

This manual is intended to provide buyers with a comprehensive and practical installation guide, please be sure to read through each section of the manual before starting assembly. These contents will help you gain a comprehensive understanding of the device structure and workflow. In addition, we can provide all products related to greenhouse support as well as other types of greenhouses on request. Contact us if necessary.

*The images in this manual are for reference only. Please refer to the actual product inside the packaging.

CONTENT

Illustration of the connecting piece.....	3
Illustration of greenhouse structural components.....	4
Schematic diagram of greenhouse skeleton.....	5
Step 1 Site adjustment.....	6
Step 2 Install the arch tube.....	8
Step 3 Install the horizontal tie rod.....	9
Step 4 Install the top longitudinal tie rod.....	10
Step 5 Install the diagonal brace.....	11
Step 6 Install the end face column.....	12
Step 7 Install the door.....	13
Step 8 Install the lock channel.....	15
Step 9 Install the film and insect proof net	18
Step 10 Install the film roll up unit.....	21
Other optional equipment.....	23

Illustration of the connecting piece



Hex bolt



Hex nut



Self-tapping screw



Hoop



Lock channel connector



Alt lock channel set



Double U-shaped clamp



Film Clamp



Wiggle wire



Clamp



Lock channel

Illustration of greenhouse structural components



V-shaped rod



Top arch tube



Side arch tube



Column arch tube



Horizontal tie rod1

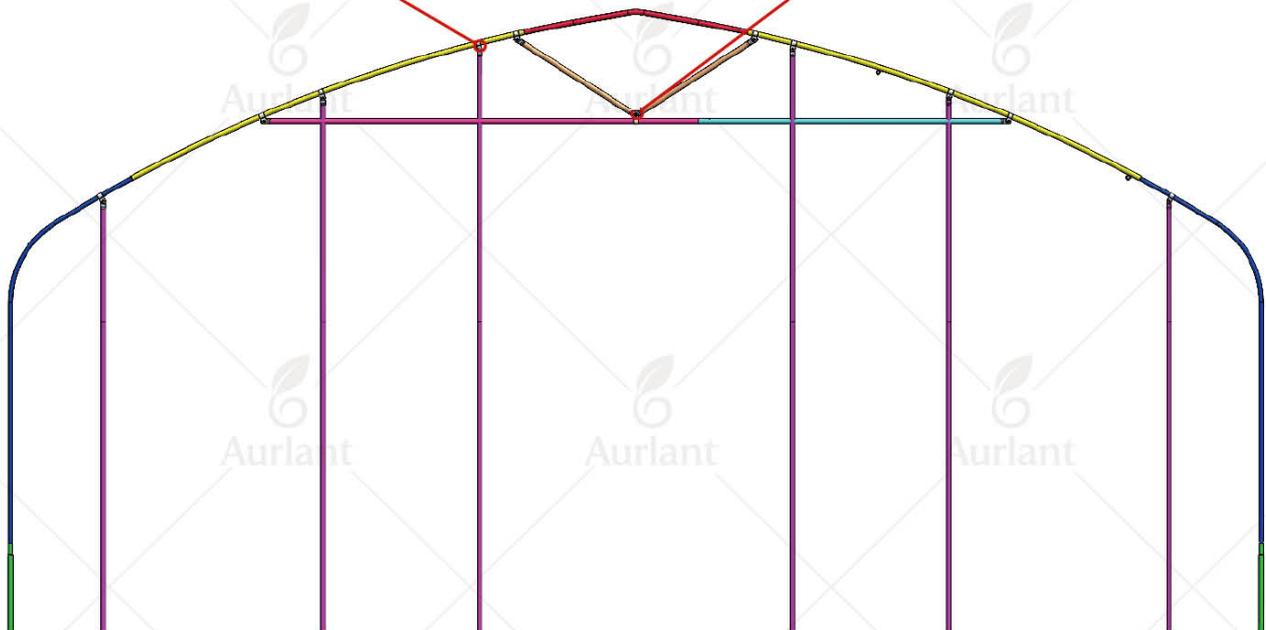
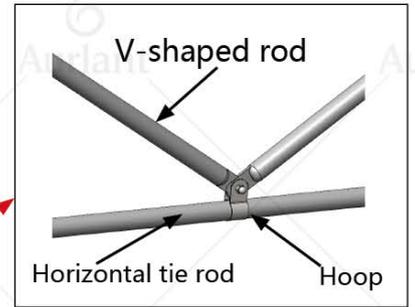
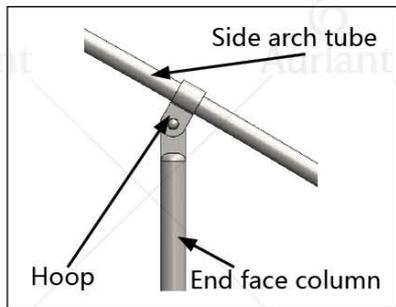
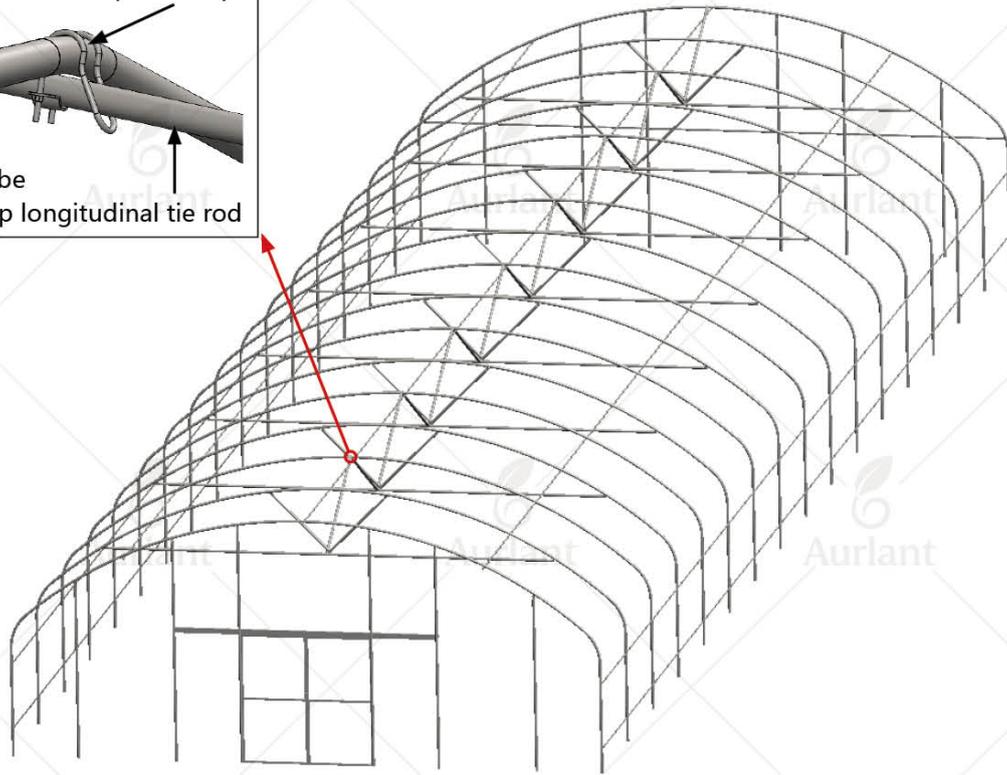
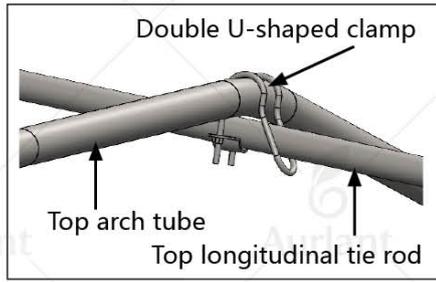


Horizontal tie rod2



End face column

Greenhouse skeleton diagram



Greenhouse installation process

Step 1 Site adjustment

Step 1 Required Parts:

Embedded parts

Step 1.0 Make sure your site is as flat as possible. It is essential to keep the site level from beginning to end, and the height difference should not exceed a few inches.

If you encounter rocks or very hard soil, it is recommended to consider renting a power drilling machine or digging a continuous ditch and backfilling with flat soil.

1.1 Fixed point of embedded parts: As shown in the figure below, if the greenhouse floor has not been hardened, the four points A, B, C, and D are used as the reference points to determine the position of the embedded parts; if the greenhouse floor has been hardened, the four points A, B, C, and D are used as the reference points to determine the position of the fasteners.

The greenhouse size is 9m*32m (other sizes can be customized on demand), and the dimensions are all "center measurements", so it is necessary to start measuring from the center of each column to determine its length direction, and ensure that the diagonals AC and BD are equal.

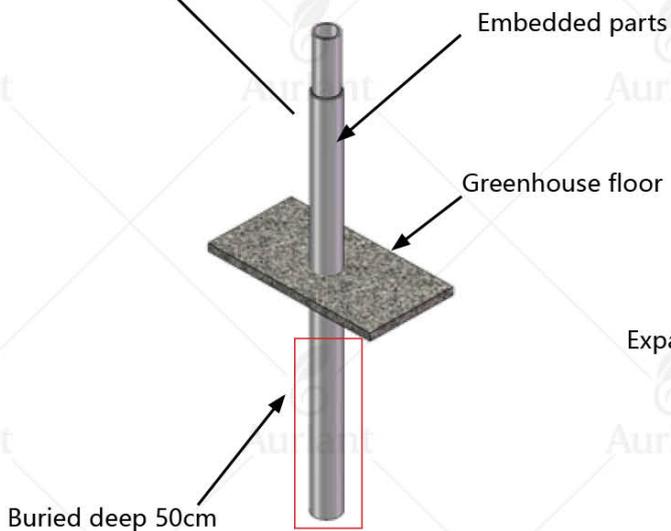
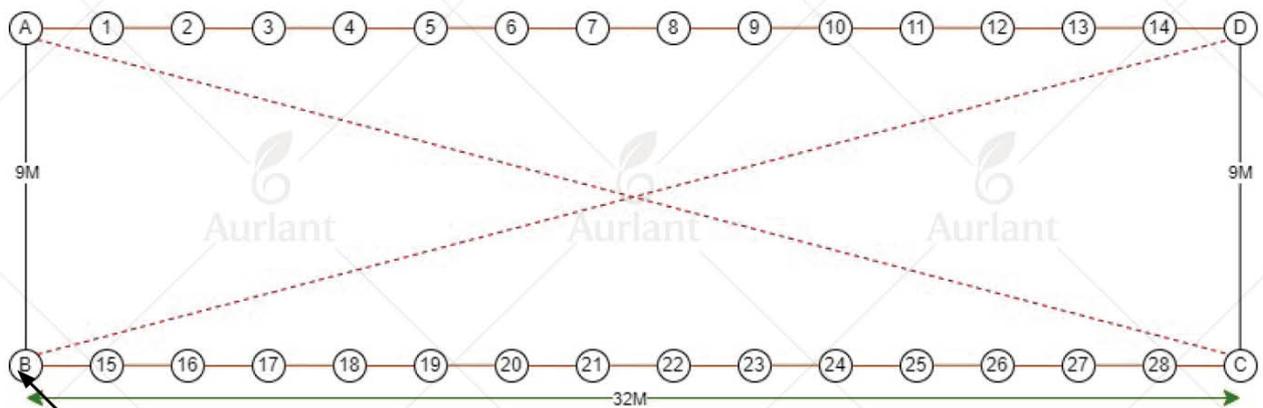


Figure 1-1 Embedded parts installation diagram

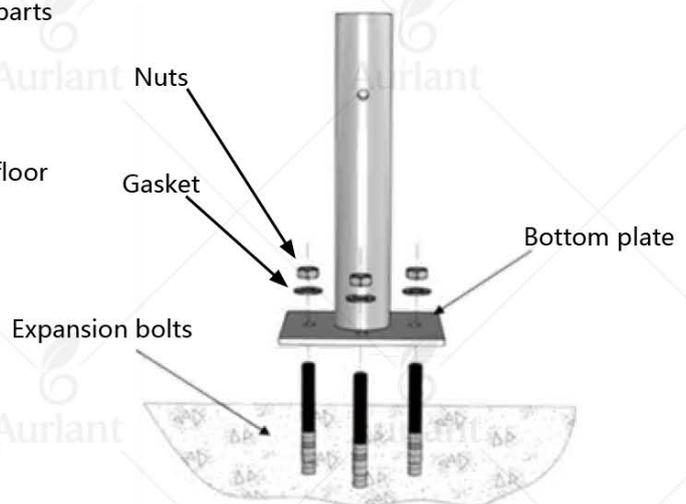


Figure 1-2 Fastener installation diagram

1.2 Pay-off measurement: the spacing between the embedded parts is 2 meters, and the embedded parts are fixed in turn through four reference points, and the on-site operation can be done by driving piles or vertical poles, using ropes and rulers to put all vertical poles on the same horizontal line to ensure that the greenhouse has a square structure.



Figure 1-3 Site leveling

Step 2 Install the arch pipe

Required parts for step 2:

Arch tube/Self-tapping screw

2.1 According to the fixed point of the embedded parts, first insert the column arch pipe into the embedded parts; then connect the column arch tube, side arch tube and top arch tube with Self-tapping screw, as shown in the figure below.

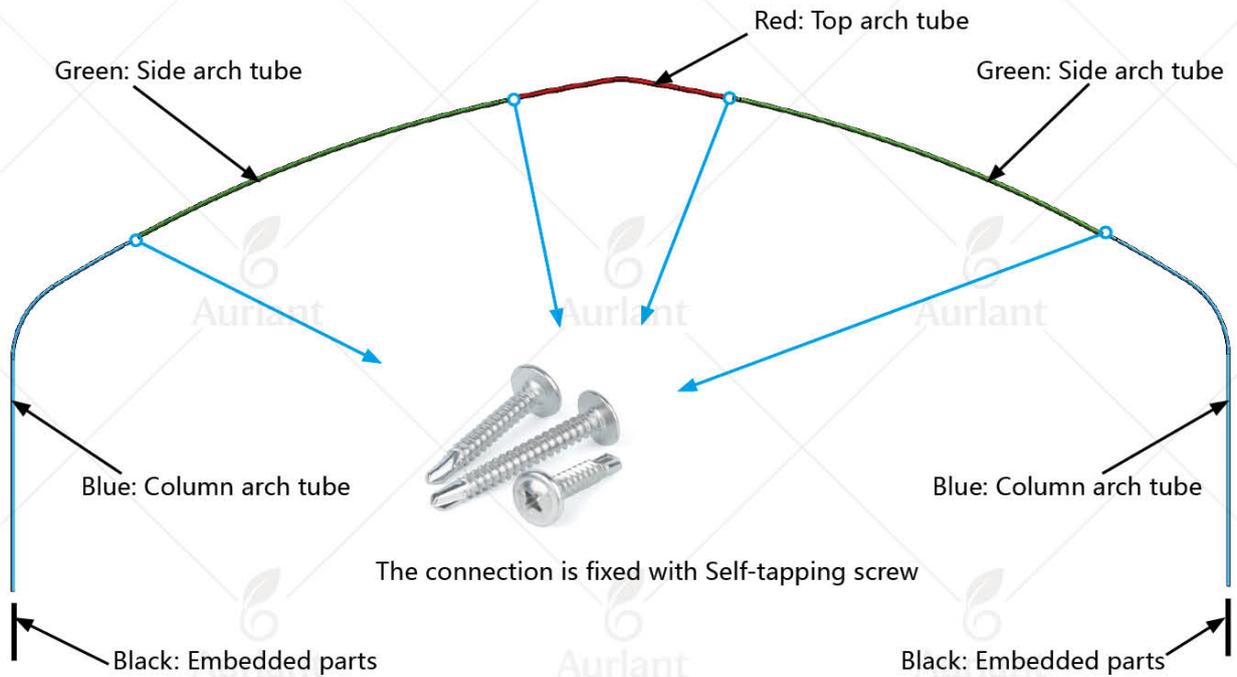


Figure 2-1 Schematic diagram of arch pipe installation

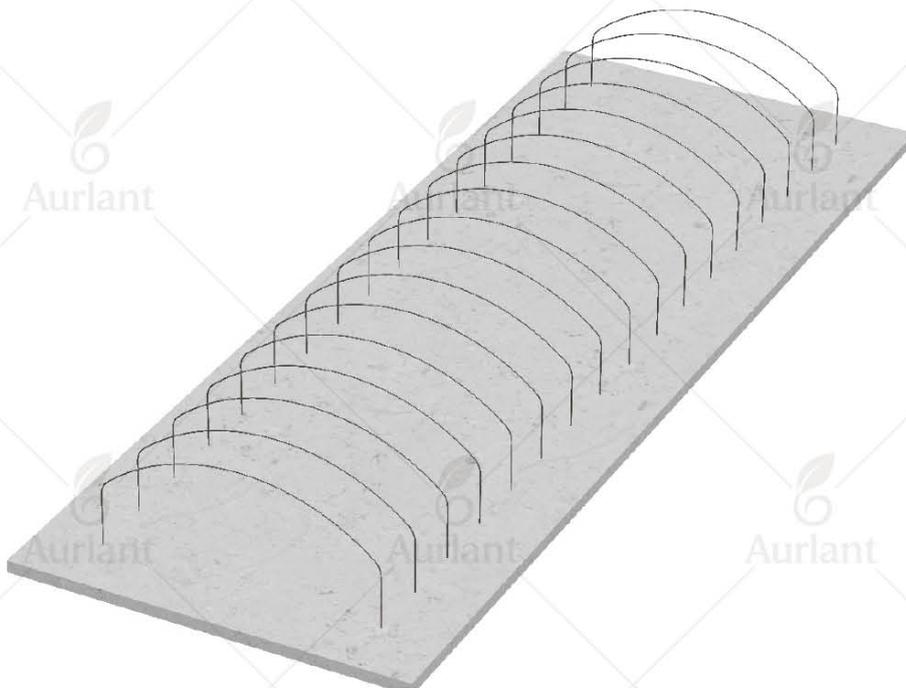


Figure 2-2 Schematic diagram of the completion of arch tube installation

Step 3 Install the horizontal tie rod

Required parts for step 3:

Horizontal tie rod/V-shaped rod/hoop/bolts and nuts

Connect the two ends of the horizontal tie rod with joints to the side arch tube at both ends through hoops, and then fix the V-shaped rod in the middle of the horizontal tie rod with hoops.

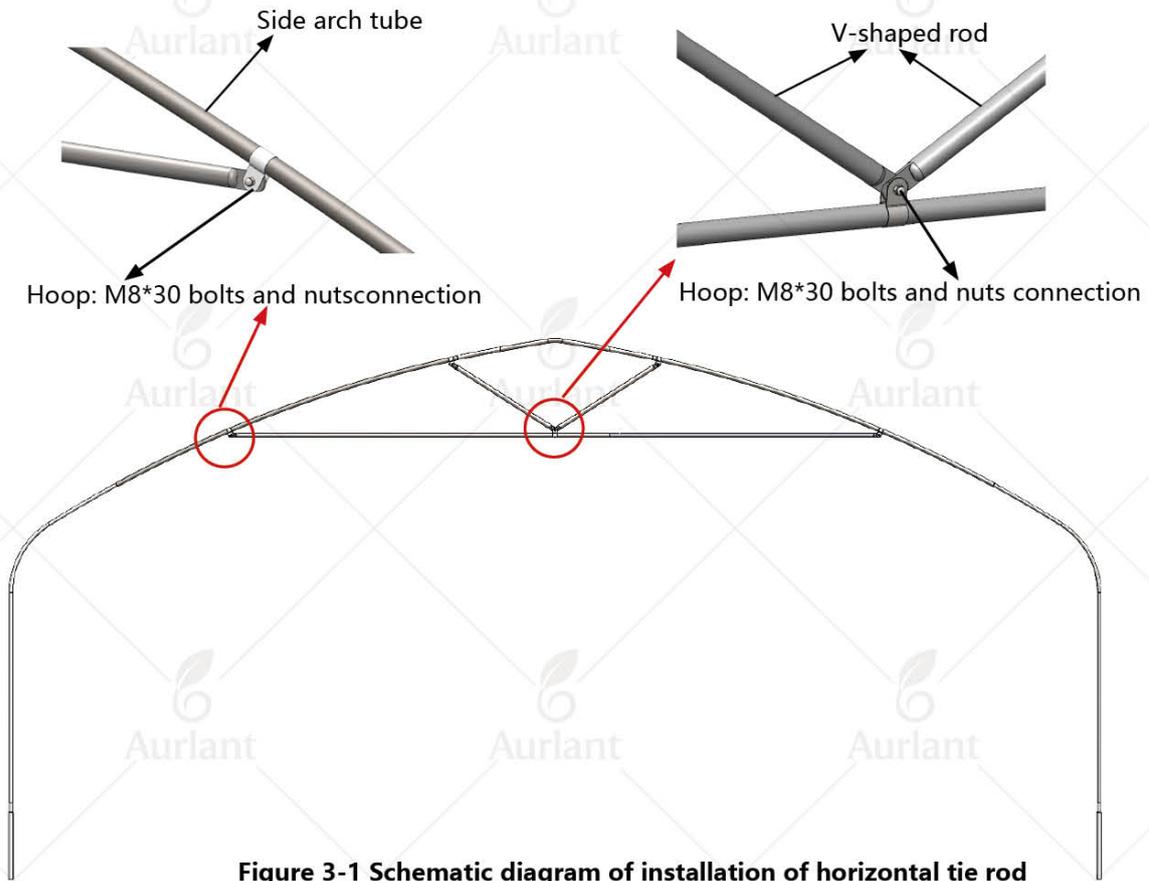


Figure 3-1 Schematic diagram of installation of horizontal tie rod

Note: The V-shaped rod are divided into horizontal and vertical, and the spacing between the horizontal V-shaped rod is 4m.

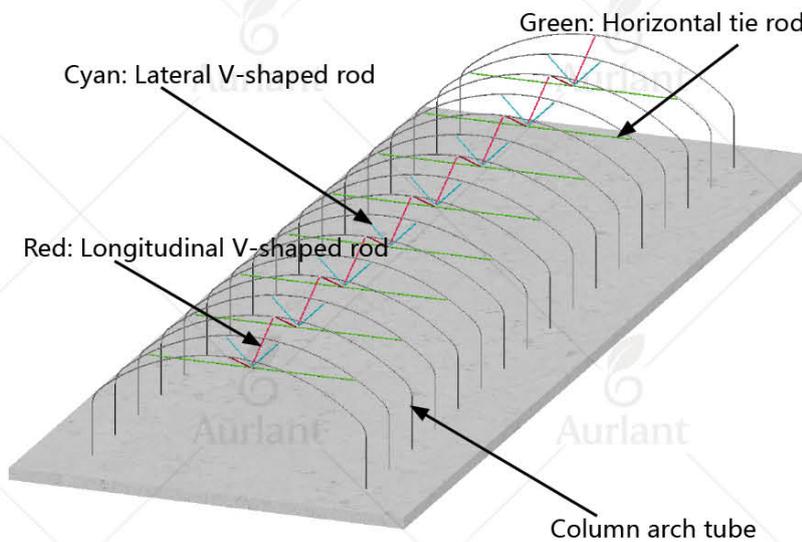


Figure 3-2 Schematic diagram of tie rod arrangement

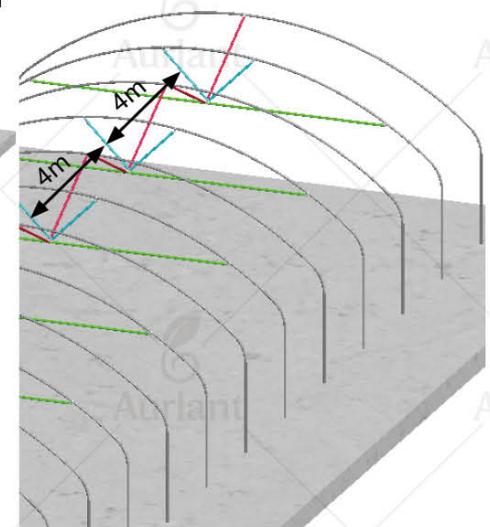


Figure 3-3 Schematic diagram of horizontal V-shaped rod spacing

Step 4 Install the top longitudinal tie rod

Step 4 Required Parts:

Top longitudinal tie rod/Tie rod sleeve/Double U-shaped clamp/clamp/bolts and nuts

4.1 After the installation of the horizontal tie rod is completed, the relative spacing of the arch tube needs to be fixed by the top longitudinal tie rod to avoid the tilt of the arch tube; the top longitudinal tie rod is connected to the top arch tube through a double U-shaped clamp. The bolts of the fixing parts need to be screwed until the tie rod and the connecting rod are completely fixed, with a total of three top longitudinal tie rods.



Double U-shaped clamp

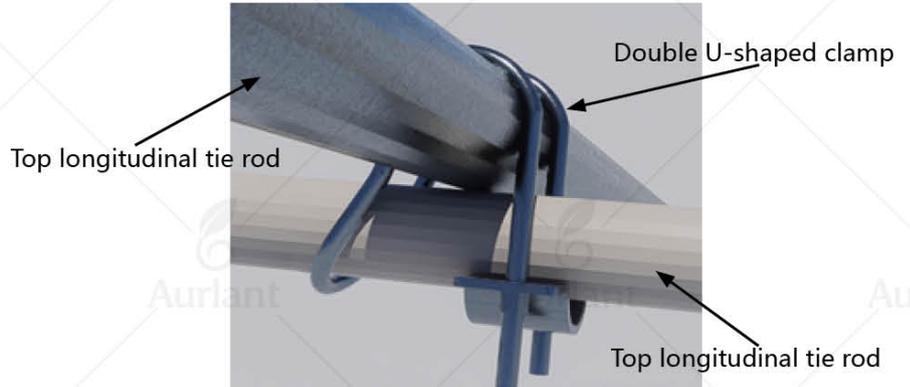
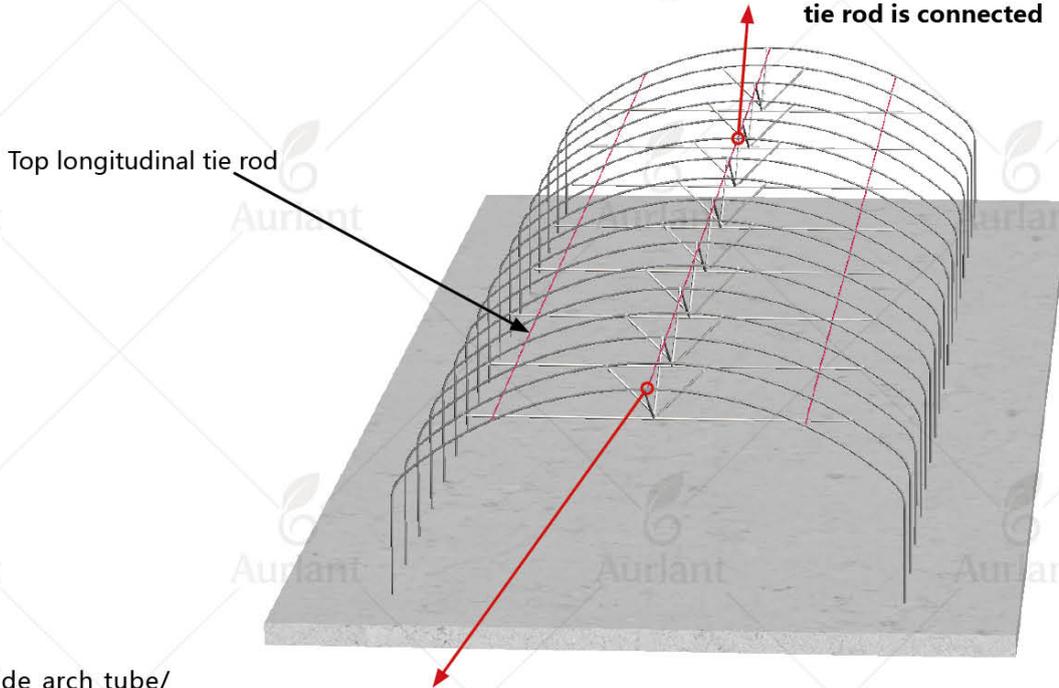


Figure 4-1 The middle of the top longitudinal tie rod is connected



Side arch tube/
Top arch tube



Clamp: M8*65 bolt and screw connection

Top longitudinal tie rod

Figure 4-2 The end of the top longitudinal tie rod is connected

Step 5 Install the diagonal brace

Step 5 Required Parts:

Diagonal brace/hoop/bolts and nuts

5.1 The diagonal brace adopts hoops and bolts in an "V" shape to connect the first arch tube and the second arch tube on the end face column. The front and rear two end faces (a total of four diagonal braces) are fixed in turn.

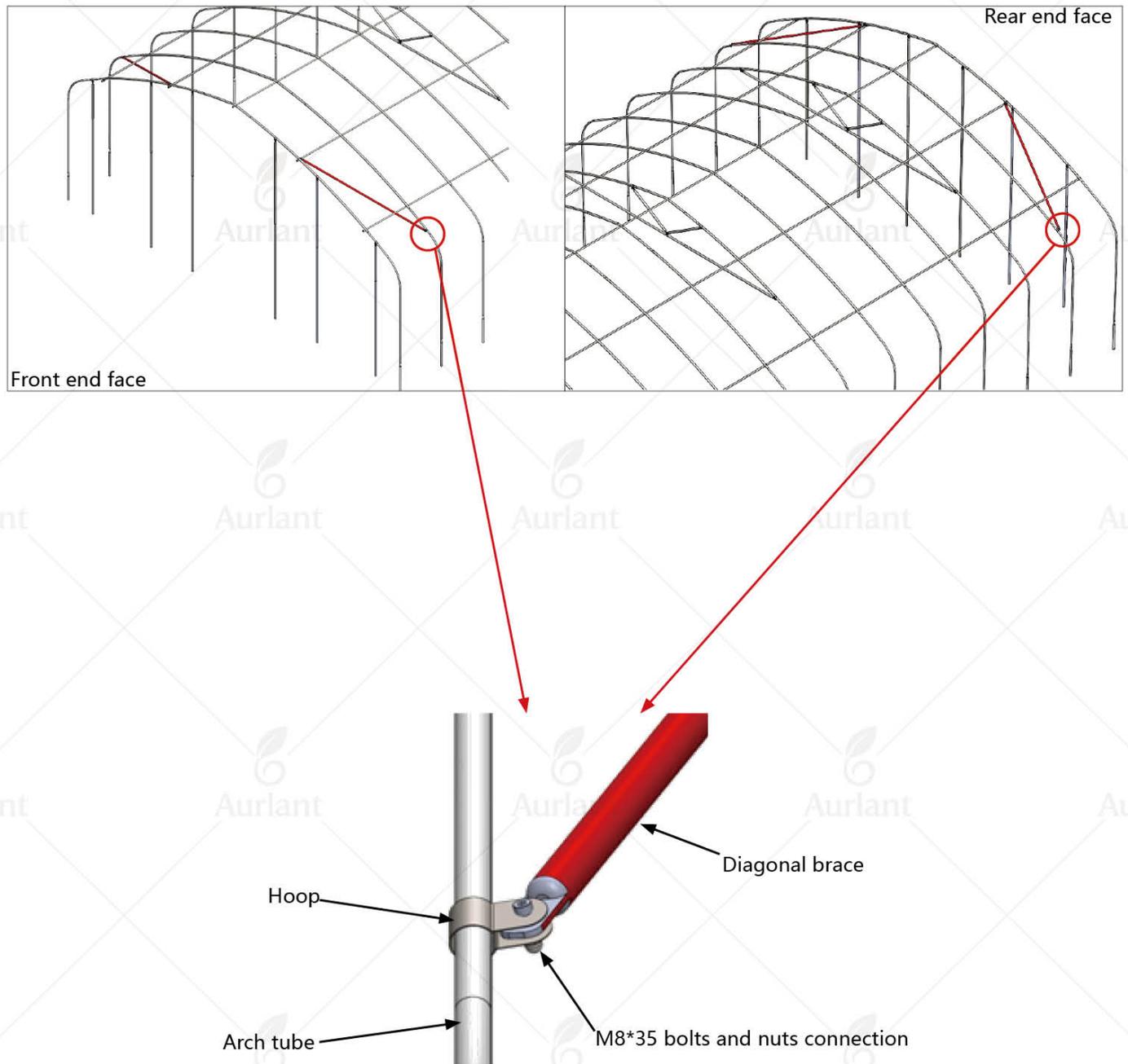


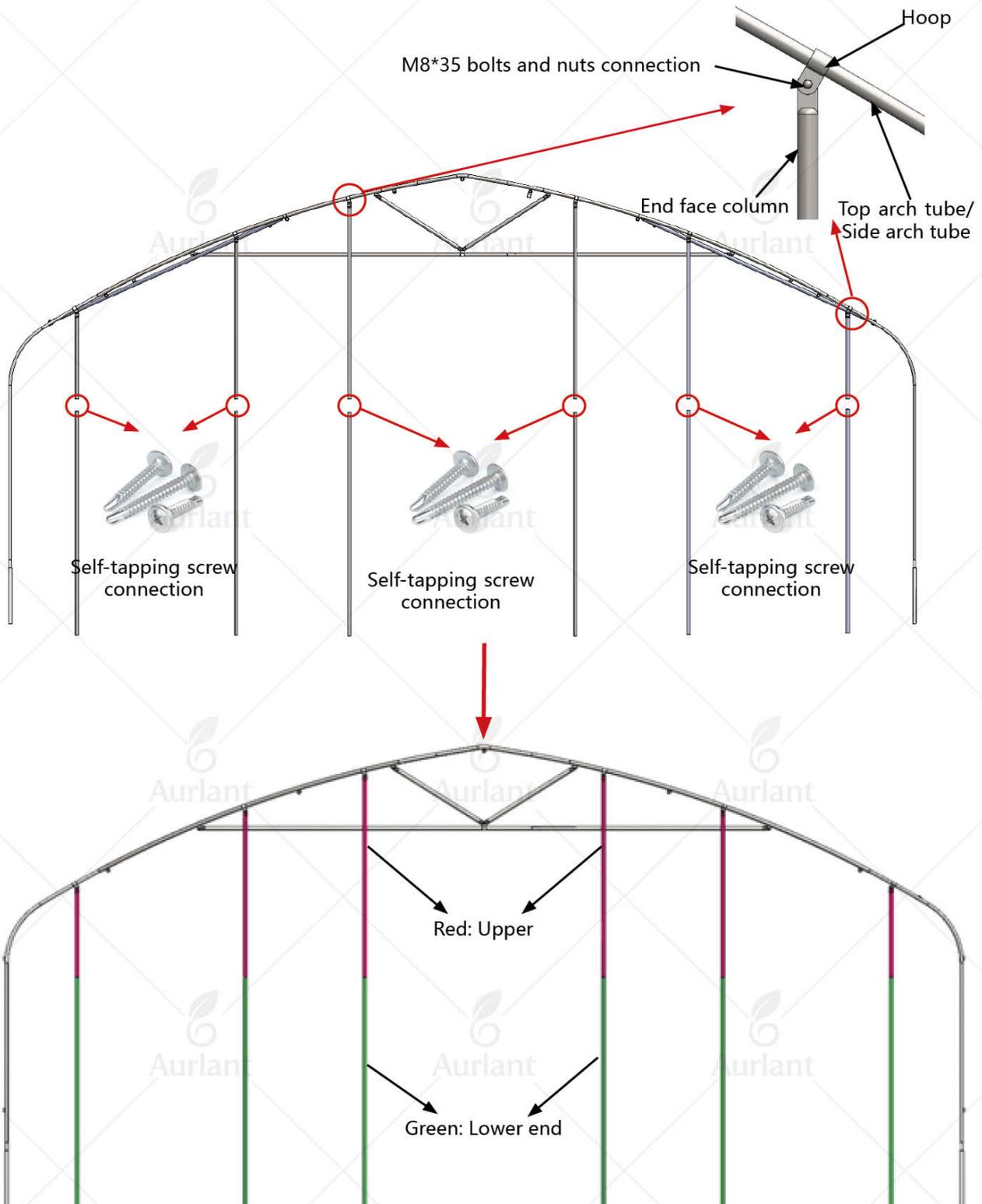
Figure 5-1 Schematic diagram of diagonal brace installation

Step 6 Install the end face column

Step 6 Required Parts:

End face column/Hoop/Self-tapping screw/bolts and nuts

6.1 After the diagonal brace of the greenhouse is installed, make sure that the position of the first arch tube and the second arch tube are fixed, and choose different sizes of end face columns for installation according to the specifications of the greenhouse. The end face column is divided into two upper and lower sections.



Step 7 Install the door

Step 7 Required Parts:

Gate pulley/door track/door beam/door handle/Self-tapping screw/bolts and nuts/film/Wiggle wire and Lock channel

7.1 Use a 30*50 square tube as the beam of the door on the end face of the greenhouse and make 50 face out. According to the size of the door, open two holes with a diameter of 8mm in advance where the beam meets the end face column, and then use M8*90 bolts and nuts to fix the door beam and the end face column; use Self-tapping screw to fix the door beam and the door track.

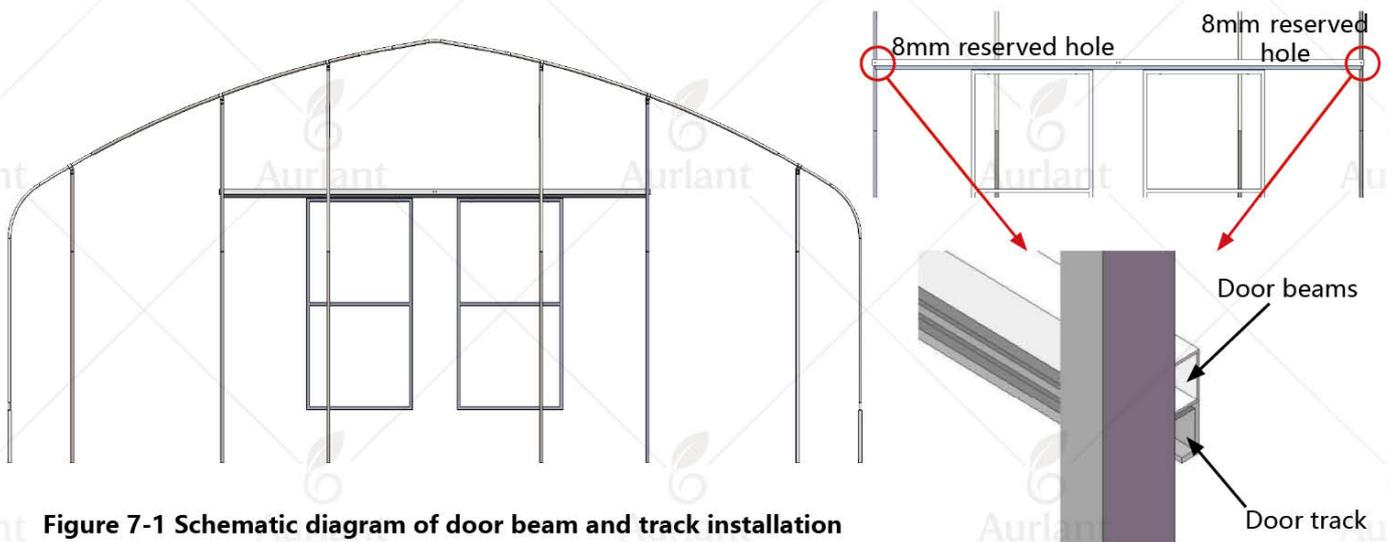


Figure 7-1 Schematic diagram of door beam and track installation

7.2 Drill two reserved holes with a diameter of 8mm above the door frame, and fix the door pulley with the door frame through M8*60 bolts and nuts; secondly, the door film card groove is fixed with self-tapping nails around the door frame, and the door is covered with film with Wiggle wire and lock channels; Finally, the Self-tapping screw nails are used to fix the door handle in the appropriate position of the door frame.

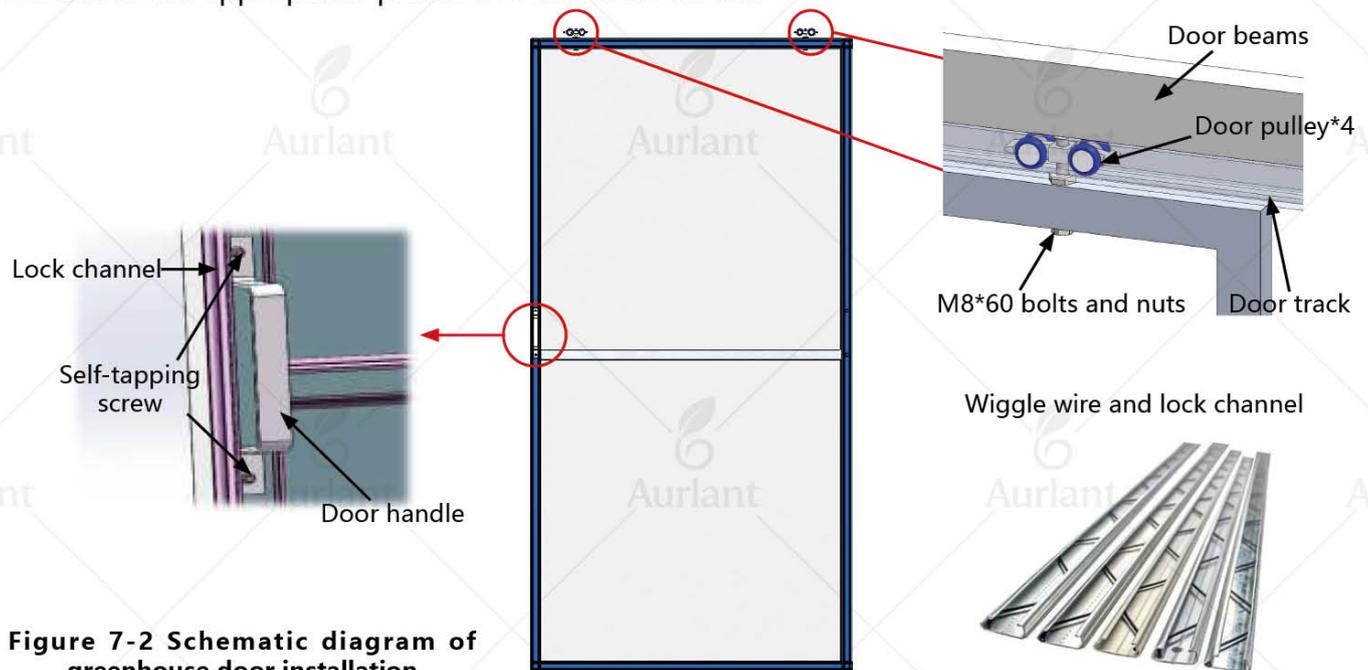


Figure 7-2 Schematic diagram of greenhouse door installation

7.3 Connect the assembled door frame with the track through the door pulley, and hang the door in the door track to open and close it freely.

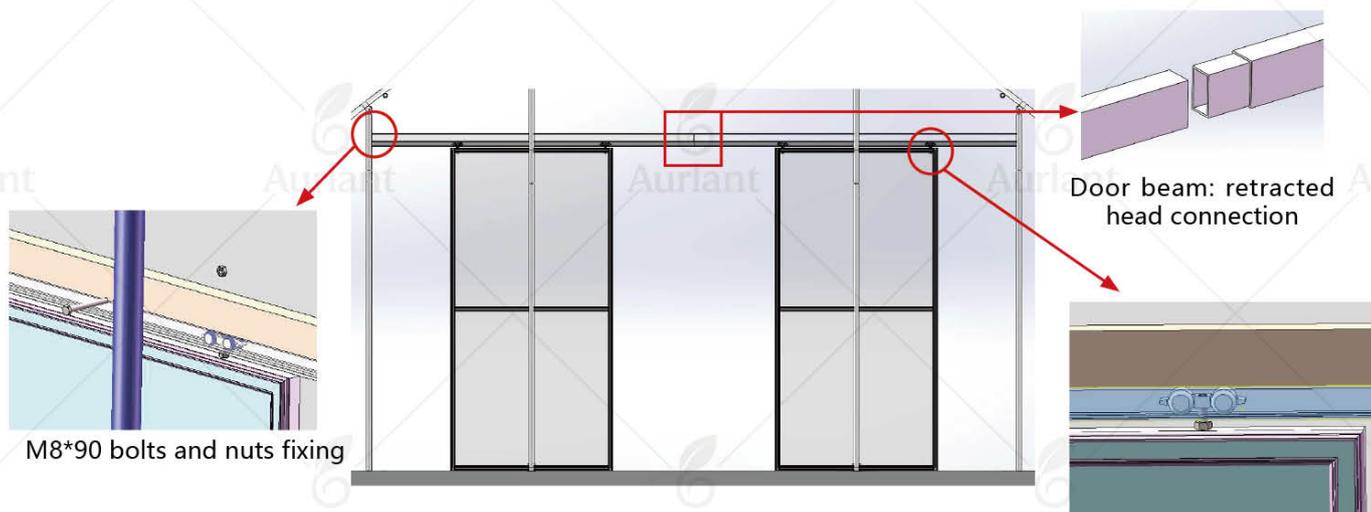


Figure 7-3 Schematic diagram of greenhouse door fixation

7.3 In order to avoid shaking when the door opens and closes, the door stopper is fixed between the end face column and the door frame by Self-tapping screw.

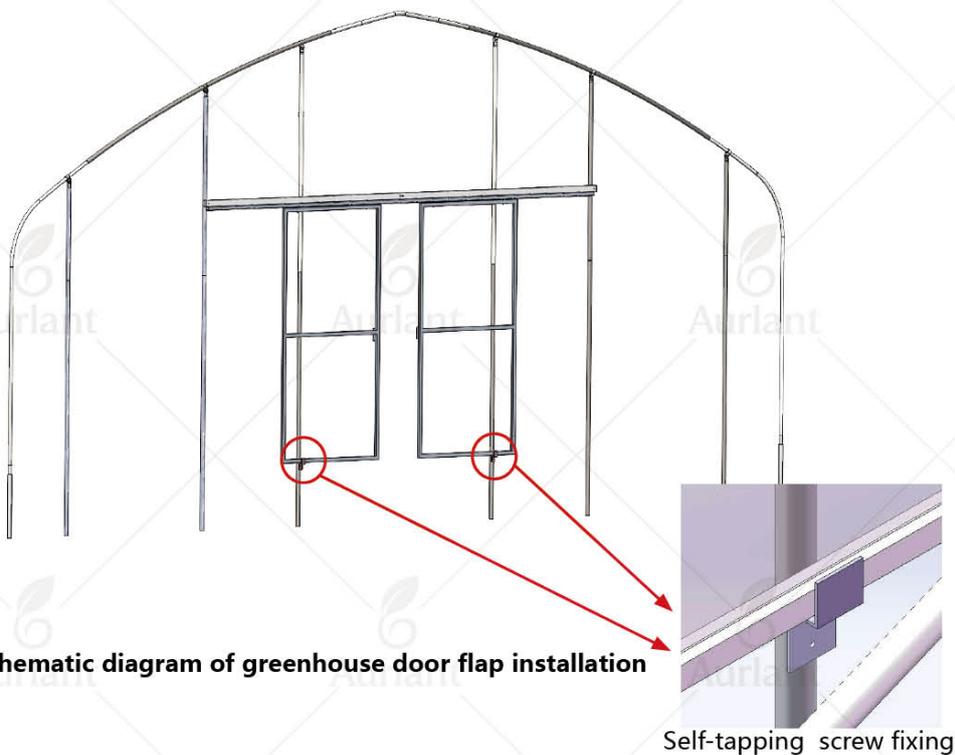


Figure 7-4 Schematic diagram of greenhouse door flap installation

Step 8 Install the Lock channel

Required parts for step 8:

Lock channel/Alt lock channel/Self-tapping screw/Lock channel connector

8.1 At the position shown on the front end face, fix the Lock channel with a retainer and self-tapping screw on the end face column and arch tube, and the middle and insufficient length of the Lock channel can be connected with the Lock channel connector.

Fixed lock channel on the front end face

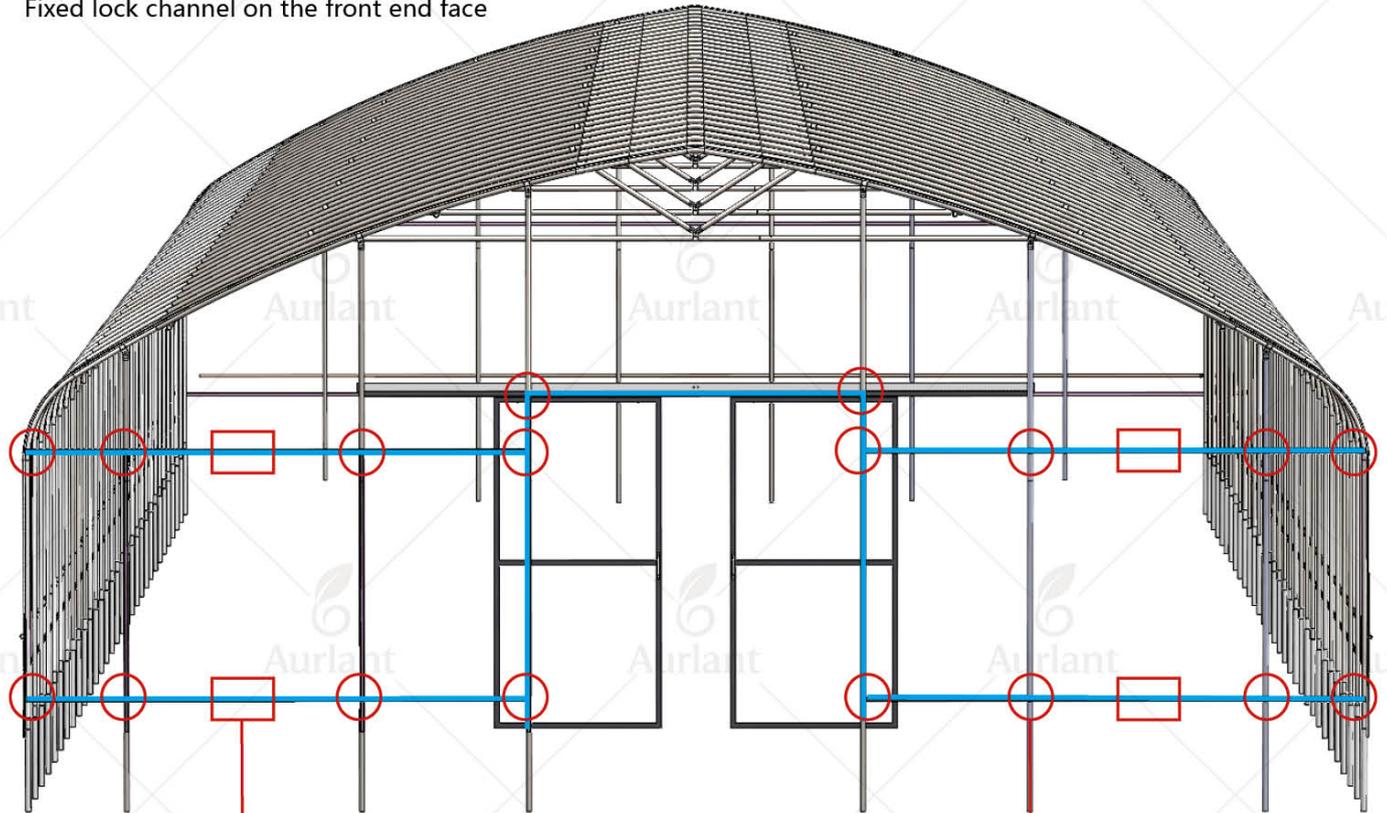
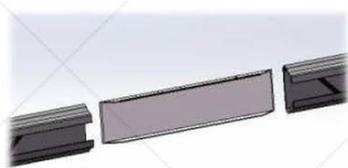


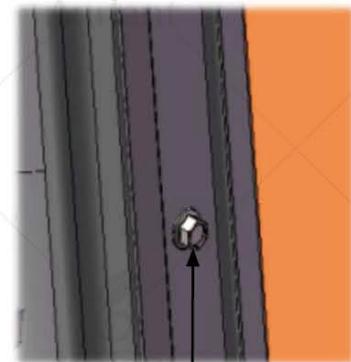
Figure 8-1 Schematic diagram of the fixed point of the front face lock channel



Lock channel connector



Self-tapping screw connection



Self-tapping screw

8.2 At the position shown on the rear end face, fix the Lock channel with a retainer and Self-tapping screw on the end face column and arch tube, and the middle and insufficient length of the lock channel can be connected with the lock channel connector.

Fixed lock channel on the rear end face

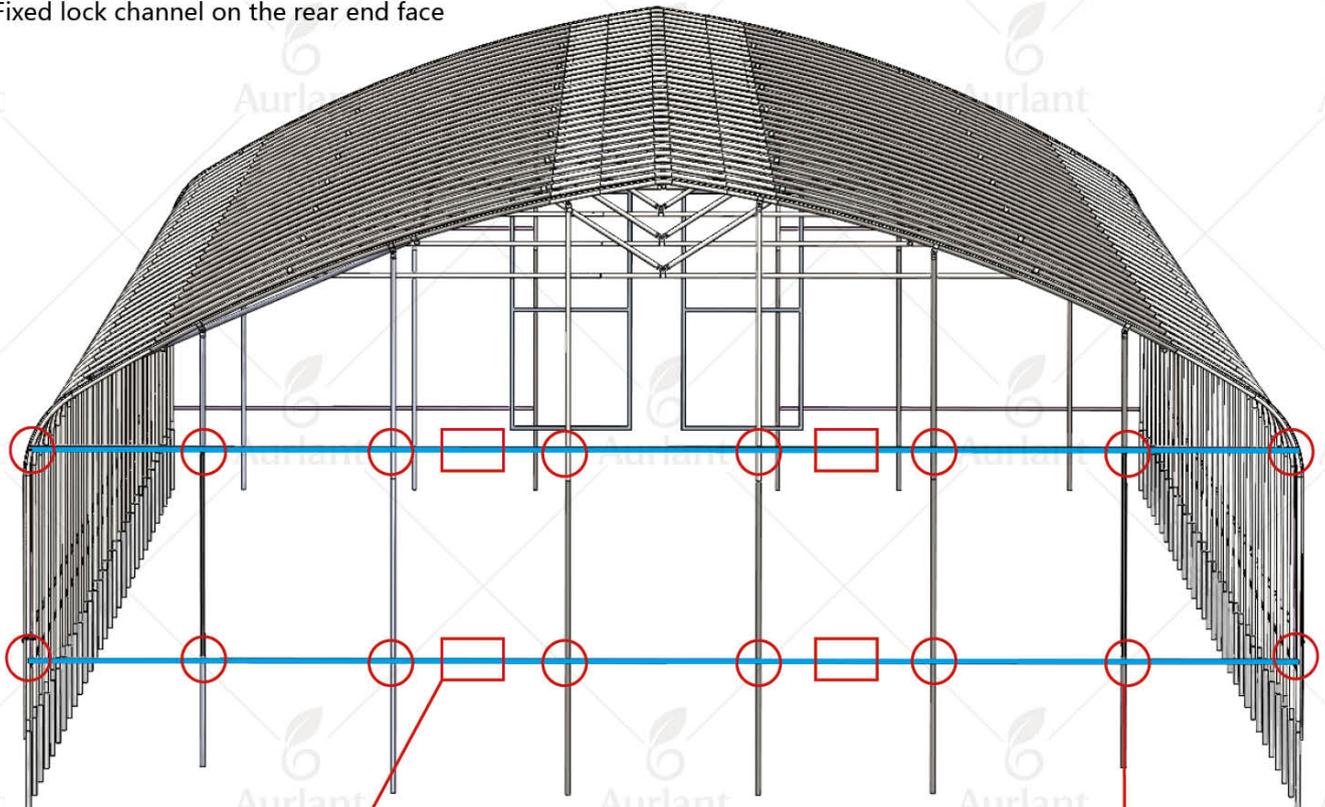
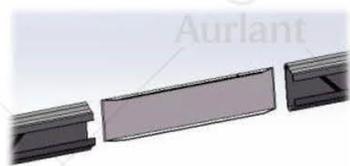


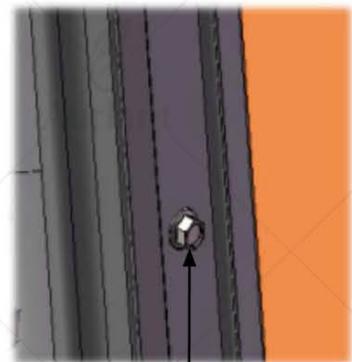
Figure 8-2 Schematic diagram of the fixed point of the lock channel on the rear end face



Lock channel connector



Self-tapping screw connection



Self-tapping screw

8.3 Use Self-tapping screw to fix the curved lock channel along the direction of the arch tube to fix it above the arch tube (the curved Lock channel is only arranged on the front and rear end faces of the arch tube).

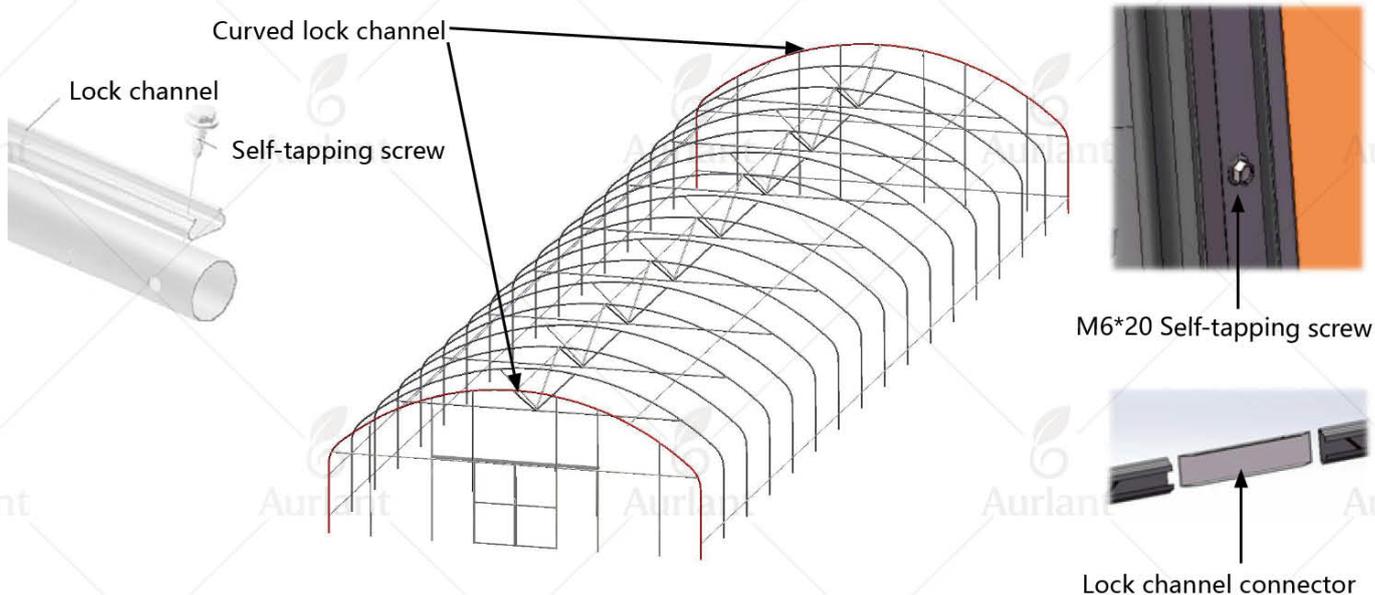


Figure 8-3 Schematic diagram of the installation of the curved Lock channel

8.4 Side lock channel installation requires standard lock channel and Alt lock channel (special Alt lock channel connectors must be used between Alt lock channels).

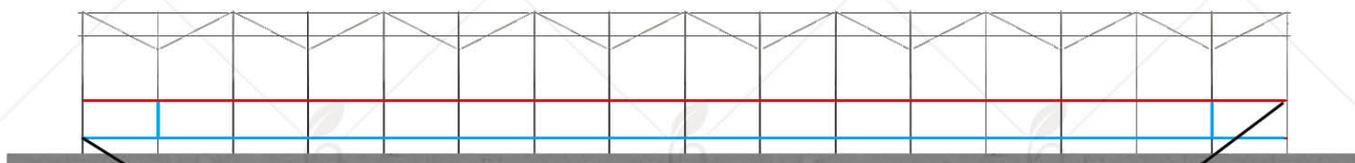


Figure 8-4 Schematic diagram of the installation of the side lock channel



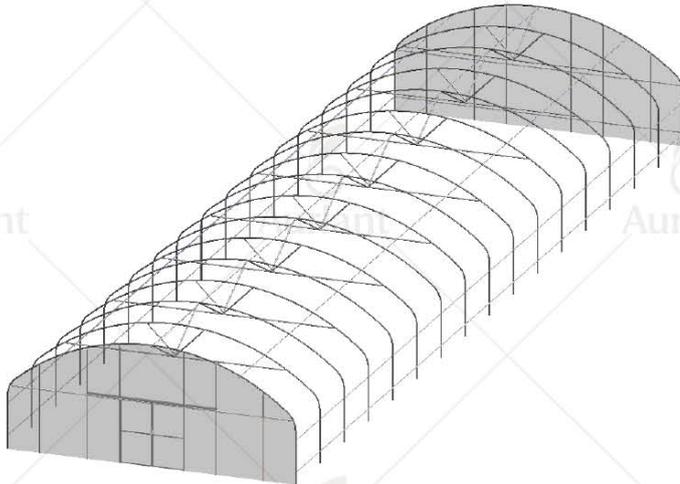
Step 9 Install the film and insect proof net

Step 9 Required Parts:

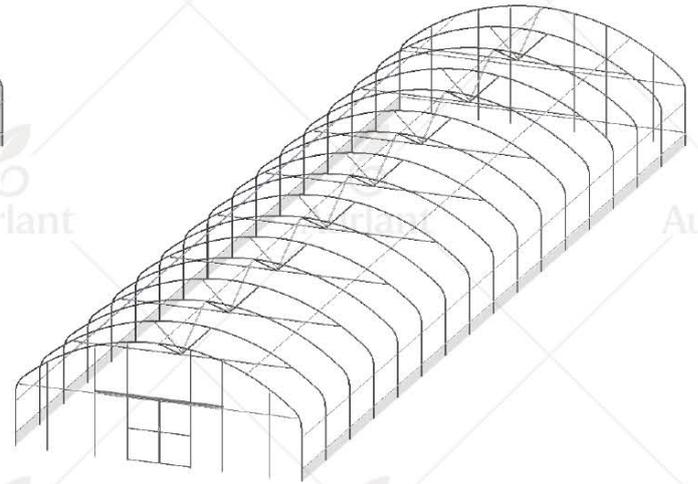
Film/insect proof net/Wiggle wire

9.1 Use a wiggle wire to fix the cut film in the above slot position. **Note: Where insect nets need to be installed, insect nets must be installed first and then ventilation film must be installed. The Windproof film and insect proof net is located on the inside of the ventilation film.**

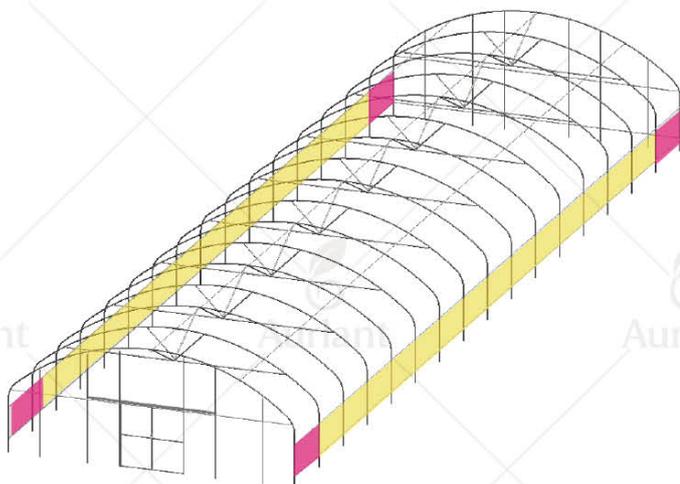
End film installation



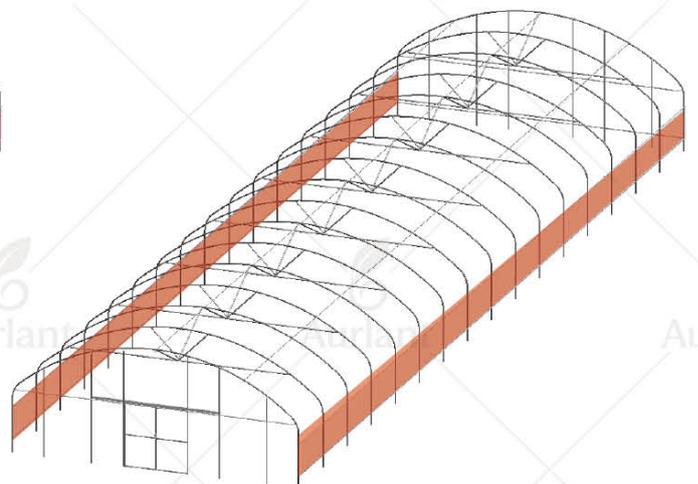
Bottom film installation



Side film installation

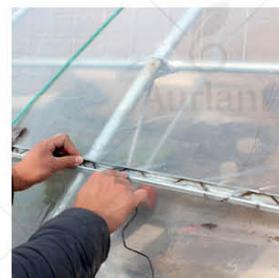


Side film installation



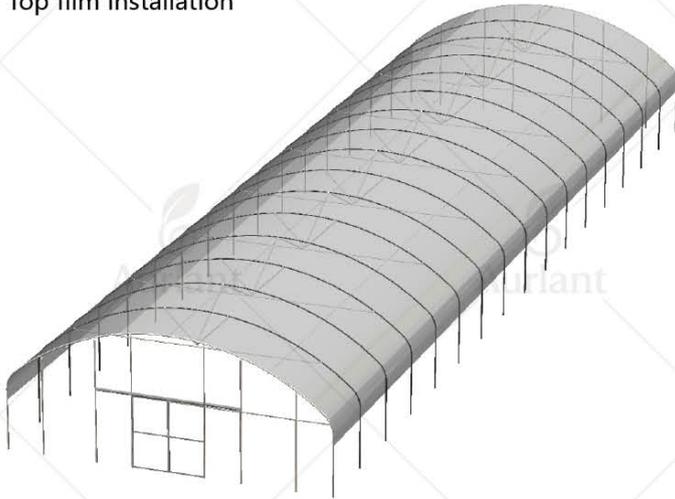
Yellow square: Insect proof net
Pink square: Windproof film

Red square: Ventilation film



Wiggle wire fixation

Top film installation



Wiggle wire and lock channel fixation

If your greenhouse is a side-ventilated greenhouse, please refer to the diagram above for roof film installation.

If your greenhouse is a fully-ventilated greenhouse, please refer to step 9.2 for roof film installation.

9.2 When installing the fully open top film, first fix the lock channel at the position shown in the picture, then use the film clamp to press the film, and then use the expansion fixed fixture to fix the film clamp and the film to prevent the film from moving. **Note: Where insect nets need to be installed, insect nets must be installed first and then ventilation film must be installed. The Windproof film and insect proof net is located on the inside of the ventilation film.**

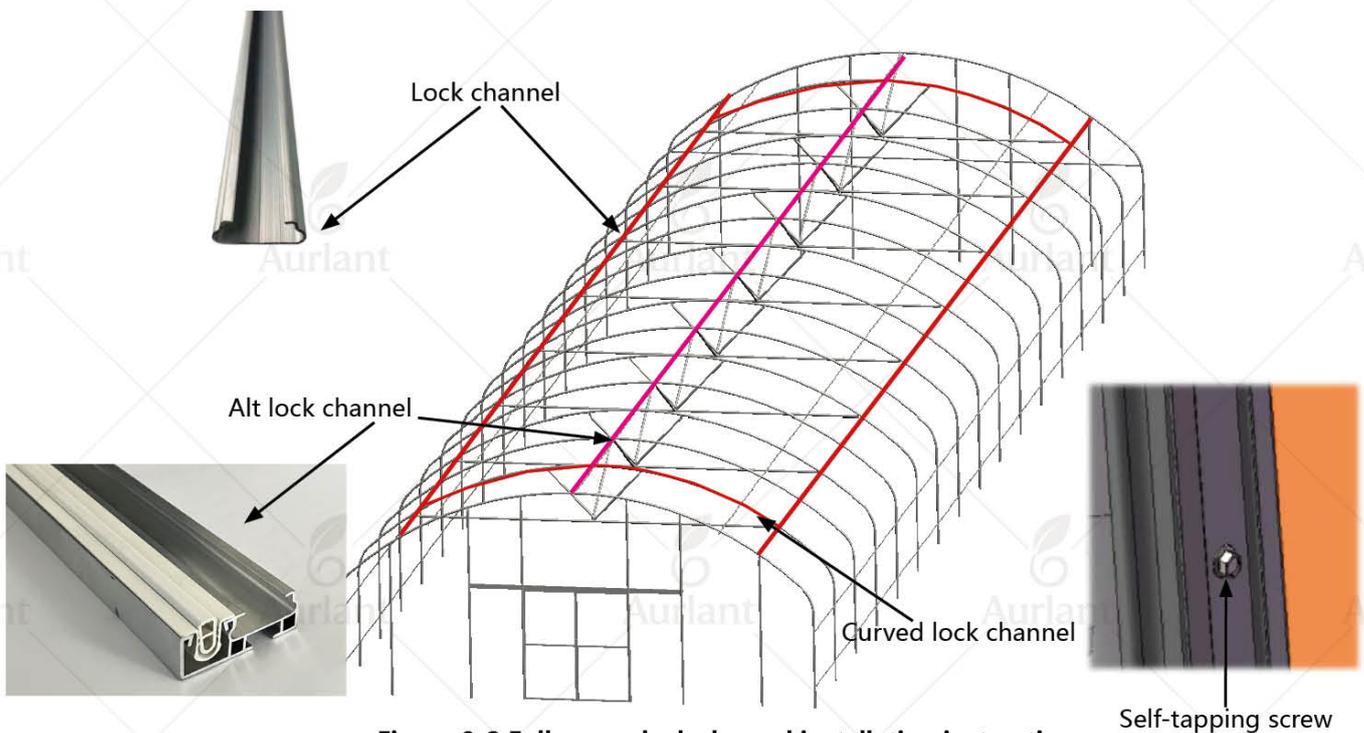
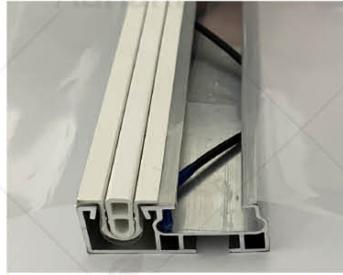


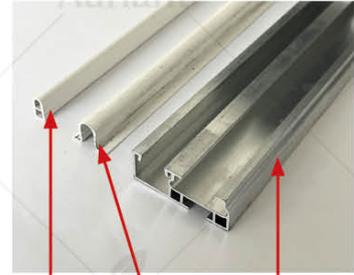
Figure 9-2 Fully open lock channel installation instructions



Wiggle wire and lock channel fixation



Schematic diagram of film installation



Film Clamp
Expansion fixed fixture
Alt lock channel

Fully open top film installation

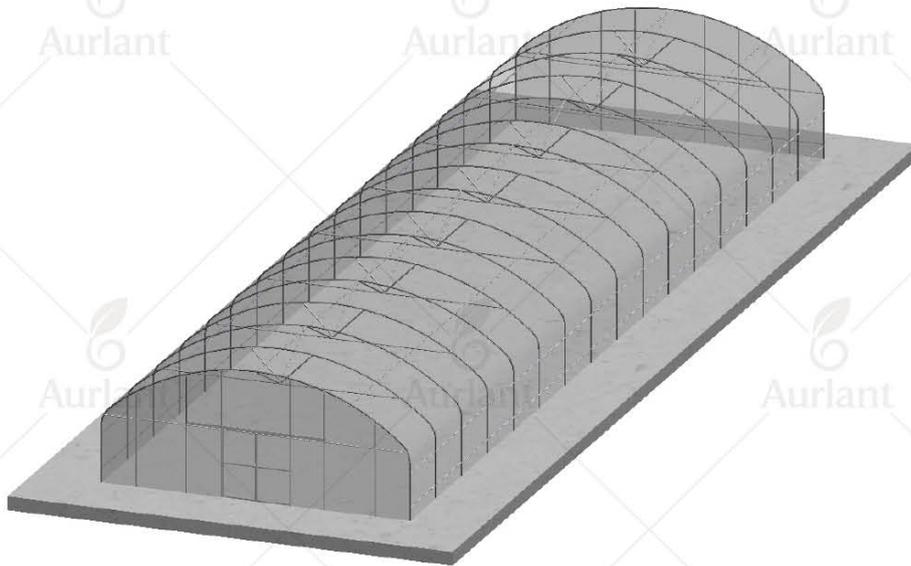
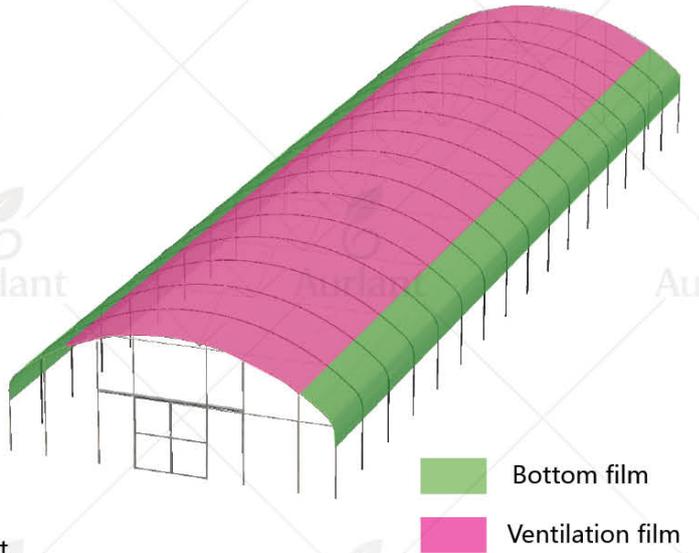
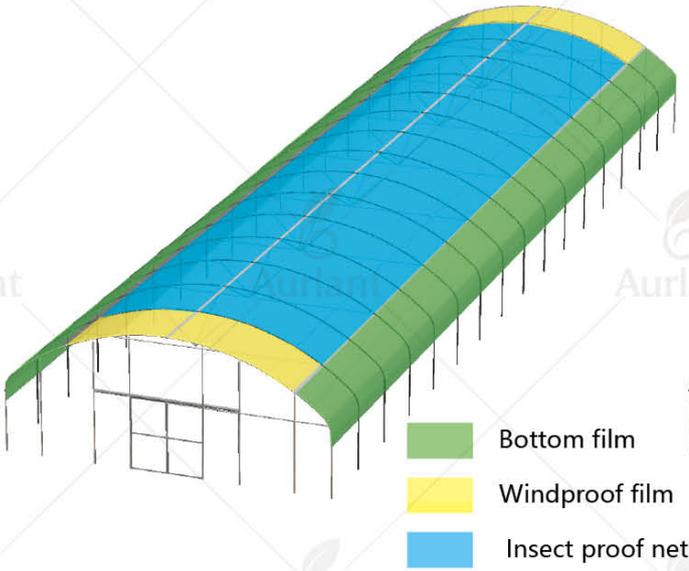


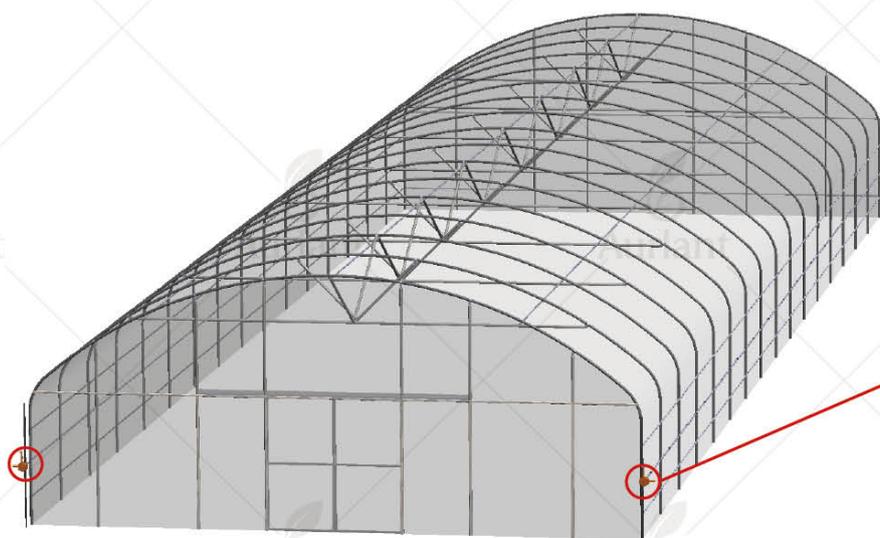
Figure 9-3 Schematic diagram of greenhouse film coating

Step 10 Install the Film roll up unit

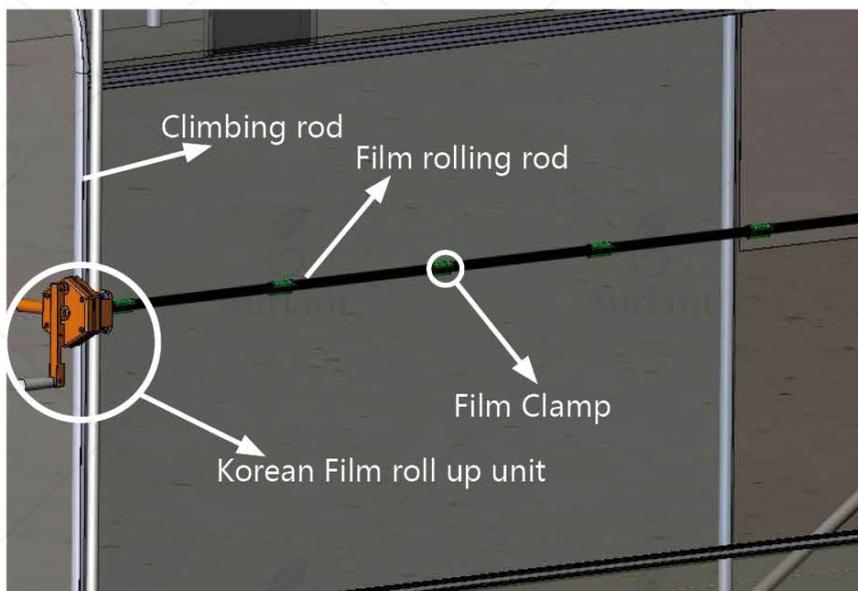
Required parts for step 10:

Film roll up unit/Film rolling rod/Climbing rod/Film Clamp

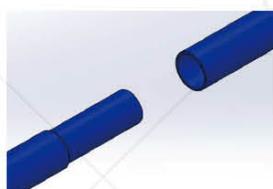
10.1 Place the climbing rod of the film roll up unit on the side that needs ventilation and fix it at a deep depth. Connect the film rolling rod and the film roll up unit through self-tapping screw, and let the climbing rod pass through the pulley of the film roll up unit. Try to keep the film roll up unit and the film rolling rod in a horizontal state, and turn the handle of the film roll up unit to complete the film reel. Greenhouse assembly is completed.



Film roll up unit



Turn the handle to complete the film rolling



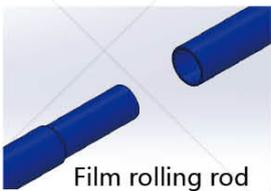
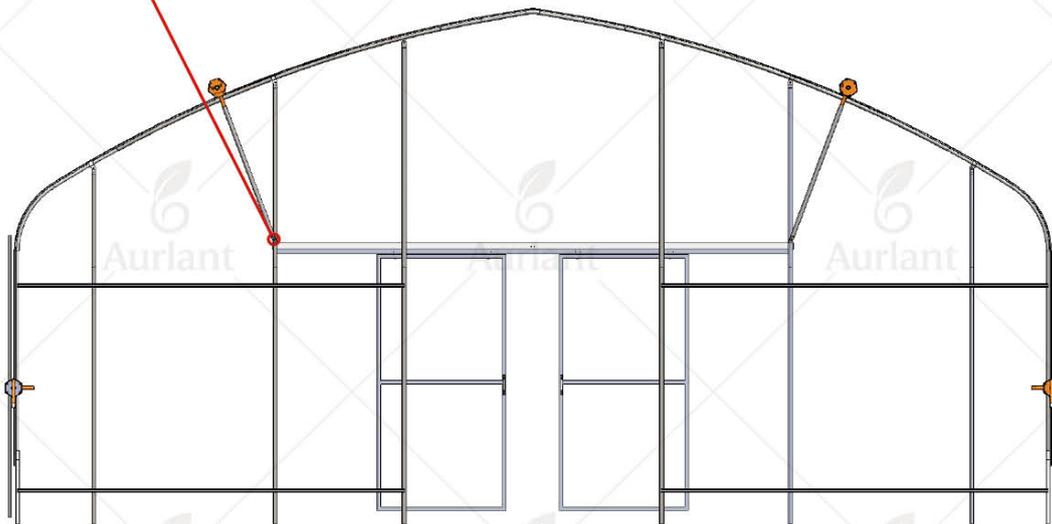
Roll film rod docking

If your greenhouse is a side-ventilated greenhouse, please refer to step 10.1 for film roll up unit installation.

If your greenhouse is a fully-ventilated greenhouse, please refer to step 10.1 for side film roll up unit installation; for top film roll up unit installation, please refer to step 10.2.

10.2 As illustrated, install telescopic rods, film rolling rod and film roll up unit on the greenhouse roof.

Pre-install the fixing shaft on the end-face column



Film rolling rod



Self-tapping screw

Large tube over small tube (Tube retraction drives film winder to retract film)



Secure the film rolling rod using self-tapping screws.

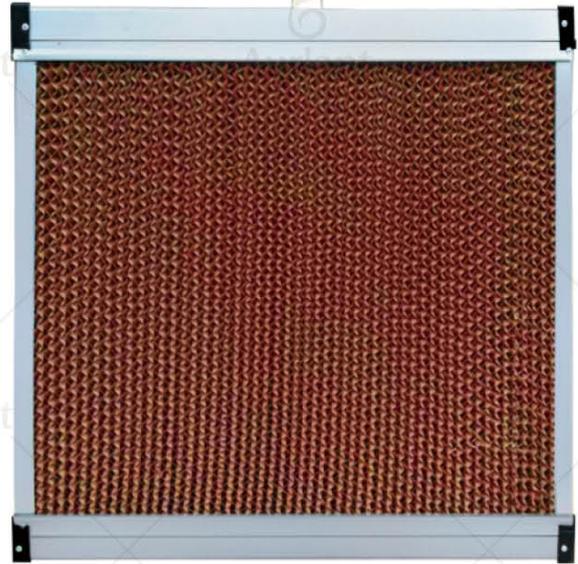
Method of use: Pull the chain to complete the film roll.

Other equipment options

In addition to the basic greenhouse installations mentioned above, we also offer a range of other greenhouse products.



Negative Pressure Ventilator



Cooling pads



Shade net



Seedbed