

PROVISTA

BALUSTRADE SYSTEMS

EURO FIN BALUSTRADE

PRODUCT TECHNICAL STATEMENT - Version BPIR 1, November 2023



"THE CHOICE IS CLEAR"

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COMMERCIAL & RESIDENTIAL BALUSTRADE DESIGN



Euro Fin Balustrade



Product Line: Provista Euro Fin Aluminium Balustrade Solution

Product Name/Identifier: Euro Fin 50, Euro Fin 40

Manufacturer Location: Provista Balustrade Systems Ltd/New Zealand, NZBN 9429033696102

Address for Service: 1568 Kumara Junction Highway, Hokitika RD2, Westland 7882

Manufacturer Contact Details: nbarrett@provista.co.nz, 0272 580 876, www.provista.co.nz

Warnings and Bans: No

Description:

Provista Balustrade Systems Aluminum Euro Fin product features options of a pleasing rectangular and square profile offering increased privacy over conventional baluster systems. Suiting both classic and contemporary building design Provista Euro Fin is a versatile solution for a deck balustrade or privacy screening. Sizes of screen panels and gaps between fins can be fabricated to suit the required design and completed panels are affixed to either a face-fixed or top-fixed Provista post profile. These post profiles are also used for Provista glass solutions, so a balustrade or pool fence can comprise a combination of Euro Fin and glass to suit the desired look. Euro Fin panels are designed to be the same height as posts ensuring a uniform and lineal appearance.

Key Features:

- Designed for residential and commercial applications including apartment balconies and decks
- Suitable for both interior or exterior applications, including pool fencing and gates
- Hidden-fixings for face-fixed solutions
- Designed for all building structures including membrane decks
- T6 Temper Grade alloy used for all profiles, providing approx. 20% increased strength for greater post spacings
- Multiple finish options – can be powder-coated or anodised in all available NZ colours, including Dulux Duratec powder coating for high-corrosion zones
- National design service to assist with project specific design and detailing
- National network of fabricators and installers
- Complies with AS/NZS 1170, NZS3603, AS/NZS 1664, AS/NZS 2208 and NZS 4223.3 2016
- 5 year warranty on balustrade(see warranty statement on page 9)

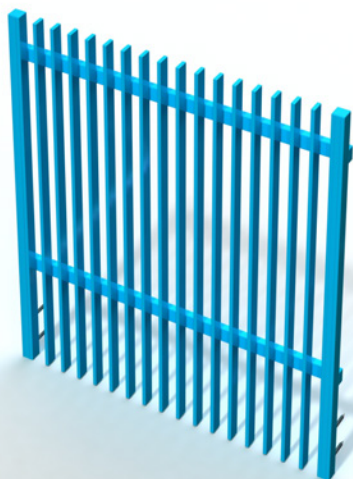
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COMMERCIAL & RESIDENTIAL BALUSTRADE DESIGN

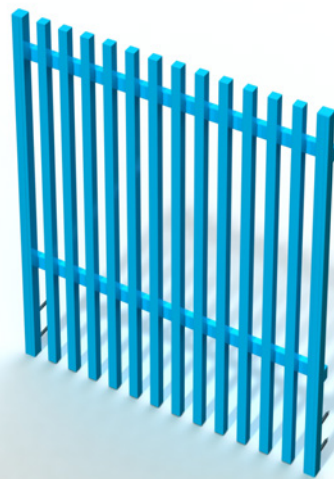
PROVISTA 
BALUSTRADE SYSTEMS

Euro Fin Balustrade

de V12/2023
Approved by: DE Consulting
Engineers and Inspection.

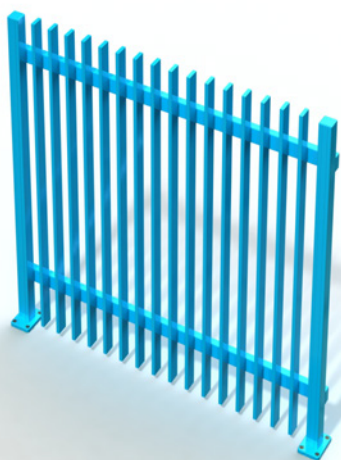


Euro Fin 50

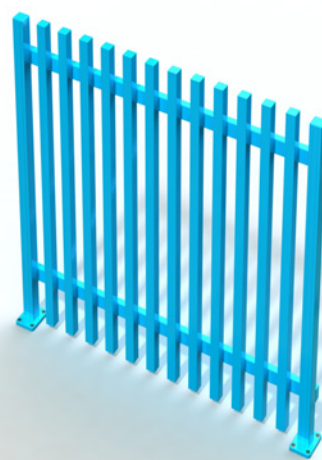


Euro Fin 40

Side-fix



Euro Fin 50



Euro Fin 40

Top-fix

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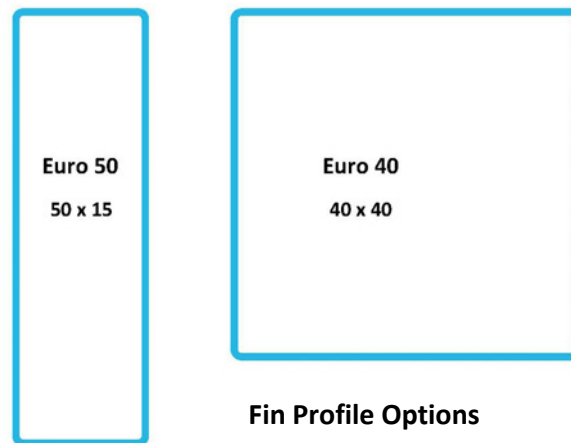
Scope of Use:



Provista Euro Fin solutions are designed to comply with A, B, E and C3 loadings for residential and commercial occupancy types and are suitable for decks, balconies, stairways, gates and landscape screening.

Suitable building structures can be timber, concrete, steel and typical combinations of each. Provista Euro Fin balustrade and pool fence solutions can also be used in conjunction with the Provista Gutter Bracket – a robust 6061 T6 aluminum product designed to be specified where membrane decks and gutters are required.

Address or Site-specific design and Producer Statements can be arranged as required.



Conditions of Use:

- Provista Aluminium Euro Fin solutions should only be used in accordance with this Provista Technical Statement which confirms post spacings and fixing methods available
- Not suitable for Commercial Occupancy Type C5
- Specified for use in **Extra High Wind Zones**
- For high corrosion zones use Dulux Duratec powder-coating

NZS 3604 MAXIMUM SUITABILITY



Extra High Wind Zone

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In-service History:

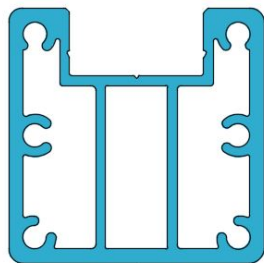


Provista has over 20 years of balustrade and pool fence design, development and installation experience across New Zealand. Provista products are designed and manufactured for NZ conditions. The Provista Euro Slat styles have been installed in thousands of homes, apartments, schools, aged care villages etc, across the length and breadth of NZ

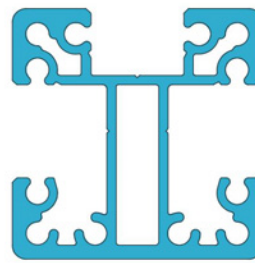
Statement of Building Code Compliance:

- Provista Balustrade Systems solutions have been designed and tested by independent engineers to comply with:
 - AS/NZS 1170 Structural Design Actions
 - NZS3603 Timber Structures Standard
 - AS/NZS 1664 Aluminium Structures – allowable stress design
 - AS/NZS 2208 Safety Glazing Materials in Buildings
 - NZS 4223.3 2016 Glazing in Buildings – Human Impact Safety Requirements
- Summit, Panorama and Horizon Semi-frameless styles are designed for Occupancy types A, B, E and C3
- Designs are engineered to comply with B1, B2, F2 and F4 of the NZ Building Code
 - B1 Structure — B1.3.1, B1.3.2, B1.3.3 (c, f, h, j, m), B1.3.4
 - B2 Durability — B2.3.1 (a), B2.3.2 (a, b)
 - F2 Hazardous building materials — F2.3.1, F2.3.3
 - F4 Safety from falling — F4.3.1
 - F9 Means of restricting access to residential pools — F9.3.1, F9.3.3
- For applications outside of the Provista Product Technical Statement specifications, a Site Specific PS1 can be prepared upon request

Exclusive to Provista Balustrade Systems:
53mm x 53mm Heavy Duty Ultra Post profiles for unparalleled strength and versatility along with maximum post spacings



9120
Ultra Side-fix post
53x53mm



33142
Ultra 3 Way Post
53 x 53mm

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Building Code Performance Clauses

All relevant building code performance clauses listed in this document:

B1 Structure

B1.3.1

Buildings, building elements and sitework shall have a low probability of rupturing, becoming unstable, losing equilibrium, or collapsing during construction or alteration and throughout their lives.

B1.3.2

Buildings, building elements and sitework shall have a low probability of causing loss of amenity through undue deformation, vibratory response, degradation, or other physical characteristics throughout their lives, or during construction or alteration when the building is in use.

B1.3.3

Account shall be taken of all physical conditions likely to affect the stability of buildings, building elements and sitework, including:

- (c) temperature
- (f) earthquake
- (h) wind
- (j) impact
- (m) differential movement

B1.3.4

Due allowances shall be made for:

- a. the consequences of failure,
- b. the intended use of the building,
- c. effects of uncertainties resulting from construction activities, or the sequence in which construction activities occur,
- d. variation in the properties of materials and the characteristics of the site, and
- e. accuracy limitations inherent in the methods used to predict the stability of buildings

B2 Durability

B2.3.1

Building elements must, with only normal maintenance, continue to satisfy the performance requirements of this code for the lesser of the specified intended life of the building, if stated, or:

- (a) the life of the building, being not less than 50 years, if:
 - i. those building elements (including floors, walls, and fixings) provide structural stability to the building, or
 - ii. those building elements are difficult to access or replace, or
 - iii. failure of those building elements to comply with the building code would go undetected during both normal use and maintenance of the building

B2.3.2

Individual building elements which are components of a building system and are difficult to access or replace must either:

- (a) all have the same durability
- (b) be installed in a manner that permits the replacement of building elements of lesser durability without removing building elements that have greater durability and are not specifically designed for removal and replacement

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Building Code Performance Clauses, continued

All relevant building code performance clauses listed in this document:

F2 Hazardous building materials

F2.3.1

The quantities of gas, liquid, radiation or solid particles emitted by materials used in the construction of buildings, shall not give rise to harmful concentrations at the surface of the material where the material is exposed, or in the atmosphere of any space.

F2.3.3

Glass or other brittle materials with which people are likely to come into contact shall:

- a. if broken on impact, break in a way which is unlikely to cause injury, or
- b. resist a reasonably foreseeable impact without breaking, or
- c. be protected from impact.

F4 Safety from falling

F4.3.1

Where people could fall 1 metre or more from an opening in the external envelope or floor of a building, or from a sudden change of level within or associated with a building, a barrier shall be provided.

F9 Means of restricting access to residential pools

F9.3.1

Residential pools must have or be provided with physical barriers that restrict access to the pool or the immediate pool area by unsupervised young children (ie, under 5 years of age).

F9.3.3

A barrier surrounding a pool must have no permanent objects or projections on the outside that could assist children in negotiating the barrier. Any gates must

- a. open away from the pool; and
- b. not be able to be readily opened by children; and
- c. automatically return to the closed position after use

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Warranty Statement

5 year peace of mind limited warranty covering faulty materials and installation supplied by Provista Balustrade Systems and installed by an authorised Provista Balustrade Systems agent. Warranty and provisions expressly covered in accordance with Building Code requirements within the Producer Technical Statement and assigned Building Code of Compliance Certificate.

The Client must notify Provista within 7 days of installation of any appearance or finishing defects present at installation and must give Provista reasonable opportunity to inspect. Provista will repair the defect or replace the materials or installation where the defect is the responsibility of Provista.

Excluded from any warranty claims:

A. Any or all sub structures that are supplied by third parties and covered under separate supplier warranties.

B. Provista does not give any warranty as to the life or appearance of the powder coating colour due to varying factors outside of Provista's control, including but not limited to sun exposure and weather conditions, that can affect powder coating.

C. Provista Balustrade Systems warranty excludes damage caused by extreme weather events and wind speeds greater than speeds the system was granted a code of compliance. Abnormal use, neglect, intentional damage or altered, modified after initial installation. And can be proven that the damage was caused by defective materials and or installation of Provista Balustrade Systems products only.

D. Damage or losses to business, personal property and third parties are also not covered under the warranty.

Provista Balustrade Systems Ltd will put right any defective materials or part thereof, found to be faulty in accordance with building code specified durability and performance guidelines, by their specified agent at no cost to the initial buyer/owner of the balustrade system at the discretion of Provista Balustrade Systems.

Balustrade Care and Maintenance

Whilst powder coated Aluminium and glass balustrades are low maintenance, they still require regular maintenance checks and cleaning to ensure optimum good looks and safety is achieved for many years.

MAINTENANCE:

Make a 2 monthly schedule to conduct a visual check for any defects, loose fittings and/or glazing rubbers. Report any issues to your local Provista agent immediately.

CLEANING:

Residential non sea zone industrial environments: 3-6month schedule. Hose down air born deposits and residues. Wash down all balustrade and glass with warm water and a small amount of detergent. Rinse with cold tap water. Use a dry towel or chamois to remove excess water. Use a squeegee on glass for the best finish.

Sea zone, industrial areas: 1-2 month schedule, wash down aluminium and glass with warm water and detergent, rinse thoroughly with cold tap water. Use a dry towel or chamois to remove excess water from aluminium and glass. While the use of glass cleaner can be used, a small amount of detergent in water performs just as well with a clean streak free finish. Use a squeegee on glass for the best finish.

AVOID:

1. Washing balustrade and glass in direct sun light or when surfaces are hot.
2. Avoid sunscreens, solvents, alcohol from coming in contact with powder coated surfaces. Wash off immediately with warm water and detergent, should a spill occur.
3. Never use abrasive compounds or materials to clean powder coated or glass surfaces.

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General Notes

GENERAL NOTE:

- (1) THE BALUSTRADE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE ARCHITECTS AND ENGINEERS DRAWINGS.
- (2) ALL DIMENSIONS AND LEVELS ARE TO BE CHECKED ON SITE AGAINST THE ARCHITECTS AND ENGINEERS DRAWINGS PRIOR TO COMMENCING WORK - ANY VARIATIONS OR DISCREPANCIES ARE TO BE REFERRED TO THE CONSULTANT FOR RESOLUTION.
- (3) ALL WORK IS TO COMPLY WITH THE NZ BUILDING CODE.
- (4) REMOVE ALL EXCESS MATERIALS AND RUBBISH FROM SITE AND REINSTATE ANY DAMAGE ON COMPLETION OF WORK.
- (5) THE MAXIMUM BALUSTRADE HEIGHT IS 1200MM.

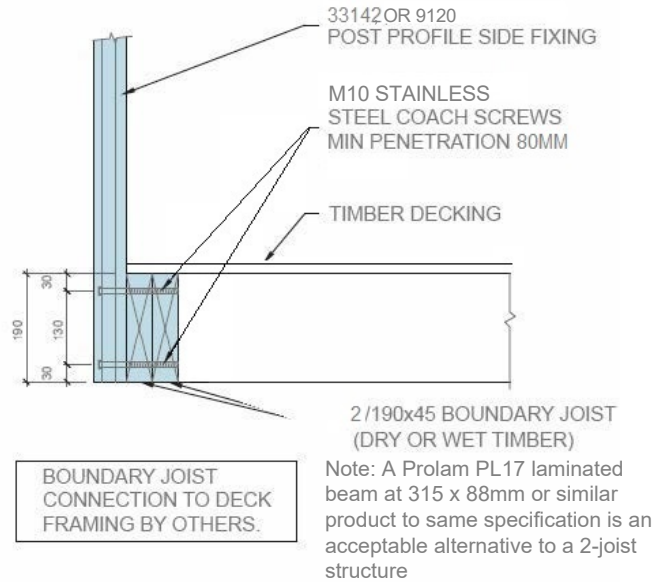
NEW CONSTRUCTION NOTES:

- (1) THE EXISTING SUPPORTING STRUCTURE DETAILS ARE NOT COVERED BY THESE DRAWINGS.
- (2) THESE DRAWINGS ONLY COVER INSTALLATION DETAILS OF THE NEW ALUMINIUM BALUSTRADE
- (3) ALL BOLTS AND COACH SCREWS CLASS 80 AND BRACKETS ARE TO BE 316 STAINLESS STEEL.
- (4) ALL CHEMSET CONCRETE ANCHORS TO BE CLASS 80 STAINLESS STEEL AND FIXED TO MANUFACTURER'S SPECIFICATION.
- (5) PREVENT CONTACT BETWEEN ALL DISSIMILAR MATERIALS IE: GALVANISED STEEL AND ALUMINIUM BY SEPARATING WITH NEOPRENE WASHERS.
- (6) ALL SEALANTS ARE TO COMPLY WITH THE REQUIREMENTS FOR THE SPECIFIC USE INTENDED DURING CONSTRUCTION.
- (7) A RUBBER, EPDM OR FOAM TAPE LAYER MUST BE INSTALLED BETWEEN THE POSTS AND DECK.

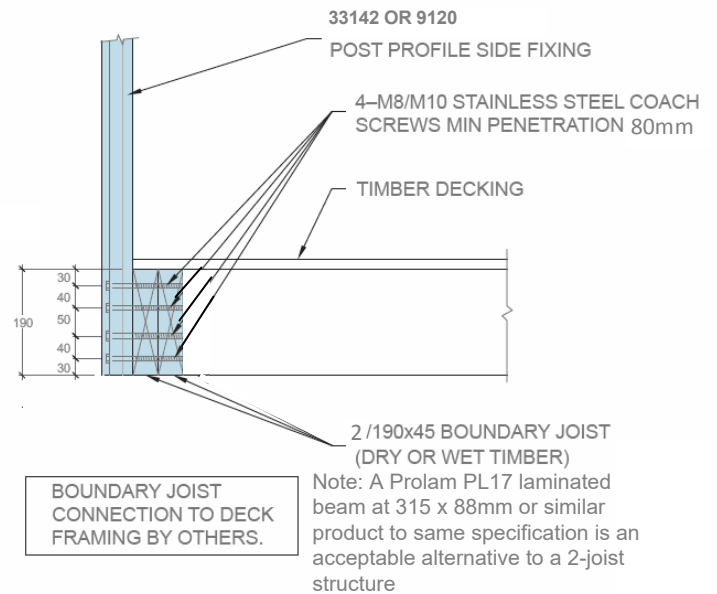
EXISTING SUPPORT STRUCTURE:

- (1) THE EXISTING DECK, BALCONY OR PAVING STRUCTURE MUST HAVE BEEN CONSTRUCTED TO COMPLY WITH THE LOCAL TERRITORIAL AUTHORITY REGULATIONS AND REQUIREMENTS, THE NZ BUILDING CODE AND NZS 3604
- (2) ALL STEELWORK IS TO BE PROTECTED AS REQUIRED BY THE NZ BUILDING CODE.
- (3) THE DESIGN OF CONCRETE, STEEL OR TIMBER SUPPORT FOR THE BALUSTRADE IS THE RESPONSIBILITY OF OTHERS.

Connection Type 1 – Timber Side-Fix 2 x 190x45 (Coach Screws)



1a
CONNECTION TYPE 1A – SIDE FIXING TO
2 /190x45 TIMBERS WITH 2 COACH SCREWS
SCALE 1:10



1b
CONNECTION TYPE 1B – SIDE FIXING TO
2 /190x45 TIMBERS WITH 4 COACH SCREWS
SCALE 1:10

Balustrade Spacing summary Table to NZS:1170 Minimum Imposed Action to Barrier and NZS:3604 **Very High Wind / Extra High Wind**

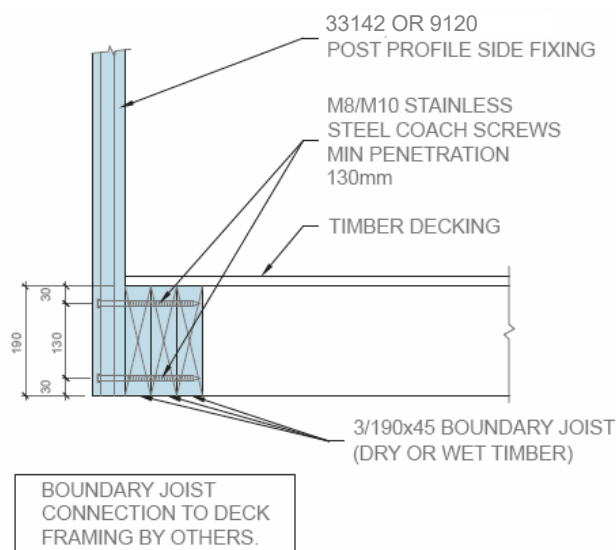
Balustrade Height	Post Section Model	Fixing Type	Maximum Post Spacing (M)			
			Type 1a & 1b			
			Coach Screw Side Fixing to Timber Deck			
			2 x 190x45 Boundary Joists			
			2/M8	4/M8	2/M10	4/M10
			33142	33142	9120	9120
1M	33142, 9120	Side	-	1.30	1.50 1.40	1.70 1.60
1.1M	33142, 9120	Side	-	1.30	1.50 1.40	1.70 1.60
1.2M	33142, 9120	Side	-	1.30	1.50 1.40	1.70 1.60
1.3M	33142, 9120	Side	-	1.25	1.45 1.35	1.65 1.55
1.4M	33142, 9120	Side	-	1.25	1.45 1.35	1.65 1.55
1.5M	33142, 9120	Side	-	1.25	1.45 1.35	1.65 1.55
1.6M	33142, 9120	Side	-	1.10	1.30 1.20	1.50 1.40
1.7M	33142, 9120	Side	-	1.00	1.20 1.10	1.40 1.30
1.8M	33142, 9120	Side	-	0.90	1.10 1.00	1.30 1.20

Note:

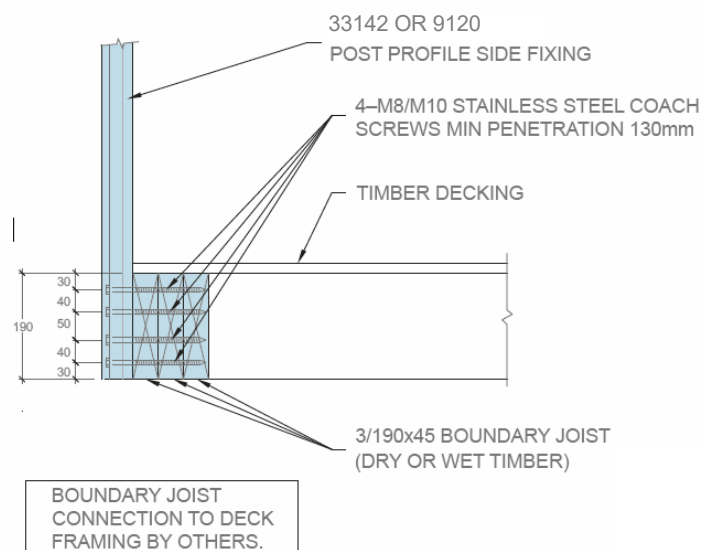
- The above table summarises the maximum balustrade post spacings that can be achieved based on the balustrade post strength and the connection strengths.
- Minimum height to be 1.2m when used for Pool Fencing.

EURO FIN BALUSTRADE

Connection Type 1 – Timber Side-Fix 3 x 190x45 (Coach Screws)



1a CONNECTION TYPE 1A – SIDE FIXING TO
3/190x45 TIMBERS WITH 2 COACH SCREWS
SCALE 1:10



1b CONNECTION TYPE 1B – SIDE FIXING TO
3/190x45 TIMBERS WITH 4 COACH SCREWS
SCALE 1:10

Balustrade Spacing summary Table to NZS:1170 Minimum Imposed Action to Barrier and NZS:3604 **Very High Wind / Extra High Wind**

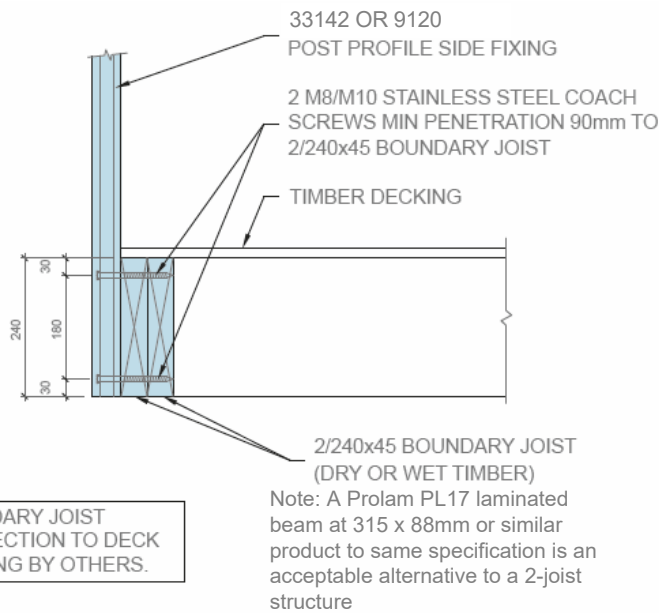
Balustrade Height	Post Section Model	Fixing Type	Maximum Post Spacing (M)			
			Connection Types 1a & 1b			
			Coach Screws			
			3 x 190x45 Boundary Joists			
			2/M8	4/M8	2/M10	4/M10
			33142	33142	9120	9120
1M	33142 9120	Side	1.10	1.40	1.60 1.50	1.80 1.70
1.1M	33142, 9120	Side	1.10	1.40	1.60 1.50	1.80 1.70
1.2M	33142 9120	Side	1.10	1.40	1.60 1.50	1.80 1.70
1.3M	31742, 9120	Side	1.05	1.35	1.55 1.45	1.75 1.65
1.4M	33142 9120	Side	1.05	1.35	1.55 1.45	1.75 1.65
1.5M	33142, 9120	Side	1.05	1.35	1.55 1.45	1.75 1.65
1.6M	33142, 9120	Side	0.90	1.20	1.40 1.30	1.60 1.50
1.7M	33142, 9120	Side	0.80	1.10	1.30 1.20	1.50 1.40
1.8M	33142, 9120	Side	0.70	1.00	1.20 1.10	1.40 1.30

Note:

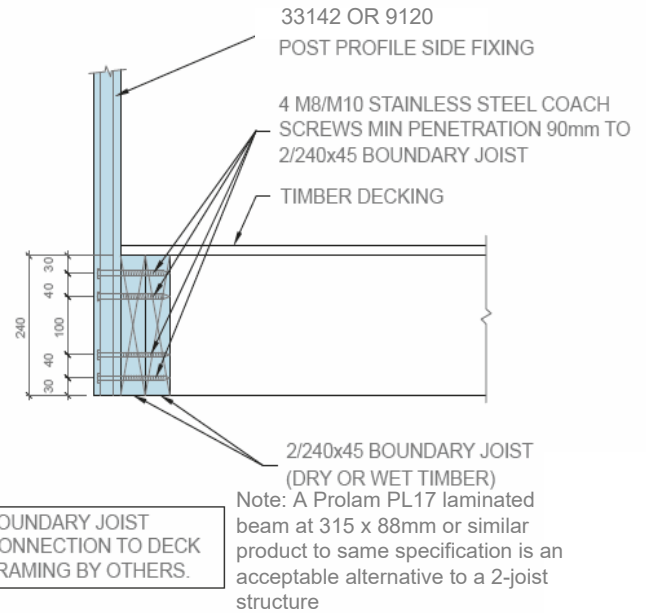
- The above table summarises the maximum balustrade post spacings that can be achieved based on the balustrade post strength and the connection strengths.
- Minimum height to be 1.2m when used for Pool Fencing.

EURO FIN BALUSTRADE

Connection Type 1 – Timber Side-Fix 2 x 240x45 (Coach Screws)



1c
CONNECTION TYPE 1C – SIDE FIXING TO
2/240x45 TIMBERS WITH 2 COACH SCREWS
SCALE 1:10



1d
CONNECTION TYPE 1E – SIDE FIXING TO
2/240x45 TIMBERS WITH 4 COACH SCREWS
SCALE 1:10

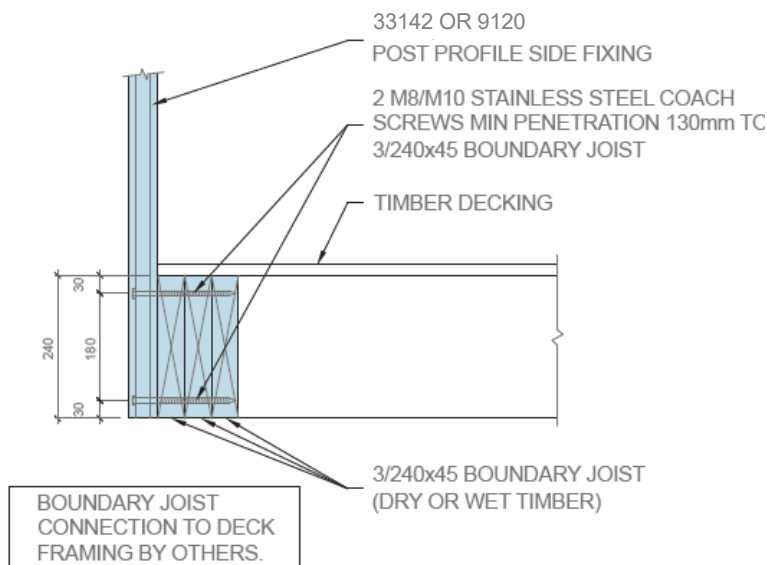
Balustrade Spacing summary Table to NZS:1170 Minimum Imposed Action to Barrier and NZS:3604 **Very High Wind / Extra High Wind**

Balustrade Height	Post Section Model	Fixing Type	Maximum Post Spacing (M)			
			Connection Types 1c & 1d			
			Coach Screws			
			2 x 240x45 Boundary Joists			
			2/M8	4/M8	2/M10	4/M10
			33142	33142	9120	9120
1M	33142, 9120	Side	1.10	1.40	1.60 1.50	1.80 1.70
1.1M	33142, 9120	Side	1.10	1.40	1.60 1.50	1.80 1.70
1.2M	33142, 9120	Side	1.10	1.40	1.60 1.50	1.80 1.70
1.3M	33142, 9120	Side	1.05	1.35	1.55 1.45	1.75 1.65
1.4M	33142, 9120	Side	1.05	1.35	1.55 1.45	1.75 1.65
1.5M	33142, 9120	Side	1.05	1.35	1.55 1.45	1.75 1.65
1.6M	33142, 9120	Side	0.90	1.20	1.40 1.30	1.60 1.50
1.7M	33142, 9120	Side	0.80	1.10	1.30 1.20	1.50 1.40
1.8M	33142, 9120	Side	0.70	1.00	1.20 1.10	1.40 1.30

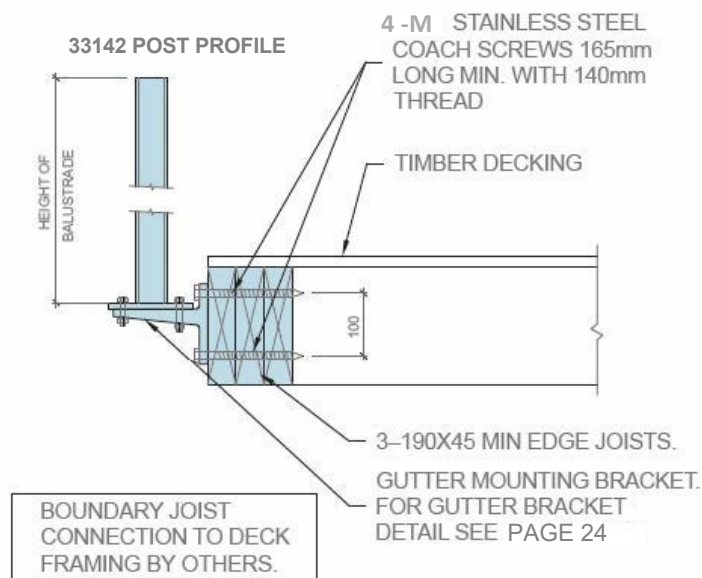
Note:

- The above table summarises the maximum balustrade post spacings that can be achieved based on the balustrade post strength and the connection strengths.
- Minimum height to be 1.2m when used for Pool Fencing.

Connection Type 1 – Timber Side-Fix 3 x 240x45 (Coach Screws)



1e
CONNECTION TYPE 1E – SIDE FIXING TO
3/240x45 TIMBERS WITH 2 COACH SCREWS
SCALE 1:10



1f
CONNECTION TYPE 1F – SIDE FIXING TO
3/190x45 TIMBERS WITH 4 COACH SCREWS
SCALE 1:10

Balustrade Spacing summary Table to NZS:1170 Minimum Imposed Action to Barrier and NZS:3604 **Very High Wind / Extra High Wind**

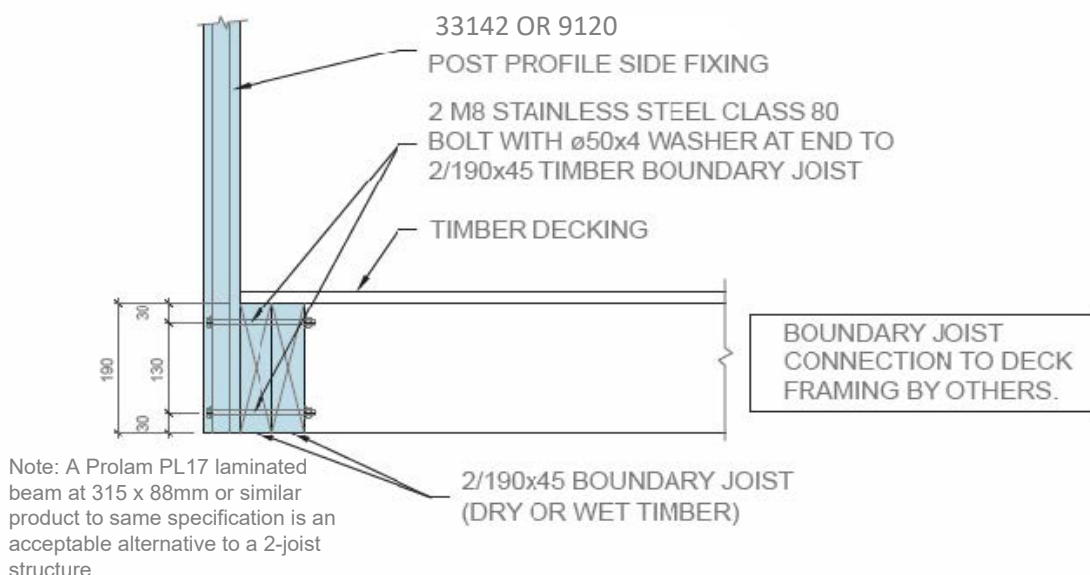
Balustrade Height	Post Section Model	Fixing Type	Maximum Post Spacing (M)							
			Type 1e & 1f							
			Coach Screw Side Fixing to Timber Deck							
			3 x 240x45 Boundary Joists				3 x 190x45 Boundary Joists			
			2/M8		2/M10		4/M10 Gutter Bracket			
			33142	33142	9120	9120	33142	33142		
1M	33142 9120	Side	1.10	1.40	1.60	1.50	1.80	1.70	1.35	1.25
1.1M	33142, 9120	Side	1.10	1.40	1.60	1.50	1.80	1.70	1.35	1.25
1.2M	33142, 9120	Side	1.10	1.40	1.60	1.50	1.80	1.70	1.35	1.25
1.3M	33142, 9120	Side	1.05	1.35	1.55	1.45	1.75	1.65	1.00	0.90
1.4M	33142, 9120	Side	1.05	1.35	1.55	1.45	1.75	1.65	1.00	0.90
1.5M	33142, 9120	Side	1.05	1.35	1.55	1.45	1.75	1.65	1.00	0.90
1.6M	33142, 9120	Side	0.90	1.20	1.40	1.30	1.60	1.50	0.80	0.70
1.7M	33142, 9120	Side	0.80	1.10	1.30	1.20	1.50	1.40	0.70	0.60
1.8M	33142, 9120	Side	0.70	1.00	1.20	1.10	1.40	1.30	0.60	0.50

Note:

- The above table summarises the maximum balustrade post spacings that can be achieved based on the balustrade post strength and the connection strengths.
- Minimum height to be 1.2m when used for Pool Fencing.

EURO FIN BALUSTRADE

Connection Type 2 – Bolt Side-Fix 2 x 190x45



2a
CONNECTION TYPE 2A – SIDE FIXING TO 2/190x45
TIMBERS WITH 2 BOLTS WASHERS & NUTS
SCALE 1:10

Balustrade Spacing summary Table to NZS:1170 Minimum Imposed Action to Barrier and NZS:3604 **Very High Wind** / **Extra High Wind**

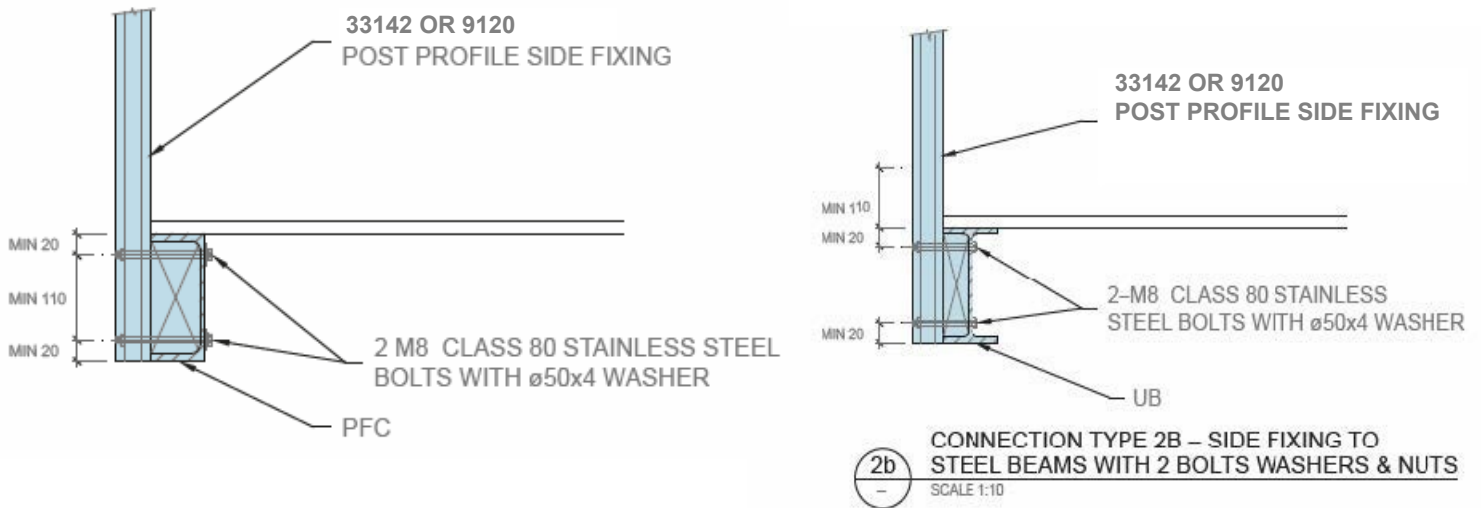
Balustrade Height	Post Section Model	Fixing Type	Maximum Post Spacing (M)		
			Type 2		
			Bolt side fixing to timber 2 x 190x45		
			2/M8 33142	2/M10 9120	
1M	33142, 9120	Side	1.50	1.80	1.70
1.1M	33142, 9120	Side	1.50	1.80	1.70
1.2M	33142, 9120	Side	1.50	1.80	1.70
1.3M	33142, 9120	Side	1.45	1.75	1.65
1.4M	33142, 9120	Side	1.45	1.75	1.65
1.5M	33142, 9120	Side	1.45	1.75	1.65
1.6M	33142, 9120	Side	1.30	1.60	1.50
1.7M	33142, 9120	Side	1.20	1.50	1.40
1.8M	33142, 9120	Side	1.10	1.40	1.30

Note:

- The above table summarises the maximum balustrade post spacings that can be achieved based on the balustrade post strength and the connection strengths.
- Minimum height to be 1.2m when used for Pool Fencing.

EURO FIN BALUSTRADE

Connection Type 2 – Bolt Side Fix Steel Beam



Balustrade Spacing summary Table to NZS:1170 Minimum Imposed Action to Barrier and NZS:3604 **Very High Wind** / **Extra High Wind**

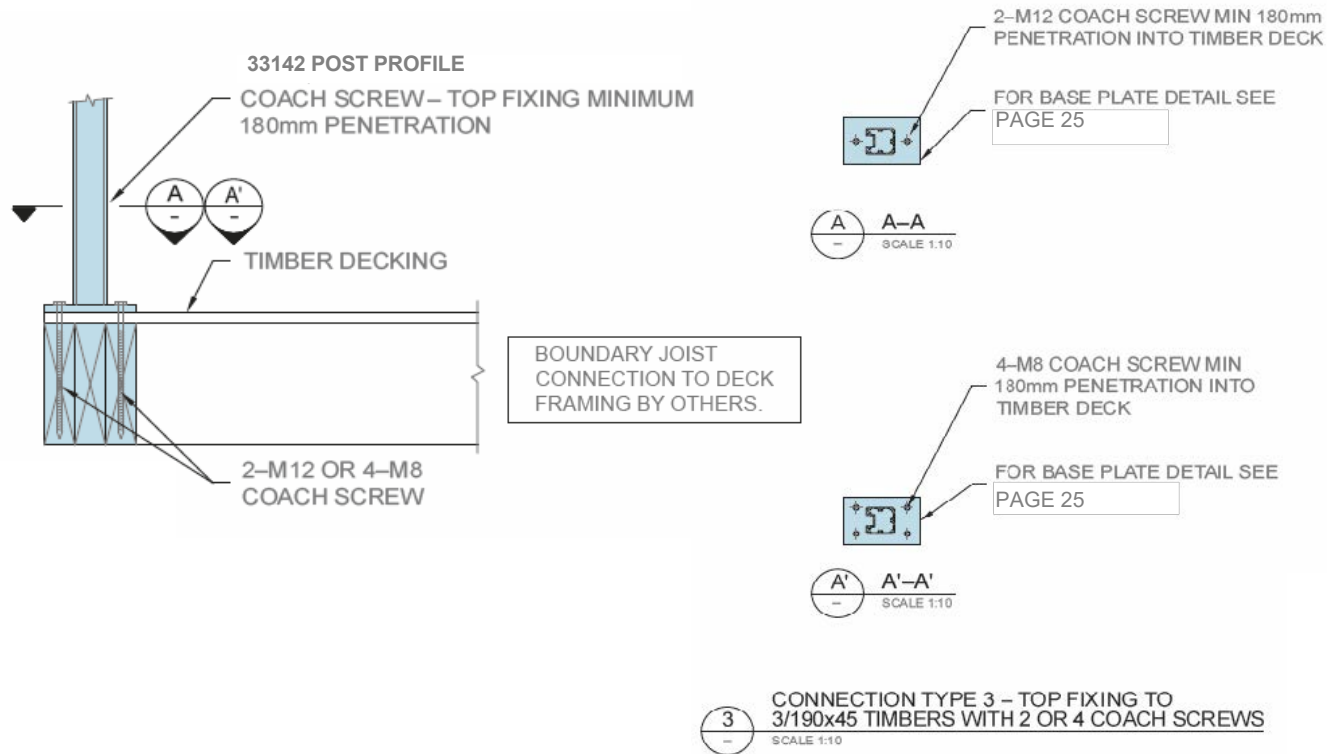
Balustrade Height	Post Section Model	Fixing Type	Maximum Post Spacing (M)		
			Type 2		
			Bolt Side Fix Steel Beam		
			2/M8 33142	2/M10 9120	
1M	33142,9120	Side	1.50	1.80	1.70
1.1M	33142, 9120	Side	1.50	1.80	1.70
1.2M	33142, 9120	Side	1.50	1.80	1.70
1.3M	33142, 9120	Side	1.45	1.75	1.65
1.4M	33142, 9120	Side	1.45	1.75	1.65
1.5M	33142, 9120	Side	1.45	1.75	1.65
1.6M	33142, 9120	Side	1.30	1.60	1.50
1.7M	33142, 9120	Side	1.20	1.50	1.40
1.8M	33142, 9120	Side	1.10	1.40	1.30

Note:

- The above table summarises the maximum balustrade post spacings that can be achieved based on the balustrade post strength and the connection strengths.
- Minimum height to be 1.2m when used for Pool Fencing.

EURO FIN BALUSTRADE

Connection Type 3 – Timber Top-Fix



Balustrade Spacing summary Table to NZS:1170 Minimum Imposed Action to Barrier and NZS:3604 **Very High Wind** / **Extra High Wind**

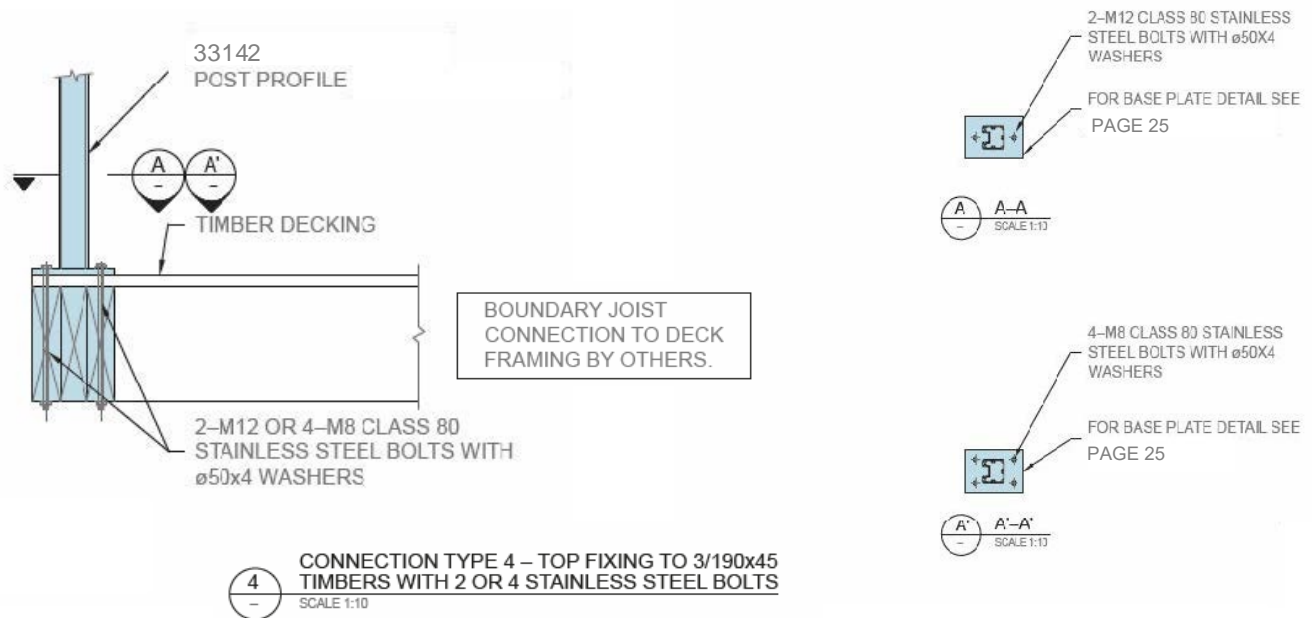
Balustrade Height	Post Section Model	Fixing Type	Maximum Post Spacing (M)			
			Type 3			
			Coach Screw Top Fixing to Timber Deck			
			4/M8		2/M12	
1M	33142	Top	1.40	1.30	1.30	1.20
1.1M	33142	Top	1.40	1.30	1.30	1.20
1.2M	33142	Top	1.40	1.30	1.30	1.20
1.3M	33142	Top	1.35	1.25	1.25	1.15
1.4M	33142	Top	1.35	1.25	1.25	1.15
1.5M	33142	Top	1.35	1.25	1.25	1.15
1.6M	33142	Top	1.20	1.10	1.00	0.90
1.7M	33142	Top	1.10	1.00	0.90	0.80
1.8M	33142	Top	1.00	0.90	0.80	0.70

Note:

- The above table summarises the maximum balustrade post spacings that can be achieved based on the balustrade post strength and the connection strengths.
- Minimum height to be 1.2m when used for Pool Fencing.

EURO FIN BALUSTRADE

Connection Type 4– Timber Top-Fix



Balustrade Spacing summary Table to NZS:1170 Minimum Imposed Action to Barrier and NZS:3604 **Very High Wind** / **Extra High Wind**

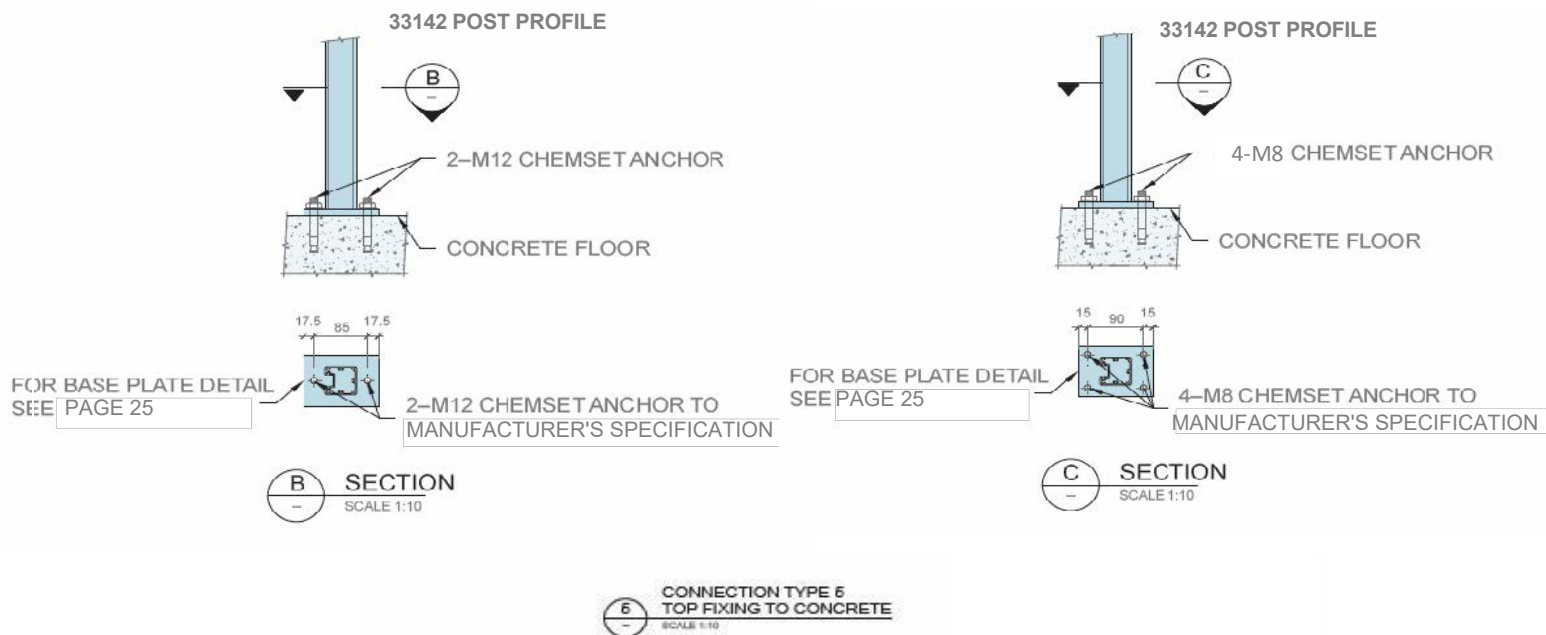
Balustrade Height	Post Section Model	Fixing Type	Maximum Post Spacing (M)			
			Type 4			
			Bolt Top Fixing to Timber Deck			
			4/M8		2/M12	
1M	33142	Top	1.50	1.40	1.40	1.30
1.1M	33142	Top	1.50	1.40	1.40	1.30
1.2M	33142	Top	1.50	1.40	1.40	1.30
1.3M	33142	Top	1.45	1.35	1.35	1.25
1.4M	33142	Top	1.45	1.35	1.35	1.25
1.5M	33142	Top	1.45	1.35	1.35	1.25
1.6M	33142	Top	1.30	1.20	1.20	1.10
1.7M	33142	Top	1.20	1.10	1.10	1.00
1.8M	33142	Top	1.10	1.00	1.00	0.90

Note:

- The above table summarises the maximum balustrade post spacings that can be achieved based on the balustrade post strength and the connection strengths.
- Minimum height to be 1.2m when used for Pool Fencing.

EURO FIN BALUSTRADE

Connection Type 5 – Concrete Top-Fix



Balustrade Spacing summary Table to NZS:1170 Minimum Imposed Action to Barrier and NZS:3604 **Very High Wind** / **Extra High Wind**

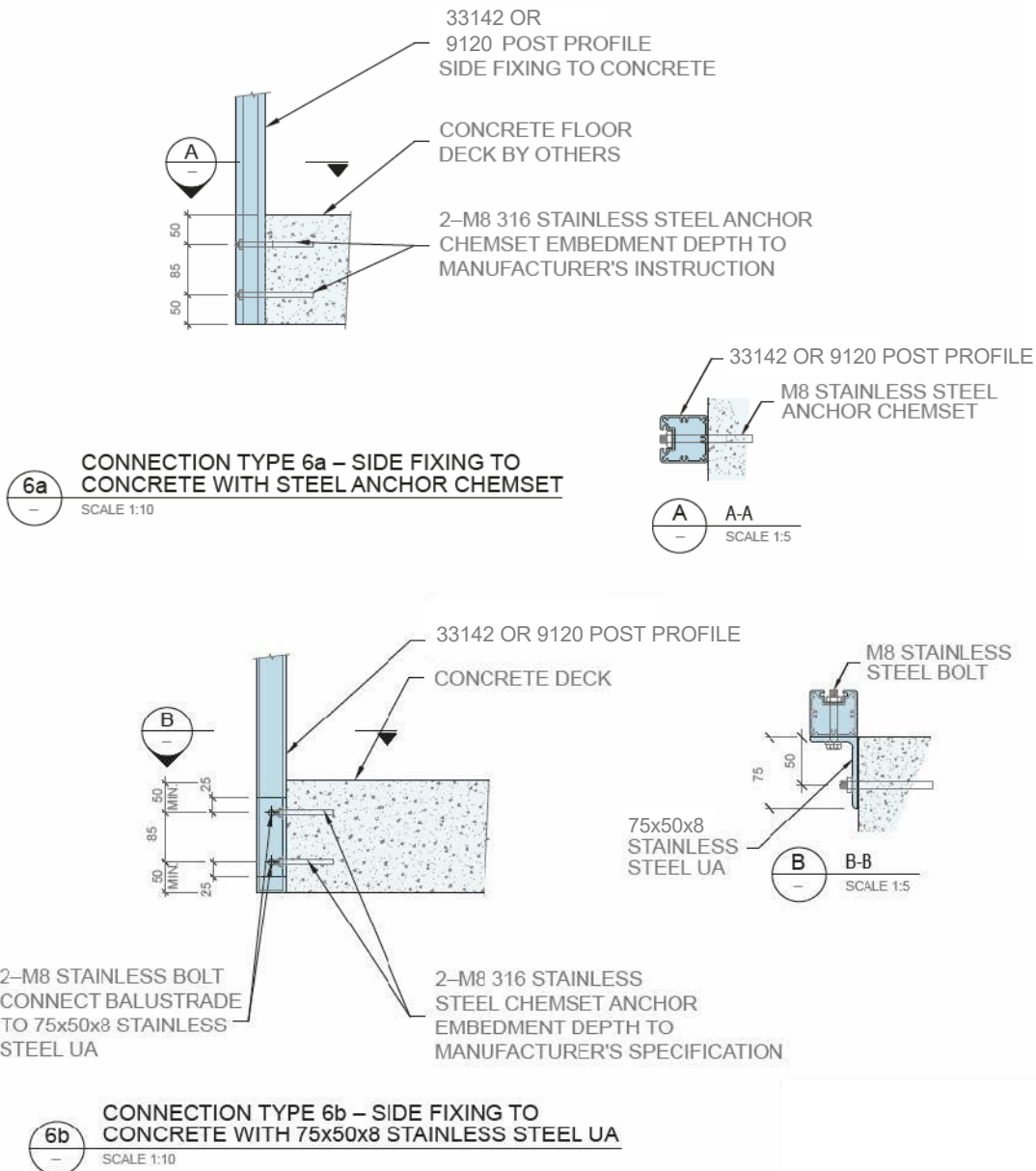
Balustrade Height	Post Section Model	Fixing Type	Maximum Post Spacing (M)			
			Type 5			
			Chemset Anchor Top Fixing Concrete			
			4/M8		2/M12	
1M	33142	Top	1.50	1.40	1.40	1.30
1.1M	33142	Top	1.50	1.40	1.40	1.30
1.2M	33142	Top	1.50	1.40	1.40	1.30
1.3M	33142	Top	1.45	1.35	1.35	1.25
1.4M	33142	Top	1.45	1.35	1.35	1.25
1.5M	33142	Top	1.45	1.35	1.35	1.25
1.6M	33142	Top	1.30	1.20	1.20	1.10
1.7M	33142	Top	1.20	1.10	1.10	1.00
1.8M	33142	Top	1.10	1.00	1.00	0.90

Note:

- The above table summarises the maximum balustrade post spacings that can be achieved based on the balustrade post strength and the connection strengths.
- Minimum height to be 1.2m when used for Pool Fencing.

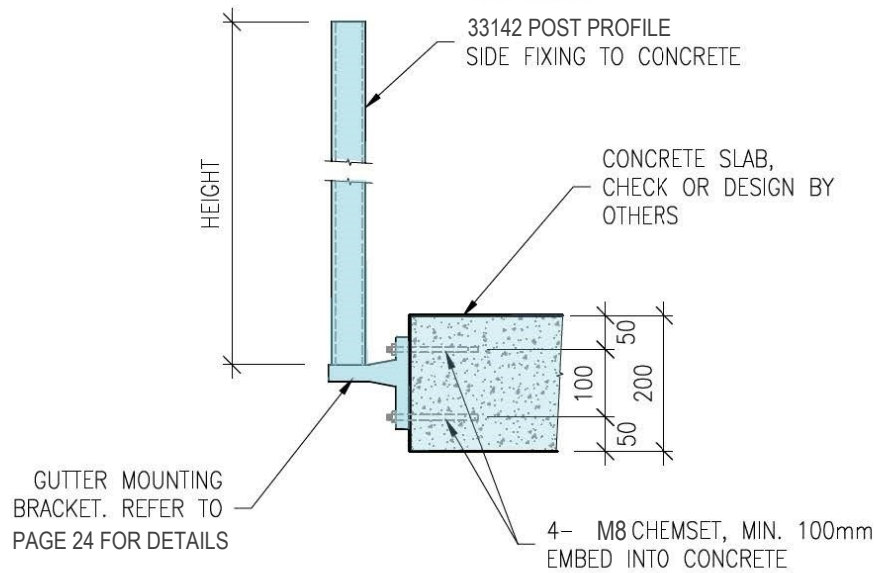
EURO FIN BALUSTRADE

Connection Type 6 – Concrete Side-Fix



SEE POST SPACING TABLE ON PAGE 22

Connection Type 7 – Concrete Side-Fix (Gutter Bracket)



7c
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CONNECTION TYPE 7c - SIDE FIXING TO
CONCRETE WITH GUTTER MOUNTING BRACKET

SCALE 1:10

EURO FIN BALUSTRADE

Connection Type 6 – 7 Concrete Side-Fix

Balustrade Spacing summary Table to NZS:1170 Minimum Imposed Action to Barrier and NZS:3604 **Very High Wind** / **Extra High Wind**

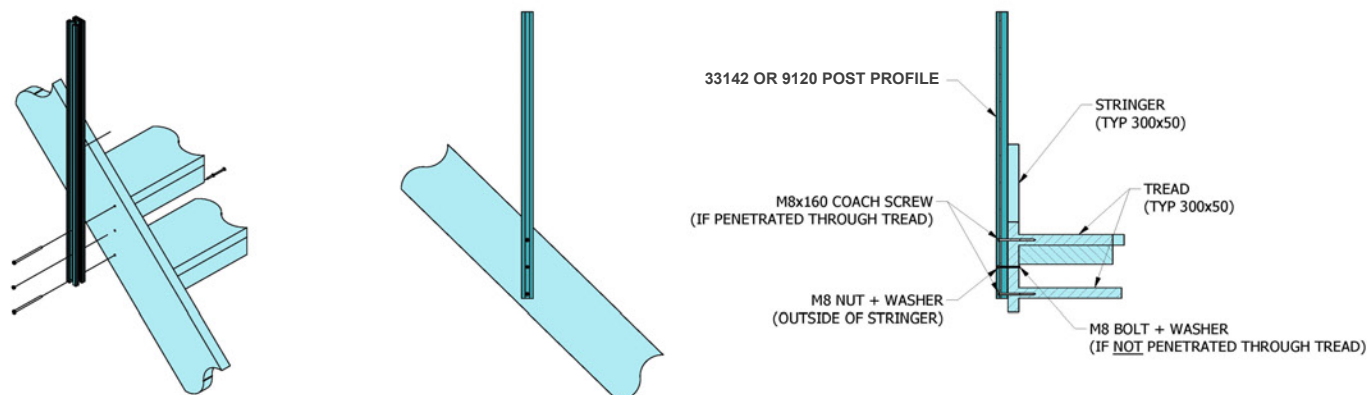
Balustrade Height	Post Section Model	Fixing Type	Maximum Post Spacing (M)		
			Type 6-7		
			Chemset Anchor Side Fixing Concrete		
			2/M8 33142	2/M10 9120	
1M	33142, 9120	Side	1.60	1.80	1.70
1.1M	33142, 9120	Side	1.60	1.80	1.70
1.2M	33142 9120	Side	1.60	1.80	1.70
1.3M	33142, 9120	Side	1.55	1.75	1.65
1.4M	33142, 9120	Side	1.55	1.75	1.65
1.5M	33142, 9120	Side	1.55	1.75	1.65
1.6M	33142, 9120	Side	1.40	1.60	1.50
1.7M	33142, 9120	Side	1.30	1.50	1.40
1.8M	33142, 9120	Side	1.20	1.40	1.30

Note:

- The above table summarises the maximum balustrade post spacings that can be achieved based on the balustrade post strength and the connection strengths.
- Minimum height to be 1.2m when used for Pool Fencing.

EURO FIN BALUSTRADE

Connection Type 8 - Side fixed to stair stringer



8
CONNECTION TYPE 8
SIDE FIXED TO STAIR STRINGER
SCALE 1:10

Connection Options:

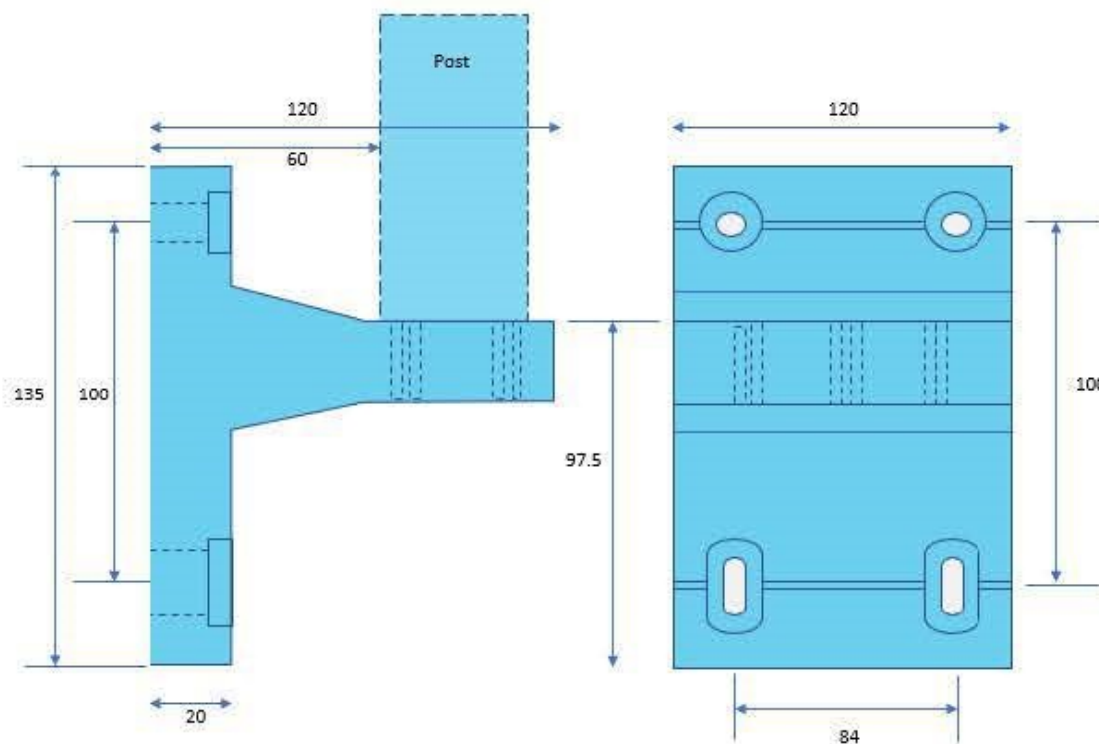
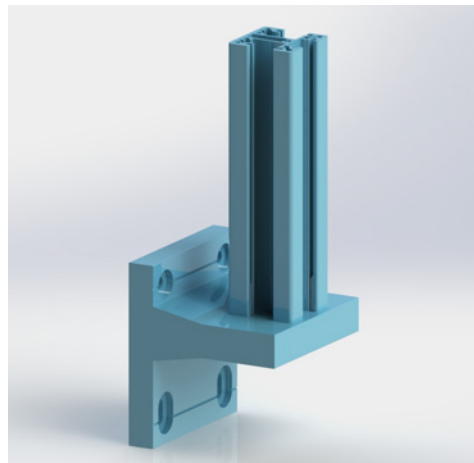
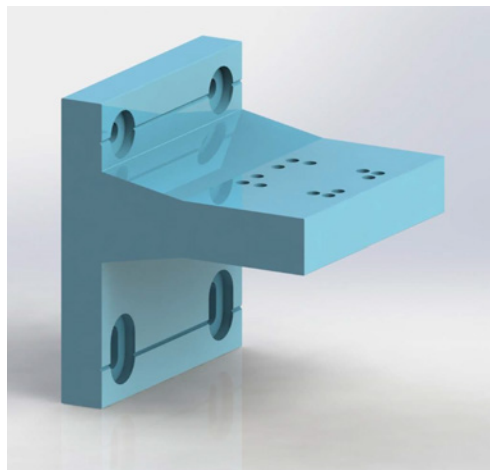
- 2 / M8 x160 coach screws penetrated to treads, and 1 M8 bolt + nut + washers
- 3 / M8 bolts + nuts + washers if none of them is penetrated to the tread
- 3 / M8 coach screws if all are penetrated to the tread, or to the 90x45 riser board

Balustrade Height	Post Section Model	Fixing Type	Maximum Post Spacing (M)
			Connection Type 8
1M	33142 9120	Side	1300

Note:

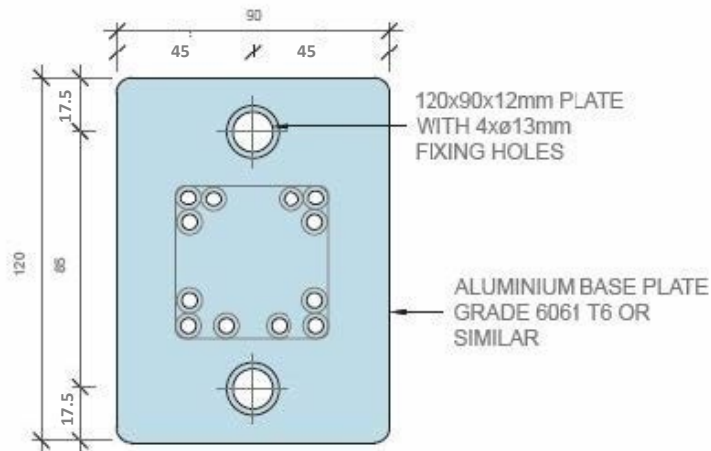
- i. The above table summarises the maximum balustrade post spacings that can be achieved based on the balustrade post strength and the connection strengths.
- ii. Minimum height to be 1.2m when used for Pool Fencing.

Gutter Bracket Design

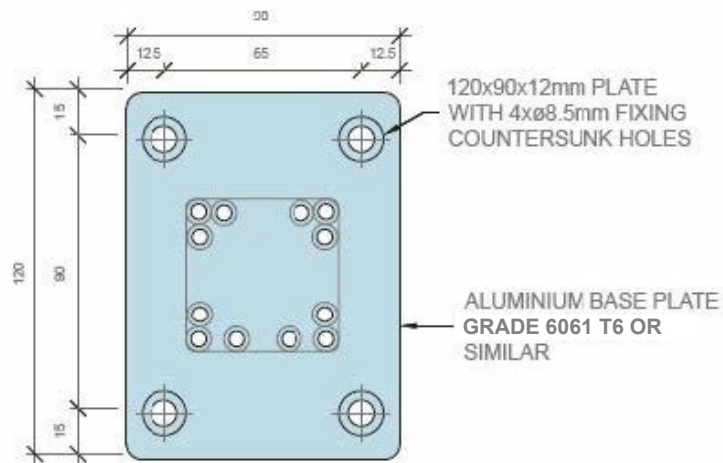


11 GUTTER MOUNTING BRACKET
SCALE 1:2

Base Plate Design – Euro Fin Balustrade



7 PART NO. HDSC213 BASE PLATE
SCALE 1:2



8 PART NO. HDSW485 BASE PLATE
SCALE 1:2

NOTE: BOTH HDSC213 AND HDSW485 BASE PLATES
MATE WITH THE 33142 POST PROFILE