**STRAIGHT BRACKET**

**13.5–15.5mm GLASS**

300149

Min 14
Max 20

---

**CORNER BRACKET**

**13.5–15.5mm GLASS**

300151

---

**WALL BRACKET**

**13.5–15.5mm GLASS**

300153

---

**STRAIGHT BRACKET**

**17.2 – 21.52mm GLASS**

300150

Min 14
Max 20

---

**CORNER BRACKET**

**17.2 – 21.52mm GLASS**

300152

---

**WALL BRACKET**

**17.2 – 21.52mm GLASS**

300154

---

**FULL HEIGHT FULL WIDTH SILICONE INSTALLATION INSTRUCTIONS.**

All brackets are supplied with a selection of gaskets to suit glass thickness and includes stainless steel clamping plates.

**DOWSIL PREPARATION AND FULL HEIGHT FULL WIDTH SILICONE INSTALLATION INSTRUCTIONS.**

(180° bracket)

**POSIGLAZE RAIL & BRACKETS (DRAWING 06)**

Suit glass from 13.5 - 15.5mm.

Duplex 2205. Stainless Steel

Satin finish.

75mm x 50mm x 25mm.

Stiffener bracket - No holes required.

**POSIGLAZE RAIL & BRACKETS (DRAWING 06)**

Suit glass from 17.52 - 21.52mm.

Duplex 2205. Stainless Steel

Satin finish.

65mm x 55mm x 25mm.

Stiffener bracket - No holes required.
**75MM SINGLEDISC MB75 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
**75MM SINGLEDISC MB75 BALUSTRADE SYSTEM**

**Edgetec® 220 Link Rail**

---

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

**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** (#300848)
- **Edgetec® 220 Rail Horizontal Adjustable Joiner** (#301996)
- **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

---

**.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
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
75MM SINGLEDISC MB75 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

S25 LINK 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

IMPORTANT NOTE: Conforming to NZS 4223.3.2016 and Building Code Clause B1/AS1 Cl 7.3.1
75MM SINGLEDISC MB75 BALUSTRADE SYSTEM

**S25 Link Rail**

**S25-04**

S25 RAIL WALL BRACKET

All fixings to be stainless steel

**S25 LINK RAIL SECTION**

300738

**SECTION C–C**

S25 LINK RAIL WALL BRACKET (RIGHT HAND - 301946)

S25 LINK RAIL WALL BRACKET

S25 LINK RAIL - END BRACKET SECTION

**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 & detailed in accordance with NZS3101.

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


www.metroglass.co.nz
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.

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.
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
75MM SINGLEDISC MB75 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
300739

S40 Link Rail Inline Joiner
300869

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

IMPORTANT NOTE: Conforming to NZS 4223.3.2016 and Building Code Clause B1/AS1 Cl 7.3.1
75mm SingleDisc MB75 Balustrade System
S40 Link Rail

S40-04
S40 Rail Wall Bracket

All fixings to be stainless steel

S40 Link Rail Section
300739

S40 Link Rail Wall Bracket

RIGHT HAND - 301855
LEFT HAND - 300156

Section F-F

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
   B is to be designed B detailed in accordance with NZS3101.

Important Note: Conforming to NZS 4223.3.2016 and Building Code Clause B1/AS1 Cl 7.3.1
75MM SINGLEDISC MB75 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* = 0.9kN - 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.

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* = 0.9kN - 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 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* = 0.9kN- 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
**75MM SINGLE DISC MB75 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
75MM SINGLEDISC MB75 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**

- **AP65 TOP CAP**
  - 301599 MIL 301560 SF
- **AP65 POST**
  - 301816 MIL 301845 SF
- **INTERLINKING RAIL WALL BRACKET**
  - 301992
- **INTERLINKING RAIL GASKET**
  - or TAPE & SILICONE
- **GLASS PANEL**
- **SELF TAPPING SS SCREWS**
  - 8G x 1" 301784

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

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

---

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

- **AP65 TOP CAP**
  - 301599 MIL 301560 SF
- **AP65 POST**
  - 301816 MIL 301845 SF
- **S25 RAIL WALL BRACKET**
  - LH 300148   RH 301946
- **S25 RAIL GASKET**
  - or TAPE & SILICONE
- **GLASS PANEL**
- **SELF TAPPING SS SCREWS**
  - 8G x 1 1/2" 301783

**AP65 Structural Post & S25 Rail Plan**

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

---

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

- **AP78 TOP CAP**
  - 301599 MIL 301560 SF
- **AP78 POST**
  - 301839 MIL 301855 SF
- **S40 RAIL WALL BRACKET**
  - LH 300156   RH 301855
- **S40 RAIL GASKET**
  - or TAPE & SILICONE
- **GLASS PANEL**
- **SELF TAPPING SS SCREWS**
  - 8G x 1 1/2" 301783

**AP78 Structural Post & S40 Rail Plan**

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

---

**IMPORTANT NOTE:** Conforming to NZS 4223.3:2016 and Building Code Clause B1/AS1 Cl 7.3.1
**75MM SINGLEDISC MB75 BALUSTRADE SYSTEM**

For attaching EDGETEC® 220 S25 & S40 (on glass) to a Semi Frameless AP65 Post Interlinking Top Rail (where wall fixing not suitable)

---

**SingleDisc MB75 Balustrade System**

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

Concrete structure shown - refer installation drawings for minimum slab thickness. Refer installation drawings for steel structure options.

**Single Disc MB75 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

Concrete structure shown - refer installation drawings for minimum slab thickness. Refer installation drawings for steel structure options.

**NOTE:** for steel structure, upper post bolt to be as high as possible, MIN 60mm between post bolts.

**MIN 60mm for M10 bolts & nuts to steel**

**MIN 90mm for M10 fixings to concrete**

Post to extend to bottom of structure

**SPACERS x 3mm (ex 302099)**

**EPDM, MIN 1mm thick (ex 302010)**

**Hilti HIT-HY-200 & HIT-V-R M10 anchors**

**MIN 120mm embedment depth**

MIN 100mm horizontal distance to edge of slab

**CONTINUOUS EVEN BEARING BETWEEN POST & STRUCTURE.**

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

"E" = D - (34 - t/2)

1 = glass thickness

---

**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

Concrete structure shown - refer installation drawings for minimum slab thickness. Refer installation drawings for steel structure options.

**NOTE:** for steel structure, upper post bolt to be as high as possible, MIN 60mm between post bolts.

**MIN 60mm for M10 bolts & nuts to steel**

**MIN 90mm for M10 fixings to concrete**

Post to extend to bottom of structure

**SPACERS x 3mm (ex 302099)**

**EPDM, MIN 1mm thick (ex 302010)**

**Hilti HIT-HY-200 & HIT-V-R M10 anchors**

**MIN 120mm embedment depth**

MIN 100mm horizontal distance to edge of slab

**CONTINUOUS EVEN BEARING BETWEEN POST & STRUCTURE.**

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

"F" = D - (38 - t/2)

1 = glass thickness

---

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

---

Refer installation drawings for steel structure options.

Concrete structure shown - refer installation drawings for minimum slab thickness.

MIN 100mm horizontal distance to edge of slab

**CONTINUOUS EVEN BEARING BETWEEN POST & STRUCTURE.**

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

"F" = D - (38 - t/2)

1 = glass thickness

---

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