Lavarack House feat. Austratus Linear - Timber
Architect: BDA Architecture
Builder: DB Build
Photographer: Andy Macpherson

Austratus System

Installation Guide

Linear | Grid | Vertical

For installation support: 1800 156 455

modinex.com.au

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Contents

1. Introduction

Austratus is a clip-on batten system developed to streamline installation and support thoughtful architectural design. Available in Linear, Grid, and Vertical formats, it suits internal and external use across a wide range of project types: from commercial fit-outs and public spaces to residential applications.

The system uses a patented clip-in rail that allows timber or aluminium battens to be fixed quickly and with precision, delivering a clean, consistent finish. The complete off-the-shelf system includes clips, rails, and a full selection of timber and aluminium profiles, along with finishing trims and spacers.

2. Before You Begin

Before Installation

Before you begin, ensure you understand all relevant building codes and compliance requirements for your project location. These vary by state and region and must always take precedence over this document.

This guide supports the correct installation of the Austratus system. It does not replace professional judgement, site-specific requirements, or legal obligations under the National Construction Code (NCC).

Installation must be carried out by qualified trades in accordance with this guide and applicable Australian Standards and local building codes. Modinex accepts no responsibility for failure resulting from incorrect installation or use outside the intended scope.

> **Important:** Check with your local regulatory authority for any special code requirements before commencing work.

For technical assistance, contact Modinex on 1800 156 455.

Delivery

On delivery, inspect all materials to confirm the correct products have been supplied and that there is no visible damage. Any defect, shortage, or discrepancy must be reported to Modinex in writing within 7 days of delivery. Check materials within 48 hours where possible.

3. Safety, Storage & Tools

Safety

Standard safe work practices apply at all times. Always wear appropriate PPE when cutting or drilling profiles:

- Safety glasses
- Hearing protection when cutting or using power tools
- Dust mask when cutting timber profiles
- Gloves when handling aluminium profiles with sharp edges

Warning: Ensure any overhead work is carried out from stable, rated access equipment. Never stand on incomplete ceiling systems.

Storage

Once on site, storage is the responsibility of the client or installer. Store all products:

- Flat, undercover, and off the ground
- In a dry, protected area away from weather and site traffic
- Clear of activities that may cause damage

Note: Lay out all battens before installation to check colour mix and grain consistency.

Tools Required

Standard woodworking or aluminium-compatible tools:

- Circular saw or mitre saw: timber-rated blade for timber profiles, aluminium-compatible blade for aluminium profiles
- Drill driver with appropriate bit set
- Laser level or spirit level
- Tape measure and pencil
- Rubber mallet (for installing clips)
- Touch-up paint (for cut timber ends: available from Modinex)

4. System Components

The Austratus system uses a fixed set of compatible components. Understand what each part does before beginning installation.

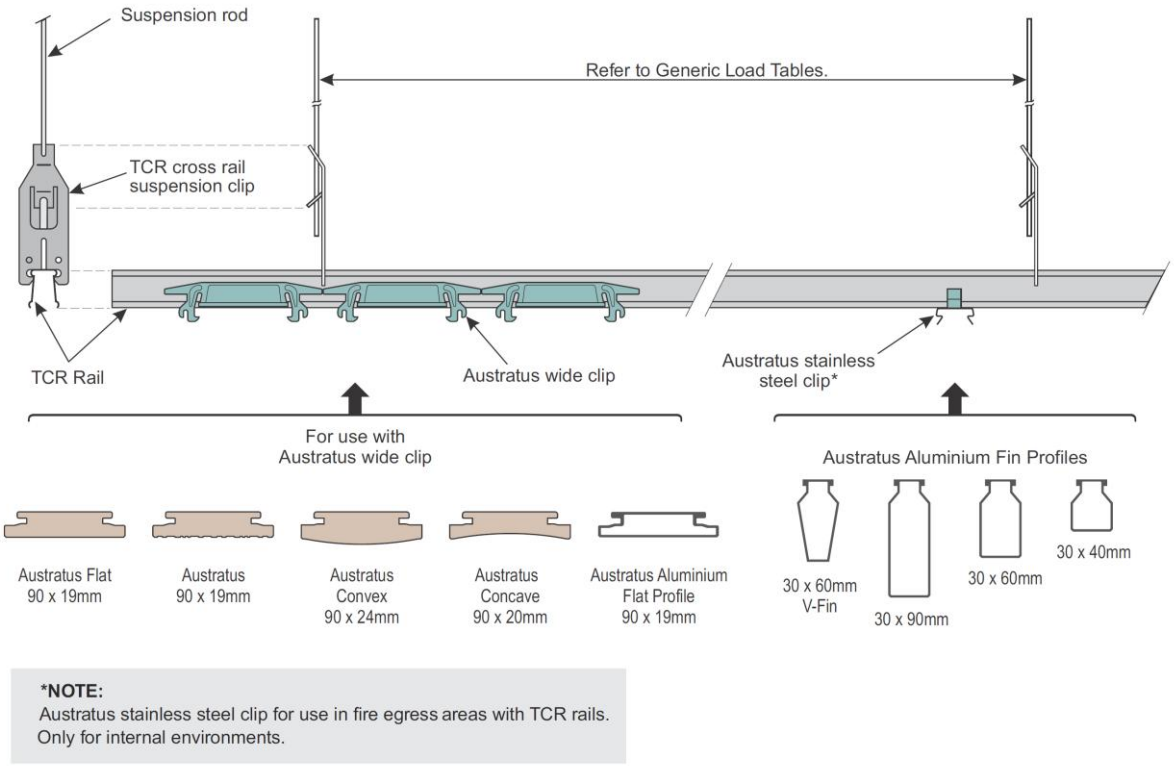


Figure 4.1: Austratus system components: rails, clips, and suspension hardware

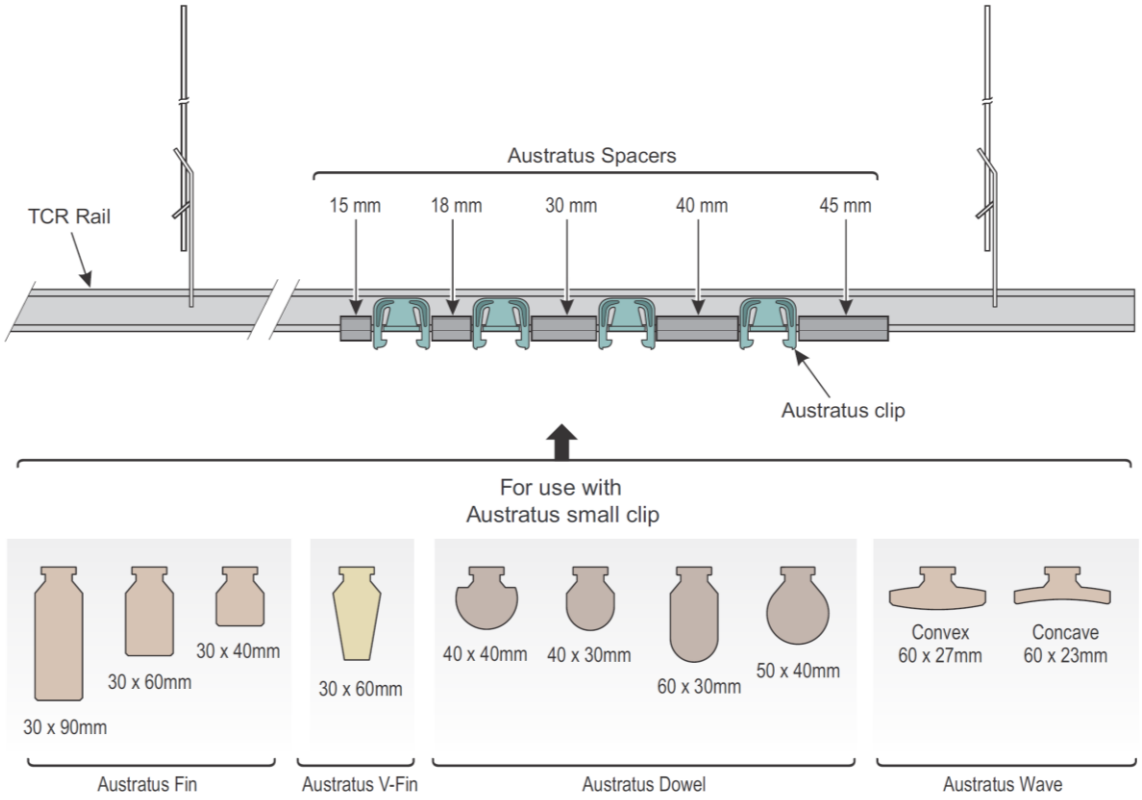


Figure 4.2: Austratus profile range: timber and aluminium options

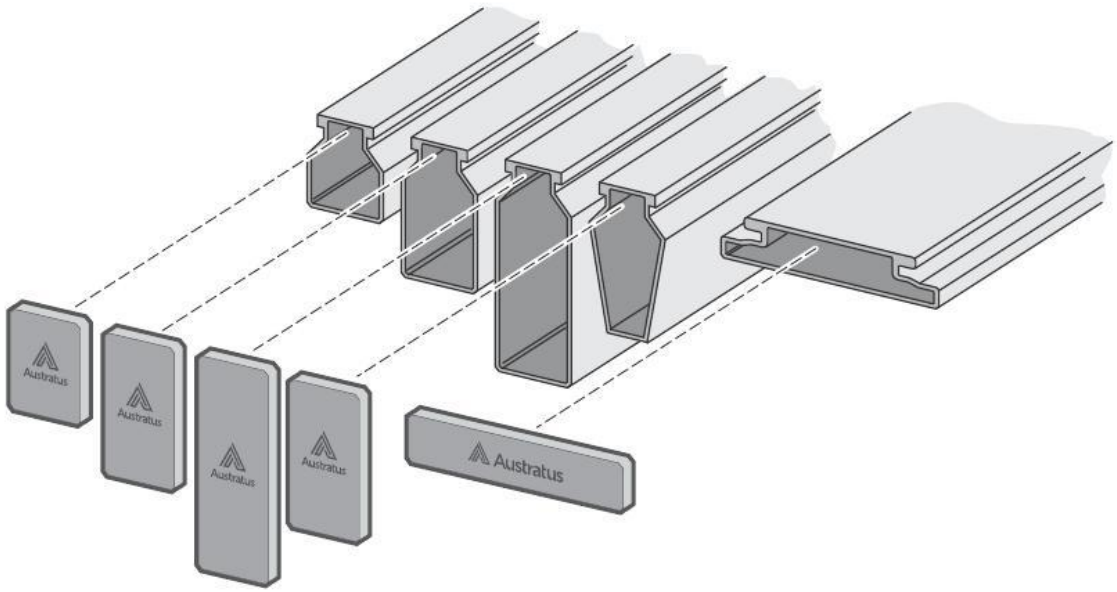


Figure 4.3: Austratus spacers, clips, and accessories

Key Components

TCR Rail

The primary horizontal support rail. Aluminium profiles clip directly into the TCR rail. Comes in 4.2m lengths; can be cut to suit. Suspension clips or direct-fix screws attach the TCR rail to the substrate.

Austratus Clips

Clips that snap onto the back of each batten, then lock into the TCR rail. Three types are available:

- Wide clip: for Flat and Wave profiles (includes built-in 18mm spacer; no separate spacer required)
- Small clip: for Fin, Round, and low profiles (use with separate spacer clips)
- Metal clip: for Group 1 fire rating
- Inline TCR clip: for grid installations, allows perpendicular batten attachment

Spacer Clips

Clip onto the TCR rail between battens to set and maintain consistent profile spacing. Available in: 15 mm, 18 mm, 19.5 mm, 30 mm, and 40 mm configurations.

> **Note:** Flat and Wave profiles do not require separate spacer clips: 18mm spacers are built into the wide clip.

Suspension Rods & Cross-Rail Clips

For suspended ceiling applications, dropper rods hang from the structural slab. TCR cross-rail suspension clips connect the TCR rail to the rods. Refer to the Generic Structural Design Certification for load capacities.

L-Shaped Trim

Optional perimeter trim fixed to walls to border ceiling installations. Provides a clean edge and accommodates timber movement.

End Caps

Press-fit caps for hollow aluminium profile ends. Available in satin black as standard. Cover cut ends and provide a finished appearance.

Joiner Clips

Clip-on joiners for end-butting profiles.

Profile Overview

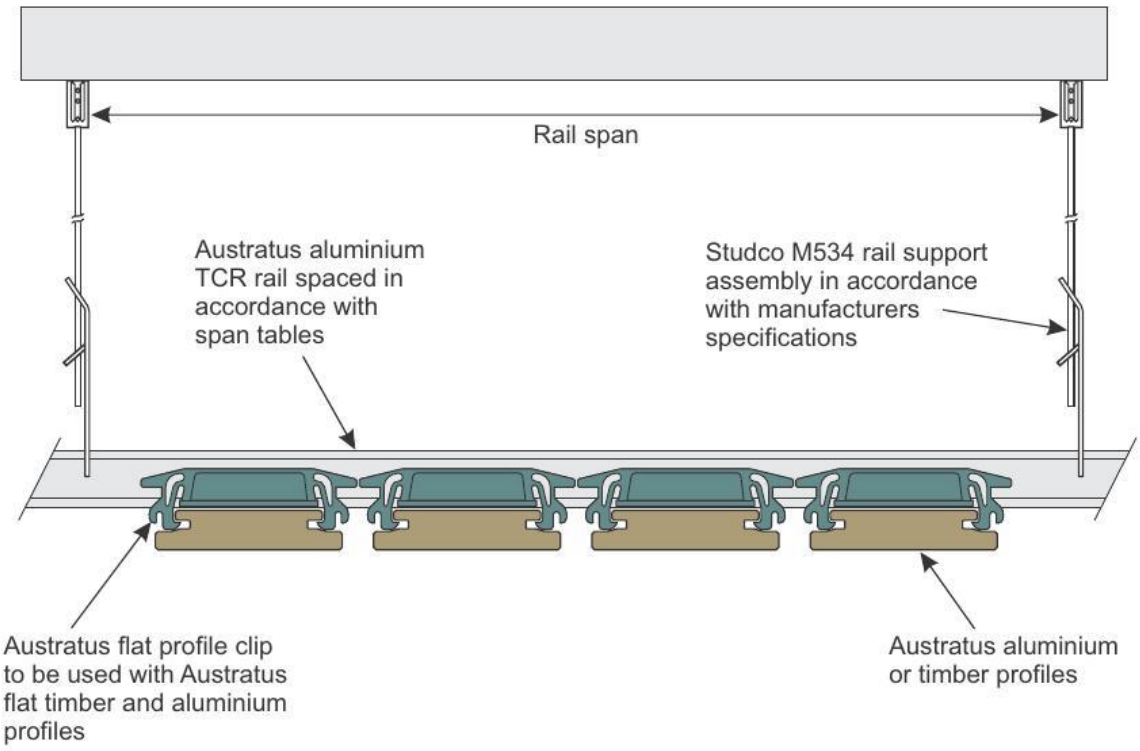


Figure 4.4: Flat profile dimensions and clip engagement

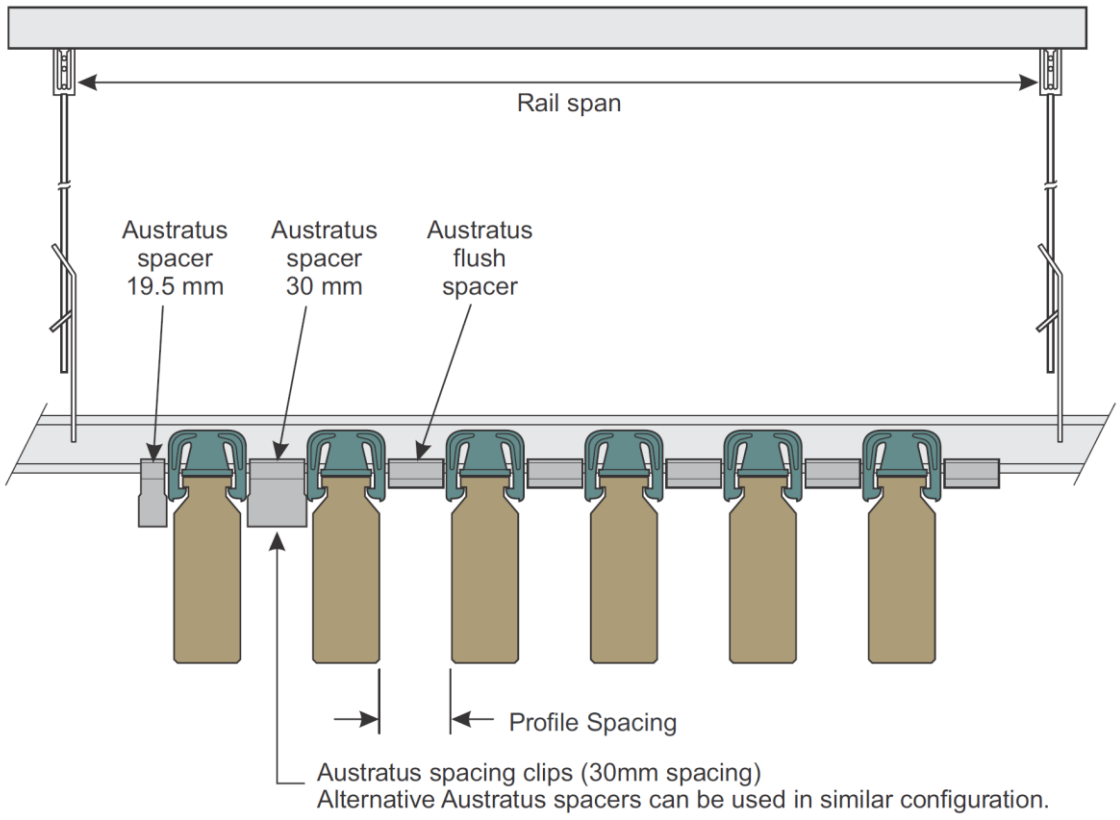


Figure 4.5: Spacing clip types and configurations

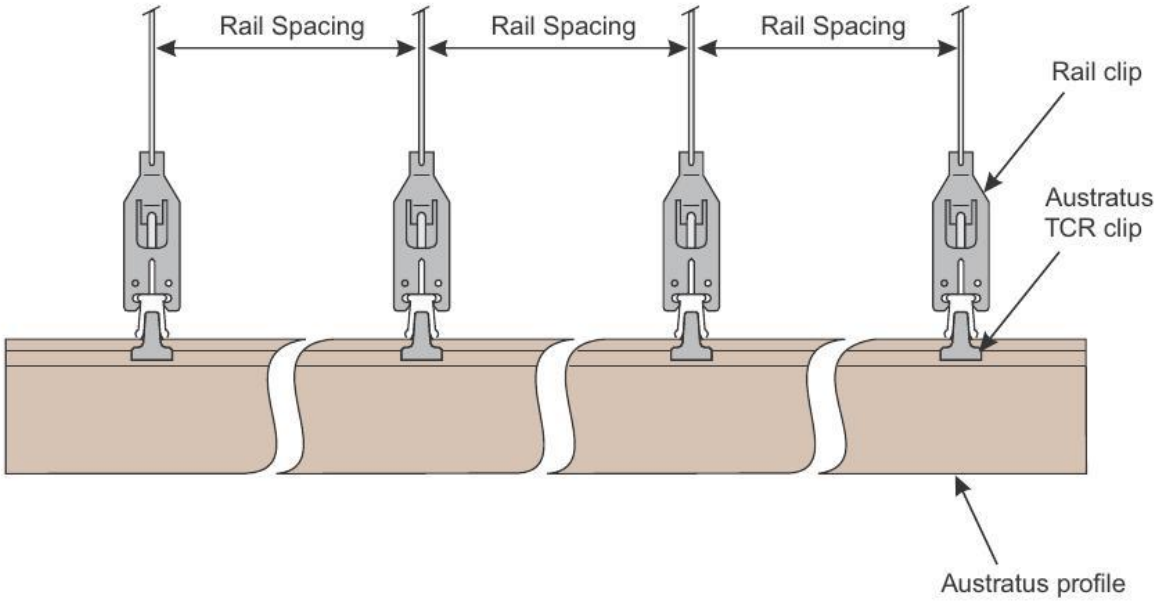


Figure 4.6: Rail clip spacing and rail span reference

5. Design Considerations

5.1 Material Selection

Choose the right material early. Timber and aluminium each suit different project conditions.

Timber	Aluminium
Best for applications where natural warmth and acoustic performance are priorities.	Ideal for commercial applications, wet areas, and projects with high fire requirements. Minimal maintenance. Available in timber-look or solid colour finishes. *Use aluminium where Group 1 fire rating is required, colour consistency is critical, or moisture resistance is needed.*

> **Note:** Only selected species and aluminium profiles are suitable for external applications. Confirm with Modinex before specifying external use.

5.2 Species, Finishes & Profile Notes

Timber Variation

Natural timber varies in grain, colour, and tone between boards and between batches. This is a normal characteristic. To minimise variation: purchase all material for a project at the same time, and lay battens out on-site before fixing to balance colour and grain across the installation.

Profile Types

- Fin: narrow, sharp profiles used for dramatic lines or dense screening. Not suitable for all wind regions (see Section 11.3).
- Flat: clean, modern aesthetic. Wide clips include built-in 18mm spacing.
- Dowel: rounded profiles with a soft texture. Centre-to-centre spacing is measured profile-to-profile (see Figure 4.4).
- Waves: textured profile with an undulating surface. Good for feature walls and acoustic applications.
- Ultra Low: shallow profile for direct fix to walls using Austratus Direct Fix clips.

Thermal Movement

Aluminium profiles expand and contract with temperature. Always leave a 2 mm expansion gap per 6 m of run when end-butting aluminium profiles. Timber expands naturally but still needs adequate clearance at joins and terminations.

Pre-finished vs Unfinished Battens

- Pre-finished (stained, painted, or oiled): reduces site labour. Handle carefully during installation to avoid marking finished surfaces.
- Unfinished: allows custom finishing on site. Plan for additional time and curing before handover.

> **Note:** Always confirm with the specifier or builder which material is being used before ordering, especially on hybrid projects combining timber and aluminium.

5.3 Colour & Orientation

Before commencing, consider painting the backing surface (ceiling or wall) black or dark grey. This makes the space between battens recede visually and highlights the profile. TCR rails, clips, and insulation are supplied black as standard.

6. Coverage & Estimating

Use the table below to calculate linear metres of profile, clip counts, and spacer counts required per m². TCR rail spacing is 600 mm throughout. All quantities include approximately 10% allowance: verify against your specific layout.

Profile Code	Spacing (mm)	Lm per m²	TCR Spacing (mm)	Clips per m²	Spacers per m²
FLAT PROFILE					
PR-AUSFLAT-90X18	–	11.2	600	18.7	18.7
PR-AUSFLAT-90X18	18	9.3	600	15.5	15.5
PR-AUSFLAT-90X18	30	8.4	600	14.0	14.0
PR-AUSFLAT-90X18	50	7.2	600	12.0	12.0
FIN PROFILES					
PR-AUSFIN-30X40	30	16.7	600	27.9	27.9
PR-AUSFIN-30X40	60	11.2	600	18.7	18.7
PR-AUSFIN-30X40	90	8.4	600	14.0	14.0
PR-AUSFIN-30X60	30	16.7	600	27.9	27.9
PR-AUSFIN-30X60	60	11.2	600	18.7	18.7
PR-AUSFIN-30X60	90	8.4	600	14.0	14.0
PR-AUSFIN-30X90	30	16.7	600	27.9	27.9
PR-AUSFIN-30X90	60	11.2	600	18.7	18.7
PR-AUSFIN-30X90	90	8.4	600	14.0	14.0
V-FIN PROFILES					
PR-AUSVFIN-30X60	30	16.7	600	27.9	27.9
PR-AUSVFIN-30X60	60	11.2	600	18.7	18.7
PR-AUSVFIN-30X60	90	8.4	600	14.0	14.0
LOW PROFILE					
PR-AUSLOW-30X20	30	16.7	600	27.9	27.9
PR-AUSLOW-30X20	60	11.2	600	18.7	18.7
ROUND PROFILES					
PR-AUSRND-40X40	15	18.2	600	30.4	30.4
PR-AUSRND-40X40	30	14.3	600	23.9	23.9
PR-AUSRND-40X40	60	10.0	600	16.7	16.7
PR-AUSRND-40X40	90	7.7	600	12.9	12.9
PR-AUSRND-30X40	15	22.3	600	37.2	37.2
PR-AUSRND-30X40	30	16.7	600	27.9	27.9
PR-AUSRND-30X40	60	11.2	600	18.7	18.7
PR-AUSRND-30X40	90	8.4	600	14.0	14.0
PR-AUSRND-30X60	15	22.3	600	37.2	37.2
PR-AUSRND-30X60	30	16.7	600	27.9	27.9
PR-AUSRND-30X60	60	11.2	600	18.7	18.7

Profile Code	Spacing (mm)	Lm per m²	TCR Spacing (mm)	Clips per m²	Spacers per m²
PR-AUSRND-30X60	90	8.4	600	14.0	14.0
PR-AUSRND-40X50	15	18.2	600	30.4	30.4
PR-AUSRND-40X50	30	14.3	600	23.9	23.9
PR-AUSRND-40X50	60	10.0	600	16.7	16.7
PR-AUSRND-40X50	90	7.7	600	12.9	12.9
WAVE CONCAVE					
PR-AUSCNCV-60X23	–	16.7	600	27.9	27.9
PR-AUSCNCV-60X23	18	12.9	600	21.5	21.5
PR-AUSCNCV-60X23	30	11.2	600	18.7	18.7
PR-AUSCNCV-60X23	50	9.1	600	15.2	15.2
PR-AUSCNCV-90X20	–	11.2	600	18.7	18.7
PR-AUSCNCV-90X20	18	9.3	600	15.5	15.5
PR-AUSCNCV-90X20	30	8.4	600	14.0	14.0
PR-AUSCNCV-90X20	50	7.2	600	12.0	12.0
WAVE CONVEX					
PR-AUSCNVX-60X27	–	16.7	600	27.9	27.9
PR-AUSCNVX-60X27	18	12.9	600	21.5	21.5
PR-AUSCNVX-60X27	30	11.2	600	18.7	18.7
PR-AUSCNVX-60X27	50	9.1	600	15.2	15.2
PR-AUSCNVX-90X25	–	11.2	600	18.7	18.7
PR-AUSCNVX-90X25	18	9.3	600	15.5	15.5
PR-AUSCNVX-90X25	30	8.4	600	14.0	14.0
PR-AUSCNVX-90X25	50	7.2	600	12.0	12.0

Note: Max individual profile length is 6000mm and must not exceed 10 kg. Refer to the Generic Structural Design Certification for maximum profile lengths for each profile type.

7. Preparation

7.1 Substrate

Austratus is a decorative system only. It must not be relied upon as a structural element. Before any clips or rails are fixed:

- Confirm all substrates (walls, ceilings, soffits) are level, square, and structurally sound
- Surfaces must meet required tolerances before rails and clips are installed
- Rails and clips must be level, straight, and square: Austratus profiles will conform to their alignment

Important: Austratus is not for use as a component of the foundation or substructure. All structural loads must be independently supported.

7.2 Surface Preparation

Paint the backing surface (wall or ceiling) black or dark grey before installation. This is strongly recommended: it enhances the visual depth between battens and conceals TCR rails, clips, and fixings from view.

Note: TCR rails, clips, and acoustic insulation are supplied in black as standard.

7.3 Pre-Installation Checklist

- ☐ Reviewed the Generic Structural Design Certification for your profile and spacing choice
- ☐ Confirmed material type (timber or aluminium) with specifier
- ☐ Checked BCA compliance requirements for the area (fire egress, sprinkler status)
- ☐ Confirmed seismic zone requirements with structural engineer if applicable
- ☐ All materials inspected on delivery and stored correctly
- ☐ Backing surface painted
- ☐ Tools, fasteners, and PPE on site

8. Ceiling Installation: Linear & Vertical Systems

These instructions apply to suspended (TCR on rods) and standard (TCR screwed to substrate) ceiling systems, for linear and vertical profile orientations.

Before You Begin

- Review ceiling layout plans and confirm Austratus areas
- Confirm correct rail spacing from the Generic Structural Design Certification for your profile and batten choice
- Gather all components: TCR rails, suspension hardware (if applicable), clips, spacers, battens, fasteners, L-angle trims (if required), and tools
- Paint ceiling surface black or dark grey

Step 1: Install TCR Rails

Suspended System

1. Install suspension hardware in accordance with Studco recommendations and project engineering requirements.
2. Working from one end of the ceiling, attach each TCR rail to its suspension clips.
3. Check level on each rail before moving to the next. All TCR rails must be set to the same height.

Standard System

4. Mark rail positions on the ceiling based on required spacing from the structural certification.
5. Drill pilot holes and secure TCR rails using fasteners appropriate for the substrate (e.g. expansion bolts for concrete).
6. Check level as each rail is fixed.

> **Note:** Rail spacing must not exceed the maximum specified in the Generic Structural Design Certification for your profile type and span.

Step 2: Install Perimeter Trims (If Required)

7. If using an L-angle trim as a border, fix the trims to walls now, before fitting battens.
8. Ensure trims are level and square on all sides.

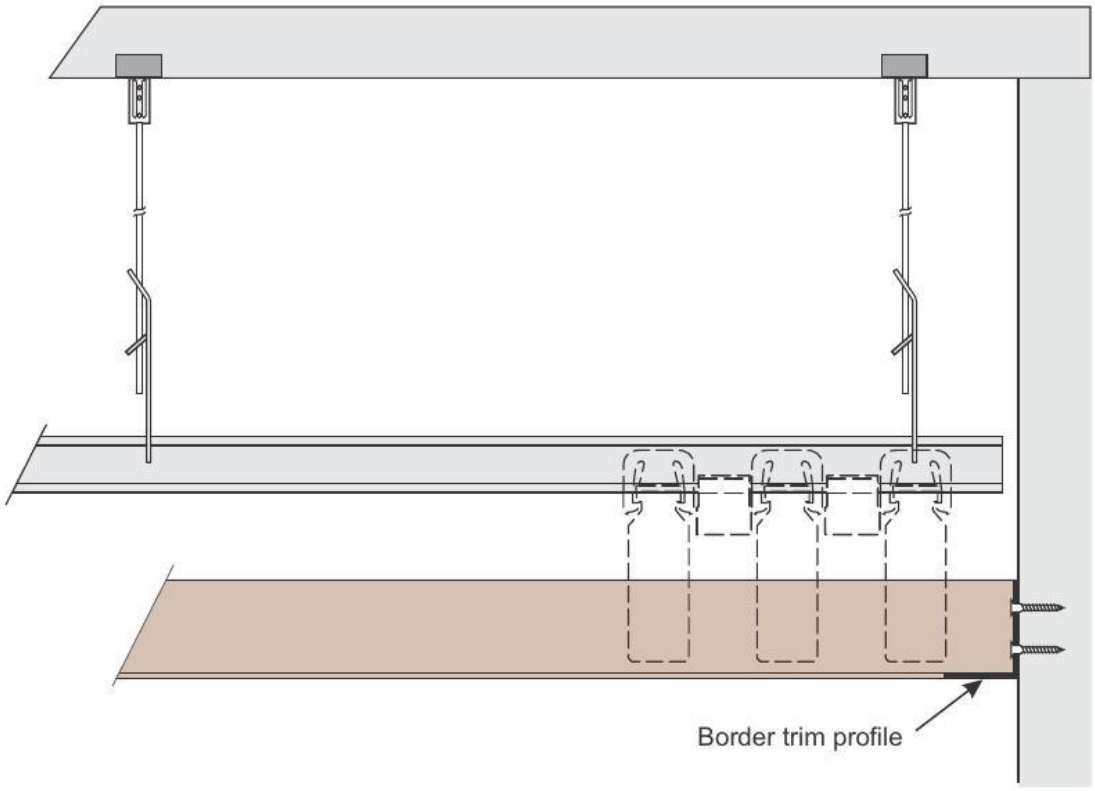


Figure 8.2: L-shaped perimeter trim position and clearance detail

Step 3: Attach Austratus Clips to Battens

9. Snap Austratus clips onto each batten. Position clips to align with TCR rail centres when the batten is installed.
10. For Group 1 areas, use metal clips with aluminium battens only.

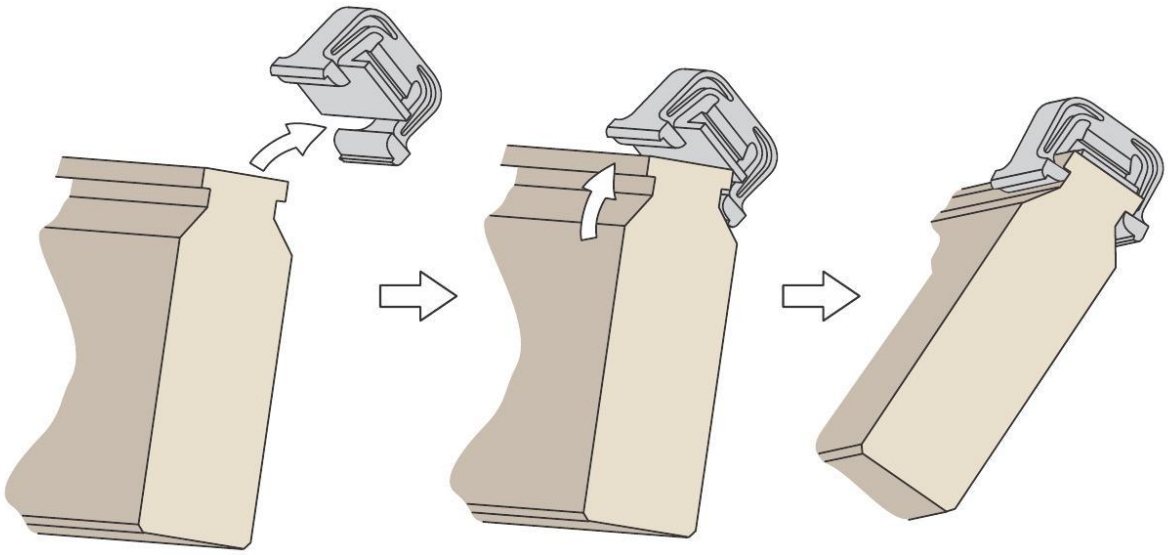


Figure 8.3: Clip attachment to batten profile

> **Note:** Steps 3 and 4 must be performed in this order to avoid damage to the batten.

Step 4: Insert Battens into TCR Rails

11. Firmly push each batten upward, clicking the clips into the TCR rail throat. You should hear and feel the clip engage.
12. Battens can be slid along the rail for minor positional adjustments: do not force clips laterally once locked.
13. Work across the ceiling in one direction. Use a laser level or chalk line to confirm each row is straight before moving to the next.

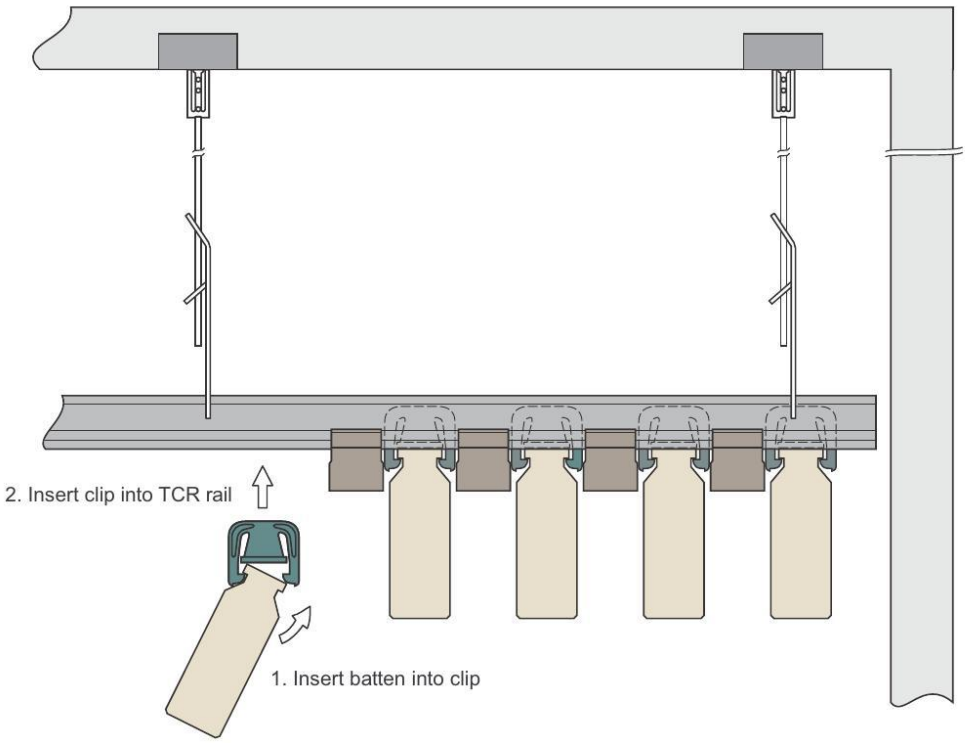


Figure 8.4: Two-step clip installation: Step 1 clip onto batten, Step 2 insert into rail

Step 5: Add Spacers (If Required)

14. For fin, round, and low profiles: snap spacer clips onto the TCR rail between each run of battens.
15. Push spacers and each installed batten run hard up together to eliminate gaps: any gap here will compound across the ceiling and become visible.

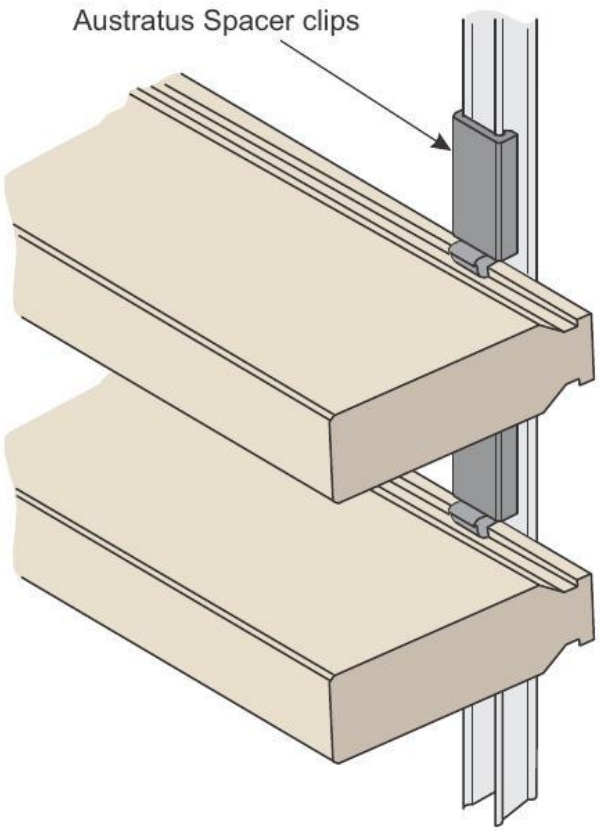


Figure 8.5: Spacer clip placement between profiles

Note: Flat and Wave profiles do not require spacer clips. Spacing is set by the built-in bars on the wide clip.

Step 6: Fit End Caps on Aluminium Battens

16. Press Austratus end caps into the hollow ends of aluminium profiles to conceal the profile cavity.
17. End caps are available in satin black as standard for all aluminium profiles.

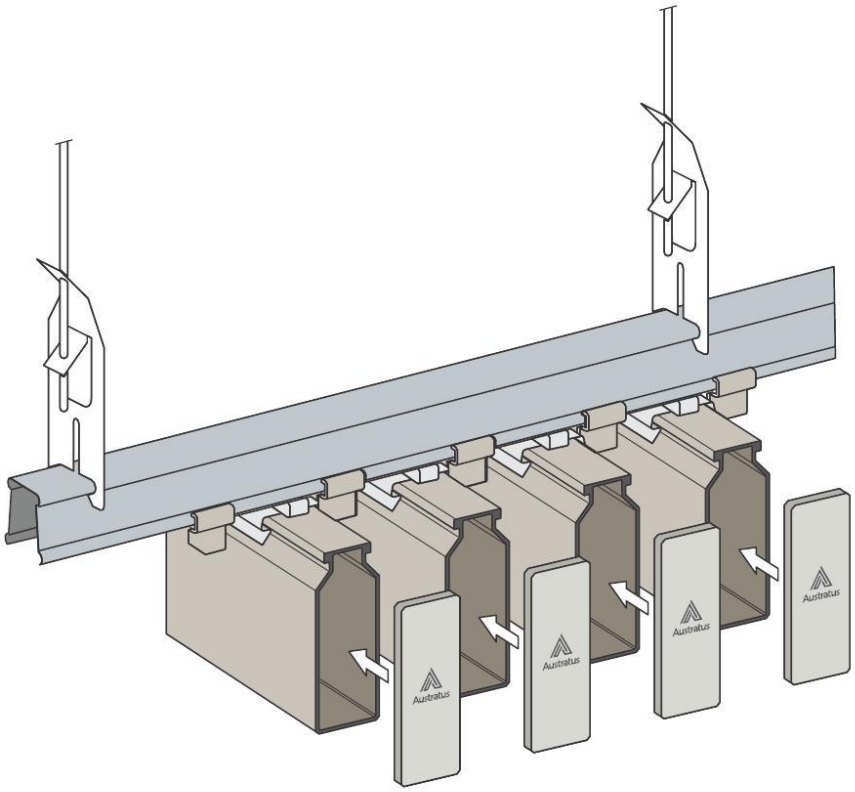


Figure 8.7: Aluminium profile end cap fitting

Step 7: Cut Battens for Services & Utilities

18. Mark service locations (speakers, sensors, sprinklers) on the reflected ceiling plan before cutting.
19. Cut battens neatly on site using a fine-tooth saw. Apply touch-up paint to exposed cut ends.
20. Ensure all loads for services are carried by the building structure or independent framing: never by the Austratus system.

Important: Austratus is not load-bearing. No additional loads are permitted on the batten system.

Step 8: Build Access Hatches (If Required)

21. Identify hatch locations on the reflected ceiling plan.
22. Refer to the Generic Structural Design Certification for minimum TCR rail spacing. Position lock-in TCR rails a minimum of 50 mm from the hatch edge.
23. Construct the hatch frame from TCR rail lengths, screwing together into a square or rectangle perimeter using Pan Head Bi-Metal 8-18x16 Phillips Drive screws.
24. Cut battens to fit within the hatch frame, leaving 5 mm clearance on all sides.
25. Test the hatch operation and adjust before completing the adjacent installation.

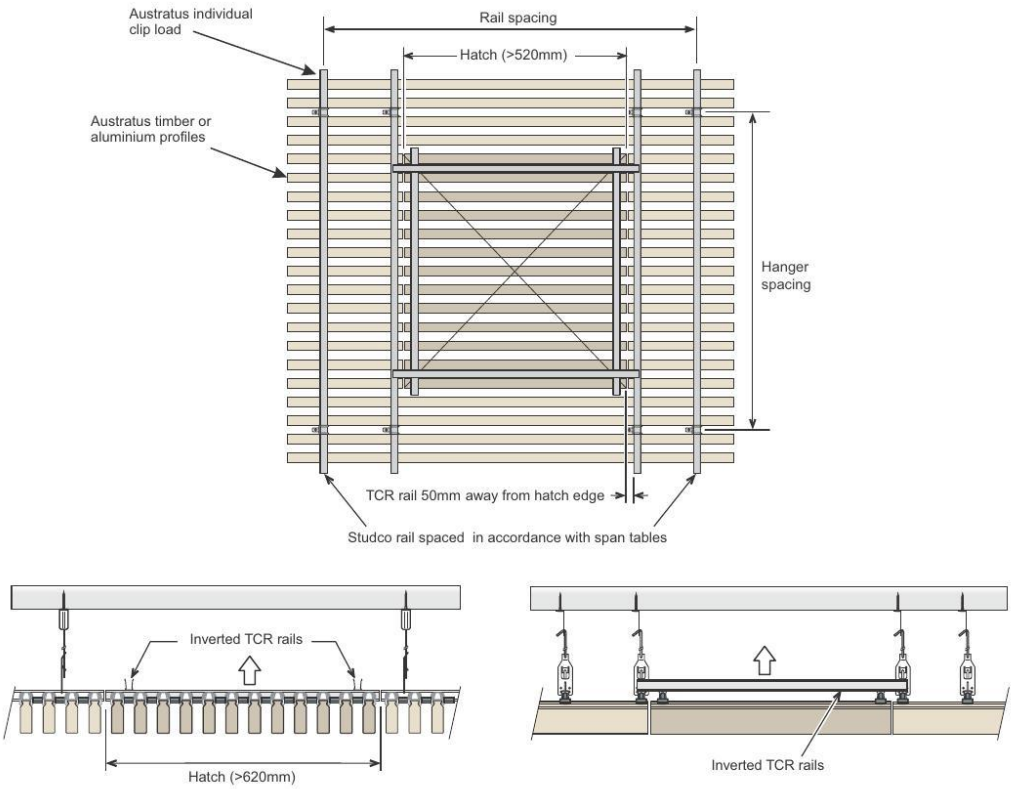


Figure 8.8: Access hatch construction and TCR rail positioning

Step 9: Acoustic Insulation (Optional)

26. Austratus batten systems provide natural acoustic benefit. For enhanced performance, add acoustic insulation above the battens.
27. Cut insulation to size and lay under the battens, fitting it between TCR rails.
28. Apply double-sided tape to the top face of battens to hold insulation in place where needed.

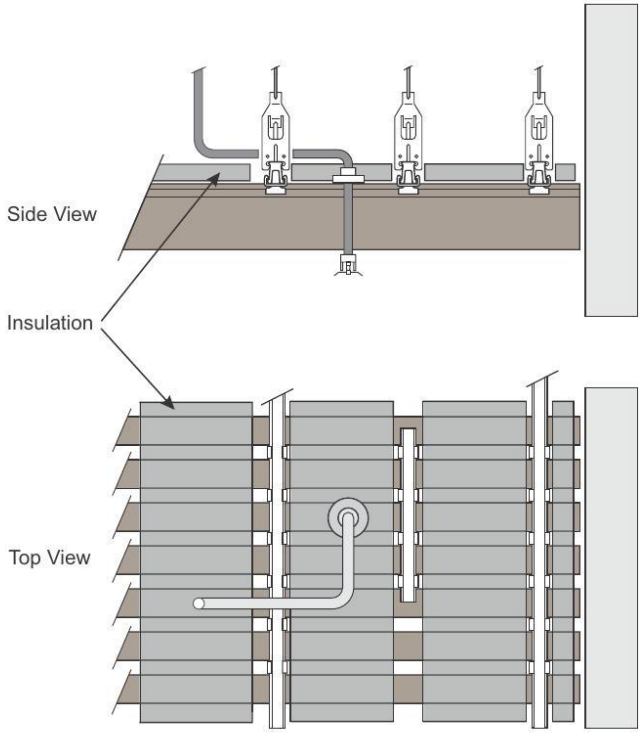


Figure 8.9: Acoustic insulation laid under battens

Step 9 Continued: Acoustic Insulation (Optional)

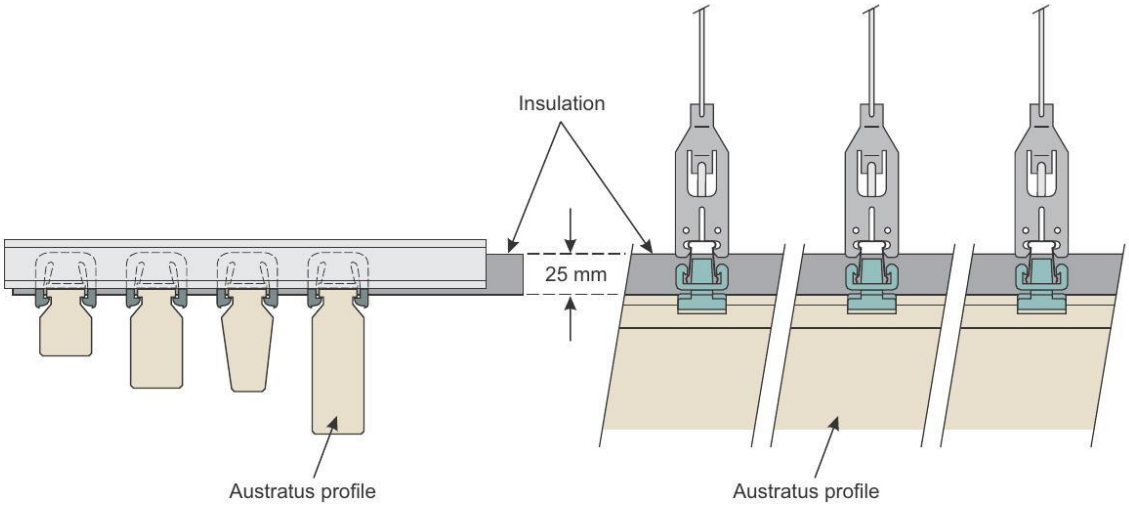


Figure 8.10: Double-sided tape fixing for insulation

Curved Ceilings

Linear suspended ceiling systems can be installed on concave or convex curved ceilings with a radius greater than 600mm. Curved TCR rails are required. Contact Modinex for custom curved rail options.

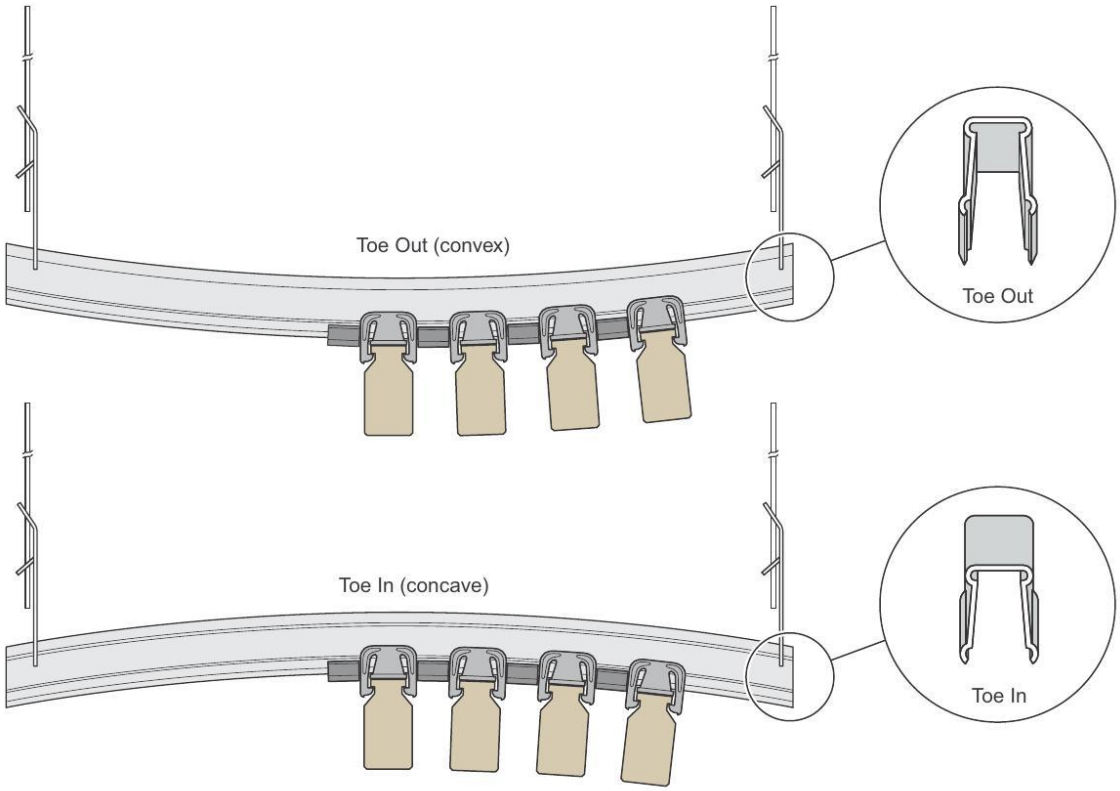


Figure 8.11: Curved ceiling installation: convex (toe-out) and concave (toe-in) configurations. Minimum radius 1.2 m.

Final Checks: Ceiling Linear & Vertical

- ☐ All battens straight, evenly spaced, and fully clicked into TCR rails
- ☐ Spacer clips consistently installed with no gaps
- ☐ Service cut-outs neat and independently supported
- ☐ End caps and joiners fitted (aluminium profiles)
- ☐ Touch-up paint applied to all cut ends
- ☐ Acoustic insulation secure and level (if installed)
- ☐ Access hatches operate correctly (if installed)

9. Ceiling Installation: Grid System

Grid installations combine two sets of perpendicular battens in the same plane. Install long battens first, then intermediate (cross) battens. Long battens run perpendicular to the TCR rails.

Before You Begin

- Confirm TCR rail spacing against batten centres for your desired grid size
- Consider painting the ceiling black or dark grey before installation
- Gather all components: TCR rails, standard and inline Austratus clips, long and short battens, fasteners, and tools
- Review the Generic Structural Design Certification for correct rail spacing and clip placement

Step 1: Install TCR Rails

Install TCR rails as described in Section 8, Steps 1 and 2. For a grid layout, TCR rails must be spaced in accordance with the batten centres of the desired grid module size.

Step 2: Install Long Battens

29. Install long battens first, running perpendicular to the TCR rails. Refer to Section 8, Steps 3 and 4 for clip attachment and rail insertion.
30. Use the longest available lengths to minimise wastage.
31. Leave extra spacing between long battens, slightly wider than the final grid spacing, to allow room for inserting intermediate battens in the next step.

Step 3: Prepare Intermediate Battens

32. Measure and cut intermediate battens to fit between long battens.
33. Use the shortest available lengths for intermediate battens to minimise waste.
34. For battens 30 mm wide or less, make a small chamfer on the Austratus groove edge. This provides clearance for the TCR clip during installation.

Step 4: Attach Inline Clips to Intermediate Battens

35. Attach Austratus inline TCR clips to each intermediate batten.
36. Each batten must be supported by a minimum of two clips, spaced no more than 600 mm apart.

Step 5: Install Intermediate Battens

37. Starting from one corner, insert the intermediate battens into the TCR rails.
38. Complete one full row of intermediate battens before adjusting the adjacent long batten.
39. Once the row is in, slide the long batten sideways to sit flush against the installed cross-battens, locking the grid into final position.

> **Note:** Expansion gaps are not required for grid layouts: the Austratus clips slide to allow for movement.

Step 6: Install Aluminium Battens (If Applicable)

40. Use Austratus metal clips to install aluminium battens. Refer to Section 8, Step 3.
41. Fit end caps to cover hollow aluminium ends.

Final Checks: Grid

- All battens securely clipped: no movement in the grid structure after alignment
- Even spacing throughout: verify grid module size is consistent
- Chamfered battens seated flush and fitting snugly
- No clips spaced more than 600 mm apart
- Touch-up paint applied to cut ends (timber)
- End caps fitted (aluminium)

10. Wall Installation

Austratus can be installed as horizontal or vertical profiles on walls, using either TCR rails fixed to studs or noggings, or the direct-fix method for Ultra Low Profile battens.

Before You Begin

- Confirm wall dimensions, profile orientation (horizontal or vertical), and batten spacing
- Consider painting the wall black or dark grey before installation
- Confirm correct rail spacing from load tables for your profile type
- Gather: TCR rails, clips, spacers, battens, fasteners, and tools

10.1 Install TCR Rails (All Wall Methods)

42. Using load tables, determine the correct rail spacing and measure floor-to-ceiling height. Cut TCR rails to length.
43. Pre-drill pilot holes through the TCR rail into the stud or nogging behind.
44. Fix rails using self-tapping metal or timber screws at nogging centres.

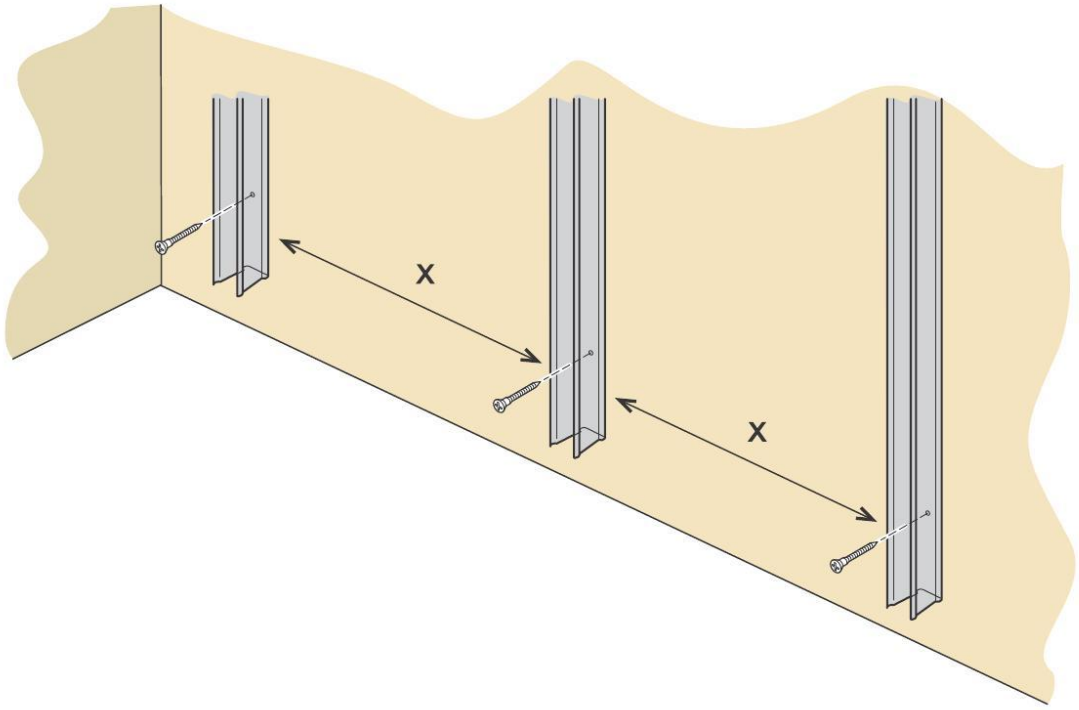


Figure 10.1: Wall TCR rail pre-drilling and fixing into studs/noggings

10.2 Horizontal Profile Installation

45. Determine batten spacing and calculate the number of battens required.
46. Cut profiles to the wall width required or use joiners to bridge long spans.
47. Snap clips onto the top rear edge of each batten. Refer to Figure 10.2.
48. Slide clips into position to align with the TCR rail, then push the batten firmly into the rail throat until it clicks.
49. Continue across the wall, pressing clips onto each batten and installing in order.
50. Use spacer clips between battens.

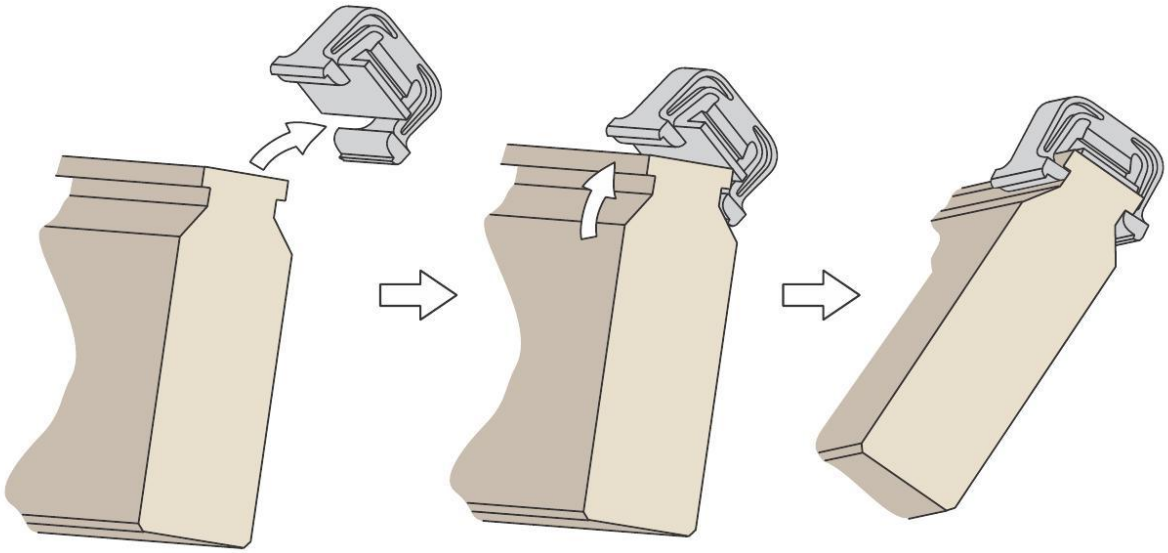


Figure 10.2: Clip attachment to horizontal batten

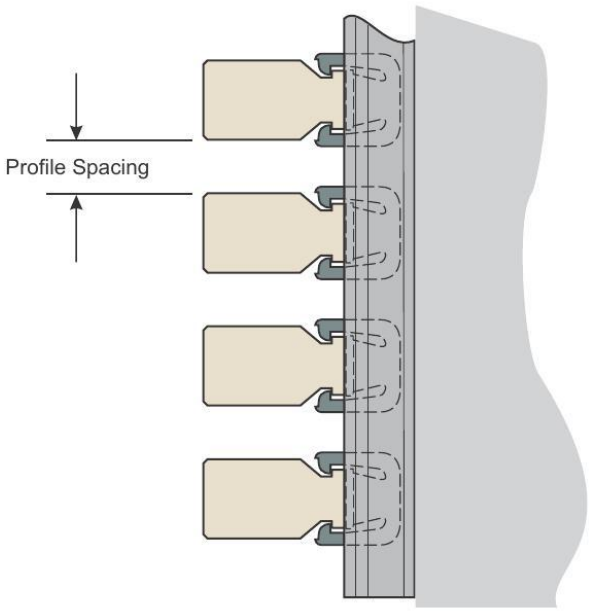


Figure 10.3: Profile spacing from centres (horizontal)

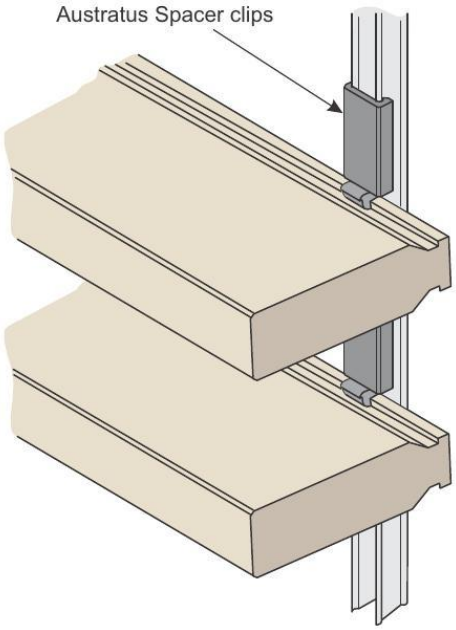


Figure 10.4: Spacer clip installation between horizontal profiles

10.3 Vertical Profile Installation

51. Determine batten quantity based on spacing requirements.
52. Cut profiles to suit floor-to-ceiling height.
53. Snap clips onto the sides of each batten. Refer to Figure 10.2.
54. Push the batten into the TCR rail throat until secure.
55. Work across the wall installing battens one at a time.
56. Place spacer clips between each profile for consistent gaps.
57. Set the correct floor clearance using the Austratus joiner clip.

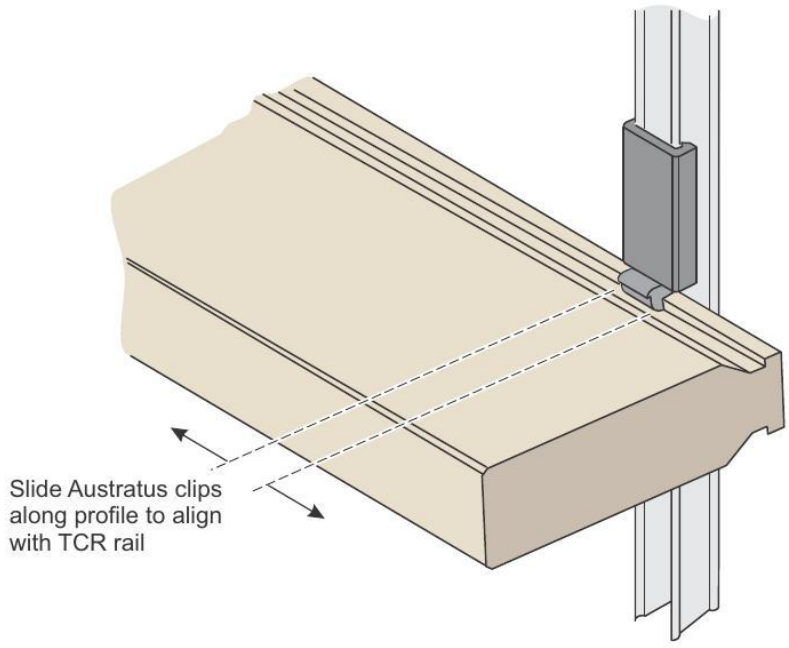


Figure 10.5: Clip alignment detail for vertical profiles

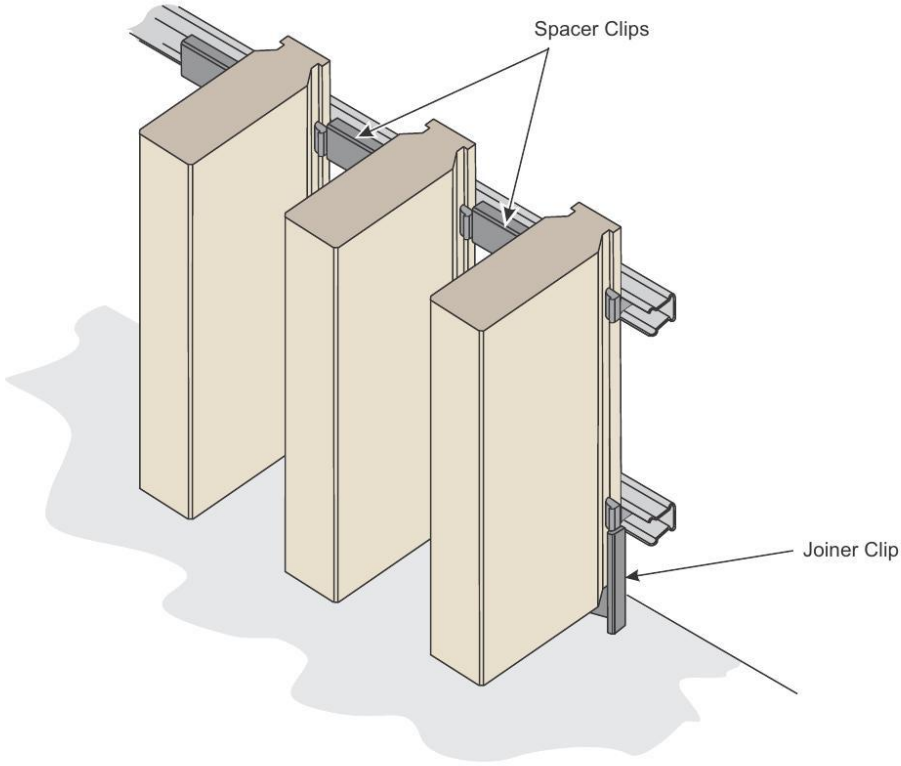


Figure 10.6: Spacer and floor offset joiner clip detail (vertical)

10.4 Direct Fix Profiles

Battens can be installed directly to the wall without TCR rails using Austratus Direct Fix Clips.

58. Mark out aligned clip positions on the wall.
59. Drill pilot holes through each clip and into the wall substrate.
60. Fix clips using counter sunk screws.
61. Once all clips are fixed, clip in battens one at a time, pressing along the full batten length before moving to the next.

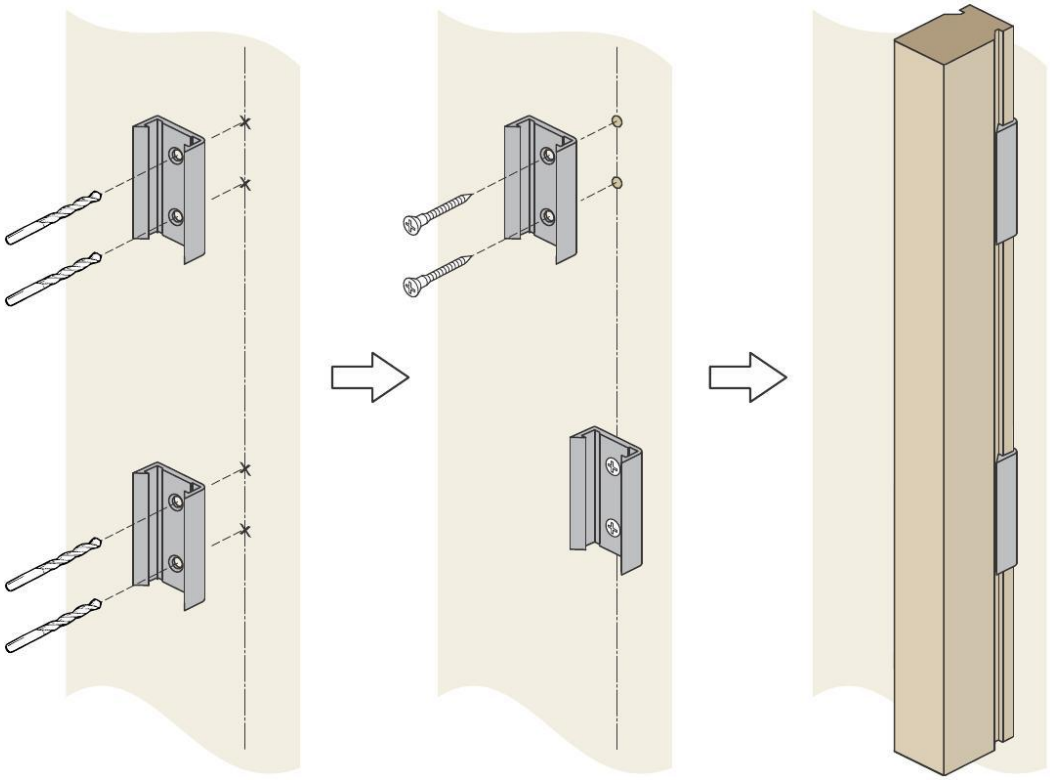


Figure 10.7: Direct fix clip wall alignment for Ultra Low Profile

10.5 Curved Wall Installation

Austratus can be installed on curved wall surfaces. TCR rails run in line with the batten direction, fixed directly to the substrate.

62. Run TCR rails in line with the batten curve and fix directly to the substrate using fasteners as per the Generic Structural Design Certification.
63. Drill pilot holes through the back of the clip and TCR rail before fastening to the substrate.
64. Check rail spacing consistently as you work across the curve: spacing is governed by the critical dimension (L) at the tightest point of the arc.
65. Once clips are in position on the rails, clip battens in one at a time, checking alignment before moving to each row.

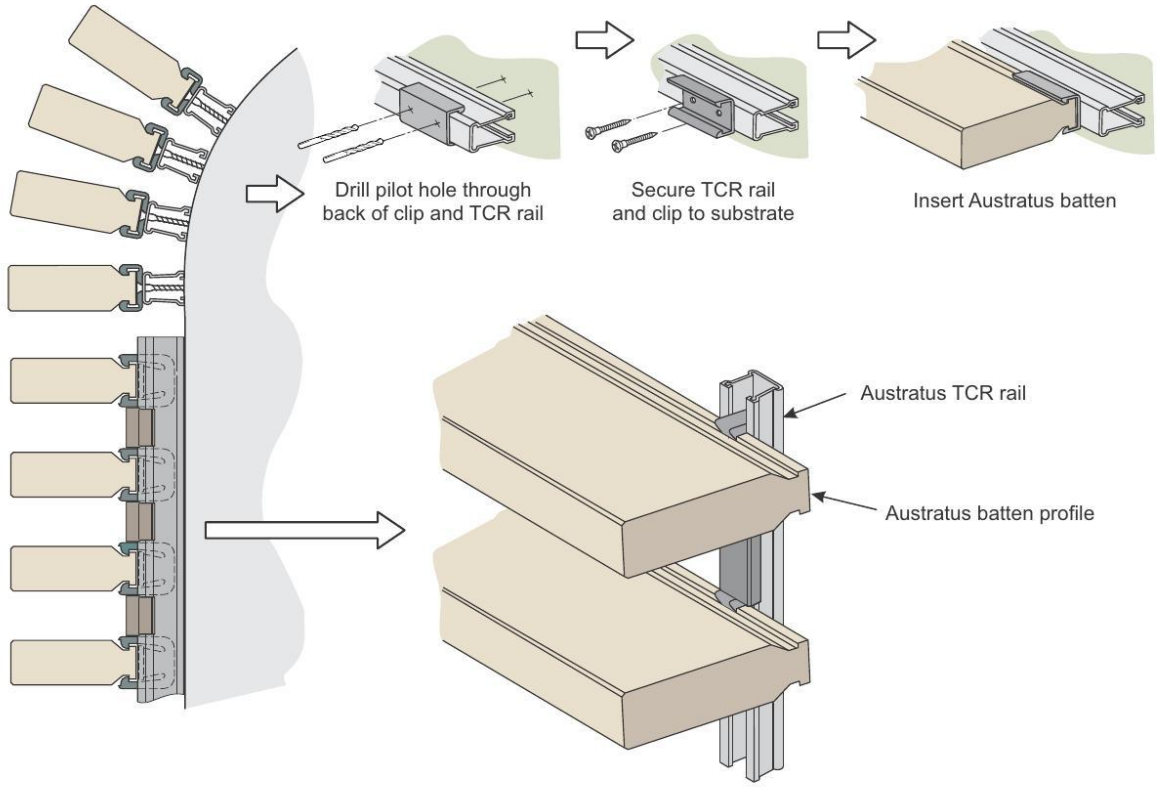


Figure 10.8: Curved wall: clip and rail fixing to substrate

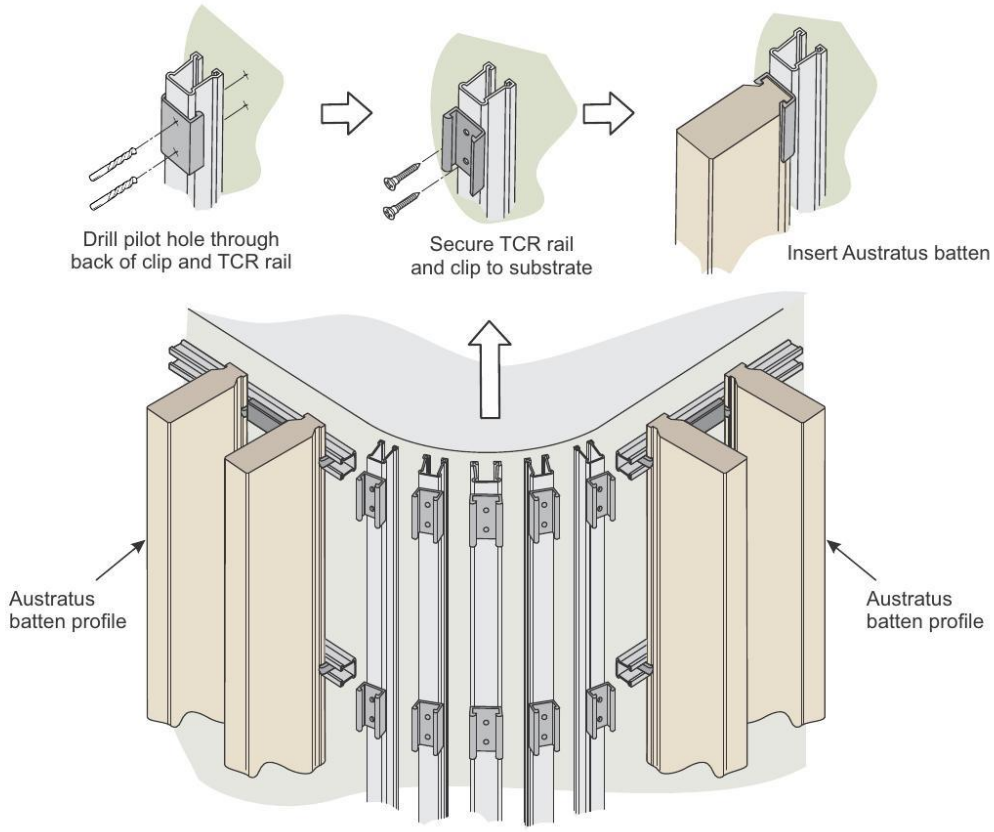


Figure 10.9: Curved wall: full installation view

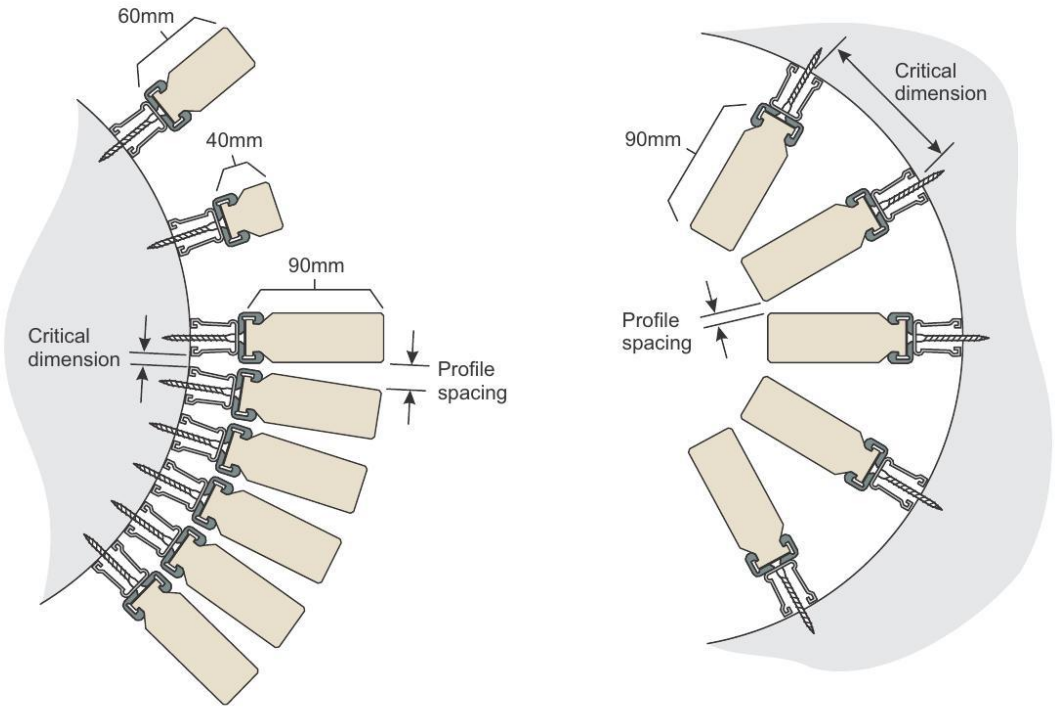


Figure 10.10: Curved wall: profile spacing at radius, spacing governed by critical dimension L

10.6 Corner Installation

Austratus battens can be wrapped around internal and external corners for a seamless appearance.

66. Drill pilot holes through both clip and TCR rail.
67. Turn the clip into the corner position and fix the rail to the substrate using appropriate screws.
68. Once all clips are in place, clip battens in one at a time, checking alignment through the corner transition before moving to the next row.

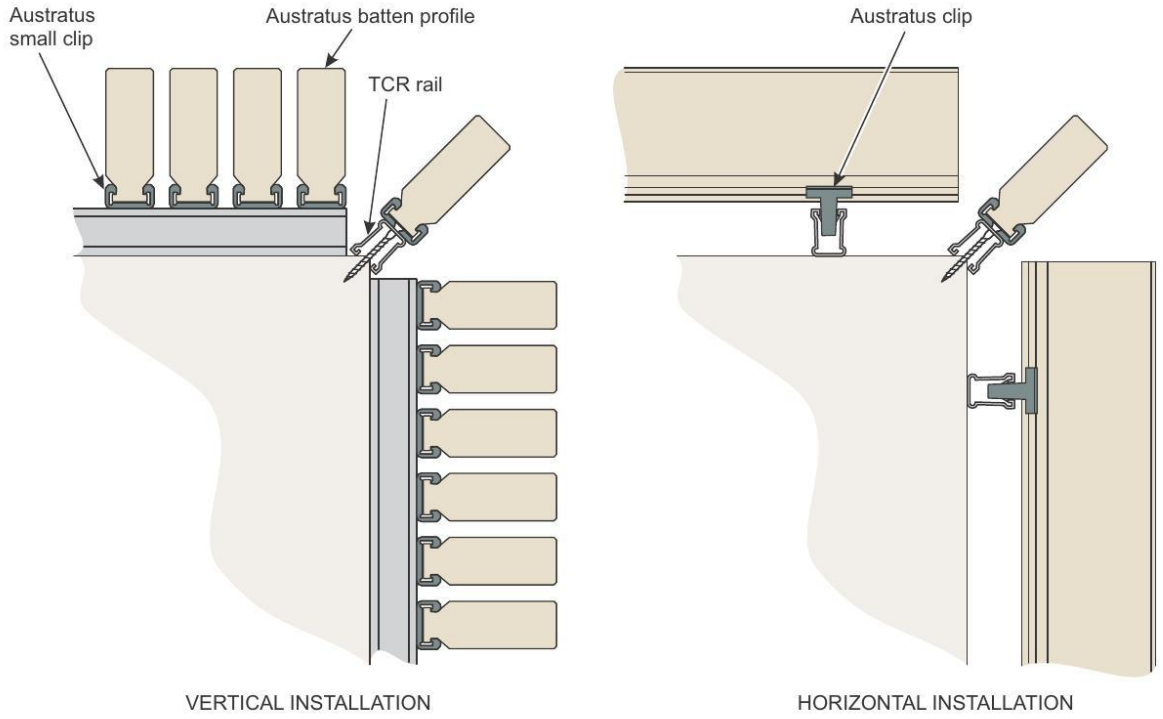


Figure 10.11: Corner installation: vertical and horizontal profile orientations

Final Checks: Wall

- ☐ All battens fully clicked into rails or direct-fix clips
- ☐ Battens evenly spaced, aligned, and flush across the wall surface
- ☐ Spacer clips consistently installed
- ☐ Floor offsets and corner transitions secure and visually clean
- ☐ All fasteners tight and concealed
- ☐ Touch-up paint applied to cut ends (timber profiles)
- ☐ End caps fitted (aluminium profiles)

11. Compliance & Technical Data

11.1 Structural Certification

The Austratus system is structurally certified in accordance with the following Australian and New Zealand Standards:

- AS/NZS 1170.0:2002 Structural Design Actions: General Principles
- AS/NZS 1170.1:2002 Structural Design Actions: Permanent, Imposed & Other Actions
- AS/NZS 1664.1:1997 Aluminium Structures: Limit State Design
- AS/NZS 1664.2:1997 Aluminium Structures: Allowable Stress Design
- AS 1720.1:2010 Timber Structures: Design Methods

Reference Documentation Drawing Set: 19-15471-S01 to S06 REV-B (105 pages)

Download the Generic Structural Design Certification from the Resources tab at modinex.com.au.

> **Note:** Confirm current standard revisions with Modinex before specifying on projects.

11.2 Fire Compliance

Before specifying or installing Austratus in any fire-sensitive area, confirm the following with the project architect, fire engineer, or certifier:

- Does the ceiling or wall system sit on a designated fire egress route?
- Does the building have fire sprinkler systems installed or planned?
- Has the fire engineer reviewed the ISO 5660 flow chart and confirmed compliance under AS 5637.1?

Key material fire ratings:

- Aluminium 6000 series: melts at 660°C, deemed non-combustible.
- Metal clips: melts at 1427°C. Use metal clips and aluminium battens in fire egress areas.
- Mild steel Studco ceiling grid: melts at 1427°C.
- Hemlock and Cedar: Group 3 (ISO 9705 / AS 3837). Confirm other species group ratings at modinex.com.au.

BCA Specification C1.10: Maximum Group Numbers for Wall and Ceiling Linings:

Class of Building	Fire-Isolated Exits	Pub. Corridors (Wall)	Pub. Corridors (Ceiling)	Specific Areas (Wall)	Specific Areas (Ceiling)	Other Areas
Class 2 or 3: Excluding accommodation for aged, disabled, children						
Unsprinklered	1	1,2	1,2	1,2,3	1,2,3	1,2,3
Sprinklered	1	1,2,3	1,2,3	1,2,3	1,2,3	1,2,3
Class 3 or 9a: Accommodation for aged, disabled, children, healthcare						
Unsprinklered	1	1	1	1,2	1,2	1,2,3
Sprinklered	1	1,2	1,2	1,2,3	1,2,3	1,2,3
Class 5, 6, 7, 8 or 9b (schools)						
Unsprinklered	1	1,2	1,2	1,2,3	1,2	1,2,3
Sprinklered	1	1,2,3	1,2,3	1,2,3	1,2,3	1,2,3
Class 9b (other than schools)						
Unsprinklered	1	1	1	1,2	1,2	1,2,3
Sprinklered	1	1,2	1,2	1,2,3	1,2,3	1,2,3
Class 9c						
Sprinklered	1	1,2	1,2	1,2,3	1,2,3	1,2,3

Note: Group 1 = best fire performance. Group numbers 1, 2, 3 refer to combustibility classifications under AS 1530.1 and AS 5637.1. For buildings without sprinklers: smoke growth rate index must be ≤ 100, or average specific extinction area < 250 m²/kg.

11.3 Wind Load Compliance

The span tables below apply to interior environments with wind loading where the system is direct-fixed to the substructure (e.g. foyer areas with concertina or bifold doors).

- Individual profiles must not exceed 6000 mm in length and must be ≤ 10 kg in weight
- For profiles, spacings, or materials not shown in these tables, contact Modinex for specific engineering advice

Western Red Cedar Fin Profile: Wind Load Suitability				
Wind Region	**Profile Type**	**Width (mm)**	**Depth (mm)**	**Suitable**
N1	Fin	30	90	YES
N1	Fin	30	60	YES
N1	Fin	30	40	YES
N1	Truncated Fin	30	60	YES
N2	Fin	30	90	NO
N2	Fin	30	60	YES
N2	Fin	30	40	YES
N2	Truncated Fin	30	60	YES
N3	Fin	30	90	NO
N3	Fin	30	60	YES
N3	Fin	30	40	YES
N3	Truncated Fin	30	60	YES
C1	Fin	30	90	NO
C1	Fin	30	60	YES
C1	Fin	30	40	YES
C1	Truncated Fin	30	60	YES
C2	Fin	30	90	NO
C2	Fin	30	60	NO
C2	Fin	30	40	YES
C2	Truncated Fin	30	60	NO

Aluminium Fin Profile: Wind Load Suitability				
Wind Region	**Profile Type**	**Width (mm)**	**Depth (mm)**	**Suitable**
N1	Fin	30	90	YES
N1	Fin	30	60	YES
N1	Fin	30	40	YES
N1	Truncated Fin	30	60	YES
N2	Fin	30	90	YES
N2	Fin	30	60	YES
N2	Fin	30	40	YES
N2	Truncated Fin	30	60	YES
N3	Fin	30	90	YES
N3	Fin	30	60	YES
N3	Fin	30	40	YES
N3	Truncated Fin	30	60	YES
C1	Fin	30	90	YES
C1	Fin	30	60	YES
C1	Fin	30	40	YES
C1	Truncated Fin	30	60	YES
C2	Fin	30	90	NO
C2	Fin	30	60	YES
C2	Fin	30	40	YES
C2	Truncated Fin	30	60	YES

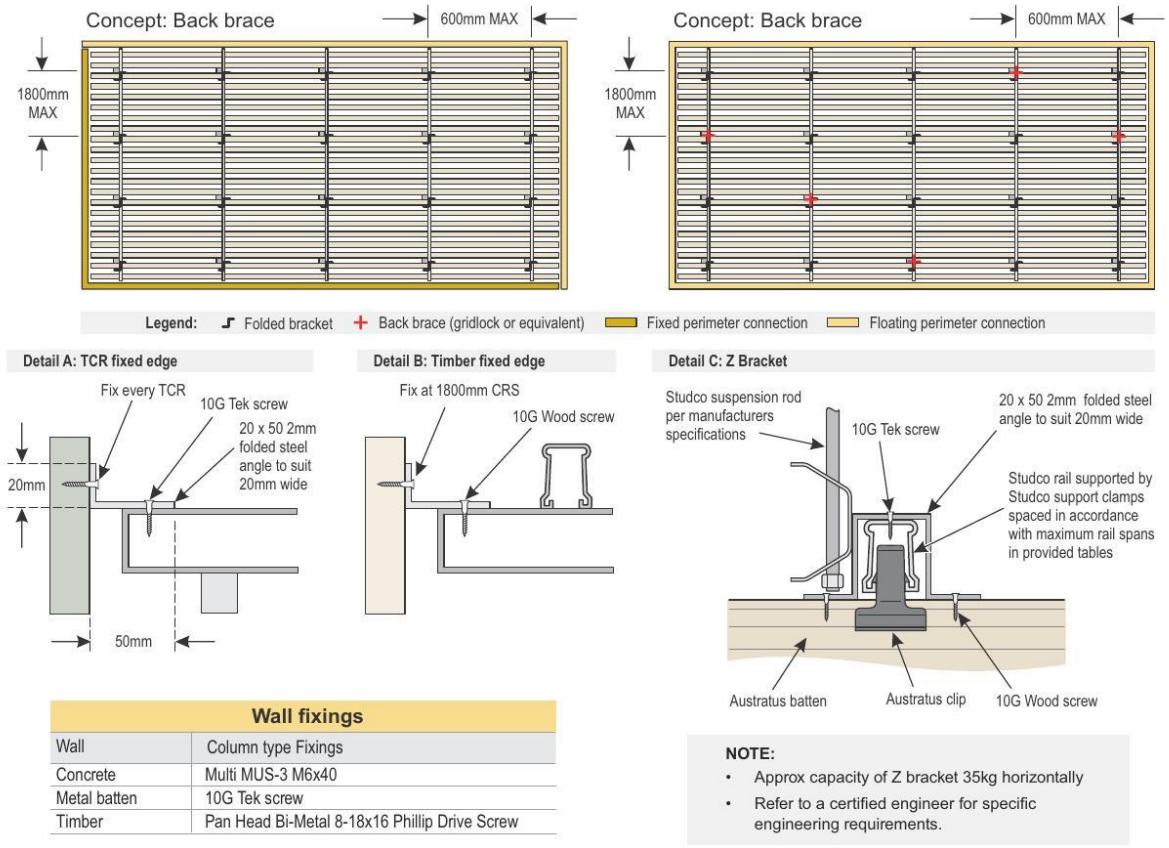
Hemlock Fin Profile: Wind Load Suitability				
Wind Region	**Profile Type**	**Width (mm)**	**Depth (mm)**	**Suitable**
N1	Fin	30	90	NO
N1	Fin	30	60	YES
N1	Fin	30	40	YES
N1	Truncated Fin	30	60	YES
N2	Fin	30	90	NO
N2	Fin	30	60	YES
N2	Fin	30	40	YES
N2	Truncated Fin	30	60	YES
N3	Fin	30	90	NO
N3	Fin	30	60	NO
N3	Fin	30	40	YES
N3	Truncated Fin	30	60	NO
C1	Fin	30	90	NO
C1	Fin	30	60	NO
C1	Fin	30	40	NO
C1	Truncated Fin	30	60	NO
C2	Fin	30	90	NO
C2	Fin	30	60	NO
C2	Fin	30	40	YES
C2	Truncated Fin	30	60	NO

Note: Wind load compliance tables apply to interior environments only. C5 coastal region ratings are currently under assessment. Contact Modinex for advice on projects in C5 wind regions.

11.4 Seismic Requirements

For installations in seismic zones, the following installation approaches are recommended. Engage a certified structural engineer for project-specific seismic engineering requirements.

Wall / Column Type	Recommended Fixing
Concrete	Multi MUS-3 M6x40
Metal batten	10G Tek screw
Timber	Pan Head Bi-Metal 8-18x16 Phillips Drive screw



Wall fixings	
Wall	Column type Fixings
Concrete	Multi MUS-3 M6x40
Metal batten	10G Tek screw
Timber	Pan Head Bi-Metal 8-18x16 Phillip Drive Screw

NOTE:
- Approx capacity of Z bracket 35kg horizontally
- Refer to a certified engineer for specific engineering requirements.

Figure 11.1: Seismic installation details: Fix-float, Back-brace, and Z-bracket configurations

Note: Approximate horizontal capacity of Z-bracket: 35 kg. Always engage a certified engineer for specific seismic engineering requirements. This guidance is indicative only.

12. Acoustic Insulation

Austratus batten systems provide natural acoustic benefits through the open-cell structure of the installation. Performance can be enhanced further by adding acoustic insulation above the battens.

Product Specification

Austratus sound absorption insulation is a thermally bonded polyester fibre insulation:

- Non-irritant: no protective clothing or mask required for installation
- Available in a range of thicknesses and densities (XHD-25 = 25 mm, XHD-50 = 50 mm)
- Suitable for diverse industrial, commercial, community, and residential applications

Acoustic Performance, tested in accordance with AS/ISO 354-2006:

Product	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	Alpha W	NRC
XHD-25	0.15	0.35	0.60	0.80	0.85	0.95	0.7	0.7
XHD-50	0.19	0.62	1.01	1.02	0.98	0.96	0.9	0.9

Installation

69. Cut insulation to the required shape and size for the space between TCR rails.
70. Lay insulation over the installed battens, pressing it flat between TCR rails.
71. Apply double-sided tape to the top face of battens to keep insulation in position.

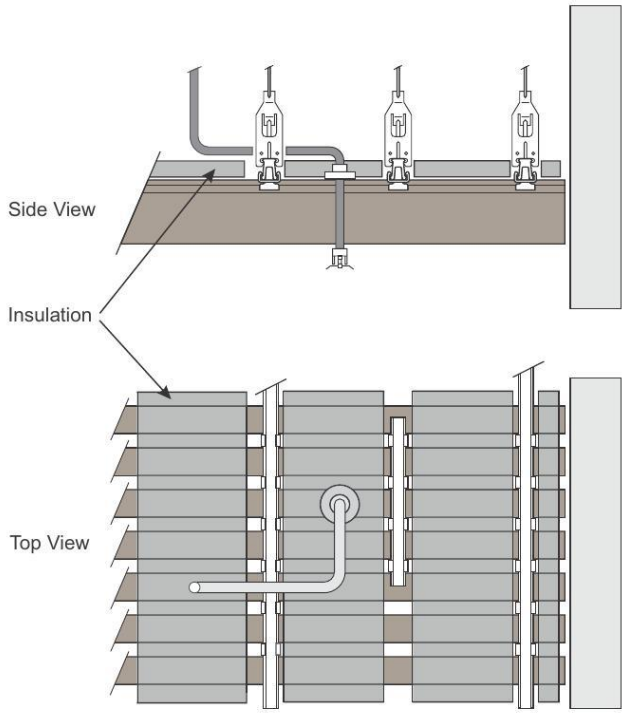


Figure 12.1: Acoustic insulation laid over battens between TCR rails

13. Maintenance & Finishes

13.1 Timber Products

Natural timber requires ongoing maintenance regardless of finish type. The timber cells must be kept hydrated to prevent separation, shrinking, cracking, and twisting.

Oil Finishes (Recommended)

Modinex recommends Cutek Wood Preservative oil. Advantages:

- Brings out the natural character and colour of the timber
- Penetrates and feeds the timber cells, providing dimensional stability
- Allows the timber to breathe
- Wears away gradually without blistering or peeling: easy to identify when reapplication is needed
- Can be reapplied by an unskilled person using a lamb's wool applicator

Frequency of reapplication depends on: sun exposure, local rainfall, UV block level in the coating, and western sun exposure.

> **Note:** UV coatings are for interior and covered out-of-weather applications only. Not for use in direct sunlight or rain.

Interior Finishes: Satin

Satin finishes for Western Red Cedar enhance the natural depth and colour of the timber:

- Premium commercial-grade finish
- No VOCs: environmentally friendly
- UV resistant
- Clear Satin and Pecan Satin available
- For interior and out-of-weather applications only

Washes: Satin & Matte

Hemlock offers a consistent even texture well suited to coloured washes:

- Satin washes: striking colours with a satin sheen, suitable for feature applications
- Matte washes: in-vogue matte finishes for a contemporary look

Touch-Up Paint

1-litre tins of touch-up paint are available from Modinex to restore coated finishes on cut or damaged ends. Apply to all cut timber faces on site.

13.2 Aluminium Products

Aluminium profiles are low maintenance. Periodically inspect the finish and clean with mild detergent and water. The following are the quality benchmarks for Austratus aluminium finishes:

- No visible cracking or checking of the applied finish
- No chalking in excess of No. 8 rating per ASTM D4214
- Colour change not greater than 5 CIE Lab AE units per ASTM 2244 Section 6.3
- Gloss retention minimum 30% of original after exposure
- No film removal when tested to AAMA 2604-02 Clause 7.4.2

14. Technical Specifications

14.1 Timber Grading

All Austratus timber is graded to Natural Select standard (minimum 2/3 Select, maximum 1/3 Standard per AS 2796.2). Minimal surface checking is permitted. Top face only is graded.

14.2 Batten Lengths

All timber profiles are supplied in random lengths ranging from 0.9 m to 6.0 m unless otherwise specified. Average length is approximately 2.7 m. Maximum 15% of any order may be under 1.8 m.

14.3 Profile Accuracy

Dimensional tolerance at time of manufacture is ±0.2 mm in both dimension and profile. Due to natural variation in timber moisture content and characteristics, individual boards may swell or contract slightly when exposed to environmental conditions.

14.4 Colour

Colour selection is not part of the grading process. Natural timber colours vary significantly: from rich brown to pale blonde and grey tones. This is a normal characteristic of timber. Purchase all battens for a project at the same time to minimise batch-to-batch variation.

14.5 Durability Ratings (Al Fresco Areas, AS 5604)

Above-ground durability ratings for external species:

- Blackbutt, Spotted Gum, Ironbark: Class 1 (High)
- Western Red Cedar, Pacific Teak: Class 2 (Reasonably High)

External use of timber profiles requires confirmation from Modinex on appropriate species, finish, and exposure rating.

14.6 Aluminium Custom Colours

Aluminium profiles can be supplied in custom powder coat colours for larger projects requiring a unique look. Minimum order quantities apply. Contact Modinex for further details.

15. Contact & Support

The Modinex team is available for installation guidance, technical queries, and project-specific assistance.

Installation Support **1800 156 455** Monday to Friday, 7:30am-4:30pm.	**Website & Resources** **modinex.com.au** Generic Structural Design Certification, installation videos, and full product range available under Resources.

For fire engineering assessments, engage a qualified fire engineer or certifier. Modinex can provide product data to support the assessment process.

For seismic zone projects, engage a certified structural engineer. Modinex can provide system details for engineering review.

Modinex

For installation support: 1800 156 455

modinex.com.au