

# DOME ASSEMBLY MANUAL

## PREPARATION

### 1. Climate

Avoid rain and snow. Recommended temperature 10 to 30 degrees Celsius (higher temperature is better for the outer cover's ductility).

### 2. Platform

- Wooden/WPC deck: thickness at least 30-50mm
- Concrete foundation: thickness at least 100-150mm
- Soft ground (grass/sand/soil): surface be horizontal

### 3. Tools Preparation

- hex key
- step ladder
- thick ropes
- utility knife
- tape measure
- electric wrench
- adjustable wrench
- scaffold (mainly for dome over 7m)
- hammer drill (for concrete foundation)

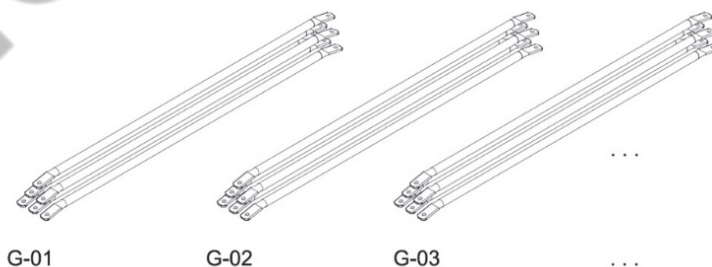
### 4. Packages Check

Please refer to the *Packing List*, check the packages and make sure everything is received.

### 5. Framework Tubes Preparation

Arrange the framework tubes by the marked number at both ends (e.g.: G-01, G-02, G-03 ...).

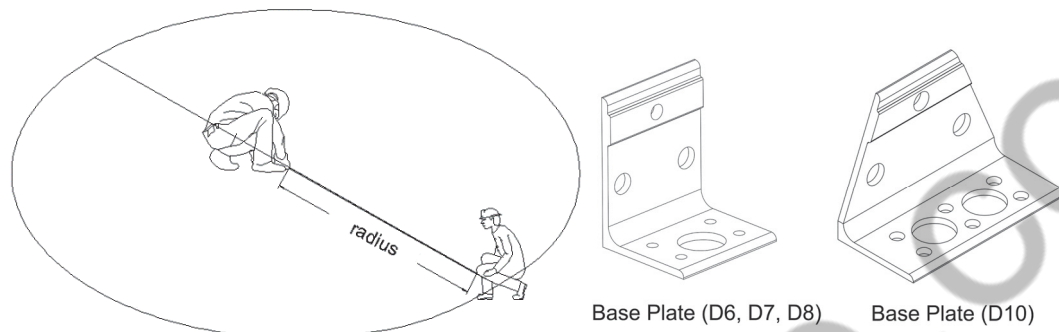
**Notice:** Make sure to pick out the pre-drilled tubes (for the placement of solar extractor fan, stove jack, glass window, and automatic shades) according to the *Packing List*, *Technical Drawing Guide* and the frame tube's item code (specified on packaging sticker).



## 6. Site Plan

Decide the dome's orientation and mark a circle on the platform, roughly place the base plates according to the order's *Technical Drawing Guide*.

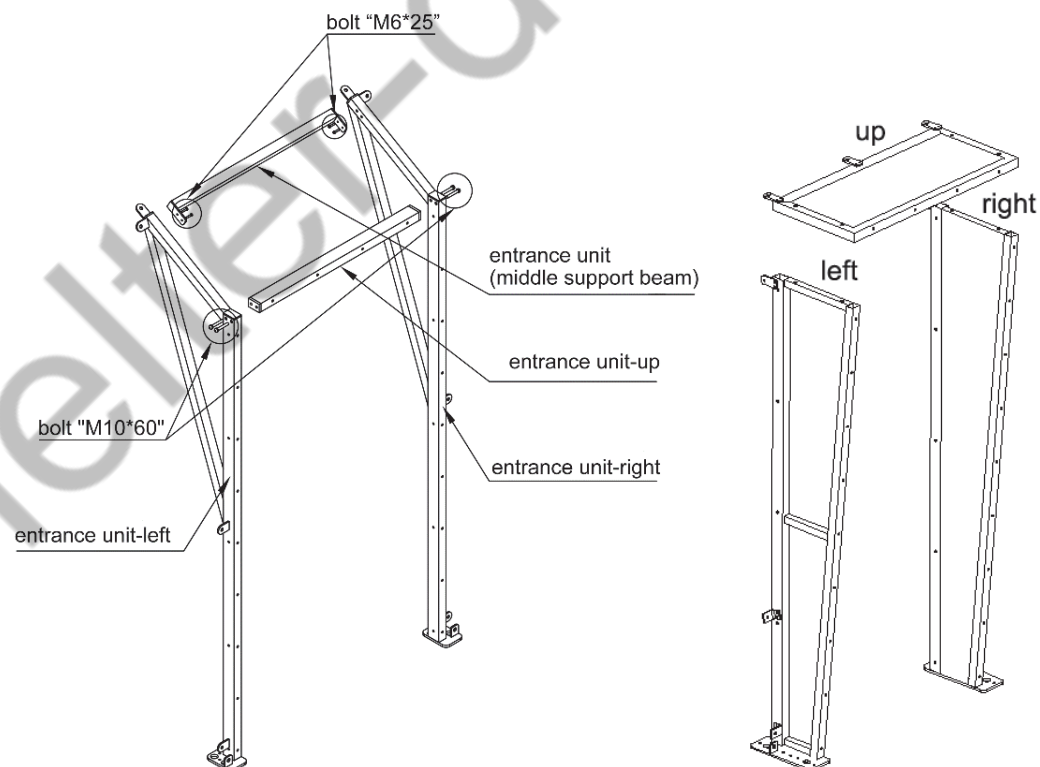
**Notice:** The base plates can be placed either towards outdoor or indoor, usually towards outdoor.

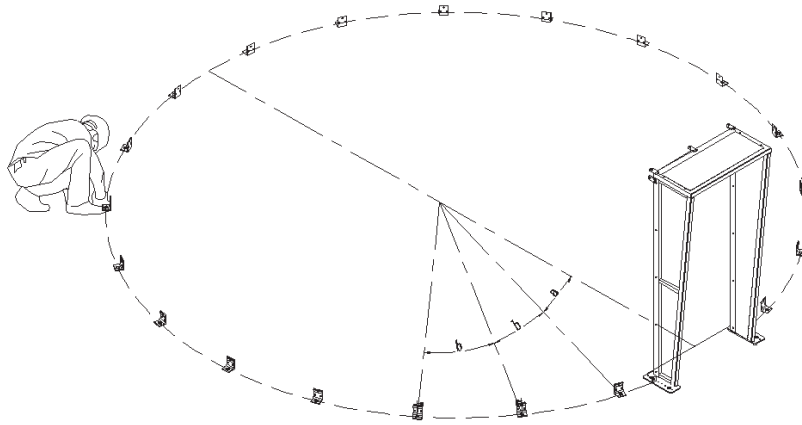


## STRUCTURE

### 1. Door Frame (Entrance Units) Assembly

Connect the up, left, right entrance units and the middle support beam with bolt "M6\*25" and "M10\*60" (for the old type door frame please refer to below diagram at right, use bolt "M10\*100" to connect the up, left and right units).



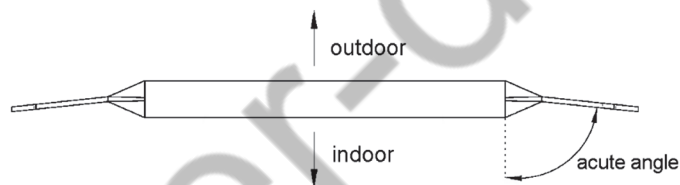


## 2. Framework Assembly

Check the framework assembly page in the order's *Technical Drawing Guide* to understand the framework tubes arrangement, also be sure to check the related bolts list on the same page.

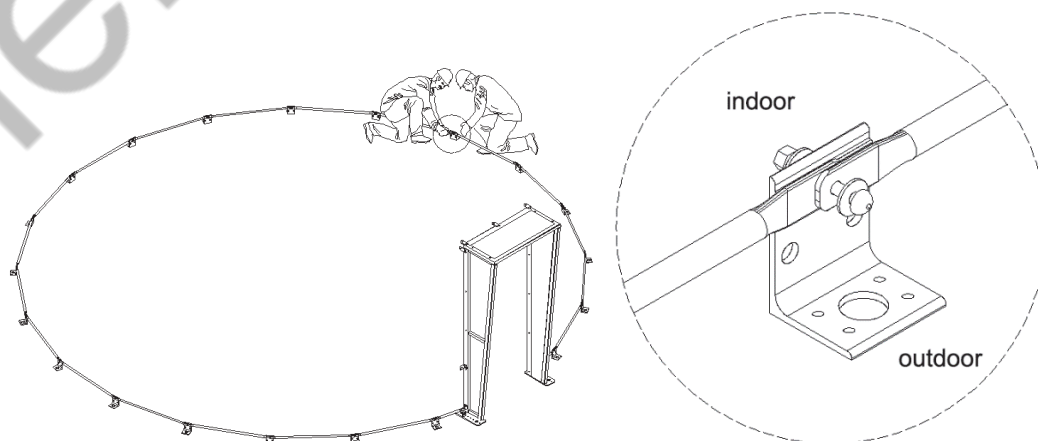
### Notice:

- Ensure pre-drilled tubes' placement beforehand, make sure to install at correct place.
- Install the framework layer by layer from bottom to top and start from the entrance.
- Double check each tube's marked number beforehand, just in case.
- All the horizontal tubes should be placed at outermost.
- Place plain washer at both ends of each node.
- The tube's both ends are inclined, and the acute angle side should be inward-facing.



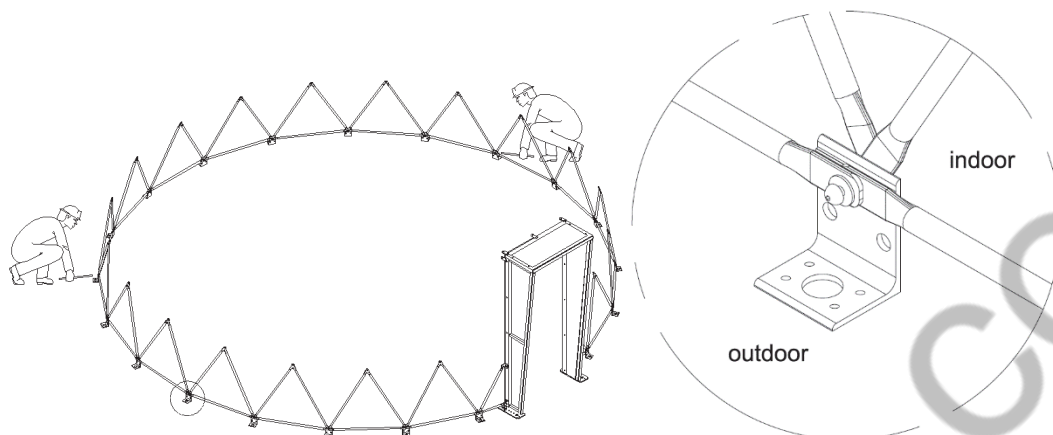
### [Step 1]:

Install the first layer of horizontal tubes, place at the base plate's outward-facing side (alternative to place at inward facing side).



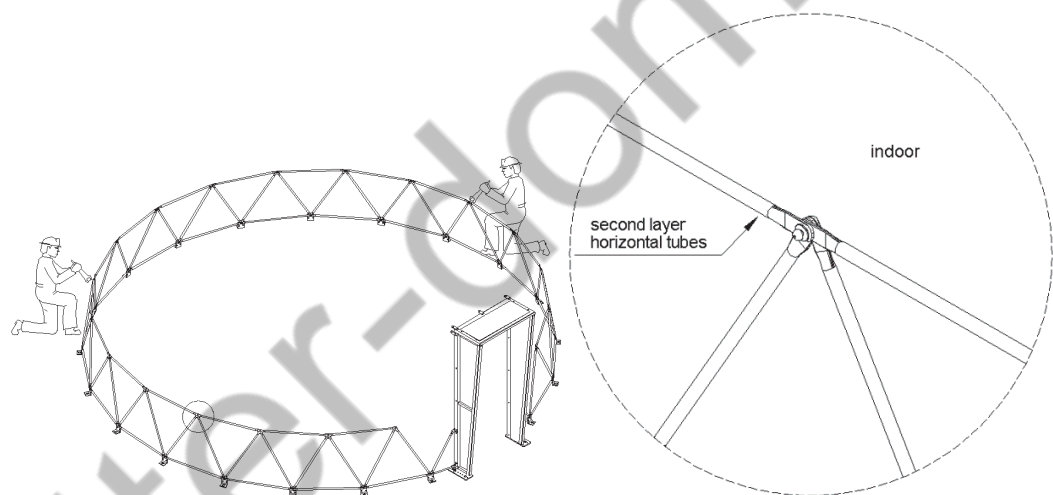
[Step 2]:

Install the first layer of upright tubes, place at the base plate's inward-facing side.



[Step 3]:

Install the second layer of horizontal tubes, place at outermost, as well as the following layers of horizontal tubes.

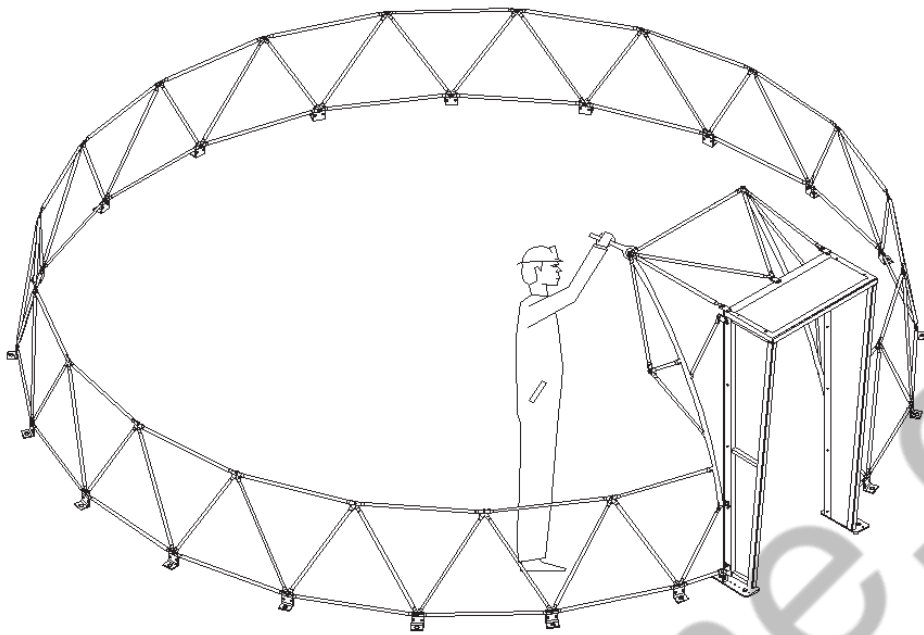


[Step 4]:

Install the tubes at the entrance area. Please refer to the framework assembly page in the order's *Technical Drawing Guide* to understand the near-door tubes arrangement. The relative bolts list is specified on the same page.

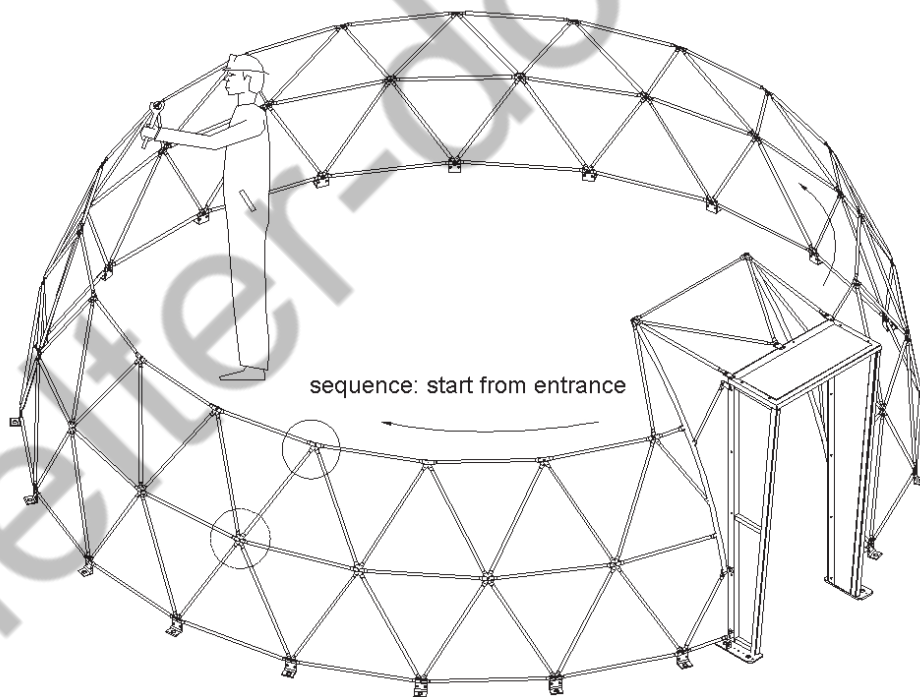
**Notice:** Kindly note below picture shows the old type door frame therefore the near-door tubes arrangement is different too. Please refer to the order's *Technical Drawing Guide*.

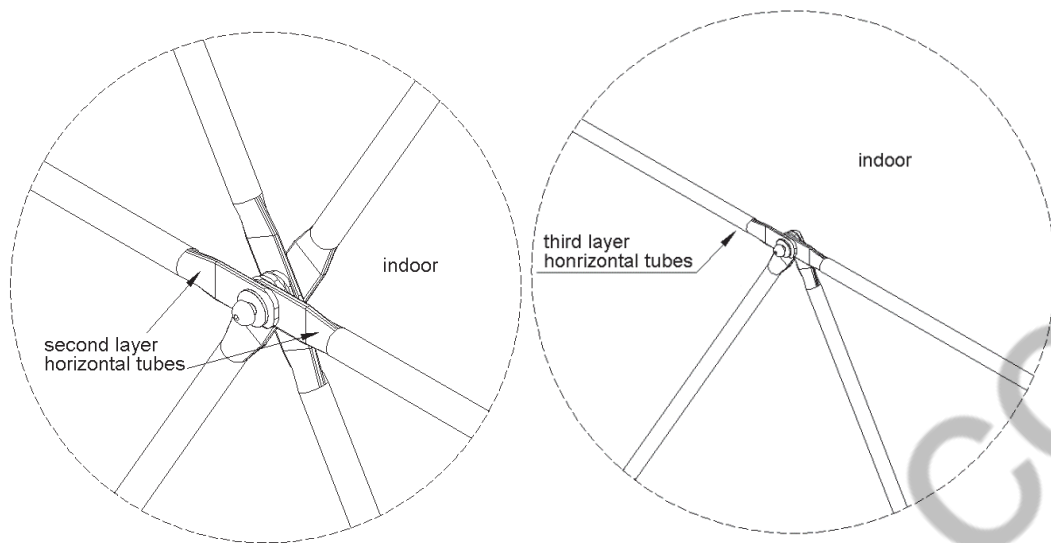




[Step 5]:

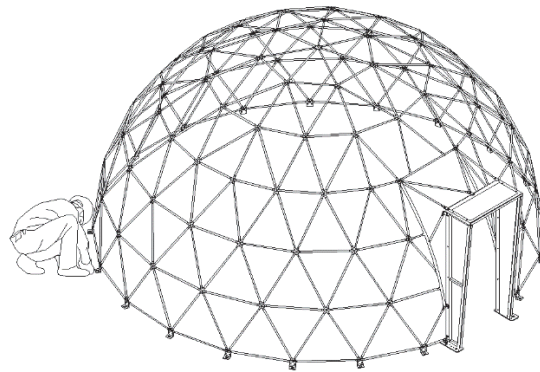
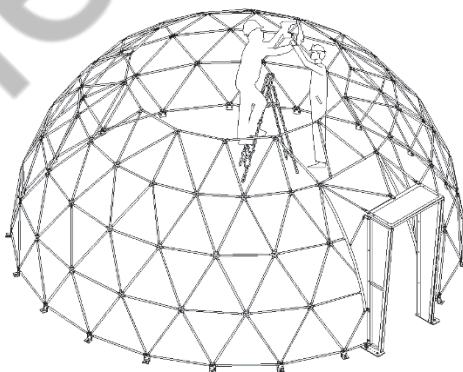
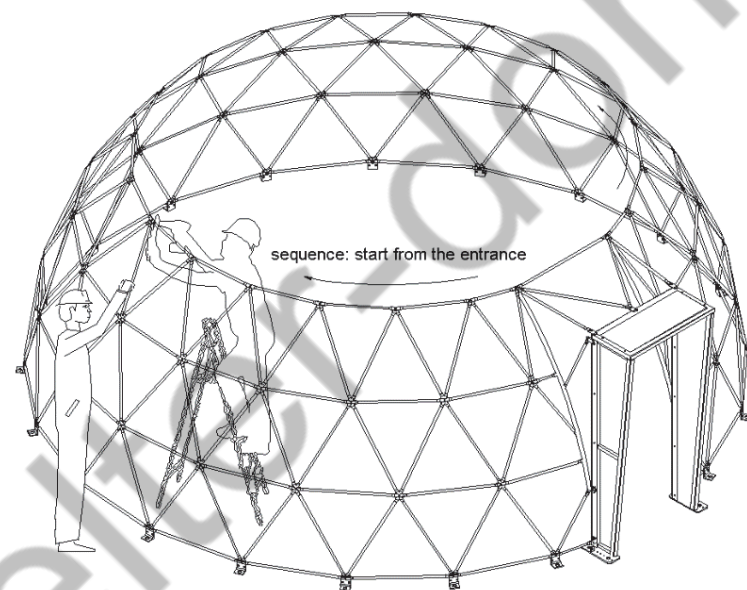
Install the second layer of upright tubes (place at innermost) and the third layer of horizontal tubes (place at outermost).





[Step 6]:

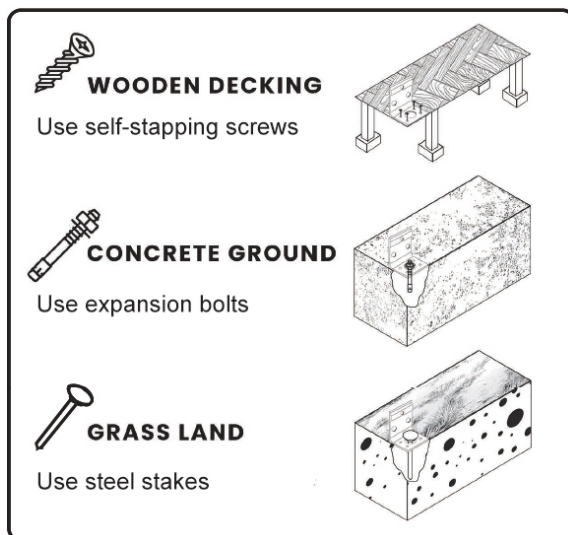
Follow the same placement rules (horizontal tubes at outermost, upper upright tubes at innermost, underneath upright tubes in the middle), finish the rest framework. Check the entire structure and secure all the nodes.



[Step 7]:

Anchor the base plate by the related fixing component.

- Wooden/WPC deck: self-tapping screws
- Concrete foundation: expansion bolts
- Soft ground (grass/sand/soil): steel stakes

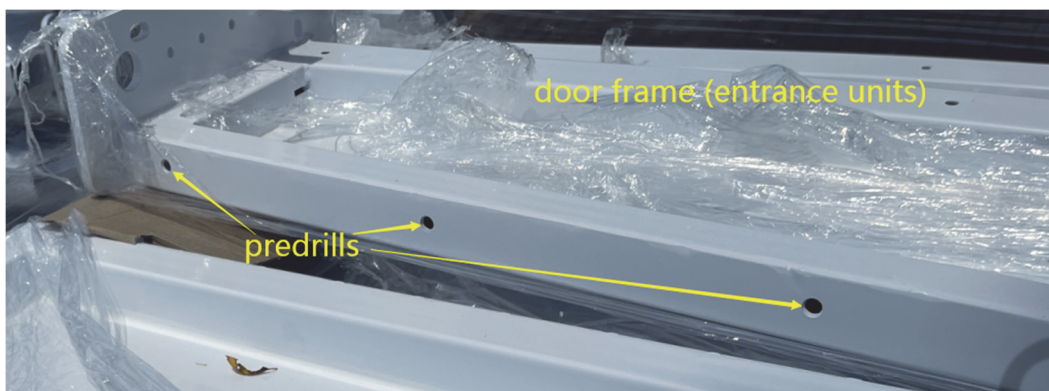


## SINGLE DOOR

**Note:** The glass door's frame is with rivet nuts which has hollow thread, and the door frame (entrance units) is with matching predrills.







Match the door frame and the glass door by matching the rivet nuts and predrills, then use bolts “M6\*65” to secure (wooden door same way but by ST4.8\*60 tapping screws).

## INSULATION

**Note:** Each insulation piece is marked with certain number, and it's also with eyelets, lashing ropes and hook-and-loop fasteners.



[Step 1]:

Check the insulation assembly page in the order's *Technical Drawing Guide* to understand the

insulation pieces' arrangement.

[Step 2]:

Put up the insulation pieces by attaching the eyelets on the framework's nodes, and tie up the lashing ropes on the framework.

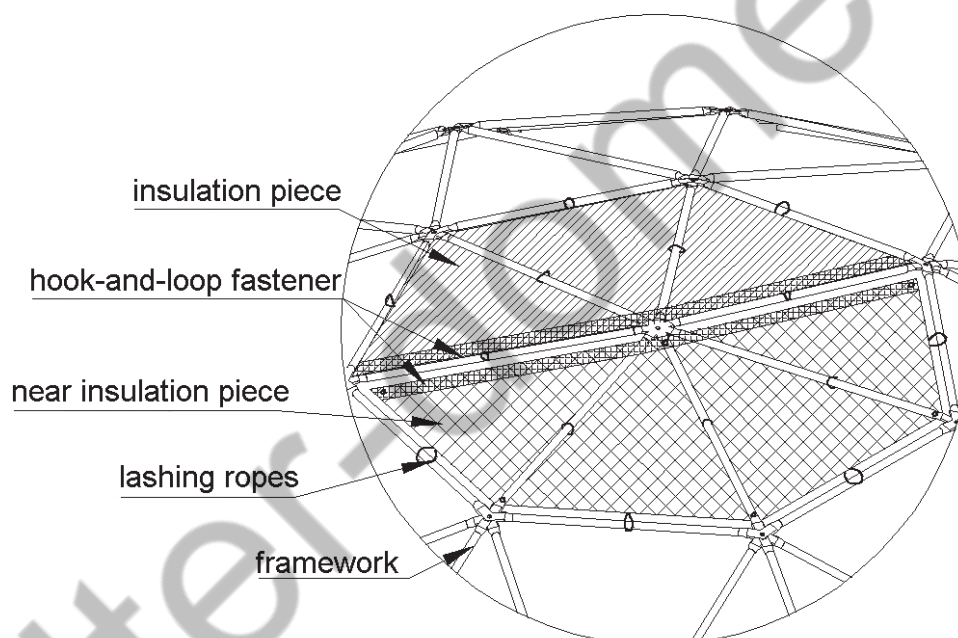
[Step 3]:

Connect the near insulation pieces by attaching the hook-and-loop fasteners (for the insulation piece beside entrance, please find the hook-and-loop fastener tape and stick on the entrance, then attach the insulation piece on it).

[Step 4]:

Secure the nodes and cover up with plastic acorn hex cap nuts.

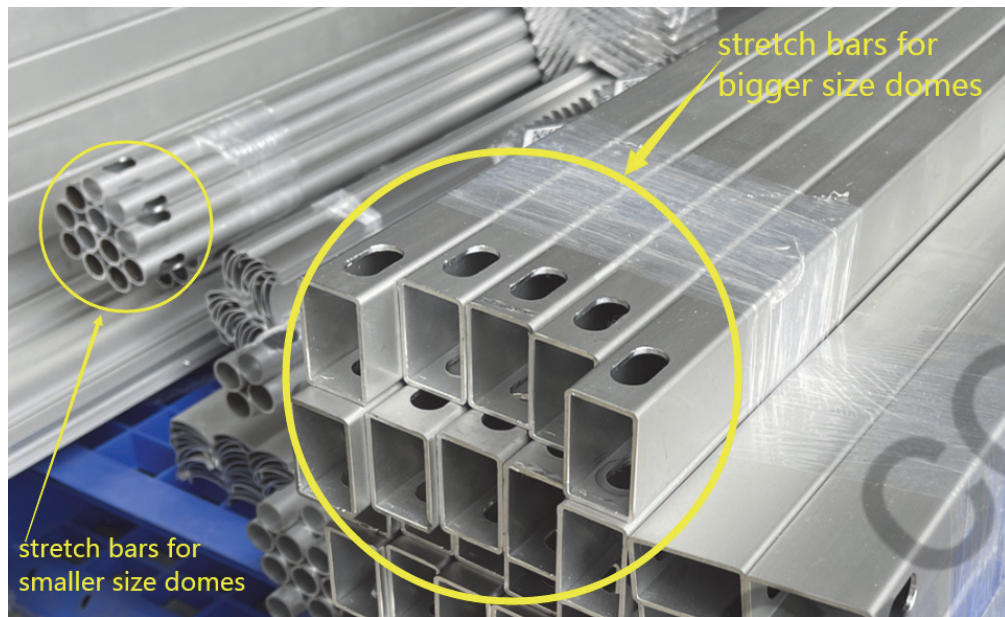
**Notice:** Insulation step is ok to be after outer cover step if it rains.



## OUTER COVER

**Note:** The PVC fabric of the entrance area is with eyelets, and the bottom area has pocket design. The package comes with stretch bars and white ropes (dia. 6mm). Please prepare thick ropes at local.

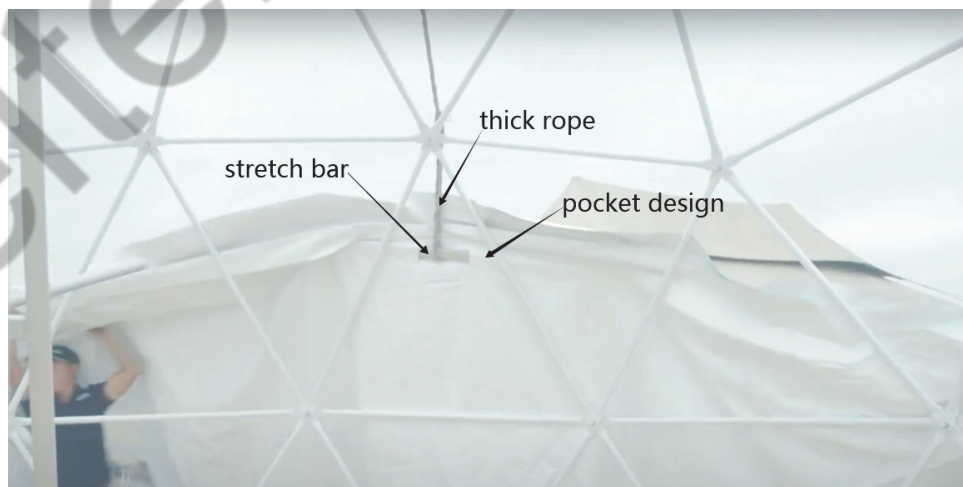




## 1. Putting Up

[Step 1]:

Put a stretch bar in the outer cover's pocket design, then use thick rope to tie on the stretch bar. Have at least 2 groups of people to pull the rope and to assist.





[Step 2]:

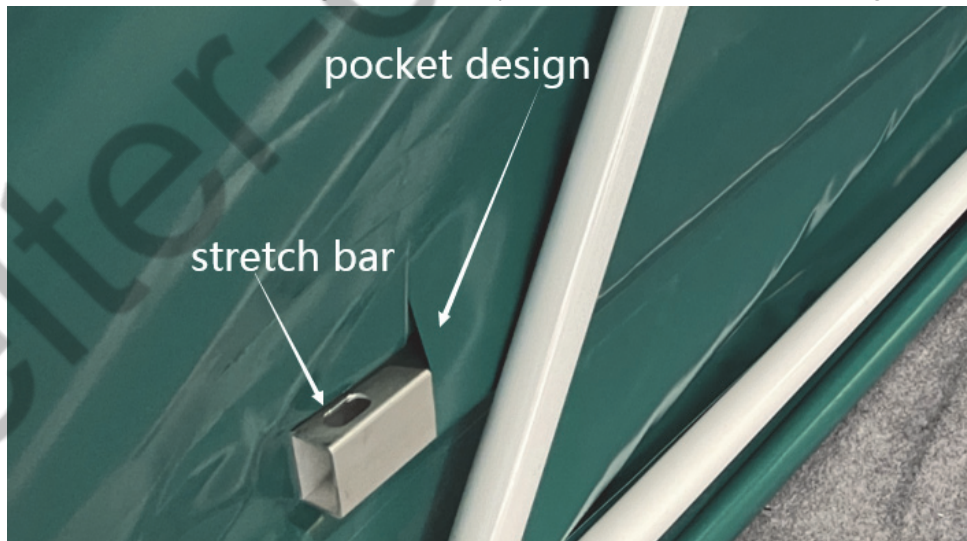
Adjust the outer cover by having multiple people push the outer cover's interior side together and pull towards the correct direction.

## 2. Tightening

[Step 1]:

Put the stretch bars through the outer cover's pocket design at the bottom.

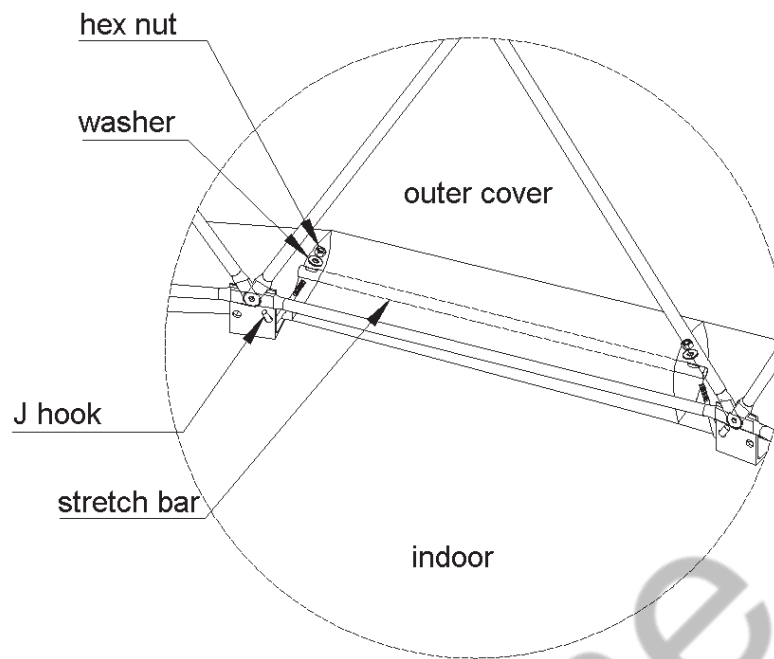
(near-door stretch bar's length is different, please refer to the order's *Packing List*)



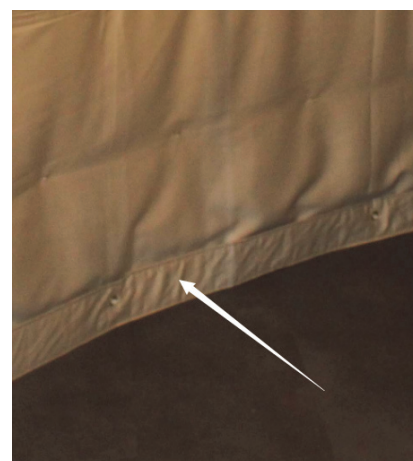
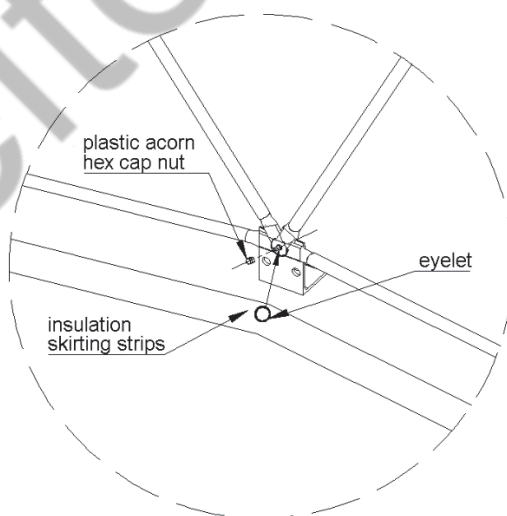
[Step 2]:

Use J hook to connect the stretch bar and the base plate, secure with plain washer and hex nut. Adjust the hex nut to tighten the outer cover.





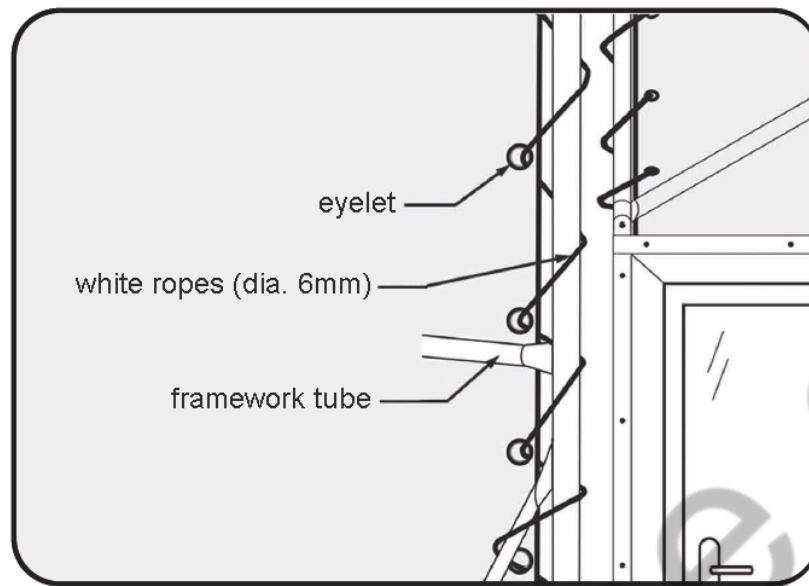
Cover the bottom area with insulation skirting strips, attach the eyelets on the nodes and cover up with plastic acorn hex cap nuts.



[Step 3]:



Use white ropes (dia. 6mm) or cable ties to tie near-door PVC fabric on the structure.



### 3. Securing

[Step 1]:

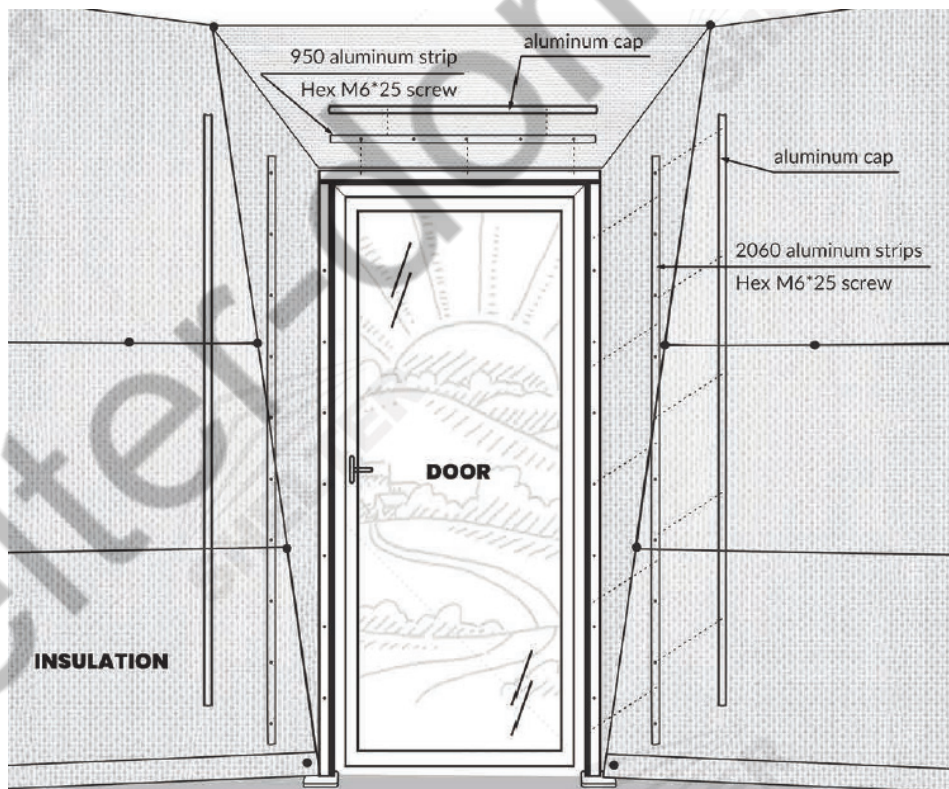
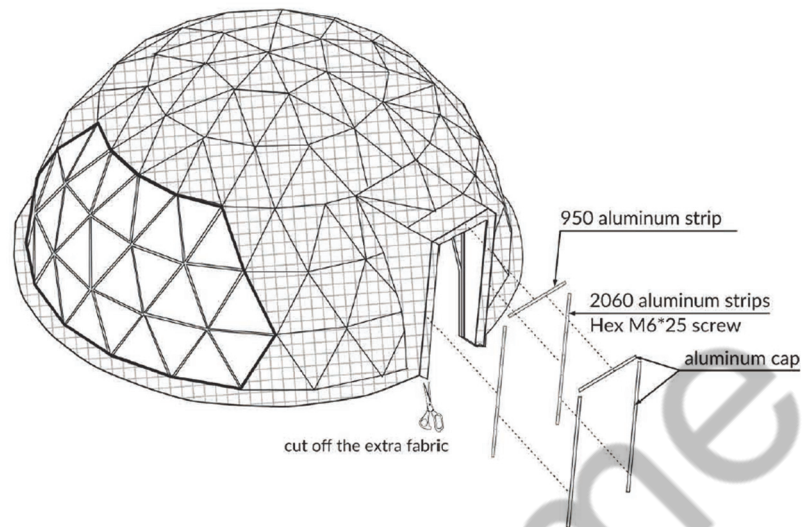
Use tapping screws “ST4.2\*35” to secure the aluminium strips on bottom fabric, cover with related aluminium caps.



[Step 2]:

Use bolt "M6\*25" to secure the aluminium strips on the door frame (up, left and right entrance units), cover with related aluminium caps.

**Notice:** Securing step is ok to do anytime later.

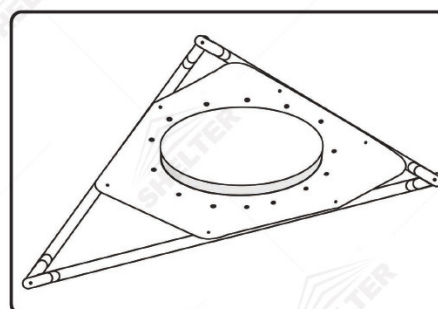
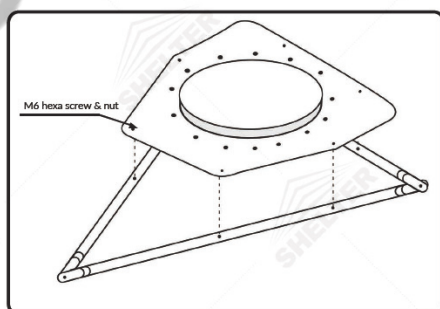




## SOLAR EXTRACTOR FAN

### 1. Base Plate Installation

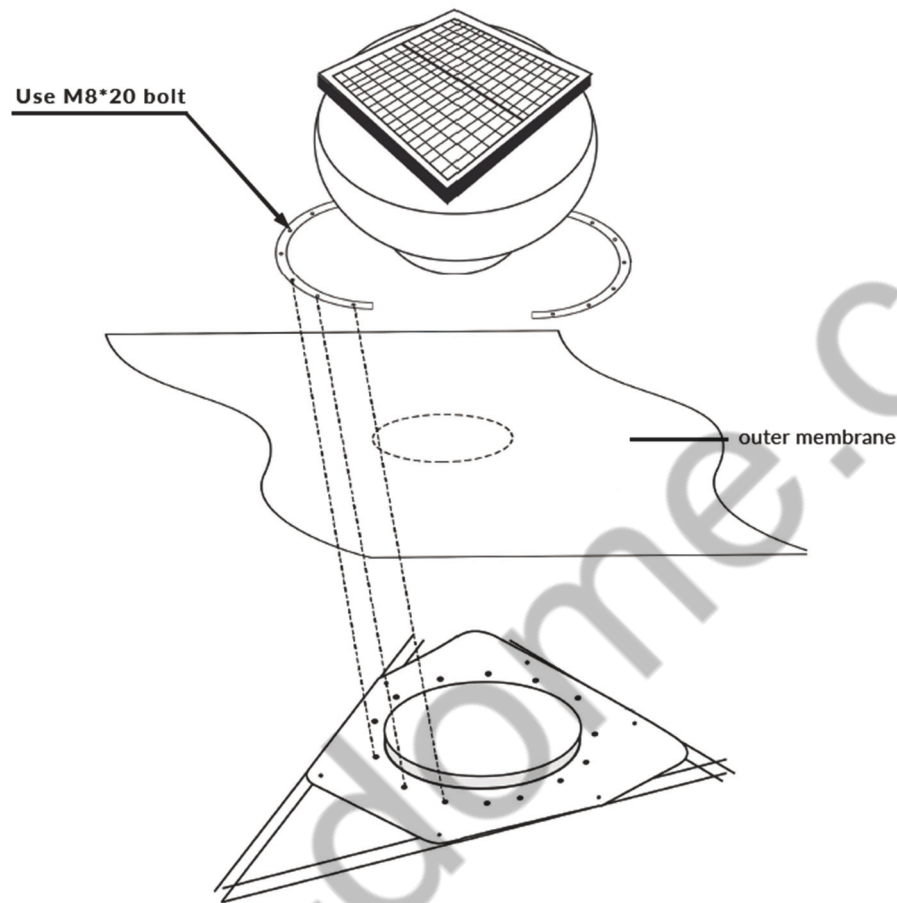
Find the solar extractor fan's placement, fix the base plate on the related pre-drilled tubes by M6 hexagon head bolts ( $\Phi 20\text{mm}$  tube/"M6\*30",  $\Phi 25\text{mm}$  tube/"M6\*40",  $\Phi 32\text{mm}$  tube/"M6\*45").





## 2. Solar Extractor Fan Installation

Put down the solar extractor fan, fix the metal seal strips on the base plate with bolts "M8\*20", seal glue between the outer cover and the metal seal strips.



## GLASS WINDOW

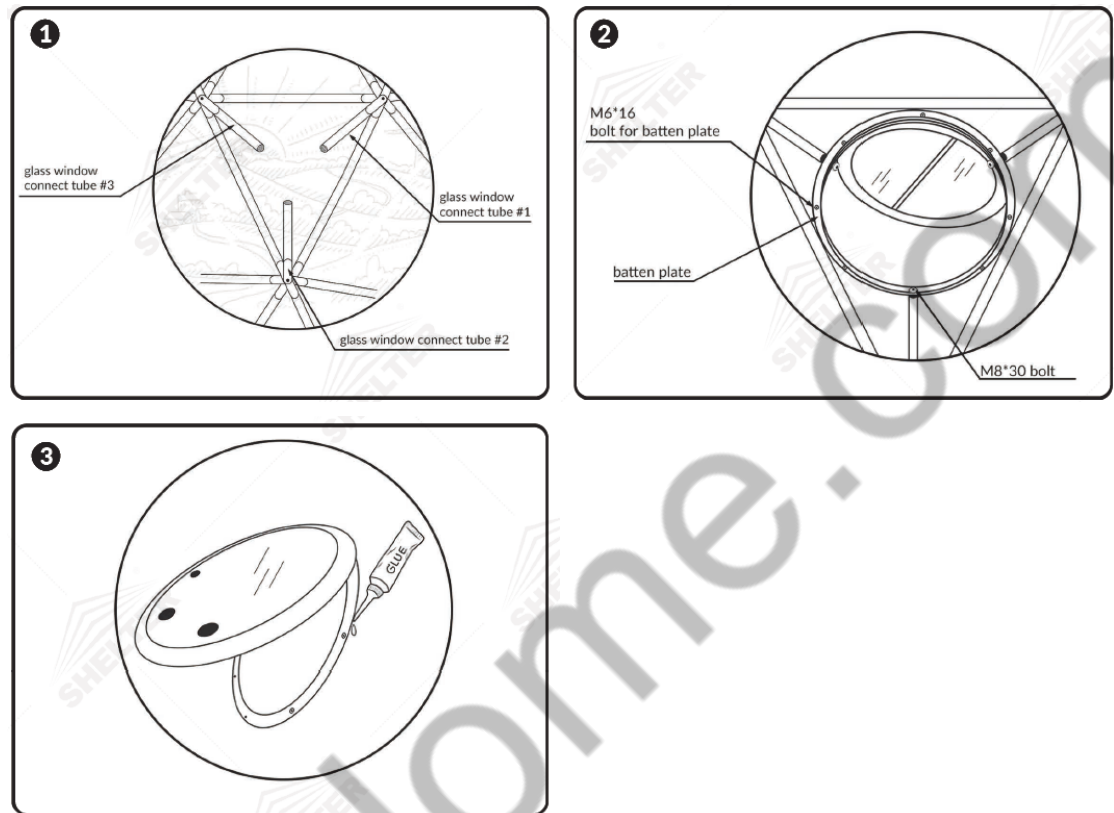
**Note:** Prepare glass window's support tubes (with hollow thread, tube number specified in *Packing List*) and metal seal strips (batten plates).



1. Install the 3 support tubes, attach on the nearby 3 framework notes.
2. Cut the PVC fabric carefully, connect the glass window and the 3 support tubes with bolt

"M8\*30", then fix the metal seal strips by bolt "M6\*16".

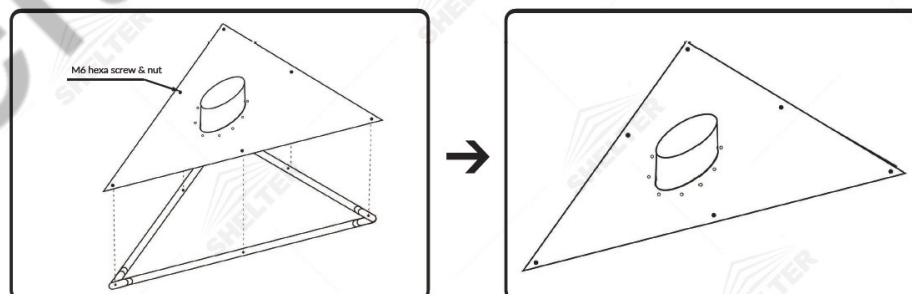
3. Seal glue between the outer cover and the metal seal strips.



## STOVE JACK

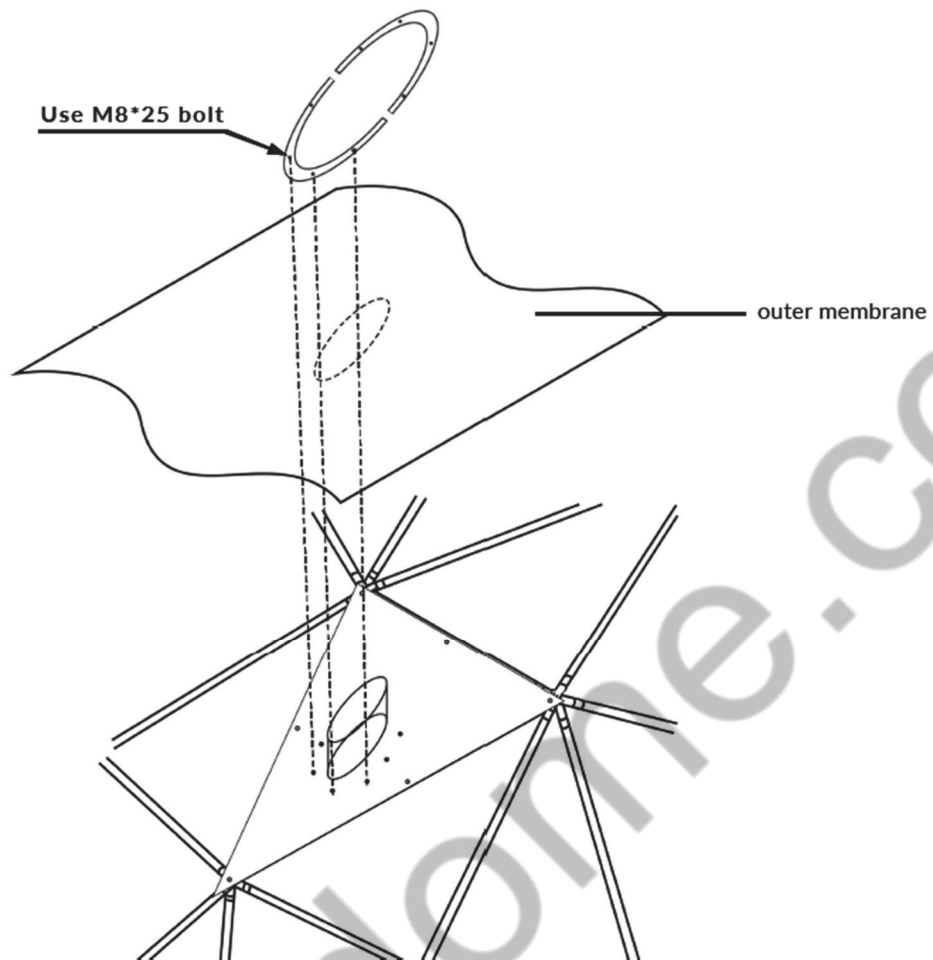
### 1. Stove Jack Panel Installation

Find the stove jack's placement, fix stove jack triangle panel on the related pre-drilled tubes by M6 hexagon head bolts ( $\Phi 20\text{mm}$  tube/"M6\*30",  $\Phi 25\text{mm}$  tube/"M6\*40",  $\Phi 32\text{mm}$  tube/"M6\*45").

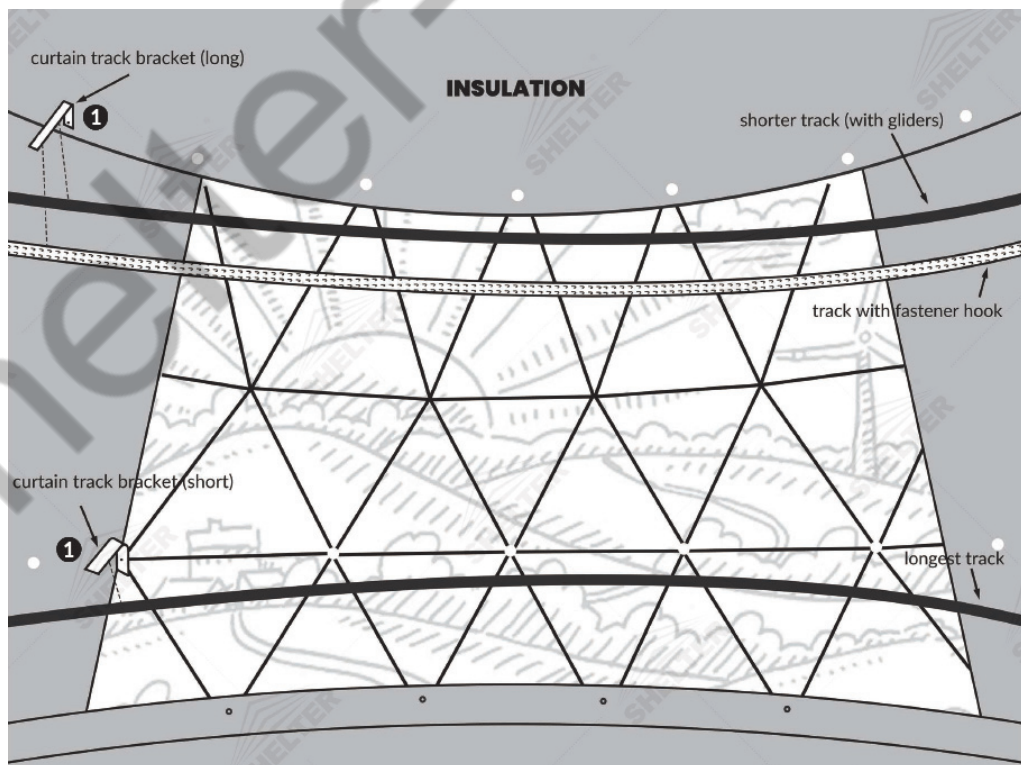


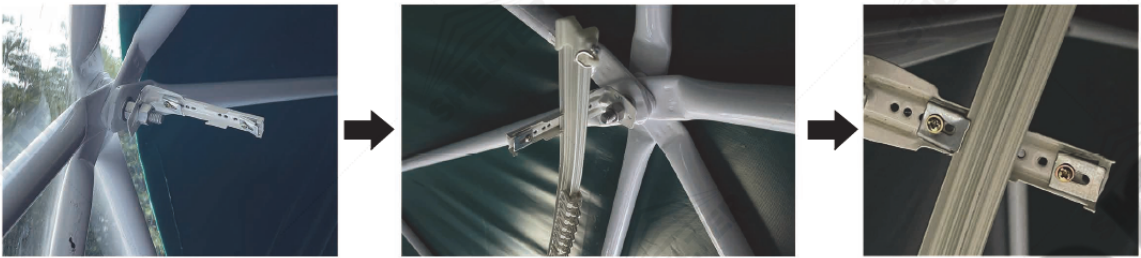
### 2. Securing

Fix the metal seal strips by bolt "M8\*25", seal glue between the outer cover and the metal seal strips.



## CURTAIN



**1****STEP 1**

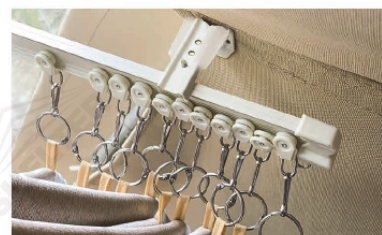
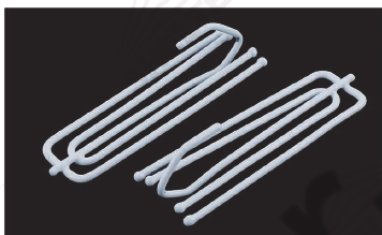
Install the curtain track bracket (short) and curtain track bracket (long) on the framework's nodes at the transparent bay window area. Place the long bracket upper, short bracket lower.

**STEP 2**

Attach the curtain track to the brackets and screw to fasten up. Place the longest track lower, shorter track (with gliders) upper, and fix the left track (with hook-and-loop fastener) in front of the upper track.

**STEP 3**

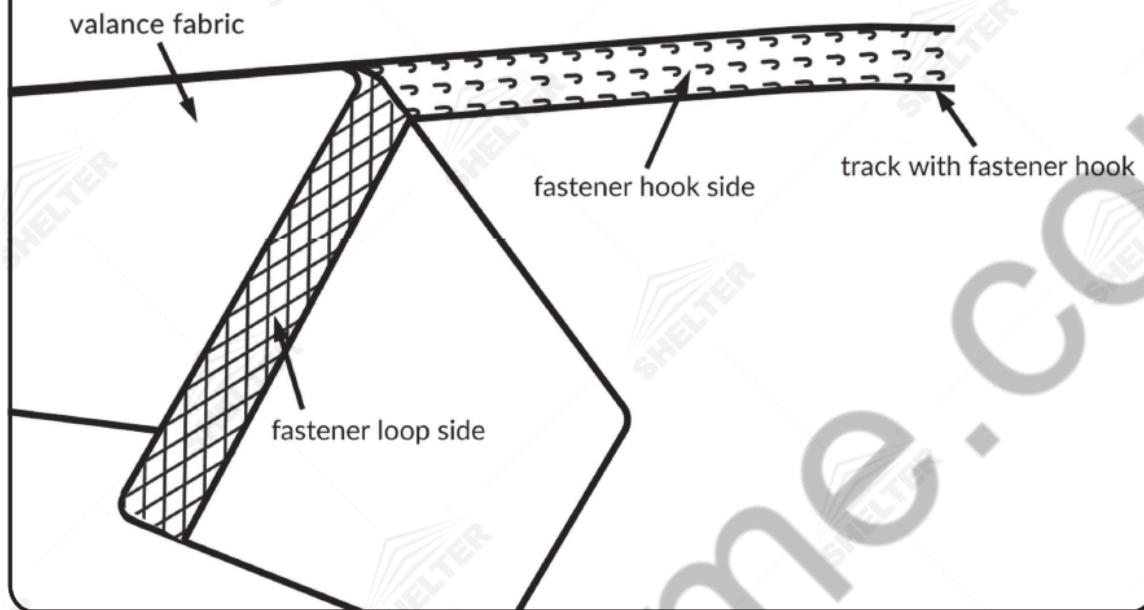
Attach the top of curtain fabric to the upper track (with gliders) by curtain hooks, and attach the lower fabric to the lower track with curtain buckles.





#### STEP 4

Attach the valance fabric (with oop fastener) to the upper track (with hook fastener).



### AUTOMATIC SHADES

#### 1. Framework Tubes Check

When the dome is equipped with automatic shades, the very top round of horizontal frame tubes includes 4 pcs with predrill in the middle.

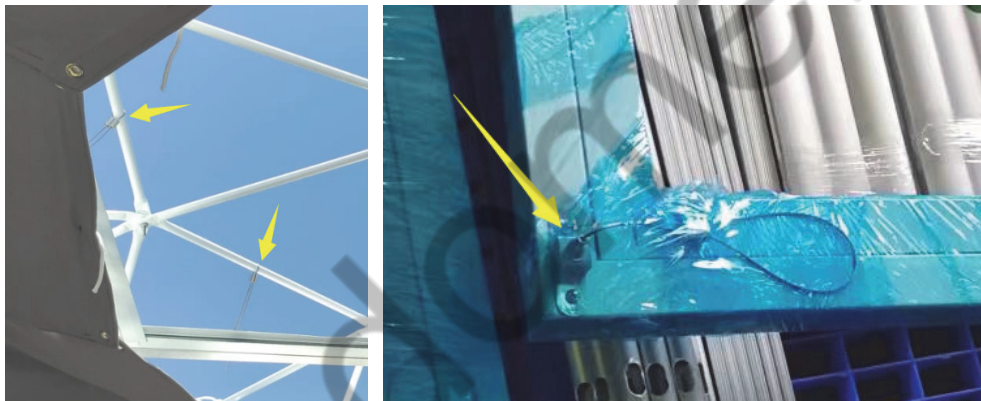
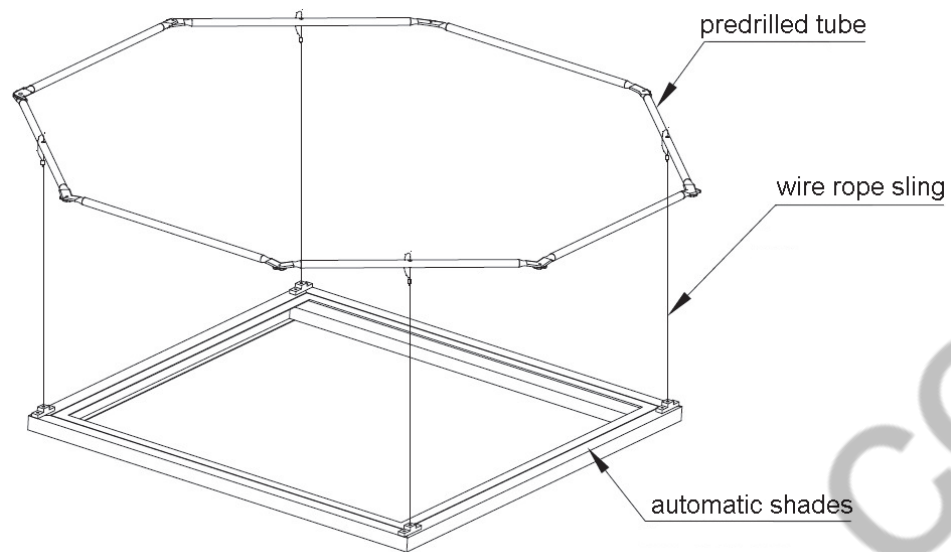
Please check the framework page and insulation page in the order's *Technical Drawing Guide* to find the predrilled tubes' placement.

Make sure in STRUCTURE step the 4 tubes at the correct placement.

#### 2. Automatic Shades Installation

The automatic shades has adjustable wire rope slings at the 4 right-angles. Have the wire rope sling go through the drill on the tube, pull the wire rope slings till the automatic shades reaches the very top, then adjust the wire rope slings to secure.





### 3. Connecting Insulation

Stick the hook-and-loop fastener tape on the automatic shades' frame, attach the near insulation pieces' edge (with hook-and-loop already) to the hook-and-loop fastener on automatic shades.