

ClearVue

ROOFING SYSTEM



ClearVue in colour
Blue Breeze

DESIGN & INSTALLATION GUIDE

VERSION 1.5 | SEPTEMBER 2026

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1.0 GENERAL INFORMATION

1.1 Product Overview

The BRANZ Appraised ClearVue Roofing System is an exterior clear or translucent-roofing system for open-sided porches, verandas and carports, over decks or patios, and for free-standing shelters. It uses ClearVue acrylic and polycarbonate glazing sheets clamped into aluminium glazing bars, finished with cover rails, end caps and gaskets, and carries a 15-year full replacement warranty.

ClearVue offers three distinct installation methods to suit a range of applications:

- the Span Bar (a structural aluminium rafter with an integrated clamping rail),
- fixing glazing rails to timber or metal rafters
- fixing glazing rails to timber or metal purlins.

Sheet & extrusion range

ClearVue Sheets	Standard sizes (mm)	Detail
6mm acrylic	3700 × 586 or 5100 × 586mm	Clear or grey tints; max bar spacing 600mm centres
8mm acrylic	3700 × 736 or 5100 × 736mm	Clear or grey tints; max bar spacing 750mm centres
8mm polycarbonate	4000 × 736 or 6000 × 736mm	Clear, Diffused, Solar Control, & Blue Breeze; max bar spacing 750mm centres

If rafter centres are outside of the standard 600mm and 750mm centres, cut panels 14mm less than the centre to centre measurement.

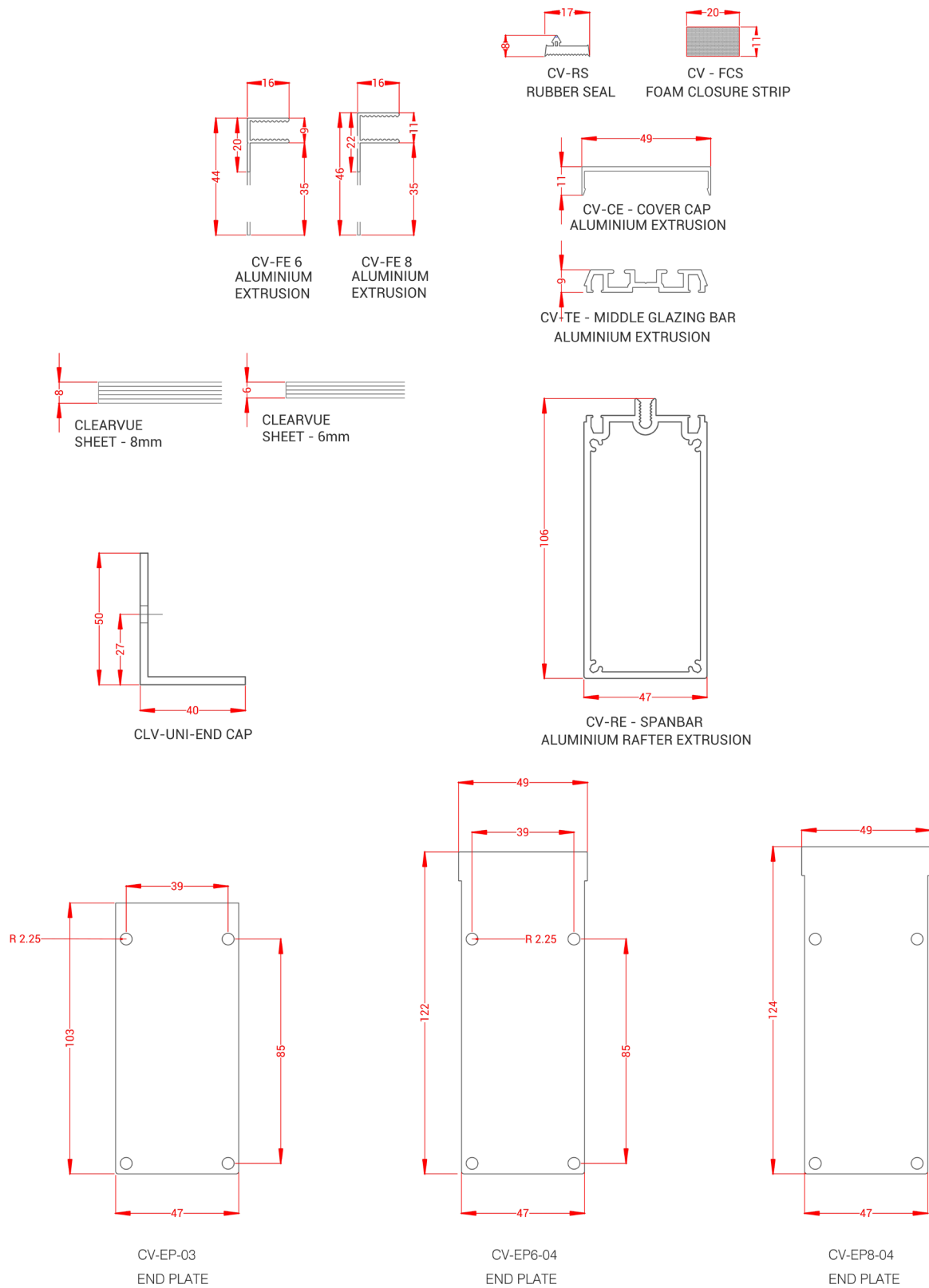
Aluminium extrusions and Accessories

Aluminium Glazing Bars and Span (Rafter Bars) are available in 3.7 m, 4.0 m, 5.1 m, and 6.0 m lengths. Each profile kit includes Bottom Rail - Middle Rail & Top Cover, Bottom Rail sealing gaskets & Mid Rail sealing gaskets. Bar ends can be finished with a range of end cap options, providing a neat and professional finish for a variety of installation requirements. To close off the bar open dead ends of panel runs full-length and F-Sections are available for both 6 mm and 8 mm panel applications.

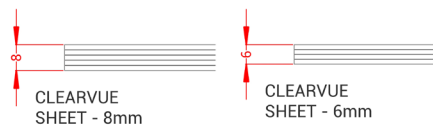
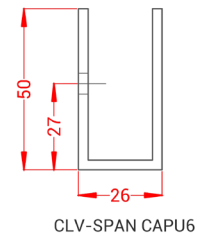
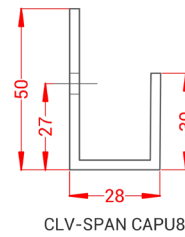
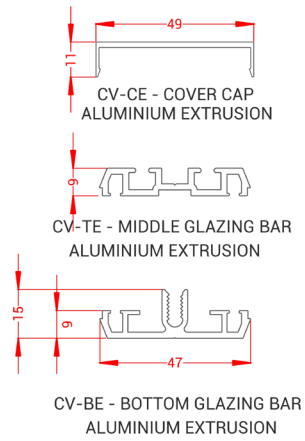
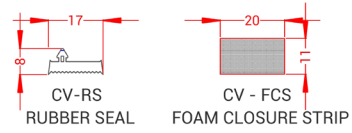
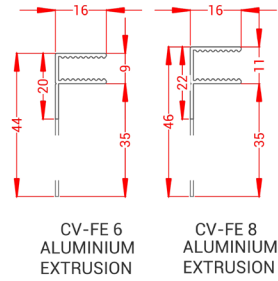
Component reference drawings

The following master detail sheets show the ClearVue glazing-bar / span-bar profiles, end plates and end caps, the rafter bracket, and the mechanical fixings schedule. Dimensions in millimetres.

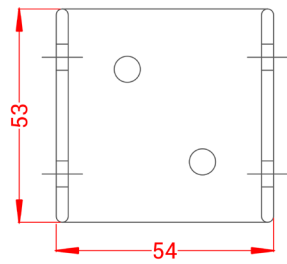
CLEARVUE EXTRUSIONS - SPANBARS ALUMINIUM



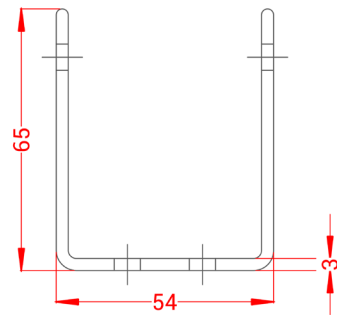
CLEARVUE EXTRUSIONS - GLAZING BARS ALUMINIUM



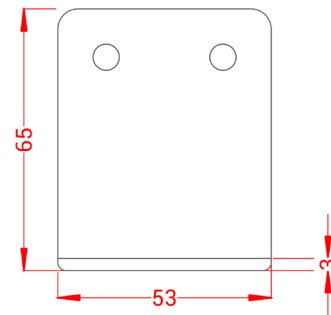
PSP RAFTER BRACKET - 3mm 316 STAINLESS STEEL WITH PSP FIXING SCREWS



CV-RB-1P
PLAN

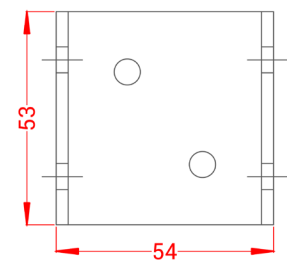


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ELEVATION

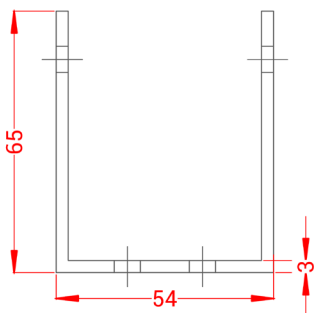


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ELEVATION

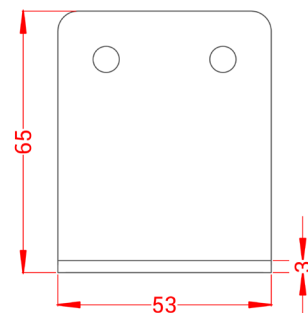
PSP RAFTER BRACKET - 3mm ALUMINIUM EXTRUSION WITH PSP FIXING SCREWS



CV-RB-1P
PLAN



CV-RB-1P
ELEVATION



CV-RB-1P
ELEVATION



CV-F09

M12 x 150mm GALVANISED FORTRESS
SCREW BOLT WITH GALVANISED M12
SQUARE WASHER



RECOMMENDED

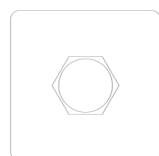


CV-F10

M12 x 135mm STAINLESS STEEL 316
THROUGH BOLT WITH STAINLESS STEEL
316 ROUND WASHER



RECOMMENDED



CV-F11

FIXING - PSP M12 STAINLESS STEEL 316
COACH SCREW WITH STAINLESS STEEL
316 M12 SQUARE WASHER

PROPRIETRY SUPPLIED FASTENINGS



CV-F01

6g SQUARE DRIVE
STAINLESS STEEL 316
FIXING SCREW FOR
SCREWING END PLATES



SGL

10G-16 X 19 HARDTEC SS
HWF SELF DRILL SCREW FOR
MID RAIL AND ENDCAP



CV-F03

8g x 50mm PAN SQUARE DRIVE SELF
TAPPERS
STAINLESS STEEL 316 FIXING SCREW
FOR CLEARVUE AND SUNGLAZE
BOTTOM GLAZING BARS



CV-F04

HEX DRIVE, UNC THREAD
STAINLESS STEEL 316 SOCKET
CAP SCREW FOR SECURING MID
GLAZING BAR TO SPANBAR OR
BOTTOM GLAZING BAR



CV-F05

14g x 25mm HEX HARDTEC FLANGE
STAINLESS STEEL 316 SELF DRILLING
SCREW
FOR SPANBAR AND RAFTER BRACKET
CONNECTION
ALSO FOR SUNGLAZE RAFTER BRACKET



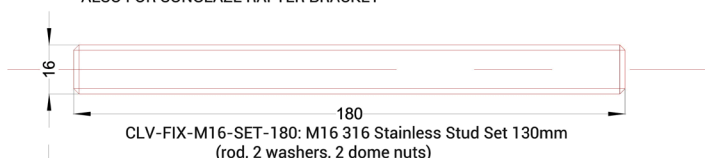
CV-F06

12g x 35mm HEX FLANGE TYPE 17
STAINLESS STEEL 316 FIXING SCREW
FOR SECURING RAFTER BRACKET
TO TIMBER BEAM

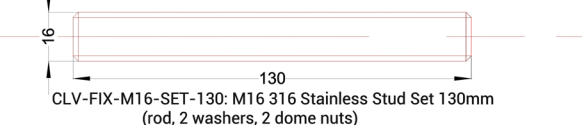


CV-F08

10g x 50mm COUNTER SUNK SQUARE
DRIVE STAINLESS STEEL
316 FIXING WOOD SCREW FOR SECURING
RAFTER BRACKET TO TIMBER BEAM



CLV-FIX-M16-SET-180: M16 316 Stainless Stud Set 130mm
(rod, 2 washers, 2 dome nuts)



CLV-FIX-M16-SET-130: M16 316 Stainless Stud Set 130mm
(rod, 2 washers, 2 dome nuts)



M16 T316 STAINLESS STEEL THREADED ROD WITH
M16 T316 LARGE WASHERS AND M16 DOME NUTS
FOR POST AND BEAM CONNECTIONS

1.2 Important & Controlled Documents

This guide covers the scope of use, design, fixing and maintenance of the Acrylic panelled ClearVue Roofing System. It must be read in conjunction with:

- **BRANZ Appraisal No. 877 (2025)** – dated 25 August 2025.
- ClearVue Typical Installation Details 1.4 (dated September 2026).
- ClearVue Installation Instructions for Span Bar Rafters, and Purlins.
- ClearVue System PS1 - dated September 2026

All documents are controlled – always confirm you are using the current version. For the latest documents, refer to www.psp.co.nz.

2.0 APPLICATION AND SCOPE

2.1 Scope of Use

- For open-sided porch or veranda-type roof structures attached to buildings that are Risk Group SH (per NZBC Acceptable Solution C/AS1), and other attached or detached roof structures not subject to fire Group Number requirements.
- Designed for use in NZS 3604 Wind Zones up to and including Extra High.
- Minimum roof pitch **3°**; maximum roof pitch **30°**. Recommended pitch 5°. Depends on type of endcap used.
- Constructed with 6mm or 8mm ClearVue acrylic or polycarbonate sheet (max glazing-bar spacing 600mm and 750mm respectively).

Note: The system is for use over open areas; there is no weathertightness requirement for such roofs, though ClearVue provides an adequate weathertight seal at the glazing supports.

2.2 Limitations

- The ClearVue Roofing System is not assessed for roofs used for the collection of potable water.
- Flashing profiles and intersection details must be to a specific weathertightness design where not detailed in the Technical Literature.
- Connection to the building and any additional supporting structure is outside the scope of BRANZ Appraisal 877 and must comply with NZS 3604 or specific engineering design.
- Where a design snow load of **1.0–1.5 kPa** applies (NZS 3604 Table 15.1), additional fixing requirements apply – see pg 3.3 and pg 6.2.

2.3 Building Code Regulations

If designed and installed per PSP technical documentation, the ClearVue Roofing System will meet or contribute to compliance with the following provisions of the New Zealand Building Code (NZBC):

Code Clause	Performance
B1 Structure	B1 Structure, B1.3.1, B1.3.2, B1.3.3 (a),(g),(h),(j)
B2 Durability	B2 Durability B2.3.1 (b) – 15 years
F2 Hazardous Building Materials	F2.3.1

3.0 DESIGN

3.1 Building Consent & Product Substitution

Where ClearVue forms part of a building consent application, submit this Design & Installation Guide together with [BRANZ Appraisal 877 \(2025\)](#) and BPIR V1.0. Where ClearVue is used as a substitute for a consented product, supply the relevant variation documentation to the building inspector before installation, along with this guide, the BRANZ Appraisal and the ClearVue PS1.

3.2 Design Considerations & Support

IMPORTANT: READ ME FIRST

- PSP provides typical ClearVue details for general guidance. Flashing profiles and intersections not shown in the Technical Literature must be to a specific weathertightness design.
- Connection to the building and any additional supporting structure required must be in accordance with NZS 3604 or specific structural engineering design. Where the work is Restricted Building Work (RBW), it must be done by, or supervised by, a Licensed Building Practitioner.

Supporting structure

The ClearVue system must be fixed to suitable structural support complying with the relevant clauses of the NZBC and the New Zealand Building Act. Minimum support requirements:

Requirement	Detail
Timber grade	Minimum H3.2 treated timber; rafters/purlins as per span tables (MSG 8).
Separation	Isolate ClearVue aluminium extrusions from treated timber with butyl rubber tape or a DPC.
Fixings	Grade 316 stainless steel throughout; purlin-to-rafter 14g × 100mm type-17 (per Appraisal Section 8.2).
Connection to building	In accordance with NZS 3604, or specific structural engineering design (outside the scope of Appraisal 877).

3.3 Span Tables

Tables 1–2 give maximum allowable spans for NZS 3604 Wind Zones up to and including Extra High, and snow loading up to 1.5 kPa ([BRANZ Appraisal 877, 2025](#)). 6mm sheet: max bar spacing 600mm; 8mm sheet: max bar spacing 750mm.

Table 1 – Method A: Span Bar configuration

Rafter	Acrylic (mm)	Max Bar Spacing (mm)	Extra High	Very High	High	Medium	Low
			<i>Maximum Rafter Span (m) – NZS 3604:2011 Wind Zone</i>				
Aluminium Span Bar	6	600	4.5	4.9	5.6	6	6
Aluminium Span Bar	8	750	4	4.4	5	5.4	5.4

Table 2 – Method B: Glazing Bar fixed to rafter

Rafter	Acrylic (mm)	Max Bar Spacing (mm)	Extra High	Very High	High	Medium	Low
			<i>Maximum Span (m) – NZS 3604:2011 Wind Zone</i>				
90 x 45 MSG 8	6	600	1.9	2.1	2.4	2.6	2.6
90 x 45 MSG 8	8	750	1.7	1.9	2.1	2.3	2.3
140 x 45 MSG 8	6	600	3	3.3	3.7	4	4
140 x 45 MSG 8	8	750	2.6	2.9	3.3	3.6	3.6
190 x 45 MSG 8	6	600	4	4.4	5	5.4	5.4
190 x 45 MSG 8	8	750	3.6	3.9	4.5	4.8	4.8
240 x 45 MSG 8	6	600	5.1	5.6	6.3	6.8	6.8
240 x 45 MSG 8	8	750	4.5	5	5.7	6.1	6.1

Table 3 – Method C: Glazing Bar fixed to purlins, 6mm sheet

Rafter Type	Max Rafter Spacing (mm)		Extra High	Very High	High	Medium	Low
			Max Rafter Span & Purlin Spacing (m) – NZS 3604:2011 Wind Zone				
140 x 45 MSG 8	600	Max Rafter Span (m)	3	3.3	3.7	4	4
		Max Purlin Spacing (m)	1	1.2	1.3	1.4	1.4
190 x 45 MSG 8	600	Max Rafter Span (m)	4	4.4	5	5.4	5.4
		Max Purlin Spacing (m)	1	1.2	1.3	1.4	1.4
240 x 45 MSG 8	600	Max Rafter Span (m)	5.1	5.6	6.3	6.8	6.8
		Max Purlin Spacing (m)	1	1.2	1.3	1.4	1.4
140 x 45 MSG 8	750	Max Rafter Span (m)	2.6	2.9	3.3	3.6	3.6
		Max Purlin Spacing (m)	1	1.2	1.3	1.4	1.4
190 x 45 MSG 8	750	Max Rafter Span (m)	3.6	3.9	4.5	4.8	4.8
		Max Purlin Spacing (m)	1	1.2	1.3	1.4	1.4
240 x 45 MSG 8	750	Max Rafter Span (m)	4.5	5	5.7	6.1	6.1
		Max Purlin Spacing (m)	1	1.2	1.3	1.4	1.4

Table 4 – Method C: Glazing Bar fixed to purlins, 8mm sheet

Rafter Type	Max Rafter Spacing (mm)		Extra High	Very High	High	Medium	Low
			Max Rafter Span & Purlin Spacing (m) – NZS 3604:2011 Wind Zone				
140 x 45 MSG 8	600	Max Rafter Span (m)	3	3.3	3.7	4	4
		Max Purlin Spacing (m)	0.8	1	1.3	1.4	1.4
190 x 45 MSG 8	600	Max Rafter Span (m)	4	4.4	5	5.4	5.4
		Max Purlin Spacing (m)	0.8	1	1.3	1.4	1.4

240 x 45 MSG 8	(mm) 600	Max Rafter Span (m)	5.1	5.6	6.3	6.8	6.8
		Max Purlin Spacing (m)	0.8	1	1.3	1.4	1.4
140 x 45 MSG 8	750	Max Rafter Span (m)	2.6	2.9	3.3	3.6	3.6
		Max Purlin Spacing (m)	0.8	1	1.3	1.4	1.4
190 x 45 MSG 8	750	Max Rafter Span (m)	3.6	3.9	4.5	4.8	4.8
		Max Purlin Spacing (m)	0.8	1	1.3	1.4	1.4
240 x 45 MSG 8	750	Max Rafter Span (m)	4.5	5	5.7	6.1	6.1
		Max Purlin Spacing (m)	0.8	1	1.3	1.4	1.4

Note: Purlins in Tables 3 and 4 are 90 × 45mm MSG 8 on flat, fixed to rafters with one 14g × 100mm type-17 self-drilling screw. This purlin-to-rafter structural fixing is separate from the glazing-bar-to-purlin fixing in pg 6.2.

SNOW LOAD – RAFTER SYSTEM

- Where a design snow load between **1.0 kPa and 1.5 kPa** is required (NZS 3604:2011, Table 15.1), the system must be fixed through **every** pre-drilled hole in the mid rail (150mm centres). If unsure, consult a design professional.

3.4 Span Tables - Post and Beams

Tables 1–2 give maximum allowable spans for NZS 3604 Wind Zones up to and including Extra High, and snow loading up to 1.5 kPa.

Finalised maximum rafter and beam spans in accordance with NZS 3604 wind zones:

Table – Rafter/Beam Length Matrix for 6mm System@ 600mm Max

BEAM SPAN	RAFTER LENGTH				
	EH	VH	H	M	L
2.90	4.5	4.9	5.6	6.0	6.0
3.40	4.2	4.9	5.6	5.8	5.8
3.80	3.3	3.8	4.4	4.4	4.4
4.30	2.6	3.0	3.5	3.5	3.5
4.80	2.1	2.5	2.8	2.8	2.8

Table – Rafter/Beam Length Matrix for 8mm System @750mm Max

BEAM SPAN	RAFTER LENGTH				
	EH	VH	H	M	L
3.00	4.0	4.4	5.0	5.4	5.4
3.60	3.6	4.3	4.9	4.9	4.9
4.20	2.6	3.1	3.6	3.6	3.6
4.80	2.1	2.4	2.7	2.7	2.7

Maximum Rafter Overhangs: The following maximum rafter overhangs can be adopted:

VH-EH Wind Zone: 0.80 m

L-H Wind Zone 1.00 m

Note: The maximum rafter overhangs shown above are additional to the rafter spans shown in the table above. The spans in the table represent the maximum clear span of the rafters, with allowable overhang extending beyond these spans.

Snow Loads: The RHS beams have been designed to support a snow load of up to 1.5kPa. For pergolas located in areas where snow loading applies, the RHS beam span should be selected based on the Extra High (EH) wind zone values.

Table 2 – Maximum Rafter Overhang Lengths

Wind Zn	Max Rafter L[m]	Rafter OH [m]	Min Rafter L [m]	Max OH [m]
EH	3.50	1.40	1.70	0.85
VH	4.20	1.68	2.00	1.00
H	4.80	1.92	2.40	1.20
M	5.40	2.16	2.90	1.45
L	6.00	2.40	3.40	1.70
Su	6.00	2.40	1.80	0.90

Note: Therefore, a maximum rafter overhang corresponding to the value shown in column 5 of the table could be adopted across all beam span and rafter span configurations shown in the gravity design section. Rafter overhangs could be increased to that shown in column 3, which are the maximum rafter overhangs corresponding to the maximum rafter length, however consideration of the following would need to be made: Backspan of the rafter would need to be greater than the overhang (meaning that the rafter overhang is governed by the backspan of the rafter if you are using these values)

Adopt: Maximum rafter overhang Su, VH, EH Wind Zone: 800 mm

Low – High Wind Zone: 1000 mm

4.0 PLAN THE LAYOUT

Planning the layout at the start of the project ensures the finished roof achieves the intended appearance, reduces wastage and speeds installation. Refer to Section 6

Remember

- Confirm the supporting structure for the Spanbar or glazing-bar spacing against the span tables for the project wind zone and sheet thickness.
- Consider environmental conditions (coastal, high-wind, snow) that may influence fixing and span decisions.
- Ensure the design complies with local regulations – if unsure, contact the PSP team.
- Allow tolerances at panel ends and joins to accommodate expansion and contraction (see 4.3).
- Refer to ClearVue Details: **PSP_CV_Brick Veneer Masonry Block Details**
PSP_CV_Fibre Cement Details
PSP_CV_Retrofit Details
PSP_CV_Roof Details
PSP_CV_Weatherboard Details
PSP_ClearVue Post & Beam Details

4.1 Post & Beam Details:

1. Design basis: the MarkPlan details

- MarkPlan has engineered and signed off a set of standard post, beam and base details, supported by a PS1.
- The MarkPlan details are based on **aluminium posts and beams only**.
- The MarkPlan PS1 applies only when **every** element of the post and beam structure follows the MarkPlan details. This covers:
 - Structural member sizes
 - spans
 - post spacing
 - post-to-beam connections
 - post base details
 - the site conditions listed in Section 4
- Any departure from the MarkPlan details puts the installation outside the PS1. This includes a change of material, span, connection, base detail or site condition.

2. Design routes and responsibilities

Route	When it applies	Design and documentation provided by
A: ClearVue standard details	Aluminium posts and beams, fully within the approved details and site limits	ClearVue PS1 (supplied through PSP)
B: Specific engineering design	Aluminium outside the approved details, mixed aluminium and timber, or any site outside the PS1 limits	Customer's chartered professional engineer (CPEng), who issues their own PS1
C: Timber design	Timber posts and/or beams	Customer's CPEng, or an LBP (Design) where the design falls within NZS 3604

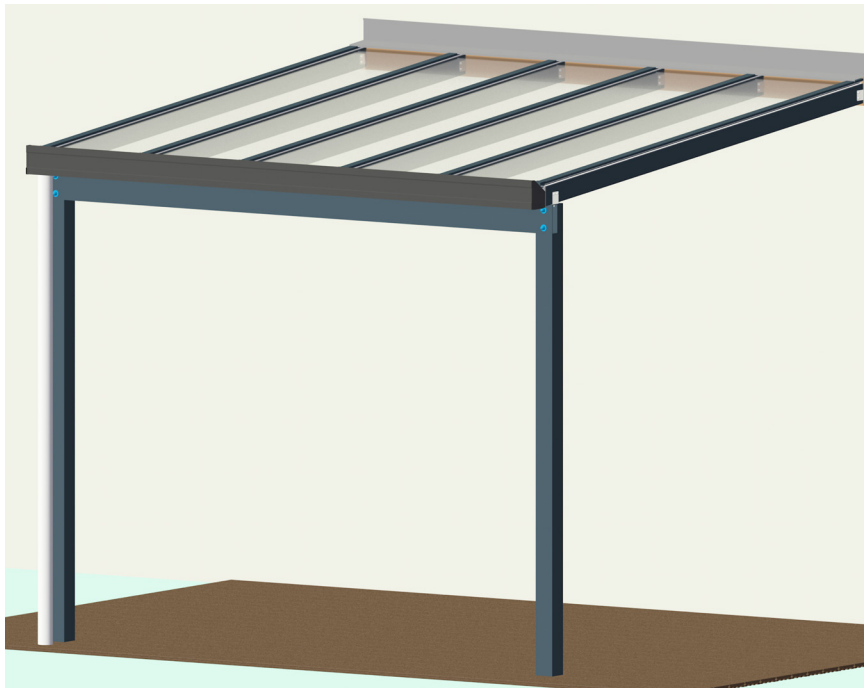
3. Building consent responsibility

- The customer, as owner and applicant, is responsible for:
 - confirming whether building consent is required
 - where it is required, managing the consent process
- Some pergolas and similar structures may qualify as exempt building work under Schedule 1 of the Building Act 2004, subject to conditions.
 - The customer, or their designer, must confirm eligibility.
 - PSP does not determine whether an exemption applies.
- **Route A:** PSP supplies the ClearVue PS1 and details to support the customer's application.
- **Routes B and C:** The customer's engineer or LBP prepares the design documentation and handles the technical side of the consent application. The customer still remains the applicant and holds overall responsibility.
- In all cases, PSP's documentation supports the consent process. It does not replace it.

4. Design decision sequence

Decision 1: Attached or free-standing

- **Attached to the house:**
 - The house side is supported by a ledger or fascia connection.
 - Posts are only needed along the outer beam line.
 - Requires the house-connection flashing and tape detail, and confirmation that the existing fascia, framing or cladding can take the load.
 - The house connection must meet the PSP details to remain within Route A.
- **Free-standing:**
 - Requires a beam and post line on both sides.
 - Sideways stability must come from the structure itself: knee bracing, moment-resisting post bases, or embedded posts.
 - Independent engineering will be required.

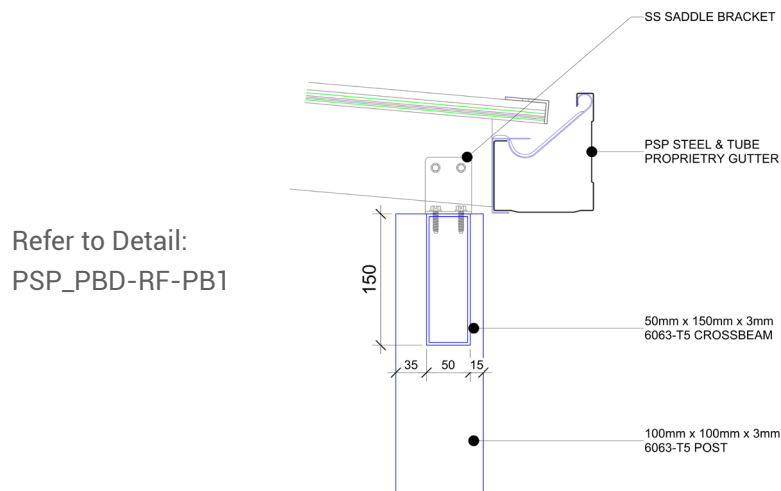


Decision 2: Cross beam span and post count

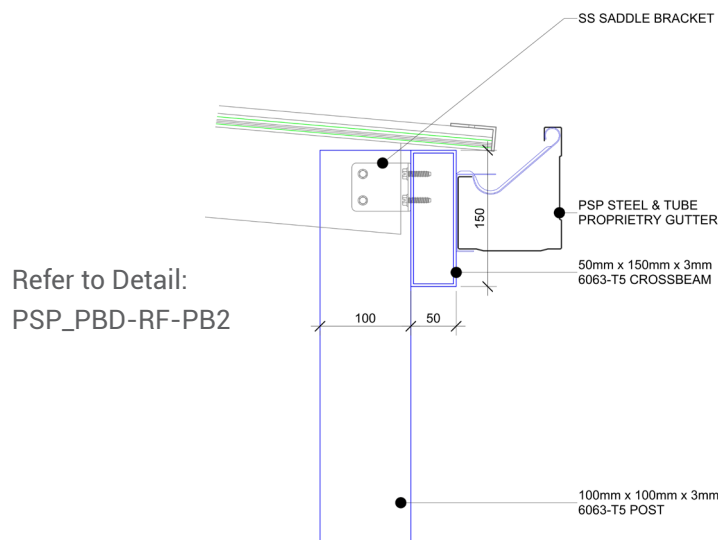
- The crossbeam span sets how many posts are needed.
- Span is governed by:
 - beam section
 - rafter spacing and the load each rafter passes onto the beam
 - the site wind and snow zone
 - must stay within the ClearVue span tables to remain within Route A.

Decision 3: Post-to-beam connection

- **Slotted into the post** (beam sits in a slotted or saddled post head):
 - Cleaner look, with the load going directly into the post.
 - Needs more precise fabrication.



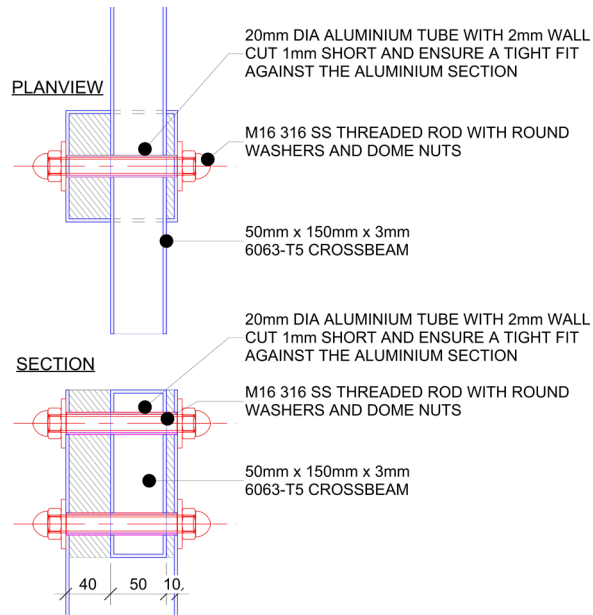
- **Surface mounted** (beam fixed to the post face or cap with a bracket or plate):
 - Simpler to fabricate, and more tolerant of site variation.
 - The load is carried through the fixings and bracket.
 - The hardware is visible.



- Only the connection types detailed by PSP fall within Route A.

- M16 316 SS threaded rod to be used in conjunction with M16 Large SS washers and M16 SS Dome Nuts
- Spacer tubes to be used to reduce potential of the Post or Beam wall being compressed.

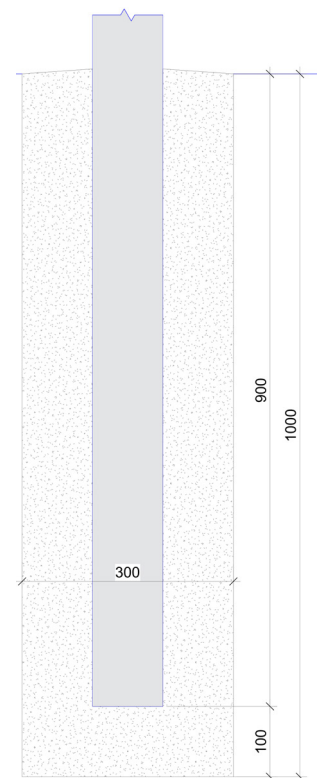
Refer to Detail:
PSP_PBD-RF-PB1



Decision 4: Post base

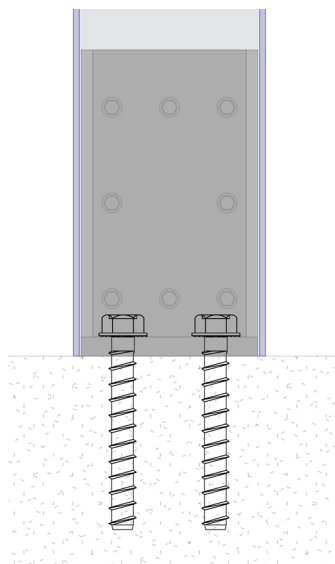
- **Embedded in the ground** (post set into a concrete footing):
 - Gives the best resistance to sideways loads, so it's well suited to free-standing structures.
 - Hardest to adjust or replace.
 - Needs a durability detail at ground level.

Refer to Detail:
PSP_FTD_PC01



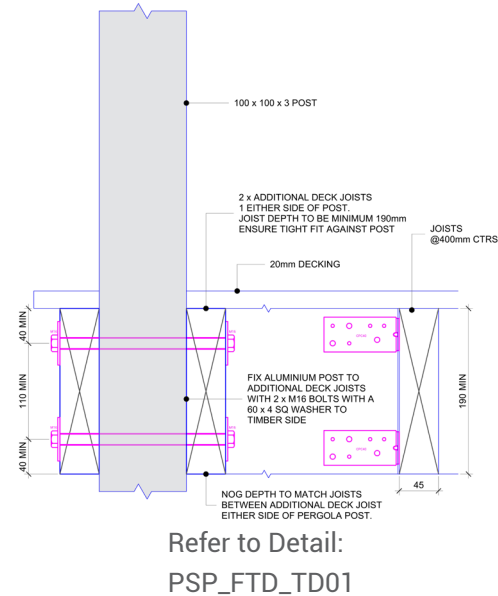
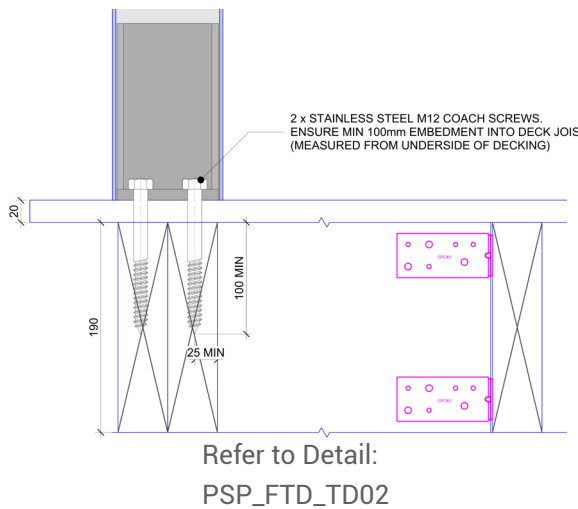
- **Bolted to a concrete slab** (base plate with anchors):
 - Quick to install and replaceable.
 - Depends on slab thickness, edge distance and anchor capacity.
 - A simple pinned base gives limited resistance to sideways loads.

Refer to Detail:
PSP_PBD-RF-PB1



- **Fixed through a timber deck to the support joists:**

- The most constrained option. Most existing decks were not designed for concentrated post loads or wind uplift.
- Extra stiffening may be needed to meet the PS1 details, e.g. additional joists, blocking, doubled bearers, or added piles under post positions.
- If the existing deck framing cannot be brought up to the PS1 requirements, the installation will need to be reviewed by an engineer to ensure it meets NZS 3604:2011.



4.2 Rafter Layout

Rafter Span & Centres – Planning Process

1. Confirm site inputs

- Wind zone and snow zone (snow conversion: 1 kPa $\approx$ 102 kg/m²)
- Attached or free-standing, footprint, projection

2. Select sheet and Spanbar/Glazing bar width

- 6 mm (CV6): 600 mm centres
- 8 mm (CV8): 750 mm centres

3. Set pitch

- Acrylic: 3° minimum. Polycarbonate: 3-5° minimum
- Pitch + wind zone also sets flashing cover (E2/AS1 'X' dimension)

4. Check rafter span

- Table 1, Method A (Span Bar), for the confirmed wind/snow zone and sheet
- Within table proceed
- Outside table route to engineering

5. Check overhang

- See ClearVue rafter overhang tables to establish what is acceptable across all wind zones

6. Connections and consent

- Rafter-to-beam fixing (uplift), apron to wall substrate (PCV-RTF detail sheets), post base
- ClearVue PS1 covers signed-off details only – anything outside goes to the customer's engineer/LBP
- Customer manages consent

Quick reference

Parameter	ClearVue value / source
Rafter centres – 6 mm (CV6)	600 mm
Rafter centres – 8 mm (CV8)	750 mm
Minimum pitch – acrylic	3°
Minimum pitch – polycarbonate	3-5°
Rafter span check	Table 1, Method A (Span Bar)
Rafter overhang	ClearVue Overhang Span Tables
Supporting beam	ClearVue Span tables
Snow load conversion	1 kPa $\approx$ 102 kg/m ²

4.3 Expansion and Contraction

CRITICAL: WARRANTY & TOLERANCE

- Glazing-centre tolerance is **$\pm 2.0\text{mm}$** . Anything outside this may cause system failure and will void the warranty.

Do not overtighten fixings – over-tightening distorts the extrusion and gaskets.

- Allow 3mm for Clear Blue Breeze & Diffused panels & 5mm for Grey Tint and Solar Control per metre of panel length for thermal expansion. Example: a 5.1m span allows 25mm, so cut sheet length $\approx$ 5075mm.
- Leave a 2.0mm gap between panels at the glazing bar (inside edge of the gasket). This is allowed for if centres are correct.
- For low pitches, machine-finish the bottom edge of panels with a radius / bullnose to stop water drawing back up the underside.

5.0 PREPARATION

5.1 Health & Safety, Handling & Substrate

KEEP SAFE

- Wear appropriate PPE (eye protection, gloves, safety footwear). Take care with sharp cut edges of aluminium and acrylic.
- Never rely on ClearVue sheets to support loads generated by workers on the roof – loads must be carried on planks transferred directly to the purlins, rafters and structure.
- Take suitable precautions when working at height, with treated timber, or with power tools.

Handling & storage

- Store ClearVue sheets covered and horizontal on a flat surface; do not stack vertically.
- Keep other components clean and dry until installation; leave protective masking on until panels are fixed.

Check substrate

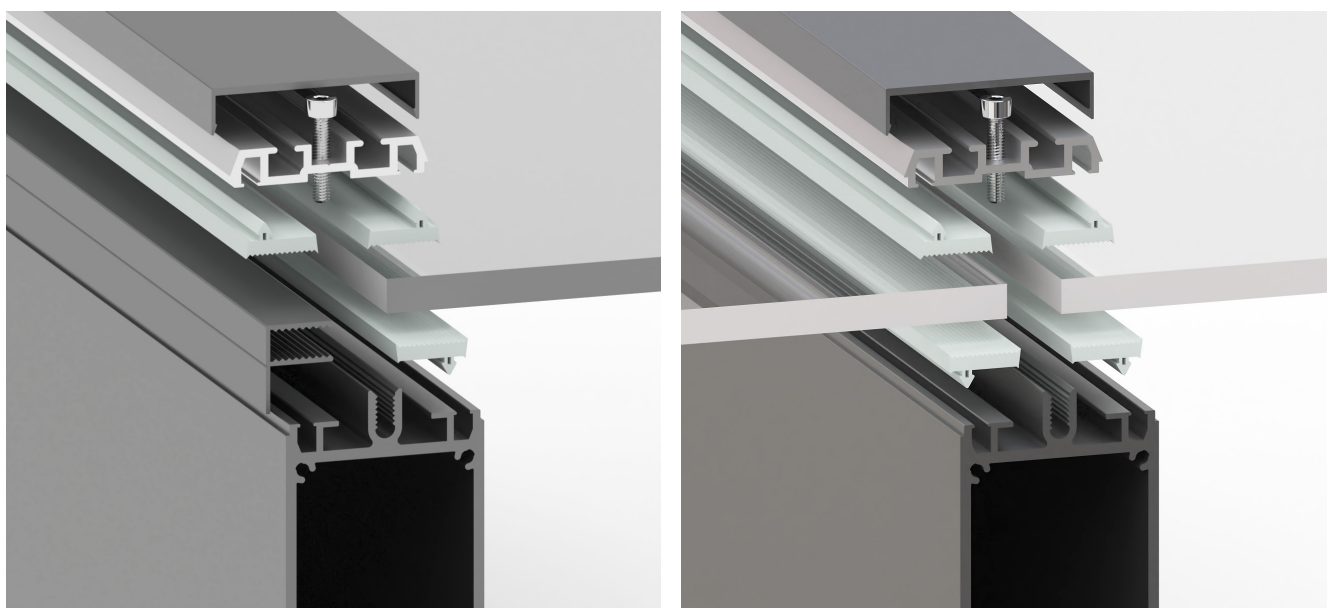
Ensure the supporting structure is sound, true and compliant with the span tables before starting. Confirm timber is H3.2 minimum and isolated from aluminium with butyl tape or DPC.

6.0 CUT & INSTALL CLEARVUE

6.1 Prepare and install structure

- **Confirm the design is final** and check the site set-out against it before cutting: post positions, heights, pitch, levels and square.
 - If the site doesn't match, stop and refer back to the designer. This may change the design route (Section 3).
- **Cut SHS posts and RHS beams to length** from the finalised design.
 - Allow for the base detail and the post-to-beam connection when calculating post length.
- **Spanbars (where installed):** establish the length and cut to the indicated pitch angle. See the Spanbar install guide.
- **Follow the selected details for:**
 - securing posts to the ground, slab or deck, including any deck stiffening
 - the post-to-beam connection
 - Do not substitute fixings. A substitution takes the installation outside the MarkPlan PS1.
- **Isolate aluminium** from treated timber and dissimilar metals where specified.
- **Brace the frame temporarily** until the rafters and glazing bars are installed. See the glazing bar install guide.

6.2 Span Bar System (Method A)



Spanbar System (A)

The primary standalone method: an aluminium rafter extrusion with an integrated clamping rail, mounted on stainless steel saddle brackets connected to cross beams and posts. Suits cantilevered-into-gutter or flush finishes.

1. Prepare and set out the extrusions

- Cut extrusions to suit the design – typically **50mm overhang** for gutter discharge, or flush.
- Slide gaskets into the extrusions. Wet the channels with soapy water to ease entry.

2. Fix the Span Bars to the structure

- Fix saddle brackets to the roof structure at the required glazing centres.
- Fix the Span Bars into the brackets at both ends with the 14g x 25mm Hardtech screws.
- Fix the bottom split end cap with the 6g pan-head screws..

3. Prepare the panels

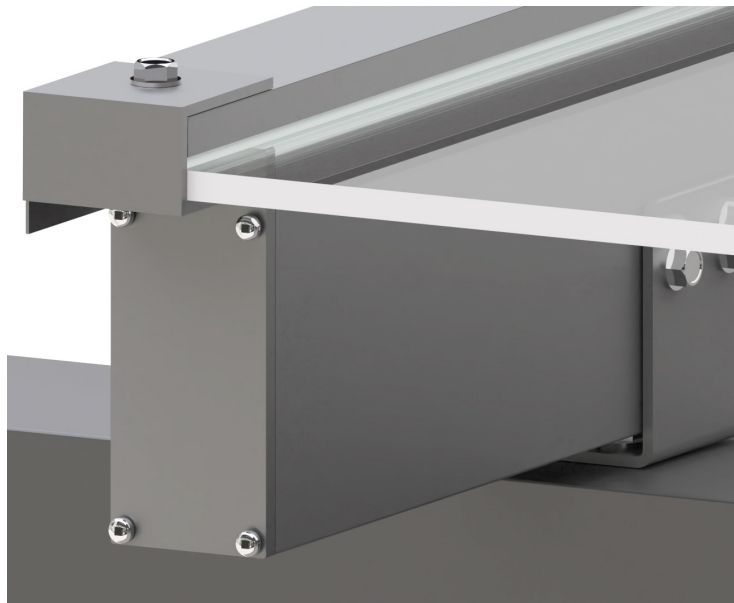
- Peel 50mm of protective masking from the long sides of each panel (both faces) before installing; leave the remainder on until the panel is fixed.

4. Install the panels

- Place two panels to the inside edge of the gasket, leaving a **2.0mm expansion gap**; align to the intended mid and cover rail positions.

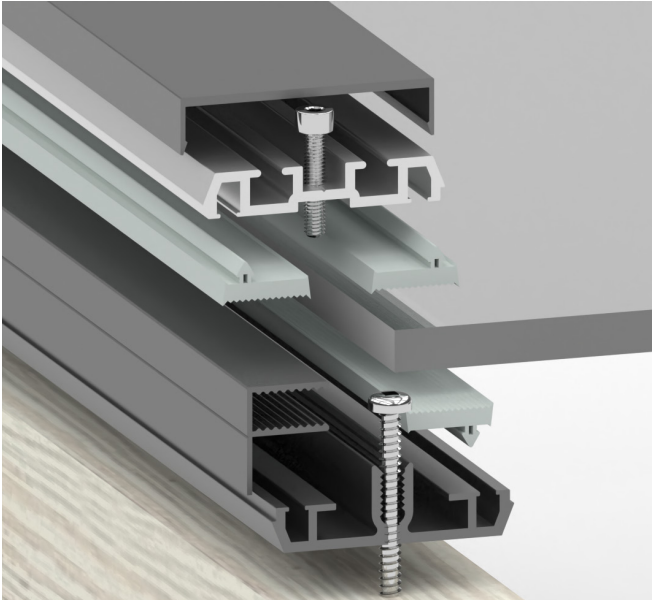
5. Secure the mid rail

- Optional: Remove the bottom gasket and fit the applicable 6mm or 8mm F-Section to finish the outside edges.
- Secure the mid rail with cap screws through the pre-drilled holes at **150mm centres**; place a fixing no less than **50mm from the bottom end** for secure clamping.
- Clip on the top cover rail – tap with a rubber mallet until it clicks.
- Fit end caps using the 25mm Hardtech self-drilling screws provided.

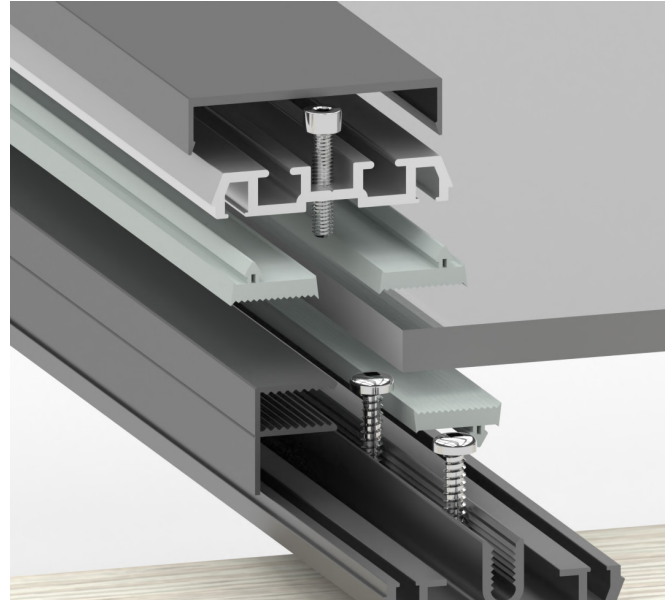


Spanbar Endcap System (A)

6.3 Rafter & Purlin Systems (Methods B & C)



Rafter System (B)



Purlin System (C)

Both methods fix ClearVue glazing rails directly to the supporting structure and share almost all of their process. Method B fixes glazing bars on top of and parallel with timber rafters; Method C fixes glazing bars on top of and perpendicular to timber purlins — allowing the rafter spacing beneath to differ from the glazing-rail spacing. Follow the universal steps below, then apply the method-specific differences.

Universal steps (all methods)

1. Fit the gaskets

- Slide rubber gaskets into the bottom and mid rails; wet the channels with soapy water for easier entry.

2. Prepare the panels

- Peel 50mm of protective masking from the long sides of each panel (both faces) before installing; leave the remainder on until the panel is fixed.

3. Install the panels

- Place two panels to the inside edge of the gasket, leaving a **2.0mm expansion gap**; align to the intended mid and cover rail positions
- Optional: Remove the bottom gasket and fit the applicable 6mm or 8mm F-Section to finish the outside edges..
- Clip on the top cover rail — tap with a rubber mallet until it clicks.
- Fit end caps with the 14g x 25mm Hardtech self-drilling screws provided.

Method-specific differences

Method B fixes to rafters; **Method C** fixes to purlins. All other steps follow the universal sequence above.

	Method B – Rafters	Method C – Purlins
Bottom glazing bar fixing	@ 600 centres into rafters with 8g × 50mm Pan Head Square drive screws.	2 × 8g × 75mm Pan Head Square drive screws into each purlin.
Drilling method	Turn bottom glazing bars over, use groove for centring and drill 5mm dia. holes @ 600mm centres.	Turn bottom glazing bars over, use groove for centring and drill 2 × 5mm dia. holes adjacent to each purlin.
Middle glazing bar fixing	@ 150mm centres using the supplied cap screws, excluding positions where a fixing would land on a rafter fixing.	@ 150mm centres using the supplied cap screws, excluding positions where a fixing would land on a purlin fixing.
Snow load provision	Standard fixing at 150mm centres. Where a design snow load of 1.0–1.5 kPa applies (NZS 3604:2011, Table 15.1), fix through every pre-drilled mid-rail hole. Above 1.5 kPa, consult a design professional.	Purlin spacing and rafter span are governed by the snow-rated span tables – Tables 3 & 4 (§3.3) , valid for snow loads up to 1.5 kPa across all wind zones. Above 1.5 kPa, or outside the tabulated cases, consult a design professional.
Overhang	50mm for gutters, or flush for run-off.	50mm for gutters, or flush for run-off.



Glazing Bar Endcap System for Rafters (B) and Purlins (C)

SNOW LOAD – RAFTER SYSTEM

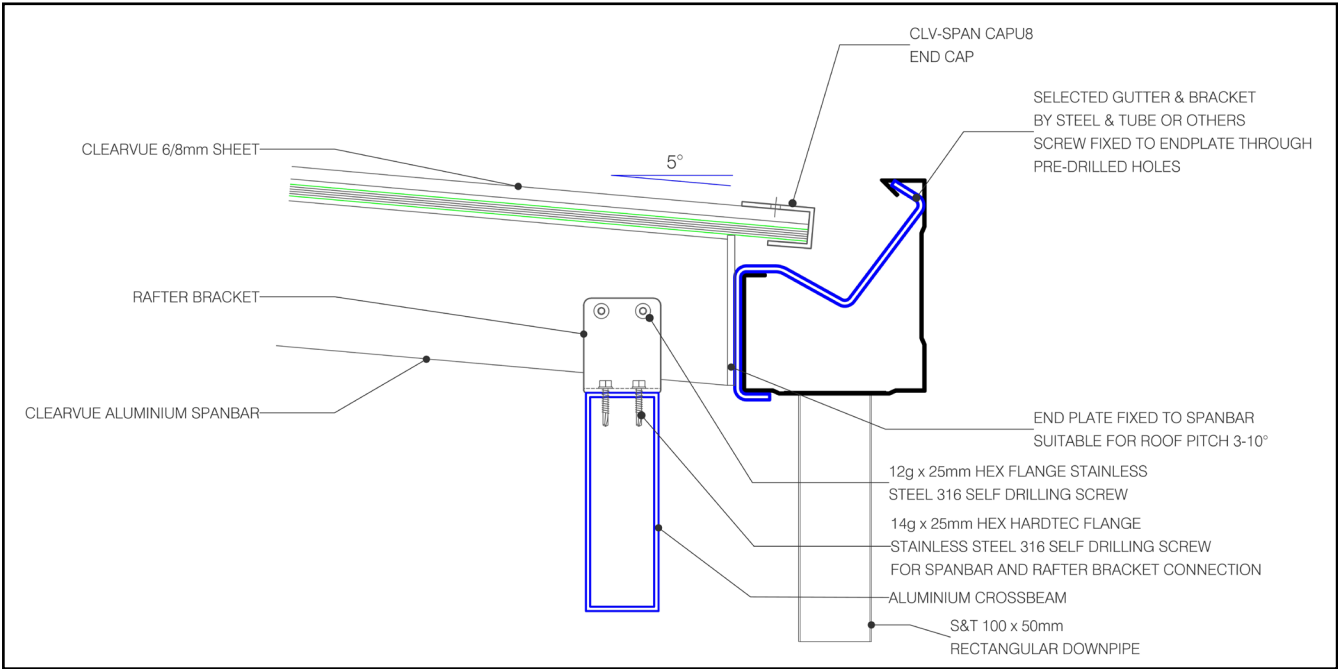
Where a design snow load between **1.0 kPa and 1.5 kPa** is required (NZS 3604:2011, Table 15.1), the system must be fixed through **every** pre-drilled hole in the mid rail (150mm centres). If unsure, consult a design professional.

6.4 Gutter & Downpipe Details

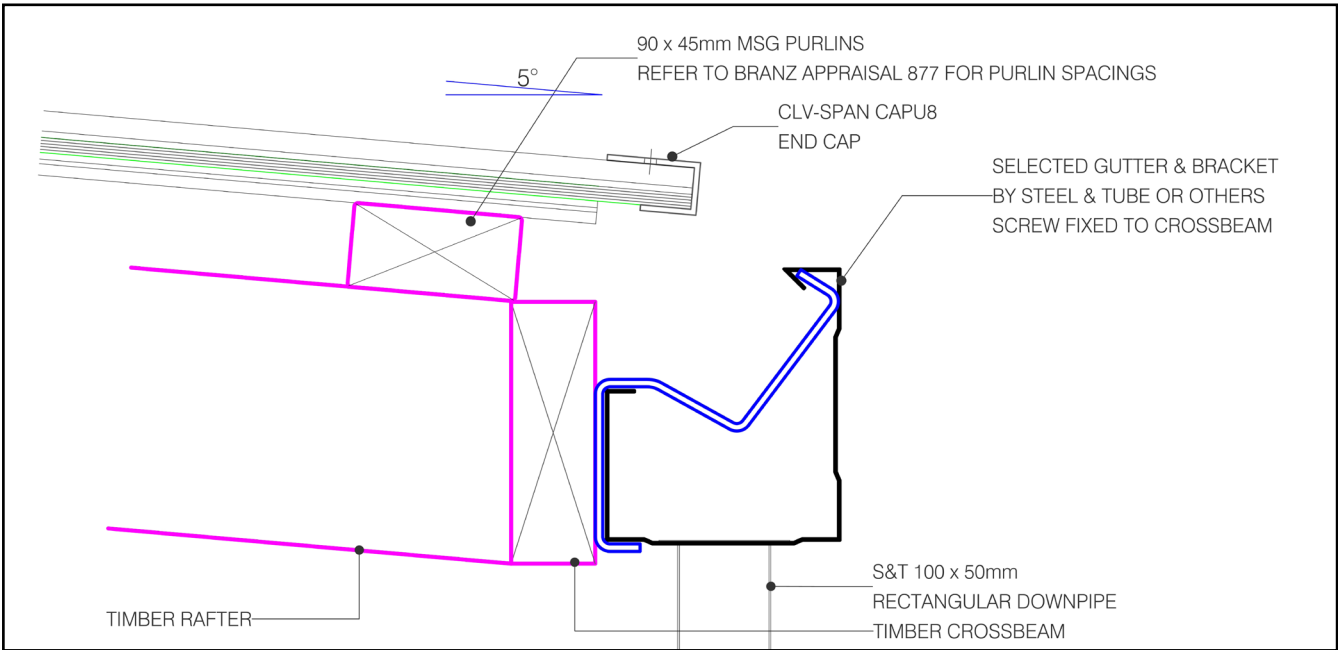
Downpipe capacity by roof pitch

Roof pitch	Typical maximum roof area (m ²) per outlet — downpipes				
	Round (mmø)			Rectangular (mm×mm)	
	65	75	100	100 × 50	75 × 50
<10°	60	85	155	100	73
10-24°	60	85	155	100	73
25-34°	50	70	130	80	61
35-44°	40	60	110	70	50
45-55°	35	50	90	60	43

Typical maximum roof area (m²) served per downpipe outlet, by roof pitch.

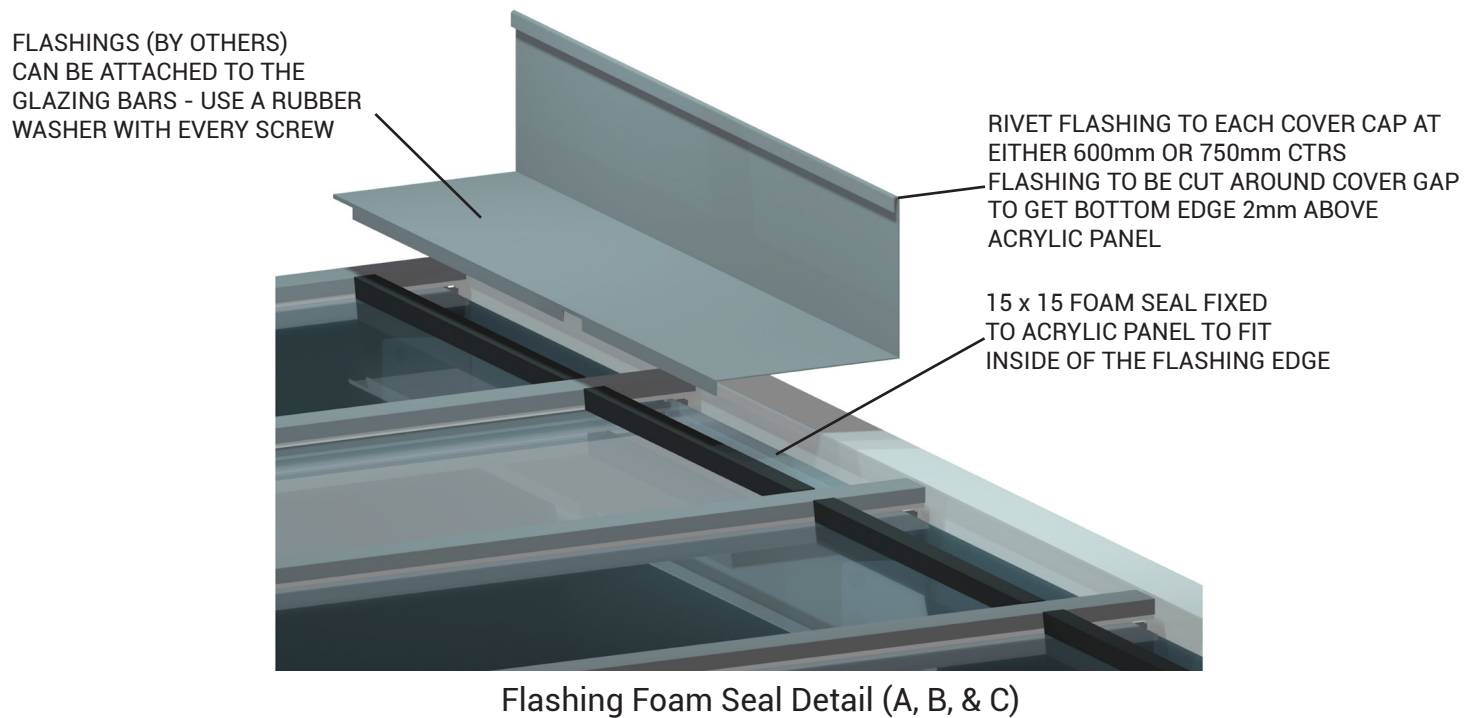


Spanbar Gutter Option (A)



Rafter & Purlin Gutter Option (B & C)

6.5 Flashing Details



7.0 CARE AND MAINTENANCE

The ClearVue Roofing System does not normally require structural maintenance — damaged components can be replaced individually to maintain integrity. Routine cleaning, however, is a condition of the warranty. Carry out any maintenance in accordance with the relevant Health and Safety requirements.

WARRANTY CONDITION — CLEANING & TRAFFICABILITY

- Weather-exposed panel surfaces must be cleaned of accumulated dust and dirt **no less than twice a year**, or more frequently where extreme dust or dirt conditions prevail.
- **The ClearVue Roofing System is non-trafficable.** Under no circumstances should it be walked on or used as scaffold / or a working platform.

7.1 Cleaning — Acrylic Panels

Safety: always use crawl boards spanning the bars if climbing on the roof structure.

With the correct cleaning agent and materials, acrylic will stay clear for years. Clean gently — never use force, which scratches the surface and voids the warranty.

- Clean with soapy water and a soft microfibre cloth; the fine fibres hold dirt particles well. Rinse the cloth regularly.
- Use a generous amount of water with a drop of detergent to wash solid dirt away thoroughly.
- A touch-free method (hose or water blaster) may be used — keep the water-blaster nozzle **at least 500mm** from the sheet.
- Do not use solvent based or glass cleaners — they will not dissolve solid dirt particles such as sand and dust.
- **Do not use benzene, thinner or acetone.** These soften the surface and leave an irreversible haze, voiding the warranty.

7.2 Cleaning — Polycarbonate Panels

Safety: always use crawl boards spanning the bars if climbing on the roof structure.

With the correct method and materials, polycarbonate keeps its clarity and performance for many years. As with acrylic, clean gently and never use force.

- **Pre-rinse first** with clean lukewarm water to float off loose dust and grit before making any contact with the panel.
- Clean with soapy water and a soft microfibre cloth using a drop of mild detergent; rinse the cloth regularly.
- **Apply in light, linear strokes** — avoid circular scrubbing, which causes visible swirl scratches.
- Do not use white spirit or glass cleaners (including ammonia-based window cleaners) — they will not dissolve solid dirt and may damage the surface or UV-protective coating.
- A touch-free method (hose or water blaster) may be used — keep the nozzle **at least 500mm** from the sheet.
- **Never use solvent based cleaners including MEK or chlorinated solvents - they will not dissolve solid dirt particles such as sand and dust.**

What to avoid (polycarbonate)

Avoid	Reason
All Solvent based cleaners, for example Acetone, MEK, benzene	Solvent attack – causes crazing and irreversible hazing
Ammonia-based cleaners (most glass / window sprays)	Chemical damage to the surface and UV-protective coating
Dry wiping	Micro-scratches from grit and dust particles
Soft Brushes, Paper towels or rough cloths	Abrasive fibres cause surface scratches
Circular scrubbing motion	Creates visible swirl-scratch patterns
Water-blaster nozzle closer than 500mm	Can damage panels or coatings, or cause water ingress at edges
Spirit based for example White spirit, mineral spirits	Does not dissolve solid dirt; leaves residue

7.3 Powder Coating & Anodised Components

Three steps to cleaning powder-coated and anodised components:

- Carefully remove loose surface deposits with a wet sponge.
- Using a soft, non-abrasive brush and a mild household detergent (no solvents) in warm water, remove dust, salt and other deposits.
- Rinse off with clean fresh water and towel dry.
- Avoid the use of water blasters as they may cause the powder coating to come away from the surface.

Note: Coastal and other high-corrosion environments require more frequent cleaning. For further powder-coating guidance, refer to duluxpowders.co.nz/tech-advice.

7.4 Moss, Mould, Mildew, Algae & Lichen

For removal of moss, mould, mildew, algae and lichen, contact **30 Seconds** for advice on the correct treatment (e.g. their Roof & Awning Cleaner), and follow the manufacturer's instructions for application and safety.

7.5 Frequency & Serviceable Life

Clean weather-exposed surfaces at least twice a year, and more often in coastal, industrial or high-dust locations. Damaged components can be replaced individually.

Note: The system is expected to have a serviceable life of at least 15 years when designed, installed and maintained in accordance with BRANZ Appraisal 877 (2025) and the Technical Literature.

For further assistance, please contact your nearest PSP branch.

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