



Infinity
BA122 Base Fix and
BA124 Side Fix
Glass Balustrade Systems
Manual

MFG Infinity BA122 and BA124 Glass Balustrade Systems

Complies With AS/NZS 1170:2002, NZS 4223.3.2016, NZBC B1, B2, F2, F4 and the FOSP Act 1987

**MFG Infinity BA122 and BA124 Balustrades are for Domestic and Residential Occupancy types A, A Other and C3 and for Commercial Occupancy Types B, E, A Other and C3
Occupancy Types as per AS/NZ 1170.1.2002. Not suitable for Commercial C1/C2, C5 and D applications**

Code	Type of Occupancy for part of the building or structure	Specific Uses	Glass
A	Domestic and Residential activities	All areas within or serving exclusively one dwelling including stairs, landings etc, but excluding external balconies and edges of roofs. (see C3)	Residential, 12mm Toughened Glass
B, E	Offices and work areas not included elsewhere including storage areas.	Light access stairs and gangways not more than 600mm wide Fixed platforms, walkways, stairways and ladders for access Areas not susceptible to overcrowding in office and institutional buildings; also industrial and storage building.	Commercial, 15mm 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.	Residential, 12mm Toughened Glass Commercial, 15mm Toughened Glass

Note 1 For 12mm and 15mm Toughened Glass as applicable.
Glass must have a minimum strength of 100MPa. All edges polished

Note 2 The Dulux powder coating warranty period is conditional upon the Balustrade being maintained in accordance with the Dulux 'Care and Maintenance Instructions'. See Page 5 for warnings concerning Coastal conditions.
Contact your balustrade installer for a copy of the Care and Maintenance procedure.

Note 3 MFG Systems building code compliance documentation requires all balustrade installations are to be completed in accordance with their requirements.

Note 4 All Frameless glass balustrades must have an Interlinking Rail to conform to NZS 4223.3.2016

Index

Heading	Pages	Description
All Sections Below for BA 124 Side Fix only		
Configurations	3 - 5	Shows typical layouts for Residential 12mm Toughened and Commercial 15mm Toughened Glass
Top Rail	6	Show Interlinking Rail and Typical layout all conforming to NZS 4223.3.2016
General	7	Shows Infinity Clamp Cross section
Components	8 - 10	Shows all Components and Extrusions
Mountings	11 - 20	Shows Mounting details - All Side fixed. To Timber, Concrete and Steel
Installation	21	15 step Recommended Installation guide.
All Sections below for BA 122 Base Fix only		
Configurations	22 - 23	Shows typical layouts for Residential 12mm Toughened and Commercial 15mm Toughened Glass
Top Rail	24	Show Interlinking Rail and Typical layout all conforming to NZS 4223.3.2016
General	25	Shows Infinity Clamp Cross section
Components	26 - 27	Shows all Components and Extrusions
Mountings	28 - 30	Shows Mounting details - All Base fixed. To Timber, Concrete and Steel
General Care		
Surface Care	31 - 32	Instructions for the care of Powder coated and Glass surfaces.

MFG Infinity BA124 Side Fix Glass Balustrade System

Typical Layouts - Residential, 12mm Toughened Glass only

2 x Infinity Glass Clamps
per Panel. Side Fix

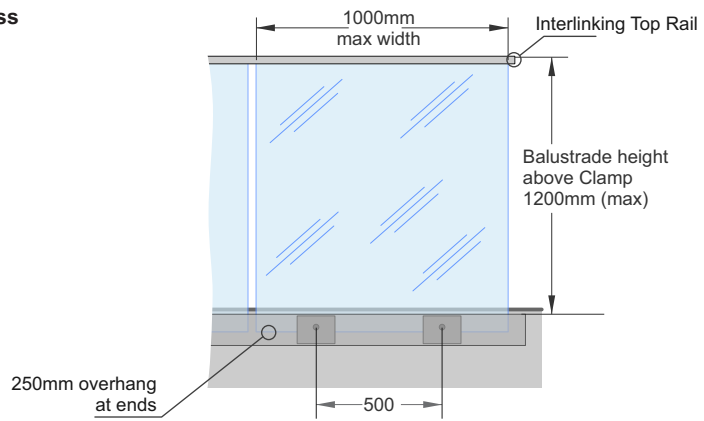
Residential, 12mm glass

MFG Infinity Balustrade
for Domestic and Residential Occupancy
types A, A Other and C3 only

All for 12mm toughened Glass.
Glass must have a minimum strength of 100MPa
All edges polished

Exceeds the wind loading for all Wind Zones
up to **and including** Very High Wind Zone
as set out in NZS 3604:2011

Refer to the Interlinking Top Rail page
for conformance to NZS 4223.3.2016



3 x Infinity Glass Clamps
per Panel. Side Fix

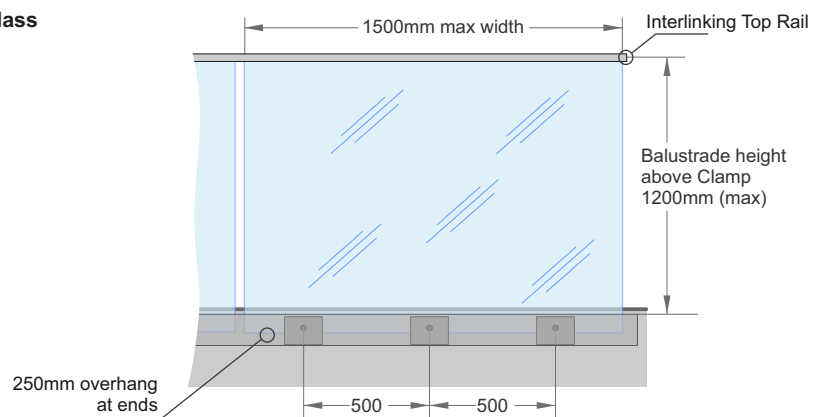
Residential, 12mm glass

MFG Infinity Balustrade
for Domestic and Residential Occupancy
types A, A Other and C3 only

All for 12mm toughened Glass.
Glass must have a minimum strength of 100MPa
All edges polished

Exceeds the wind loading for all Wind Zones
up to **and including** Very High Wind Zone
as set out in NZS 3604:2011

Refer to the Interlinking Top Rail page
for conformance to NZS 4223.3.2016



4 x Infinity Glass Clamps
per Panel. Side Fix

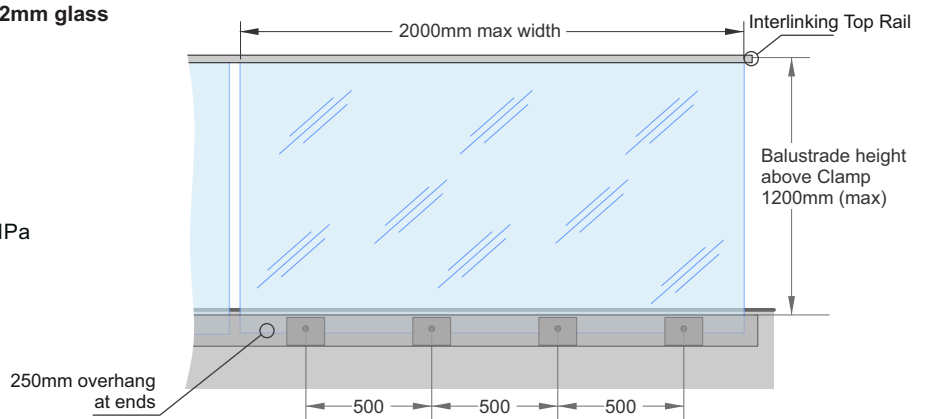
Residential, 12mm glass

MFG Infinity Balustrade
for Domestic and Residential Occupancy
types A, A Other and C3 only

All for 12mm toughened Glass.
Glass must have a minimum strength of 100MPa
All edges polished

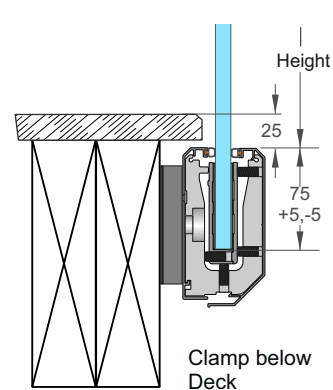
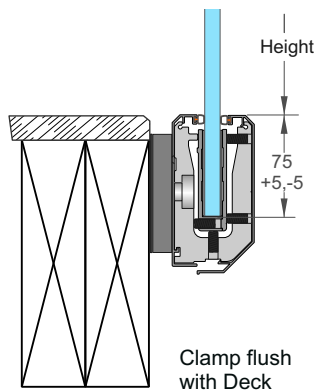
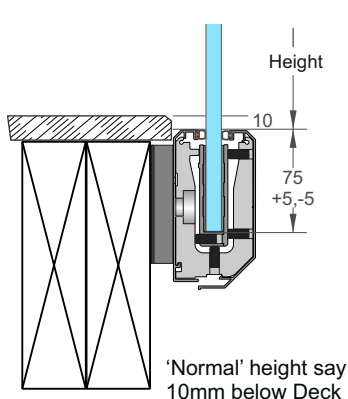
Exceeds the wind loading for all Wind Zones
up to **and including** Very High Wind Zone
as set out in NZS 3604:2011

Refer to the Interlinking Top Rail page
for conformance to NZS 4223.3.2016



Infinity Glass Clamps
Timber Deck Height Options

The 15mm Spacer is
recommended for
Timber deck installations



MFG Infinity BA124 Side Fix Glass Balustrade System

Typical Layouts - Commercial, 15mm Toughened Glass only

2 x Infinity Glass Clamps
per Panel. Side Fix

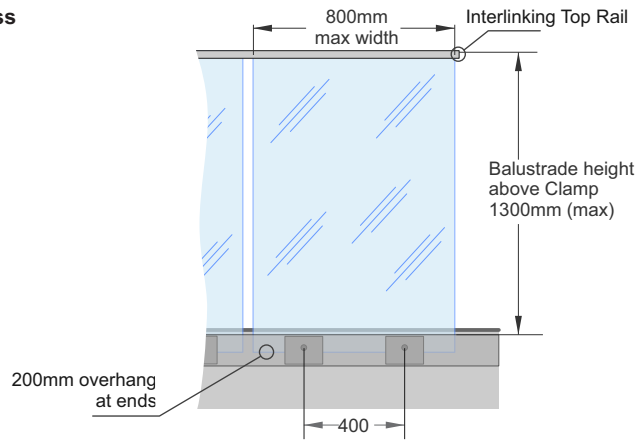
Commercial, 15mm glass

MFG Infinity Balustrade
for Commercial Occupancy
types B, E, and C3 only

All for 15mm toughened Glass.
Glass must have a minimum strength of 100MPa
All edges polished

Exceeds the wind loading for all Wind Zones
up to **and including** Very High Wind Zone
as set out in NZS 3604:2011

Refer to the Interlinking Top Rail page
for conformance to NZS 4223.3.2016



3 x Infinity Glass Clamps
per Panel. Side Fix

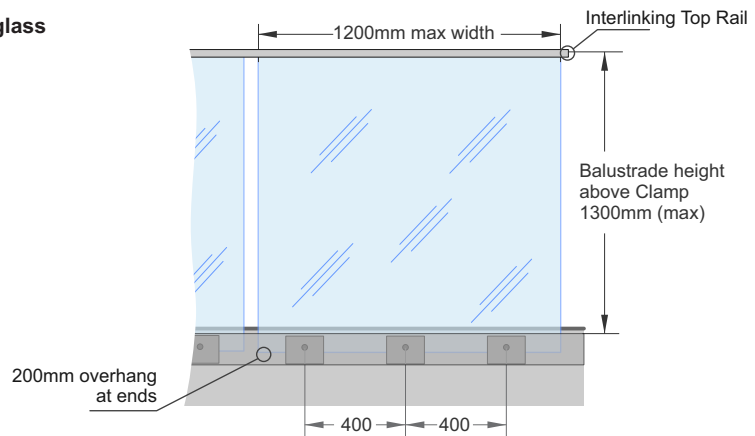
Commercial, 15mm glass

MFG Infinity Balustrade
for Commercial Occupancy
types B, E, and C3 only

All for 15mm toughened Glass.
Glass must have a minimum strength of 100MPa
All edges polished

Exceeds the wind loading for all Wind Zones
up to **and including** Very High Wind Zone
as set out in NZS 3604:2011

Refer to the Interlinking Top Rail page
for conformance to NZS 4223.3.2016



4 x Infinity Glass Clamps
per Panel. Side Fix

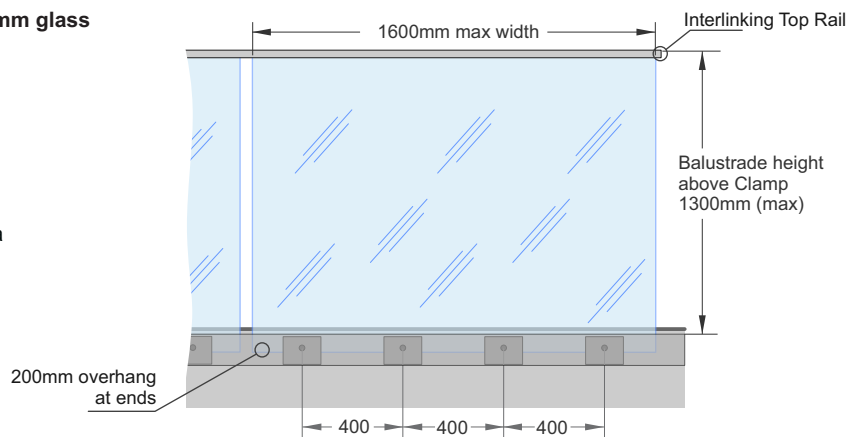
Commercial, 15mm glass

MFG Infinity Balustrade
for Commercial Occupancy
types B, E, and C3 only

All for 15mm toughened Glass.
Glass must have a minimum strength of 100MPa
All edges polished

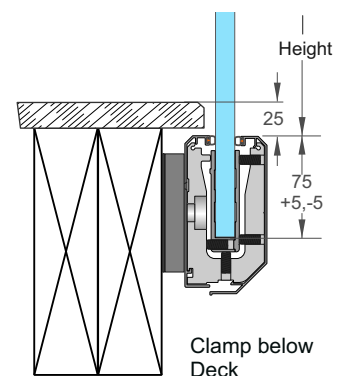
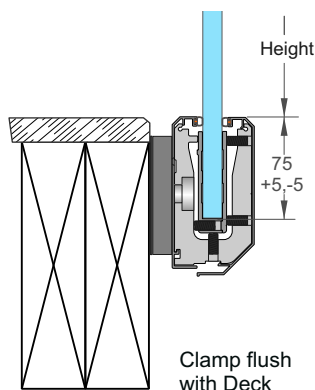
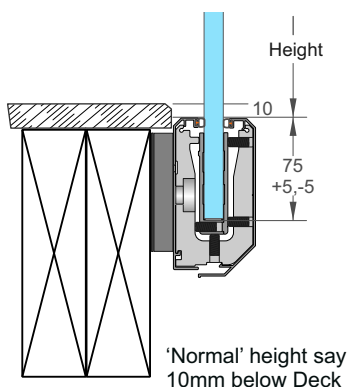
Exceeds the wind loading for all Wind Zones
up to **and including** Very High Wind Zone
as set out in NZS 3604:2011

Refer to the Interlinking Top Rail page
for conformance to NZS 4223.3.2016



Infinity Glass Clamps
Timber Deck Height Options

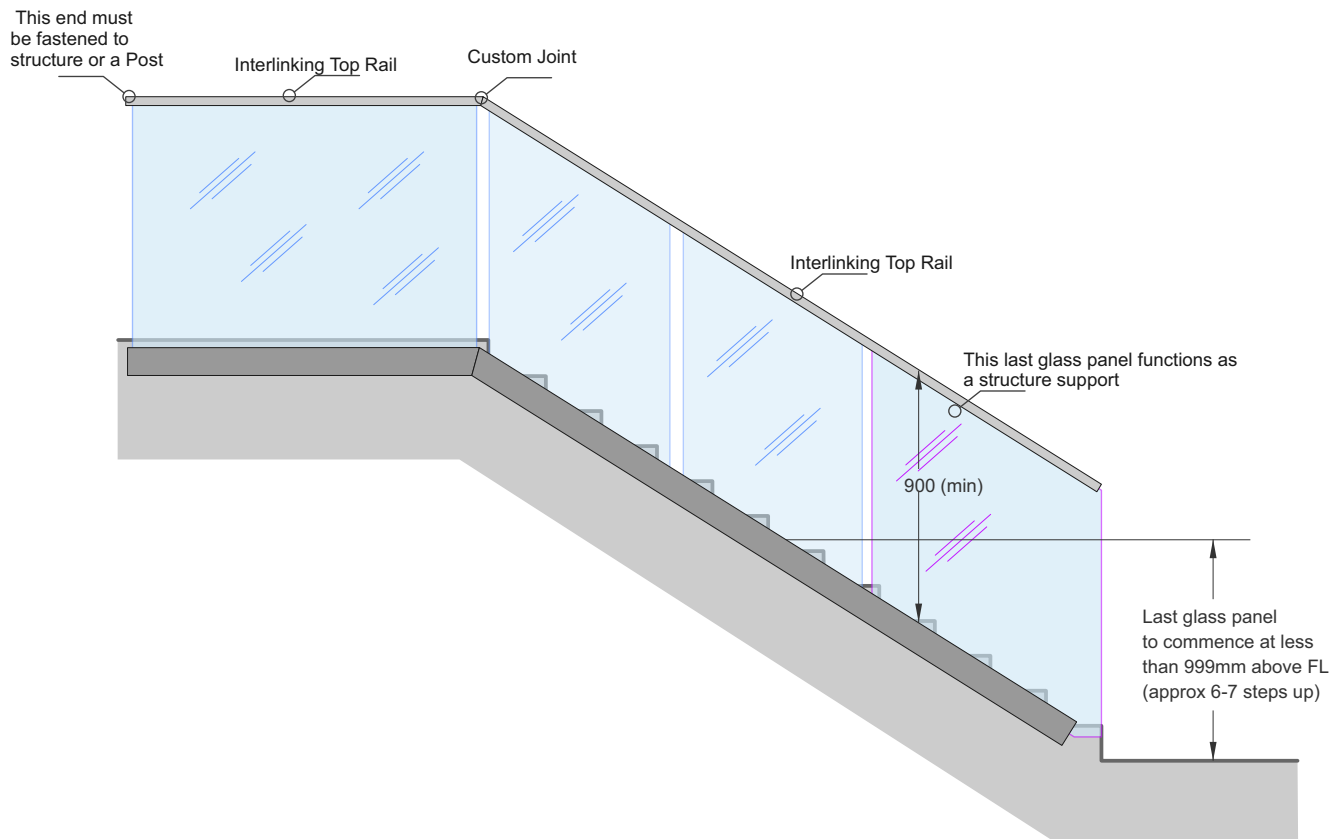
The 15mm Spacer is
recommended for
Timber deck installations



MFG Infinity BA124 Side Fix Glass Balustrade System - Typical Stair Layout

Infinity. Side Fix
Stairs

Typical Stair 250mm tread, 150mm step



Important instructions for Powder Coatings near Salt Water

The standard Dulux powder coating system used by MFG is Duralloy® and is suitable for installations greater than 100 metres from high tide level and for buildings up to 3 stories above ground. Use Duratec® for installations between 10 and 100 metres from high tide level and for prestigious residential and commercial developments. For all other applications contact MFG for alternative systems.

Note - Powder coated prices listed in MFG price books are for the standard Duralloy system. If the Duratec® system is required it must be specified upon placement of the order and will incur a surcharge – Duratec® prices on application.

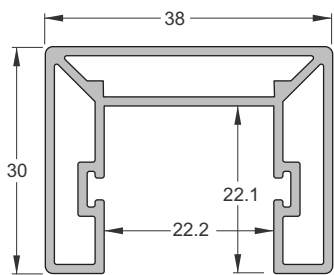
Important instructions for Powder Coating - Attachment to structures

An EPDM or similar material spacer must be used to separate powder coated aluminium items from all timber, concrete and steel structures. Failure to do so can lead to the chemicals in the structure affecting the powder coating layer on the aluminium.

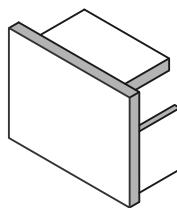
Powder Coating Warranty

The Dulux powder coating warranty period is conditional upon being maintained in accordance with the Dulux 'Care and Maintenance Instructions'. Contact your installer for a copy (or download from Dulux) of the Care and Maintenance instructions or refer to the back page of this manual.

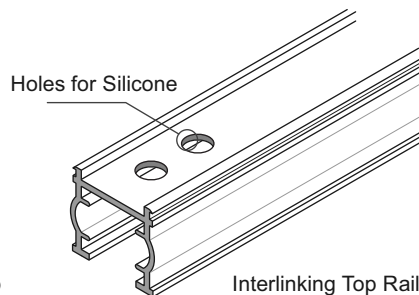
MFG Infinity BA124 Side Fix Glass Balustrade System
Interlinking Top Rail conforming to NZS 4223.3.2016 and Building Code Clause B1.3.4



Interlinking Top Rail Extrusion
for 12 and 15mm Toughened Glass



Interlinking Top Rail End Cap
38.4x30.4mm



Interlinking Top Rail Gaskets
for 12 and 15mm Toughened Glass
(12mm version shown)

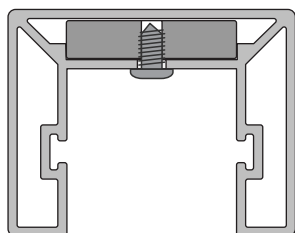
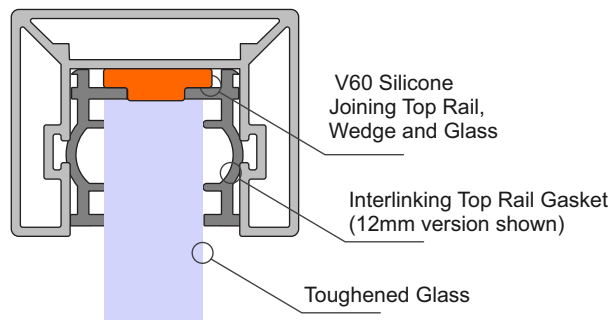
Application Notes:

- Cut short lengths of Gasket (50mm) and place say every 700mm.
- Cut/adjust Interlinking rail to correct dimensions, test in place.
- Remove all, install full cut lengths of Gasket to glass top edge

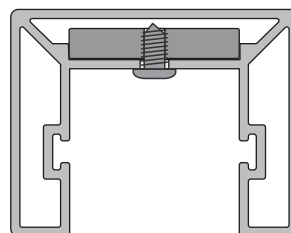
- Assemble Top Rail + Joiners and suitable End plates

- Place blobs of V60 silicone in every Gasket hole
- Then place Top Rail extrusion + Joiners and End plates in place clipping firmly to Gasket
- Tape all down, wait 24 hrs to fully bond. Clean up.

Note: Ends must be attached to structure or post,
 - Joins must have a suitable joiner plate



Joiners both 22.5 x 5mm
Aluminium



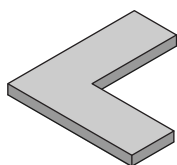
End Plate
Tabs all 22.5 x 4mm SS.

Joiners: (After cutting extrusions to length)

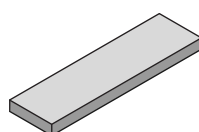
- With Joiner in place, spot drill from below for position
- Drill out to joiner to 3mm dia, extrusion to 4mm dia
- Use No 6 x 1/4in SS ST Pan sq drive Screw
- One end must be attached.
- Joins must be within 300mm of Post

End Plates: (After cutting extrusions to length)

- With End Plate in place, spot drill from below for position
- Drill out to SS tab to 3mm dia, extrusion to 4mm dia
- Use No 6 x 1/4in SS ST Pan sq drive Screw
- End Plate must be securely attached to Post or structure.

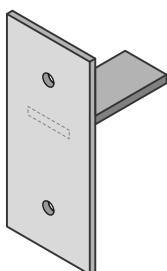


Interlinking Top Rail
Corner Joiner
75x75x5mm

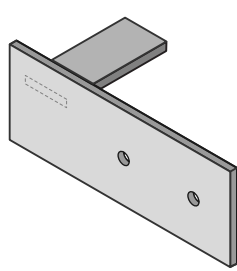


Interlinking Top Rail
Straight Joiner
80x22.8x5mm

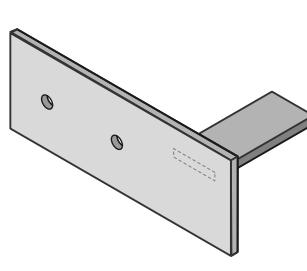
Joiners both 22.5 x 5mm Aluminium



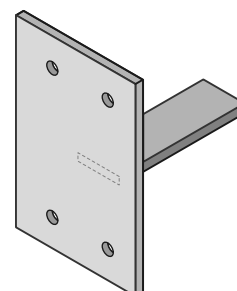
Interlinking Top Rail
End Plate, SS. 100x45mm



Interlinking Top Rail
End Plate, SS. 120x45mm



Interlinking Top Rail
End Plate, SS. 120x45mm



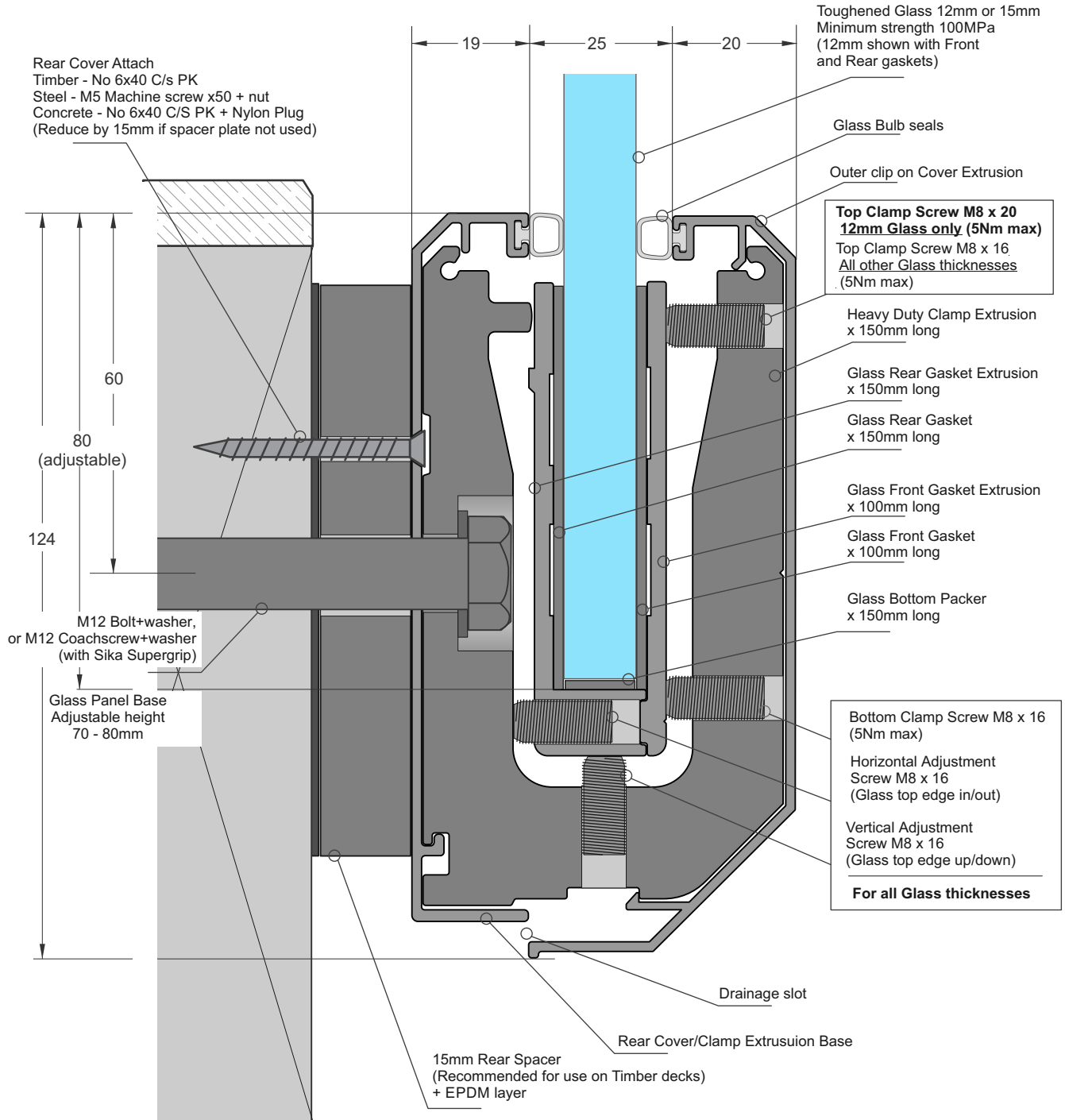
Interlinking Top Rail
End Plate, SS. 100x65mm

Tabs all 22.5 x 4mm SS. Front faces all 3mm SS

MFG Infinity BA124 Side Fix Glass Balustrade System - General

Infinity Glass Clamp (12mm Glass Shown)

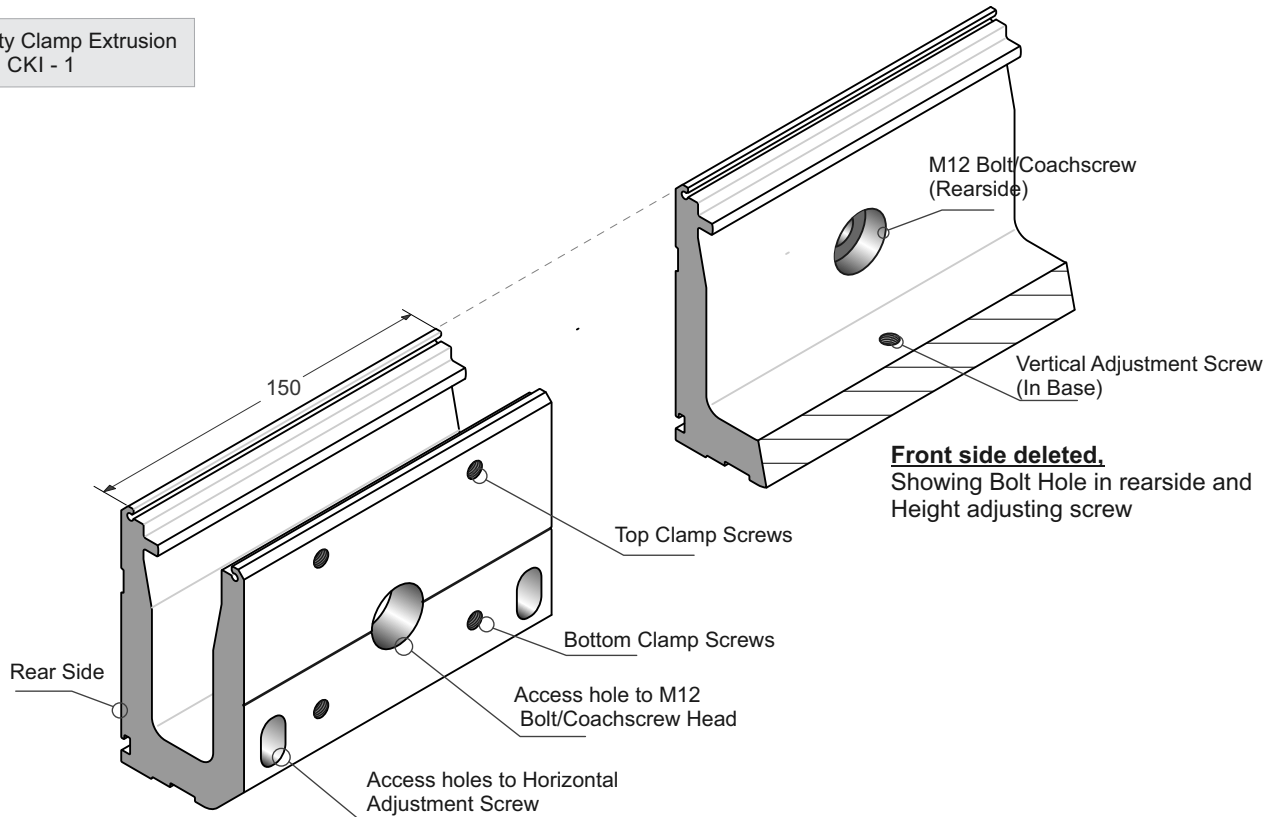
The Infinity Balustrade Clamp comes as a kit;
Clamp Extrusion, Front and Rear Gasket Extrusions
Gaskets, Glass bottom Packer and all adjusting screws.
(M12 Fastener not included)



Elevation showing the Main Features

MFG Infinity BA124 Side Fix Glass Balustrade System - Components

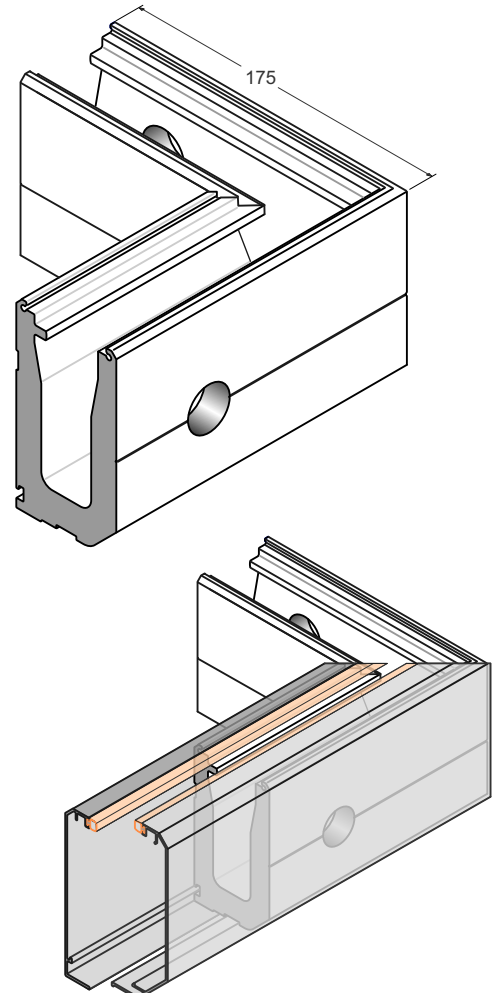
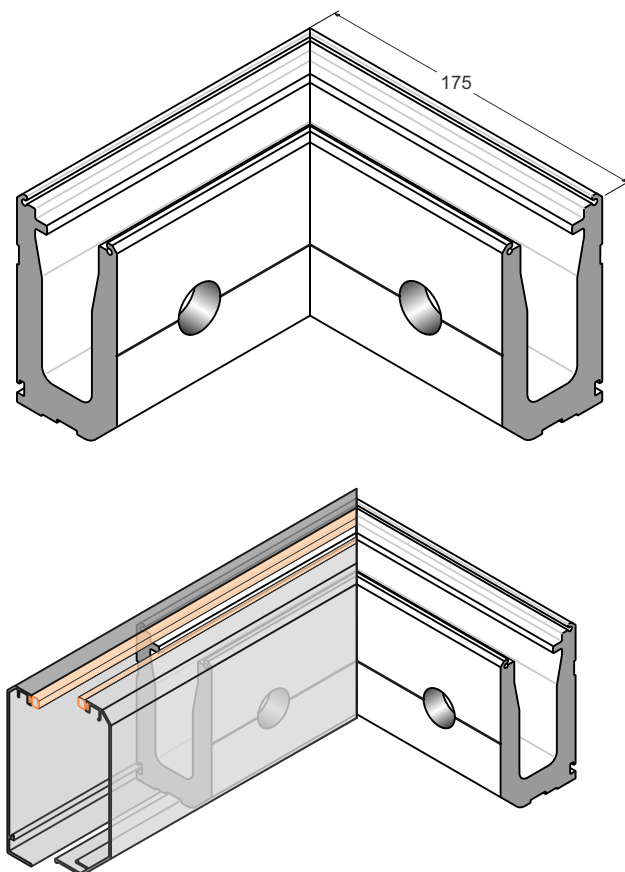
Heavy Duty Clamp Extrusion
CKI - 1



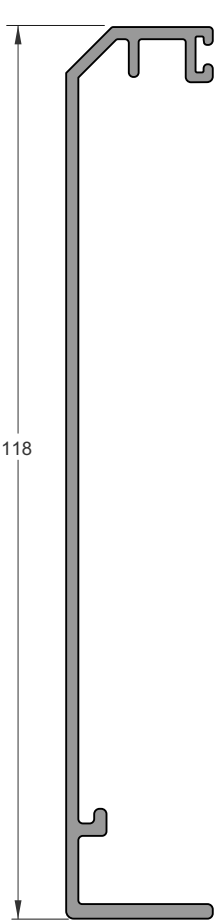
Heavy Duty Clamp Extrusion
90deg Internal Corner
Part No HDC- 90-I

Note: These corners are used only
to align the mitered Rear and Front cover corners.
They are not supplied with Glass Clamps
or adjusting screws

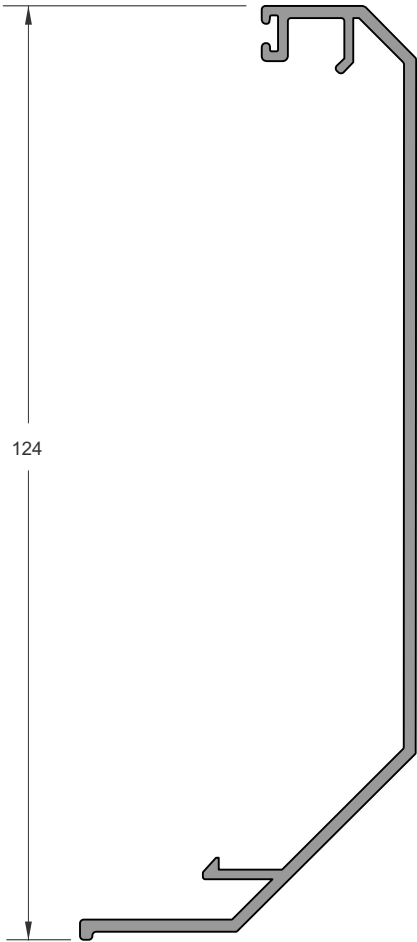
Heavy Duty Clamp Extrusion
90deg External Corner
Part No HDC-90-E



MFG Infinity BA124 Side Fix Glass Balustrade System - Extrusions

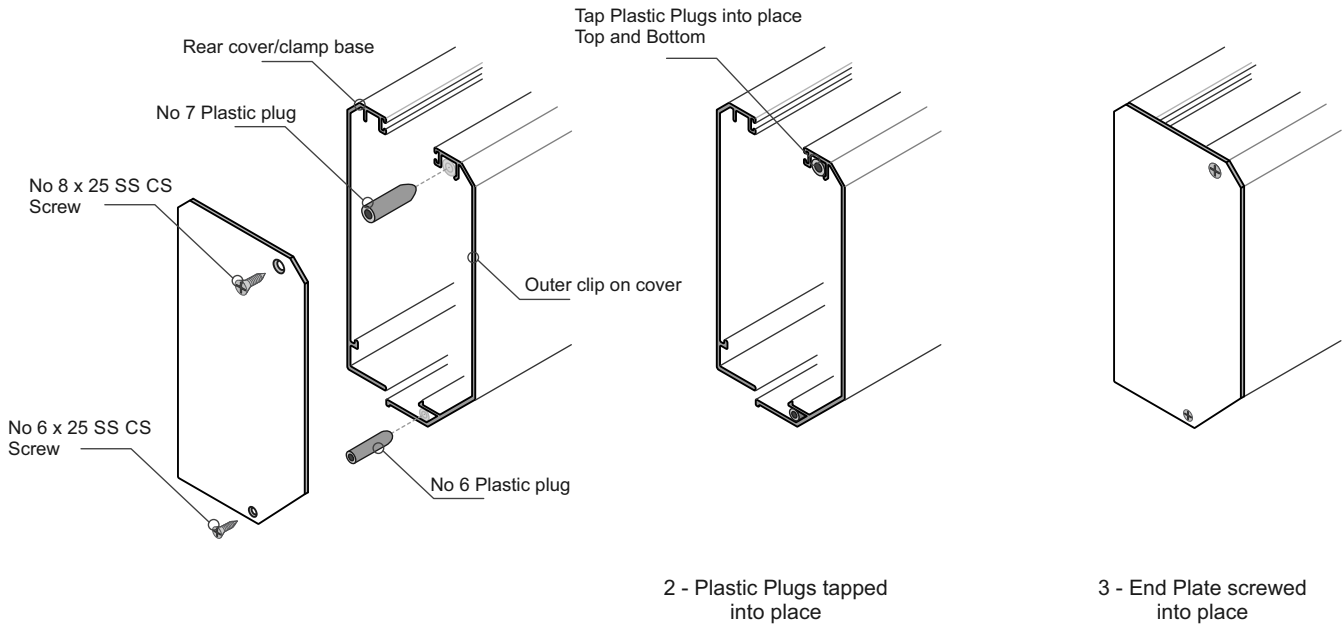


REAR COVER/CLAMP BASE
PART NO RCI - 118



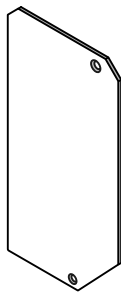
OUTER CLIP ON COVER
PART NO FCI - 124

End Plate Fastening
with ECI - 124 Kit



MFG Infinity BA124 Side Fix Glass Balustrade System - Components

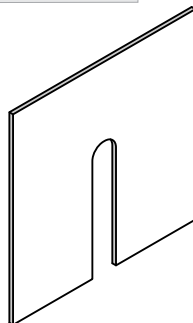
Extrusion End Plate
Part No ECI - 124



Kit Includes
No7 Plastic plug + 8g x 25 SS CS Screw
No 6 Plastic plug + 6g x 25 SS CS Screw

Rear Spacer Plate
100 wide x 94 deep

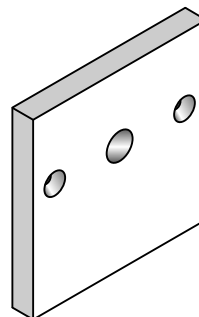
Use only
if required



1mm thick Plate - Part No RSI- 1
5mm thick Plate - Part No RSI - 5

Clamp Spacer Plate 15mm
Part No SOI- 15

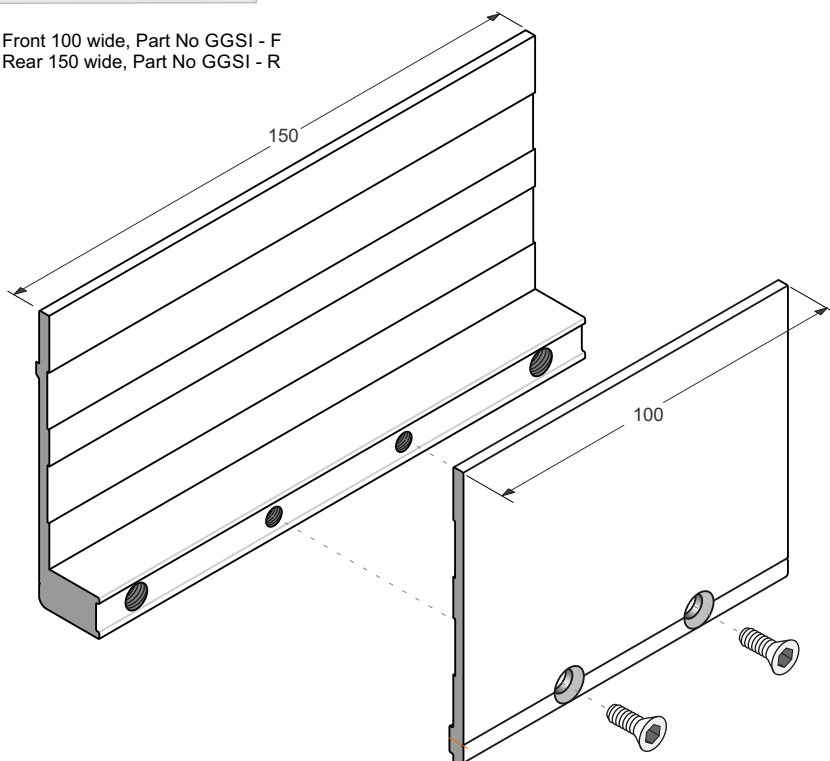
Recommended
for Timber
Decks



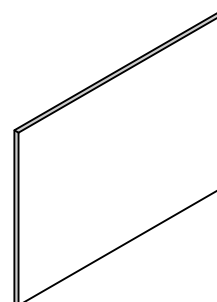
100 wide x 94 high x 15mm thick

Glass Gasket Set
Front and Rear

Front 100 wide, Part No GGSI - F
Rear 150 wide, Part No GGSI - R



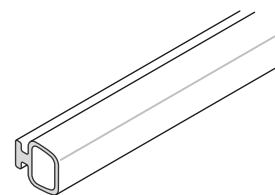
Glass Gasket
1mm and 2mm



Gasket 2mm Thick	Front 100 wide, Part No GGI- 12F Rear 150 wide, Part No GGI - 12R
Gasket 1mm Thick	Front 100 wide, Part No GGI - 15F Rear 150 wide, Part No GGI - 15R

For 12mm Toughened Glass use 2 x 2mm Gaskets
For 15mm Toughened Glass use 2 x 1mm Gaskets

Glass Bulb Seal
Part No GBS - 124



MFG Infinity BA124 Side Fix Glass Balustrade System - Typical Fixing - Residential only

Complies with NZS3604:2011 - Double Boundary Joists

Typical Side Fix to Timber - M12 Coachscrew

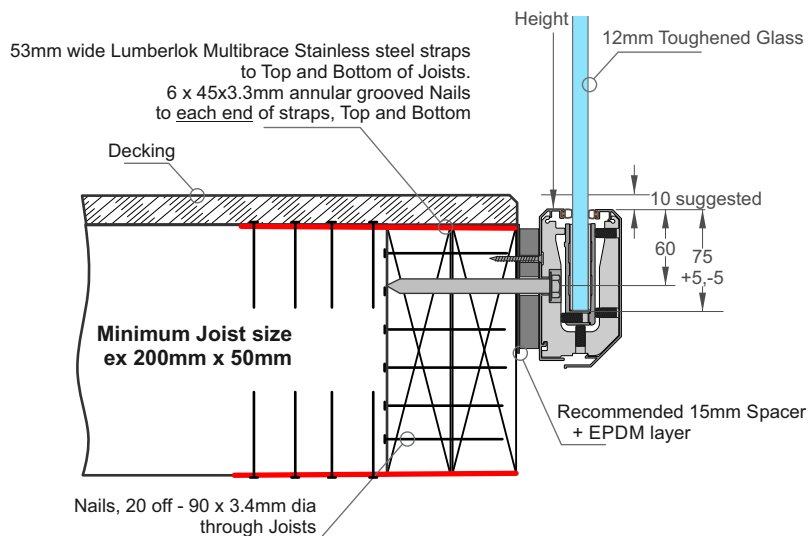
Occupancy - Residential A, A Other and C3. 12mm Toughened Glass

Height (max)	Panel Width (max)	Clamps per Panel	Clamp Spacing	End Overhang (max)
1200	1000	2 per panel	500	250
1200	1500	3 per panel	500	250
1200	2000	4 per panel	500	250

Exceeds the wind loading for all Wind Zones up to **and including** Very High Wind Zone as set out in NZS 3604:2011

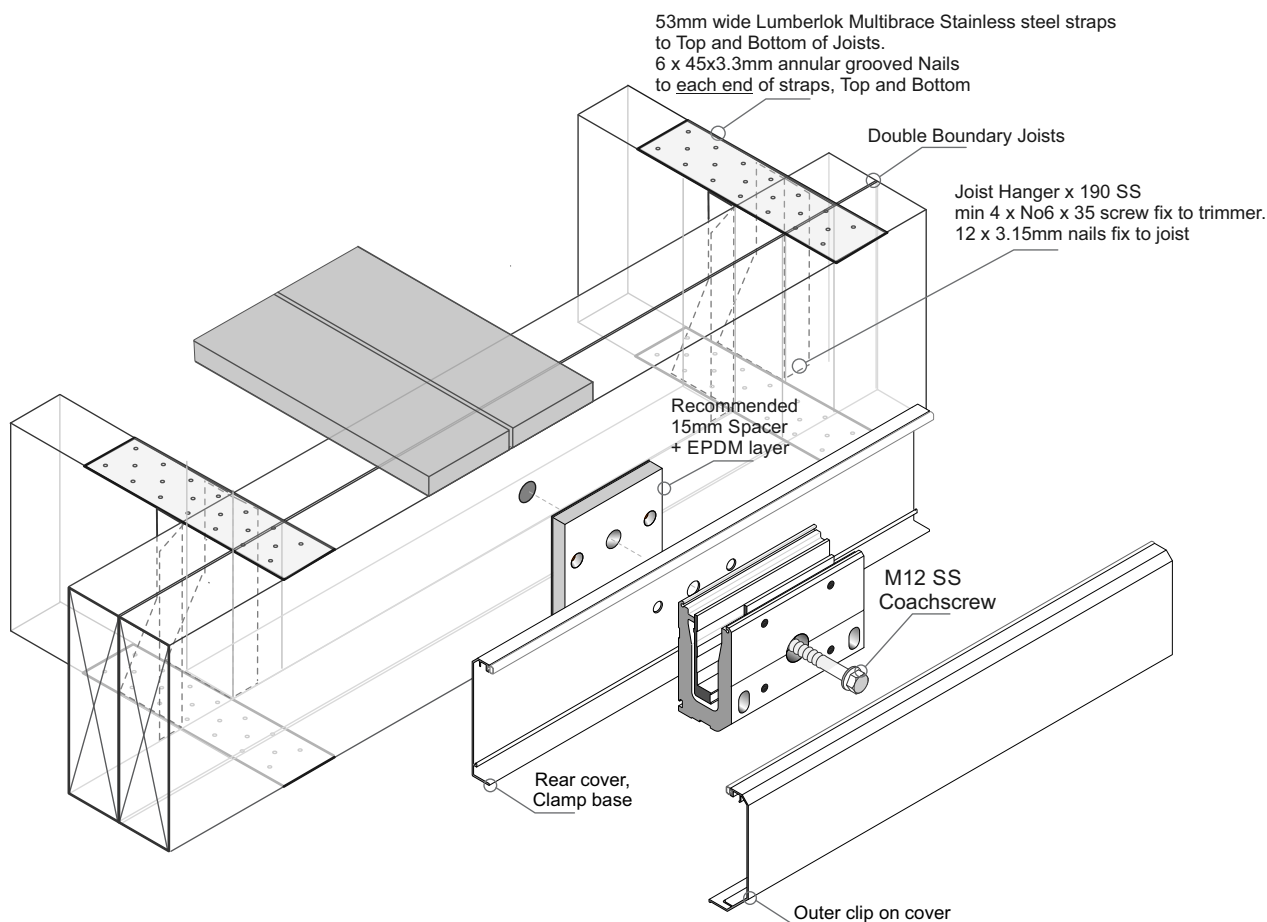
Refer to the Interlinking Top Rail page for conformance to NZS 4223.3.2016

- All measurements mm
- Balustrade height measured from top of Clamp



Important Notes:

- 1 - A Design engineer must ensure the structure can support the appropriate loads
- 2 - Coachscrews 90mm min thread engagement into joists
- 3 - Bond all coachscrews with SIKA Supergrip to full depth.
- 4 - A Rubber, EPDM or Foam Tape layer must be installed between the Clamp and Timber
- 5 - All fixings must be Stainless steel



MFG Infinity BA124 Side Fix Glass Balustrade System - Typical Fixing - Residential only

Complies with NZS3604:2011 - Double Boundary Joists

Typical Side Fix to Timber - M12 Bolt

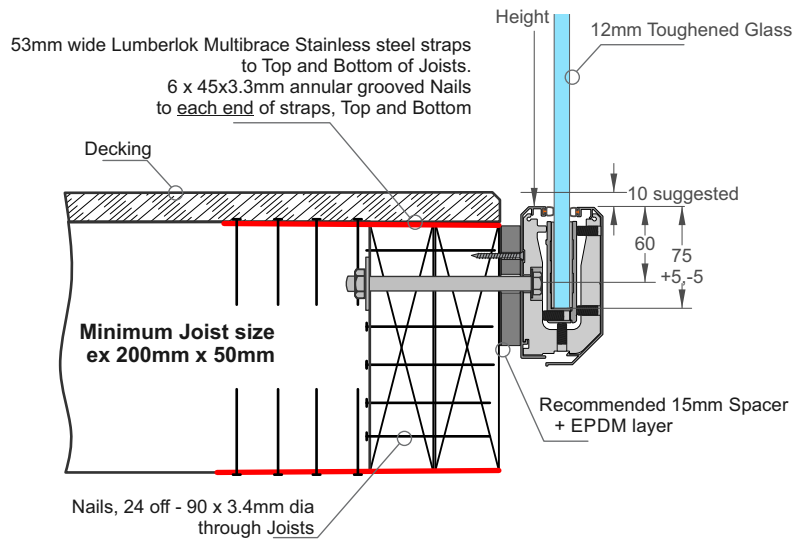
Occupancy - Residential A, A Other and C3. 12mm Toughened Glass

Height (max)	Panel Width (max)	Clamps per Panel	Clamp Spacing	End Overhang (max)
1200	1000	2 per panel	500	250
1200	1500	3 per panel	500	250
1200	2000	4 per panel	500	250

Exceeds the wind loading for all Wind Zones up to **and including** Very High Wind Zone as set out in NZS 3604:2011

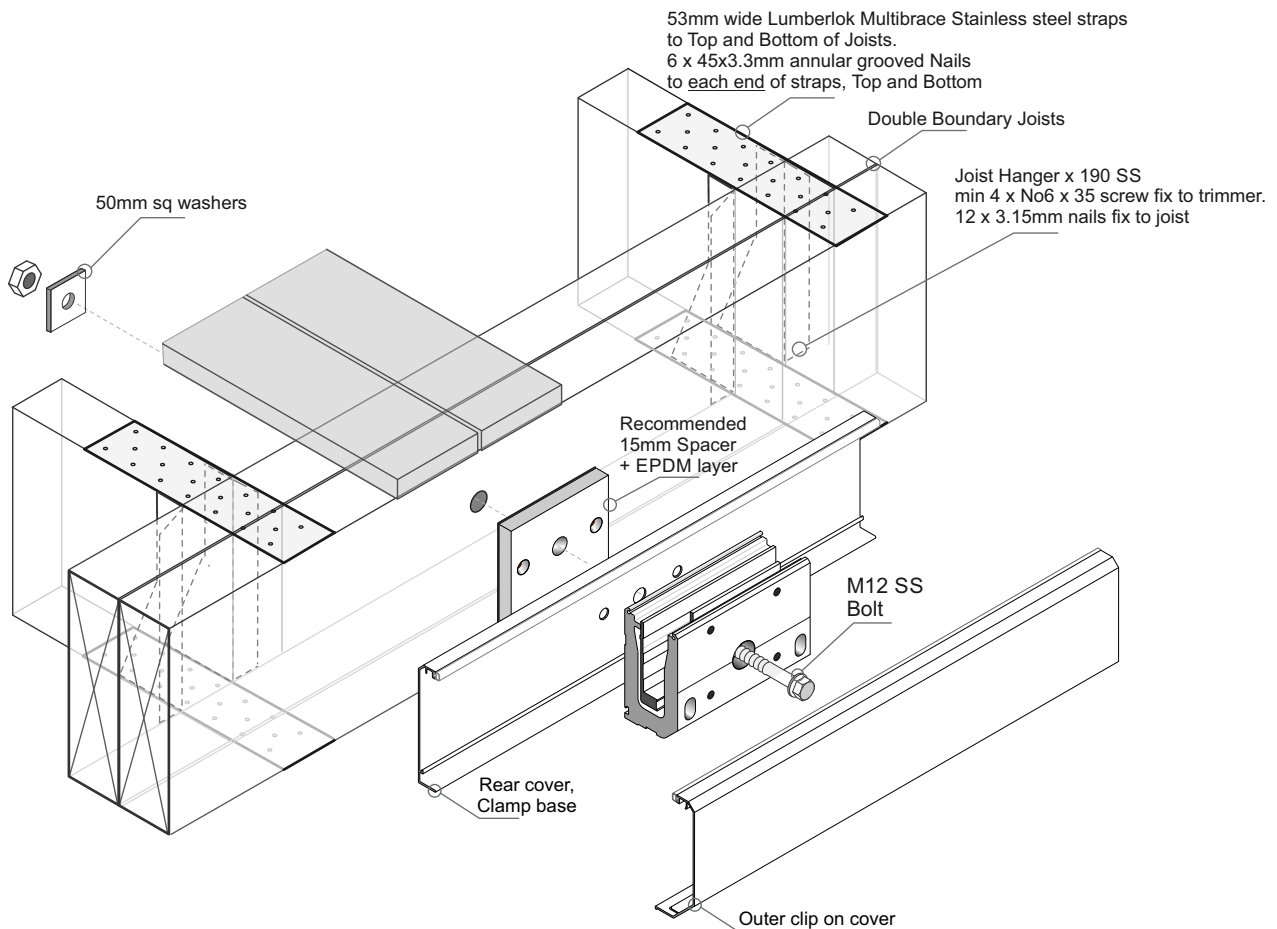
Refer to the Interlinking Top Rail page for conformance to NZS 4223.3.2016

- All measurements mm
- Balustrade height measured from top of Clamp



Important Notes:

- 1 - A Design engineer must ensure the structure can support the appropriate loads
- 2 - A Rubber, EPDM or Foam Tape layer must be installed between the Clamp and Timber
- 3 - All fixings must be Stainless steel



MFG Infinity BA124 Side Fix Glass Balustrade System - Typical Fixing - Residential only

Complies with NZS3604:2011 - Double Boundary Joists

Typical Hidden Side Fix to Timber - M12 Coachscrew (or M12 Bolt)

**Occupancy - Residential
A, A Other and C3.
12mm Toughened Glass**

Height (max)	Panel Width (max)	Clamps per Panel	Clamp Spacing	Over hang
1200	1000	2 per panel	500	250
1200	1500	3 per panel	500	250
1200	2000	4 per panel	500	250

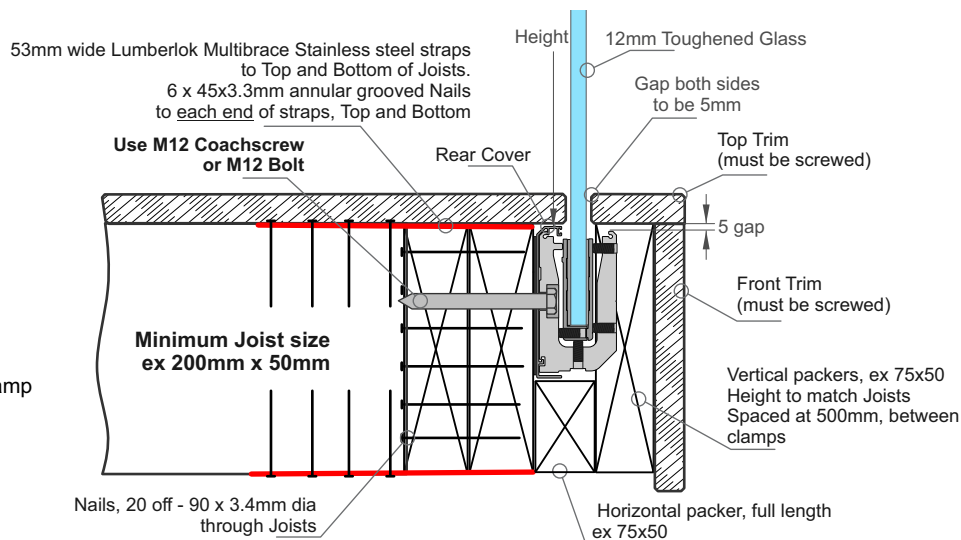
Exceeds the wind loading for all Wind Zones up to **and including** Very High Wind Zone as set out in NZS 3604:2011

Refer to the Interlinking Top Rail page for conformance to NZS 4223.3.2016

- All measurements mm
- Balustrade height measured from top of Clamp

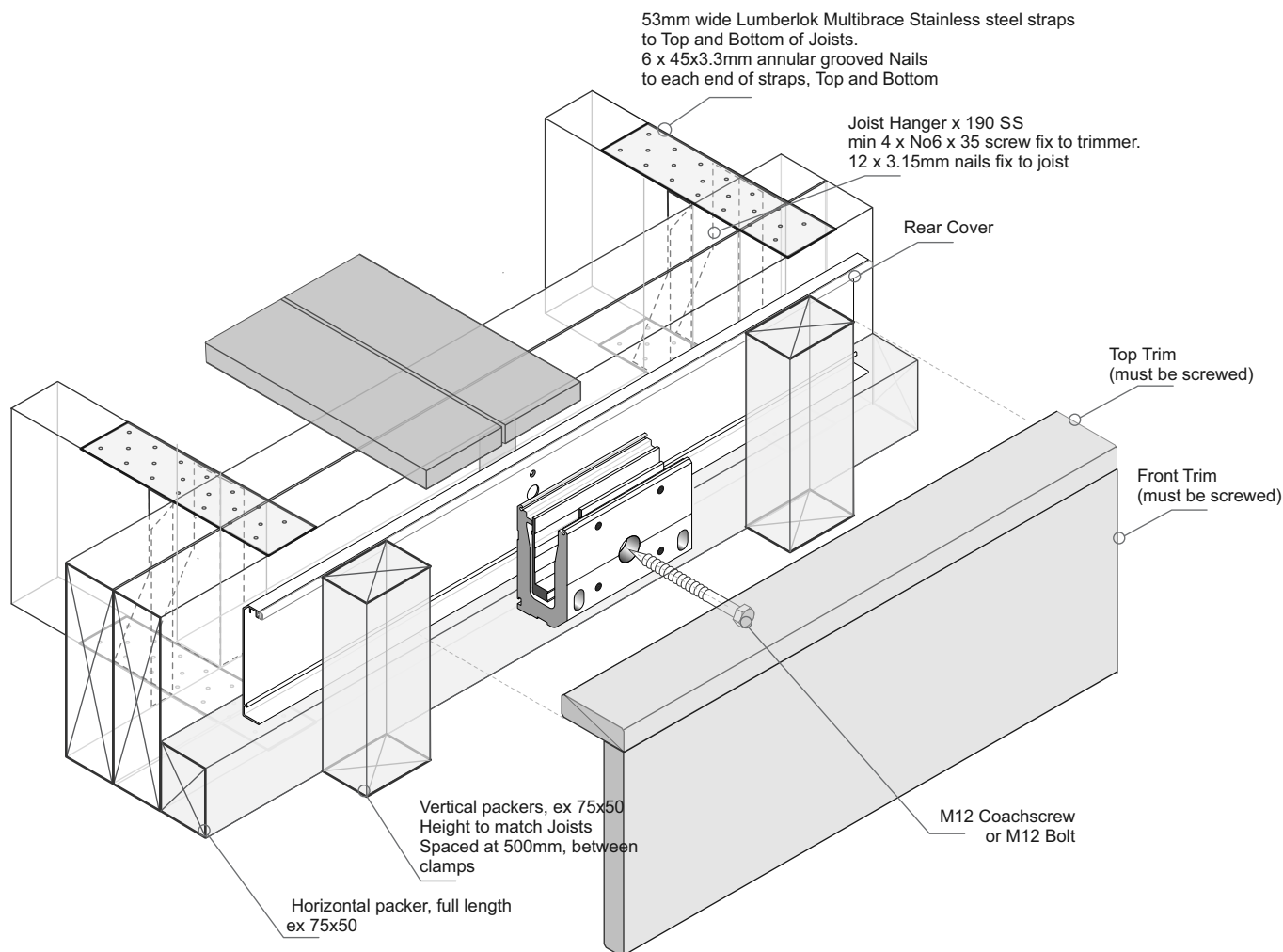
Important Note.

No Front Cover used, Back cover only



Important Notes:

- 1 - A Design engineer must ensure the structure can support the appropriate loads
- 2 - Coachscrews 90mm min thread engagement into joists
- 3 - Bond all coachscrews with SIKa Supergrip to full depth.
- 4 - A Rubber, EPDM or Foam Tape layer must be installed between the Clamp and Timber
- 5 - All fixings must be Stainless steel



MFG Infinity BA124 Side Fix Glass Balustrade System - Typical Fixing - Residential only

Complies with NZS3604:2011 - Double Boundary Joists

Typical Side Fix to a Waterproof Timber deck - M12 Coachscrew

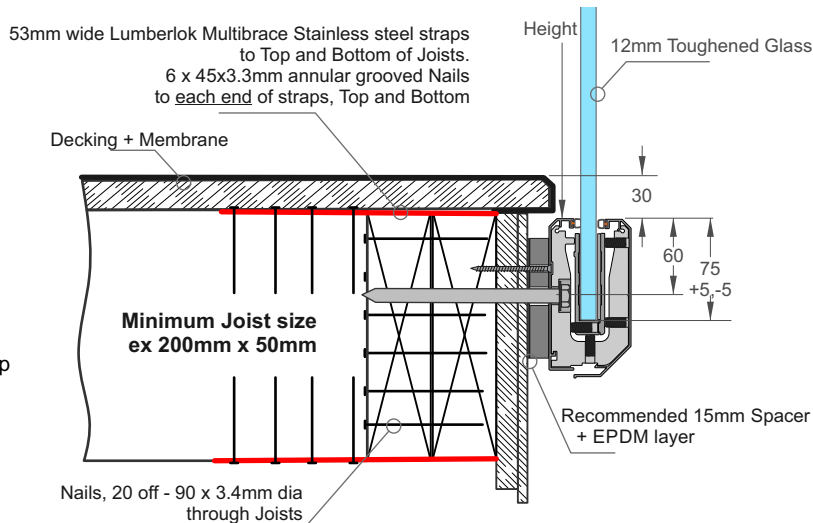
Occupancy - Residential A, A Other and C3. 12mm Toughened Glass

Height (max)	Panel Width (max)	Clamps per Panel	Clamp Spacing	End Overhang (max)
1200	1000	2 per panel	500	250
1200	1500	3 per panel	500	250
1200	2000	4 per panel	500	250

Exceeds the wind loading for all Wind Zones up to **and including** Very High Wind Zone as set out in NZS 3604:2011

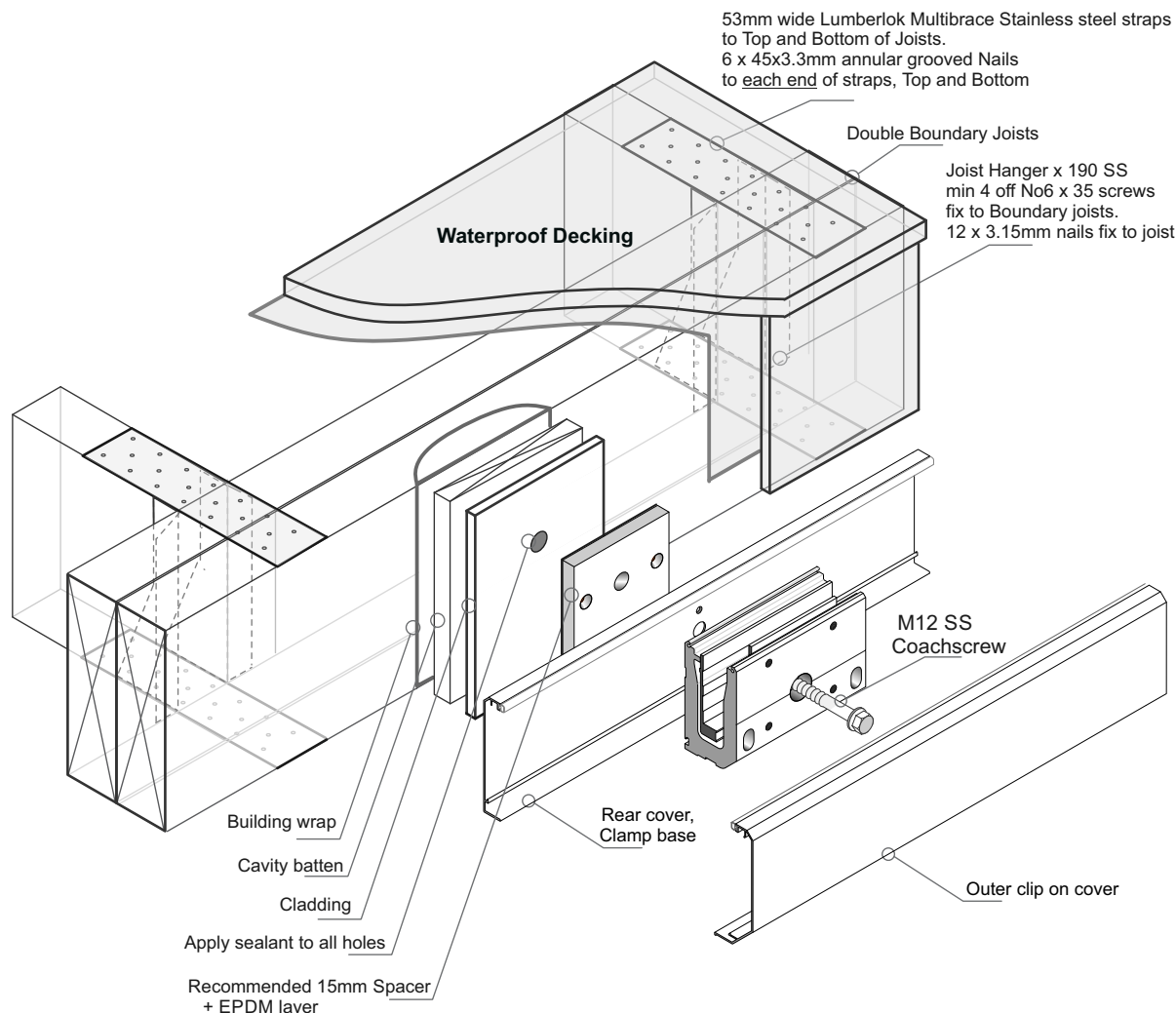
Refer to the Interlinking Top Rail page for conformance to NZS 4223.3.2016

- All measurements mm
- Balustrade height measured from top of Clamp



Important Notes:

- 1 - A Design engineer must ensure the structure can support the appropriate loads
- 2 - Coachscrews 90mm min thread engagement into joists
- 3 - Bond all coachscrews with SIKA Supergrip to full depth.
- 4 - A Rubber, EPDM or Foam Tape layer must be installed between the Clamp and Timber
- 5 - All fixings must be Stainless steel



MFG Infinity BA124 Side Fix Glass Balustrade System - Typical Fixing - Commercial (or Residential)

Complies with NZS3604:2011 - Triple Boundary Joists

Typical Side Fix to a Waterproof Timber deck - M12 Coachscrew

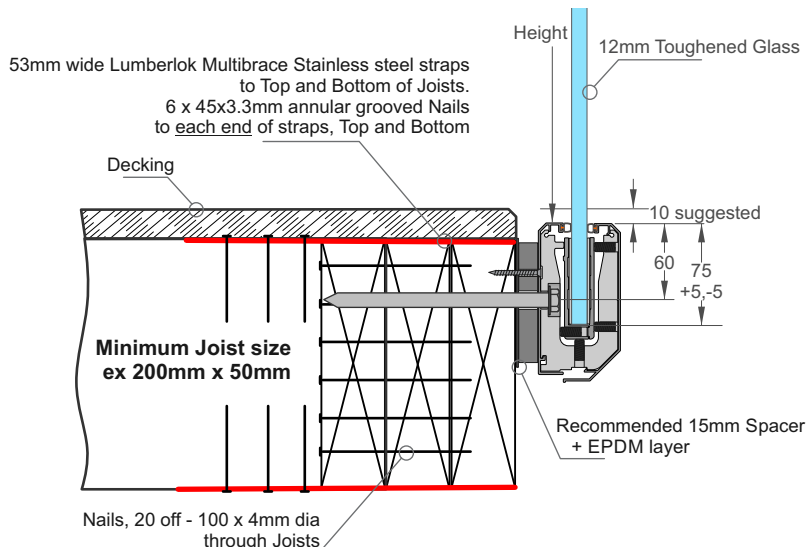
**Occupancy - Commercial
B, E and C3.
15mm Toughened Glass**

Height (max)	Panel Width (max)	Clamps per Panel	Clamp Spacing	End Overhang (max)
1300	800	2 per panel	400	200
1300	1200	3 per panel	400	200
1300	1600	4 per panel	400	200

Exceeds the wind loading for all Wind Zones up to **and including** Very High Wind Zone as set out in NZS 3604:2011

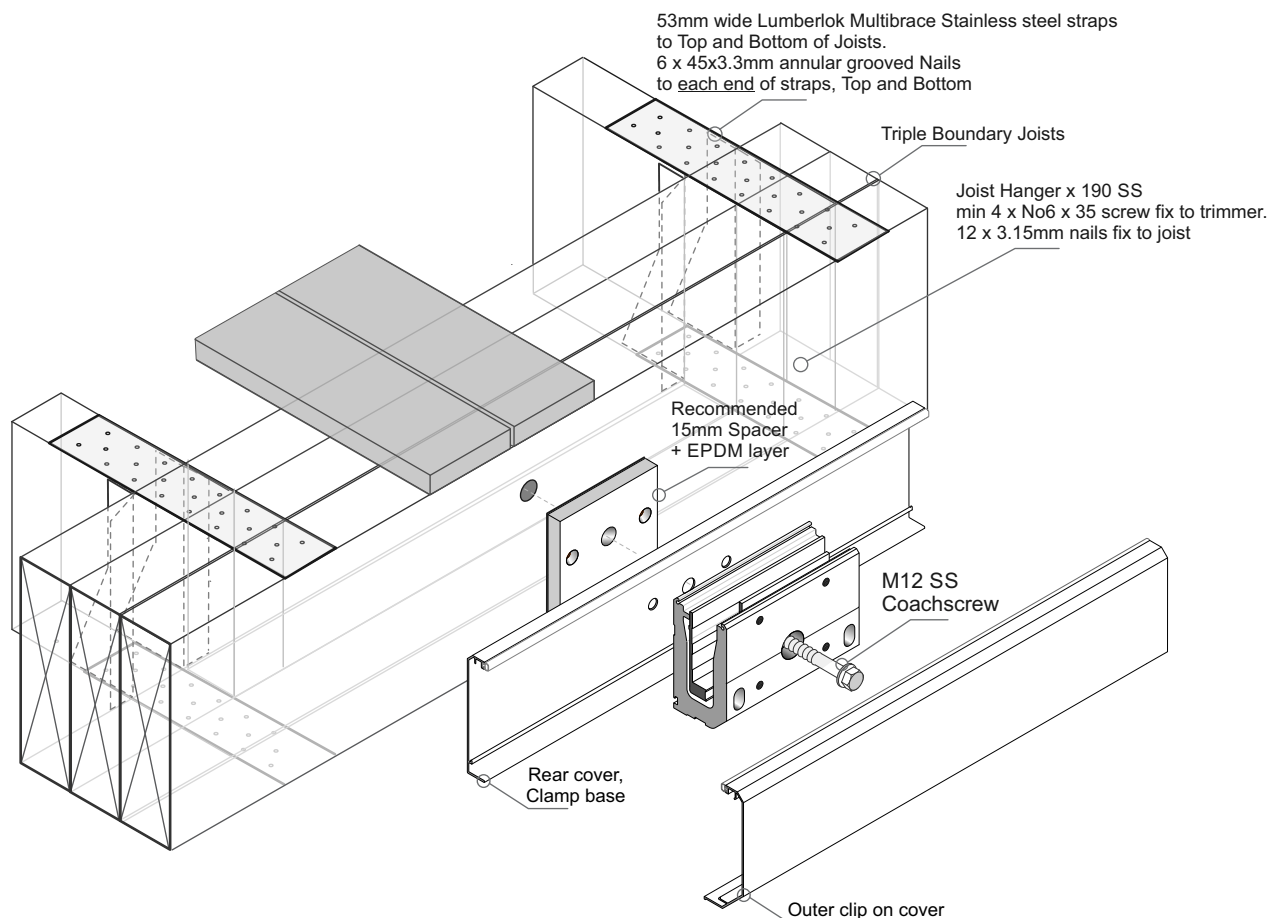
Refer to the Interlinking Top Rail page for conformance to NZS 4223.3.2016

- All measurements mm
- Balustrade height measured from top of Clamp



Important Notes:

- 1 - A Design engineer must ensure the structure can support the appropriate loads
- 2 - Coachscrews 120mm min thread engagement into joists
- 3 - Bond all coachscrews with SIKA Supergrip to full depth.
- 4 - A Rubber, EPDM or Foam Tape layer must be installed between the Clamp and Timber
- 5 - All fixings must be Stainless steel



MFG Infinity BA124 Side Fix Glass Balustrade System - Typical Fixing - Commercial (or Residential)

Complies with NZS3604:2011 - Double Boundary Joists

Typical Side Fix to Timber - M12 Bolt

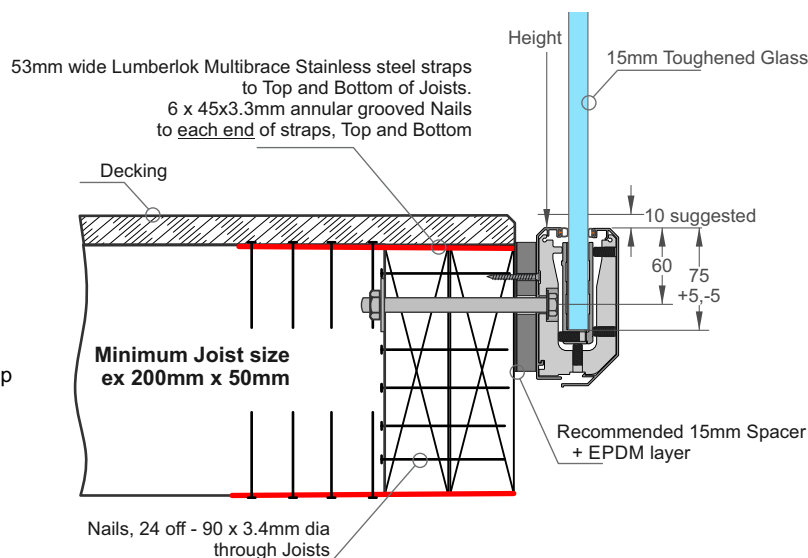
Occupancy - Commercial B, E and C3. 15mm Toughened Glass

Height (max)	Panel Width (max)	Clamps per Panel	Clamp Spacing	End Overhang (max)
1300	800	2 per panel	400	200
1300	1200	3 per panel	400	200
1300	1600	4 per panel	400	200

Exceeds the wind loading for all Wind Zones up to **and including** Very High Wind Zone as set out in NZS 3604:2011

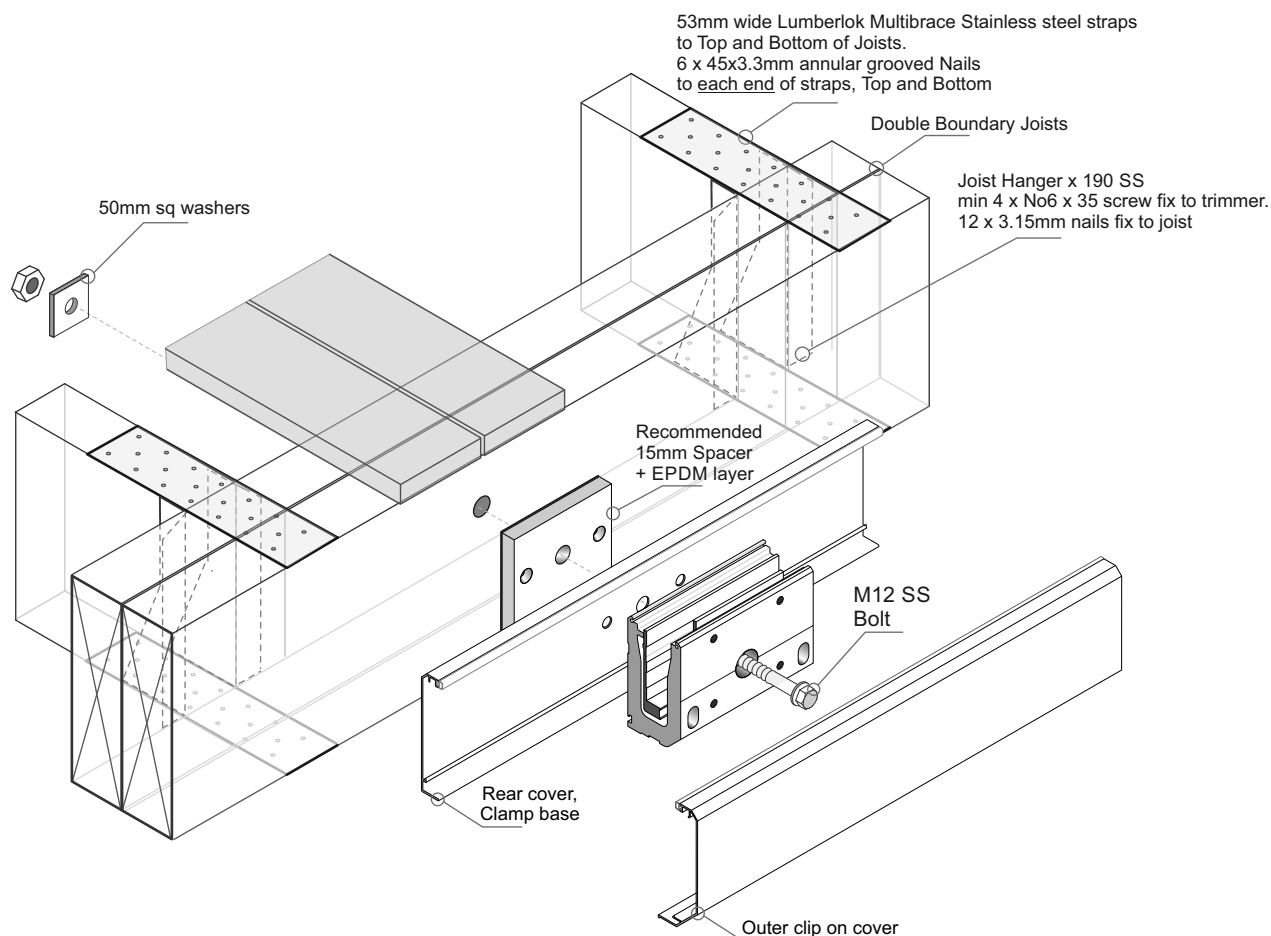
Refer to the Interlinking Top Rail page for conformance to NZS 4223.3.2016

- All measurements mm
- Balustrade height measured from top of Clamp



Important Notes:

- 1 - A Design engineer must ensure the structure can support the appropriate loads
- 2 - A Rubber, EPDM or Foam Tape layer must be installed between the Clamp and Timber
- 3 - All fixings must be Stainless steel



MFG Infinity BA124 Side Fix Glass Balustrade System - Typical Fixing - Commercial (or Residential)

Complies with NZS3604:2011 - Double or Triple Boundary Joists

Typical Hidden Side Fix to Timber - M12 Coachscrew - Triple Boundary Joist or M12 Bolt - Double boundary Joist

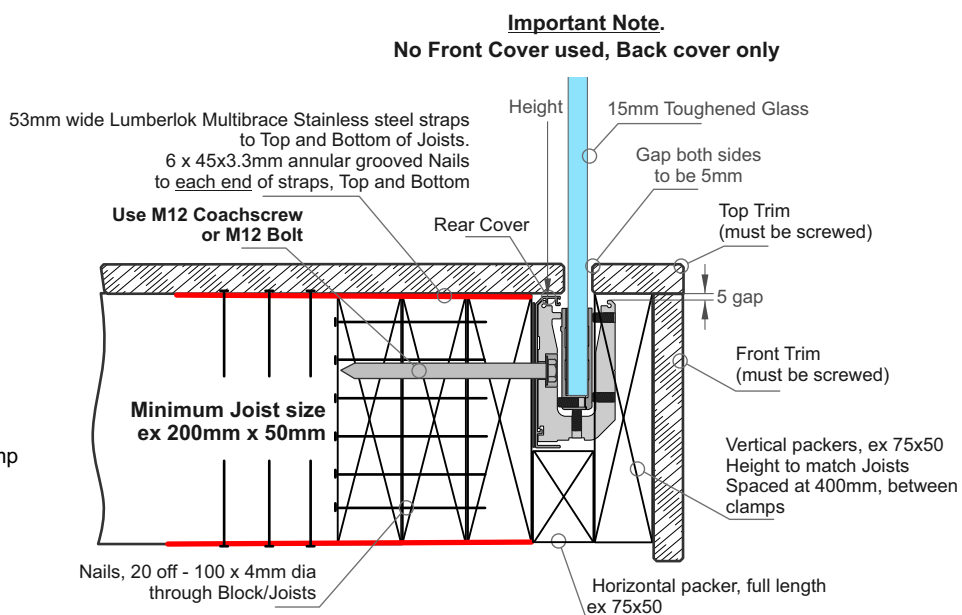
**Occupancy - Commercial
B, E and C3.
15mm Toughened Glass**

Height (max)	Panel Width (max)	Clamps per Panel	Clamp Spacing	End Overhang (max)
1300	800	2 per panel	400	200
1300	1200	3 per panel	400	200
1300	1600	4 per panel	400	200

Exceeds the wind loading for all Wind Zones up to **and including** Very High Wind Zone as set out in NZS 3604:2011

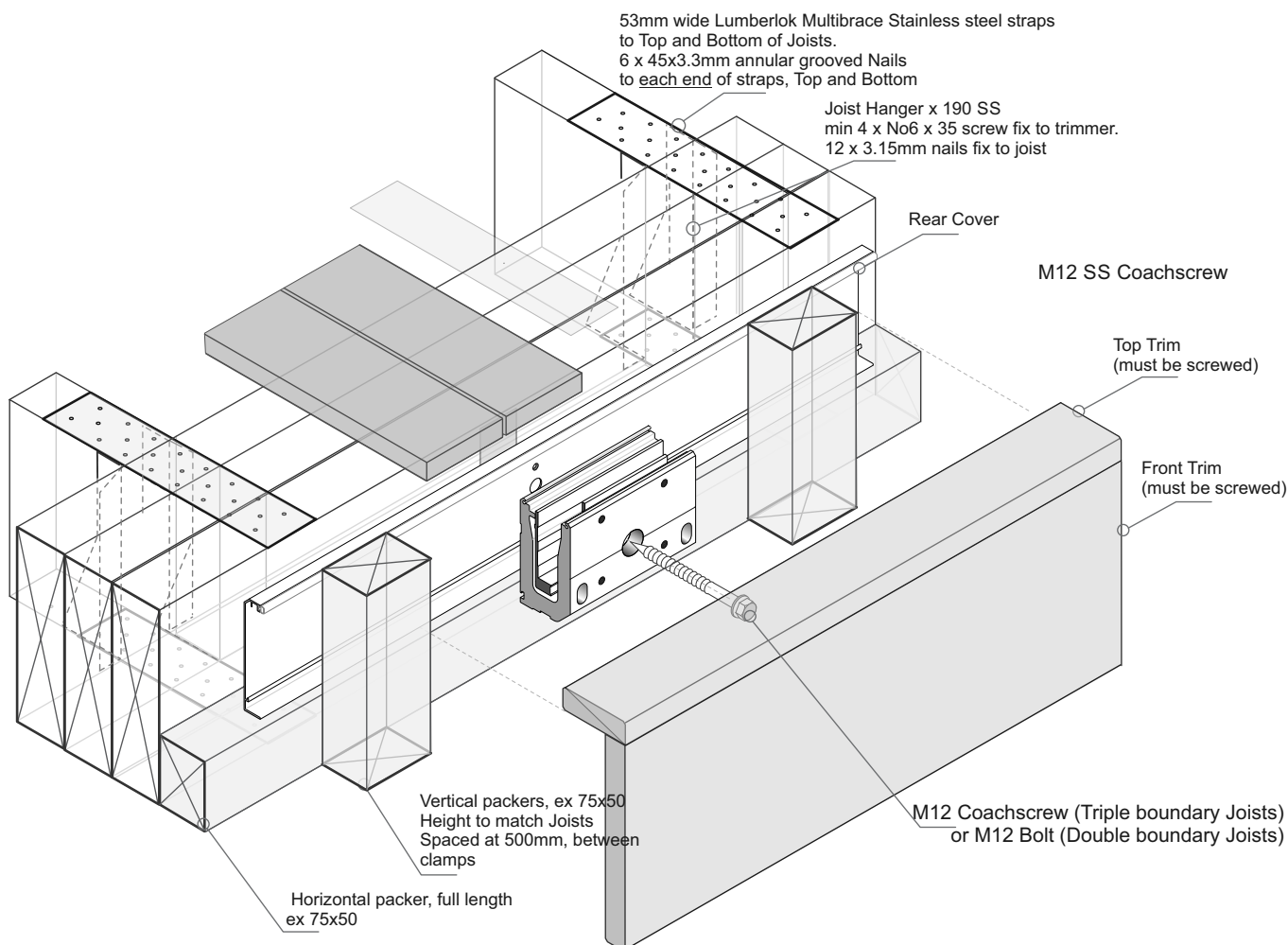
Refer to the Interlinking Top Rail page for conformance to NZS 4223.3.2016

- All measurements mm
- Balustrade height measured from top of Clamp



Important Notes:

- 1 - A Design engineer must ensure the structure can support the appropriate loads
- 2 - Coachscrews 120mm min thread engagement into joists. Bolts right through.
- 3 - Bond all coachscrews with SIKa Supergrip to full depth.
- 4 - A Rubber, EPDM or Foam Tape layer must be installed between the Clamp and Timber
- 5 - All fixings must be Stainless steel



MFG Infinity BA124 Side Fix Glass Balustrade System - Typical Fixing - Commercial (or Residential)

Complies with NZS3604:2011 - Triple Boundary Joists

Typical Side Fix to a Waterproof Timber deck - M12 Coachscrew

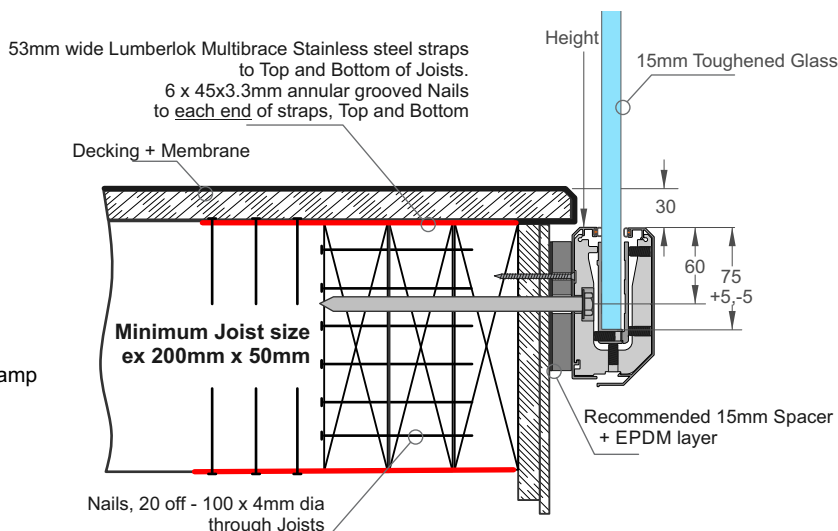
Occupancy - Commercial B, E and C3. 15mm Toughened Glass

Height (max)	Panel Width (max)	Clamps per Panel	Clamp Spacing	End Overhang (max)
1300	800	2 per panel	400	200
1300	1200	3 per panel	400	200
1300	1600	4 per panel	400	200

Exceeds the wind loading for all Wind Zones up to **and including** Very High Wind Zone as set out in NZS 3604:2011

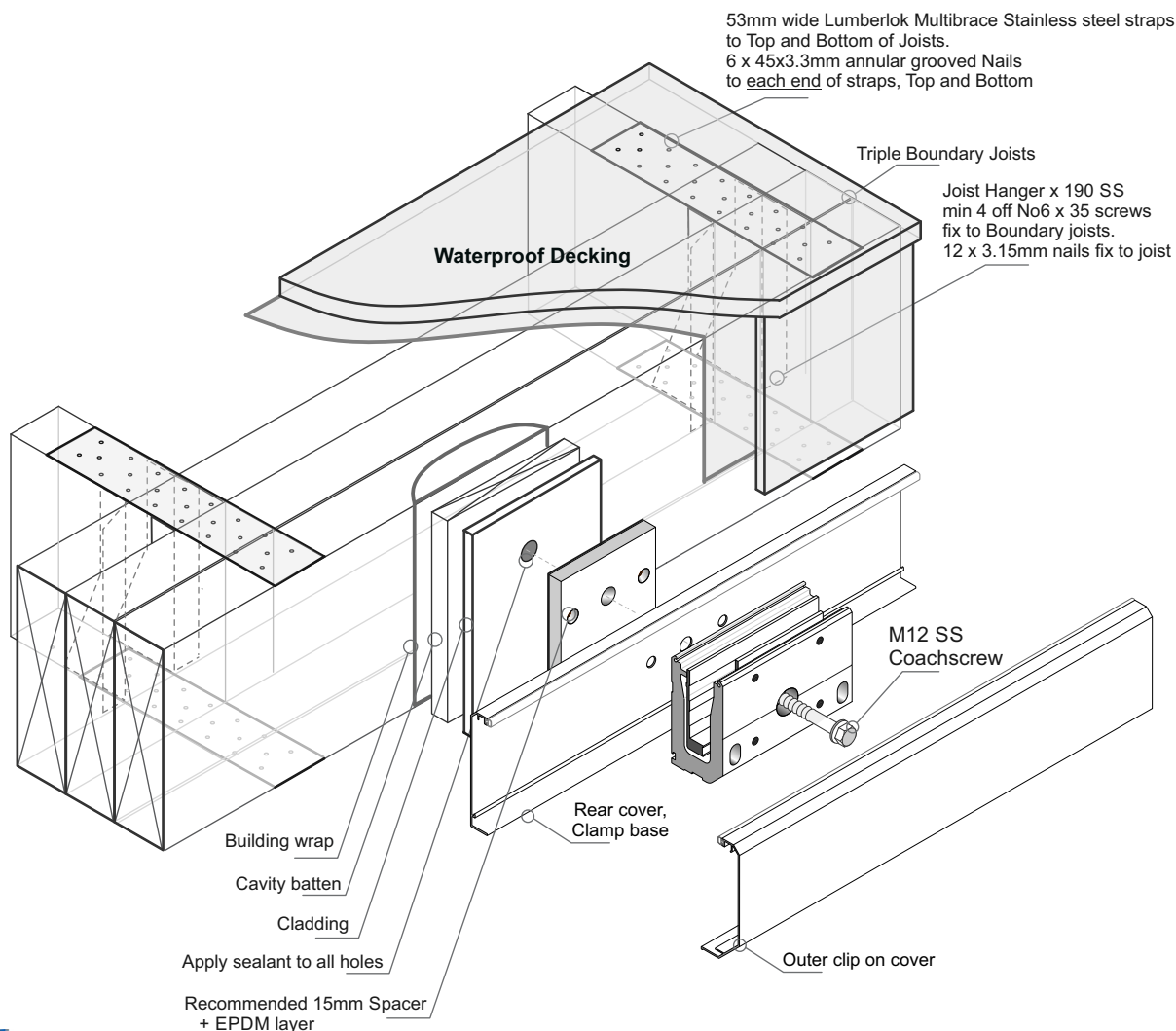
Refer to the Interlinking Top Rail page for conformance to NZS 4223.3.2016

- All measurements mm
- Balustrade height measured from top of Clamp



Important Notes:

- 1 - A Design engineer must ensure the structure can support the appropriate loads
- 2 - Coachscrews 120mm min thread engagement into joists
- 3 - Bond all coachscrews with SIKA Supergrip to full depth.
- 4 - A Rubber, EPDM or Foam Tape layer must be installed between the Clamp and Timber
- 5 - All fixings must be Stainless steel



Typical Side Fix to Steel - M12 Bolt

Occupancy - Residential A, A Other and C3. 12mm Toughened Glass

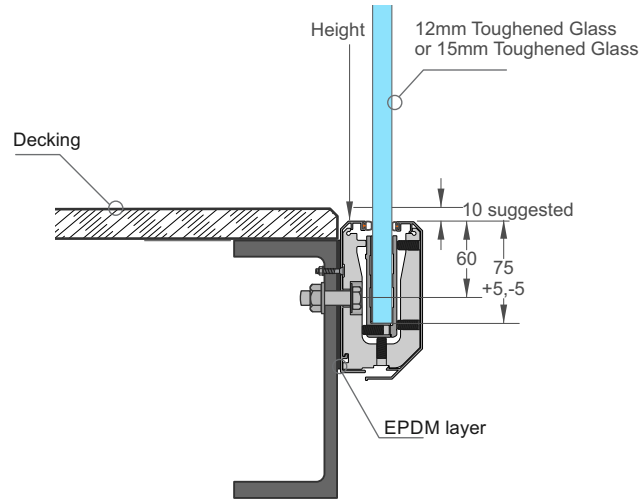
Height (max)	Panel Width (max)	Clamps per Panel	Clamp Spacing	End Overhang (max)
1200	1000	2 per panel	500	250
1200	1500	3 per panel	500	250
1200	2000	4 per panel	500	250

Occupancy - Commercial B, E and C3. 15mm Toughened Glass

Height (max)	Panel Width (max)	Clamps per Panel	Clamp Spacing	End Overhang (max)
1300	800	2 per panel	400	200
1300	1200	3 per panel	400	200
1300	1600	4 per panel	400	200

Exceeds the wind loading for all Wind Zones up to **and including** Very High Wind Zone as set out in NZS 3604:2011

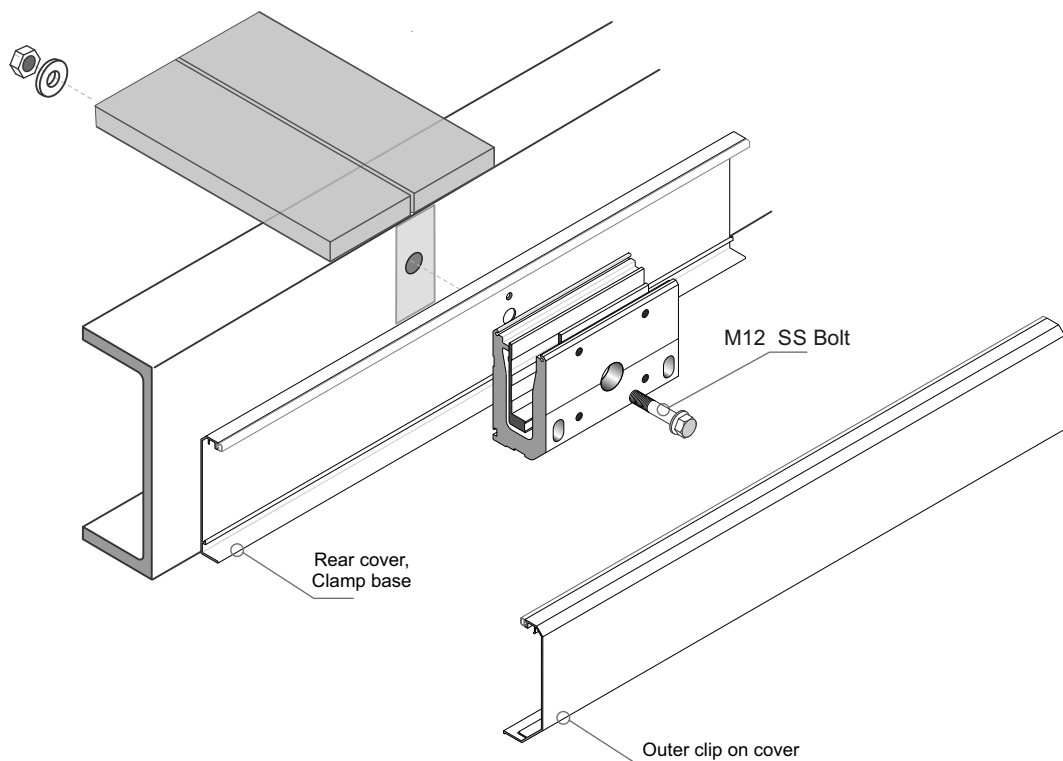
Refer to the Interlinking Top Rail page for conformance to NZS 4223.3.2016



- All measurements mm
- Balustrade height measured from top of Clamp

Important Notes:

- 1 - A Design engineer must ensure the structure can support the appropriate loads
- 2 - A Rubber, EPDM or Foam Tape layer must be installed between the Clamp and Steel
- 3 - All fixings must be Stainless steel



Typical Side Fix to Concrete - M12 Stud

Occupancy - Residential A, A Other and C3. 12mm Toughened Glass

Height (max)	Panel Width (max)	Clamps per Panel	Clamp Spacing	End Overhang (max)
1200	1000	2 per panel	500	250
1200	1500	3 per panel	500	250
1200	2000	4 per panel	500	250

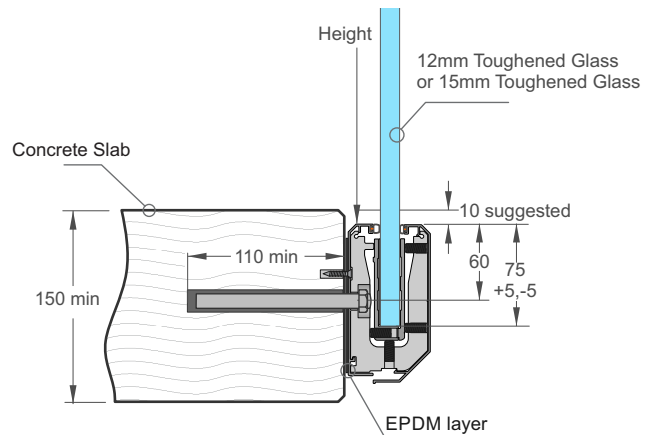
Occupancy - Commercial B, E and C3. 15mm Toughened Glass

Height (max)	Panel Width (max)	Clamps per Panel	Clamp Spacing	End Overhang (max)
1300	800	2 per panel	400	200
1300	1200	3 per panel	400	200
1300	1600	4 per panel	400	200

Exceeds the wind loading for all Wind Zones up to **and including** Very High Wind Zone as set out in NZS 3604:2011

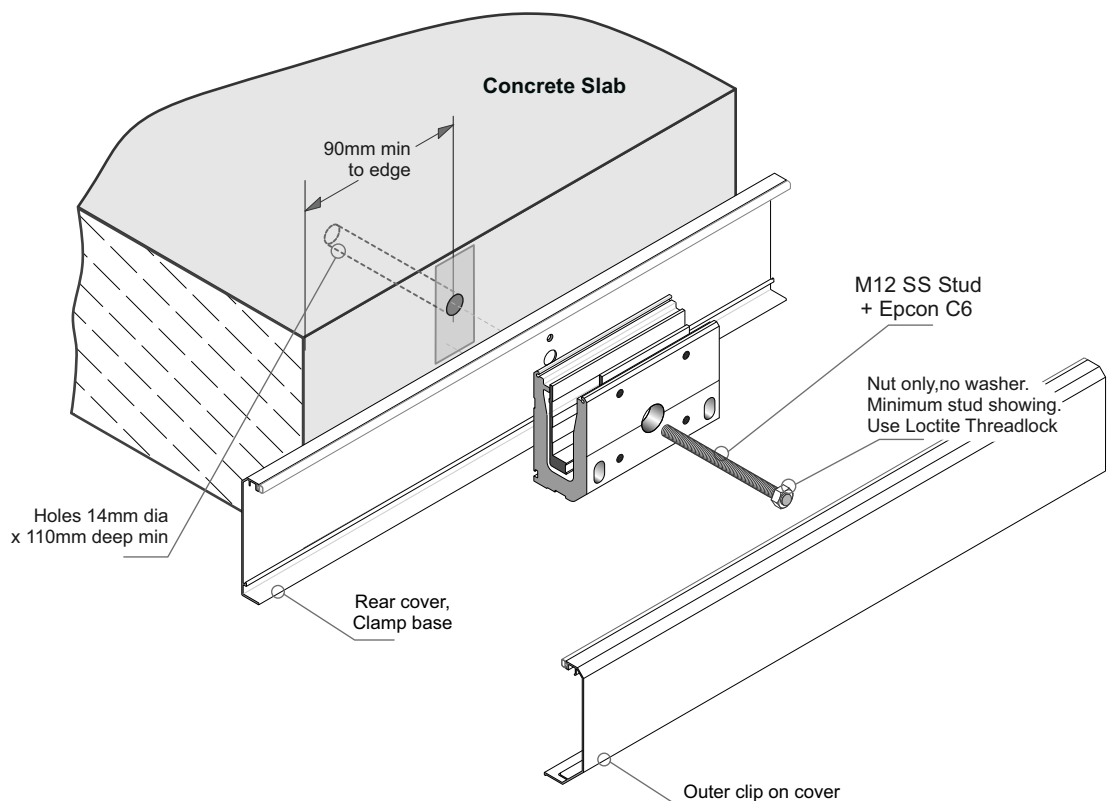
Refer to the Interlinking Top Rail page for conformance to NZS 4223.3.2016

- All measurements mm
- Balustrade height measured from top of Clamp



Important Notes:

- 1 - A Design engineer must ensure the structure can support the appropriate loads
- 2 - All fixings must engage into the structural slab
- 3 - A Rubber, EPDM or Foam Tape layer must be installed between the Clamp and Concrete
- 4 - All fixings must be Stainless steel

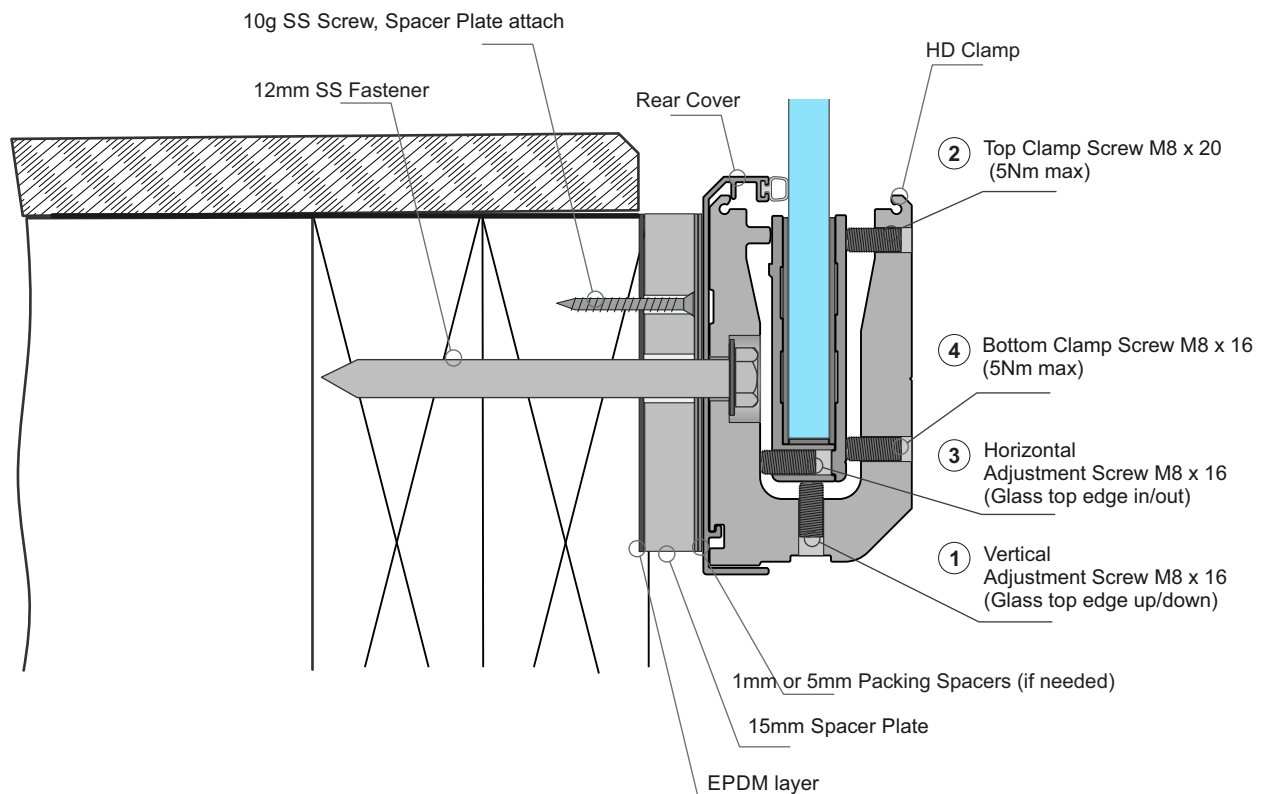


Infinity Balustrade Installation Side Fix procedure using 15mm Spacer Plate on Boundary Joists

- 1 - Attach a 15mm Spacer Plate to the boundary joist at each end of the balustrade section.
EPDM or rubber membrane between Timber and Spacer
- 2 - Run string line between these two Spacers Plates on the top edge of the Spacers.
- 3 - Mark out position of intermediate Spacer Plates (will be the same spacing as the Heavy Duty clamps) and screw to joists using 10g SS Screws. EPDM or rubber membrane between Timber and Spacer
Use clamp spacings as listed on fixing details. Note that glass joins are usually made at the HD clamps.
- 4 - Run string line between the spacers on the front face. This will determine if the joists are warped.
Calculate the position and quantity of JET/IB/CSP 1.0mm thick Packing spacers to packout the 15mm Spacer Plates as necessary. Do not fit at this stage.
- 5 - Temporarily fit Rear cover and mark out position of 12.5mm holes for 12mm coach screw/bolts. Drill holes. Fit bulb seal on back cover.
- 6 - Fit Rear cover and HD clamps in position with the 12mm fasteners. Prior to tightening up fit the 1.0mm Packing spacers as previously determined between the 15mm Spacers Plates and the Rear cover extrusion.
Tighten up the 12mm fasteners, while ensuring the Rear Cover is plumb.
- 7 - Mark out position of Glass clamps on glass to match position of HD clamps and tighten on glass.
- 8 - Fit glass into position on HD clamps.
- 9 - Adjust the Vertical height grub screw on the bottom of the HD clamp to ensure the top edges of the glass panels are level
- 10 - Lightly nip the top 2 grub screws on the HD clamp to hold the glass vertical.
- 11 - Adjust the 4 lower grub screws on the HD clamp and Glass clamp assemblies for top edge Horizontal alignment
- 12 - When glass panels are in the correct position tighten top and bottom clamp screws on HD clamp (5.0Nm max)
- 13 - Cut Front cover to length and fit bulb seal
- 14 - Clip Front cover on
- 15 - Fit End plate kits as required (note: 2 different size plastic plugs and screws)

Fitting Stages 1-6 to get HD Clamp Plumb, both Vertical and Horizontal

Fitting Stages 9-11 to get Glass Plumb, both Vertical and Horizontal



MFG Infinity BA122 Base Fix Glass Balustrade System

Typical Layouts - Residential, 12mm Toughened Glass only

2 x Infinity Glass Clamps
per Panel. Base Fix

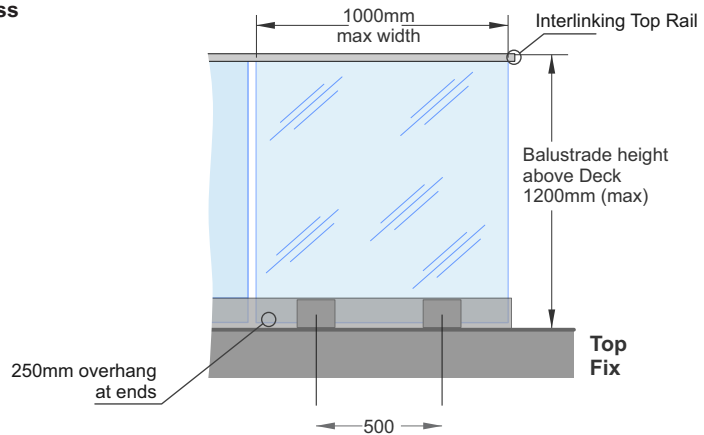
Residential, 12mm glass

MFG Infinity Balustrade
for Domestic and Residential Occupancy
types A, A Other and C3 only

All for 12mm toughened Glass.
Glass must have a minimum strength of 100MPa
All edges polished

Exceeds the wind loading for all Wind Zones
up to **and including** Very High Wind Zone
as set out in NZS 3604:2011

**Refer to the Interlinking Top Rail page
for conformance to NZS 4223.3.2016**



3 x Infinity Glass Clamps
per Panel. Base Fix

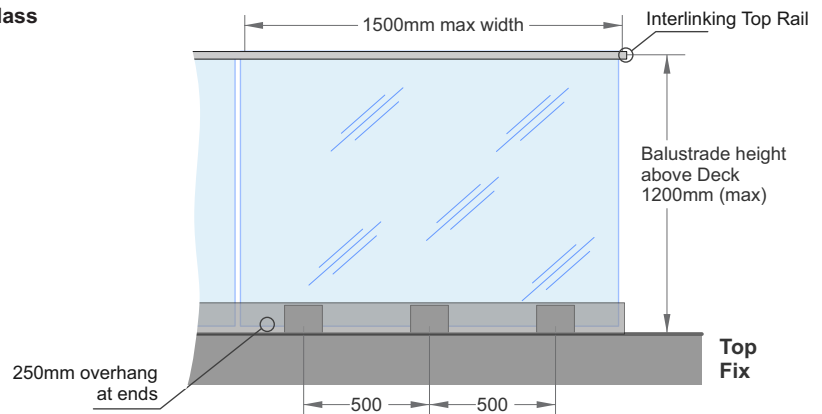
Residential, 12mm glass

MFG Infinity Balustrade
for Domestic and Residential Occupancy
types A, A Other and C3 only

All for 12mm toughened Glass.
Glass must have a minimum strength of 100MPa
All edges polished

Exceeds the wind loading for all Wind Zones
up to **and including** Very High Wind Zone
as set out in NZS 3604:2011

**Refer to the Interlinking Top Rail page
for conformance to NZS 4223.3.2016**



4 x Infinity Glass Clamps
per Panel. Base Fix

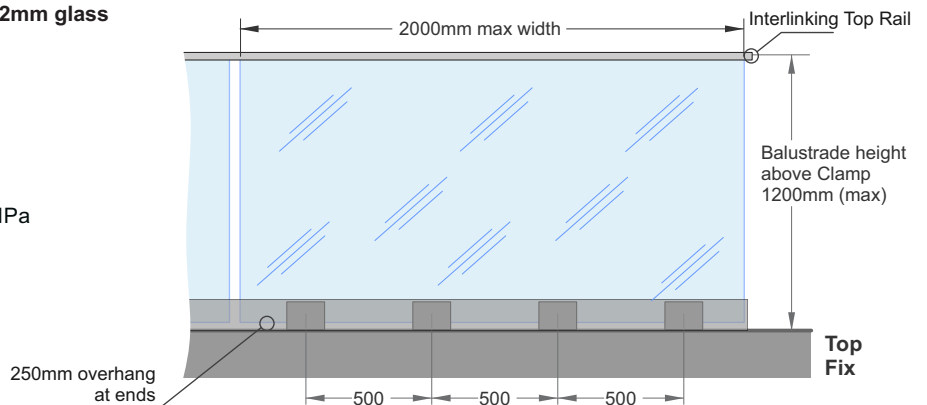
Residential, 12mm glass

MFG Infinity Balustrade
for Domestic and Residential Occupancy
types A, A Other and C3 only

All for 12mm toughened Glass.
Glass must have a minimum strength of 100MPa
All edges polished

Exceeds the wind loading for all Wind Zones
up to **and including** Very High Wind Zone
as set out in NZS 3604:2011

**Refer to the Interlinking Top Rail page
for conformance to NZS 4223.3.2016**



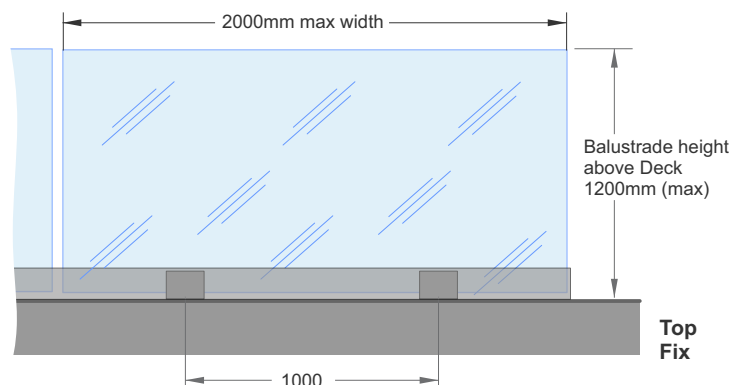
2 x Infinity Glass Clamps
per Panel. Base Fix

Residential, 12mm glass

For 12mm Toughened Glass only,
minimum strength 100MPa

Conforms to FOSP Act 1987

Pool Fencing Only. Interlinking Rail not required



MFG Infinity BA122 Base Fix Glass Balustrade System

Typical Layouts - Commercial, 15mm Toughened Glass only

2 x Infinity Glass Clamps
per Panel. Base Fix

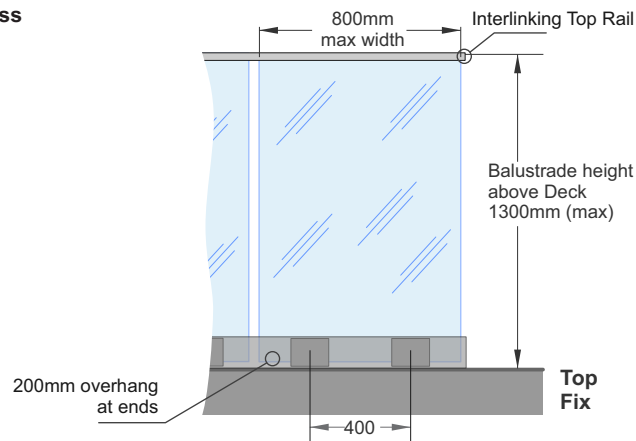
Commercial, 15mm glass

MFG Infinity Balustrade
for Commercial Occupancy
types B, E, and C3 only

All for 15mm toughened Glass.
Glass must have a minimum strength of 100MPa
All edges polished

Exceeds the wind loading for all Wind Zones
up to **and including** Very High Wind Zone
as set out in NZS 3604:2011

**Refer to the Interlinking Top Rail page
for conformance to NZS 4223.3.2016**



3 x Infinity Glass Clamps
per Panel. Base Fix

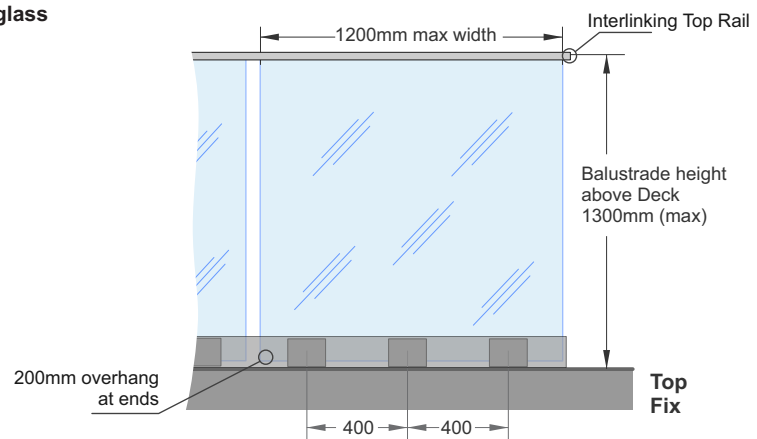
Commercial, 15mm glass

MFG Infinity Balustrade
for Commercial Occupancy
types B, E, and C3 only

All for 15mm toughened Glass.
Glass must have a minimum strength of 100MPa
All edges polished

Exceeds the wind loading for all Wind Zones
up to **and including** Very High Wind Zone
as set out in NZS 3604:2011

**Refer to the Interlinking Top Rail page
for conformance to NZS 4223.3.2016**



4 x Infinity Glass Clamps
per Panel. Base Fix

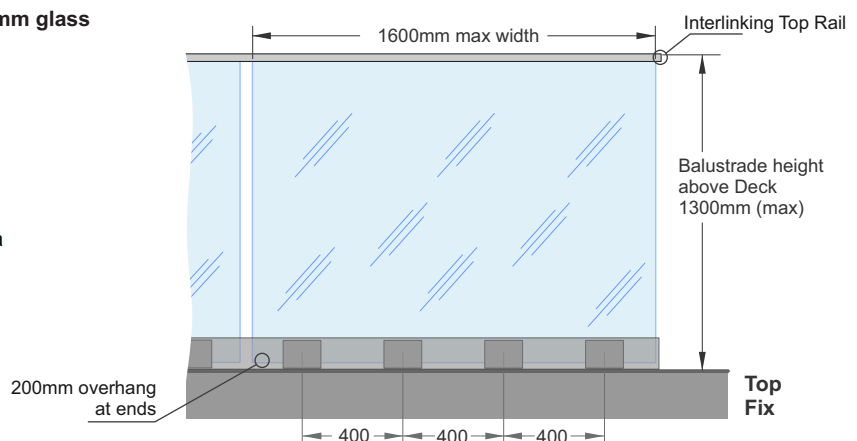
Commercial, 15mm glass

MFG Infinity Balustrade
for Commercial Occupancy
types B, E, and C3 only

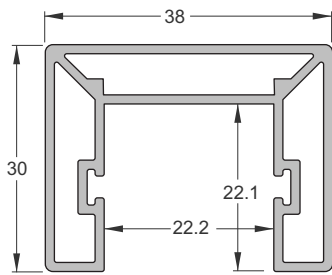
All for 15mm toughened Glass.
Glass must have a minimum strength of 100MPa
All edges polished

Exceeds the wind loading for all Wind Zones
up to **and including** Very High Wind Zone
as set out in NZS 3604:2011

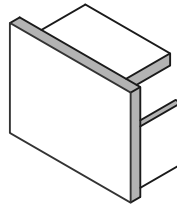
**Refer to the Interlinking Top Rail page
for conformance to NZS 4223.3.2016**



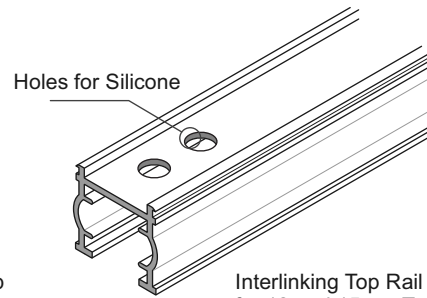
MFG Infinity BA122 Base Fix Glass Balustrade System
Interlinking Top Rail conforming to NZS 4223.3.2016 and Building Code Clause B1.3.4



Interlinking Top Rail Extrusion
for 12 and 15mm Toughened Glass



Interlinking Top Rail End Cap
38.4x30.4mm



Interlinking Top Rail Gaskets
for 12 and 15mm Toughened Glass
(12mm version shown)

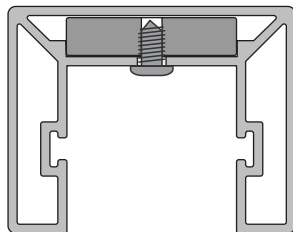
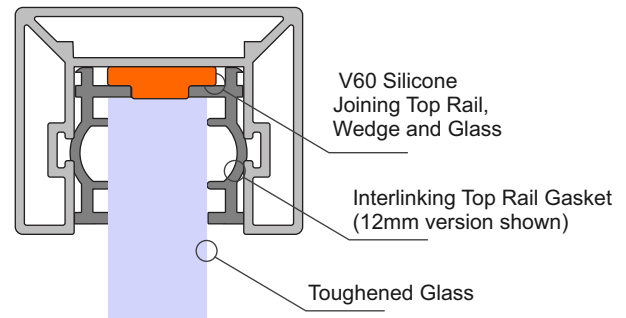
Application Notes:

- Cut short lengths of Gasket (50mm) and place say every 700mm.
- Cut/adjust Interlinking rail to correct dimensions, test in place.
- Remove all, install full cut lengths of Gasket to glass top edge

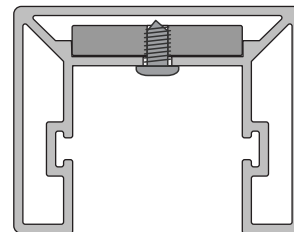
- Assemble Top Rail + Joiners and suitable End plates

- Place blobs of V60 silicone in every Gasket hole
- Then place Top Rail extrusion + Joiners and End plates in place clipping firmly to Gasket
- Tape all down, wait 24 hrs to fully bond. Clean up.

Note: Ends must be attached to structure or post,
 - Joins must have a suitable joiner plate



Joiners both 22.5 x 5mm
Aluminium



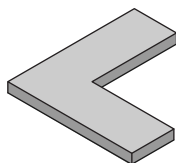
End Plate
Tabs all 22.5 x 4mm SS.

Joiners: (After cutting extrusions to length)

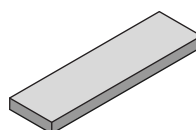
- With Joiner in place, spot drill from below for position
- Drill out to joiner to 3mm dia, extrusion to 4mm dia
- Use No 6 x 1/4in SS ST Pan sq drive Screw
- One end must be attached.
- Joins must be within 300mm of Post

End Plates: (After cutting extrusions to length)

- With End Plate in place, spot drill from below for position
- Drill out to SS tab to 3mm dia, extrusion to 4mm dia
- Use No 6 x 1/4in SS ST Pan sq drive Screw
- End Plate must be securely attached to Post or structure.

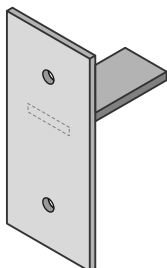


Interlinking Top Rail
Corner Joiner
75x75x5mm

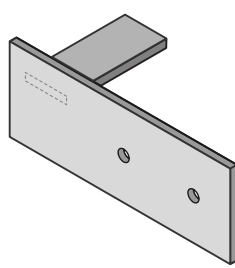


Interlinking Top Rail
Straight Joiner
80x22.8x5mm

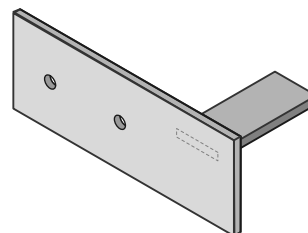
Joiners both 22.5 x 5mm Aluminium



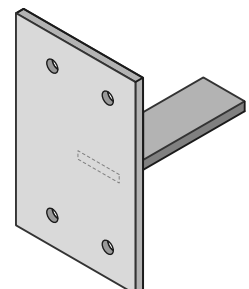
Interlinking Top Rail
End Plate, SS. 100x45mm



Interlinking Top Rail
End Plate, SS. 120x45mm



Interlinking Top Rail
End Plate, SS. 120x45mm



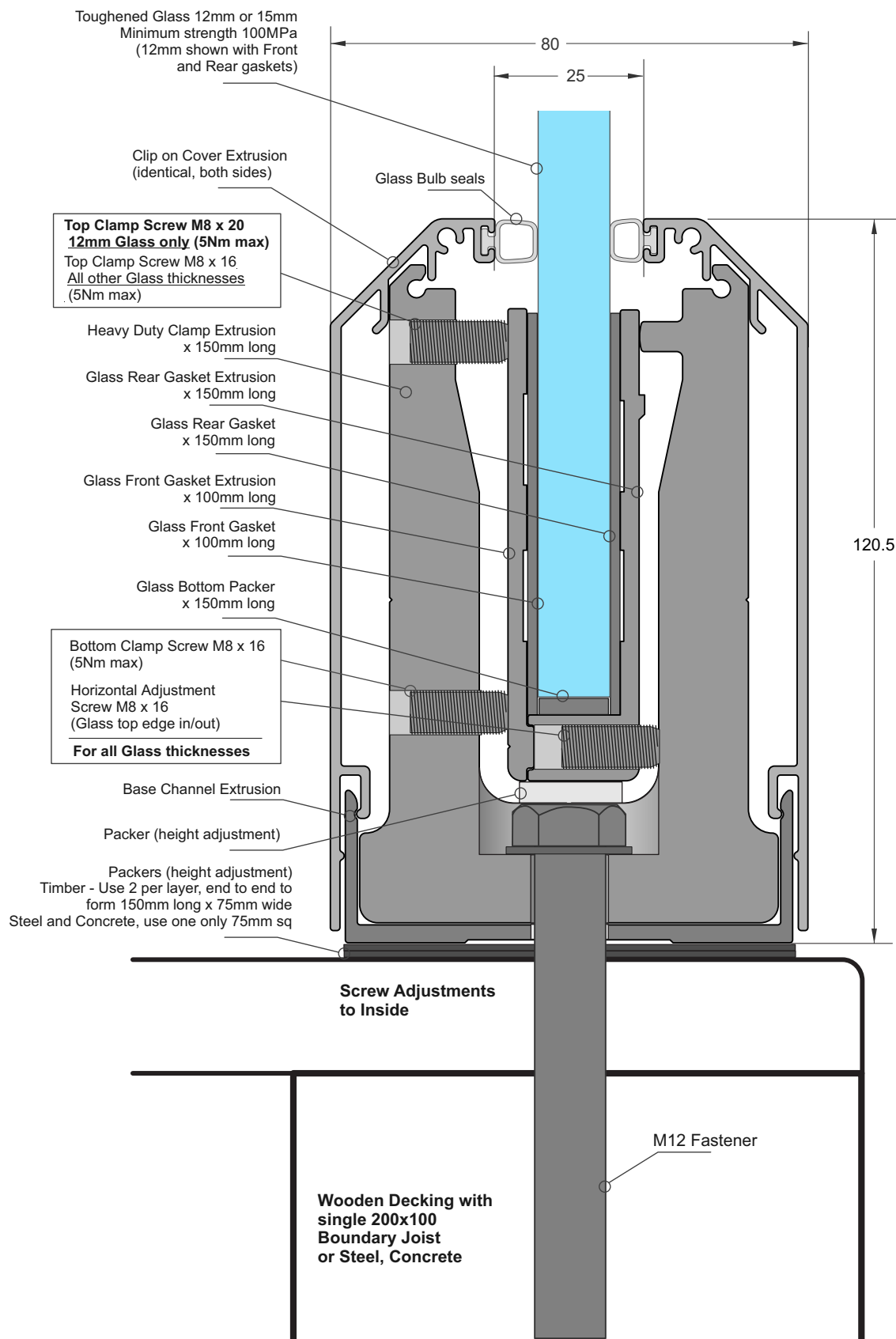
Interlinking Top Rail
End Plate, SS. 100x65mm

Tabs all 22.5 x 4mm SS. Front faces all 3mm SS

MFG Infinity BA122 Base Fix Glass Balustrade System - General

Infinity Glass Clamp
Base Fix
(12mm Glass Shown)

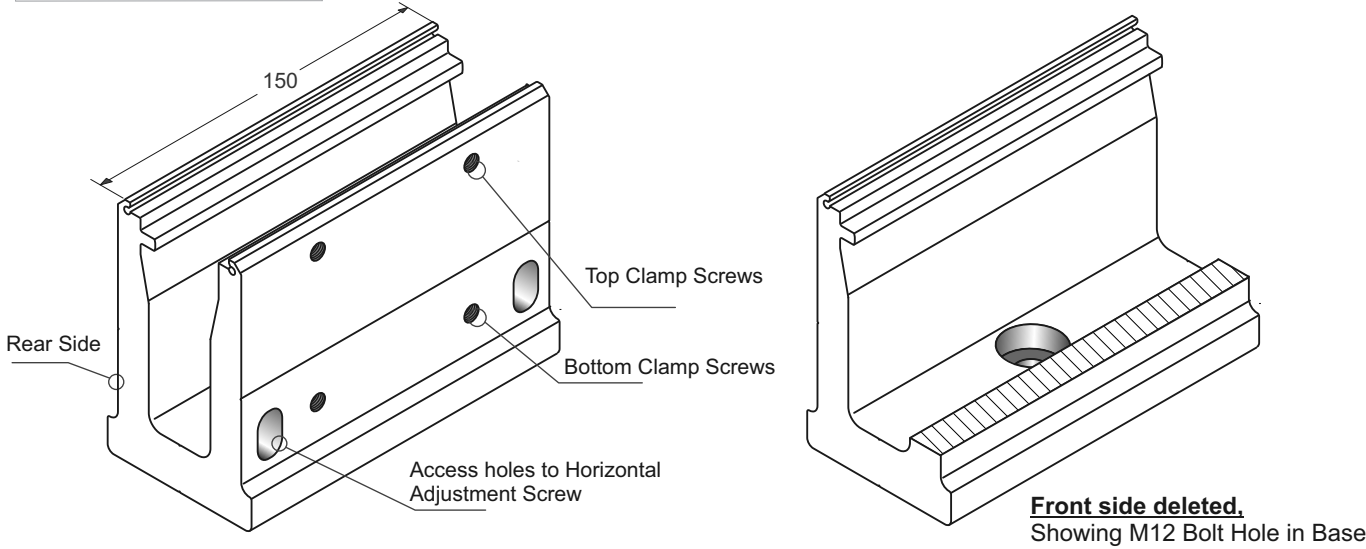
The Infinity Balustrade Clamp comes as a kit;
Clamp Extrusion, Front and Rear Gasket Extrusions
Gaskets, Glass bottom Packer and all adjusting screws.
(M12 Fastener not included)



Elevation showing the Main Features

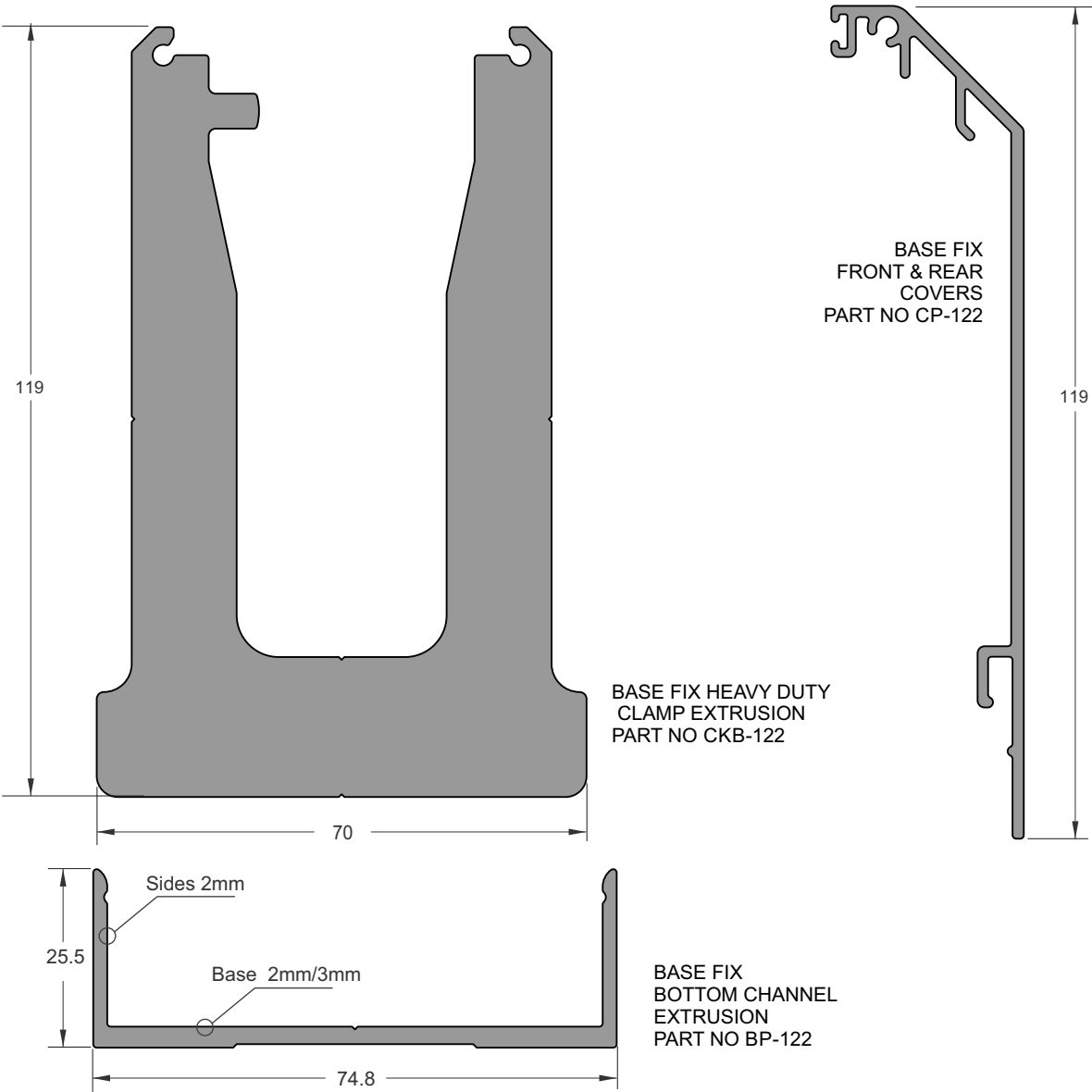
MFG Infinity BA122 Base Fix Glass Balustrade System - Components

Base Fix
Heavy Duty Clamp Extrusion



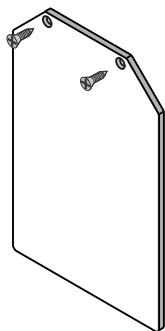
Cover and Base Extrusion

Front and Back Cover Extrusions Identical



MFG Infinity BA122 Base Fix Glass Balustrade System - Components

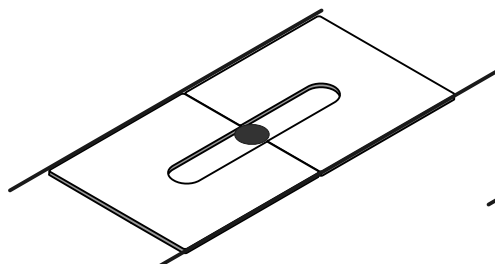
Extrusion End Plate
Part No ECB-122



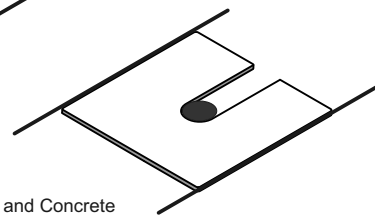
Attach Screws x 2
No 8 x 25 SS CS

Bottom Spacer Plates

Packers (height adjustment)
- Timber - Use 2 per layer, end to end to form 150mm long x 75mm wide
- Steel and Concrete, use one only 75mm sq



Timber
2 x 75 long x 75 wide



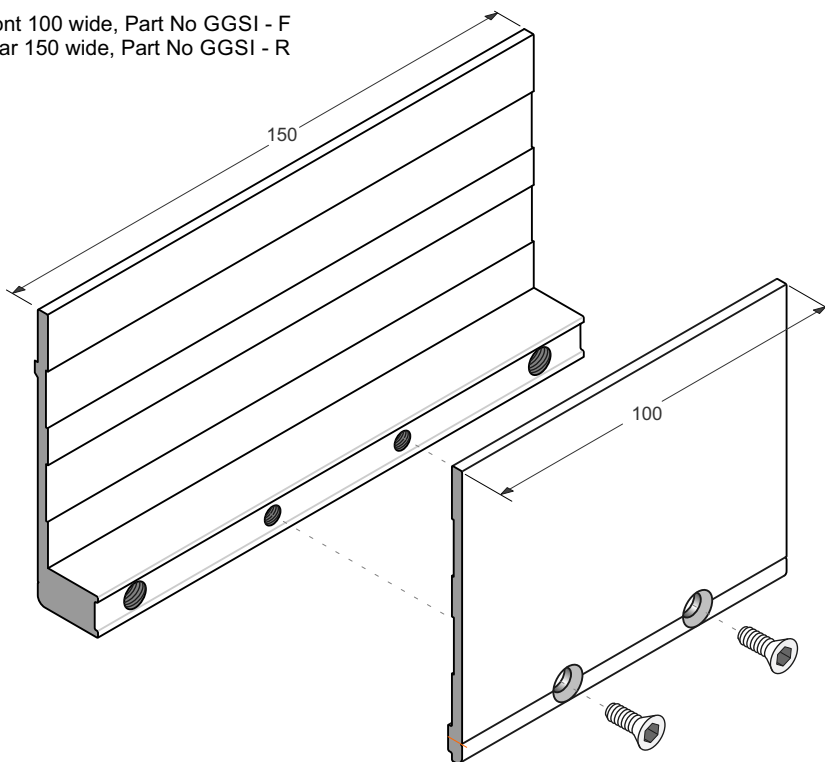
Steel and Concrete
1 x 75 long x 75 wide.
Insert then rotate 90 deg

1mm thick Plate - Part No BPP-122- 1

5mm thick Plate - Part No BPP-122 - 5

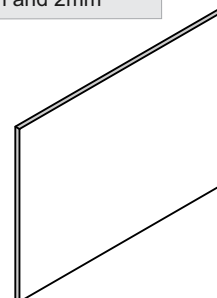
Glass Gasket Set
Front and Rear

Front 100 wide, Part No GGSI - F
Rear 150 wide, Part No GGSI - R



M6 x 16 C/s SS Screws,
reduced head type.
Use 3mm Allen key.
Part No JET/IB/M6x16

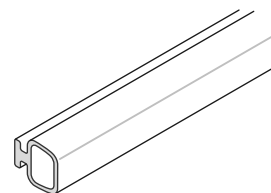
Glass Gaskets
1mm and 2mm



Gasket 2mm Thick	Front 100 wide, Part No GGI- 12F Rear 150 wide, Part No GGI - 12R
Gasket 1mm Thick	Front 100 wide, Part No GGI - 15F Rear 150 wide, Part No GGI - 15R

For 12mm Toughened Glass use 2 x 2mm Gaskets
For 15mm Toughened Glass use 2 x 1mm Gaskets

Glass Bulb Seal
Part No GBS - 124



MFG Infinity BA122 Base Fix Glass Balustrade System - Typical Fixing - Residential or Commercial

Complies with NZS3604:2011 - Boundary Joist

Typical Base Fix to Timber - M12 Coachscrew

Occupancy - Residential A, A Other and C3. 12mm Toughened Glass

Balustrade Height (max)	Panel Width (max)	Clamps per Panel	Clamp Spacing	End Overhang (max)
1200	1000	2 per panel	500	250
1200	1500	3 per panel	500	250
1200	2000	4 per panel	500	250

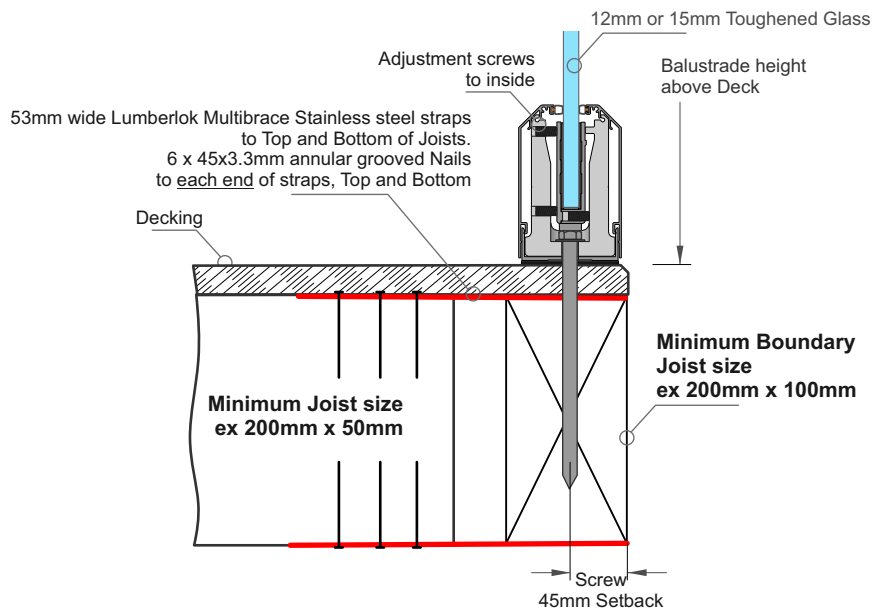
Occupancy - Commercial B, E and C3. 15mm Toughened Glass

Balustrade Height (max)	Panel Width (max)	Clamps per Panel	Clamp Spacing	End Overhang (max)
1300	800	2 per panel	400	200
1300	1200	3 per panel	400	200
1300	1600	4 per panel	400	200

Exceeds the wind loading for all Wind Zones up to **and including** Very High Wind Zone as set out in NZS 3604:2011

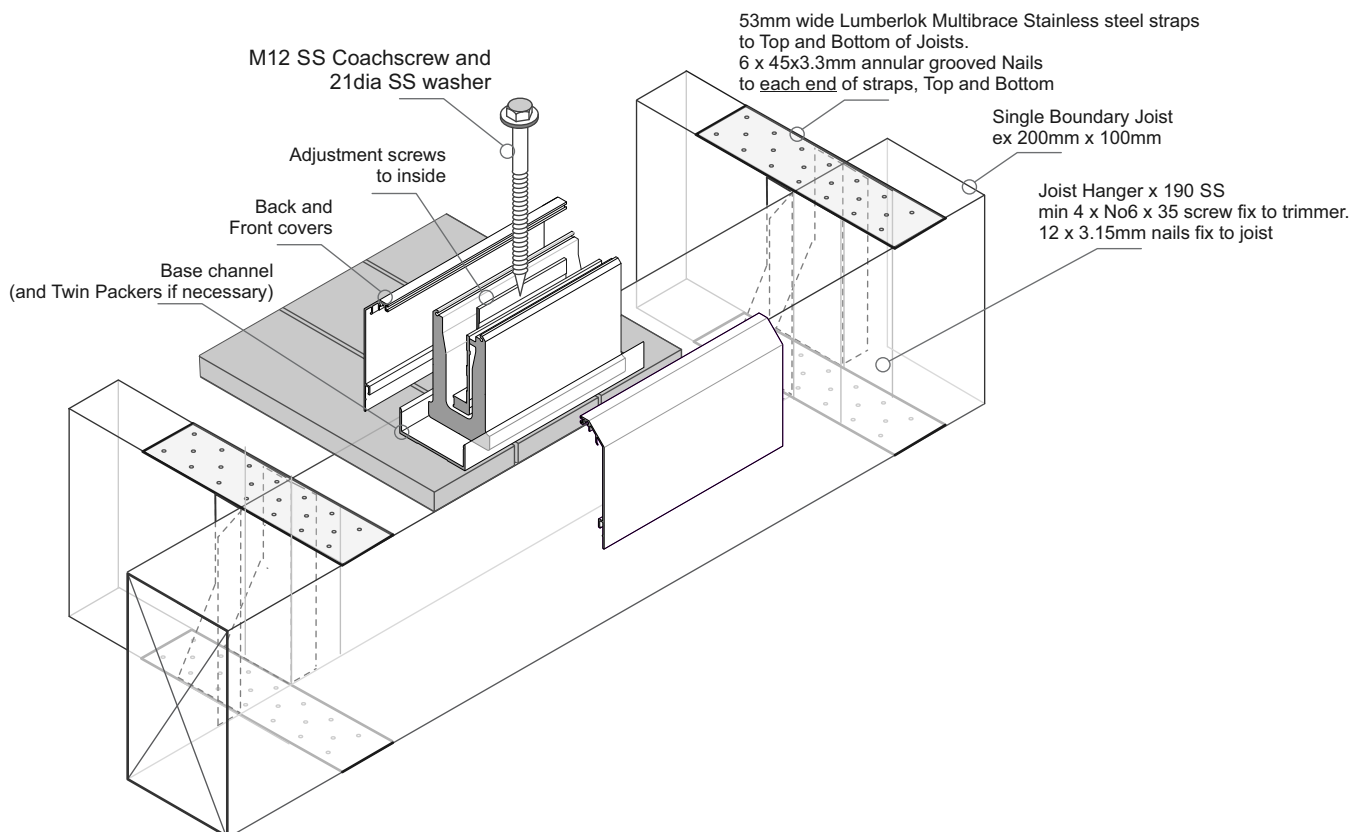
Refer to the Interlinking Top Rail page for conformance to NZS 4223.3.2016

- All measurements mm
- Balustrade height measured from Deck



Important Notes:

- 1 - A Design engineer must ensure the structure can support the appropriate loads
- 2 - Coachscrews 150mm min thread engagement into joists
- 3 - Bond all coachscrews with SIKA Supergrip to full depth
- 4 - All fixings must be Stainless Steel



Typical Base Fix to Steel - M12 Bolt

Occupancy - Residential
A, A Other and C3.
12mm Toughened Glass

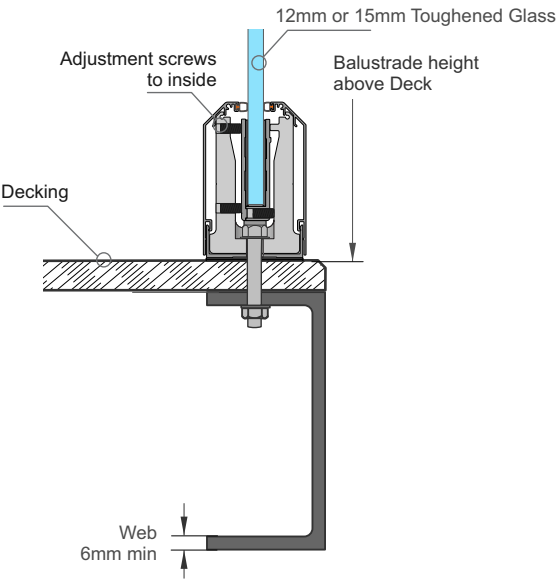
Balustrade Height (max)	Panel Width (max)	Clamps per Panel	Clamp Spacing	End Overhang (max)
1200	1000	2 per panel	500	250
1200	1500	3 per panel	500	250
1200	2000	4 per panel	500	250

Occupancy - Commercial
B, E and C3.
15mm Toughened Glass

Balustrade Height (max)	Panel Width (max)	Clamps per Panel	Clamp Spacing	End Overhang (max)
1300	800	2 per panel	400	200
1300	1200	3 per panel	400	200
1300	1600	4 per panel	400	200

Exceeds the wind loading for all Wind Zones up to **and including** Very High Wind Zone as set out in NZS 3604:2011

Refer to the Interlinking Top Rail page for conformance to NZS 4223.3.2016

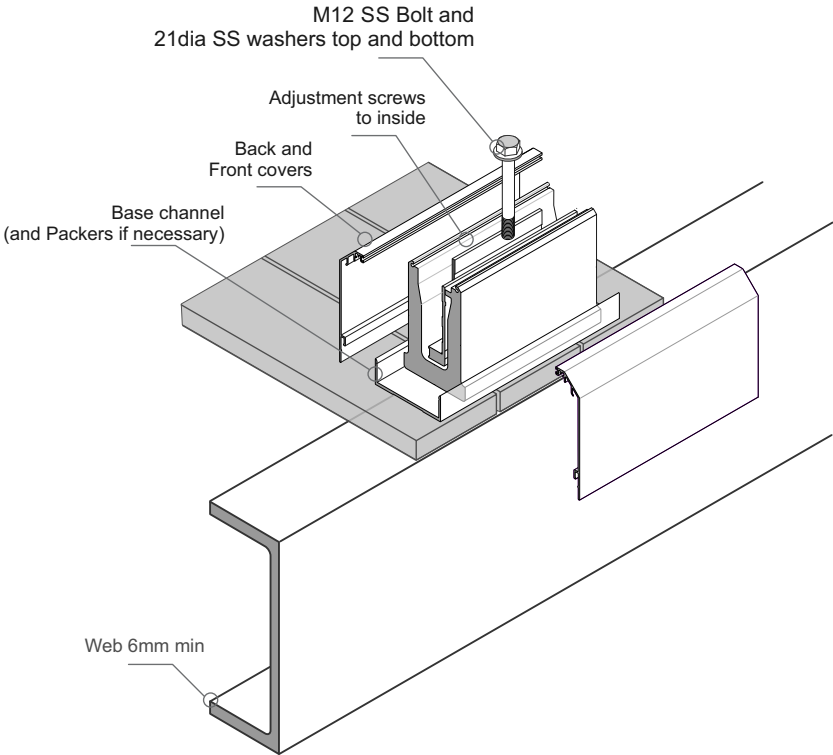


- All measurements mm
- Balustrade height measured from Deck

Important Notes:

1 - A Design engineer must ensure the structure can support the appropriate loads

2 - All fixings must be Stainless Steel



Typical Base Fix to Concrete - M12 Stud

**Occupancy - Residential
A, A Other and C3.
12mm Toughened Glass**

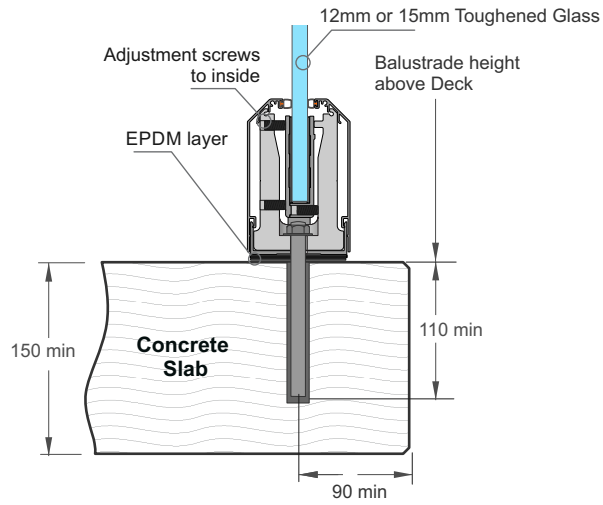
Balustrade Height (max)	Panel Width (max)	Clamps per Panel	Clamp Spacing	End Overhang (max)
1200	1000	2 per panel	500	250
1200	1500	3 per panel	500	250
1200	2000	4 per panel	500	250

**Occupancy - Commercial
B, E and C3.
15mm Toughened Glass**

Balustrade Height (max)	Panel Width (max)	Clamps per Panel	Clamp Spacing	End Overhang (max)
1300	800	2 per panel	400	200
1300	1200	3 per panel	400	200
1300	1600	4 per panel	400	200

Exceeds the wind loading for all Wind Zones up to **and including** Very High Wind Zone as set out in NZS 3604:2011

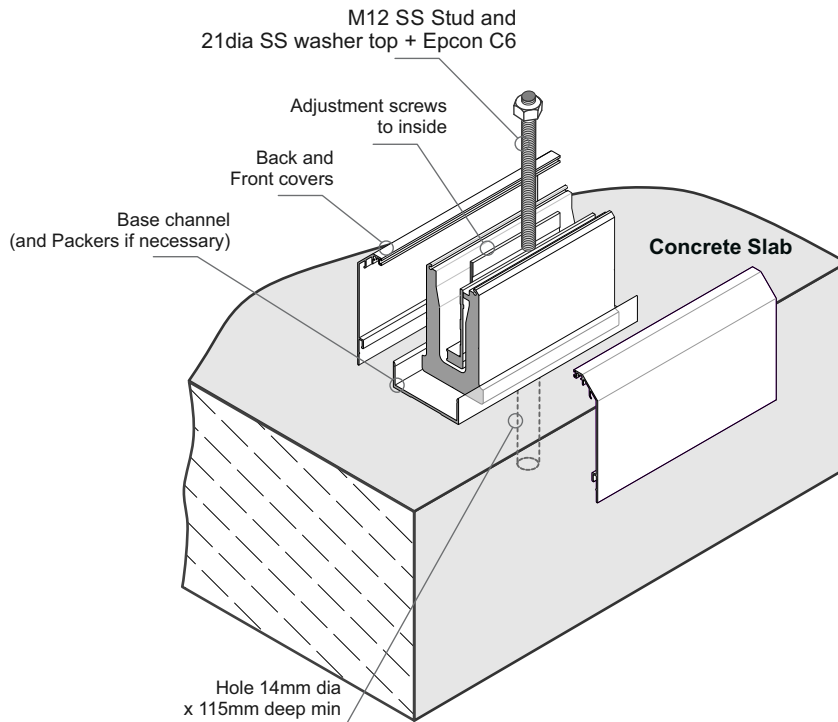
Refer to the Interlinking Top Rail page for conformance to NZS 4223.3.2016



- All measurements mm
- Balustrade height measured from Deck

Important Notes:

- 1 - A Design engineer must ensure the structure can support the appropriate loads
- 2 - An EPDM, Rubber or Foam Tape layer must be installed between the Channel and Concrete
- 3 - All fixings must be Stainless Steel



MFG Infinity Glass Balustrade System - Glass Care

Glass Cleaning and Maintenance

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

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

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

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

Scratches and Metal Scrapers

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

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

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

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

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

Glass Cleaning, Do's and Don'ts

DO NOT..

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

DO...

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

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

All above reprinted with permission from Metro Glass Tech

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