

Translations:Chauffe eau solaire/34/en

This step consists of connecting the solar collectors (refrigerator grid) to the heat transfer fluid circuit via two feeders (copper tubes). The feeders must have a diameter equal to the sum of the diameters of the pipes they feed, in addition, in our case, 3 pipes of 3mm inside diameter, it is necessary a feeder of at least 9mm inside diameter.

- Position the grids on the frame, in the following direction, the blades in opposition to the sun's rays once the frame is vertical. If necessary, re-cut the grids to the correct size.
- Each grid will be connected to two feeders, one with a "cold" water inlet and the other with a "hot" water outlet.
- For each grid, cut the pipe with a pipe cutter about 10 cm from the grid and the other about 15 cm from the grid. It must be possible to fit each tube in a different feeder in the same plane.
- Deburr the cuts
- Carefully clean the tubes cut to a few centimetres with sandpaper. There must be no paint left to solder successfully.
- Cut a passage in the frame to get the feeders out.
- Cut 2 copper pipes, the feeders, so that they protrude about 15 cm from the panel
- Position the two feeders. One will receive the "short" hot water pipes, the other the long cold water pipes.
- Crush the ends of the two feeders on the blind side of the frame, the one by which the feeders do not go out.
- Mark with pencil the place where the pipes and feeders meet.
- Mark with a needle.
- Drill the feeders to the diameter of the pipes (4mm).
- Deburr the holes of the feeders.
- Thread a metal rod about 12mm in diameter into each of the feeders with sandpaper at the end to remove the chips inside the pipes, as if to clean them.
- Put the metal rods back into the feeders, they serve as stoppers for the grid pipes. If the grid pipes are pushed all the way down to the bottom of the feeder, the heat transfer fluid won't get through!
- Insert each tube into the corresponding feeder
- Hold the grids and feeders with iron wire in between.
- Braze the grid pipe/feeders interfaces, making sure to braze all around the pipe. As the grid pipes are made of tinplate, the solder is made of brass or silver to avoid melting the metal.
- Braze the blind ends of the feeders.
- Remove the two metal rods that were used to stop the pipes from the grids.
- Shake the frame to remove potential solder impurities.
- Perform a "Riké" solder leak test. Moisten one thumb and put it at the entrance of one of the feeders, suck it up with your mouth and put your tongue on the 2^e nurse. The tongue must stay stuck. Otherwise review the solder joints.

The feeders may be on the top or bottom of the frame, this does not change the proper operation of the panel. To be adapted according to the installation of each one.