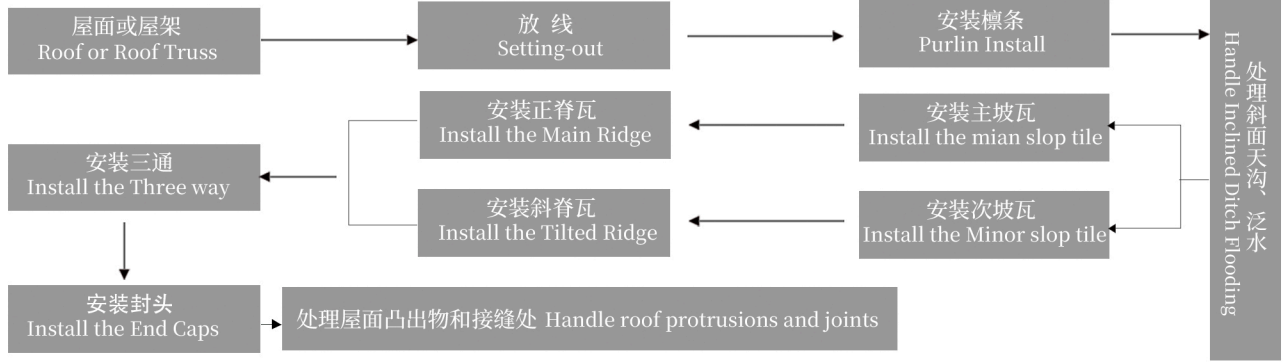


Installation Note



Tools and Accessories

1. Tools: Engineering wire, spring box, portable electric drill, portable cutting machine, portable grinder, measuring tape, wrench, heat gun.
2. Accessories: Self-tapping screws, waterproof caps.
3. Additional materials: Glass glue (if drilling errors occur during construction, mix the two materials and fill in the gaps)

Before installing the steel frame, the priority thing is ensure that the roof is flat with a slope of 30 to 80 degrees.

Step 1: Purlin installation:

- I. Usual purlin materials and sizes (mm) for roof trusses: 60×40 wood, 60×40×3 square steel tube, 100×50×3 C-shape steel.
- II. Metal purlins must be made of galvanized square tubes, and the welding points must be brushed with anti-rust oil. Wooden purlins must be brushed with anti-corrosion oil or dipped in asphalt oil. The top purlin is 150mm away from the ridge line to facilitate the installation of ridge tiles, and the bottom purlin is 50~70mm away from the eaves. The spacing of the main tile purlins is recommended to be 500mm, and the spacing of the large arc main tile purlins shall not be greater than 600mm.

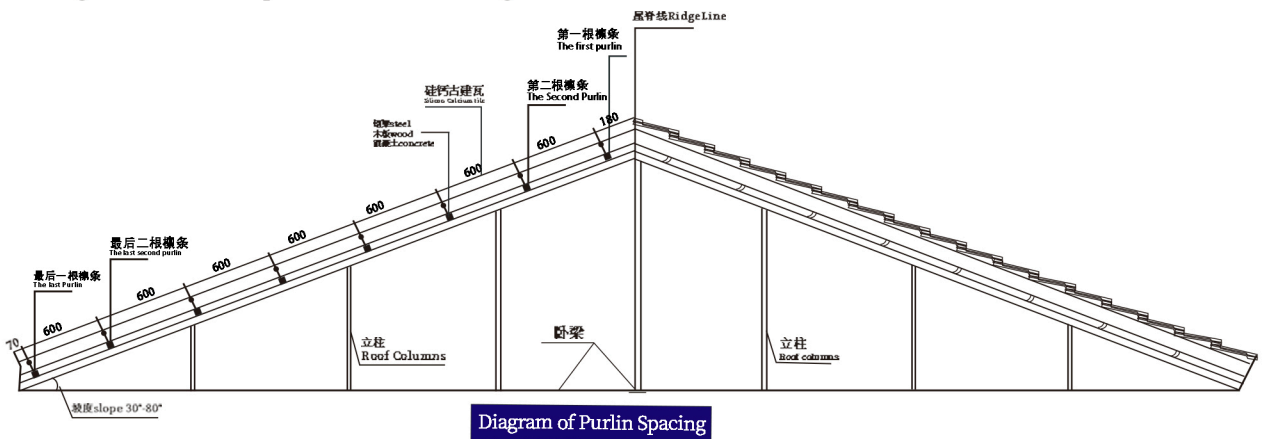


Diagram of Purlin Spacing

Step 2 : lay out the lines before installation.

The lines should be laid out according to the roof conditions. This will help to achieve horizontal and vertical alignment when installing the tiles, ensuring the installation quality. The line laying diagram is as follows

Step 3 : Install inclined Gutter

The inclined gutter is also called the inner corner. The inner corner can be made of 1000mm wide and 0.5mm thick color steel plate, or 800mm wide and 3.0mm thick synthetic resin plate. It is customized according to the on-site structure. Before the main tile is installed, the inner corner plate is fixed on the purlin. The exposed part is 200mm ~300mm wide.

Step 4 : Install main tile

The most crucial step is putting in the first tile. It needs to guarantee that the tile's lower edge is parallel to either the DD1 (DD2) or CC1 (CC2) line. Fix the tile's wave crest and the purlin's center using self-tapping screws. When installing the main tiles, they should be arranged horizontally one above the other to prevent

tilting or unevenness caused by one-way overlap. This means that the second tile should buckle the first and third tiles, the fourth tile should buckle the third and fifth tiles and overlap a tile wave, and so on.

At any point during the installation process, make sure the construction line and the tile's bottom edge are vertical. A tile section should be overlapped by a vertical installation. To guarantee that the ridge tile's wave crest is constant and to set the stage for the installation of the positive ridge tile, the double-slope roof's main tile must be installed simultaneously on both sides. It is necessary to hammer the electric drill perpendicular to the tile surface into the tile. Take care not to overtighten it so that there is room for expansion and contraction due to heat. The tile crest is fitted with the waterproof sealing cap.

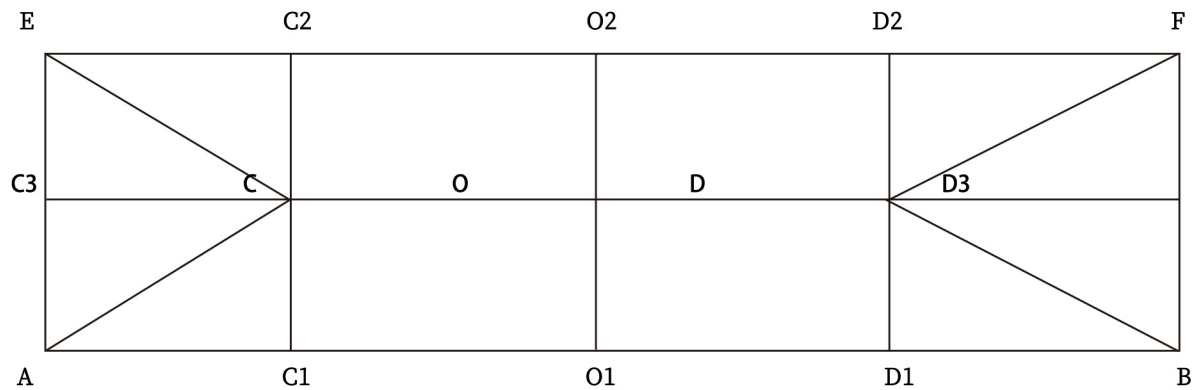


Diagram of Layout for two-slope and four-slope roofing

The process for installing a four-slope roof is the same as for a two-slope roof. Just take note that the main slope needs to be installed first, followed by the installation of the triangular roofs on both sides. Using the center lines, CC3 and DD3, as a reference, cut along the diagonal to make the installation of the ridge tiles easier.

Step 5 : Install the main ridge tile

To avoid the overlap point at the same position between the ridge tile and the main tile, the first ridge tile needs to be a half. When installing, squeeze the bigger end pressing against the small end, and fix it to the purlin with the main tile after placing it straight. If the ridge angle does not match the slope, do not press hard to correct it excessively. For solutions, refer to the special problem handling method.

Step 6 : Install the tilted ridge tile

Tilted ridge tiles are generally used on the triangular hypotenuse of multi-slope roofs. When installing, the big head should be pressed against the small head, and then press the bottom side on the hypotenuse of the main tiles on both slopes, fix it together with the main tiles on the purlin with the self-tapping screw. Pay attention to adjustment at any time to avoid skew.

Step 7 : Install the three way ridge

The three way ridge tile is used for the connection of the three-slope roof. It can only be installed after the installing of top ridge and tilted ridges. When installing, one side is overlapped under the main ridge tile, and the other two sides are overlapped above the sloping ridge tile. Fix it with the self-tapping screw on purlin. Note: If the angle of the three way tile does not fit, do not press it too much to correct it. Use a heating tool to soften it, then hand press and adjust its angle (wear the heat-insulation glove). If it cannot be fixed on the purlin, it is okay to connect it on the main ridge and tilted ridge with the ordinary screws.

Step 8 : Install the cover of side edge

The cover of side edge is generally used for two-slope roofs. There are left and right sides. When installing, put the corrugated side on the main tile, then fix it on the steel frame together with the main tile by self-tapping screws, and fix the side to the wall with ordinary screws.

Last: Install the end of the main ridge

The end of main ridge is used for two-slope roofs. After installing the cover of side edge, it is naturally buckled on the main ridge, then connected it on the main ridge and side cover with ordinary screws.

Check the roof's levelness and the joint when all installation is finished, make any necessary corrections