



# SunZilla - Guide 1: Preparing the aluminium profiles

This is the second tutorial for building the Pop-up Solar Generator: SunZilla 3.0. Here we are going to build the inverter and battery box

 Difficulty **Medium**

 Duration **24 hour(s)**

 Categories **Energy, Machines & Tools**

 Cost **128 EUR (€)**

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## Introduction

Preparing the aluminium profiles

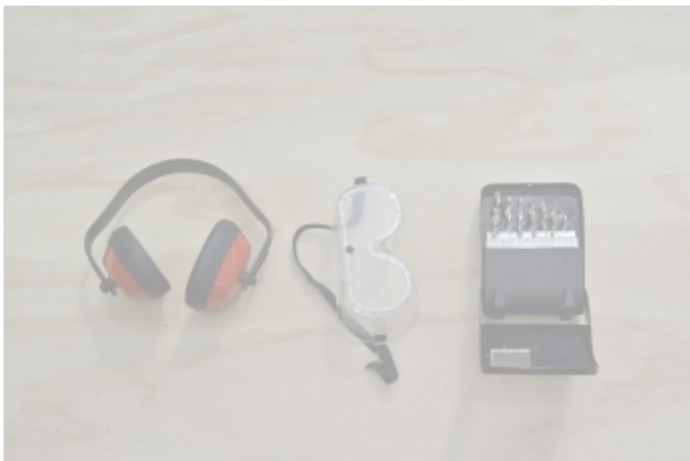


## Materials

- Black Euro-Boxes: 80€
- 4 Solar modules (à 35 Watt): 200€
- Inverter victron phoenix 24/350: 153€
- Charge Controller: blue solar 100/15: 115€
- 2 Batteries Agm 38 yuasa: 180€
- Connectors, cables: 100€
- Screws, Aluminium profiles, etc.: 200€

## Tools

- Drills
- Drilling machine (drill press)
- Wrenches
- Soldering station
- Pliers
- Aluminium file
- Centre punch
- Rubber and metal hammers
- Ruler
- Set square
- Marker pen
- Mitre saw (for aluminium)
- Milling cutter
- Silicon pistol
- Countersinking cutter



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## Step 1 - Cut the aluminum profiles

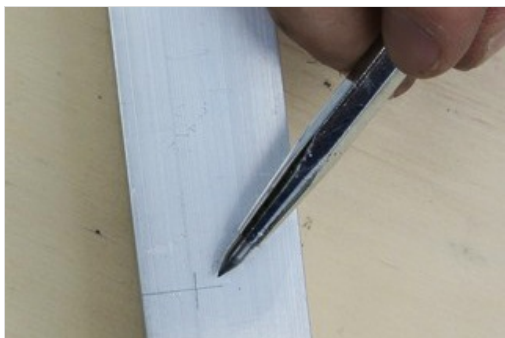
Cut the aluminum profiles according to the technical drawings in the attached PDFs. Once you have them in hand, the first step is to file the ends of the profiles to deburr them, as shown in the picture.



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## Step 2 - Mark hole's positions

Mark the position of the hole you will drill with the metal marker and the ruler. For the precise location and size of the various holes in the specific profiles, refer to the technical drawings in the below PDFs.




## Step 3 - Drill holes with the drill press

Afterwards, the marked positions need to be punched with the centre punch and then the holes can be drilled with the drill press. After the holes are drilled they also need to be deburred by a countersinking cutter.



## Step 4 - Cut open on one side

For the 4 x 150mm long square profiles, you should use the .PDF technical drawing "Folding Mech.- slides.pdf".

 the length is incorrectly indicated as 200mm in the technical drawing.

These will be cut open on one side like on the first picture beside.

