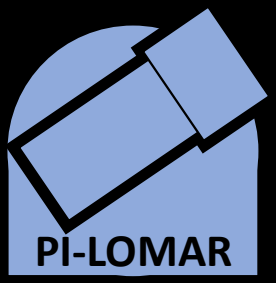
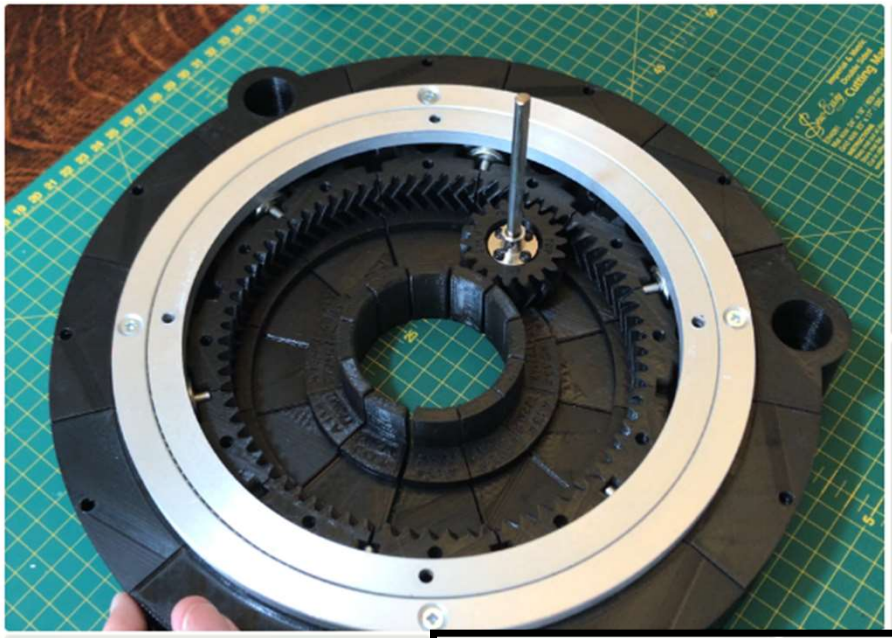
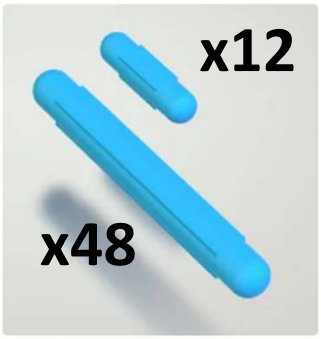
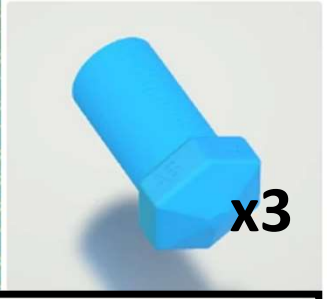


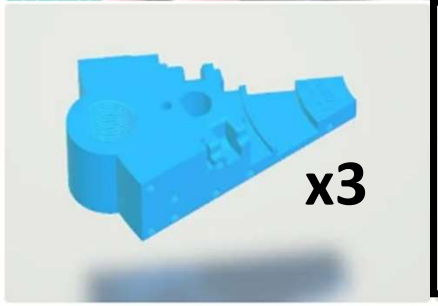
Pi-lomar 3D printing

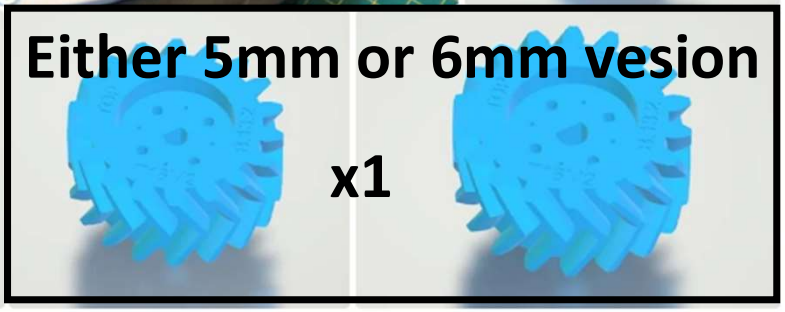
AZIMUTH DRIVE AND FOUNDATION

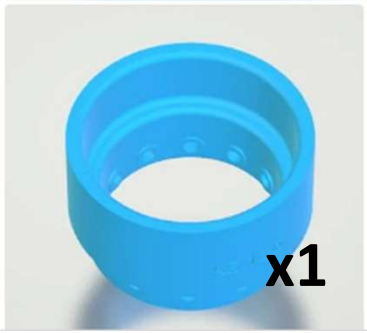


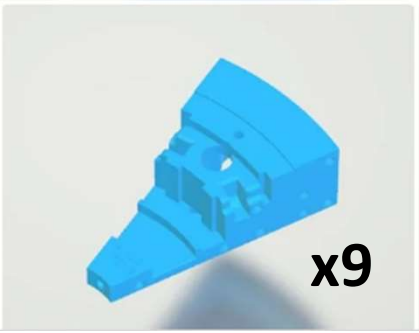








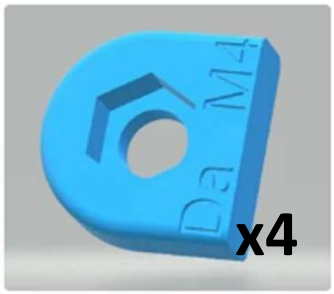


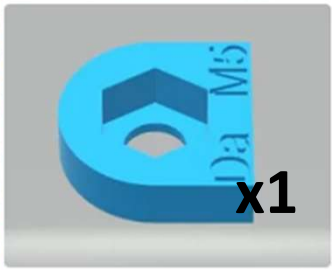


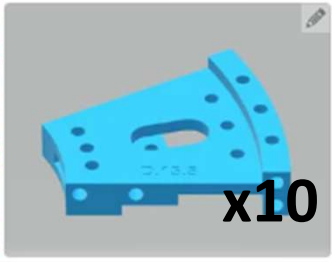
NOTES

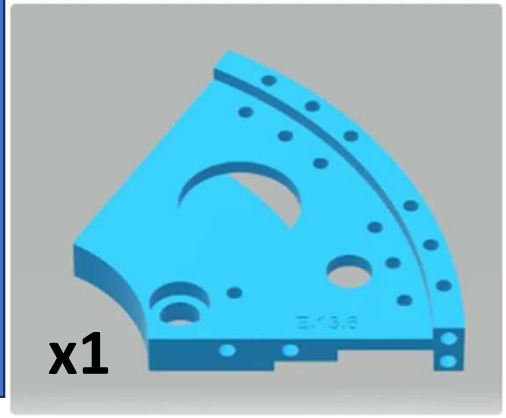
- The 18mm and 38mm pegs are good things to print if you are using up the end of filament spools. You need many 18 and 38 mm pegs throughout the build.
- I found that the pieces with gear teeth and the adjustable feet benefit from printing with quite fine layer height, you get smoother and components.

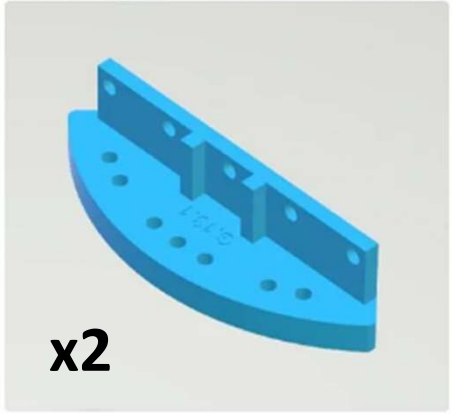
PLATFORM

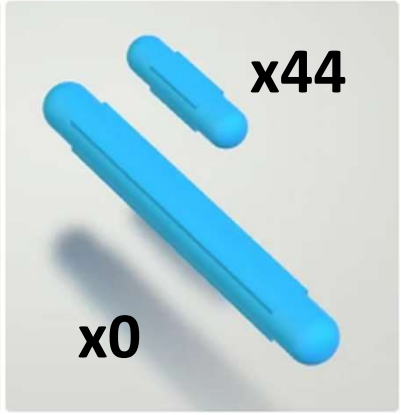








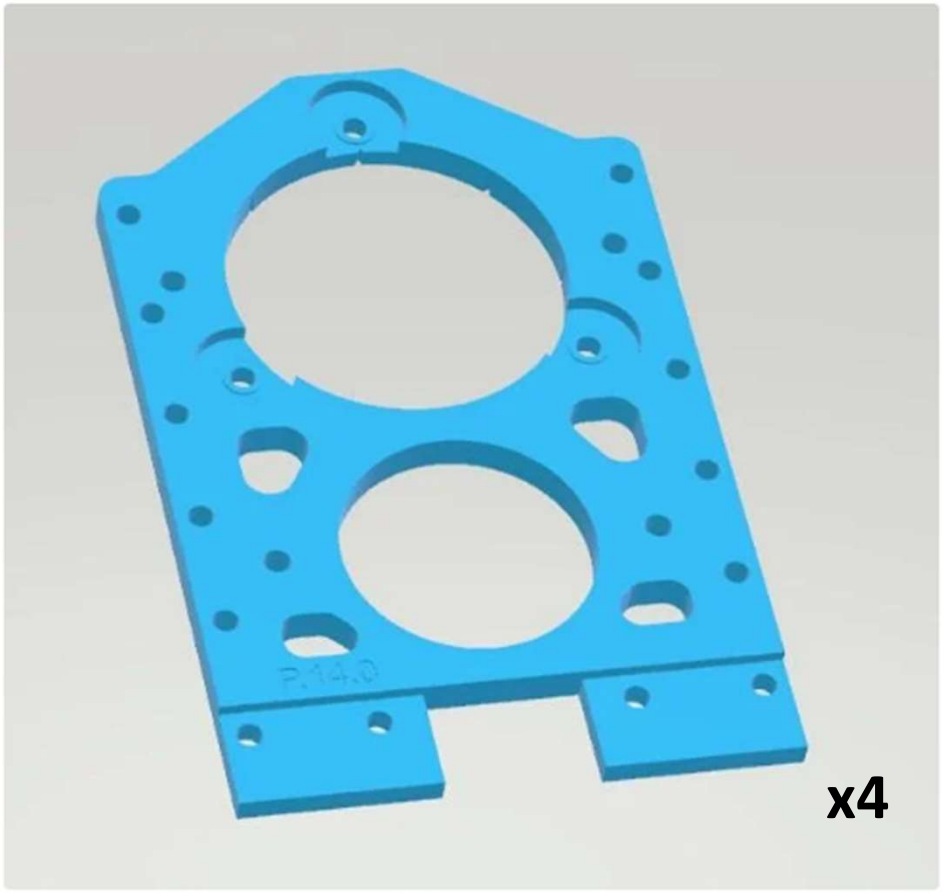


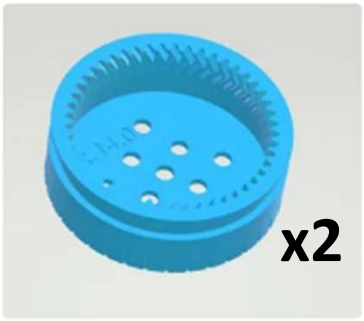


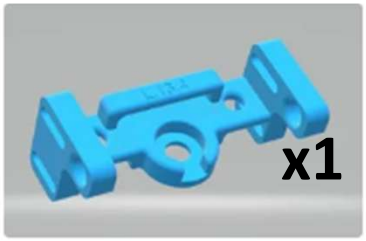
NOTES

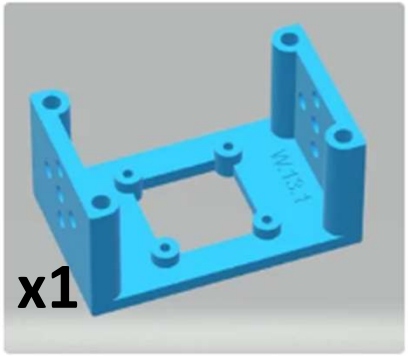
- The 18mm and 38mm pegs are good things to print if you are using up the end of filament spools. You need many 18 and 38 mm pegs throughout the build.

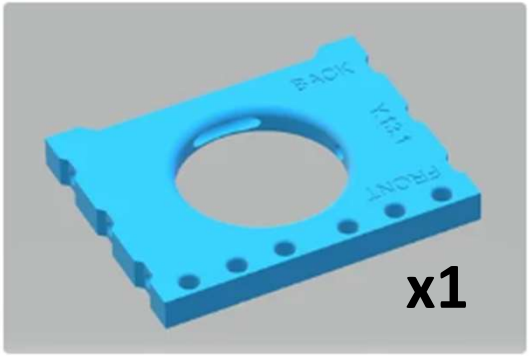
CAMERA TOWER







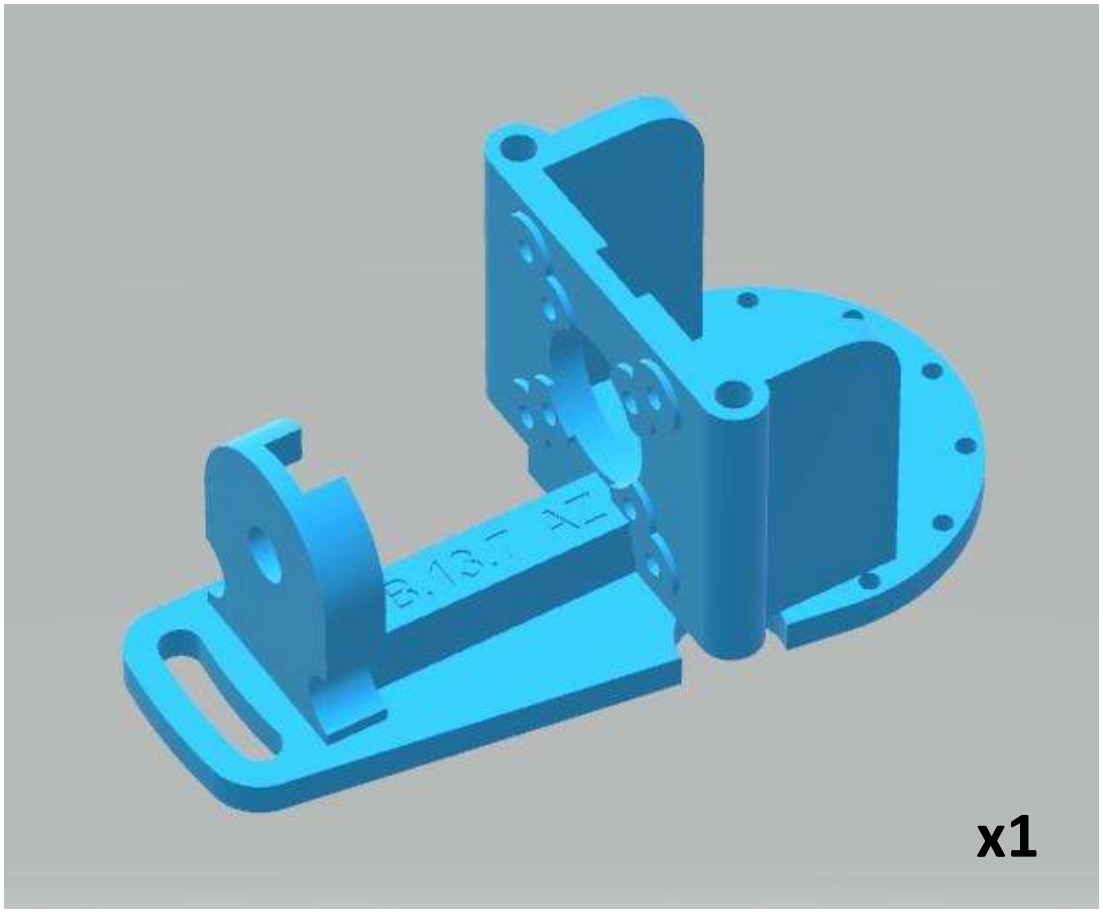




NOTES

- Print the three pieces with gear teeth in a fine layer height for smoother stronger gear teeth.
- The InnerWall part P has 2 versions available.
  - P.14.0 is a low profile one with more clearance under the dome.
  - P.13.6 is higher and has extra mounting holes available giving more options to mounting circuitboards to the tower. (The demo video uses this version.)

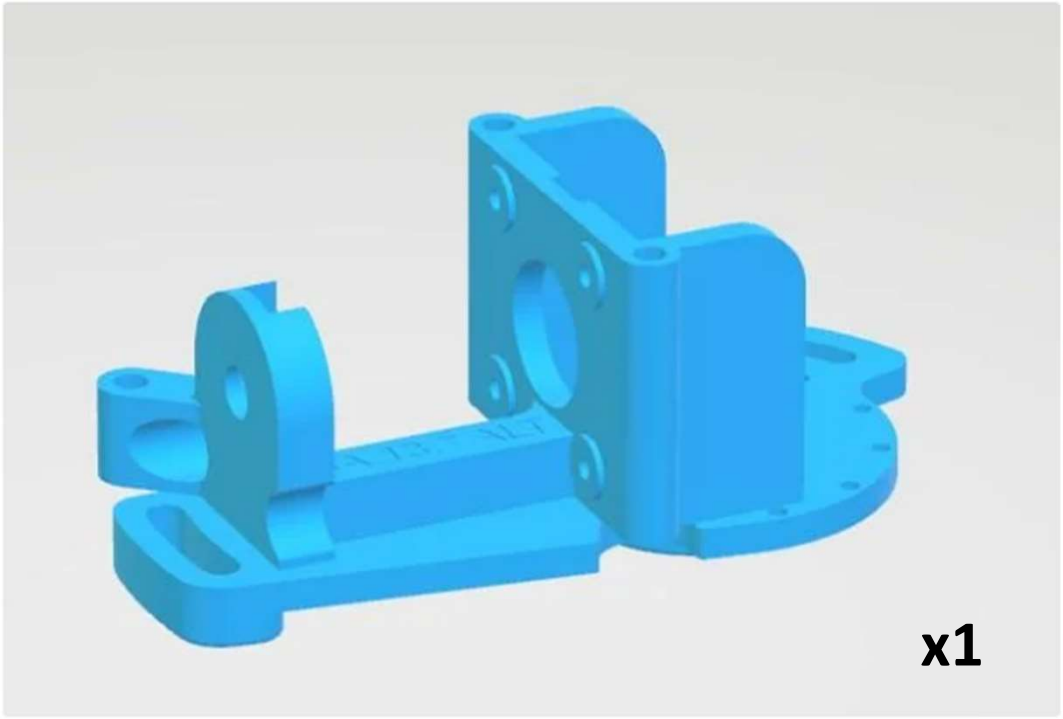
AZIMUTH MOTOR

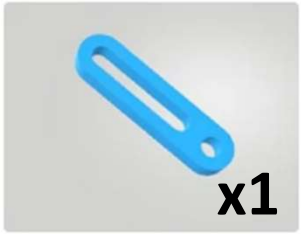


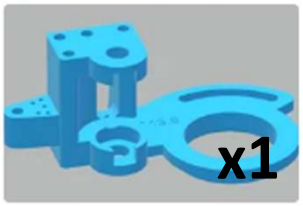
NOTES

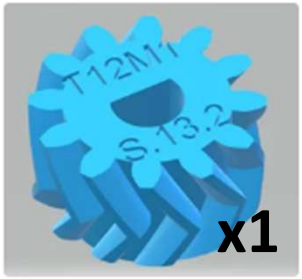
- Beware that the Azimuth motor housing looks similar to the Altitude one, but they are not the same.

ALTITUDE MOTOR





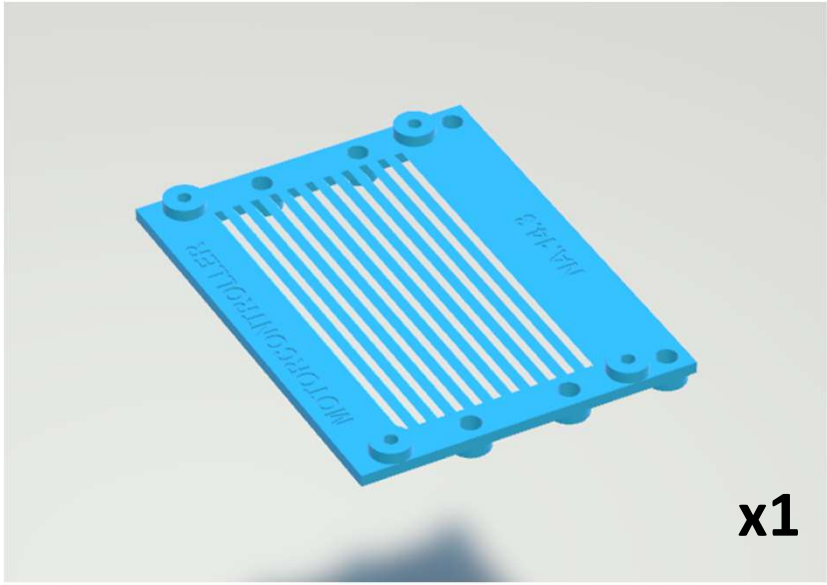




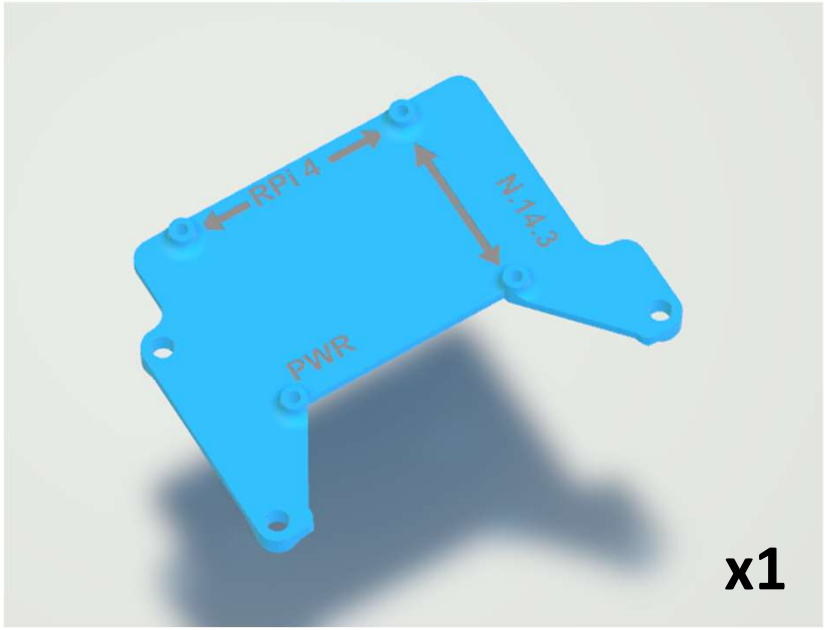
NOTES

- Beware that the Altitude motor housing looks similar to the Azimuth one, but they are not the same.
- The S.12.3 drive wheel is available with a 5mm and 6mm bore depending upon the drive shaft you have to use for the Worm Gear cog.

MOUNT ELECTRONICS



x1

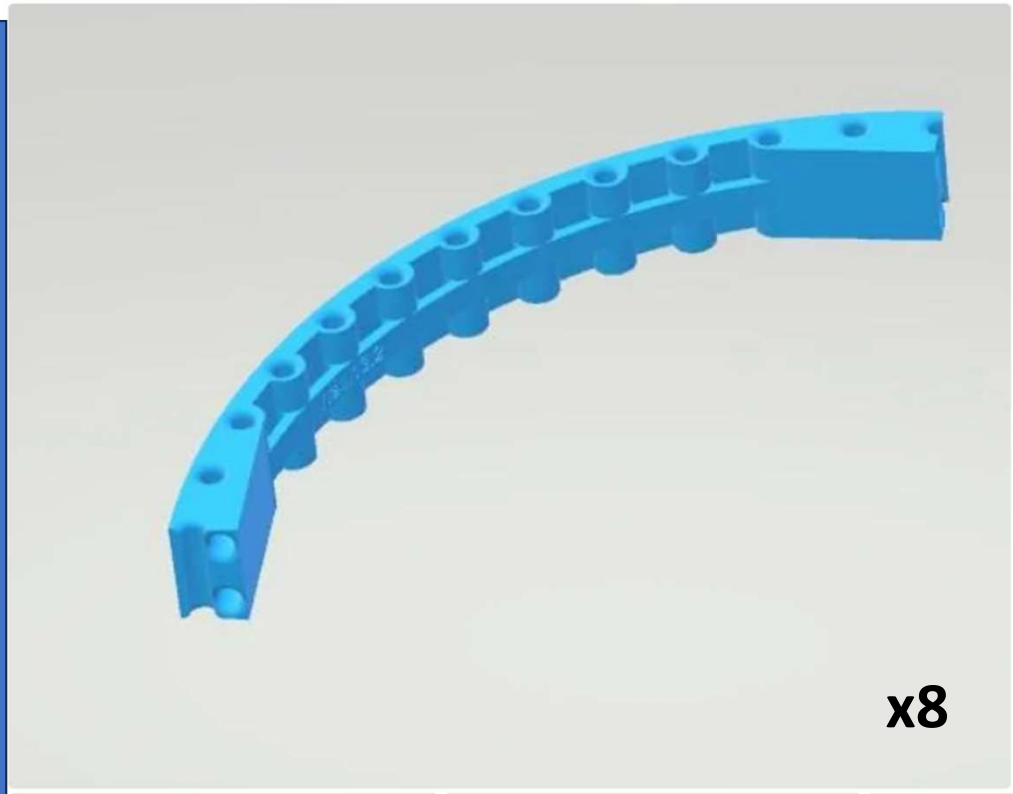


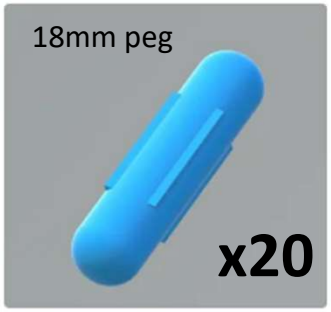
x1

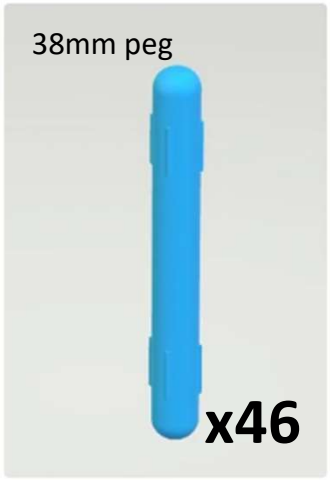
NOTES

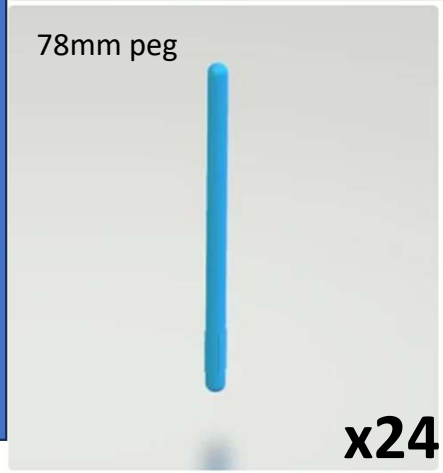
- The microcontroller holder NA.14.3 may be used as a guide for your own mounting piece for the electronics. The mounting holes are spaced to match the available holes on the camera tower. However your solution to the electronics may require a different holder.
- The Raspberry Pi holder is designed for a RPi4B, if you align the RPi power connector with the PWR marking it should allow access to the other cable ports if needed. Depending upon your solution for the microcontroller you may be able to mount this higher on the camera tower if there is space.

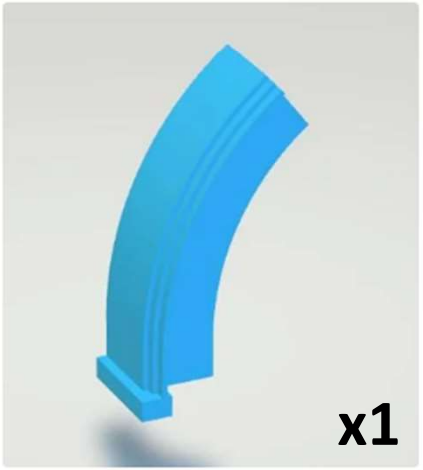
DOME 1/2

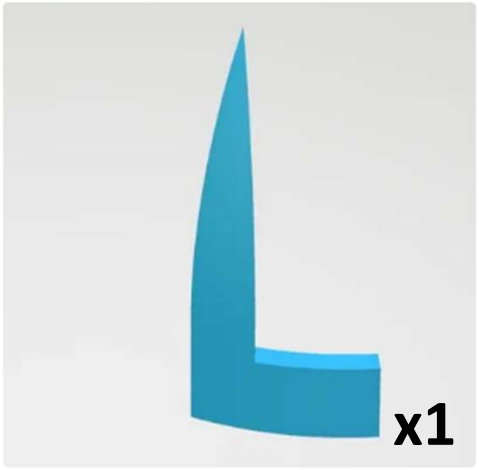








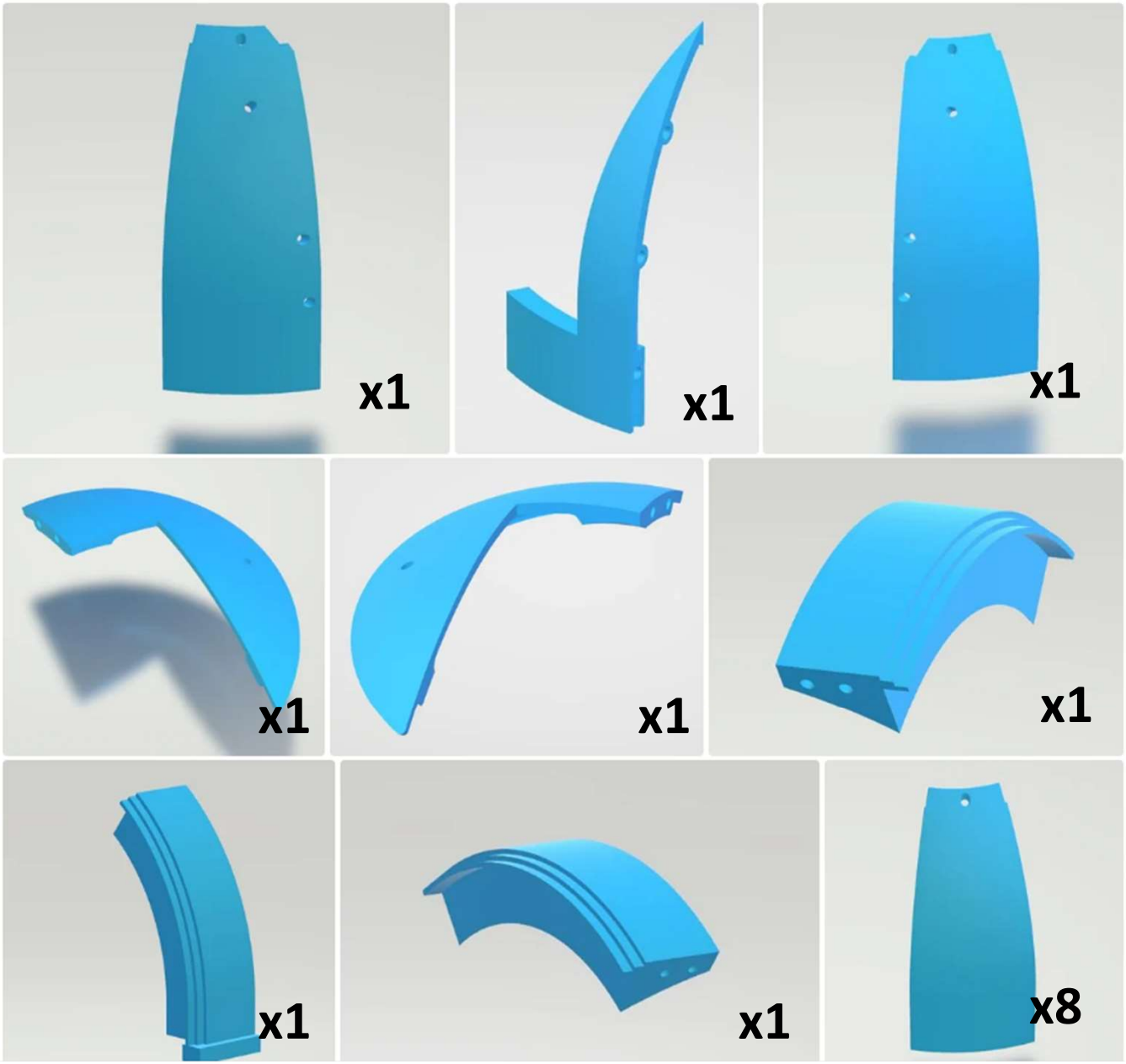




NOTES

- You need 4 wall sections to create an entire layer of the observatory wall. You only need to print the second wall layer if you need the space under the dome for your electronics or gearing. 8 pieces here will give 2 layers to have plenty of space under the dome.
- The dome segments can be glued together, but do not glue them to the lower walls or platform of the telescope.

DOME 2/2



NOTES

- You will notice that some of these pieces are mirror images of each other, if your slicer allows you to mirror parts you can make the matching part easily that way.
- The dome cap can be glued into a single piece, if you glue it to the lower part of the dome then you must remove the entire dome each time you want to access the interior.