50MM DOUBLEDISC MB50 BALUSTRADE SYSTEM

Stiffener Brackets

**STRAIGHT BRACKET**
13.5–15.5mm GLASS
300149

**CORNER BRACKET**
13.5–15.5mm GLASS
300151

**WALL BRACKET**
13.5–15.5mm GLASS
300153

**STRAIGHT BRACKET**
17.2–21.52mm GLASS
300150

**CORNER BRACKET**
17.2–21.52mm GLASS
300152

**WALL BRACKET**
17.2–21.52mm GLASS
300154

*Note: All brackets are supplied with a selection of gaskets to suit glass thickness and includes stainless steel clamping plates.*
50MM DOUBLEDISC MB50 BALUSTRADE SYSTEM
Edgetec® 220 Link Rail

**INSTALLATION NOTES:**
1. Cut short lengths of gasket (nom 50mm) and place at approximately 700mm centres.
2. Cut/adjust interlinking rail to correct dimensions and test in position.
3. Remove all parts from glass barrier and install full cut lengths of gasket to top edge of glass barrier.
4. Assemble top rail, joiners and suitable end plates.
5. Place blobs of V60 silicone in every gasket hole.
6. Place top rail extrusion, joiners and end plates in position on glass barrier, clipping firmly to gasket.
7. Tape assembled components down to glass barrier and wait 24hrs to fully bond.
8. Clean up any excess silicone.

**Note:** Rail ends must be attached to structure or structural post. Extrusion joins must have a suitable joiner plate.

**IMPORTANT NOTE:** Conforming to NZS 4223.3.2016 and Building Code Clause B1/AS1 Cl 7.3.1
Edgetec® 220 Link Rail

Edgetec® 220 Rail for 12mm & 15mm Glass
Full Length (5800mm) 300729
Half Length (2900mm) 300726
38x30mm

Edgetec® 220 Rail
End Cap (300494)
38x30mm

Edgetec® 220 Rail
Black EPDM Gasket (2900mm length)
for 12mm Glass 300593
for 15mm Glass 300594

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 (301993)

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 (301993)
- End Plate must be securely attached to Post or structure.

JOINERS NOM. 22.5 X 5MM ALUMINIUM

Edgetec® 220 Rail Inline Joiner (#300847)
80x22.5x5mm

Edgetec® 220 Rail Vertical Adjustable Joiner (#301990)

Edgetec® 220 Rail Horizontal Fixed Joiner (#301985)

Edgetec® 220 Rail Horizontal Adjustable Joiner (#301986)

Edgetec® 220 Rail Wall Bracket Post End* (#301992)
60x46mm

Edgetec® 220 Rail Wall Bracket Left Hand (#301004)
120x45mm

Edgetec® 220 Rail Wall Bracket Right Hand (#301006)
120x45mm

Edgetec® 220 Rail Wall Bracket Post End (#301149)
100x45mm

* Suits AP65 Aluminium Post

Holes for Silicone

Black EPDM Gasket (2900mm length)
for 12mm Glass 300593
for 15mm Glass 300594

Tabs all 22.5 x 4mm SS.

Tabs all 22.5 x 4mm SS.

End Plate

IMPORTANT NOTE: Conforming to NZS 4223.3:2016 and Building Code Clause B1/AS1 Cl 7.3.1
50MM DOUBLEDISC MB50 BALUSTRADE SYSTEM

S25 Link Rail

S25-01
S25 RAIL - TYPICAL INSTALLATIONS

NOTES:
1. Interlinking rail details are only to be used on metro performance glass. Cantilevered glass balustrades.
2. Prepare for and apply DC795 & DC121 structural silicone in accordance with dow. Corning preparation and installation instructions.
3. Interlinking rail splice & corner connections are shown on drawings S25-02 & S25-03
4. Interlinking rail end connection brackets & attachment details are shown on drawings S25-04 to S25-08.
5. All screws to be stainless steel with a minimum ultimate shear strength of 3.5kN (per Screw).
7. Refer to warranty & maintenance pages for periodic inspection, cleaning & maintenance requirements.

IMPORTANT NOTE: Conforming to NZS 4223.3:2016 and Building Code Clause B1/AS1 Cl 7.3.1
50MM DOUBLEDISC MB50 BALUSTRADE SYSTEM

S25 Link Rail

S25-02
S25 RAIL - SPLICE CONNECTION DETAIL
All fixings to be stainless steel

S25 LINK RAIL SECTION
300738

S25 LINK RAIL INLINE JOINER
300852

SECTION A-A

S25 LINK RAIL - SPLICE CONNECTION ELEVATION

S25-03
S25 RAIL - 90° CORNER CONNECTION DETAIL
All fixings to be stainless steel

S25 LINK RAIL SECTION
300738

S25 LINK RAIL 90° CORNER
300861

SECTION B-B

S25 LINK RAIL - 90° CORNER CONNECTION ELEVATION

IMPORTANT NOTE: Conforming to NZS 4223.3.2016 and Building Code Clause B1/AS1 Cl.7.3.1

Balustrade Systems
www.metroglass.co.nz
S25 Link Rail

S25-04
S25 RAIL WALL BRACKET
All fixings to be stainless steel

S25 LINK RAIL WALL BRACKET
RIGHT HAND - 301946 LEFT HAND - 300148

S25 LINK RAIL WALL BRACKET
(RIGHT HAND - 301946)

S25 LINK RAIL WALL BRACKET
(LEFT HAND - 300148)

S25-05
S25 RAIL - END BRACKET CONCRETE WALL ATTACHMENT
All fixings to be stainless steel

NOTES:
1. Concrete wall is to be designed by project structural engineer for loads imposed by balustrade. ULS Point load, \( n^* = 0.9 \text{kN} \) - inwards, outwards or down.
2. Concrete wall to be minimum 140mm thick.
3. Concrete wall must be reinforced & is to be designed & detailed in accordance with NZS3101.

IMPORTANT NOTE: Conforming to NZS 4223.3.2016 and Building Code Clause B1/AS1 Cl 7.3.1
50MM DOUBLE DISC MB50 BALUSTRADE SYSTEM

S25 Link Rail

S25-06
S25 RAIL - END BRACKET BLOCKWALL ATTACHMENT

All fixings to be stainless steel

NOTES:
1. Blockwall is to be designed by Project structural engineer for loads imposed by Balustrade. ULS point load, \( n^* = 0.9 \text{kN} \) - inwards, outwards or down.
2. Minimum blockwall thickness = 140mm.
3. Blockwall must be corefilled /Reinforced & is to be designed & detailed in Accordance with NZS4230 or NZS4229.
4. Minimum corefill concrete strength = 17.5MPa.

S25-07
S25 RAIL - END BRACKET WEATHERBOARD ATTACHMENT

All fixings to be stainless steel

NOTES:
1. Timber stud wall is to be designed by project Structural engineer for loads imposed by balustrade. ULS Point load, \( n^* = 0.9 \text{kN} \) - inwards, outwards or down.
2. Minimum stud size = 90x45.
3. Minimum timber grade = SG8
4. Timber stud wall to be designed & detailed in accordance with NZS3603 or NZS3604.

S25-08
S25 RAIL - END BRACKET STEEL POST ATTACHMENT

All fixings to be stainless steel

NOTES:
1. Steel post is to be designed by project structural engineer for loads imposed by balustrade. ULS point load, \( n^* = 0.9 \text{kN} \) - inwards, outwards or down.
2. Building designer to ensure durability requirements of connection are met.
3. Minimum steel post wall thickness = 5mm.

IMPORTANT NOTE: Conforming to NZS 4223.3.2016 and Building Code Clause B1/AS1 Cl 7.3.1
50MM DOUBLEDISC MB50 BALUSTRADE SYSTEM

S40 Link Rail

S40-01
S40 RAIL - TYPICAL INSTALLATIONS

NOTES:
1. Interlinking rail details are only to be used on metro performance glass cantilevered glass balustrades.
2. Prepare for and apply DC795 & DC121 structural silicone in accordance with Dow Corning preparation and installation instructions.
3. Interlinking rail splice & corner connections are shown on drawings S40-02 & S40-03.
4. Interlinking rail end connection brackets & attachment details are shown on drawings S40-04 to S40-08.
5. All screws to be stainless steel with a minimum ultimate shear strength of 3.5kN (per screw).
7. Refer to warranty & maintenance pages for periodic inspection, cleaning & maintenance requirements.

IMPORTANT NOTE: Conforming to NZS 4223.3:2016 and Building Code Clause B1/AS1 Cl 7.3.1
S40 Link Rail

S40-02 S40 RAIL - SPLICE CONNECTION DETAIL
All fixings to be stainless steel

S40 Link Rail Section

S40 Link Rail - 90° Corner Connection Detail
All fixings to be stainless steel

S40-03 S40 RAIL - 90° Corner Connection Detail
All fixings to be stainless steel

Important Note: Conforming to NZS 4223.3:2016 and Building Code Clause B1/AS1 Cl 7.3.1
50MM DOUBLEDISC MB50 BALUSTRADE SYSTEM

S40 Link Rail

S40-04
S40 RAIL WALL BRACKET

All fixings to be stainless steel

S40-05
S40 RAIL - END BRACKET CONCRETE WALL ATTACHMENT

All fixings to be stainless steel

NOTES:
1. Concrete wall is to be designed by project structural engineer for loads imposed by balustrade. ULS point load, n* = 0.9kN - inwards, outwards or down.
2. Concrete wall to be minimum 140mm thick.
3. Concrete wall must be reinforced 8 is to be designed 8 detailed in accordance with NZS3101.

IMPORTANT NOTE: Conforming to NZS 4223.3 2016 and Building Code Clause B1/AS1 Cl 7.3.1
**50MM DOUBLEDISC MB50 BALUSTRADE SYSTEM**

**S40 Link Rail**

**S40-06**

**S40 RAIL - END BRACKET BLOCKWALL ATTACHMENT**

All fixings to be stainless steel

**NOTES:**
1. Blockwall is to be designed by project structural engineer for loads imposed by balustrade. ULS point load, \( n^* = 0.9 \)kN - inwards, outwards or down.
2. Minimum blockwall thickness = 140mm.
3. Blockwall must be corefilled / reinforced 8 is to be designed 8 detailed in accordance with NZS4230 or NZS4229.
4. Minimum corefill concrete strength = 17.5MPa.

**S40-07**

**S40 RAIL - END BRACKET WEATHERBOARD ATTACHMENT**

All fixings to be stainless steel

**NOTES:**
1. Timber stud wall is to be designed by project structural engineer for loads imposed by balustrade. ULS point load, \( n^* = 0.9 \)kN - inwards, outwards or down.
2. Minimum stud size = 90x45.
4. Timber stud wall to be designed 8 detailed in accordance with nz3603 or NZS3604.

**S40-08**

**S40 RAIL - END BRACKET STEEL POST ATTACHMENT**

All fixings to be stainless steel

**NOTES:**
1. Steel post is to be designed by project structural engineer for loads imposed by balustrade. ULS point load, \( n^* = 0.9 \)kN - inwards, outwards or down.
2. Building designer to ensure durability requirements of connection are met.
3. Minimum steel post wall thickness = 5mm.

**IMPORTANT NOTE:** Conforming to NZS 4223.3.2016 and Building Code Clause B1/AS1 Cl 7.3.1
50MM DOUBLEDISC MB50 BALUSTRADE SYSTEM
HB50 Rail Brackets

HB50–R–90 HANDRAIL BRACKET
All fixings to be stainless steel

HB50–S–90 HANDRAIL BRACKET
All fixings to be stainless steel
For attaching EDGETEC® 220 S25 & S40 (on glass) to a Semi Frameless AP65 Post Interlinking Top Rail (where wall fixing not suitable)

**AP65 Structural Post & Edgetec® 220 Rail Side Elevation**

- AP65 POST & TOP CAP
- AP65 POST & S25 Rail
- AP65 POST & Edgetec Rail
- 1mm EPDM
- SELF TAPPING SS SCREWS
- S25 RAIL WALL BRACKET
- INTERLINKING RAIL GASKET
- GLASS PANEL
- DOUBLE DISC MB50 BALUSTRADE SYSTEM

**AP65 Structural Post & Edgetec® 220 Rail Plan**

- AP65 POST & TOP CAP
- AP65 INFILL CLIP
- SELF TAPPING SS SCREWS
- S25 RAIL WALL BRACKET
- INTERLINKING RAIL GASKET
- GLASS PANEL

**AP65 Structural Post & Edgetec® S25 Rail Side Elevation**

- AP65 POST & TOP CAP
- AP65 POST & S25 Rail
- INTERLINKING RAIL WALL BRACKET
- INTERLINKING RAIL GASKET
- GLASS PANEL
- SELF TAPPING SS SCREWS

**AP65 Structural Post & Edgetec® S25 Rail Plan**

- AP65 POST & TOP CAP
- AP65 INFILL CLIP
- SELF TAPPING SS SCREWS
- S25 RAIL WALL BRACKET
- INTERLINKING RAIL GASKET
- GLASS PANEL

**AP78 Structural Post & Edgetec® S40 Rail Side Elevation**

- AP78 TOP CAP
- AP78 POST & S40 Rail
- AP78 POST & Edgetec Rail
- S40 RAIL WALL BRACKET
- INTERLINKING RAIL GASKET
- GLASS PANEL
- SELF TAPPING SS SCREWS

**AP78 Structural Post & Edgetec® S40 Rail Plan**

- AP78 POST & TOP CAP
- AP78 INFILL CLIP
- SELF TAPPING SS SCREWS
- S34 RAIL WALL BRACKET
- INTERLINKING RAIL GASKET
- GLASS PANEL

**IMPORTANT NOTE:** Conforming to NZS 4223.3.2016 and Building Code Clause B1/AS1 Cl 7.3.1
DoubleDisc MB50 Balustrade System

MAKE "D" THE SAME, TO ENSURE GLASS PANELS ARE CORRECTLY ALIGNED

**Double Disc MB50 series (refer installation drawings & EXPLODED VIEWS page for fitting options)

AP65 Semi Frameless Post Extrusion
Side Fix Post as an end Post for Edgetec® 220 & S25 Rails

MAKE "D" THE SAME, TO ENSURE GLASS PANELS ARE CORRECTLY ALIGNED

FOR AP65 SPACER THICKNESS "E"
(EXCLUDING 1.6mm EPDM):

\[ E = D - (34 - t/2) \]

\( t = \) glass thickness

SPACERS x 3mm (ex 302099) + 1.6mm EPDM (ex 302101)

145mm for 10mm coachscrews to 2x190x45 joists;
95mm for M10 bolts & nuts to 2x190x45 joists;
60mm for M10 bolts & nuts to steel;
60mm for M10 studs to concrete.

AP78 Semi Frameless Post Extrusion
Side Fix Post as an end Post for S40 Rail

MAKE "D" THE SAME, TO ENSURE GLASS PANELS ARE CORRECTLY ALIGNED

FOR AP78 SPACER THICKNESS "F"
(EXCLUDING 1.6mm EPDM):

\[ F = D - (38 - t/2) \]

\( t = \) glass thickness

SPACERS x 3mm (ex 302099) + 1.6mm EPDM (ex 302101)

145mm for 10mm coachscrews to 2x190x45 joists;
95mm for M10 bolts & nuts to 2x190x45 joists;
60mm for M10 bolts & nuts to steel;
60mm for M10 studs to concrete.