



 JURALCO

**JURALCO VIKING®**  
**BALUSTRADE SYSTEM**

ISSUE 1-25 v1





Juralco Viking® Balustrade showing Full Height glass with Handrail and Bottom Rail



Juralco Viking® Balustrade showing Full Height glass with Handrail and Bottom Rail



Juralco Viking® Balustrade showing Baluster type



Juralco Viking® Balustrade showing Full Height glass with Handrail and Bottom Rail

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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)

**Viking® Balustrade is for Occupancy types A, A Other and C3 only  
Occupancy Types as per AS/NZ 1170.1.2002.**

| 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 and 10mm Toughened 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** All for 6mm and 10mm, Toughened Glass. 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 a Top or Side mounted handrail to conform to NZS 4223.3.2016.

**masterspec partner**  
Section 4852JB

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### Specifications for Juralco Viking® Balustrade System

#### 1. Scope

- This specification details the documents the Juralco Viking® 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 Viking® 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 Wind Zones, up to and including Low, Medium, High, Very High and Extra High.
- The Structural Engineering design includes the requirements of B1 Structure, B2 Durability, F2 Hazardous Materials and F4 Safety from falling, from the Building Code.
- Verification Method B1 / VM1, B2/AS1, F4 / AS1
- All glass used in the Juralco Viking® Balustrade System must conform to AS/NZS 2208.
- Complies with NZS 4223.3.2016

#### 3. Manufacturer's Documents

- The Juralco Viking® 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](mailto: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 Viking® System
- Aluminium extrusions, components and hardware – unless specified are manufactured to 6060 T5 or T6 specifications
- Stainless Steel components, hardware, fixings – all components to 316 grade
- Glass - all glass used in the Juralco Viking® Balustrade System must conform to the specifications as listed in the Juralco Viking® 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
- Dulux Duralloy® powder coating systems are suitable for properties greater than 100m from high tide level  
AAMA 2603 performance. Residential buildings, 3 levels max. Warranty 10 yrs
- Dulux Duralloy Plus® powder coating systems are suitable for properties greater than 10m from high tide level.  
AAMA 2603 performance. Residential and Light commercial buildings, 3 levels max Warranty 15 yrs
- Dulux Duratec® powder coating systems are suitable for properties greater than 10m from high tide level  
AAMA2603 and 2604 performance. All Residential and Commercial buildings. Warranty 25 yrs

#### 6. Installation and Fixing

- The Juralco Viking® Balustrade System must only be installed in accordance with the Juralco Viking® Balustrade System manual
- Any deviation from that specified in the Juralco Viking manual must only be in accordance with the site specific PS1 with site specific calculations and drawings listing the non standard details
- The Juralco Viking® 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.

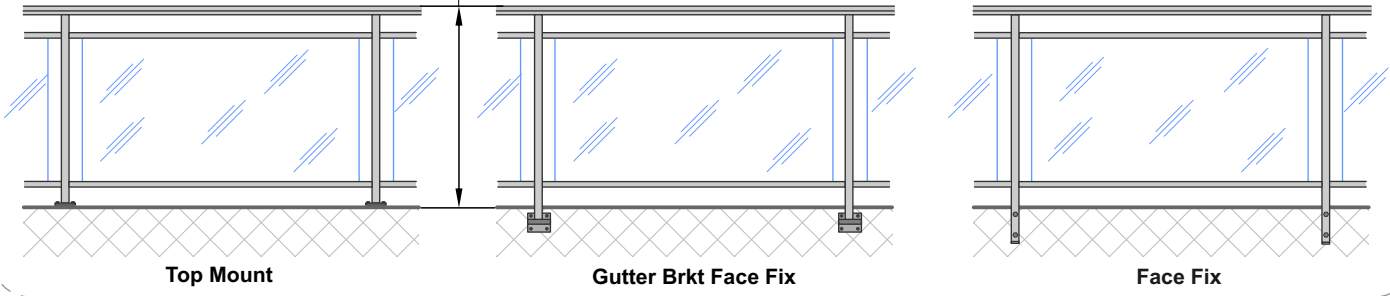
**Attachment to structures** A PVC Tape or similar material spacer must be used to separate powder coated aluminium items from all concrete and steel structures. Failure to do so can lead to the chemicals in the structure affecting the powder coating, leading to corrosion.

**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.

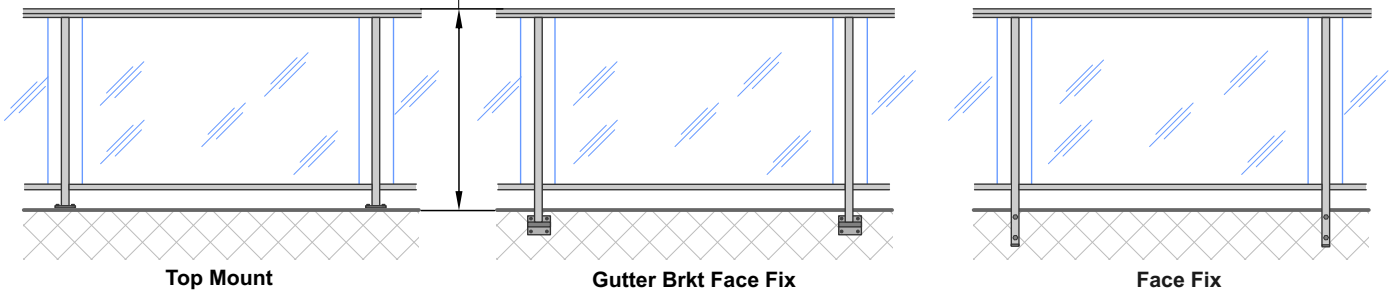
**Care** The Dulux powder coating warranty period is conditional upon the surface being maintained in accordance with the Dulux 'Care and Maintenance Instructions'. Download from Dulux or refer to the back page of this manual.

**For 6mm Toughened Glass**

6mm Glass - Full Height. Handrail + Split Rails.  
Balustrade Height, 1000mm min, above FFL



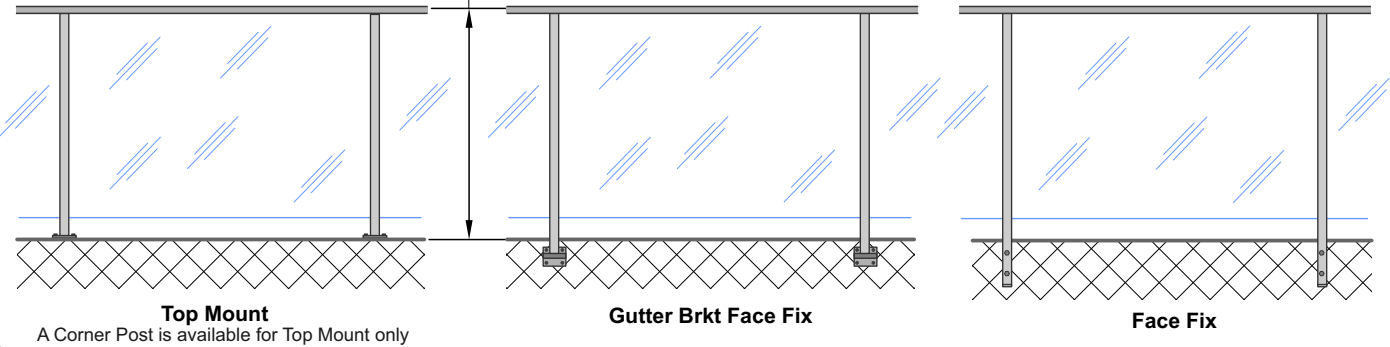
6mm Glass - Full Height. Handrail  
Balustrade Height, 1000mm min, above FFL



**For 10mm Toughened Glass**

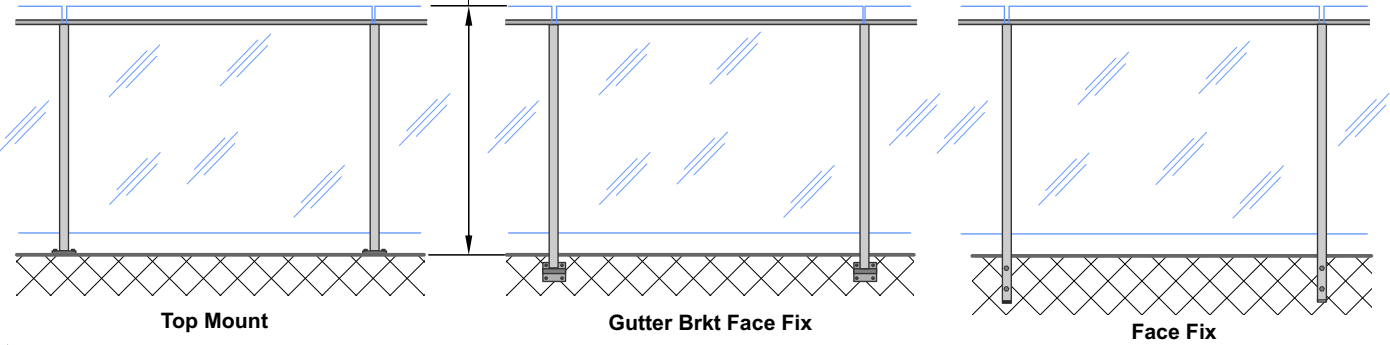
10mm Toughened Glass - Semi Frameless.w Handrail

Balustrade Height, 1000mm min, above FFL



10mm Toughened Glass - Semi Frameless - JEB 222 Interlinking Rail + JEC29 Brackets, Deck side.

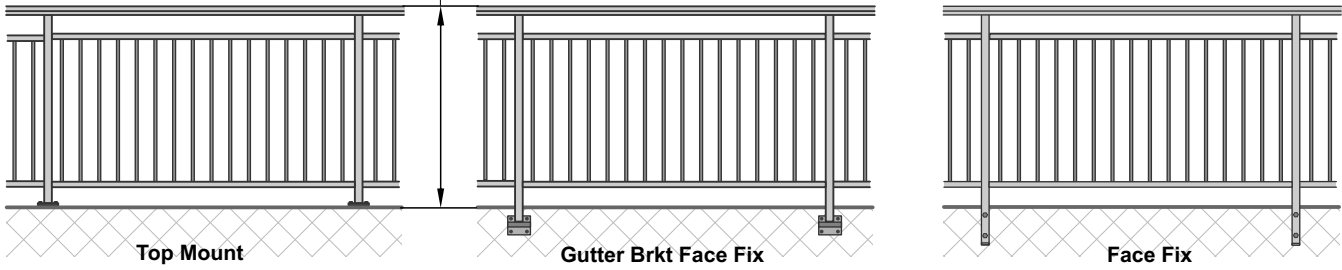
Balustrade Height, 1000mm min, above FFL



**For 17mm Baluster**

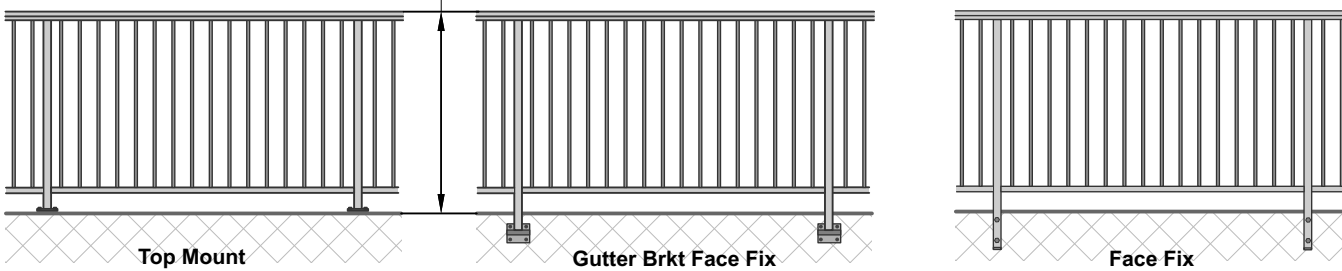
**17mm Baluster - Split Rail. Handrail + Top and Bottom Rail.**

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



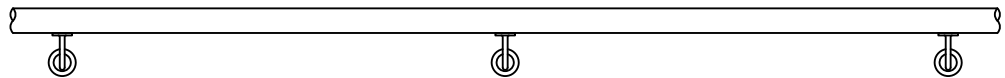
**17mm Baluster - Full Height. Handrail + Bottom Rail.**

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



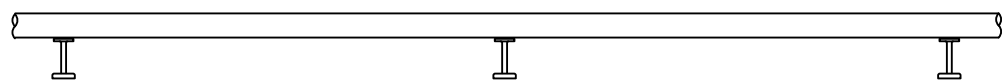
**For JA/160 50mm dia Aluminium Tube + wall Brackets**

Handrail Bracket JVB116  
(Curved, Side Fix)



Handrail - Wall mount. Could be Horizontal or for Stairway

Handrail Bracket JVB117  
(80mm Top fix)



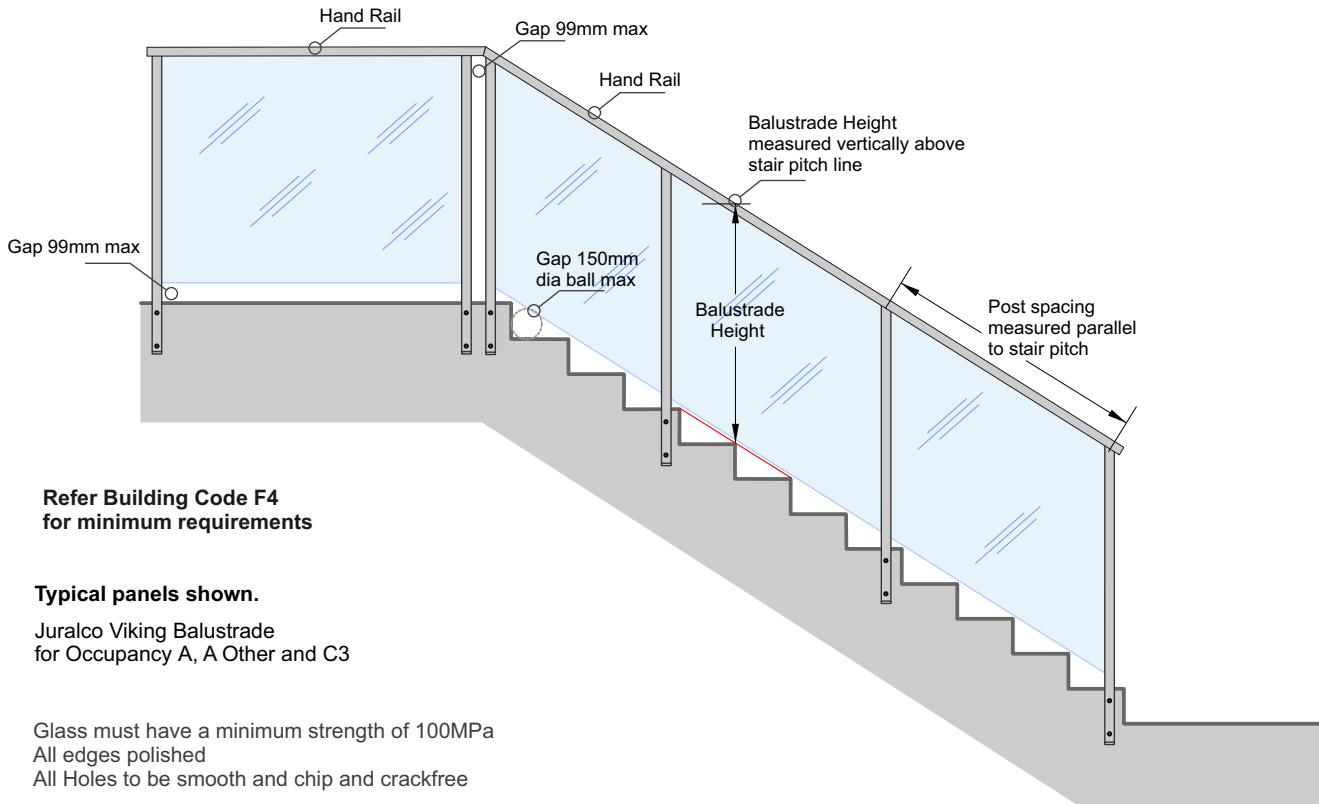
Handrail - Nib Wall mount. Could be Horizontal or for Stairway



Juralco Viking® Balustrade System Stair Setouts, Construction

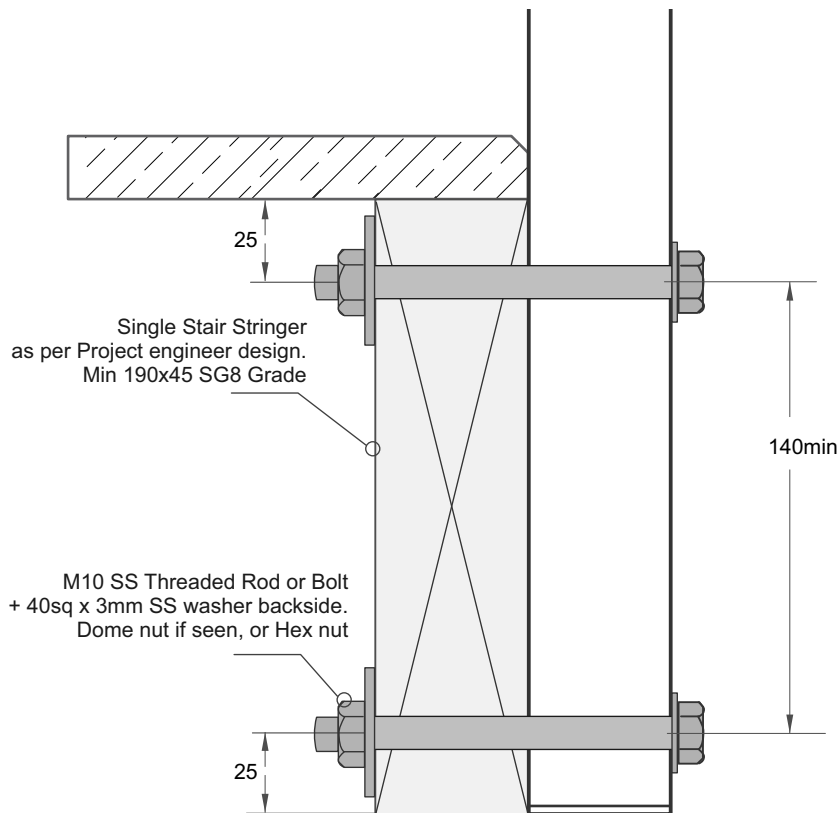
Viking Balustrade  
Face Fix shown

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

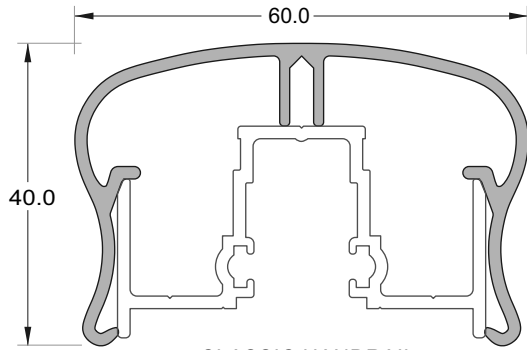


Viking Balustrade  
Stair Stringer Detail

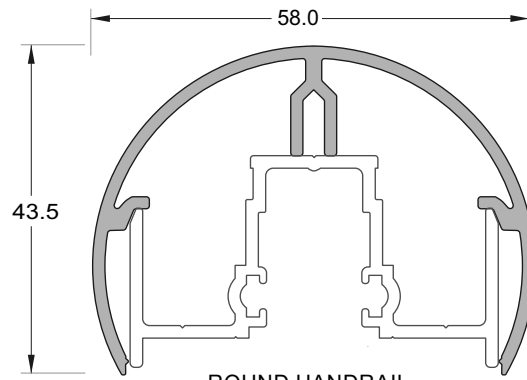
Stair structure to be designed by others to resist Balustrade actions as per NZS1170.1 Table 3.3  
Applicable to Occupancy A only unless Project Engineer ensures it can support appropriate balustrade loads



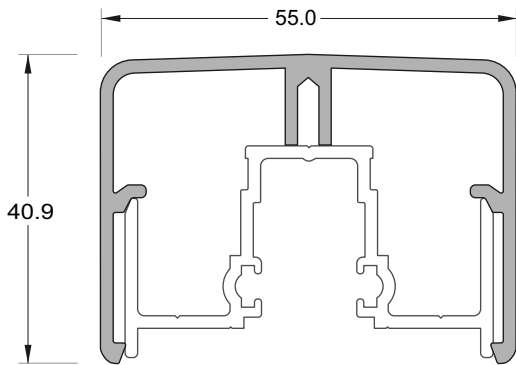
Handrails below suitable for Private and Common Stairways, but **NOT** suitable for Accessible Stairways



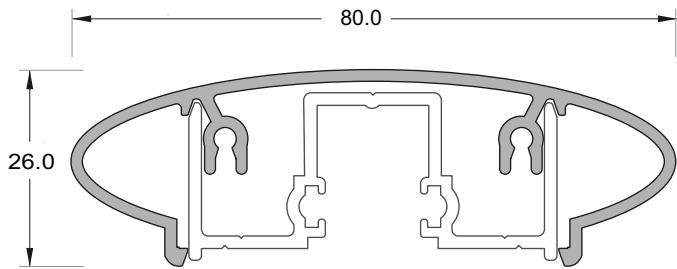
CLASSIC HANDRAIL  
JVB/001/5.8



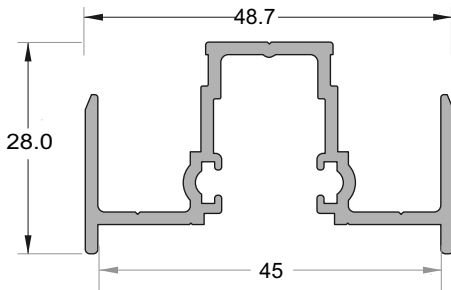
ROUND HANDRAIL  
JVB/009/5.8



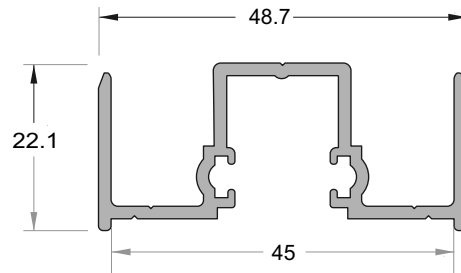
RECTANGULAR HANDRAIL  
JVB/016/5.8



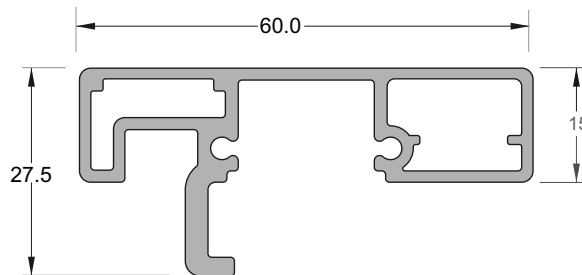
ELLIPTICAL HANDRAIL  
JVB/024/5.8



TOP RAIL  
JVB/004/5.8



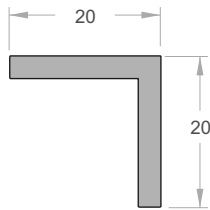
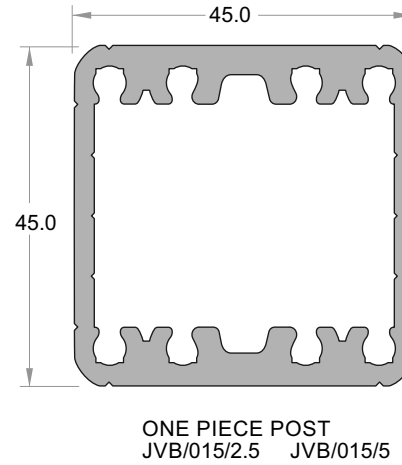
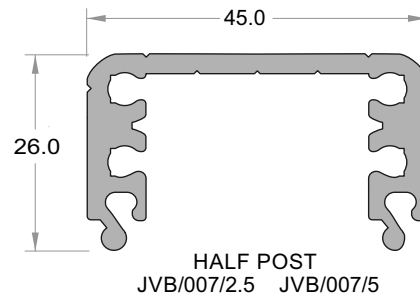
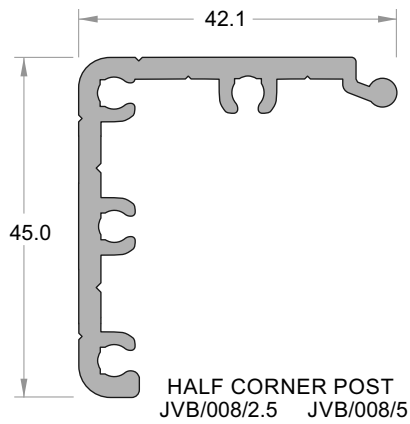
ELLIPTICAL TOP RAIL  
JVB/023/5.8



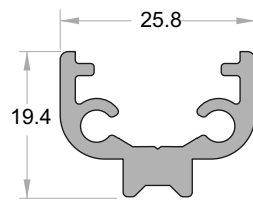
INTERLINKING RAIL  
JEB/222/5.8

Note - For use with JEC 29 Handrail Bracket  
- Infill clips not used with the JEB 222

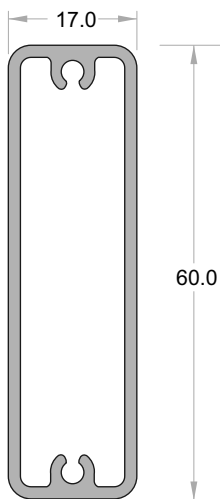
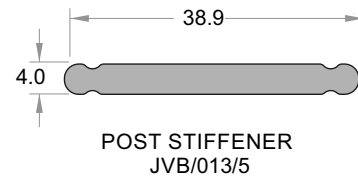




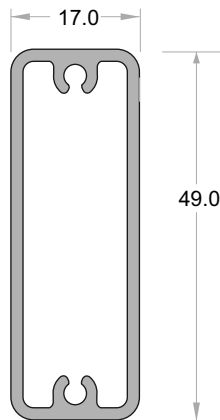
WATER DEFLECTION ANGLE  
JA118/5



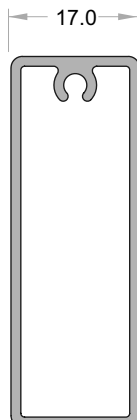
SPIGOT  
JVB/017/5  
(Fits Bottom Rail)



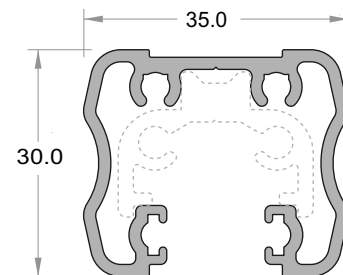
INFILL  
60mm SLAT  
JVB/019/5.3



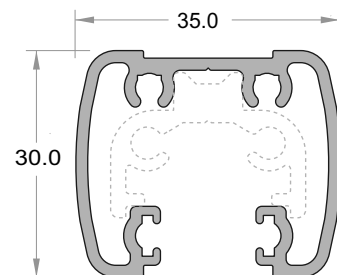
INFILL  
49mm SLAT  
JVB/018/5.35



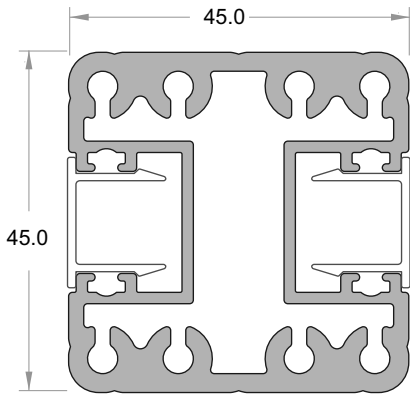
INFILL  
49mm SLAT  
(Single Screw)  
JVB/030/5.35



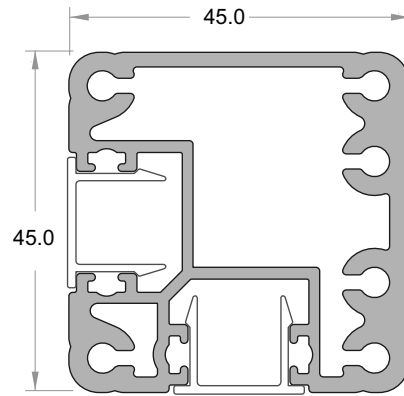
BOTTOM RAIL  
JVB/002/5.8



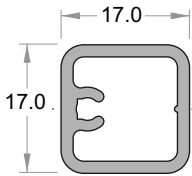
BOTTOM RAIL  
JVB/022/5.8w



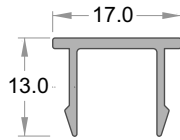
**FRAMELESS POST**  
JVB/011/2.5 JVB/011/5



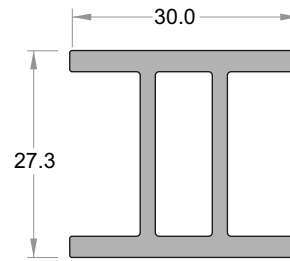
**FRAMELESS CORNER POST**  
JVB/012/2.5 JVB/012/5



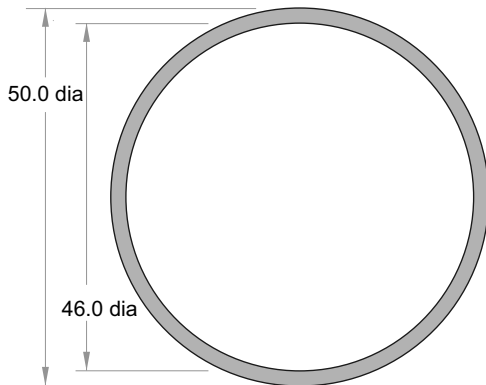
**BALUSTER**  
JVB/005/5.35



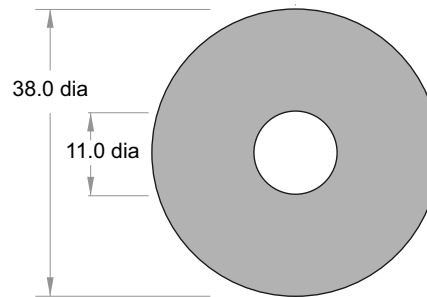
**FRAMELESS POST CAP**  
JVB/006



**SEMI FRAMELESS  
POST STIFFENER**  
JVB/020/5

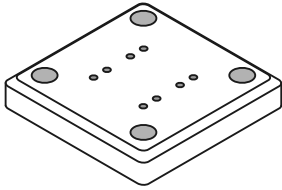


**HANDRAIL**  
JA160/5



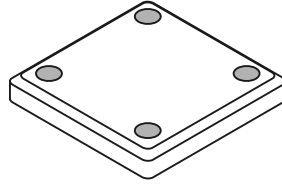
**SPACER LENGTH**  
JVB/125/1000

Base Plate  
JVB100



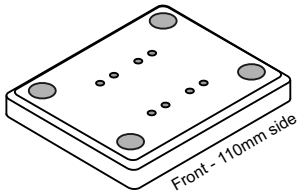
100mm x 100mm x 12mm - 4 x holes

Base Plate  
JVB100/Blank



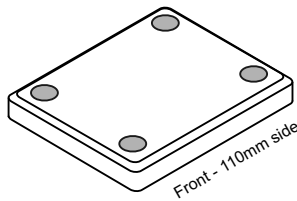
100mm x 100mm x 12mm - 4 x holes

Base Plate  
JVB121



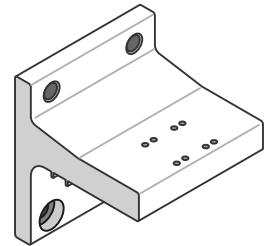
110mm x 90mm x 12mm - 4 x holes

Base Plate  
JVB121/Blank



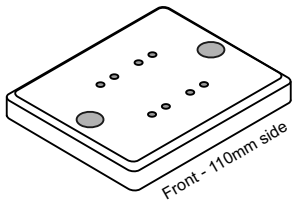
110mm x 90mm x 12mm - 4 x holes

Gutter Bracket  
JVB137/45



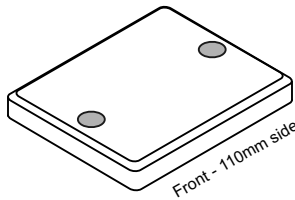
120mm wide x 135mm high

Base Plate  
JVB101



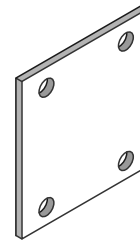
110mm x 90mm x 12mm - 2 x holes

Base Plate  
JVB101/Blank



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

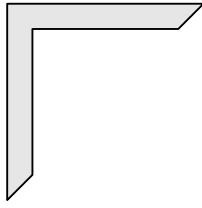
Gutter Bracket Spacer  
JEC139



135mm x 120mm x 5mm - 4 x holes

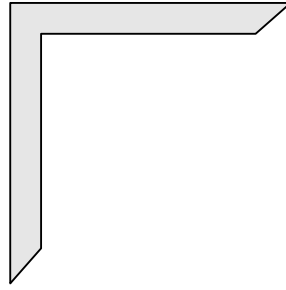
**Juralco Viking® Balustrade System**  
**Components**

Handrail Corner Joiner 90deg  
JVB150



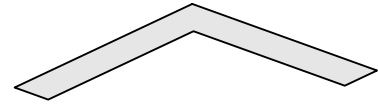
Legs 70mm long x 9mm wide  
x 3mm thick

Handrail Corner Joiner 90deg  
JVB151



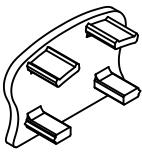
Legs 100mm long x 11mm wide  
x 3mm thick

Handrail Corner Joiner 135deg  
JVB152

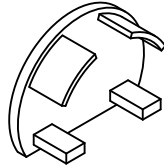


Legs 70mm long x 11mm wide  
x 3mm thick

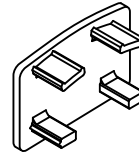
Classic End Cap  
JVB105



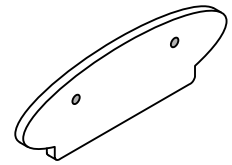
Round End Cap  
JVB113



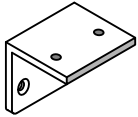
Rectangular End Cap  
JVB129



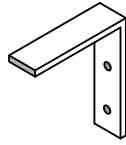
Elliptical End Cap  
JVB140



Top Rail Wall Bracket  
4.5mm thick JVB103

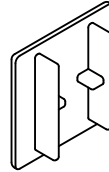


Glass Setting Angle  
JVB118

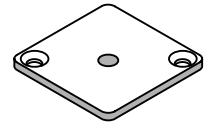


30mm x 30mm Angle x 12mm wide

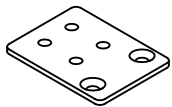
Frameless Post-top Cap  
JVB115



Post End Cap  
JVB104



Bottom Rail Wall Bracket  
3mm thick JVB102

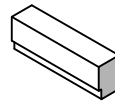


4mm Glass Setting Block  
Part No JVB119



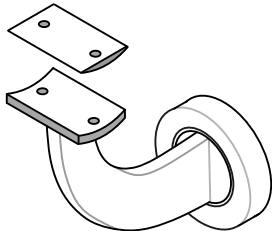
4mm x 8mm x 30mm long

Glazing Block 50mm  
JVB108



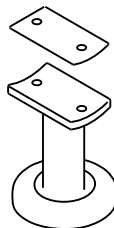
17mm x 9mm x 350mm long

Handrail Bracket JVB116  
(Curved, Side Fix)



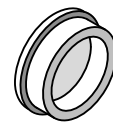
Satin or SCC finishes

Handrail Bracket JVB117  
(80mm Top fix)



Satin or SCC finishes







50.8mm dia Handrail End Cap  
JGS 132

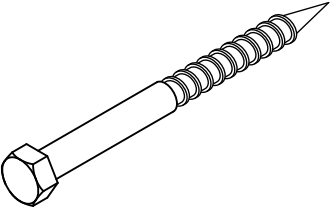
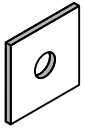



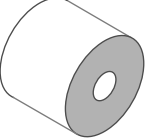




SCC finishes

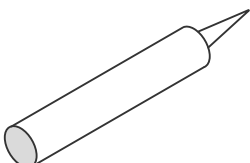
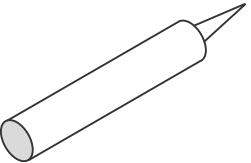
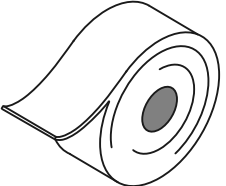


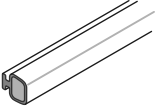
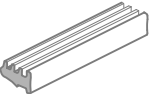

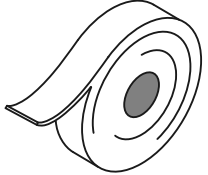
**Components**

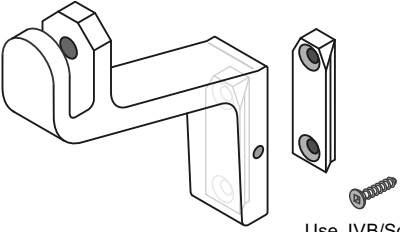
|   |  |   |  |   |  |
|---|--|---|--|---|--|
| <p>PK SCREW SS<br/>JVBScrew/10x6</p>  <p>Top Rail<br/>to Handrail<br/>Pan SQ drive</p> | <p>PK SCREW SS<br/>JVBScrew/25x6</p>  <p>Bottom Rail<br/>to Baluster<br/>Pan SQ drive</p> | <p>PK SCREW SS<br/>JVBScrew/38x6</p>  <p>Top Rail<br/>to Baluster<br/>C/S SQ drive</p> | <p>PK SCREW SS<br/>JVBScrew/25x8</p>  <p>Post to<br/>Bottom Rail<br/>Pan SQ drive</p> | <p>PK SCREW SS<br/>JVBScrew/25x10</p>  <p>Top Rail<br/>to Post<br/>Pan SQ drive</p> | <p>PK SCREW SS<br/>JVBScrew/50x10</p>  <p>Attaching Post to Base plate<br/>or Gutter Bracket<br/>C/S SQ drive. High Tensile</p> |
|---|--|---|--|---|--|

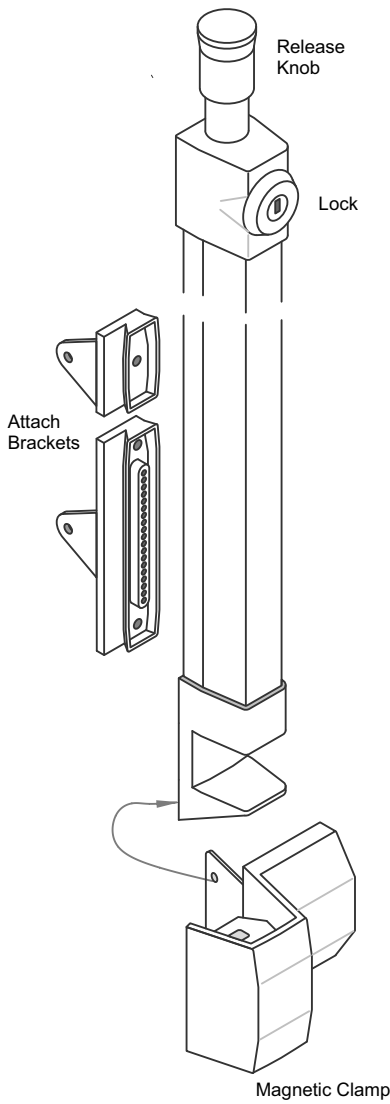
|   |   |  |  |
|---|---|--|--|
| <p>COACHSCREW SS<br/>JVBCoach/M10x160</p> |  | <p>Square Washer<br/>JVBSqwsh/40x40x3</p>  <p>SS 40mm sq x 3mm</p> | <p>Round Washer<br/>JVBSwasher/21x2</p>  <p>SS 21mmdiax11x2mm thick</p> |
| <p>COACHSCREW SS<br/>JVBCoach/M10x180</p> |   |  |  |
| <p>COACHSCREW SS<br/>JVBCoach/M10x200</p> |   |  |  |

|  |  |  |  |   |  |
|--|--|--|--|---|--|
| <p>All For M10 SS<br/>Coachscrews<br/>or Bolts</p> | <p>Face Fix Spacer<br/>JVB125/30mm</p>  <p>Aluminium<br/>38mm dia<br/>x 30mm long.</p> | <p>Face Fix Spacer<br/>JVB125/15mm</p>  <p>Aluminium<br/>38mm dia<br/>x 15mm long.</p> | <p>Face Fix Spacer<br/>JVB125/10mm</p>  <p>Aluminium<br/>38mm dia<br/>x 10mm long.</p> | <p>EPDM Washer<br/>JVB126</p>  <p>For M10 Fastener<br/>38mm dia<br/>x 3mm</p> | <p>EPDM Washer<br/>JVB130</p>  <p>For M10 Fastener<br/>20mm dia<br/>x 1.6mm</p> |
|--|--|--|--|---|--|

|   |  |  |
|---|--|--|
| <p>SIKA Supergrip<br/>JECSUPERGRIP30</p>  <p>For All Coachscrews fixings</p> | <p>Rhodorsil V60 Clear Silicone<br/>H/RTV419098</p>  <p>Construction Silicone</p> | <p>Foam Tape 100mm x 4.8mm<br/>JVB/FTAPE100</p>  <p>Base Plate Separator<br/>for Concrete and Steel<br/>Single sided 100mm wide x 15.2mt Roll</p> |
|---|--|--|

|   |  |  |  |
|---|--|--|--|
| <p>BULB SEAL<br/>JVB/Bulbseal</p>  <p>300m Roll, Black</p> | <p>GLAZING WEDGE<br/>JVBWedge/Brown</p>  <p>6mm Glass Wedge 75m Roll, Black</p> | <p>BACKING WEDGE<br/>JVB/BackWedge500</p>  <p>500m Roll, Black</p> | <p>Foam Tape 38mm x 4.8mm<br/>JVB/FTAPE38</p>  <p>Face fix Post Separator<br/>for Concrete and Steel<br/>Single sided 38mm wide x 15.2mt Roll</p> |
|---|--|--|--|

|   |
|---|
| <p>HANDRAIL BRACKET KIT<br/>JEC 29/Kit</p> <p>Includes 2 x grub screws<br/>(For use with Interlinking<br/>Rail Extrusion)</p>  <p>Use JVB/Screw 10gx20 C/S</p> |
|---|

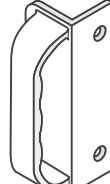


**Latch - 540mm high OA**

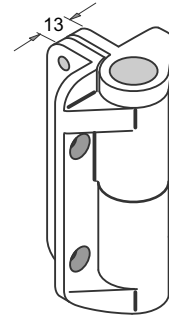
**MAGNETIC POOL GATE LATCH**  
Nylon, Black  
JEF/APL



**SOFT GATE STOP**  
Nylon, Black.  
Part No JEF/GS



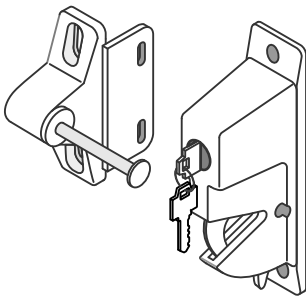
**GATE HANDLE**  
Nylon, Black.  
Part No JEF/GH



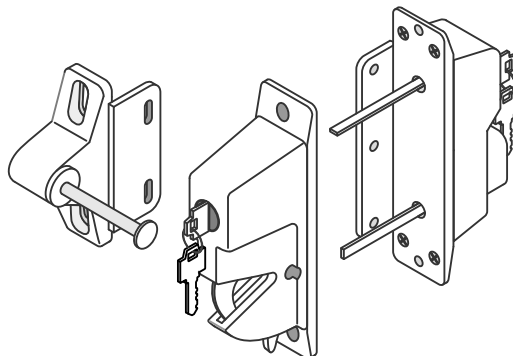
Suitable for Pool gates  
Max Self Closing 45kg

**ADJUSTABLE TENSION  
HINGE, LEGS**  
JEF/AHHD (Pairs)

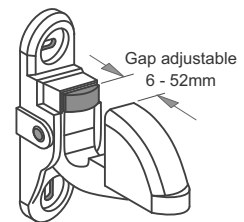
**These Latches not suitable for Pool Gates**



**UNIVERSAL DROP LATCH  
AND STRIKER**  
Nylon, Black  
JEF/DL

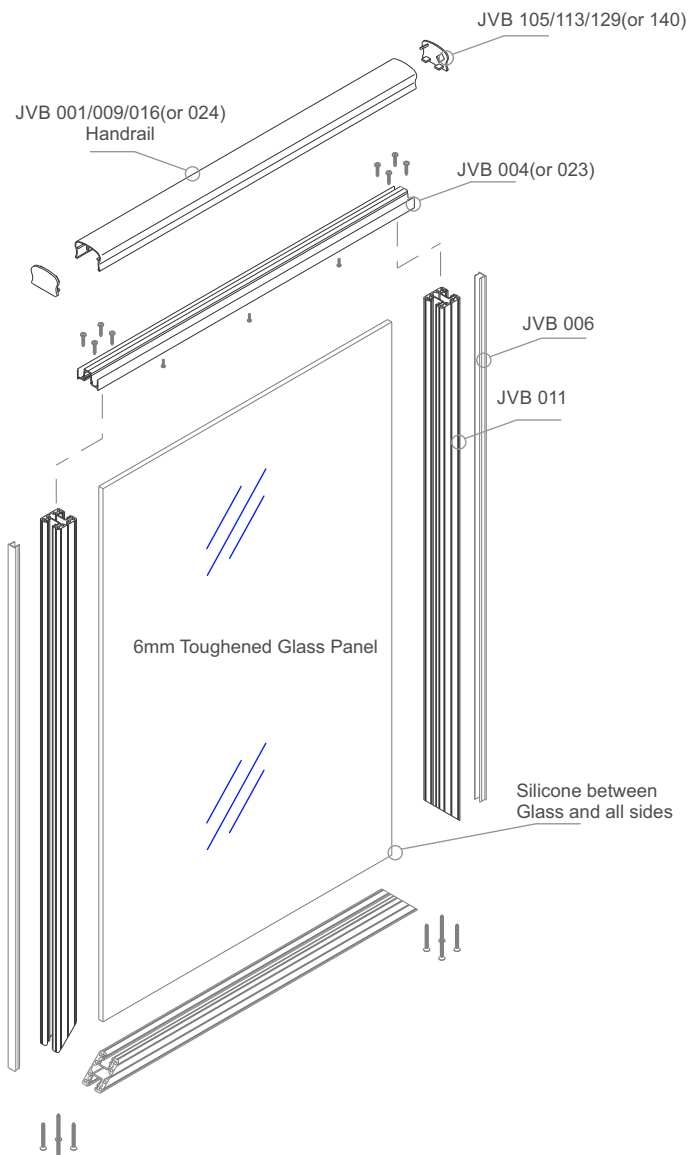
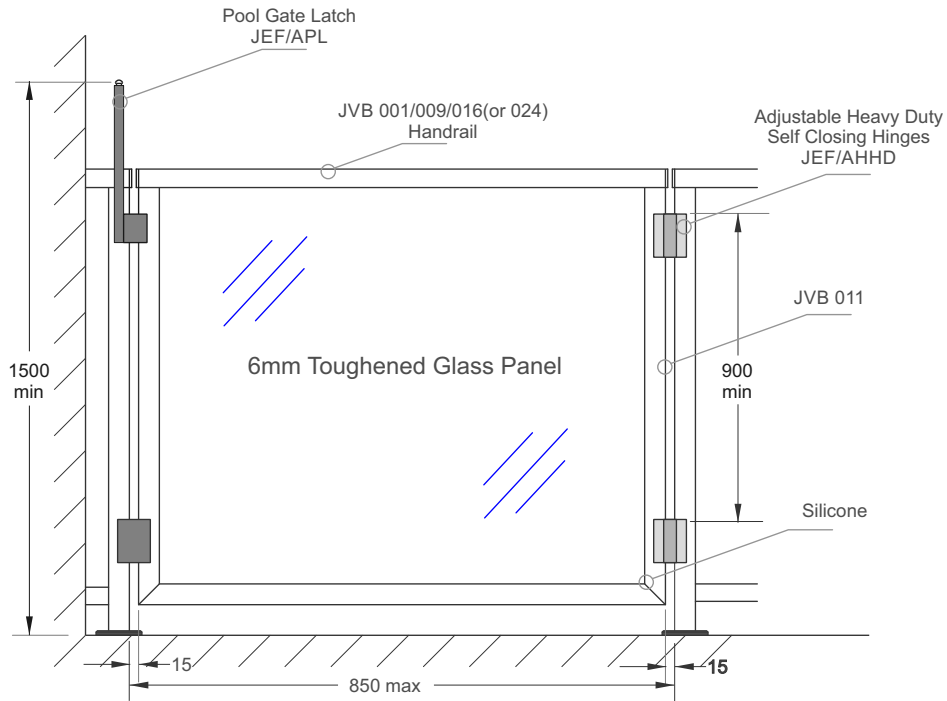


**UNIVERSAL DROP LATCH  
AND STRIKER**  
Nylon, Black. (External Access)  
JEF/DLEA

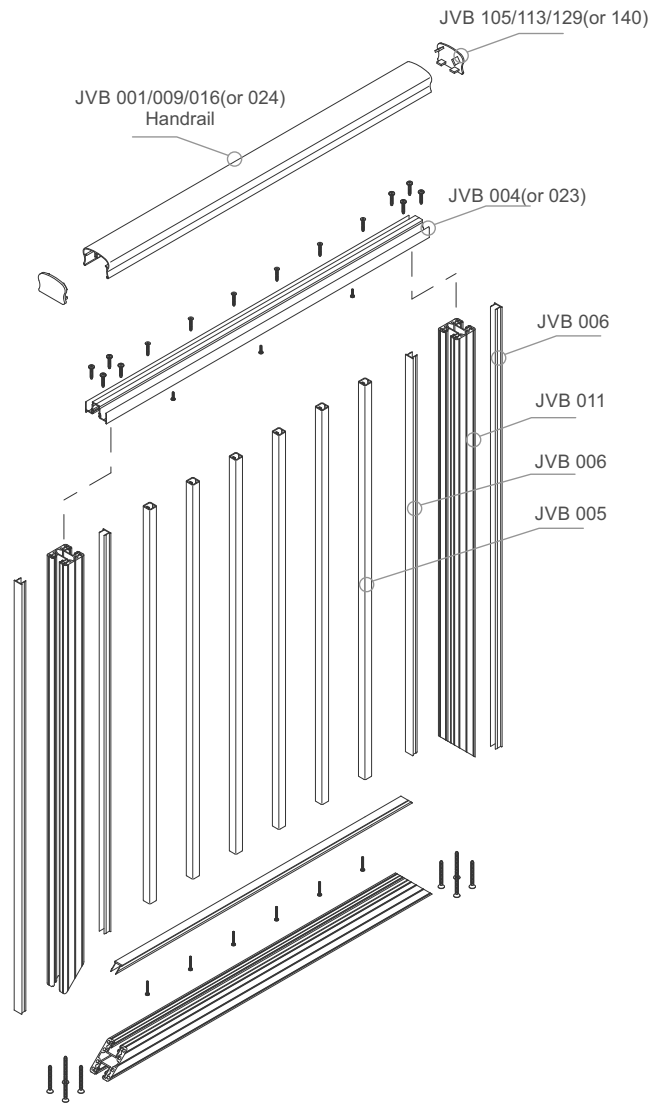
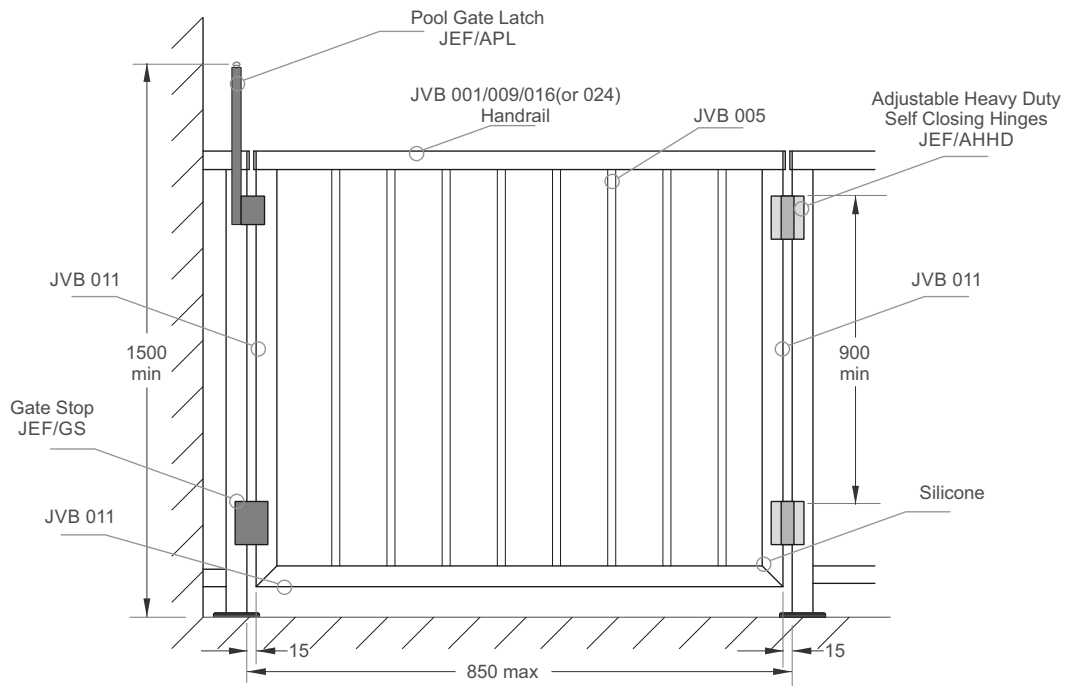


**PARKING LATCH**  
Nylon, Black.  
G21

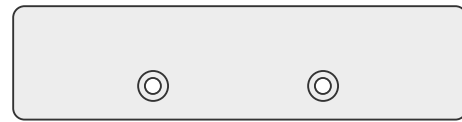
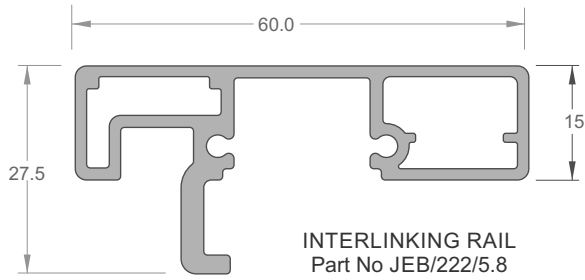
**Typical Gate Assembly - Glass**



**Typical Gate Assembly - Baluster**

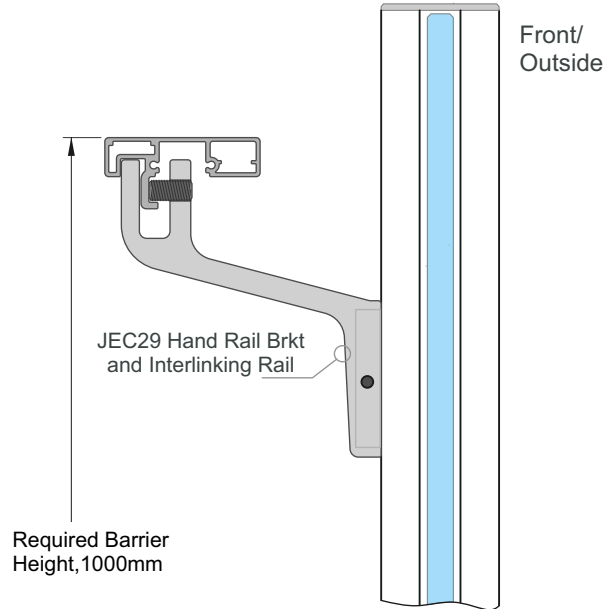






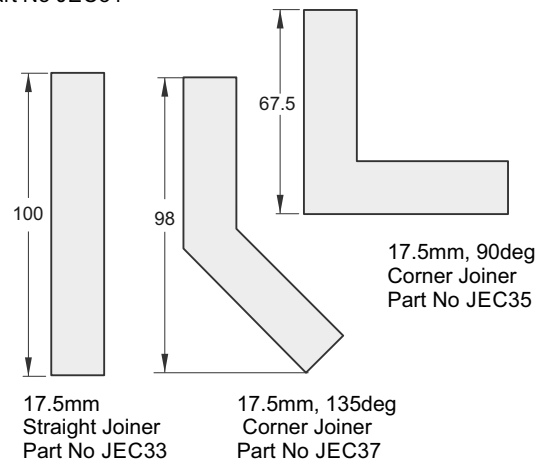
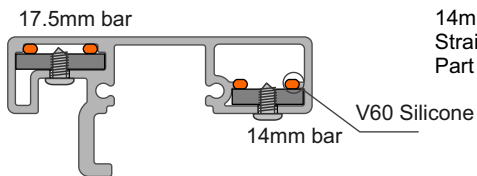
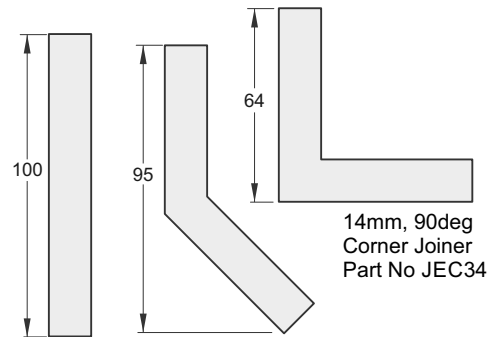
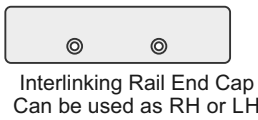
Interlinking Rail End Cap  
Part No JEC 18  
Can be used as RH or LH

10mm Toughened Glass - Semi Frameless. Interlinking Rail + JEC29 Brackets Deckside.



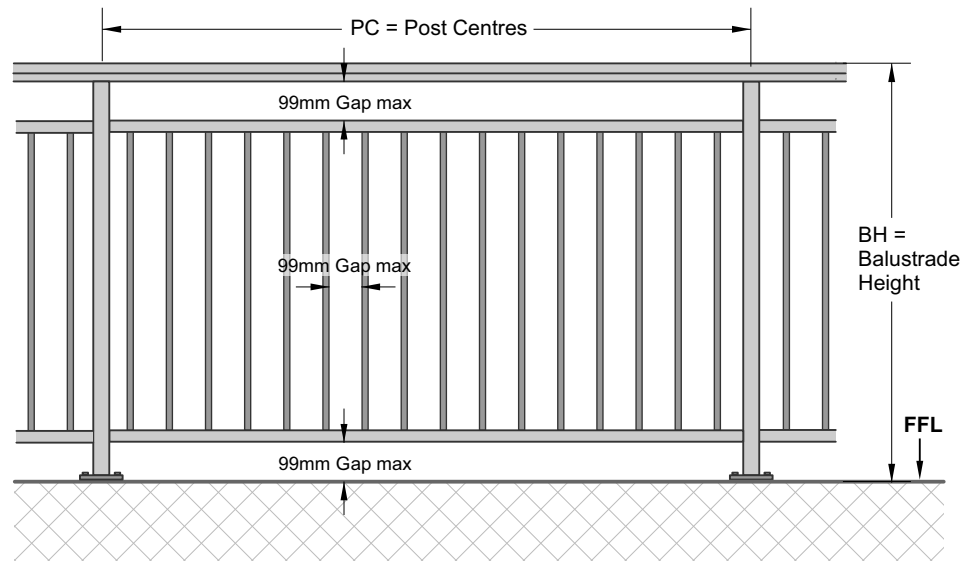
Interlinking Rail  
End Cap, Straight  
135 deg and 90deg corners

All ex 3mm Aluminium Plate



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 dabs 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



BALUSTRADE DESIGN GUIDE - for building types below. All other applications please contact Juralco

| BH = HEIGHT OF BALUSTRADE<br><br>(Measured from FFL to top of Barrier)   | BUILDING TYPE   | LOCATION  | HEIGHT (mm) |
|--|---|---|-------------|
|  | Detached dwellings and within household units of multi-unit dwellings | Stairs and ramps and their landings                                   | 900         |
|  |   | Balconies and decks, and edges of internal floors or mezzanine floors | 1000        |
|  | All other buildings, and common areas of multi-unit dwellings         | Stairs or ramps (excluding landings)                                  | 900         |
|  |   | Barriers within 530mm of the front of fixed seating                   | 800         |
| All other locations  |   | 1100  |             |
| Note: A Building Consent is required when installing or replacing a Swimming Pool Fence. Refer to NZBC Clause F9 |   | Swimming Pools  | 1200        |

|                     |  |    |
|---------------------|--|----|
| GAPS (max) as above |  | 99 |
|---------------------|--|----|

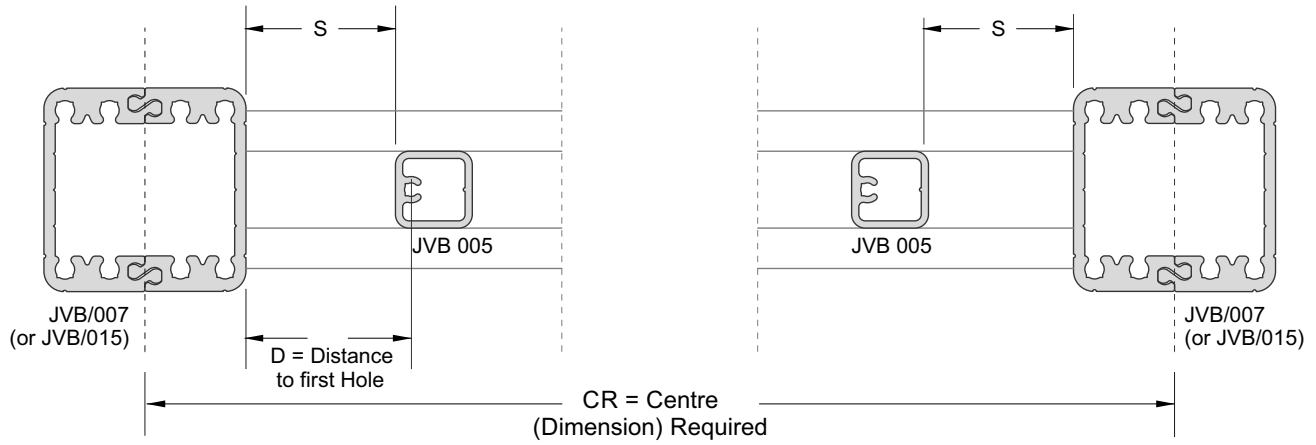
|                         |   |      |
|-------------------------|---|------|
| PC = POST CENTRES (max) | 17mm Balusters  | 1400 |
|                         | 6mm Toughened glass infill panels   | 1400 |
|                         | 10mm Toughened glass for up to & including 1200mm High and High wind zone | 1400 |

**NZBC REQUIREMENTS - SECTION F4 : SAFETY FROM FALLING**

**NOTES:**

- 1 - Heights are measured vertically from finished floor level (ignoring carpet or vinyl, or similar thickness coverings) on floors, landings and ramps. On stairs the height is measured vertically from the pitch line or stair nosings.
- 2 - A landing is a platform with the sole function of providing access.
- 3 - Household unit does not include a hostel, boarding house, motel or other specialized accommodation.
- 4 - Stairs or ramps for all other buildings does not include landings - use all other locations
- 5 - The triangular opening formed by the riser, tread, and bottom rail of the barrier on a stair shall be of such a size that a 150mm diameter sphere can not pass through it, except for swimming pool stairs where the diameter is 100mm.
- 6 - Barriers to swimming pools shall have in addition to performance F9 and NZS8500
  - a) All gates and doors fitted with latching devices not readily operated by children, and constructed to automatically close and latch when released from any stationary position 150mm or more from the closed and secured position but excluding sliding and sliding-folding doors that give access to the immediate pool surround from a building that forms part of the barrier and,
  - b) No permanent objects on the outside or inside of the barrier that could provide a climbing step
- 7 - No toeholds between the heights of 150mm and 760mm above floor level (or stair nosing).

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



| CM= Centre, Maximum (of Posts) | Max CRS for No of Balusters | No of Balusters |
|--------------------------------|-----------------------------|-----------------|
|                                | 260                         | 1               |
|                                | 376                         | 2               |
|                                | 492                         | 3               |
|                                | 608                         | 4               |
|                                | 724                         | 5               |
|                                | 840                         | 6               |
|                                | 956                         | 7               |
|                                | 1072                        | 8               |
|                                | 1188                        | 9               |
|                                | 1304                        | 10              |
| 1420                           | 11                          |                 |

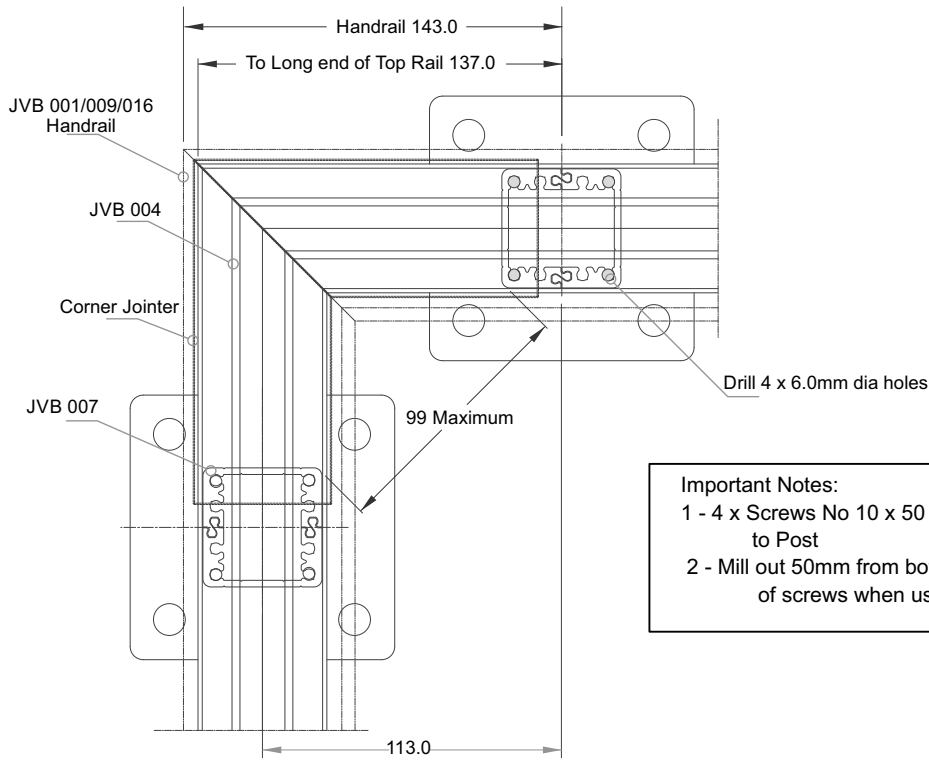
To achieve an equal distance 'S' from either end of panel use equation shown below.  
 $= 103 - (CM - CR)/2$

Example:  
 The distance required (CR) is 890mm centres,  
 Use CM = 956 as next value up.

Substitute into equation shown above  
 $= 103 - [(956-890)/2]$   
 $= 103-33$   
 $= 70$

Therefore make first cut 70mm from first hole (as shown at the LH End)  
 Note: Balusters JVB005 must be positioned as shown.

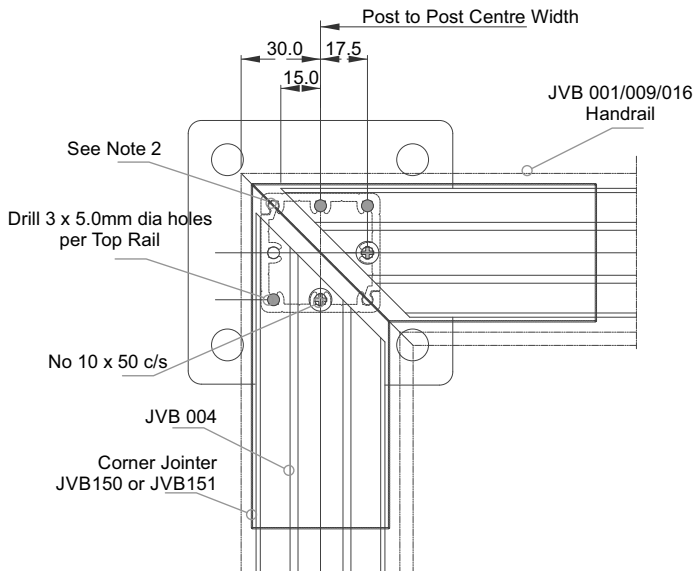
**Two Post 90 Deg Corner**



**Important Notes:**

- 1 - 4 x Screws No 10 x 50 pan required to fix Base Plate to Post
- 2 - Mill out 50mm from bottom of Post to allow fitment of screws when using Base Plate

**Single Post 90 Deg Corner**

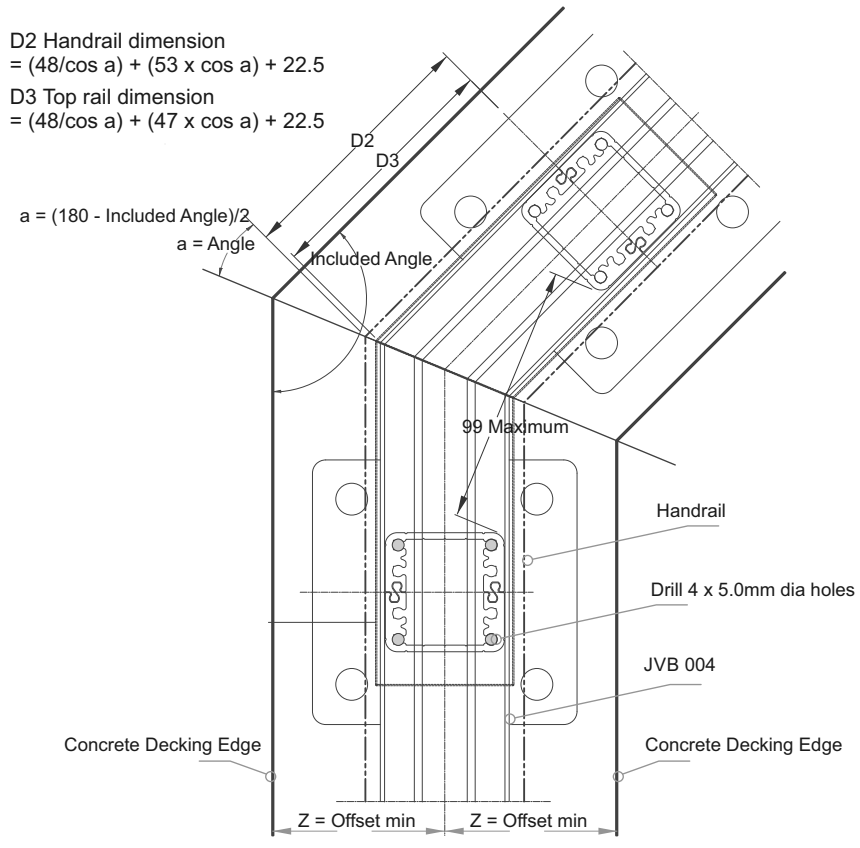


**Important Notes:**

- 1 - 4 x Screws No 10 x 50 pan required to fix Base Plate to Post
- 2 - Mill out 50mm from bottom of Post to allow fitment of screws when using Base Plate



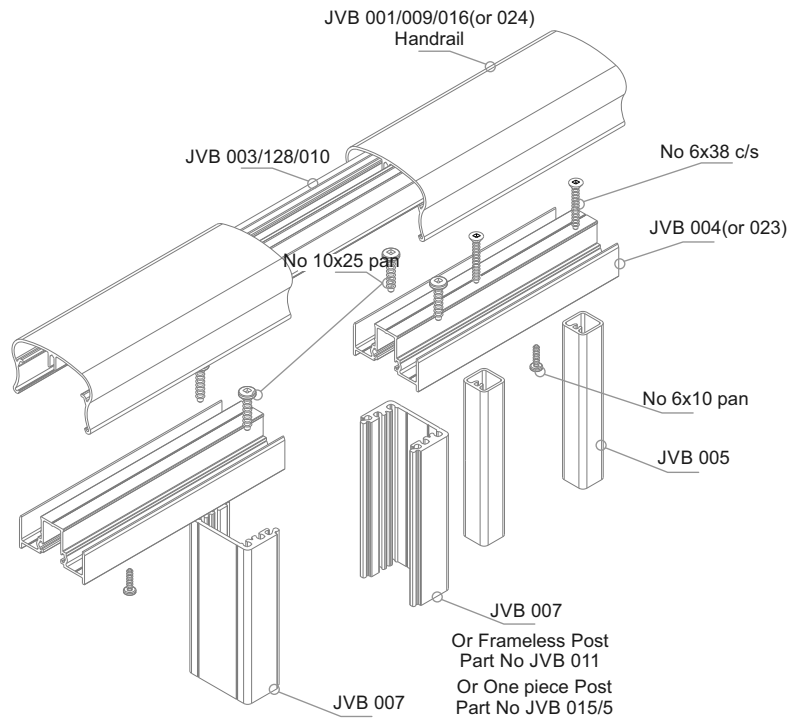
**Angled Corner**



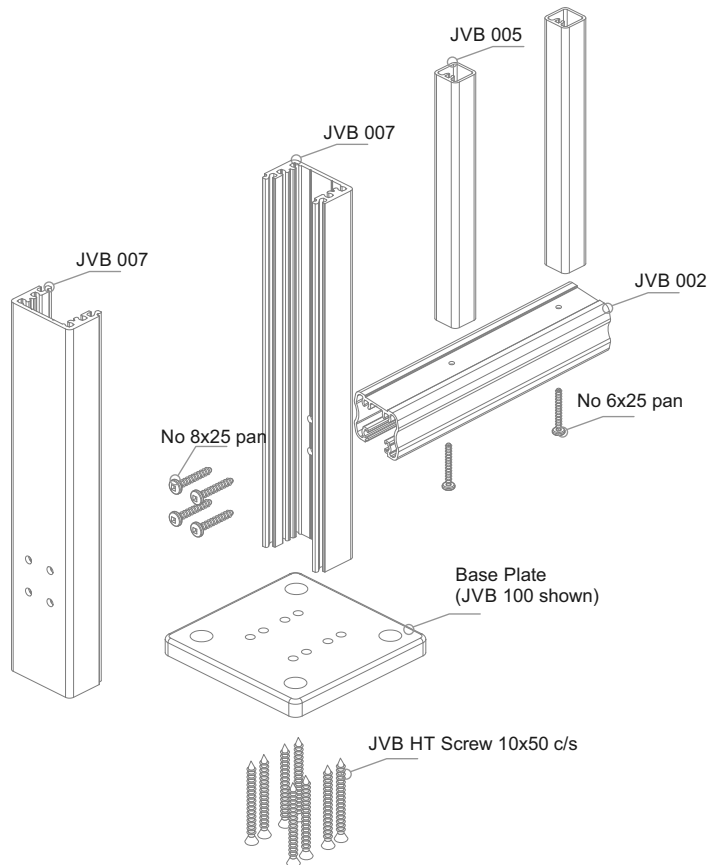
Minimum Edge distance when fixing to Concrete and anchor types.  
 JVB 101 Baseplate ,  $Z = 50\text{mm}$ , 2 x M12 x 80mm deep Epcon or Chemset anchors  
 JVB 100 Baseplate ,  $Z = 70\text{mm}$ , 4 x M10 x 90mm deep Epcon or Chemset anchors  
 These fastenings are based on a minimum concrete strength of 17.5 MPa

Corner Jointers to be Cut/Welded by installer

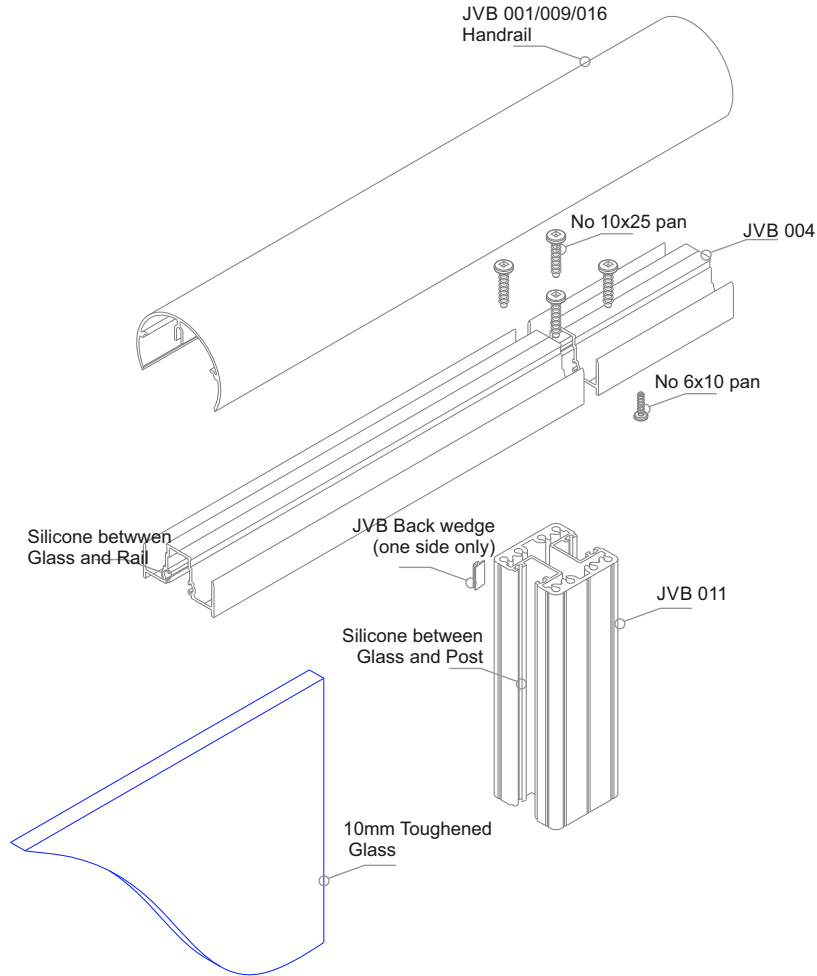
**Typical Assembly - Top Handrail**



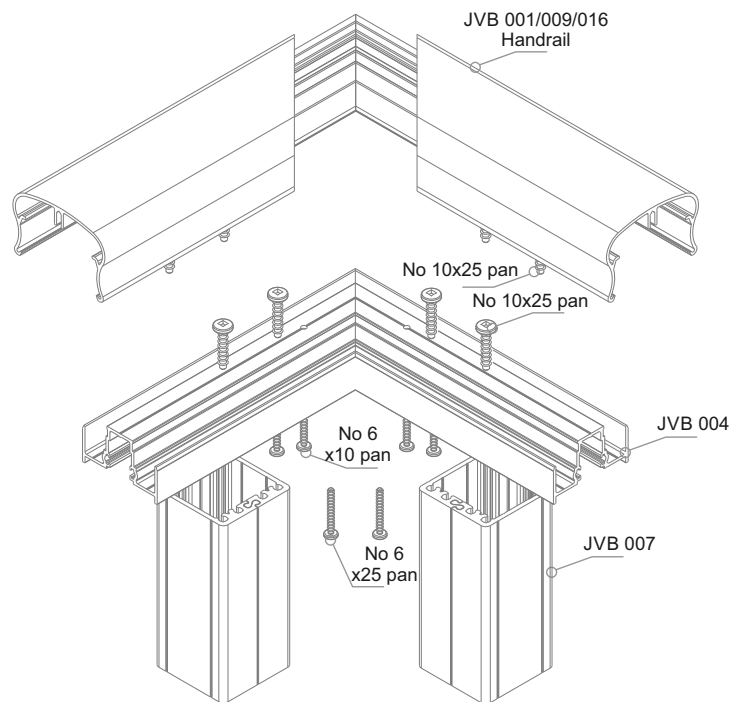
**Typical Assembly - Lower Panel**



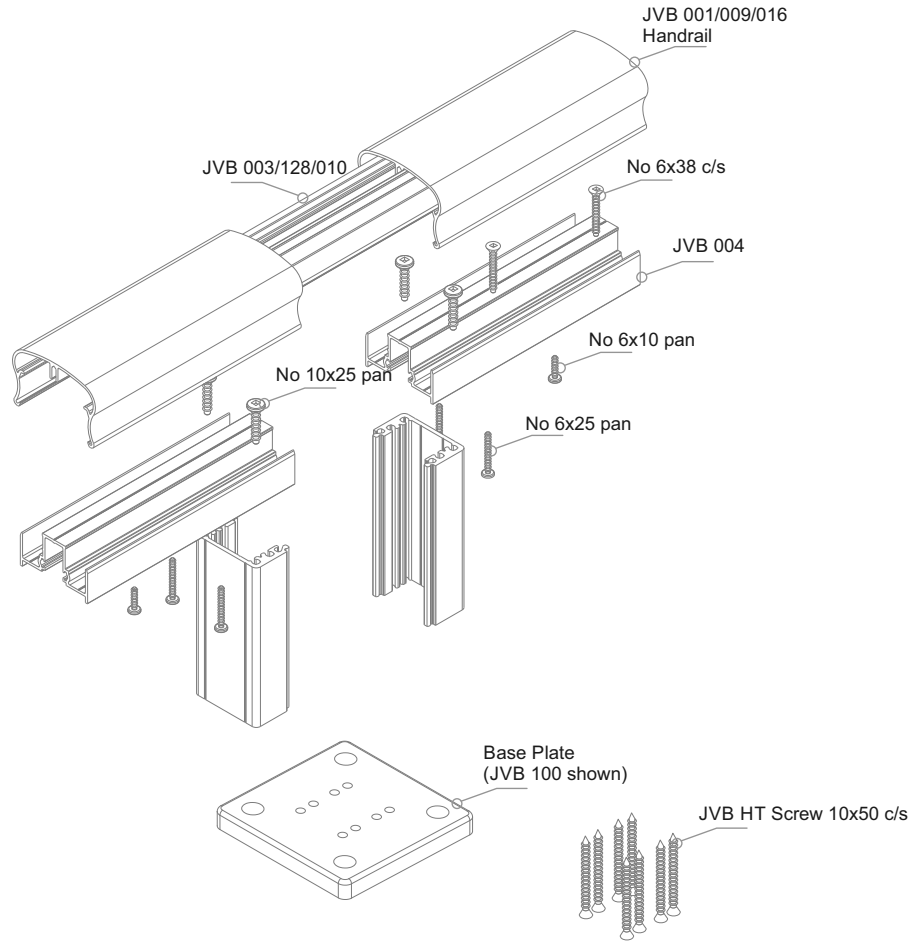
**Typical Assembly - Semi Frameless Glass and Handrail**



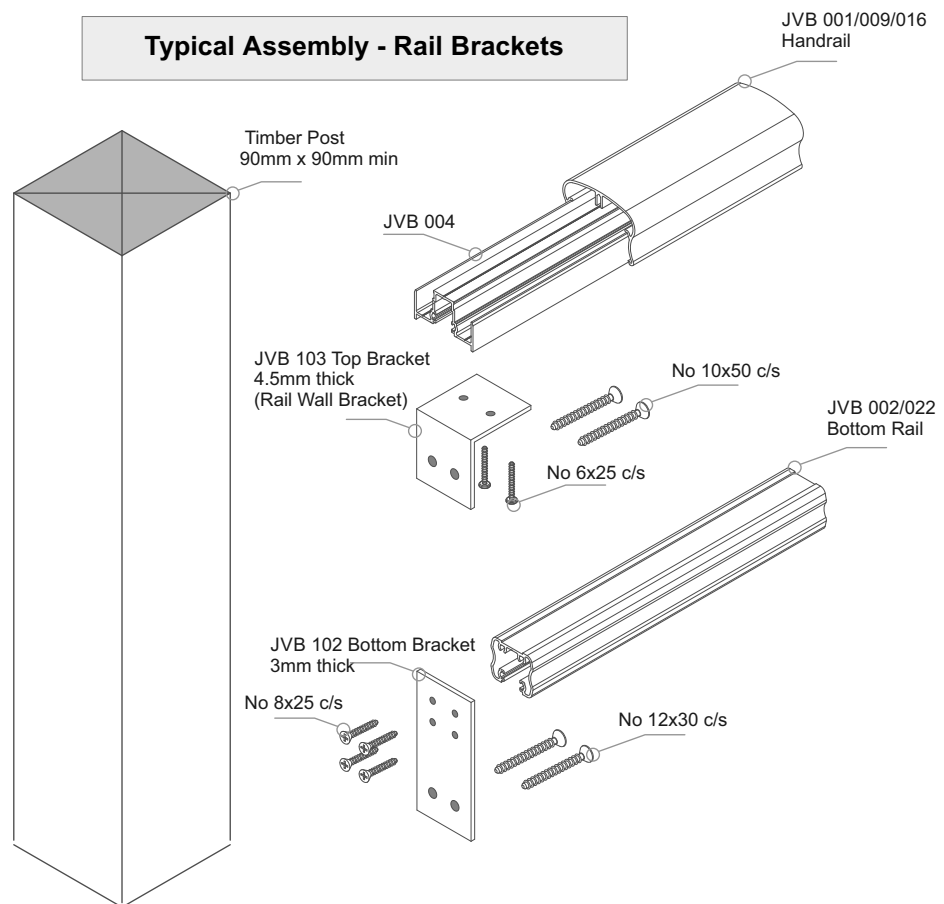
**Typical Assembly - Corner**



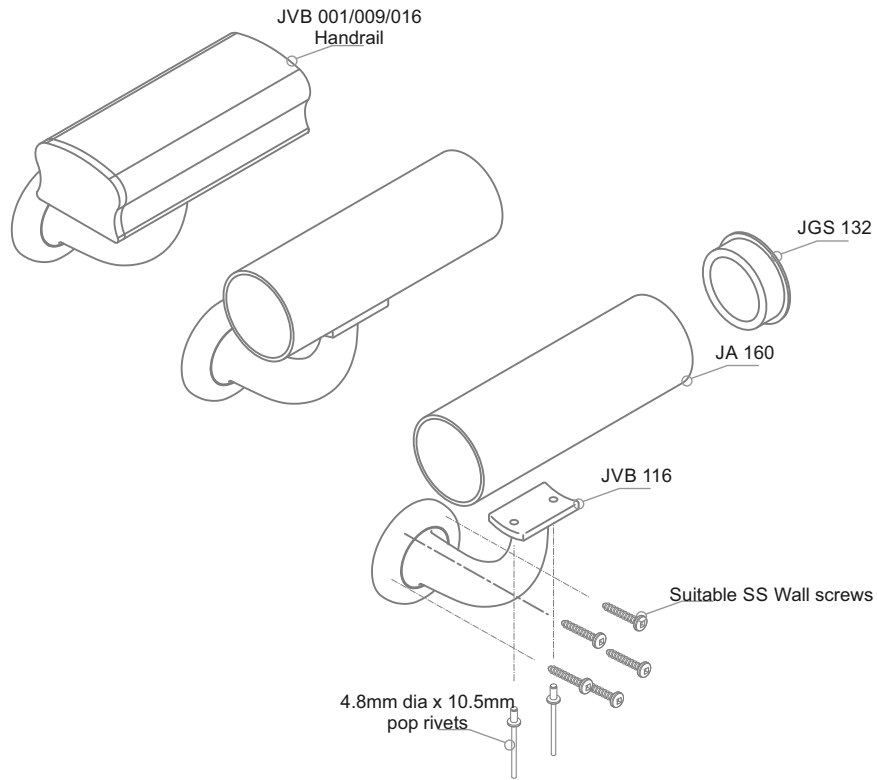
**Typical Assembly - Nib Wall, Handrail**

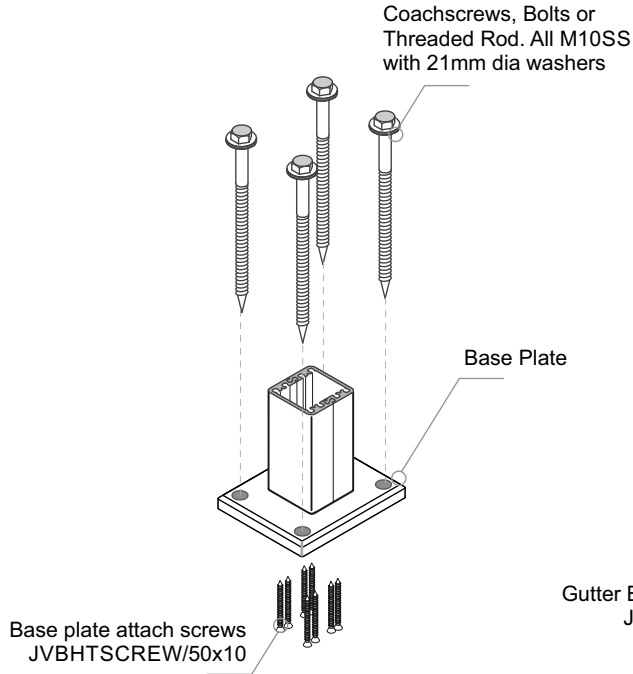


**Typical Assembly - Rail Brackets**

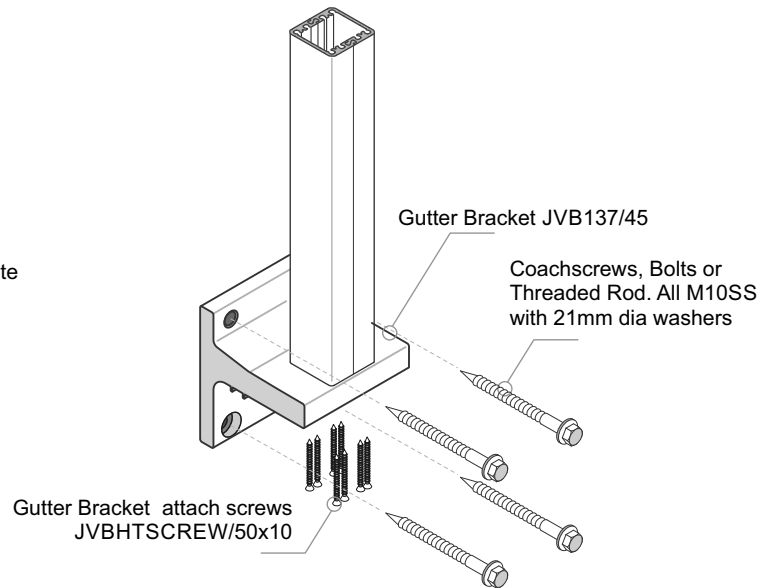


**Typical Assembly - Wall Mounted Handrail**

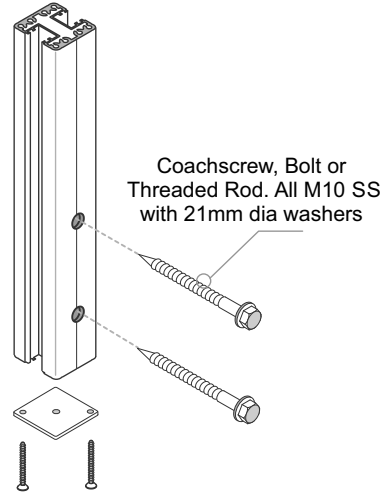
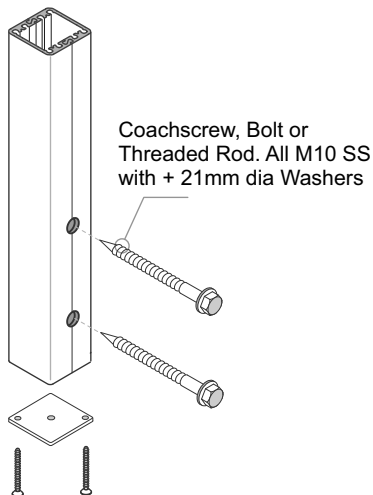
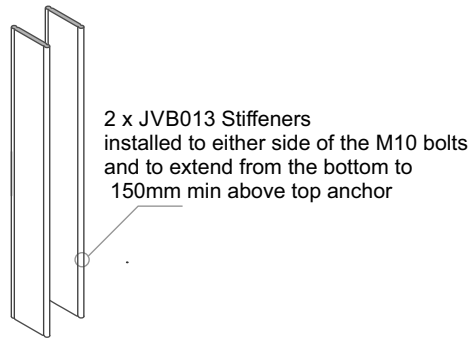




**Top Fix**  
 Base Plates in a variety of sizes.  
 Different fasteners types depending on the Building substrate.  
 Includes a 90deg Semi Frameless Corner Post



**Gutter Bracket Face Fix**  
 Different fasteners types depending on the Building substrate.



**Face Fix**  
 Different fasteners types depending on the Building substrate.



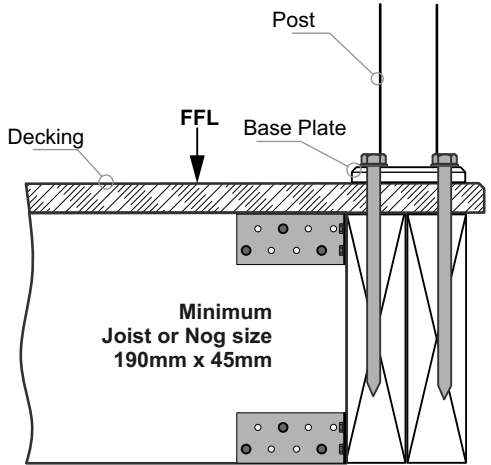
**Typical TOP Fix to Timber - JVB121, 110mm x 90mm, 4 hole Base Plate - M10 SS Coachscrews**

**Balustrade Dimensions by Wind Zone**

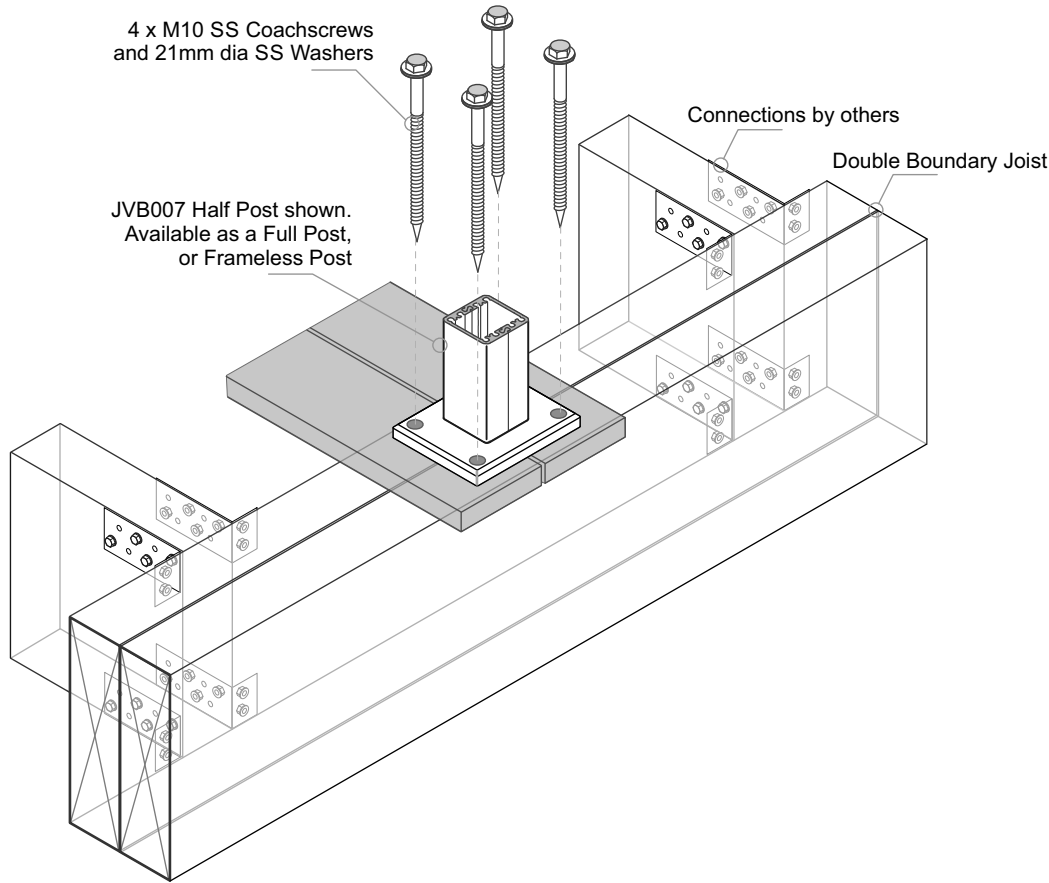
| Up to and including Very High Wind Zone |      |      |      |      |      |          |  |
|---|------|------|------|------|------|----------|--|
| Balustrade Height, mm                   |      |      |      |      |      |          |  |
| 1000                                    | 1050 | 1100 | 1150 | 1200 | 1250 | 1300 max |  |
| 1400                                    | 1350 | 1300 | 1250 | 1200 | 1150 | 1100     |  |
| Post Spacing max, mm                    |      |      |      |      |      |          |  |

| Extra High Wind Zone  |  |
|-----------------------|--|
| 17mm Balusters only   |  |
| Balustrade Height, mm |  |
| 1275 max              |  |
| 1400                  |  |
| Post Spacing max, mm  |  |

- General Notes:  
 1 - All measurements mm  
 2 - Occupancy only A, A other and C3.  
 3 - Balustrade Height measured above Deck/FLL.  
 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**

**Balustrade Dimensions by Wind Zone**

**Up to and including Very High Wind Zone**

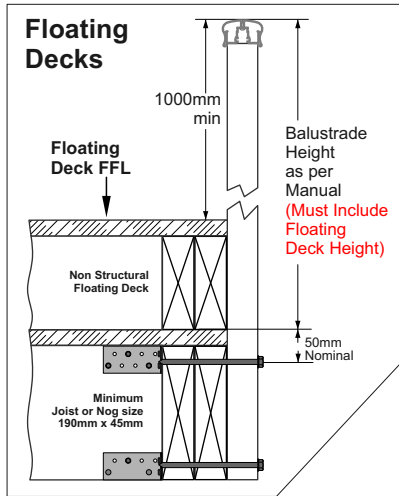
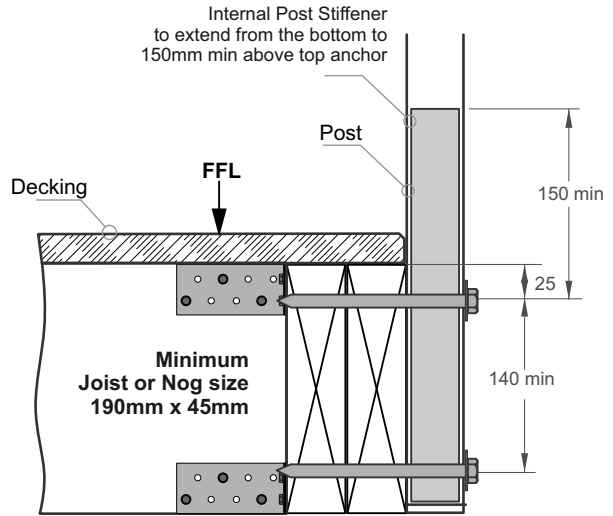
| Balustrade Height, mm |      |      |      |      |      |          |
|-----------------------|------|------|------|------|------|----------|
| 1000                  | 1050 | 1100 | 1150 | 1200 | 1250 | 1300 max |
| 1400                  | 1350 | 1300 | 1250 | 1200 | 1150 | 1100     |
| Post Spacing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

**Extra High Wind Zone**

All Balustrades  
 Coachscrews as shown  
**NOT SUITABLE.**  
 Must use Bolts

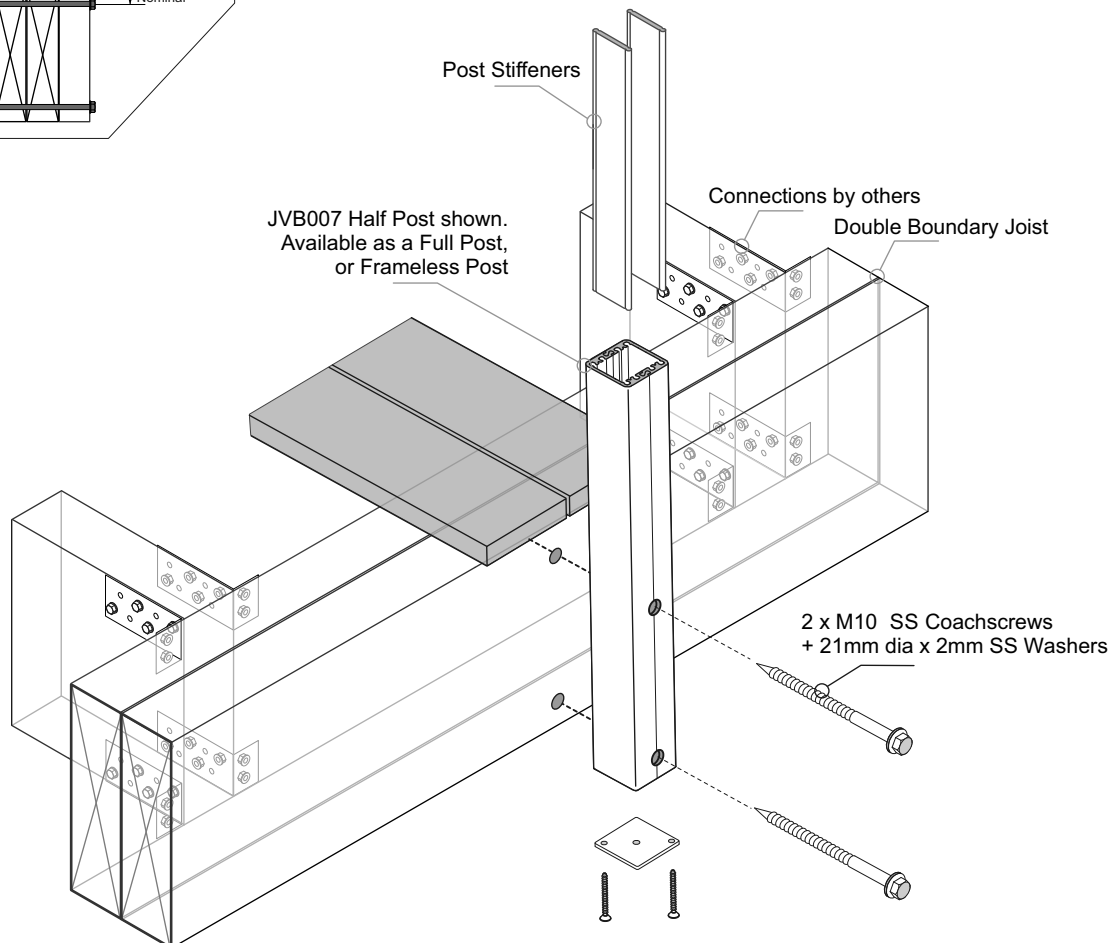
**General Notes:**

- 1 - All measurements mm
- 2 - Occupancy only A, A other and C3.
- 3 - Balustrade Height measured above Deck/FFL.
- 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**

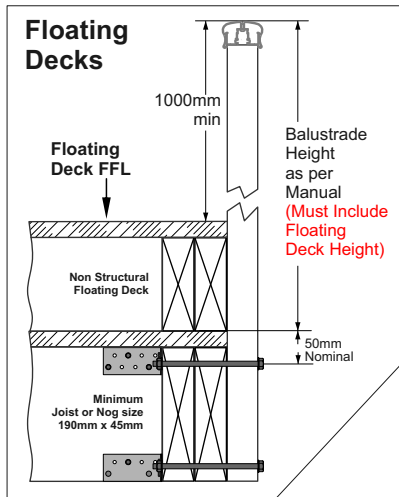
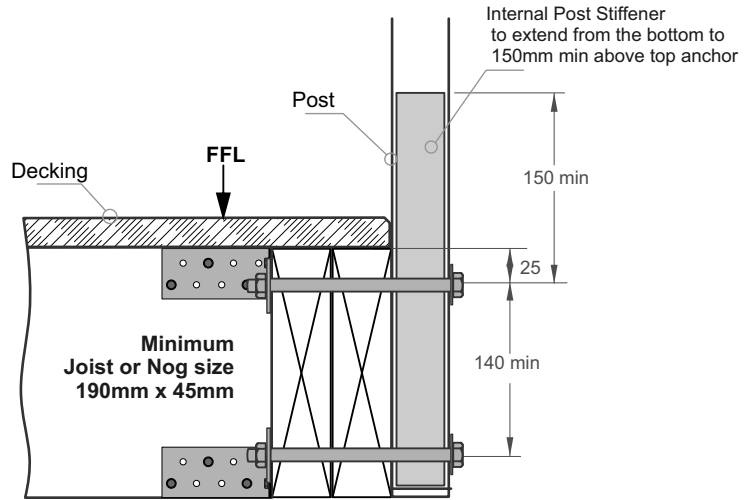
| Balustrade Height, mm |      |      |      |      |      |          |  |
|-----------------------|------|------|------|------|------|----------|--|
| 1000                  | 1050 | 1100 | 1150 | 1200 | 1250 | 1300 max |  |
| 1400                  | 1350 | 1300 | 1250 | 1200 | 1150 | 1100     |  |
|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

**Extra High Wind Zone**

|                       |
|-----------------------|
| 17mm Balusters only   |
| Balustrade Height, mm |
| <b>1275 max</b>       |
| 1400                  |
| Post Spacing max, mm  |

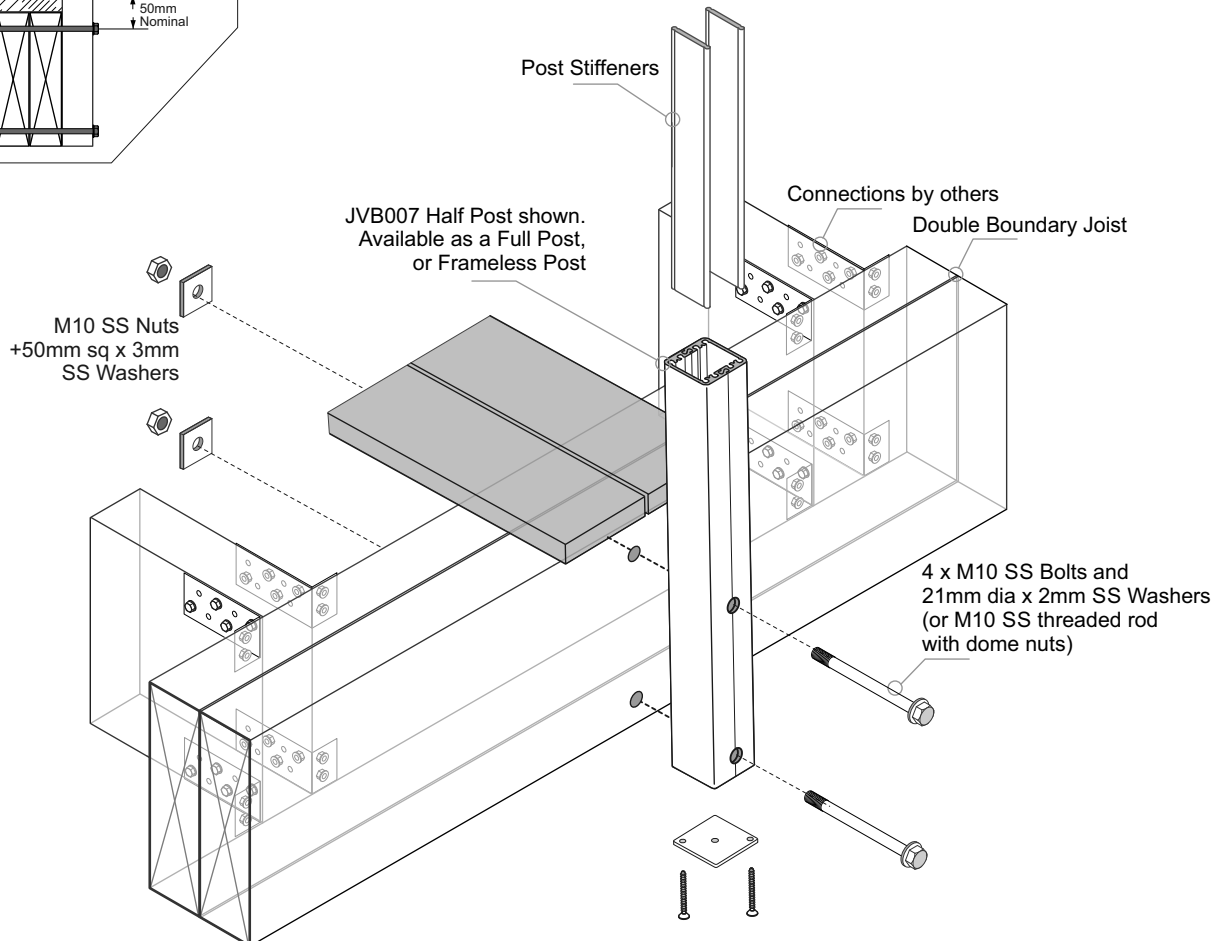
**General Notes:**

- 1 - All measurements mm
- 2 - Occupancy only A, A other and C3.
- 3 - Balustrade Height measured above Deck/FFL.
- 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 - JVB137/45, Gutter Bracket - M10 SS Coachscrews**

**Balustrade Dimensions by Wind Zone**

**Up to and including Very High Wind Zone**

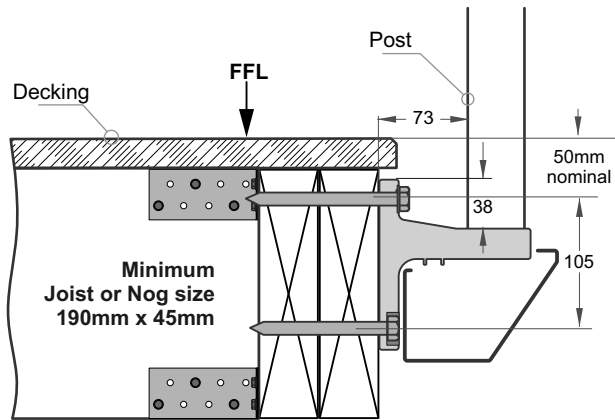
| Balustrade Height, mm |      |      |      |      |      |          |
|-----------------------|------|------|------|------|------|----------|
| 1000                  | 1050 | 1100 | 1150 | 1200 | 1250 | 1300 max |
| 1400                  | 1350 | 1300 | 1250 | 1200 | 1150 | 1100     |
| Post Spacing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

**Extra High Wind Zone**

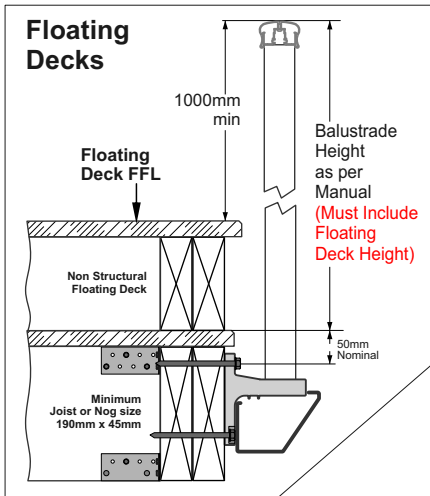
|                       |
|-----------------------|
| 17mm Balusters only   |
| Balustrade Height, mm |
| 1275 max              |
| 1400                  |
| Post Spacing max, mm  |

**General Notes:**

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

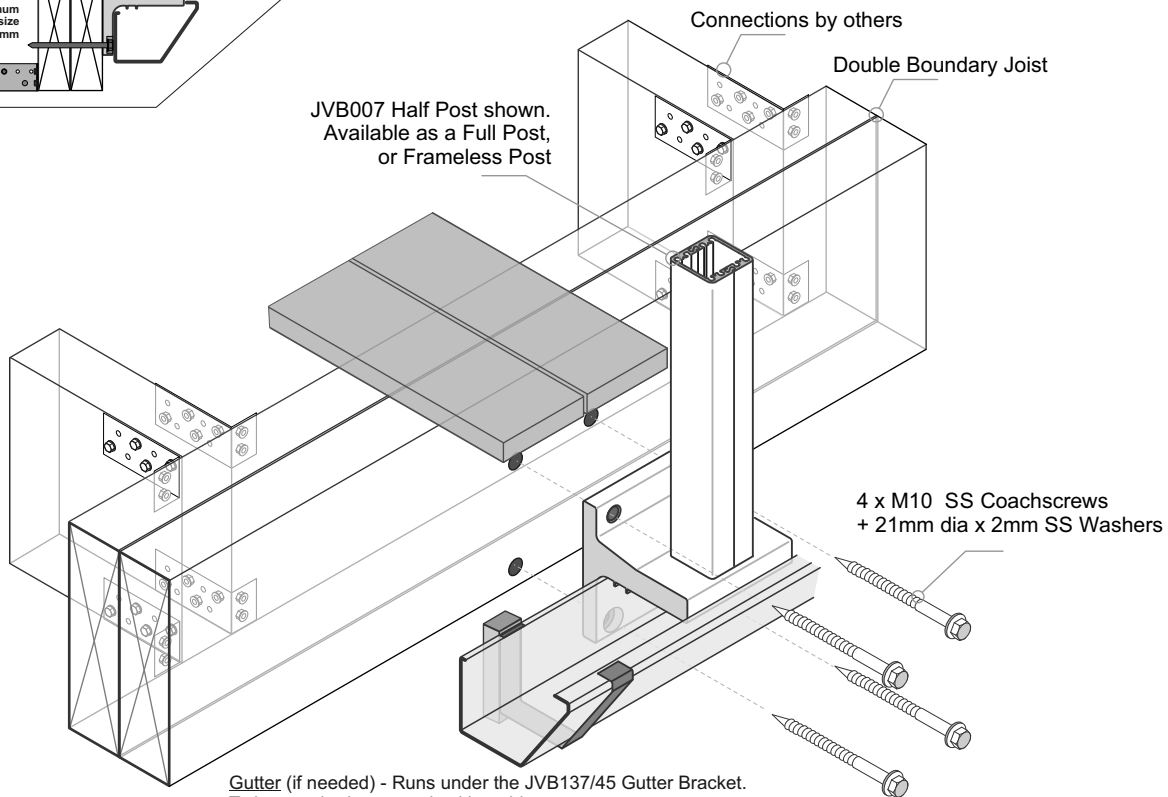


**Floating Decks**



**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



**Gutter** (if needed) - Runs under the JVB137/45 Gutter Bracket. To be attached separately either side of the Bracket to suit propriety guttering system. Pack out to clear.

**Typical FACE Fix to Timber - JVB137/45, Gutter Bracket - M10 SS Bolts**

**Balustrade Dimensions by Wind Zone**

**Up to and including Very High Wind Zone**

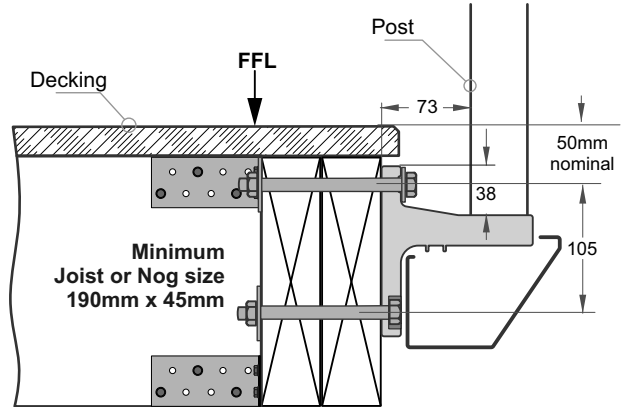
| Balustrade Height, mm |      |      |      |      |      |          |
|-----------------------|------|------|------|------|------|----------|
| 1000                  | 1050 | 1100 | 1150 | 1200 | 1250 | 1300 max |
| 1400                  | 1350 | 1300 | 1250 | 1200 | 1150 | 1100     |
| Post Spacing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

**Extra High Wind Zone**

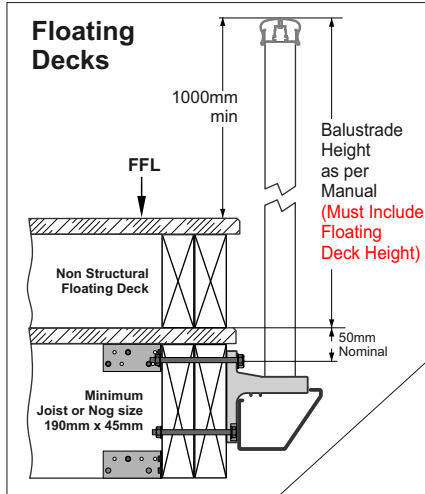
|                       |
|-----------------------|
| 17mm Balusters only   |
| Balustrade Height, mm |
| 1275 max              |
| 1400                  |
| Post Spacing max, mm  |

**General Notes:**

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

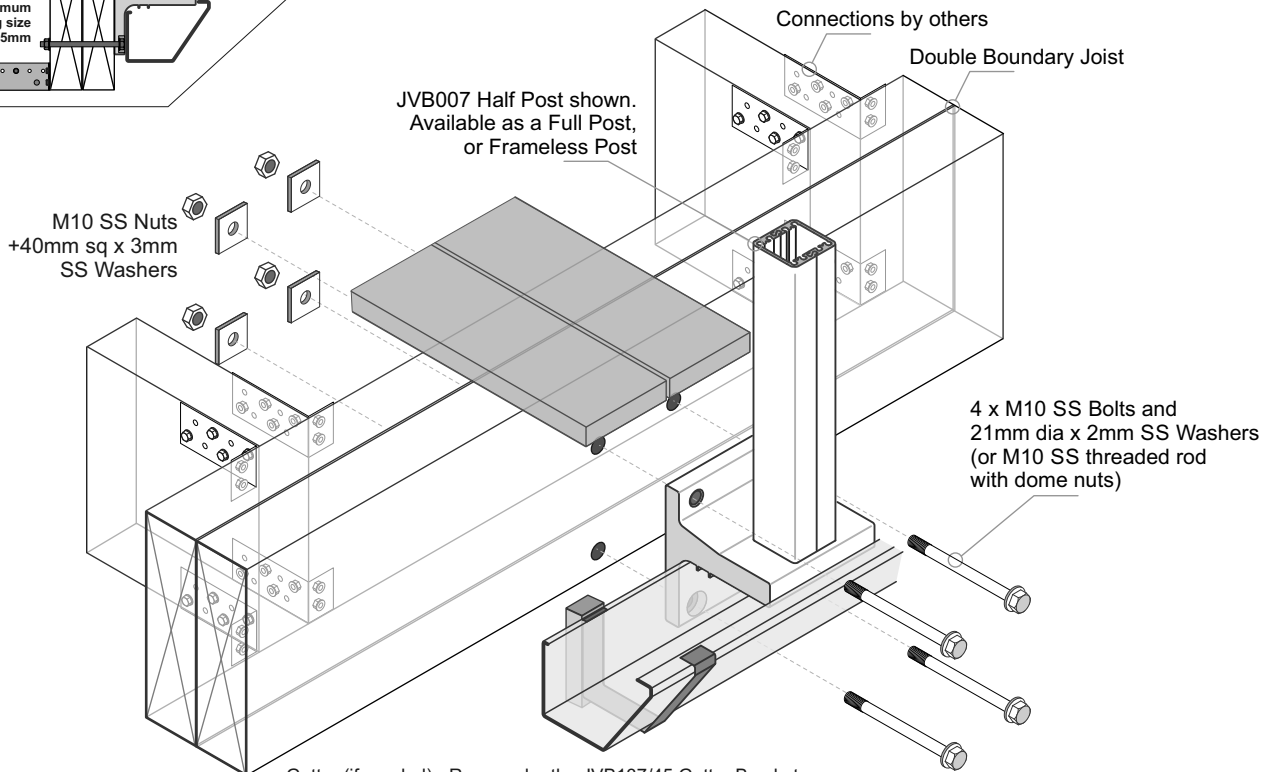


**Floating Decks**



**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 - All Fixings must be Stainless steel



Gutter (if needed) - Runs under the JVB137/45 Gutter Bracket.  
 To be attached separately either side of the Bracket to suit propriety guttering system.  
 Pack out to clear.

Typical TOP Fix to Steel with Timber Deck - JVB121, 110mm x 90mm, 4 hole Base Plate - M10 SS Bolts

Balustrade Dimensions by Wind Zone

Up to and including Very High Wind Zone

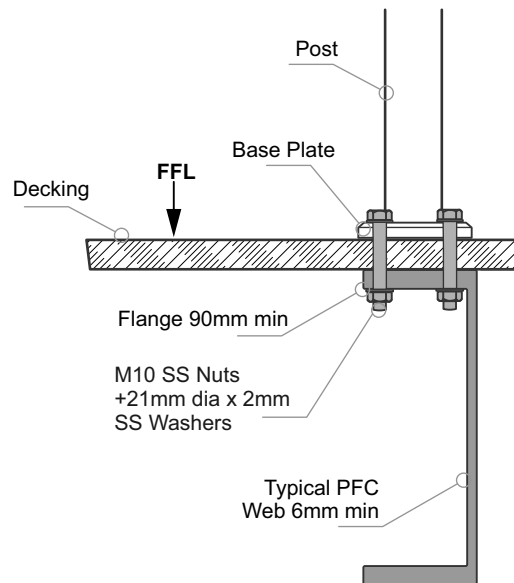
| Balustrade Height, mm |      |      |      |      |      |          |
|-----------------------|------|------|------|------|------|----------|
| 1000                  | 1050 | 1100 | 1150 | 1200 | 1250 | 1300 max |
| 1400                  | 1350 | 1300 | 1250 | 1200 | 1150 | 1100     |
| Post Spacing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

Extra High Wind Zone

|                       |
|-----------------------|
| 17mm Balusters only   |
| Balustrade Height, mm |
| <b>1275 max</b>       |
| 1400                  |
| Post Spacing max, mm  |

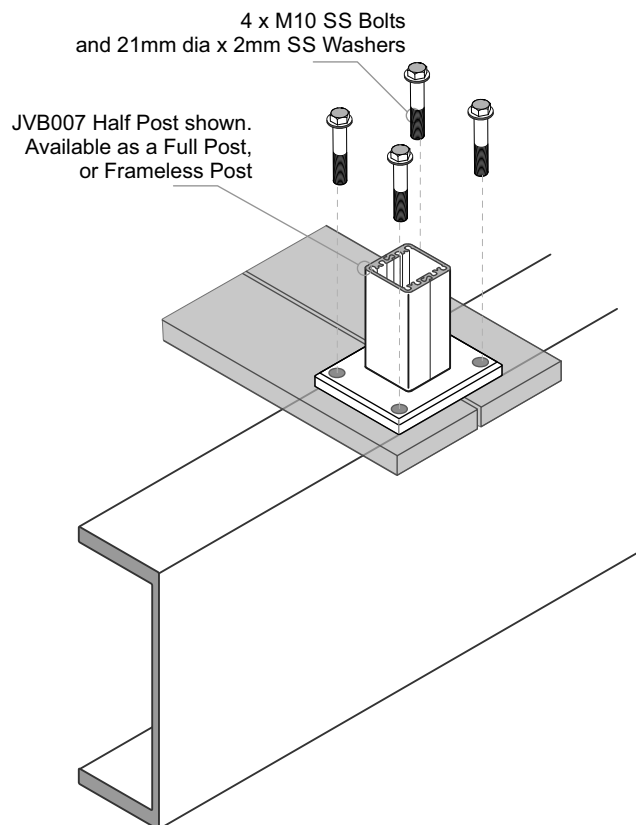
General Notes:

- 1 - All measurements mm
- 2 - Occupancy only A, A other and C3.
- 3 - Balustrade Height measured above Deck/FFL.
- 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 Timber Deck + Steel - JVB101, 110mm x 90mm, 2 hole Base Plate - M10 SS Bolts

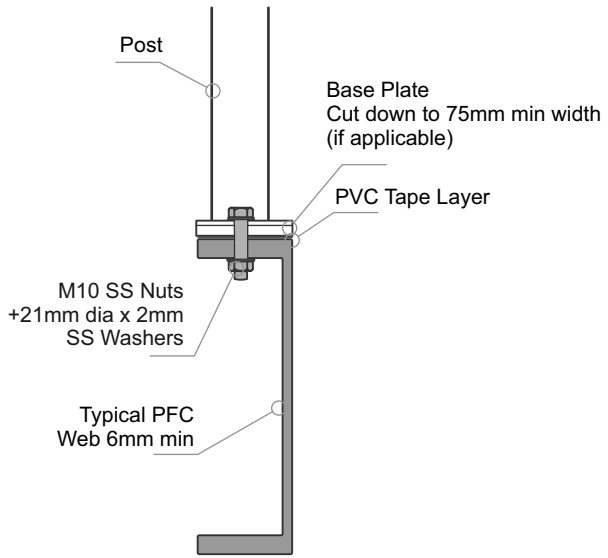
Balustrade Dimensions by Wind Zone

**Up to and including Very High Wind Zone**

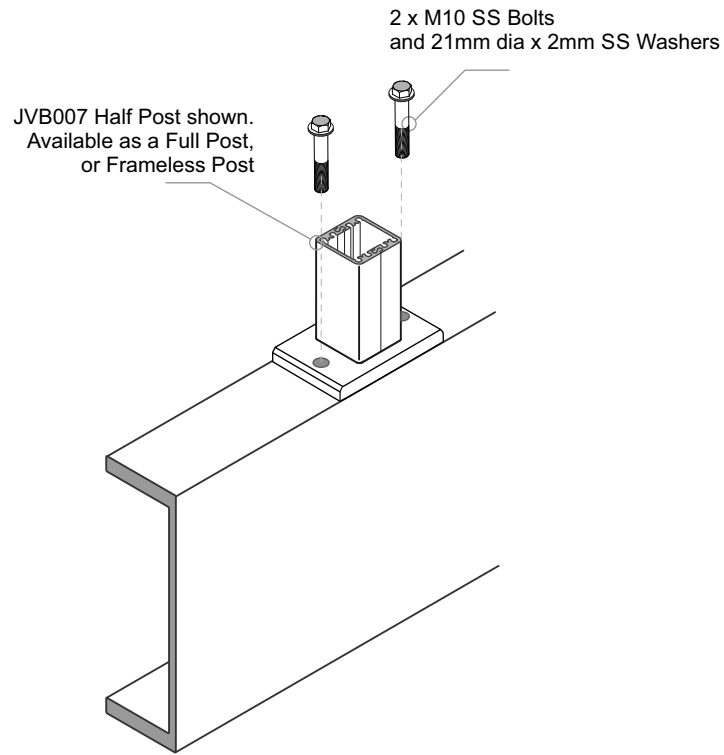
| Balustrade Height, mm |      |      |      |      |      |          |
|-----------------------|------|------|------|------|------|----------|
| 1000                  | 1050 | 1100 | 1150 | 1200 | 1250 | 1300 max |
| 1400                  | 1350 | 1300 | 1250 | 1200 | 1150 | 1100     |
| Post Spacing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

**Extra High Wind Zone**  
NOT SUITABLE.

- General Notes:  
 1 - All measurements mm  
 2 - Occupancy only A, A other and C3.  
 3 - Balustrade Height measured above Deck/FFL.  
 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 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

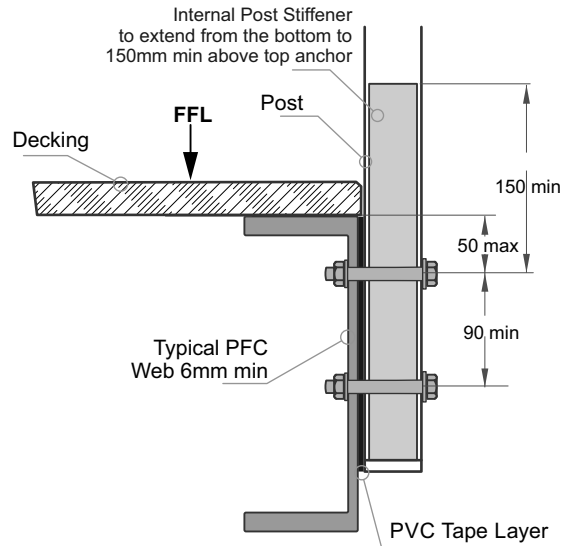
| Balustrade Height, mm |      |      |      |      |      |          |
|-----------------------|------|------|------|------|------|----------|
| 1000                  | 1050 | 1100 | 1150 | 1200 | 1250 | 1300 max |
| 1400                  | 1350 | 1300 | 1250 | 1200 | 1150 | 1100     |
| Post Spacing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

Extra High Wind Zone

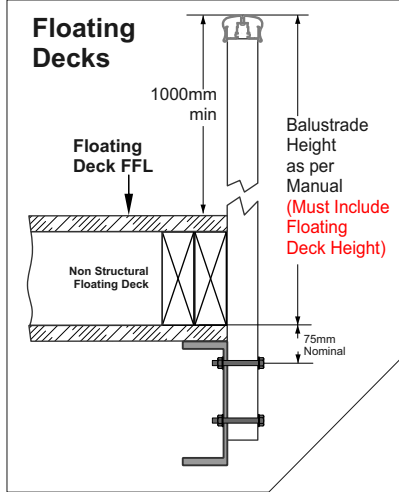
|                       |
|-----------------------|
| 17mm Balusters only   |
| Balustrade Height, mm |
| 1275 max              |
| 1400                  |
| Post Spacing max, mm  |

General Notes:

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

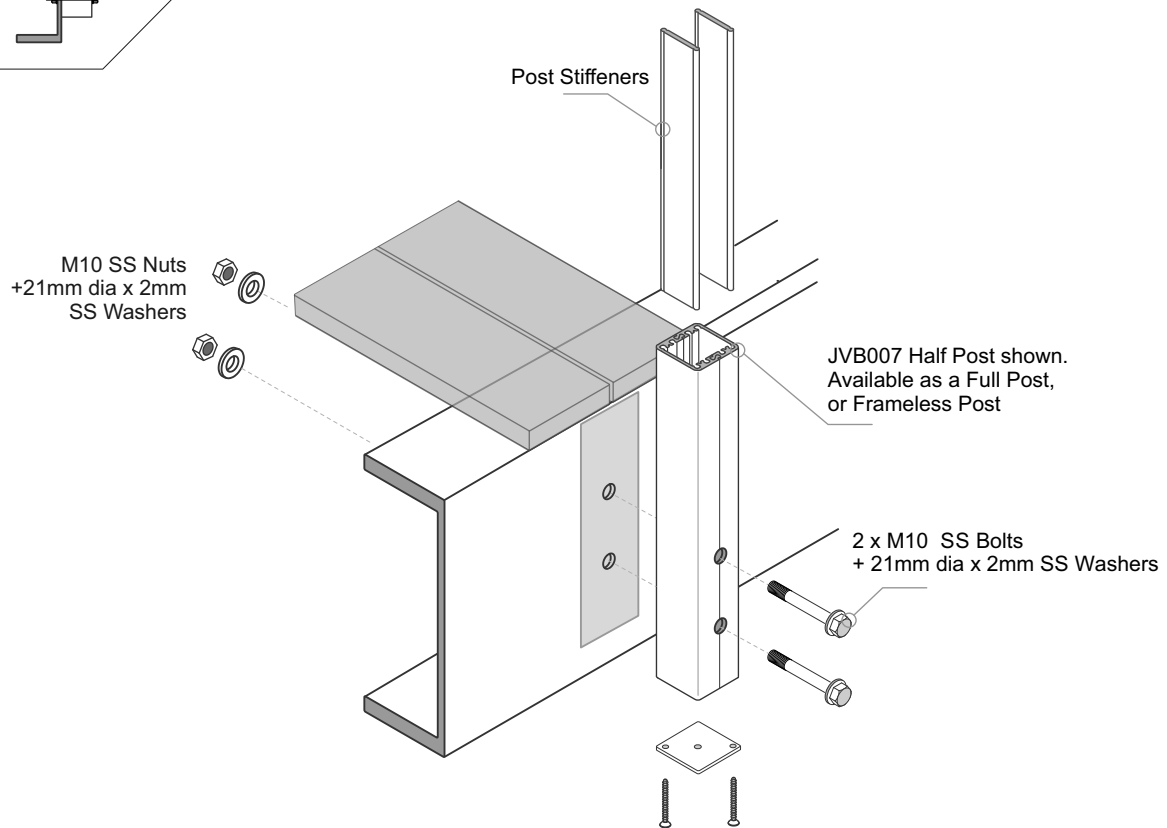


Floating Decks



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 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

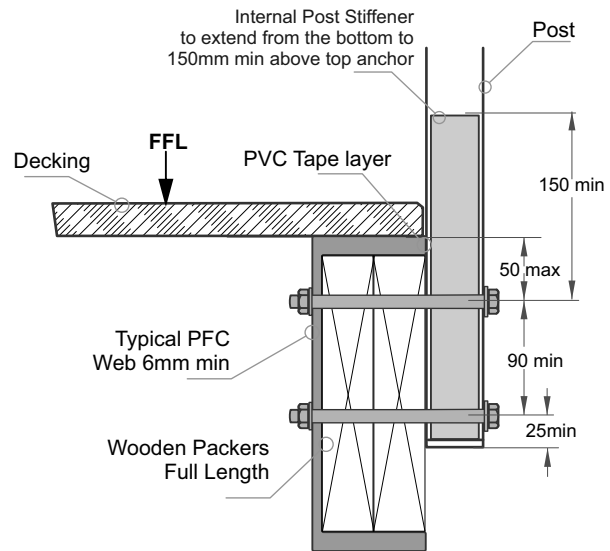
| Balustrade Height, mm |      |      |      |      |      |          |
|-----------------------|------|------|------|------|------|----------|
| 1000                  | 1050 | 1100 | 1150 | 1200 | 1250 | 1300 max |
| 1400                  | 1350 | 1300 | 1250 | 1200 | 1150 | 1100     |
| Post Spacing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

Extra High Wind Zone

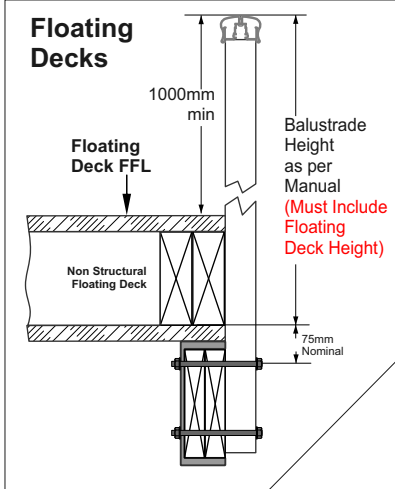
|                       |
|-----------------------|
| 17mm Balusters only   |
| Balustrade Height, mm |
| <b>1275 max</b>       |
| 1400                  |
| Post Spacing max, mm  |

General Notes:

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

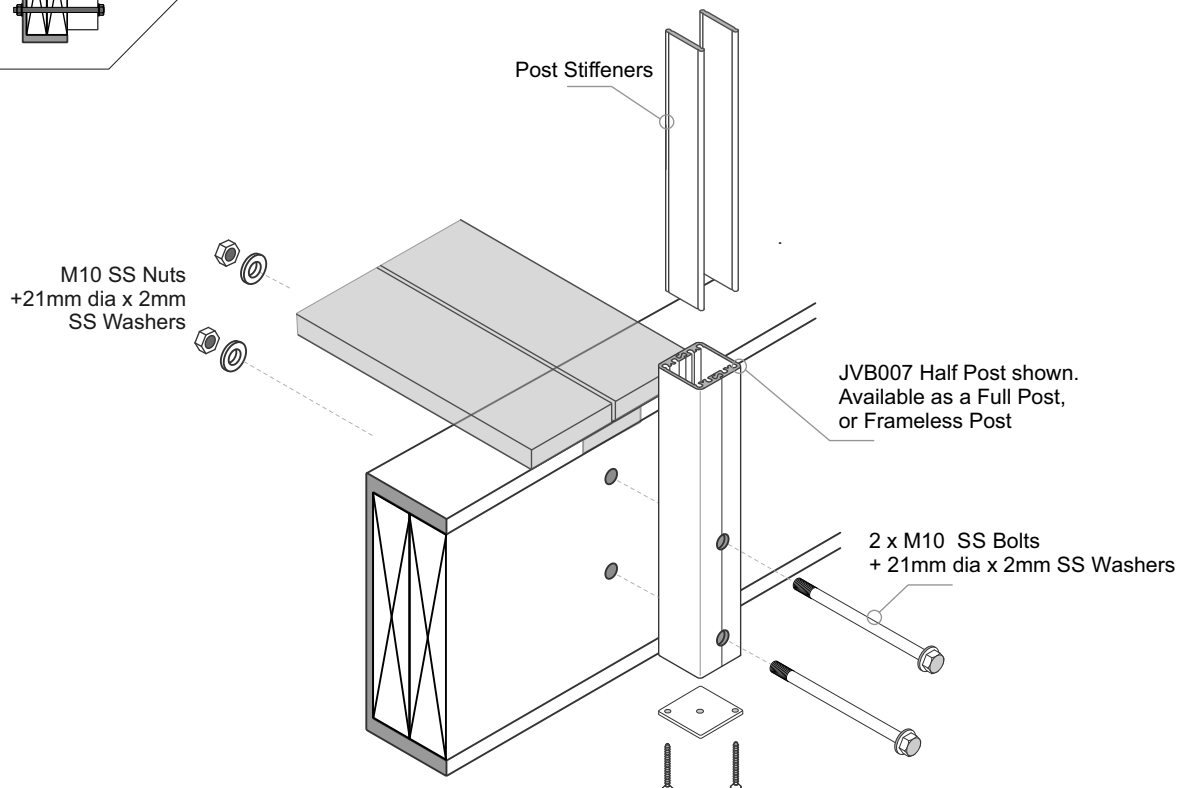


Floating Decks



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 - A PVC Tape layer must be installed between the Post and 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

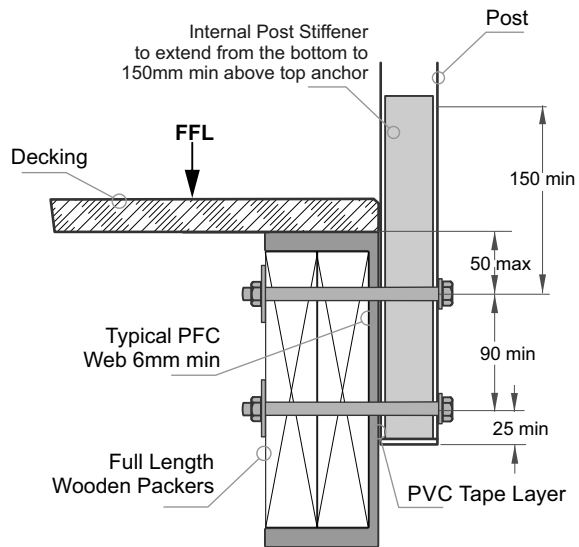
| Balustrade Height, mm |      |      |      |      |      |          |
|-----------------------|------|------|------|------|------|----------|
| 1000                  | 1050 | 1100 | 1150 | 1200 | 1250 | 1300 max |
| 1400                  | 1350 | 1300 | 1250 | 1200 | 1150 | 1100     |
| Post Spacing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

Extra High Wind Zone

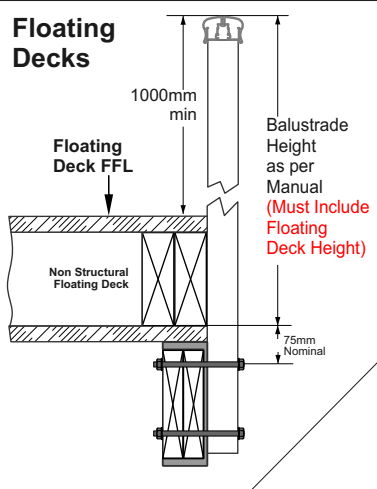
|                       |
|-----------------------|
| 17mm Balusters only   |
| Balustrade Height, mm |
| <b>1275 max</b>       |
| 1400                  |
| Post Spacing max, mm  |

General Notes:

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

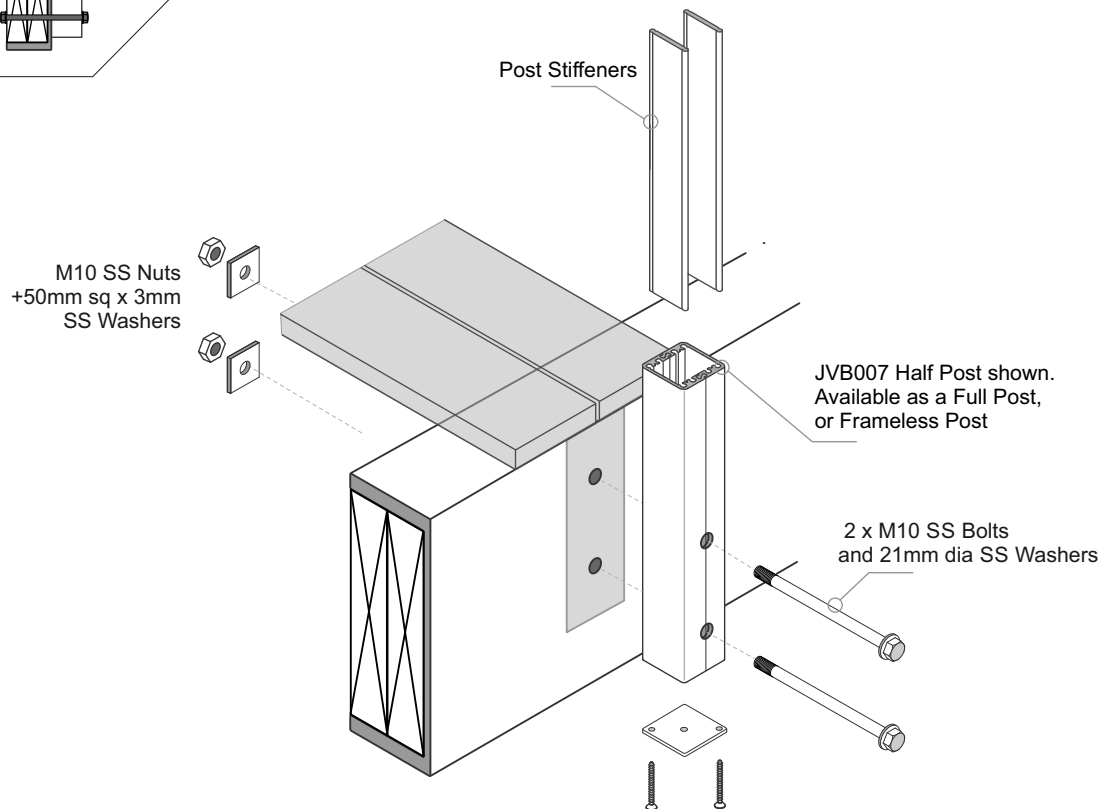


Floating Decks



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 - A PVC Tape layer must be installed between the Post and Steel
- 4 - All Fixings must be Stainless steel



Typical FACE Fix to Steel - JVB137/45, Gutter Bracket - M10 SS Bolts

Balustrade Dimensions by Wind Zone

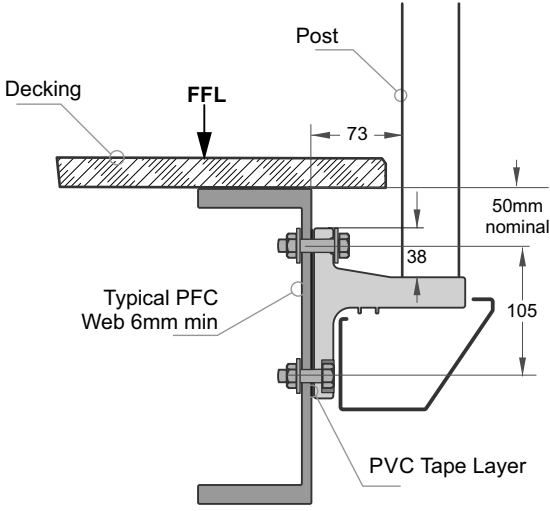
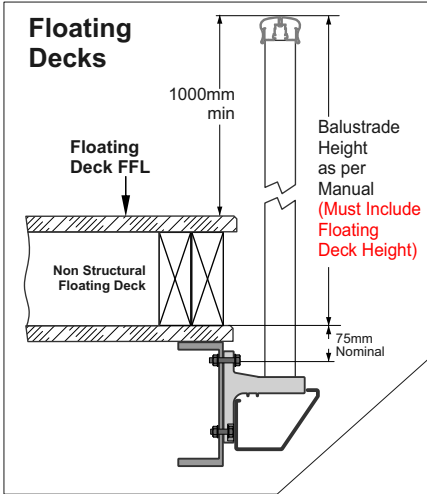
**Up to and including Very High Wind Zone**

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

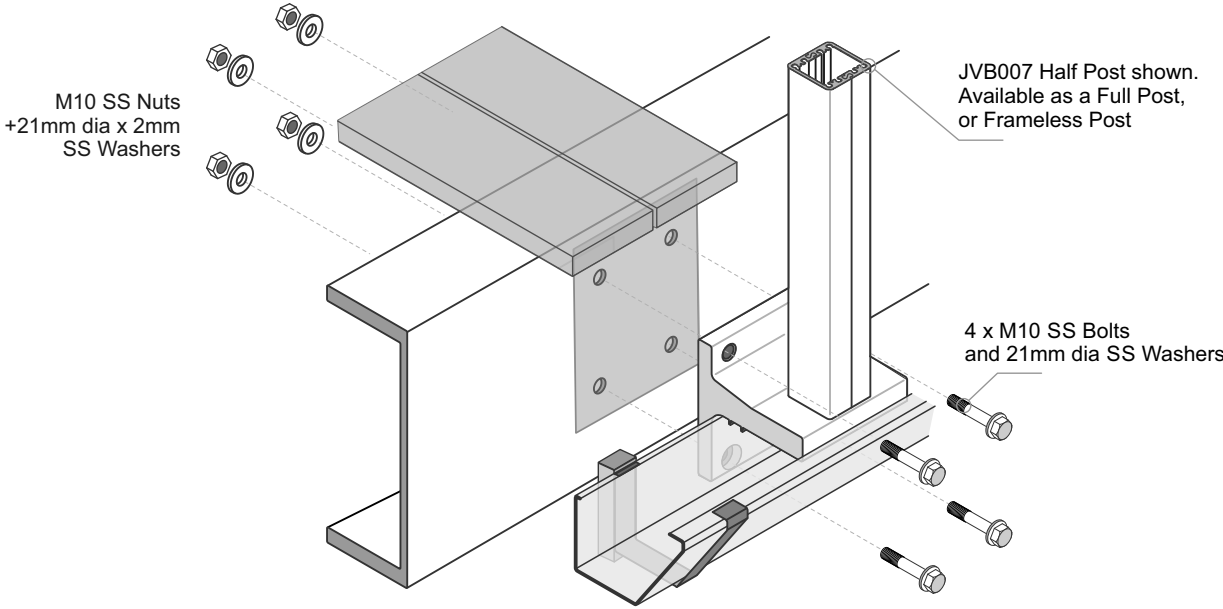
**Extra High Wind Zone**

|                       |
|-----------------------|
| 17mm Balusters only   |
| Balustrade Height, mm |
| 1275 max              |
| 1400                  |
| Post Spacing max, mm  |

- General Notes:
- 1 - All measurements mm
  - 2 - Occupancy only A, A other and C3.
  - 3 - Balustrade Height measured above Deck/FFL.
  - 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 Gutter Bracket and Steel
  - 4 - All Fixings must be Stainless steel



Gutter (if needed) - Runs under the JVB137/45 Gutter Bracket. To be attached separately either side of the Bracket to suit propriety guttering system. Pack out to clear.

Typical TOP Fix to Concrete - JVB100, 100mm x 100mm, 4 hole Base Plate - M10 SS Studs

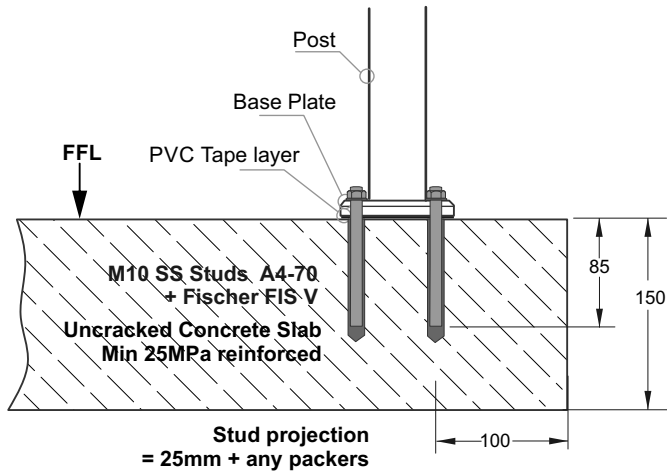
Balustrade Dimensions by Wind Zone

| Up to and including Very High Wind Zone |      |      |      |      |      |          |
|---|------|------|------|------|------|----------|
| Balustrade Height, mm                   |      |      |      |      |      |          |
| 1000                                    | 1050 | 1100 | 1150 | 1200 | 1250 | 1300 max |
| 1400                                    | 1350 | 1300 | 1250 | 1150 | 1050 | 1000     |
| Post Spacing max, mm                    |      |      |      |      |      |          |

| Extra High Wind Zone  |
|-----------------------|
| 17mm Balusters only   |
| Balustrade Height, mm |
| 1275 max              |
| 1300                  |
| Post Spacing max, mm  |

General Notes:

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



Installation details Fischer FIS V 300T

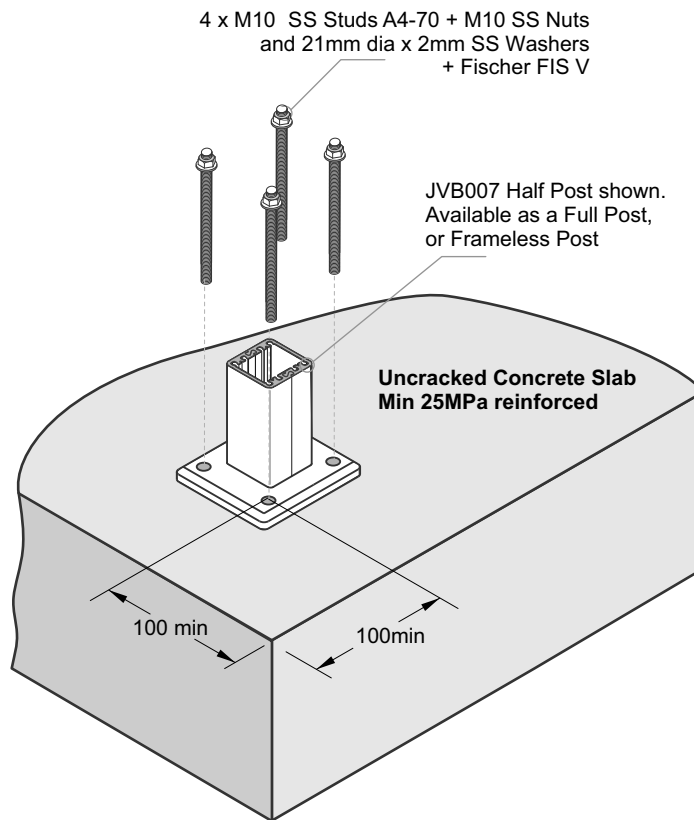
- Thread diameter M10
- Drill hole diameter = 12 mm
- Drill hole depth = 95 mm
- Anchorage depth = 85 mm

- 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 Thin Concrete - JVB100, 100mm x 100mm, 4 hole Base Plate - M10 SS Studs

Balustrade Dimensions - 17mm Balusters ONLY

| Up to and including Extra High Wind Zone |      |      |      |      |      |          |
|--|------|------|------|------|------|----------|
| Balustrade Height, mm                    |      |      |      |      |      |          |
| 1000                                     | 1050 | 1100 | 1150 | 1200 | 1250 | 1300 max |
| 1250                                     | 1200 | 1150 | 1100 | 1050 | 1050 | 1050     |
| Post Spacing max, mm                     |      |      |      |      |      |          |

General Notes:

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

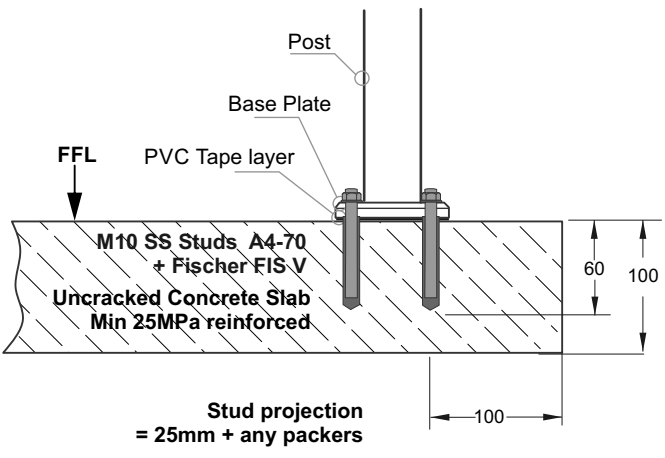


**Installation details Fischer FIS V 300T**

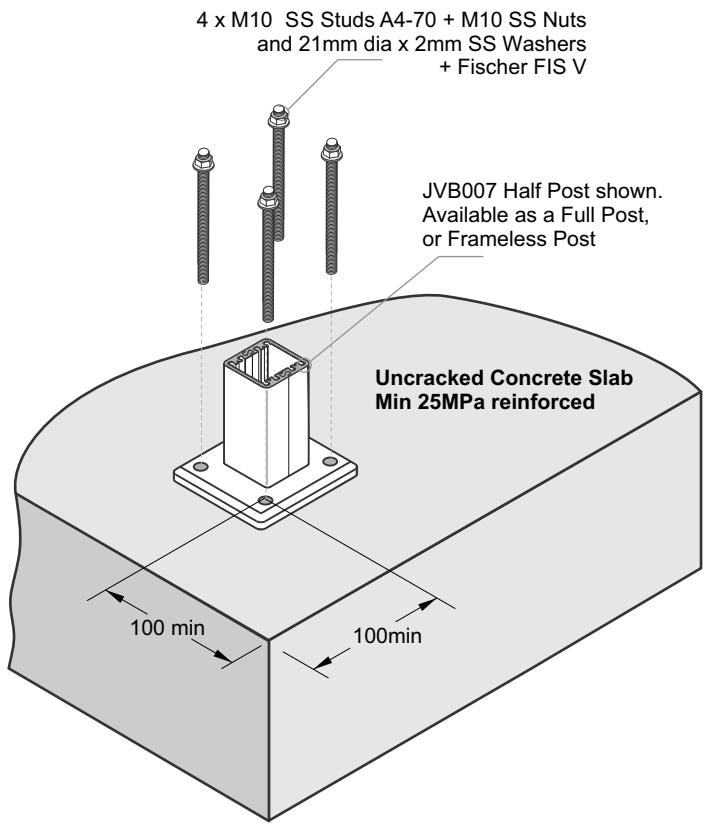
Thread diameter M10  
 Drill hole diameter = 12 mm  
 Drill hole depth = 70mm  
 Anchorage depth = 60 mm

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 - JVB101, 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, mm                   |      |      |      |      |      |          |
| 1000                                    | 1050 | 1100 | 1150 | 1200 | 1250 | 1300 max |
| 1100                                    | 1050 | 1000 | 900  | 800  | 750  | 700      |
| Post Spacing max, mm                    |      |      |      |      |      |          |

| Extra High Wind Zone  |
|-----------------------|
| 17mm Balusters only   |
| Balustrade Height, mm |
| 1275 max              |
| 900                   |
| Post Spacing max, mm  |

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

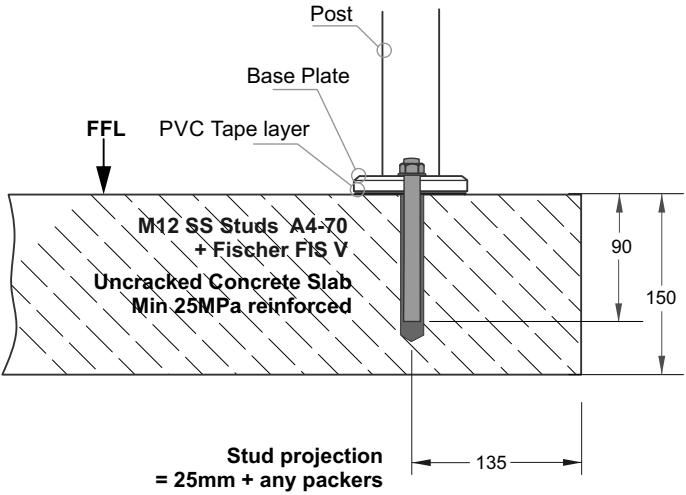


**Installation details Fischer FIS V 300T**

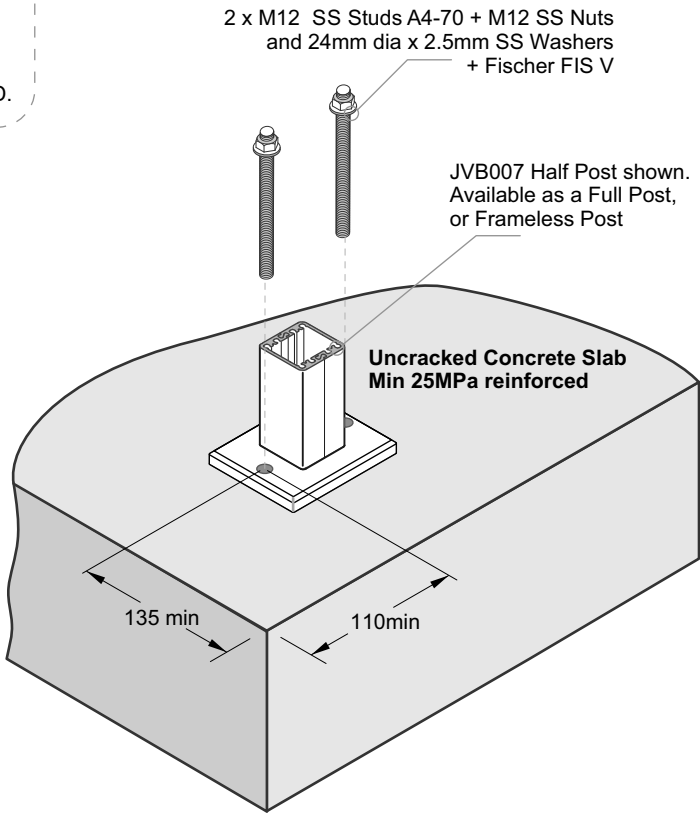
Thread diameter M12  
 Drill hole diameter = 14 mm  
 Drill hole depth = 100 mm  
 Anchorage depth = 90 mm

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 - Embed Post in Concrete Slab

Balustrade Dimensions by Wind Zone

**Up to and including Very High Wind Zone**

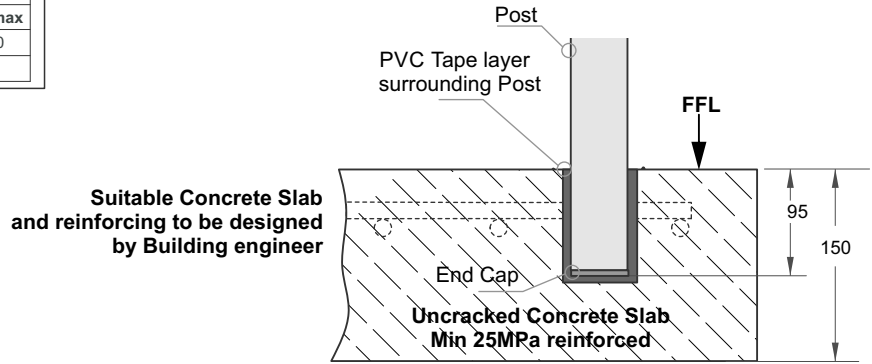
| Balustrade Height, mm |      |      |      |      |      |          |
|-----------------------|------|------|------|------|------|----------|
| 1000                  | 1050 | 1100 | 1150 | 1200 | 1250 | 1300 max |
| 1400                  | 1350 | 1300 | 1250 | 1200 | 1150 | 1100     |
| Post Spacing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

**Extra High Wind Zone**

|                       |
|-----------------------|
| 17mm Balusters only   |
| Balustrade Height, mm |
| 1275 max              |
| 1400                  |
| Post Spacing max, mm  |

General Notes:

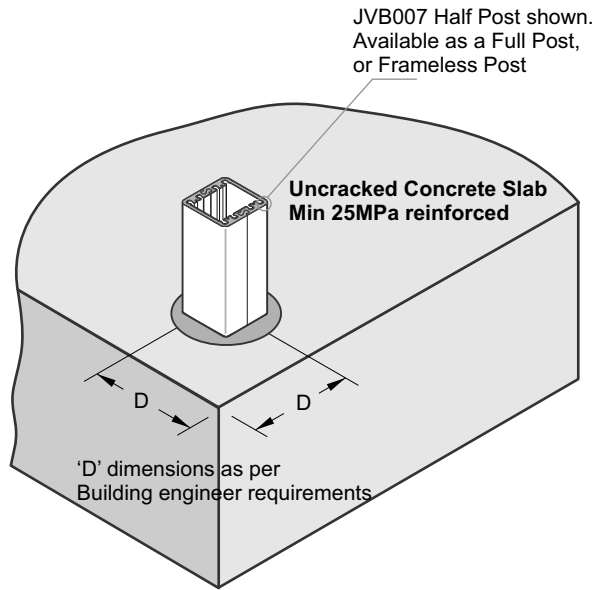
- 1 - All measurements mm
- 2 - Occupancy only A, A other and C3.
- 3 - Balustrade Height measured above Deck/FFL.
- 4 - Wind Zones as per NZS 3604:2011



**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 completely surround the Post
- 4 - Mortar pocket 60mm sq or 80mm 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

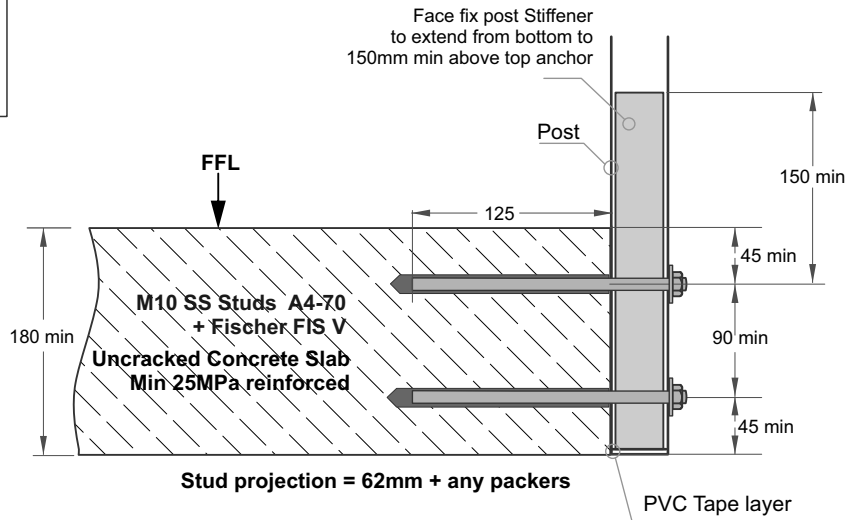
| Balustrade Height, mm |      |      |      |      |      |          |
|-----------------------|------|------|------|------|------|----------|
| 1000                  | 1050 | 1100 | 1150 | 1200 | 1250 | 1300 max |
| 1200                  | 1100 | 1000 | 900  | 850  | 800  | 750      |
| Post Spacing max, mm  |      |      |      |      |      |          |

Extra High Wind Zone

| 17mm Balusters only   |
|-----------------------|
| Balustrade Height, mm |
| 1275 max              |
| 1000                  |
| Post Spacing max, mm  |

General Notes:

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



Installation details Fischer FIS V 300T

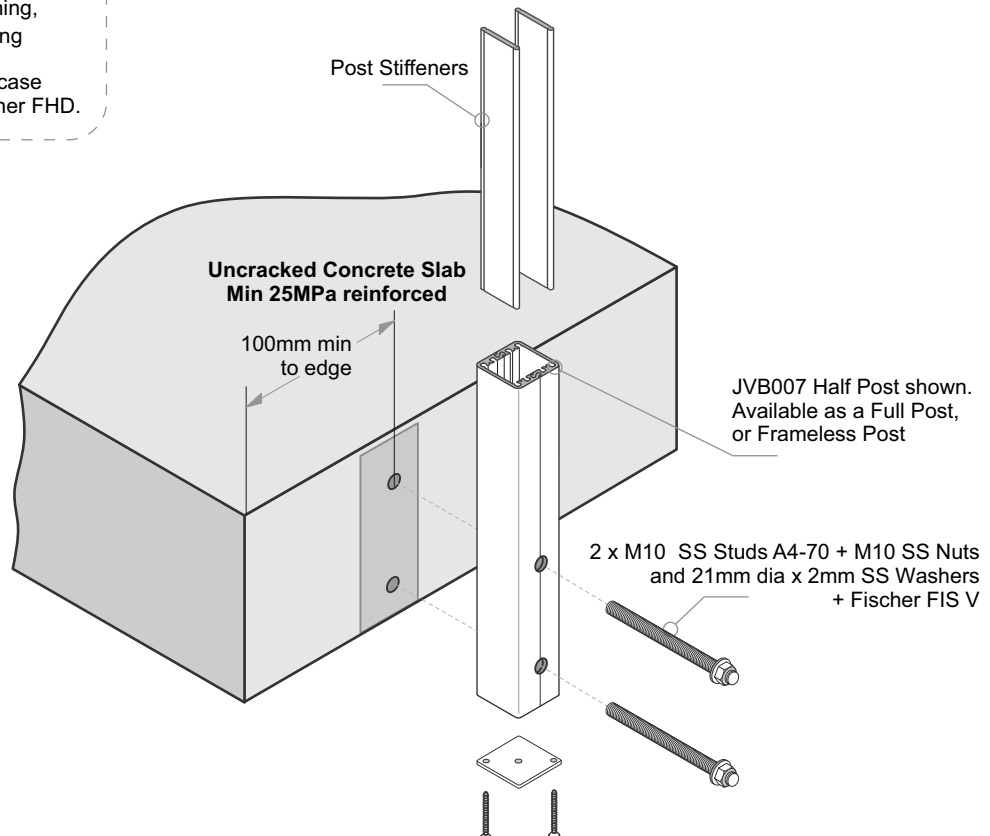
|                     |          |
|---------------------|----------|
| Thread diameter     | M10      |
| Drill hole diameter | = 12 mm  |
| Drill hole depth    | = 135 mm |
| Anchorage depth     | = 125 mm |

|                     |  |
|---------------------|--|
| Drilling method     | Hammer drilling  |
| Drill hole cleaning | 4 times blowing,<br>4 times brushing,<br>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 Post to Blockwall - M12 SS Studs

Balustrade Dimensions by Wind Zone

Up to and including Very High Wind Zone

| Balustrade Height, mm |      |      |      |      |      |          |
|-----------------------|------|------|------|------|------|----------|
| 1000                  | 1050 | 1100 | 1150 | 1200 | 1250 | 1300 max |
| 1200                  | 1100 | 1000 | 900  | 850  | 800  | 750      |
| Post Spacing max, mm  |      |      |      |      |      |          |

Extra High Wind Zone

| 17mm Balusters only   |
|-----------------------|
| Balustrade Height, mm |
| 1275 max              |
| 1050                  |
| Post Spacing max, mm  |

General Notes:

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

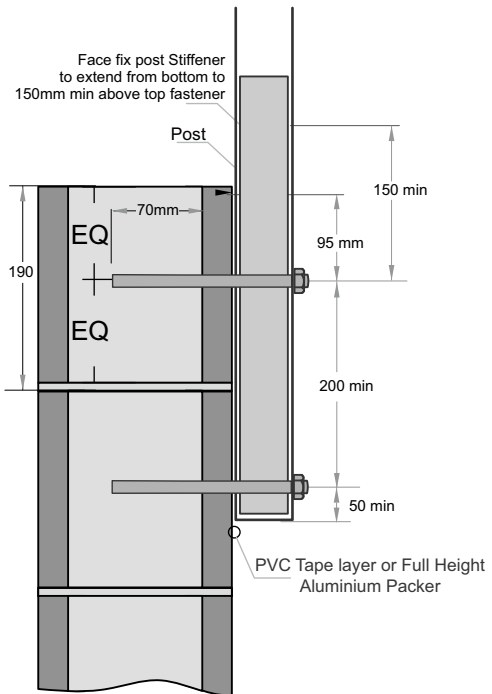


Installation details Hilti RE-500 V4

Thread diameter M12  
 Drill hole diameter = 14 mm  
 Drill hole depth = 80mm  
 Anchorage depth = 70mm

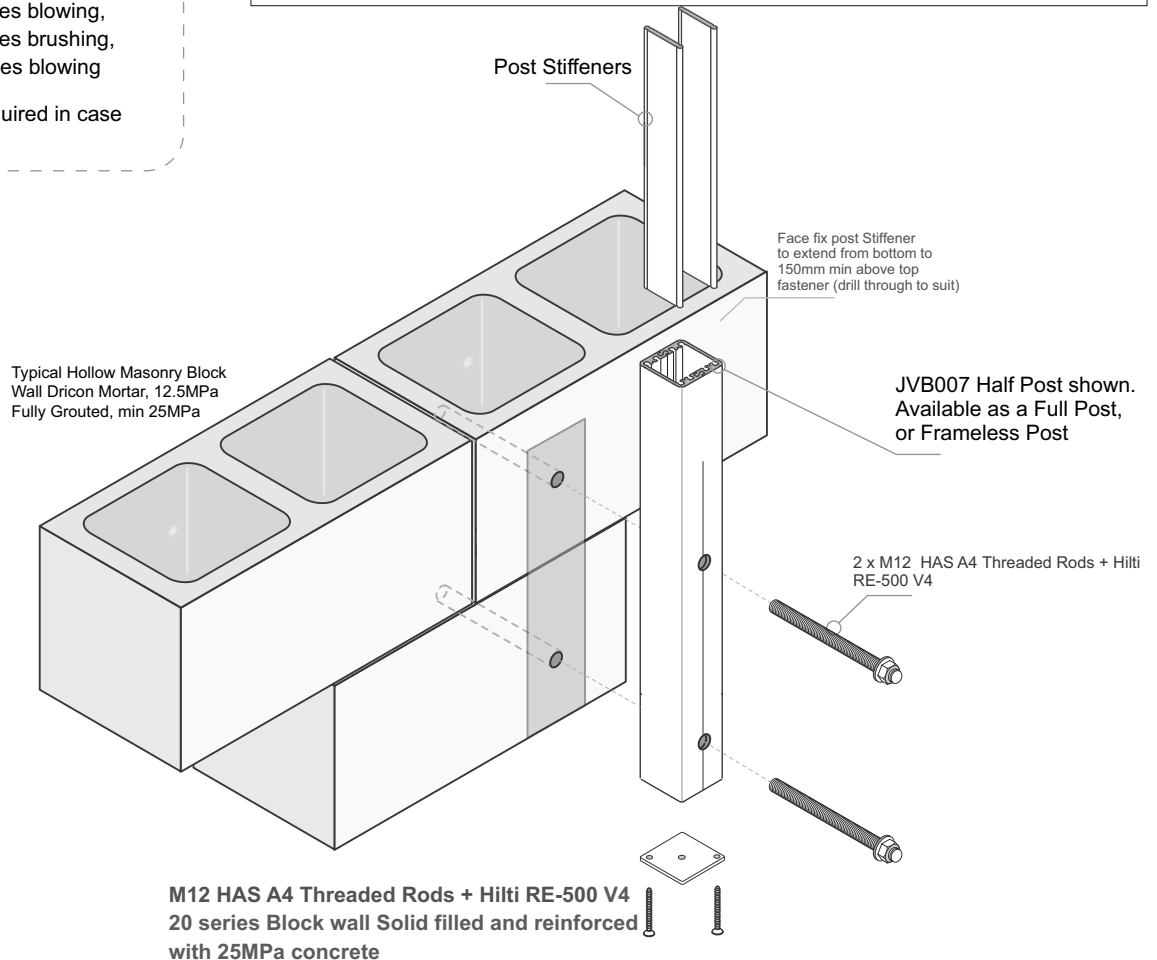
Drilling method Hammer drilling  
 Drill hole cleaning 4 times blowing,  
 4 times brushing,  
 4 times blowing

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



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 - JVB137/45, Gutter Bracket - M10 SS Studs

Balustrade Dimensions by Wind Zone

**Up to and including Very High Wind Zone**

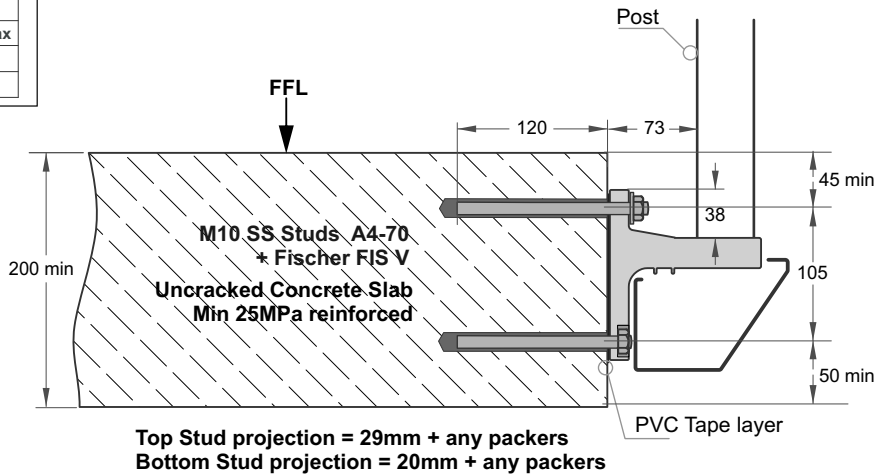
| Balustrade Height, mm |      |      |      |      |      |          |
|-----------------------|------|------|------|------|------|----------|
| 1000                  | 1050 | 1100 | 1150 | 1200 | 1250 | 1300 max |
| 1400                  | 1350 | 1300 | 1250 | 1200 | 1150 | 1100     |
| Post Spacing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

**Extra High Wind Zone**

|                       |
|-----------------------|
| 17mm Balusters only   |
| Balustrade Height, mm |
| 1275 max              |
| 1400                  |
| Post Spacing max, mm  |

General Notes:

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



Installation details Fischer FIS V 300T

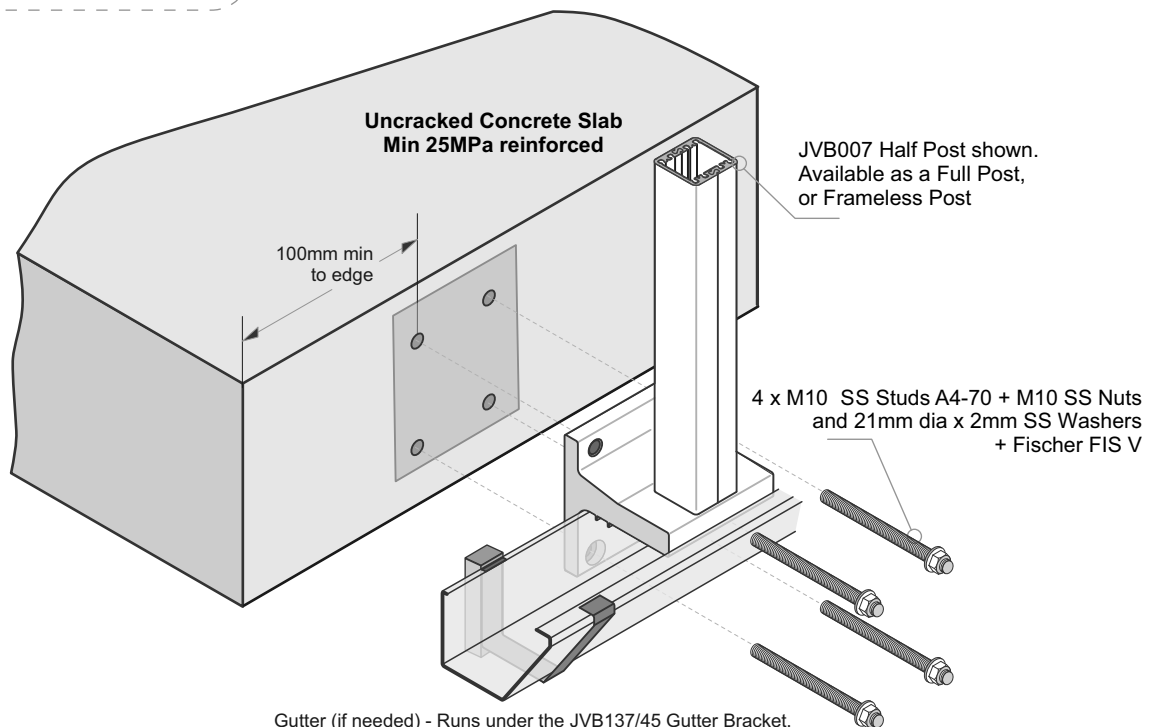
- Thread diameter M10
- Drill hole diameter = 12 mm
- Drill hole depth = 130 mm
- Anchorage depth = 120 mm

- 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



Gutter (if needed) - Runs under the JVB137/45 Gutter Bracket. To be attached separately either side of the Bracket to suit propriety guttering system. Pack out to clear.



**Typical TOP Fix to Timber - JVB121, 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

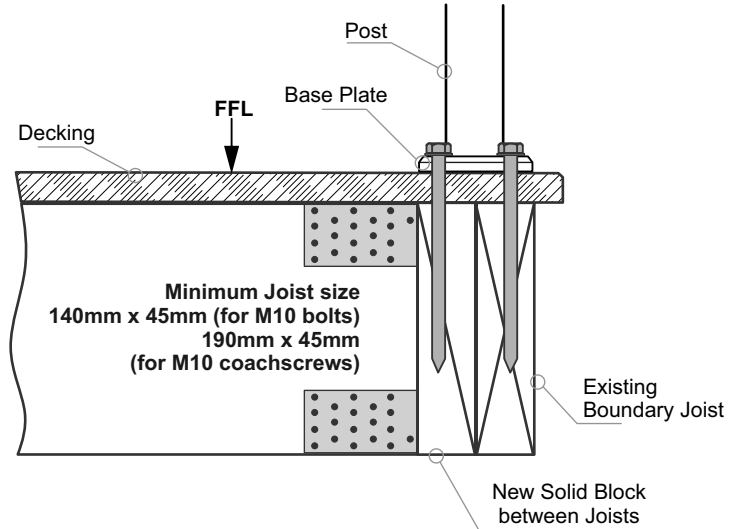
**Balustrade Dimensions by Wind Zone**

**Up to and including Very High Wind Zone**

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

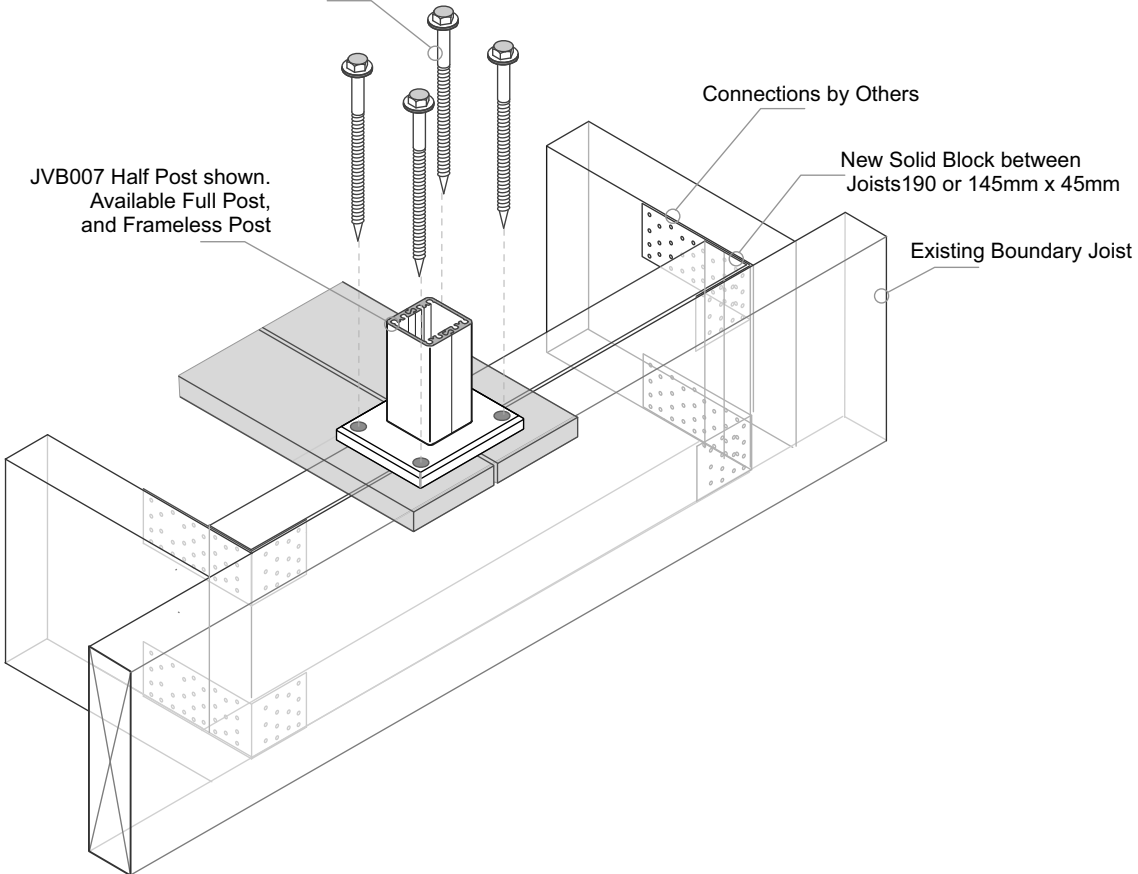
**Extra High Wind Zone**  
NOT SUITABLE.

- General Notes:  
 1 - All measurements mm  
 2 - Occupancy only A, A other and C3.  
 3 - Balustrade Height measured above Deck/FFL.  
 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 - Coachscrews 130mm min engagement into joists, predrill 6mm hole
  - 4 - Bond all coachscrews with SIKA Supergrip to full depth
  - 5 - All Fixings must be Stainless steel

4 x M10 SS Coachscrews + 21mm dia x 2mm SS Washers  
 (or 4 x M10 SS Bolts and 21dia SS washers Top and 40mm sq x 3mm SS Washers under)



**Typical TOP Fix to Timber - JVB100, 100mm 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

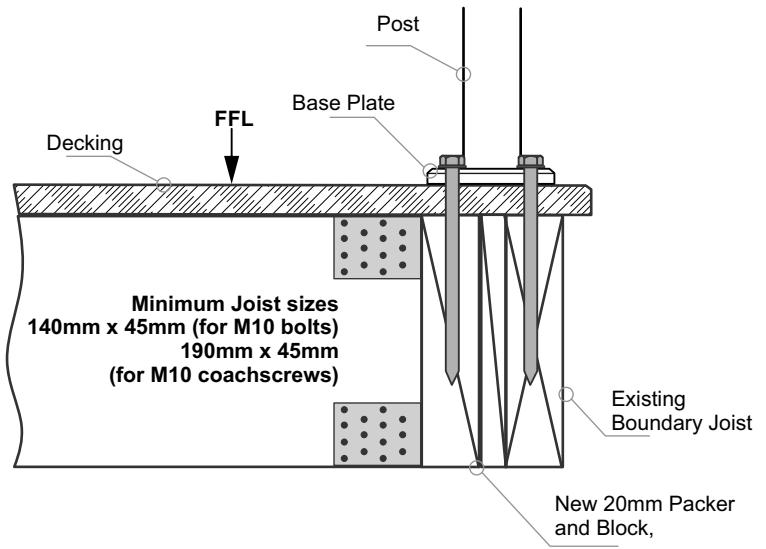
**Balustrade Dimensions by Wind Zone**

**Up to and including Very High Wind Zone**

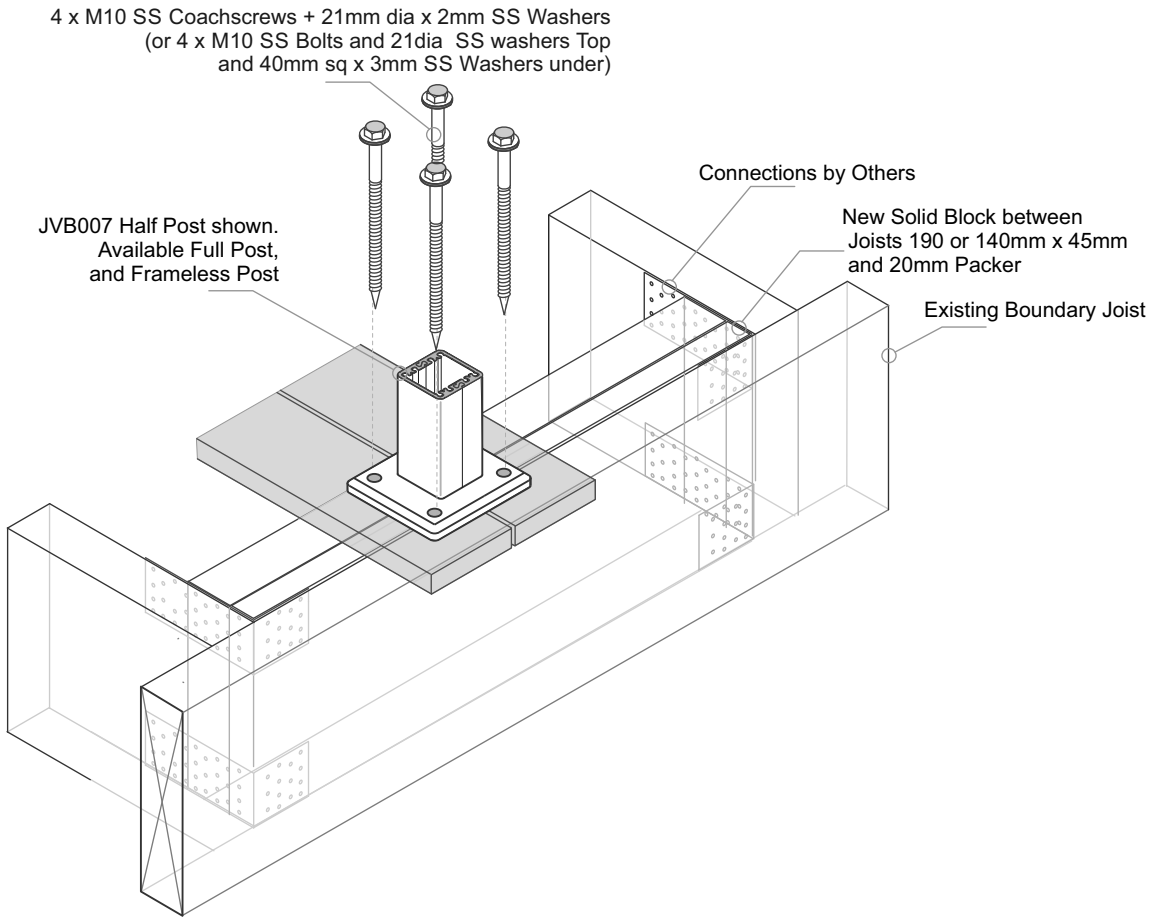
| Balustrade Height, mm |      |      |      |      |
|-----------------------|------|------|------|------|
| 1000                  | 1050 | 1100 | 1150 | 1200 |
| 1400                  | 1350 | 1300 | 1250 | 1200 |
| Post Spacing max, mm  |      |      |      |      |

**Extra High Wind Zone**  
**NOT SUITABLE.**

- General Notes:
- 1 - All measurements mm
  - 2 - Occupancy only A, A other and C3.
  - 3 - Balustrade Height measured above Deck/FFL.
  - 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 - Coachscrews 130mm min engagement into joists, predrill 6mm hole
  - 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

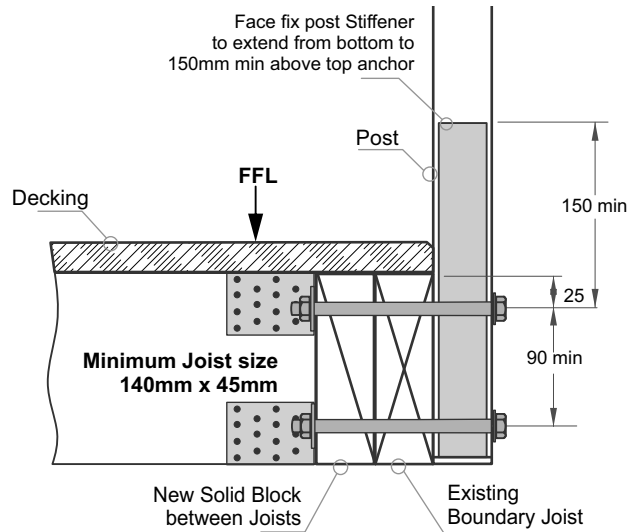
**Balustrade Dimensions by Wind Zone**

**Up to and including Very High Wind Zone**

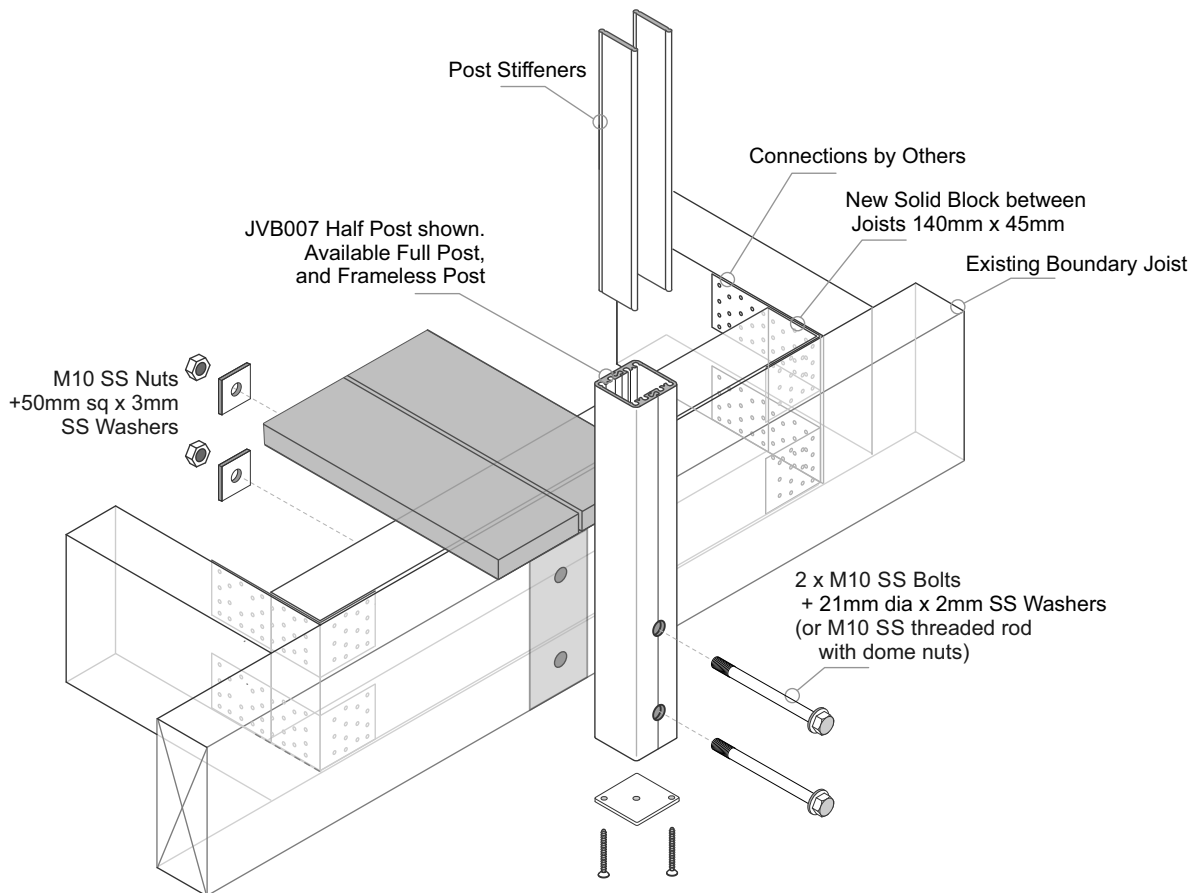
| Balustrade Height, mm |      |      |      |      |
|-----------------------|------|------|------|------|
| 1000                  | 1050 | 1100 | 1150 | 1200 |
| 1400                  | 1350 | 1300 | 1250 | 1200 |
| Post Spacing max, mm  |      |      |      |      |

**Extra High Wind Zone**  
**NOT SUITABLE.**

- General Notes:  
 1 - All measurements mm  
 2 - Occupancy only A, A other and C3.  
 3 - Balustrade Height measured above Deck/FFL.  
 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 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**

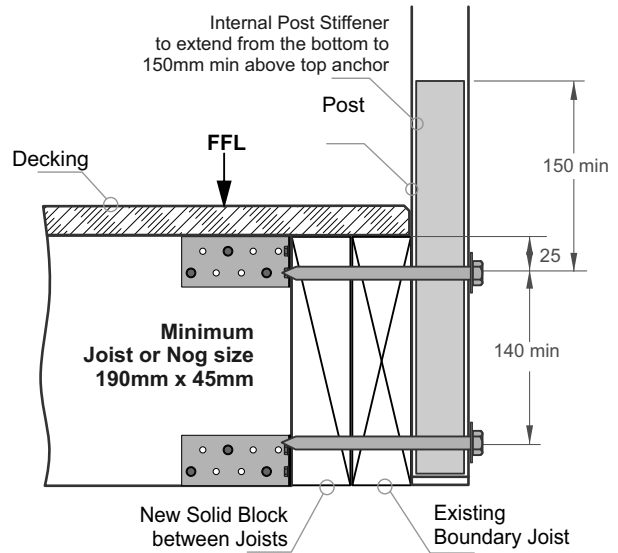
**Up to and including Very High Wind Zone**

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

**Extra High Wind Zone**  
NOT SUITABLE.

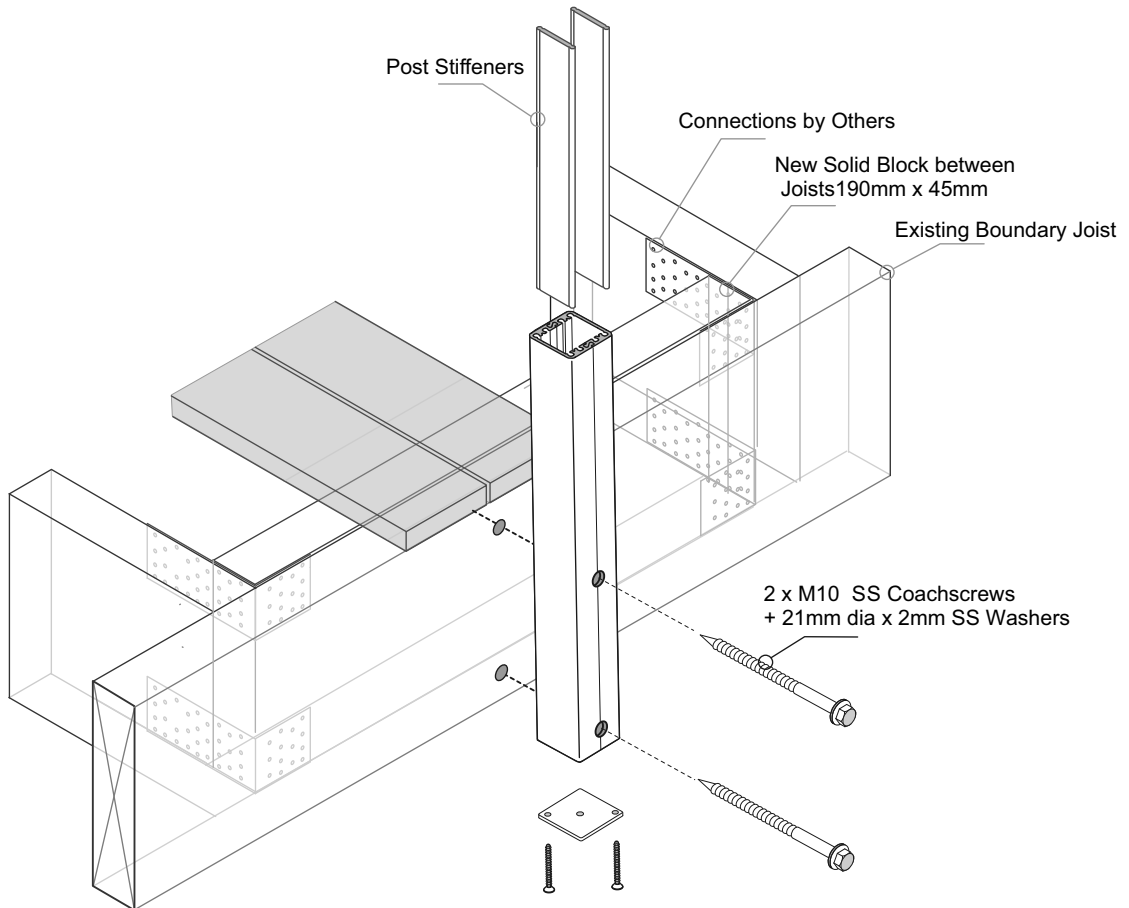
**General Notes:**

- 1 - All measurements mm
- 2 - Occupancy only A, A other and C3.
- 3 - Balustrade Height measured above Deck/FFL.
- 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 - Coachscrews 90mm min engagement into joists, predrill 6mm hole
- 4 - Bond all coachscrews with SIKA Supergrip to full depth
- 5 - All Fixings must be Stainless steel



**Typical FACE Fix to Timber - JVB137/45, 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

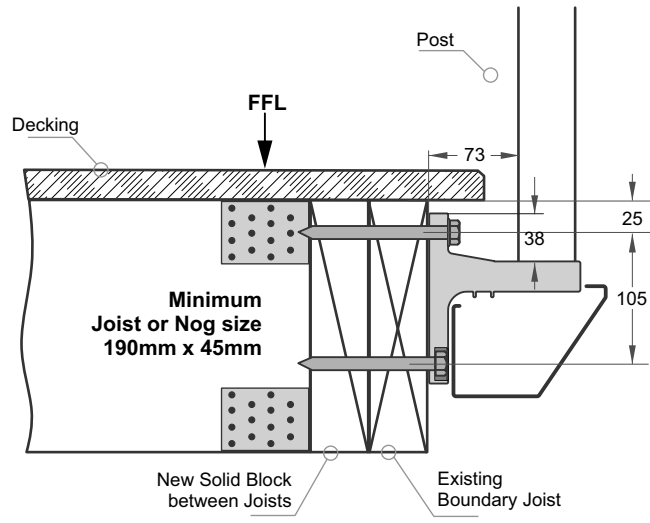
**Balustrade Dimensions by Wind Zone.**

**Up to and including Very High Wind Zone**

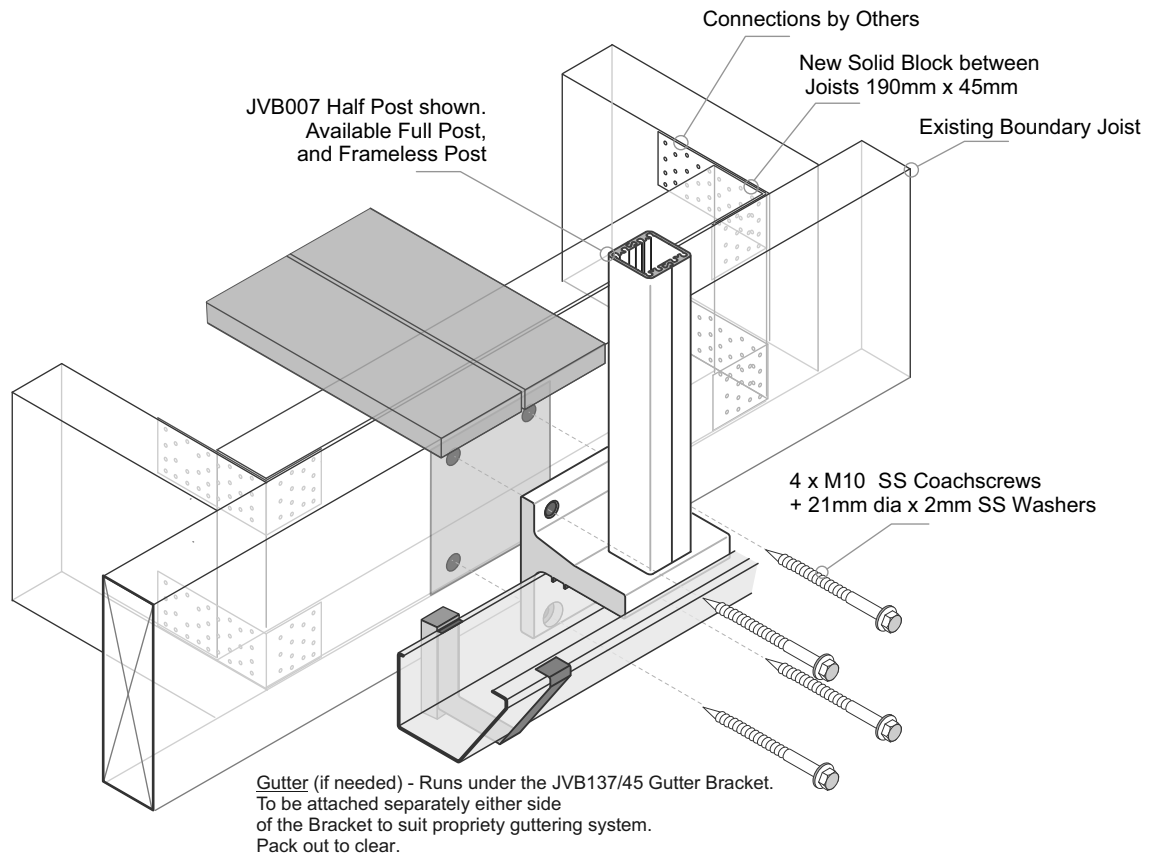
| Balustrade Height, mm |      |      |      |      |
|-----------------------|------|------|------|------|
| 1000                  | 1050 | 1100 | 1150 | 1200 |
| 1400                  | 1350 | 1300 | 1250 | 1200 |
| Post Spacing max, mm  |      |      |      |      |

**Extra High Wind Zone**  
NOT SUITABLE.

- General Notes:
- 1 - All measurements mm
  - 2 - Occupancy only A, A other and C3.
  - 3 - Balustrade Height measured above Deck/FFL.
  - 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 - Coachscrews 90mm min engagement into joists, predrill 6mm hole
  - 4 - Bond all coachscrews with SIKA Supergrip to full depth
  - 5 - All Fixings must be Stainless steel



**Typical FACE Fix to Timber - JVB137/45, Gutter Bracket - M10 SS 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**

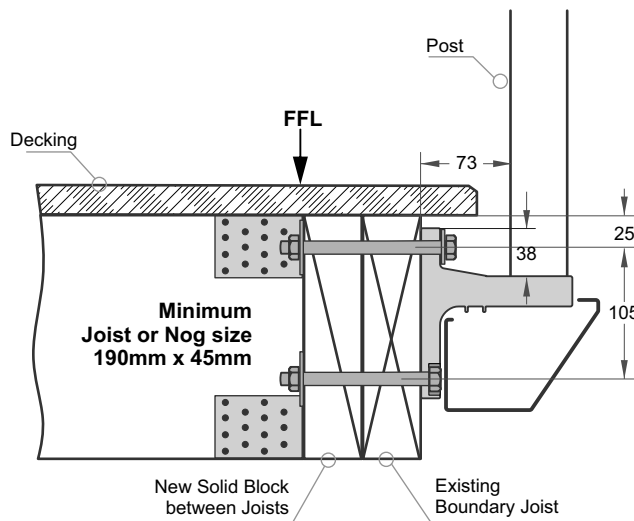
| Balustrade Height, mm |      |      |      |      |
|-----------------------|------|------|------|------|
| 1000                  | 1050 | 1100 | 1150 | 1200 |
| 1400                  | 1350 | 1300 | 1250 | 1200 |
| Post Spacing max, mm  |      |      |      |      |

**Extra High Wind Zone**

NOT SUITABLE.

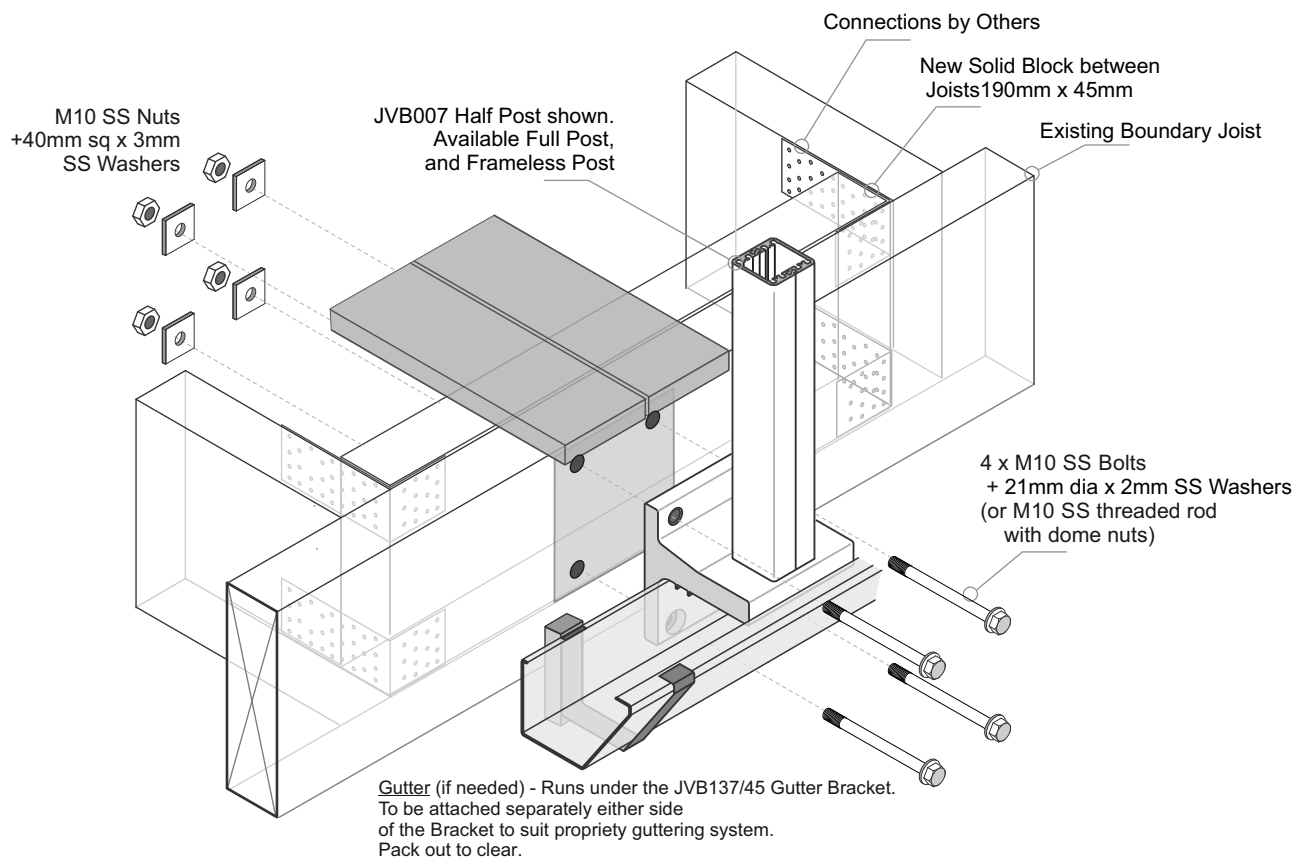
**General Notes:**

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



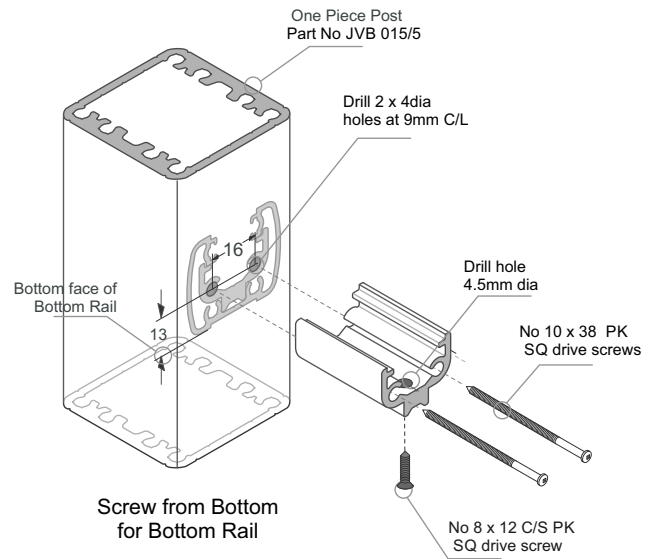
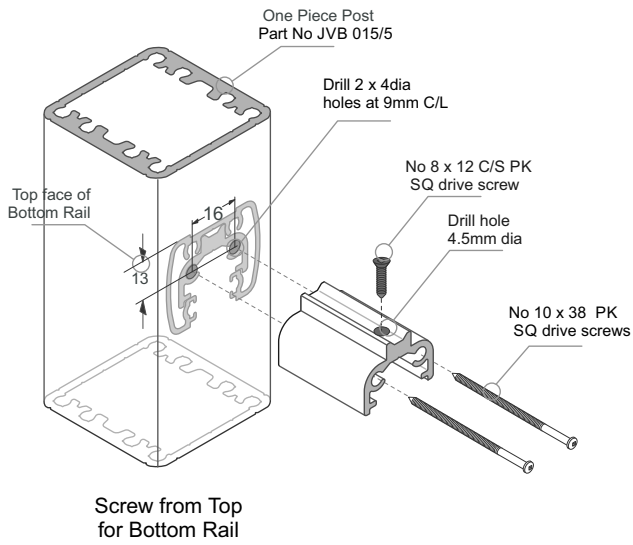
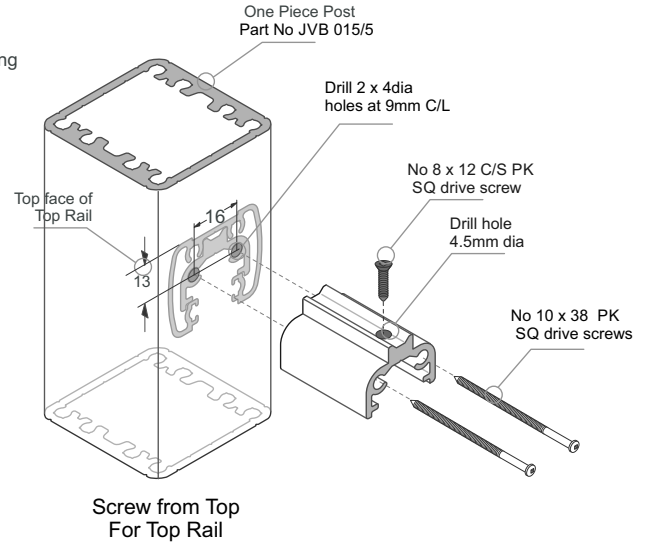
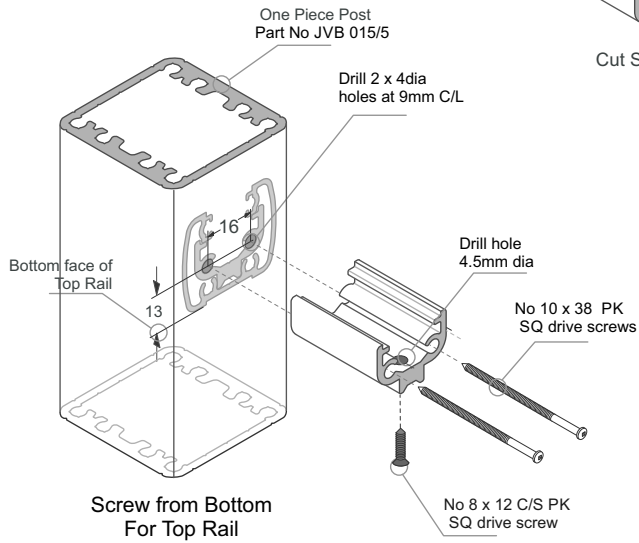
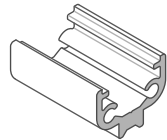
**Important Installation notes:**

- 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



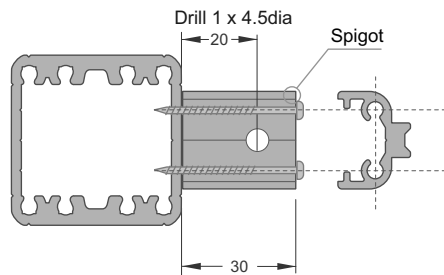
## Juralco Viking® Balustrade System

### Typical Assembly - One Piece Post to Rail

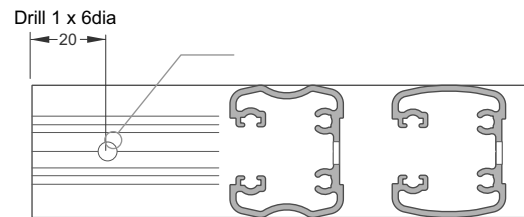


**This Setout for Baluster Installations**

**This Setout for Glass Installations**



Attaching Bottom or Top Rail to One Piece Post Part No JVB 015/5

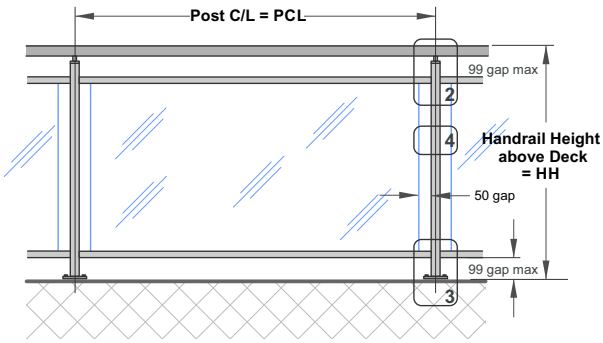


Drill Bottom Rail, Top rail if needed

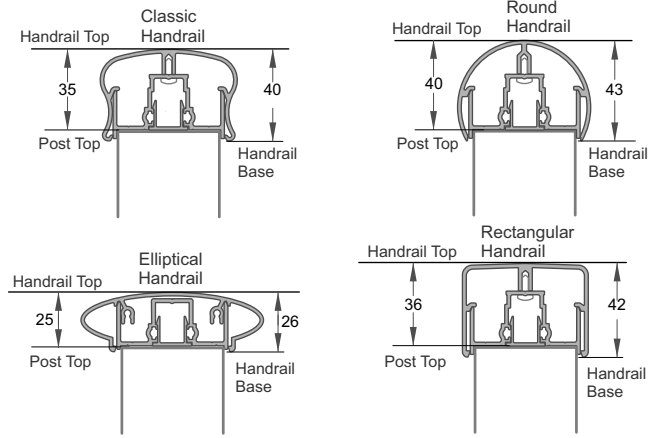


6mm Toughened Glass - Full Height. Handrail + Split Rails. Top Fix

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



2 - Handrail - Offsets

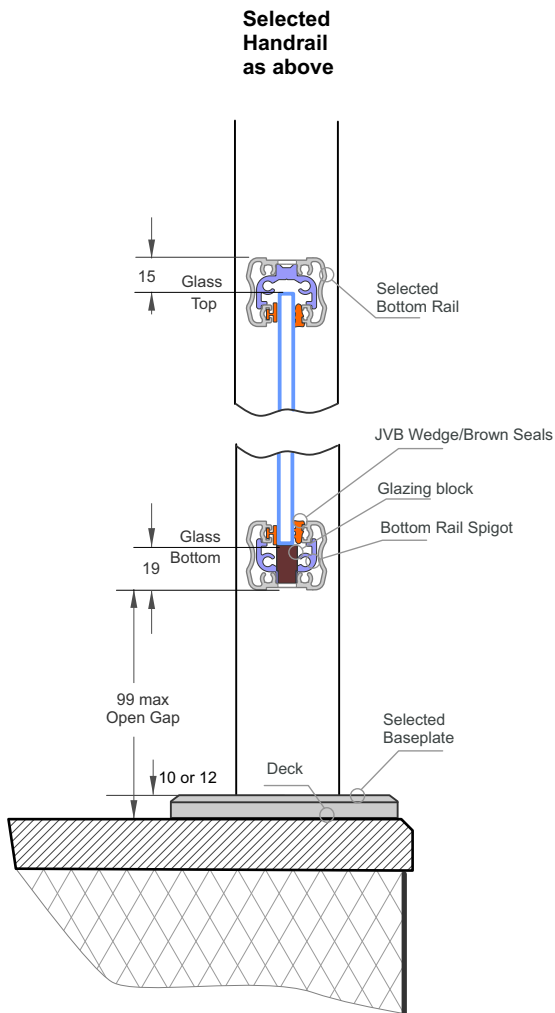


**A**  
For Post Height.  
Post Top to Handrail Top  
25-40 Depending on  
chosen Handrail

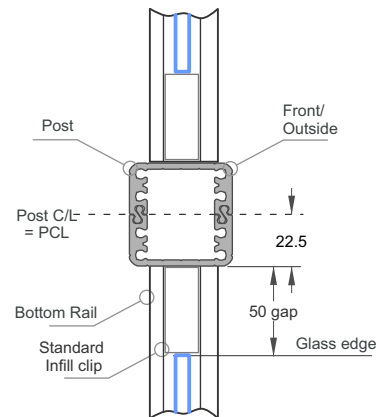
**B**  
For Top Gap Height  
Handrail Base to Handrail Top  
26-43 Depending on  
chosen Handrail

Important Note: All Glass Engagements 10mm min

3 - Post Height offsets



4 - Width Offsets

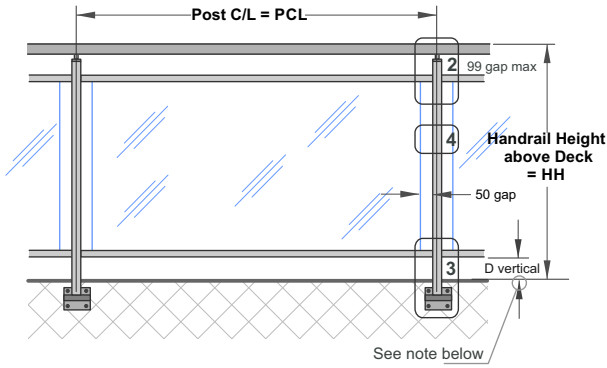


Viking post  
JVB/007 shown  
(or could be JVB/015)

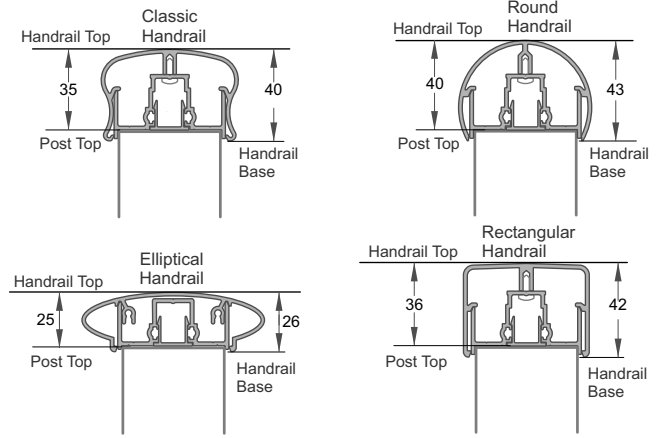
5 - Cutting Guide

- a - Hand Rail = Use maximum lengths
- b - Post, Cut to  
= HH - **A** - (10 or 12) = Post Height
- c - Bottom Rail (x2), Cut to  
= PCL - 2x22.5 = PCL - 45
- d - 6mm Glass Height  
= HH - **B** - (10 or 12) - 99x2 - (15+19)  
= Glass Height
- e - 6mm Glass Width  
= PCL - 2x22.5 - 2x50 = Glass Width

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



### 2 - Handrail - Offsets



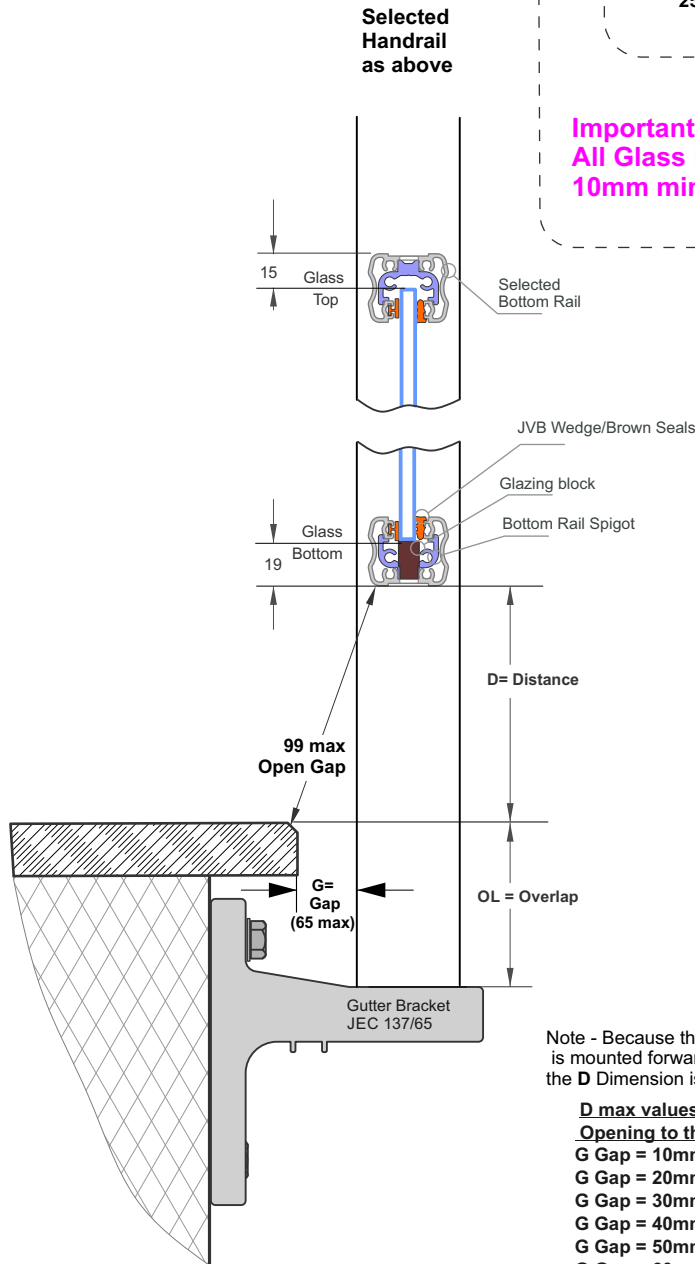
**A**

For Post Height.  
Post Top to Handrail Top  
25-40 Depending on  
chosen Handrail

**B**

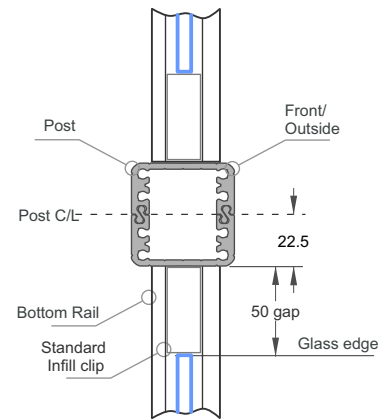
For Top Gap Height  
Handrail Base to Handrail Top  
26-43 Depending on  
chosen Handrail

### 3 - Post Height offsets



**Important Note:**  
All Glass Engagements  
10mm min

### 4 - Width Offsets



Viking post  
JVB/007 shown  
(or could be JVB/015)

### 5 - Cutting Guide

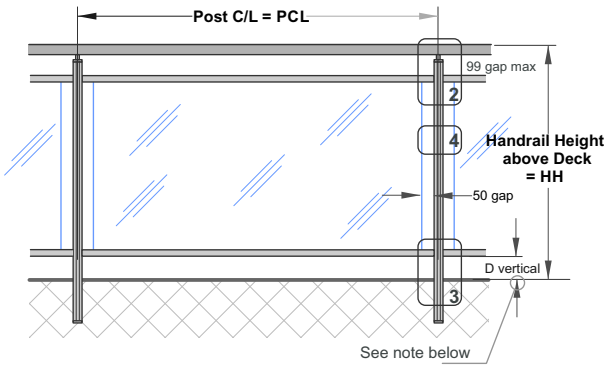
- a - Hand Rail = Use maximum lengths
- b - Post, Cut to  
=  $HH - A + OL = \text{Post Height}$
- c - Bottom Rail (x2), Cut to  
=  $PCL - 2 \times 22.5 = PCL - 45$
- d - 6mm Glass Height  
=  $HH - B - 99 - D - (15 + 19)$   
= Glass Height
- e - 6mm Glass Width  
=  $PCL - 2 \times 22.5 - 2 \times 50 = \text{Glass Width}$

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

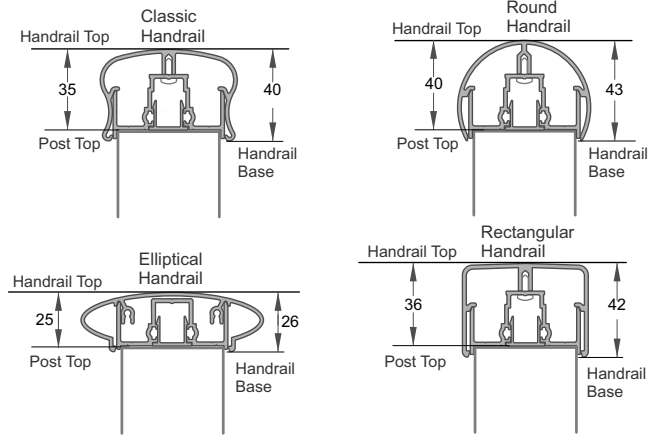
**D max values for a 99mm Opening to the deck**

|                  |          |
|------------------|----------|
| G Gap = 10mm     | D = 97mm |
| G Gap = 20mm     | D = 95mm |
| G Gap = 30mm     | D = 91mm |
| G Gap = 40mm     | D = 86mm |
| G Gap = 50mm     | D = 79mm |
| G Gap = 60mm     | D = 71mm |
| G Gap = 65mm max | D = 66mm |

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



**2 - Handrail - Offsets**

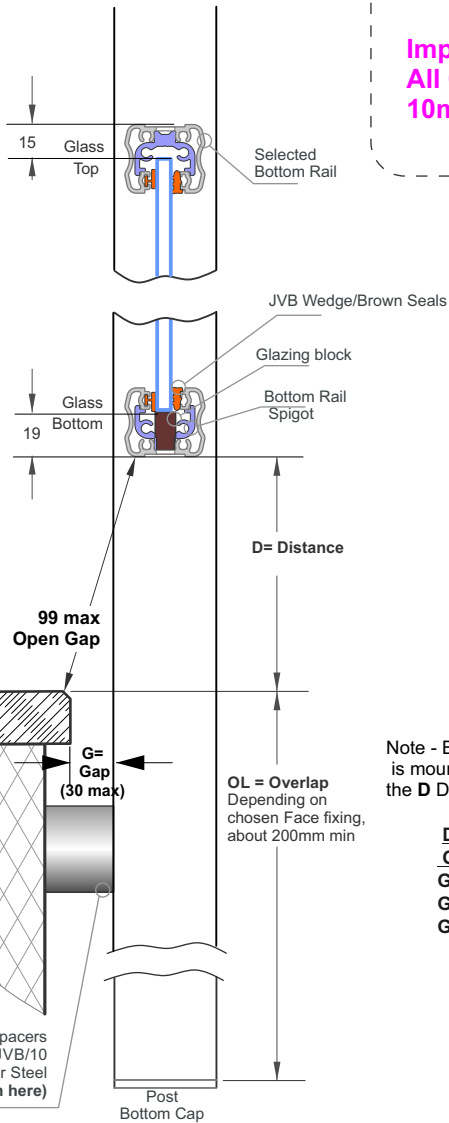


**A**  
For Post Height.  
Post Top to Handrail Top  
25-40 Depending on  
chosen Handrail

**B**  
For Top Gap Height  
Handrail Base to Handrail Top  
26-43 Depending on  
chosen Handrail

**3 - Post Height offsets**

Selected Handrail as above

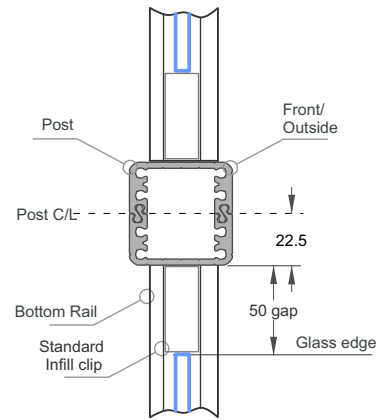


**Important Note:**  
All Glass Engagements  
10mm min

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 = 97mm  
G Gap = 20mm D = 95mm  
G Gap = 30mm max D = 91mm

**4 - Width Offsets**



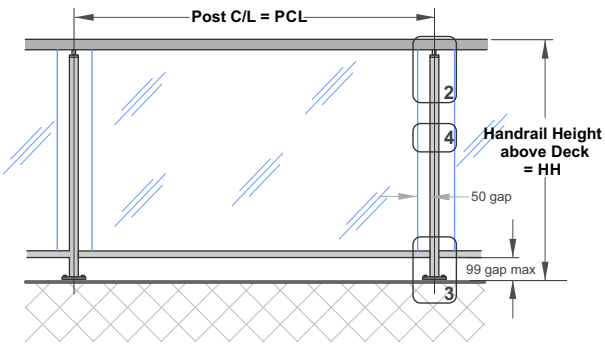
Viking post JVB/007 shown (or could be JVB/015)

**5 - Cutting Guide**

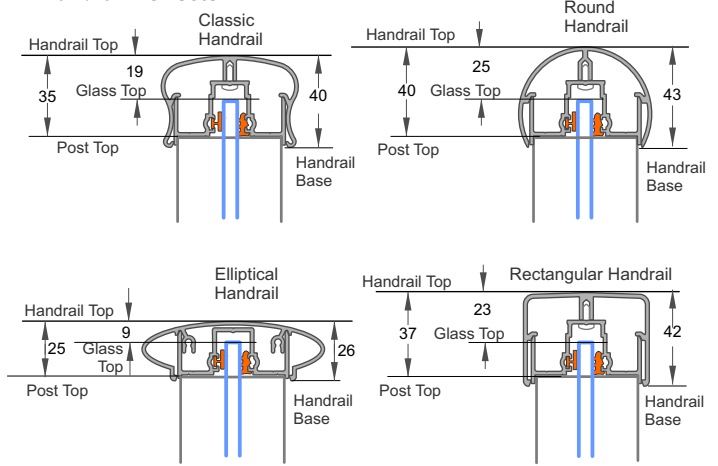
- a - Hand Rail = Use maximum lengths
- b - Post, Cut to =  $HH - A + OL = \text{Post Height}$
- c - Bottom Rail (x2), Cut to =  $PCL - 2 \times 22.5 = PCL - 45$
- d - 6mm Glass H9height =  $HH - B - 99 - D - (15 + 19) = \text{Glass Height}$
- e - 6mm Glass Width =  $PCL - 2 \times 22.5 - 2 \times 50 = \text{Glass Width}$

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**

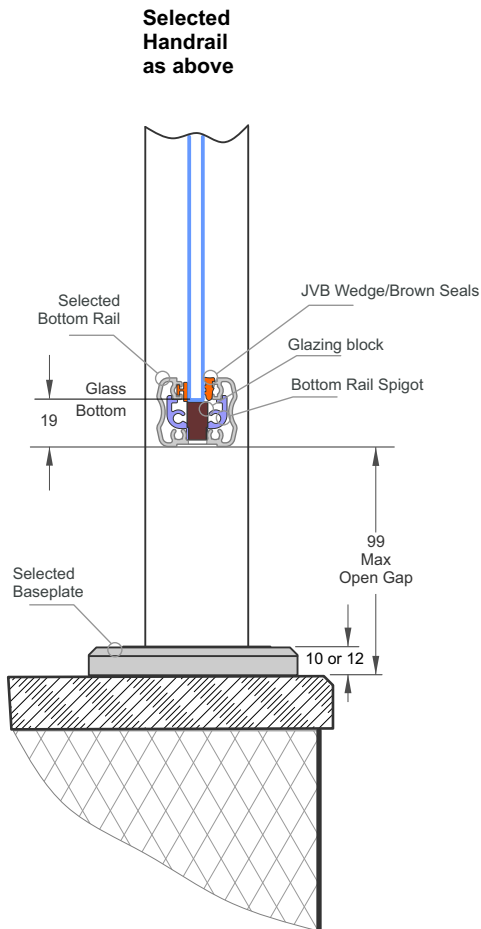


**A**  
For Post Height.  
Post Top to Handrail Top  
25-40 Depending on  
chosen Handrail

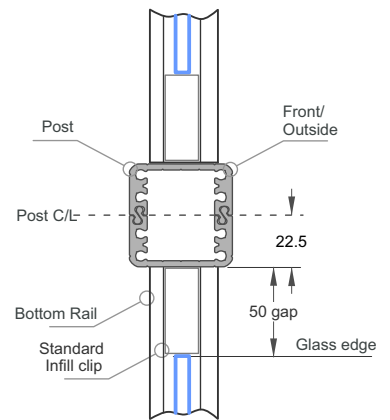
**B**  
For Glass Height  
Glass Top to Handrail Top  
9-25 Depending on  
chosen Handrail

**Important Note: All Glass Engagements 10mm min**

**3 - Post Height offsets**



**4 - Width Offsets**

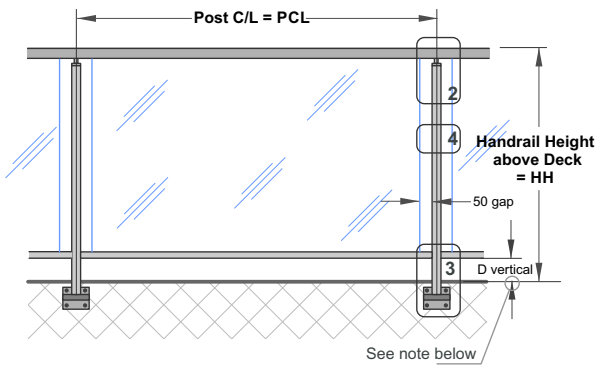


Viking post  
JVB/007 shown  
(or could be JVB/015)

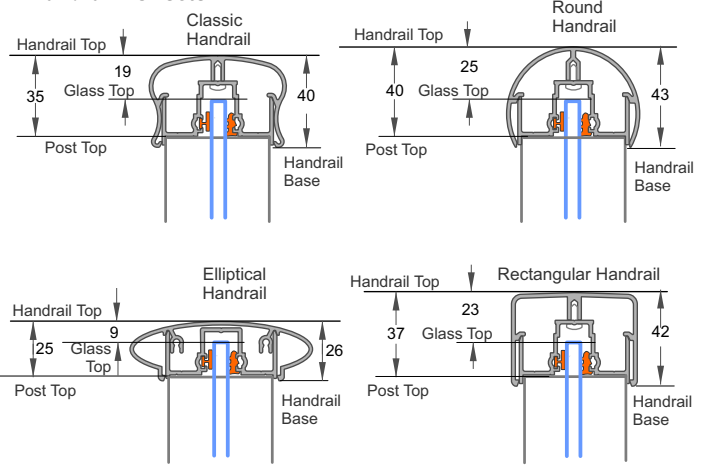
**5 - Cutting Guide**

- a - Hand Rail = Use maximum lengths
- b - Post, Cut to  
= HH - **A** - (10 or 12) = Post Height
- c - Bottom Rail (x2), Cut to  
= PCL - 2x22.5 = PCL - 45
- d - 6mm Glass Height  
= HH - **B** - 99 - (15+19)  
= Glass Height
- e - 6mm Glass Width  
= PCL - 2x22.5 - 2x50 = Glass Width

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



**2 - Handrail - Offsets**

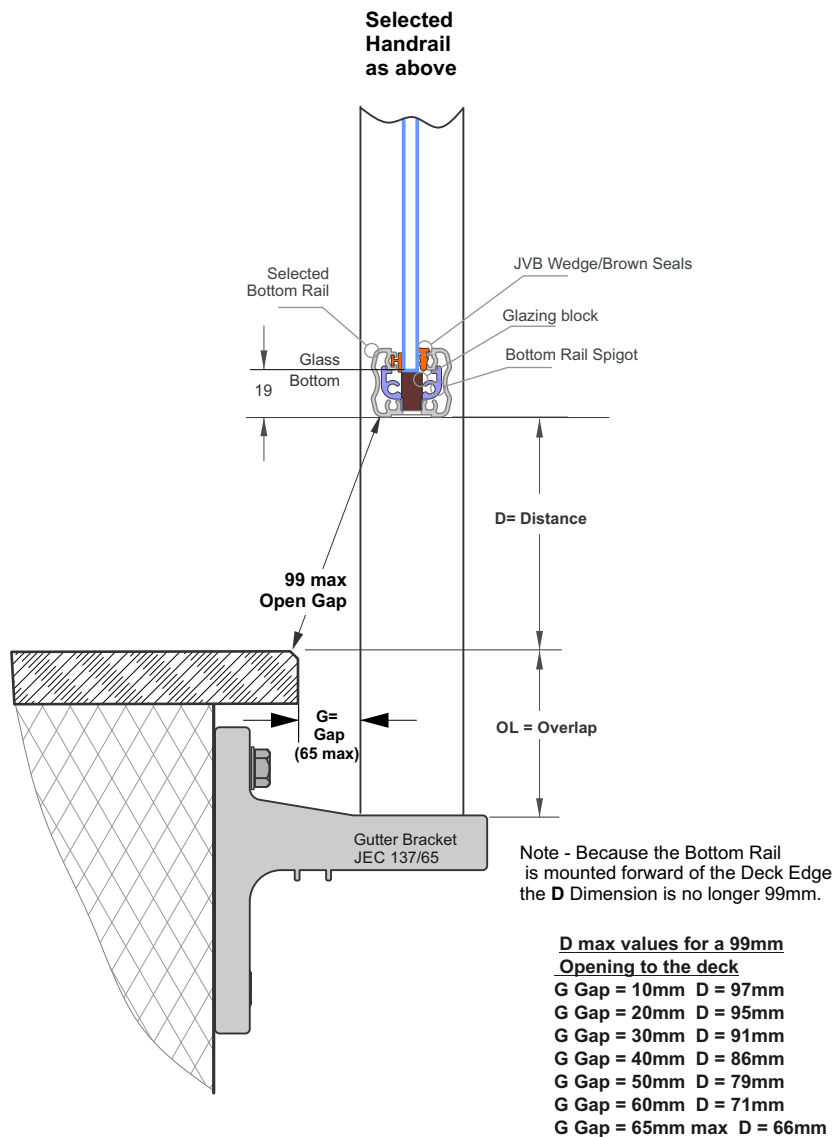


**A**  
For Post Height.  
Post Top to Handrail Top  
25-40 Depending on  
chosen Handrail

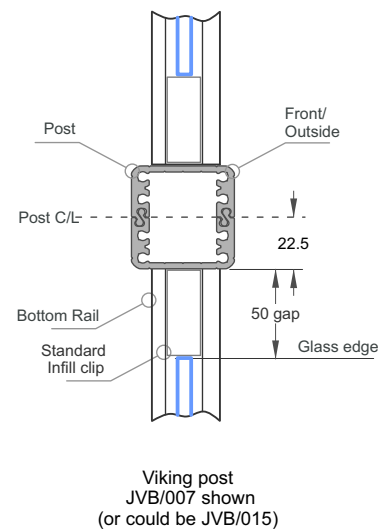
**B**  
For Glass Height  
Glass Top to Handrail Top  
9-25 Depending on  
chosen Handrail

**Important Note: All Glass Engagements 10mm min**

**3 - Post Height offsets**



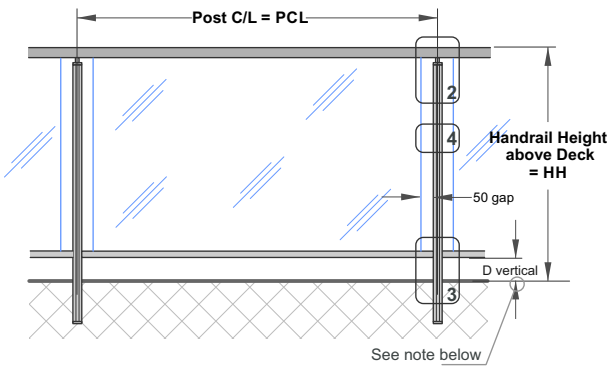
**4 - Width Offsets**



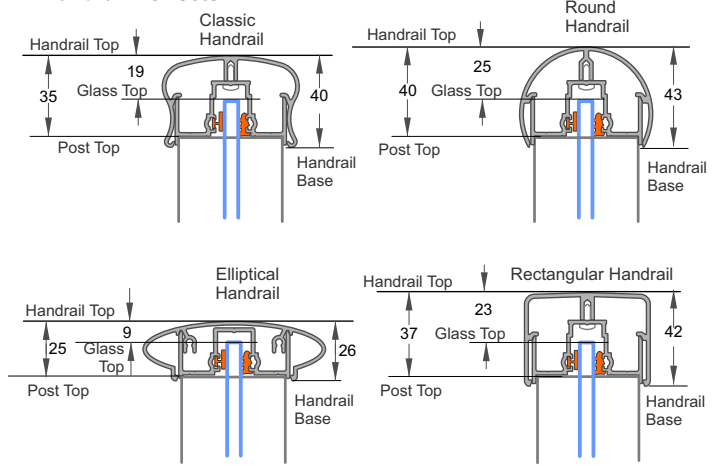
**5 - Cutting Guide**

- a - Hand Rail = Use maximum lengths
- b - Post, Cut to  
=  $HH - A + OL$  = Post Height
- c - Bottom Rail (x2), Cut to  
=  $PCL - 2 \times 22.5 = PCL - 45$
- d - 6mm Glass Height  
=  $HH - B - D - 99 - (15 + 19)$   
= Glass Height
- e - 6mm Glass Width  
=  $PCL - 2 \times 22.5 - 2 \times 50$  = Glass Width

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



**2 - Handrail - Offsets**

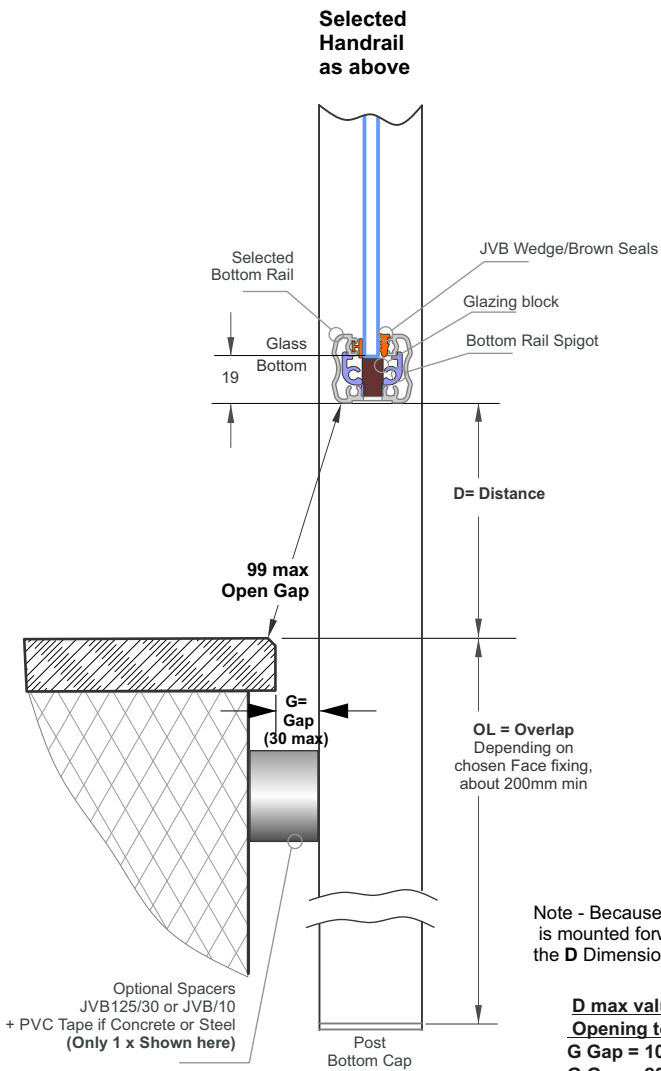


**A**  
For Post Height.  
Post Top to Handrail Top  
25-40 Depending on  
chosen Handrail

**B**  
For Glass Height  
Glass Top to Handrail Top  
9-25 Depending on  
chosen Handrail

**Important Note: All Glass Engagements 10mm min**

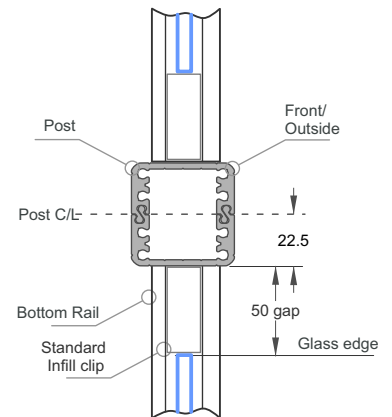
**3 - Post Height offsets**



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 = 97mm**  
**G Gap = 20mm D = 95mm**  
**G Gap = 30mm max D = 91mm**

**4 - Width Offsets**



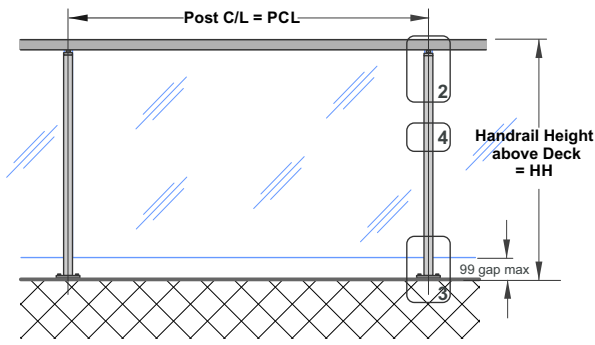
Viking post  
JVB/007 shown  
(or could be JVB/015)

**5 - Cutting Guide**

- a - Hand Rail = Use maximum lengths
- b - Post, Cut to  
= HH - A + OL = Post Height
- c - Bottom Rail (x2), Cut to  
= PCL - 2x22.5 = PCL - 45
- d - 6mm Glass Height  
= HH - B - 99 - D - (15+19)  
= Glass Height
- e - 6mm Glass Width  
= PCL - 2x22.5 - 2x50 = Glass Width

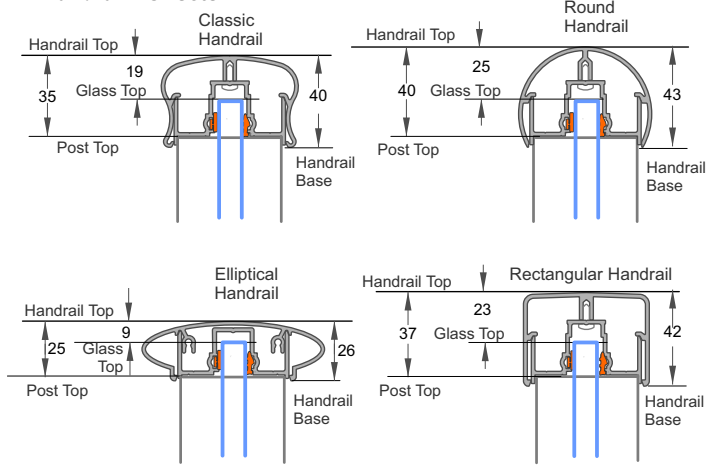
10mm Toughened Glass - Semi Frameless + Handrail. Top Fix

**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**

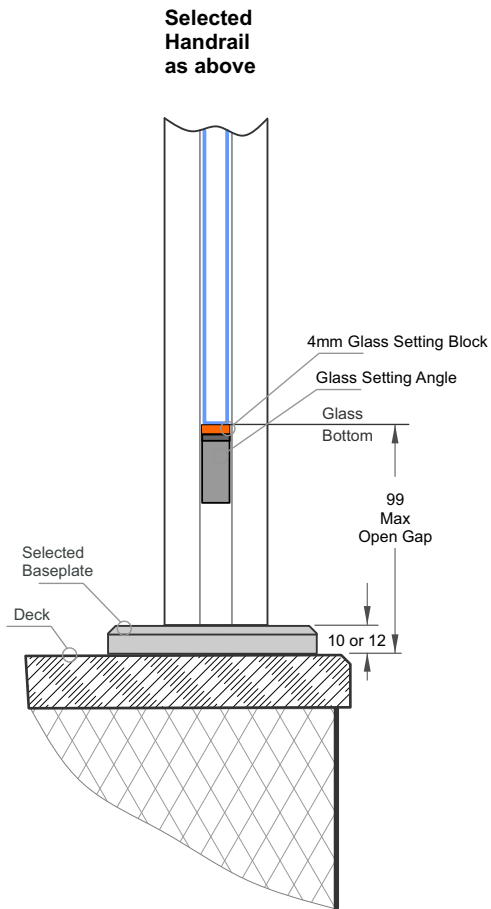


**A**  
For Post Height.  
Post Top to Handrail Top  
25-40 Depending on  
chosen Handrail

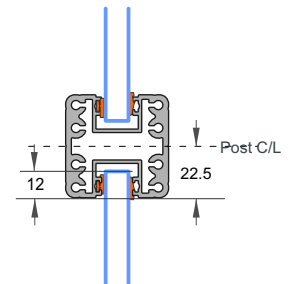
**B**  
For Glass Height  
Glass Top to Handrail Top  
9-25 Depending on  
chosen Handrail

**Important Note: All Glass Engagements 10mm min**

**3 - Post Height offsets**



**4 - Width Offsets**



Viking post  
JVB/011

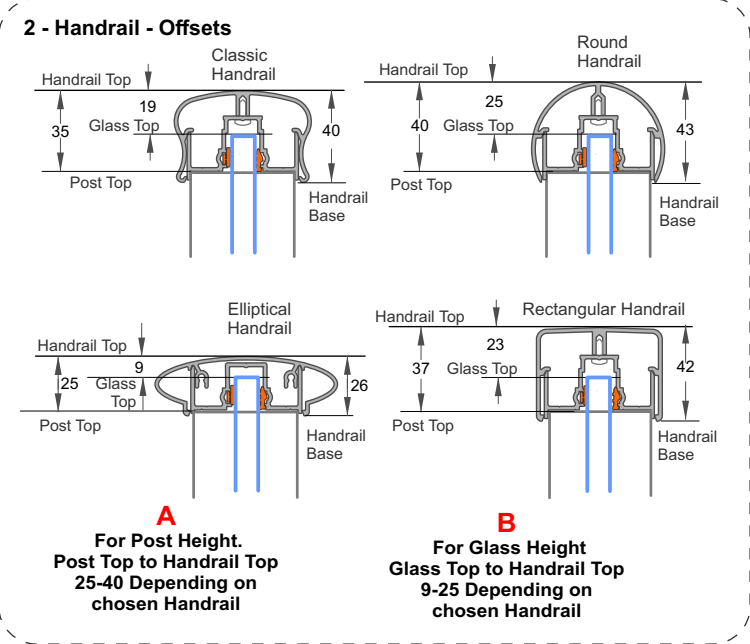
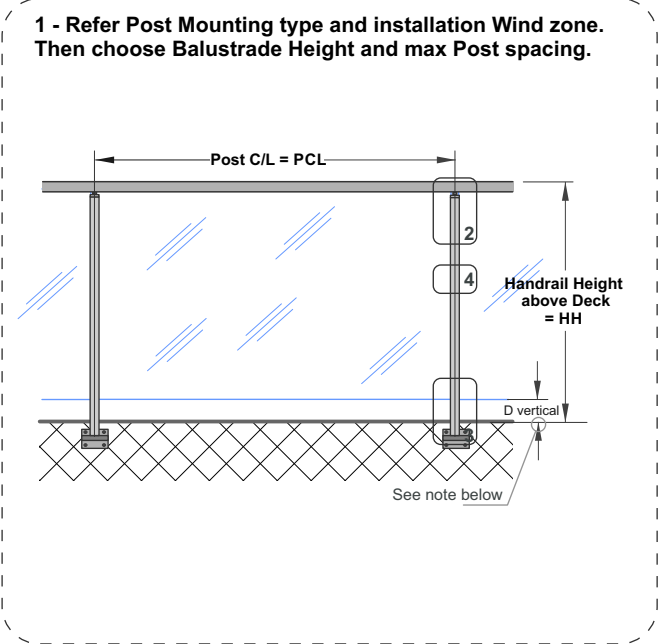
**5 - Cutting Guide**

a - Hand Rail = Use maximum lengths  
b - Post, Cut to  
= HH - **A** - (10 or 12) = Post Height

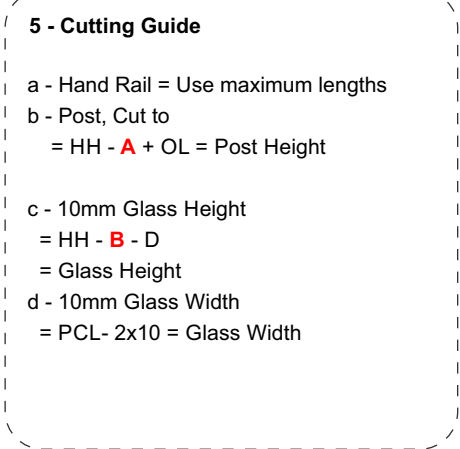
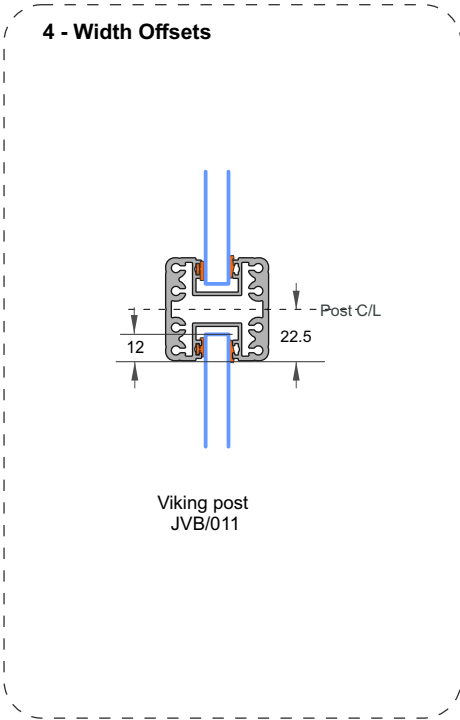
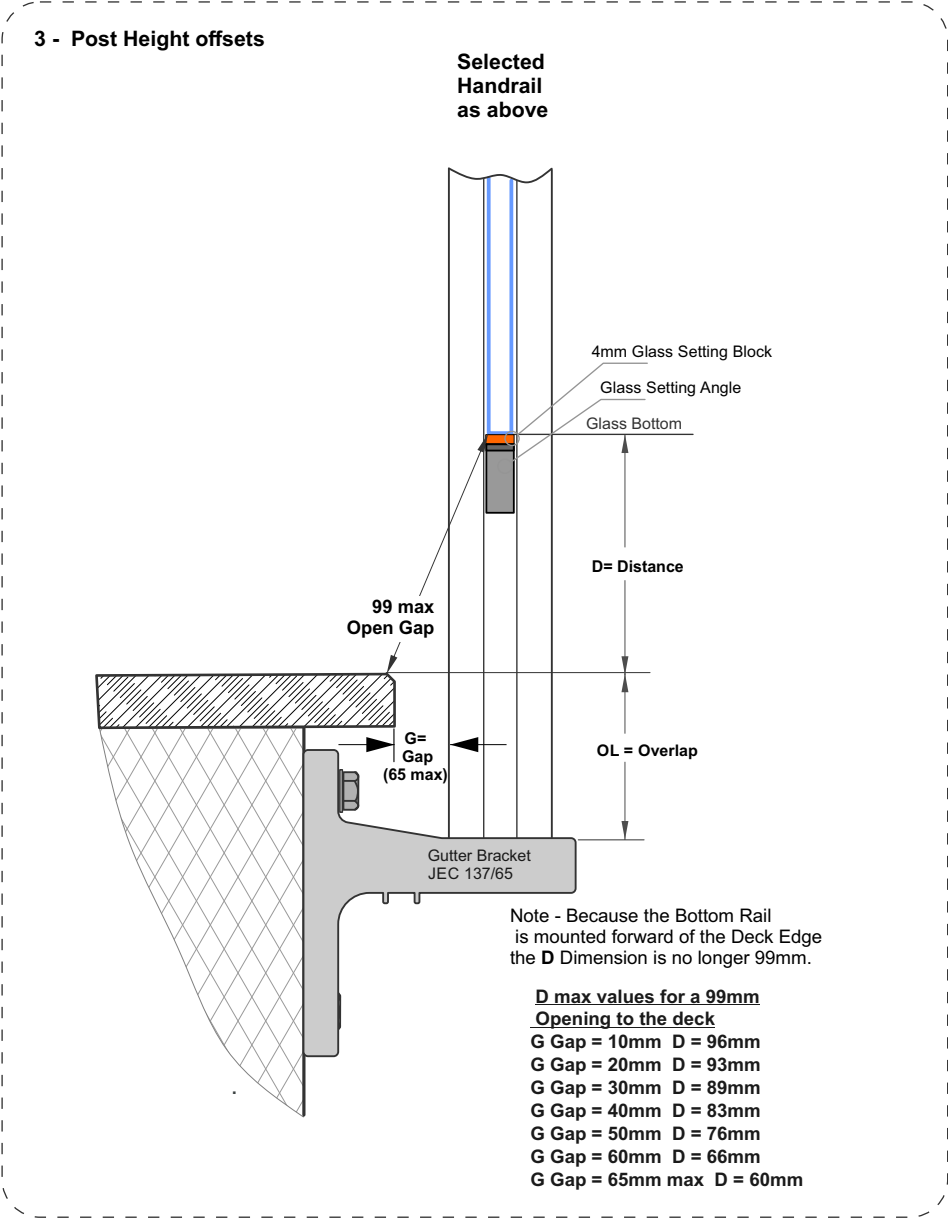
c - 10mm Glass Height  
= HH - **B** - 99

d - 10mm Glass Width  
= PCL - 2x10 = Glass Width



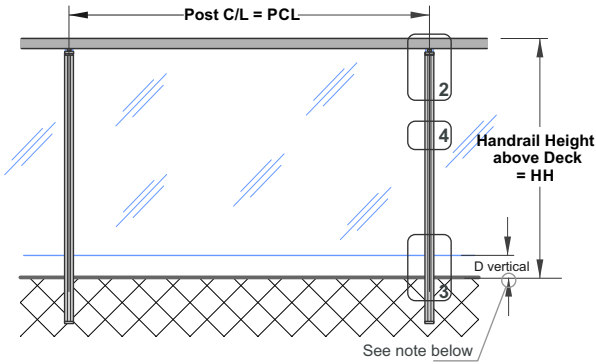


**Important Note: All Glass Engagements 10mm min**

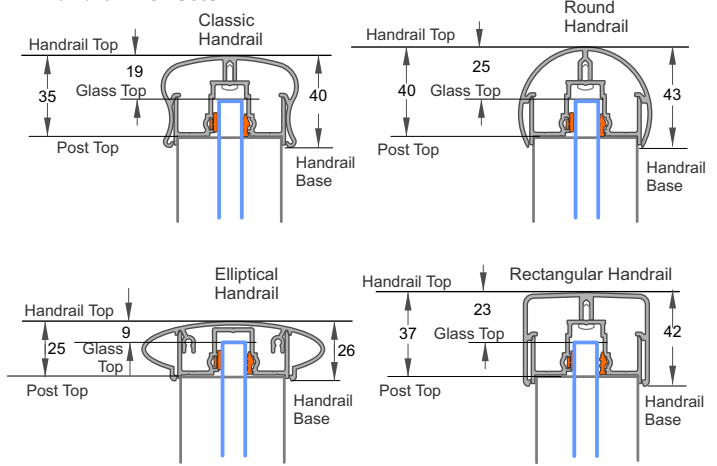


10mm Toughened Glass - Semi Frameless + Handrail. Face Fix

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



**2 - Handrail - Offsets**

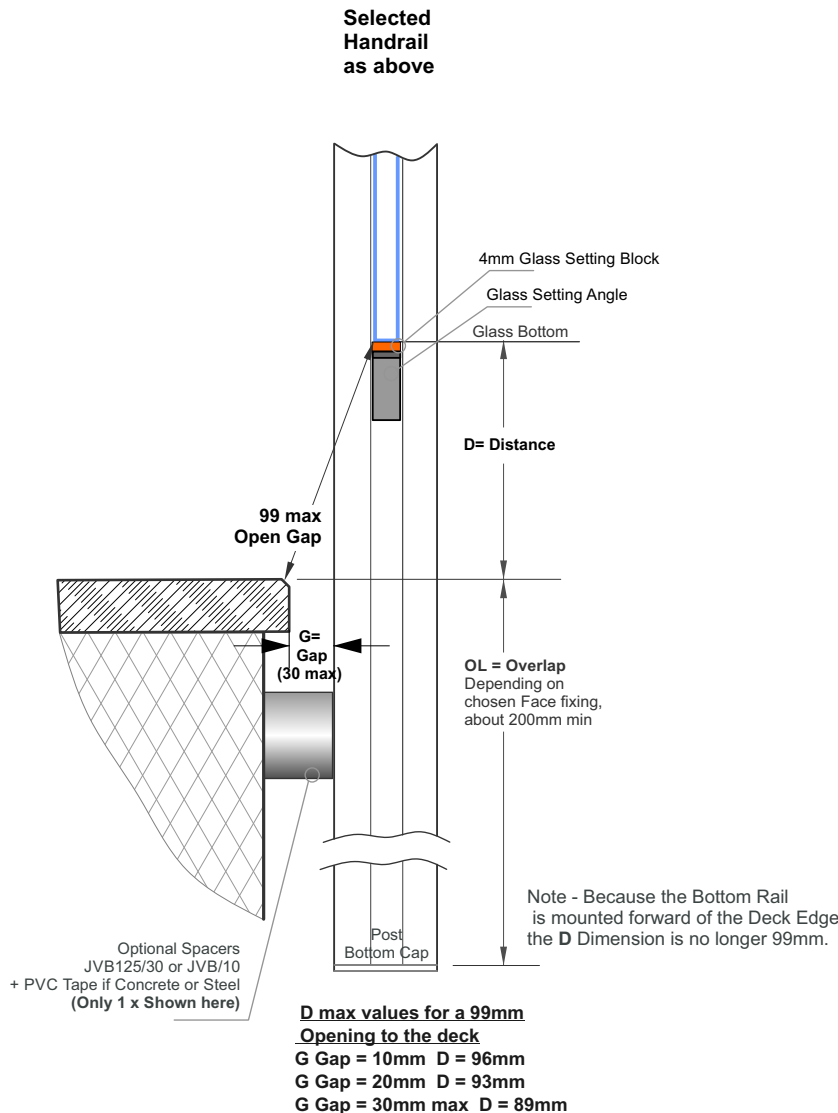


**A**  
For Post Height.  
Post Top to Handrail Top  
25-40 Depending on  
chosen Handrail

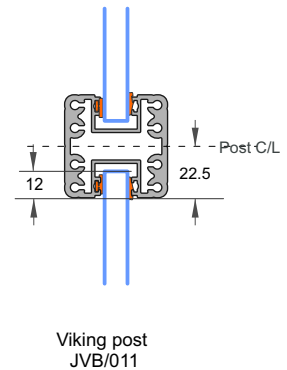
**B**  
For Glass Height  
Glass Top to Handrail Top  
9-25 Depending on  
chosen Handrail

**Important Note: All Glass Engagements 10mm min**

**3 - Post Height offsets**



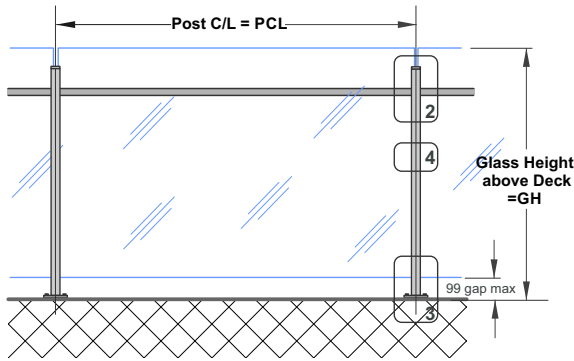
**4 - Width Offsets**



**5 - Cutting Guide**

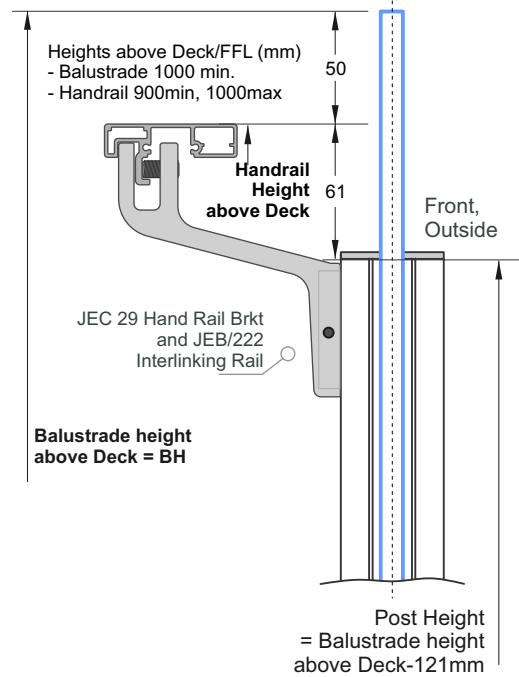
- a - Hand Rail = Use maximum lengths
- b - Post, Cut to  
= HH - A + OL = Post Height
- c - 10mm Glass Height  
= HH - B - D  
= Glass Height
- d - 10mm Glass Width  
= PCL - 2x10 = Glass Width

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



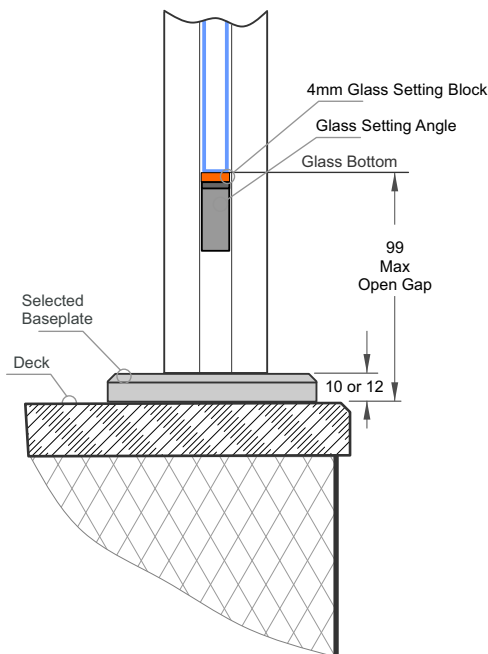
A Corner Post is not suitable available for this configuration

### 2 - Glass Top - Offsets

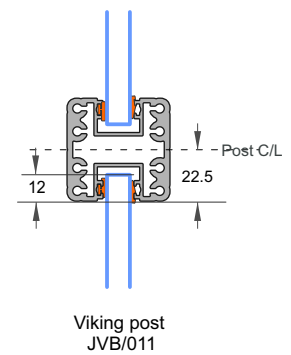


**Important Note: All Glass Engagements 10mm min**

### 3 - Post Height offsets



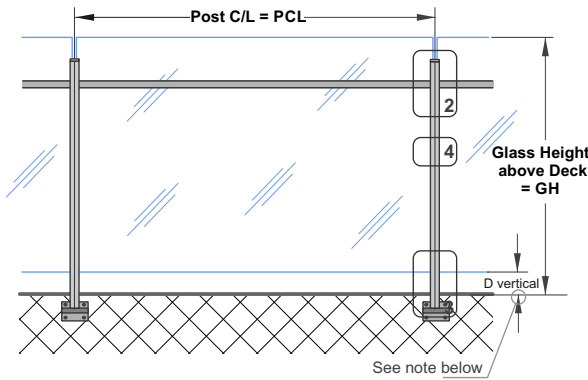
### 4 - Width Offsets



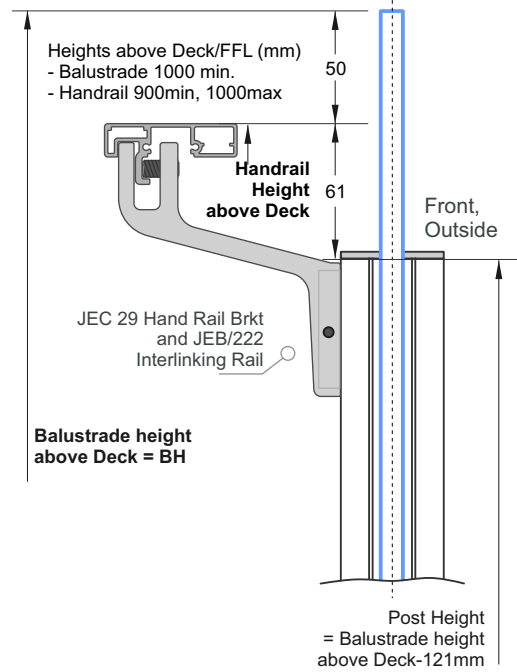
### 5 - Cutting Guide

- a - Hand Rail = Use maximum lengths
- b - Post, Cut to  
= BH - 121 - (10 or 12) = Post Height
- c - 10mm Glass Height  
= BH - 99  
= Glass Height
- d - 10mm Glass Width  
= PCL - 2x10 = Glass Width

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

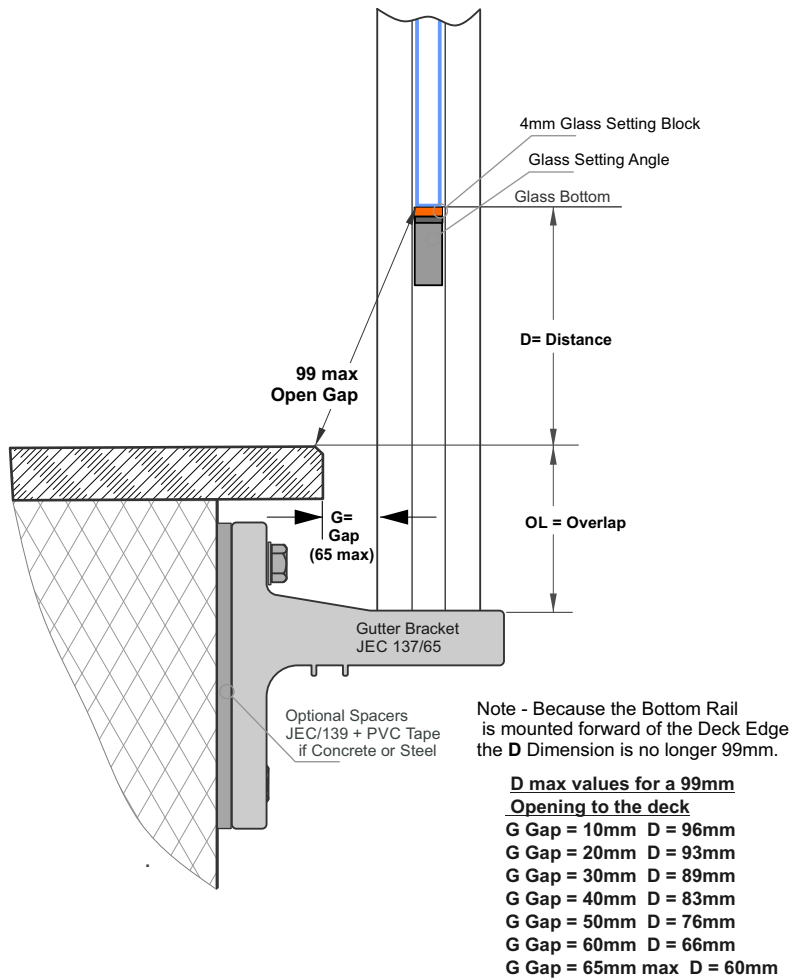


### 2 - Glass Top - Offsets

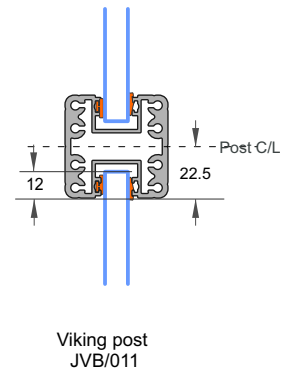


**Important Note: All Glass Engagements 10mm min**

### 3 - Post Height offsets



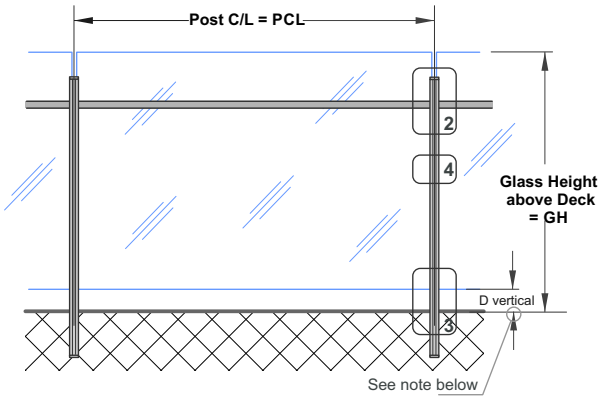
### 4 - Width Offsets



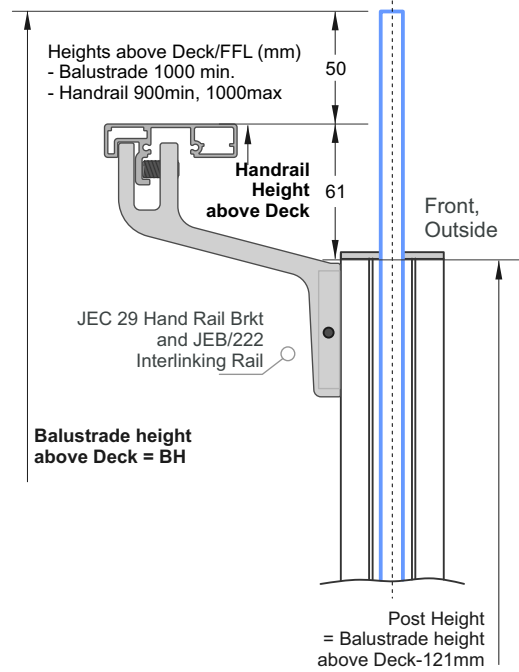
### 5 - Cutting Guide

- a - Hand Rail = Use maximum lengths
- b - Post, Cut to  
= BH - 121 + OL = Post Height
- c - 10mm Glass Height  
= BH - D  
= Glass Height
- d - 10mm Glass Width  
= PCL - 2x10 = Glass Width

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

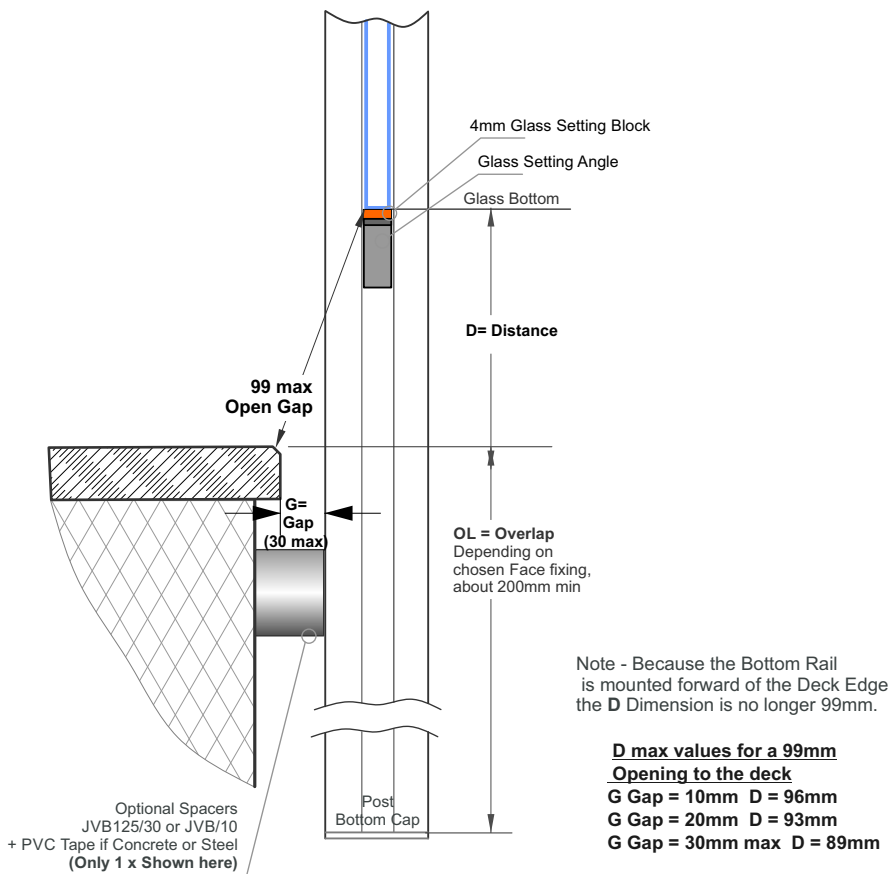


**2 - Glass Top - Offsets**

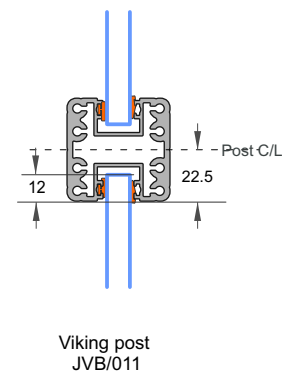


**Important Note: All Glass Engagements 10mm min**

**3 - Post Height offsets**



**4 - Width Offsets**

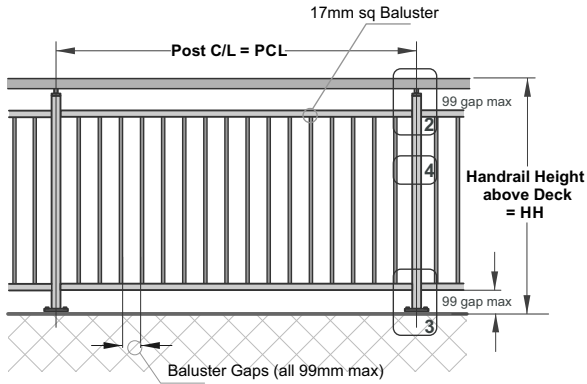


**5 - Cutting Guide**

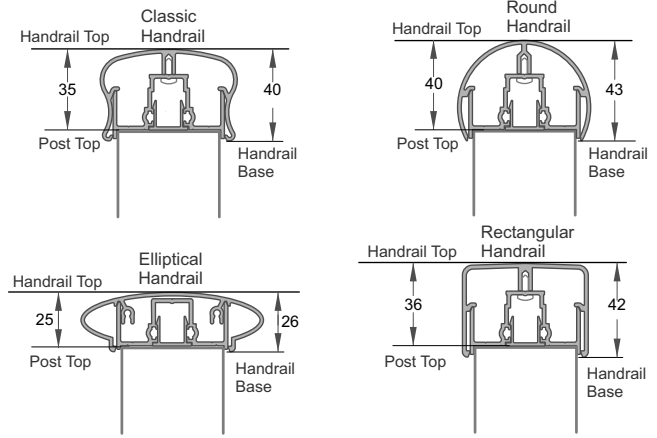
- a - Hand Rail = Use maximum lengths
- b - Post, Cut to  
= BH - 121 + OL = Post Height
- c - 10mm Glass Height  
= BH - D  
= Glass Height
- d - 10mm Glass Width  
= PCL - 2x10 = Glass Width

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.**



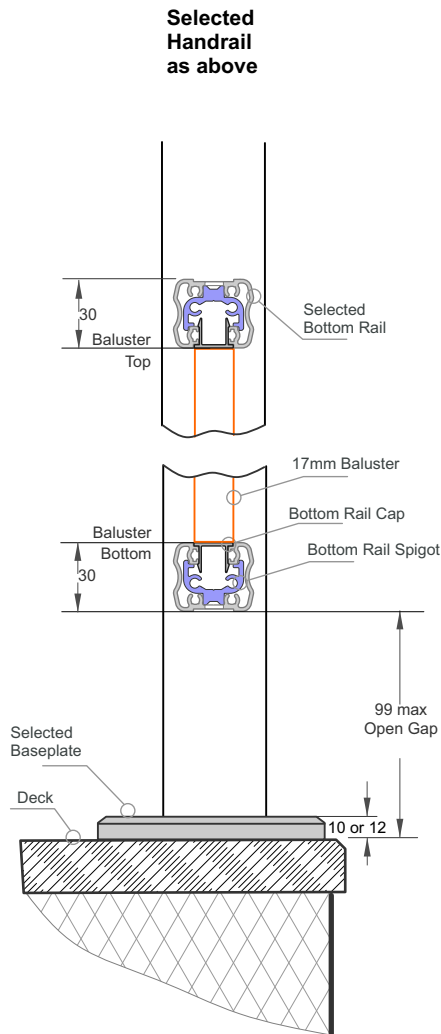
**2 - Handrail - Offsets**



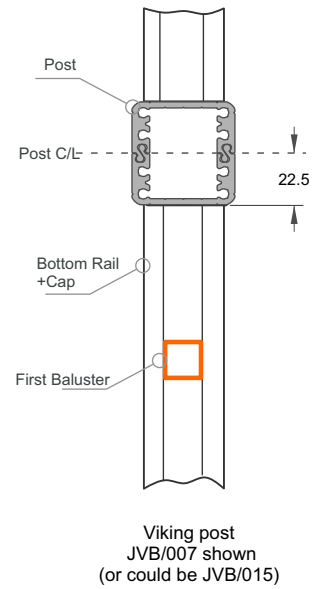
**A**  
For Post Height.  
Post Top to Handrail Top  
25-40 Depending on  
chosen Handrail

**B**  
For Top Gap Height  
Handrail Base to Handrail Top  
26-43 Depending on  
chosen Handrail

**3 - Post Height offsets**



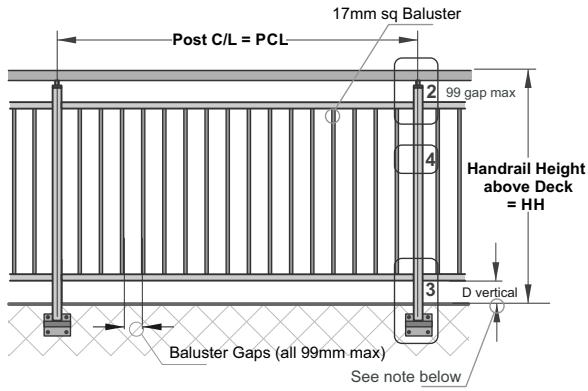
**4 - Width Offsets**



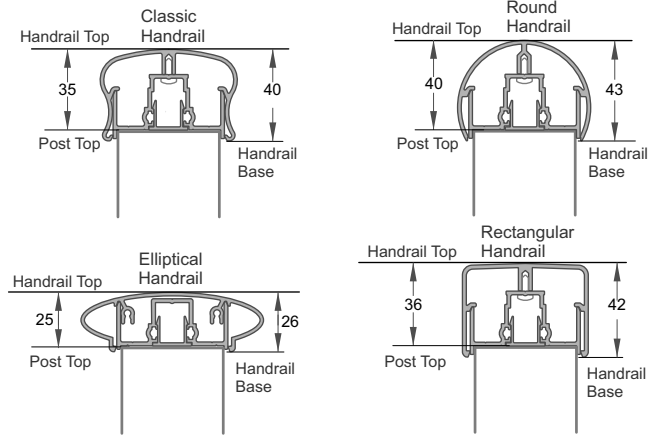
**5 - Cutting Guide**

- a - Hand Rail = Use maximum lengths
- b - Post, Cut to  
= HH - **A** - (10 or 12) = Post Height
- c - Bottom Rail (x2), Cut to  
= PCL - 2x22.5 = PCL - 45
- d - 17mm Balustrade Height  
= HH - **B** - 2x99 - 2x30

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



**2 - Handrail - Offsets**

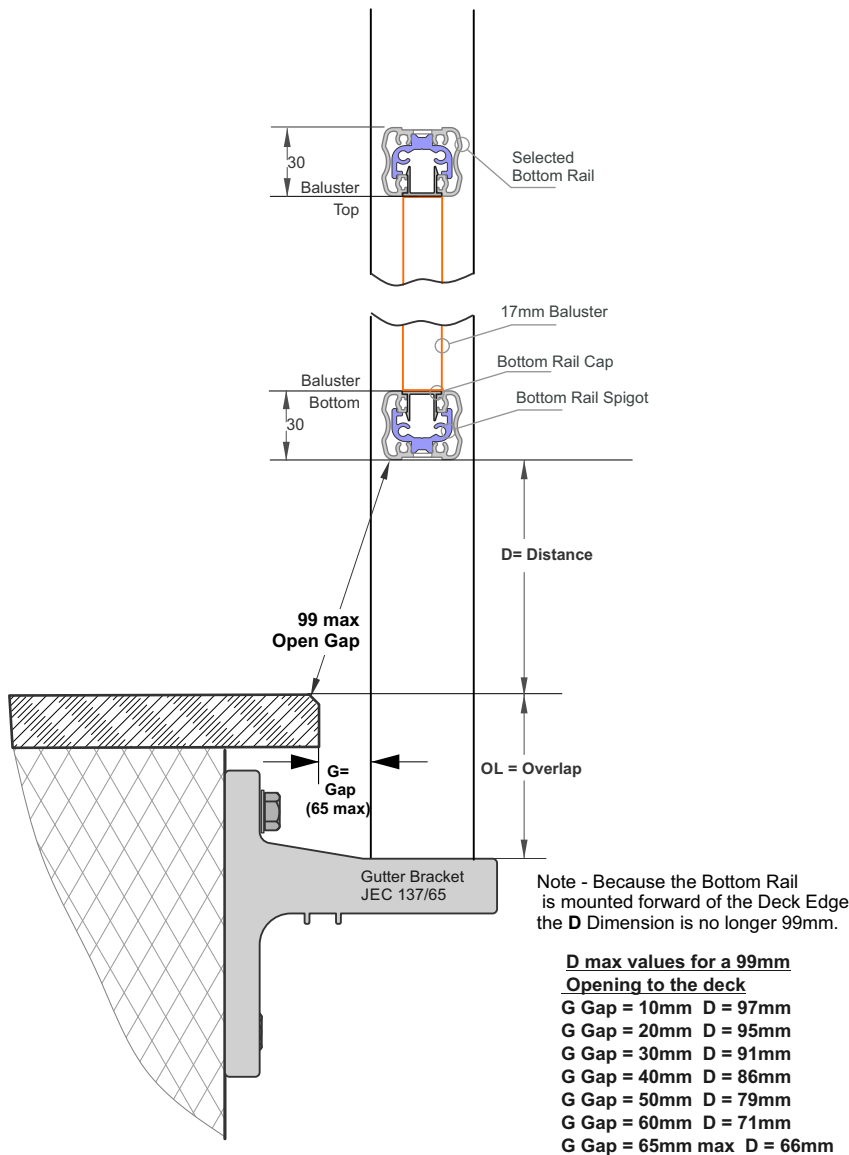


**A**  
For Post Height.  
Post Top to Handrail Top  
25-40 Depending on  
chosen Handrail

**B**  
For Top Gap Height  
Handrail Base to Handrail Top  
26-43 Depending on  
chosen Handrail

**3 - Post Height offsets**

Selected Handrail as above

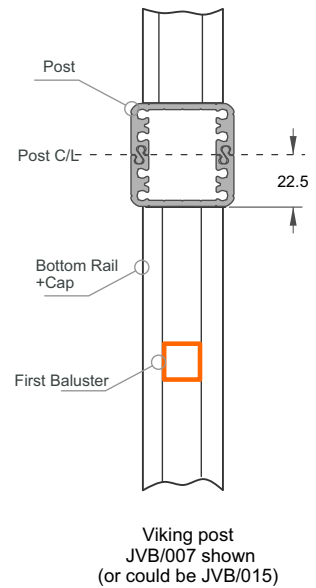


Note - Because the Bottom Rail is mounted forward of the Deck Edge the D Dimension is no longer 99mm.

**D max values for a 99mm Opening to the deck**

|                  |          |
|------------------|----------|
| G Gap = 10mm     | D = 97mm |
| G Gap = 20mm     | D = 95mm |
| G Gap = 30mm     | D = 91mm |
| G Gap = 40mm     | D = 86mm |
| G Gap = 50mm     | D = 79mm |
| G Gap = 60mm     | D = 71mm |
| G Gap = 65mm max | D = 66mm |

**4 - Width Offsets**



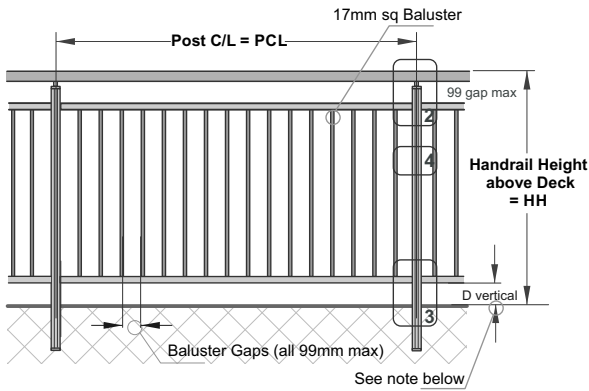
Viking post JVB/007 shown (or could be JVB/015)

**5 - Cutting Guide**

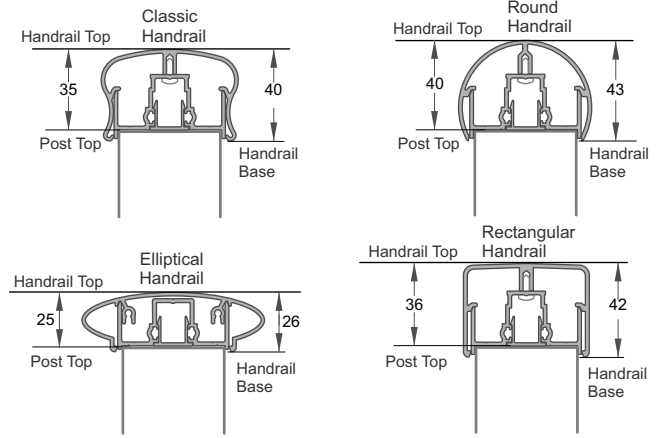
- a - Hand Rail = Use maximum lengths
- b - Post, Cut to  
= HH - **A** + OL = Post Height
- c - Bottom Rail (x2), Cut to  
= PCL - 2x22.5 = PCL - 45
- d - 17mm Balustrade Height  
= HH - **B** - 99 - D - 2x30



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



**2 - Handrail - Offsets**

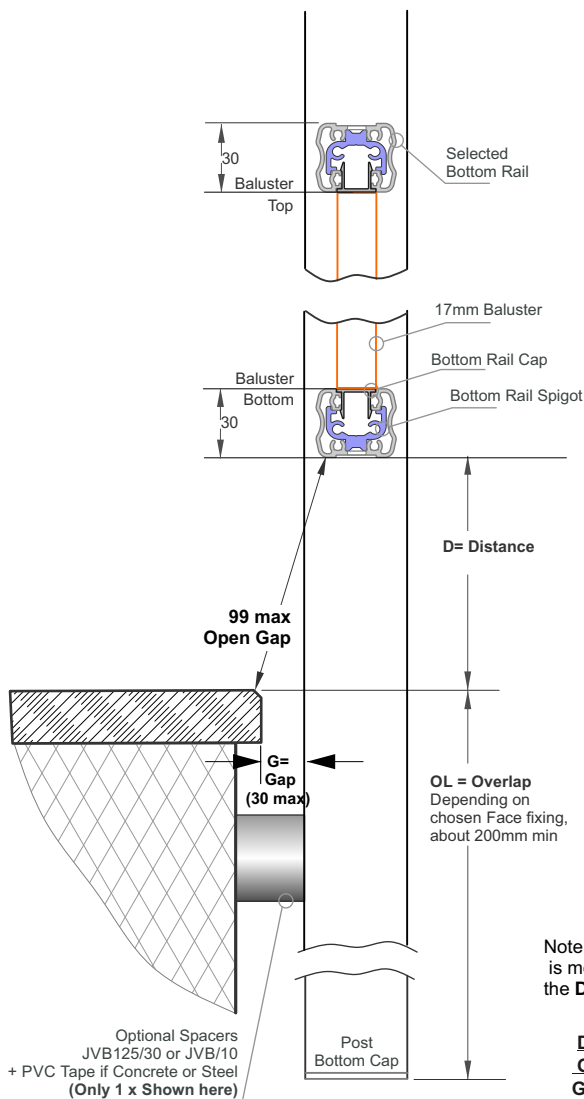


**A**  
For Post Height.  
Post Top to Handrail Top  
25-40 Depending on  
chosen Handrail

**B**  
For Top Gap Height  
Handrail Base to Handrail Top  
26-43 Depending on  
chosen Handrail

**3 - Post Height offsets**

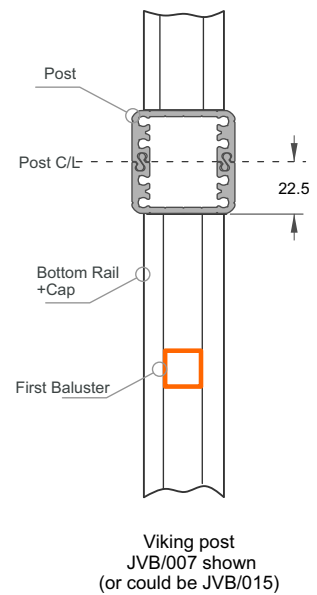
Selected  
Handrail  
as above



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 = 97mm  
G Gap = 20mm D = 95mm  
G Gap = 30mm max D = 91mm

**4 - Width Offsets**

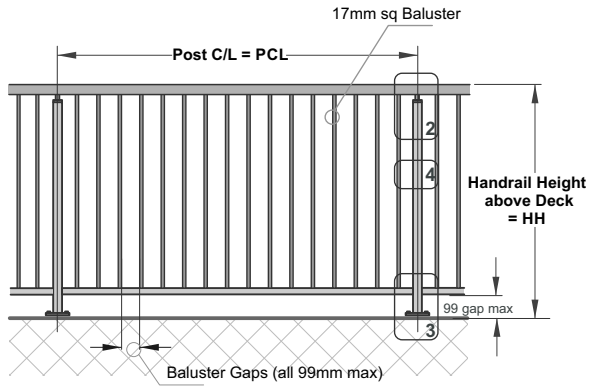


**5 - Cutting Guide**

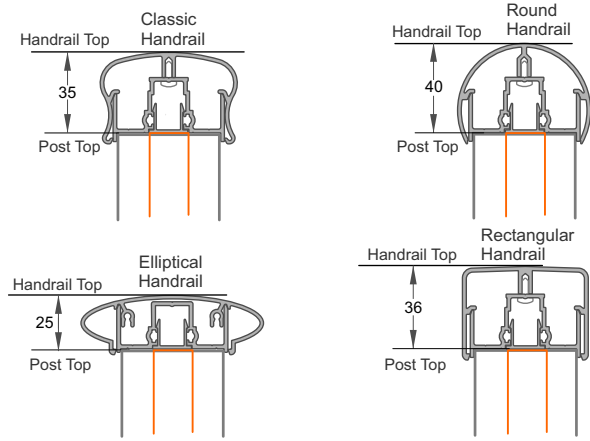
- a - Hand Rail = Use maximum lengths
- b - Post, Cut to  
= HH - **A** + OL = Post Height
- c - Bottom Rail (x2), Cut to  
= PCL - 2x22.5 = PCL - 45
- d - 17mm Balustrade Height  
= HH - **B** - 99 - D - 2x30

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.**

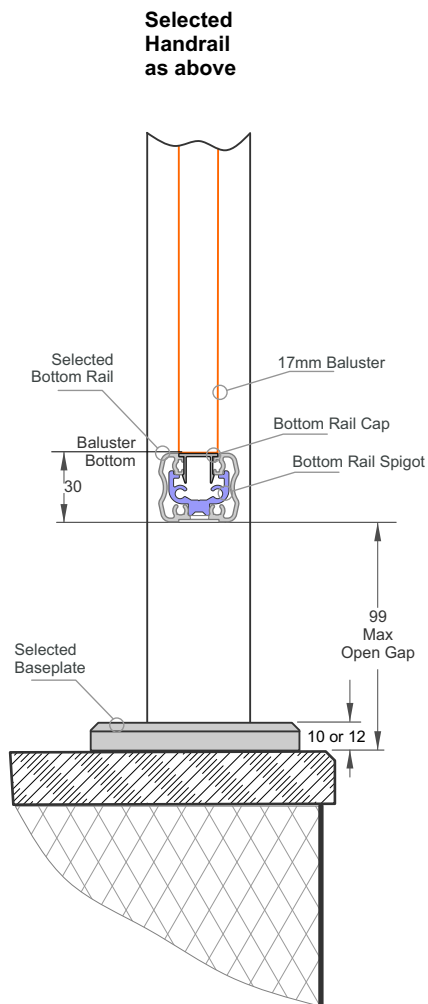


**2 - Handrail - Offsets**

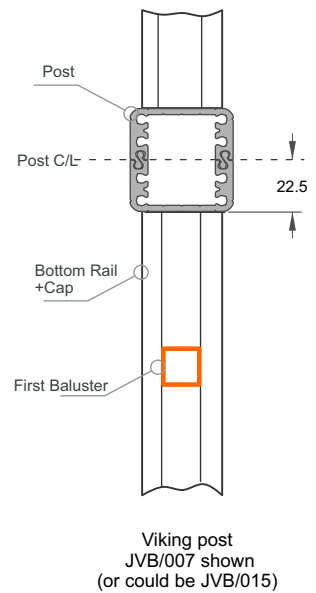


**A**  
For Post and Baluster Top Height.  
Post Top to Handrail Top  
25-40 Depending on  
chosen Handrail

**3 - Post Height offsets**



**4 - Width Offsets**

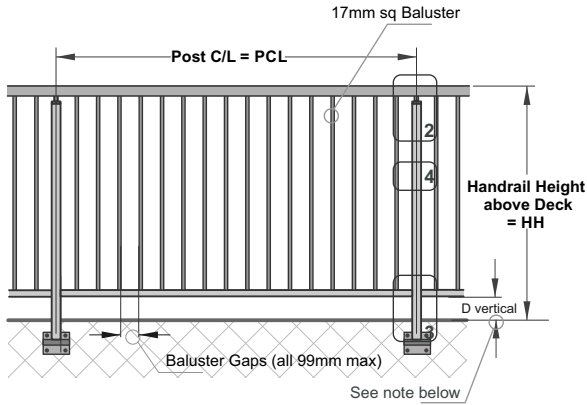


Viking post  
JVB/007 shown  
(or could be JVB/015)

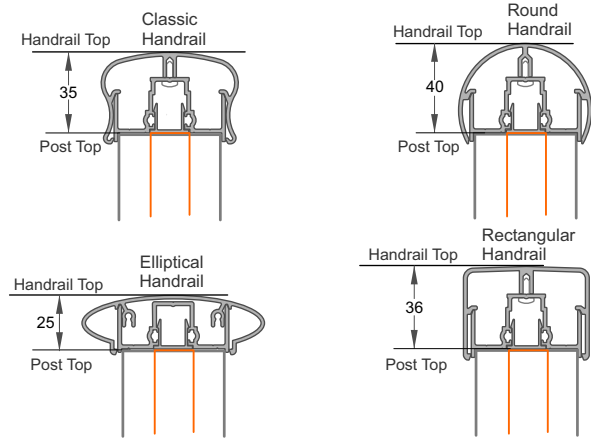
**5 - Cutting Guide**

- a - Hand Rail = Use maximum lengths
- b - Post, Cut to  
= HH - A - (10 or 12) = Post Height
- c - Bottom Rail (x2), Cut to  
= PCL - 2x22.5 = PCL - 45
- d - 17mm Balustrade Height  
= HH - A - 99 - 30

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

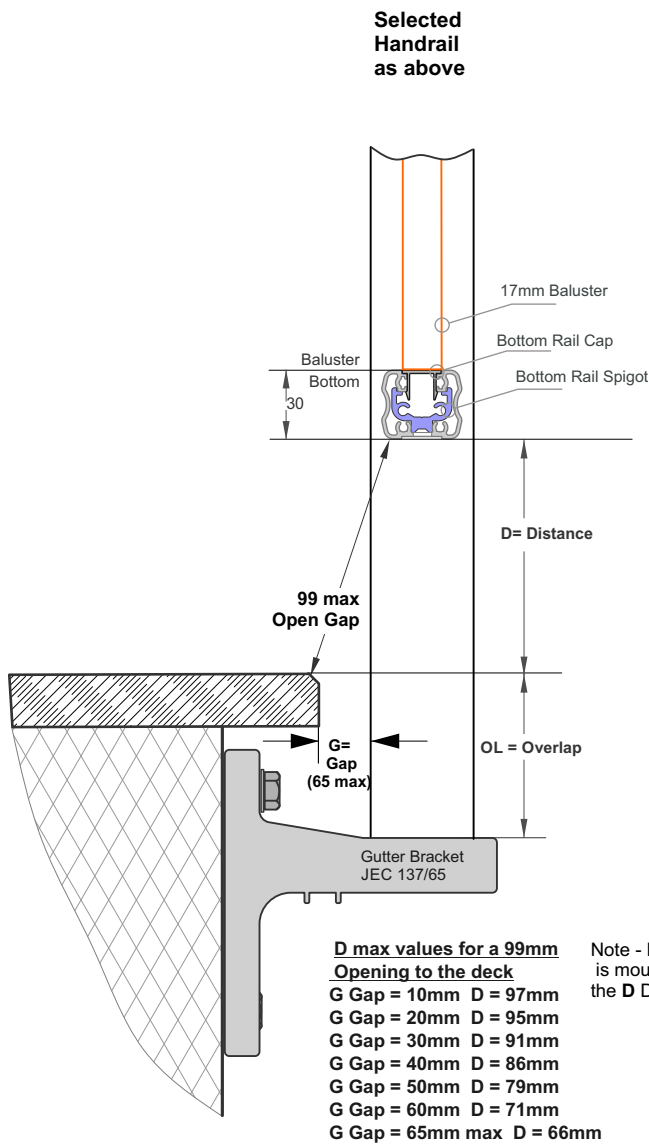


**2 - Handrail - Offsets**



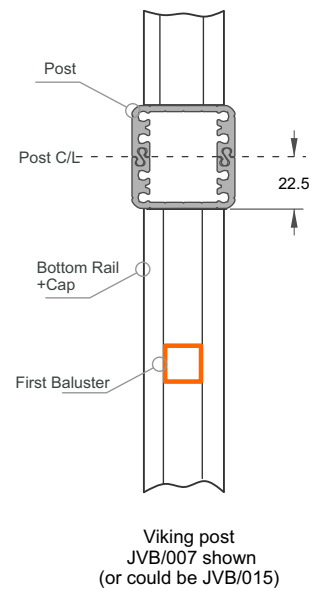
**A**  
For Post and Baluster Top Height.  
Post Top to Handrail Top  
25-40 Depending on  
chosen Handrail

**3 - Post Height offsets**



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

**4 - Width Offsets**

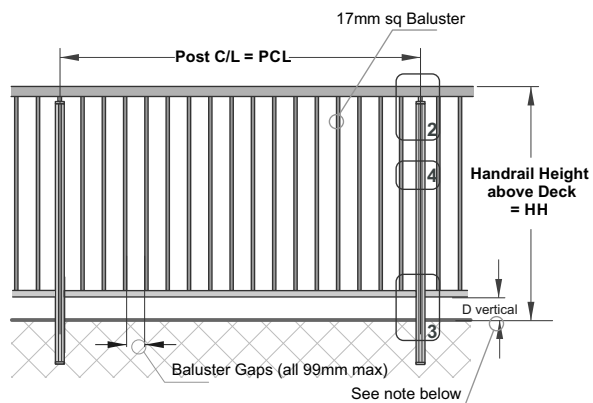


**5 - Cutting Guide**

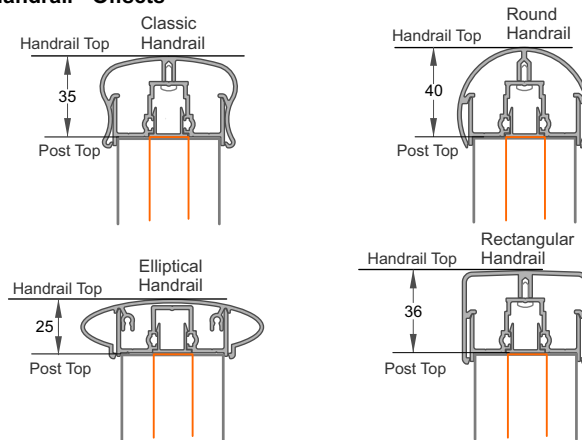
- a - Hand Rail = Use maximum lengths
- b - Post, Cut to  
= HH - **A** + OL = Post Height
- c - Bottom Rails (x2), Cut to  
= PCL - 2x22.5 = PCL - 45
- d - 17mm Balustrade Height  
= HH - **A** - 99 - 30

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.

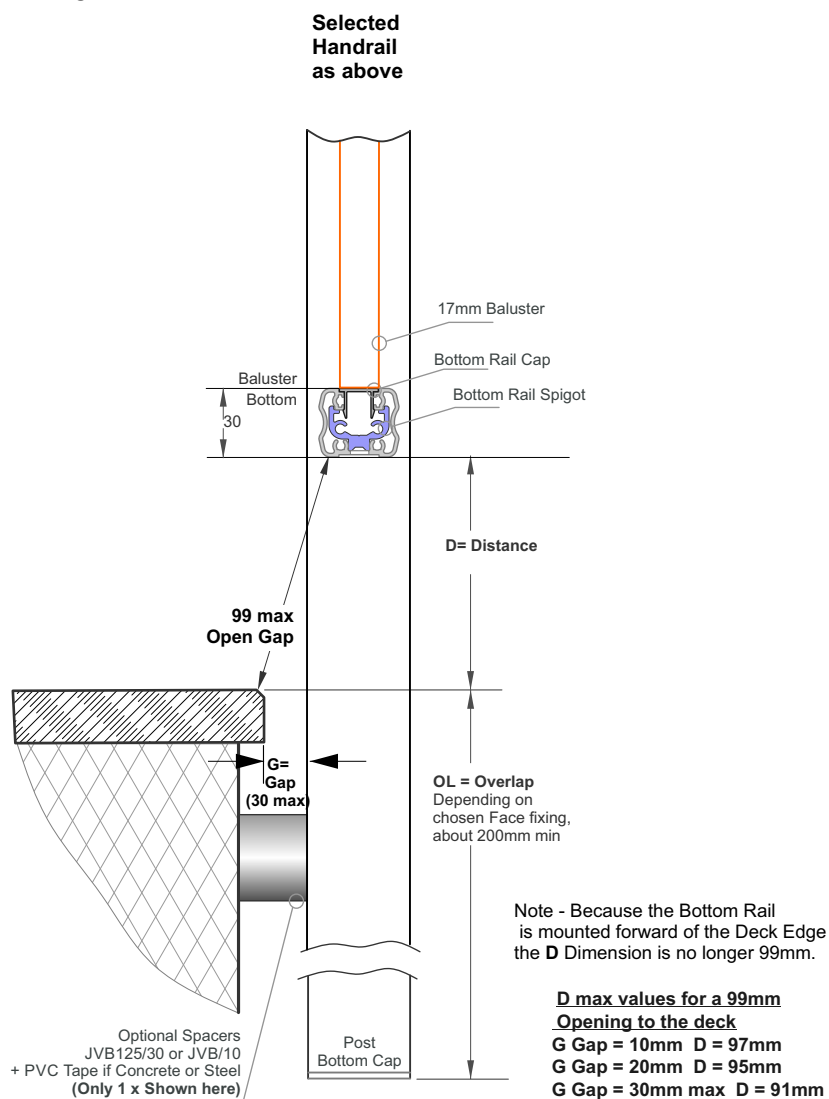


2 - Handrail - Offsets

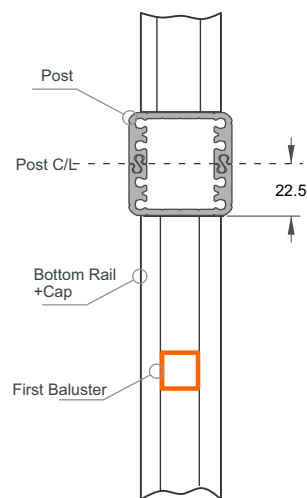


**A**  
For Post and Baluster Top Height.  
Post Top to Handrail Top  
25-40 Depending on  
chosen Handrail

3 - Post Height offsets



4 - Width Offsets

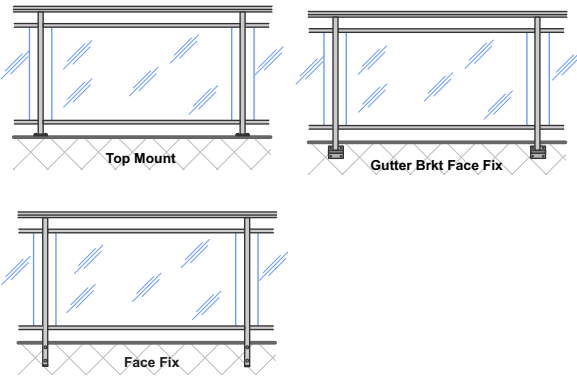


Viking post JVB/007 shown (or could be JVB/015)

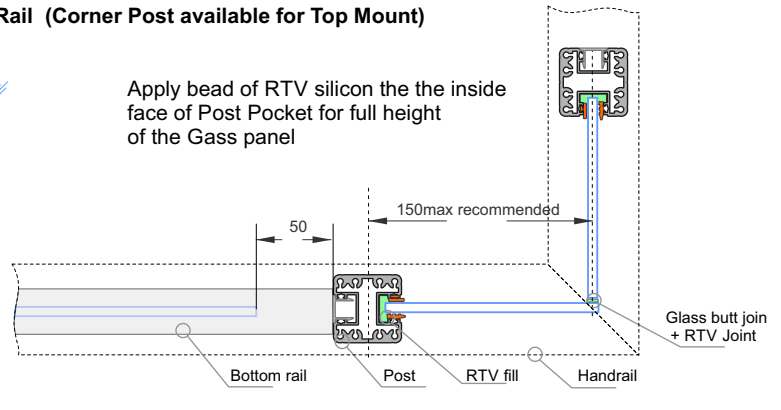
5 - Cutting Guide

- a - Hand Rail = Use maximum lengths
- b - Post, Cut to = HH - A + OL = Post Height
- c - Bottom Rails (x2), Cut to = PCL - 2x22.5 = PCL - 45
- d - 17mm Balustrade Height = HH - A - 99 - 30

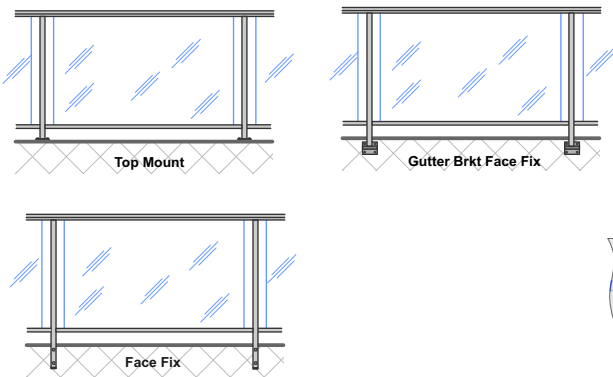
**6mm Glass, Inline - Split Rail (Corner Post available for Top Mount)**



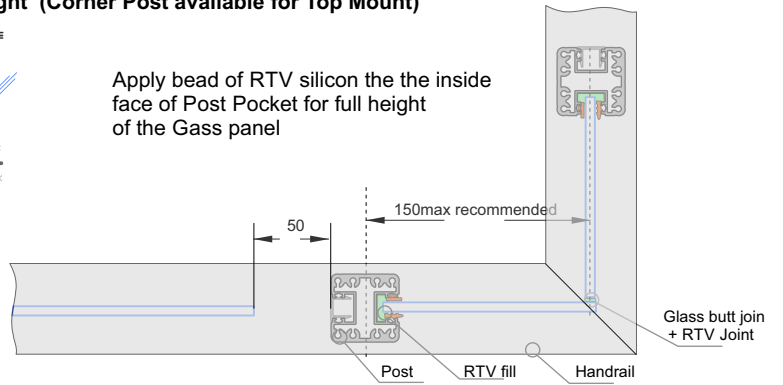
Apply bead of RTV silicon the the inside face of Post Pocket for full height of the Gass panel



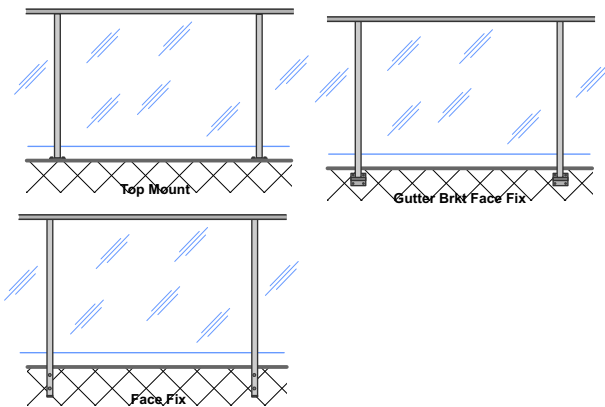
**6mm Glass, Inline - Full Height (Corner Post available for Top Mount)**



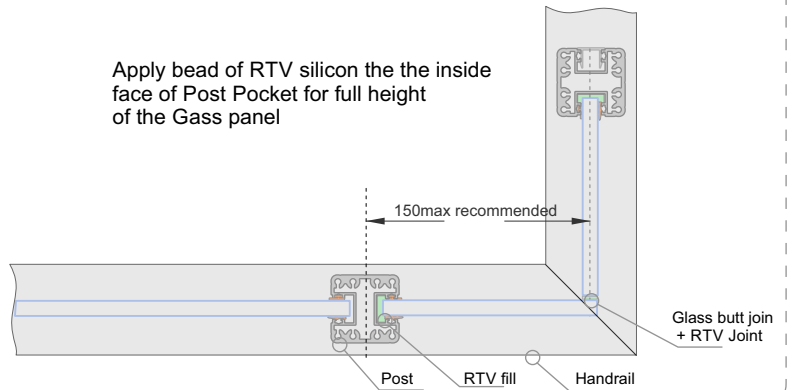
Apply bead of RTV silicon the the inside face of Post Pocket for full height of the Gass panel



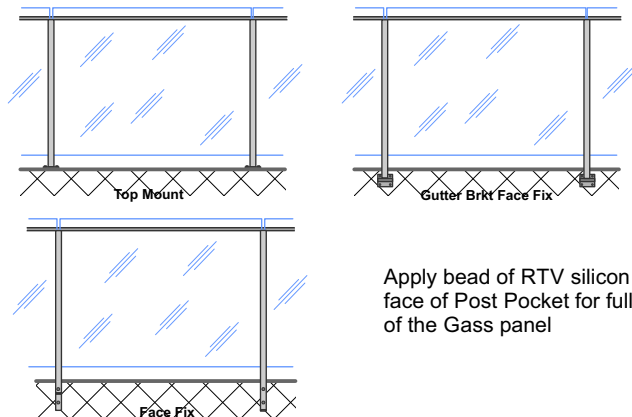
**10mm Toughened Glass - Semi Frameless.w Handrail (Corner Post available for Top Mount)**



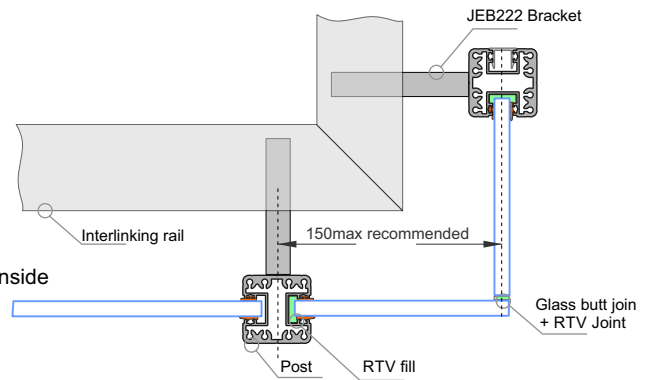
Apply bead of RTV silicon the the inside face of Post Pocket for full height of the Gass panel



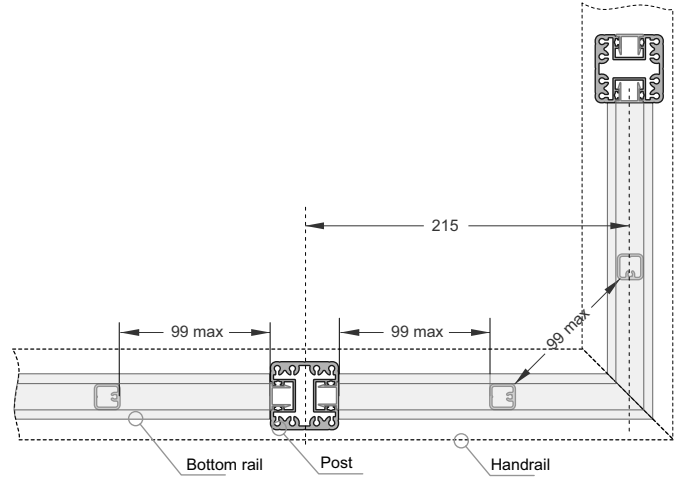
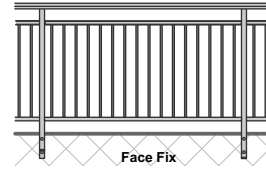
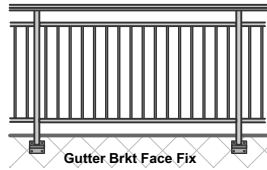
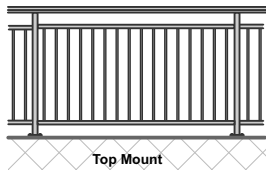
**10mm Toughened Glass - Semi Frameless - JEB 222 Interlinking Rail + JEC29 Brackets, Deck side.**



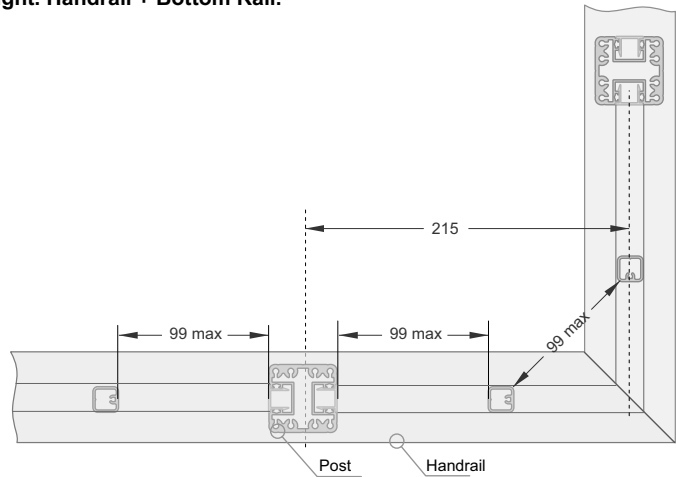
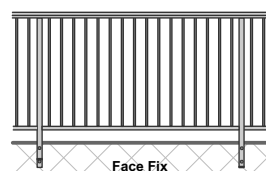
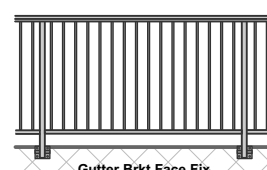
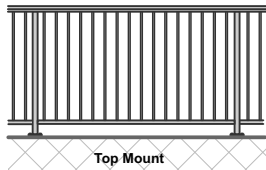
Apply bead of RTV silicon the the inside face of Post Pocket for full height of the Gass panel



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



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



## Juralco Viking® Balustrade System - Glass Care and Maintenance

### 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 "pick-up" 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.

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#### **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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# Juralco Viking® Balustrade System - Powder Coating Care and Maintenance

## Powder Coating Installation Care

### Warning re use of solvents:

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

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

### Joinery Protection during Installation:

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

Please ensure that all powder coated articles are 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

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