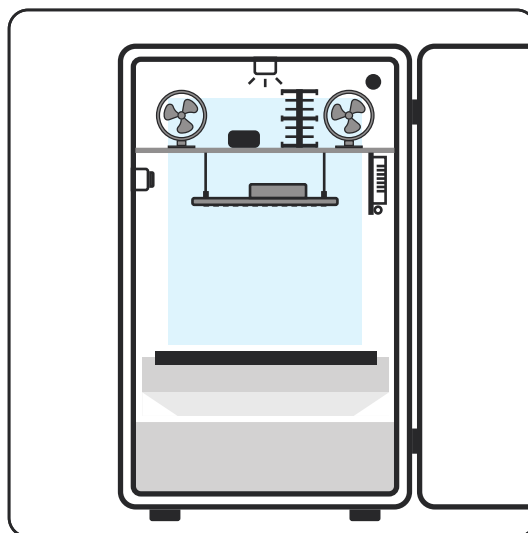


Now start the app and follow the wizard. Have Fun!

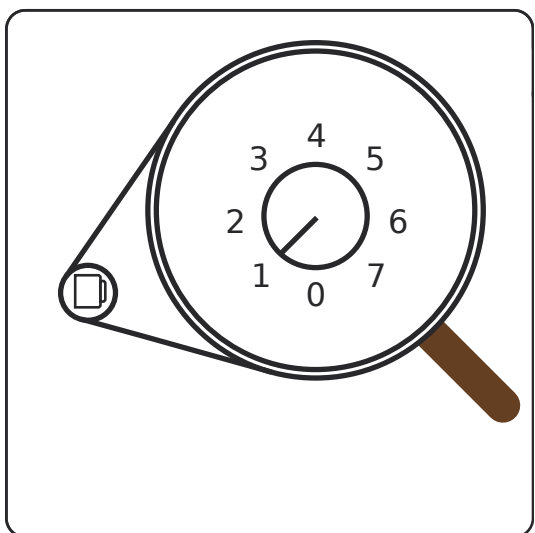
## Commissioning – important information



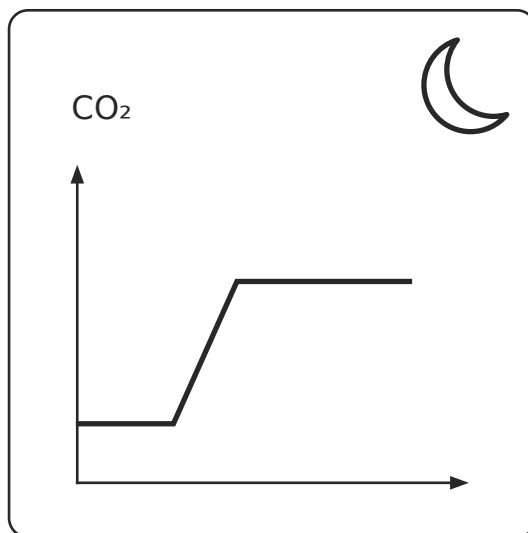
If your plant is still very small, we recommend using a mini greenhouse with a cover. Select the „greenhouse mode“ in the app.



If you want to check if your system works, but you don't have a plant yet, select the „Greenhouse Mode“ as well.



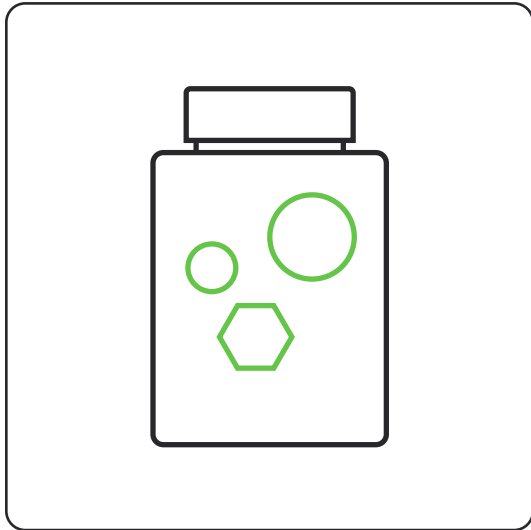
Set your refrigerator to the warmest setting. There is usually a dial inside (often the warmest level is „1“).



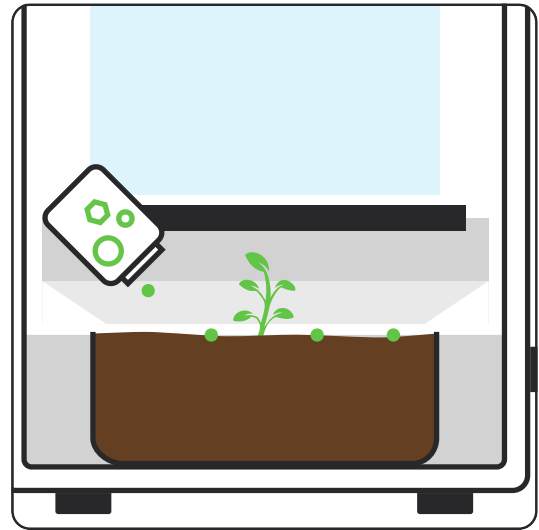
During the night, CO<sub>2</sub> levels may increase due to microbiological processes in the soil or fertilizer. For more information, visit [forum.fridgegrow.com](http://forum.fridgegrow.com), or our YouTube channel.

# Micro nutrients

Due to the reuse of water in the Fridge Grow system, micro nutrients that are normally supplied to the plants via the tap water may be missing. To provide your plants with the best possible care, you can give them the enclosed micro nutrients.



The micro nutrient fertilizer contains traces of manganese, boron, iron, molybdenum, cobalt and high levels of copper and zinc.



For every gallon of soil, you should spread one to two granules under the drip tray.

Because of the closed system and the recirculating water, many people make the mistake of overwatering the plants in the beginning. If this happens to you, you can either place a bowl under the drip tray or remove it completely (don't forget to remove any sealant from the hole as well) to draw water from the system. Please note that the evaporator tray will eventually be full and leak water. The evaporator tray is the plastic container at the back of your refrigerator's compressor into which the drain hole leads. In general, be careful when watering and educate yourself on the proper soil moisture for your plant. Watering intervals for the Fridge Grow system can be very long.

Contact:

- Fridge Grow Telegram: <https://t.me/fridgeGrowPublic>
- Fridge Grow Forum: <https://forum.fridgegrow.com/>
- Instagram: <https://www.instagram.com/fridgegrow/>
- E-Mail: [info@fridgegrow.com](mailto:info@fridgegrow.com)
- <https://www.youtube.com/fridgegrowdeutsch>



**Fridge Grow**