

# Shelter Livestock 2020

Model: TMG-ST2020L



Please read the instructions **COMPLETELY** before assembly.

This shelter might not be suitable for local bylaws or weather conditions. It is the owner's responsibility to ensure the installation and use of this building are permitted by local authorities. Some municipalities may require engineering drawings to be submitted. It is the owner's responsibility to hire an engineer to submit drawings if required.

## **Main Specifications :**

- Overall assembled size : W6 x L6 x H3.7 (m) / 20 x 20 x 12 (ft)
- Shoulder height : 2.2 (m) / 7.2 (ft)
- Front door : 1.85 x 2.5 (m) / W6 x H8 (ft)

## **Prior to assembly**

Please read the instructions carefully before installation. It is important to follow your local safety regulations and industry standards during installation. Regulations may include but are not limited to :

- Safety helmets, protective eyewear, and clothing
- Safety harnesses for all elevated workers
- Proper ladder, cage, and safety operation

Check all components and parts before installation. All parts are marked with a part number, please refer to the parts list to make sure you have all parts.

Choose a day with low or no wind to install, assembly is hard in heavy wind. Do not make any alterations to the structure. Do not hang any weights on the frame during installation, including parts. We are not responsible for any damages or injuries caused by inappropriate installation, unauthorized modifications or extreme weather.

This building is not intended for human occupancy.

It is recommended to tape or add foam/rubber on the frame where joints connect and where it touches the cover. This will help extend the life span of the cover.

Read the following item list carefully and count the number of items to ensure that all parts are included prior to setup.

## **Installation steps**






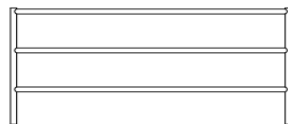
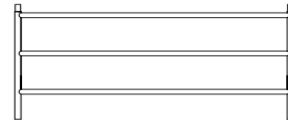
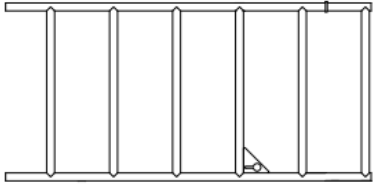
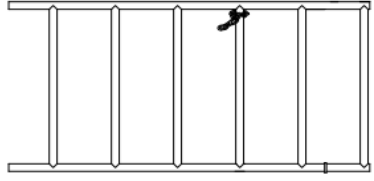

### **Step 1 : Review the whole structure and choose the proper installation site**








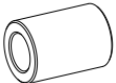
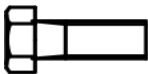
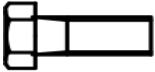
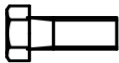

Choose a solid flat level ground area to set up the building. Do not install the building on soft ground, wetland, uneven surfaces, sloped surfaces, or on top of structures that are not rated to hold its weight.

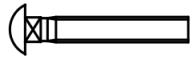
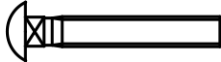

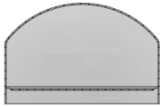


We strongly recommend that you build the structure on a solid foundation such as cement and use anchor bolts on all baseplates.

Be aware of the surrounding area. Do not set up the building near snowdrifts, open flames or exposed electrical wires. Do not keep heat sources near the fabric cover. Keep the building surroundings clear at all times

**TMG-ST2020L**

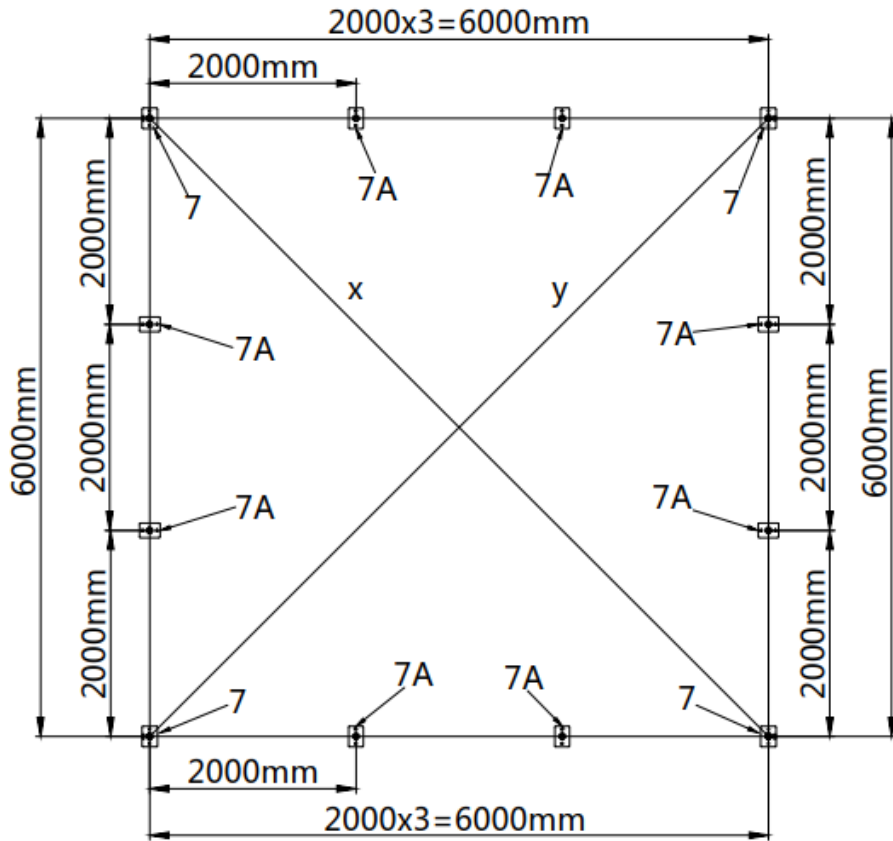
<b>Parts code</b>	<b>Graphical</b>	<b>Description</b>	<b>Qty</b>	<b>BOX</b>
1		Peak arch tube	4	1/1
2		Middle rafter tube	8	1/1
3		Shoulder tube	8	1/1
4		Sidewall tube	12	1/1
5		Roof purlin (horizontal tube)	15	1/1
6		Upper fence	11	1/1
6A		Lower fence	11	1/1
6L		Left door	1	1/1
6R		Right door	1	1/1
7		Corner baseplate (front and rear truss)	4	1/1

7A		Middle truss baseplate	8	1/1
8		Front door upper column pipe	2	1/1
8A		Rear door upper column pipe	2	1/1
8B		Tube clamp	4	1/1
9		Front door cross pull tube	1	1/1
10		Double fastener	48	1/1
10A		Single fastener	48	1/1
10B		Washer	6	1/1
11		Hex bolt M10x60mm	72	1/1
11A		Hex bolt M10x80mm	4	1/1
11B		Hex bolt M10x40mm	4	1/1
12		Expansion bolt $\phi$ 16x150mm	24	1/1

13		Half round head bolt M8x70mm	80	1/1
13A		Half round head bolt M10x80mm	20	1/1
14		Top cover	1	1/1
15		Rear cover panel	1	1/1
16		Braided rope (100m)	1	1/1
17		Waterproof plug	26	1/1

### Step 1 : Baseplate positioning and installation

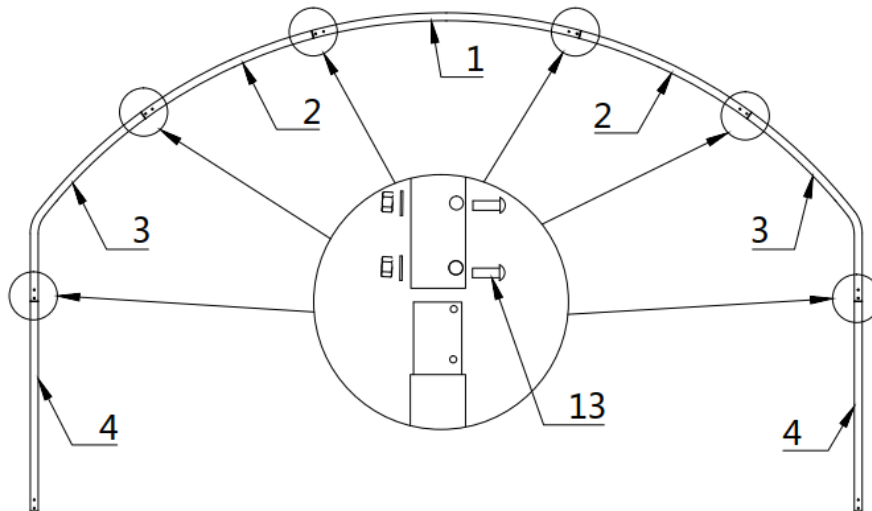
- Mark the ground in the final building location with a line showing the positions of base plates, front, and rear doors. All lines should be drawn from center to center of all baseplate tubes. Diagonal line X must be equal to Y.
- Baseplates : all baseplates must be installed firmly with expansion bolts (#12) on this step (Picture 1)
- Parts used in this step :
  - (4) Corner baseplate (#7)
  - (8) Middle truss baseplate (#7A)
  - (24) Expansion bolt (#12)



**Picture 1**

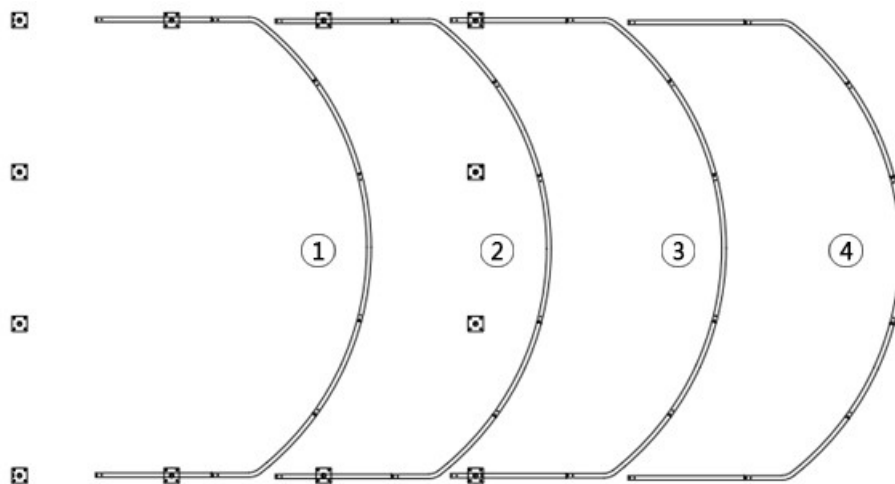
## Step 2 : Assemble all trusses

- The building includes 4 trusses, the installation method of each truss is the same.
- Parts used to install all trusses in this process (refer to Picture 2):
  - (1x4) Peak arch tube (#1)
  - (2x4) Middle rafter tube (#2)
  - (2x4) Shoulder tube (#3)
  - (2x4) Sidewall tube (#4)
  - (12x4) Half round head bolt (#13)



**Picture 2**

- Lay down all 4 trusses on the ground as picture 3 when the assembly is all completed and before moving to next step (refer to Picture 3).



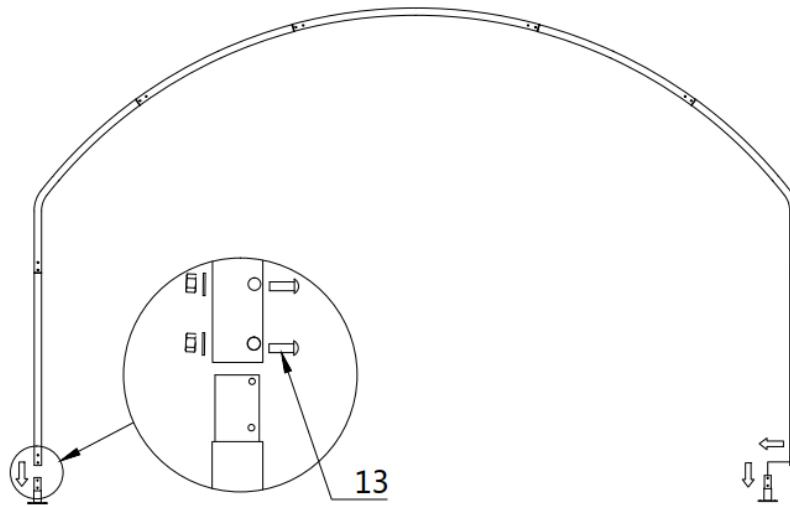
**Picture 3**

### **Step 3 : Put up all truss**

- Team can use ropes to lift the trusses, but you have to make sure it is safe, and have enough manpower. We recommend 3 to 5 people to pull the truss up from different directions. When the truss is up, tie the ropes to the heavy objects to make sure the truss will stay upright and use bolt (#13) to connect the truss to the baseplate on both sides (Picture 4).

- Parts used in this step :

- (4x4) Half round head bolt (#13)



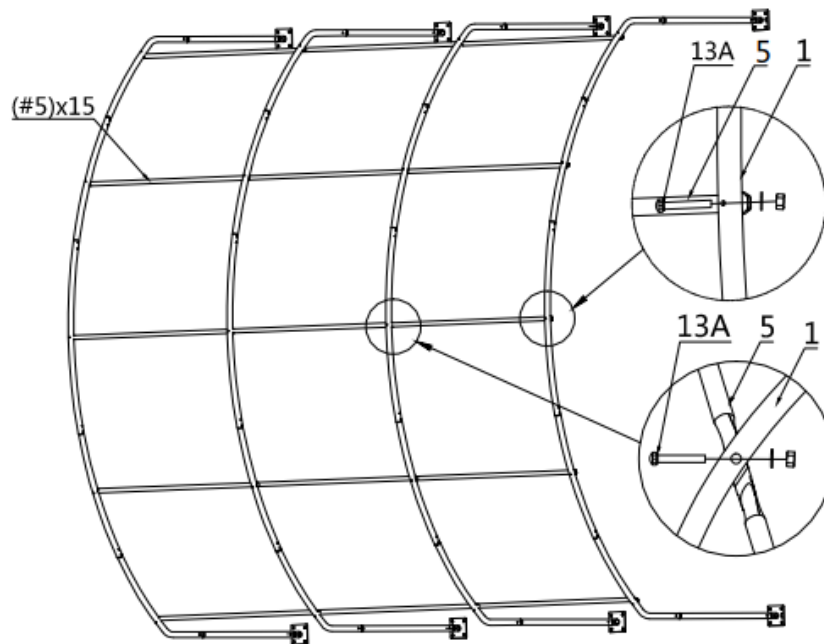
**Picture 4**

**Step 4 : Connect all roof purlin**

- Refer to step 3 to put up the rest trusses, connect all purlins (#5) with bolt (#13) and secure all bolts firmly on each span before going to next truss (Picture 5).

- Parts used in this step :

- (15) Roof purlin (#5)
- (20) Half round head bolt (#13A)

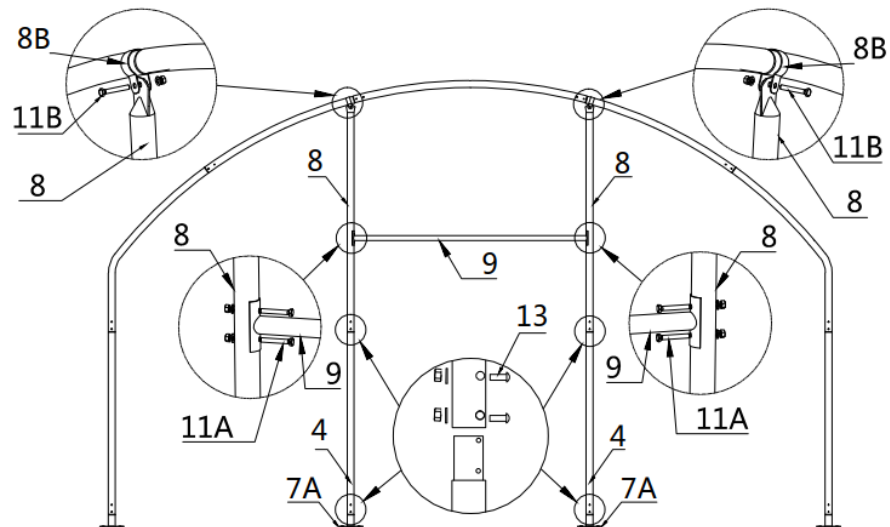


**Picture 5**



### Step 5 : Install front truss (Picture 6)

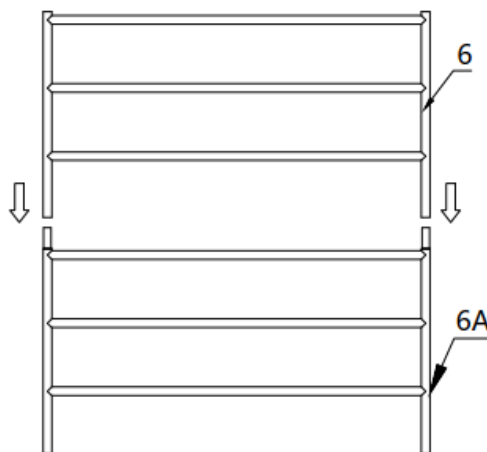
- Parts used in this step :
  - (2) Front door upper column pipe (#8)
  - (1) Front door cross pull tube (#9)
  - (2) Sidewall tube (#4)
  - (2) Tube clamp (#8B)
  - (2) Hex bolt (#11B)
  - (4) Hex bolt (#11A)
  - (8) Half round head bolt (#13)



Picture 6

### Step 6 : Assemble all the upper and lower fences as shown in (Picture 7)

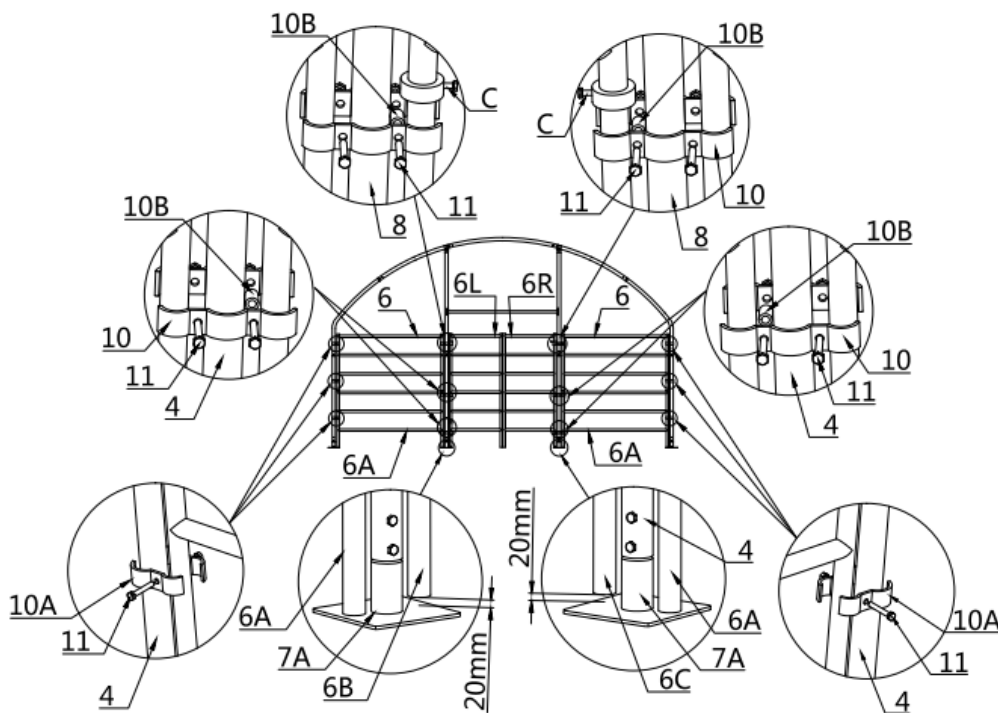
- Parts used in this step :
  - (11) Upper fence (#6)
  - (11) Lower fence (#6A)



Picture 7

### Step 7 : Install the front door enclosure (Picture 8)

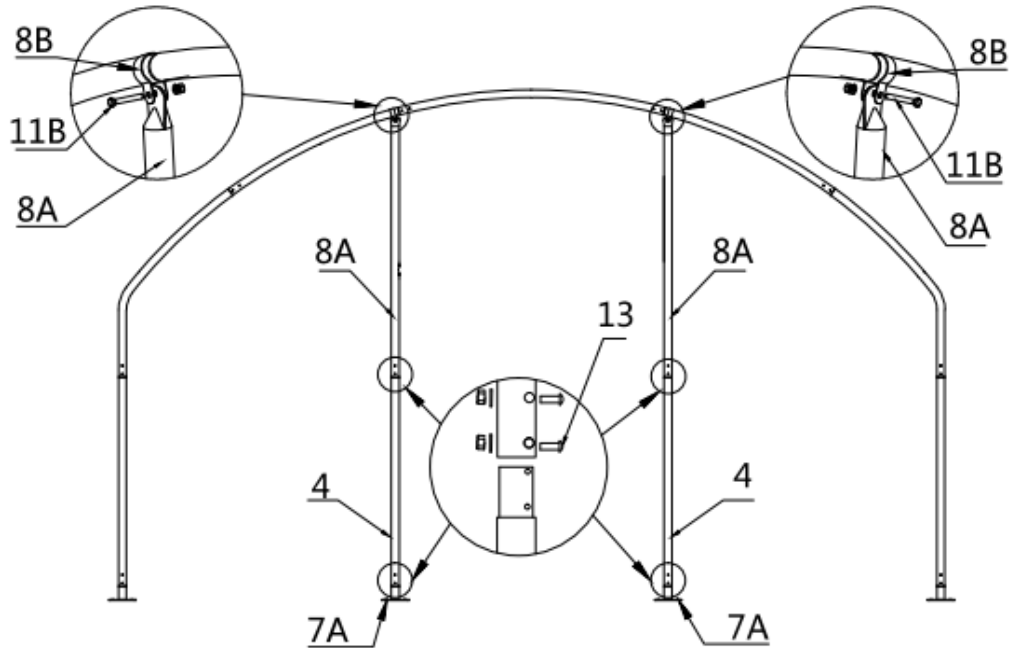
- Install the left and right mechanical doors, fix the mechanical doors with double fasteners (#10) and the fences assembled in step 6. Adjust the height of the mechanical door to the base plate by 20 mm, adjust the locating iron ring on the mechanical door to match the upper double fasteners, tighten the bolt C, The left and right mechanical doors are installed symmetrically. The fence and truss are fixed with single fastener(#10A) and locked with (#11) hexagon bolt.
- Parts used in this step :
  - (1) Left door (#6L)
  - (1) Right door (#6R)
  - (12) Double fastener (#10)
  - (12) Single fastener (#10A)
  - (6) Washer (#10B)
  - (18) Hex bolt (#11)



Picture 8

### Step 8 : Install the rear truss (Picture 9)

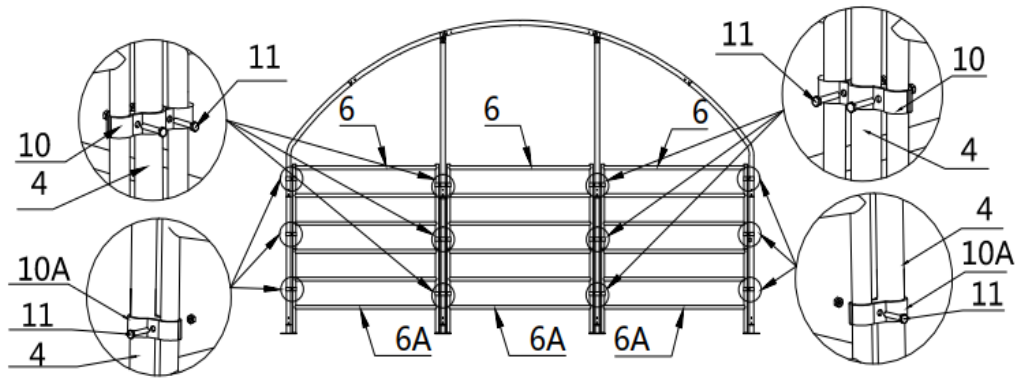
- Parts used in this step :
  - (2) Rear door upper column pipe (#8A)
  - (2) Sidewall tube (#4)
  - (2) Tube clamp (#8B)
  - (2) Hex bolt (#11B)
  - (8) Half round head bolt (#13)



Picture 9

### Step 9 : Installation of rear fence (Picture 10)

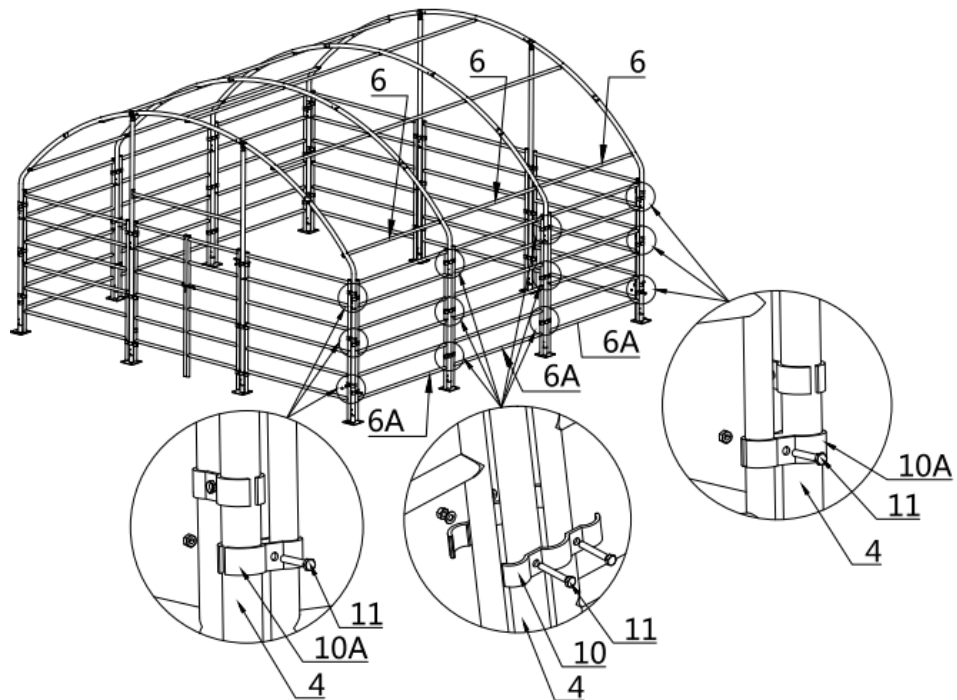
- Both sides of the fence are fixed with single fastener (#10A) and truss, and the middle is fixed with double fastener (#10), and locked with hex bolt (#11).
- Parts used in this step :
  - (12) Double fastener (#10)
  - (12) Single fastener (#10A)
  - (18) Hex bolt (#11)



**Picture 10**

**Step 10 : Install fences on both sides**

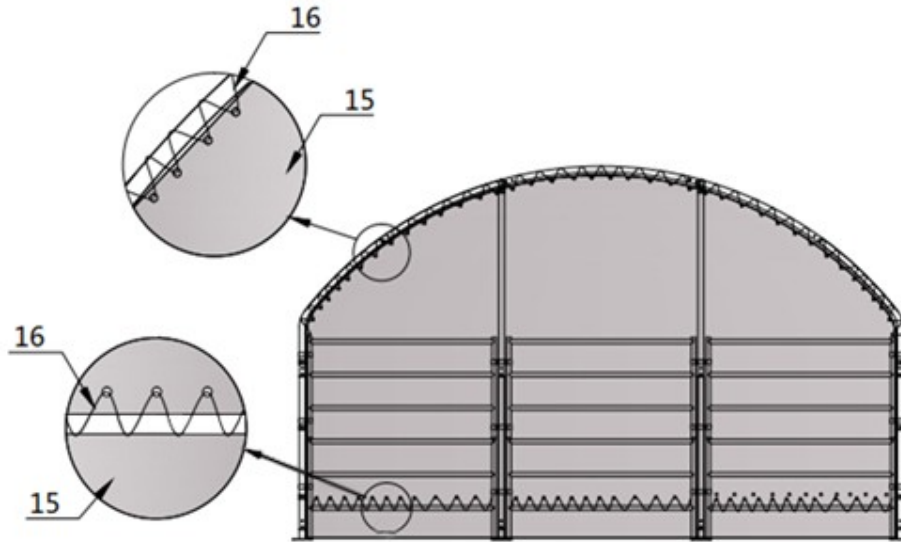
- Install the fence between the trusses, the left and right trusses and fences are fixed with single fastener (#10A), middle trusses and fences are fixed with double fastener (#10), and locked with hex bolt (#11) , same installation method on both sides (Picture 11).
- Parts used in this step :
  - (24) Double fastener (#10)
  - (24) Single fastener (#10A)
  - (36) Hex bolt (#11)



**Picture 11**

### Step 11 : Install rear cover panel

- Use braided rope (#16) to lift up the rear cover panel (#15) from the center grommet and tie it firmly to the truss tube and spread toward both sides through each grommet along the tube (Picture 12 - view from inside).

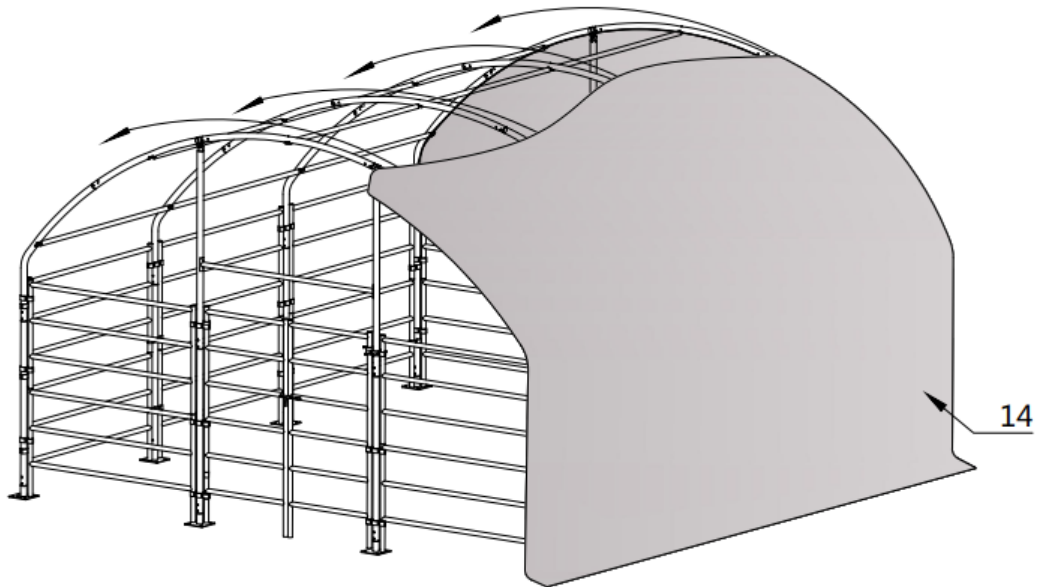


(Picture 12 - view from inside)

### Step 12 : Install top cover

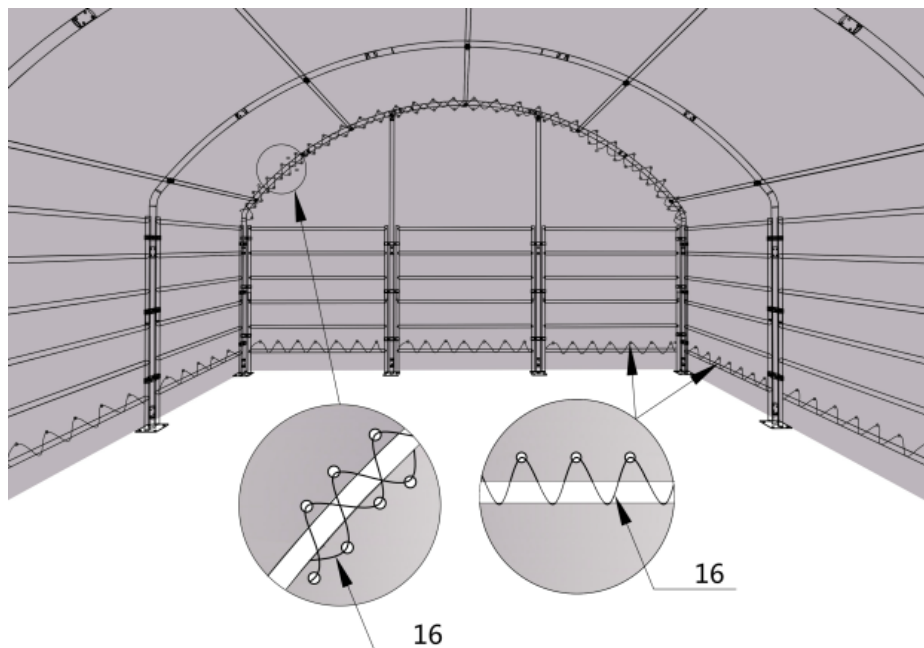
Do not install the cover during windy weather!

- Unpack the top cover and place it along one of the long sides of the structure.
- Use 3 to 5 ropes (#16) to pull the cover over the top of the structure, 2 or 3 people standing inside on ladders to push upwards will help to move the cover smooth without any damage (Picture 13).

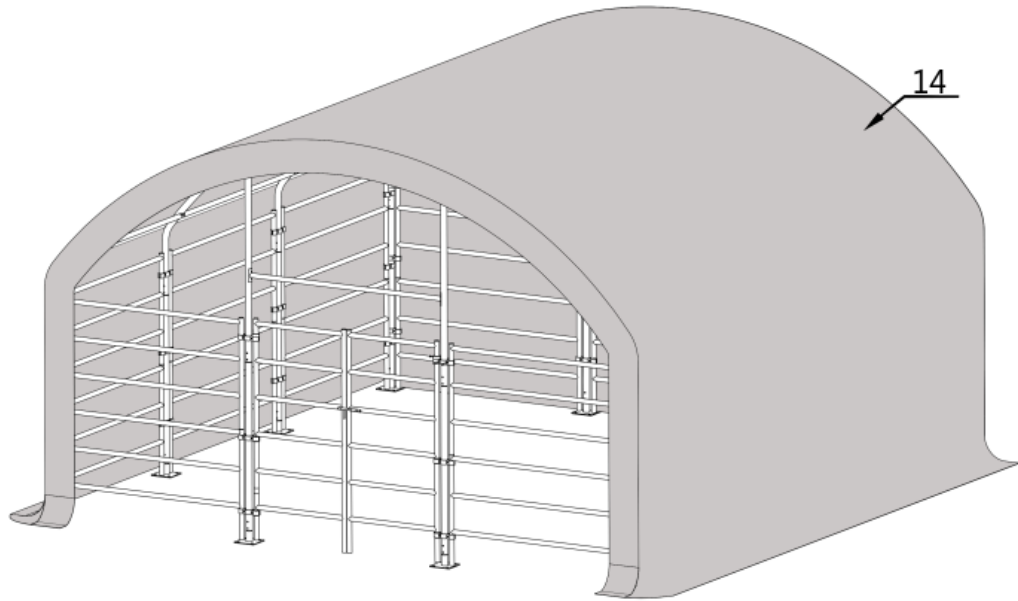


**Picture 13**

- The roof cover must be stretched and tied to the front and rear truss by rope going through the flap grommets on the cover. Start from the top center and go toward both side on each end. Add or cut the rope as needed.
- Pull and stretch the cover enough only to take wrinkles out. Repeat for the rear truss. Do not over stretch as it could rip off the grommets (Picture 14).



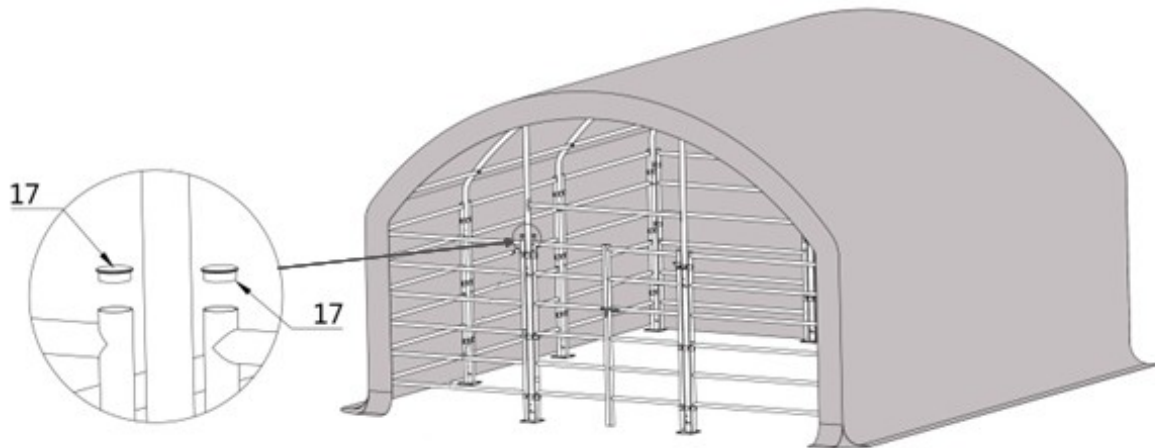
**(Picture 14 - view from inside)**



**Picture 15**

**Step 13 : Install the waterproof plug**

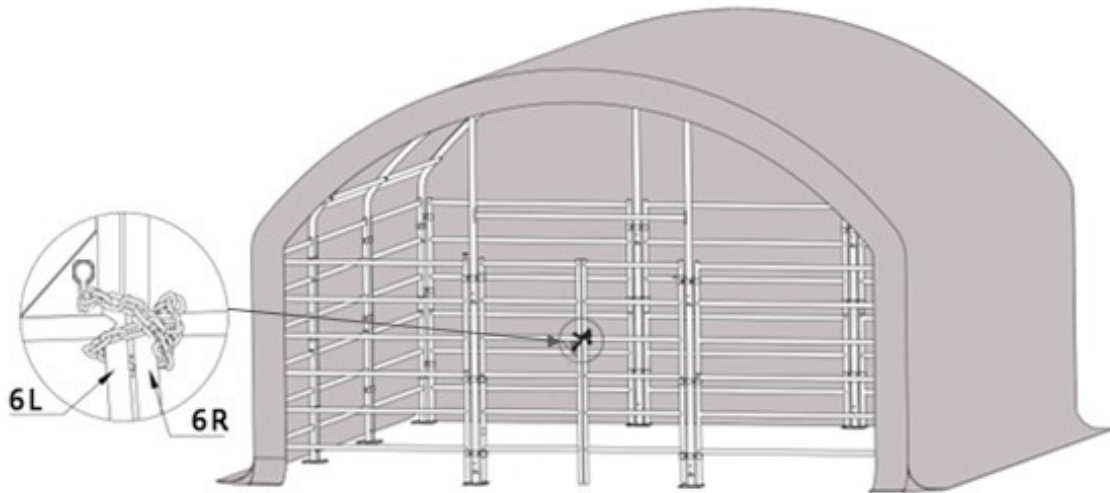
- Install waterproof plug (#17) on the pipe head at the upper end of all upper fence (#6), left door (#6L) and right door (#6R) (Picture 16).
- Parts used in this step :
  - (26) Waterproof plug (#17)



**Picture 16**

## Step 14 : Method of use of door chain

- Wrap the two round pipes of the mechanical door with a chain and clip the chain into the plate slot of the left door (Picture 17).



**Picture 17**

## After the Installation

Walk around and inspect the shelter periodically to make sure all components are still firmly secured and the whole shelter is well supported. Check all bolts and nuts as well as all connection points to make sure they are all in good position. Check the base plates, adjust the ropes and tie downs if required and clean the cover regularly.

Snow accumulating on the fabric cover must be removed as soon as possible. If snow becomes solid ice on the cover, it will increase the weight on the roof and may collapse the shelter or reduce the life span.

Keep the shelter on a dry ground most of the time. Do not keep the fabric dirt skirt under water all the time, otherwise the fabric will deteriorate.

We strongly recommend you remove any snow from the roof immediately. Do not leave any snow load on the roof overnight. Keep 3 feet of clearance on all sides at all times. Do not allow snow to accumulate and pile up on the sides of the building. Otherwise the pressure from the sides will push inwards and could lead to a collapse.