**50MM DOUBLEDISC MB50 BALUSTRADE SYSTEM**

**Stiffener Brackets**

**STRAIGHT BRACKET**

**13.5–15.5mm GLASS**

MINIMUM 11

MAXIMUM 16

**17.2 – 21.52mm GLASS**

MINIMUM 14

MAXIMUM 20

**CORNER BRACKET**

**13.5–15.5mm GLASS**

MINIMUM 11

MAXIMUM 16

**17.2 – 21.52mm GLASS**

MINIMUM 12

MAXIMUM 17

**WALL BRACKET**

**13.5–15.5mm GLASS**

MINIMUM 11

MAXIMUM 16

**17.2 – 21.52mm GLASS**

MINIMUM 11

MAXIMUM 16
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 CI 7.3.1
**50MM DOUBLEDISC MB50 BALUSTRADE SYSTEM**

**Edgetec® 220 Link Rail**

**Edgetec® 220 Rail for 12mm & 15mm Glass**
- Full Length [5800mm] 300729
- Half Length [2900mm] 300726
- 38x30mm

**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 Wall Bracket Post End* (#301992)**
  - 60x46mm

- **Edgetec® 220 Rail Wall Bracket Right Hand (#301149)**
  - 100x45mm

**End Cap (300494)**
- 38x30mm

**Edgetec® 220 Rail End Cap (300494)**
- 38x30mm

**Edgetec® 220 Rail Wall Bracket Post End**
- Black EPDM Gasket (2900mm length)
  - for 12mm Glass 300593
  - for 15mm Glass 300594

**Horizontal Adjustable Joiner (#301988)**
- Holes for Silicone
- 50x50x5mm

**Horizontal Fixed 90 Degree Joiner (#300848)**
- Black EPDM Gasket (2900mm length)
- for 12mm Glass 300593
- for 15mm Glass 300594

**End Plate**
- Tabs all 22.5 x 4mm SS.

**Wall Bracket Post End (#301149)**
- 120x45mm

**Wall Bracket Left Hand (#301004)**
- 120x45mm

**Wall Bracket Right Hand (#301006)**
- 120x45mm

**Joiners both 22.5 x 5mm Aluminium**

**TABS ALL 22.5 X 4MM. FRONT FACES ALL 3MM.**

**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 - SPLICE CONNECTION ELEVATION

S25 LINK RAIL INLINE JOINER
300852

SECTION A-A

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

S25 LINK RAIL SECTION
300738

S25 LINK RAIL - 90° CORNER CONNECTION ELEVATION

S25 LINK RAIL 90° CORNER
300861

SECTION B-B

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

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

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

LEFT HAND - 300148

S25 LINK RAIL WALL BRACKET
(RIGHT HAND - 301946)

M5x8 GRUB SCREWS (301283)

S25 LINK RAIL 30073B

S25 LINK RAIL - END BRACKET SECTION

EPDM BETWEEN BRACKET AND STRUCTURE (ex-302101)
CR STAINLESS SCREW ANCHORS
2 off 6x70mm HILTI HUS-HR,
CR STAINLESS SCREW ANCHORS

S25 LINK RAIL WALL BRACKET

S25 LINK RAIL WALL BRACKET

M5x8 GRUB SCREWS (301283)

S25 LINK RAIL 30073B

ALTERNATIVE GRUB SCREW LOCATIONS

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* = 0.9kN - 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, $n^* = 0.9kN$ - 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, $n^* = 0.9kN$ - inwards, outwards or down.
2. Minimum stud size = 90x45.

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, $n^* = 0.9kN$ - 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
50MM DOUBLEDISC MB50 BALUSTRADE SYSTEM

S40 Link Rail

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

S40 LINK RAIL SECTION
300739

S40 LINK RAIL INLINE JOINER
300869

SECTION D-D

S40 LINK RAIL - SPLICE CONNECTION ELEVATION
TAP 4 OFF M5x6mm GRUB SCREWS WITH TUBE LOCK LOCTITE (301978 & 300961)

S40-03
S40 RAIL - 90° CORNER CONNECTION DETAIL
All fixings to be stainless steel

S40 LINK RAIL SECTION
300739

S40 LINK RAIL 90° CORNER
300866

SECTION E-E

S40 LINK RAIL - 90° CORNER CONNECTION ELEVATION
DRILL & TAP 4 OFF M5x6mm GRUB SCREWS WITH TUBE LOCK LOCTITE (301978 & 300961)

IMPORTANT NOTE: Conforming to NZS 4223.3.2016 and Building Code Clause B1/AS1 Cl 7.3.1
S40-04
S40 RAIL WALL BRACKET

All fixings to be stainless steel

S40 LINK RAIL SECTION
300739

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 & 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 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, \( n^u = 0.9kN \) - inwards, outwards or down.
2. Minimum blockwall thickness = 140mm.
3. Blockwall must be corefilled / reinforced \( B \) is to be designed \( B \) 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, \( n^u = 0.9kN \) - inwards, outwards or down.
2. Minimum stud size = 90x45.
3. Minimum timber grade = SG8
4. Timber stud wall to be designed \( B \) detailed in accordance with nzs3603 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, \( n^u = 0.9kN \) - 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
50MM DOUBLEDISC MB50 BALUSTRADE SYSTEM

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**

- **INTERLINKING RAIL WALL BRACKET** 301992
- **INTERLINKING RAIL**
- **INTERLINKING RAIL GASKET** or TAPE & SILICONE
- **GLASS PANEL**
- **SELF TAPPING SS SCREWS** 8G x 1” 301784

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

- 1mm EPDM (ex 302101)
- **SELF TAPPING SS SCREWS** 8G x 1/2” 301783
- **INTERLINKING RAIL WALL BRACKET** 301992
- **INTERLINKING RAIL GASKET** or TAPE & SILICONE

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

- **S25 RAIL WALL BRACKET** LH 300148 RH 301946
- **S25 RAIL**
- **S25 RAIL GASKET** or TAPE & SILICONE
- **GLASS PANEL**
- **SELF TAPPING SS SCREWS** 8G x 1/2” 301783

**AP65 Structural Post & S25 Rail Plan**

- 1mm EPDM (ex 302101)
- **SELF TAPPING SS SCREWS** 8G x 1/2” 301783
- **S25 RAIL WALL BRACKET** LH 300148 RH 301946
- **S25 RAIL GASKET** or TAPE & SILICONE

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

- **S40 RAIL WALL BRACKET** LH 300156 RH 301855
- **S40 RAIL**
- **INTERLINKING RAIL GASKET** or TAPE & SILICONE
- **GLASS PANEL**
- **SELF TAPPING SS SCREWS** 8G x 1/2” 301783

**AP78 Structural Post & S40 Rail Plan**

- 1mm EPDM (ex 302101)
- **SIDE SCREW ON OUTER SIDE OF BALUSTRADE**
- **S40 RAIL WALL BRACKET** LH 300156 RH 301855
- **S40 RAIL GASKET** or TAPE & SILICONE

**IMPORTANT NOTE:** Conforming to NZS 4223.3:2016 and Building Code Clause B1/AS1 Cl 7.3.1
**Double Disc MB50 series (refer installation drawings & EXPLODED VIEWS page for fitting options)**

### DoubleDisc MB50 Balustrade System

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

### AP65 Semi Frameless Post Extrusion

**Side Fix Post as an end Post for Edgetec® 220 & S25 Rails**

145mm for 10mm coachscrews to 2x190x45 joists.
95mm for M10 bolts & nuts to 2x40x45 joists.
60mm for M10 bolts & nuts to steel.
60mm for M10 studs to concrete.

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

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

\[ f = \text{glass thickness} \]

### AP78 Semi Frameless Post Extrusion

**Side Fix Post as an end Post for S40 Rail**

145mm for 10mm coachscrews to 2x190x45 joists.
95mm for M10 bolts & nuts to 2x40x45 joists.
60mm for M10 bolts & nuts to steel.
60mm for M10 studs to concrete.

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

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

\[ f = \text{glass thickness} \]