



 JURALCO

JURALCO EDGE®
BALUSTRADE SYSTEMS

ISSUE 10-24 v1

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, shutters and awnings, shower screens, wardrobe doors and organisers and internal doors. The Juralco EDGE® Balustrading Systems is an architectural balustrade system designed to provide a wide range of design options in both contemporary glass and in more conventional aluminium metal balusters.

The Juralco EDGE® Balustrade system is an architectural balustrade system designed to provide a range of modern design options in both glass and aluminium. Mounting to a deck can be done a variety of ways to timber, concrete, steel, and to waterproof membranes. Toughened Glass infills can be 6mm or 10mm, either fully framed (6mm) or semi frameless (10mm) with handrails either top or side mounted. Toughened 13.2mm Laminated glass can be used for semi frameless applications. For a more traditional look Vertical metal infills are available in 17mm sq and 49mm, 60mm and 123mm slats, all in powder coated colour of your choice. All designs are available with a variety of handrails. Tables are shown for various baluster spacings, heights and wind zones. All mountings and installation recommendations conform to the latest AS/NZS1170 and NZS 4223.3.2016 regulations. Our installers are all very experienced and can recommend a balustrading system to fit your design requirements and budget.



Top left illustration - Top Mount EDGE® Balustrade with Metal Balusters
 Bottom left illustration - Top Mount EDGE® Balustrade with Metal Balusters
 Illustration above - Face Fixed EDGE Balustrade with Laminated glass, to Concrete
 Cover illustration - Face Fixed EDGE® Semi Frameless Balustrades

**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)**

**EDGE® Balustrade is for Domestic and Residential Occupancy types A, A Other and C3 only
Occupancy Types as per AS/NZ 1170.1.2002. Not suitable for Commercial C3 applications**

Code	Type of Occupancy for part of the building or structure	Specific Uses	Glass
A	Domestic and Residential activities	All areas within or serving exclusively one dwelling including stairs, landings etc, but excluding external balconies and edges of roofs.	6mm,10mm Toughened Glass and 13.2mm Toughened Laminated Glass
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 Glass 6mm, 10mm Toughened Safety Glass and 13.2mm Toughened Laminated Glass must have a minimum strength of 100MPa. All edges polished.

Note 2 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.

Note 3 All Semi Frameless glass Balustrades must have an Top or Side mounted Handrail to conform to NZS 4223.3.2016, except for 13.2mm Toughened Laminated Glass applications as per this manual. Handrails not necessary for Swimming Pools.

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- 1.Scope-** This specification details the documents the Juralco EDGE® 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 EDGE® 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 and C3, 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.
 - All glass used in the Juralco EDGE® Balustrade System must conform to AS/NZS 2208.
 - Complies with NZS 4223.3.2016
- 3. Manufacturer's Documents**
 - The Juralco EDGE® 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 EDGE® System
 - Aluminium extrusions, components and hardware – unless specified are manufactured to 6060 T5 specifications
 - Stainless Steel components, hardware, fixings – all components to 316 grade
 - Glass - all glass used in the Juralco EDGE® Balustrade System must conform to the specifications as listed in the Juralco EDGE® manual with each panel conforming to AS/NZS 2208 as confirmed by the Safety Stamp detailing the manufacturer's description and licence number.
- 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
 - Unless specified otherwise, Dulux Duralloy® powder coating systems are used for properties greater than 100 metres from high tide level where AAMA 2603 performance is required
 - Dulux Duratec® powder coating systems must be used for all properties greater than 10 metres and up to 100 metres from high tide level where AAMA 2604 performance is required
 - Dulux Duralloy® has a 10 year film and colour integrity warranty, Dulux Duratec® has a 20 year film and colour integrity warranty
- 6. Installation and Fixing**
 - The Juralco EDGE® Balustrade System must only be installed in accordance with the Juralco EDGE® Balustrade System manual
 - Any deviation from that specified in the Juralco EDGE® manual must only be in accordance with the site specific PS1 with site specific calculations and drawings listing the non standard details
 - The Juralco EDGE® 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.

Important information - Anodised Coatings.

Anodised Systems. The standard Anodised thickness used by Juralco is 12 micron and is suitable for single story sites greater than 100 metres from high tide.. For any multi storey buildings use 20 micron coatings. Use 25 micron for installations less than 100 metres from high tide level and for prestigious residential and commercial developments. Standard Juralco colours are Natural and Bronze. Note - Anodising prices listed in Juralco price books are for the standard 12 micron systems. For thicker coatings, and other colours prices on application. Also, for coloured coatings there will be colour variations from batch to batch.

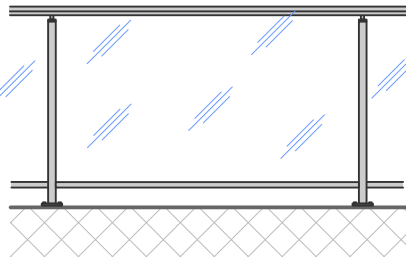
Attachment to structures An PVC layer or similar material spacer must be used to separate Anodised aluminium items from all concrete and steel structures. Failure to do so may lead to the chemicals in the structure affecting the aluminium base

Care Aluminium oxide is amphoteric in nature. Therefore, any cleaning products used on anodised surfaces must be ph neutral so that they do not react chemically with the coating. Cleaning products should be thoroughly rinsed from surfaces as soon as possible. Stubborn contamination can usually be removed using a non-scratch cleaning pad and water or a gentle solvent.

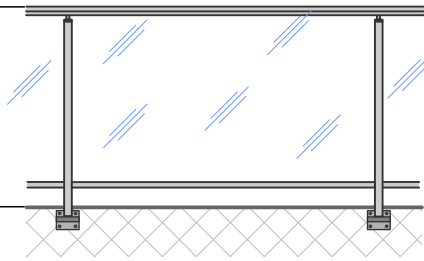
For 6mm Toughened Glass

6mm Glass - Fully Framed. Handrail + Bottom Rail.

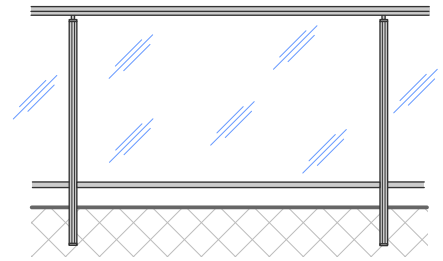
Balustrade Height, 1000mm min, above FFL



Top Mount



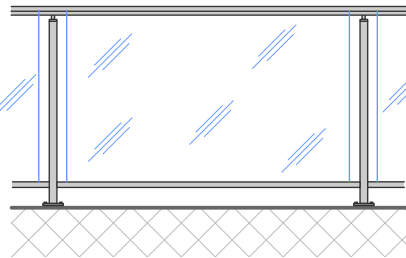
Gutter Brkt Face Fix



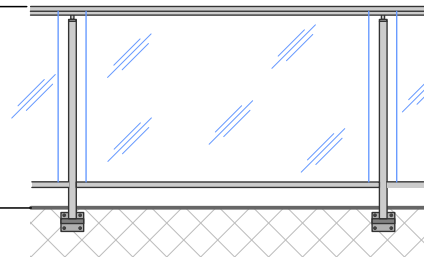
Face Fix

6mm Glass - Full Height. Handrail + Bottom Rail.

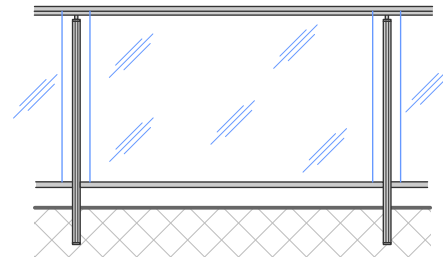
Balustrade Height, 1000mm min, above FFL



Top Mount



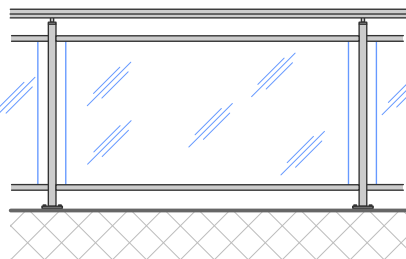
Gutter Brkt Face Fix



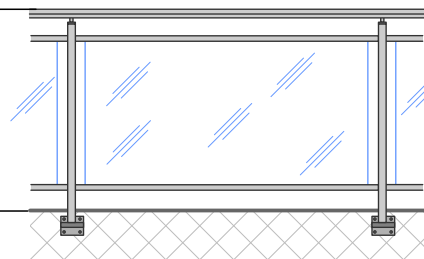
Face Fix

6mm Glass - Full Height. Handrail + Split Rails.

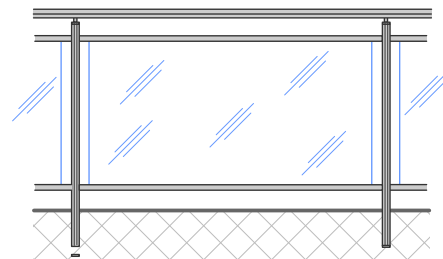
Balustrade Height, 1000mm min, above FFL



Top Mount



Gutter Brkt Face Fix

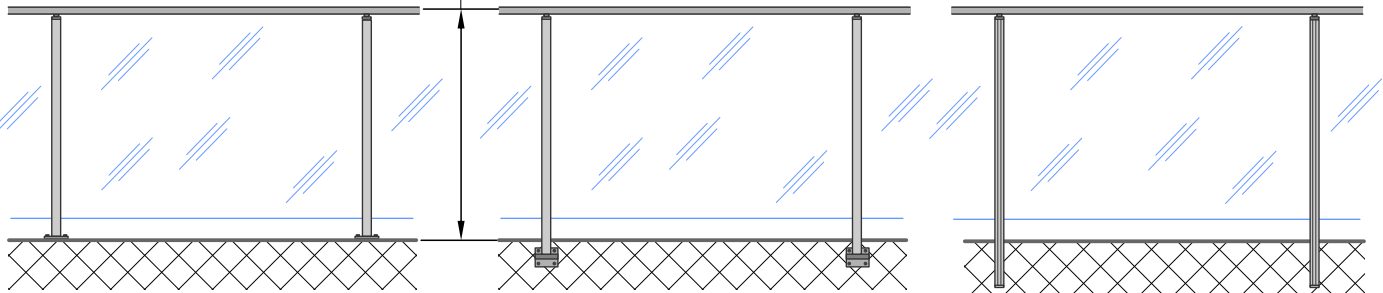


Face Fix

For 10mm Toughened Glass

10mm Toughened Glass - Semi Frameless - Handrail

Balustrade Height, 1000mm min, above FFL



Top Mount

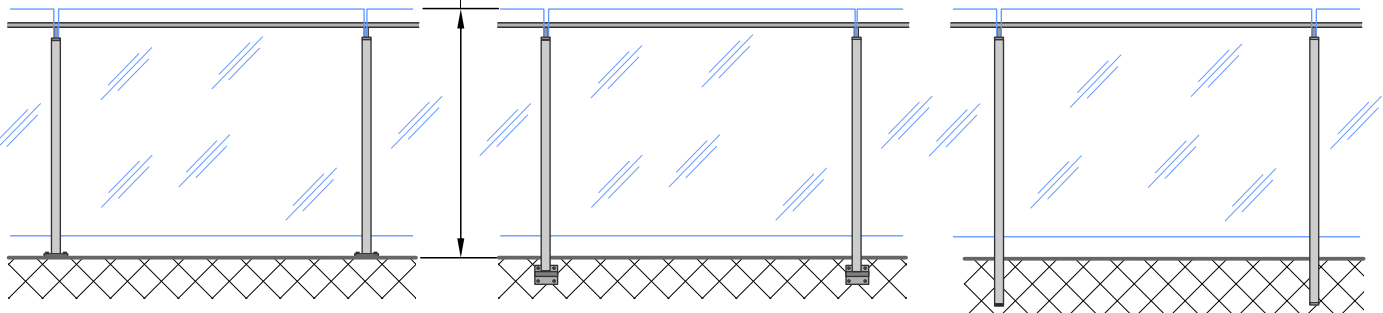
A Corner Post is available for Top Mount only

Gutter Brkt Face Fix

Face Fix

10mm Toughened Glass - Semi Frameless - JEB 222 Interlinking Rail + JEC 29 Brackets, Deck side. Glass 110mm Above Posts.

Balustrade Height, 1000mm min, above FFL



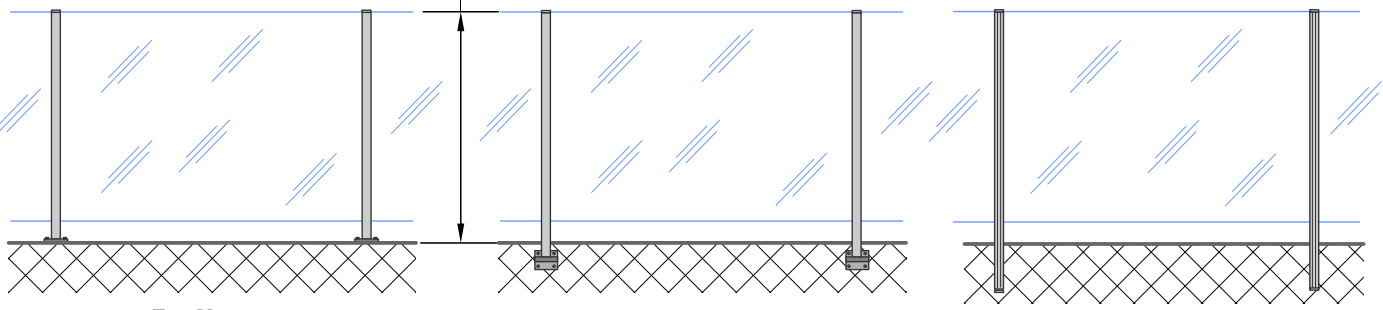
Top Mount

Gutter Brkt Face Fix

Face Fix

10mm Toughened Glass - Semi Frameless - No Handrail. SWIMMING POOLS ONLY. 1200mm Min Height

Pool Fence Height. Not for use where protecting a fall of 1m or more



Top Mount

Gutter Brkt Face Fix

Face Fix

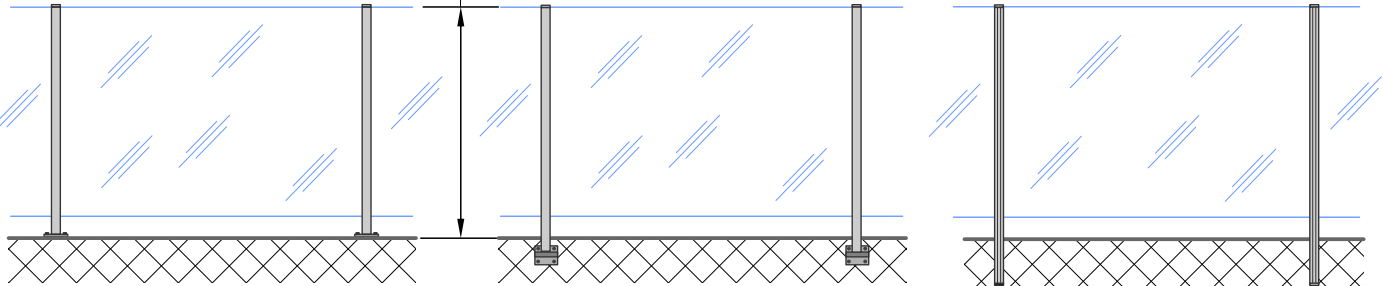
Note: A Building Consent is required when installing or replacing a Swimming Pool Fence. Refer to NZBC Clause F9

For 13.2mm Toughened Laminated Glass

13.2mm Toughened Laminated Glass - Semi Frameless

Balustrade Height, 1000mm min, above FFL

Top Protection cap JET 212 recommended



Top Mount

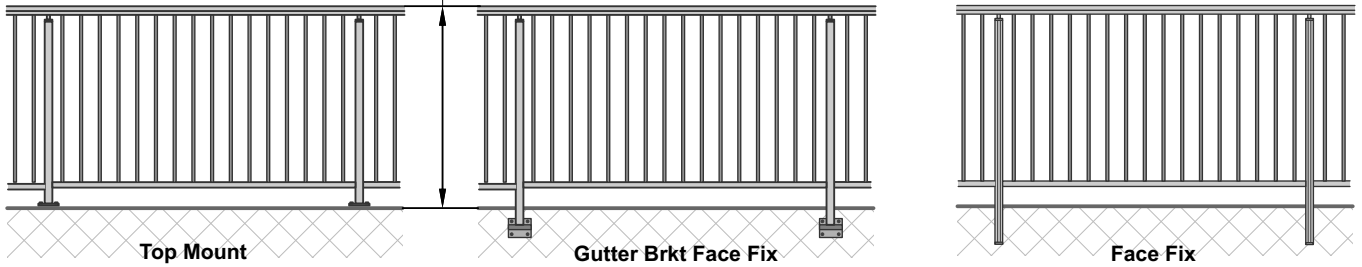
Gutter Brkt Face Fix

Face Fix

For 17mm Baluster

17mm Baluster - Full Height. Handrail + Bottom Rail.

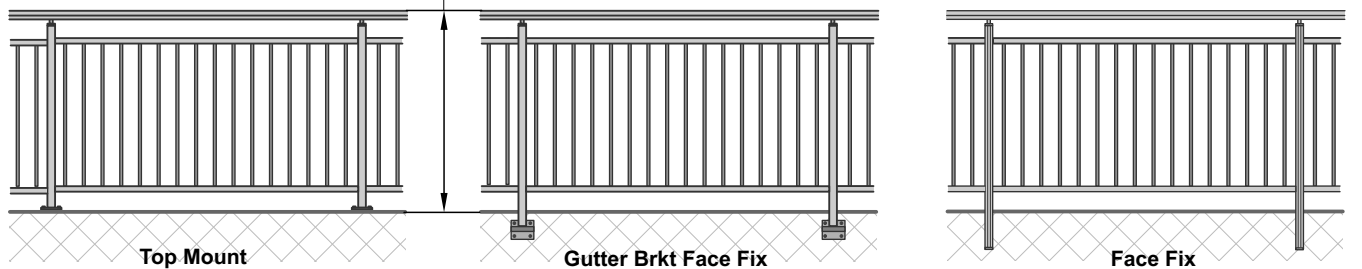
Balustrade Height, 1000mm min, 1275mm max above FFL.



All 17mm Baluster - suitable for Extra High Wind Zones

17mm Baluster - Split Rail. Handrail + Top and Bottom Rail.

Balustrade Height, 1000mm min, 1275mm max above FFL.

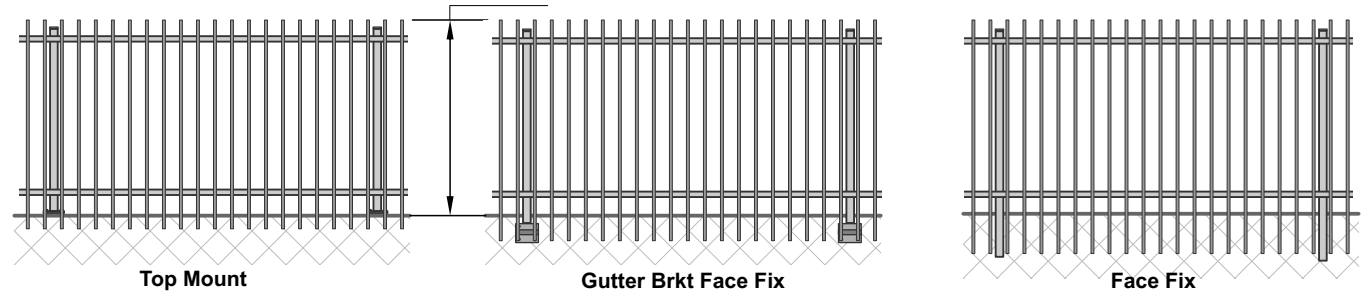


All 17mm Baluster - suitable for Extra High Wind Zones

For 49mm Slat - Vertical. Stecca System

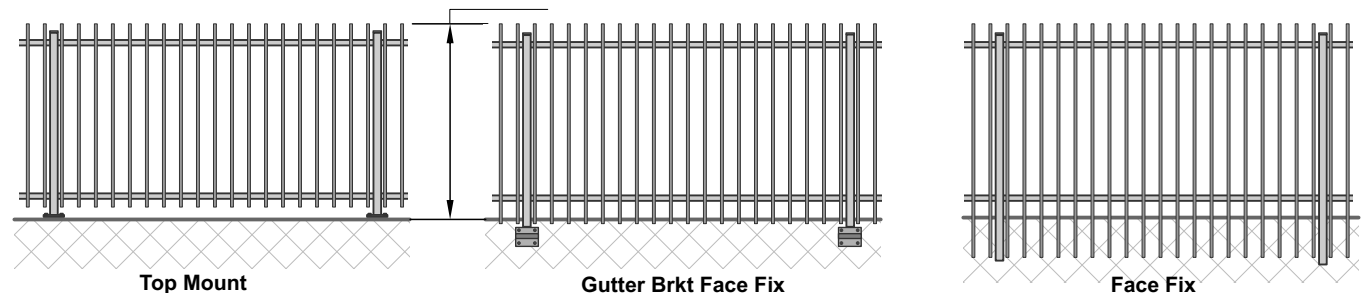
49mm Slat - Full Height. Top + Bottom Rails (Front mounted).

Balustrade Height, 1000mm min, above FFL



49mm Slat - Full Height. Top + Bottom Rails (Between Posts mounted).

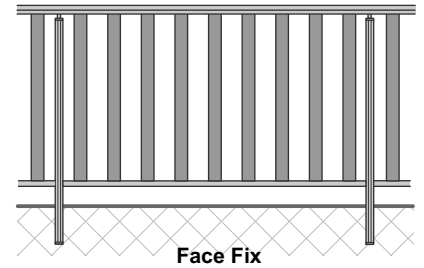
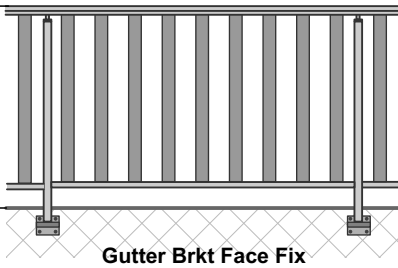
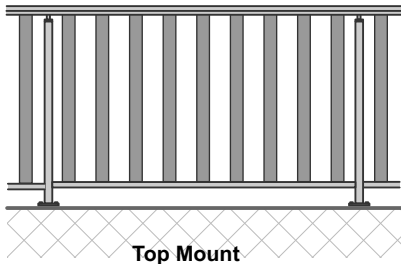
Balustrade Height, 1000mm min, above FFL



For 60mm Slat - Vertical

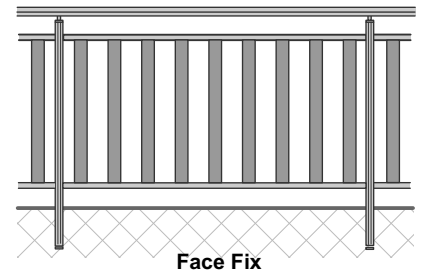
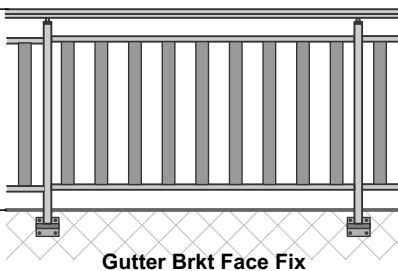
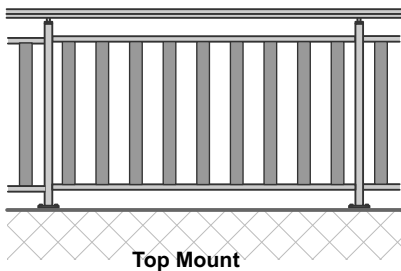
60mm Slat - Full Height. Handrail + Bottom Rail.

Balustrade Height, 1000mm min, above FFL



60mm Slat - Split Rail. Handrail + Top and Bottom Rail.

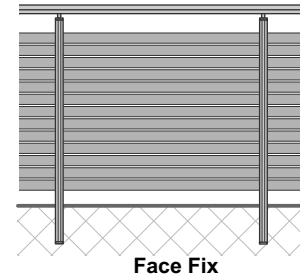
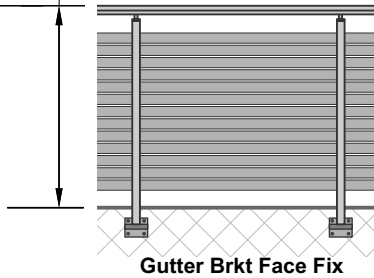
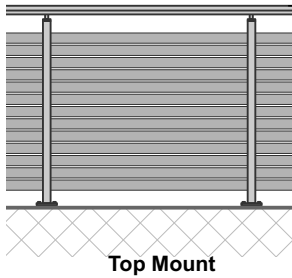
Balustrade Height, 1000mm min, above FFL



For 60mm Slat - Horizontal

60mm Slat - Horizontal + Handrail. 15mm Gaps max between Slats.

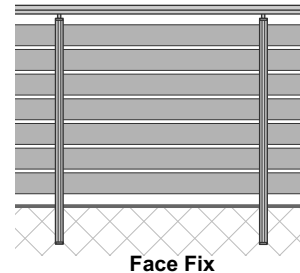
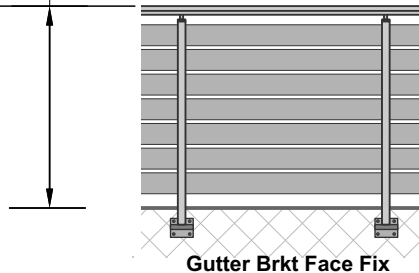
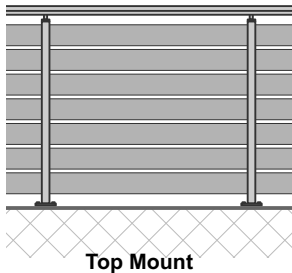
Balustrade Height. 1000mm min height above FFL



For 123mm Slat - Horizontal

123mm Slat - Horizontal + Handrail. 15mm Gaps max between Slats.

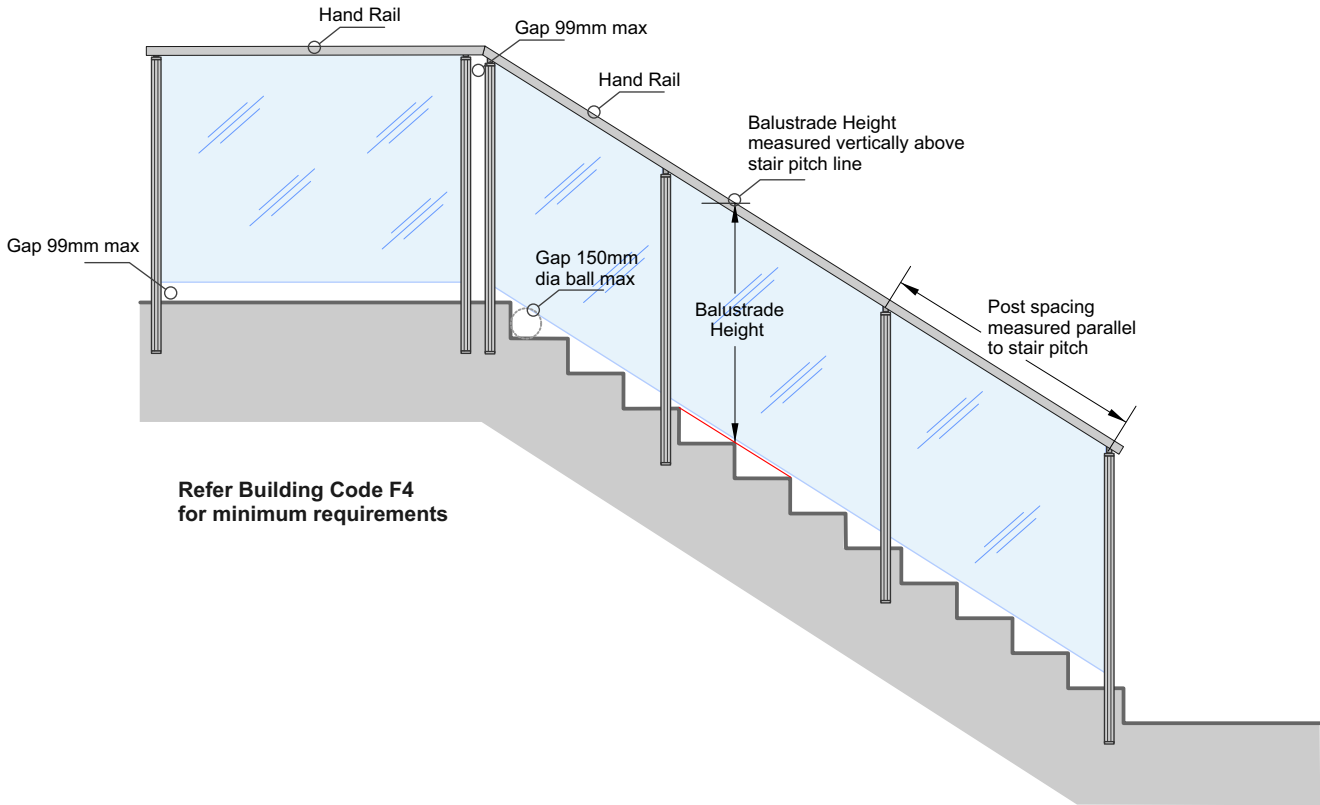
Balustrade Height. 1000mm min height above FFL



Juralco EDGE® Balustrade System Stair Setouts, Construction

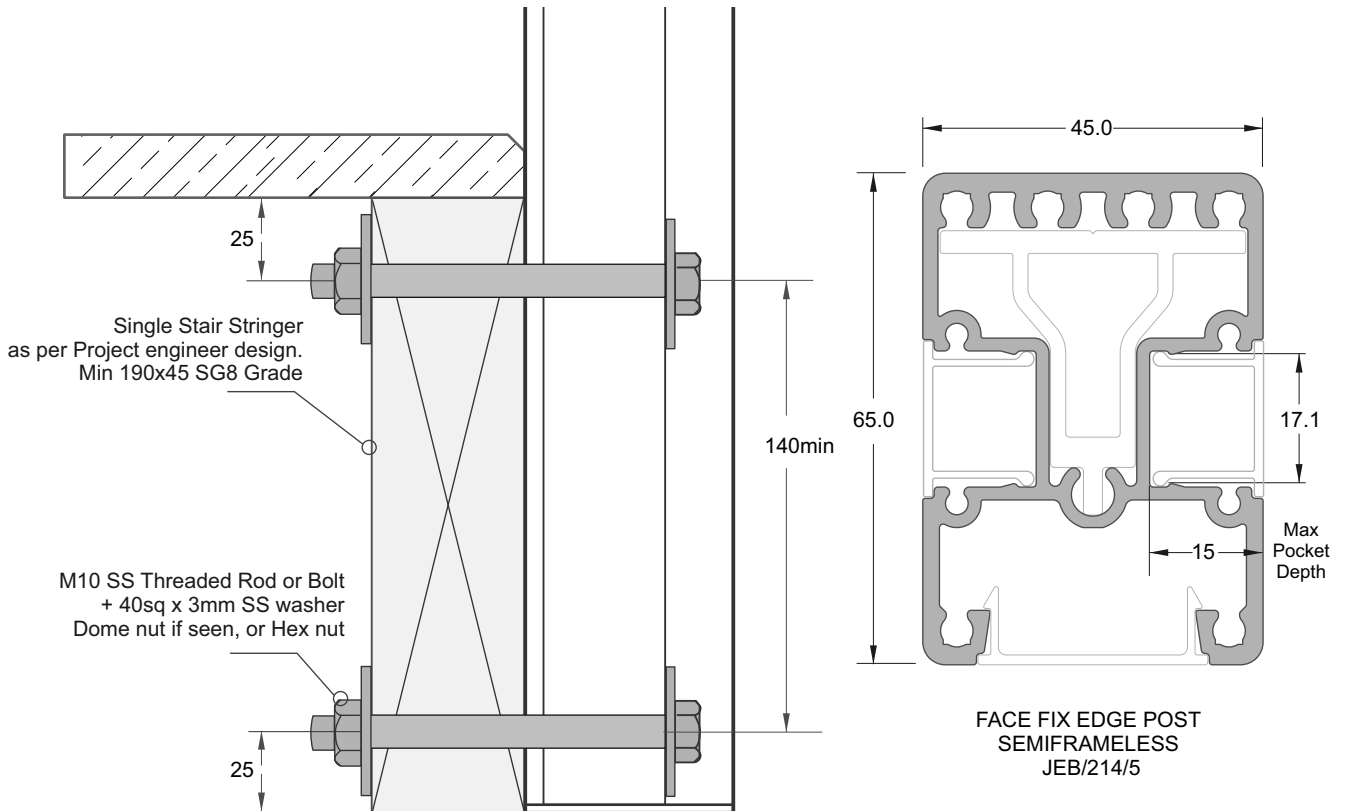
EDGE Balustrade Face Fix shown

Typical Stair installation
Screw fixings into Single or Double Joists/Stiffeners, Concrete or Steel

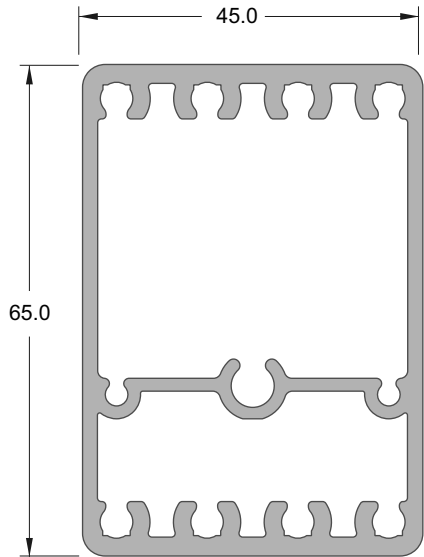


EDGE Balustrade Stair Stringer Detail

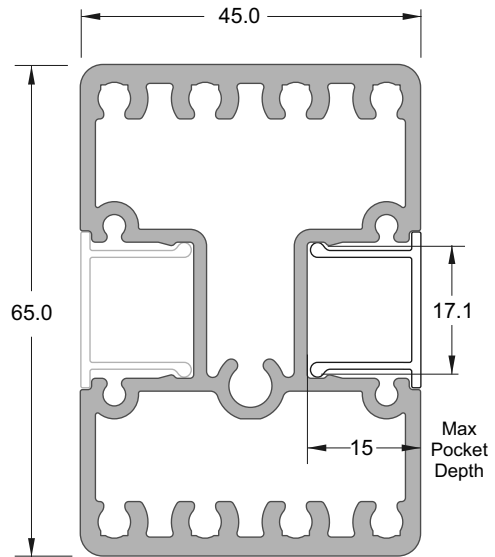
Stair structure to be designed by others to resist Balustrade actions as per NZS1170.1 Table 3.3
Applicable to Internal Residential applications only



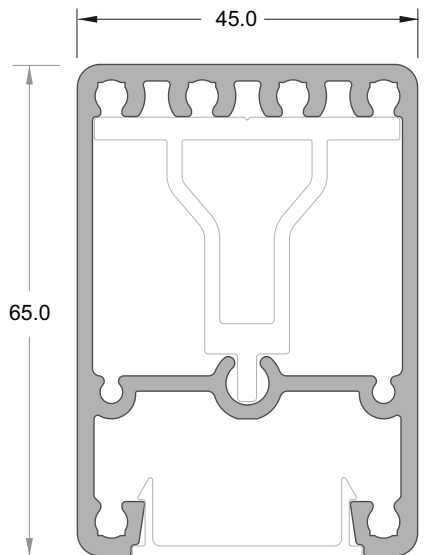
FACE FIX EDGE POST SEMIFRAMELESS JEB/214/5



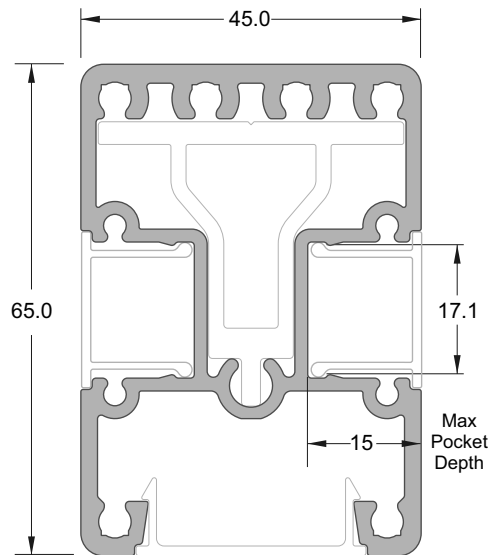
TOP FIX EDGE POST
JEB/207/5



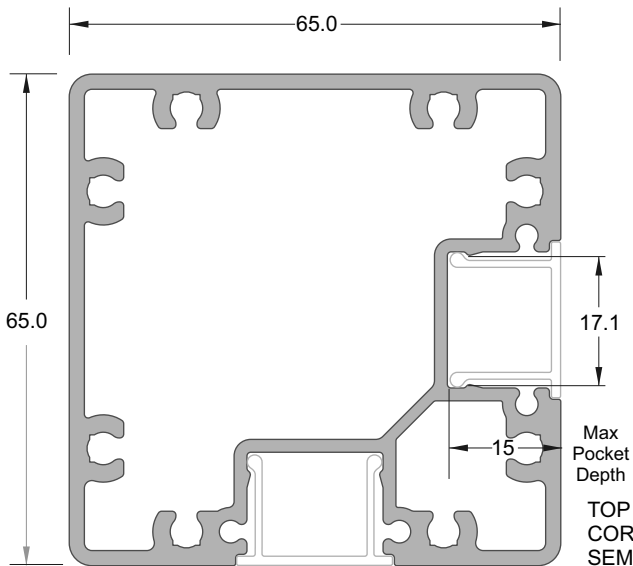
TOP FIX EDGE POST
SEMIFRAMELESS
JEB/212/5



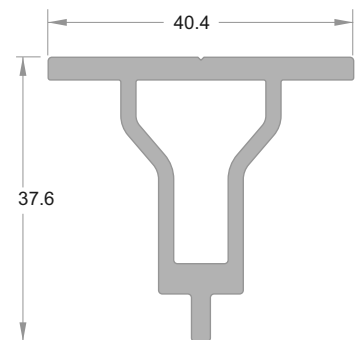
FACE FIX EDGE POST
JEB/208/5



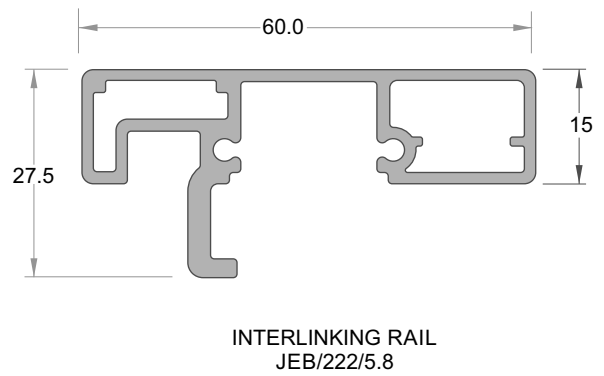
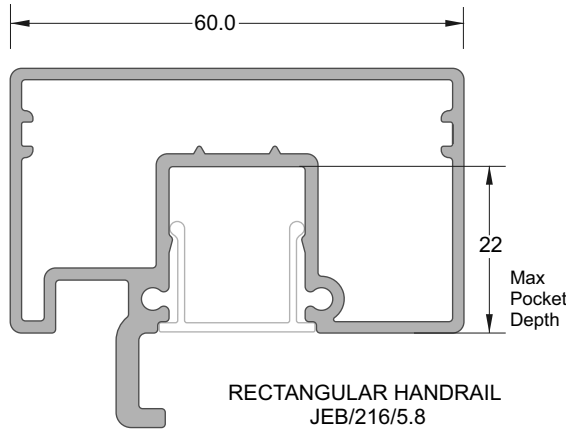
FACE FIX EDGE POST
SEMIFRAMELESS
JEB/214/5



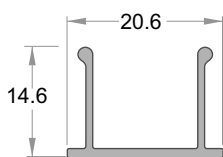
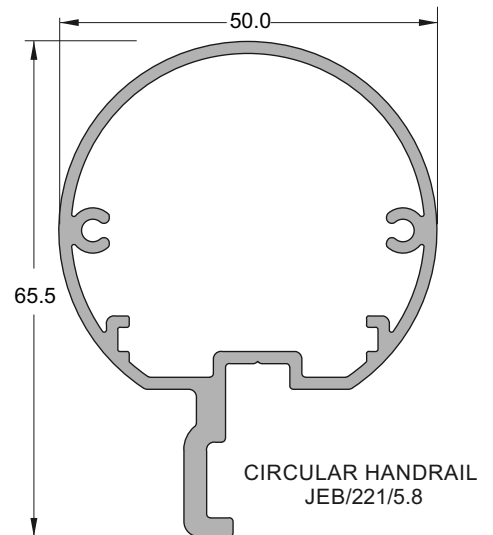
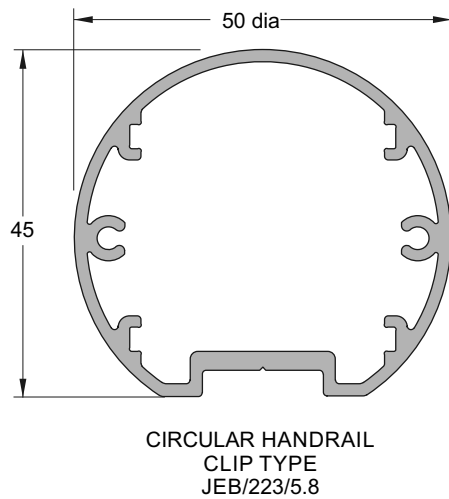
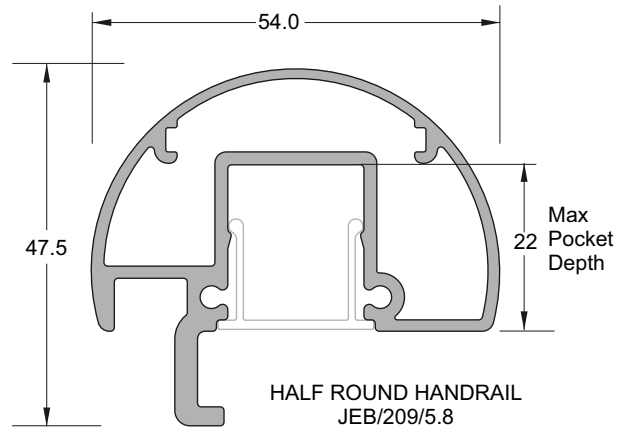
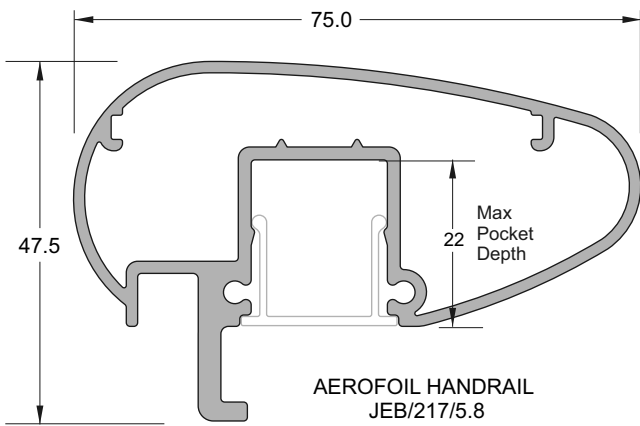
TOP FIX EDGE
CORNER POST
SEMIFRAMELESS
JEB/213/5



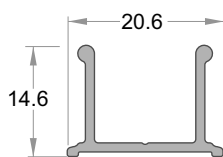
FACE FIX EDGE POST
STIFFENER
JEB/205/5



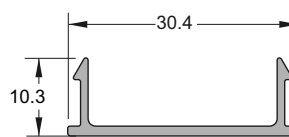
Note - Infill clips are not used with the JEB 222



STANDARD INFILL CLIP
JEB/206/5.8



REBATED INFILL CLIP
JEB/218/5.8

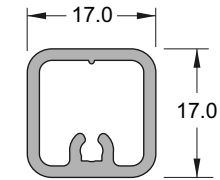


POST FACE FIX INFILL CLIP
JEB/203/5

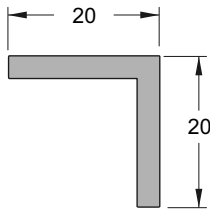
For Posts and Handrails

For Posts only

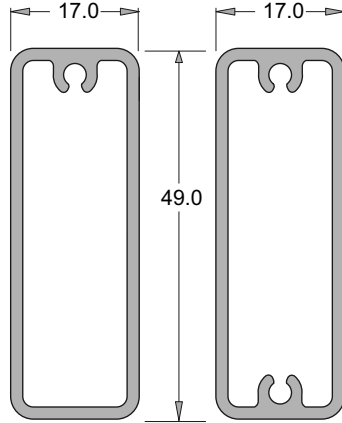
Juralco EDGE® Balustrade System - Extrusions



INFILL
17mm BALUSTER
JVB/005/5.35

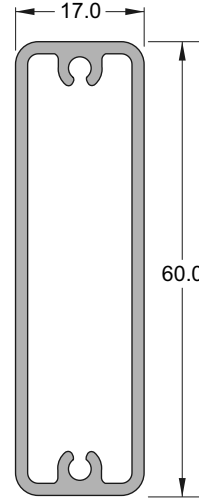


WATER DEFLECTION ANGLE
JA118/5

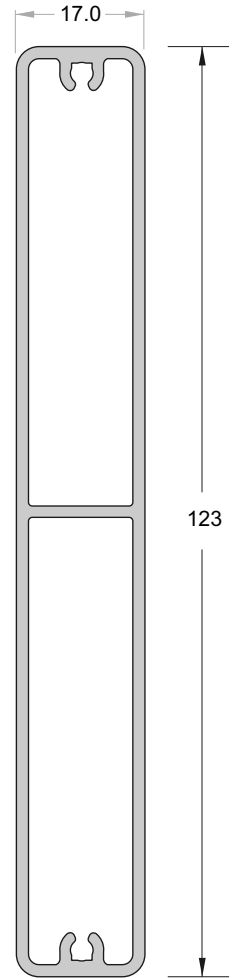


INFILL
49mm SLAT
(Single Screw)
JVB/030/5.35

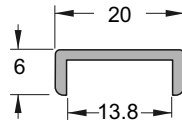
INFILL
49mm SLAT
(Double Screw)
JVB/018/5.35



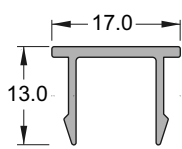
INFILL
60mm SLAT
JVB/019/5.35



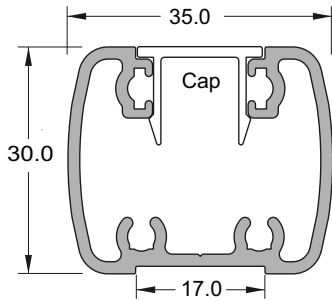
INFILL
123mm SLAT
JGF/2227/5.8



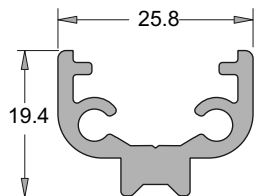
TOP PROTECTION CAP
for 13.2mm Laminated Glass
JET212
(attach with JET 330
DS Tape)



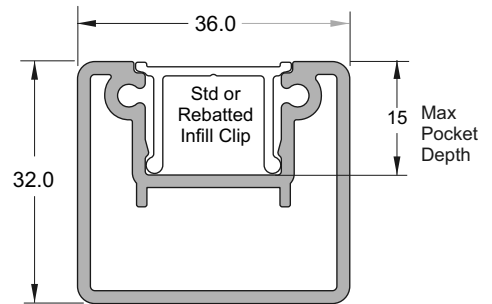
CAP
JVB/006/5.8



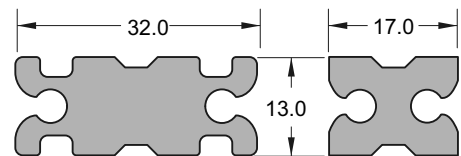
BOTTOM RAIL
JVB/022/5.8



BOTTOM RAIL SPIGOT
JVB/017/5

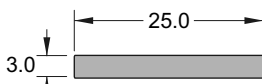


BOTTOM RAIL
Part No JEB/202/5.8

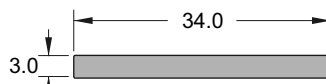


HEAVY DUTY BOTTOM RAIL
SPIGOT
JET/917/5
(NOT Suitable Semi
Frameless Posts)

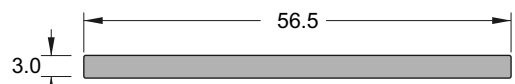
BOTTOM RAIL
SPIGOT
JEB/210/5
(Suitable all Posts)



25x3 FLAT BAR
HANDRAIL JOINTER
Part No JA174/5



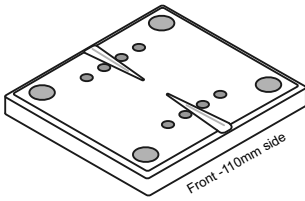
34x3 FLAT BAR
HANDRAIL JOINTER
Part No JA188/5



56.5x3 FLAT BAR
HANDRAIL JOINTER
Part No JA189/5

These ex
Viking Balustrade
System

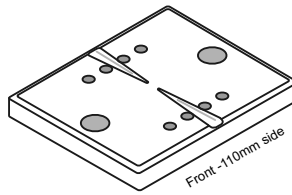
Base plate
JEC200



110mm x 100mm x 12mm - 4 x holes

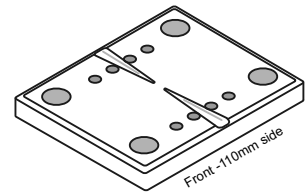
Base plate
JEC201

For Concrete and Steel only



110mm x 90mm x 12mm - 2 x holes

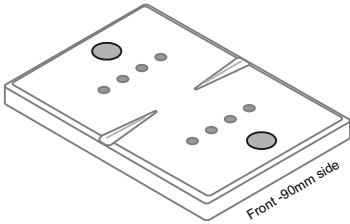
Base plate
JEC221



110mm x 90mm x 12mm - 4 x holes

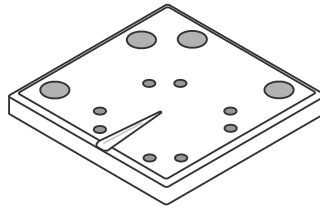
Base plate
JEC232

For Concrete and Steel only



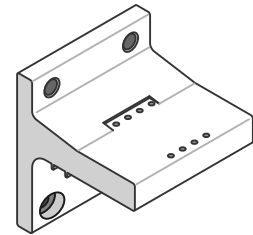
128mm x 90mm x 12mm - 2 x Holes 14mm dia

Base plate - Corner Post
JEC222



110mm x 110mm x 12mm - 4 x holes x 14mm dia

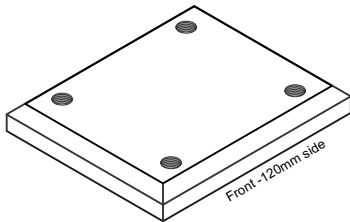
Base plate
JEC137/65



120mm wide x 135mm high - 4 x holes

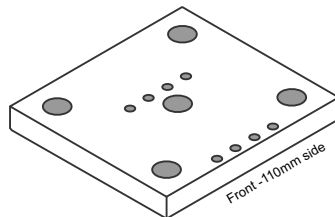
Base plate
JEC206

These two Plates form a pair.
For Floating decks only on a
concrete base



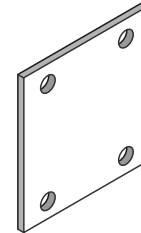
120mm x 100mm x 15mm - M10 and M12 (all blind) threaded

Base plate
Offset Corner Post
JEC207



110mm x 100mm x 12mm - 13Ø holes

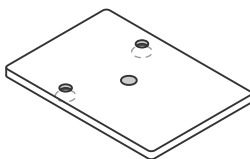
Gutter Bracket Spacer
JEC139



135mm x 120mm x 5mm thick

Post Bottom Cap
JEC10/HF

Hidden Fix



45mm x 65mm - Fits under face Fix Posts
Attach with No 6 x 12 C/S SS PK screws

Handrail Clamp Screw
JECscrew/M8x20

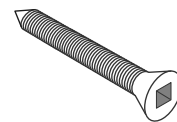
Handrail
Clamp



M8 x 20 SS Grub screw

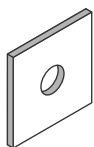
Post/Baseplate Screw
JVBHTSCREW/50x10

This Screw **MUST** be used when attaching
Posts to Baseplates or Gutter Brackets



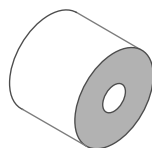
50mm SS High Tensile PK C/S sq drive screw

Square Washer
JVB SQWSH



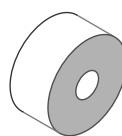
40mm sqx 3mm SS

Face Fix Spacer
JVB125/30mm



38mm dia x 30mm long.

Face Fix Spacer
JVB125/15mm



38mm dia x 15mm long.

Face Fix Spacer
JVB125/10mm



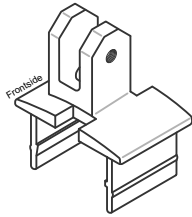
38mm dia x 10mm long.

EPDM Spacer Washer
JVB126



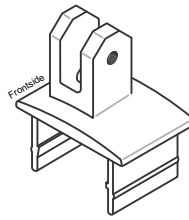
38mm dia x 3mm

**Handrail Mount
JEC23**



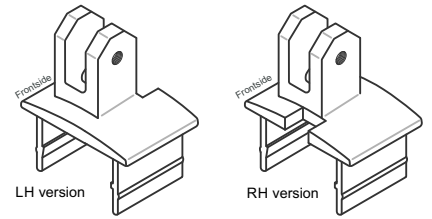
Angled Hand Rail Mount - Double Pocket
Fits over Post. 66mm x 46mm

**Handrail Mount
JEC24**



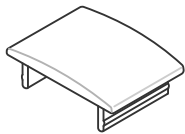
Angled Hand Rail Mount - No Pocket
Fits over Post. 66mm x 46mm

**Handrail Mount
JEC25RH or LH**



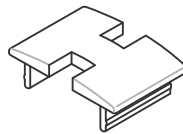
Angled Hand Rail Mount - Single Pocket, LH & RH
Fits over Post. 66mm x 46mm

**Top Cap
JEC20**



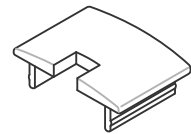
Fits over Post. 66mm x 46mm

**Top Cap
JEC21**



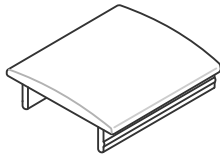
Double Pocket
Fits over Post. 66mm x 46mm

**Top Cap
JEC22**



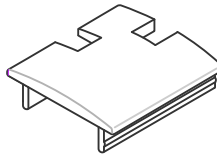
Single Pocket. RH/LH symmetrical
Fits over Post. 66mm x 46mm

**Top Cap - Corner Post
JEC27**



Fits over Post. 66mm x 66mm

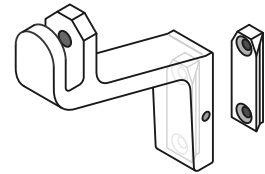
**Top Cap Notched - Corner Post
JEC28**



Double Pocket
Fits over Post. 66mm x 66mm

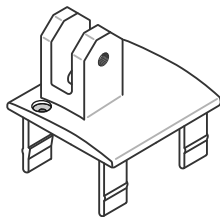
**Handrail assembly
JEC29/Kit**

For Wall or Post mounting



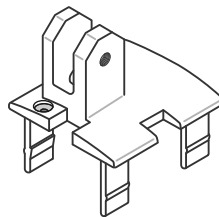
Includes 2 x grub screws

**Corner Post, Handrail Mount
JEC30**



No Pockets - Fits over Post. 66mm x 66mm

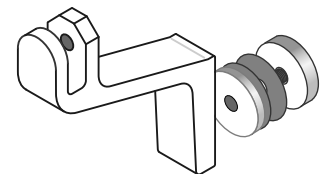
**Corner Post, Handrail Mount
JEC31**



Pockets - Fits over Post. 66mm x 66mm

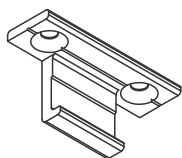
**Handrail assembly
JET48/Kit**

For Glass Panel mounting



Includes all components

**Circular Handrail Clip
JEC38**

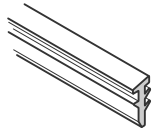


Attach.
2 x No 8 x 12 C/S,
SS PK Screws

For Circular Handrail JEB/223

3mm Glazing Wedge
JEC10/100

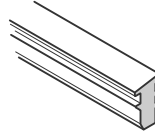
For 10mm Glass



100mt Roll - PVC

5mm Glazing Wedge
JECW8/75

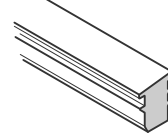
For 8mm Glass and
13.2mm Laminated Glass



75mt Roll - PVC

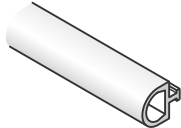
7mm Glazing Wedge
JECW6/75

For 6mm Glass



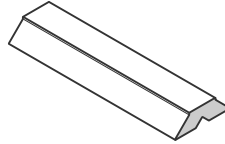
75mt Roll - PVC

Glazing D Seal
JEC DSEAL/100



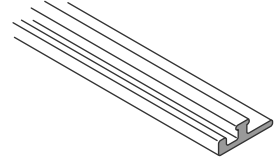
8mm deep x 9.5mm wide x 100mt Roll
Semi Rigid PVC

50mm Glazing Block
JEC15



Back Seal
JET/BSEAL/100

For 13.2mm Laminated Glass



Post Handrail Screw
JEC Screw/14gx2

Attach Post Cap to Post top

Use with JEC14GWASHER to attach Post cap to Post top



14g x 50mm SS PK Cap screw

EPDM Washer
JEC14GWASHER

Use with JESCREW 14g to attach Post cap to Post top



11mm dia x 14g

Glass Support Bracket
JEC13

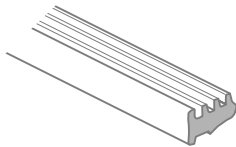
Nylon



17mm x 13mm x 32mm long. Attaches to Post with 2 x No 8 x 16 SS PK Screws

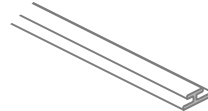
Glazing Wedge. Brown Tip
JV BWedge/Brown/75

For use with Viking Bottom Rail



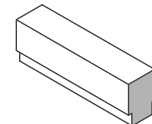
Backing Seal
JV BBackWedge/500

For use with Viking Bottom Rail



Glazing Block
JV B108

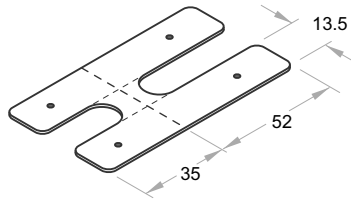
For use with Viking Bottom Rail



17mm high x 9mm x 50mm long.

Plastic Packer - Glass

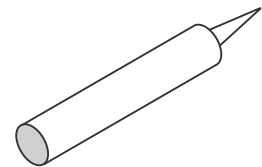
Part No	Thickness
H/PP1.5	1.5mm
H/PP2	2mm
H/PP3	3mm
H/PP4	4mm
H/PP5	5mm



Cut down to suit. 35x13.5, 52x13.5

SIKA Supergrip
Part No JEC SUPERGRIP30

For All Coach screws fixings

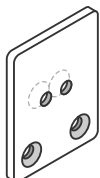


Rhodorsil V60 Clear Silicone
Part No H/RTV419098

Construction Silicone

Bottom Rail Bracket
Part No JEC 14

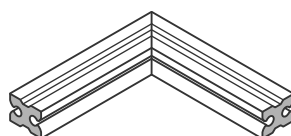
Attaches Bottom Rail to Timber



50mm x 38mm x 3mm thick.

Bottom Rail 90 deg Spigot
Part No JEC 12

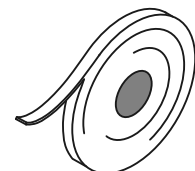
Joins Bottom Rail at 90 deg



76mm x 76mm.

DS Tape 12.7mm x 0.8mm
Part No JET 330

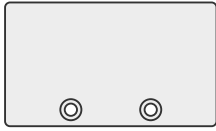
Attach Top Protection Cap



Double sided 12.7mm wide x 33mt Roll

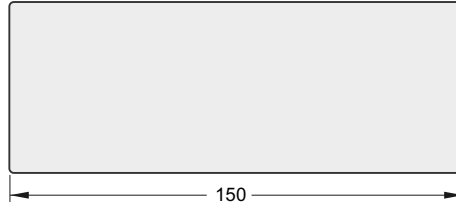
**Rectangular and 75mm Aerofoil Handrails
End Cap, Straight and 90deg corners**

All ex 3mm Aluminium

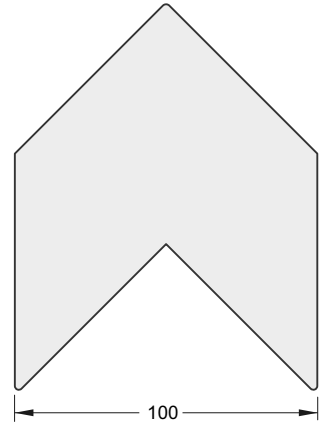


Rectangular End Cap
JEC03
Can be used as RH or LH

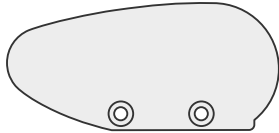
(for Rectangular
Handrail JEB/216)



Rectangular and 75m Aerofoil Inline Joiner
Use 56.5 x 3 flat bar JA/189/5.0



Rectangular and 75m Aerofoil
90deg Corner Joiner JEC01

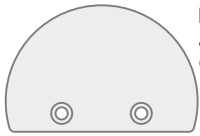


75mm Aerofoil End Cap
JEC11
Available as RH or LH

(for 75mm Aerofoil
Handrail JEB/217)

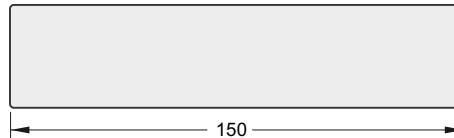
**Round and Circular
Handrail, End Cap,
Straight and 90deg corners**

All ex 3mm Aluminium

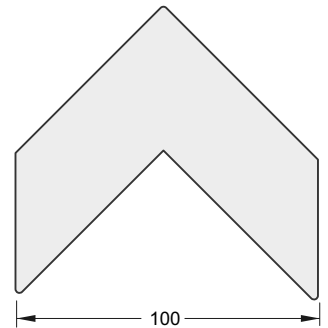


Round End Cap
JEC06
Can be used as RH or LH

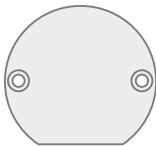
(for Round
Handrail JEB/209)



Round Inline Joiner
Use 34.0 x 3 flat bar JA/188/5.0



Round 90deg Corner Joiner
JEC04



Circular End Cap
JEC218
Can be used as RH or LH

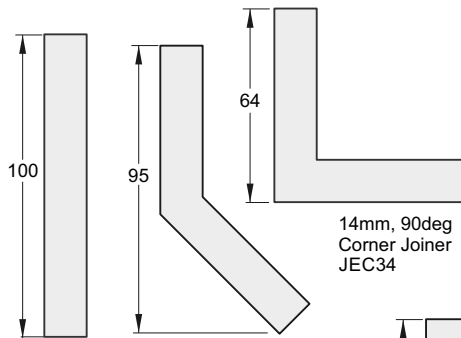
(for Circular
Handrail JEB/221)

**Interlinking Rail
End Cap, Straight
135 deg and 90deg corners**

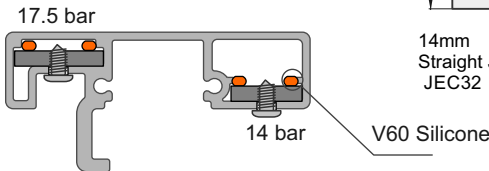
All ex 3mm Aluminium



Interlinking Rail End Cap
Can be used as RH or LH

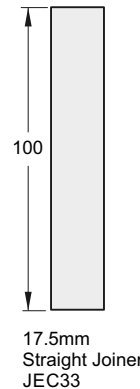


14mm, 90deg
Corner Joiner
JEC34

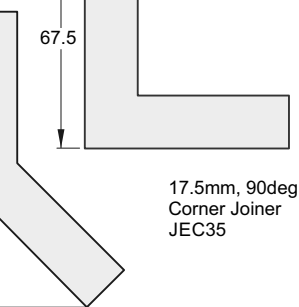


14mm
Straight Joiner
JEC32

14mm, 135deg
Corner Joiner
JEC36



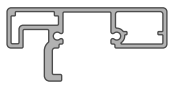
17.5mm
Straight Joiner
JEC33



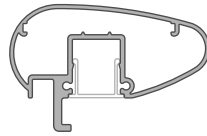
17.5mm, 135deg
Corner Joiner
JEC37

Joiners:

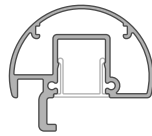
- With Joiner in place, spot drill from below for position
- Drill out joiner to 3mm dia, extrusion to 4mm dia
- Use No 6 x 1/4in SS ST Pan sq drive screw
- Insert dobs of V60 Silicone inside cavities before inserting
- Both ends to be attached.
- Joins must be within 300mm of Post
- Minimum distance between screw and end of handrail is 10mm



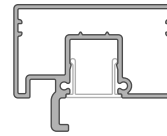
INTERLINKING RAIL
JEB/222/5.8



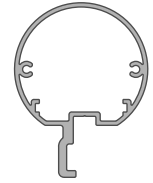
AEROFOIL HANDRAIL
JEB/217/5.8



ROUND HANDRAIL
JEB/209/5.8



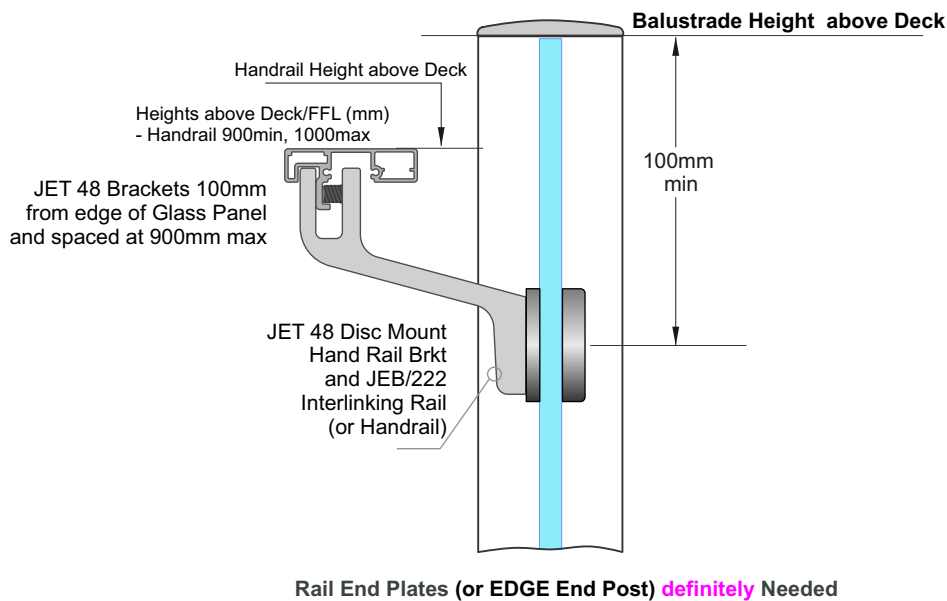
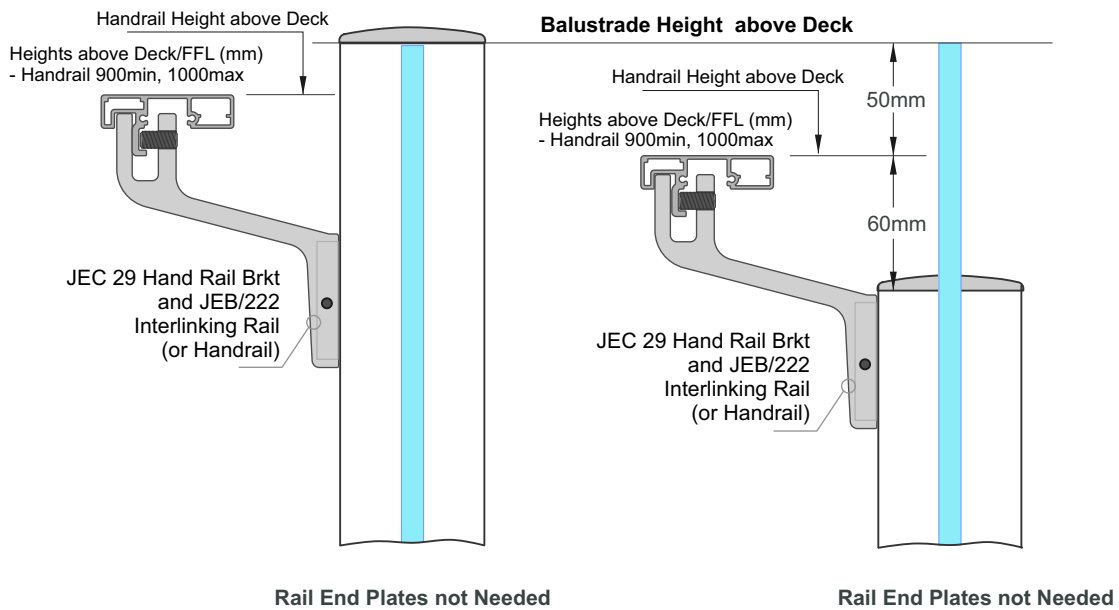
RECTANGULAR HANDRAIL
JEB/216/5.8



CIRCULAR HANDRAIL
JEB/221/5.8

Suitable Interlinking and Handrails

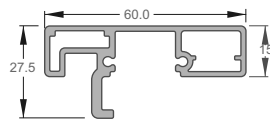
Semi Frameless and Frameless - Interlinking or Handrails on Deck side
JEB/222 shown, but any Handrails from above suitable.



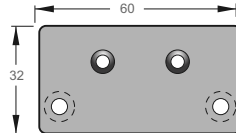
Important Note: Applies to JET48 Disc Mount Bracket to Glass only.
All Interlinking rails, at their ends must be attached to a Building Structure using Rail End Plates or to an Edge Post attached to the Deck structure. Applies to Handrails used as Interlinking Rails.

Juralco EDGE® Balustrade System Interlinking and Handrails End Plates for attaching to a Wall

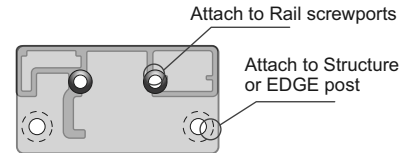
End Caps all ex 3mm Aluminium



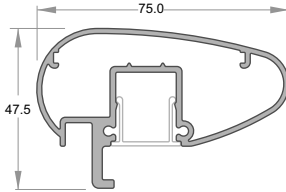
HANDRAIL
JEB/222/5.8



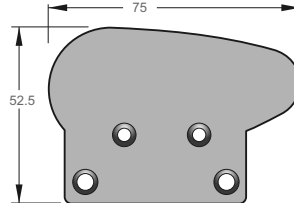
HANDRAIL
WALL ATTACH END PLATE
Part No JEC215/WC



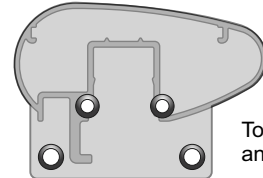
For RH and LH



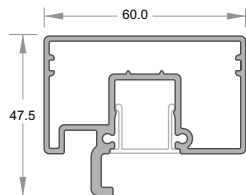
AEROFOIL HANDRAIL
JEB/217/5.8



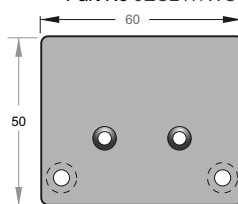
HANDRAIL
WALL ATTACH END PLATE
Part No JEC217/WC



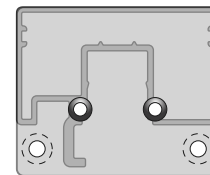
For RH and LH



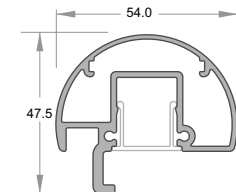
RECTANGULAR HANDRAIL
JEB/216/5.8



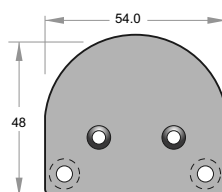
HANDRAIL
WALL ATTACH END PLATE
Part No JEC216/WC



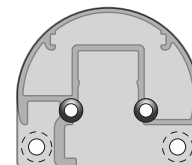
For RH and LH



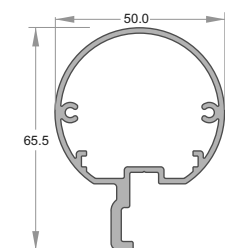
HALF ROUND HANDRAIL
JEB/209/5.8



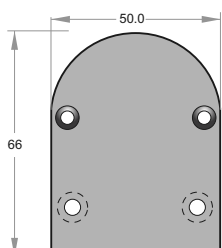
HANDRAIL
WALL ATTACH END PLATE
Part No JEC209/WC



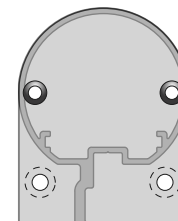
For RH and LH



CIRCULAR HANDRAIL
JEB/221/5.8



HANDRAIL
WALL ATTACH END PLATE
Part No JEC221/WC



For RH and LH

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

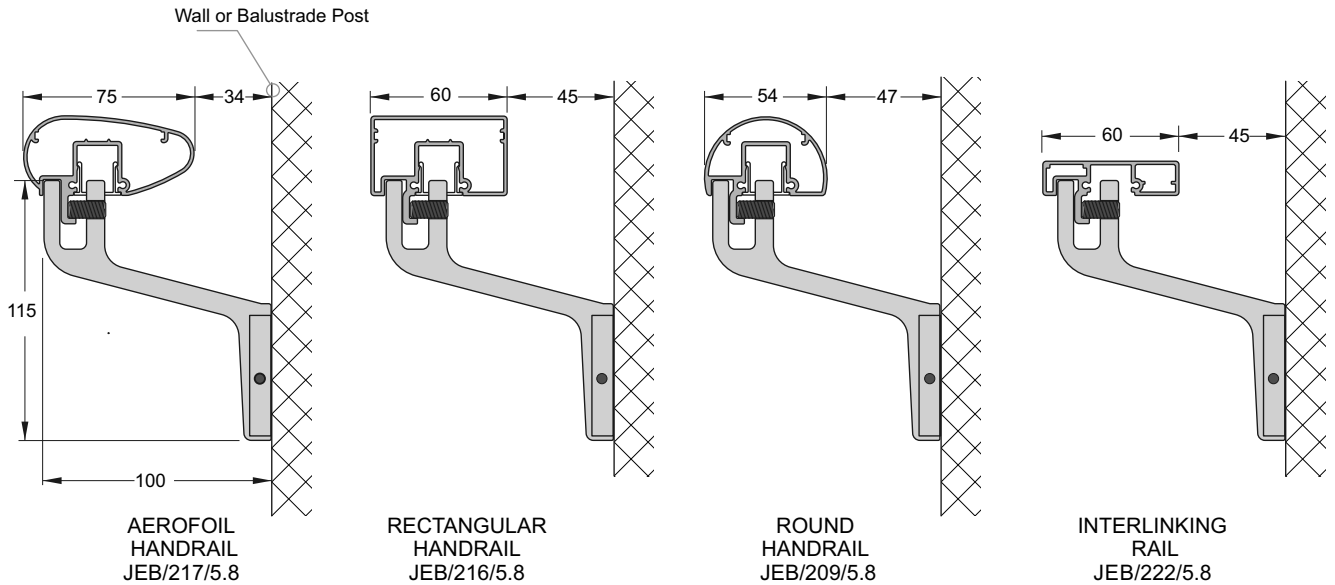
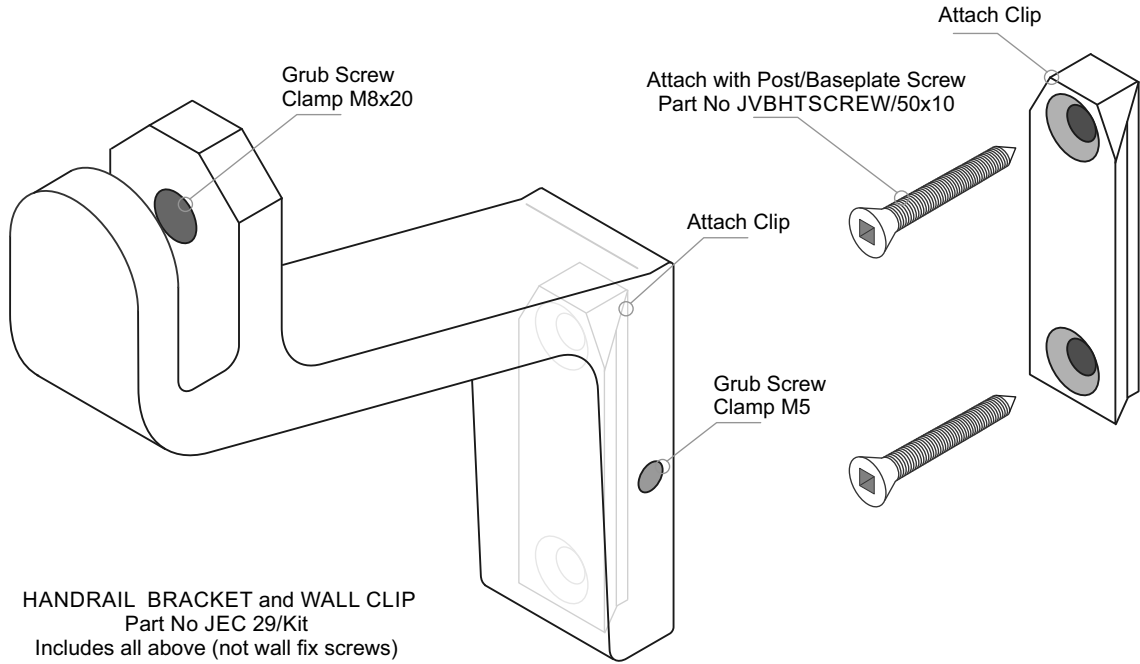
- use 2 off 8g SS Screws, 35mm min into studs.
- use Sika Supergrip 2hr
- 30mm min distance to Horizontal Edge
- If Weatherboard use suitable predrilled Wedge
- Timber stud wall to be designed and detailed in accordance with NZS 1720.1:2022 Timber Structures Part 1 - Design methods or NZ3604

Note : Fixing to Juralco EDGE Post

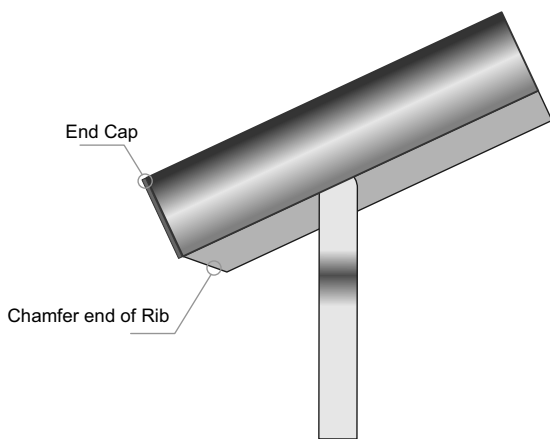
- use 2 off 8g x 25 SS PK Screws

Note : Fixing to Concrete Wall

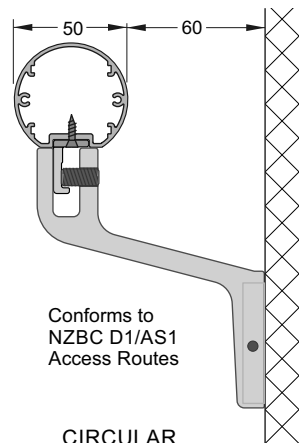
- use 2 off M6 x70 SS Screw Anchors
- Solid Concrete min 20Mpa
- Block wall Concrete filled/Reinforced
- 140mm min Wall thickness
- 70mm min distance to Horizontal Edge
- 100mm min distance to Vertical Edge
- Blockwork wall must be corefilled /reinforced and is to be designed and detailed in accordance with NZ4230 or NZ4229



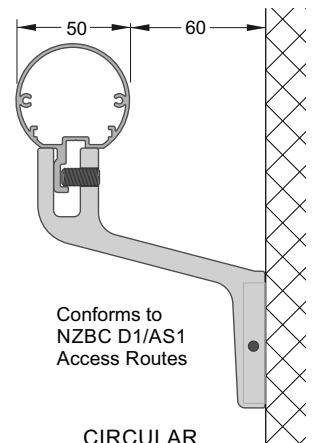
Hand rail bracket and Hand rails



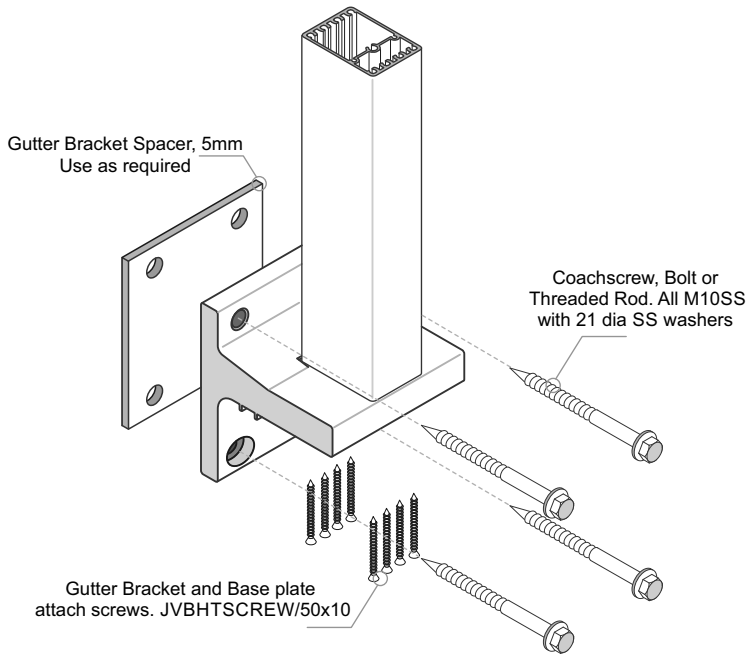
Hand rail bracket and Hand rail.
Angle attach up to 35deg



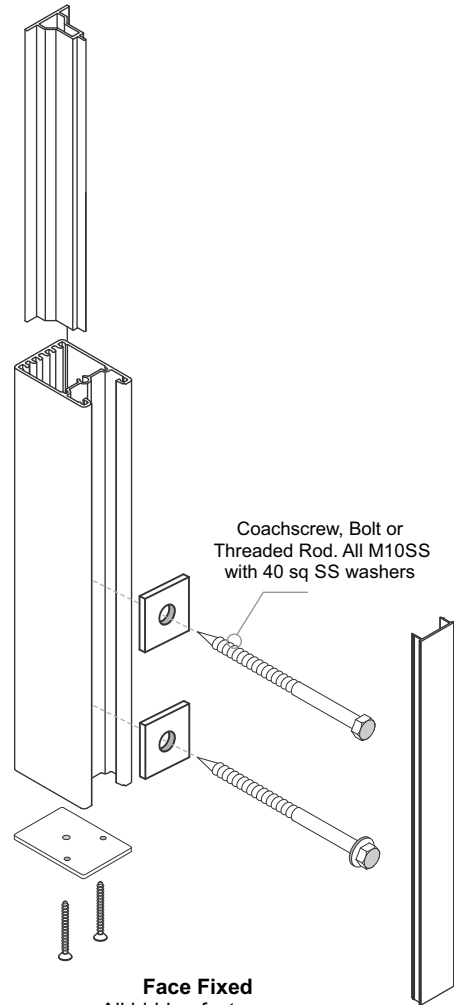
CIRCULAR HANDRAIL
JEB/223/5.8
+ Clip JEC38



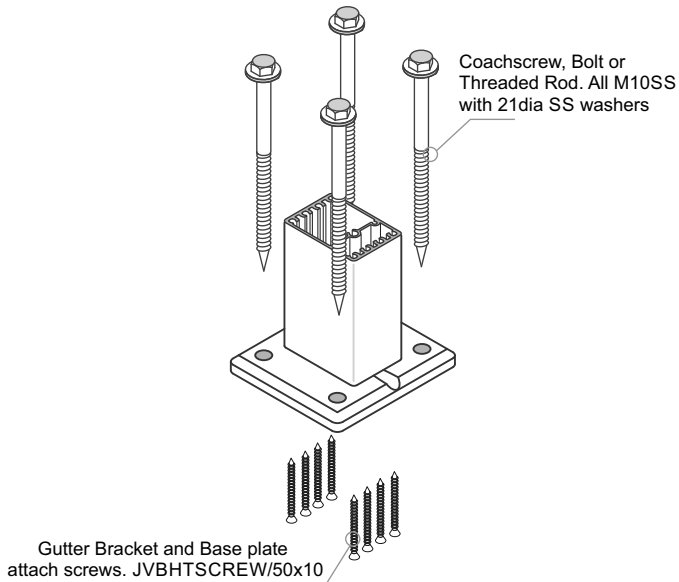
CIRCULAR HANDRAIL
JEB/221/5.8



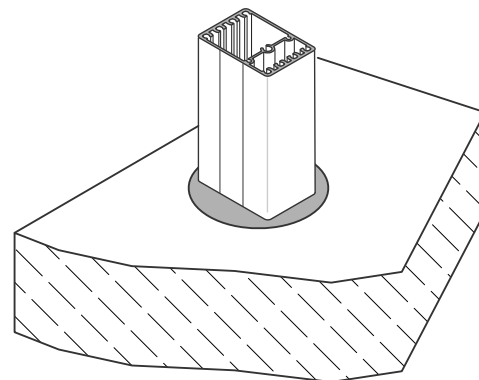
Gutter Bracket - Face Fixed
Suitable for Waterproofed Decks and any overhanging decks.
Allows for Guttering to run under.
Different fasteners types depending on the Building substrate



Face Fixed
All hidden fasteners.
Different fasteners types depending on the Building substrate



Top Mount
Base Plates in a variety of sizes. Different fasteners types depending on the Building substrate.
Includes a 90deg Semi Frameless Corner Post



Base Fix - Concrete only.
Post cemented permanently in place

Typical TOP Fix to Timber - JEC 221, 110mm x 90mm, 4 hole Base Plate - M10 SS Coachscrews

Balustrade Dimensions by Wind Zone.

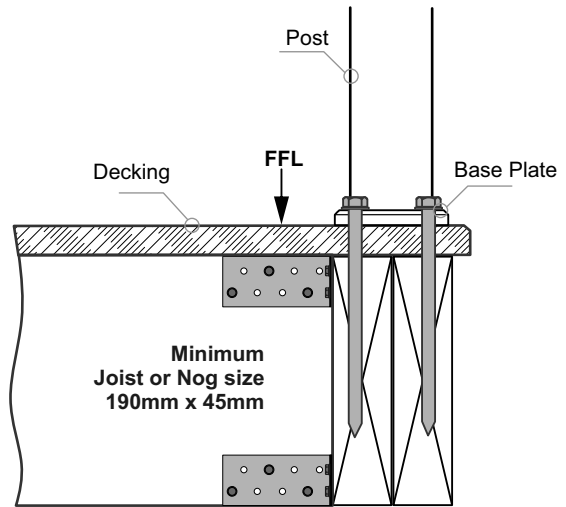
Up to and including Very High Wind Zone
Balustrade Height above FFL, mm

1000	1050	1100	1150	1200	1250	1300 max
1400	1350	1300	1250	1200	1150	1100

Post Spacing max, mm

Up to and including Extra High Wind Zone

General Balustrades	17mm Balusters only
Balustrade Height, mm	Balustrade Height, mm
1200 max	1000 min - 1275 max
1000	1480
Post Spacing max, mm	Post Spacing max, mm

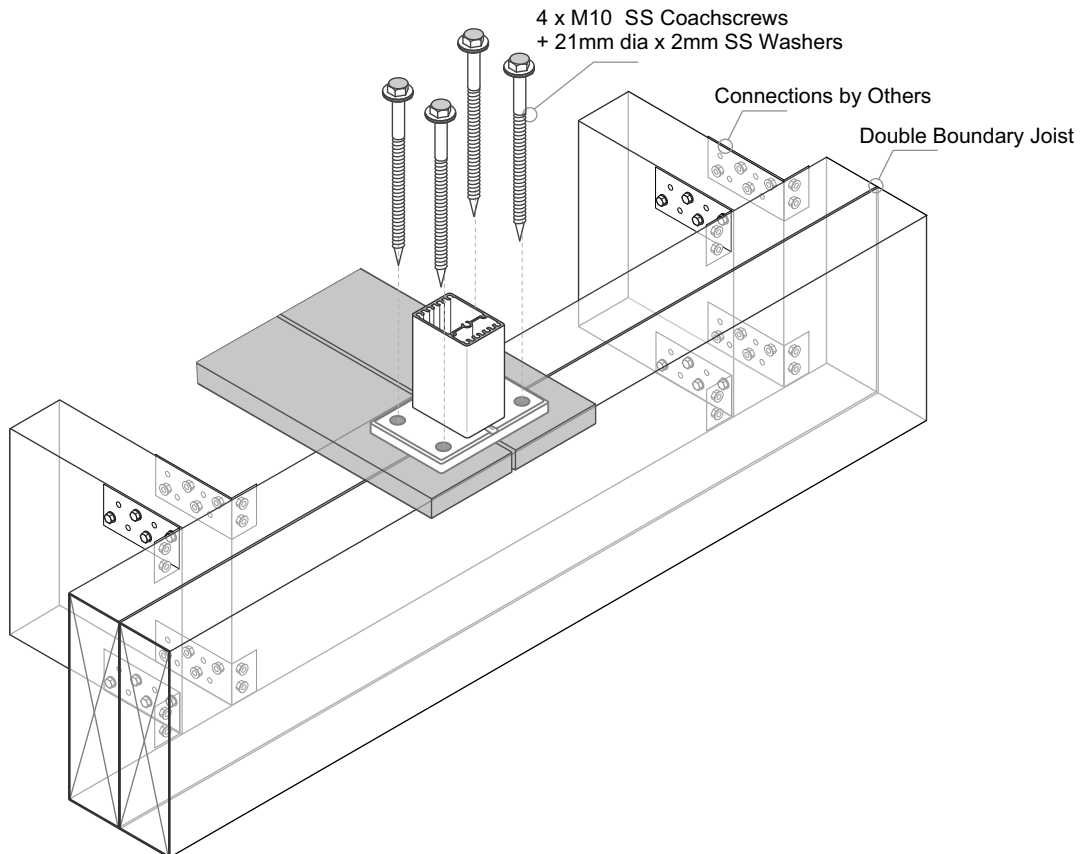


General Notes:

- 1 - All measurements mm
- 2 - Domestic Occupancy only A, A other and C3.
- 3 - Balustrade Height measured above Deck/FFL. 1000mm min
- 4 - Wind Zones as per NZS 3604:2011

Important Installation notes:

- 1 - The Project Engineer must ensure the structure can support the appropriate loads
- 2 - Substructure shown indicatively only. Timber SG8 minimum strength
- 3 - Coachscrew engagement into joists 150mm. All coachscrews predrill 6mm holes
- 4 - Bond all coachscrews with SIKA Supergrip to full depth
- 5 - All Fixings must be Stainless steel



Typical FACE Fix Post to Timber - M10 SS Coachscrews

Balustrade Dimensions by Wind Zone.

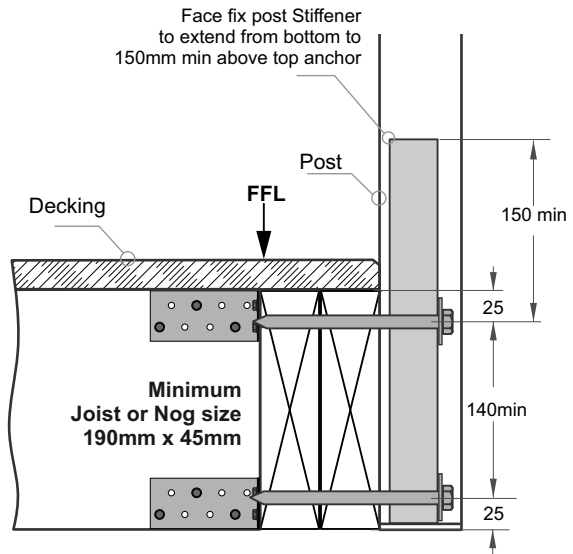
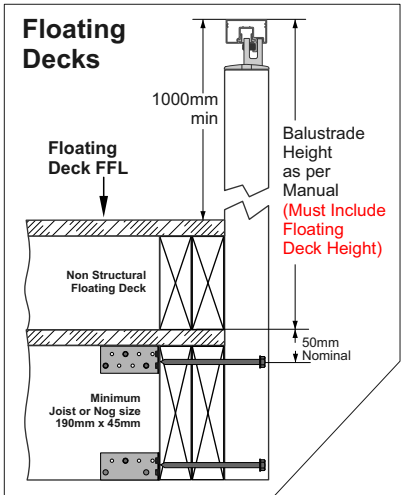
Up to and including Very High Wind Zone
Balustrade Height above FFL, mm

1000	1050	1100	1150	1200	1250	1300 max
1400	1350	1300	1250	1200	1150	1100

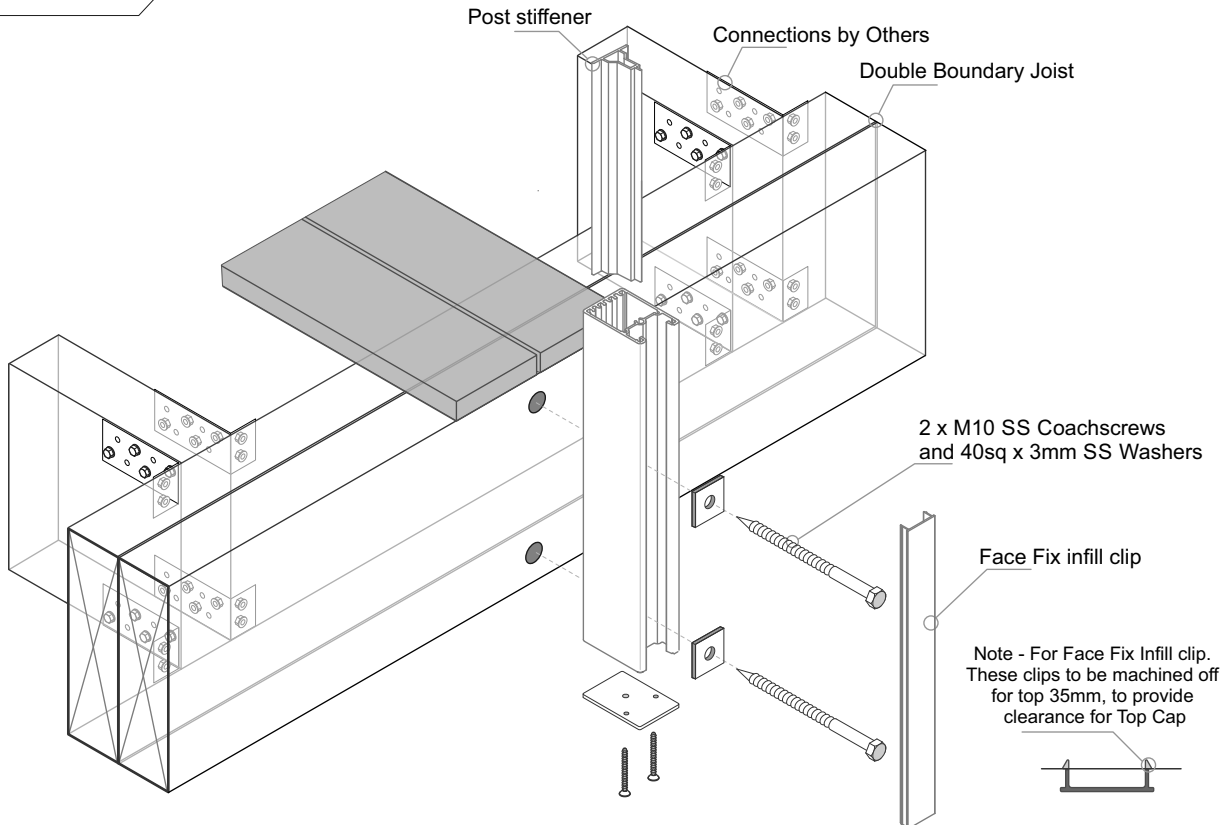
Post Spacing max, mm

Up to and including Extra High Wind Zone
General Balustrades
Coachscrews as shown
NOT SUITABLE.
Must use Bolts

- General Notes:
- 1 - All measurements mm
 - 2 - Domestic Occupancy only A, A other and C3.
 - 3 - Balustrade Height measured above Deck/FFL. 1000mm min
 - 4 - Wind Zones as per NZS 3604:2011



- Important Installation notes:**
- 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 Supergrip to full depth
 - 5 - All Fixings must be Stainless steel



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

Balustrade Dimensions by Wind Zone.

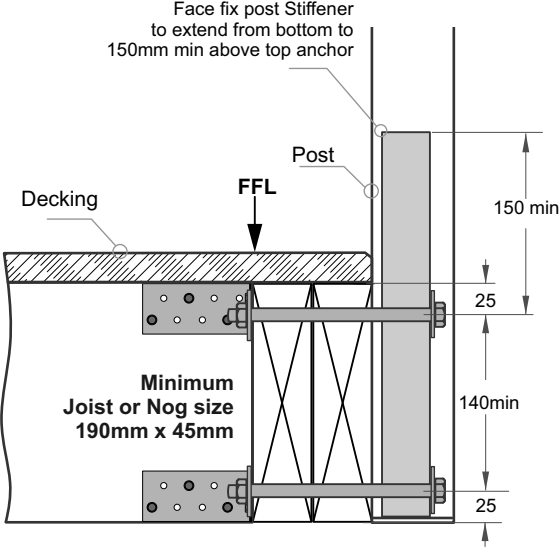
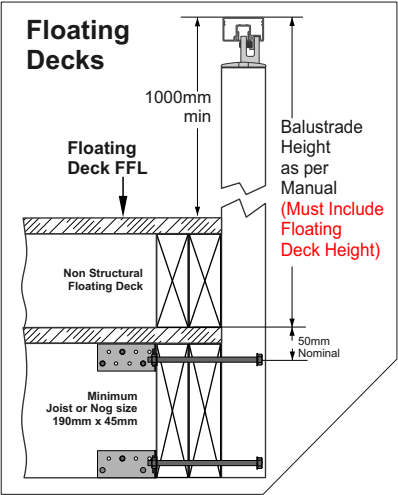
Up to and including Very High Wind Zone

Balustrade Height above FFL, mm							
1000	1050	1100	1150	1200	1250	1300 max	
1400	1350	1300	1250	1200	1150	1100	
Post Spacing max, mm							

Up to and including Extra High Wind Zone

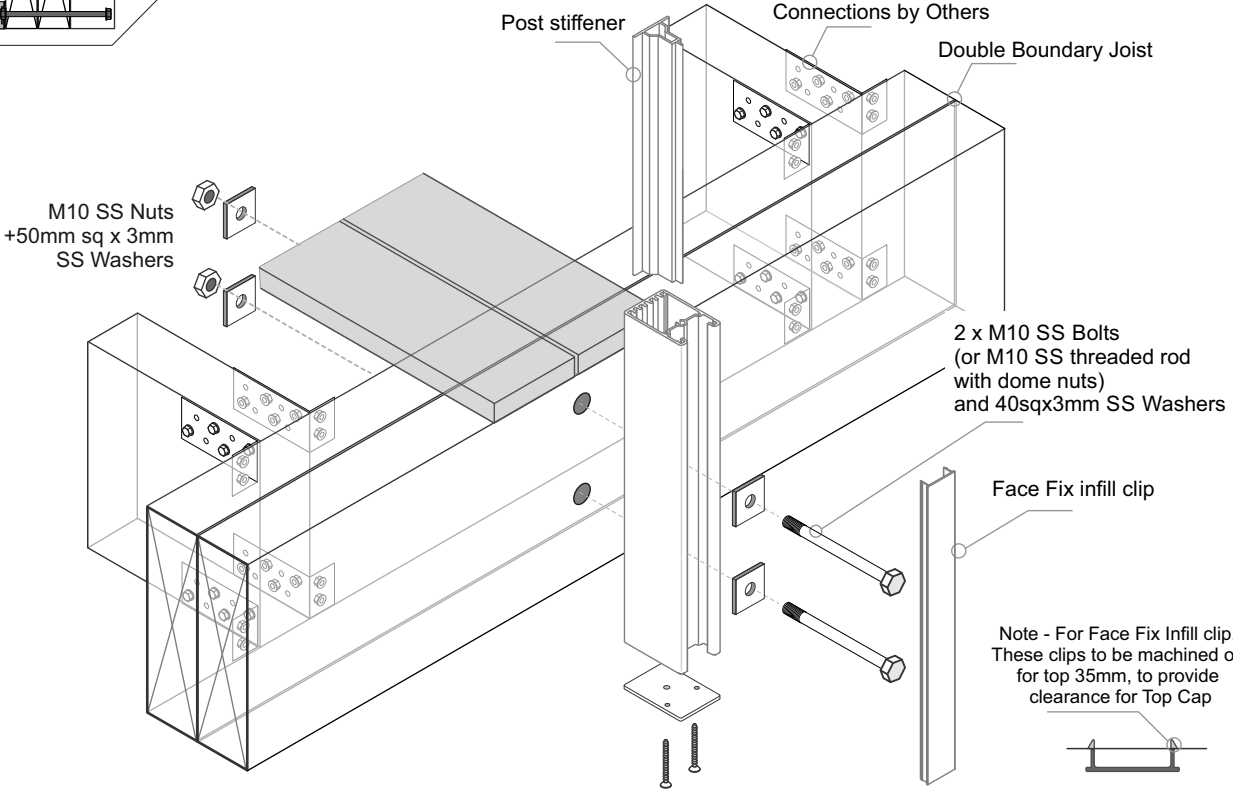
General Balustrades	17mm Balusters only
Balustrade Height, mm	Balustrade Height, mm
1200 max	1000 min - 1275 max
1000	1480
Post Spacing max, mm	Post Spacing max, mm

- General Notes:
- 1 - All measurements mm
 - 2 - Domestic Occupancy only A, A other and C3.
 - 3 - Balustrade Height measured above Deck/FFL. 1000mm min
 - 4 - Wind Zones as per NZS 3604:2011



Important Installation notes:

- 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 Timber - JEC 137/65, Gutter Bracket - M10 SS Coachscrews

Balustrade Dimensions by Wind Zone.

Up to and including Very High Wind Zone

Balustrade Height above FFL, mm

1000	1050	1100	1150	1200	1250	1300 max
1500	1450	1400	1350	1300	1250	1200

Post Spacing max, mm

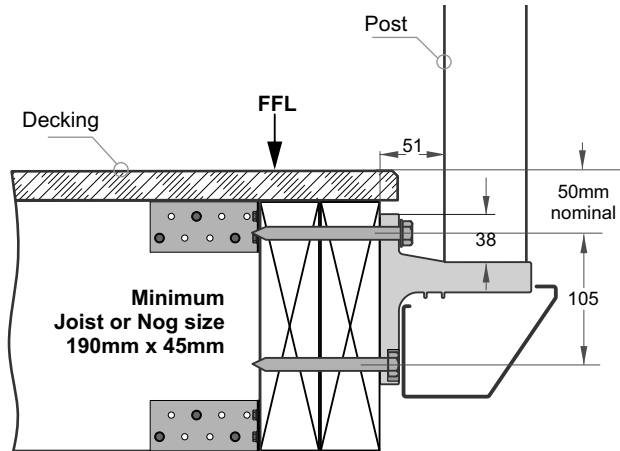
Up to and including Extra High Wind Zone

General Balustrades

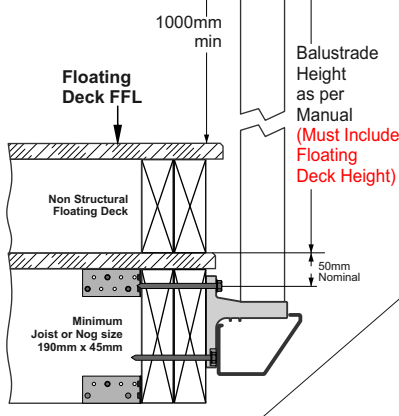
Coachscrews as shown
NOT SUITABLE.
Must use Bolts

General Notes:

- 1 - All measurements mm
- 2 - Domestic Occupancy only A, A other and C3.
- 3 - Balustrade Height measured above Deck/FFL. 1000mm min
- 4 - Wind Zones as per NZS 3604:2011

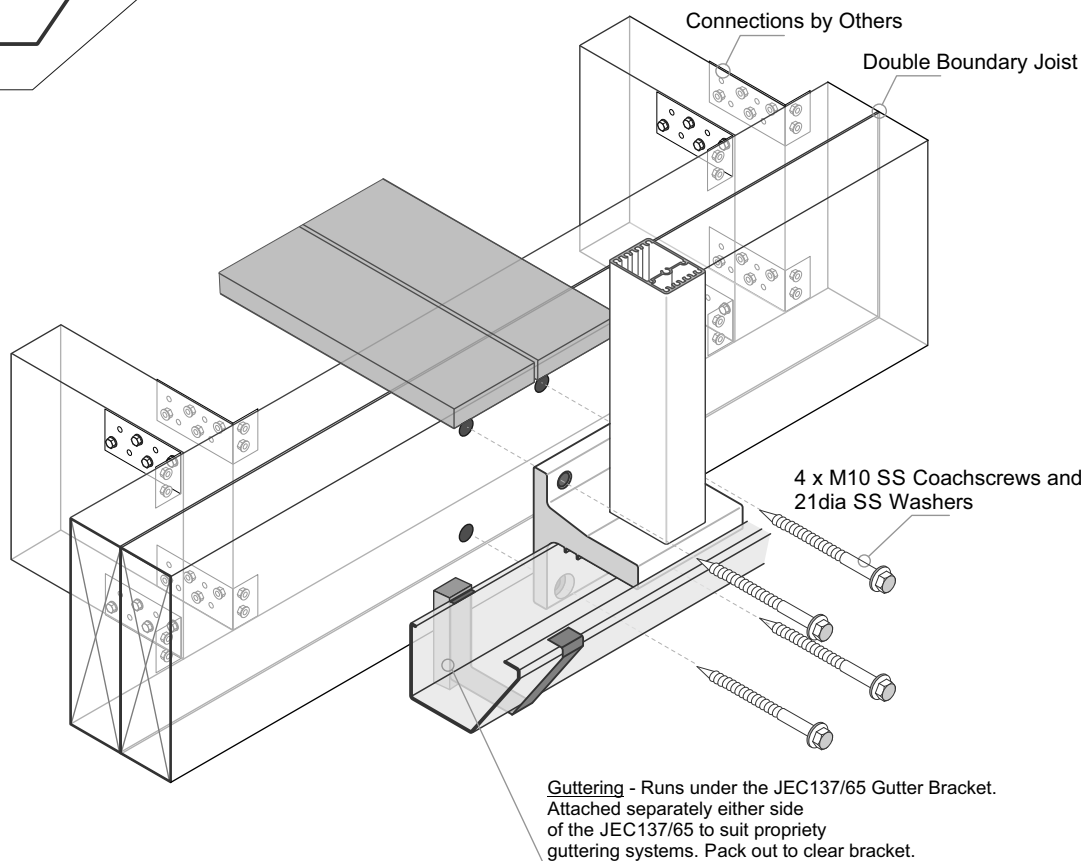


Floating Decks



Important Installation notes:

- 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 Supergrip to full depth
- 5 - All Fixings must be Stainless steel



Typical FACE Fix to Timber - JEC 137/65, Gutter Bracket - M10 SS Bolts or Threaded Rod

Balustrade Dimensions by Wind Zone.

Up to and including Very High Wind Zone
Balustrade Height above FFL, mm

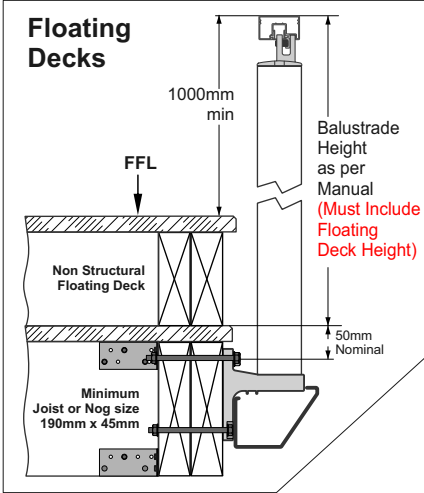
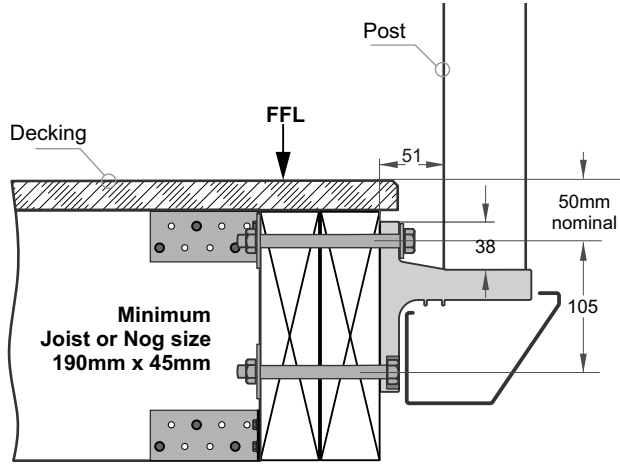
1000	1050	1100	1150	1200	1250	1300 max
1500	1450	1400	1350	1300	1250	1200

Post Spacing max, mm

Up to and including Extra High Wind Zone

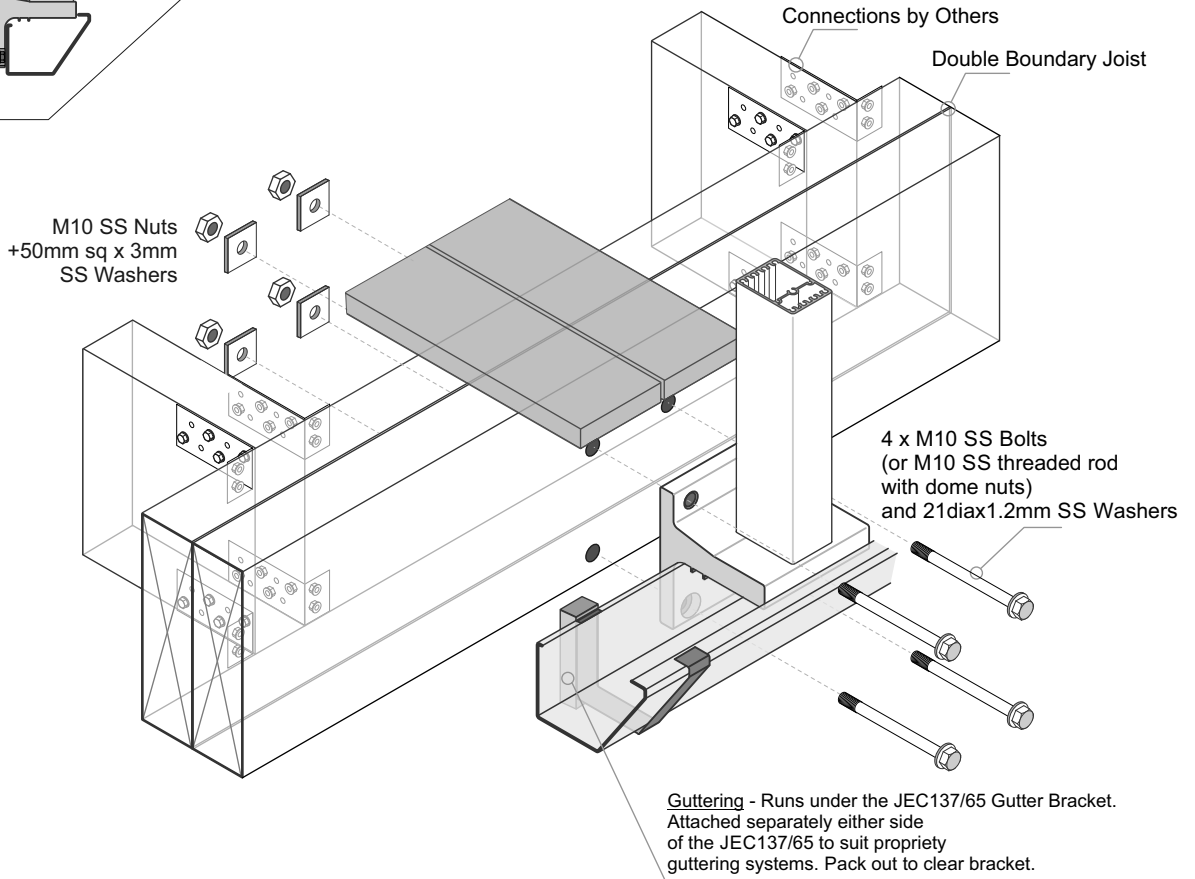
General Balustrades	17mm Balusters only
Balustrade Height, mm	Balustrade Height, mm
1200 max	1000 min - 1275 max
1000	1480
Post Spacing max, mm	Post Spacing max, mm

- General Notes:
- 1 - All measurements mm
 - 2 - Domestic Occupancy only A, A other and C3.
 - 3 - Balustrade Height measured above Deck/FFL. 1000mm min
 - 4 - Wind Zones as per NZS 3604:2011



Important Installation notes:

- 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 TOP Fix to Steel with Timber Deck - JEC 221, 110mm x 90mm, 4 hole Base Plate - M10 SS Bolts

Balustrade Dimensions by Wind Zone.

Up to and including Very High Wind Zone
Balustrade Height above FFL, mm

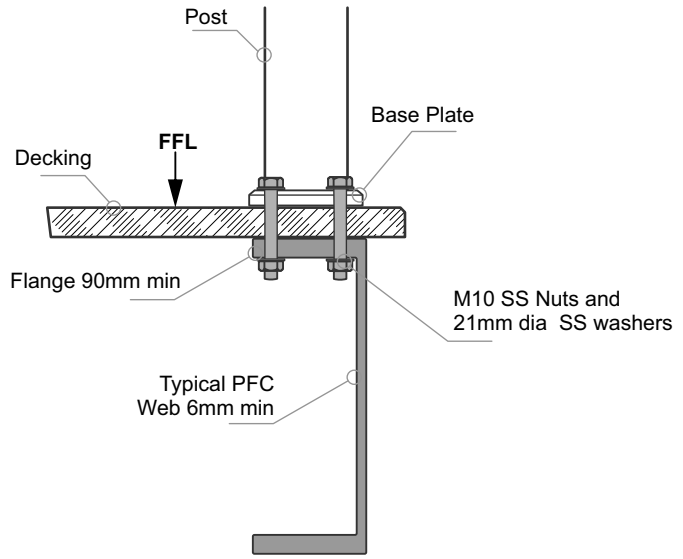
1000	1050	1100	1150	1200	1250	1300 max
1500	1450	1400	1350	1300	1250	1200

Post Spacing max, mm

Up to and including Extra High Wind Zone

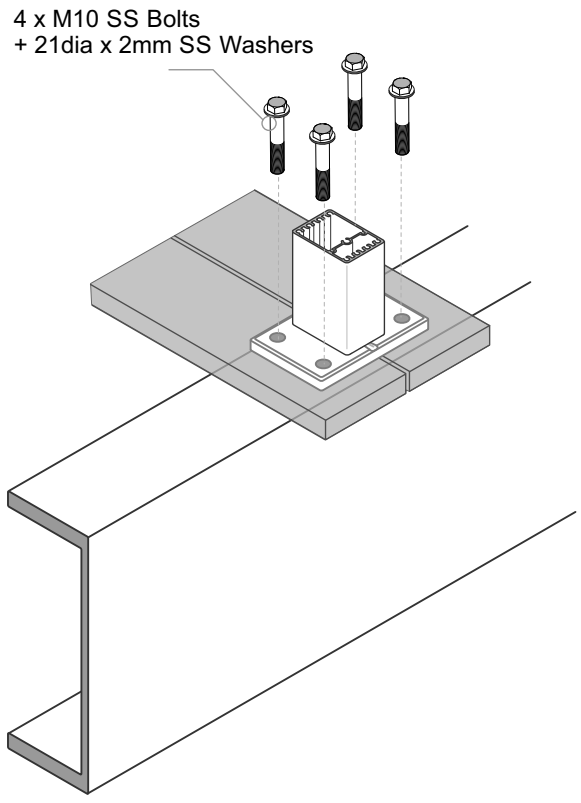
General Balustrades	17mm Balusters only
Balustrade Height, mm	Balustrade Height, mm
1200 max	1000 min - 1275 max
1000	1480
Post Spacing max, mm	Post Spacing max, mm

- General Notes:
- 1 - All measurements mm
 - 2 - Domestic Occupancy only A, A other and C3.
 - 3 - Balustrade Height measured above Deck/FFL. 1000mm min
 - 4 - Wind Zones as per NZS 3604:2011



Important Installation notes:

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



Typical TOP Fix to Steel - JEC 201, 110mm x 90mm, 2 hole Base Plate - M12 SS Bolts

Balustrade Dimensions by Wind Zone.

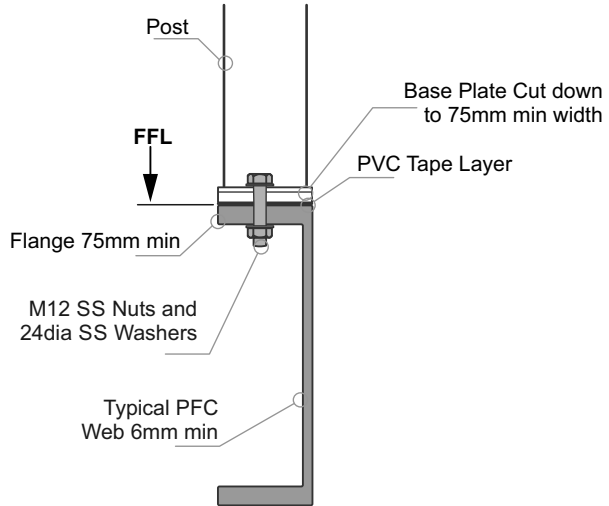
Up to and including Very High Wind Zone

Balustrade Height above FFL, mm							
1000	1050	1100	1150	1200	1250	1300 max	
1500	1450	1400	1350	1300	1250	1200	
Post Spacing max, mm							

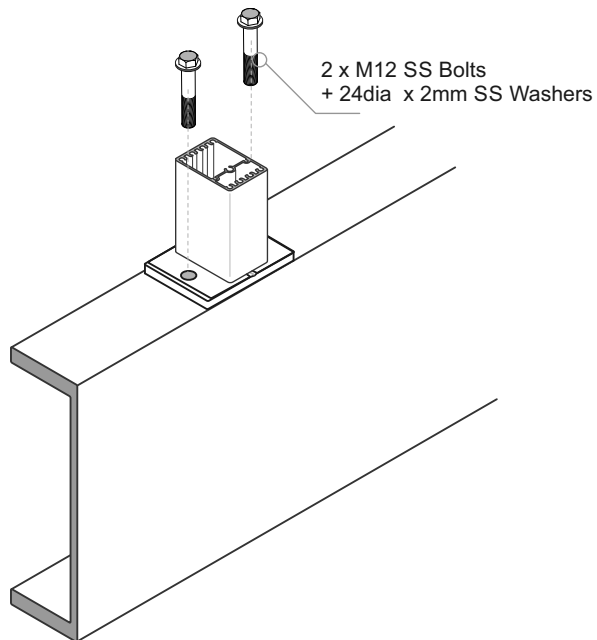
Up to and including Extra High Wind Zone
NOT SUITABLE.

General Notes:

- 1 - All measurements mm
- 2 - Domestic Occupancy only A, A other and C3.
- 3 - Balustrade Height measured above Deck/FFL. 1000mm min
- 4 - Wind Zones as per NZS 3604:2011



- Important Installation notes:**
- 1 - The Project Engineer must ensure the structure can support the appropriate loads
 - 2 - Substructure shown indicatively only
 - 3 - The Baseplate can be cut down to 75mm wide
 - 4 - Both Base plate and PFC must be aligned, with Bolt at C/L
 - 5 - A PVC tape layer must be placed between the Baseplate and Steel
 - 6 - All fixings must be Stainless steel



Typical FACE Fix Post to Steel - M10 SS Bolts

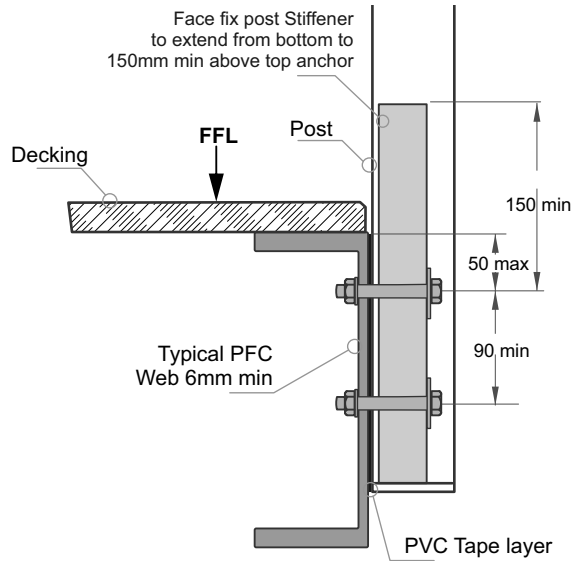
Balustrade Dimensions by Wind Zone.

Up to and including Very High Wind Zone

Balustrade Height above FFL, mm							
1000	1050	1100	1150	1200	1250	1300 max	
1500	1450	1400	1350	1300	1250	1200	
Post Spacing max, mm							

Up to and including Extra High Wind Zone

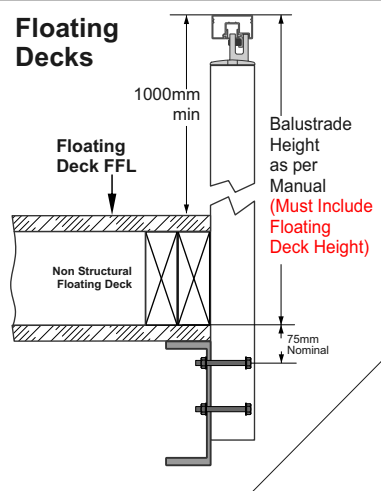
General Balustrades	17mm Balusters only
Balustrade Height, mm	Balustrade Height, mm
1200 max	1000 min - 1275 max
1000	1480
Post Spacing max, mm	Post Spacing max, mm



General Notes:

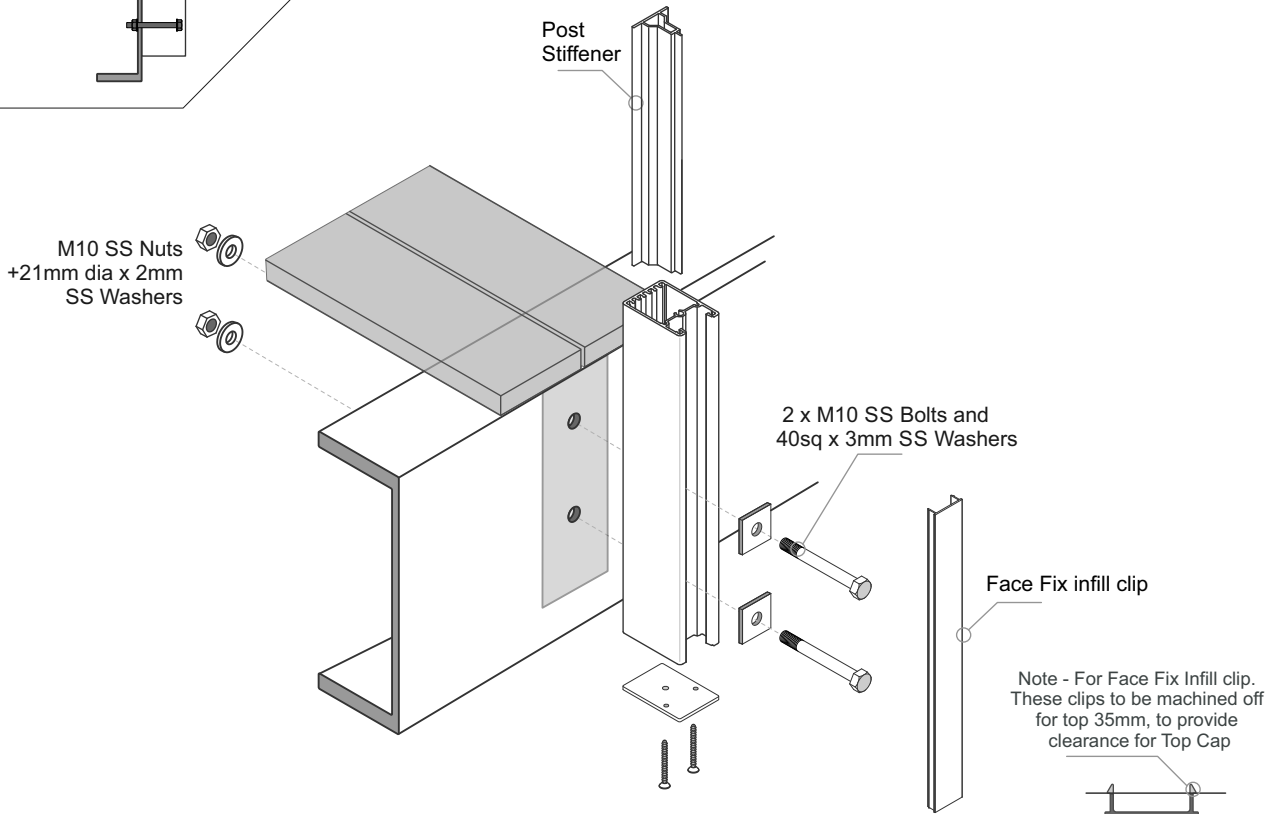
- 1 - All measurements mm
- 2 - Domestic Occupancy only A, A other and C3.
- 3 - Balustrade Height measured above Deck/FFL. 1000mm min
- 4 - Wind Zones as per NZS 3604:2011

Floating Decks



Important Installation notes:

- 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 Post and Steel
- 4 - All fixings must be Stainless steel



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

Balustrade Dimensions by Wind Zone.

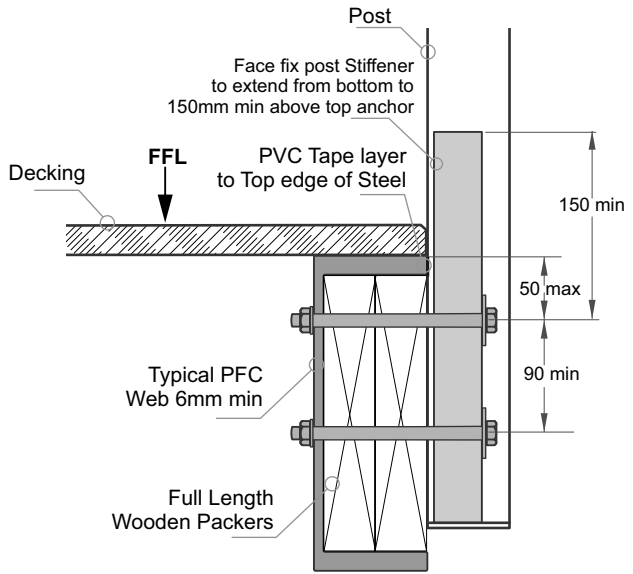
Up to and including Very High Wind Zone
Balustrade Height above FFL, mm

1000	1050	1100	1150	1200	1250	1300 max
1500	1450	1400	1350	1300	1250	1200

Post Spacing max, mm

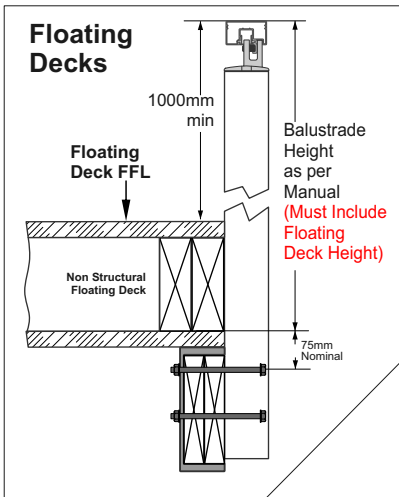
Up to and including Extra High Wind Zone

General Balustrades	17mm Balusters only
Balustrade Height, mm	Balustrade Height, mm
1200 max	1000 min - 1275 max
1000	1480
Post Spacing max, mm	Post Spacing max, mm



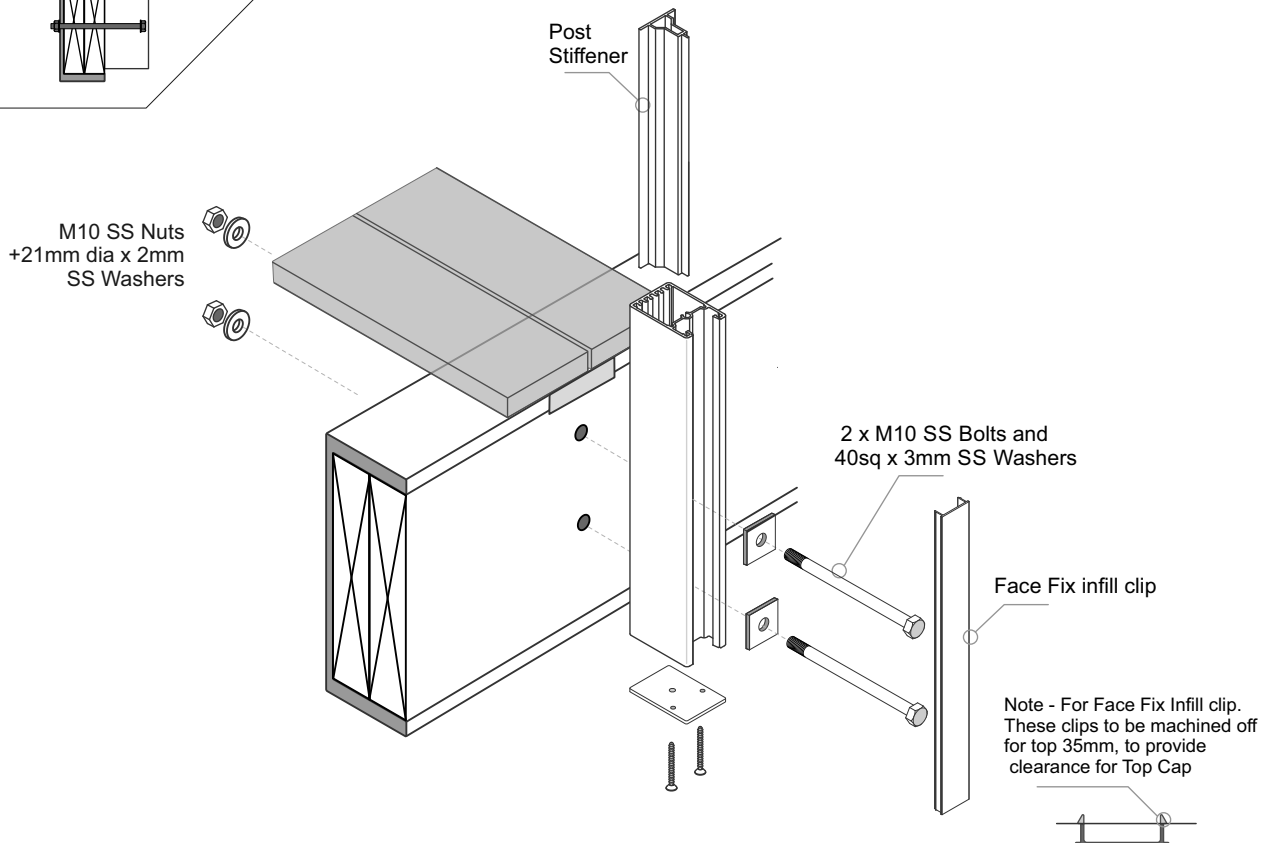
General Notes:

- 1 - All measurements mm
- 2 - Domestic Occupancy only A, A other and C3.
- 3 - Balustrade Height measured above Deck/FFL. 1000mm min
- 4 - Wind Zones as per NZS 3604:2011



Important Installation notes:

- 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 Post and the Top Steel Flange
- 4 - All Fixings must be Stainless steel



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

Balustrade Dimensions by Wind Zone.

Up to and including Very High Wind Zone
Balustrade Height above FFL, mm

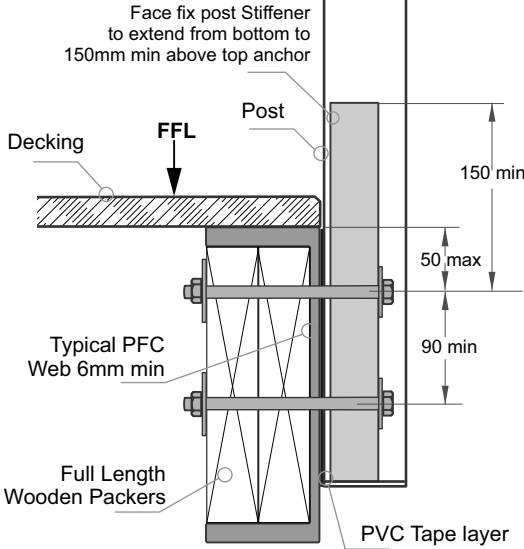
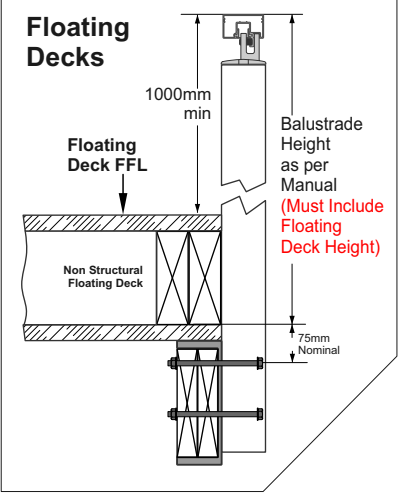
1000	1050	1100	1150	1200	1250	1300 max
1500	1450	1400	1350	1300	1250	1200

Post Spacing max, mm

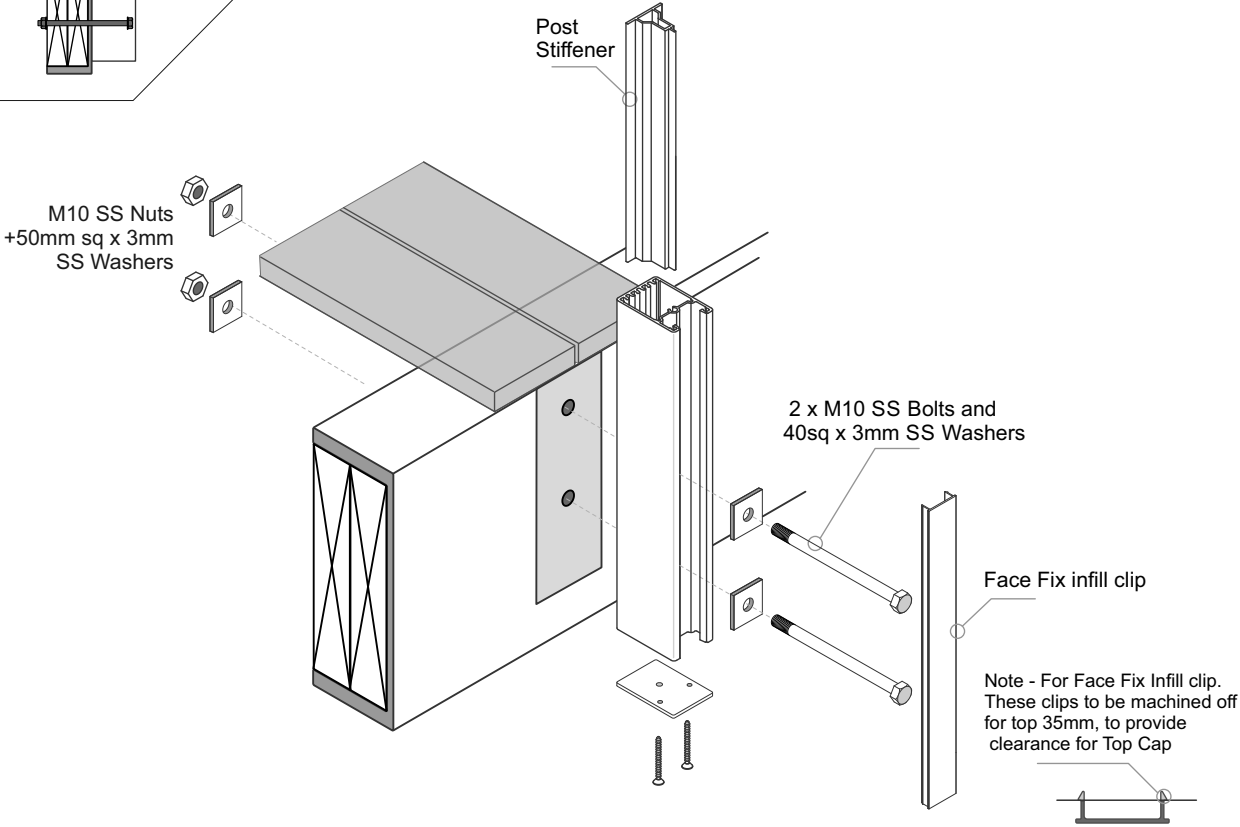
Up to and including Extra High Wind Zone

General Balustrades	17mm Balusters only
Balustrade Height, mm	Balustrade Height, mm
1200 max	1000 min - 1275 max
1000	1480
Post Spacing max, mm	Post Spacing max, mm

- General Notes:
- 1 - All measurements mm
 - 2 - Domestic Occupancy only A, A other and C3.
 - 3 - Balustrade Height measured above Deck/FFL. 1000mm min
 - 4 - Wind Zones as per NZS 3604:2011



- Important Installation notes:**
- 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 Post and Steel
 - 4 - All Fixings must be Stainless steel



Typical FACE Fix to Steel - JEC 137/65, Gutter Bracket - M10 SS Bolts

Balustrade Dimensions by Wind Zone.

Up to and including Very High Wind Zone

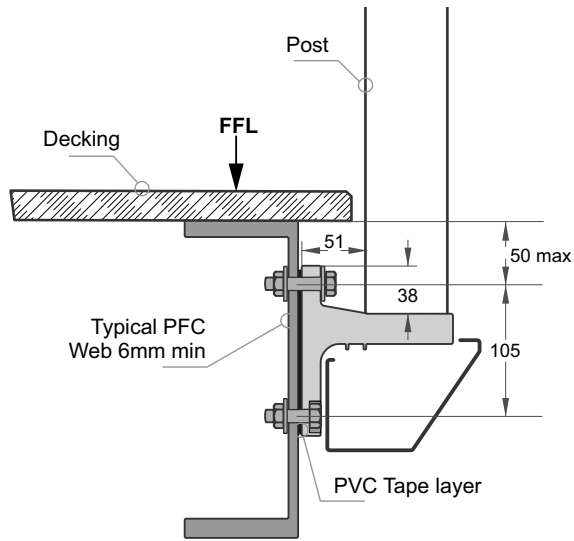
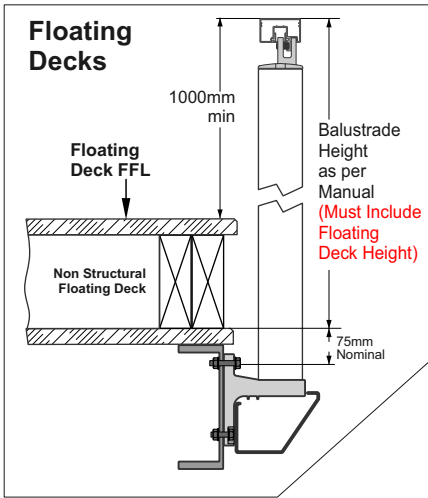
Balustrade Height above FFL, mm							
1000	1050	1100	1150	1200	1250	1300 max	
1500	1450	1400	1350	1300	1250	1200	
Post Spacing max, mm							

Up to and including Extra High Wind Zone

General Balustrades	17mm Balusters only
Balustrade Height, mm	Balustrade Height, mm
1200 max	1000 min - 1275 max
1000	1480
Post Spacing max, mm	Post Spacing max, mm

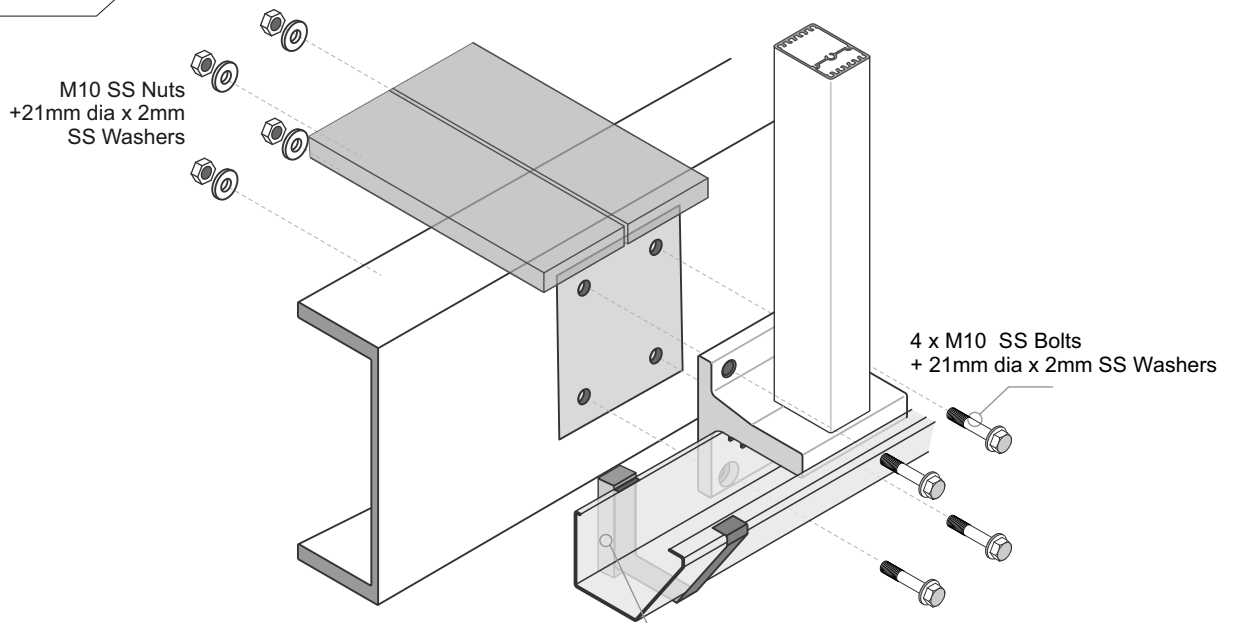
General Notes:

- 1 - All measurements mm
- 2 - Domestic Occupancy only A, A other and C3.
- 3 - Balustrade Height measured above Deck/FFL. 1000mm min
- 4 - Wind Zones as per NZS 3604:2011



Important Installation notes:

- 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 installed between the Gutter Bracket and Steel
- 4 - All Fixings must be Stainless steel



Guttering - Runs under the JEC137/65 Gutter Bracket. Attached separately either side of the JEC137/65 to suit proprietary guttering systems. Pack out to clear bracket.

Typical TOP Fix to Concrete - JEC 200, 110mm x 100mm, 4 hole Base Plate - M10 SS Studs

Balustrade Dimensions by Wind Zone.

Up to and including Very High Wind Zone

Balustrade Height above Deck, mm				
1000	1050	1100	1150	1200 max
1300	1250	1200	1150	1100
Post Spacing max, mm				

Up to and including Extra High Wind Zone

General Balustrades	17mm Balusters only
Balustrade Height, mm	Balustrade Height, mm
1200 max	1000 min - 1275 max
1000	1480
Post Spacing max, mm	Post Spacing max, mm

- General Notes:
- 1 - All measurements mm
 - 2 - Domestic Occupancy only A, A other and C3.
 - 3 - Balustrade Height measured above Deck/FFL. 1000mm min
 - 4 - Wind Zones as per NZS 3604:2011

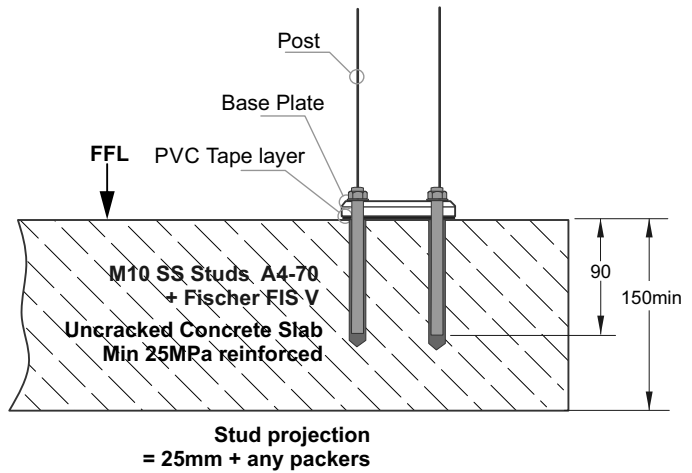


Installation details Fischer FIS V 300T

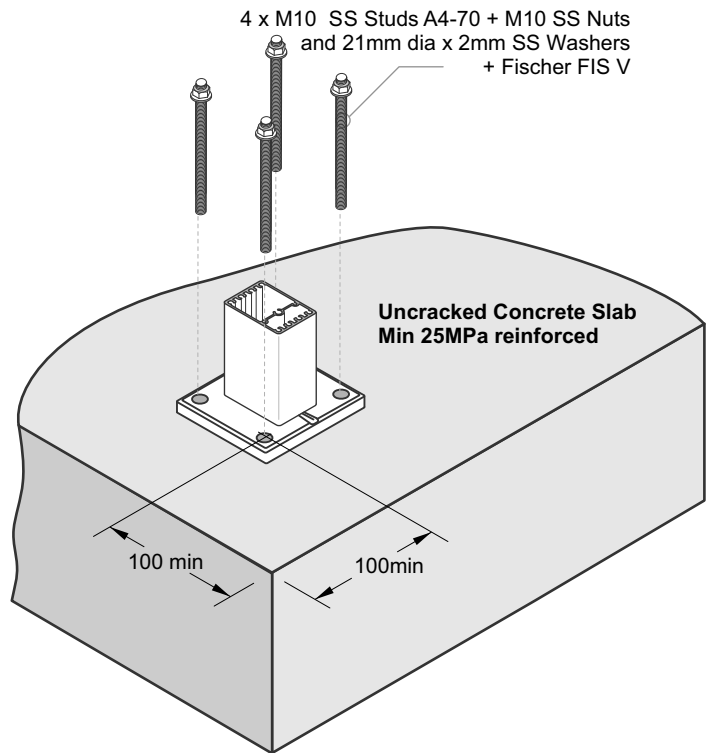
Thread diameter M10
 Drill hole diameter = 12 mm
 Drill hole depth = 100 mm
 Anchorage depth = 90 mm

Drilling method Hammer drilling
 Drill hole cleaning 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.



- Important Installation Notes:**
- 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 Baseplate and Concrete
 - 5 - Use Threadlok on Nuts
 - 6 - All fixings must be Stainless Steel



Typical TOP Fix to Concrete - JEC 201, 110mm x 90mm, 2 hole Base Plate - M12 SS Studs

Balustrade Dimensions by Wind Zone.

Up to and including Very High Wind Zone

Balustrade Height above Deck, mm				
1000	1050	1100	1150	1200 max
1070	1020	970	920	870
Post Spacing max, mm				

Up to and including Extra High Wind Zone

General Balustrades	17mm Balusters only
Balustrade Height, mm	Balustrade Height, mm
1200 max	1000 min - 1275 max
740	960
Post Spacing max, mm	Post Spacing max, mm

General Notes:

- 1 - All measurements mm
- 2 - Domestic Occupancy only A, A other and C3.
- 3 - Balustrade Height measured above Deck/FFL. 1000mm min
- 4 - Wind Zones as per NZS 3604:2011

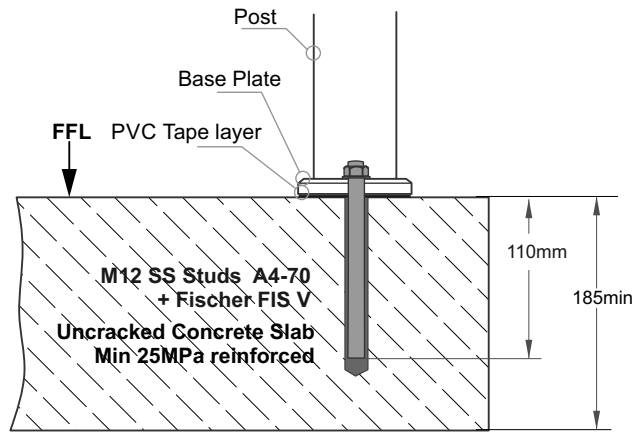


Installation details Fischer FIS V 300T

Thread diameter	M12
Drill hole diameter	= 14 mm
Drill hole depth	= 120mm
Anchorage depth	= 110mm

Drilling method	Hammer drilling
Drill hole cleaning	4 times blowing, 4 times brushing, 4 times blowing

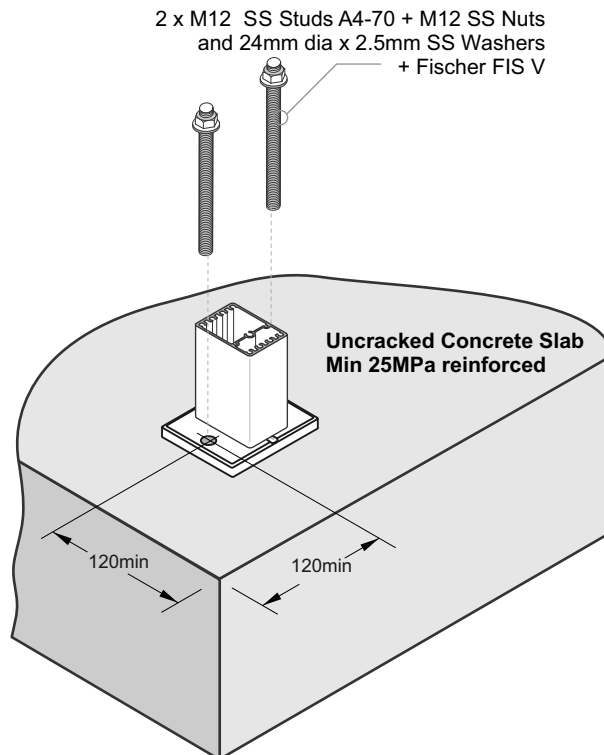
No borehole cleaning required in case of using a hollow drill bit, e.g. fischer FHD.



Stud projection = 25mm + any packers

Important Installation Notes:

- 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 Baseplate and Concrete
- 5 - Use Threadlok on Nuts
- 6 - All fixings must be Stainless Steel



Typical TOP Fix to Concrete - JEC 232, 128mm x 90mm, 2 hole Base Plate - M12 SS Studs

Balustrade Dimensions by Wind Zone.

Up to and including Very High Wind Zone

Balustrade Height above Deck, mm				
1000	1050	1100	1150	1200 max
1300	1250	1200	1150	1100
Post Spacing max, mm				

Up to and including Extra High Wind Zone

General Balustrades	17mm Balusters only
Balustrade Height, mm	Balustrade Height, mm
1200 max	1000 min - 1275 max
1000	1480
Post Spacing max, mm	Post Spacing max, mm

General Notes:

- 1 - All measurements mm
- 2 - Domestic Occupancy only A, A other and C3.
- 3 - Balustrade Height measured above Deck/FFL. 1000mm min
- 4 - Wind Zones as per NZS 3604:2011

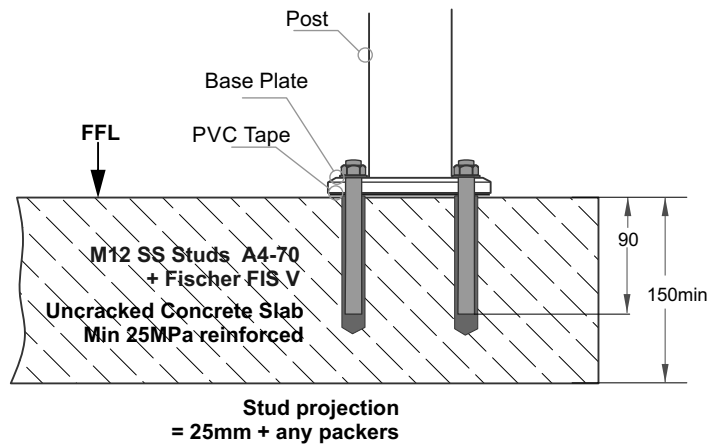


Installation details Fischer FIS V 300T

Thread diameter	M12
Drill hole diameter	= 14 mm
Drill hole depth	= 100 mm
Anchorage depth	= 90 mm

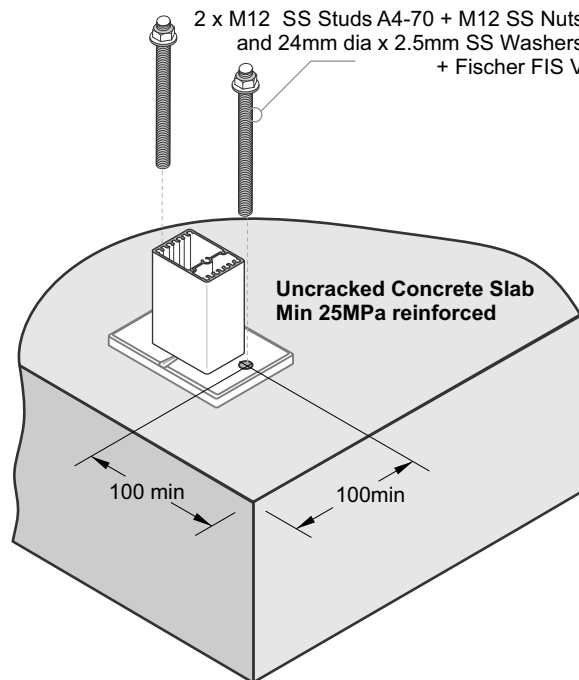
Drilling method	Hammer drilling
Drill hole cleaning	4 times blowing, 4 times brushing, 4 times blowing

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



Important Installation Notes:

- 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 Baseplate and Concrete
- 5 - Use Threadlok on Nuts
- 6 - All fixings must be Stainless Steel



Typical TOP Fix to Concrete - JEC 205 +207, 120mm x 100mm, 2 hole Base Plate - M12 SS Studs

Balustrade Dimensions by Wind Zone.

Up to and including Very High Wind Zone

Balustrade Height above Deck, mm				
1000	1050	1100	1150	1200 max
970	920	870	820	770
Post Spacing max, mm				

Up to and including Extra High Wind Zone

NOT SUITABLE.

General Notes:

- 1 - All measurements mm
- 2 - Domestic Occupancy only A, A other and C3.
- 3 - Balustrade Height measured above Deck/FFL. 1000mm min
- 4 - Wind Zones as per NZS 3604:2011

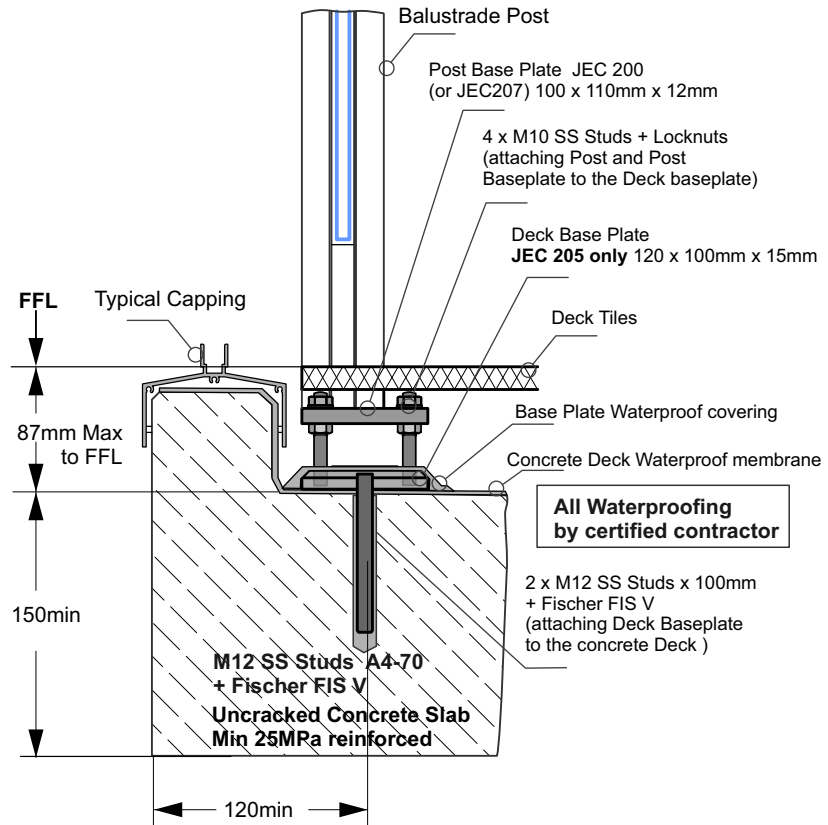


Installation details Fischer FIS V 300T

Thread diameter M12
 Drill hole diameter = 14 mm
 Drill hole depth = 90 mm
 Anchorage depth = 80 mm

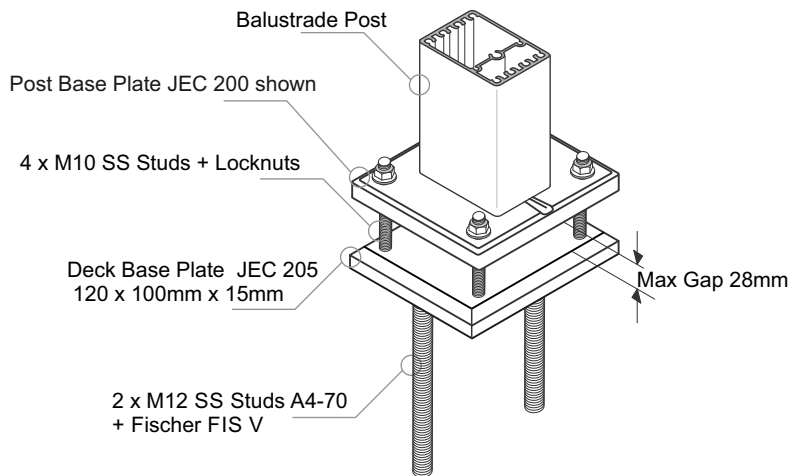
Drilling method Hammer drilling
 Drill hole cleaning 4 times blowing,
 4 times brushing,
 4 times blowing

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



Important Installation notes:

- 1 - The Project Engineer must ensure the structure can support the appropriate loads
- 2 - Substructure shown indicatively only
- 3 - All fixings must engage into the structural slab
- 4 - A PVC Tape layer must be installed between the Base plate and Concrete
- 5 - Waterproofing membrane final details and certification by others
- 6 - All fixings must be Stainless steel



Typical TOP Fix to Concrete - Embed Post in Concrete Slab

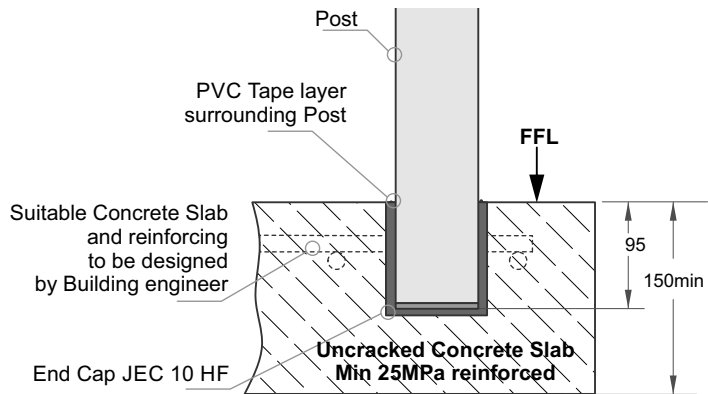
Balustrade Dimensions by Wind Zone.

Up to and including Very High Wind Zone

Balustrade Height above Deck, mm				
1000	1050	1100	1150	1200 max
1300	1250	1200	1150	1100
Post Spacing max, mm				

Up to and including Extra High Wind Zone

General Balustrades	17mm Balusters only
Balustrade Height, mm	Balustrade Height, mm
1200 max	1000 min - 1275 max
1000	1480
Post Spacing max, mm	Post Spacing max, mm

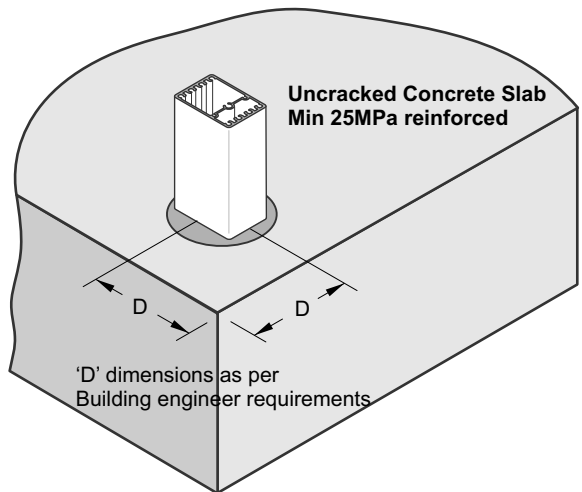


General Notes:

- 1 - All measurements mm
- 2 - Domestic Occupancy only A, A other and C3.
- 3 - Balustrade Height measured above Deck/FFL. 1000mm min
- 4 - Wind Zones as per NZS 3604:2011
- 5 - Only suitable for Ground Level sites.
NOT elevated

Important Installation notes:

- 1 - The Project Engineer must ensure the structure can support the appropriate loads
- 2 - Substructure shown indicatively only
- 3 - A PVC Tape layer must completely surround the Post
- 4 - Mortar pocket 70mm sq or 85mm dia.
Avoid mortar splashes on exposed aluminium. Wash off immediately.



Typical FACE Fix Post to Concrete - M10 SS Studs

Balustrade Dimensions by Wind Zone.

Up to and including Very High Wind Zone

Balustrade Height above Deck, mm				
1000	1050	1100	1150	1200 max
1300	1250	1200	1150	1100
Post Spacing max, mm				

Up to and including Extra High Wind Zone

General Balustrades	17mm Balusters only
Balustrade Height, mm	Balustrade Height, mm
1200 max	1000 min - 1275 max
1000	1480
Post Spacing max, mm	Post Spacing max, mm

General Notes:

- 1 - All measurements mm
- 2 - Domestic Occupancy only A, A other and C3.
- 3 - Balustrade Height measured above Deck/FFL. 1000mm min
- 4 - Wind Zones as per NZS 3604:2011

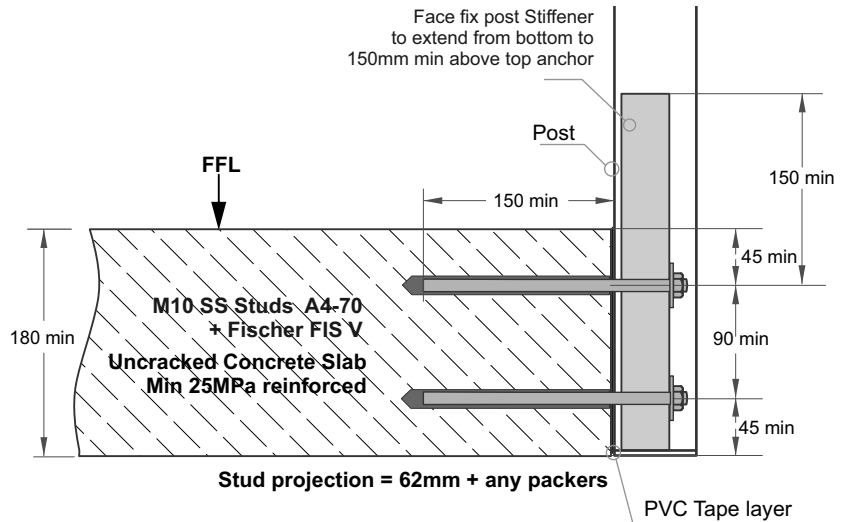


Installation details Fischer FIS V 300T

Thread diameter	M10
Drill hole diameter	= 12 mm
Drill hole depth	= 160 mm
Anchorage depth	= 150 mm

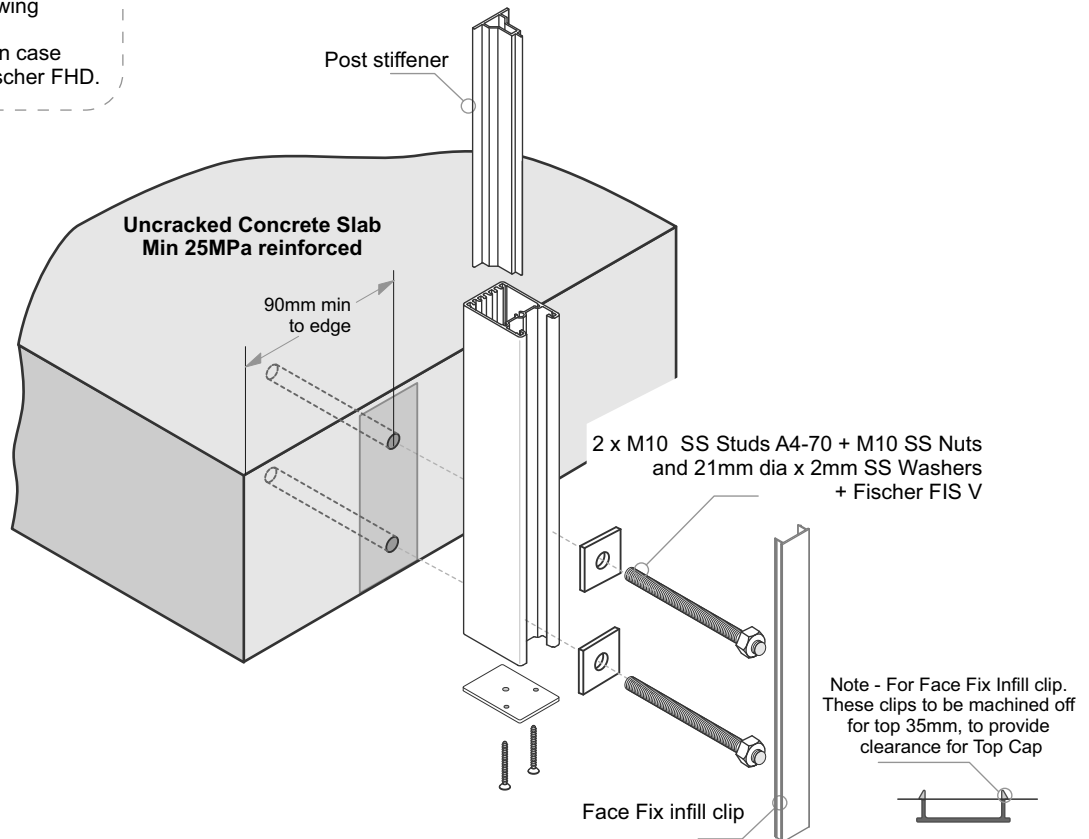
Drilling method	Hammer drilling
Drill hole cleaning	4 times blowing, 4 times brushing, 4 times blowing

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



Important Installation Notes:

- 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 Post and Concrete
- 5 - Use Threadlok on Nuts
- 6 - All fixings must be Stainless Steel



Typical FACE Fix to Concrete - JEC 137/65, Gutter Bracket - M10 SS Studs

Balustrade Dimensions by Wind Zone.

Up to and including Very High Wind Zone

Balustrade Height above Deck, mm				
1000	1050	1100	1150	1200 max
1300	1250	1200	1150	1100
Post Spacing max, mm				

Up to and including Extra High Wind Zone

General Balustrades	17mm Balusters only
Balustrade Height, mm	Balustrade Height, mm
1200 max	1000 min - 1275 max
1000	1480
Post Spacing max, mm	Post Spacing max, mm

General Notes:

- 1 - All measurements mm
- 2 - Domestic Occupancy only A, A other and C3.
- 3 - Balustrade Height measured above Deck/FFL. 1000mm min
- 4 - Wind Zones as per NZS 3604:2011

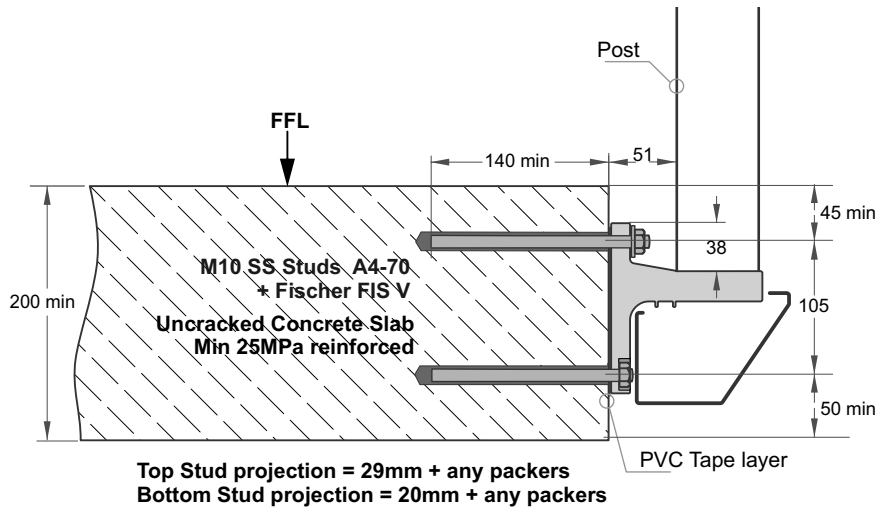


Installation details Fischer FIS V 300T

Thread diameter	M10
Drill hole diameter	= 12 mm
Drill hole depth	= 150 mm
Anchorage depth	= 140 mm

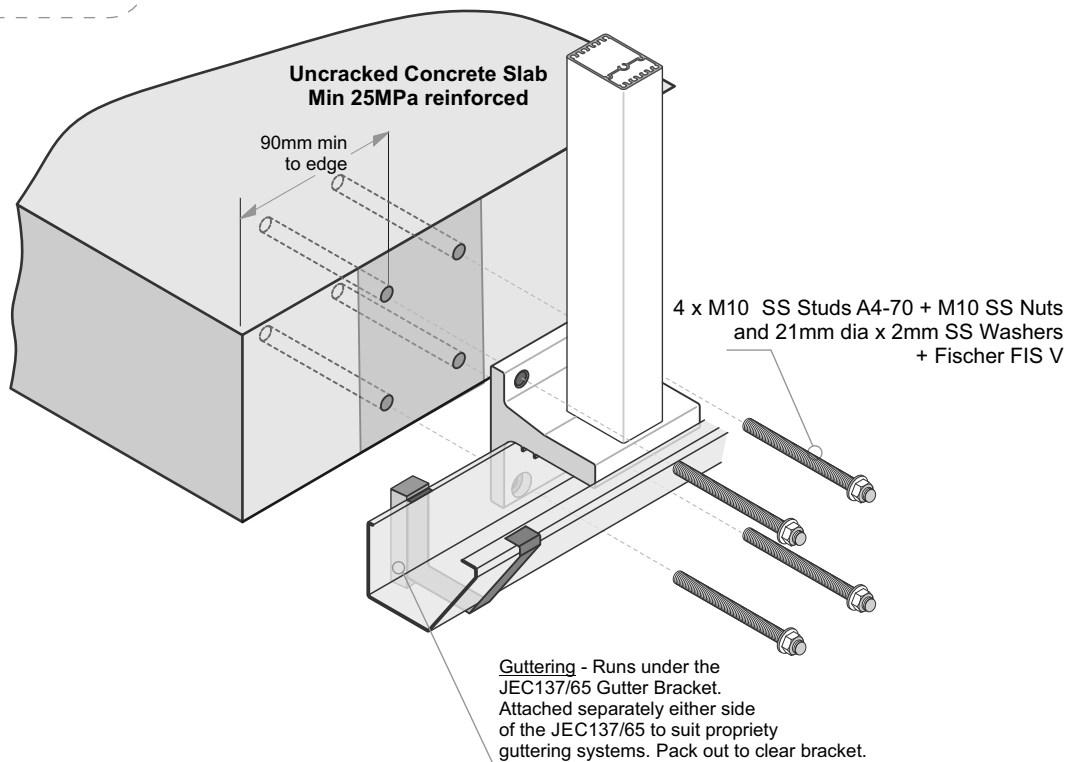
Drilling method	Hammer drilling
Drill hole cleaning	4 times blowing, 4 times brushing, 4 times blowing

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



Important Installation Notes:

- 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 Gutter Bracket and Concrete
- 5 - Use Threadlok on Nuts
- 6 - All fixings must be Stainless Steel



Typical TOP Fix to Timber - JEC 221, 110mm x 90mm, 4 hole Base Plate - M10 SS Coachscrews or Bolts

The pre NZS3604:2011 mounting details are included for older, existing buildings. New buildings must comply with NZS3604:2011- Double Boundary Joists

Balustrade Dimensions by Wind Zone.

Up to and including Very High Wind Zone

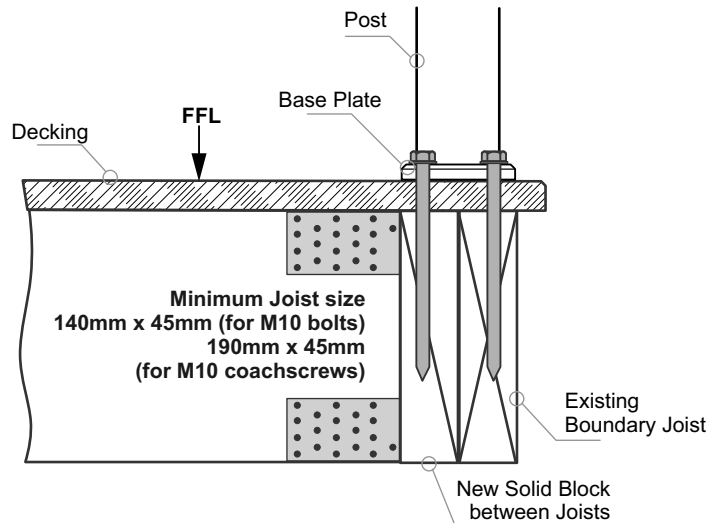
Balustrade Height above FFL, mm				
1000	1050	1100	1150	1200
1400	1350	1300	1250	1200
Post Spacing max, mm				

Up to and including Extra High Wind Zone

NOT SUITABLE.

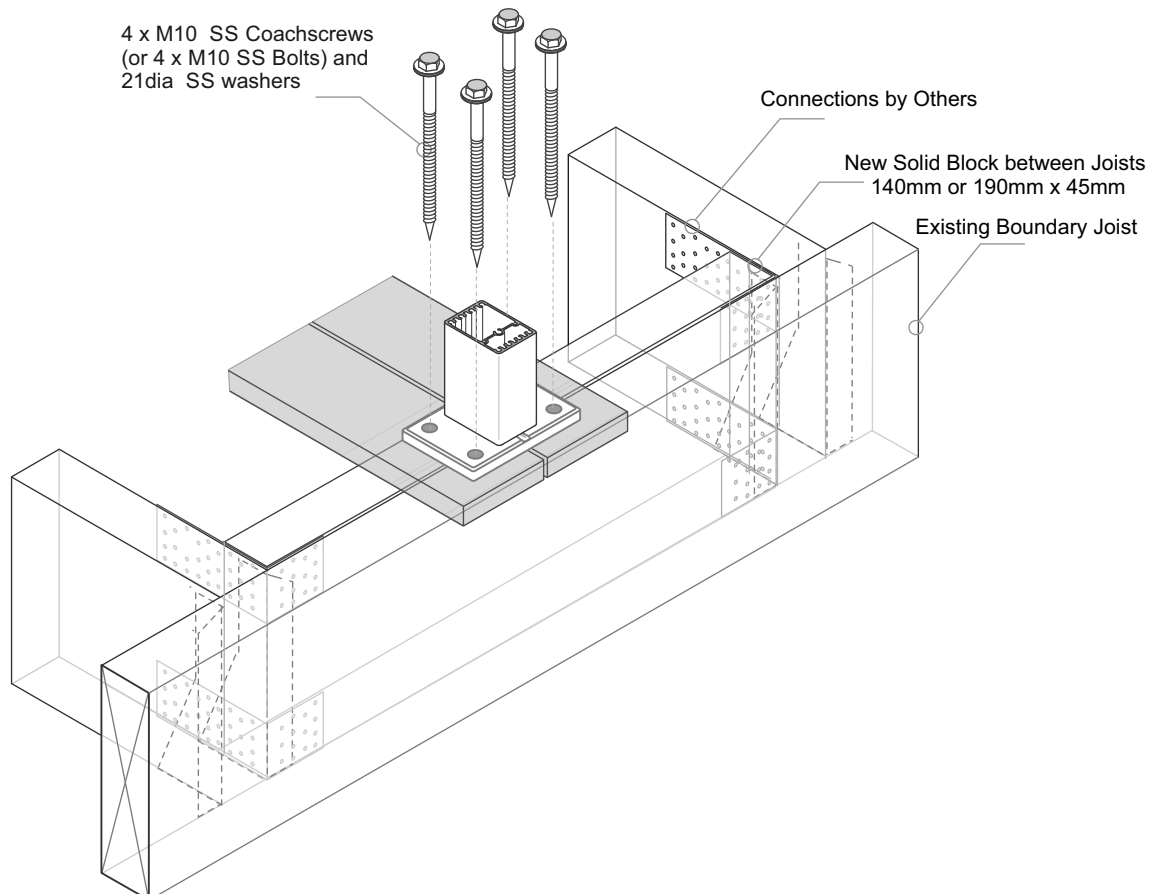
General Notes:

- 1 - All measurements mm
- 2 - Domestic Occupancy only A, A other and C3.
- 3 - Balustrade Height measured above Deck/FFL. 1000mm min
- 4 - Wind Zones as per NZS 3604:2011



Important Installation notes:

- 1 - The Project Engineer must ensure the structure can support the appropriate loads
- 2 - Substructure shown indicatively only. Timber SG8 minimum strength
- 3 - Coachscrews 130mm min engagement into joists, predrill 6mm holes.
- 4 - Bond all coachscrews with SIKA Supergrip to full depth
- 5 - All Fixings must be Stainless steel



Typical TOP Fix to Timber - JEC 200, 110mm x 100mm, 4 hole Base Plate - M10 SS Coachscrews or Bolts

The pre NZS3604:2011 mounting details are included for older, existing buildings. New buildings must comply with NZS3604:2011- Double Boundary Joists

Balustrade Dimensions by Wind Zone.

Up to and including Very High Wind Zone

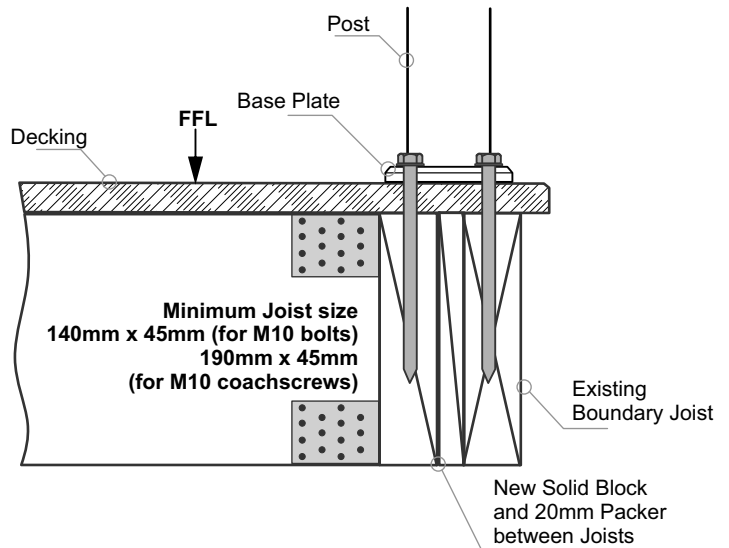
Balustrade Height above FFL, mm					
1000	1050	1100	1150	1200	
1400	1350	1300	1250	1200	
Post Spacing max, mm					

Up to and including Extra High Wind Zone

NOT SUITABLE.

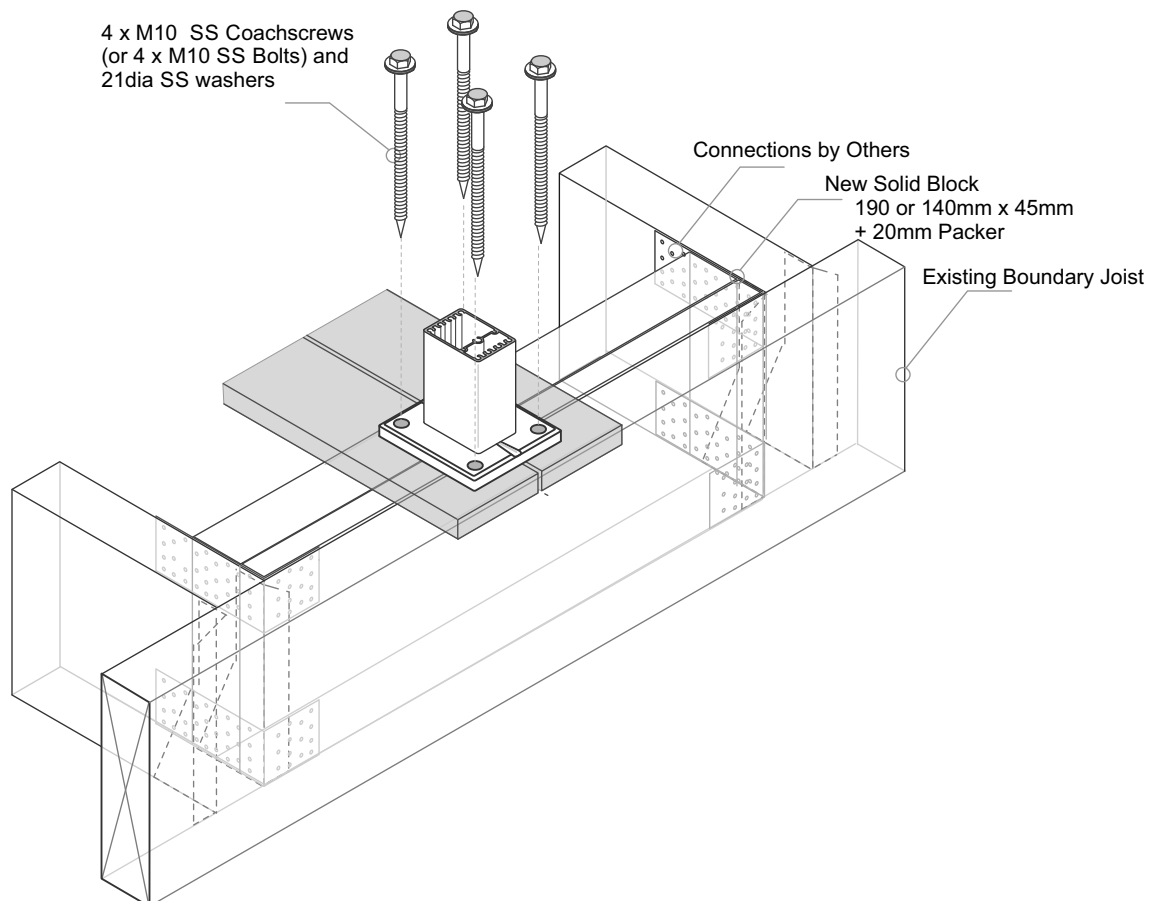
General Notes:

- 1 - All measurements mm
- 2 - Domestic Occupancy only A, A other and C3.
- 3 - Balustrade Height measured above Deck/FFL. 1000mm min
- 4 - Wind Zones as per NZS 3604:2011



Important Installation notes:

- 1 - The Project Engineer must ensure the structure can support the appropriate loads
- 2 - Substructure shown indicatively only. Timber SG8 minimum strength
- 3 - Coachscrews 130mm min engagement into joists, predrill 6mm holes.
- 4 - Bond all coachscrews with SIKA Supergrip to full depth
- 5 - All Fixings must be Stainless steel



Typical FACE Fix Post to Timber - M10 SS Coachscrews

The pre NZS3604:2011 mounting details are included for older, existing buildings. New buildings must comply with NZS3604:2011- Double Boundary Joists

Balustrade Dimensions by Wind Zone.

Up to and including Very High Wind Zone

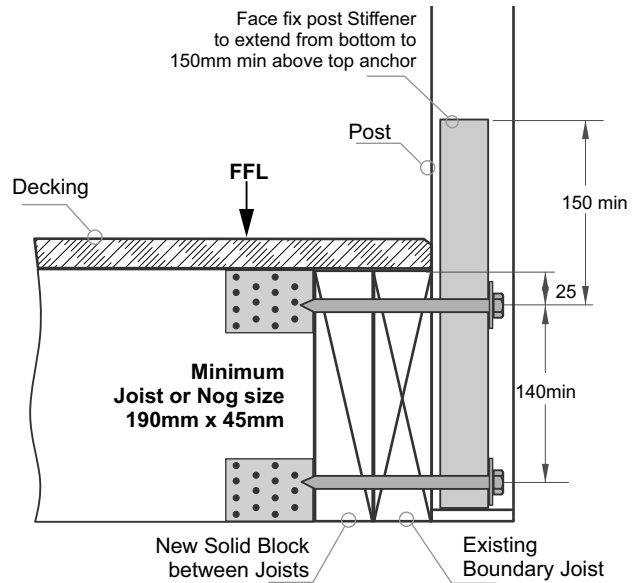
Balustrade Height above FFL, mm					
1000	1050	1100	1150	1200	
1400	1350	1300	1250	1200	
Post Spacing max, mm					

Up to and including Extra High Wind Zone

NOT SUITABLE.

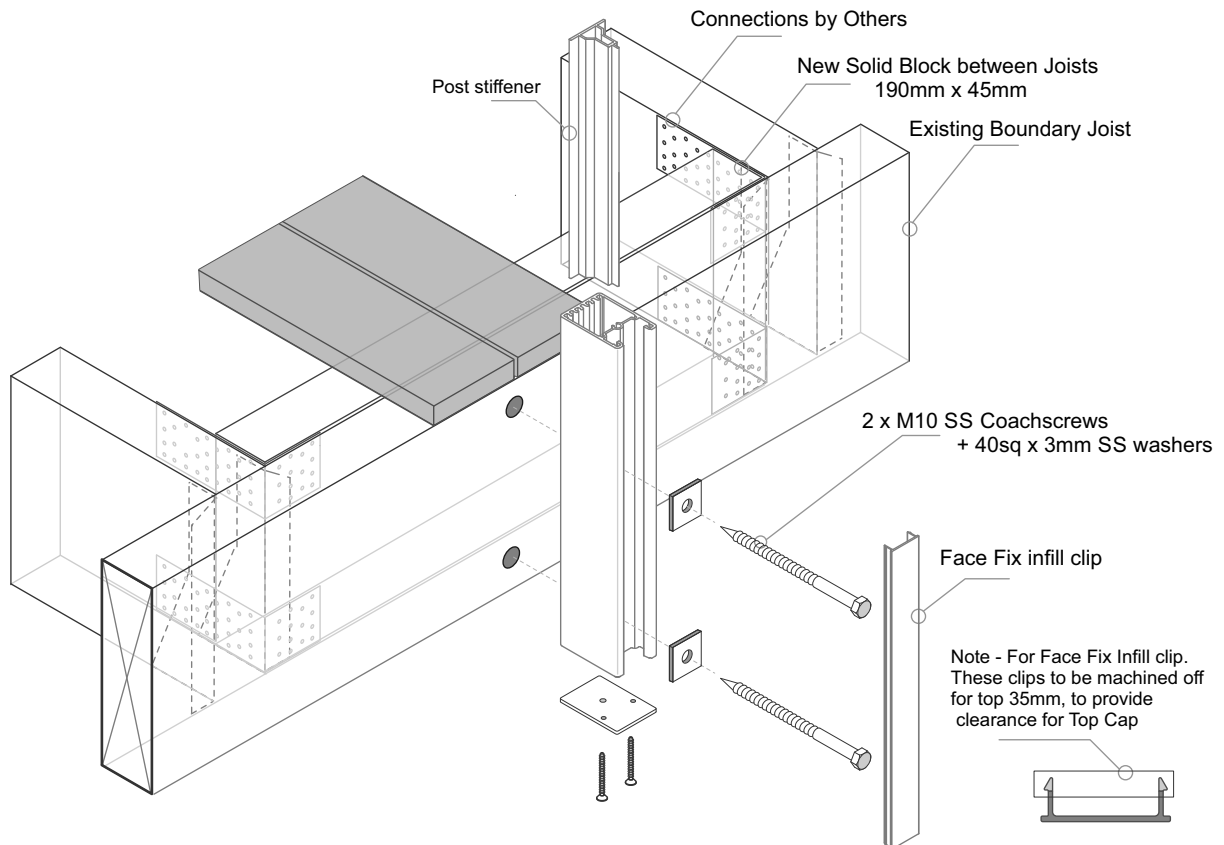
General Notes:

- 1 - All measurements mm
- 2 - Domestic Occupancy only A, A other and C3.
- 3 - Balustrade Height measured above Deck/FFL. 1000mm min
- 4 - Wind Zones as per NZS 3604:2011



Important Installation notes:

- 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 Supergrip to full depth
- 5 - All Fixings must be Stainless steel



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

The pre NZS3604:2011 mounting details are included for older, existing buildings. New buildings must comply with NZS3604:2011- Double Boundary Joists

Balustrade Dimensions by Wind Zone.

Up to and including Very High Wind Zone

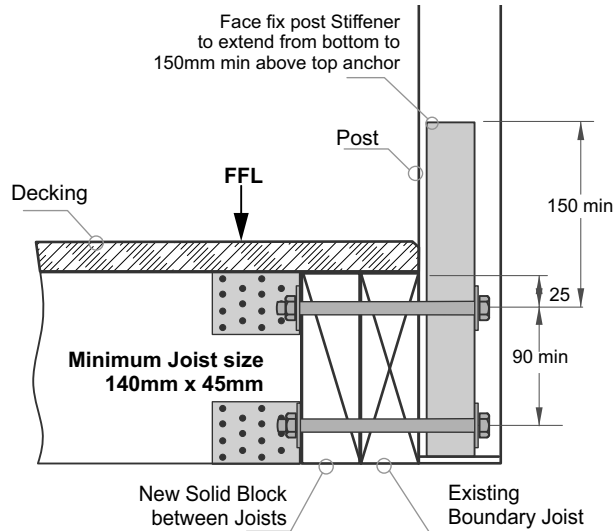
Balustrade Height above FFL, mm				
1000	1050	1100	1150	1200
1400	1350	1300	1250	1200
Post Spacing max, mm				

Up to and including Extra High Wind Zone

NOT SUITABLE.

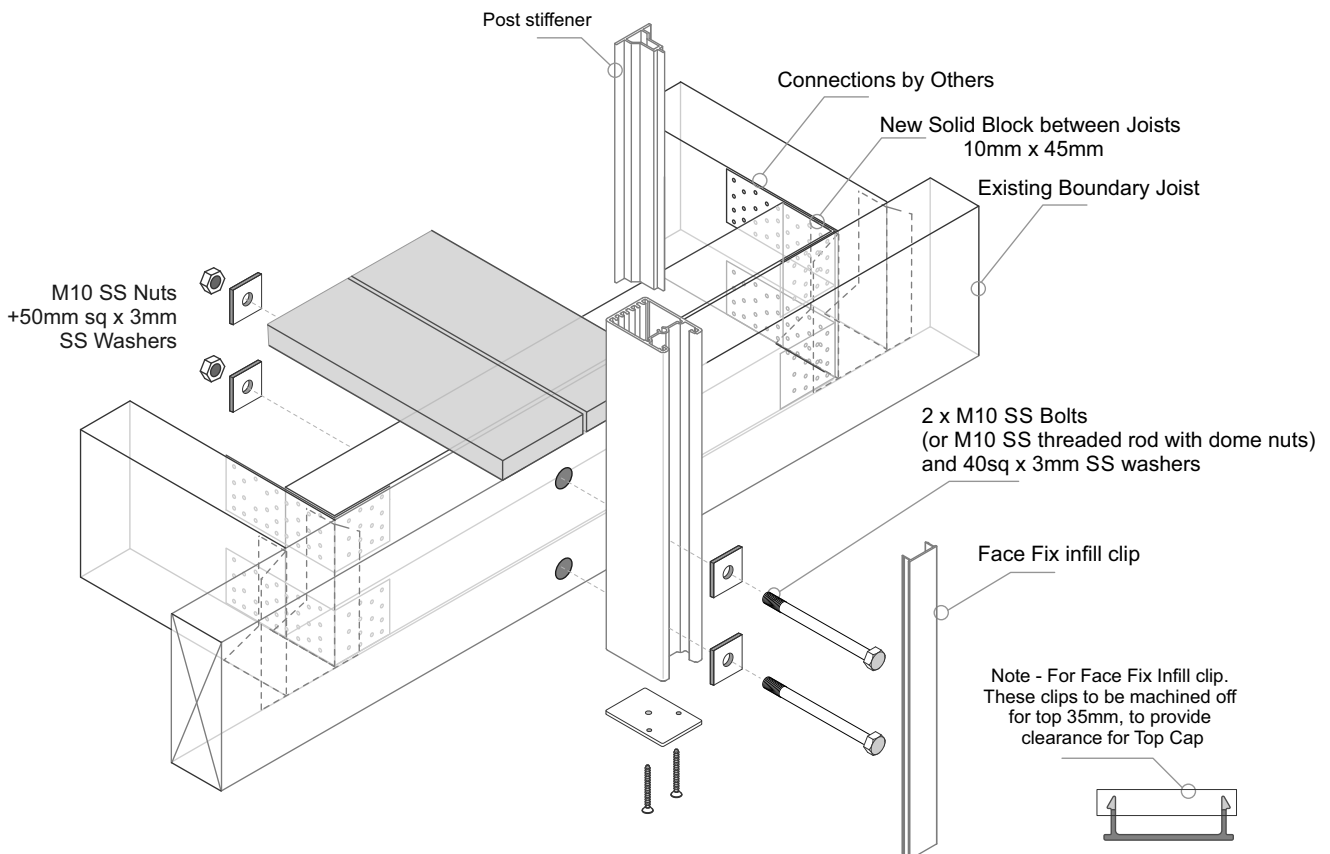
General Notes:

- 1 - All measurements mm
- 2 - Domestic Occupancy only A, A other and C3.
- 3 - Balustrade Height measured above Deck/FFL. 1000mm min
- 4 - Wind Zones as per NZS 3604:2011



Important Installation notes:

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



Typical FACE Fix to Timber - JEC 137/65, Gutter Bracket - M10 SS Coachscrews

The pre NZS3604:2011 mounting details are included for older, existing buildings. New buildings must comply with NZS3604:2011- Double Boundary Joists

Balustrade Dimensions by Wind Zone.

Up to and including Very High Wind Zone

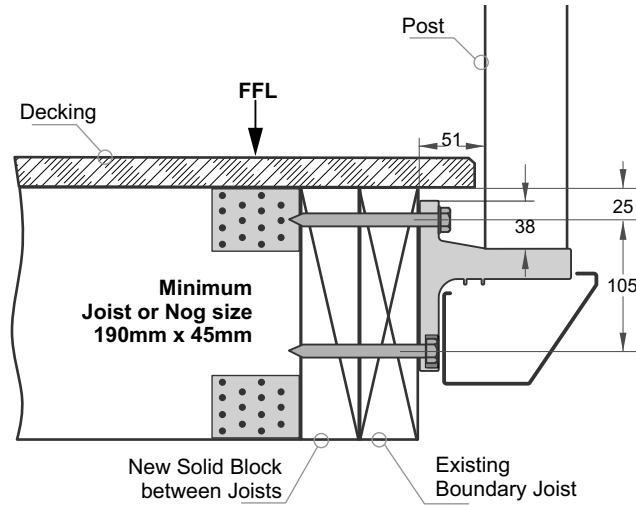
Balustrade Height above FFL, mm				
1000	1050	1100	1150	1200
1400	1350	1300	1250	1200
Post Spacing max, mm				

Up to and including Extra High Wind Zone

NOT SUITABLE.

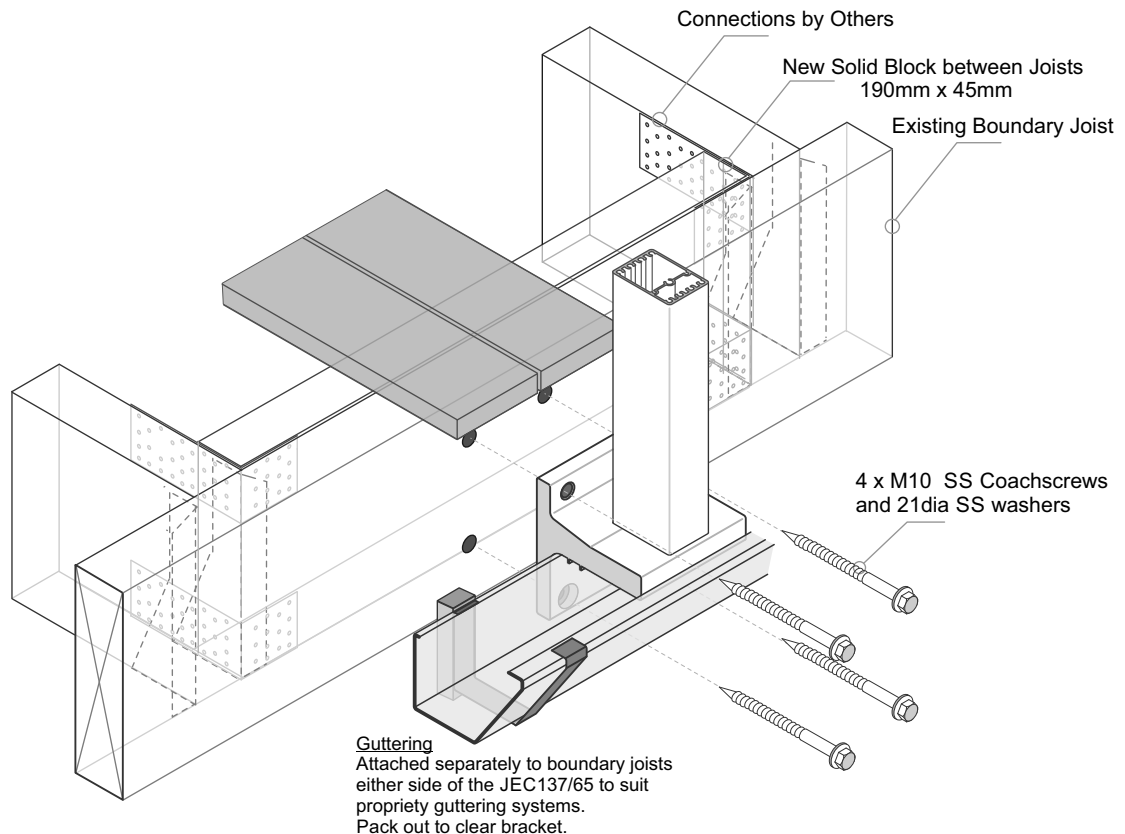
General Notes:

- 1 - All measurements mm
- 2 - Domestic Occupancy only A, A other and C3.
- 3 - Balustrade Height measured above Deck/FFL. 1000mm min
- 4 - Wind Zones as per NZS 3604:2011



Important Installation notes:

- 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 Supergrip to full depth
- 5 - All Fixings must be Stainless steel



Typical FACE Fix to Timber - JEC 137/65, Gutter Bracket - M10 SS Bolts or Threaded Rod

The pre NZS3604:2011 mounting details are included for older, existing buildings. New buildings must comply with NZS3604:2011- Double Boundary Joists

Balustrade Dimensions by Wind Zone.

Up to and including Very High Wind Zone

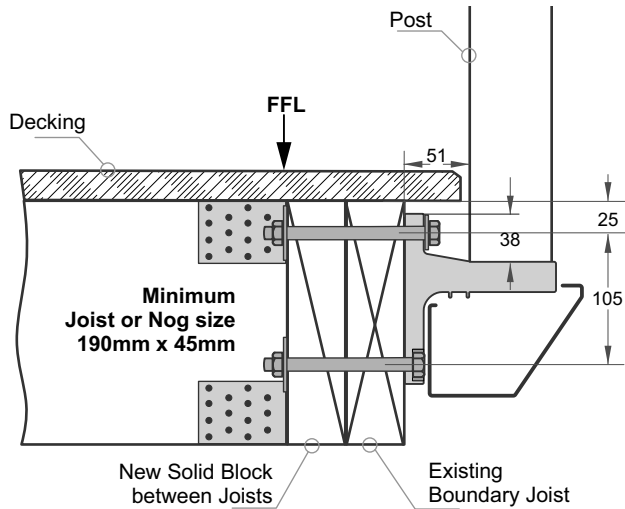
Balustrade Height above FFL, mm					
1000	1050	1100	1150	1200	
1400	1350	1300	1250	1200	
Post Spacing max, mm					

Up to and including Extra High Wind Zone

NOT SUITABLE.

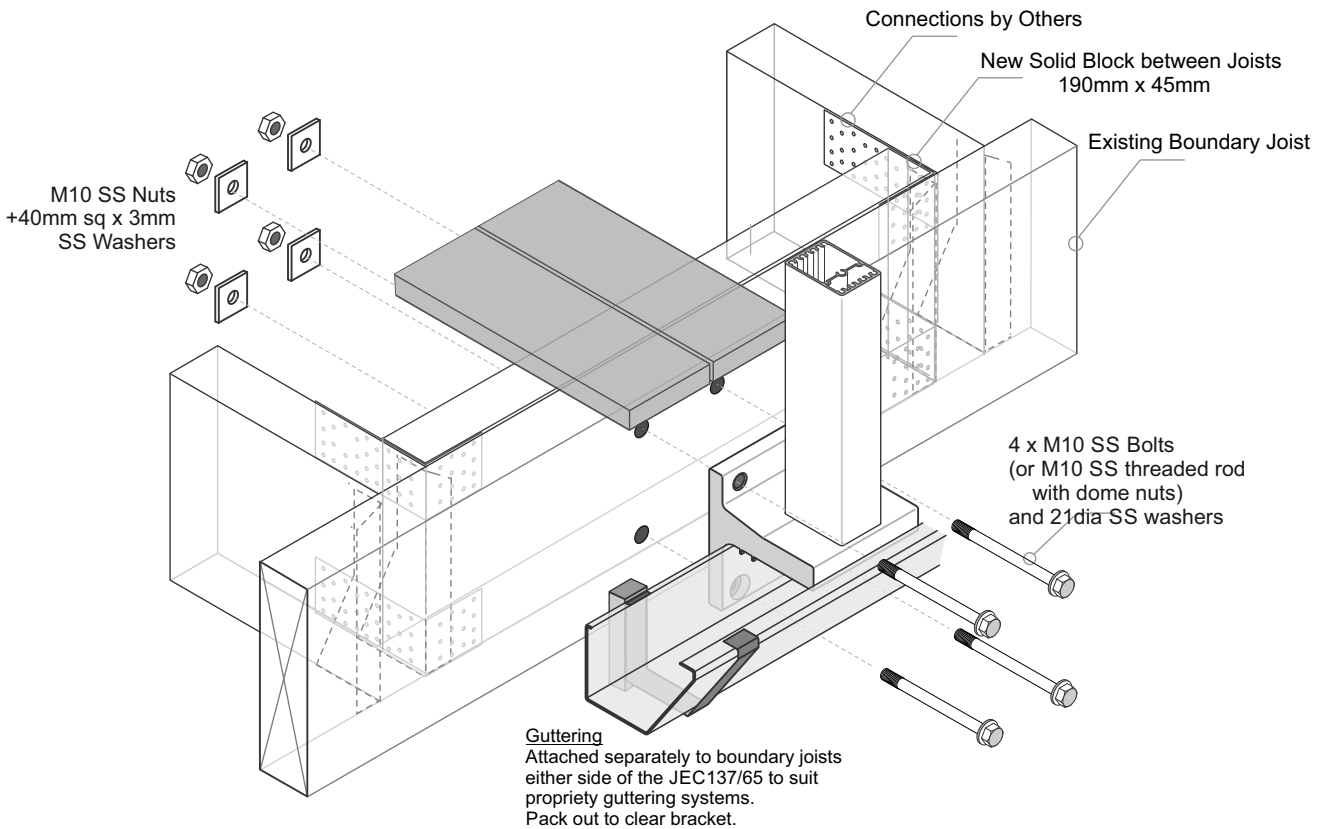
General Notes:

- 1 - All measurements mm
- 2 - Domestic Occupancy only A, A other and C3.
- 3 - Balustrade Height measured above Deck/FFL. 1000mm min
- 4 - Wind Zones as per NZS 3604:2011



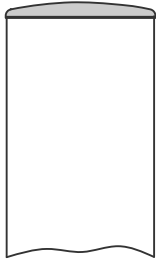
Important Installation notes:

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



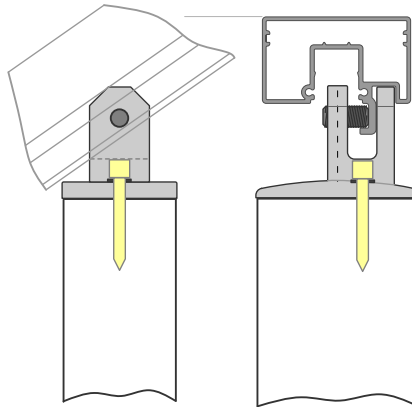
Post Caps - no swivel/clamp

Use for 10mm Toughened Glass with Handrail, or 13.2mm Laminated Glass with no Handrail. Top Protection Cap recommended



All tap fit

Post Caps - with swivel/clamp - to Handrail

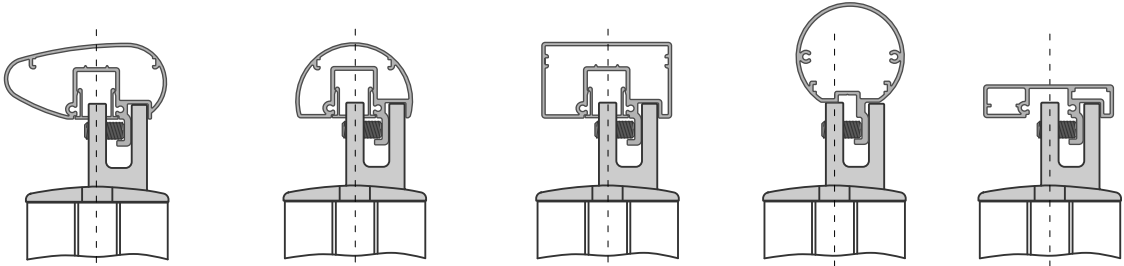


Attach from top with special 14g dia x 50mm SS PK Capscrew

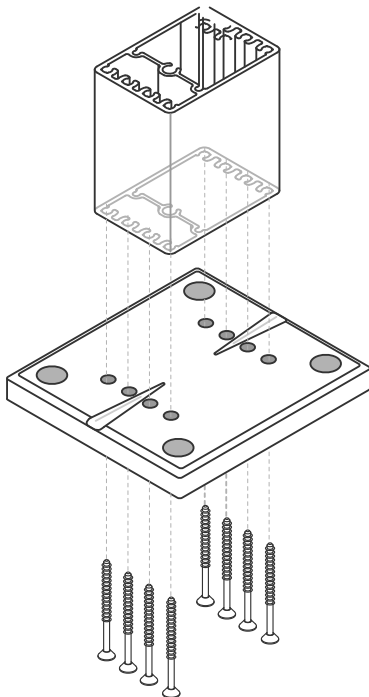
Showing 35deg max inclination - for all handrails

Handrail Attach

All handrails fixings identical - clamp attach with M8 grubscrew

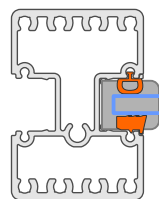
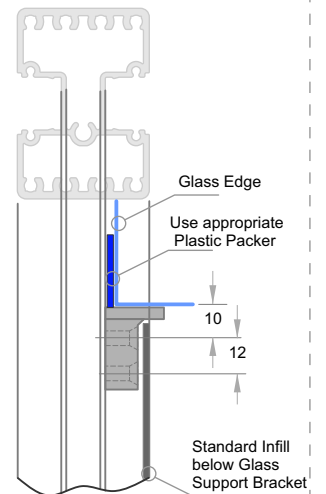
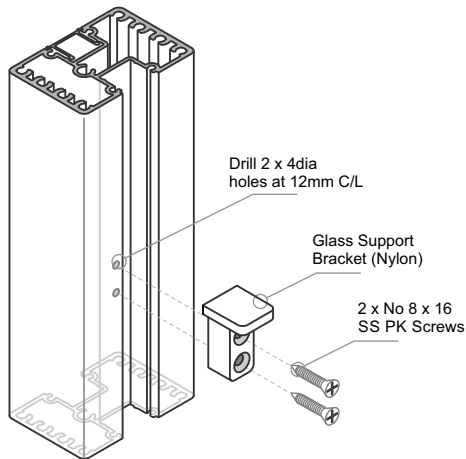


Baseplate to Post Attach



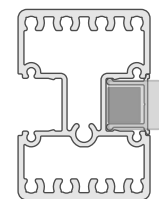
JVBHT SCREW/ 50 x 10
C/S PK SQ drive high tensile screws

Glass Support Attach



Showing Glass and seals above the Glass Support Bracket

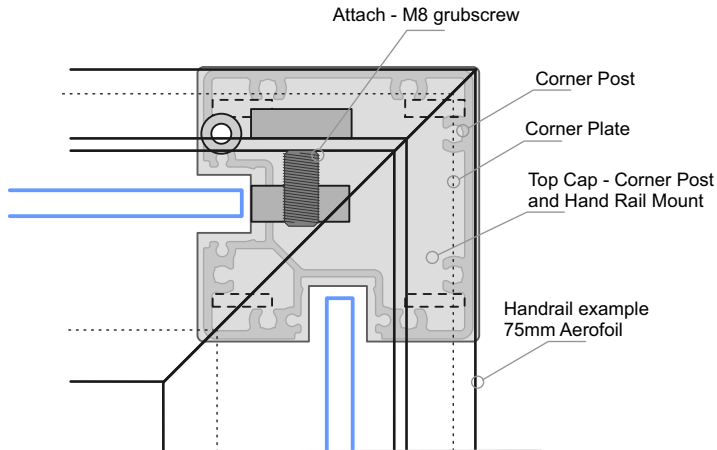
Important Note:
All Glass engagement 10mm min



Showing Standard Infill below Glass Support Bracket

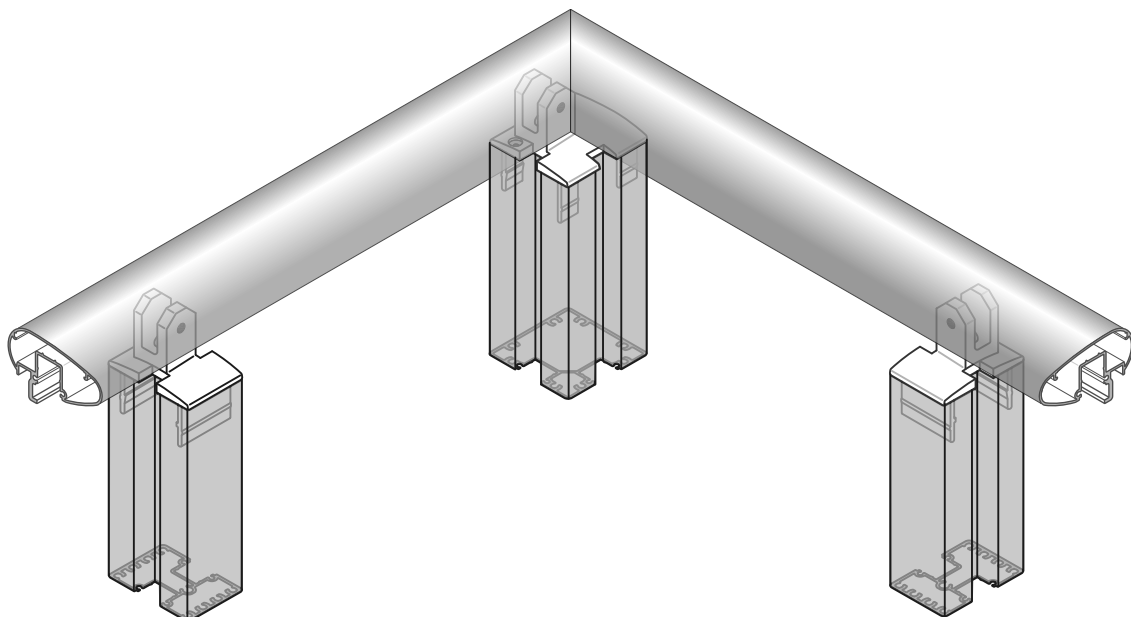
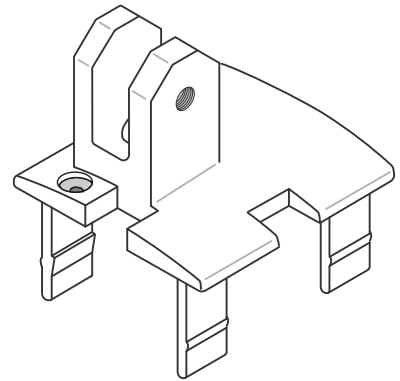
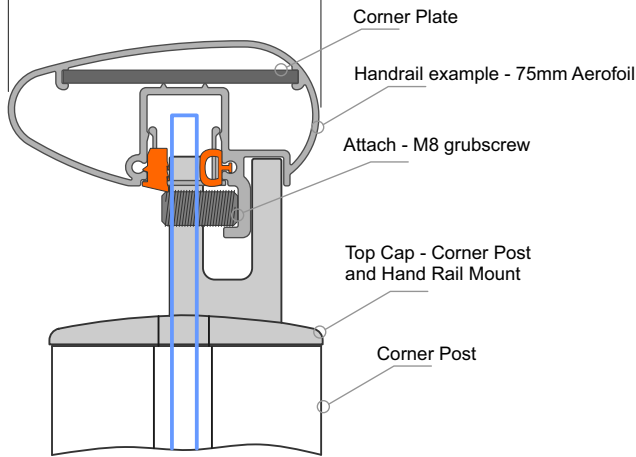
**Handrail Attach
at Corner Post**

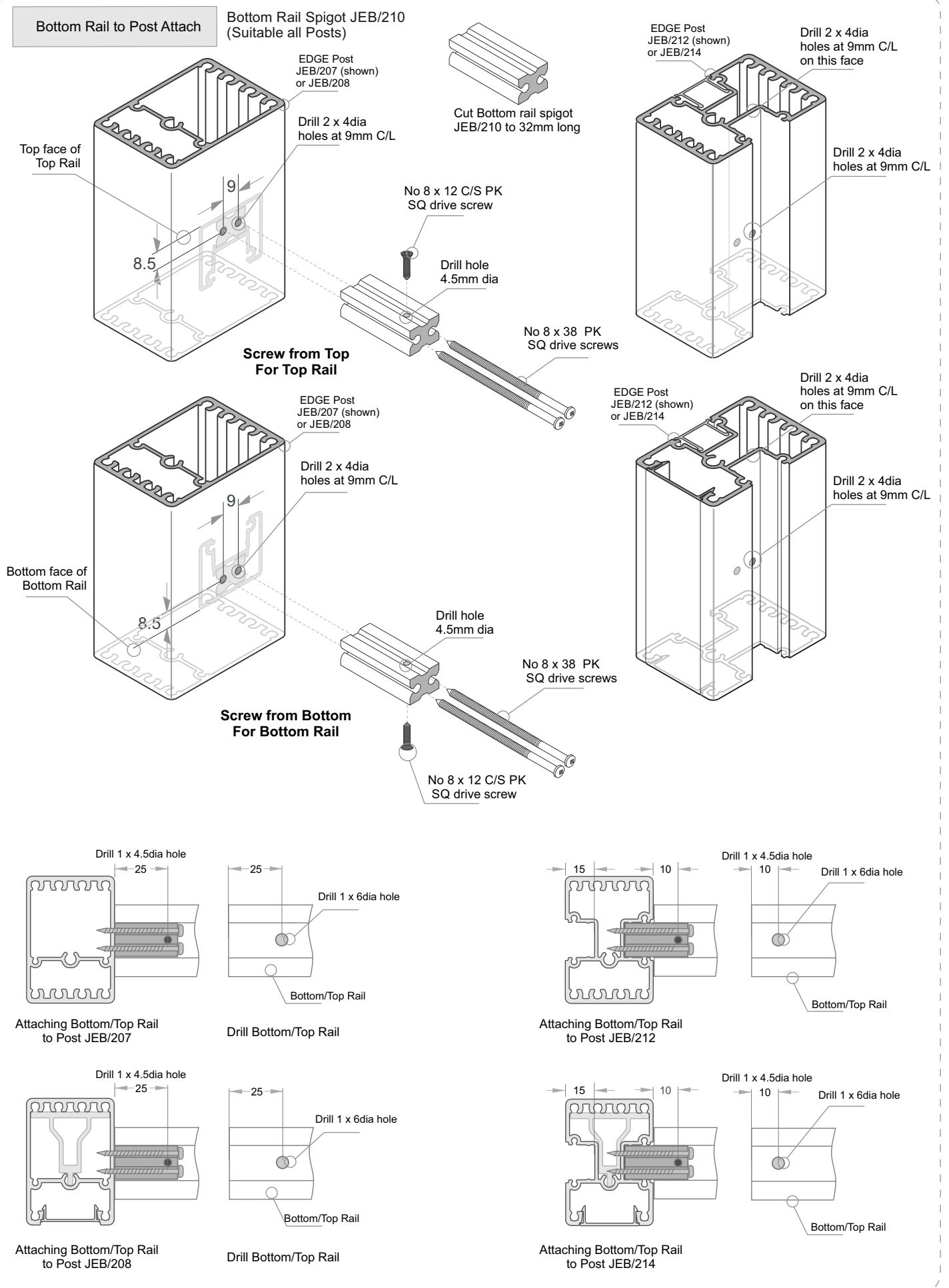
All handrails fixings identical - clamp attach with M8 grubscrew



Plan view above, looking down through
1 - Hand rail
2 - Top Cap/Handrail Corner Mount
3 - Corner Post

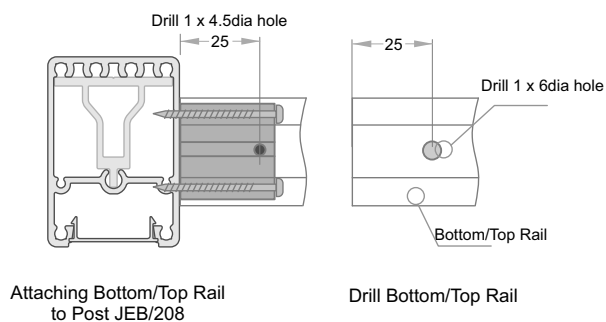
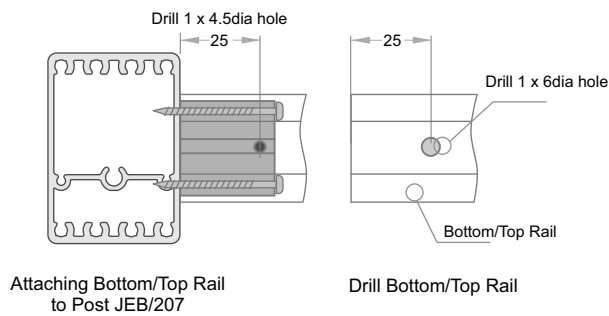
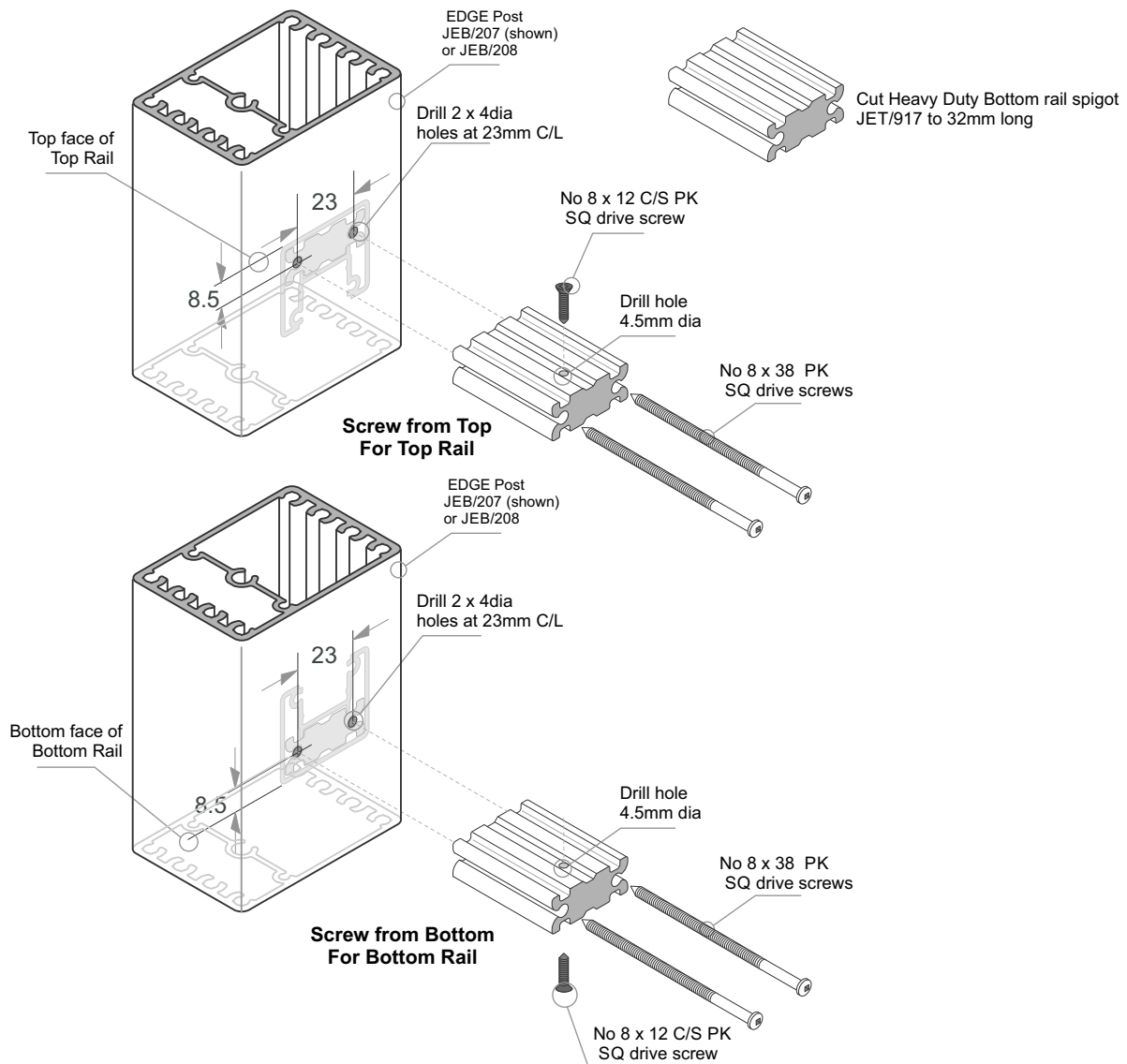
Important Note:
All Glass Engagements
10mm min





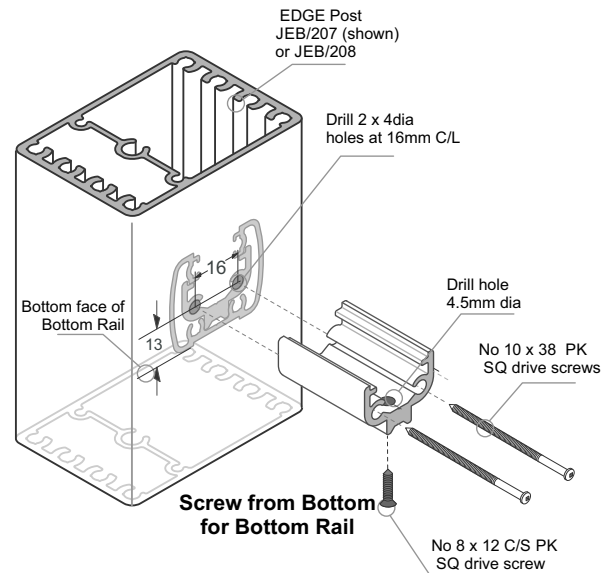
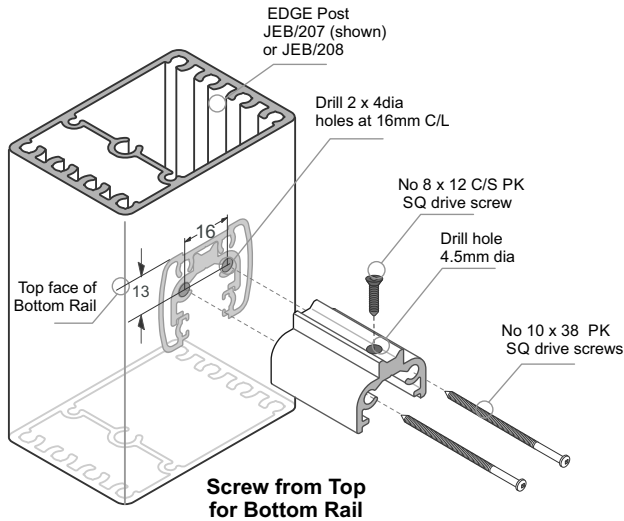
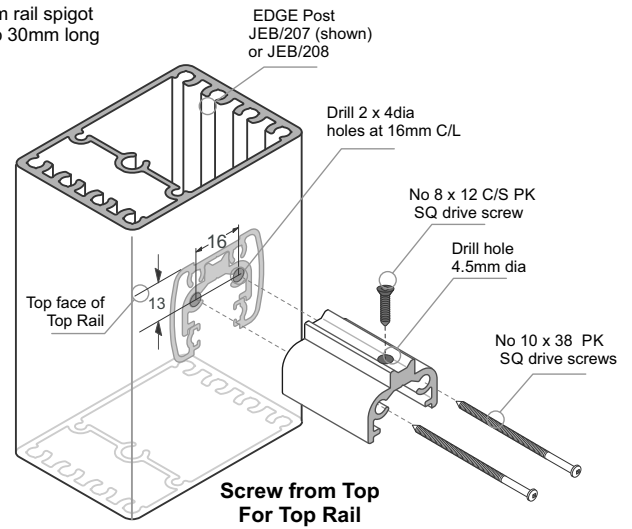
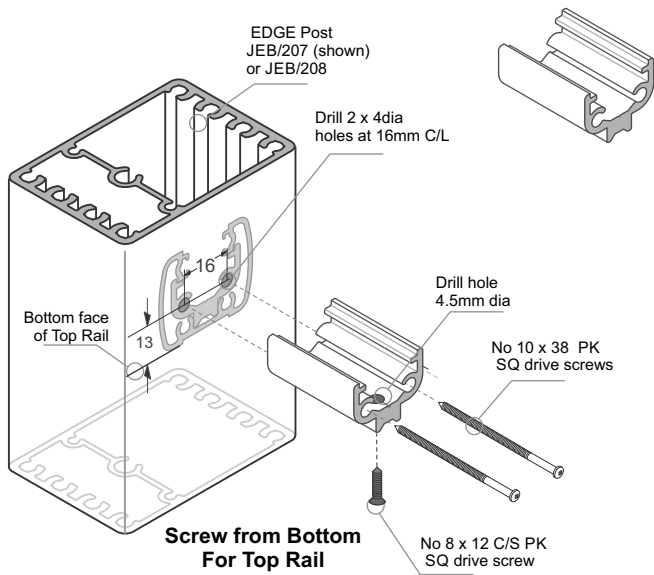
Bottom Rail to Post Attach

**Heavy Duty Bottom Rail Spigot JET/917/5
(NOT Suitable Semi Frameless Posts)**



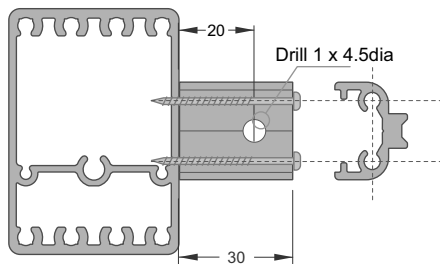
**Bottom Rail to Post Attach
(Viking Components)**

Viking Bottom Rail Spigot JVB017
(NOT Suitable Semi Frameless Posts)

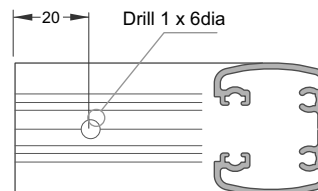


This Setout for Baluster Installations

This Setout for Glass Installations

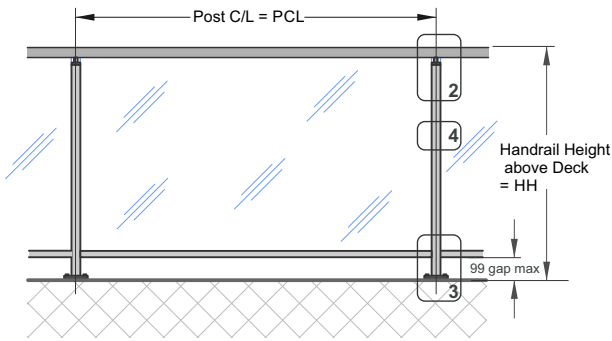


Attaching Bottom or Top Rail
TOP Fix Edge Post. PN JEB/207/5
or FACE Fix Edge Post. PN JEB/208/5
Not suitable for Semiframeless Posts

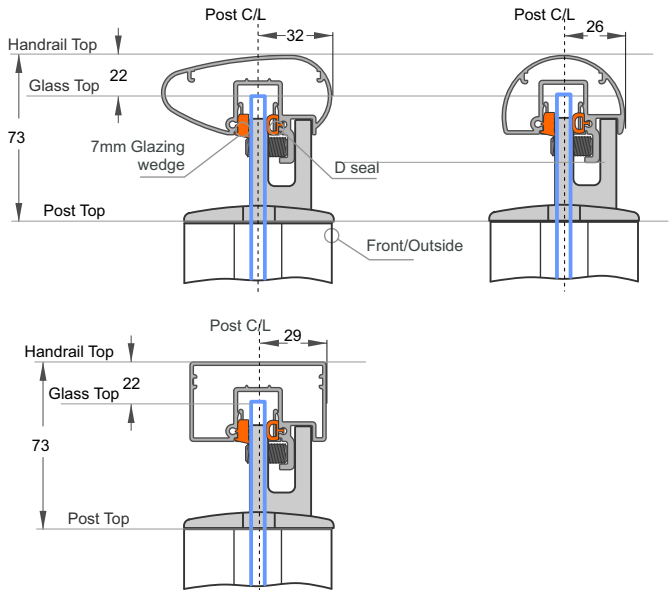


Drill Bottom Rail, Top rail if needed

1 - Refer Post Mounting type and installation Wind zone. Then choose Balustrade Height and max Post spacing.

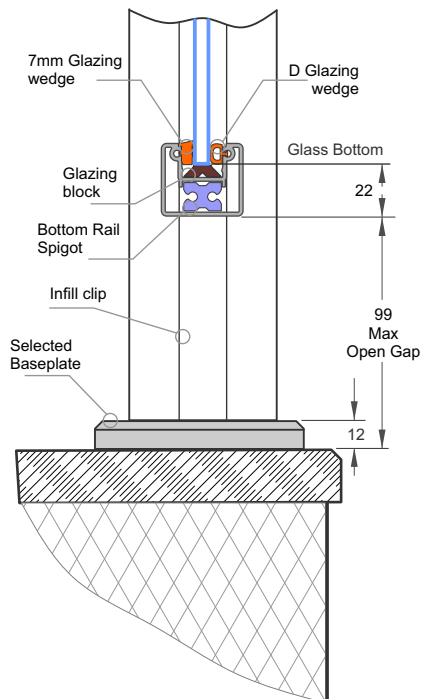


2 - Handrail - Offsets

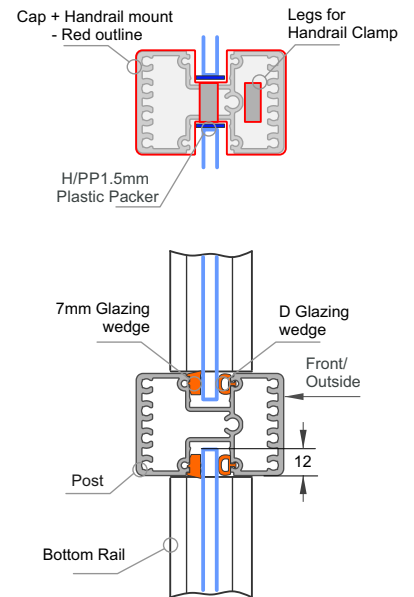


Important Note: All Glass Engagements 10mm min

3 - Height offsets



4 - Glass, Width Offsets



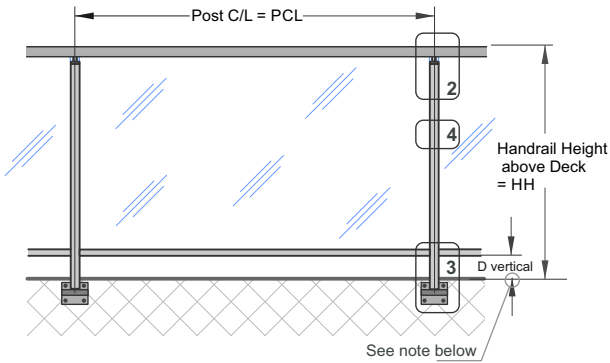
Top fix EDGE post JEB/212
Semiframeless
6mm Toughened Glass

5 - Cutting, nominal

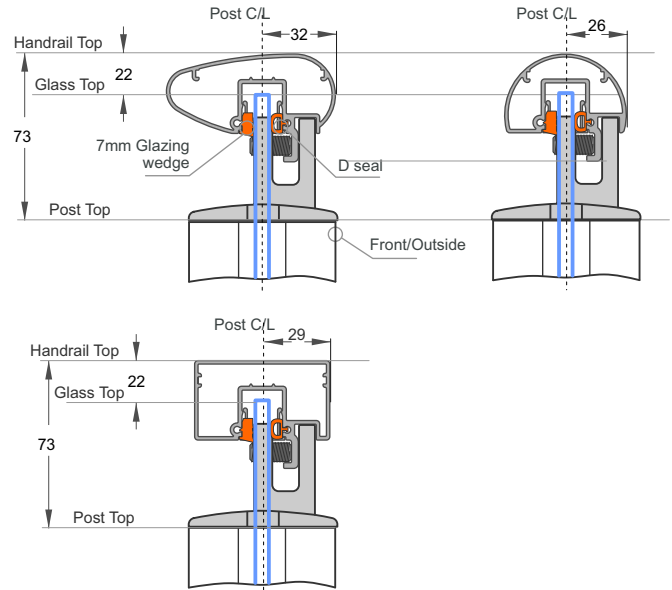
- a - Hand Rail = Use maximum lengths
- b - Post, Cut to
= $HH - 73 - 12 = HH - 85$
- c - Bottom Rail, Cut to
= $PCL - 2 \times 22.5 = PCL - 45$
- d - 6mm Glass height
= $HH - 2 \times 22 - 99 = HH - 143$
- e - 6mm Glass width
= $PCL - 2 \times 12 = PCL - 24$
or tight distance between posts
at deck level + 24mm

6mm Toughened Glass - Fully Framed. Handrail + Bottom Rail. Gutter Brkt Face Fix

1 - Refer Post Mounting type and installation Wind zone. Then choose Balustrade Height and max Post spacing.

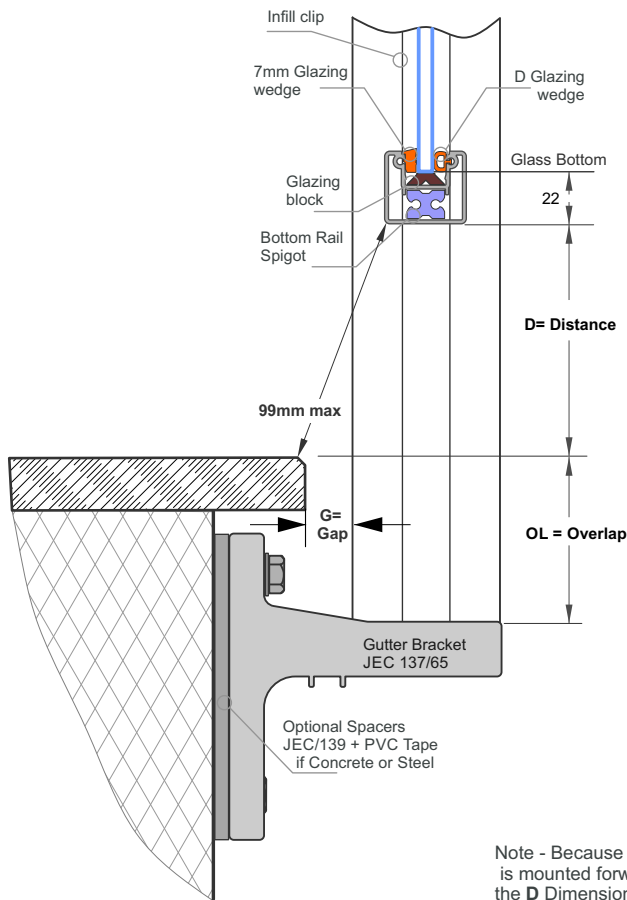


2 - Handrail - Offsets



Important Note: All Glass Engagements 10mm min

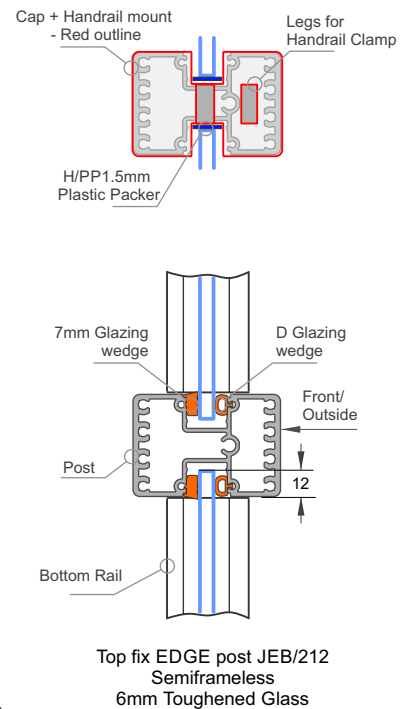
3 - Height offsets



Note - Because the Bottom Rail is mounted forward of the Deck Edge the D Dimension is no longer 99mm.

- D max values for a 99mm Opening to the deck**
- G Gap = 10mm, D = 96mm
 - G Gap = 20mm, D = 92mm
 - G Gap = 30mm, D = 88mm
 - G Gap = 40mm, D = 82mm
 - G Gap = 50mm max, D = 75mm

4 - Glass, Width Offsets

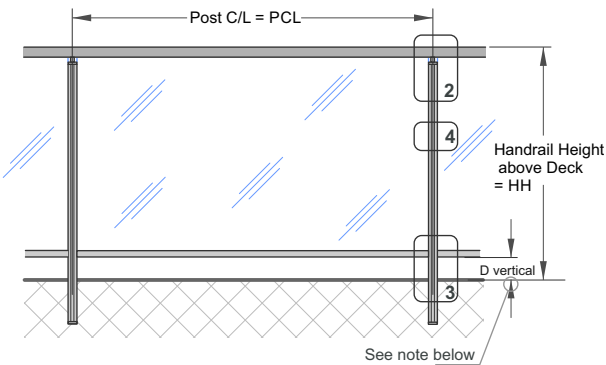


Top fix EDGE post JEB/212 Semiframeless 6mm Toughened Glass

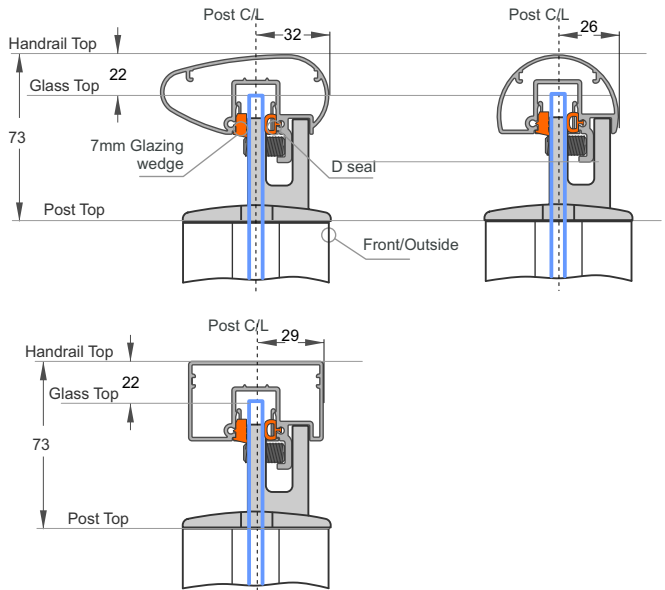
5 - Cutting, nominal

- a - Hand Rail = Use maximum lengths
- b - Post, Cut to = $HH-73+OL$
- c - Bottom Rail, Cut to = $PCL-2x22.5 = PCL - 45$
- d - 6mm Glass height = $HH-2x22-99 = HH - 143$
- e - 6mm Glass width = $PCL - 2x12 = PCL - 24$ or tight distance between posts at deck level + 24mm

1 - Refer Post Mounting type and installation Wind zone. Then choose Balustrade Height and max Post spacing.

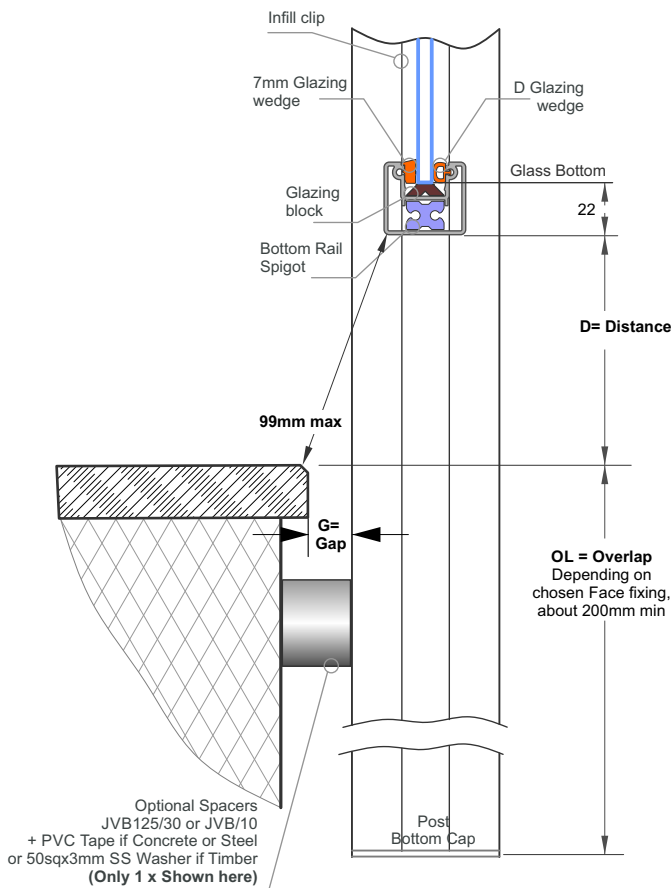


2 - Handrail - Offsets



Important Note: All Glass Engagements 10mm min

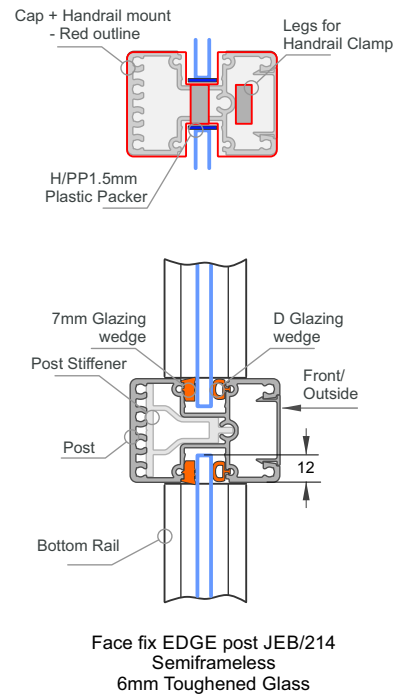
3 - Height offsets



Note - Because the Bottom Rail is mounted forward of the Deck Edge the D Dimension is no longer 99mm.

- D max values for a 99mm Opening to the deck**
- G Gap = 10mm, D = 96mm
 - G Gap = 20mm, D = 92mm
 - G Gap = 30mm, D = 88mm
 - G Gap = 40mm, D = 82mm
 - G Gap = 50mm max, D = 75mm

4 - Glass, Width Offsets

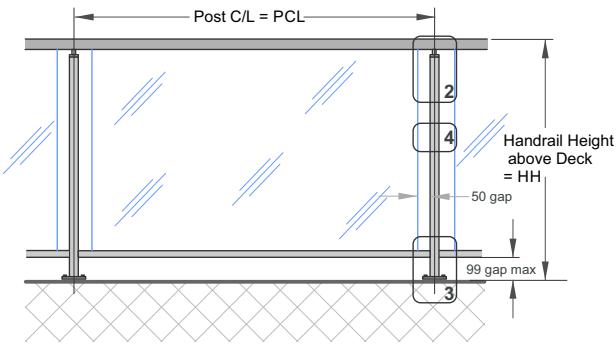


5 - Cutting, nominal

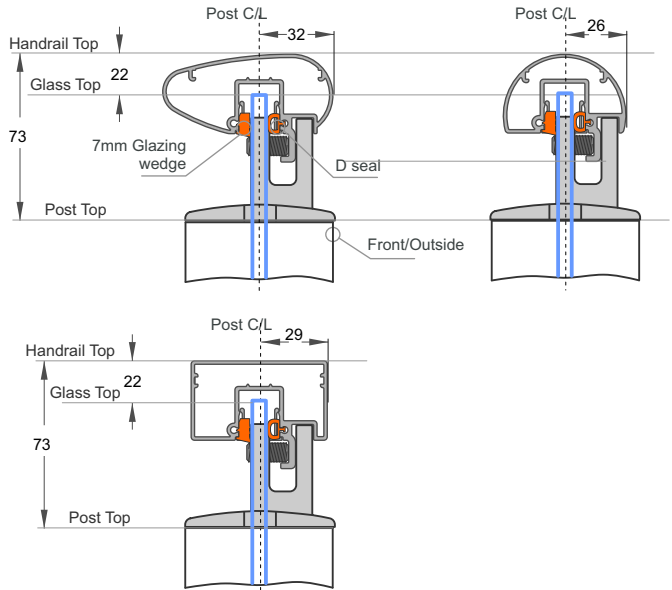
- a - Hand Rail = Use maximum lengths
- b - Post, Cut to = $HH-73+OL$
- c - Bottom Rail, Cut to = $PCL-2x22.5 = PCL - 45$
- d - 6mm Glass height = $HH-2x22-D = HH - 44 - D$
- e - 6mm Glass width = $PCL - 2x12 = PCL - 24$
or tight distance between posts at deck level + 24mm

6mm Toughened Glass - Full Height. Handrail + Bottom Rail. Top Fix

1 - Refer Post Mounting type and installation Wind zone. Then choose Balustrade Height and max Post spacing.

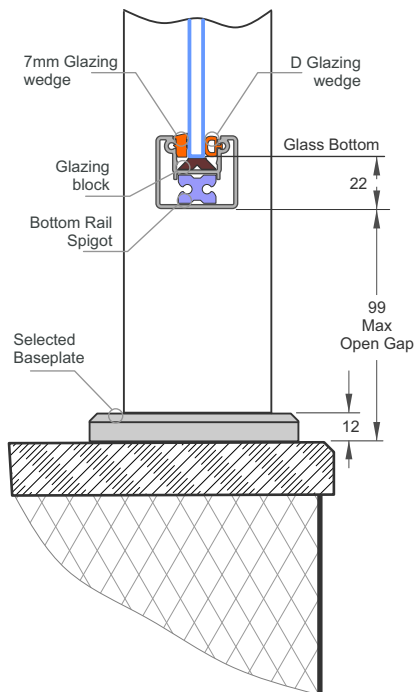


2 - Handrail - Offsets

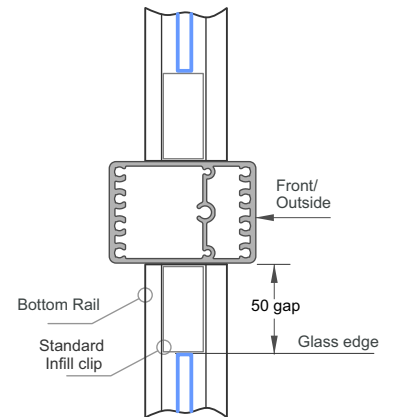


Important Note: All Glass Engagements 10mm min

3 - Height offsets



4 - Glass, Width Offsets

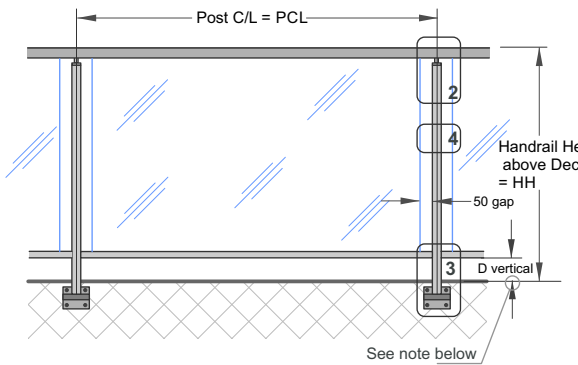


Top fix EDGE post JEB/207
Semiframeless
6mm Toughened Glass

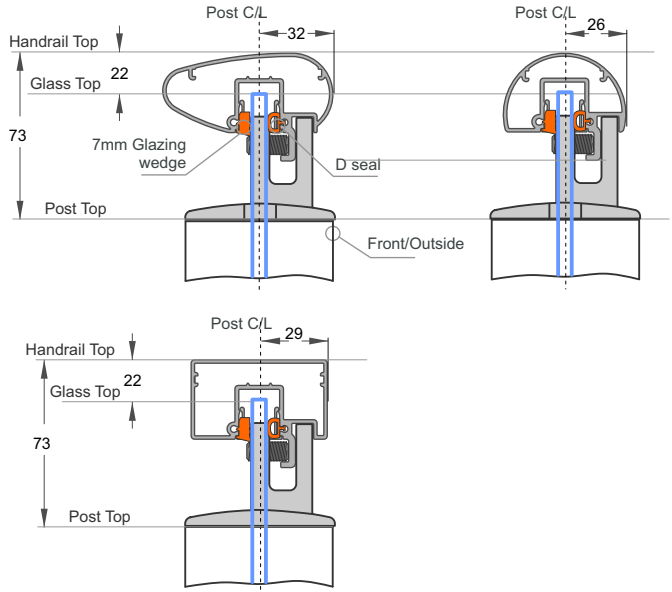
5 - Cutting, nominal

- a - Hand Rail = Use maximum lengths
- b - Post, Cut to
= $HH - 73 - 12 = HH - 85$
- c - Bottom Rail, Cut to
= $PCL - 2 \times 22.5 = PCL - 45$
- d - 6mm Glass height
= $HH - 2 \times 22 - 99 = HH - 143$
- e - 6mm Glass width
= $PCL - 2 \times 22.5 - 2 \times 50 = PCL - 145$

1 - Refer Post Mounting type and installation Wind zone. Then choose Balustrade Height and max Post spacing.

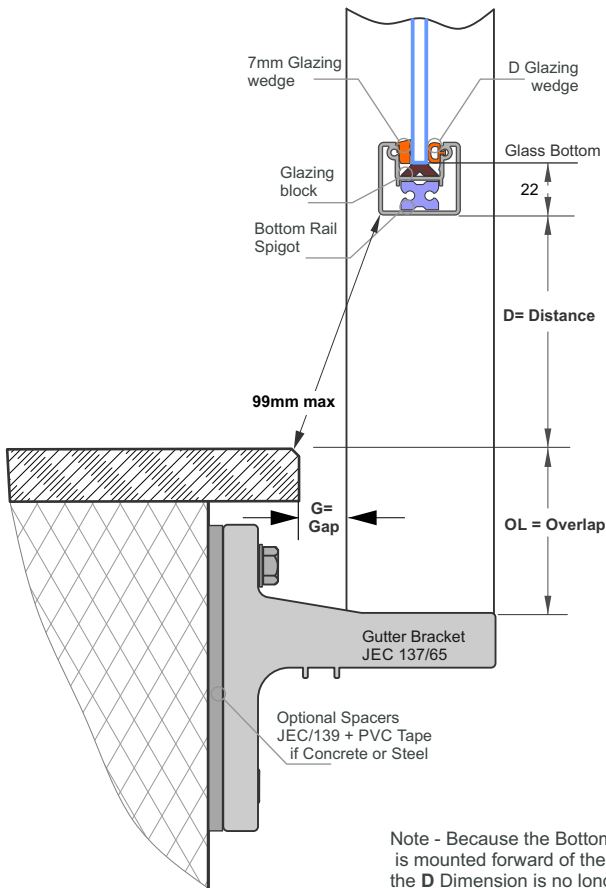


2 - Handrail - Offsets



Important Note: All Glass Engagements 10mm min

3 - Height offsets

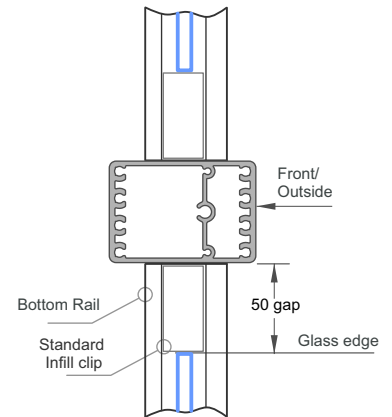


Note - Because the Bottom Rail is mounted forward of the Deck Edge the D Dimension is no longer 99mm.

D max values for a 99mm Opening to the deck

- G Gap = 10mm, D = 96mm
- G Gap = 20mm, D = 92mm
- G Gap = 30mm, D = 88mm
- G Gap = 40mm, D = 82mm
- G Gap = 50mm max, D = 75mm

4 - Glass, Width Offsets



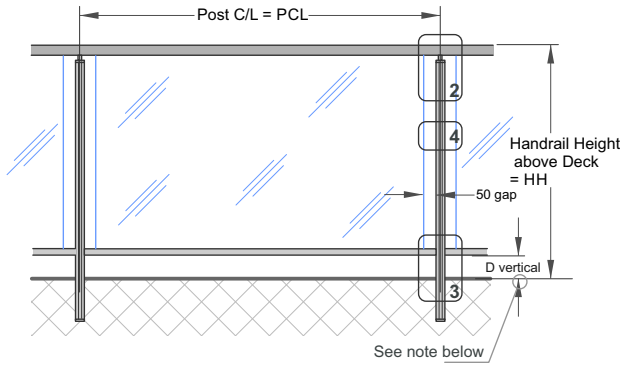
Top fix EDGE post JEB/207
Semiframeless
6mm Toughened Glass

5 - Cutting, nominal

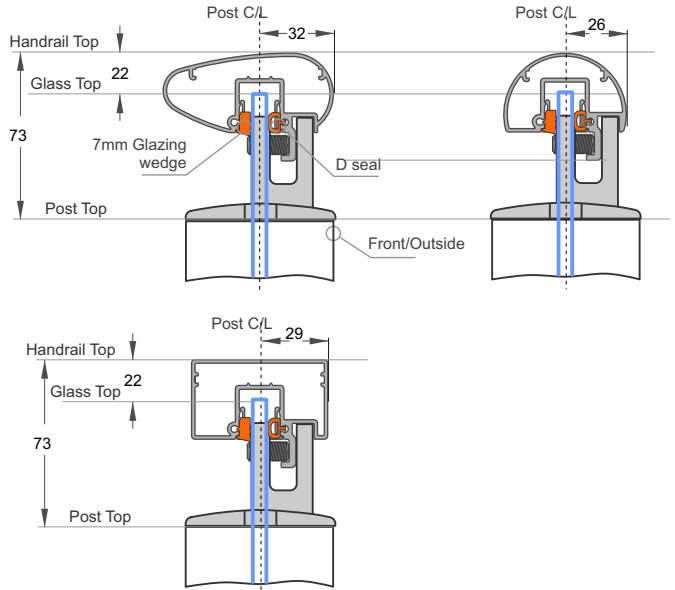
- a - Hand Rail = Use maximum lengths
- b - Post, Cut to = $HH - 73 + OL$
- c - Bottom Rail, Cut to = $PCL - 2 \times 22.5 = PCL - 45$
- d - 6mm Glass height = $HH - 2 \times 22 - D = HH - 44 - D$
- e - 6mm Glass width = $PCL - 2 \times 22.5 - 2 \times 50 = PCL - 145$

6mm Toughened Glass - Full Height. Handrail + Bottom Rail. Face Fix

1 - Refer Post Mounting type and installation Wind zone. Then choose Balustrade Height and max Post spacing.

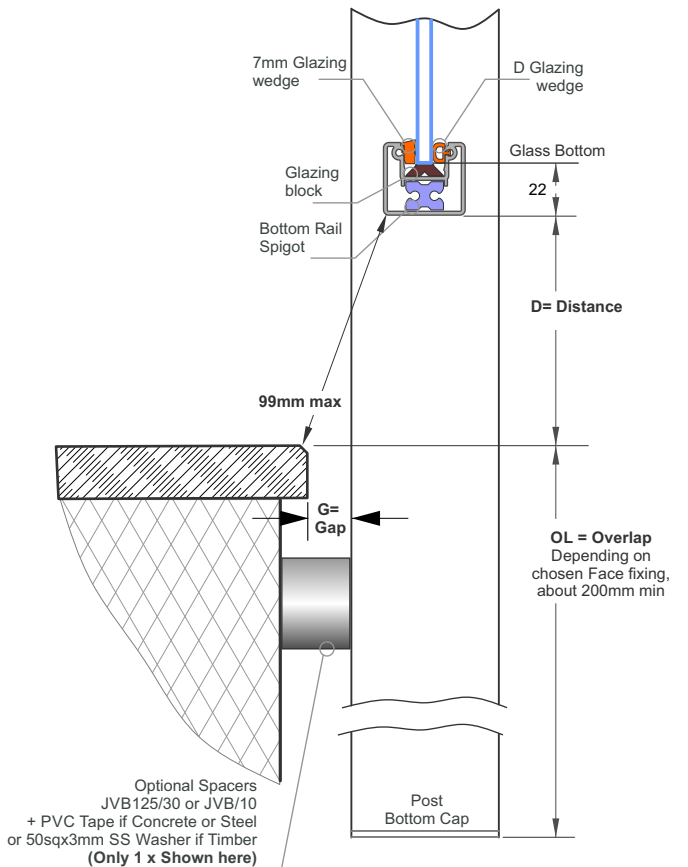


2 - Handrail - Offsets



Important Note: All Glass Engagements 10mm min

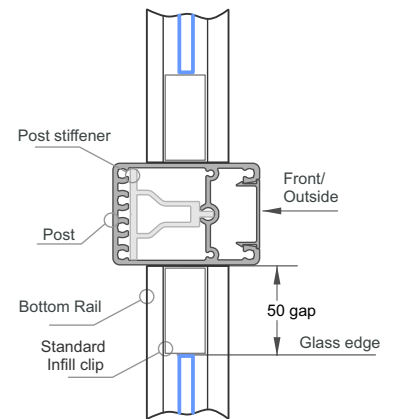
3 - Height offsets



Note - Because the Bottom Rail is mounted forward of the Deck Edge the D Dimension is no longer 99mm.

- D max values for a 99mm Opening to the deck**
- G Gap = 10mm, D = 96mm
 - G Gap = 20mm, D = 92mm
 - G Gap = 30mm, D = 88mm
 - G Gap = 40mm, D = 82mm
 - G Gap = 50mm max, D = 75mm

4 - Glass, Width Offsets



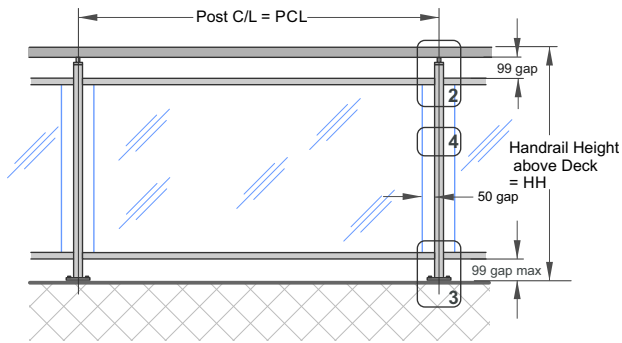
Face fix EDGE post JEB/208
Semiframeless
6mm Toughened Glass

5 - Cutting, nominal

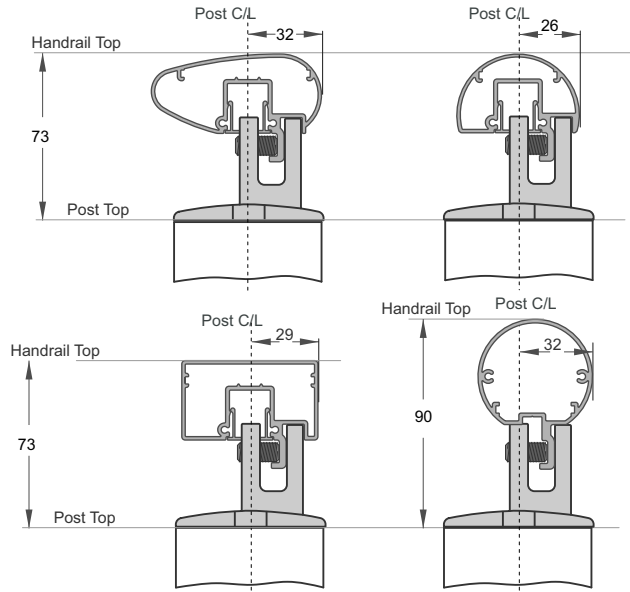
- a - Hand Rail = Use maximum lengths
- b - Post, Cut to = $HH-73+OL$
- c - Bottom Rail, Cut to = $PCL-2x22.5 = PCL - 45$
- d - 6mm Glass height = $HH-2x22-D = HH - 44 - D$
- e - 6mm Glass width = $PCL-2x22.5-2x50 = PCL - 145$

6mm Toughened Glass - Full Height. Handrail + Split Rails. Top Fix

1 - Refer Post Mounting type and installation Wind zone. Then choose Balustrade Height and max Post spacing.

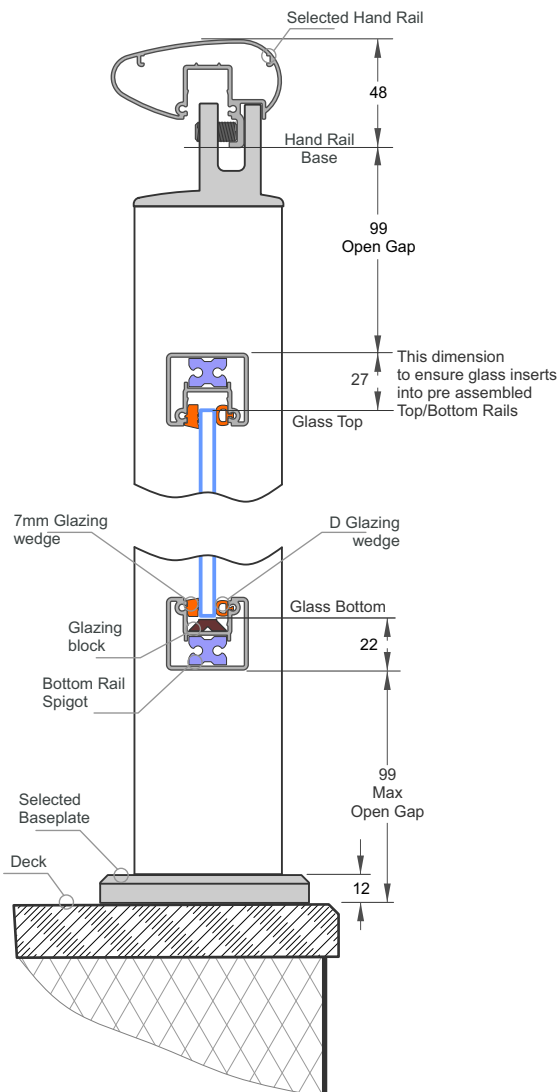


2 - Handrail - Offsets

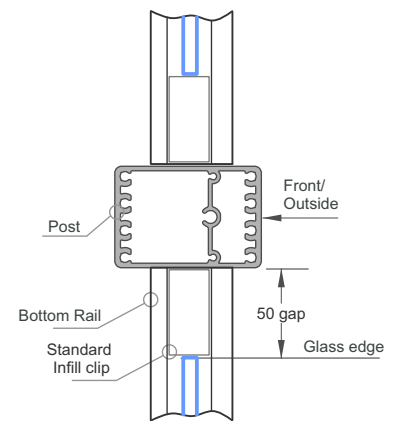


Important Note: All Glass Engagements 10mm min

3 - Height offsets



4 - Glass, Width Offsets

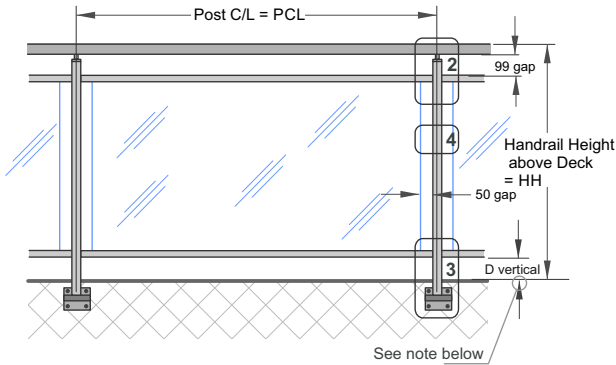


Top fix EDGE post JEB/207
Semiframeless
6mm Toughened Glass

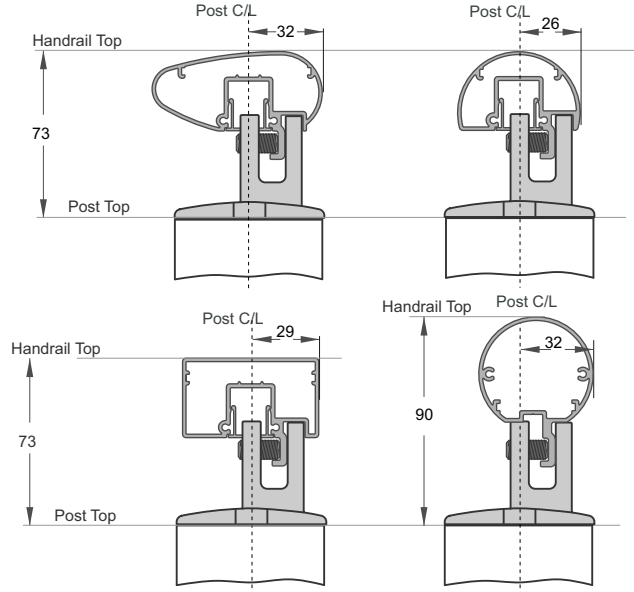
5 - Cutting, nominal

- a - Hand Rail = Use maximum lengths
- b - Post, Cut to
= $HH - 73 - 12 = HH - 85$
- c - Bottom Rail (x2), Cut to
= $PCL - 2 \times 22.5 = PCL - 45$
- d - 6mm Glass height
= $HH - 27 - 22 - 2 \times 99 - 48 = HH - 295$
- e - 6mm Glass width
= $PCL - 2 \times 22.5 - 2 \times 50 = PCL - 145$

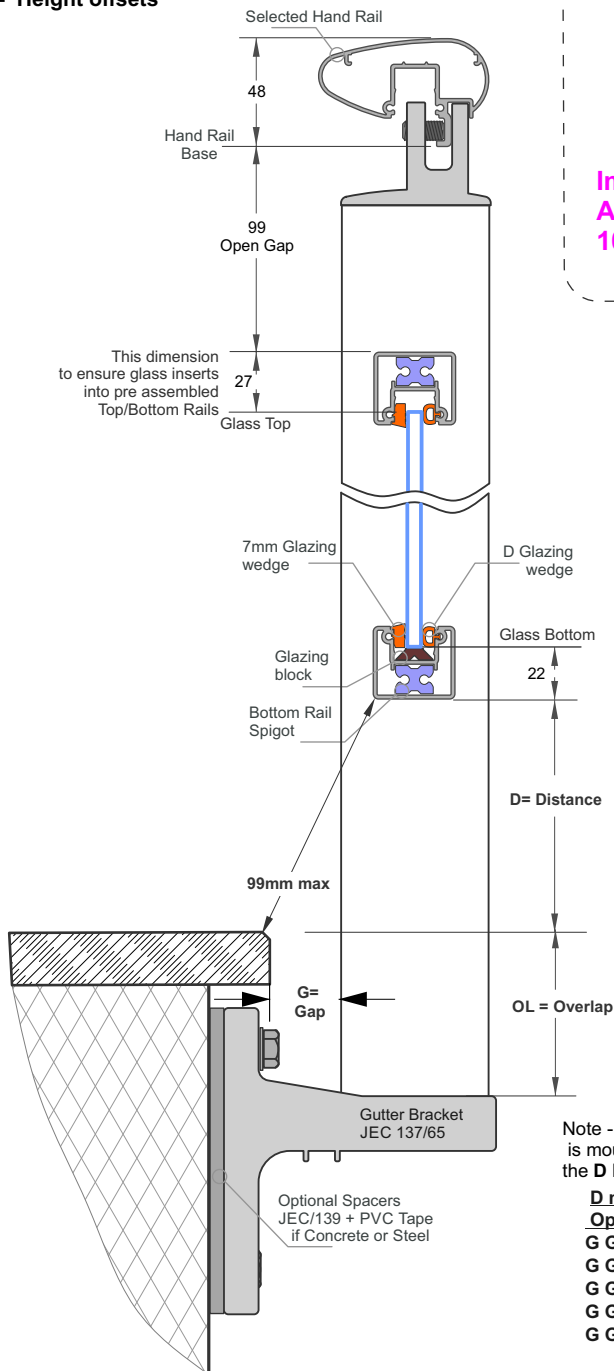
1 - Refer Post Mounting type and installation Wind zone. Then choose Balustrade Height and max Post spacing.



2 - Handrail - Offsets

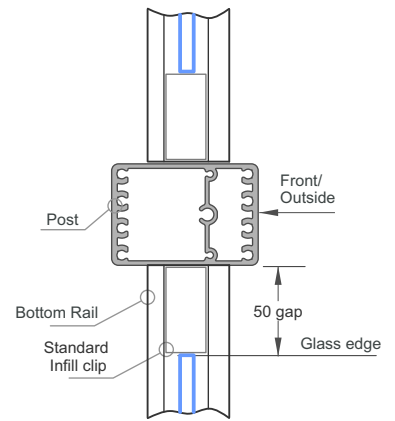


3 - Height offsets



Important Note:
All Glass Engagements
10mm min

4 - Glass, Width Offsets



Top fix EDGE post JEB/207
Semiframeless
6mm Toughened Glass

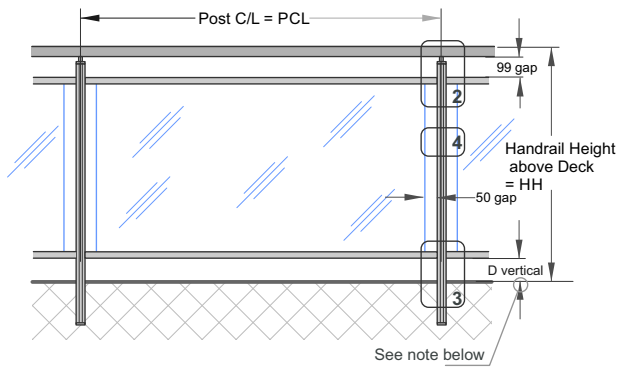
5 - Cutting, nominal

- a - Hand Rail = Use maximum lengths
- b - Post, Cut to = $HH-73+OL$
- c - Bottom Rail (x2), Cut to = $PCL-2x22.5 = PCL - 45$
- d - 6mm Glass height = $HH-48-27-22-99-D = HH - 196 - D$
- e - 6mm Glass width = $PCL-2x22.5-2x50 = PCL - 145$

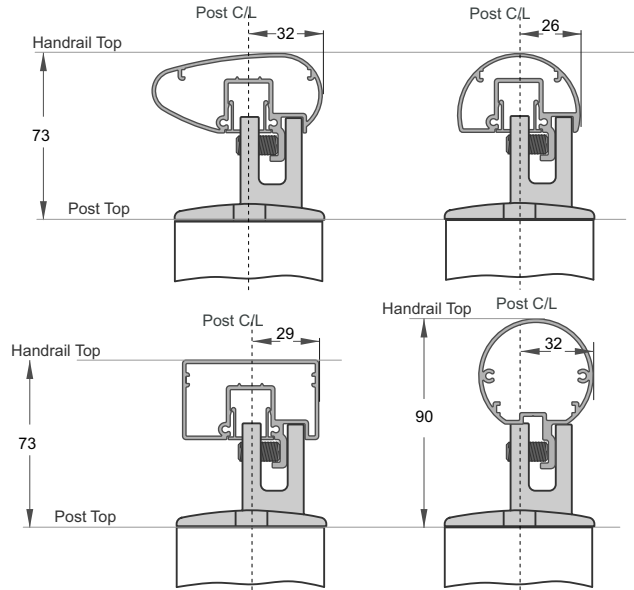
Note - Because the Bottom Rail is mounted forward of the Deck Edge the D Dimension is no longer 99mm.

- D max values for a 99mm Opening to the deck**
- G Gap = 10mm, D = 96mm
 - G Gap = 20mm, D = 92mm
 - G Gap = 30mm, D = 88mm
 - G Gap = 40mm, D = 82mm
 - G Gap = 50mm max, D = 75mm

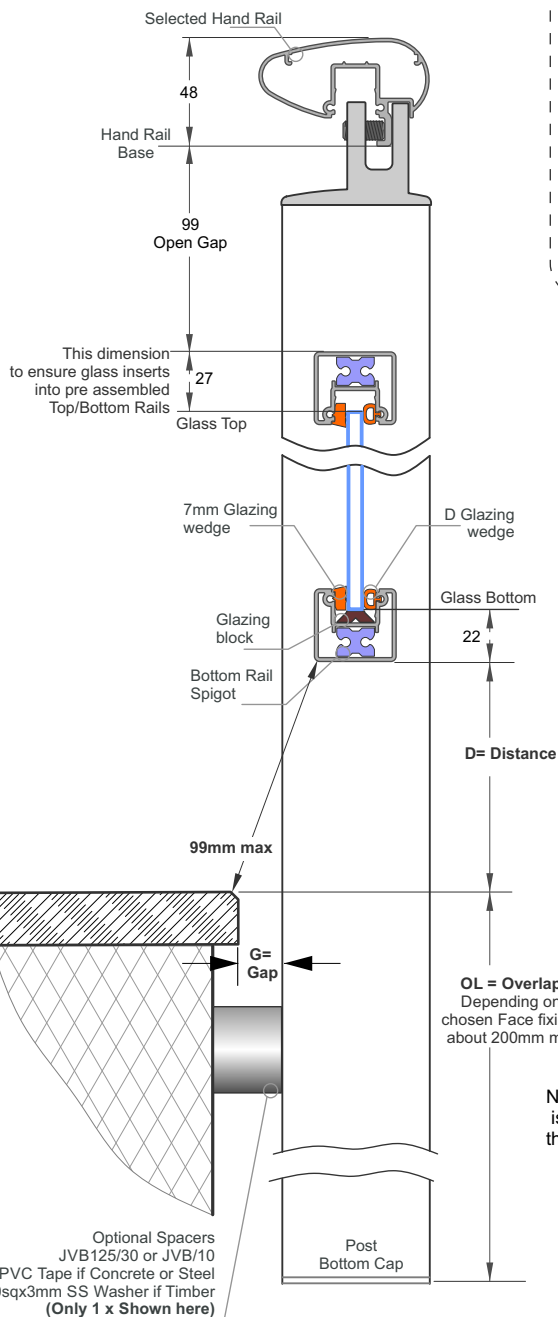
1 - Refer Post Mounting type and installation Wind zone. Then choose Balustrade Height and max Post spacing.



2 - Handrail - Offsets

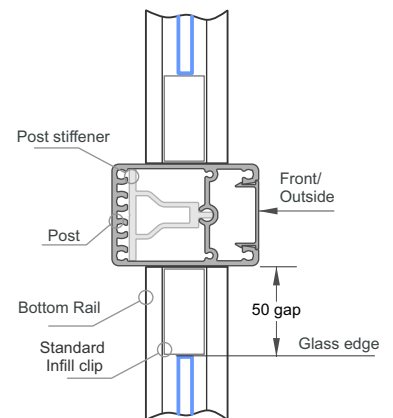


3 - Height offsets



Important Note:
All Glass Engagements
10mm min

4 - Glass, Width Offsets



Face fix EDGE post JEB/208
Semiframeless
6mm Toughened Glass

5 - Cutting, nominal

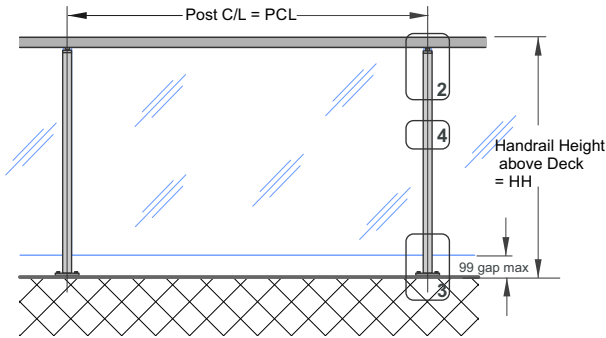
- a - Hand Rail = Use maximum lengths
- b - Post, Cut to
= $HH - 73 + OL$
- c - Bottom Rail (x2), Cut to
= $PCL - 2 \times 22.5 = PCL - 45$
- d - 6mm Glass height
= $HH - 48 - 27 - 22 - 99 - D = HH - 196 - D$
- e - 6mm Glass width
= $PCL - 2 \times 22.5 - 2 \times 50 = PCL - 145$

Note - Because the Bottom Rail is mounted forward of the Deck Edge the D Dimension is no longer 99mm.

D max values for a 99mm Opening to the deck
G Gap = 10mm, D = 96mm
G Gap = 20mm, D = 92mm
G Gap = 30mm, D = 88mm
G Gap = 40mm, D = 82mm
G Gap = 50mm max, D = 75mm

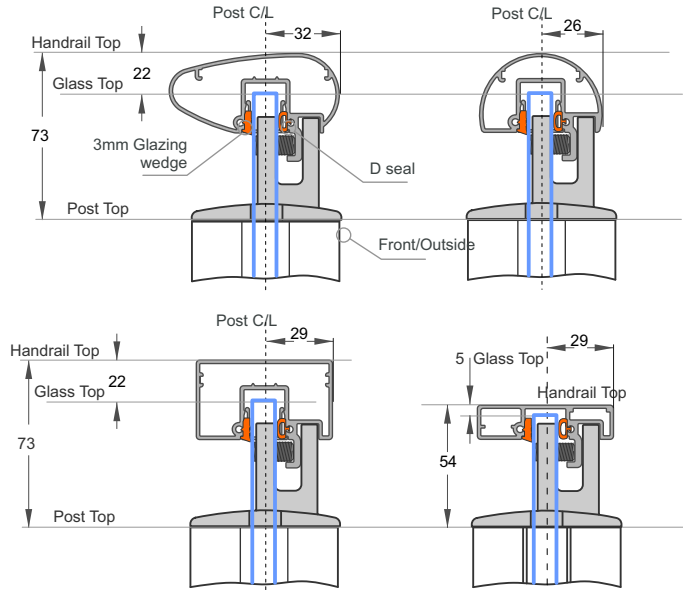
10mm Toughened Glass - Semi Frameless + Handrail. Top Fix

1 - Refer Post Mounting type and installation Wind zone. Then choose Balustrade Height and max Post spacing.



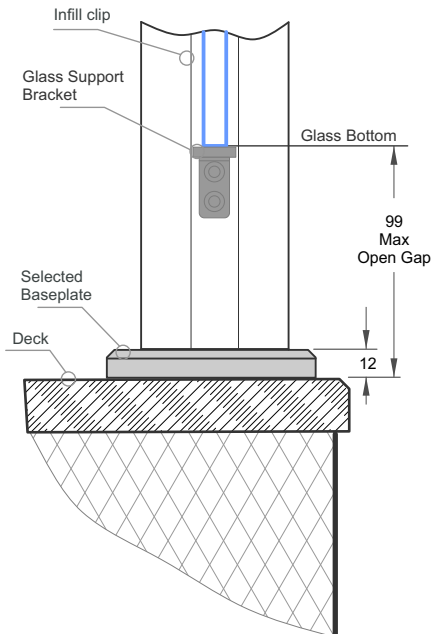
A Corner Post is available for 10mm Glass, Inline - Semi Frameless. Top Mount only with 110mm sq JEC 222 Baseplate

2 - Handrail - Offsets

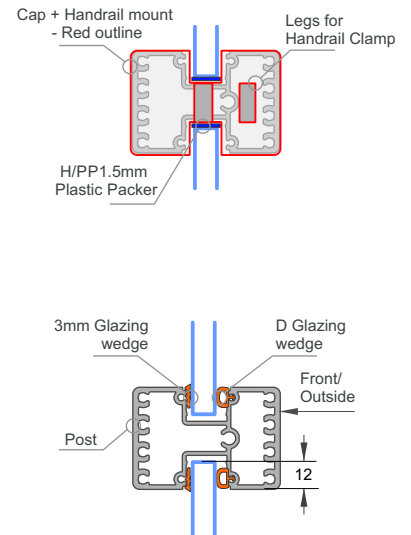


Important Note: All Glass Engagements 10mm min

3 - Height offsets



4 - Glass, Width Offsets



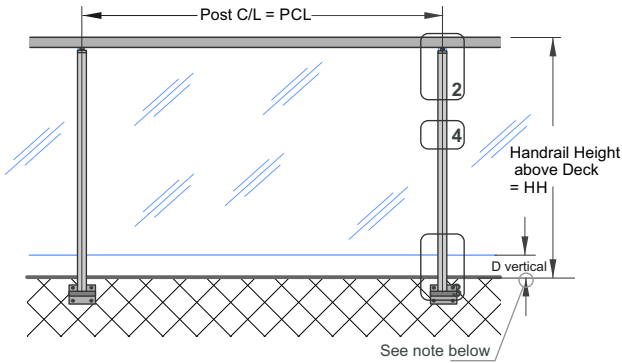
Top fix EDGE post JEB/212
Semiframeless
10mm Toughened Glass

5 - Cutting, nominal

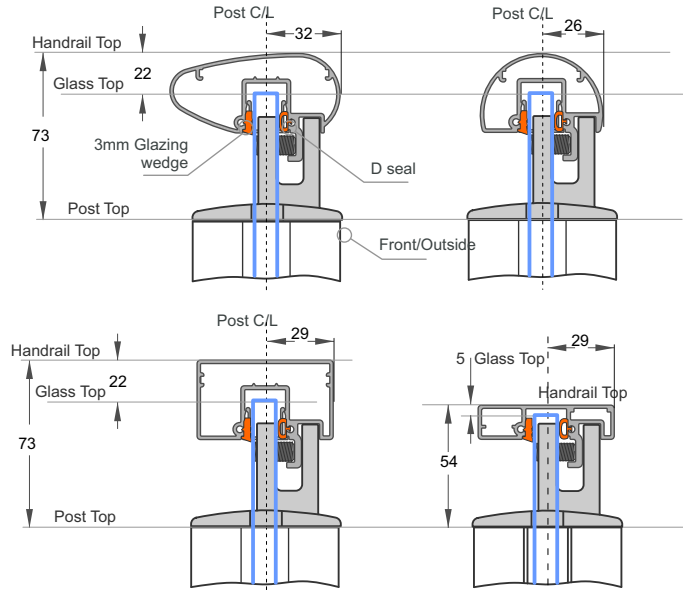
- a - Hand Rail = Use maximum lengths
- b - Post, Cut to = $HH - 54 - 12$
- c - 10mm Glass height = $HH - 104$
- d - 10mm Glass width = $PCL - 2 \times 12 = PCL - 24$
or tight distance between posts at deck level + 24mm

10mm Toughened Glass - Semi Frameless + Handrail. Gutter Brkt Face Fix

1 - Refer Post Mounting type and installation Wind zone. Then choose Balustrade Height and max Post spacing.

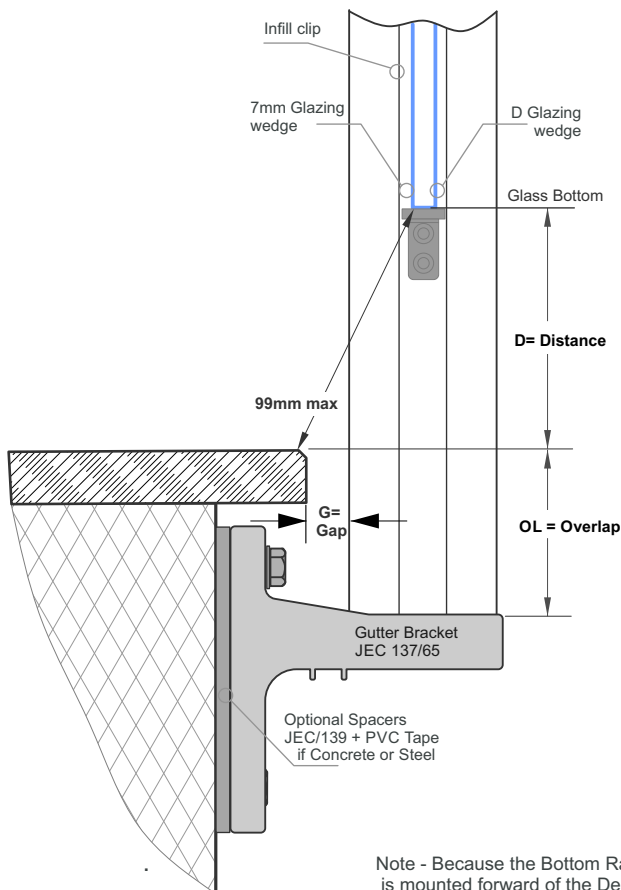


2 - Handrail - Offsets



Important Note: All Glass Engagements 10mm min

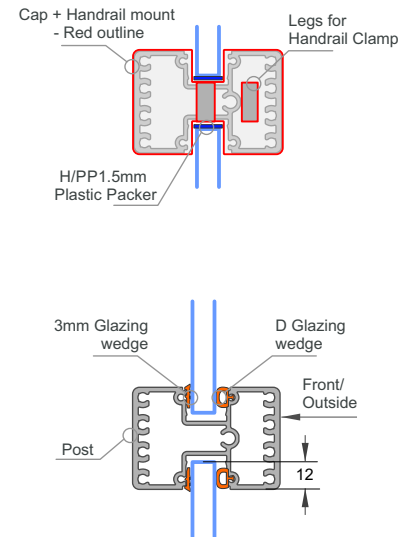
3 - Height offsets



Note - Because the Bottom Rail is mounted forward of the Deck the D Dimension is no longer 99mm.

- D max values for a 99mm Opening to the deck**
- G Gap = 10mm, D = 91mm
 - G Gap = 20mm, D = 86mm
 - G Gap = 30mm, D = 80mm
 - G Gap = 40mm, D = 72mm
 - G Gap = 50mm max, D = 61mm

4 - Glass, Width Offsets



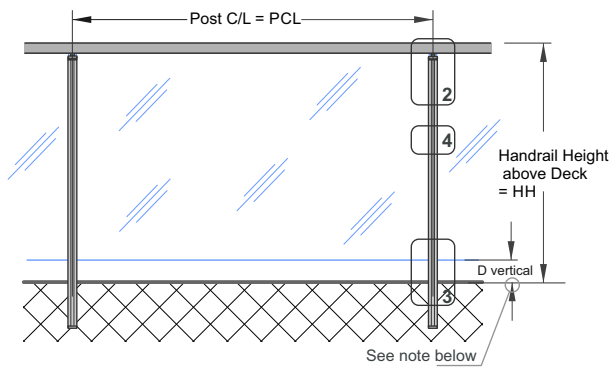
Top fix EDGE post JEB/212 Semiframeless 10mm Toughened Glass

5 - Cutting, nominal

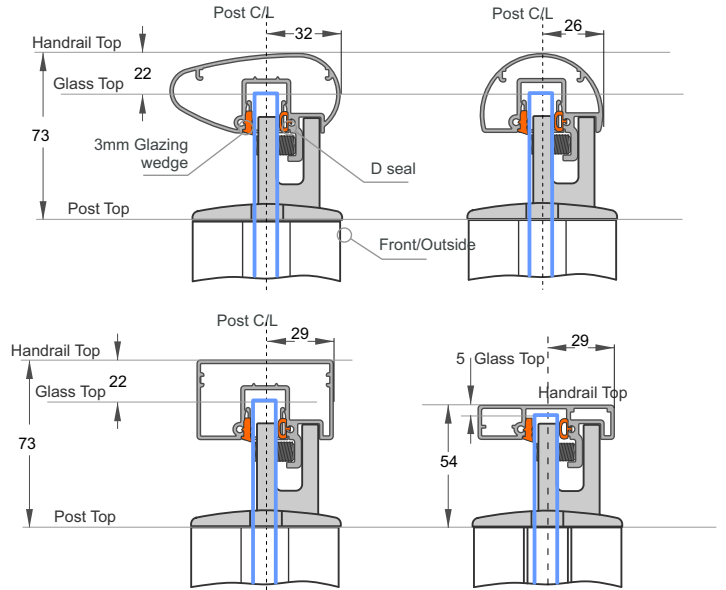
- a - Hand Rail = Use maximum lengths
- b - Post, Cut to = $HH - 54 + OL$
- c - 10mm Glass height = $HH - 5 - D$
- d - 10mm Glass width = $PCL - 2 \times 12 = PCL - 24$ or tight distance between posts at deck level + 24mm

10mm Toughened Glass - Semi Frameless + Handrail. Face Fix

1 - Refer Post Mounting type and installation Wind zone. Then choose Balustrade Height and max Post spacing.

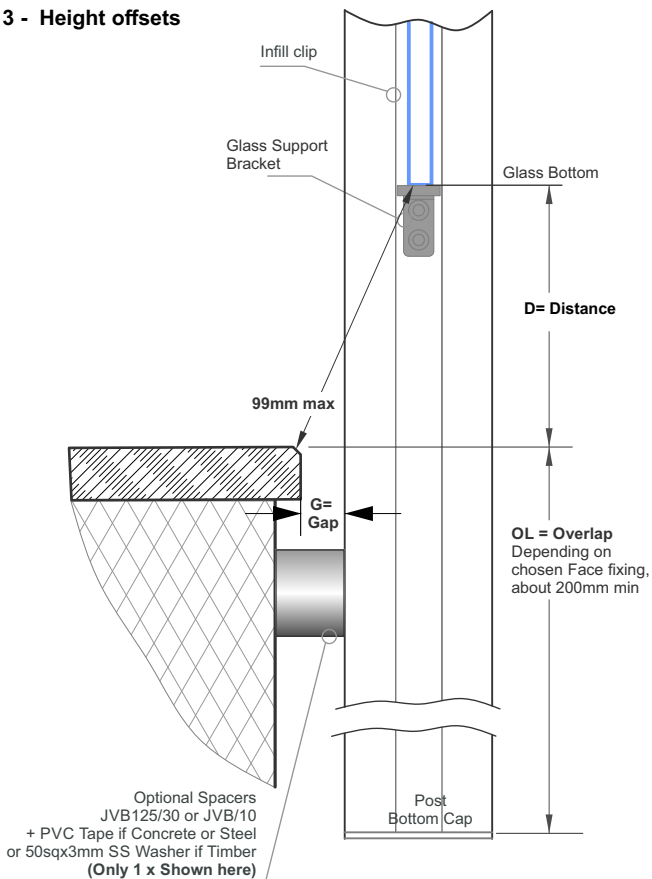


2 - Handrail - Offsets



Important Note: All Glass Engagements 10mm min

3 - Height offsets

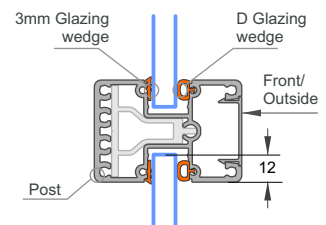
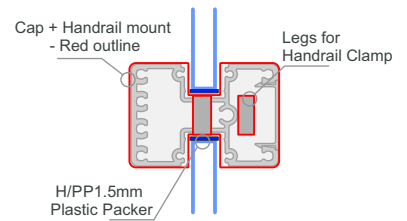


Note - Because the Bottom Rail is mounted forward of the Deck Edge the D Dimension is no longer 99mm.

D max values for a 99mm Opening to the deck

- G Gap = 10mm, D = 91mm
- G Gap = 20mm, D = 86mm
- G Gap = 30mm, D = 80mm
- G Gap = 40mm, D = 72mm
- G Gap = 50mm max, D = 61mm

4 - Glass, Width Offsets

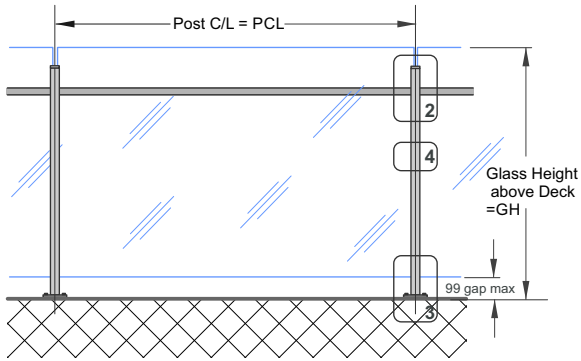


Face fix EDGE post JEB/214
Semiframeless
10mm Toughened Glass

5 - Cutting, nominal

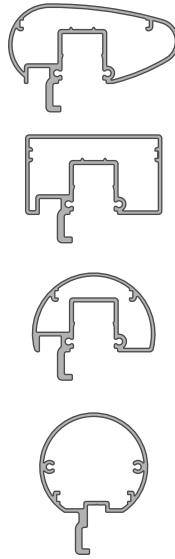
- a - Hand Rail = Use maximum lengths
- b - Post, Cut to = $HH-54+OL$
- c - 10mm Glass height = $HH-5-D$
- d - 10mm Glass width = $PCL - 2x12 = PCL - 24$
or tight distance between posts at deck level + 24mm

1 - Refer Post Mounting type and installation Wind zone. Then choose Balustrade Height and max Post spacing.

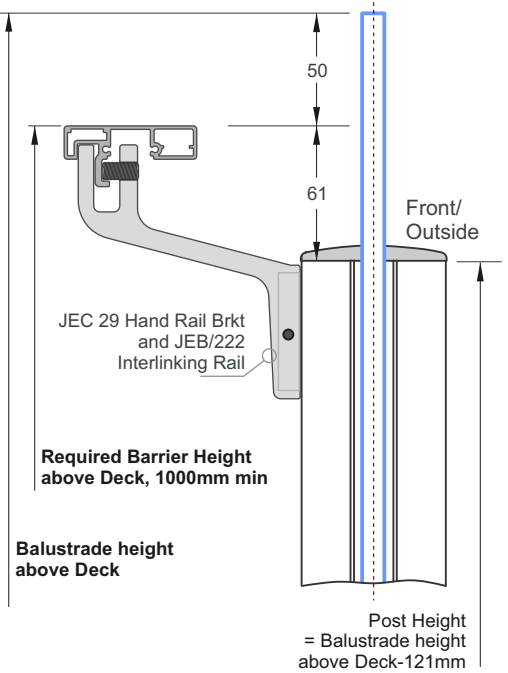


A Corner Post is not suitable available for this configuration

2 - Glass Top - Offsets

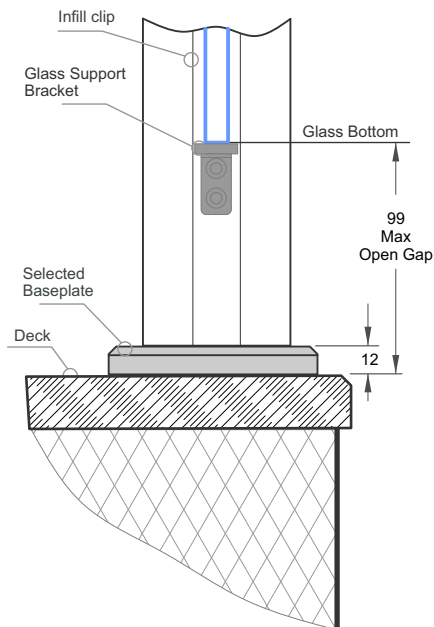


Other suitable Handrails

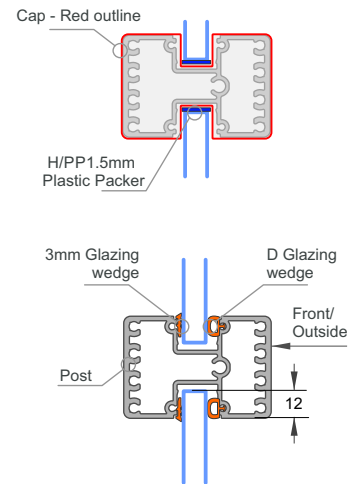


Important Note: All Glass Engagements 10mm min

3 - Height offsets



4 - Glass, Width Offsets

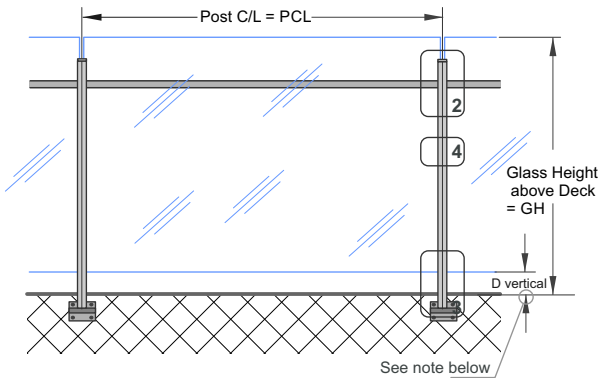


Top fix EDGE post JEB/212
Semiframeless
10mm Toughened Glass

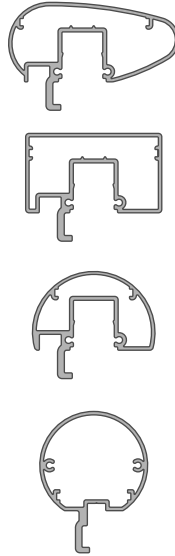
5 - Cutting, nominal

- a - Hand Rail = Use maximum lengths
- b - Post, Cut to = 840 min
- c - 10mm Glass height = GH - 99
- d - 10mm Glass width = $PCL - 2 \times 12 = PCL - 24$
or tight distance between posts at deck level + 24mm

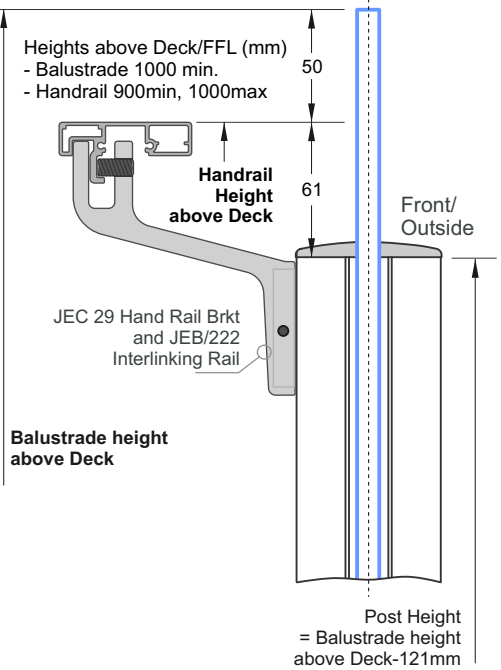
1 - Refer Post Mounting type and installation Wind zone. Then choose Balustrade Height and max Post spacing.



2 - Glass Top - Offsets

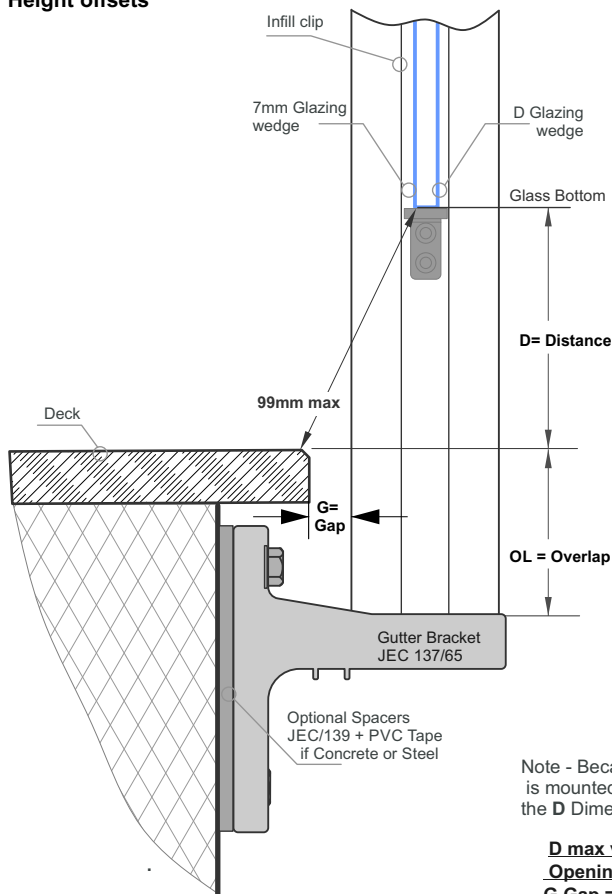


Other suitable Handrails



Important Note: All Glass Engagements 10mm min

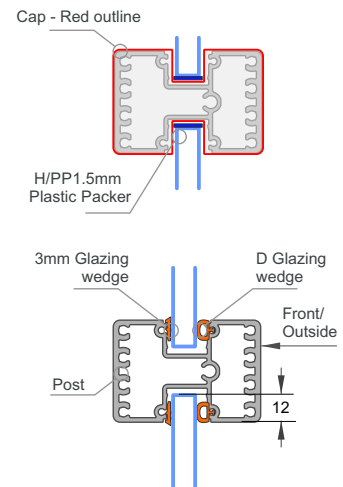
3 - Height offsets



Note - Because the Bottom Rail is mounted forward of the Deck Edge the D Dimension is no longer 99mm.

- D max values for a 99mm Opening to the deck**
- G Gap = 10mm, D = 91mm
 - G Gap = 20mm, D = 86mm
 - G Gap = 30mm, D = 80mm
 - G Gap = 40mm, D = 72mm
 - G Gap = 50mm max, D = 61mm

4 - Glass, Width Offsets



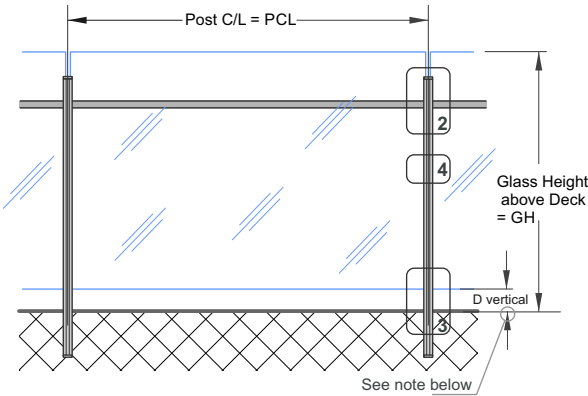
Top fix EDGE post JEB/212 Semiframeless 10mm Toughened Glass

5 - Cutting, nominal

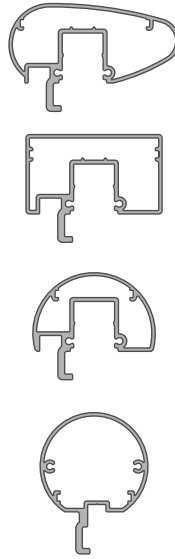
- a - Hand Rail = Use maximum lengths
- b - Post, Cut to = 850 + OL
- c - 10mm Glass height = GH-D
- d - 10mm Glass width = PCL - 2x12 = PCL - 24 or tight distance between posts at deck level + 24mm

10mm Toughened Glass - Semi Frameless + JEC 29 Bracket mounted on Post + Handrail. Face Fix

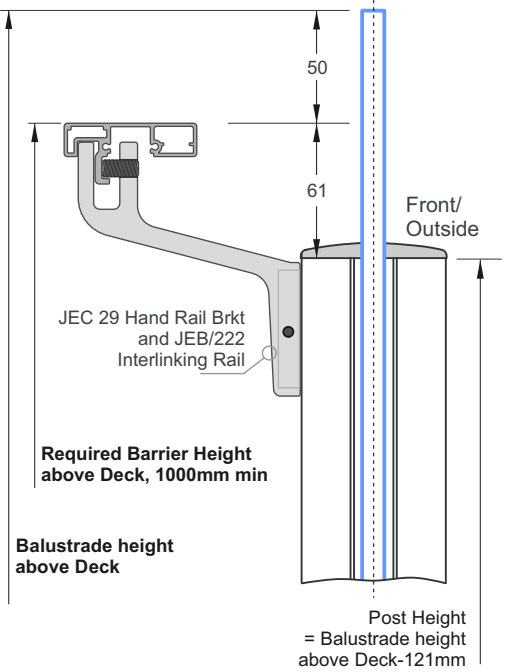
1 - Refer Post Mounting type and installation Wind zone. Then choose Balustrade Height and max Post spacing.



2 -Glass Top - Offsets

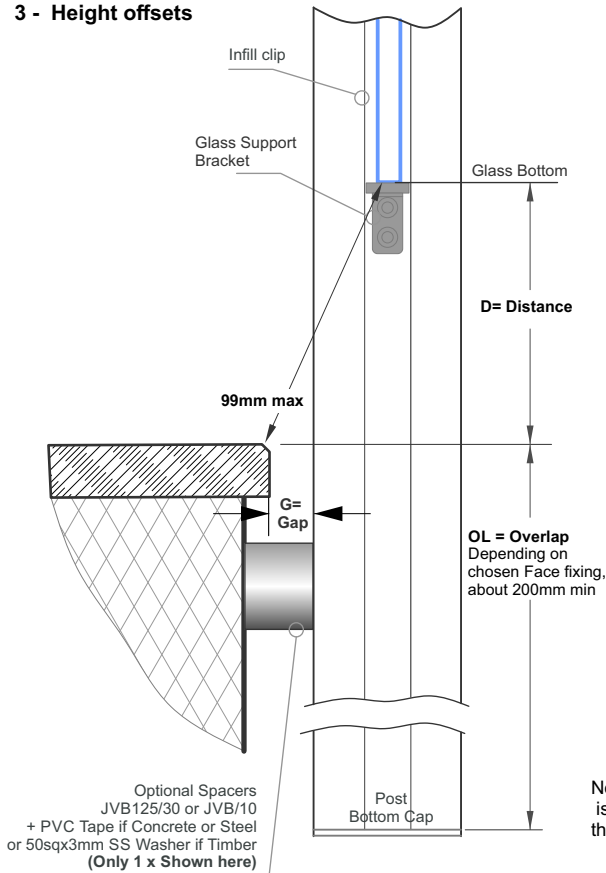


Other suitable Handrails



Important Note: All Glass Engagements 10mm min

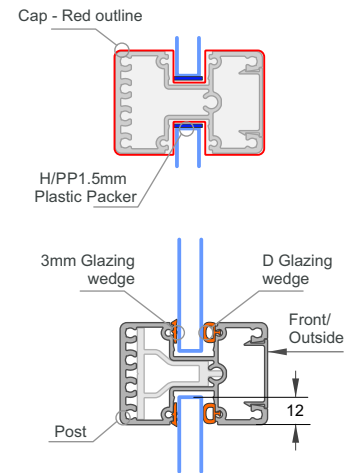
3 - Height offsets



Note - Because the Bottom Rail is mounted forward of the Deck Edge the D Dimension is no longer 99mm.

- D max values for a 99mm Opening to the deck**
 G Gap = 10mm, D = 91mm
 G Gap = 20mm, D = 86mm
 G Gap = 30mm, D = 80mm
 G Gap = 40mm, D = 72mm
 G Gap = 50mm max, D = 61mm

4 - Glass, Width Offsets



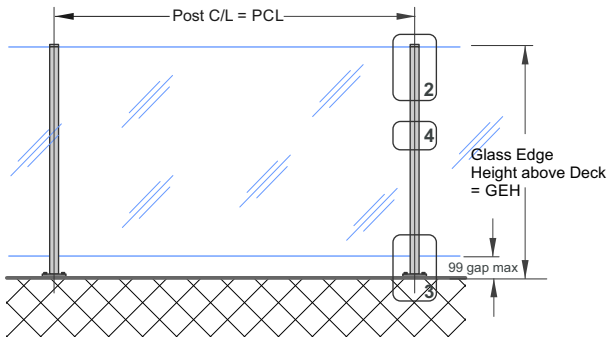
Face fix EDGE post JEB/214 Semiframeless 10mm Toughened Glass

5 - Cutting, nominal

- a - Hand Rail = Use maximum lengths
- b - Post, Cut to = 850 + OL
- c - 10mm Glass height = GH-D
- d - 10mm Glass width = PCL - 2x12 = PCL - 24 or tight distance between posts at deck level + 24mm

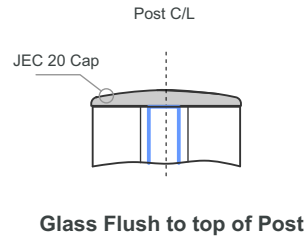
1 - Refer Post Mounting type and installation Wind zone. Then choose Balustrade Height and max Post spacing.

Top Protection Cap JET 212 between Posts highly recommended



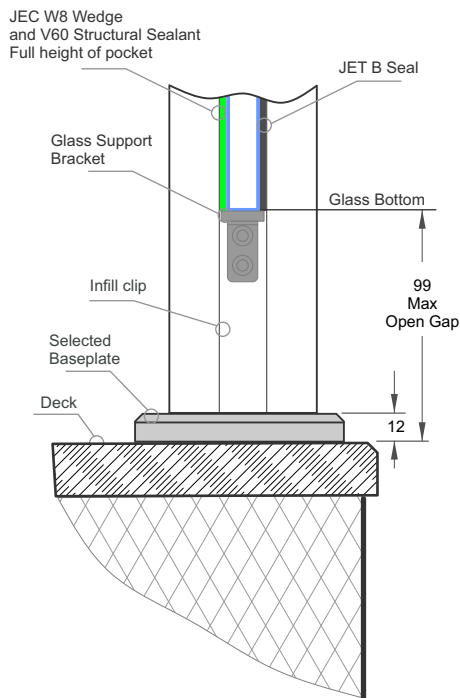
A Corner Post is available
Inline - Semi Frameless. Top Mount only
with 110mm sq JEC 222 Baseplate

2 -Glass Top - Offsets

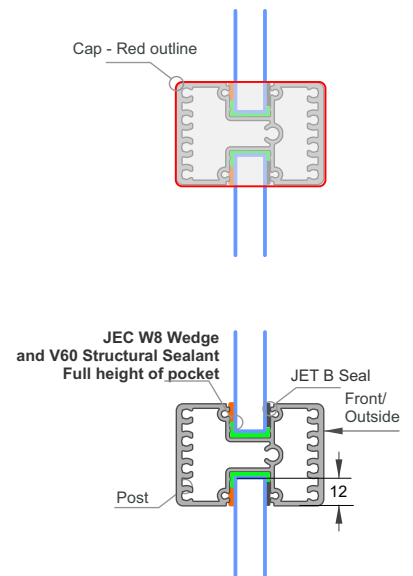


Important Note: All Glass Engagements 10mm min

3 - Height offsets



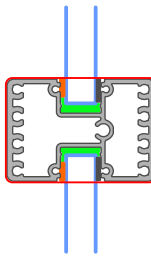
4 - Glass, Width Offsets



Top fix EDGE post JEB/212
Semiframeless
13.2mm Laminated Toughened Glass

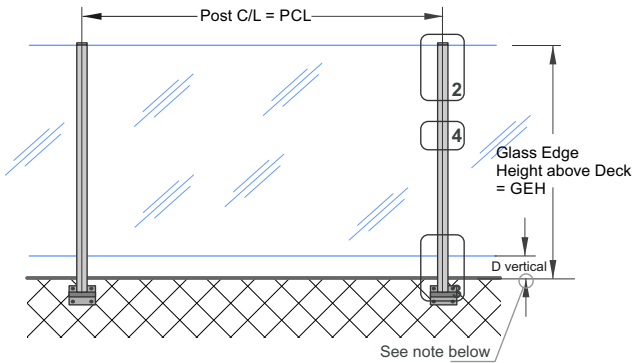
5 - Cutting, nominal

- a - Post, Cut to = GEH - 12
- b - 13.2mm Glass height = GEH - 99
- c - 13.2mm Glass width = PCL - 2x12 = PCL - 24
or tight distance between posts at deck level + 24mm

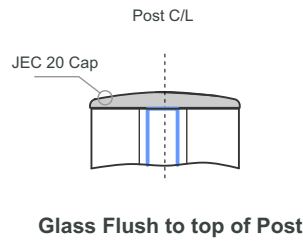


1 - Refer Post Mounting type and installation Wind zone. Then choose Balustrade Height and max Post spacing.

Top Protection Cap JET 212 between Posts highly recommended

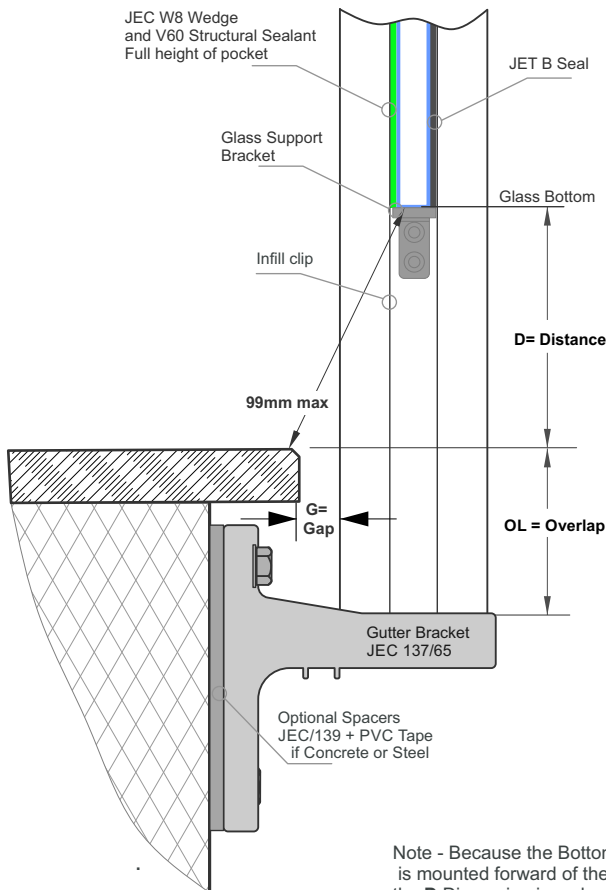


2 -Glass Top - Offsets



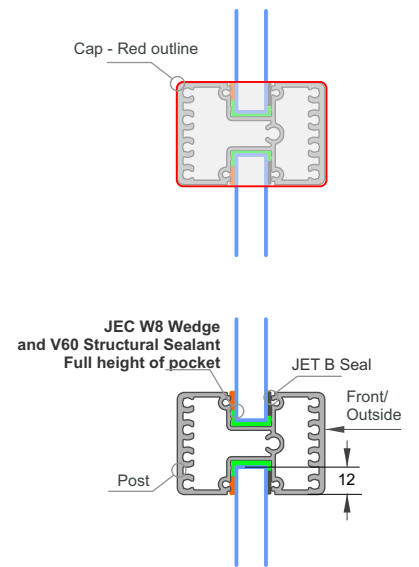
Important Note: All Glass Engagements 10mm min

3 - Height offsets



- D max values for a 99mm Opening to the deck**
- G Gap = 10mm, D = 91mm
 - G Gap = 20mm, D = 86mm
 - G Gap = 30mm, D = 80mm
 - G Gap = 40mm, D = 72mm
 - G Gap = 50mm max, D = 61mm

4 - Glass, Width Offsets



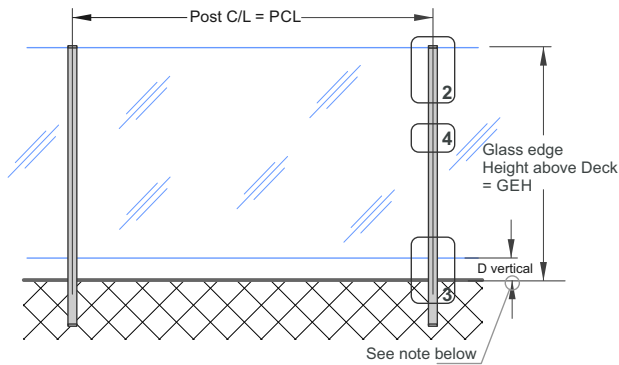
Top fix EDGE post JEB/212
Semiframeless
13.2mm Laminated Toughened Glass

5 - Cutting, nominal

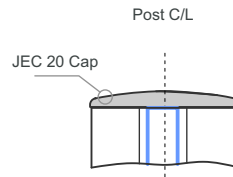
- a - Post, Cut to = $GEH + OL$
- b - 13.2mm Glass height = $GEH - D$
- c - 13.2mm Glass width = $PCL - 2 \times 12 = PCL - 24$
or tight distance between posts at deck level + 24mm

1 - Refer Post Mounting type and installation Wind zone. Then choose Balustrade Height and max Post spacing.

Top Protection Cap JET 212 between Posts highly recommended



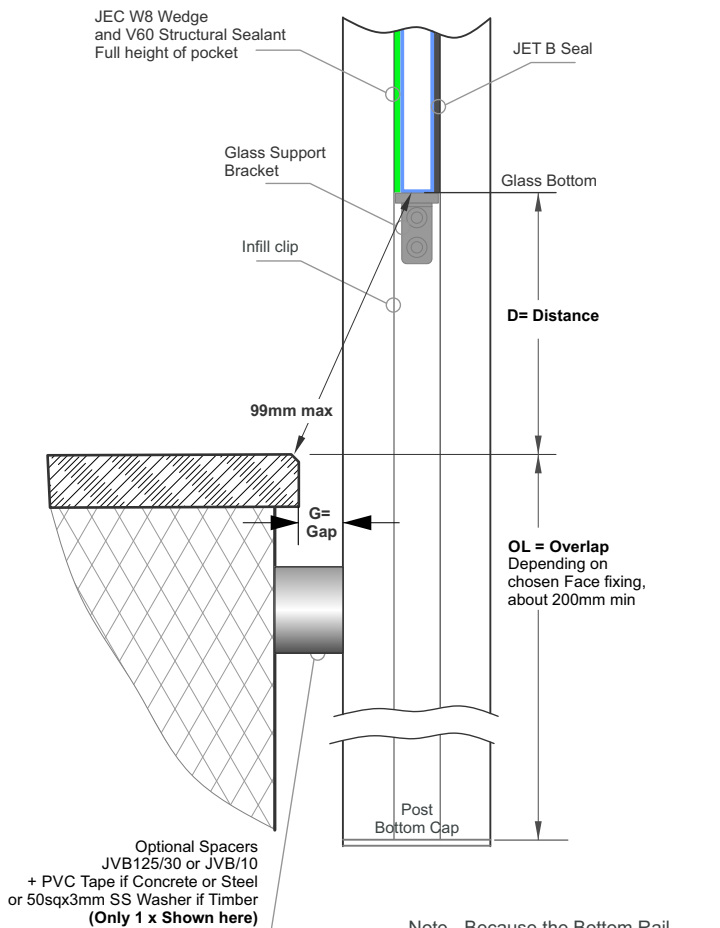
2 - Glass Top - Offsets



Glass Flush to top of Post

Important Note: All Glass Engagements 10mm min

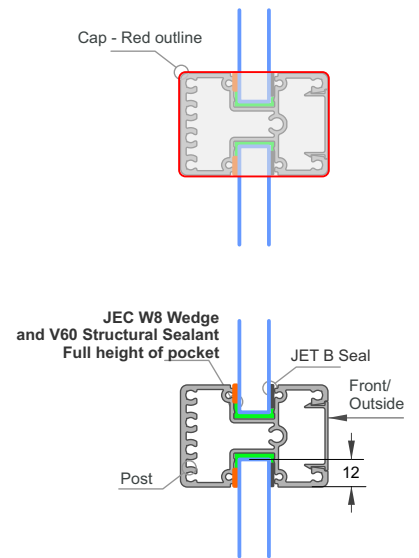
3 - Height offsets



Note - Because the Bottom Rail is mounted forward of the Deck Edge the D Dimension is no longer 99mm.

- D max values for a 99mm Opening to the deck**
- G Gap = 10mm, D = 91mm
 - G Gap = 20mm, D = 86mm
 - G Gap = 30mm, D = 80mm
 - G Gap = 40mm, D = 72mm
 - G Gap = 50mm max, D = 61mm

4 - Glass, Width Offsets

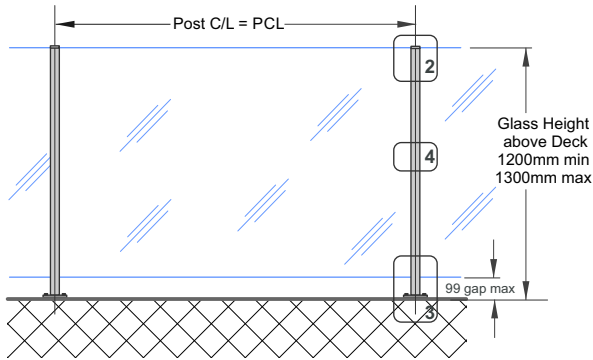


Face fix EDGE post JEB/214
Semiframeless
13.2mm Laminated Toughened Glass

5 - Cutting, nominal

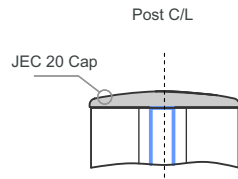
- a - Post, Cut to = GEH + OL
- b - 13.2mm Glass height = GEH-D
- c - 13.2mm Glass width = PCL - 2x12 = PCL - 24 or tight distance between posts at deck level + 24mm

1 - Refer Post Mounting type and installation Wind zone. Then choose Balustrade Height and max Post spacing.



Applies to Swimming Pools as of Jan 2017
Complies with the Building Code Clause F9
and section 162C of the Building Act.
Applies to Pool Fences not protecting
a fall of 1.0m or more

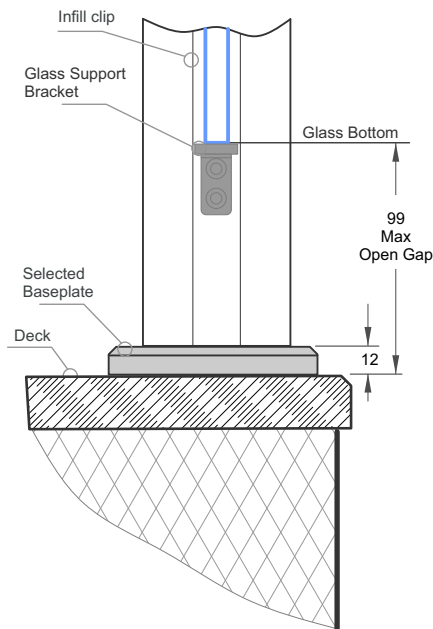
2 -Glass Top



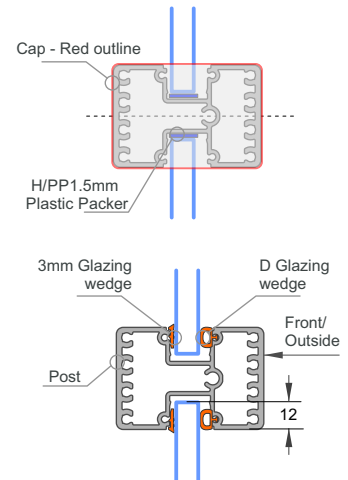
Glass Flush to top of Post

Important Note: All Glass Engagements 10mm min

3 - Height offsets



4 - Glass, Width Offsets

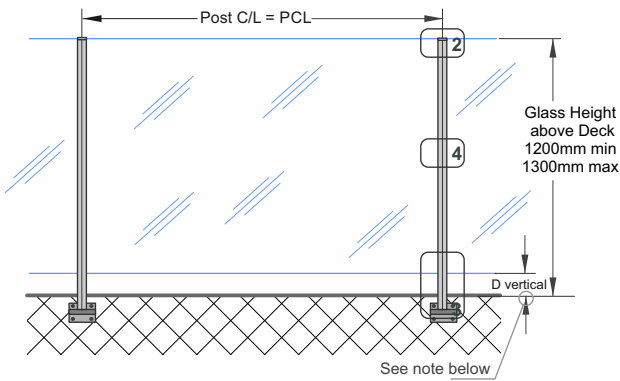


**Top fix EDGE post JEB/212
Semiframeless
10mm Toughened Glass**

5 - Cutting, nominal

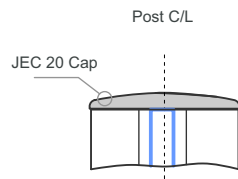
- a - Post, Cut to
= 1200-12
- b - 10mm Glass height
= 1100
- c - 10mm Glass width
= PCL - 2x12 = PCL - 24
or tight distance between posts
at deck level + 24mm

1 - Refer Post Mounting type and installation Wind zone. Then choose Balustrade Height and max Post spacing.



Applies to Swimming Pools as of Jan 2017
Complies with the Building Code Clause F9
and section 162C of the Building Act.
Applies to Pool Fences not protecting
a fall of 1.0m or more

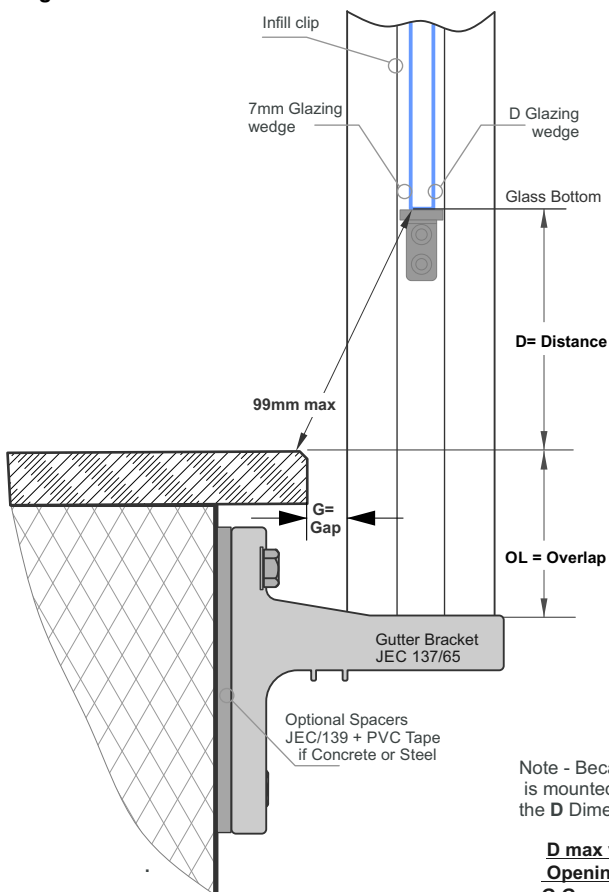
2 -Glass Top - Offsets



Glass Flush to top of Post

Important Note: All Glass Engagements 10mm min

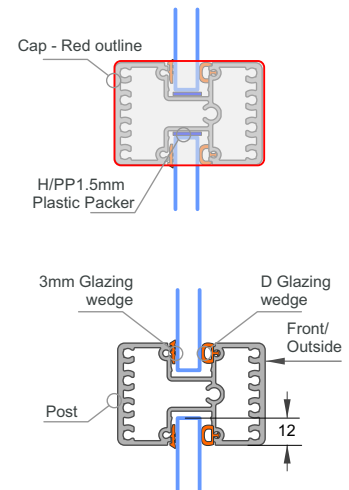
3 - Height offsets



Note - Because the Bottom Rail is mounted forward of the Deck Edge the D Dimension is no longer 99mm.

D max values for a 99mm Opening to the deck
G Gap = 10mm, D = 91mm
G Gap = 20mm, D = 86mm
G Gap = 30mm, D = 80mm
G Gap = 40mm, D = 72mm
G Gap = 50mm max, D = 61mm

4 - Glass, Width Offsets

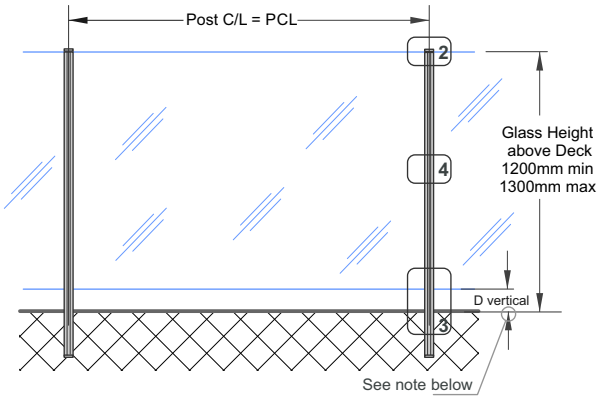


Top fix EDGE post JEB/212
Semiframeless
10mm Toughened Glass

5 - Cutting, nominal

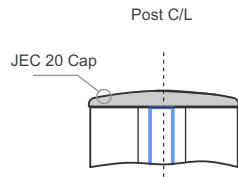
- a - Post, Cut to = 1200 + OL
- b - 10mm Glass height = 1200 - D
- c - 10mm Glass width = PCL - 2x12 = PCL - 24
or tight distance between posts
at deck level + 24mm

1 - Refer Post Mounting type and installation Wind zone. Then choose Balustrade Height and max Post spacing.



Applies to Swimming Pools as of Jan 2017
Complies with the Building Code Clause F9
and section 162C of the Building Act.
Applies to Pool Fences not protecting
a fall of 1.0m or more

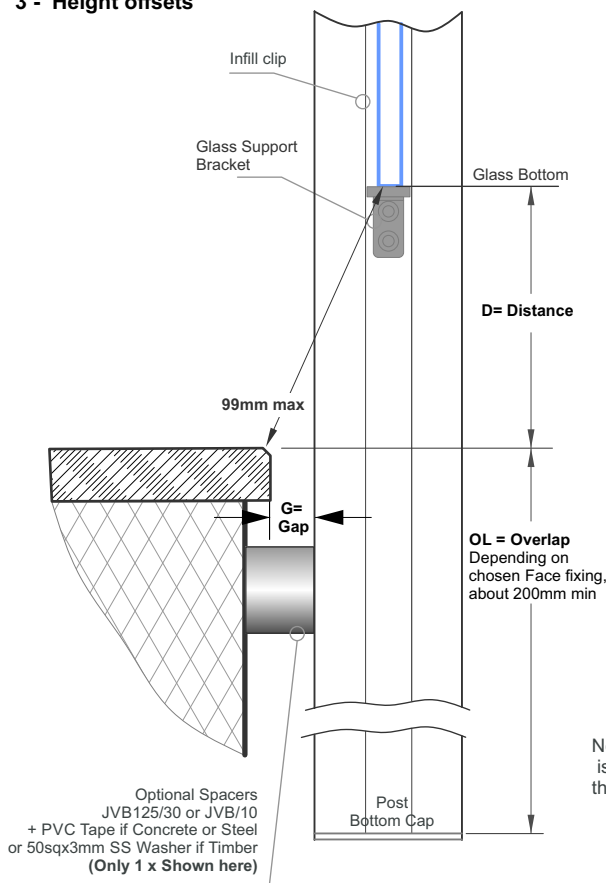
2 -Glass Top - Offsets



Glass Flush to top of Post

Important Note: All Glass Engagements 10mm min

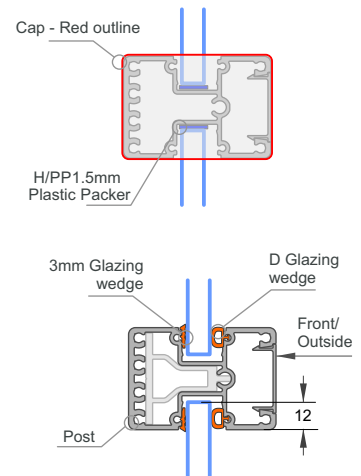
3 - Height offsets



Note - Because the Bottom Rail is mounted forward of the Deck Edge the D Dimension is no longer 99mm.

D max values for a 99mm Opening to the deck
G Gap = 10mm, D = 91mm
G Gap = 20mm, D = 86mm
G Gap = 30mm, D = 80mm
G Gap = 40mm, D = 72mm
G Gap = 50mm max, D = 61mm

4 - Glass, Width Offsets



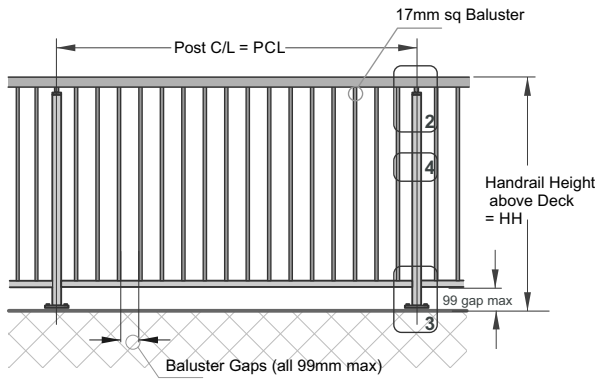
Face fix EDGE post JEB/214
Semi frameless
10mm Toughened Glass

5 - Cutting, nominal

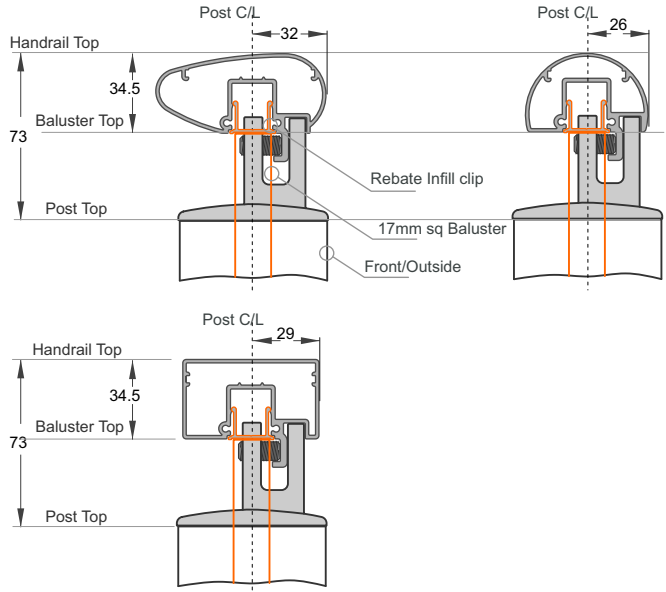
- a - Post, Cut to = 1200 + OL
- b - 10mm Glass height = 1200 - D
- c - 10mm Glass width = PCL - 2x12 = PCL - 24 or tight distance between posts at deck level + 24mm

17mm Baluster - Full Height. Handrail + Bottom Rail. Top Fix

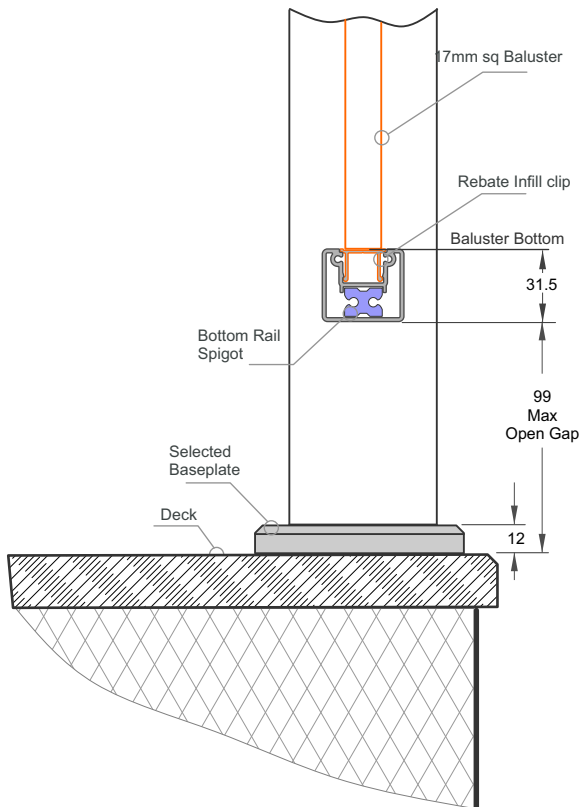
1 - Refer Post Mounting type and installation Wind zone. Then choose Balustrade Height and max Post spacing.



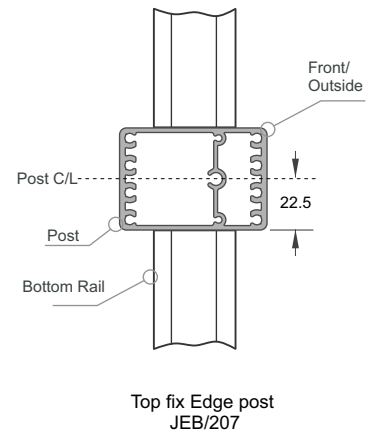
2 - Handrail - Offsets



3 - Height offsets



4 - Width Offsets

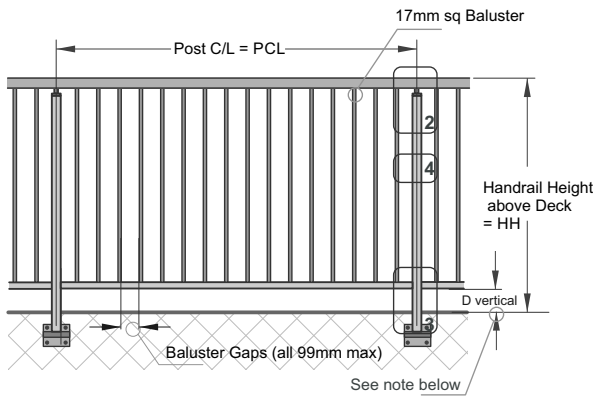


5 - Cutting, nominal

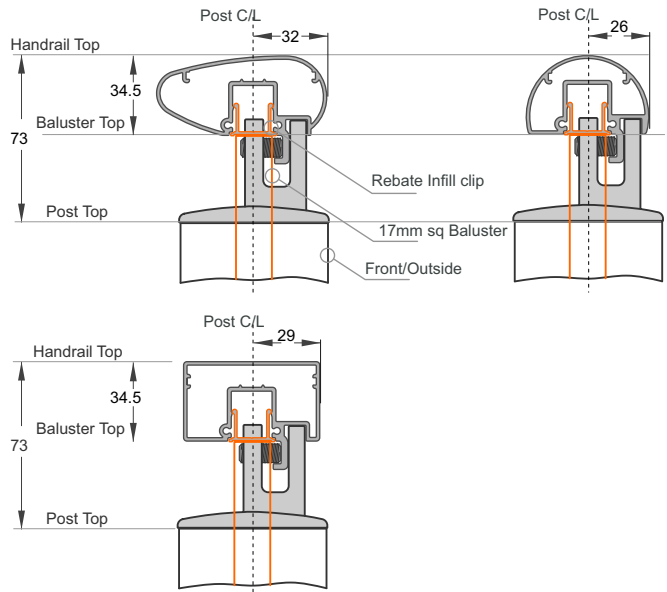
- a - Hand Rail = Use maximum lengths
- b - Post, Cut to
= $HH - 73 - 12 = HH - 85$
- c - Bottom Rail, Cut to
= $PCL - 2 \times 22.5 = PCL - 45$
- d - 17mm sq Baluster, Cut to
= $HH - 34.5 - 31.5 - 99 = HH - 165$

17mm Baluster - Full Height. Handrail + Bottom Rail. Gutter Brkt Face Fix

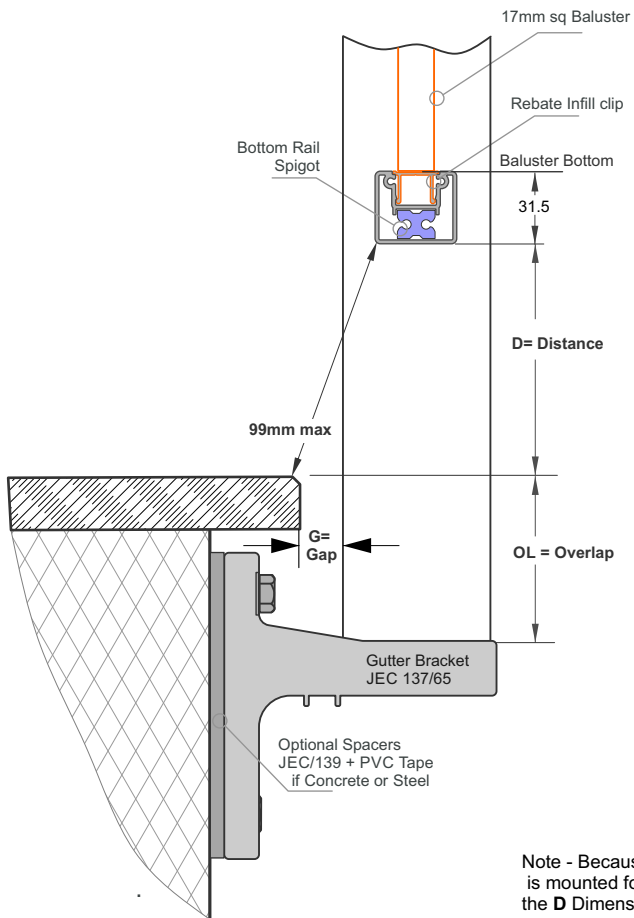
1 - Refer Post Mounting type and installation Wind zone. Then choose Balustrade Height and max Post spacing.



2 - Handrail - Offsets



3 - Height offsets

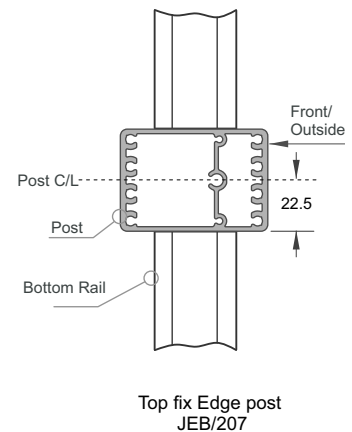


Note - Because the Bottom Rail is mounted forward of the Deck Edge the D Dimension is no longer 99mm.

D max values for a 99mm Opening to the deck

- G Gap = 10mm, D = 96mm
- G Gap = 20mm, D = 92mm
- G Gap = 30mm, D = 88mm
- G Gap = 40mm, D = 82mm
- G Gap = 50mm max, D = 75mm

4 - Width Offsets

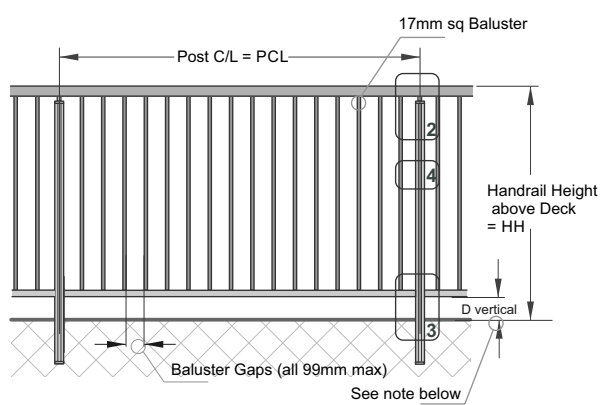


5 - Cutting, nominal

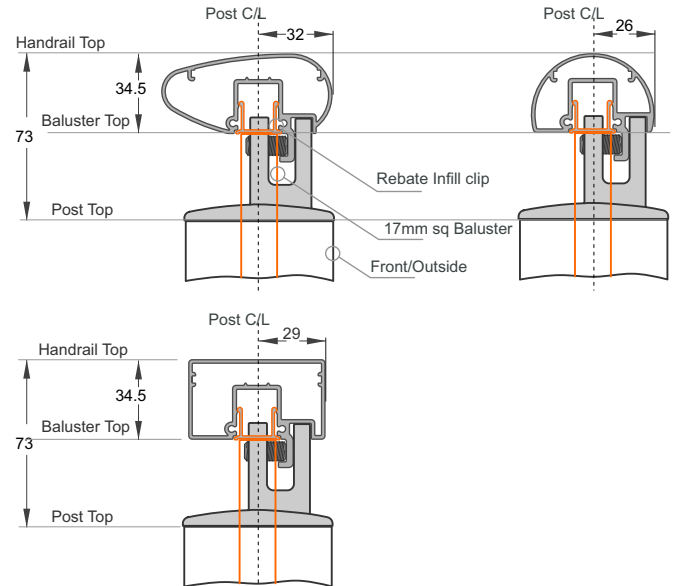
- a - Hand Rail = Use maximum lengths
- b - Post, Cut to = $HH-73+OL$
- c - Bottom Rail, Cut to = $PCL-2 \times 22.5 = PCL - 45$
- d - 17mm sq Baluster, Cut to = $HH-34.5-31.5-D = HH - 66 - D$

17mm Baluster - Full Height. Handrail + Bottom Rail. Face Fix

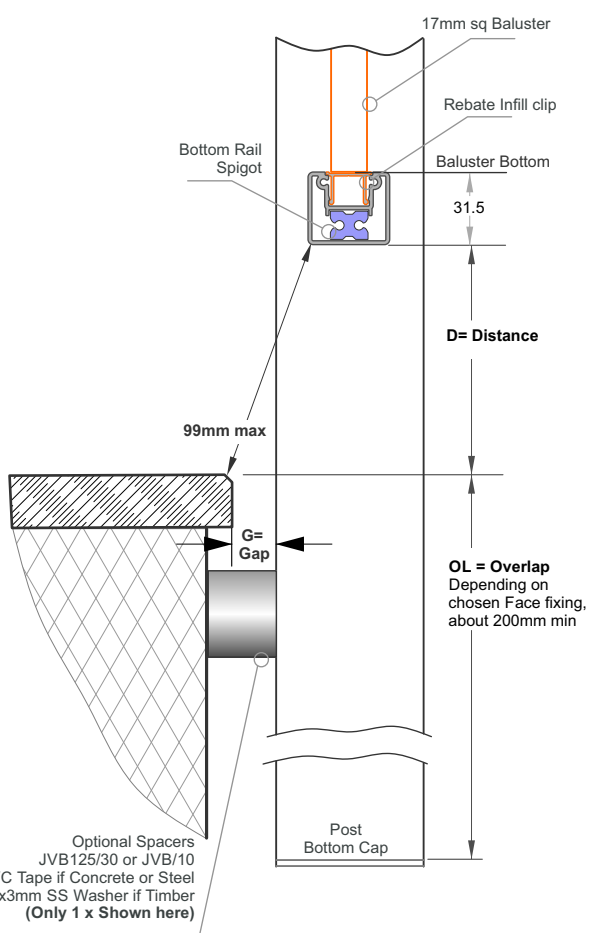
1 - Refer Post Mounting type and installation Wind zone. Then choose Balustrade Height and max Post spacing.



2 - Handrail - Offsets



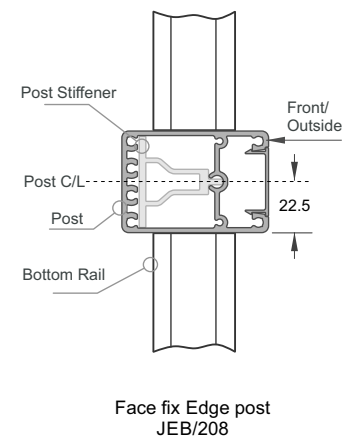
3 - Height offsets



Note - Because the Bottom Rail is mounted forward of the Deck Edge the D Dimension is no longer 99mm.

- D max values for a 99mm Opening to the deck**
- G Gap = 10mm, D = 96mm
 - G Gap = 20mm, D = 92mm
 - G Gap = 30mm, D = 88mm
 - G Gap = 40mm, D = 82mm
 - G Gap = 50mm max, D = 75mm

4 - Width Offsets

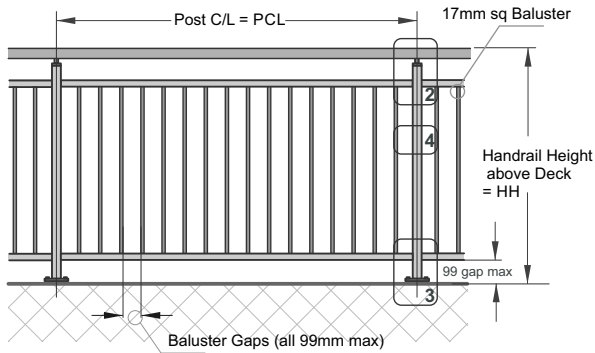


5 - Cutting, nominal

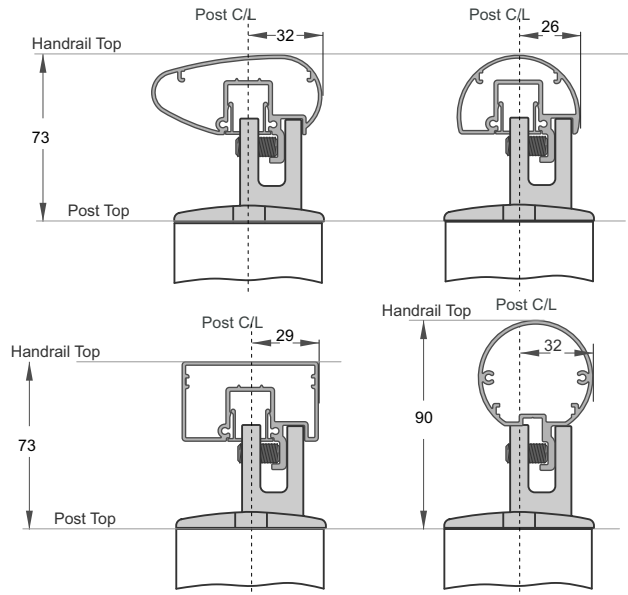
- a - Hand Rail = Use maximum lengths
- b - Post, Cut to = HH-73+OL
- c - Bottom Rail, Cut to = PCL-2x22.5 = PCL - 45
- d - 17mm sq Baluster, Cut to = HH-34.5-31.5-D = HH - 66 - D

17mm Baluster - Split Rail. Handrail + Top and Bottom Rail. Top Fix

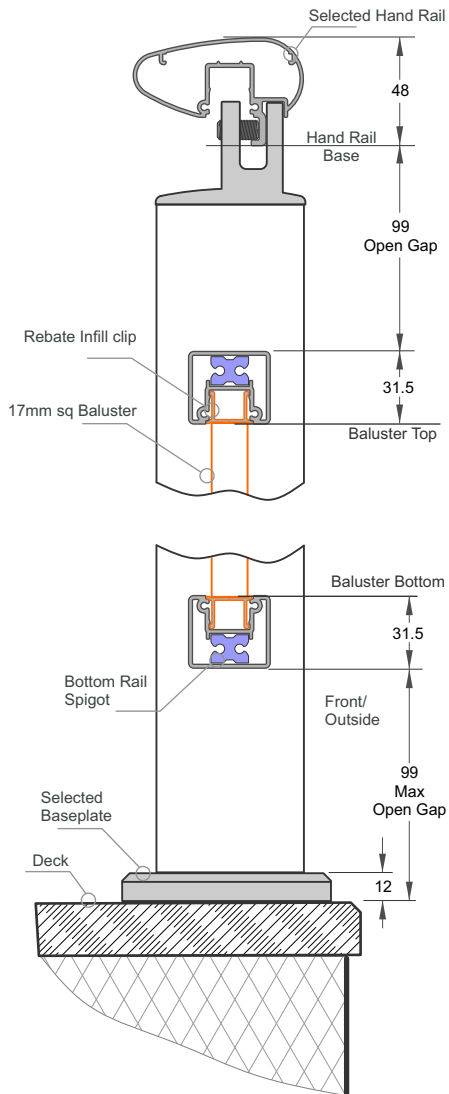
1 - Refer Post Mounting type and installation Wind zone. Then choose Balustrade Height and max Post spacing.



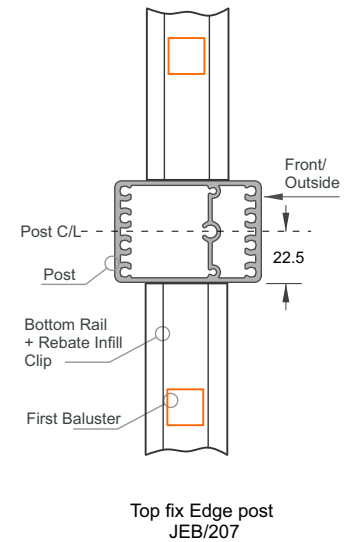
2 - Handrail - Offsets



3 - Height offsets



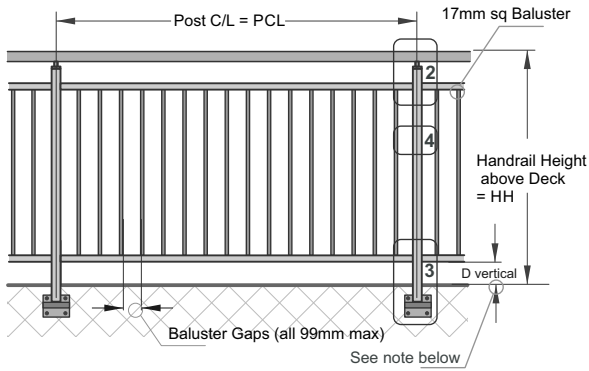
4 - Width Offsets



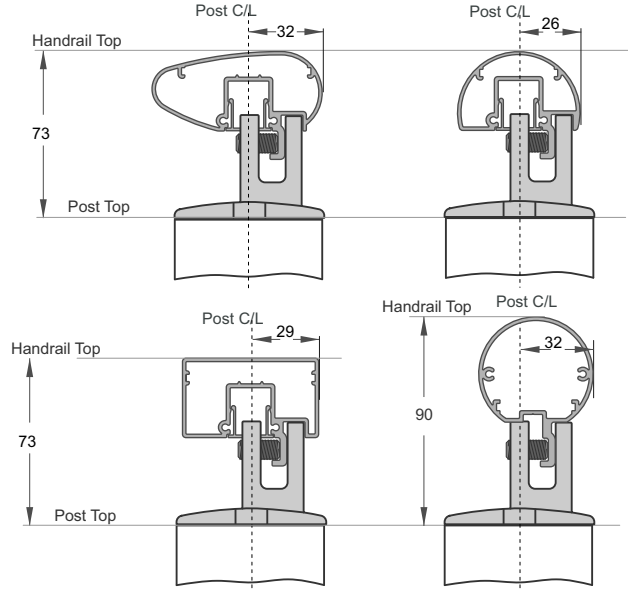
5 - Cutting, nominal

- a - Hand Rail = Use maximum lengths
- b - Post, Cut to
= $HH - 73 - 12 = HH - 85$
- c - Bottom Rail, Cut to
= $PCL - 2 \times 22.5 = PCL - 45$
- d - 17mm sq Baluster, Cut to
= $HH - 48 - 99 \times 2 - 31.5 \times 2 = HH - 309$

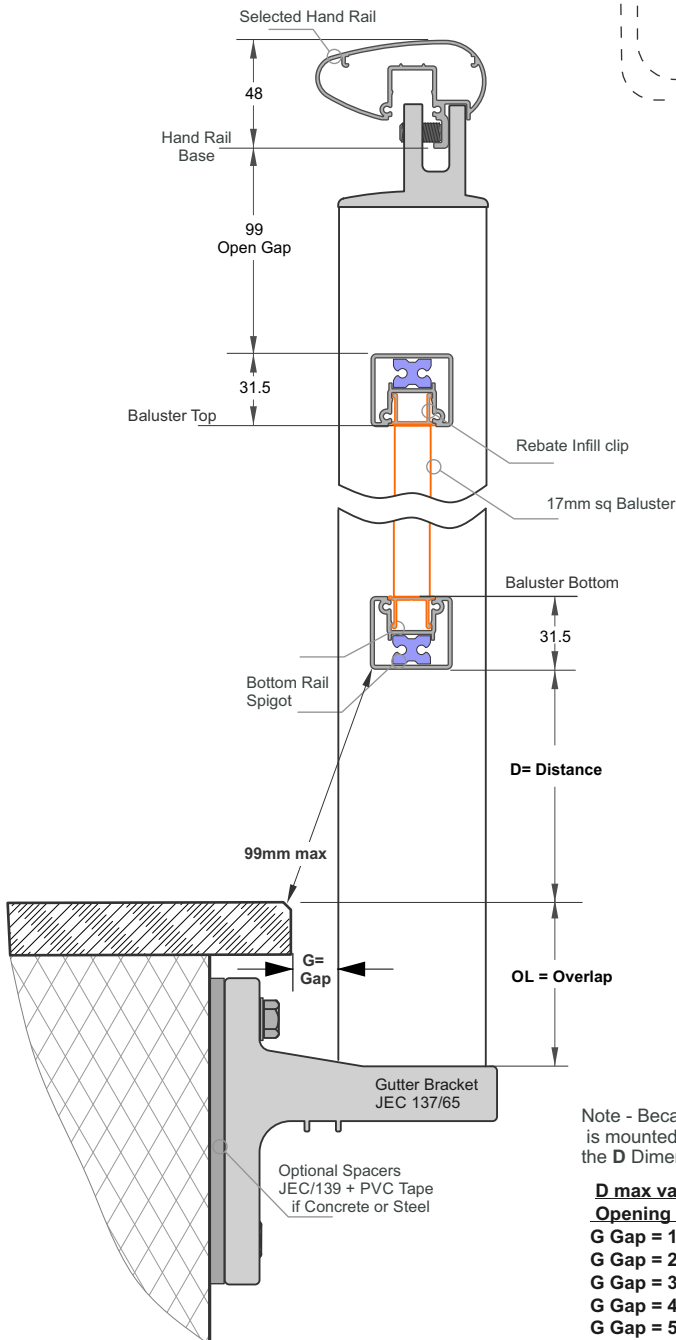
1 - Refer Post Mounting type and installation Wind zone. Then choose Balustrade Height and max Post spacing.



2 - Handrail - Offsets



3 - Height offsets



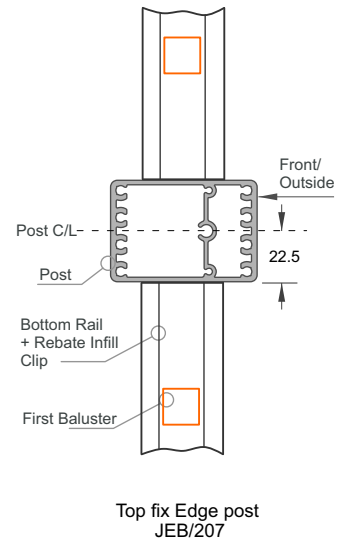
Note - Because the Bottom Rail is mounted forward of the Deck Edge the D Dimension is no longer 99mm.

D max values for a 99mm

Opening to the deck

- G Gap = 10mm, D = 96mm
- G Gap = 20mm, D = 92mm
- G Gap = 30mm, D = 88mm
- G Gap = 40mm, D = 82mm
- G Gap = 50mm max, D = 75mm

4 - Width Offsets

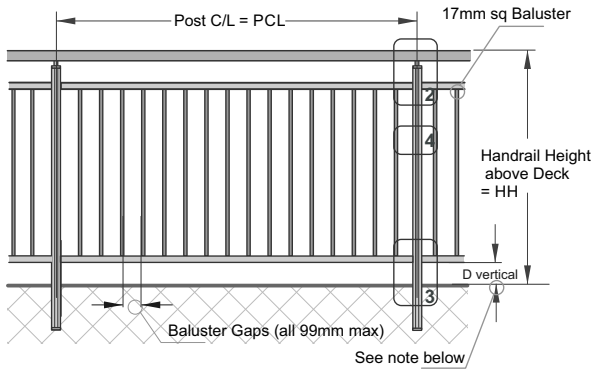


5 - Cutting, nominal

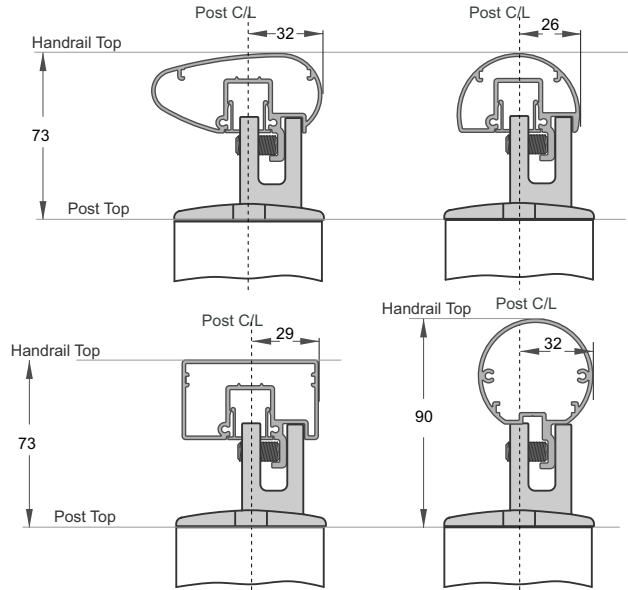
- a - Hand Rail = Use maximum lengths
- b - Post, Cut to = HH-73+OL
- c - Bottom Rail, Cut to = PCL-2x22.5 = PCL - 45
- d - 17mm sq Baluster, Cut to = HH-48-99-31.5x2-D = HH - 210 - D

17mm Baluster - Split Rail. Handrail + Top and Bottom Rail. Face Fix

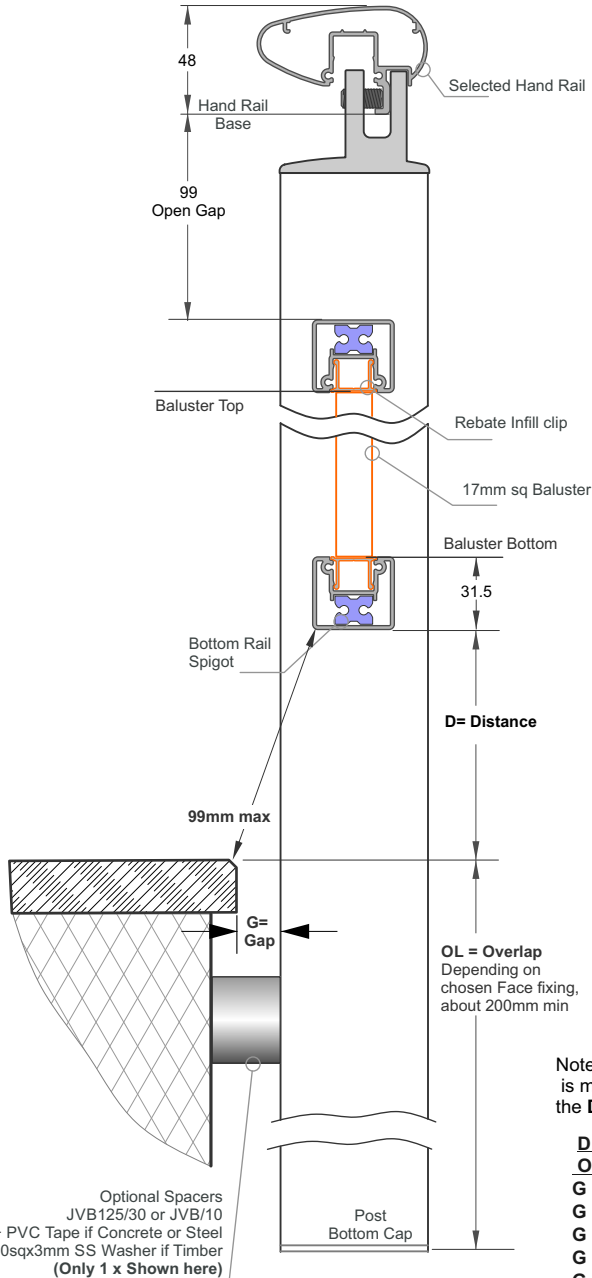
1 - Refer Post Mounting type and installation Wind zone. Then choose Balustrade Height and max Post spacing.



2 - Handrail - Offsets



3 - Height offsets



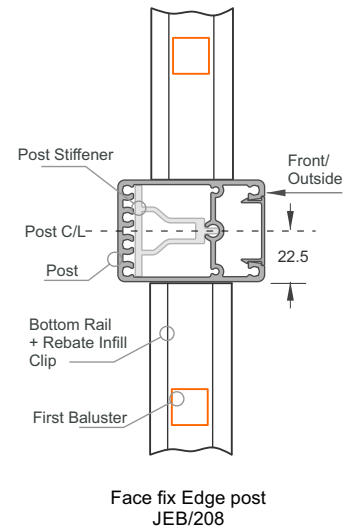
Note - Because the Bottom Rail is mounted forward of the Deck Edge the D Dimension is no longer 99mm.

D max values for a 99mm

Opening to the deck

- G Gap = 10mm, D = 96mm
- G Gap = 20mm, D = 92mm
- G Gap = 30mm, D = 88mm
- G Gap = 40mm, D = 82mm
- G Gap = 50mm max, D = 75mm

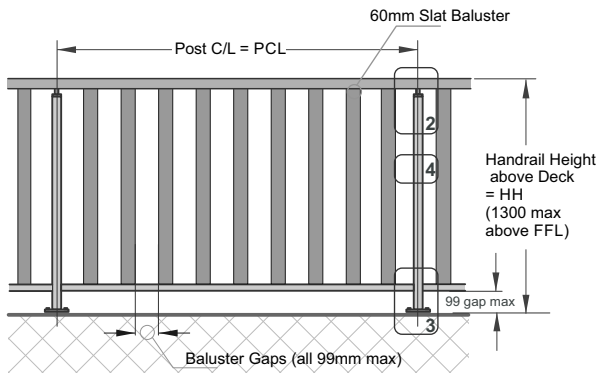
4 - Width Offsets



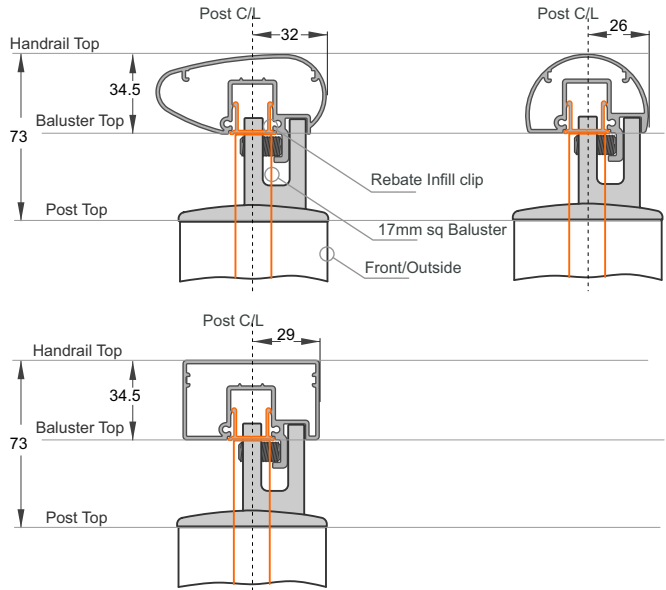
5 - Cutting, nominal

- a - Hand Rail = Use maximum lengths
- b - Post, Cut to
= HH-73+OL
- c - Bottom Rail, Cut to
= PCL-2x22.5 = PCL - 45
- d - 17mm sq Baluster, Cut to
= HH-48-99-31.5x2 - D = HH - 210 - D

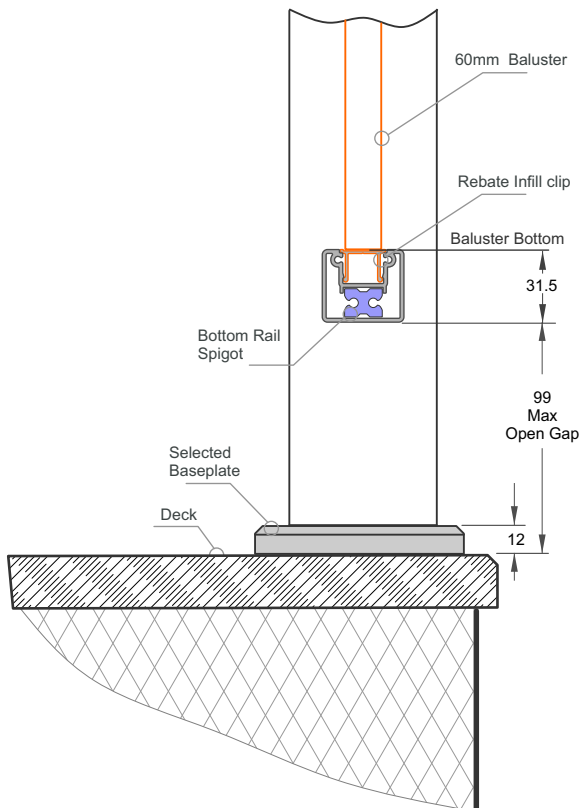
1 - Refer Post Mounting type and installation Wind zone. Then choose Balustrade Height and max Post spacing.



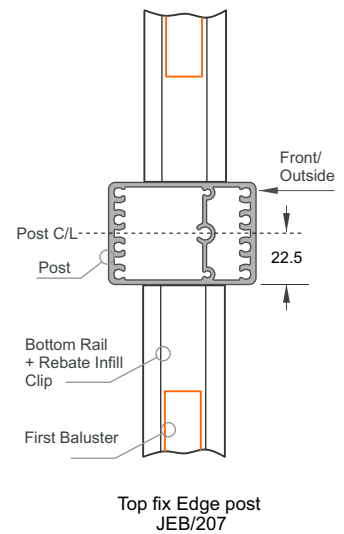
2 - Handrail - Offsets



3 - Height offsets



4 - Width Offsets

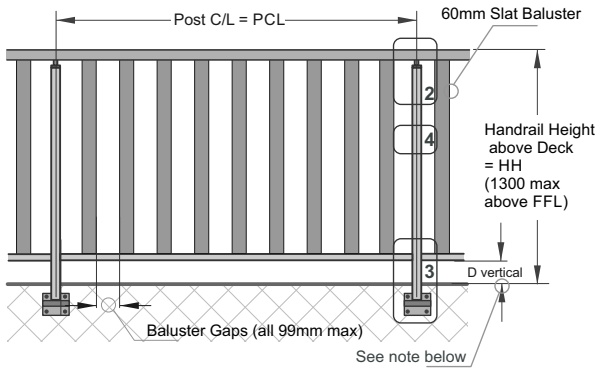


5 - Cutting, nominal

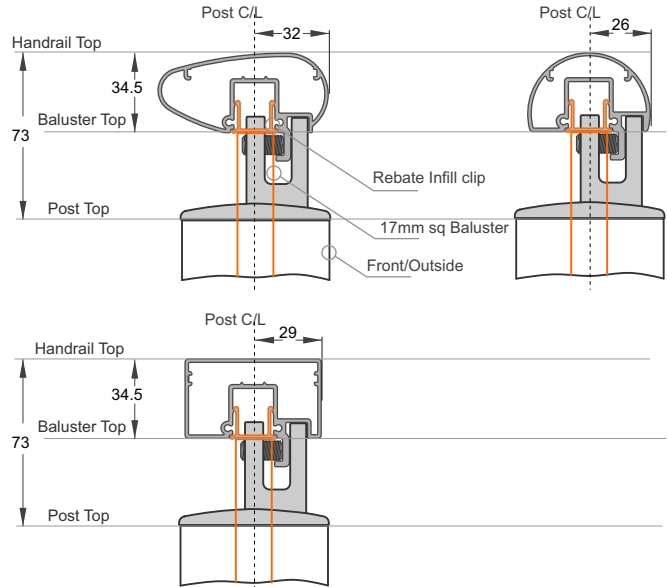
- a - Hand Rail = Use maximum lengths
- b - Post, Cut to
= HH-73-12 = HH - 85
- c - Bottom Rail, Cut to
= PCL-2x22.5 = PCL - 45
- d - 60mm Slat Baluster, Cut to
= HH-34.5-31.5-99 = HH - 165

60mm Slat - Full Height. Handrail + Bottom Rail. Gutter Brkt Face Fix

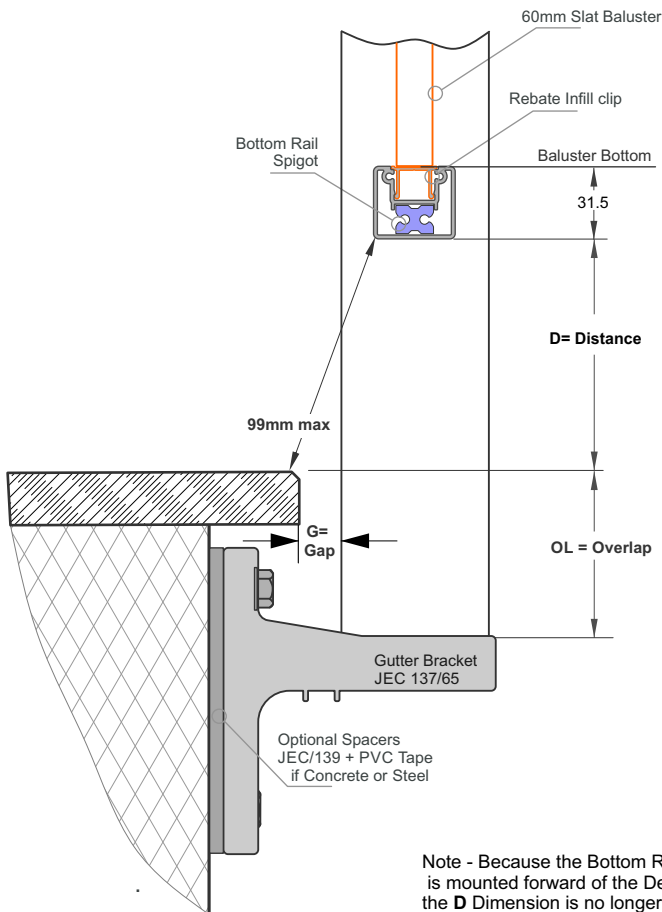
1 - Refer Post Mounting type and installation Wind zone. Then choose Balustrade Height and max Post spacing.



2 - Handrail - Offsets



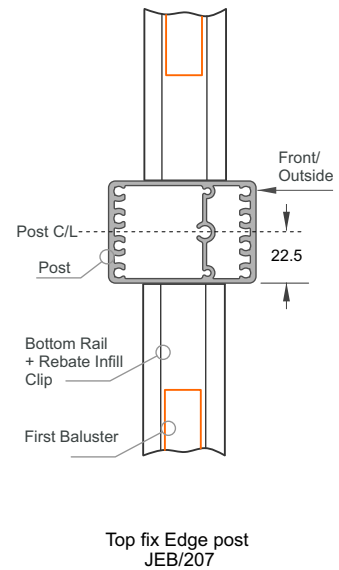
3 - Height offsets



Note - Because the Bottom Rail is mounted forward of the Deck Edge the D Dimension is no longer 99mm.

- D max values for a 99mm Opening to the deck**
- G Gap = 10mm, D = 96mm
 - G Gap = 20mm, D = 92mm
 - G Gap = 30mm, D = 88mm
 - G Gap = 40mm, D = 82mm
 - G Gap = 50mm max, D = 75mm

4 - Width Offsets

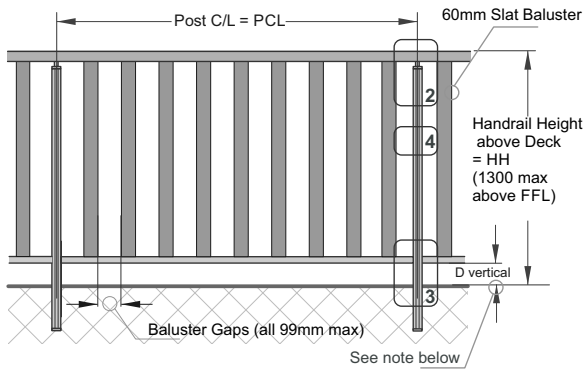


5 - Cutting, nominal

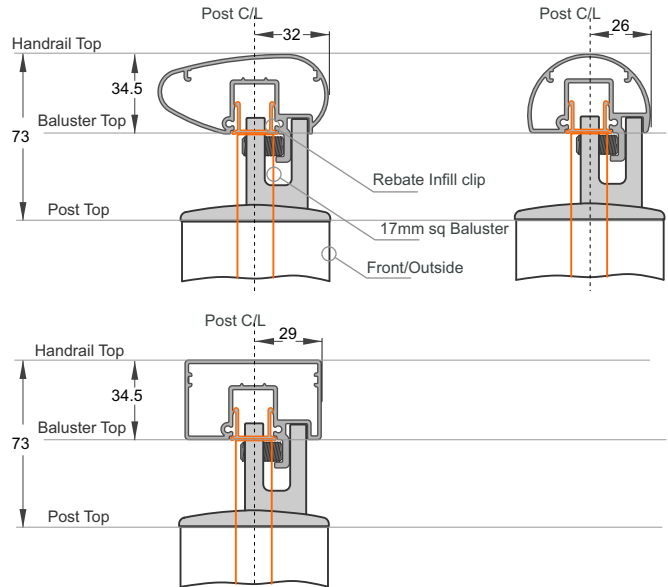
- a - Hand Rail = Use maximum lengths
- b - Post, Cut to = $HH-73+OL$
- c - Bottom Rail, Cut to = $PCL-2 \times 22.5 = PCL - 45$
- d - 60mm Slat Baluster, Cut to = $HH-34.5-31.5-D-OL = HH-66-D-OL$

60mm Slat - Full Height. Handrail + Bottom Rail. Face Fix

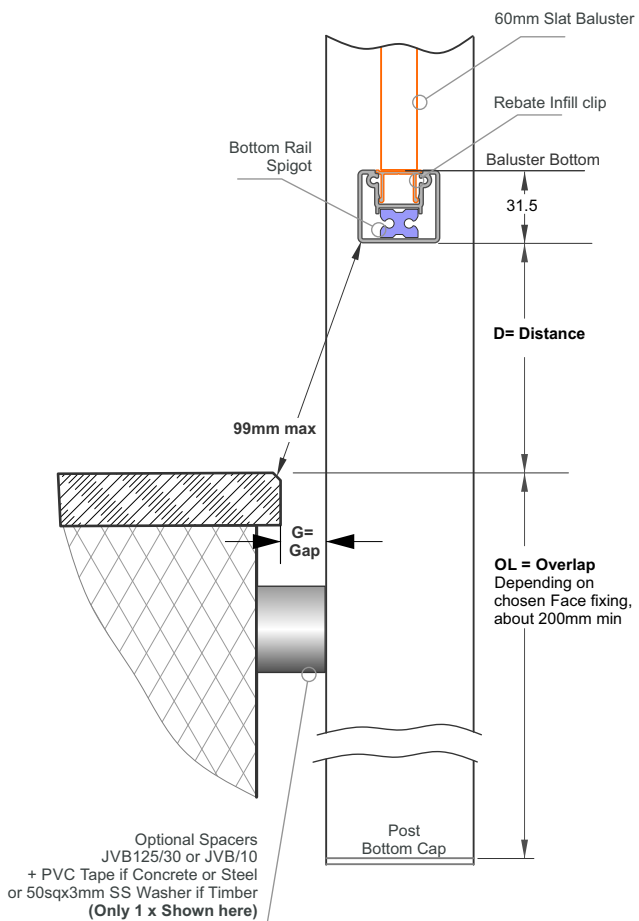
1 - Refer Post Mounting type and installation Wind zone. Then choose Balustrade Height and max Post spacing.



2 - Handrail - Offsets



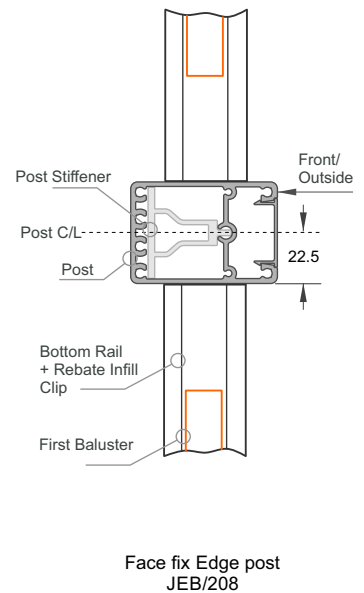
3 - Height offsets



Note - Because the Bottom Rail is mounted forward of the Deck Edge the D Dimension is no longer 99mm.

- D max values for a 99mm Opening to the deck**
- G Gap = 10mm, D = 96mm
 - G Gap = 20mm, D = 92mm
 - G Gap = 30mm, D = 88mm
 - G Gap = 40mm, D = 82mm
 - G Gap = 50mm max, D = 75mm

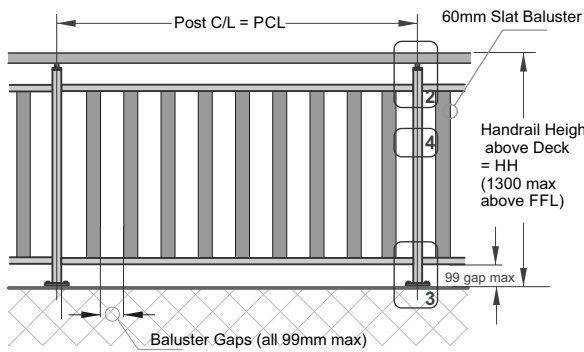
4 - Width Offsets



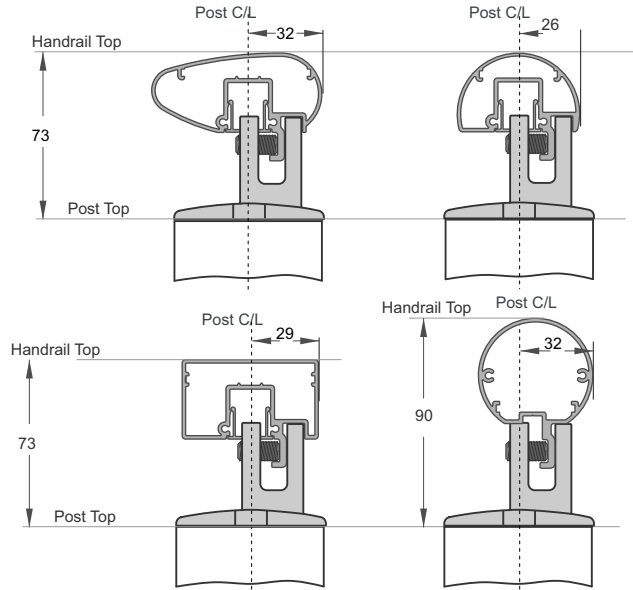
5 - Cutting, nominal

- a - Hand Rail = Use maximum lengths
- b - Post, Cut to = $HH - 73 + OL$
- c - Bottom Rail, Cut to = $PCL - 2 \times 22.5 = PCL - 45$
- d - 60mm Slat Baluster, Cut to = $HH - 34.5 - 31.5 - D = HH - 66 - D$

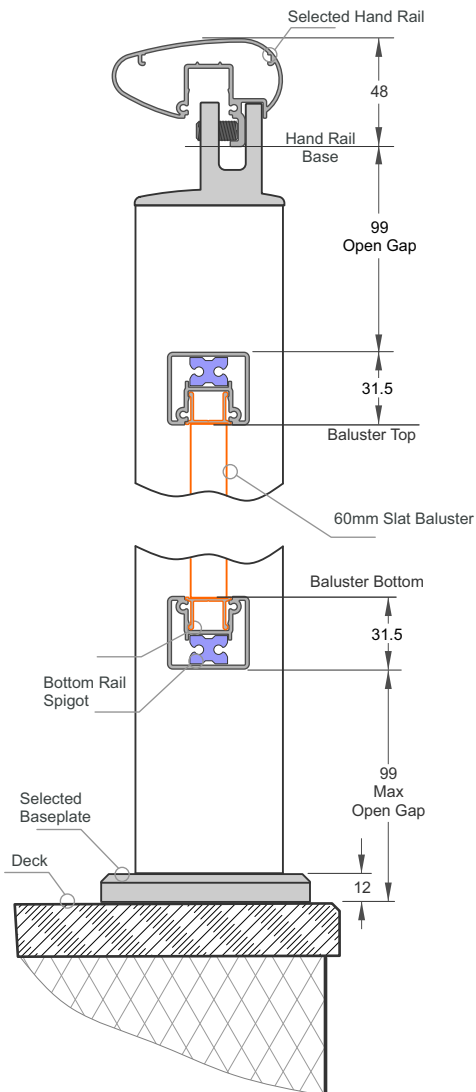
1 - Refer Post Mounting type and installation Wind zone. Then choose Balustrade Height and max Post spacing.



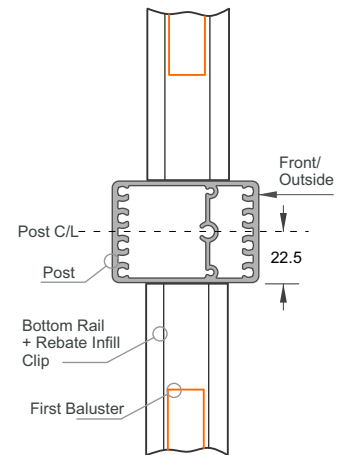
2 - Handrail - Offsets



3 - Height offsets



4 - Width Offsets



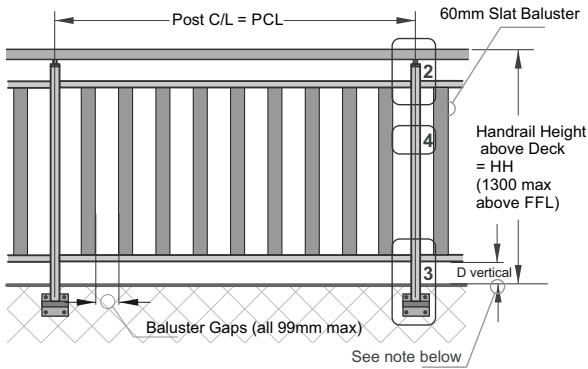
Top fix Edge post
JEB/207

5 - Cutting, nominal

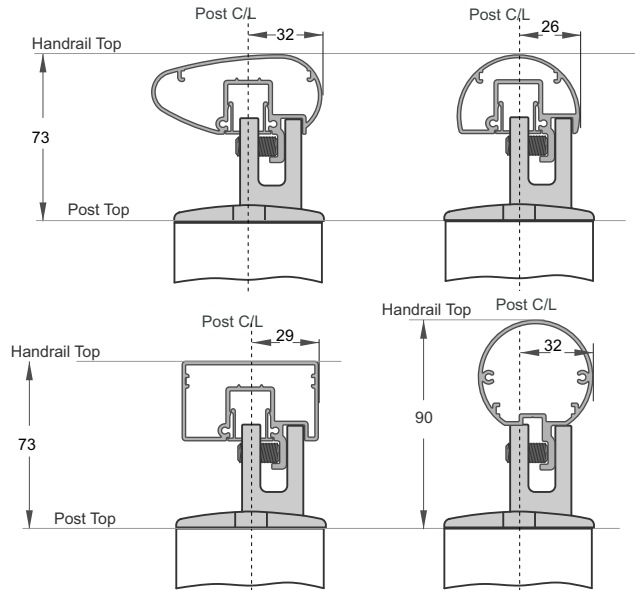
- a - Hand Rail = Use maximum lengths
- b - Post, Cut to
= HH-73-12 = HH - 85
- c - Bottom Rail, Cut to
= PCL-2x22.5 = PCL - 45
- d - 60mm Slat Baluster, Cut to
= HH-48-99x2-31.5x2 = HH - 309

60mm Slat - Split Rail. Handrail + Top and Bottom Rail. Gutter Brkt Face Fix

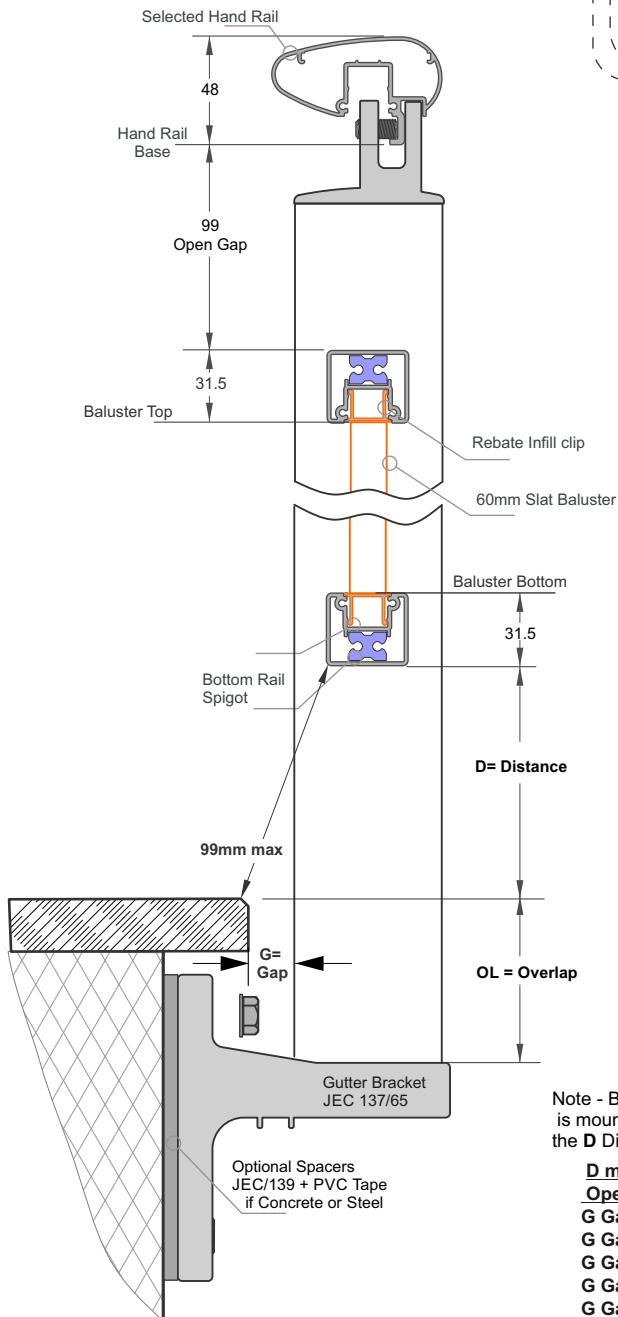
1 - Refer Post Mounting type and installation Wind zone. Then choose Balustrade Height and max Post spacing.



2 - Handrail - Offsets



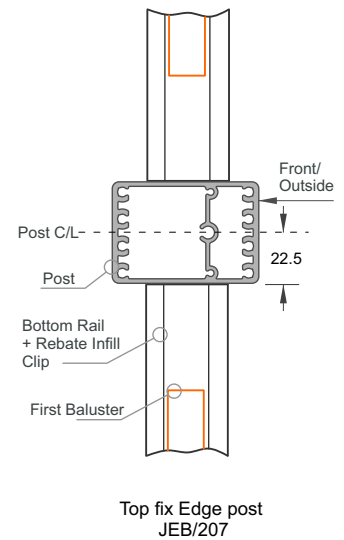
3 - Height offsets



Note - Because the Bottom Rail is mounted forward of the Deck Edge the D Dimension is no longer 99mm.

- D max values for a 99mm Opening to the deck**
- G Gap = 10mm, D = 96mm
 - G Gap = 20mm, D = 92mm
 - G Gap = 30mm, D = 88mm
 - G Gap = 40mm, D = 82mm
 - G Gap = 50mm, max D = 75mm

4 - Width Offsets

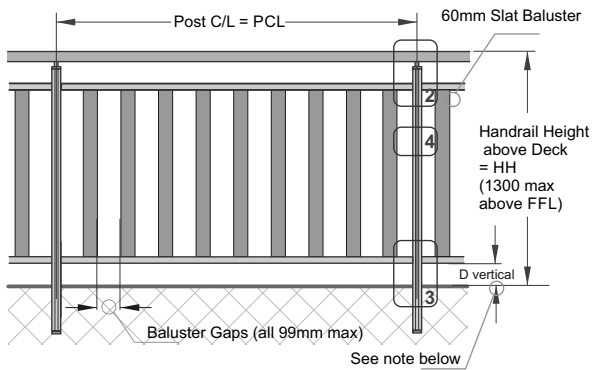


5 - Cutting, nominal

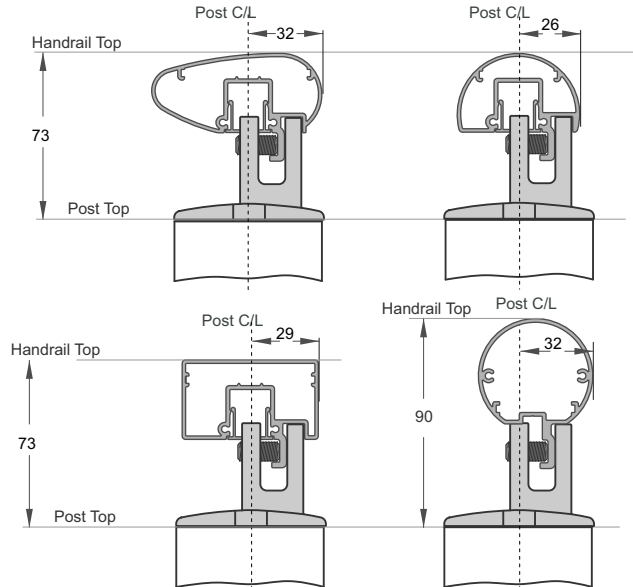
- a - Hand Rail = Use maximum lengths
- b - Post, Cut to = HH-73+OL
- c - Bottom Rail, Cut to = PCL-2x22.5 = PCL - 45
- d - 60mm Slat Baluster, Cut to = HH-48-99-31.5x2-D = HH - 210 - D

60mm Slat - Split Rail. Handrail + Top and Bottom Rail. Face Fix

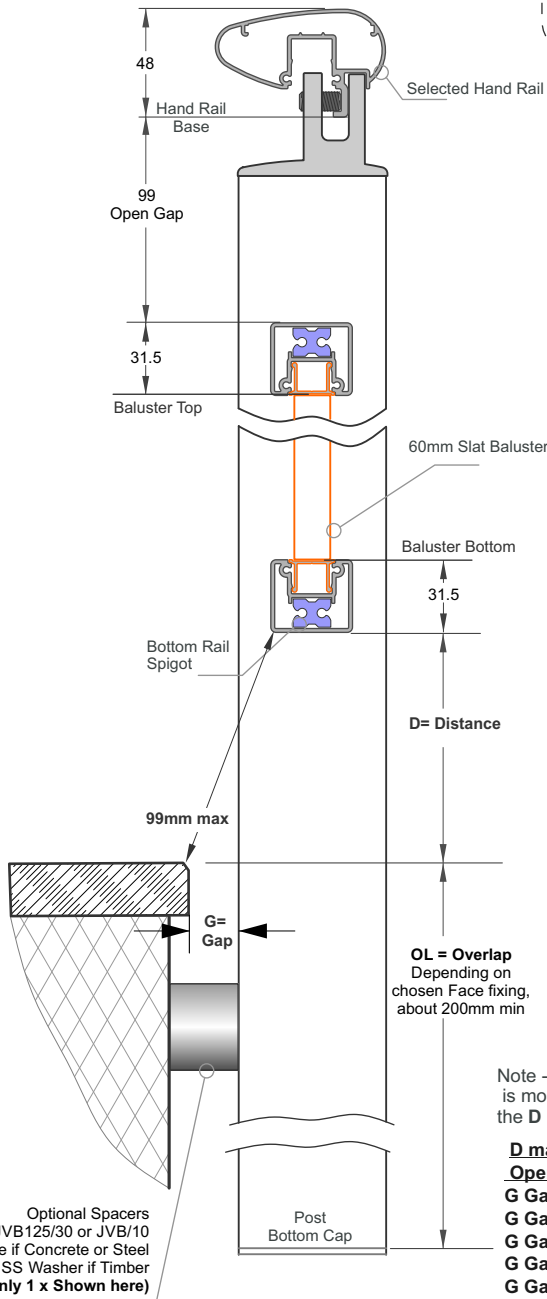
1 - Refer Post Mounting type and installation Wind zone. Then choose Balustrade Height and max Post spacing.



2 - Handrail - Offsets



3 - Height offsets

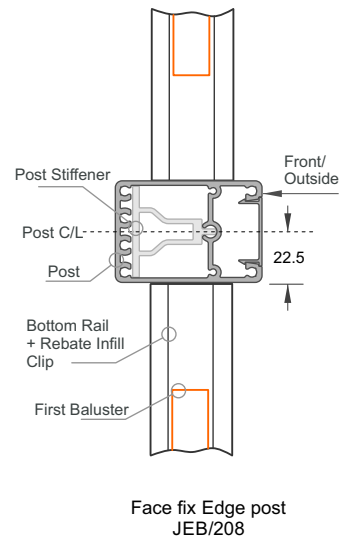


Note - Because the Bottom Rail is mounted forward of the Deck Edge the D Dimension is no longer 99mm.

D max values for a 99mm Opening to the deck

G Gap = 10mm	D = 96mm
G Gap = 20mm	D = 92mm
G Gap = 30mm	D = 88mm
G Gap = 40mm	D = 82mm
G Gap = 50mm max	D = 75mm

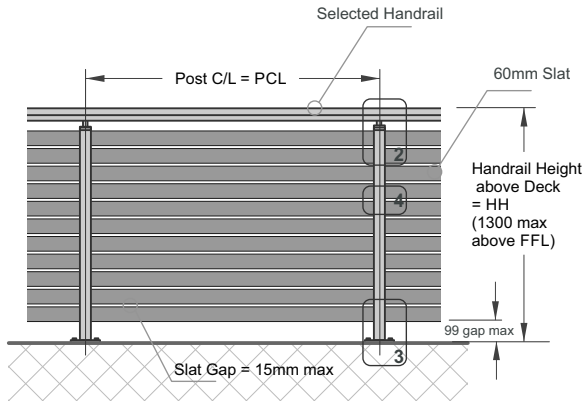
4 - Width Offsets



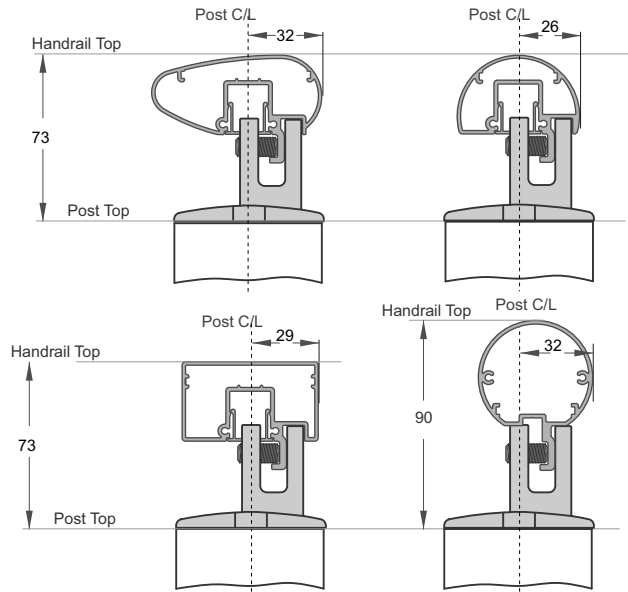
5 - Cutting, nominal

- a - Hand Rail = Use maximum lengths
- b - Post, Cut to = HH-73+OL
- c - Bottom Rail, Cut to = PCL-2x22.5 = PCL - 45
- d - 60mm Slat Baluster, Cut to = HH-48-99-31.5x2 - D = HH - 210 - D

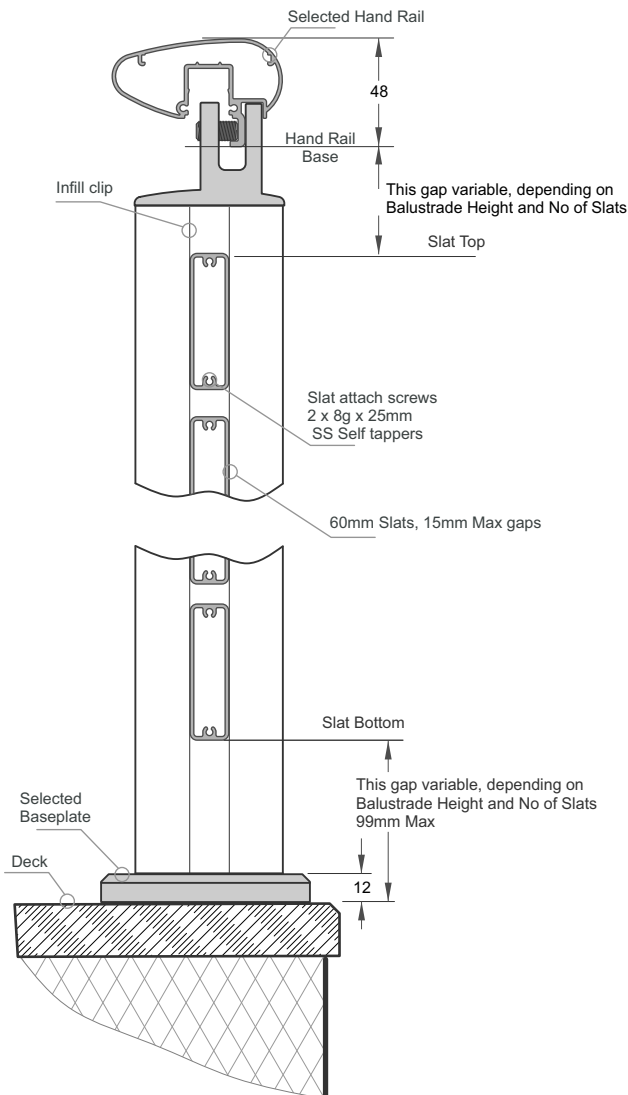
1 - Refer Post Mounting type and installation Wind zone. Then choose Balustrade Height and max Post spacing.



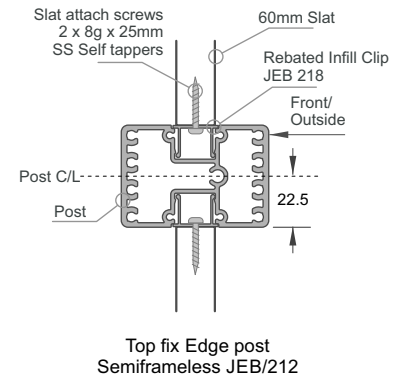
2 - Handrail - Offsets



3 - Height offsets



4 - Width Offsets

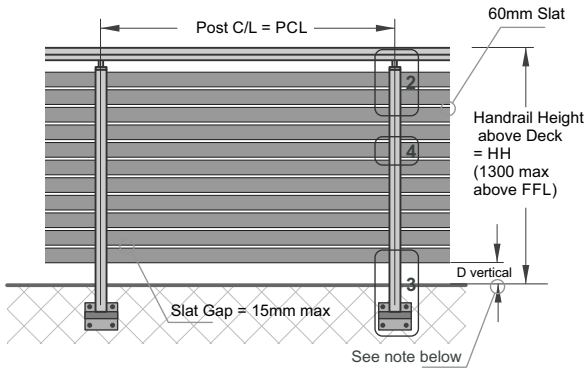


5 - Cutting, nominal

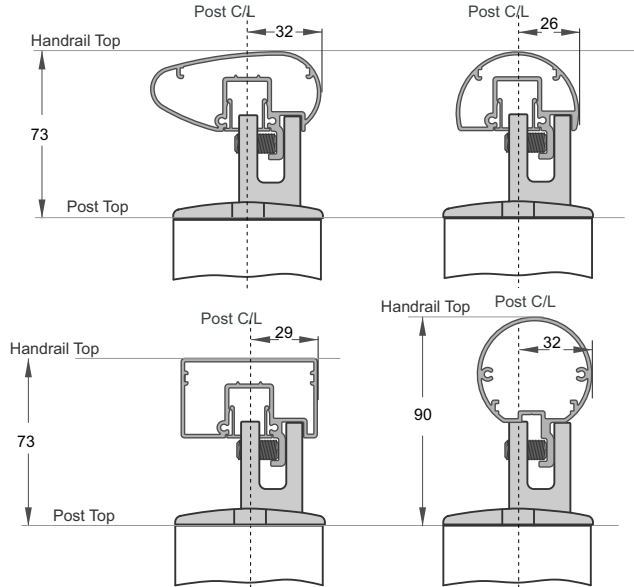
- a - Hand Rail = Use maximum lengths
- b - Post, Cut to
= $HH - 73 - 12 = HH - 85$
- c - 60mm Slat Cut to
= $PCL - 45$

60mm Slat - Horizontal + Handrail. Gutter Brkt Face Fix

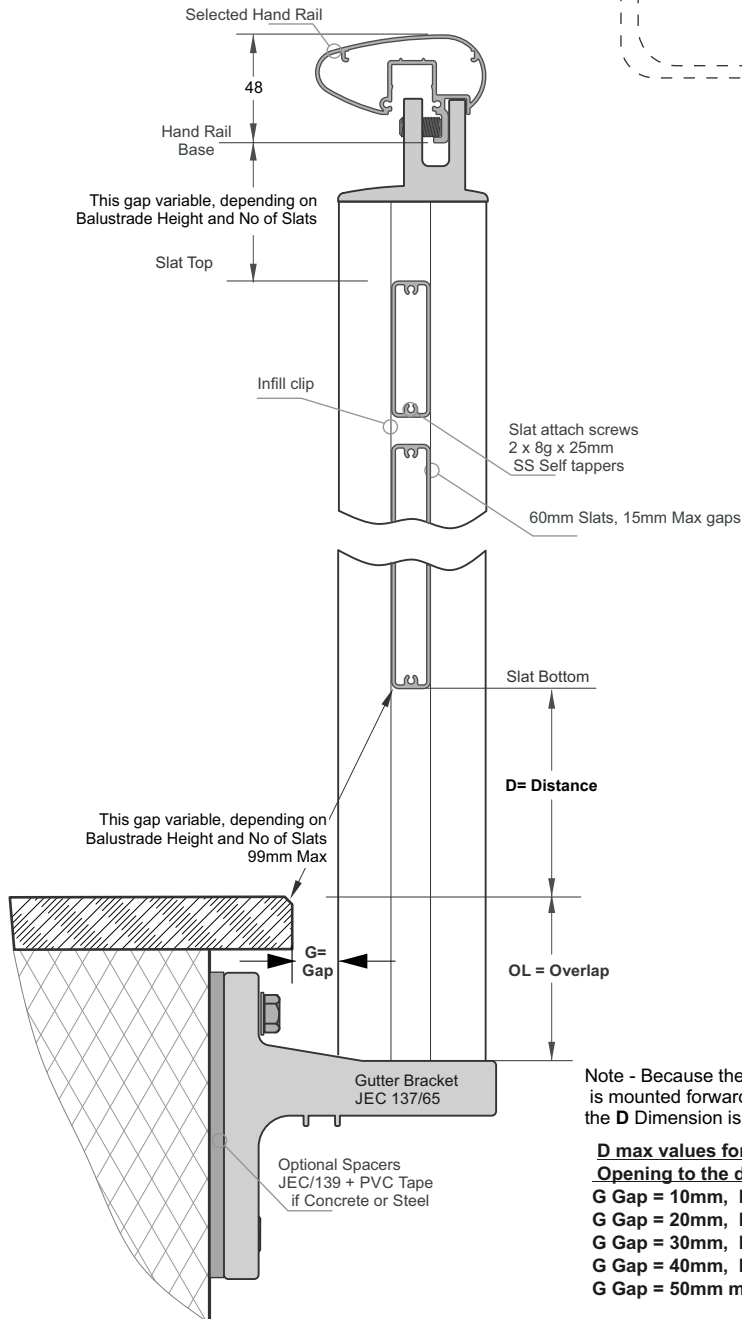
1 - Refer Post Mounting type and installation Wind zone. Then choose Balustrade Height and max Post spacing.



2 - Handrail - Offsets



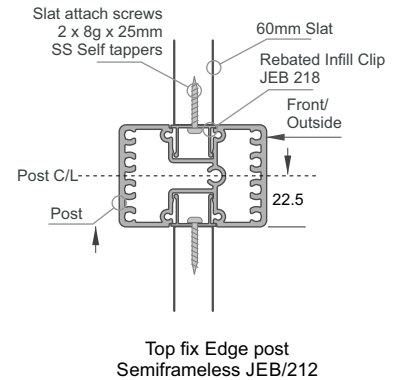
3 - Height offsets



Note - Because the Bottom Rail is mounted forward of the Deck Edge the D Dimension is no longer 99mm.

- D max values for a 99mm Opening to the deck**
- G Gap = 10mm, D = 96mm
 - G Gap = 20mm, D = 92mm
 - G Gap = 30mm, D = 88mm
 - G Gap = 40mm, D = 82mm
 - G Gap = 50mm max, D = 75mm

4 - Width Offsets

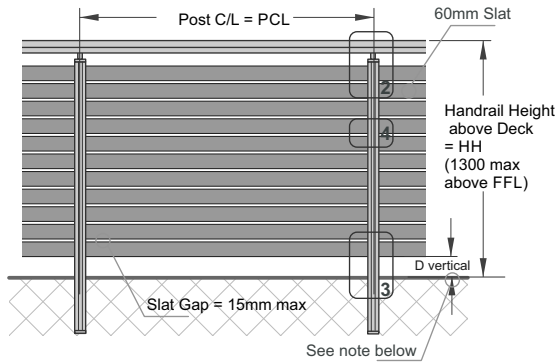


Top fix Edge post Semiframeless JEB/212

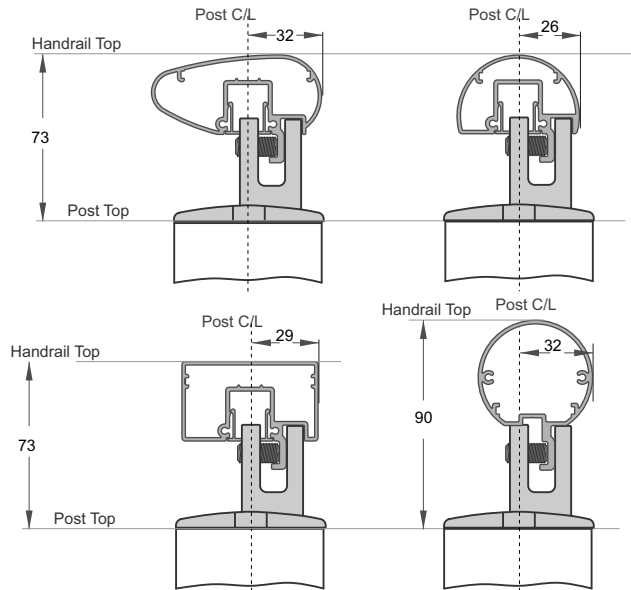
5 - Cutting, nominal

- a - Hand Rail = Use maximum lengths
- b - Post, Cut to = HH-73+OL
- c - 60mm Slat Cut to = PCL - 45

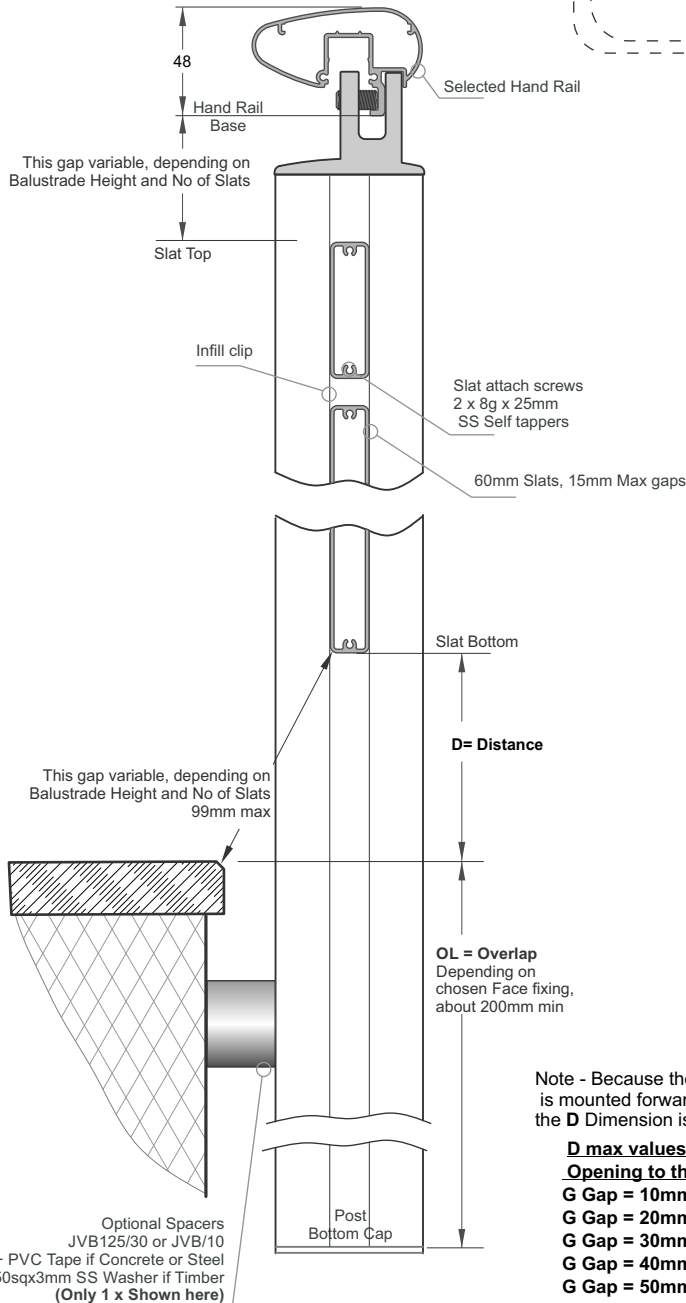
1 - Refer Post Mounting type and installation Wind zone. Then choose Balustrade Height and max Post spacing.



2 - Handrail - Offsets



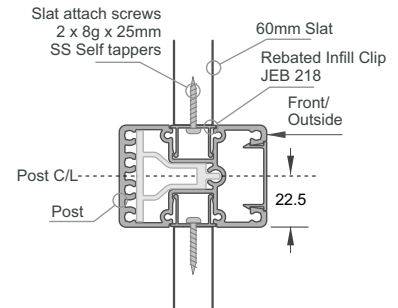
3 - Height offsets



Note - Because the Bottom Rail is mounted forward of the Deck Edge the D Dimension is no longer 99mm.

- D max values for a 99mm Opening to the deck**
- G Gap = 10mm, D = 96mm
 - G Gap = 20mm, D = 92mm
 - G Gap = 30mm, D = 88mm
 - G Gap = 40mm, D = 82mm
 - G Gap = 50mm max, D = 75mm

4 - Width Offsets

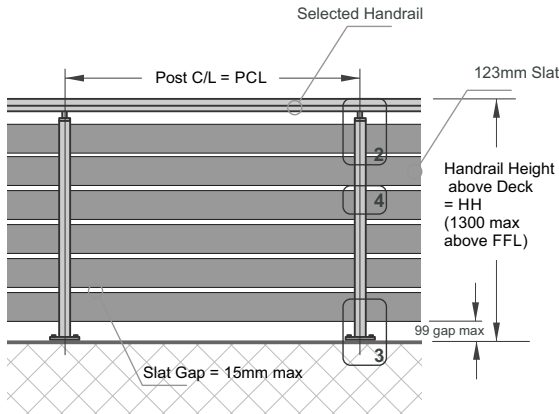


Face fix Edge post Semiframeless JEB/214

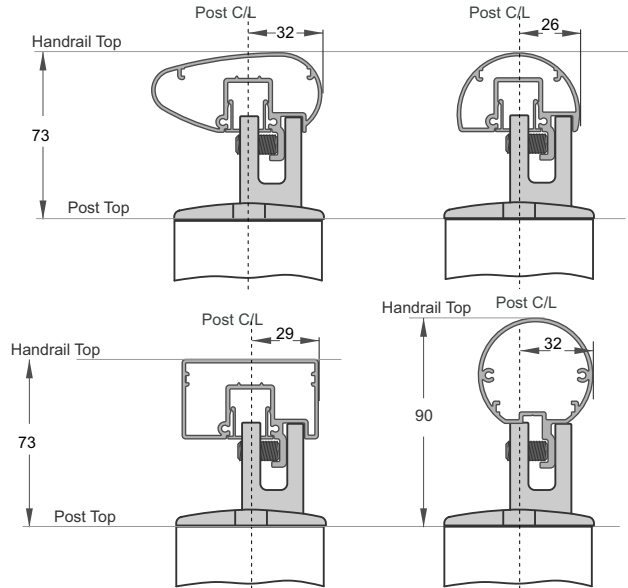
5 - Cutting, nominal

- a - Hand Rail = Use maximum lengths
- b - Post, Cut to = HH-73+OL
- c - 60mm Slat Cut to = PCL - 45

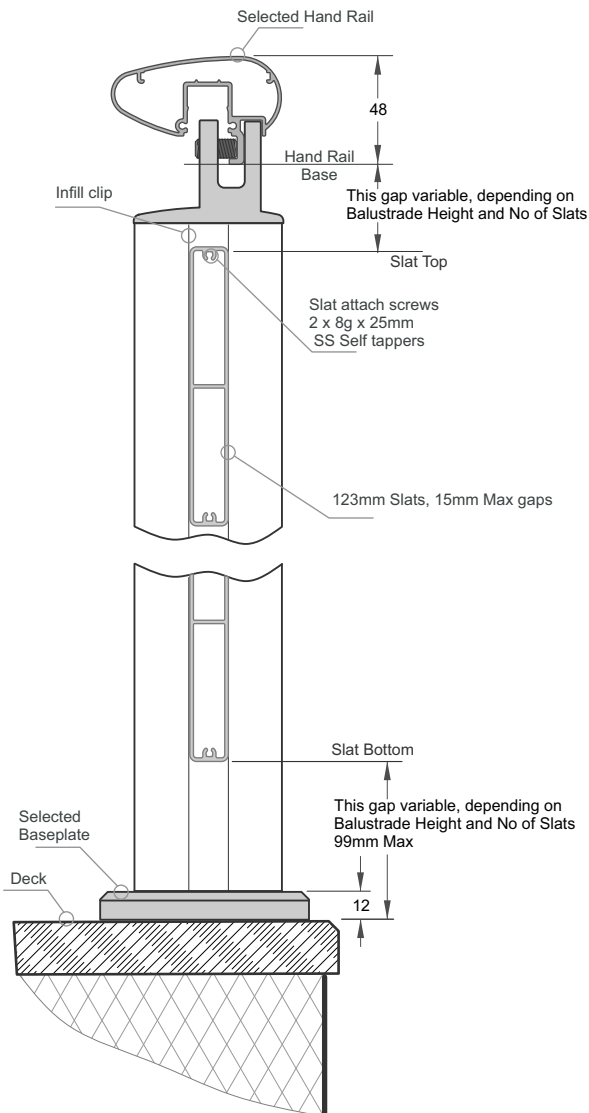
1 - Refer Post Mounting type and installation Wind zone. Then choose Balustrade Height and max Post spacing.



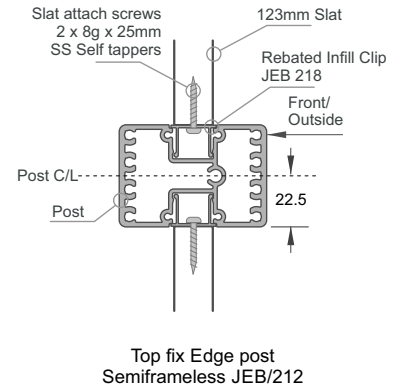
2 - Handrail - Offsets



3 - Height offsets



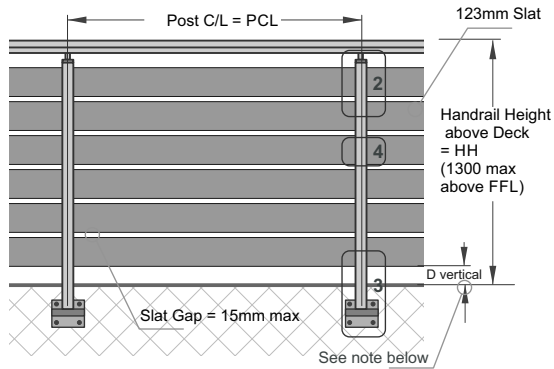
4 - Width Offsets



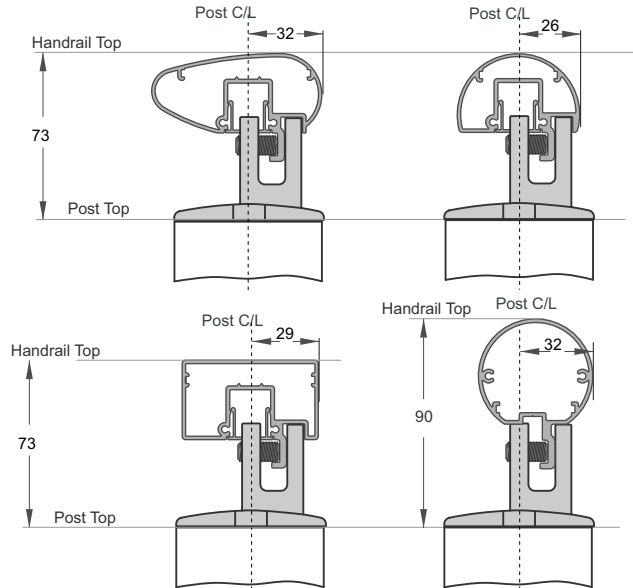
5 - Cutting, nominal

- a - Hand Rail = Use maximum lengths
- b - Post, Cut to
= $HH - 73 - 12 = HH - 85$
- c - 123mm Slat Cut to
= $PCL - 45$

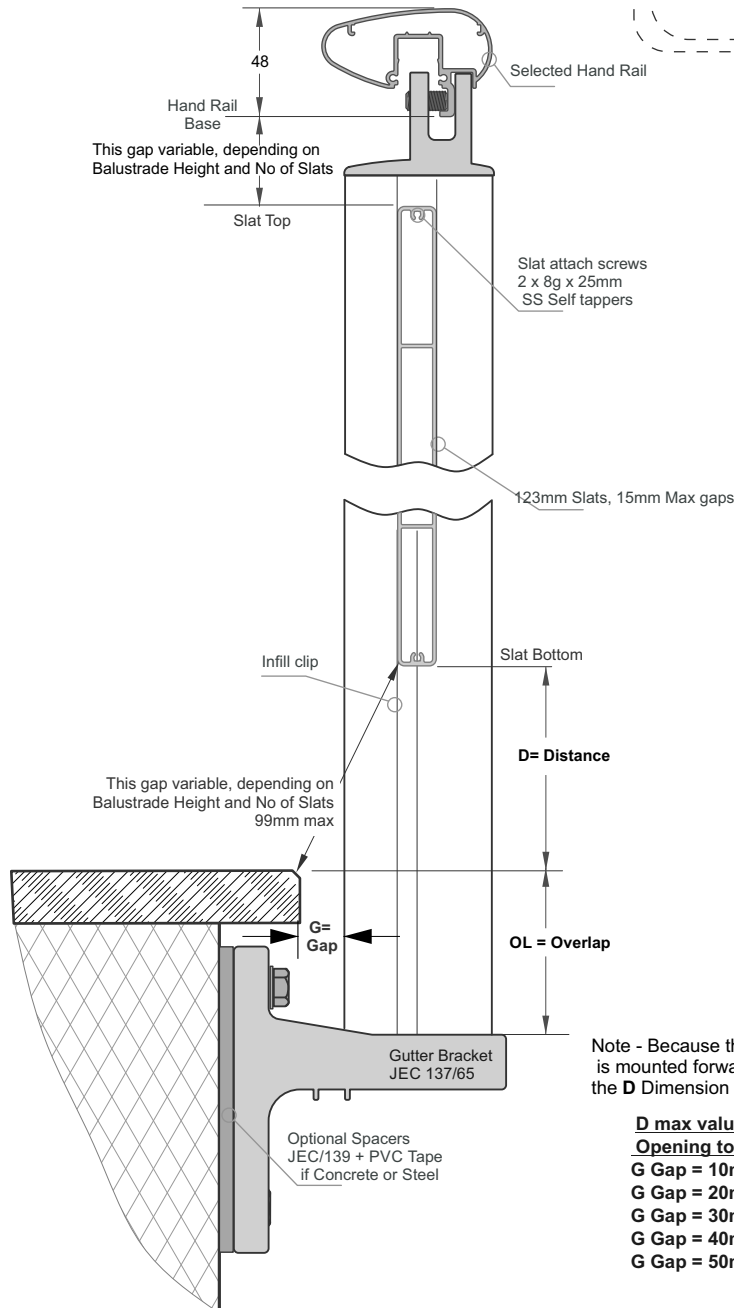
1 - Refer Post Mounting type and installation Wind zone. Then choose Balustrade Height and max Post spacing.



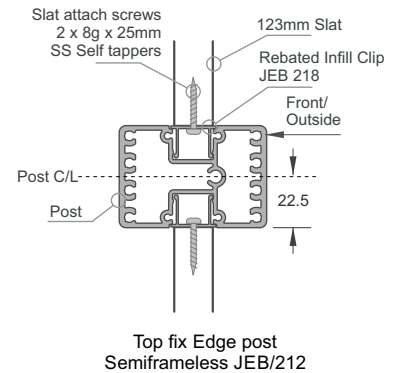
2 - Handrail - Offsets



3 - Height offsets



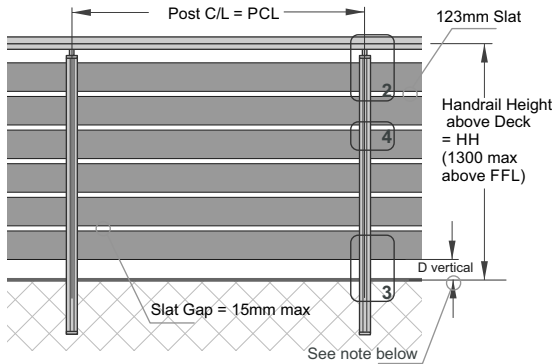
4 - Width Offsets



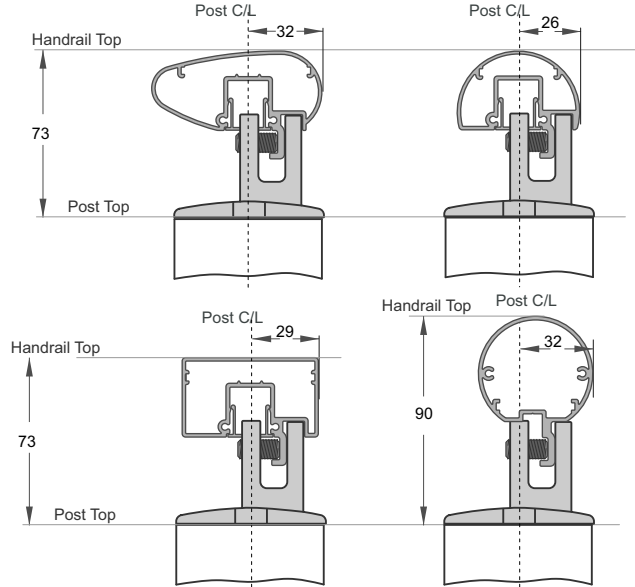
5 - Cutting, nominal

- a - Hand Rail = Use maximum lengths
- b - Post, Cut to = HH-73+OL
- c - 60mm Slat Cut to = PCL - 45

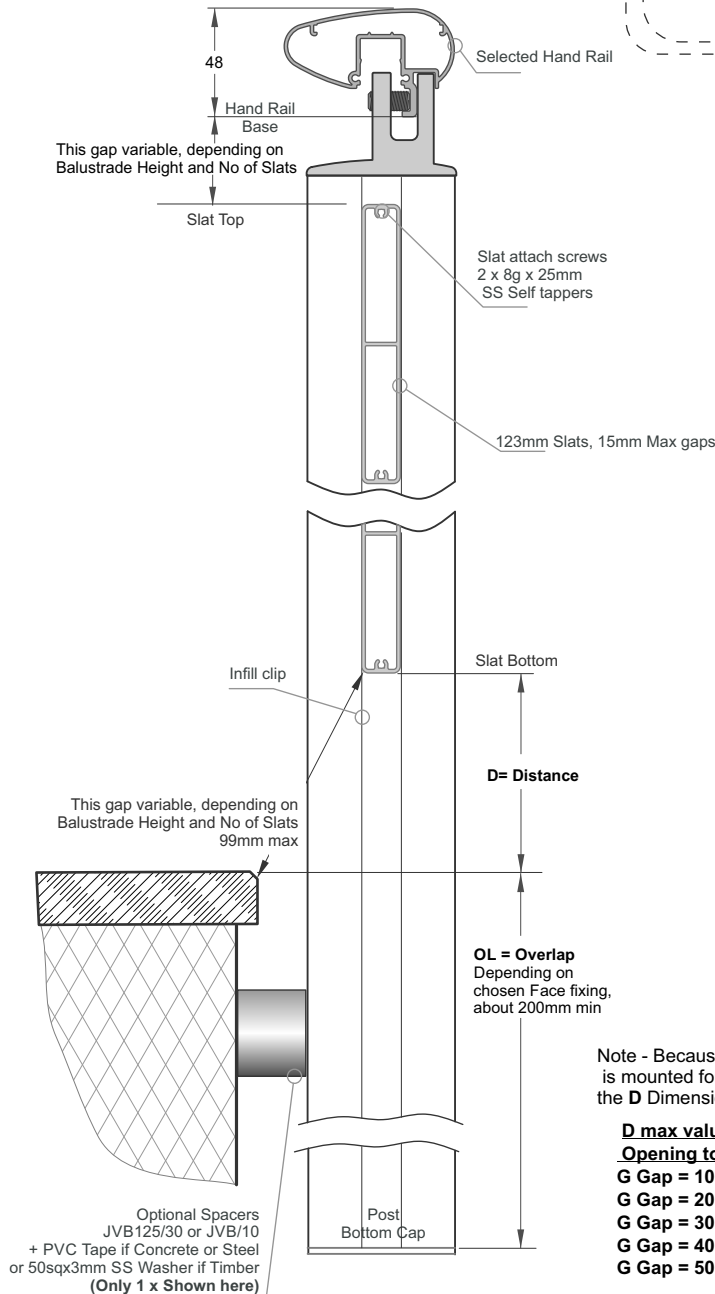
1 - Refer Post Mounting type and installation Wind zone. Then choose Balustrade Height and max Post spacing.



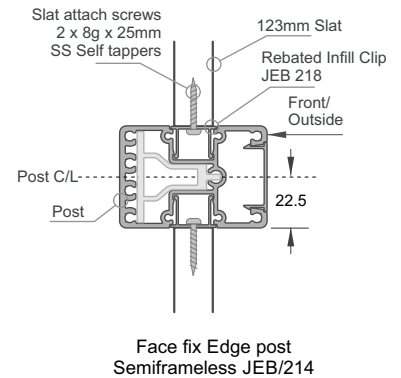
2 - Handrail - Offsets



3 - Height offsets



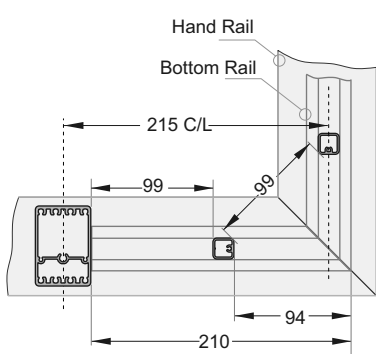
4 - Width Offsets



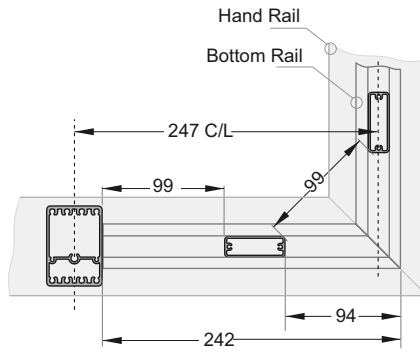
5 - Cutting, nominal

- a - Hand Rail = Use maximum lengths
- b - Post, Cut to = $HH - 73 + OL$
- c - 60mm Slat Cut to = $PCL - 45$

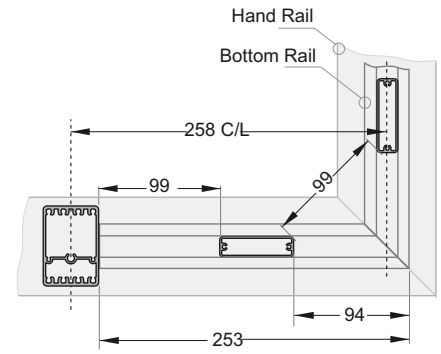
These Set out constraints apply to all 17mm sq Balusters, 49mm and 60mm Slats



17mm sq Balusters
215mm C/L max

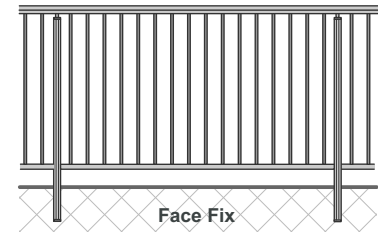
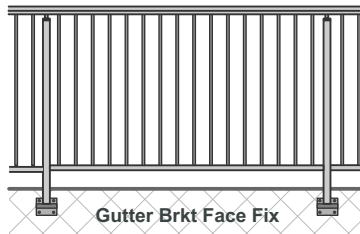
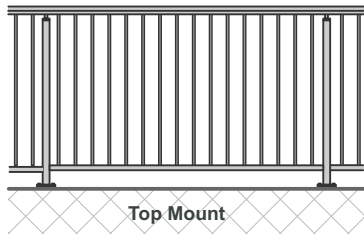


49mm Slats
247mm C/L max

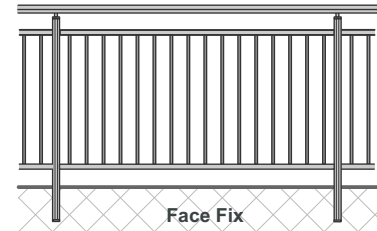
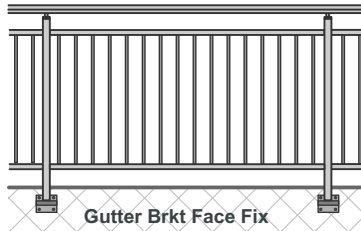
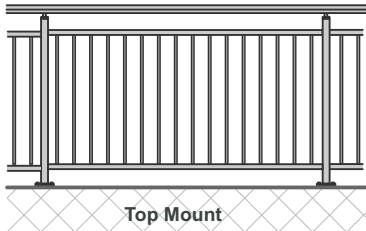


60mm Slats
258mm C/L max

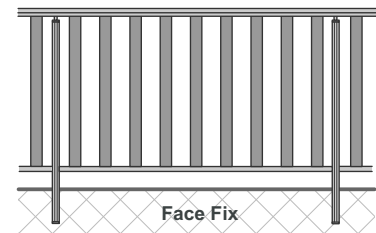
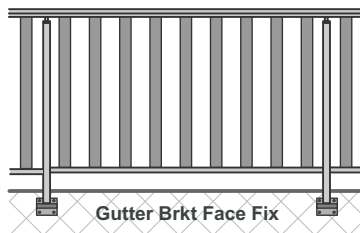
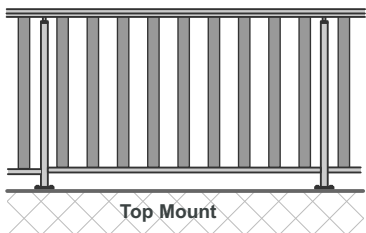
17mm Baluster - Full Height. Handrail + Bottom Rail. Top Mount, Gutter Brkt Face Fix or Face Fix



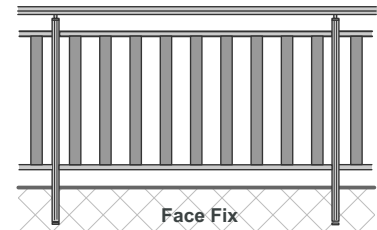
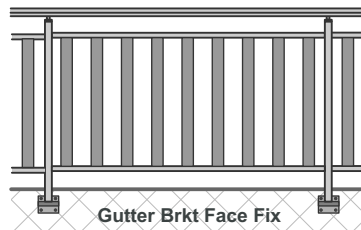
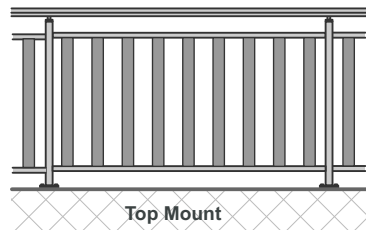
17mm Baluster - Split Rail. Handrail + Top and Bottom Rail. Top Mount, Gutter Brkt Face Fix or Face Fix



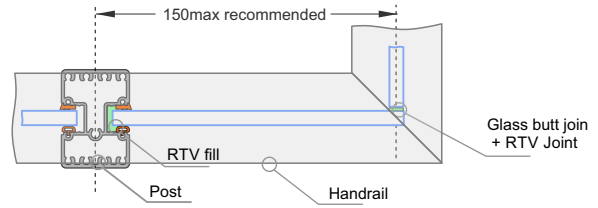
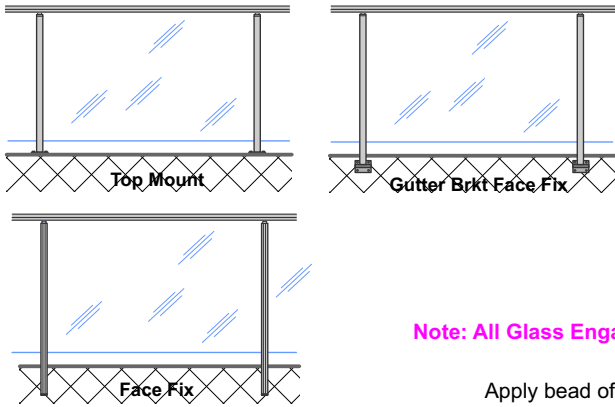
49mm or 60mm Slat - Full Height. Handrail + Bottom Rail. Top Mount, Gutter Brkt Face Fix or Face Fix



49mm or 60mm Slat - Split Rail. Handrail + Top and Bottom Rail. Top Mount, Gutter Brkt Face Fix or Face Fix



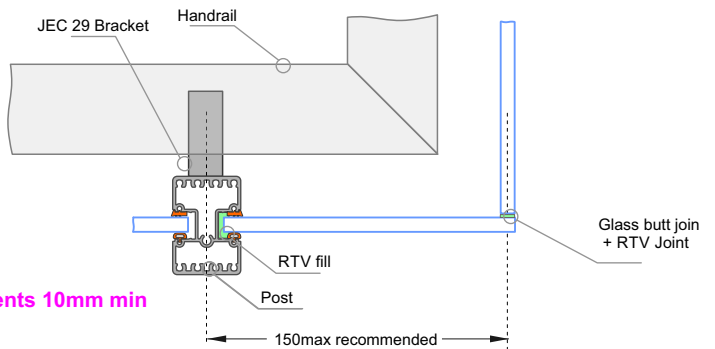
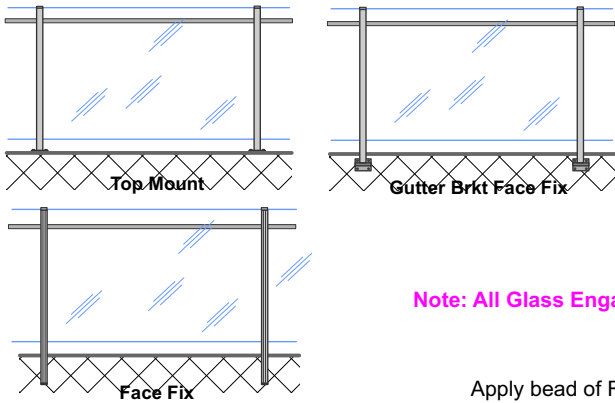
**10mm Glass, Inline - Semi Frameless. Hand Rail
(Corner Post available for Top Mount)**



Note: All Glass Engagements 10mm min

Apply bead of RTV silicon the the inside face of Post Pocket for full height of glass panel

**10mm Glass, Inline - Semi Frameless. Hand Rail + JEC 29 Bracket
(Corner Post not applicable to Top Mount, this configuration)**

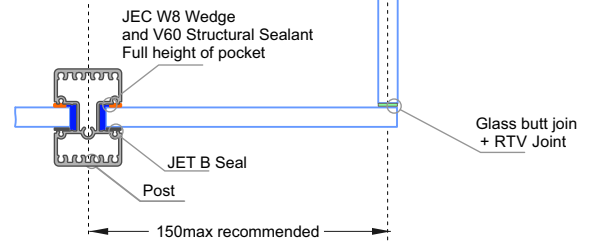
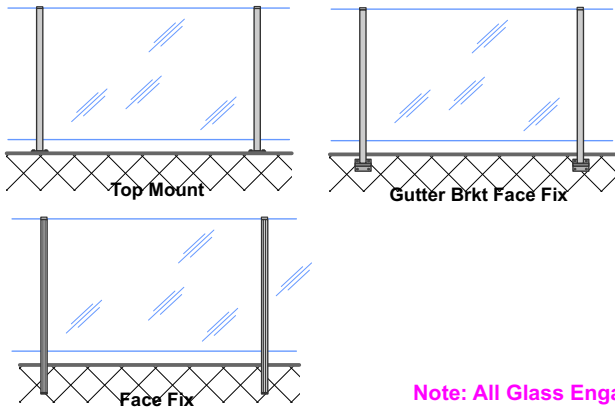


Note: All Glass Engagements 10mm min

Apply bead of RTV silicon the the inside face of Post Pocket for full height of glass panel

13.2mm Laminated Glass, Inline - Semi Frameless.

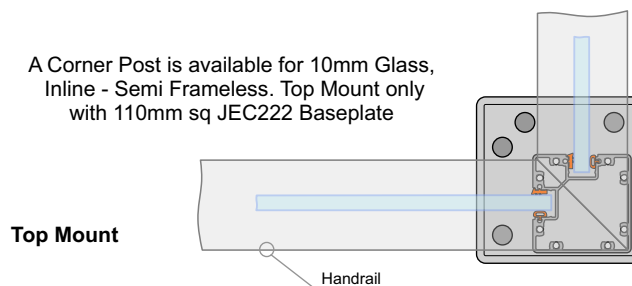
Top Protection Cap, between Posts recommended

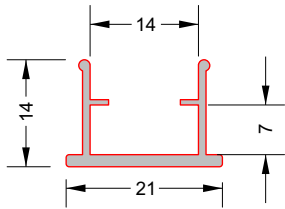


Note: All Glass Engagements 10mm min

10mm Glass, Inline - Semi Frameless. Corner Post - Handrail or Interlinking Rail Top Mount only

A Corner Post is available for 10mm Glass, Inline - Semi Frameless. Top Mount only with 110mm sq JEC222 Baseplate





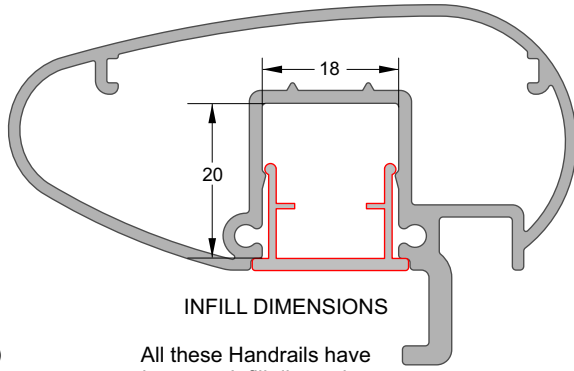
EDGE LED OPAL DIFFUSER
Part No JEC44/3/Opal

LED Opal Diffuser
(Discontinuous, between Posts)



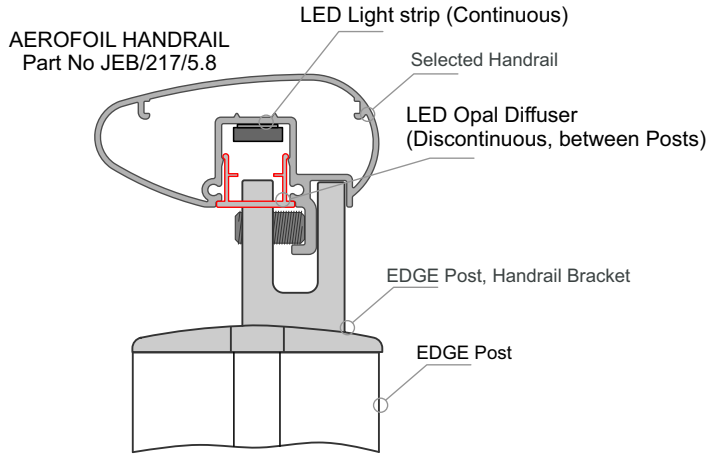
LED STRIP
C/w DS tape
(Size to suit)

LED Light strip (Continuous)



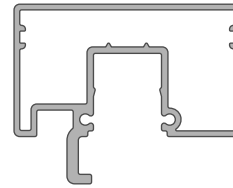
INFILL DIMENSIONS

All these Handrails have the same Infill dimensions

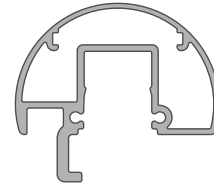


AEROFOIL HANDRAIL
Part No JEB/217/5.8

Typical Handrail with LED Installed



RECTANGULAR HANDRAIL
Part No JEB/216/5.8

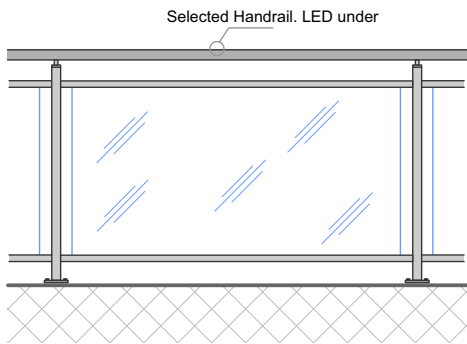


ROUND HANDRAIL
Part No JEB/209/5.8

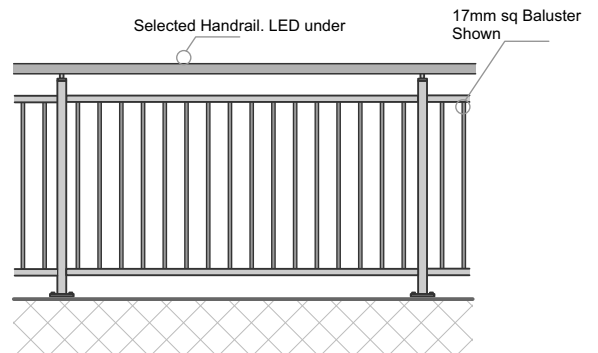
Other Suitable Handrails

EDGE Balustrade LED Lighting Options

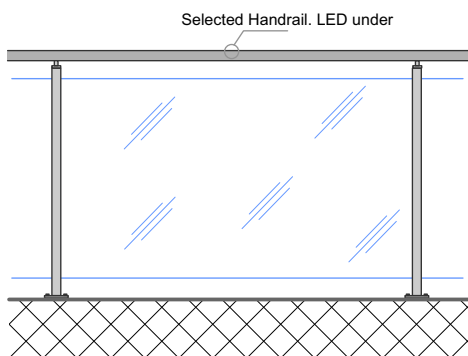
6mm Toughened Glass - Full Height. Handrail + Split Rails.



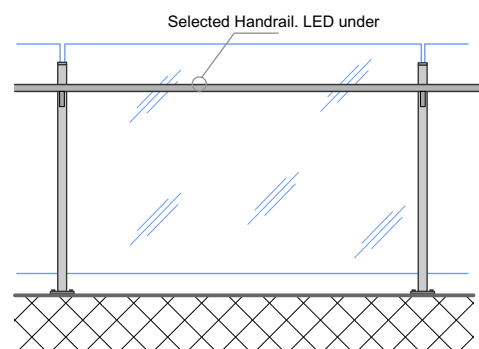
Baluster - Split Rail. Handrail + Top and Bottom Rail.



13.2mm Laminated Toughened Glass - Semi Frameless.

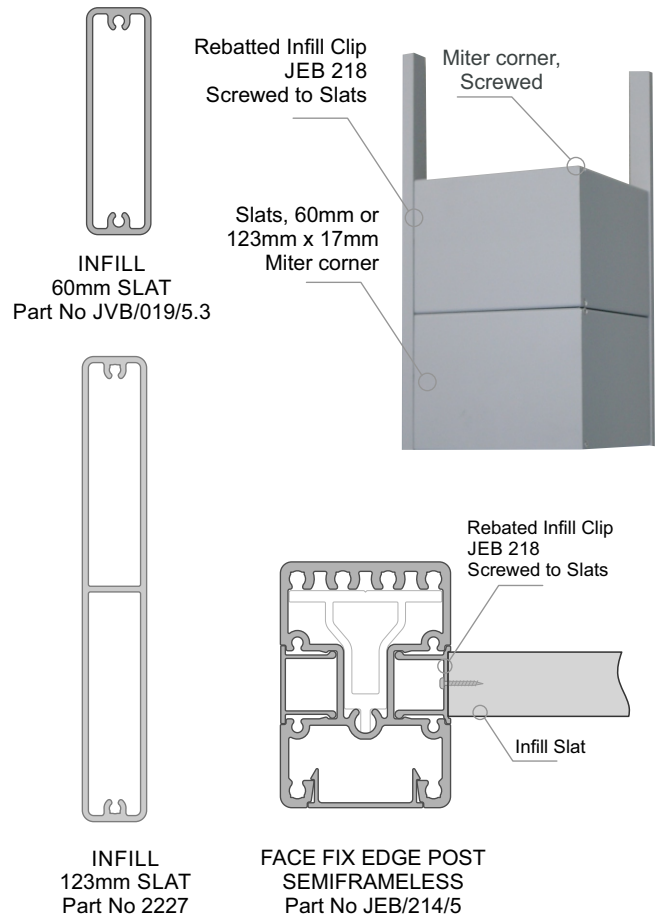


10mm Toughened Glass - Semi Frameless + JEC 29 Bracket mounted on Post + Handrail.

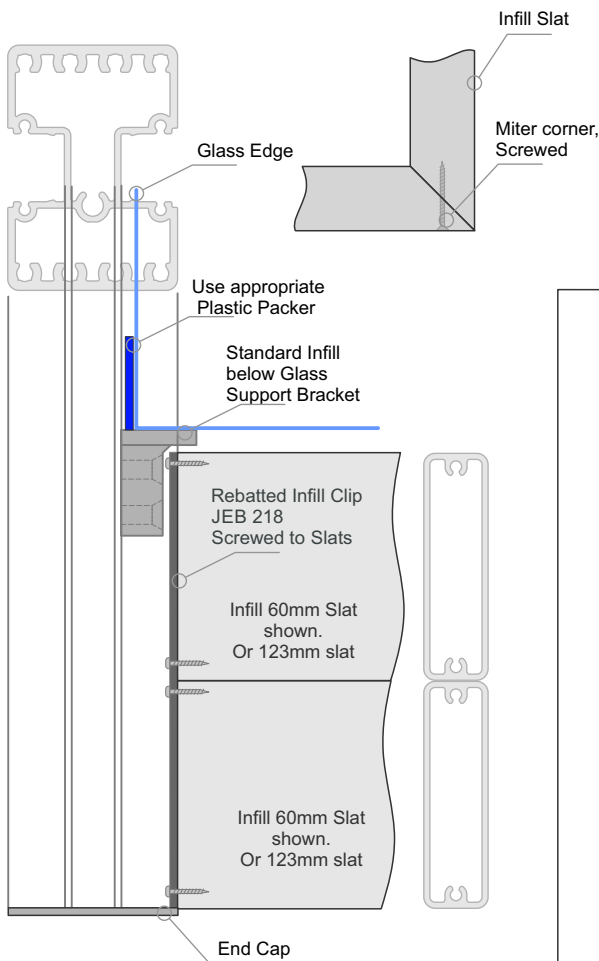




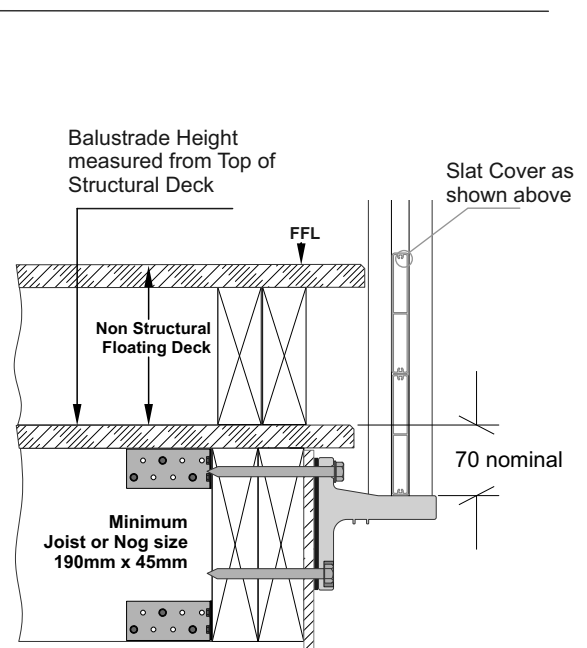
IMPORTANT NOTE: The Balustrade Height is measured from the Top of the Structural Deck, not the Top of the Floating Deck



Basic Floating EDGE Cover Layout

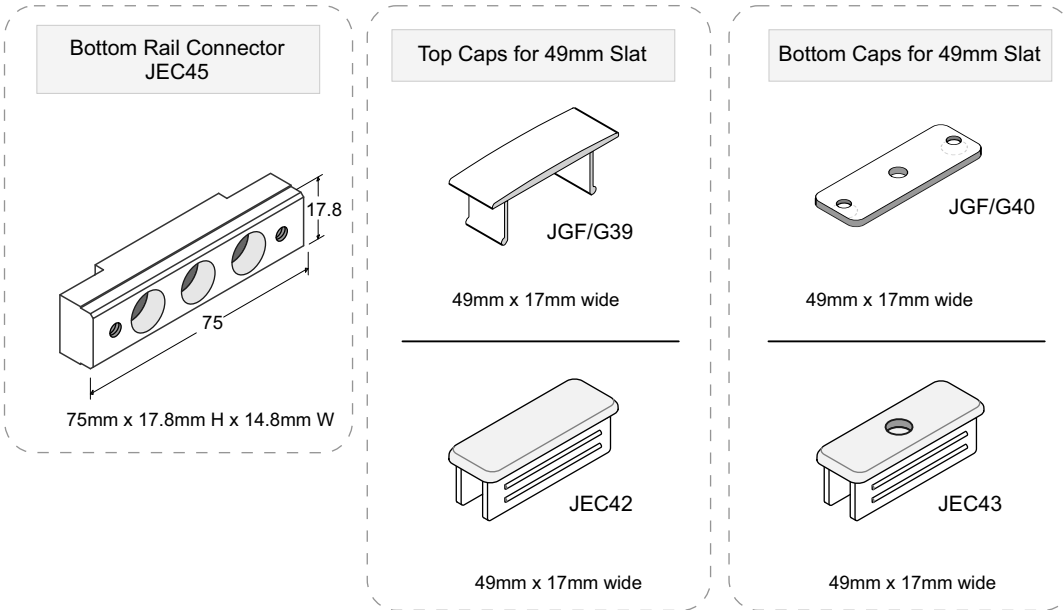


**Basic Floating EDGE Cover Layout
+ Glass Panel Above**



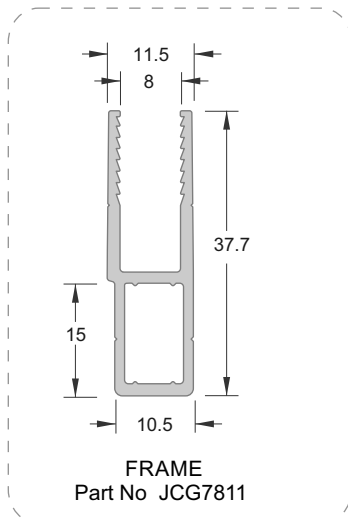
**Basic Floating Deck Layout
Applies to Face fix or Gutter Bracket**

Stecca Balustrade System - Components

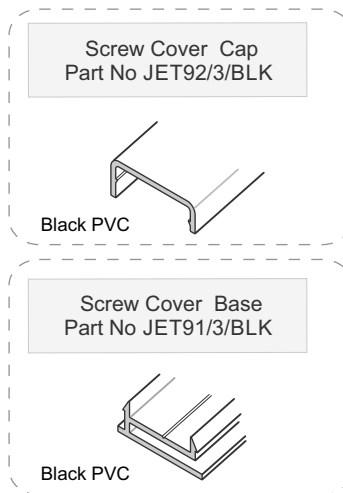


Lamerra™ Balustrade System - Components

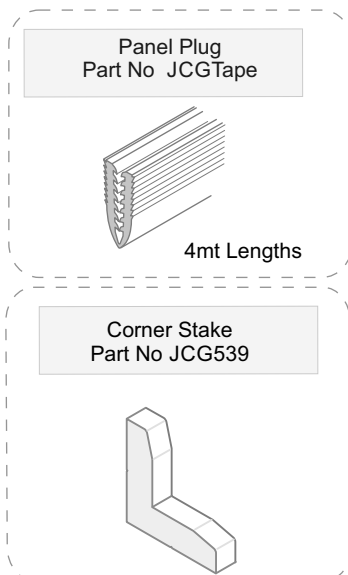
For ALL, Panel Insert System



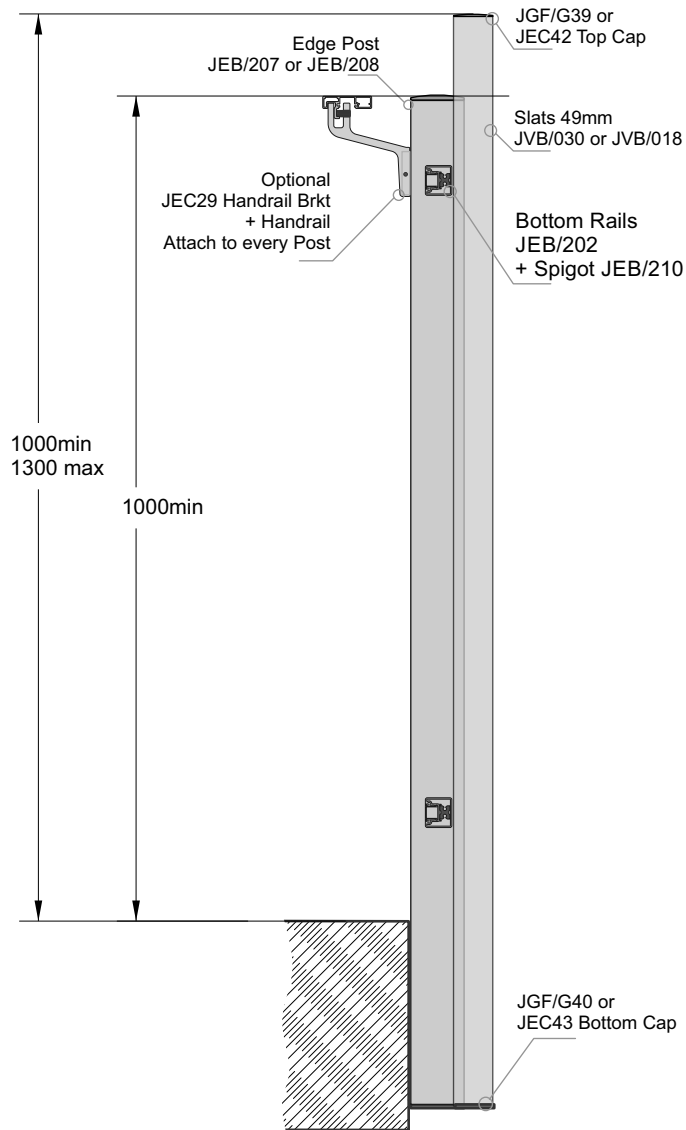
**For Panel Face Fix
Screwed Panel System**



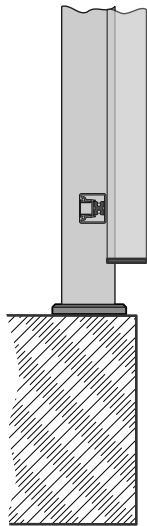
FRAME
Part No JCG7811



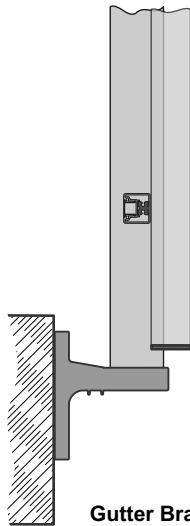
STECCA
Bottom Rails - In Line Mount



Face Fix

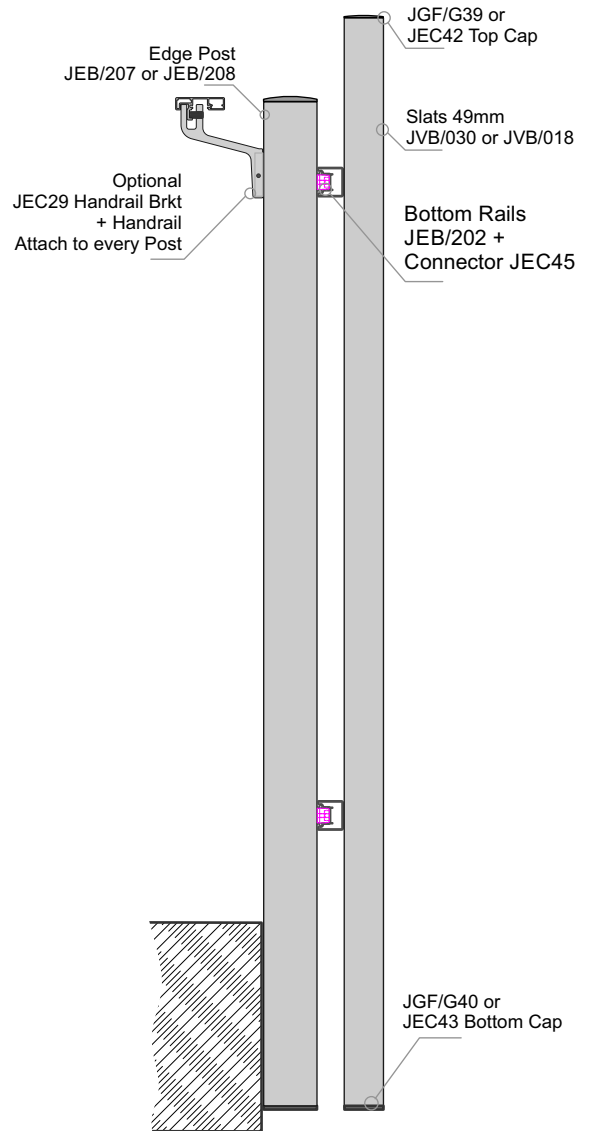


Top Fix

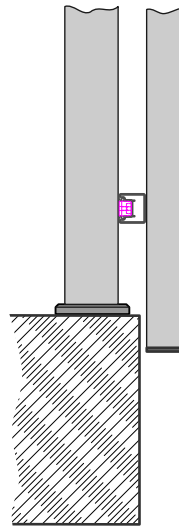


Gutter Bracket
Face Fix

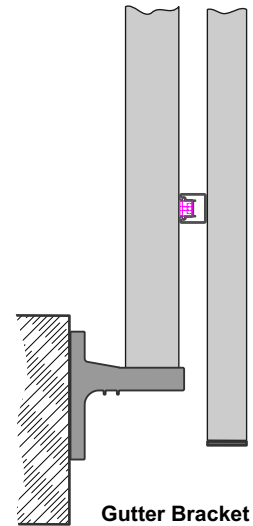
STECCA
Bottom Rails - Front Mount



Face Fix



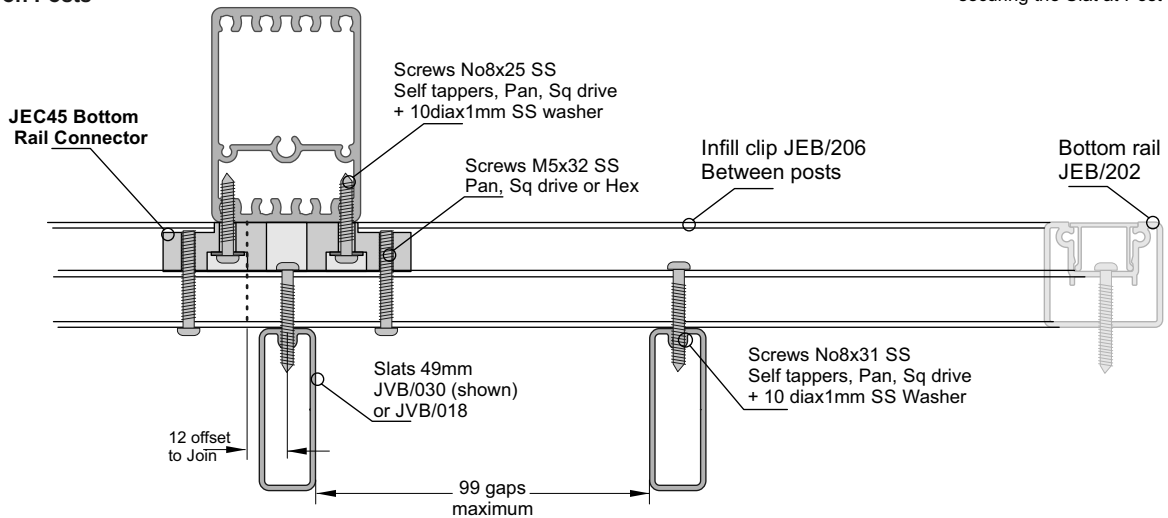
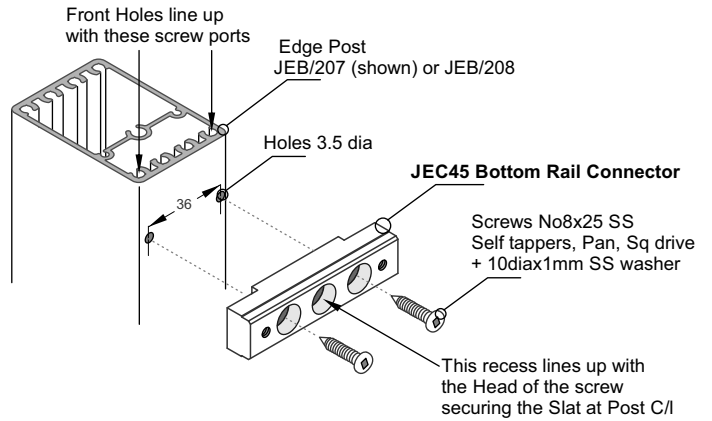
Top Fix



Gutter Bracket
Face Fix

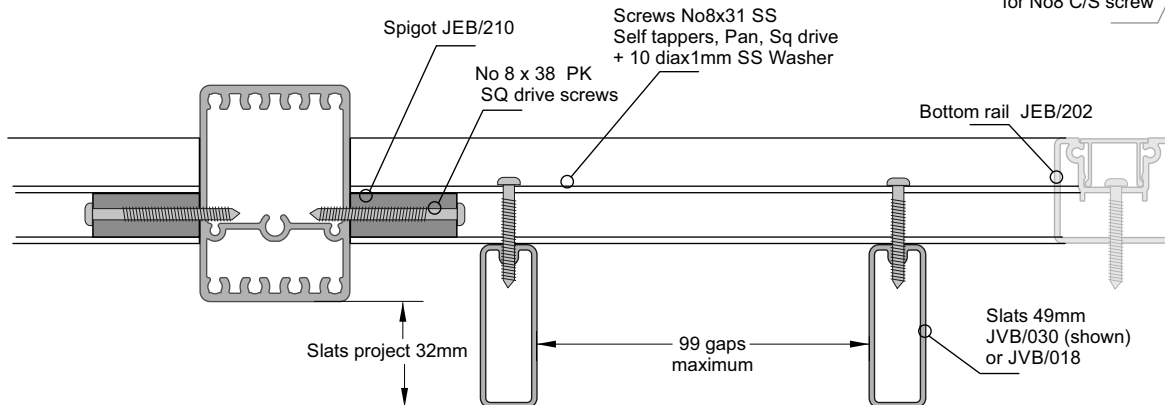
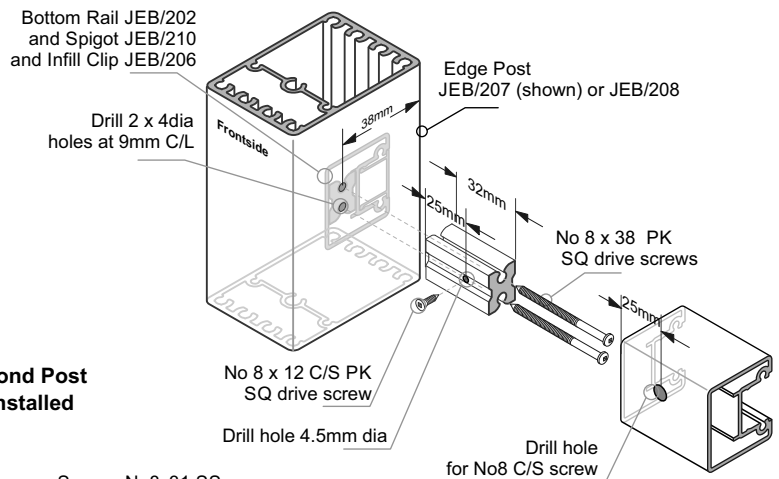
STECCA
Bottom Rails - Front Mount

- 1 - Measure up.
 - For Post Horizontal spacings.
 - Max space between slats is 99mm and one slat must be at the C/L of every Post.
 - Bottom Rail joins must be at Post.
- 2 - Attach Posts at calculated centres
- 3 - Attach JEC45 Connectors to Posts at Heights as arranged (2 per Post)
- 4 - Attach all Slats to Rails to match Post C/I
- 5 - Attach all Slats + Rails to Bottom Rail Connectors already mounted on Posts

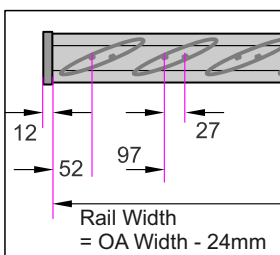
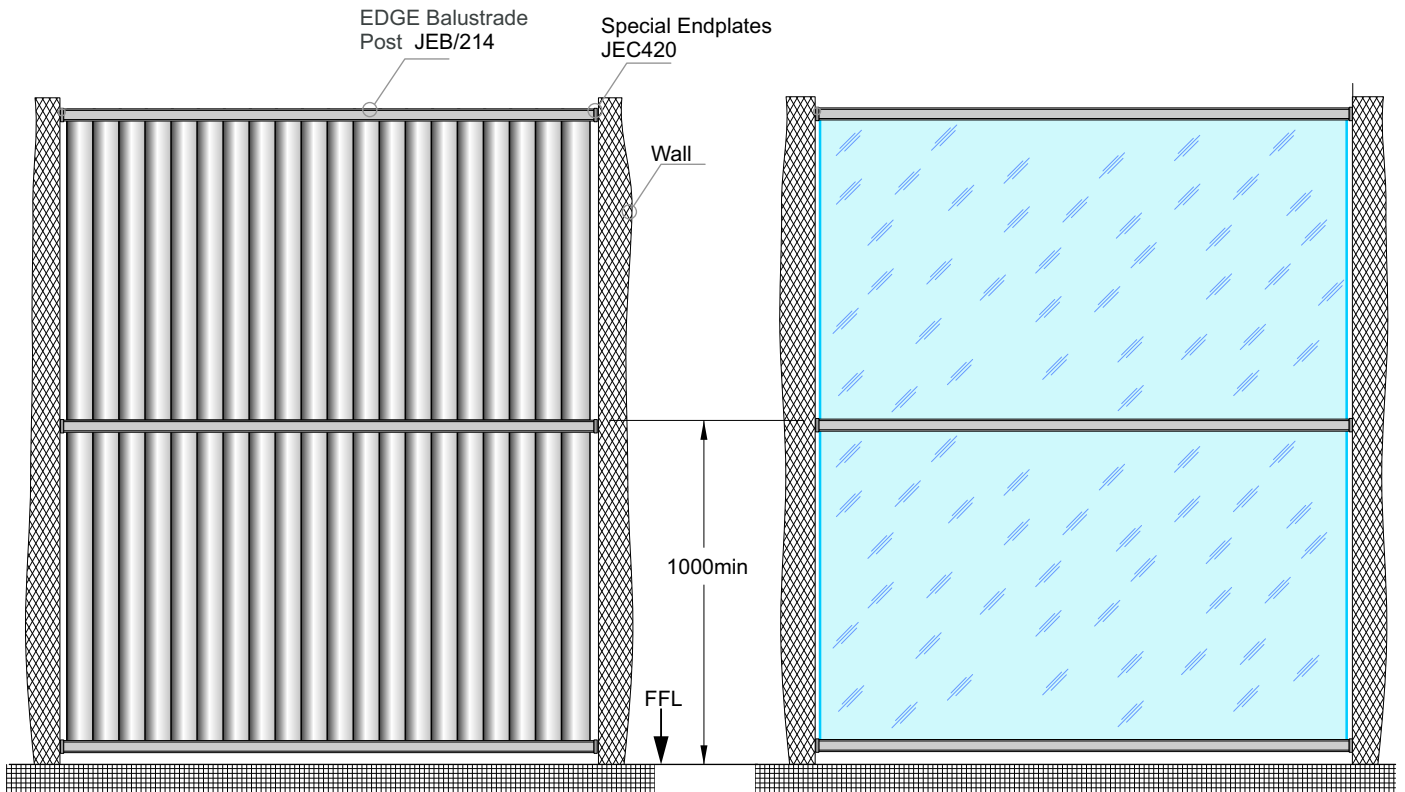
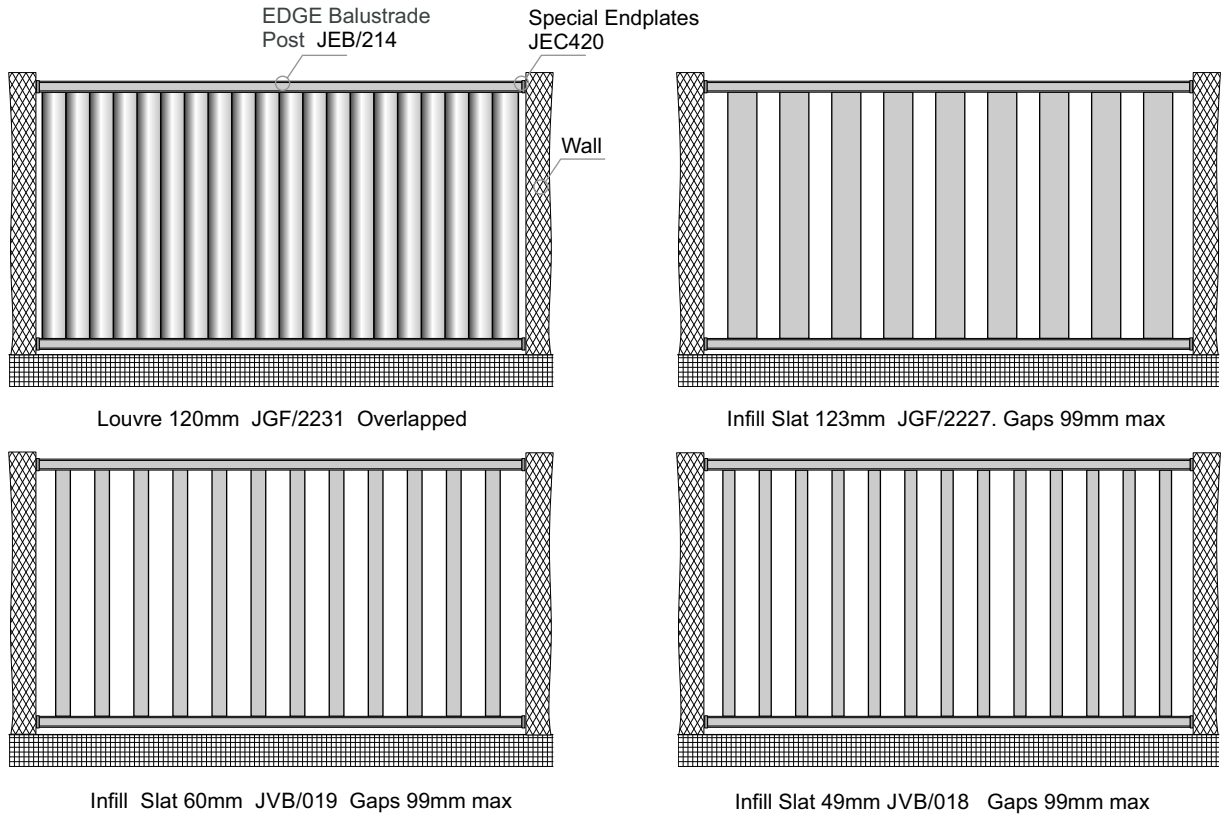


STECCA
Bottom Rails - In Line Mount

- 1 - Measure up.
 - For this layout start at one end and gradually work along balustrade to other end
- 2 - Max space between slats is 99mm and slats equal gaps between posts
 - Bottom Rail and In fill clips to fit between posts
 - Pre-drill all necessary holes.
 - Preinstall Spigots to Posts. Preinstall Slats to Rails
 - Install First Post with Spigots attached
 - Install 2 x Horizontal Rails + Slats, together with Second Post
 - Work along the Balustrade until all Posts and Rails installed



Juralco EDGE® Balustrade System
Vertical Louvre/Slat/Glass Configurations
For Fixing between Walls or Structural Posts



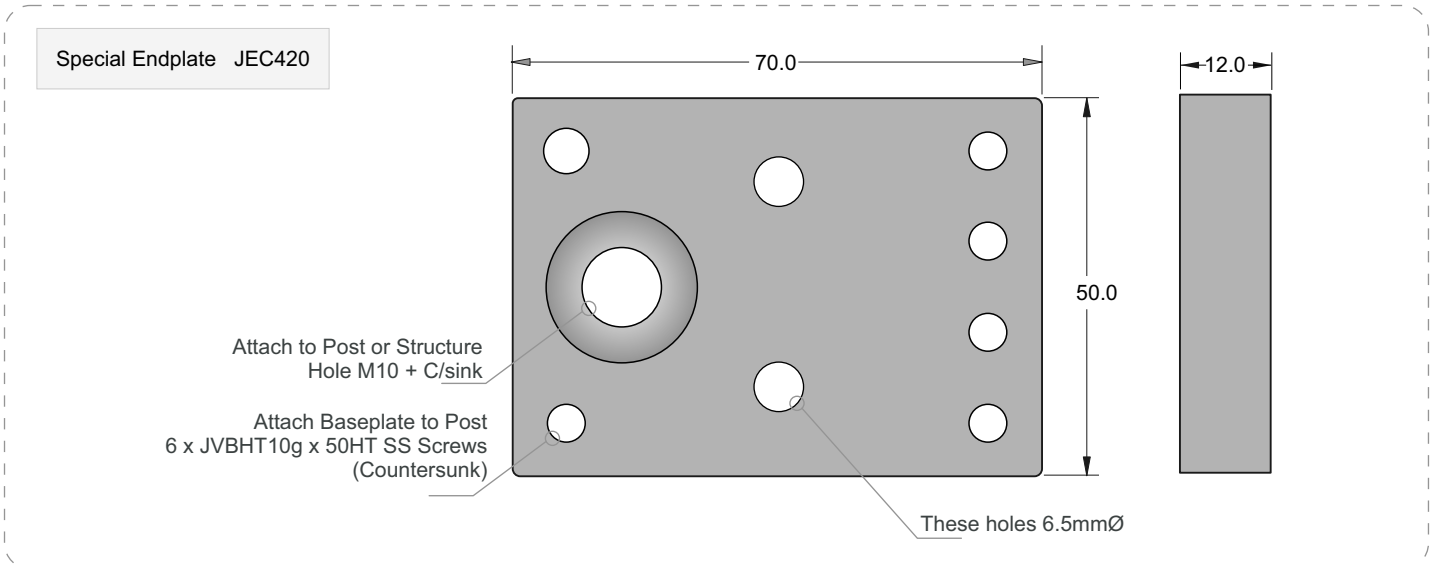
Louvre 120mm JGF/2231
Overlapped
Width 2000mm max.
Height 2400mm max

Max Widths for different Wind Zones	
Up to and including Medium WZ	2000mm
Up to and including High WZ	1700mm
Up to and including Very High WZ	1500mm
Up to and including Extra High WZ	1400mm

10mm Toughened Glass
Width 2000mm max.
Height 2400mm max
Refer Wind Zone limitations

Note: Glass Engagements 10mm min

Juralco EDGE® Vertical Louvre/Slat/Glass Configurations
Fixing between Walls or Structural Posts.
Special Endplate JEC420



Important Installation Notes:

- 1 - Attaching to Timber.** 4 total (ie 2 x ea ends) M10 x 100 SS C/s Socket drive Coachscrews central in a 90mm stud
Sika Supergrip to full depth. + 2 x 12g x 50mm SS Woodscrews
- 2 - Attaching to Steel.** 2 x M10 x 40 C/s SS Socket drive Machine Screws and Nut+ 2 x M6 SS Bolts
- 3 - Attaching to Concrete.** 2 x M10 Fischer FIS V Fasteners + M10 x 40 C/s SS Socket drive Machine Screw
+ 2 x M6 Fischer FIS V Fasteners + M6 x 30 SS Socket drive Machine Screws

Note: Fixing Options assume End Plates fixed directly to supporting structure

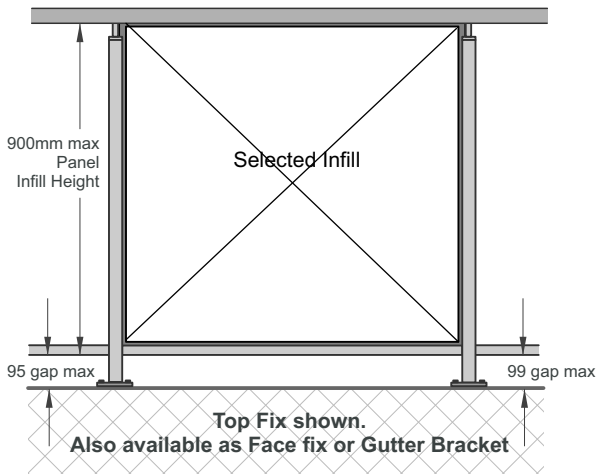
NZBC Compliance

- The Juralco Edge Vertical Louvre, Slat and Glass 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, B, E, C3,
- NZS 3604 Up to and including Low, Medium, High, Very High Wind Zones. Up to a max Design Wind Speed of 50m/sec but not exceeding a Design Wind Pressure of 1.5kPa
- The Structural Engineering design includes the requirements of B1 Structure, B2 Durability and F4 Safety from falling of the Building Code
- Verification Method B1 / VM1, B2/AS1, F4 / As1, F2 Hazardous Building Materials
- Gaps all less than 100mm.

Alternative Fixings, if required

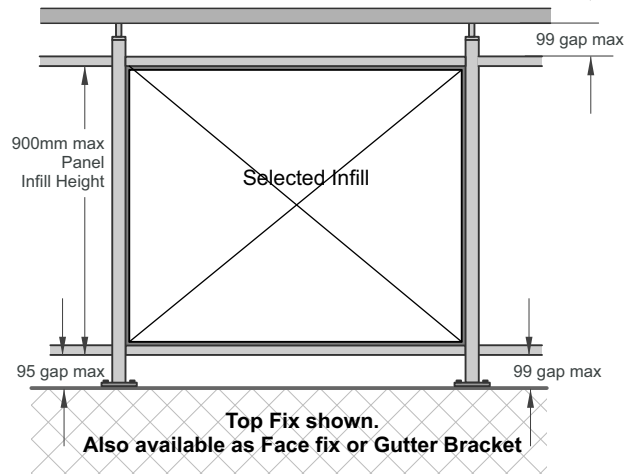
- The Specific Engineering Design should be able to resist G = 0.5kN Vertical Load. and Wu = 2.44kN Face load

Juralco EDGE® Balustrade System
LAMERRA™ Balustrade
Height, Width, Wind Zones all as per EDGE® Balustrade



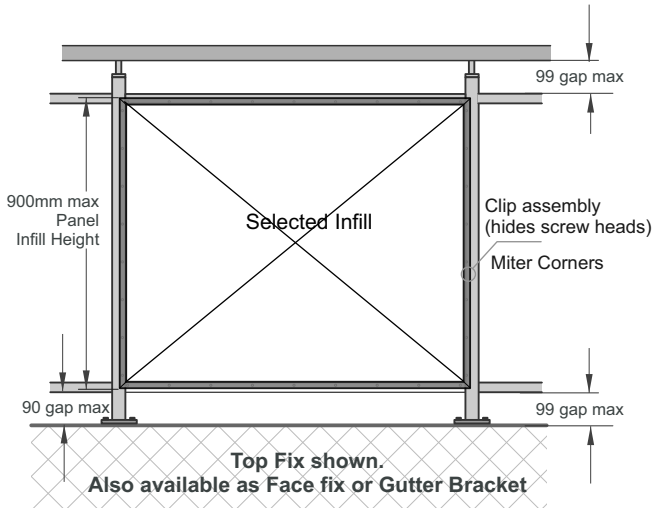
Option 1

- **Metal Panel Inset**, fully recessed into all 4 x sides
- Posts. Edge Framless
- Bottom Rail at base, Handrail at Top
- Bottom Rail, normal C/L mount
- Note the Smaller bottom gap for Face fix



Option 2

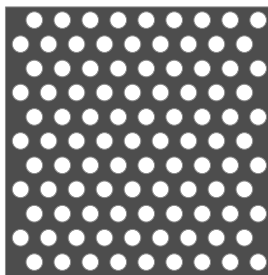
- **Metal Panel Inset**, fully recessed into all 4 x sides
- Posts. Edge (hidden fixing)
- Bottom Rail at Top and Base
- Bottom and Top Rail, normal C/L mount
- Note the Smaller bottom gap for Face fix
- Can use Round Handrail+Mini clip



Option 3

- **Metal Panel, Screw Face Fixed** all 4 x sides
- Posts. Edge (Face fix- exposed Fixings)
- Bottom Rail at Top and Base, **Front mounted**
- Note the Smaller bottom gap for Face fix
- Can use Round Handrail+Mini clip
- Clip assembly to hide Screw heads

Clareguard
Perforated Panel Specs

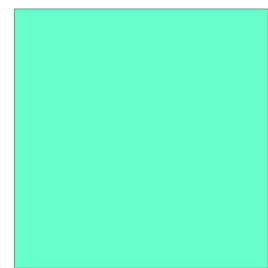


Specifications:
Combined Security and Insect Screen.
Rigid perforated sheet 2.0mm, Hardened
Open area 32%. Sizes 2000, 2400mm
x 750, 900, 1200mm Wide
Finish, Black Powdercoat

Sheet perforations, Full size

Aluminium Sheet Ordering Codes	
JCG/ALA/2.0/BLK	750mm x 2000mm
JCG/ALA/2.4/BLK	750mm x 2400mm
JCG/ALC/2.0/BLK	900mm x 2000mm
JCG/ALC/2.40/BLK	900mm x 2400mm
JCG/ALD/2.0/BLK	1200mm x 2000mm
JCG/ALD/2.40/BLK	1200mm x 2400mm

Plain Panel Specs
Rigid Sheet



Aluminium Sheet Ordering Codes

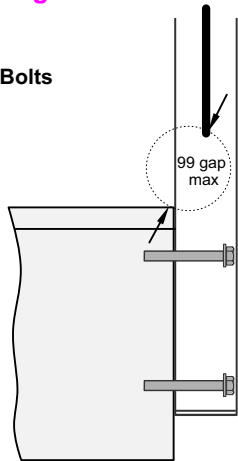
JAS/101440 Can be BLK or SCC	1200 x 2400 x 2.5mm 5052 H34
---------------------------------	---------------------------------

Specifications:
Combined Security and Insect Screen.
Rigid perforated sheet 2.0mm, Hardened
Open area 32%
Size 2400mm x 1200 Only
Finish, Black or any Powdercoat Colour

ALL for Metal Panel Inset
All for Face Hidden mounting

Typical FACE Fix Post JEB/214
to Timber with Coachscrews or Bolts
or to Steel with Bolts
or to Concrete with Studs.

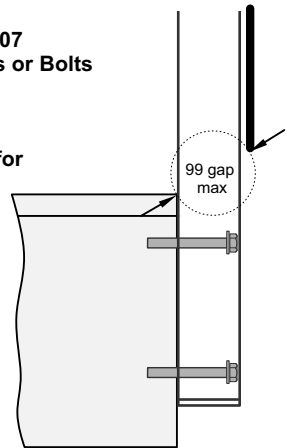
(see individual EDGE pages for
full mounting details)



ALL for Metal Panel Face Fix
All for Face Exposed mounting

Typical FACE Fix Post JEB/207
to Timber with Coachscrews or Bolts
or to Steel with Bolts
or to Concrete with Studs.

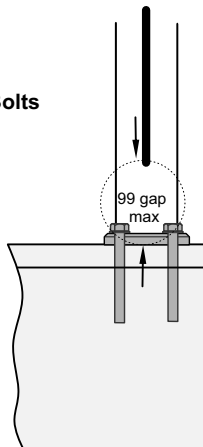
(see individual EDGE pages for
full mounting details)



ALL for Metal Panel Inset
For Top mounting

Typical Top Fix Post JEB/212
to Timber with Coachscrews or Bolts
or to Steel with Bolts
or to Concrete with Studs.

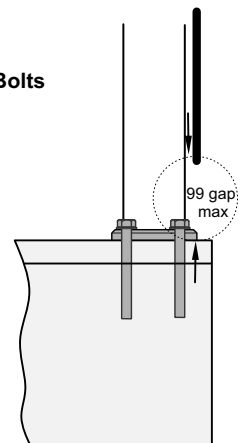
(see individual EDGE pages for
full mounting details)



ALL for Metal Panel Face Fix
For Top mounting

Typical Top Fix Post JEB/207
to Timber with Coachscrews or Bolts
or to Steel with Bolts
or to Concrete with Studs.

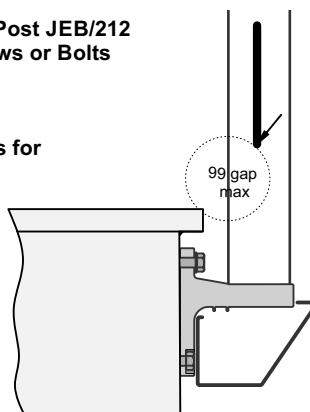
(see individual EDGE pages for
full mounting details)



ALL for Metal Panel Inset
For Gutter Bracket mounting

Typical Gutter Bracket Fix Post JEB/212
to Timber with Coachscrews or Bolts
or to Steel with Bolts
or to Concrete with Studs.

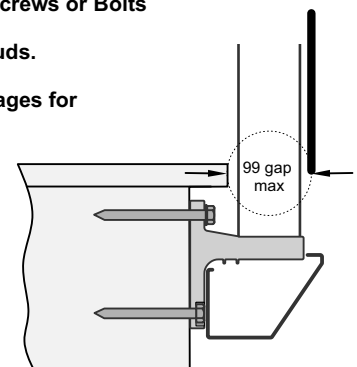
(see individual EDGE pages for
full mounting details)



ALL for Metal Panel Face Fix
For Gutter Bracket mounting

Typical Gutter Bracket Fix Post JEB/207
to Timber with Coachscrews or Bolts
or to Steel with Bolts
or to Concrete with Studs.

(see individual EDGE pages for
full mounting details)



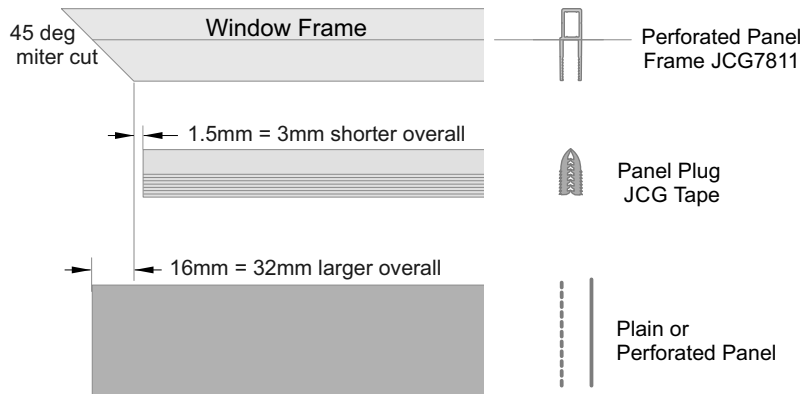
1

Cutting the Metal Sheet

After measuring Post C/L spacings and Height, then making appropriate deductions

Cutting

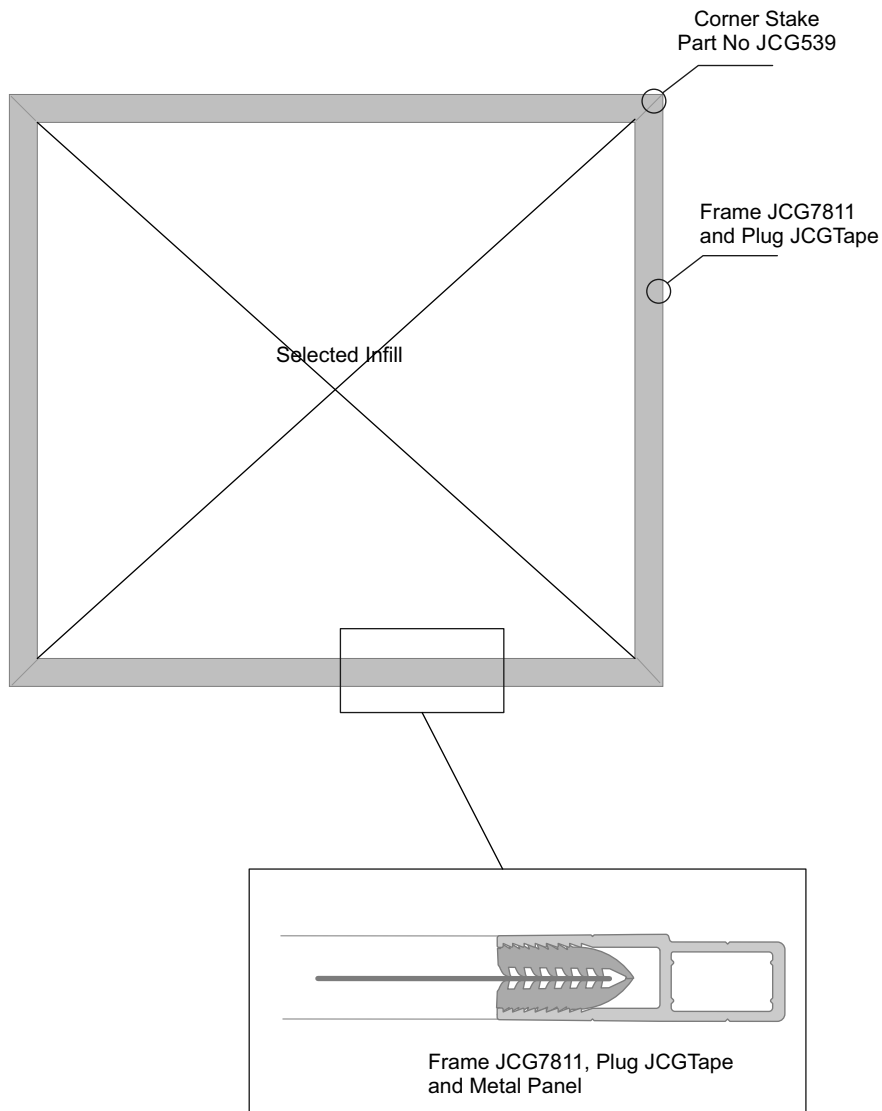
- 1- Cut Frame to measurements at exact 45 deg miters.
- 2 - Cut PVC plugs to length, straight cuts.
- 3 - Cut mid rails (optional), straight cuts.
- 4 - Cut metal sheet, square on all four sides.
- 5 - After cutting the offsets should be as drawn.



Note: IT IS VERY IMPORTANT THAT THE SHEET IS CUT EXACTLY SQUARE AND STRAIGHT

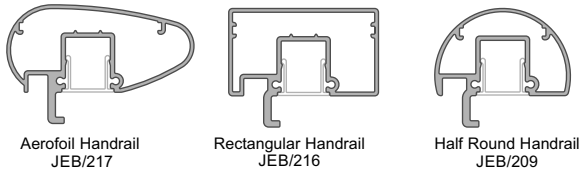
2

Assemble Frame around Metal Panel

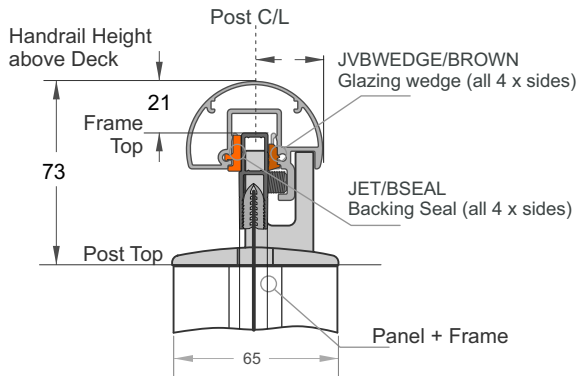


Option 1
Panel + Frame, Heights

For Top fix, Face Fix or Gutter Bracket.
Hidden Fixings

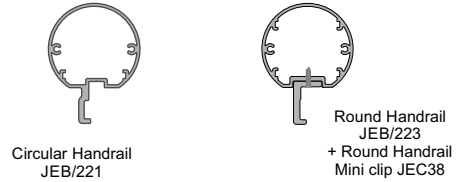
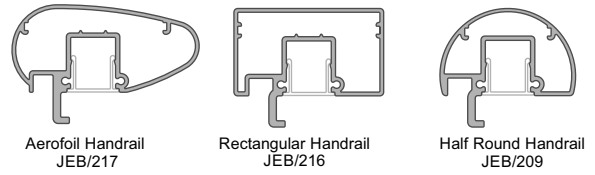


Available Handrails, for Panel Inset into Handrail

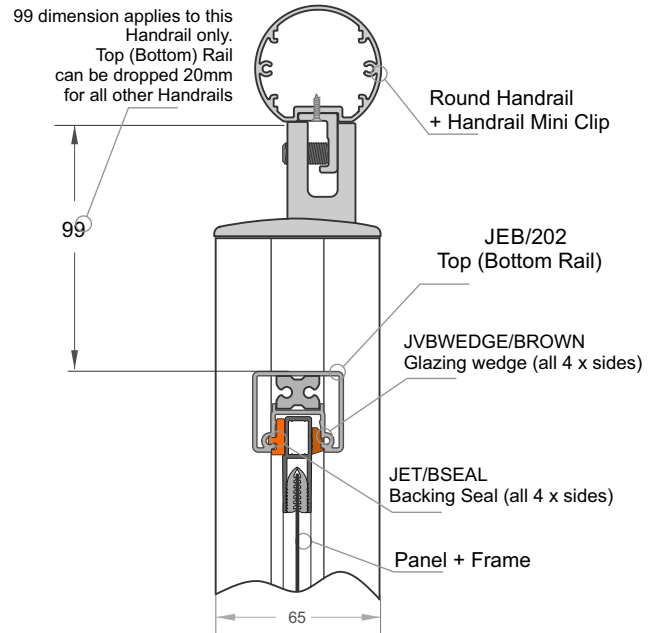


Option 2
Panel + Frame, Heights

For Top fix, Face Fix or Gutter Bracket.
Hidden Fixings

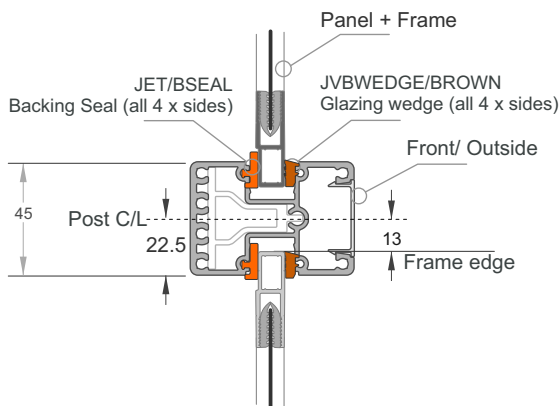


All Handrail types available for this configuration



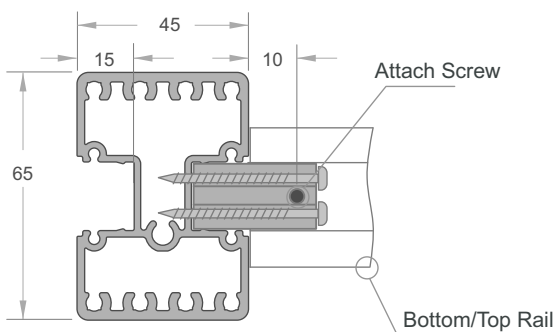
Options 1 & 2
Panel + Frame, Widths

For Top fix, Face Fix or Gutter Bracket.
Hidden Fixings

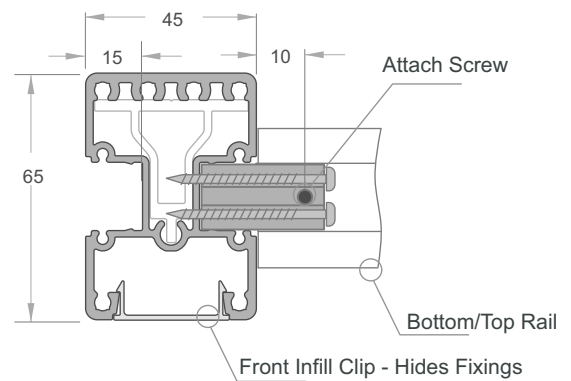


Rail Attach to Post

This Panel Fixing style allows for Hidden Fixings



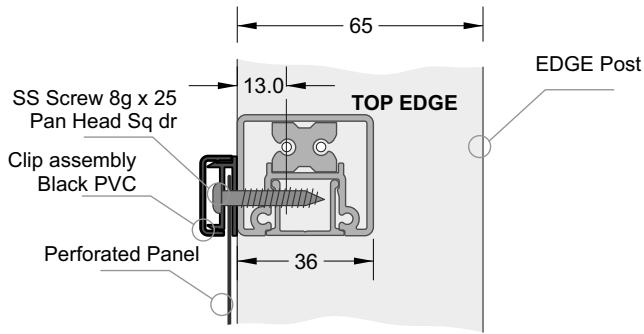
EDGE POST. 45mm x 65mm JEB/212
To be used for Panel Inset
as mounted Top Fix only



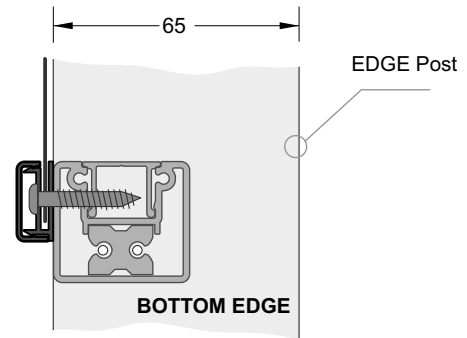
EDGE POST 45mm x 65mm JEB/214
To be used for Panel Inset
as mounted Face Fix only

Option 3
Panel + Clips, Dimensions

Only For Face Fix, Exposed Fixings
All Handrail types available for this configuration

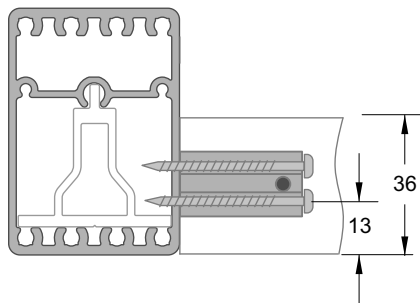


Top Rail
Front faces flush

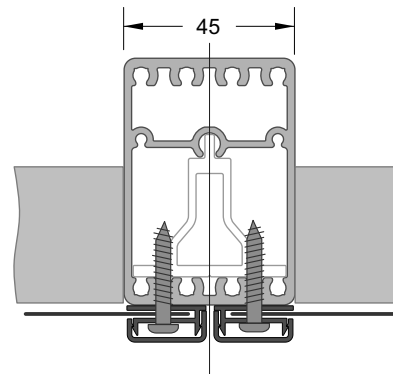


Bottom Rail
Front faces flush

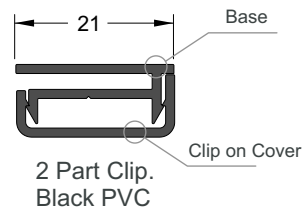
EDGE POST 45mm x 65mm JEB/207
To be used for Panel Face Fixed either
Top or Face Fix (exposed Fastenings)



Bottom/Top Rail + Post
Front faces flush



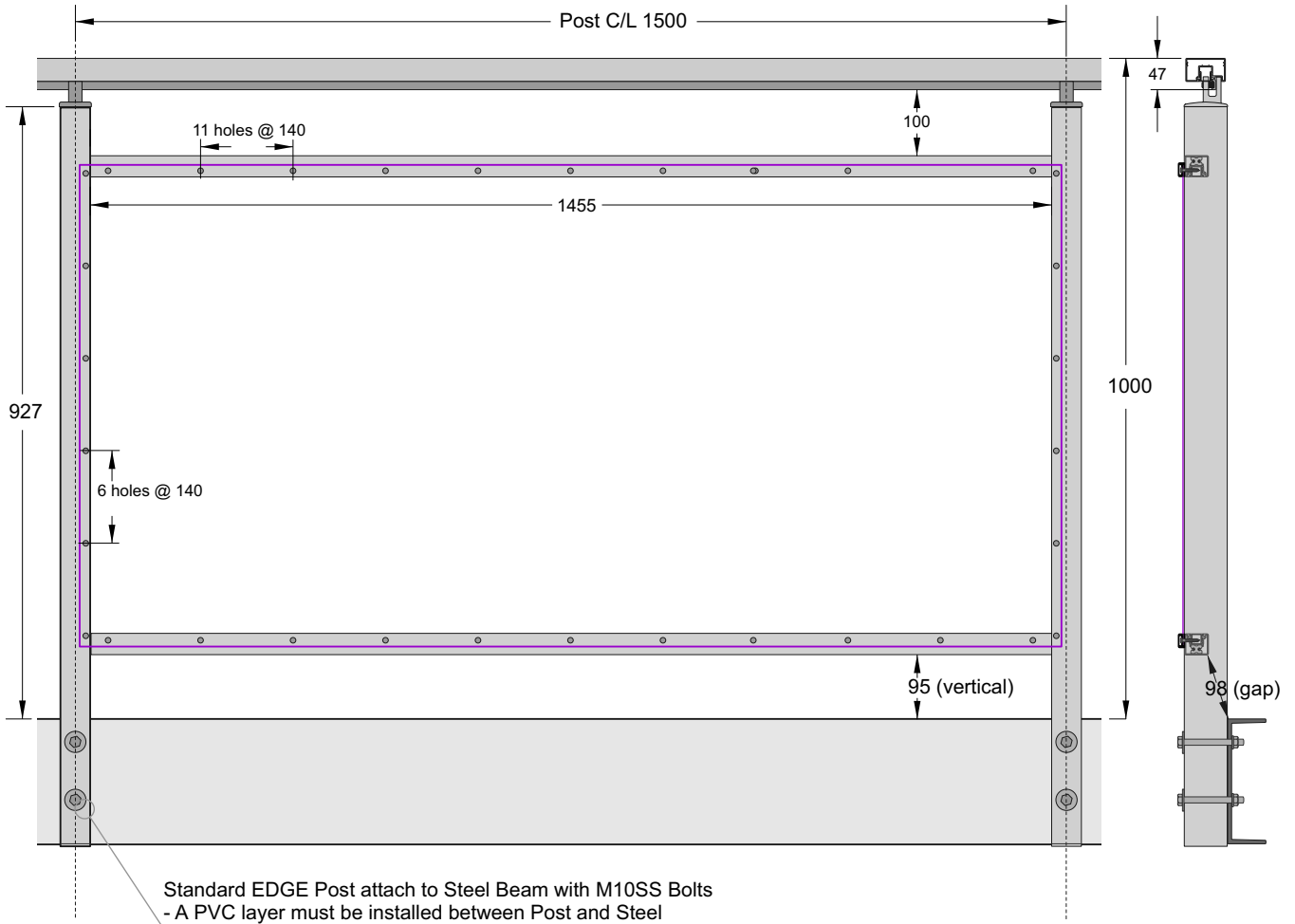
Verticals Clips shown,
Horizontals not shown.
Miter Corners



2 Part Clip.
Black PVC

**Typical Screw Layout
Panel + Clips, Dimensions**

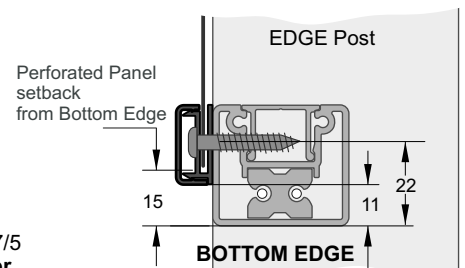
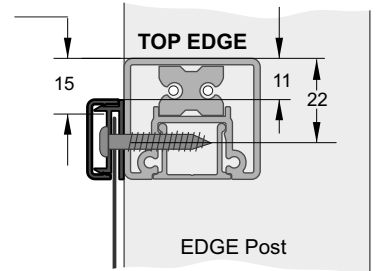
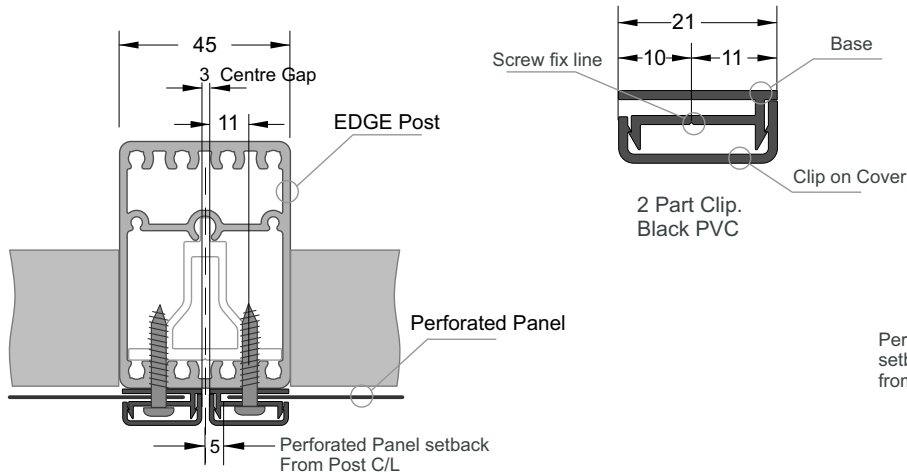
Only For Face Fix, Exposed Fixings
All Handrail types available for this configuration



**Typical Perforated Panel
+ Clips, Setbacks**

Only For Face Fix, Exposed Fixings
All Handrail types available for this configuration

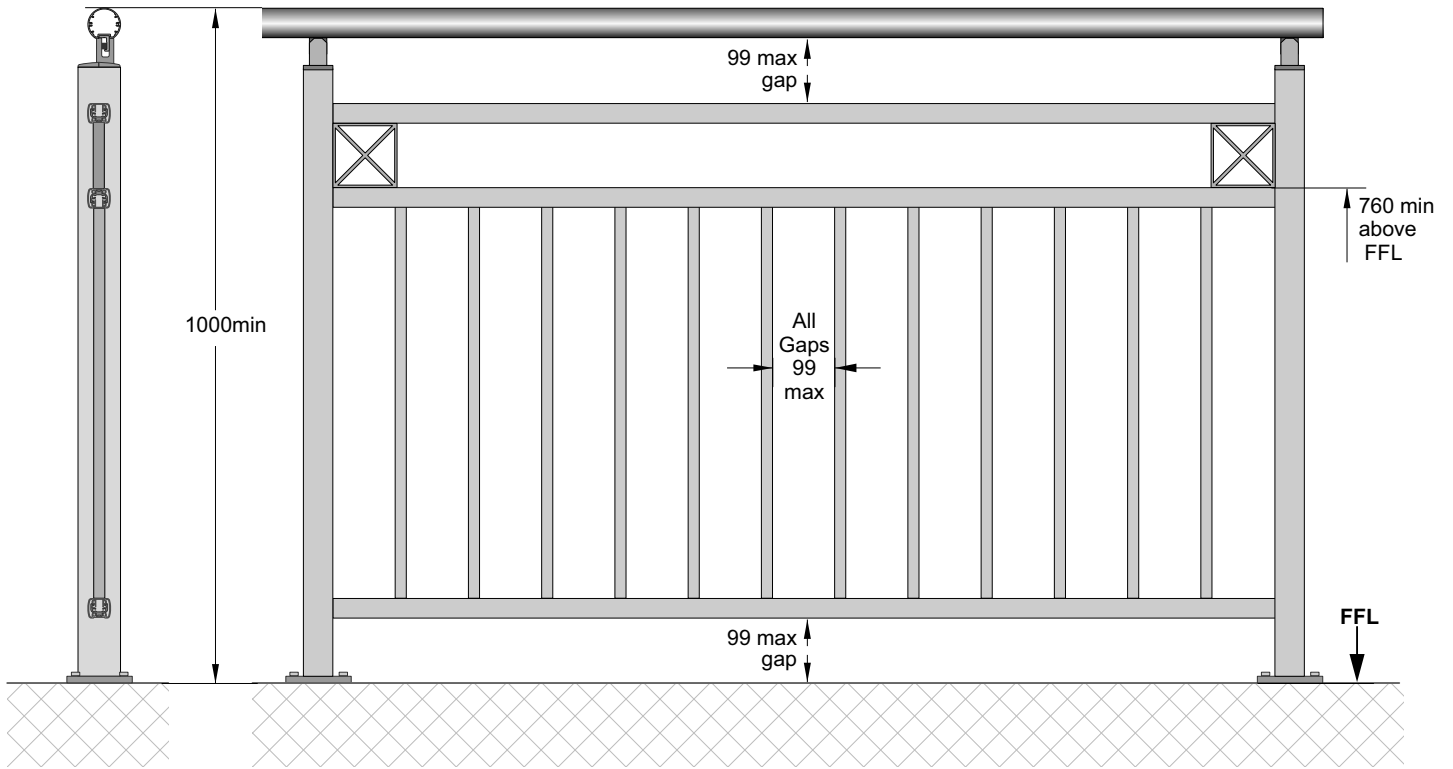
Perforated Panel setback
from Top Edge



VERTICAL EDGES

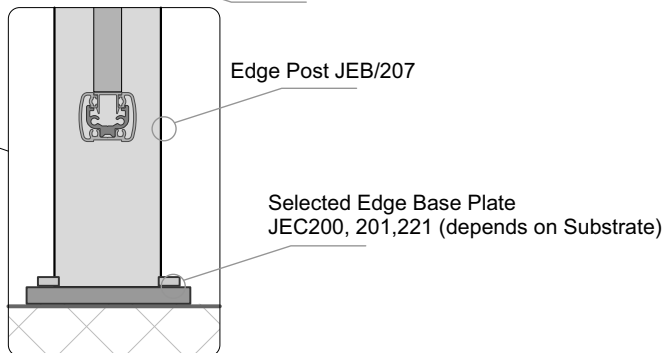
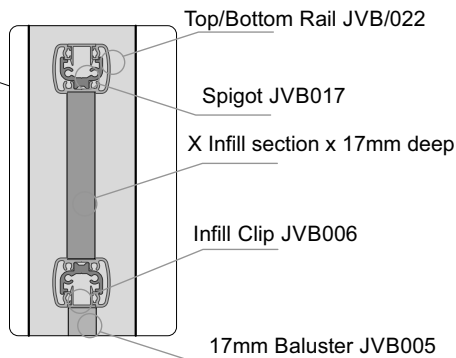
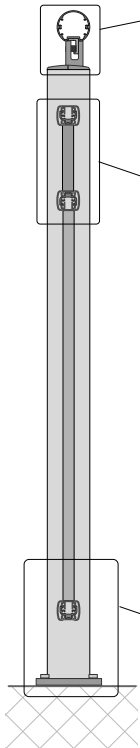
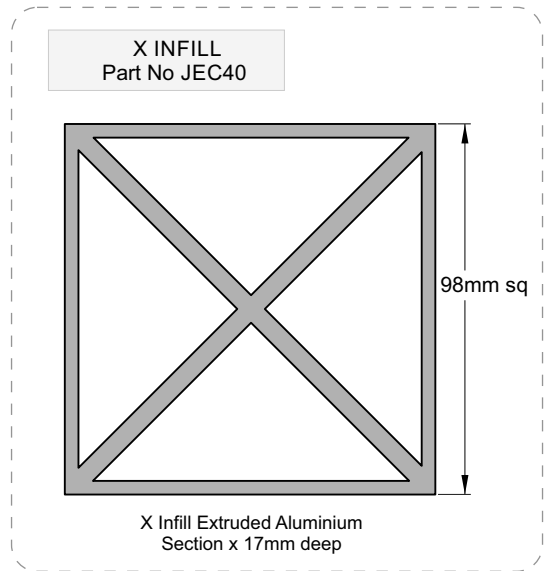
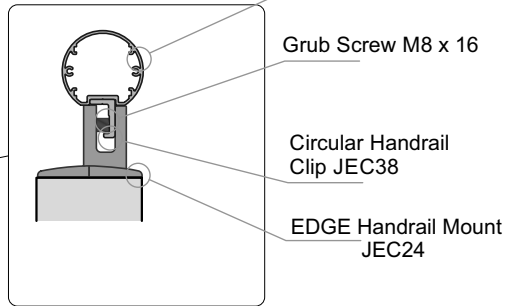
EDGE POST 45mm x 65mm JEB/207/5
To be used for Panel Face Fixed either
Top or Face Fix (exposed Fastenings)

17mm Baluster - Split Rail. Handrail + Top and Bottom Rail. Top Mount



EDGE POST
JEB/207/5

Circular Handrail JEB/223



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 masked or covered 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 displays 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 simple, regular 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 must 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

Glass Cleaning and Maintenance

Architectural glass products must be properly cleaned during the construction period so visual and aesthetic clarity are maintained. Because glass can be permanently damaged if improperly cleaned, glass producers and fabricators recommend strict compliance with the following procedures.

First, determine whether the glass is clear, tinted or reflective. Surface damage is more noticeable on reflective glass compared with the other glass products. If the reflective coated surface is exposed, either on the exterior or interior, special care must be taken when cleaning, as scratches can result in coating removal and a visible change in light transmittance. Cleaning tinted and reflective glass in direct sunlight should be avoided. Cleaning should begin at the top of the building and continue to the lower levels.

Commence cleaning by soaking the glass surfaces with clean water and a soap solution to loosen dirt or debris. Then, using a mild, non-abrasive commercial window washing solution, uniformly apply the solution to the glass surfaces with a non-abrasive applicator and follow with a squeegee to remove all of the cleaning solution from the glass surface.

Ensure that no metal parts of the cleaning equipment touch the glass surface and that no abrasive particles are trapped between the glass and the cleaning materials. All water and cleaning solution residue should be dried from the window gaskets, sealants and frames.

Scratches and Metal Scrapers

Scratches can occur from hard pointed objects or poor handling, but most often occurs from the careless removal of foreign matter from the glass surface.

Mortar splatter and paint are common offenders and efforts to remove after hardening almost always lead to surface damage. It is essential that the foreign materials are removed before they harden. Better still, if construction work continues after glazing, that the glazed areas are protected by adhesive plastic films or suitable tarpaulins or covers.

One of the common mistakes made by non-glass trades people, including glass cleaning contractors, is the use of razor blades or other metal scrapers on a large portion of the glass surface. Using large blades to scrape a window clean carries considerable risk of causing damage to the glass.

The glass industry, fabricators, distributors and installers neither condones nor recommends any scraping of glass surfaces with metal blades or knives. Such scraping usually permanently damages or scratches the glass surfaces. When paint or other construction materials cannot be removed with normal cleaning procedures, a new 25mm razor blade may have to be used. The razor blade should be used on small spots only. Cleaning should be done in one direction only. Never scrape in a back and forth motion as this could trap particles under the blade that could scratch the glass.

Blades or scrapers can dislodge "pickup" on toughened glass. There are fine particles of glass that are fused on to the surface during toughening. Once dislodged they can scratch the glass.

Glass Cleaning, Do's and Don'ts

DO NOT..

- Do Not - Use Scrapers of any type or size on a Glass surface
- Do Not - Leave building dirt or residues to remain on Glass for a period of time.
- Do Not - Begin cleaning glass until you have identified the surface type.
- Do Not - Clean Glass surfaces in direct sunlight.
- Do Not - Allow dirty water or cleaning residues to remain on the Glass.
- Do Not - Begin cleaning before rinsing off a loose residues.
- Do Not - Use abrasive cleaning solutions, materials or solvents.
- Do Not - Allow metal parts of the cleaning equipment to come in contact with the Glass.
- Do Not - Trap abrasive particles between the cleaning material and the Glass.

DO...

- Clean glass promptly when dirt or building residues appear.
- Determine glass surface type.
- Exercise special care when cleaning coated surfaces.
- Avoid cleaning glass surfaces in direct sunlight.
- Start cleaning at the top of a building, then continue to lower levels.
- Soak the glass surface in a clean soapy solution before cleaning.
- Use a mild non abrasive commercial cleaner.
- Use a squeegee to remove all cleaning solution.
- Try your procedures on a small window and check.
- Caution other trades re the care and protection of the glass surfaces.

**Residues of surface grit may be present from the toughening production process.
These grit particles must not be dragged across the surface.
NEVER use Metal Scrapers**

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