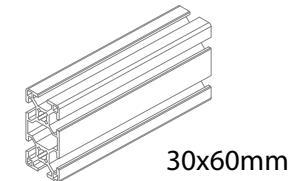
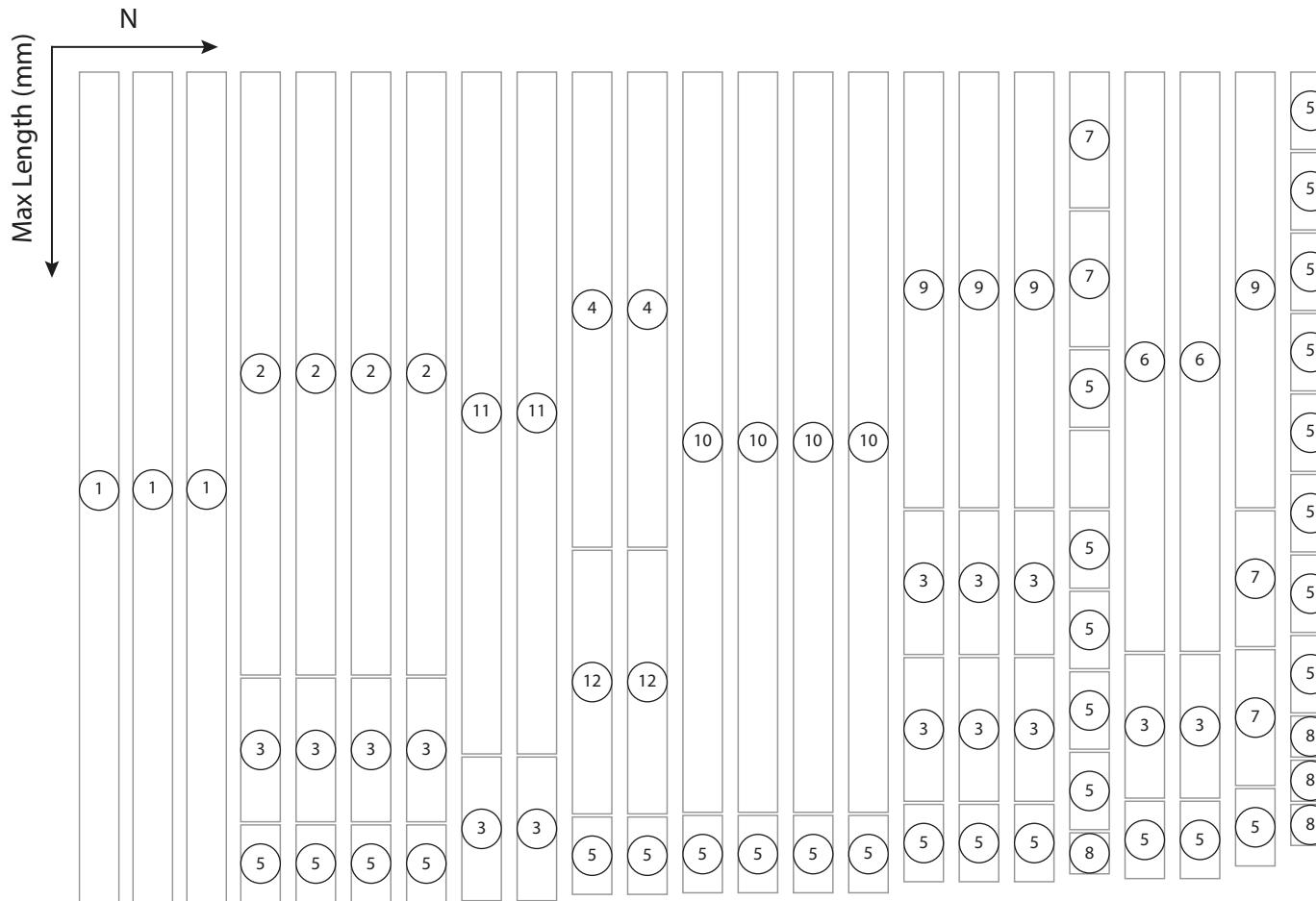


AEON HABITAT

Assembly instructions

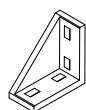
PARTS LIST

ALUMINIUM EXTRUSIONS



30x60mm

ID	Lenght (mm)
1	3000
2	2170
3	530
4	1715
5	290.34
6	2085
7	500
8	160.2
9	1572.15
10	2660
11	2455
12	955



ANGLE BRACKET
X 122



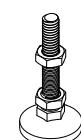
CAP SCREW M6
14mm
X 122



INSERTION NUTS
M6
X 251

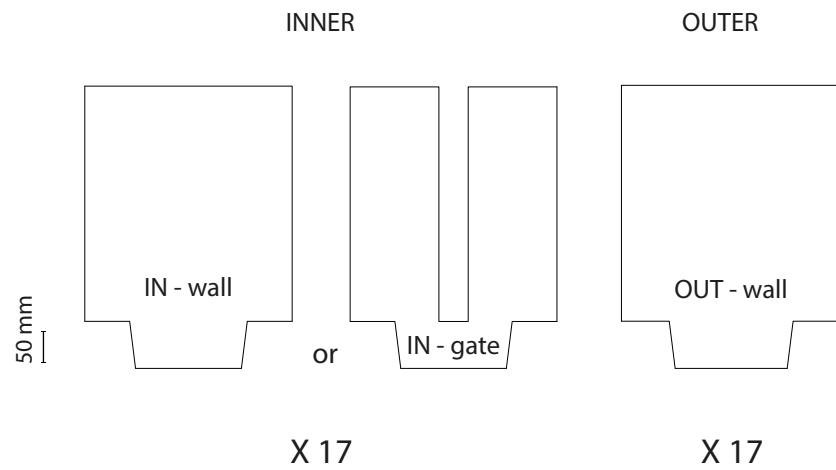


COUNTERSUNK
SCREW M6
X 129

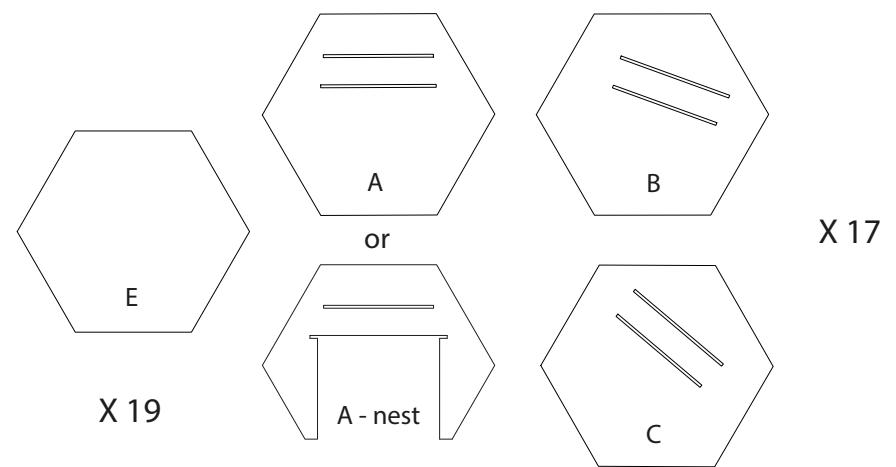


ADJUSTABLE FOOT
M8
X 22

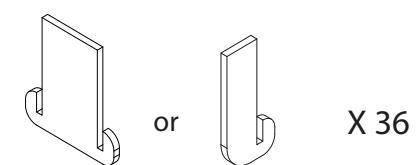
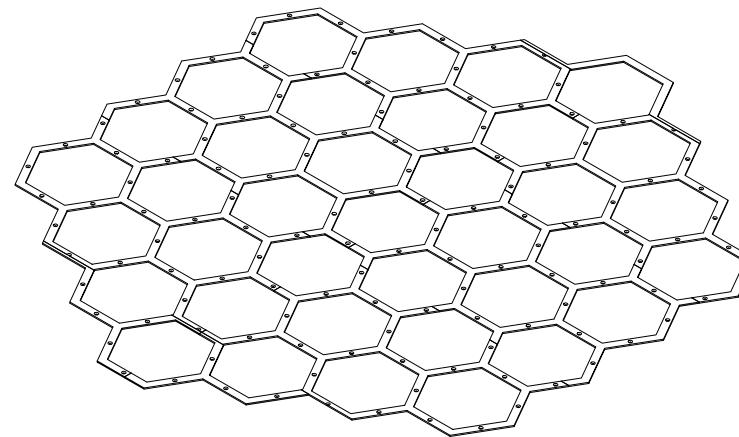
ARENA WALLS ^



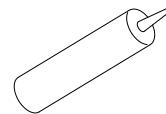
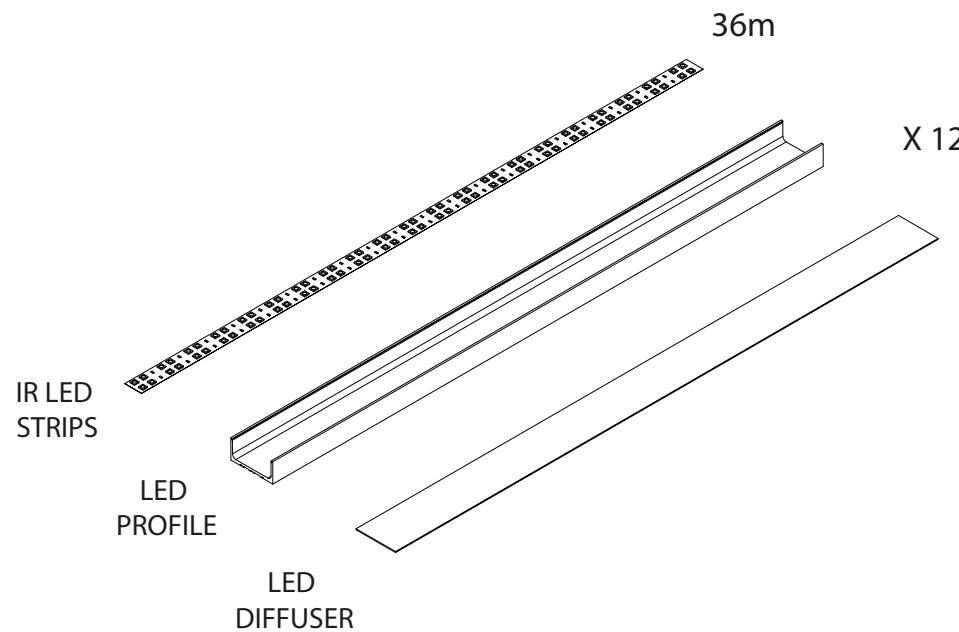
HEXAGONAL FLOOR TILES +



ACRYLIC HONEYCOMB *

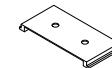


IR LEDs PROFILE



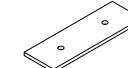
HEAT RESISTANT
SILICONE

X 2



SUSPENSION
FITTING

X 12



CONNECTION
PLATE

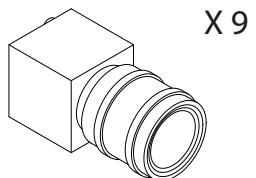
X 6



SUSPENSION
WIRE

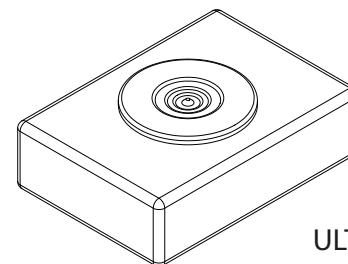
X 24

ADDITIONAL HARDWARE



X 9

CAMERA



ULTRASOUND
SPEAKER

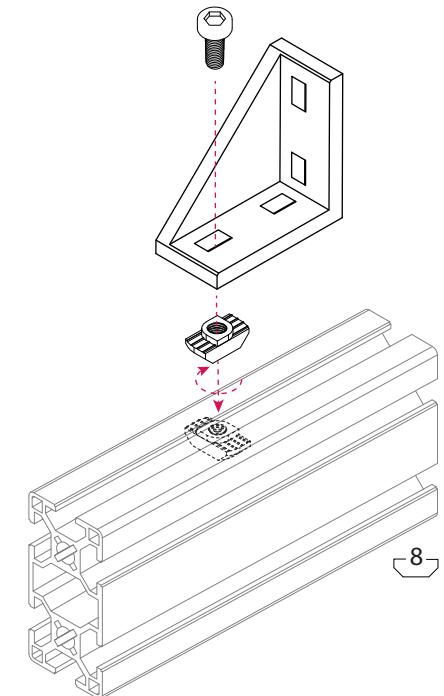
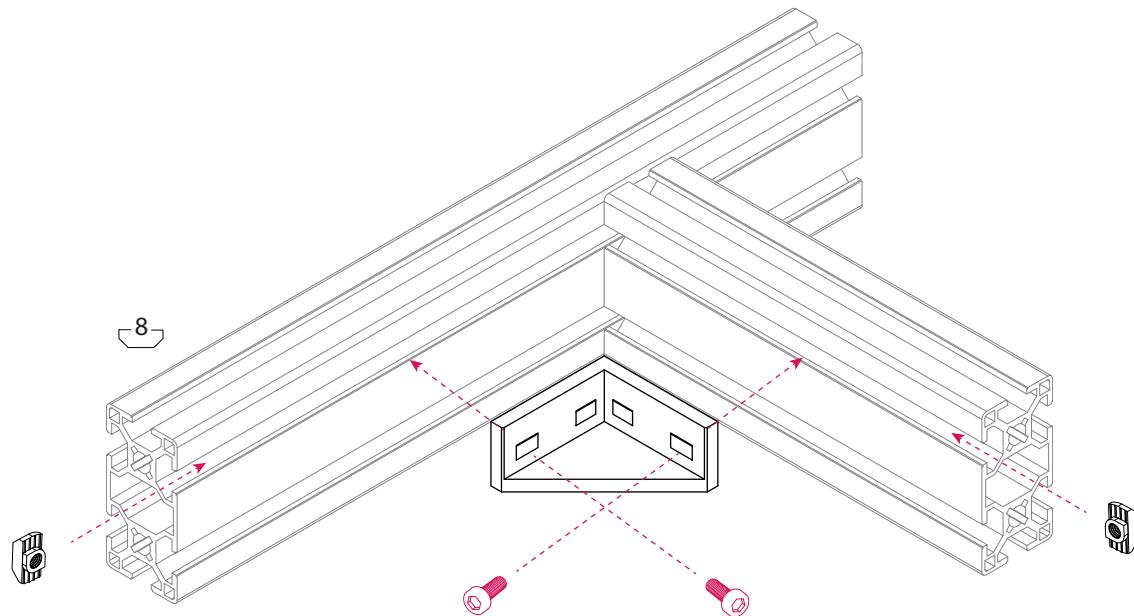
^ Red tinted

+ White matt

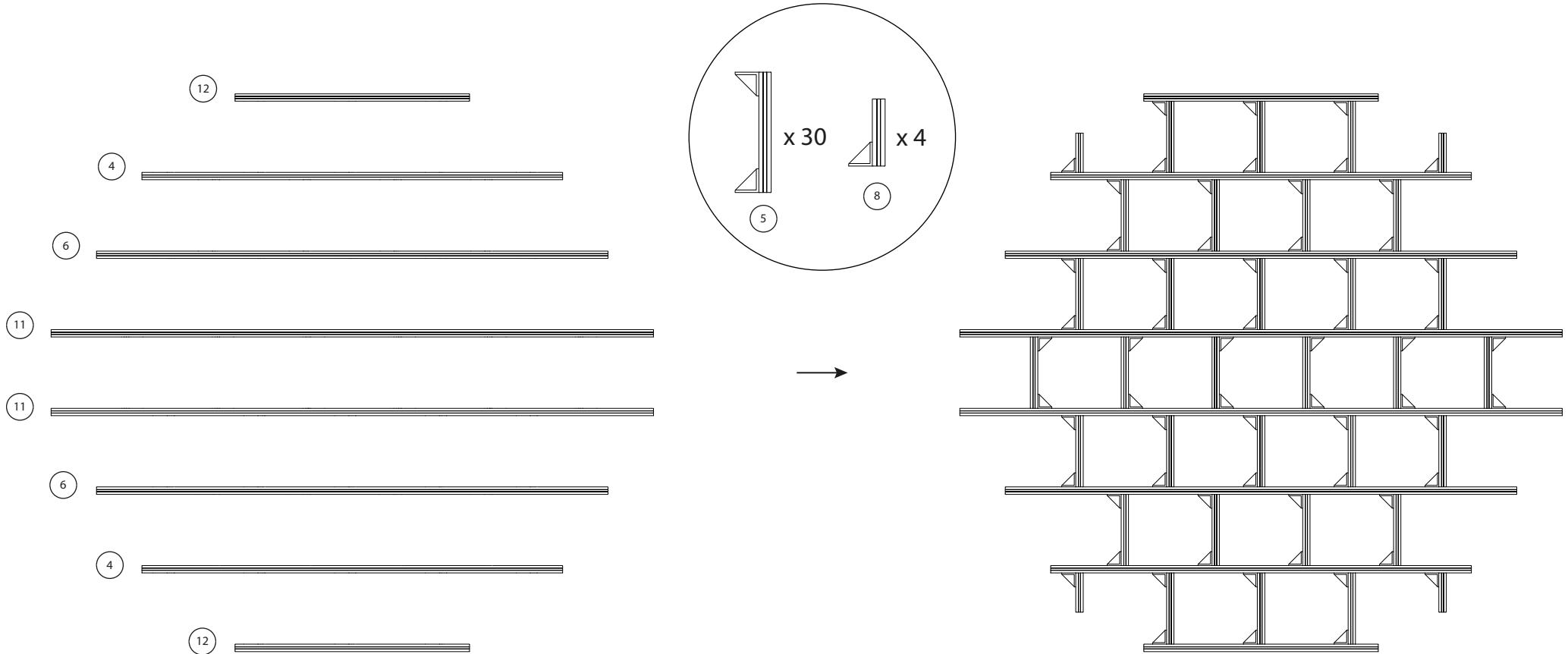
* White glossy

~ Any colour

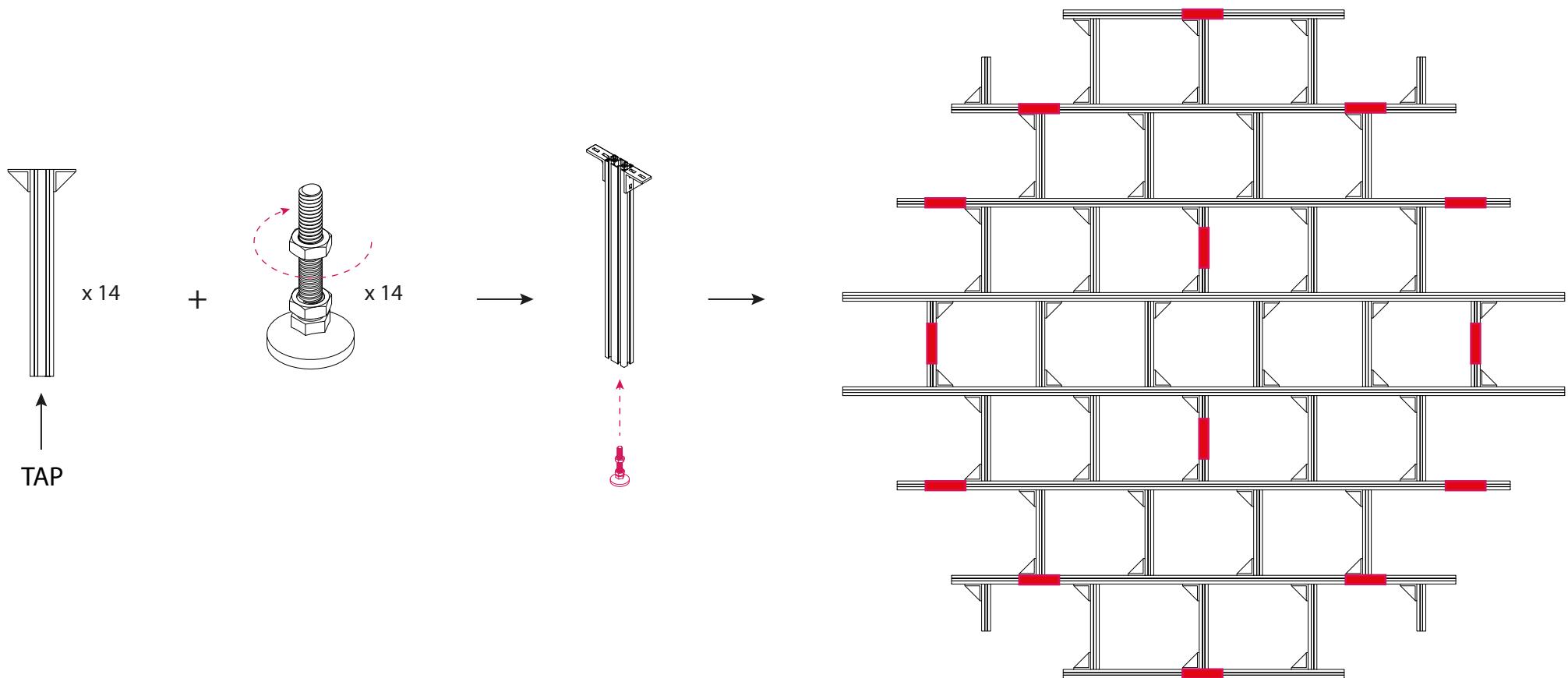
1. Connecting aluminium basic components that constitute the building blocks of the habitat structure.



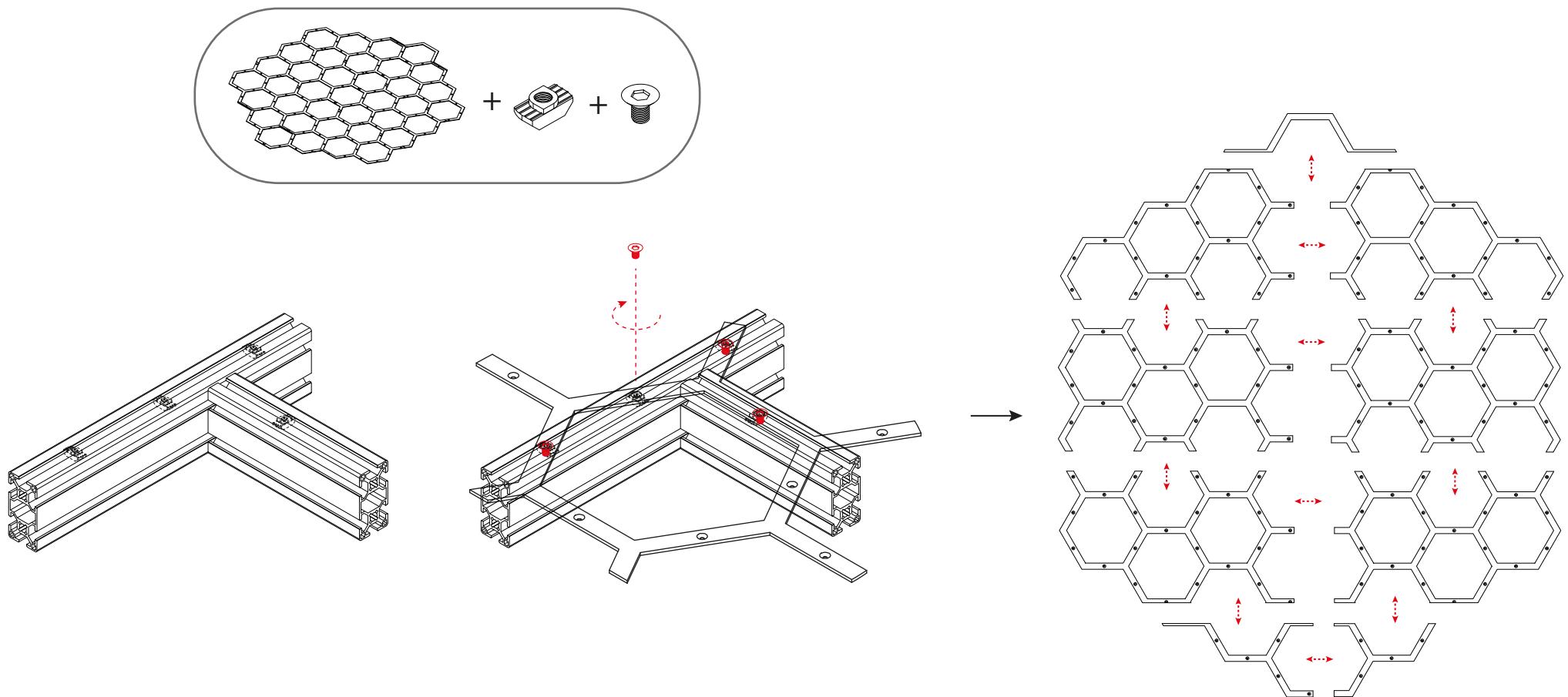
2. Place the aluminium extrusions as displayed and connect them with equally spaced shorter extrusions (ID 5-8) to create the habitat floor (see step 1).



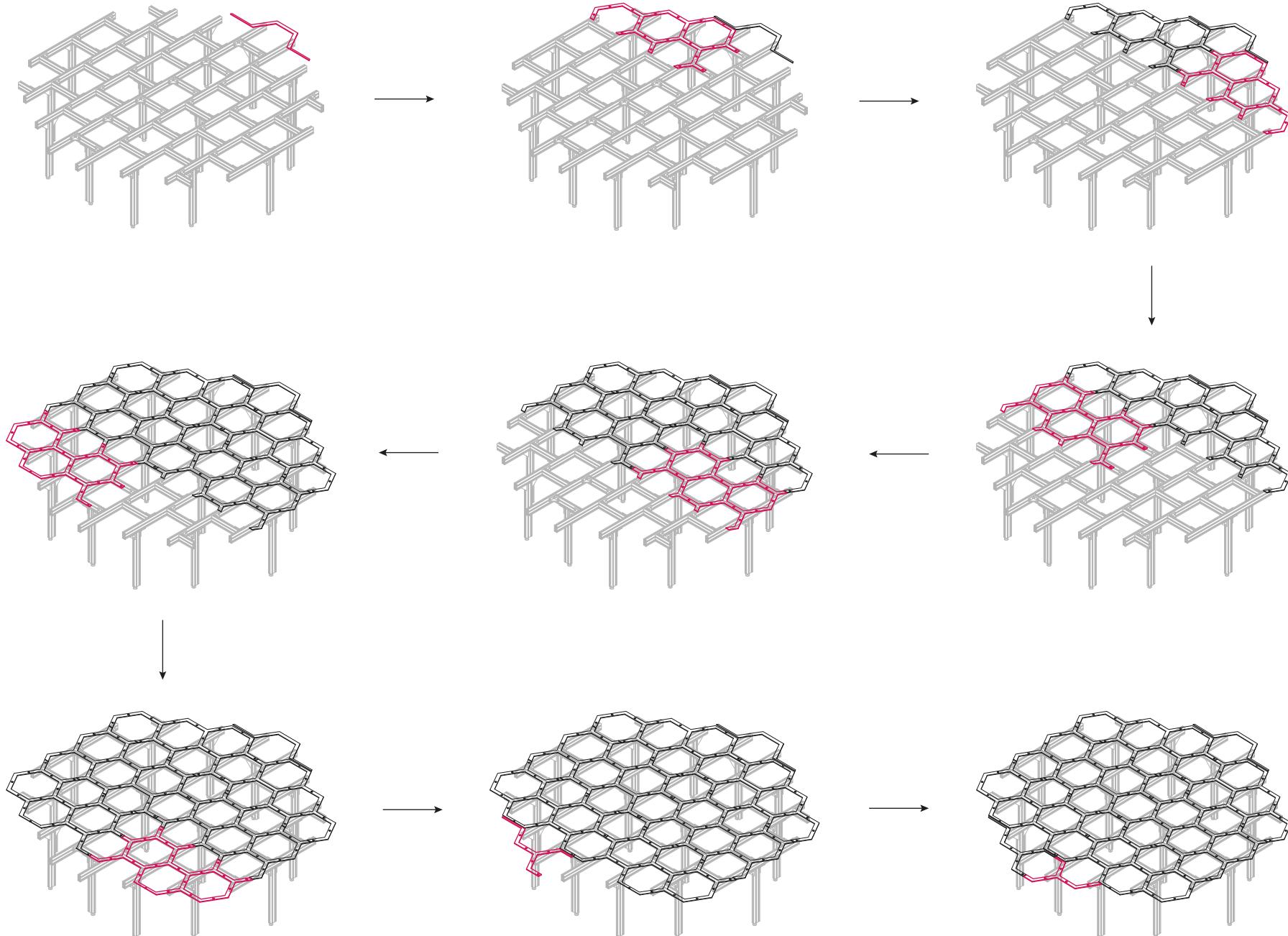
3. To create a thread for the adjustable feet, tap one end of each of the legs (ID 3) and screw the feet into it. Connect the legs to the habitat floor using angle brackets in the locations shown in red. Note: if needed, the adjustable feet allow for levelling of the floor.



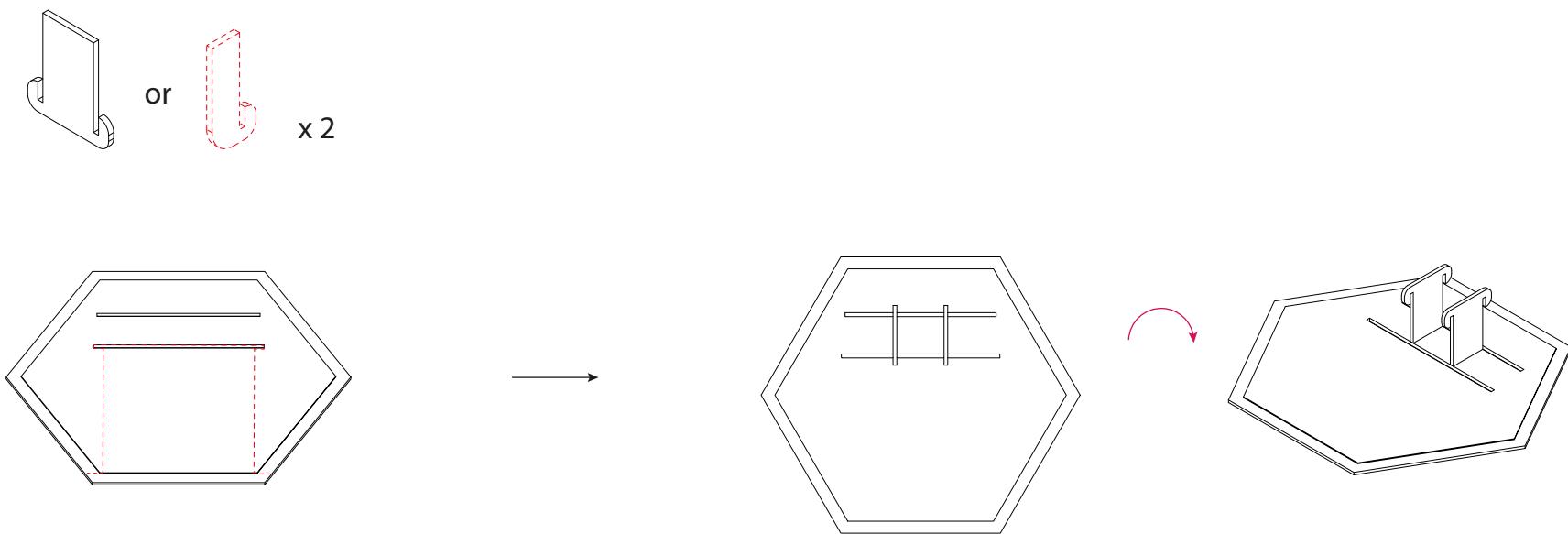
4. Connecting and assembly of the acrylic honeycomb that will support the hexagonal floor tiles.



5. Acrylic honeycomb assembly.

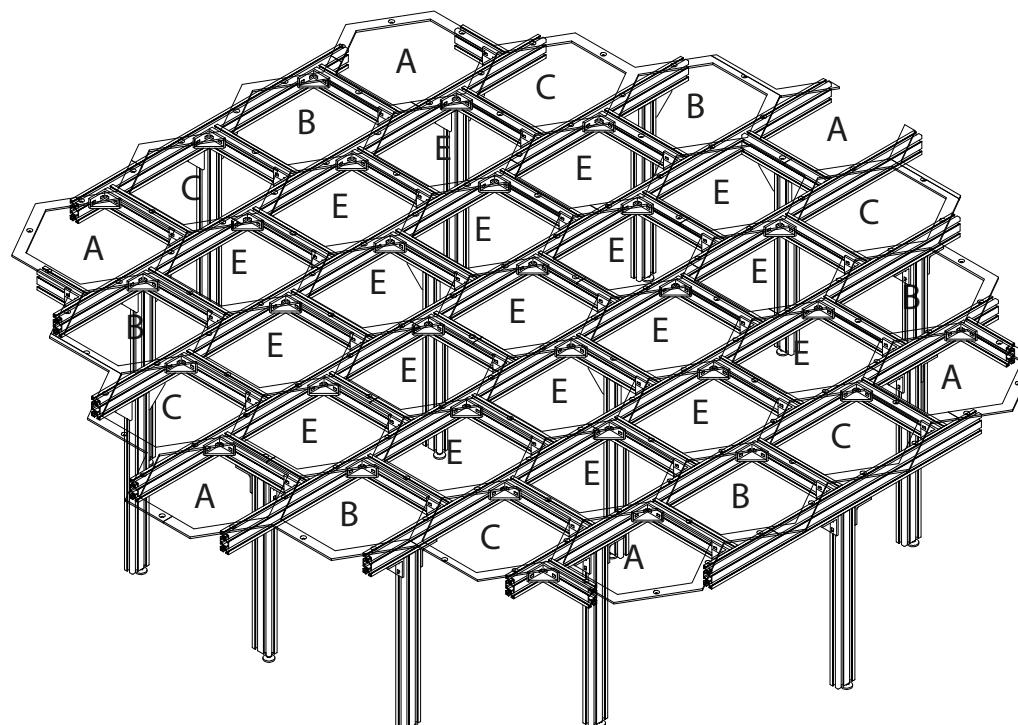
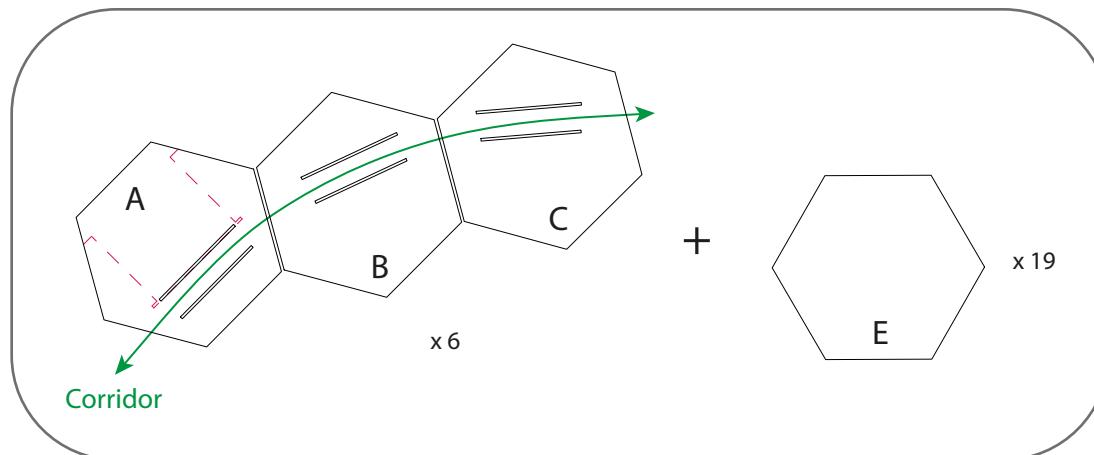


6. Some of the tiles have slots to accommodate the walls of the habitat. The walls are supported by two acrylic wall holders that are attached to the underside of each tile with chloroform. The nest tile is only equipped with 2 smaller wall holders (dotted red lines).

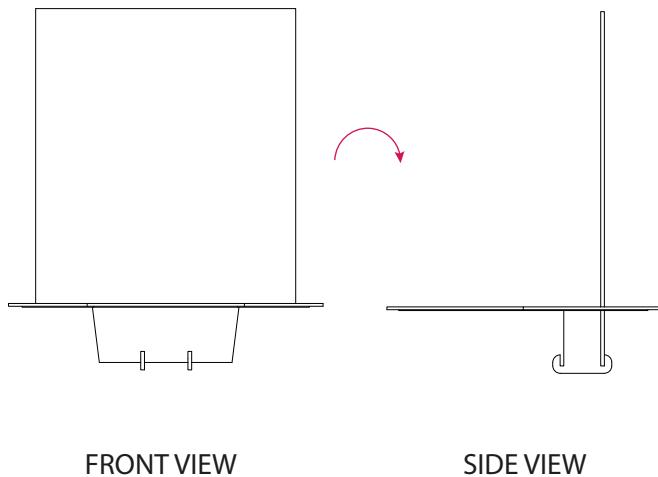
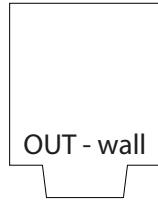


NOTE: make a 1.25mm thick and 18mm wide rim all around the bottom of the tiles using a milling machine. This allows them to slot into the honeycomb.

7. Add the hexagonal floor tiles to the habitat as shown. Tiles A,B and C have a cut out that will accommodate the walls to create a corridor.

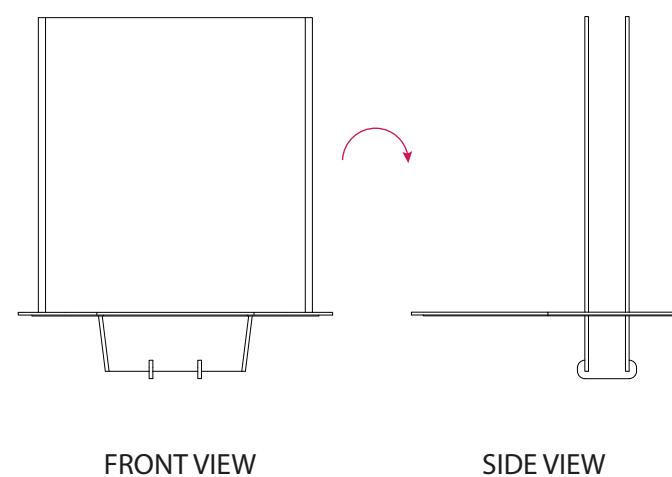
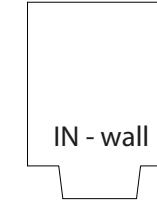


8. Insertion of the walls. The inner walls are narrower compared to the outer walls.



FRONT VIEW

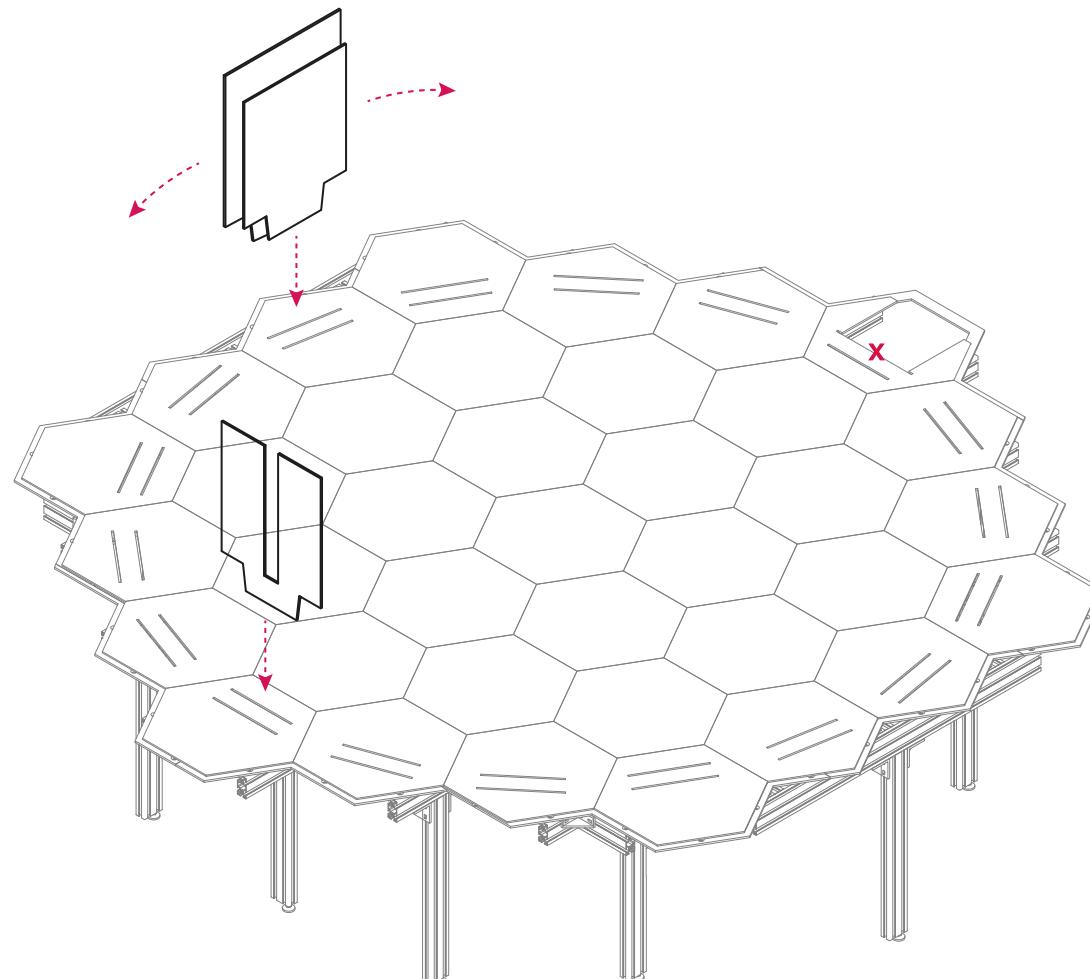
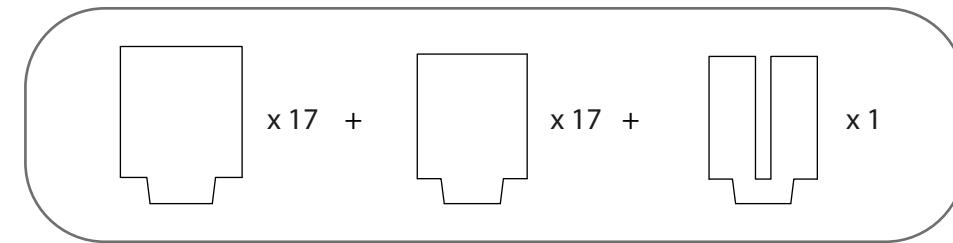
SIDE VIEW



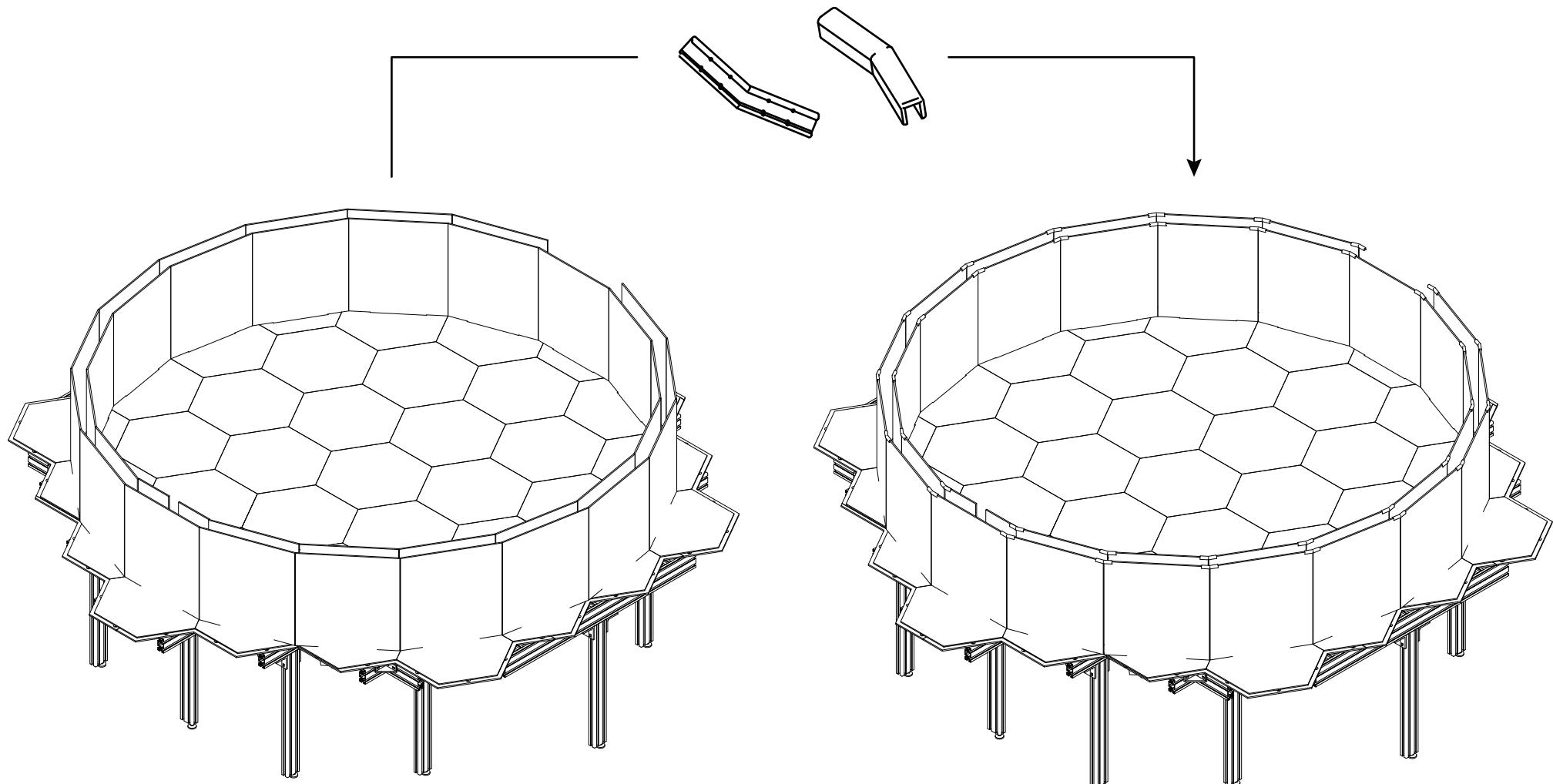
FRONT VIEW

SIDE VIEW

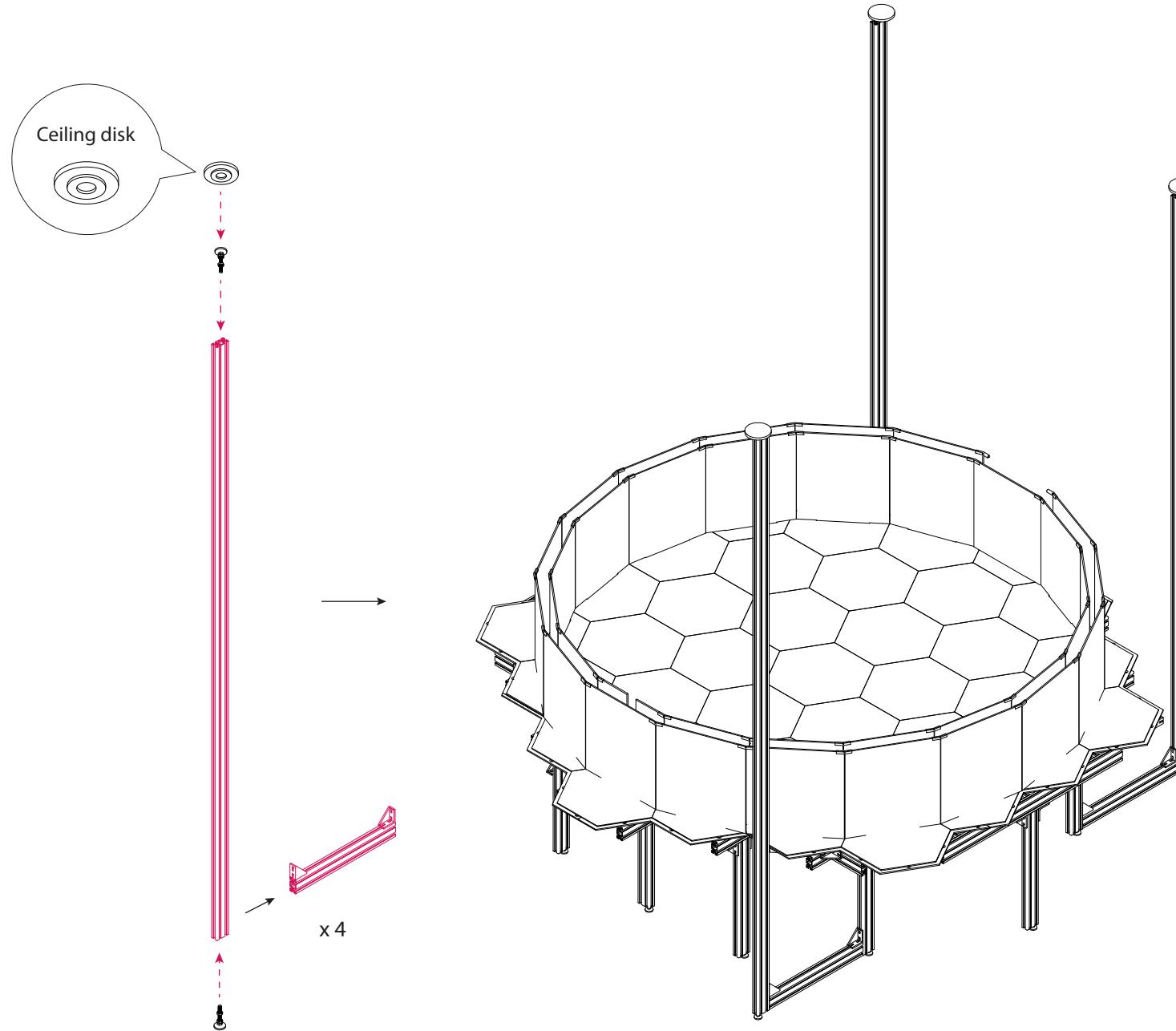
9. Place inner and outer walls around the habitat. NOTE: the inner wall with a slot across the middle allows access to the habitat from the nest via the corridor. The nest tile has only an inner wall as the outer one is part of the nest assembly (see Nest Module assembly instructions).



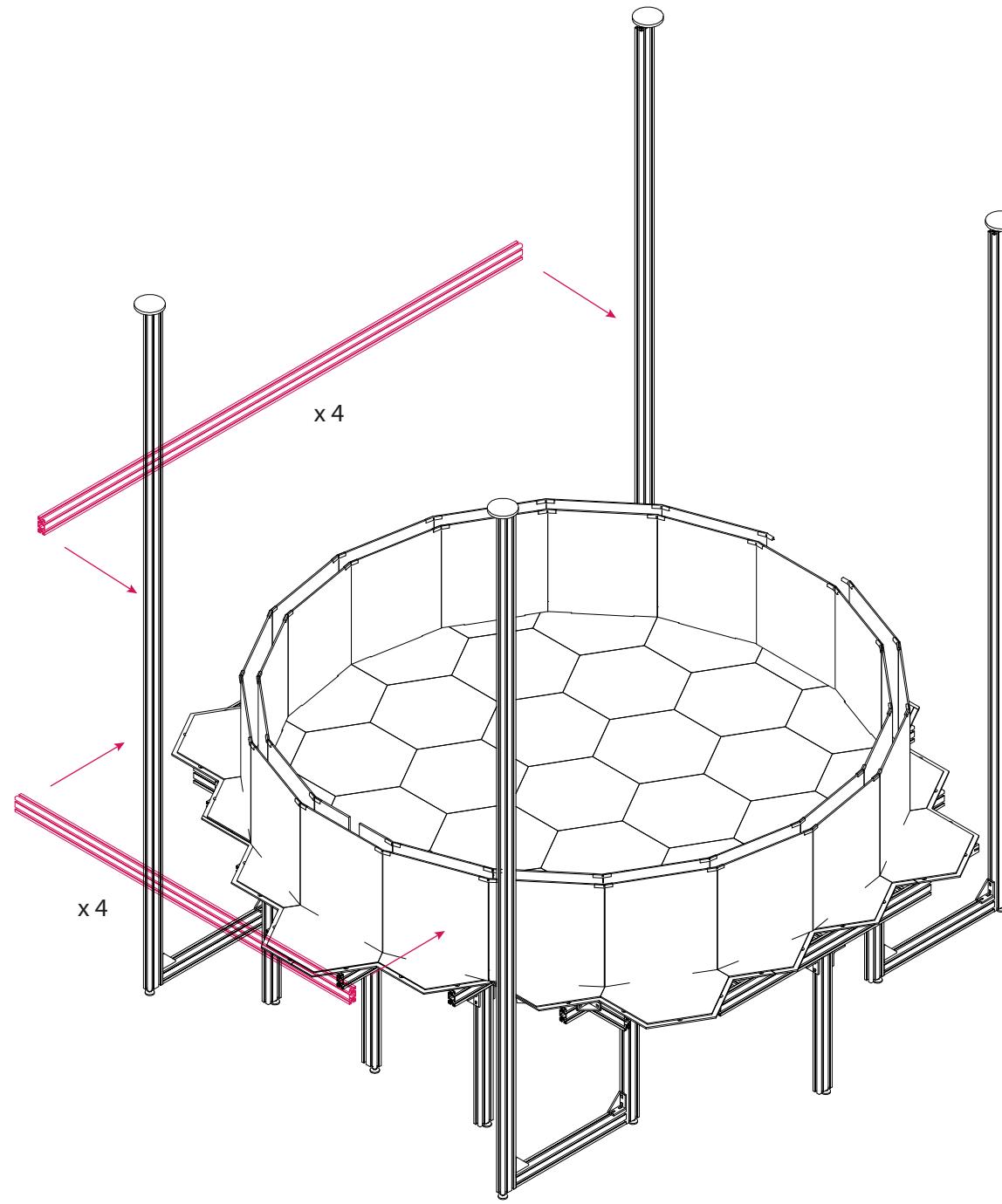
10. Attach the snap-on 3D printed wall joint to stabilise the inner and outer walls.



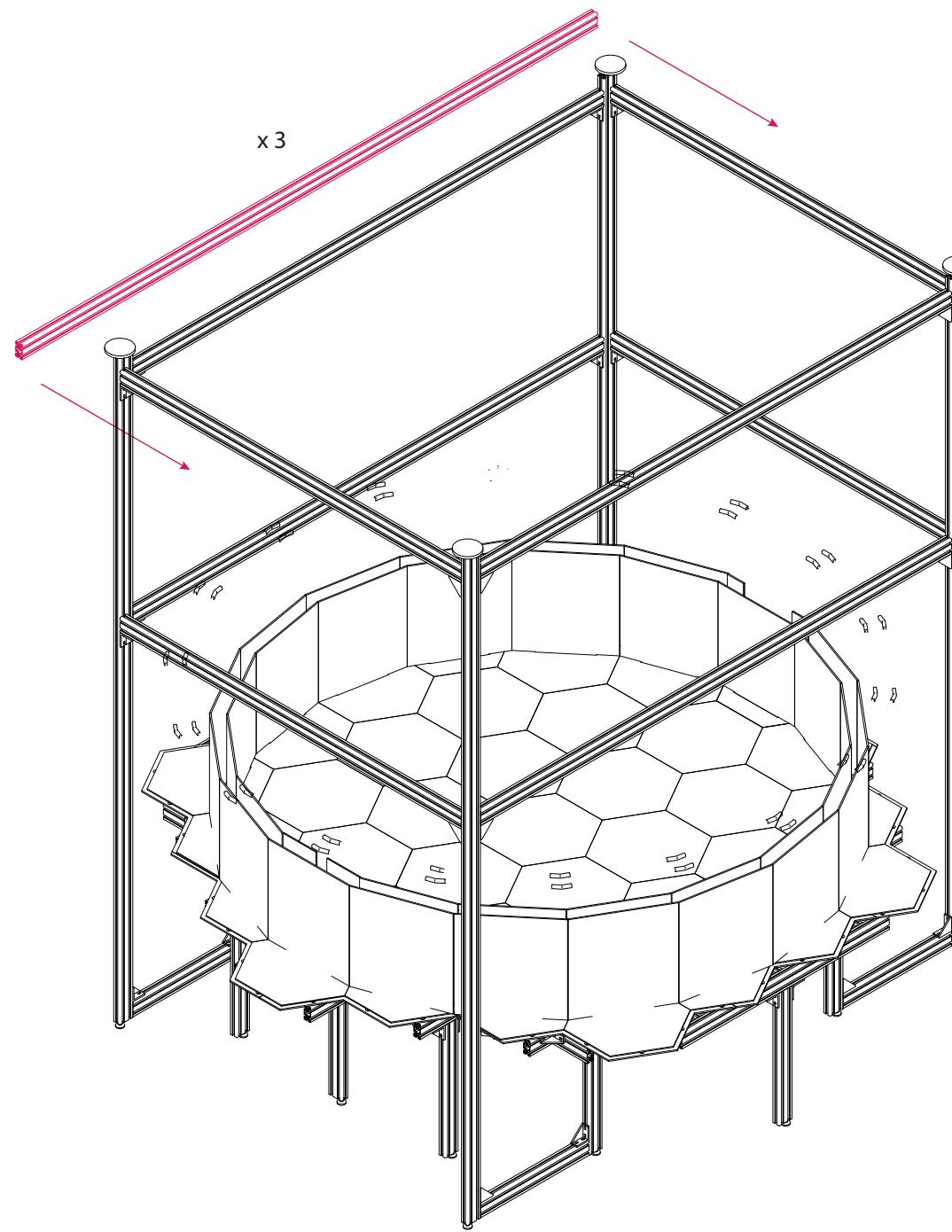
11. Tap both ends of 4 aluminium extrusions (ID 10) that will provide support and stability to the stucture. Insert one adjustable foot at each end and connect the extrusion (ID 7) to the main structure with angle brackets as shown. NOTE: these feet can then be adjusted to apply pressure and stabilise the arena. We attached 10mm disks to each adjustable foot to distribute the force applied and avoid damaging the ceiling.



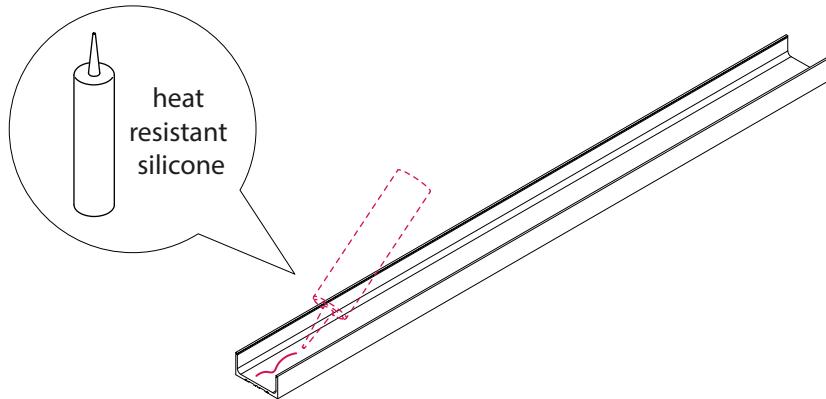
12. Add 8 support lateral aluminium extrusions (ID 2-9) to provide lateral stability.



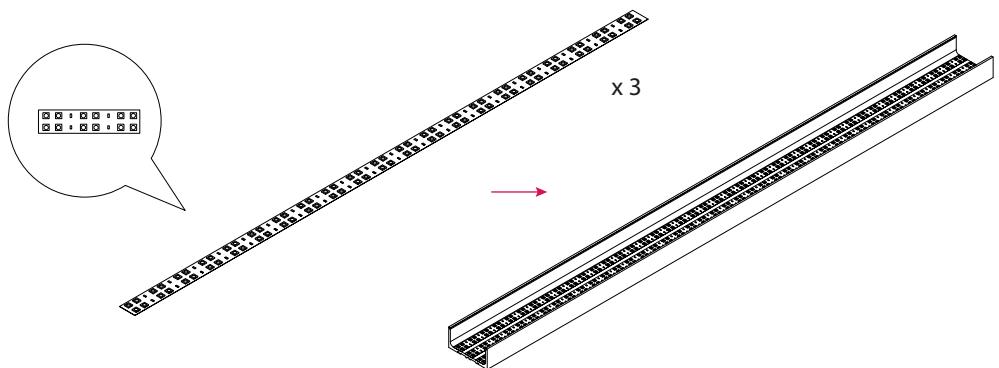
13. Add 3 aluminium extrusions (ID 1) on top of the habitat This will be used to anchor the top cameras.



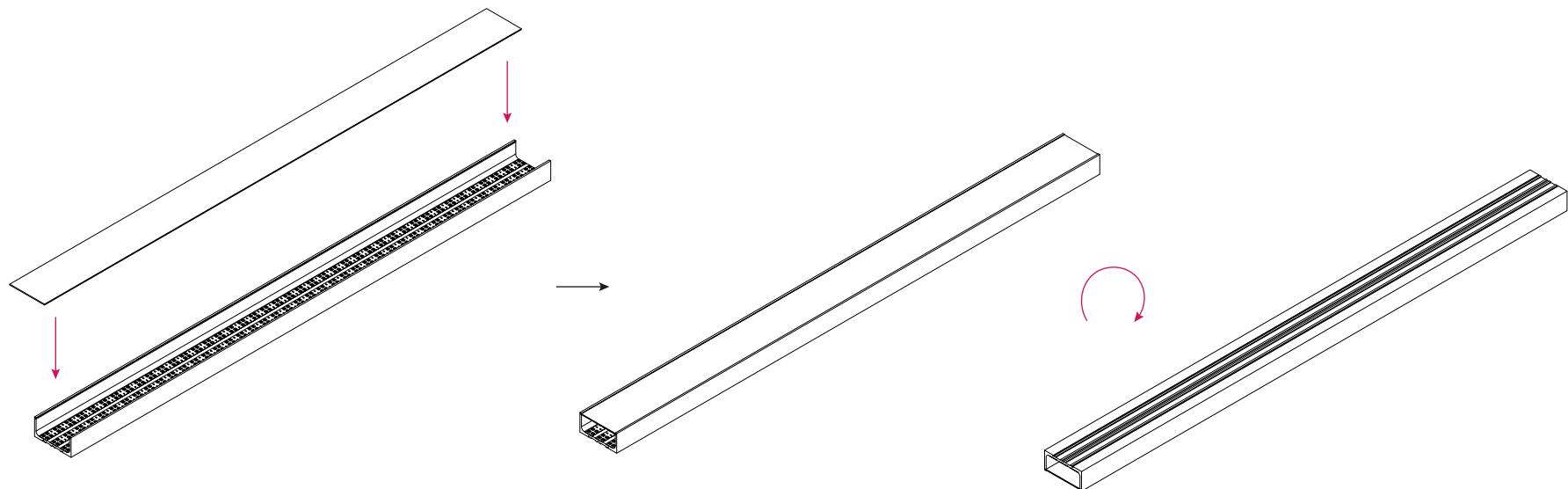
14. Assemble the Infrared LEDs extrusions (1m) by first applying a layer of heat resistant silicone onto the base of the extrusions.



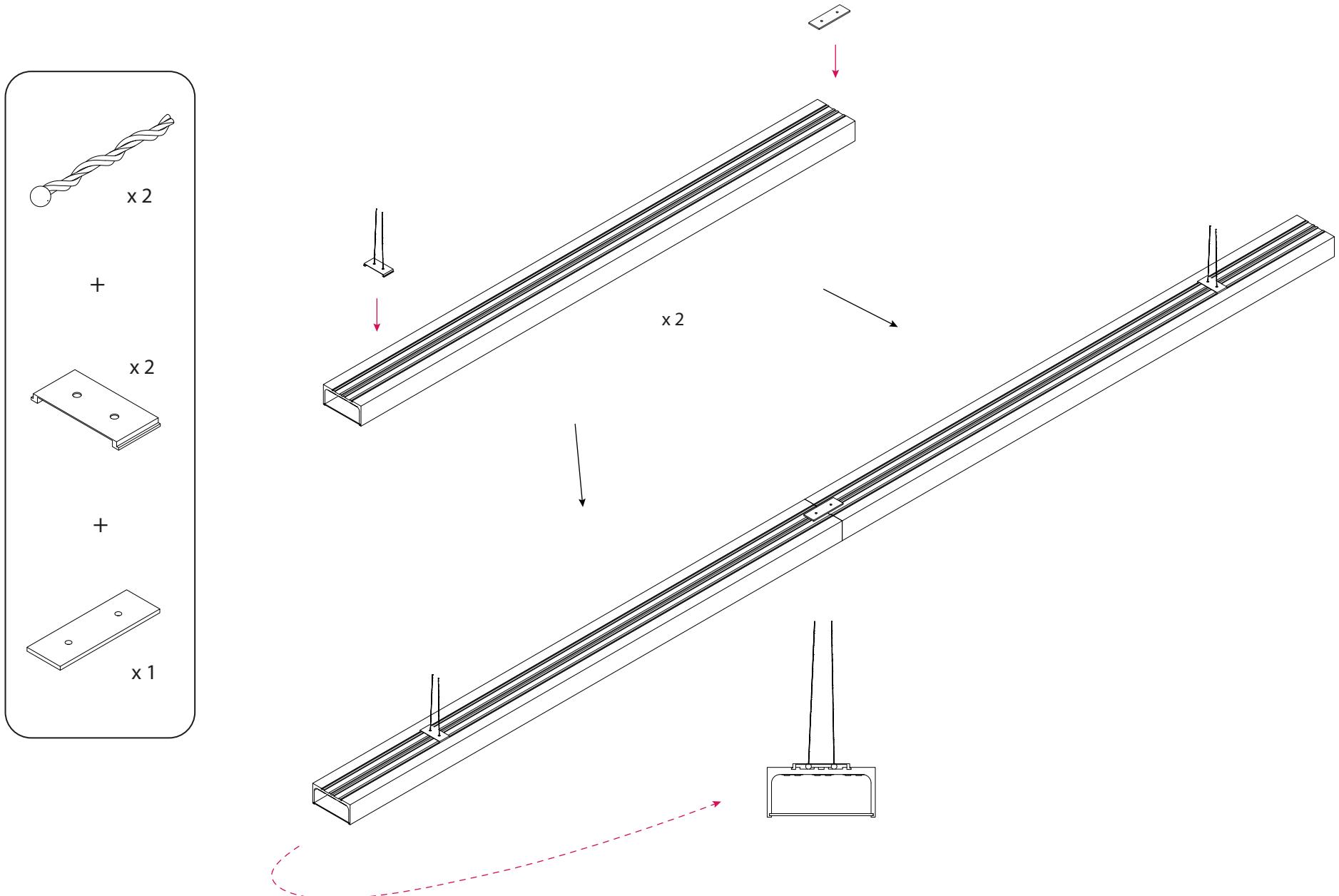
15. Press 3 IR LEDs strips into the silicon. Note: take care to remove any excess silicon from connection points or the LEDs themselves.



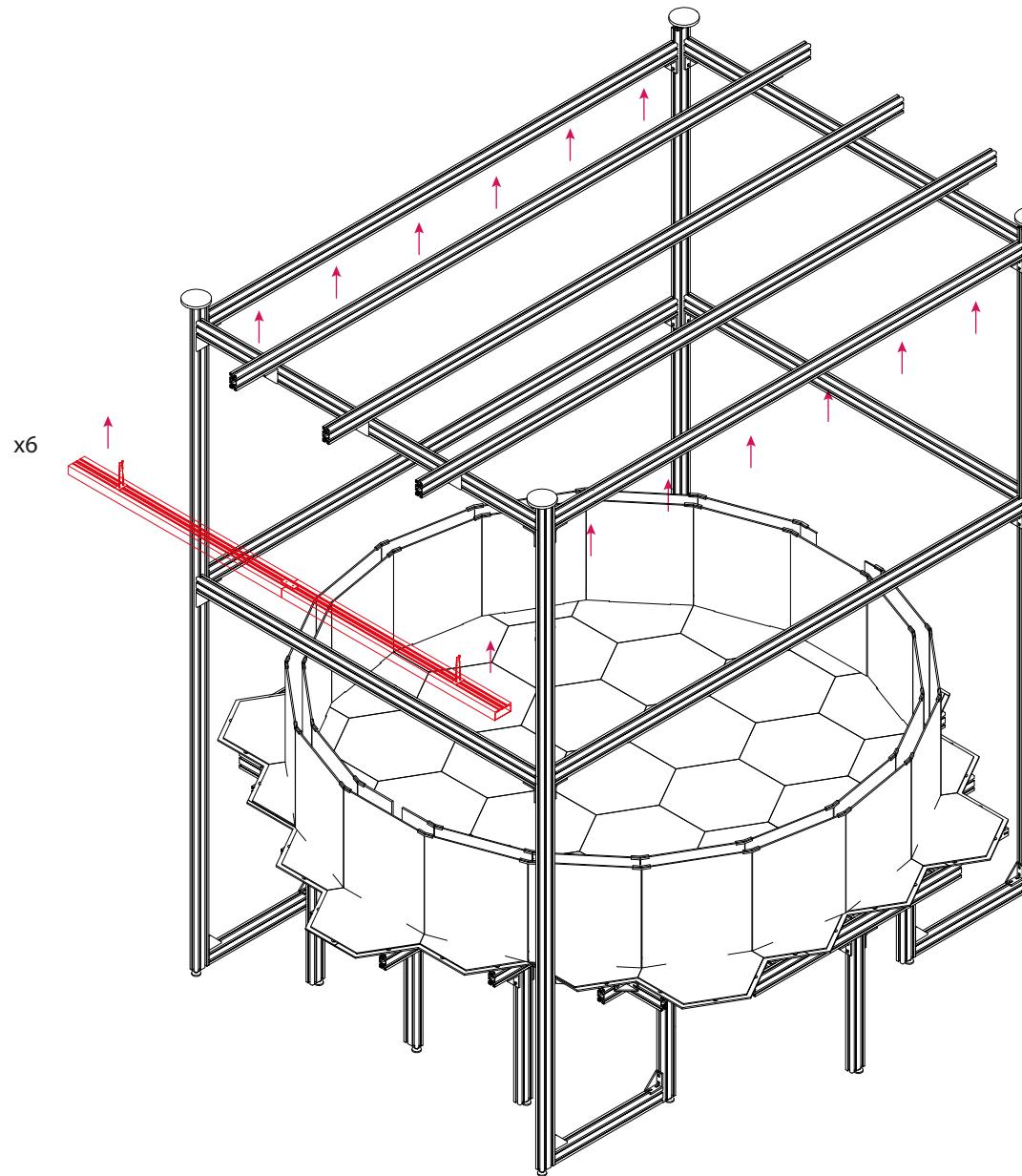
16. Cover the LEDs with a diffusive panel.



17. Connect two LEDs extrusion with a metal plate and solder the strips. Equip the LEDs extrusion with cable attachment plate, and connect the adjustable suspension cables, two per plate.



18. Suspend 6 LEDs assembly from the top most lateral support aluminium extrusions.



NOTE: use the adjustable suspension cable to vary the height and the angle of the LEDs as needed.

19. AEON habitat fully assembled to be flexibly equipped with a variety of different hardware depending on experimental requirements.

