



JURALCO STECCA® BALUSTRADE SYSTEM

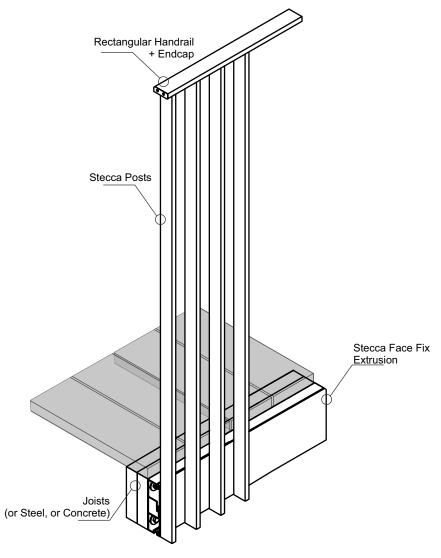
Juralco Stecca® Balustrade System

Juralco Aluminium Building Products Ltd designs and distributes specialist aluminium joinery systems through a national network of franchised fabricators and agents. For more than 25 years we have been at the forefront of specialist aluminium door and window products suitable for New Zealand joinery and building methods. Our comprehensive product range includes security and insect screens, balustrades and gates, louvre roofs, shutters and awnings, shower screens, wardrobe doors and organisers and internal doors.

The Juralco Stecca® Postless Balustrading System is a architectural based balustrade system that uses vertical slats in a standard and heavy duty form thus removing the need for larger posts, enabling a continuous integrated panel design.

Currently available as Face Fix.

Face Fix
Face fixed extrusion
Mount to ouble Joists
or Steel or Concrete



Juralco Stecca[™] Balustrade System General Arrangements

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Juralco Stecca® Balustrade System

Complies With AS/NZS 1170:2002, NZS 4223.3.2016, NZ Building Code B1, B2, F2 ,F4 and F9 Complies with French Standard NF P01-013 (1988-08)

Juralco Stecca® Balustrade System is for occupancy type A, A Other, B, C3 and E only Occupancy Types as per AS/NZ 1170.1.2002.

Code	Type of Occupancy for part of the building or structure	Specific Uses
А	Domestic and Residential activities	All areas within or serving exclusively one dwelling including stairs, landings etc, but excluding external balconies and edges of roofs.
A Other, C3 Areas without obstacles for moving people and not susceptible to over crowding		Stairs, landings, external balconies, edges of roofs etc.

Note 1 Juralco Balustrade Systems building code compliance documentation requires all balustrade installations are to be completed in accordance with the requirements of our authorised installer certification.

Index

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Surface Care	23	Instructions for the care of Powder coated surfaces	

Juralco Stecca® Balustrade System - Specifications and Surface finishes

1.Scope- This specification details the documents the Juralco Stecca® Balustrade System refers to in relation to the New Zealand Building Code, the manufacturer's documents, products used in the System, requirements in relation to fixing and surface finishings.

2. NZBC Compliance

- The Juralco Stecca® Balustrade System has been reviewed by Lautrec Technology Group Ltd to demonstrate compliance with the structural requirements of the New Zealand Building Code and AS/NZS 1170: 2002 occupancy A, A Other, B, C3, and E, NZS 3604 Low, Medium, High, Very High and Extra High Wind Zones.
- The Structural Engineering design includes the requirements of B1 Structure, B2 Durability, F2 Hazardous material and F4 Safety from falling, all from the Building Code.
- Verification Method B1 / VM1, B2/AS1, F4 / AS1, F9/AS1.
- Complies with NZS 4223.3.2016

3. Manufacturer's Documents

- The Juralco Juralco Stecca® Balustrade System manual details all extrusions and components used for the fabrication and installation/fixing of the system.
- A Producer Statement 1(Design) is available.

Copies of the above documents are available from:

Juralco Aluminium Building Products Ltd

48 Bruce McLaren Rd, Henderson, Auckland

Phone 09 478 8018 Fax 09 478 7883 Email specify@juralco.co.nz

- Any deviation from the standard fabrication or installation/fixing must be accompanied by a site specific PS1 with site specific calculations and drawings

4. Products

- Only extrusions, components and hardware supplied by or specified by JABP may be used in the Juralco Stecca® System
- Aluminium extrusions, components and hardware unless specified are manufactured to 6060 T5 specifications
- Stainless Steel components, hardware, fixings all components to 316 grade

5. Surface Finishing

- Juralco Aluminium Building Products Ltd is a Dulux Registered Applicator site, registration number 2101. JABP uses only Dulux branded powder coating materials
- Dulux Duralloy® powder coating systems are suitable for properties greater than 100m from high tide level AAMA 2603 performance. Residential buildings, 3 levels max. Warranty 10 yrs
- Dulux Duralloy Plus® powder coating systems are suitable for properties greater than 10m from high tide level. AAMA 2603 performance. Residential and Light commercial buildings, 3 levels max. Warranty 15 yrs
- Dulux Duratec® powder coating systems are suitable for properties greater than 10m from high tide level AAMA2603 and 2604 performance. All Residential and Commercial buildings. Warranty 25 yrs

- **6. Installation and Fixing** The Juralco Stecca® Balustrade System must only be installed in accordance with the Juralco Stecca® Balustrade System manual
 - Any deviation from that specified in the Juralco Stecca® manual must only be in accordance with this site specific PS1 with site specific calculations and drawings listing the non standard details
 - The Juralco Stecca® Balustrade System must only be fabricated/installed by a Juralco approved fabricator
 - Upon completion of the installation the fabricator must supply the owner with a PS3 (Construction)

Important information - Powder Coating systems.

Powdercoat Systems The new standard Dulux powder coating system used by Juralco is Duralloy Plus®. Also Duralloy® and Duratec®. All as per specs above. Juralco Powder coated prices are for Duralloy Plus® and Duralloy® (same pricing). Duratec® prices on application.

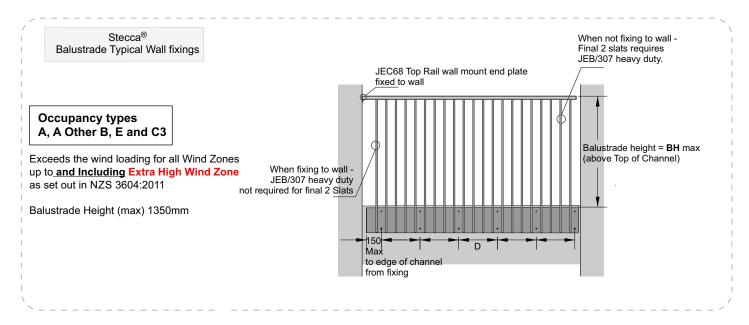
Attachment to structures A PVC Tape or similar material spacer must be used to separate powder coated aluminium items from all concrete and steel structures. Failure to do so can lead to the chemicals in the structure affecting the powder coating, leading to corrosion.

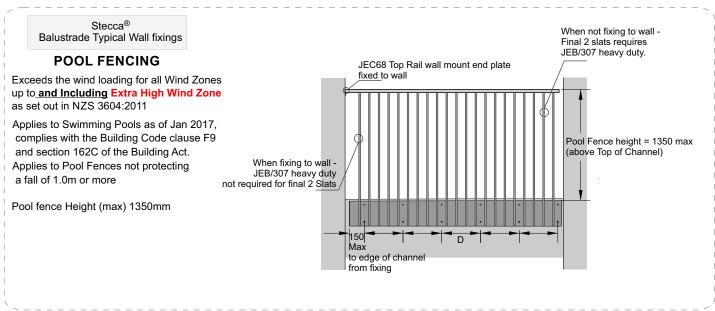
Swimming Pools The chlorinated water in swimming pools can cause the deterioration of powder coated surfaces, leading to corrosion of the underlying surface. It is recommended that Powder coated surfaces be 1200mm min from a pool.

Care The Dulux powder coating warranty period is conditional upon the surface being maintained in accordance with the Dulux 'Care and Maintenance Instructions'. Download from Dulux or refer to the back page of this manual.

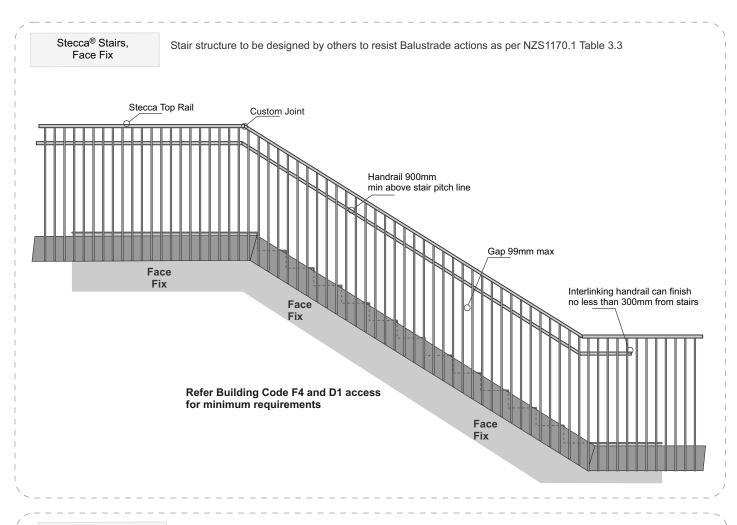


Juralco Stecca® Balustrade System - Typical Layout - Face Fix



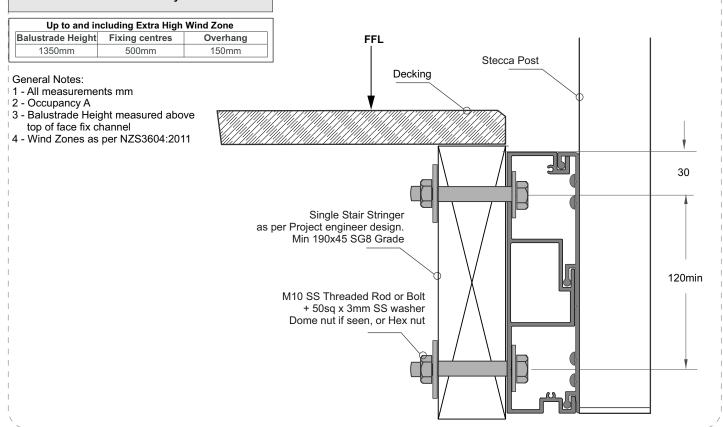


Juralco Stecca® Balustrade System - Stair Setouts, Construction

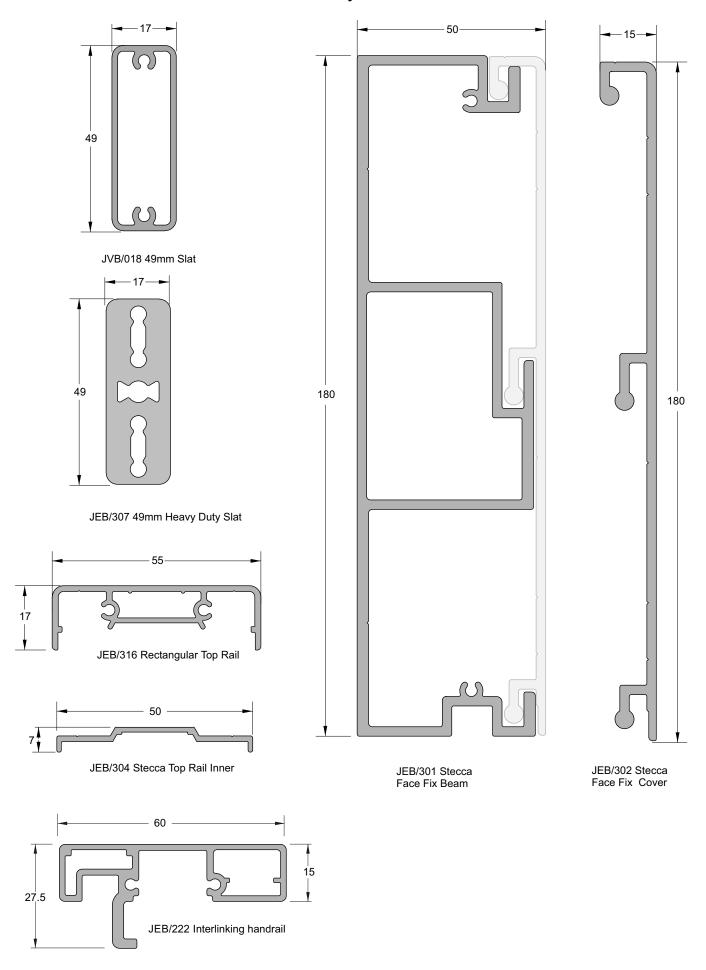


Stecca® Balustrade Stair Stringer Detail Stair structure to be designed by others to resist Balustrade actions as per NZS1170.1 Table 3.3 Applicable to Occupancy A only

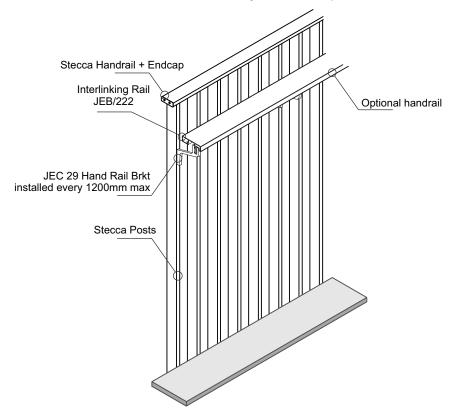
Balustrade Dimensions by Wind Zone.



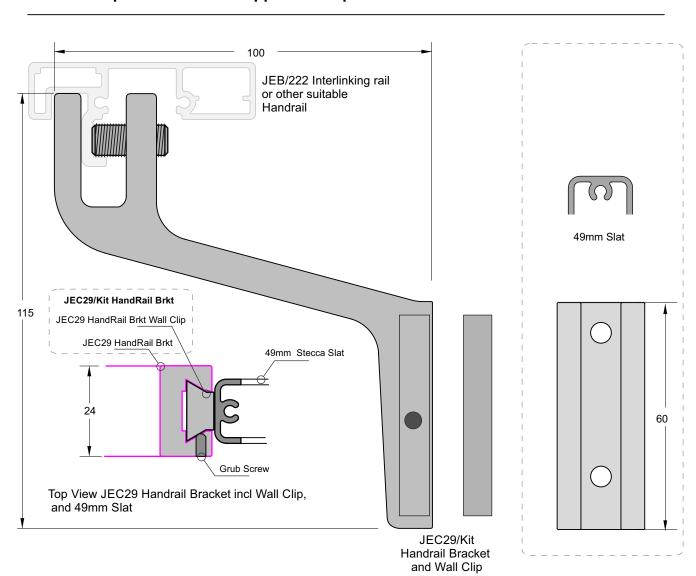
Juralco Stecca® Balustrade System - Extrusions



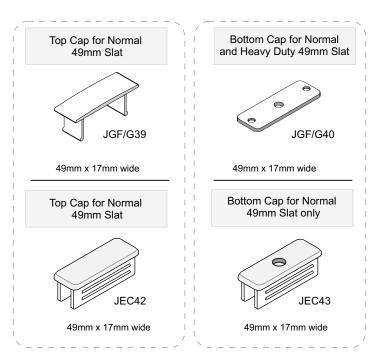
Juralco Stecca® Balustrade System - Components

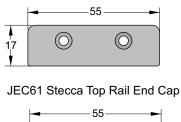


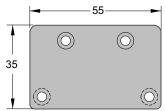
Optional Handrail. Applies to Top or Face Fix Stecca Balustrades



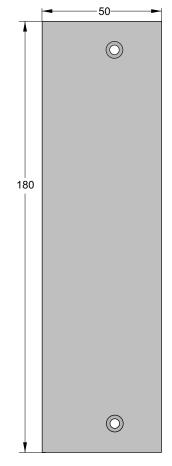
Juralco Stecca® Balustrade System - Components



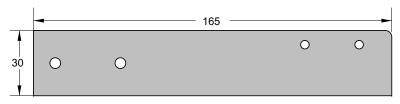




JEC68 Stecca Top Rail Wall mount End Plate



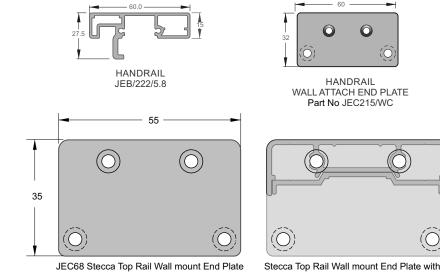
JEC62 Stecca Face Fix Beam and Cover End Cap

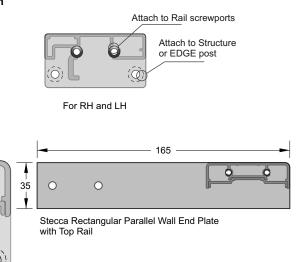


JEC69 Stecca Rectangular Parallel Wall End Plate

Juralco Stecca® Balustrade System - Components

End Caps all ex 3mm Aluminium





Top Rail and Hand Rail

General Notes: - All fixings to be Stainless Steel. - EPDM layer between Structure and End Cap - ULS Point load $N^* = 0.9kN$, inwards, outwards or down and in tension

Note: Fixing to Steel

- use 2 off 8g SS TEK Screws or M6 SS Bolts
- Steel 2mm min thickness
- Steel 300MPa minimum
- 15mm min distance to any Edges

Note: Fixing to Timber Wall

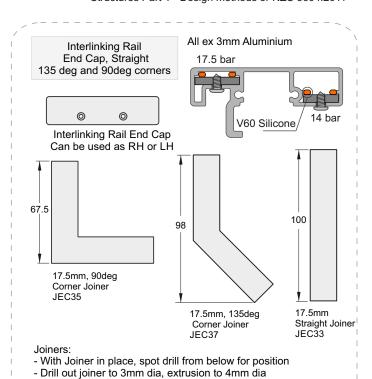
- use 2 off 8g SS Screws, 35mm min into studs.
- use Sika Supergrip 30min
- 30mm min distance to Horizontal Edge
- If Weatherboard use suitable predrilled Wedge
- Timber stud wall to be designed and detailed in accordance with NZS 1720.1:2022 Timber Structures Part 1 - Design methods or NZS 3604:2011

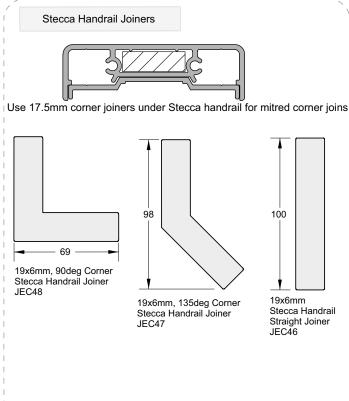
Note: Fixing to Juralco EDGE Post

- use 2 off 8g x 25 SS PK Screws

Note: Fixing to Concrete Wall

- use 2 off M6 x70 SS Screw Anchors
- Solid Concrete min 20MPa
- Block wall Concrete filled/Reinforced
- 140mm min Wall thickness
- 70mm min distance to Horizontal Edge
- 100mm min distance to Vertical Edge
- Blockwork wall must be corefilled /reinforced and is to be designed and detailed in accordance with NZS 4230:2004 or NZS 4229:2013





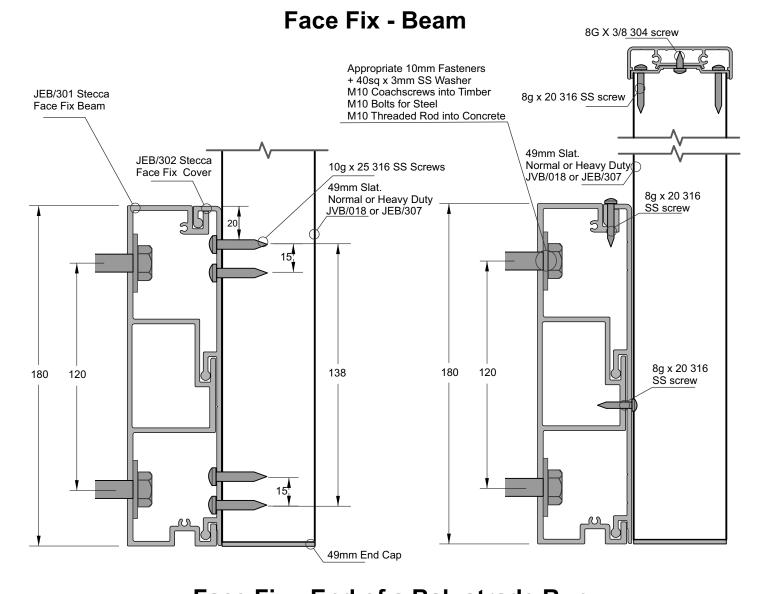
- Both ends to be attached.

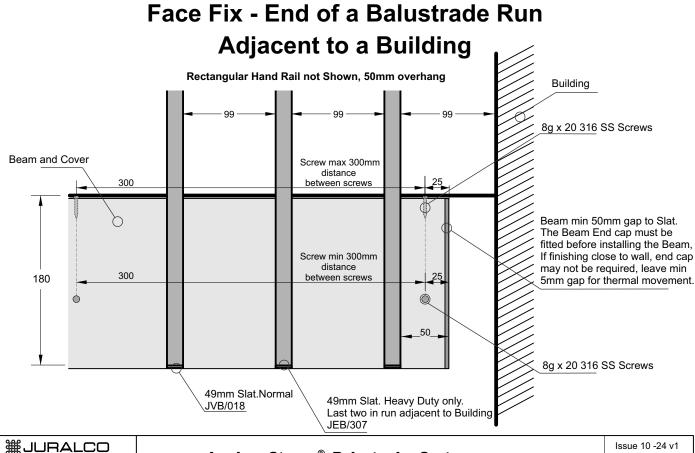
- Use No 6 x 1/4in SS ST Pan sq drive screw

- Joins must be within 300mm of Post

- Insert dobs of V60 Silicone inside cavities before inserting

- Minimum distance between screw and end of handrail is 10mm

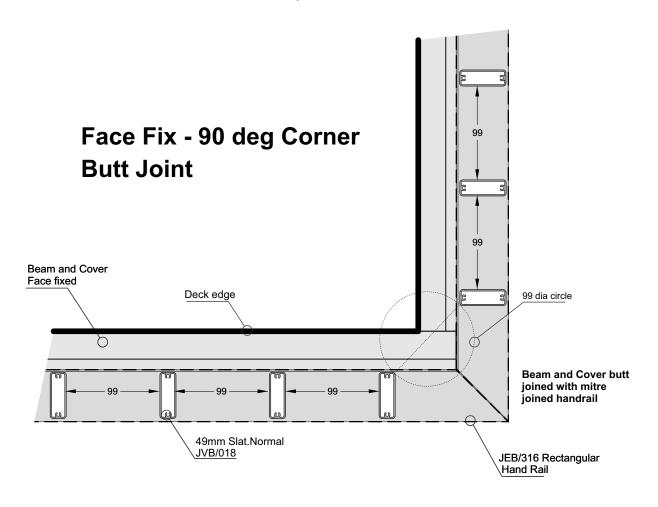


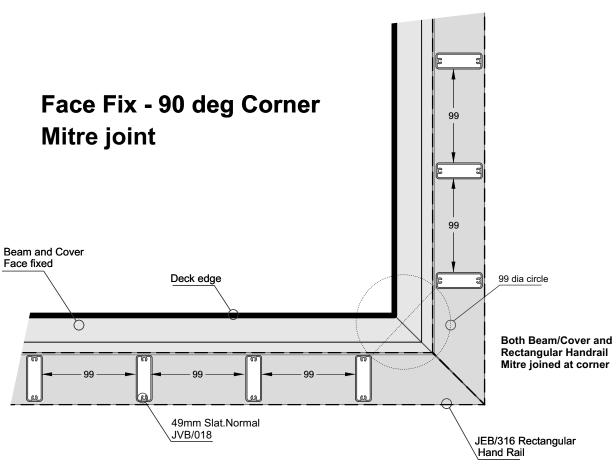


Juralco Stecca® Balustrade System

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Juralco Stecca® Balustrade System - Typical Fixings NZS3604:2011 Connection. Double Boundary Joists

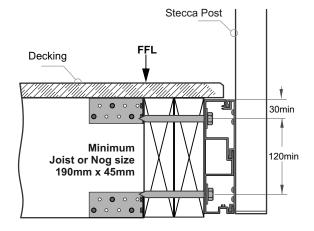
Typical FACE Fix to Timber - M10 SS Coachscrews

Balustrade Dimensions by Wind Zone.

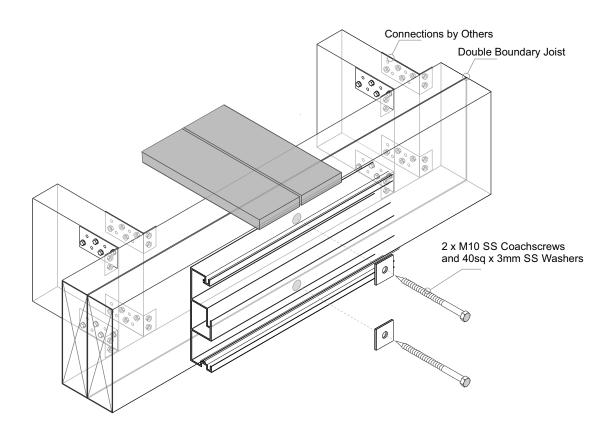
Up to and including Extra High Wind Zone			
Balustrade Height	Fixing centres	Overhang	
1350mm	500mm	150mm	

General Notes:

- 1 All measurements mm
- 2 Occupancy A, A other, B, C3, and E.
- 3 Balustrade Height measured above top of face fix channel
- 4 Wind Zones as per NZS 3604:2011



- 1 The Project Engineer must ensure the structure can support the appropriate loads
- 2 Substructure shown indicatively only. Timber SG8 minimum strength
- 3 Coachscrews 90mm min engagement into joists, predrill 6mm holes.
- 4 Bond all coachscrews with SIKA Supergrip30 to full depth
- 5 All Fixings must be Stainless steel



Juralco Stecca[®] Balustrade System - Typical Fixings NZS3604:2011 Connection. Double Boundary Joists

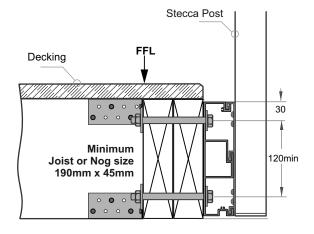
Typical FACE Fix to Timber - M10 SS Bolts or Threaded Rod

Balustrade Dimensions by Wind Zone.

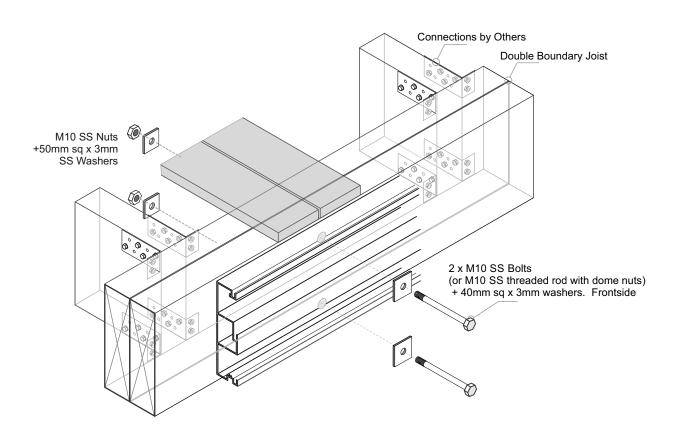
Up to and including Extra High Wind Zone			
Balustrade Height	Fixing centres	Overhang	
1350mm	500mm	150mm	

General Notes:

- 1 All measurements mm
- 2 Occupancy A, A other, B, C3, and E.
- 3 Balustrade Height measured above top of face fix channel
- 4 Wind Zones as per NZS 3604:2011



- 1 The Project Engineer must ensure the structure can support the appropriate loads
- 2 Substructure shown indicatively only. Timber SG8 minimum strength
- 3 All Fixings must be Stainless steel



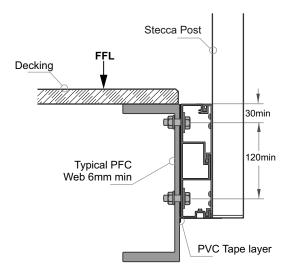
Typical FACE Fix to Steel - M10 SS Bolts

Balustrade Dimensions by Wind Zone.

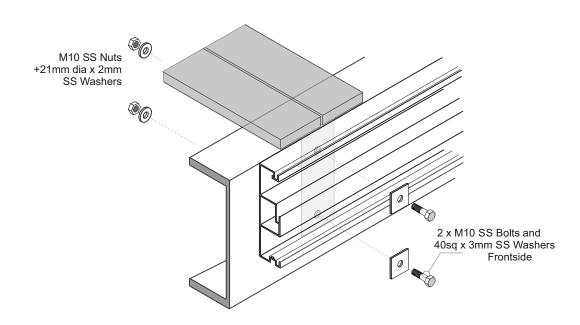
Up to and including Extra High Wind Zone		
Balustrade Height	Fixing centres	Overhang
1350mm	500mm	150mm

General Notes:

- 1 All measurements mm
- 2 Occupancy A, A other, B, C3, and E.
- 3 Balustrade Height measured above top of face fix channel
- 4 Wind Zones as per NZS 3604:2011



- 1 The Project Engineer must ensure the structure can support the appropriate loads
- 2 Substructure shown indicatively only
- 3 A PVC tape layer must be placed between the Extrusion and Steel
- 4 All fixings must be Stainless steel



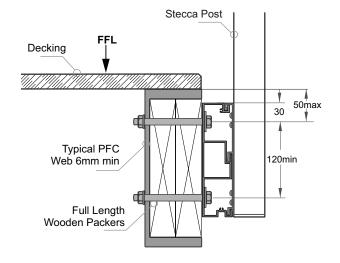
Typical FACE Fix to Steel + Wooden Packers - M10 SS Bolts

Balustrade Dimensions by Wind Zone.

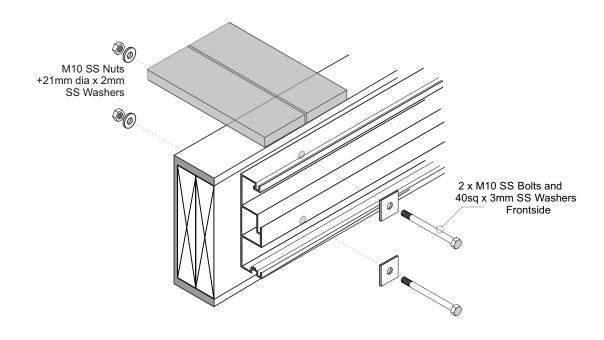
Up to and including Extra High Wind Zone			
Balustrade Height	Fixing centres	Overhang	
1350mm	500mm	150mm	

General Notes:

- 1 All measurements mm
- 2 Occupancy A, A other, B, C3, and E.
- 3 Balustrade Height measured above top of face fix channel
- 4 Wind Zones as per NZS 3604:2011



- 1 The Project Engineer must ensure the structure can support the appropriate loads
- 2 Substructure shown indicatively only. Timber SG8 minimum strength
- 3 All Fixings must be Stainless steel



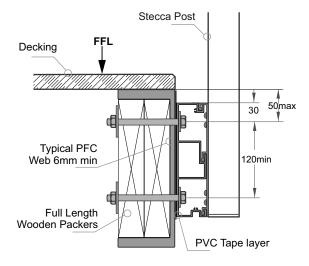
Typical FACE Fix to Steel + Wooden Packers - M10 SS Bolts

Balustrade Dimensions by Wind Zone.

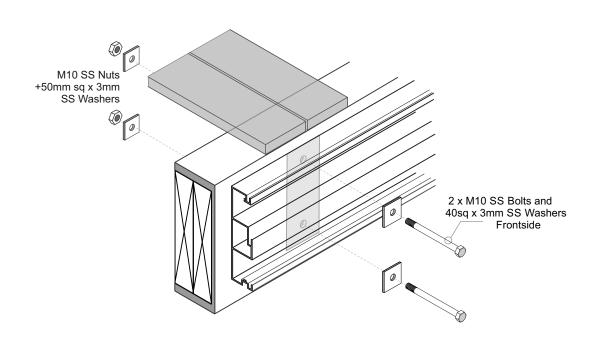
Up to and including Extra High Wind Zone			
Balustra	de Height	Fixing centres	Overhang
135	0mm	500mm	150mm

General Notes:

- 1 All measurements mm
- 2 Occupancy A, A other, B, C3, and E.
- 3 Balustrade Height measured above top of face fix channel
- 4 Wind Zones as per NZS 3604:2011



- 1 The Project Engineer must ensure the structure can support the appropriate loads
- 2 Substructure shown indicatively only. Timber SG8 minimum strength
- 3 A PVC Tape layer must be installed between the Extrusion and Steel
- 4 All Fixings must be Stainless steel



Typical FACE Fix to Concrete - M10 SS Studs

Balustrade Dimensions by Wind Zone.

Up to and including Extra High Wind Zone		
Balustrade Height	Fixing centres	Overhang
1350mm	500mm	150mm

General Notes:

- 1 All measurements mm
- 2 Occupancy A, A other, B, C3, and E.
- 3 Balustrade Height measured above top of face fix channel
- 4 Wind Zones as per NZS 3604:2011



Installation details Fischer FIS V 300T

Thread diameter M10

Drill hole diameter = 12 mm

Drill hole depth = 146 mm

Anchorage depth = 140 mm

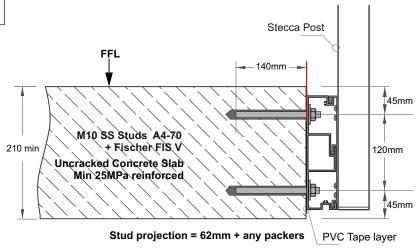
Drilling method
Drill hole cleaning

Hammer drilling 4 times blowing,

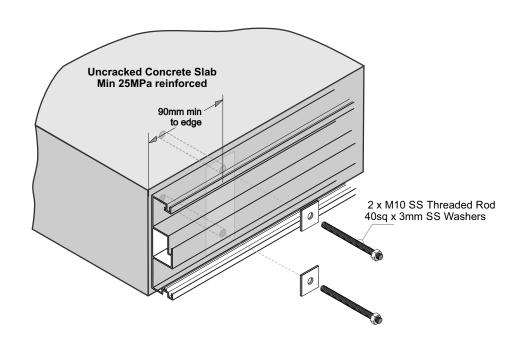
4 times brushing,

4 times blowing

No borehole cleaning required in case of using a hollow drill bit, e.g. fischer FHD.



- 1 The Project Engineer must ensure the structure can support the appropriate loads
- 2 Substructure shown indicatively only
- 3 Fixings must engage into the structural slab
- 4 A PVC Tape layer must be installed between the Extrusion and Concrete
- 5 Use Threadlok on Nuts
- 6 All fixings must be Stainless Steel



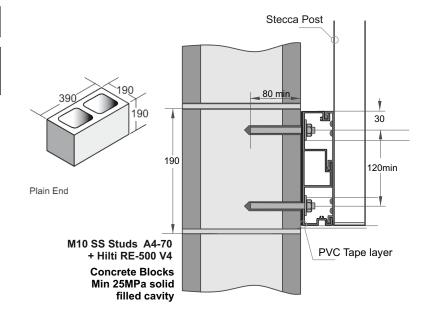
Typical FACE Fix to Concrete Block Wall - M10 SS Studs

Balustrade Dimensions by Wind Zone.

Up to and including Extra High Wind Zone			
Balustrade Height	Fixing centres	Overhang	
1350mm	400mm	150mm	

General Notes:

- 1 All measurements mm
- 2 Occupancy A, A other, B, C3, and E.
- 3 Balustrade Height measured above top of face fix channel
- 4 Wind Zones as per NZS 3604:2011





Installation details Hilti RE-500 V4

Thread diameter M10
Drill hole diameter = 12 mm
Drill hole depth = 90mm
Anchorage depth = 80mm

Drilling method
Drill hole cleaning

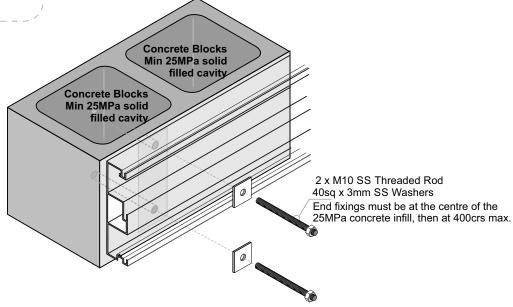
Hammer drilling 4 times blowing,

4 times brushing,

4 times blowing

No borehole cleaning required in case of using a hollow drill bit.

- 1 The Project Engineer must ensure the structure can support the appropriate loads
- 2 Substructure shown indicatively only
- 3 Fixings must engage into the Block wall
- 4 A PVC Tape layer must be installed between the Extrusion and Concrete Block
- 5 Use Threadlok on Nuts
- 6 All fixings must be Stainless Steel
- 7 Fixings must align with the centre of the blockwall



Typical Face Fix to Concrete Parapet Low Nib Wall - M10 SS Studs

Maximum Balustrade Heights. Up to and including Extra High Wind Zone.

Up to and including Extra High Wind Zone		
Balustrade Height	Fixing centres	Overhang
1350mm	350mm	150mm

General Notes:

- 1 All measurements mm
- 2 Occupancy A, A other, B, C3, and E.
- 3 Balustrade Height measured above top of face fix channel
- 4 Wind Zones as per NZS 3604:2011



Installation details Fischer FIS V 300T

Thread diameter
Drill hole diameter
Drill hole depth
Anchorage depth

M10
= 12 mm
= 90 mm
= 90 mm

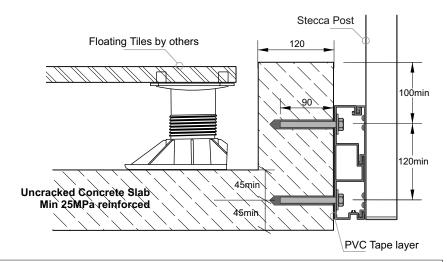
Drilling method
Drill hole cleaning

Hammer drilling

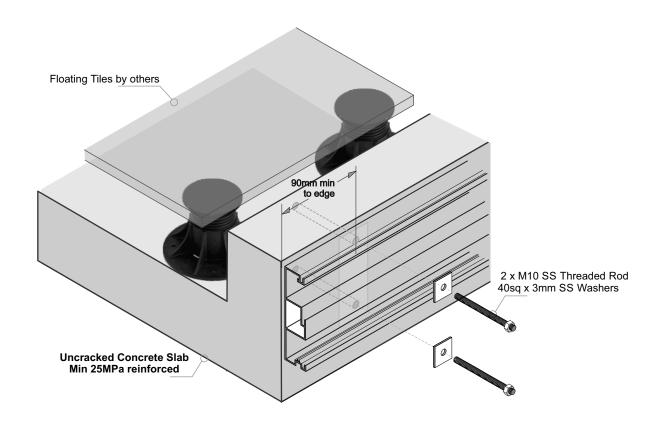
4 times blowing, 4 times brushing,

4 times blowing

No borehole cleaning required in case of using a hollow drill bit, e.g. fischer FHD.



- 1 The Project Engineer must ensure the structure can support the appropriate loads
- 2 Substructure shown indicatively only
- 3 Fixings must engage into the structural slab
- 4 A suitable Packer + PVC Tape layer must be installed between the Channel and Concrete
- 5 Use Threadlok on Nuts
- 6 All fixings must be Stainless Steel



Typical Face Fix to Concrete Parapet High Nib Wall - M10 SS Studs

Maximum Balustrade Heights. Up to and including Extra High Wind Zone.

Up to and including Extra High Wind Zone		
Balustrade Height	Fixing centres	Overhang
1350mm	350mm	150mm

General Notes:

- 1 All measurements mm
- 2 Occupancy A, A other, B, C3, and E.
- 3 Balustrade Height measured above top of face fix channel
- 4 Wind Zones as per NZS 3604:2011



Installation details Fischer FIS V 300T

Thread diameter M10
Drill hole diameter = 12 mm
Drill hole depth = 90 mm
Anchorage depth = 90 mm

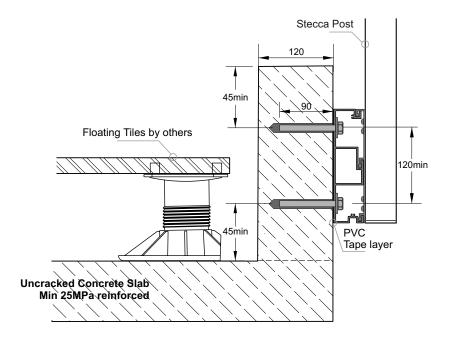
Drilling method
Drill hole cleaning

Hammer drilling

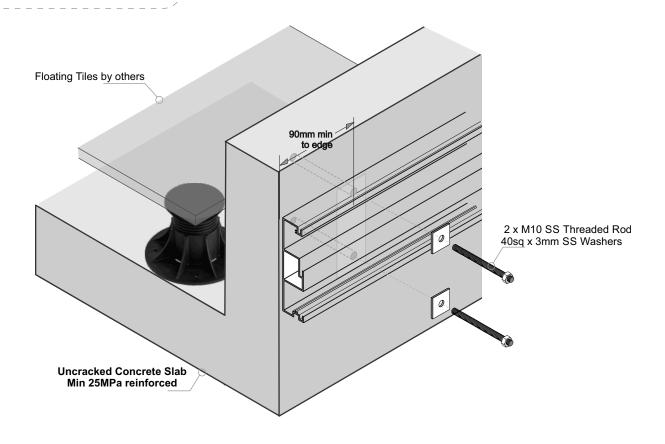
4 times blowing, 4 times brushing,

4 times blowing

No borehole cleaning required in case of using a hollow drill bit, e.g. fischer FHD.



- 1 The Project Engineer must ensure the structure can support the appropriate loads
- 2 Substructure shown indicatively only
- 3 Fixings must engage into the structural slab
- 4 A suitable Packer + PVC Tape layer must be installed between the Channel and Concrete
- 5 Use Threadlok on Nuts
- 6 All fixings must be Stainless Steel



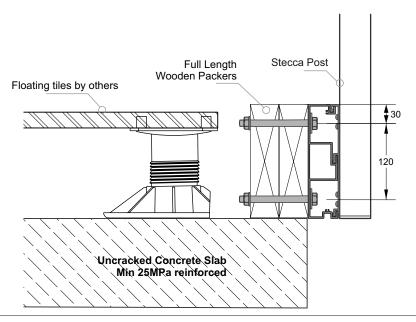
Typical FACE Fix to Wooden Parapet - M10 SS Bolts

Maximum Balustrade Heights. Up to and including Extra High Wind Zone.

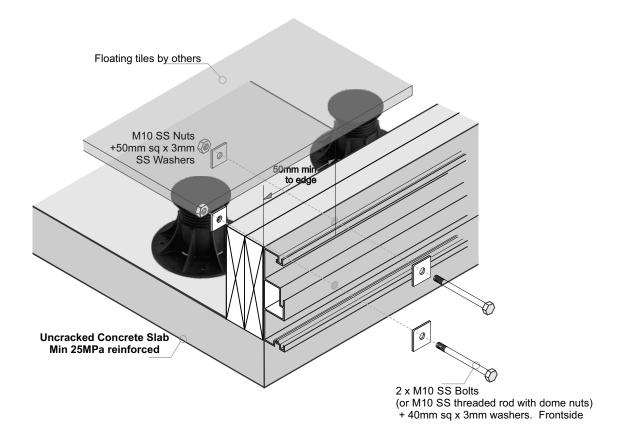
Up to and including Extra High Wind Zone			
Balustrade Height	Fixing centres	Overhang	
1350mm	500mm	150mm	

General Notes:

- 1 All measurements mm
- 2 Occupancy A, A other, B, C3, and E.
- 3 Balustrade Height measured above top of face fix channel
- 4 Wind Zones as per NZS 3604:2011



- 1 The Project Engineer must ensure the structure can support the appropriate loads
- 2 Substructure shown indicatively only
- 3 Fixings must engage into the structural slab
- 4 A suitable Packer + PVC Tape layer must be installed between the Channel and Concrete
- 5 Use Threadlok on Nuts
- 6 All fixings must be Stainless Steel
- 7 Wooden parapet & Its connection to concrete by others



Juralco Stecca[®] Balustrade System Powder Care and Maintenance

Powder Coating Installation Care

Warning re use of solvents:

- In some cases strong solvents are recommended for thinning various types of paints and also for cleaning up mastics and sealants.
- These can be harmful to the extended life of the powder coated surface, and must not be used for cleaning purposes.
- It is important to note that the damage will not be visible immediately and may take up to 12 months to develop.

If paint splashes or sealants and mastics need to be removed then the following may be safely used: Methylated Spirits, Ethyl Alcohol, Isopropanol or preferably a mild detergent in warm water.

Joinery Protection during Installation:

All the activity on a construction site means that your powder coated items may get knocked or scratched, splattered with mortar, plaster, textured coating or paint during the later stages of construction.

Please ensure that all powder coated articles are <u>masked or covered</u> at this time. It is far easier to prevent accidents than to try and correct them. Should your joinery receive mortar or paint splashes see that these are removed before cure and follow the instructions contained in this brochure.

Typical sticker used to warn other trades of the need to protect and mask off powder coated joinery (applies to anodised joinery also)

"IMPORTANT ALL TRADES"

This valuable aluminium joinery will suffer permanent damage from: plaster, mortar and paint splashes - Protect if splashes occur - Immediately wash down joinery with water or meths - Do not allow splashes to harden! ~ Do not use solvents! - Do not remove this label until final clean completed.

This photograph display damage that has occurred on site, post installation. The photo of the masked joinery displays clear signs of damage that could have occurred were it not masked. Please ensure that your joinery is protected right through the entire construction process.



Powder Coating Maintenance

External - Maintenance Program:

To extend the life of external powder coated articles and to comply with warranty requirements for powder coated aluminium joinery, a <u>simple, regular</u> maintenance program must be implemented.

The effects of ultra violet light, atmospheric pollution, dirt, grime and airborne salt deposits will all accumulate over time and must be removed or surface staining and weathering will occur, leading to an unsightly appearance.

For external coatings, cleaning should take place every six months. In areas where pollutants are more prevalent, such as beachfront houses and industrial or geothermal areas, then a cleaning program should be carried out on a more frequent basis ie. every one to three months.

Fences or Balustrades in close proximity to swimming pools <u>must</u> be washed down every six months, to clean off chlorine and salt deposits.

Cleaning your powder coating:

- 1. Carefully remove any loose surface deposits with a wet sponge.
- 2. Use a soft brush (non abrasive) and a mild household detergent (do not use solvents) in warm water, remove dust, salt and other deposits.
- 3. Rinse off with clean fresh water.

Restoring weathered or scratched surfaces:

Repair of Scuffed or Scratched surfaces

Dulux Spray Cans are available in all colour card colours.

Repair of Small Scratches or Chips.

Dulux Dabsticks are ideally suited for the repair of small scratches. Dabsticks may not be available in all colour card colours.

Repair of Weathered areas .

Dulux Gloss Up is a light to medium cutting cream ideally suited for gloss restoration and has been specifically designed for this purpose. Gloss Up contains no waxes or silicone and is a one step system.

Contact Dulux Powder Coatings, ph 0064 9 441 8244



