

SunGlaze



Installation Guide

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Installation Guide: SunTuf SunGlaze

Superior Residential Polycarbonate Glazing System

PSP

LIMITED

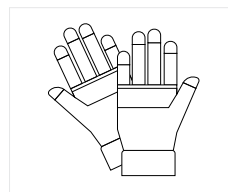
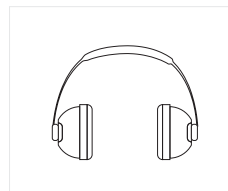
System Components

| | | | | | |
|---|---|--|---|---|---|
| <p>SUNGLAZE Panel</p> |  | <p>Edge Middle Glazing Bar Note: Edge Middle Glazing Bar is to be installed if a cut panel is required. Refer section 8.</p> |  | <p>End Panel Gasket Note: End Panel Gasket is only required if both the Edge Bottom and Edge Middle Glazing Bars are needed to fix cut panels to the structure. Refer section 8.</p> |  |
| <p>Bottom Glazing Bar</p> |  | <p>Top Cap for Middle & Edge Middle Glazing Bar</p> |  | <p>Self Tapper 8G x 50mm Pan Square Drive For fixing into the timber structure.</p> |  |
| <p>Middle Glazing Bar</p> |  | <p>Flush End Cap (for fixing to the Bottom & Edge Bottom Glazing Bar at the top of the roof nearest to the building/home). Fixings included 10G x 25mm Self Drilling Note: Both the Bottom and Edge Bottom widths are differ in size*.</p> |  | <p>Fixing Screw, Self Drilling 12G x 20mm S/S For fixing the Middle & Edge Middle Glazing Bar to Bottom and Edge Bottom Glazing Bar</p> |  |
| <p>Edge Bottom Glazing Bar Note: Edge Bottom Glazing Bar is to be installed if a cut panel is required. Refer section 8.</p> |  | <p>Standard & Edge End Cap (for fixing to the Bottom & Edge Bottom Glazing Bar at the spouting end of the roof). Fixings included 10G x 25mm Self Drilling Note: Both the Bottom and Edge Bottom widths differ in size. Top and bottom fixing points is recommended*.</p> |  | <p>Wafer Head Square 10G x 22mm S/S For fixing glazing bar to a metal structure</p> |  |

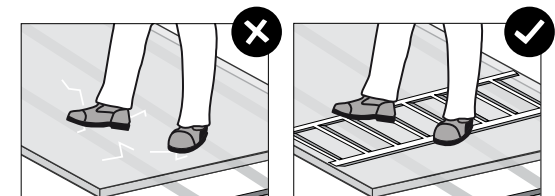
*A Left and Right Edge End Cap is included. One is to be installed at the spouting end which covers the Edge Bottom & Middle Glazing Bar end.

Required Tools

Safety comes first



Do not step directly on the sheets between the purlins!
 When installing SUNGLAZE or doing maintenance work, always consider the sheet to be unfit to support a person's weight. Always use stepping ladders or crawling boards, supported by minimum three roof structural elements, when working on a glazed roof of any kind.



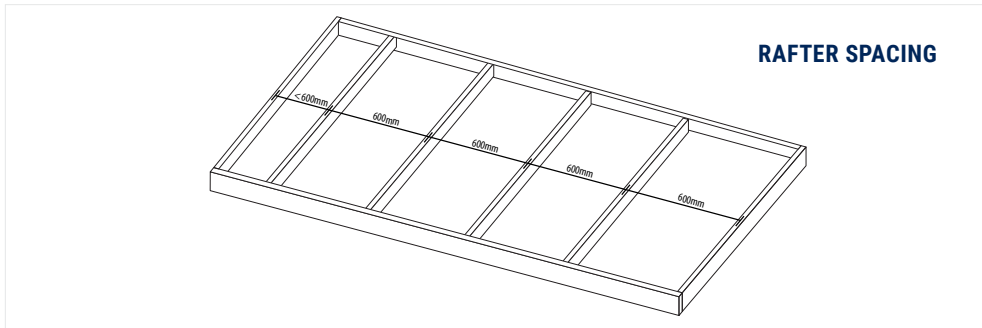
Installation Guide: SunTuf SunGlaze

Superior Residential Polycarbonate Glazing System

Roof Structure

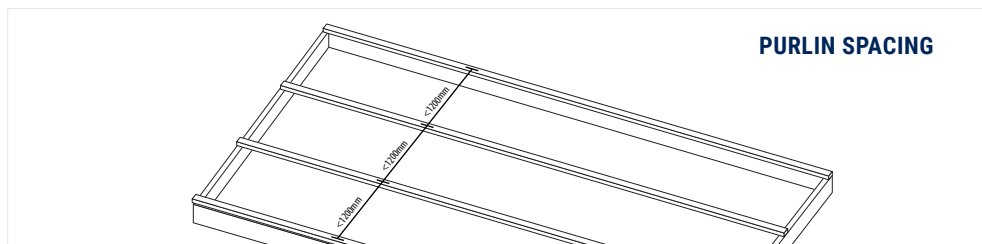
SunTuf SunGlaze is designed for both rafter and purlin construction options. The recommended minimum roof pitch for SunTuf SunGlaze applications is 5%. Ensure that the underlying roof structure is square before starting installation of the SUNGLAZE Roof Covering System.

1 Measure rafter spacing



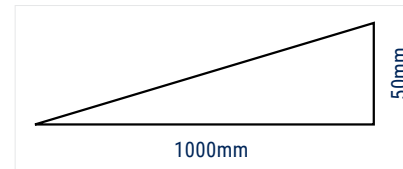
- To install SUNGLAZE directly on rafters, the inner rafters must be 600mm on centre.
- If end rafters are less than 600mm on centre, then the end Roof Panels must be cut to proper width before installation. SEE PAGE 8.

2 Measure purlin spacing



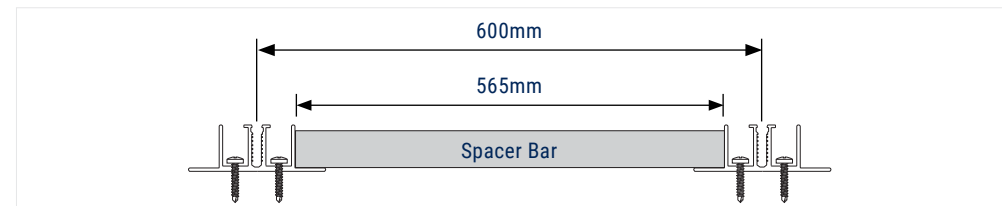
- To install SUNGLAZE directly on purlins, the purlins must be the same distance apart from each other.
- For SunTuf SUNGLAZE Purlin Spacing please refer to the Purlin Spacing Guide in this installation guide.

3 Ensure minimum roof pitch



- Confirm that the roof pitch is at least 5% (88mm rise for 1m length).
- This minimum pitch will ensure proper water runoff and help keep the Roof Panels clean.

4 Make a spacer bar



- Create a spacer bar as a jig to easily measure the distance between aluminum profiles during installation. Use a dowel, a 25x50mm, or similar.
- The spacer bar should be 565mm long.
- Make sure the edges are perfectly square cut.
- SEE PAGE 6 for spacer bar use.

| Sheet Size | Maximum Spans between purlins | | |
|---------------------------------|-------------------------------|----------|----------|
| | Single Span | Mid Span | End Span |
| 4/600 | 4/600 | 4/600 | 4/600 |
| Rafters Centres | 600mm | 600mm | 600mm |
| 75kg/m ² - 0.75kpa | 900mm | 1540mm | 1210mm |
| 100kg/m ² - 1.005kpa | 820mm | 1400mm | 1100mm |
| 125kg/m ² - 1.25kpa | 760mm | 1300mm | 1020mm |
| 150kg/m ² - 1.50kpa | 720mm | 1220mm | 960mm |
| 175kg/m ² - 1.75kpa | 680mm | 1160mm | 910mm |
| 200kg/m ² - 2.0kpa* | N/A | 1110mm | 870mm |

NOTES:

- The values are based on maximal deflection criteria of L/200 for the aluminium profiles and L/20 for the polycarbonate panels.
- The dimensions depicted do not supersede the requirements of local construction methods.
- In case of rafter installation, the distance between fixing screws should be 500mm.

Span Definitions (When installing The SunTuf Glazing System)

Single Span - refers where the sheet is installed over two supports only

Mid Span - referring to an intermediate span i.e. the sheet continues with at least one span on either side

End Span - referring to the first and last span of the installation

*SunTuf SunGlaze can achieve higher wind loads if installed as per the test report prepared by Force Engineering USA. This test report is available on request.

Installation Guide: SunTuf SunGlaze

Superior Residential Polycarbonate Glazing System

PSP

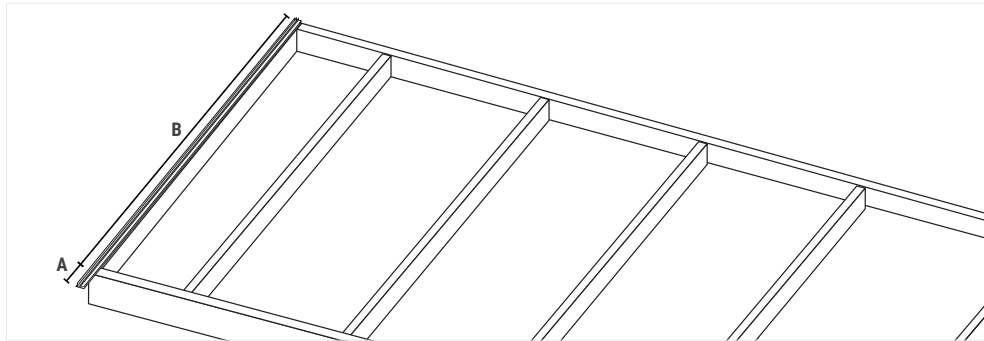
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Before Installation

5 Measuring & Cutting Aluminum Profiles

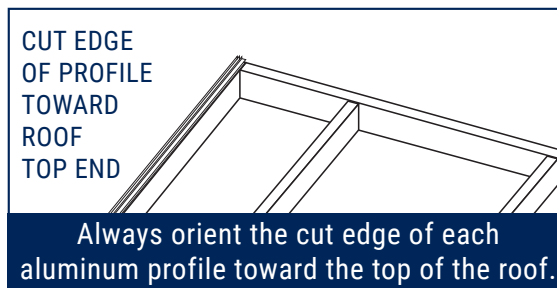
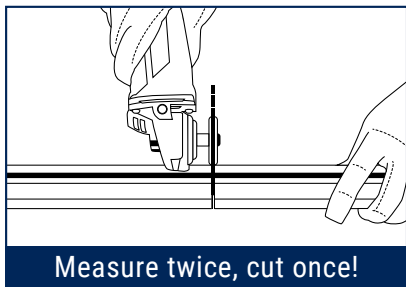
Measure and cut all aluminum Bottom, Middle and Top Caps to correct length if required. The profiles should be at least 1cm longer than the panels.

NOTE: The aluminum profiles are already in the required length to suit the supplied sheets length.



Here's how to measure the proper Profile length:

- **ADD** – Roof overhang (50mm minimum to 100mm maximum) (A)
- **PLUS** – Length of roof run (B)
- **EQUALS** – Total length of each Bottom, Middle and Top Cap.

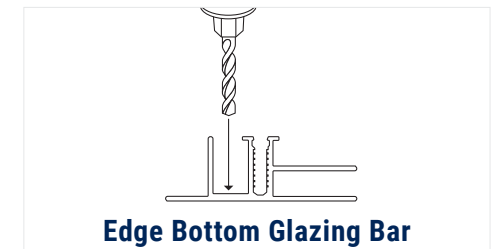


Use a drop saw or angle grinder to cut each profile component to the exact length required.

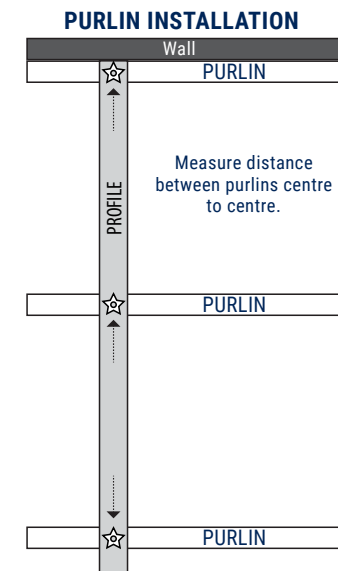
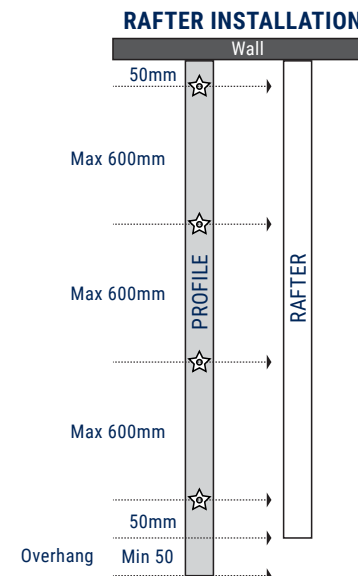
- Make sure your cuts are straight; exactly perpendicular to the profile.
- Smooth rough edges with a metal file as needed.

Before drilling holes, place the Bottom & Edge Bottom Glazing Bars over a strip of wood. This will protect the end of the drill bit as it penetrates the profiles.

6 Drilling Holes in the Profiles



- Measure, mark and pre-drill 5mm screw holes in each Bottom Glazing Bar.
- Follow the hole spacing guidelines below for rafter or purlin installation to match your roof support structure.
- Make sure all holes are centred along the notch in the middle of each Bottom Glazing Bar



Installation Guide: SunTuf SunGlaze

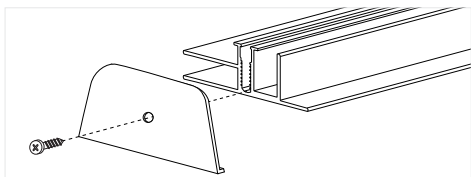
Superior Residential Polycarbonate Glazing System

PSP

LIMITED

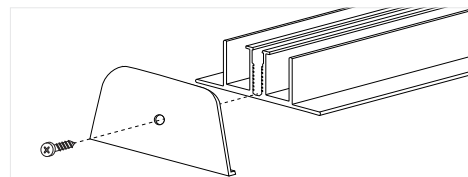
Before Installation

7 Fastening Flush End Caps.



Flush End Caps for Edge Bottom Glazing Bars

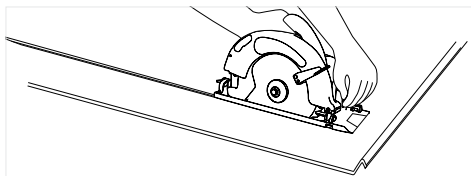
Note: Edge Bottom Glazing Bar is to be installed if a cut panel is required.



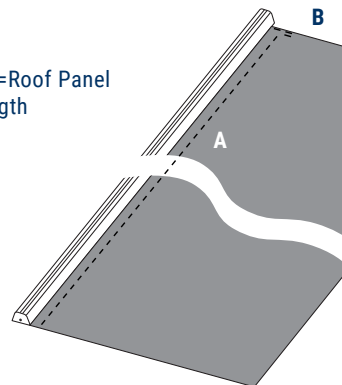
Flush End Caps for Bottom Glazing Bars

- Flush End Caps are to be fixed using the supplied 10g x 25mm Self Drilling Screws to the Bottom & Edge Bottom Glazing Bars at the end which will be located at the top of the roof closest to the building or home before the Glazing Bars are fixed to the structure. (Note the Standard & Edge Cap will be fixed at the spouting end of the roof).

8 Measure and cut all Roof Panels to the correct length, if required.



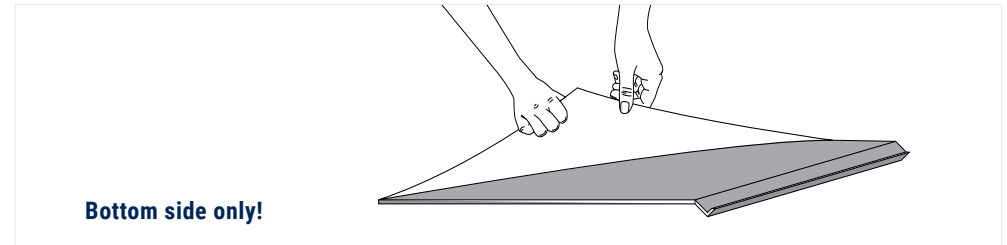
A-B=Roof Panel Length



- Out of the box, the Roof Panels and Profile parts are already cut to the proper size to fit together.
- If cutting Roof Panels is required, here's how to measure the proper Roof Panel length:
 - A – Length of aluminum Profile
 - B – MINUS 3mm for every 1.0m of aluminum Profile
 - EQUALS – Total length of each Roof Panel
 - For example, if your aluminum Profile is 4 meters long, then your Roof Panel will be 3.988m long.

Roof Panels must be cut shorter than Profiles to allow for panel expansion during hot weather. See the proper calculations above.

9 Remove the protective film from the bottom of the Panel before installation.



Installation Guide: SunTuf SunGlaze

Superior Residential Polycarbonate Glazing System

PSP

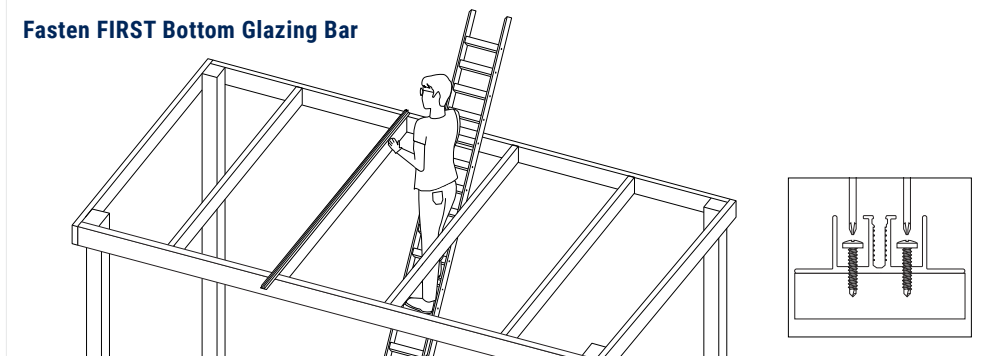
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Installation

Do not install more than two Bottom Glazing Bars at a time. Otherwise, you risk accumulated measurement deviations across the roof.

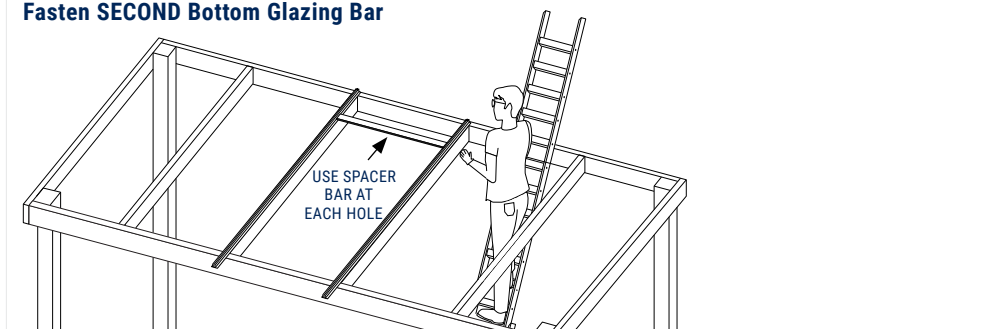
1 Fasten two Bottom Glazing Bars at or near the centre of the roof.

Fasten FIRST Bottom Glazing Bar

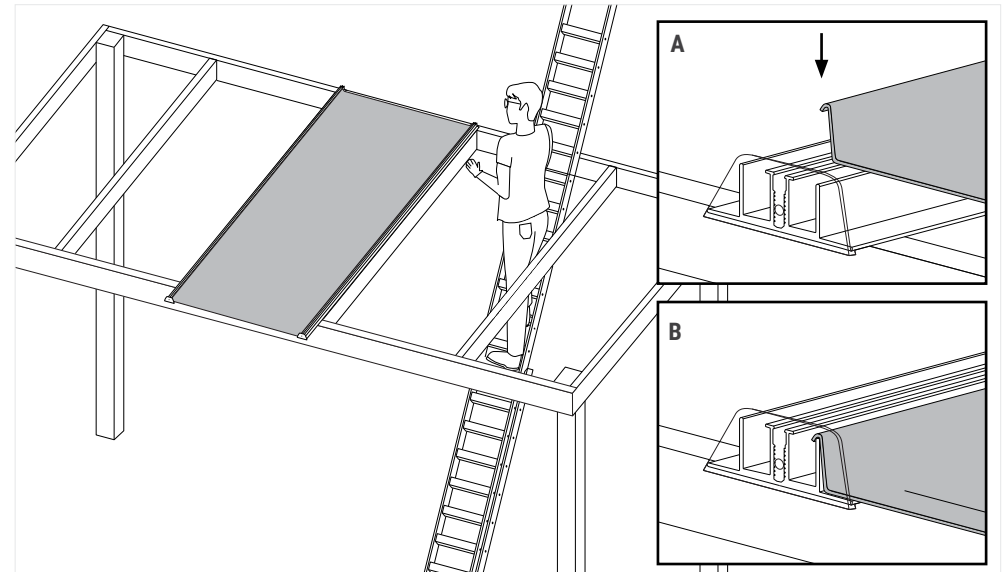


- Stand between rafters and start at top of roofline.
- Centre the profile in the middle of the rafter.
- Fasten screws in pre-drilled holes along the length of the first Bottom Glazing Bar.
- Using the spacer bar at every hole, fasten screws through the pre-drilled holes along the second Bottom Glazing Bar

Fasten SECOND Bottom Glazing Bar



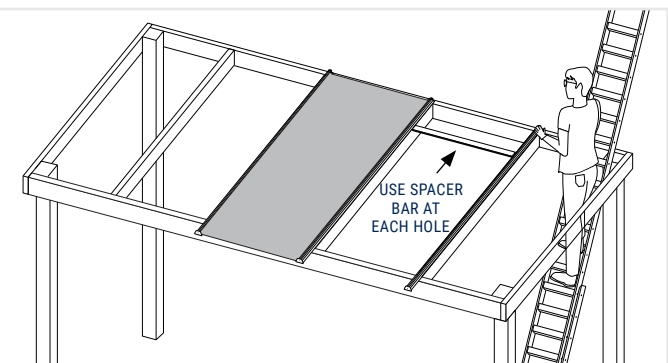
2 Place the first Roof Panel between the installed Bottom Glazing Bars.



- Make sure the raised edges of the Roof Panel are seated along the length of both Bottom Glazing Bars.

3 Add the third Bottom Glazing Bar

- Using the spacer bar at every hole, fasten screws through the pre-drilled holes along the third Bottom Glazing Bar.

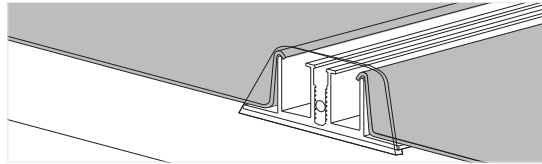


Installation Guide: SunTuf SunGlaze

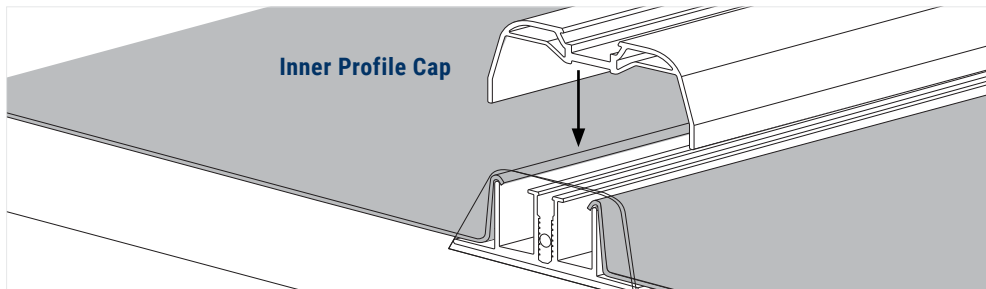
Superior Residential Polycarbonate Glazing System

Installation

4 Installing Middle Glazing Bar

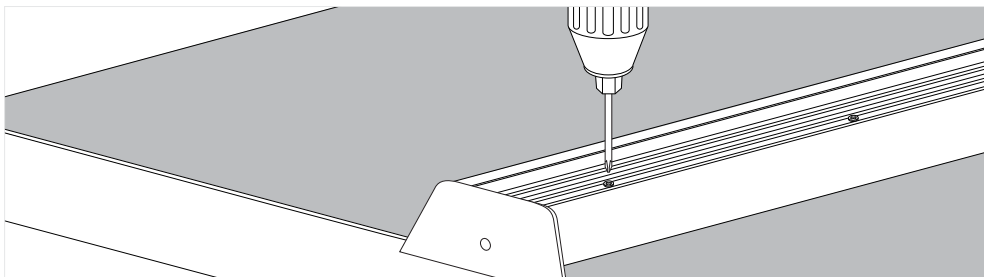


Before fastening, align the Middle Glazing Bar with the Bottom Glazing Bar



- After two adjacent Roof Panels are in place, install a Middle Glazing Bar over the Bottom Glazing Bar between them. This will secure down two adjacent Roof Panel edges.

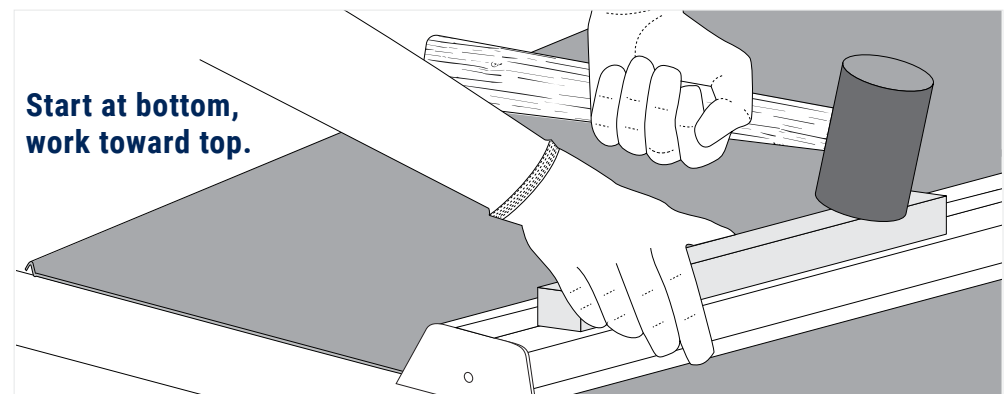
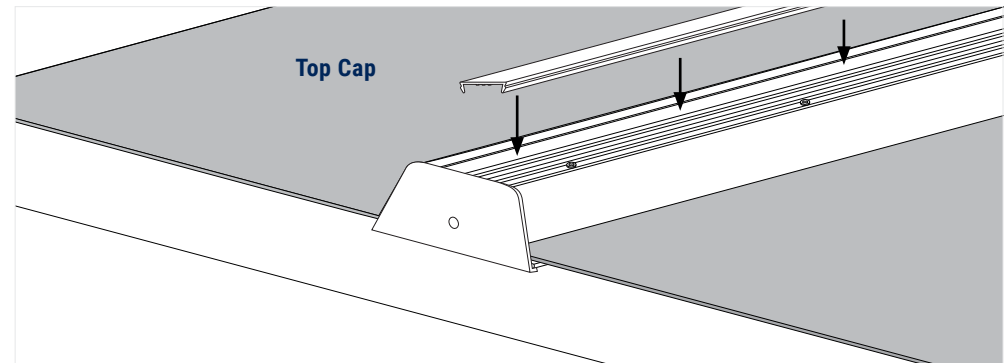
NOTE: Use cordless drill.



- Fasten the Middle Glazing Bar at 300mm centres using the 12g x 20mm fixings.
- Start fastening the Middle Glazing Bar at the bottom of the roof line, and work toward the top.
- Use adjustable impact driver or cordless drill and avoid over tightening so the screw will not strip the threads out.
- Add another Middle Glazing Bar in between every two new panels.

5 Installing Middle Glazing Bars

The Middle Glazing Bar must be fully fastened before adding the top cap. It is very difficult to remove the Middle Glazing Bar after installation.



Start at bottom,
work toward top.

- Install the Top Cap Cover by gently tapping it into place with a rubber mallet.
- Use a piece of wood to disperse the impact of the mallet and avoid damage to the Profile.
- Start at the bottom of the roof line and work toward the top.
- Remove the protective film after each Roof Panel is fully installed and secured.

Installation Guide: SunTuf SunGlaze

Superior Residential Polycarbonate Glazing System

PSP

LIMITED

Installation

6 Measuring Roof Panels for left/right side of roof

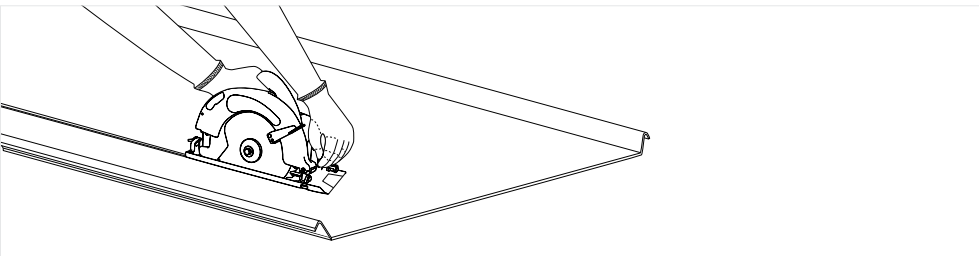
If you do not need to rip cut your final two roof panels, skip to step 14. You will rip cut the final left and right Roof Panels to fit (if required) before you install the Edge Bottom Glazing Bar. See below.



- Set the uncut end Roof Panel in place. On the Roof Panel, note the centre line of the end rafter. Then subtract 9mm and mark that as your rip line along the Roof Panel.

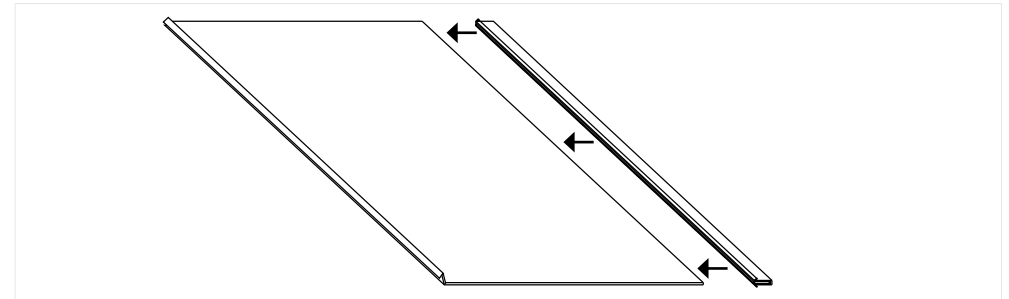
On Ground

7 Cutting Roof Panels for left/right side of roof

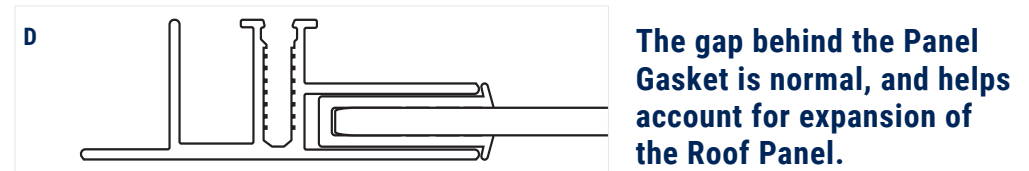
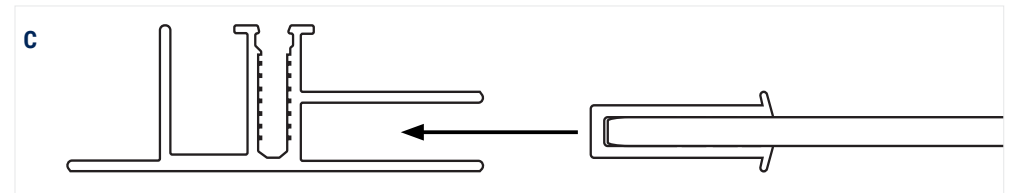


- Bring the sheet to the ground. Cut the Roof Panel along the rip line.

8 Installing Edge Bottom Glazing Bars with cut Roof Panels.



- Cut the Panel Gasket to the length of the Roof Panel.
- Then fit the cut Panel Gasket to the cut edge of the Roof Panel.



- Still on the ground, insert the End Panel Gasket and Roof Panel into the Edge Bottom Glazing Bar.
- Gently tap the Edge Bottom Glazing Bar with a rubber mallet to fully seat the Panel Gasket.
- Hammer against a length of wood to prevent damage to the Edge Bottom Glazing Bar.

Installation Guide: SunTuf SunGlaze

Superior Residential Polycarbonate Glazing System

PSP

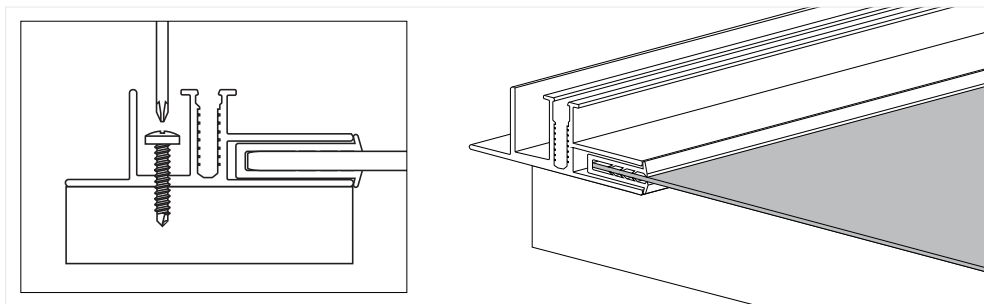
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Installation

9 Fixing both the left and right side Edge Bottom Glazing Bar.

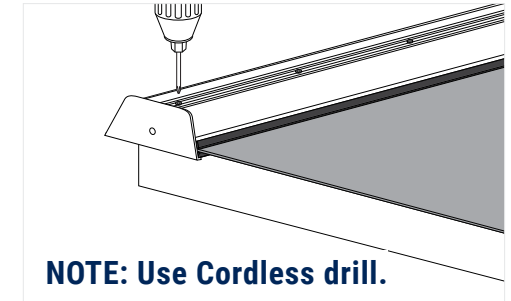
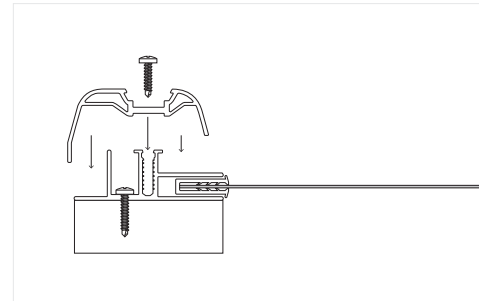


- Bring the entire assembly to the roof and set it in place.



- Start fastening the Edge Bottom Glazing Bar to the timber structure using the 8G x 50mm at the bottom of the roof line, and work towards the top. Use the Spacer to make sure the Edge Bottom Glazing Bar is at 600mm centres.

10 Install the Edge Middle Glazing Bar on either the left and right side Edge Bottom Glazing Bar.

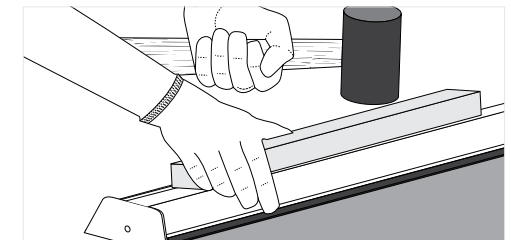
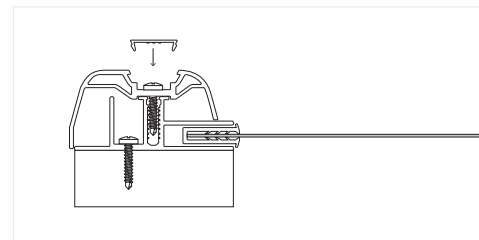


NOTE: Use Cordless drill.

- Fasten the Edge Middle Glazing Bar at 300mm centres using the 12g x 20mm fixings.
- Start fastening the Middle Glazing Bar at the bottom of the roof line, and work toward the top.
- Use adjustable compact driver or cordless drill and avoid over tightening so the screw will not strip the threads out.

11 Install the Top Cap Covers on both left and right Edge Bottom Glazing Bar.

The Edge Bottom Glazing Bar must be fully fastened before adding the Top Cap. It is very difficult to remove the End Profile Cap Cover after installation.



- Install the Top Cap by gently tapping it into place with a rubber mallet.
- Use a piece of wood to disperse the impact of the mallet and avoid damage to the Profile pieces.
- Start at the bottom of the roof line and work toward the top.
- Remove the protective film after each Roof Panel is fully installed and secured.

Installation Guide: SunTuf SunGlaze

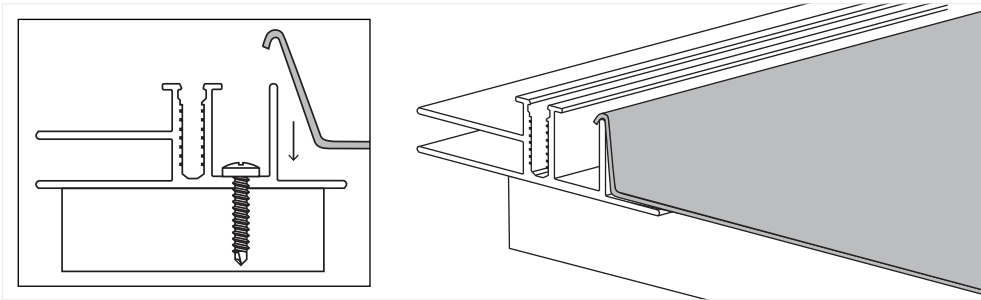
Superior Residential Polycarbonate Glazing System

PSP

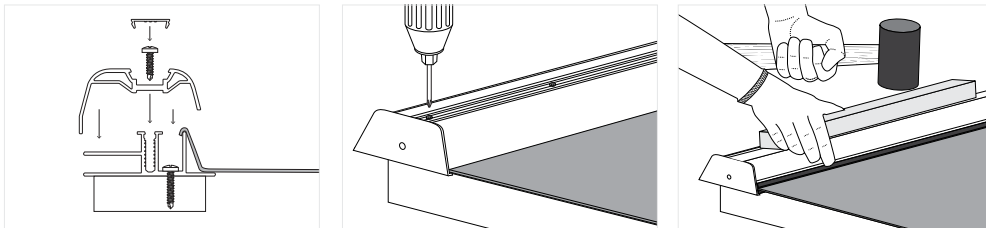
LIMITED

Installation

12 Installing Left and Right End uncut Roof Panels.



13 Installing Left and Right Edge End Cap and Cap Covers.



- Insert the Top Cap at the bottom of the roof line, and work toward the top by gently tapping it into place with a rubber mallet.
- Use a piece of wood to disperse the impact of the mallet and avoid damage to the Profile pieces. Start at the bottom of the roof line and work toward the top.
- Install the Edge End Cap at the bottom of the roof (spouting end) using the 10g x 25mm Self Drilling Screws provided. To make sure your cordless drill torque setting is set correctly, complete a trial first.
- Remove the protective film after each Roof Panel is fully installed and secured.

Please note: SunTuf SunGlaze is weather resistant not waterproof. All flashings and junctions that are installed must comply with local building regulations and the responsibility of the installer.