The PosiGlaze System was developed for cantilevered structural balustrades to cope with the transition from monolithic Toughened Safety Glass (TSG) to Toughened Laminated Safety Glass (TLSG). The unique design uses a special high strength hollow core aluminium extrusion and special glass clamp kits that secure and locate the glass into the aluminium section. This means the system can be used on 12 & 15mm TEMPAFLOAT® TSG; 15.2, 17.2, & 19.2 TLSG with SAFELITE® EVA Interlayer; and 13.52, 17.52 & 21.52 TLSG with SAFELITE® STF (Sentry®) Interlayer; without holes in the glass.

- FULLY ADJUSTABLE AFTER INSTALLATION PosiGlaze uses a unique, simple adjustment system allowing horizontal alignment of each glass panel.
- LIGHTWEIGHT AND EXTREMELY STRONG Cleverly designed out of extruded aluminium, saving weight yet keeping strength.
- ENGINEERED Our system has been engineered & tested to comply with the building regulations (with the appropriate fixing spacing and glass thickness) in both domestic and selected commercial installations. It can be installed in a wide variety of applications.
**Key Features**
- The PosiGlaze System can be base fixed (top) or side fixed (face) mounted.
- PosiGlaze’s clever locating and adjusting technique allows installers to adjust the glass panels once in place, with a turn of a spanner, saving on installation time.
- Simple to install align and adjust.
- Hydraulic Pool Gate & Panel Clip Hardware, is available to suit pool balustrade applications. (Refer to Frameless Pool Fences, Gates and Wind Break Screen Section for specific design notes: Section 7, page 496).

**Material Finish**
- The sections and covers are fully anodised to 20 microns for durability and come standard in a unique brushed anodised finish which give a ‘Stainless Steel Effect’.
- Powdercoated upon request. Note: Powder coating is available in a wide range of colours with commercially available surface integrity warranties from 10 to 30 years.
- Important instructions - Attachment to structures; - An EPDM or similar material spacer must be used to separate all aluminium items from all timber, concrete and steel structures. Failure to do so can lead to the chemicals in the structure affecting the surface finish on the aluminium.
- All fixings must be Stainless Steel.

**Occupancy Type**
- Suitable for occupancy types A, B, E, C3, C1/C2, D (subject to glass & fixing type)
- Occupancy types as per AS/NZS 1170.1.2002.

**Windzone**
- Exceeds the wind loading for all Wind Zones up to and including Extra High Wind Zone as set out in NZS 3604:2011
- Max design Wind pressure subject to glass type and fixing method.

The system is glazed with Metro Performance Glass, as follows:
- TEMPALIGHT® 12mm & 15mm nominal thickness, monolithic toughened safety glass (TSG) with interlinking rail.
- SAFELITE® EVA 13.2mm, 15.2mm & 19.2mm nominal thickness, toughened laminated safety glass (TLSG) with stiffener brackets or interlinking rail.
- SAFELITE® STF (Sentry®) 13.52mm, 17.52mm & 21.52mm nominal thickness toughened laminated safety glass (TLSG) with rigid interlayer. Stiffener brackets or interlinking railing not required (provided minimum panel length requirements are satisfied).

**Interlinking Rail**
- All monolithic toughened frameless glass balustrades must have an Interlinking Rail to conform to NZS 4223.3.2016, including the latest amendment of NZBC B1.

**Compliance**

**Scope of Use**
- PosiGlaze is the perfect choice for residential to light commercial installations where a frameless glass balustrade is desired.
- Our high specification glass clamping mechanism locks glass panels into position effortlessly with four immobilising fasteners, per meter of channel. Should the need arise, it remains possible to re-align or even remove individual panels after the initial installation has been completed.
- With the use of a trapezoidal adjustment mechanism it is possible to horizontally align each individual panel of glass to create an immaculate and seamless finish.
- Where required, an interlinking top rail finishes off the system, producing a low profile modern look.

**Support Inquiries**
- Metro Technical phone (09) 927 3000 or email technical@metroglass.co.nz

**SAFELITE® STF (Sentry®) glass layer types and nominal glass thickness orientation**

<table>
<thead>
<tr>
<th>Glass Thickness (Nominal mm)</th>
<th>Inner Layer of Glass Thickness (Nominal mm)</th>
<th>Interlayer Thickness (Nominal mm) and Type</th>
<th>Outer Layer glass Thickness (Nominal mm)</th>
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<tr>
<td>13.52</td>
<td>6</td>
<td>1.52 Sentry®</td>
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<tr>
<td>17.52</td>
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<tr>
<td>21.52</td>
<td>10</td>
<td>1.52 Sentry®</td>
<td>10</td>
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</table>

Note: Inner layer refers to the balcony side.

An interlinking rail is not required when specifying SAFELITE® STF (Sentry®) interlayer (minimum panel widths apply).
## POSIGLAZE SYSTEM

### BALUSTRADE SYSTEM KITS

#### Balustrade Solution 3m Clamp Kits (Domestic and Commercial Applications)

#### BASE FIX (PG120B)

* Doesn't include substrate fixings or end caps

<table>
<thead>
<tr>
<th>Model</th>
<th>Sizes mm</th>
<th>Finish</th>
<th>Material</th>
<th>Type</th>
<th>Application</th>
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<tr>
<td>500036</td>
<td>12mm</td>
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<td>1 x 3m Base Drilled Channel 1 x Clamp kit (consisting of 12 clamps) to suit specified glass thickness</td>
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<tr>
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**OVERALL LENGTH = 3000mm**

**ON REQUEST:** POWDERCOAT ANOD NATURAL

#### SIDE FIX (PG120S)

* Doesn't include substrate fixings or end caps

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<thead>
<tr>
<th>Model</th>
<th>Sizes mm</th>
<th>Finish</th>
<th>Material</th>
<th>Type</th>
<th>Application</th>
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<tbody>
<tr>
<td>500042</td>
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<td>CHANNEL SYSTEM SIDE FIX</td>
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<td>500043</td>
<td>13.5mm</td>
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<td>* Complete with seal strips, gaskets, side cladding and glass clamps</td>
<td>1 x 3m Top Clip Bead 1 x Clamp kit (consisting of 12 clamps) to suit specified glass thickness</td>
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<tr>
<td>500044</td>
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**OVERALL LENGTH = 3000mm**

**ON REQUEST:** POWDERCOAT ANOD NATURAL

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Balustrade Systems  
www.metroglass.co.nz
## POSIGLAZE SYSTEM

### BALUSTRADE SYSTEM KITS

Balustrade Solution 3m Clamp Kits  
( Domestic and Commercial Applications )

**ANGLED SIDE FIX (PG180S)**

* Doesn't include substrate fixings or end caps

Glass Thickness (Nominal)  
12–21.5mm

Area (Ideally suited)  
Internal & External

<table>
<thead>
<tr>
<th>Model</th>
<th>Sizes mm</th>
<th>Finish</th>
<th>Material</th>
<th>Type</th>
<th>Application</th>
</tr>
</thead>
</table>
| 500048  | 12mm      | ANOD-BRUSHED   | CHANNEL SYSTEM                          | POSIGLAZE SIDE ANOD BRUSHED DRILLED KIT COMPRISES OF: | 1 x 3m Side Drilled Channel  
| 500049  | 13.5mm    | ANOD-BRUSHED   |                                          | 1 x 3m Top Clip Bead  
| 500050  | 15mm      | ANOD-BRUSHED   |                                          | 1 x 3m Side Cladding  
| 500051  | 17.5mm    | ANOD-BRUSHED   |                                          | 1 x Clamp kit (consisting of 12 clamps) to suit specified glass thickness  
| 50052   | 19mm      | ANOD-BRUSHED   |                                          | 1 x Spanner  
| 50053   | 21.5mm    | ANOD-BRUSHED   |                                          | 1 x Dowel Chanel Joiners (Pair)  
| 500424  | 12mm      | MILL - FINISH  | ALUM 6063 T6                             | POSIGLAZE SIDE MILL FINISH DRILLED KIT COMPRISES OF: | 1 x 3m Side Drilled Channel  
| 500425  | 13.5mm    | MILL - FINISH  |                                          | 1 x 3m Top Clip Bead  
| 500427  | 15mm      | MILL - FINISH  |                                          | 1 x 3m Side Cladding  
| 500428  | 17.5mm    | MILL - FINISH  |                                          | 1 x Clamp kit (consisting of 12 clamps) to suit specified glass thickness  
| 500430  | 19mm      | MILL - FINISH  |                                          | 1 x Spanner  
| 500431  | 21.5mm    | MILL - FINISH  |                                          | 1 x Dowel Chanel Joiners (Pair)  

Model Sizes mm  
OVERALL LENGTH = 3000mm

Finish Material Type Application
ON REQUEST: POWDERCOAT ANOD NATURAL

WARRANTY

5 YEAR
# BALUSTRADE SYSTEM COMPONENTS

## Individual Parts – PosiGlaze

<table>
<thead>
<tr>
<th>Product</th>
<th>Model</th>
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<th>Finish</th>
<th>Material Type</th>
<th>Type</th>
<th>Application</th>
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<td>BALUSTRADE CHANNEL SYSTEM COMPONENT</td>
<td>Internal &amp; External</td>
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<td>SIDE DRILLED CHANNEL</td>
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<td>Internal &amp; External</td>
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<td>Internal &amp; External</td>
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*Doesn’t include bulb seal, please refer to Bulb Seal Gasket section for respective glass thicknesses

*Can be used with side fixed channel if required, gives an angled finish to the bottom of the channel. Clips into the grooves under the channel, will require adhesive for securing in place.

*The clamps can fit glass thicknesses 12mm either way of nominal glass thickness e.g. 15mm glass clamps will suit 14 16mm glass included are the clamp bars, which sit in the top mould of the clamps and the clamp bolts, which screw into the bars and are then undone to hold the glass in place. These are undone and tightened each side allowing the glass alignment. 6m gasket to suit glass thickness.

*Each kit contains 12 clamps [inc. Clamps, x2 3m lengths bulb gasket, bars, bolts]
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<thead>
<tr>
<th>Product</th>
<th>Model</th>
<th>Sizes mm</th>
<th>Finish</th>
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<th>Type</th>
<th>Application</th>
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<td>1000 (L) x 72 x 1.2mm</td>
<td>ANOD-BRUSHED</td>
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<tr>
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<td>300511</td>
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<tr>
<td>*For Stairs and angled cuts of Posi-Glaze Channel</td>
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<tr>
<td><strong>SPANNER</strong></td>
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<td></td>
<td></td>
<td>STEEL</td>
<td>SPANNER</td>
<td>BALUSTRADE SYSTEM COMPONENT</td>
<td>Internal &amp; External</td>
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<tr>
<td></td>
<td>301424</td>
<td>Angled adjustment spanner</td>
<td>BLACK</td>
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<tr>
<td><strong>BULB SEAL GASKET</strong></td>
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<td></td>
<td>RUBBER</td>
<td>BULB SEAL</td>
<td>BALUSTRADE SYSTEM COMPONENT</td>
<td>Internal &amp; External</td>
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<tr>
<td></td>
<td>301346</td>
<td>12- 17.5mm</td>
<td>BLACK</td>
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<td></td>
<td>301347</td>
<td>19- 21.5mm</td>
<td>BLACK</td>
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<tr>
<td>*Sold as per (m) Length</td>
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<td><strong>GASKET</strong></td>
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<td>FIBRE</td>
<td>CLAMP KIT GASKET</td>
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<td></td>
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<td>80 x 80 x 0.8mm</td>
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<td><strong>LINK RAIL LOCTITE 243</strong></td>
<td></td>
<td></td>
<td></td>
<td>ADHESIVE</td>
<td>TUBE LOCK ADHESIVE</td>
<td>BALUSTRADE LINK RAIL COMPONENT</td>
<td>Internal &amp; External</td>
</tr>
<tr>
<td></td>
<td>300961</td>
<td>Suite S25 Rail</td>
<td>ADHESIVE</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td><strong>50ML BOTTLE</strong></td>
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## Balustrade System Components

### Balustrade Stiffener Brackets
(For Aligning and Stiffening Panels)

<table>
<thead>
<tr>
<th>Product</th>
<th>Model</th>
<th>Sizes mm</th>
<th>Finish</th>
<th>Material</th>
<th>Type</th>
<th>Application</th>
<th>Area</th>
</tr>
</thead>
</table>
| 90 DEGREE STIFFENER BRACKET (GLASS TO WALL) | 300153 | 65x55x25mm  
GLASS THICKNESS: 12-15.5mm | SS | 2205 STAINLESS STEEL | STIFFENER BRACKET | FIXING COMPONENT | Internal & External |
| | 300154 | 65x55x25mm  
GLASS THICKNESS: 17.5-21.5mm | SS | 2205 STAINLESS STEEL | STIFFENER BRACKET | FIXING COMPONENT | Internal & External |
| 90 DEGREE STIFFENER BRACKET (GLASS TO GLASS) | 300151 | 75x50x25mm  
GLASS THICKNESS: 12-15.5mm | SS | 2205 STAINLESS STEEL | STIFFENER BRACKET | FIXING COMPONENT | Internal & External |
| | 300152 | 88x55x25mm  
GLASS THICKNESS: 17.5-21.5mm | SS | 2205 STAINLESS STEEL | STIFFENER BRACKET | FIXING COMPONENT | Internal & External |
| 180 DEGREE STIFFENER BRACKET (GLASS TO GLASS) | 300149 | 70x25mm  
GLASS THICKNESS: 12-15.5mm | SS | 2205 STAINLESS STEEL | STIFFENER BRACKET | FIXING COMPONENT | Internal & External |
| | 300150 | 103x25mm  
GLASS THICKNESS: 17.5-21.5mm | SS | 2205 STAINLESS STEEL | STIFFENER BRACKET | FIXING COMPONENT | Internal & External |

**NOTE:** All brackets are supplied with a selection of gaskets to suit glass thickness.
# POSIGLAZE SYSTEM

## S25 Link Rail

- 25 x 21mm 2205 Stainless Steel
- Suitable for 10mm or 12mm Glass Thickness.
- Rail Components available for 90 degree corners, adjustable corners (180 degrees to 90 degrees), stairway link connectors (Maximum 35 degrees), inline joiner.
- Wall mount brackets available including end caps.
- Satin Stainless Steel finish standard, can be Powdercoated upon request.

### Compliance
- Complies with NZS 4223.3 2016 and the latest amendment of New Zealand Building Code B1.

### Table: S25 Link Rail

<table>
<thead>
<tr>
<th>Product</th>
<th>Model</th>
<th>Sizes mm</th>
<th>Finish</th>
<th>Material</th>
<th>Type</th>
<th>Application</th>
<th>Area</th>
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</thead>
<tbody>
<tr>
<td>S25 LINK RAIL</td>
<td>300738</td>
<td>5800mm</td>
<td>SS</td>
<td>ON REQUEST: POWDERCOAT</td>
<td>LINK RAIL</td>
<td>BALUSTRADE LINK RAIL</td>
<td>Internal &amp; External</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2205 STAINLESS STEEL</td>
<td></td>
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<td></td>
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<td></td>
<td></td>
<td>STEEL</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>GLASS THICKNESS: 10-12mm</td>
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</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>OVERALL SIZE: 25 x 21mm</td>
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<tr>
<td>S25 LINK RAIL WALL BRACKET</td>
<td>300118</td>
<td>Suits S25 Rail</td>
<td>SS</td>
<td>ON REQUEST: POWDERCOAT</td>
<td>WALL BRACKET</td>
<td>BALUSTRADE LINK RAIL COMPONENT</td>
<td>Internal &amp; External</td>
</tr>
<tr>
<td>(LEFT HAND)</td>
<td></td>
<td></td>
<td></td>
<td>2205 STAINLESS STEEL</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S25 LINK RAIL WALL BRACKET</td>
<td>301854</td>
<td>Suits S25 Rail</td>
<td>SS</td>
<td>ON REQUEST: POWDERCOAT</td>
<td>WALL BRACKET</td>
<td>BALUSTRADE LINK RAIL COMPONENT</td>
<td>Internal &amp; External</td>
</tr>
<tr>
<td>(RIGHT HAND)</td>
<td></td>
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<td></td>
<td>2205 STAINLESS STEEL</td>
<td></td>
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</table>

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Balustrade Systems
## BALUSTRADE RAIL SYSTEM

### S25 Link Rail

<table>
<thead>
<tr>
<th>Product</th>
<th>Model</th>
<th>Sizes mm</th>
<th>Finish</th>
<th>Material Type</th>
<th>Type</th>
<th>Application Area</th>
<th>Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>S25 Link Rail Vertical Adjustable Joiner</td>
<td>300863</td>
<td>Suits S25 Rail</td>
<td>SS</td>
<td>2205 Stainless Steel</td>
<td>Adjustable Joiner</td>
<td>Balustrade Link Rail Component</td>
<td>Internal &amp; External</td>
</tr>
<tr>
<td>S25 Link Rail Horizontal Adjustable Joiner</td>
<td>300862</td>
<td>Suits S25 Rail</td>
<td>SS</td>
<td>2205 Stainless Steel</td>
<td>Adjustable Joiner</td>
<td>Balustrade Link Rail Component</td>
<td>Internal &amp; External</td>
</tr>
<tr>
<td>S25 Link Rail Fixed 90 Degree Corner</td>
<td>300861</td>
<td>Suits S25 Rail</td>
<td>SS</td>
<td>2205 Stainless Steel</td>
<td>90 Degree Corner Connector</td>
<td>Balustrade Link Rail Component</td>
<td>Internal &amp; External</td>
</tr>
<tr>
<td>S25 Link Rail Inline Joiner</td>
<td>300864</td>
<td>Suits S25 Rail</td>
<td>SS</td>
<td>2205 Stainless Steel</td>
<td>Inline Joiner</td>
<td>Balustrade Link Rail Component</td>
<td>Internal &amp; External</td>
</tr>
<tr>
<td>S25 End Cap</td>
<td>300512</td>
<td>Suits S25 Rail</td>
<td>SS</td>
<td>2205 Stainless Steel</td>
<td>End Cap</td>
<td>Balustrade Link Rail Component</td>
<td>Internal &amp; External</td>
</tr>
<tr>
<td>Link Rail Loctite 243</td>
<td>300961</td>
<td>Suits S25 Rail</td>
<td>Adhesive</td>
<td>50ml Bottle</td>
<td>Tube Lock Adhesive</td>
<td>Balustrade Link Rail Component</td>
<td>Internal &amp; External</td>
</tr>
<tr>
<td>S25 Link Rail Rubber Gasket</td>
<td>302091</td>
<td>Suits S25 Rail</td>
<td>Black</td>
<td>Rubber Gasket For S25 Link Rail</td>
<td>Rubber Gasket</td>
<td>Balustrade Link Rail Component</td>
<td>Internal &amp; External</td>
</tr>
<tr>
<td>Grub Screw</td>
<td>301978</td>
<td>M5x6mm</td>
<td>SS</td>
<td>316 Stainless Steel</td>
<td>Grub Screw</td>
<td>Balustrade Link Rail Fixing</td>
<td>Internal &amp; External</td>
</tr>
</tbody>
</table>

**Link Rail System Hardware Warranty:** 10 Years
BALUSTRADE RAIL SYSTEM
S40 Link Rail

- 40 x 30mm 2205 Stainless Steel.
- Suitable for 12mm – 21.5mm Glass Thickness.
- Rubber gasket available to suit respective glass thicknesses.
- Rail Components available for 90 degree corners, adjustable corners (180 degrees to 90 degrees), stairway link connectors (Maximum 35 degrees), inline joiner.
- Wall mount brackets available including end caps.
- Satin Stainless Steel standard finish, can be Powdercoated upon request.

Compliance
- Complies with NZS 4223.3.2016 and the latest amendment of New Zealand Building Code B1.

<table>
<thead>
<tr>
<th>Product</th>
<th>Model</th>
<th>Sizes mm</th>
<th>Finish</th>
<th>Material</th>
<th>Type</th>
<th>Application</th>
<th>Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>S40 LINK RAIL</td>
<td>300739</td>
<td>5800mm</td>
<td>SS</td>
<td>2205 STAINLESS STEEL</td>
<td>LINK RAIL</td>
<td>BALUSTRADE RAIL SYSTEM</td>
<td>Internal &amp; External</td>
</tr>
<tr>
<td>S40 LINK RAIL WALL BRACKET (LEFT HAND)</td>
<td>300156</td>
<td>Suits S40 Rail</td>
<td>SS</td>
<td>ON REQUEST: POWDERCOAT</td>
<td>WALL BRACKET</td>
<td>BALUSTRADE LINK RAIL COMPONENT</td>
<td>Internal &amp; External</td>
</tr>
<tr>
<td>S40 LINK RAIL WALL BRACKET (RIGHT HAND)</td>
<td>301855</td>
<td>Suits S40 Rail</td>
<td>SS</td>
<td>ON REQUEST: POWDERCOAT</td>
<td>WALL BRACKET</td>
<td>BALUSTRADE LINK RAIL COMPONENT</td>
<td>Internal &amp; External</td>
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</tbody>
</table>
# S40 Link Rail

<table>
<thead>
<tr>
<th>Product</th>
<th>Model</th>
<th>Sizes mm</th>
<th>Finish</th>
<th>Material</th>
<th>Type</th>
<th>Application</th>
<th>Area</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>S40 LINK RAIL VERTICAL ADJUSTABLE JOINER</strong></td>
<td>300868</td>
<td>Suits S40 Rail</td>
<td>SS</td>
<td>2205 STAINLESS STEEL</td>
<td>ADJUSTABLE VERTICAL JOINER</td>
<td>BALUSTRADE LINK RAIL COMPONENT</td>
<td>Internal &amp; External</td>
</tr>
<tr>
<td><strong>S40 LINK RAIL HORIZONTAL ADJUSTABLE JOINER</strong></td>
<td>300867</td>
<td>Suits S40 Rail</td>
<td>SS</td>
<td>2205 STAINLESS STEEL</td>
<td>ADJUSTABLE HORIZONTAL JOINER</td>
<td>BALUSTRADE LINK RAIL COMPONENT</td>
<td>Internal &amp; External</td>
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<tr>
<td><strong>S40 LINK RAIL FIXED 90 DEGREE CORNER</strong></td>
<td>300866</td>
<td>Suits S40 Rail</td>
<td>SS</td>
<td>2205 STAINLESS STEEL</td>
<td>90 DEGREE CORNER CONNECTOR</td>
<td>BALUSTRADE LINK RAIL COMPONENT</td>
<td>Internal &amp; External</td>
</tr>
<tr>
<td><strong>S40 LINK RAIL INLINE JOINER</strong></td>
<td>300869</td>
<td>Suits S40 Rail</td>
<td>SS</td>
<td>2205 STAINLESS STEEL</td>
<td>INLINE JOINER</td>
<td>BALUSTRADE LINK RAIL COMPONENT</td>
<td>Internal &amp; External</td>
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<tr>
<td><strong>S40 END CAP</strong></td>
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<td>Suits S40 Rail</td>
<td>SS</td>
<td>2205 STAINLESS STEEL</td>
<td>END CAP</td>
<td>BALUSTRADE LINK RAIL COMPONENT</td>
<td>Internal &amp; External</td>
</tr>
<tr>
<td><strong>LINK RAIL LOCTITE 243</strong></td>
<td>300961</td>
<td>Suits S40 Rail</td>
<td>ADHESIVE</td>
<td>50MM BOTTLE ADHESIVE</td>
<td>TUBE LOCK ADHESIVE</td>
<td>BALUSTRADE LINK RAIL COMPONENT</td>
<td>Internal &amp; External</td>
</tr>
<tr>
<td><strong>S40 LINK RAIL RUBBER GASKET</strong></td>
<td>302092</td>
<td>Suits S40 Rail</td>
<td>BLACK</td>
<td>RUBBER</td>
<td>RUBBER GASKET FOR S40 LINK RAIL</td>
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<td>Internal &amp; External</td>
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<tr>
<td><strong>S40 LINK RAIL RUBBER GASKET</strong></td>
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<td>Suits S40 Rail</td>
<td>BLACK</td>
<td>RUBBER</td>
<td>RUBBER GASKET FOR S40 LINK RAIL FIXING</td>
<td>BALUSTRADE LINK RAIL COMPONENT</td>
<td>Internal &amp; External</td>
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</tbody>
</table>

**Note:**
- Suits S40 Rail
- SS: Stainless Steel
- ON REQUEST: POWDERCOAT
- PER METRE LENGTH
- GLASS THICKNESS: 12-13.5mm
- GLASS THICKNESS: 12-15mm

**Warranty:** 10 YEAR
### BALUSTRADE RAIL SYSTEM

#### S40 Link Rail

<table>
<thead>
<tr>
<th>Product</th>
<th>Model</th>
<th>Sizes mm</th>
<th>Finish</th>
<th>Material</th>
<th>Type</th>
<th>Application</th>
<th>Area</th>
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<td>Suits S40 Rail</td>
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<td>RUBBER</td>
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<td>BALUSTRADE LINK RAIL COMPONENT</td>
<td>Internal &amp; External</td>
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<tr>
<td>S40 LINK RAIL RUBBER GASKET</td>
<td>302095</td>
<td>Suits S40 Rail</td>
<td>BLACK</td>
<td>RUBBER</td>
<td>RUBBER GASKET FOR S40 LINK RAIL</td>
<td>BALUSTRADE LINK RAIL COMPONENT</td>
<td>Internal &amp; External</td>
</tr>
<tr>
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<td></td>
<td></td>
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</tr>
<tr>
<td>GRUB SCREW</td>
<td>301978</td>
<td>M5x6mm</td>
<td>SS</td>
<td>316 STAINLESS STEEL</td>
<td>GRUB SCREW</td>
<td>BALUSTRADE LINK RAIL FIXING</td>
<td>Internal &amp; External</td>
</tr>
</tbody>
</table>

### BALUSTRADE RAIL SYSTEM

#### Edgetec® 220 Link Rail

- **Aluminium LinkRail 38x30mm – For 12mm and 15mm Glass**
  - 38 x 30mm Aluminium Link Rail
  - Available in Natural Anodised Finish 20 microns as standard or Silver Frost powdercoat. Special colours on request (Powdercoating or Anodising).
  - Rubber gasket available to suit 12mm or 15mm glass thicknesses.
  - Rail Components available for 90 degree corners, adjustable corners (180 degrees to 90 degrees), stairway link connectors (Maximum 35 degrees), inline joiner.
  - Wall mount brackets available including end caps.

### Compliance

### Edgetec® 220 Link Rail

#### BALUSTRADE RAIL SYSTEM

<table>
<thead>
<tr>
<th>Product</th>
<th>Model</th>
<th>Sizes mm</th>
<th>Finish</th>
<th>Material</th>
<th>Type</th>
<th>Application</th>
<th>Area</th>
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<tbody>
<tr>
<td><strong>EDGETEC® 220 LINK RAIL FULL LENGTH</strong></td>
<td>300728</td>
<td>5800mm</td>
<td>ANOD – Natural</td>
<td>ALUM 6063</td>
<td>LINK RAIL</td>
<td>BALUSTRADE LINK RAIL</td>
<td>Internal &amp; External</td>
</tr>
<tr>
<td></td>
<td>300729</td>
<td>5800mm</td>
<td>SILVER FROST</td>
<td></td>
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<tr>
<td></td>
<td>300727</td>
<td>5800mm</td>
<td>MILL FINISH</td>
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<td></td>
<td>GLASS THICKNESS: 12-15mm OVERALL SIZE: 38 x 30mm</td>
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<tr>
<td><strong>EDGETEC® 220 LINK RAIL HALF LENGTH</strong></td>
<td>300725</td>
<td>2900mm</td>
<td>ANOD – Natural</td>
<td>ALUM 6063</td>
<td>LINK RAIL</td>
<td>BALUSTRADE LINK RAIL</td>
<td>Internal &amp; External</td>
</tr>
<tr>
<td></td>
<td>300726</td>
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<tr>
<td></td>
<td>300724</td>
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<td>MILL FINISH</td>
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<td></td>
<td></td>
<td></td>
<td>(Half Length) GLASS THICKNESS: 12-15mm OVERALL SIZE: 38 x 30mm</td>
<td>ON REQUEST: POWDERCOAT</td>
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<tr>
<td><strong>EDGETEC® 220 LINK RAIL RUBBER GASKET</strong></td>
<td>300593</td>
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<td>BLACK</td>
<td>RUBBER</td>
<td>RUBBER GASKET FOR EDGETEC® 220 LINK RAIL</td>
<td>BALUSTRADE LINK RAIL COMPONENT</td>
<td>Internal &amp; External</td>
</tr>
<tr>
<td></td>
<td>300594</td>
<td>2900mm</td>
<td>BLACK</td>
<td>RUBBER</td>
<td>RUBBER GASKET FOR EDGETEC® 220 LINK RAIL</td>
<td>BALUSTRADE LINK RAIL COMPONENT</td>
<td>Internal &amp; External</td>
</tr>
<tr>
<td><strong>EDGETEC® 220 LINK RAIL INLINE JOINER</strong></td>
<td>300847</td>
<td>80 x 22.8 x 5mm</td>
<td>MILL</td>
<td>ALUM 6063</td>
<td>180 DEGREE STRAIGHT JOINER</td>
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<tr>
<td><strong>EDGETEC® 220 LINK RAIL 90 DEGREE JOINER</strong></td>
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<td>50 x 50 x 5mm</td>
<td>MILL</td>
<td>ALUM 6063</td>
<td>90 DEGREE CORNER JOINER</td>
<td>BALUSTRADE LINK RAIL COMPONENT</td>
<td>Internal &amp; External</td>
</tr>
<tr>
<td><strong>EDGETEC® 220 END CAP</strong></td>
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<td>38.4 x 30.4mm</td>
<td>ANOD – Natural</td>
<td>ALUM 6063</td>
<td>END CAP</td>
<td>BALUSTRADE LINK RAIL COMPONENT</td>
<td>Internal &amp; External</td>
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<tr>
<td></td>
<td>300494</td>
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<td>SILVER FROST</td>
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<td></td>
<td>300492</td>
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<td><strong>EDGETEC® 220 LINK RAIL FIXED 90 DEGREE CORNER</strong></td>
<td>301985</td>
<td>Suits Edgetec® 220 Rail (Component)</td>
<td>SILVER FROST</td>
<td>ALUM 6063</td>
<td>90 DEGREE CORNER CONNECTOR</td>
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<td>301986</td>
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<td>ON REQUEST: POWDERCOAT</td>
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## POSIGLAZE SYSTEM
### Edgetec® 220 Link Rail

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<th>Product</th>
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<th>Finish</th>
<th>Material</th>
<th>Type</th>
<th>Application</th>
<th>Area</th>
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<tr>
<td><strong>EDGETEC® 220 LINK RAIL HORIZONTAL ADJUSTABLE JOINER</strong></td>
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<td>ALUM 6063</td>
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<td>(Component)</td>
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<td>ADJUSTABLE VERTICAL JOINER</td>
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<td>Suits Edgetec® 220 Rail</td>
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<td>(Component)</td>
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<td>Internal &amp; External</td>
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<tr>
<td><strong>EDGETEC® 220 WALL BRACKET (LEFT HAND)</strong></td>
<td>301003</td>
<td>120 x 45mm</td>
<td>SILVER FROST</td>
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<td>WALL BRACKET</td>
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<td></td>
<td>301014</td>
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<td>Suits Edgetec® 220 Rail (Component)</td>
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<td>Internal &amp; External</td>
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<tr>
<td><strong>EDGETEC® 220 WALL BRACKET (RIGHT HAND)</strong></td>
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<td>SILVER FROST</td>
<td>ALUM 6063</td>
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<td>BALUSTRADE LINK RAIL COMPONENT</td>
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<td>301006</td>
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<td>Internal &amp; External</td>
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<td><strong>EDGETEC® 220 WALL BRACKET POST END MOUNT</strong></td>
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<tr>
<td></td>
<td>301149</td>
<td>100 x 65mm</td>
<td>MILL</td>
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<td></td>
<td>301991</td>
<td>60 x 46mm</td>
<td>SILVER FROST</td>
<td>ALUM 6063</td>
<td>POST END MOUNT FOR AP65</td>
<td>BALUSTRADE LINK RAIL COMPONENT</td>
<td>Internal &amp; External</td>
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<tr>
<td></td>
<td>301992</td>
<td>60 x 46mm</td>
<td>MILL</td>
<td>Suits Edgetec® 220 Rail (Component)</td>
<td>POST END MOUNT FOR AP65</td>
<td>BALUSTRADE LINK RAIL COMPONENT</td>
<td>Internal &amp; External</td>
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<tr>
<td><strong>SCREW</strong></td>
<td>301993</td>
<td>6G x 1/4&quot; Sq</td>
<td>SS</td>
<td>304 STAINLESS STEEL</td>
<td>SCREW</td>
<td>PAN HEAD SCREW SUITS COMPONENT 300847 300848 301985 301986 301003 301004 301005 301006 301002 301149 301991 301992</td>
<td>Internal &amp; External</td>
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<tr>
<td><strong>SILicone – STRUCTURAL GLAZING</strong></td>
<td>300011</td>
<td>V60</td>
<td>ADHESIVE</td>
<td>CARTRIDGE</td>
<td>SILicone</td>
<td>FIXING COMPONENT</td>
<td>Internal &amp; External</td>
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**BALUSTRADE FIXING COMPONENTS – BASE FIX PG120B**

Concrete and Steel Substrates [Domestic and Commercial Applications]

### CONCRETE FIXING – BASE FIX

**A,B,E,C3 OCCUPANCY TYPE**

<table>
<thead>
<tr>
<th>Product</th>
<th>Model</th>
<th>Sizes mm</th>
<th>Finish</th>
<th>Material</th>
<th>Type</th>
<th>Application</th>
<th>Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>THREADED ROD FOR CHEMICAL ANCHOR</td>
<td>500255</td>
<td>M10 x 110mm Threaded Rod M12 x 24 x 2.5mm Washer (Round) M10 Nut</td>
<td>SS</td>
<td>316 STAINLESS STEEL</td>
<td>THREADED ROD / WASHER / NUT</td>
<td>FIXING COMPONENT</td>
<td>Internal &amp; External</td>
</tr>
<tr>
<td>HILTI HIT-HY 200 MAX CHEMICAL ANCHOR</td>
<td>300003</td>
<td>330ml</td>
<td>ADHESIVE</td>
<td>CARTRIDGE</td>
<td>CHEMICAL ANCHOR</td>
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### CONCRETE FIXING – BASE FIX

**C1/C2, D OCCUPANCY TYPE**

<table>
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<tr>
<th>Product</th>
<th>Model</th>
<th>Sizes mm</th>
<th>Finish</th>
<th>Material</th>
<th>Type</th>
<th>Application</th>
<th>Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>THREADED ROD FOR CHEMICAL ANCHOR</td>
<td>500256</td>
<td>M12 x 125mm Threaded Rod M12 x 24 x 2.5mm Washer (Round) M12 nut</td>
<td>SS</td>
<td>316 STAINLESS STEEL</td>
<td>THREADED SLEEVE / WASHER / HEX SCREW</td>
<td>FIXING COMPONENT</td>
<td>Internal &amp; External</td>
</tr>
<tr>
<td>HILTI HIT-HY 200 MAX CHEMICAL ANCHOR</td>
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<td>CARTRIDGE</td>
<td>CHEMICAL ANCHOR</td>
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### STEEL FIXING – BASE FIX

**ALL OCCUPANCY TYPES**

<table>
<thead>
<tr>
<th>Product</th>
<th>Model</th>
<th>Sizes mm</th>
<th>Finish</th>
<th>Material</th>
<th>Type</th>
<th>Application</th>
<th>Area</th>
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<tbody>
<tr>
<td>HEX SCREW</td>
<td>500257</td>
<td>M10 x 35mm</td>
<td>SS</td>
<td>316 STAINLESS STEEL</td>
<td>HEX SCREW / WASHER / NUT</td>
<td>FIXING COMPONENT</td>
<td>Internal &amp; External</td>
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<tr>
<td></td>
<td>501267</td>
<td>M10 x 40mm</td>
<td>SS</td>
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<td></td>
<td>501268</td>
<td>M10 x 50mm</td>
<td>SS</td>
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</table>

*Check length for application*
## CONCRETE FIXING – SIDE FIX

### ALL OCCUPANCY TYPES

<table>
<thead>
<tr>
<th>Product</th>
<th>Model</th>
<th>Sizes mm</th>
<th>Finish</th>
<th>Material</th>
<th>Type</th>
<th>Application</th>
<th>Area</th>
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</thead>
<tbody>
<tr>
<td>THREADED ROD FOR CHEMICAL ANCHOR</td>
<td>500255</td>
<td>M10 x 190mm Threaded Rod M12 x 24 x 2.5mm Washer (Round) M12 x 24 x 2.5mm Washer (Round) M10 Nut</td>
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<td>THREADED ROD / WASHER / NUT</td>
<td>FIXING COMPONENT</td>
<td>Internal &amp; External</td>
</tr>
<tr>
<td>HILTI HIT-HY 200 MAX CHEMICAL ANCHOR</td>
<td>300003</td>
<td>330ml</td>
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## STEEL FIXING – SIDE FIX

### ALL OCCUPANCY TYPES

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<tr>
<th>Product</th>
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<th>Sizes mm</th>
<th>Finish</th>
<th>Material</th>
<th>Type</th>
<th>Application</th>
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</thead>
<tbody>
<tr>
<td>HEX SCREW</td>
<td>500257</td>
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<td>SS</td>
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<td>HEX SCREW / WASHER / NUT</td>
<td>FIXING COMPONENT</td>
<td>Internal &amp; External</td>
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<tr>
<td></td>
<td>501267</td>
<td>M10 x 40mm</td>
<td>SS</td>
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</tr>
<tr>
<td></td>
<td>501268</td>
<td>M10 x 50mm</td>
<td>SS</td>
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## TIMBER FIXING – SIDE FIX

### A, B, E, C3, C1/C2, D OCCUPANCY TYPE

<table>
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<tr>
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<th>Model</th>
<th>Sizes mm</th>
<th>Finish</th>
<th>Material</th>
<th>Type</th>
<th>Application</th>
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<tr>
<td>COACH SCREW</td>
<td>500632</td>
<td>M10 x 120mm Coach Screw M10/12x24x2.5mm Washer (Round) M12 x 24 x 2.5mm Washer (Round) M10 Nut</td>
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<td>316 STAINLESS STEEL</td>
<td>COACH SCREW / WASHER</td>
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<td>HEX BOLT</td>
<td>500259</td>
<td>M10 x 130mm Hex Bolt M12 x 24 x 2.5mm Washer (Round) M12 Washer 50 x 50mm x 5mm (Square) M10 Nut</td>
<td>SS</td>
<td>316 STAINLESS STEEL</td>
<td>HEX BOLT WASHER / NUT</td>
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## BALUSTRADE FIXING INDIVIDUAL COMPONENTS

**Fixings: Rods, Anchors, Screws, Washers, Nuts**  
To suit Concrete, Steel and Timber Substrates (Domestic and Commercial Applications)

<table>
<thead>
<tr>
<th>Product Description</th>
<th>Model</th>
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<th>Material</th>
<th>Type</th>
<th>Application</th>
<th>Area</th>
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<tr>
<td><strong>M10 x 110mm</strong> THREADED ROD</td>
<td>301500</td>
<td>M10 x 110mm</td>
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<td>THREADED ROD</td>
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<td>Internal &amp; External</td>
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<tr>
<td><strong>HILTI HIT-HY 200 MAX CHEMICAL ANCHOR</strong></td>
<td>300003</td>
<td>330ml</td>
<td>ADHESIVE</td>
<td>CARTRIDGE</td>
<td>CHEMICAL ANCHOR</td>
<td>FIXING COMPONENT</td>
<td>Internal &amp; External</td>
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<td><strong>WASHER M12X24X2.5</strong></td>
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<td>M12x24 2.5mm</td>
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<td>WASHER</td>
<td>FIXING COMPONENT</td>
<td>Internal &amp; External</td>
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<td><strong>M10 NUT</strong></td>
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<td>M10 Nut</td>
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<td>316 STAINLESS STEEL</td>
<td>NUT</td>
<td>FIXING COMPONENT</td>
<td>Internal &amp; External</td>
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<td>M10 x 35mm</td>
<td>SS</td>
<td>316 STAINLESS STEEL</td>
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<td>301880</td>
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<td>M12 x 35mm</td>
<td>SS</td>
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<td>HEX SCREW</td>
<td>FIXING COMPONENT</td>
<td>Internal &amp; External</td>
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<tr>
<td><strong>M12 NUT</strong></td>
<td>301028</td>
<td>M12 Nut</td>
<td>SS</td>
<td>316 STAINLESS STEEL</td>
<td>NUT</td>
<td>FIXING COMPONENT</td>
<td>Internal &amp; External</td>
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### Fixing Components

**Fixings: Rods, Anchors, Screws, Washers, Nuts**

To suit Concrete, Steel and Timber Substrates  
(Domestic and Commercial Applications)

<table>
<thead>
<tr>
<th>Product</th>
<th>Model</th>
<th>Sizes mm</th>
<th>Finish</th>
<th>Material</th>
<th>Type</th>
<th>Application</th>
<th>Area</th>
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<tbody>
<tr>
<td>M10 COACH SCREW</td>
<td>301837</td>
<td>M10 x 180mm</td>
<td>SS</td>
<td>316 STAINLESS STEEL</td>
<td>COACH SCREW</td>
<td>FIXING COMPONENT</td>
<td>Internal &amp; External</td>
</tr>
<tr>
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<td>301926</td>
<td>M10 x 120mm</td>
<td>SS</td>
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</tr>
<tr>
<td>M12 WASHER 50MM X 50MM X 5MM</td>
<td>302098</td>
<td>M12 WASHER 50 x 50 x 5mm</td>
<td>SS</td>
<td>316 STAINLESS STEEL</td>
<td>WASHER</td>
<td>FIXING COMPONENT</td>
<td>Internal &amp; External</td>
</tr>
<tr>
<td>M10 HEX BOLT</td>
<td>300528</td>
<td>M10 x 240mm</td>
<td>SS</td>
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<td>HEX BOLT</td>
<td>FIXING COMPONENT</td>
<td>Internal &amp; External</td>
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<tr>
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<td>M10 x 130mm</td>
<td>SS</td>
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POSIGLAZE SYSTEM

Side and Base Fix 3D Imagery

SIDE FIX (PG120S)

ANGLED SIDE FIX (PG180S)

BASE FIX (PG120B)
# POSIGLAZE PG120/180 BALUSTRADE SYSTEM

## Design Tables

### POSIGLAZE SYSTEM

**Base Fix PG120B**

SAFELITE® toughened laminated safety glass and TEMPAFLOAT® monolithic toughened safety glass.

Steel and concrete only. Not suitable for timber.

<table>
<thead>
<tr>
<th>Glass Thickness t (mm)</th>
<th>Occupancy</th>
<th>Maximum Design Height H (mm)</th>
<th>Channel Fixing Spacing (mm) Max</th>
<th>Design loads to deck structure</th>
</tr>
</thead>
<tbody>
<tr>
<td>12, 13 52, 15, 1752 &amp; 17.2</td>
<td>A</td>
<td>1150</td>
<td>400</td>
<td>M* (kNm/m)</td>
</tr>
<tr>
<td></td>
<td>C3/B/E</td>
<td>1000</td>
<td>400</td>
<td>1.04</td>
</tr>
<tr>
<td></td>
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<td>1100</td>
<td>400</td>
<td>1.13</td>
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<td>1150</td>
<td>400</td>
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</tr>
<tr>
<td>19.2</td>
<td>C3/B/E</td>
<td>1200</td>
<td>200</td>
<td>1.37</td>
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<tr>
<td>15, 1752</td>
<td>C3/B/E</td>
<td>1250</td>
<td>200</td>
<td>1.41</td>
</tr>
<tr>
<td>21.52</td>
<td>C1/C2/D</td>
<td>1250</td>
<td>200</td>
<td>2.81</td>
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</tbody>
</table>

### Side Fix PG120S & PG180S

SAFELITE® toughened laminated safety glass and TEMPAFLOAT® monolithic toughened safety glass.

Steel, concrete and timber.

<table>
<thead>
<tr>
<th>Glass Thickness t (mm)</th>
<th>Occupancy</th>
<th>Maximum Design Height H (mm)</th>
<th>Channel Fixing Spacing (mm) Max</th>
<th>Design loads to deck structure</th>
</tr>
</thead>
<tbody>
<tr>
<td>12, 13 52, 15, 1752 &amp; 17.2</td>
<td>A</td>
<td>1030</td>
<td>400</td>
<td>M* (kNm/m)</td>
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<tr>
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<td>C3/B/E</td>
<td>1030 (concrete/steel)</td>
<td>400</td>
<td>0.93</td>
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<tr>
<td></td>
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<td>1030 (timber)</td>
<td>200</td>
<td>1.33</td>
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<tr>
<td>19.2</td>
<td>C3/B/E</td>
<td>1100¹</td>
<td>200</td>
<td>1.41</td>
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<tr>
<td>1752</td>
<td>C3/B/E</td>
<td>1130 (concrete/steel)</td>
<td>200</td>
<td>1.44</td>
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<tr>
<td>21.52</td>
<td>C1/C2/D</td>
<td>1130 (concrete/steel)</td>
<td>200</td>
<td>2.28</td>
</tr>
</tbody>
</table>

Note: 1) Maximum design height (H) for fixing to timber is 1050mm.
2) Balustrades for C1, C2 & D Occupancy are not suitable for fixing to timber.

### Base Fix Free Standing Pool Fences

(Not protecting a fall of 1.0m or more). Steel and concrete only. Not suitable for timber.

<table>
<thead>
<tr>
<th>Glass Thickness t (mm)</th>
<th>NZS3604 Wind Zone</th>
<th>Substrate</th>
<th>Maximum Design Height H (mm)</th>
<th>Channel Fixing Spacing (mm) Max</th>
<th>Design loads to deck structure</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>Up to High</td>
<td>Concrete, Steel</td>
<td>1220</td>
<td>400</td>
<td>M* (kNm/m)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.86</td>
</tr>
<tr>
<td>15</td>
<td>Very High</td>
<td>Concrete, Steel</td>
<td>1220</td>
<td>200</td>
<td>M* (kNm/m)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.11</td>
</tr>
<tr>
<td>1752</td>
<td>Extra High</td>
<td>Concrete, Steel</td>
<td>1220</td>
<td>200</td>
<td>M* (kNm/m)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.34</td>
</tr>
</tbody>
</table>

### Side Fix Free Standing Pool Fences

(Not protecting a fall of 1.0m or more). Steel, Concrete and Timber.

<table>
<thead>
<tr>
<th>Glass Thickness t (mm)</th>
<th>NZS3604 Wind Zone</th>
<th>Substrate</th>
<th>Maximum Design Height H (mm)</th>
<th>Channel Fixing Spacing (mm) Max</th>
<th>Design loads to deck structure</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>Up to High</td>
<td>Concrete, Steel, Timber</td>
<td>1220</td>
<td>400</td>
<td>M* (kNm/m)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.01</td>
</tr>
<tr>
<td>15</td>
<td>Very High</td>
<td>Concrete, Steel, Timber</td>
<td>1220</td>
<td>200</td>
<td>M* (kNm/m)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.30</td>
</tr>
<tr>
<td>1752</td>
<td>Extra High</td>
<td>Concrete, Steel</td>
<td>1220</td>
<td>200</td>
<td>M* (kNm/m)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.57</td>
</tr>
</tbody>
</table>
POSIGLAZE PG120/180 BALUSTRADE SYSTEM

Design Tables

Glass thickness key:

<table>
<thead>
<tr>
<th>Glass Thickness (mm)</th>
<th>Inner layer thickness (mm)</th>
<th>Interlayer thickness (mm) and type</th>
<th>Outer layer thickness (mm)</th>
<th>Panel size requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1.2 SAFELITE® EVA</td>
<td></td>
<td>Minimum panel width</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.52 SAFELITE® STF (Sentry®)</td>
<td></td>
<td>Maximum panel width</td>
</tr>
<tr>
<td>12</td>
<td>-</td>
<td>156 SAFELITE® STF (Sentry®)</td>
<td>-</td>
<td>1000</td>
</tr>
<tr>
<td>13.52</td>
<td>6</td>
<td>156 SAFELITE® STF (Sentry®)</td>
<td>6</td>
<td>1700</td>
</tr>
<tr>
<td>15</td>
<td>8</td>
<td>1.2 SAFELITE® EVA</td>
<td>6</td>
<td>1000</td>
</tr>
<tr>
<td>17.2</td>
<td>8</td>
<td>1.2 SAFELITE® EVA</td>
<td>8</td>
<td>1000</td>
</tr>
<tr>
<td>19.2</td>
<td>10</td>
<td>1.2 SAFELITE® EVA</td>
<td>8</td>
<td>1000</td>
</tr>
<tr>
<td>21.52</td>
<td>10</td>
<td>1.52 SAFELITE® STF (Sentry®)</td>
<td>10</td>
<td>1100</td>
</tr>
</tbody>
</table>

Note: 3) Inner layer refers to balcony side.

Maximum panel widths for Interlinking Rail/Bracket systems:

Applies where barrier is protecting a fall of 1.0m or more.

<table>
<thead>
<tr>
<th>Interlinking Rail System</th>
<th>Maximum panel width (mm)</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>S25 S40</td>
<td>1700</td>
<td>on glass only</td>
</tr>
<tr>
<td>Edgetec®220</td>
<td>1700/1900</td>
<td>HB50 bracket/on glass</td>
</tr>
<tr>
<td></td>
<td>1700/1900</td>
<td>HB50 bracket/on glass</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Interlinking Rail System</th>
<th>Maximum panel width (mm)</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>MFG SB Bracket on SAFELITE® only</td>
<td>1900</td>
<td>Max 200mm from top of glass</td>
</tr>
</tbody>
</table>

Post failure requirements:

Applies where barrier is protecting a fall of 1.0m or more.

<table>
<thead>
<tr>
<th>Glass Type</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>TEMPAFLOAT®</td>
<td>Interlinking rail required in all cases</td>
</tr>
<tr>
<td>SAFELITE® EVA</td>
<td>Interlinking rail or SB brackets required in all cases</td>
</tr>
<tr>
<td>SAFELITE® STF (Sentry®)</td>
<td>No interlinking rail required, minimum panel widths apply</td>
</tr>
</tbody>
</table>

NOTES:

• Refer to elevation drawings for Height ‘H’.
• The specifier must ensure the balustrade height above floor level requirements as per the NZ Building Code are complied with.
• Design loads are in accordance with AS/NZS 1170.1:2002 table 3.3 and NZBC B1/VM1 and DBH Guidance on Barrier Design (March 2012). M* & T* denote bending moment (kNm/m width) and tension loads (kN/connection) respectively to be supported by the deck/pool structure.
• Capacity of all substructure is to be verified by building engineer or checked for accordance with NZ3604 (where applicable) prior to fixing. Fixing centres in tables above are applicable to concrete, steel and (where allowed) timber. Refer to fixing detail drawings for further details. All glass is to be toughened safety glass supplied by Metro Performance Glass, in either TEMPAFLOAT® Monolithic, SAFELITE® EVA Laminated or SAFELITE® STF (Sentry®) Laminated variants subject to requirements of the tables above.
• Glass & interlayer thicknesses shown are nominal thickness. Table is based on glass minimum tolerance as per NZS 4223.1:2008. Refer to the relevant fixing details on drawings: PG120B/C/RA(M10), PG120B/C/RA(M12), PG120B/S/BN, PG120S-180S/C/RA(M10).
• PG120S-180S/C/RA(M12) and PG120S-180S/S/BN, PG120S-180S/T/BN, PG120S-180S/T/CS. Design table only valid for use with PosisGlaze balustrade system.
• SLS Deflection in this instance is above recommended limit of 30mm excluding rotation in the supporting structure. In all cases the posiglaze channel must be fixed with EPDM layer directly to the relevant supporting structure.
• For designs outside the scope of these tables and ULS wind pressures exceeding those shown, specific design is required.
• Minimum glass strength 100MPa, all edges polished. Maximum 10mm tolerance allowed to H heights noted in table. Monolithic glass options only applicable for situations where all parts of glazing are within 5000mm of adjacent lower floor/ground below. Pool fences listed above refer to free standing structures where safety from falling is not applicable, design is based on Importance Level 1.
POSIGLAZE PG120B BALUSTRADE SYSTEM
Concrete Fixing Detail

<table>
<thead>
<tr>
<th>Drawing No.</th>
<th>Revision</th>
<th>Fixing Type</th>
<th>Occupancy</th>
</tr>
</thead>
<tbody>
<tr>
<td>PG120B/C/RA (M10)</td>
<td>R10</td>
<td>PG120 with rod anchor (M10)</td>
<td>A, B, E, C3</td>
</tr>
</tbody>
</table>

NOT SUITABLE FOR OCCUPANCY C1/C2, D OR C5

Refer to PosiGlaze balustrade system design table for required glass thickness, fixing spacings and fixing loads according to AS/NZS 1170.1:2002 for the occupancies listed above. Refer to design tables and elevations for post failure requirements. Interlinking rail / clips not shown for clarity. ‘H’ refers to top of barrier.

NOTES:
1) Capacity of structure is to be of sufficient strength to support loads $M^*$ and $T^*$ specified on PosiGlaze balustrade system design table. Structure capacity to be verified by building engineer prior to fixing balustrade.
2) Max loading to comply with AS/NZS 1170.1:2002 Minimum Imposed Actions for Barriers Occupancy, shown at top of drawing, for design in accordance with PosiGlaze balustrade system design table.
3) Penetration through a membrane must be completed in accordance with written instructions of the membrane manufacturer.
4) No substitution allowed - any variation from the details above and design tables will require specific design.
POSIGLAZE PG120B BALUSTRADE SYSTEM

Concrete Fixing Detail

<table>
<thead>
<tr>
<th>Drawing No.</th>
<th>Revision</th>
<th>Fixing Type</th>
<th>Occupancy</th>
</tr>
</thead>
<tbody>
<tr>
<td>PG120B/C/RA (M12)</td>
<td>R10</td>
<td>PG120 with rod anchor (M12)</td>
<td>A, B, E, C3, C1/C2, D</td>
</tr>
</tbody>
</table>

![Diagram of Concrete Fixing Detail](image_url)

**NOTES:**
1) Capacity of structure is to be of sufficient strength to support loads M* and T* specified on PosiGlaze balustrade system design table. Structure capacity to be verified by building engineer prior to fixing balustrade.
2) Max loading to comply with AS/NZS 1170.1:2002 Minimum Imposed Actions for Barriers Occupancy, shown at top of drawing, for design in accordance with PosiGlaze balustrade system design table.
3) Penetration through a membrane must be completed in accordance with written instructions of the membrane manufacturer.
4) No substitution allowed - any variation from the details above and design tables will require specific design.

Refer to PosiGlaze balustrade system design table for required glass thickness, fixing spacings and fixing loads according to AS/NZS 1170.1:2002 for the occupancies listed above. Refer to design tables and elevations for post failure requirements. Interlinking rail / clips not shown for clarity. ‘H’ refers to top of barrier.

**CONCRETE Fixing Detail**

**Drawing No.:** PG120B/C/RA (M12)  
**Revision:** R10  
**Fixing Type:** PG120 with rod anchor (M12)  
**Occupancy:** A, B, E, C3, C1/C2, D

**Concrete building structure to be designed by building engineer to support loads as specified on PosiGlaze balustrade system design table.**

**NOTES:** not suitable for fixing to blockwork. Specific Engineering Design required.

**Recommended drainage holes - Ø6mm @ 400mm centres**
**EPDM continuous strip (302101) & continuous even bearing to be provided**
**MIN barrier height (ref NZBC F4)**
**MIN edge distance 100mm**
**Recommended drainage holes - Ø6mm @ 400mm centres**
**EPDM continuous strip (302101) & continuous even bearing to be provided**
**MIN barrier height (ref NZBC F4)**
**MIN edge distance 100mm**

**M12 x 24 OD x 2.5mm 316 grade SS washer**
**Hilti HIT-HY 200 + HIT-W-R M12 Grade 316 stainless steel anchor with 100mm embedment into uncracked concrete. Anchors to be installed in accordance with Hilti requirements. For anchors adjacent to corners, first anchor to be placed 100mm from edge of concrete.**

**NOTES:**
1) Capacity of structure is to be of sufficient strength to support loads M* and T* specified on PosiGlaze balustrade system design table. Structure capacity to be verified by building engineer prior to fixing balustrade.
2) Max loading to comply with AS/NZS 1170.1:2002 Minimum Imposed Actions for Barriers Occupancy, shown at top of drawing, for design in accordance with PosiGlaze balustrade system design table.
3) Penetration through a membrane must be completed in accordance with written instructions of the membrane manufacturer.
4) No substitution allowed - any variation from the details above and design tables will require specific design.
POSIGLAZE PG120B BALUSTRADE SYSTEM

Steel Fixing Detail

<table>
<thead>
<tr>
<th>Drawing No.</th>
<th>Revision</th>
<th>Fixing Type</th>
<th>Occupancy</th>
</tr>
</thead>
<tbody>
<tr>
<td>PG120B/S/BN</td>
<td>R10</td>
<td>PG120 with bolt &amp; nut</td>
<td>A, B, E, C3, C1/C2, D</td>
</tr>
</tbody>
</table>

Refer to PosiGlaze balustrade system design table for required glass thickness, fixing spacings and fixing loads according to AS/NZS 1170.1:2002 for the occupancies listed above. Refer to design tables and elevations for post failure requirements. Interlinking rail / clips not shown for clarity. ‘H’ refers to top of barrier.

NOTES:
1) Capacity of structure is to be of sufficient strength to support loads M* and T* specified on PosiGlaze balustrade system design table. Structure capacity to be verified by building engineer prior to fixing balustrade.
2) Max loading to comply with AS/NZS 1170.1:2002 Minimum Imposed Actions for Barriers Occupancy, shown at top of drawing, for design in accordance with PosiGlaze balustrade system design table.
3) Penetration through a membrane must be completed in accordance with written instructions of the membrane manufacturer.
4) For fixing to steel substrates, the installer shall ensure the bolts are tightened to a “snug-tight” level as defined in NZS3404.
5) No substitution allowed - any variation from the details above and design tables will require specific design.
POSIGLAZE PG120S & PG180S BALUSTRADE SYSTEM

Concrete Fixing Detail

<table>
<thead>
<tr>
<th>Drawing No.</th>
<th>Revision</th>
<th>Fixing Type</th>
<th>Occupancy</th>
</tr>
</thead>
<tbody>
<tr>
<td>PG120S–180S/C/RA(M10)</td>
<td>R10</td>
<td>PG120S &amp; PG180S with rod anchor (M10)</td>
<td>A, B, E, C3, C1/C2, D</td>
</tr>
</tbody>
</table>

Glass thickness from Design Table

H (as per design tables)

MAX protrusion of fixing

PG180S

Recommended drainage holes - Ø6mm @ 400mm centres

EPDM continuous strip (302100) and continuous even bearing to be provided

Concrete building structure to be designed by building engineer to support loads as specified on PosiGlaze balustrade system design table. Minimum 25MPa uncracked concrete, 200mm Min thickness.

NOTES:
1) Capacity of structure is to be of sufficient strength to support loads M* and T* specified on PosiGlaze balustrade system design table. Structure capacity to be verified by building engineer prior to fixing balustrade.
2) Max loading to comply with AS/NZS 1170.1:2002 Minimum Imposed Actions for Barriers Occupancy, shown at top of drawing, for design in accordance with PosiGlaze balustrade system design table.
3) Penetration through a membrane must be completed in accordance with written instructions of the membrane manufacturer.
4) No substitution allowed - any variation from the details above and design tables will require specific design.

Refer to PosiGlaze balustrade system design table for required glass thickness, fixing spacings and fixing loads according to AS/NZS 1170.1:2002 for the occupancies listed above. Refer to design tables and elevations for post failure requirements. Interlinking rail / clips not shown for clarity. ‘H’ refers to top of barrier.

Hilti HIT-HY 200 + HIT-W-R M10 Grade 316 stainless steel anchor with 160mm embedment into uncracked concrete. Anchors to be installed in accordance with Hilti requirements. For anchors adjacent to corners, first anchor to be placed 120mm from edge of concrete.

NOTE: not suitable for fixing to blockwork. Specific Engineering Design required.
POSIGLAZE PG120S & PG180S BALUSTRADE SYSTEM

Concrete Fixing Detail

<table>
<thead>
<tr>
<th>Drawing No.</th>
<th>Revision</th>
<th>Fixing Type</th>
<th>Occupancy</th>
</tr>
</thead>
<tbody>
<tr>
<td>PG120S-180S/C/RA(M12)</td>
<td>R10</td>
<td>PG120S &amp; PG180S with rod anchor (M12)</td>
<td>A, B, E, C3, C1/C2, D</td>
</tr>
</tbody>
</table>

Glass thickness from Design Table

- H (as per design tables)

MAX protrusion of fixing

- PG180S

Recommended drainage holes - Ø6mm @ 400mm centres

EPDM continuous strip (302100) and continuous even bearing to be provided

Concrete building structure to be designed by building engineer to support loads as specified on PosiGlaze balustrade system design table. Minimum 25MPa uncracked concrete, 200mm Min thickness.

NOTE: not suitable for fixing to blockwork. Specific Engineering Design required.

- Hilti HIT-HY 200 + HIT-W-R M12 Grade 316 stainless steel anchor with 150mm embedment into uncracked concrete. Anchors to be installed in accordance with Hilti requirements. For anchors adjacent to corners, first anchor to be placed 120mm from edge of concrete.

Refer to PosiGlaze balustrade system design table for required glass thickness, fixing spacings and fixing loads according to AS/NZS 1170.1 2002 for the occupancies listed above. Refer to design tables and elevations for post failure requirements. Interlinking rail / clips not shown for clarity. ‘H’ refers to top of barrier.

NOTES:
1) Capacity of structure is to be of sufficient strength to support loads M* and T* specified on PosiGlaze balustrade system design table. Structure capacity to be verified by building engineer prior to fixing balustrade.
2) Max loading to comply with AS/NZS 1170.1 2002 Minimum Imposed Actions for Barriers Occupancy, shown at top of drawing, for design in accordance with PosiGlaze balustrade system design table.
3) Penetration through a membrane must be completed in accordance with written instructions of the membrane manufacturer.
4) No substitution allowed - any variation from the details above and design tables will require specific design.
POSIGLAZE PG120S & PG180S BALUSTRADE SYSTEM

Steel Fixing Detail

<table>
<thead>
<tr>
<th>Drawing No.</th>
<th>Revision</th>
<th>Fixing Type</th>
<th>Occupancy</th>
</tr>
</thead>
<tbody>
<tr>
<td>PG120S-180S/S/BN</td>
<td>R10</td>
<td>PG120S &amp; PG180S with bolt and nut</td>
<td>A, B, E, C3, C1/C2, D</td>
</tr>
</tbody>
</table>

Glass thickness from Design Table

H (as per design tables)

MIN barrier height (ref NZBC F4)

PG120S shown above

66mm continuous even bearing to be provided

EPDM continuous strip (302100) and continuous even bearing to be provided

Glass thickness from Design Table

MIN 52mm

MIN 52mm

M12 x 24 OD x 2.5mm washers (316 stainless steel).

M12 x 24 OD x 2.5mm

316 grade SS washer

MAX protrusion of fixing

Recommended drainage holes - Ø6mm @ 400mm centres

Steel section with adequate fixing to deck structure for load specified on PosiGlaze balustrade system design table.

M10 bolt and nut with M12 x 24 OD x 2.5mm washers (316 stainless steel).

PG120S shown above

NOTES:

1) Capacity of structure is to be of sufficient strength to support loads M*and T* specified on PosiGlaze balustrade system design table. Structure capacity to be verified by building engineer prior to fixing balustrade.

2) Max loading to comply with AS/NZS 1170.1 2002 Minimum Imposed Actions for Barriers Occupancy, shown at top of drawing, for design in accordance with PosiGlaze balustrade system design table.

3) Penetration through a membrane must be completed in accordance with written instructions of the membrane manufacturer.

4) For fixing to steel substrates, the installer shall ensure the bolts are tightened to a “snug-tight” level as defined in NZS3404.

5) No substitution allowed - any variation from the details above and design tables will require specific design.

Refer to PosiGlaze balustrade system design table for required glass thickness, fixing spacings and fixing loads according to AS/NZS 1170.1 2002 for the occupancies listed above. Refer to design tables and elevations for post failure requirements. Interlinking rail / clips not shown for clarity. 'H' refers to top of barrier.
**NOTES:** Refer to design tables and elevations for post failure requirements.

1) Capacity of structure is to be of sufficient strength to support loads \(M^*\) and \(T^*\) specified on PosiGlaze balustrade system design table. Structure capacity to be verified by building engineer where applicable or checked to NZS3604 requirements prior to fixing.

2) Max loading to comply with AS/NZS 1170.1:2002 Minimum Imposed Actions for Barriers Occupancy, shown at top of drawing.

3) Penetration through a membrane must be completed in accordance with written instructions of the membrane manufacturer.

4) For fixing to timber substrates, the installer shall ensure that the bolt / coach screw is sufficiently tightened to reduce movement for design in accordance with PosiGlaze balustrade system design table.

5) No substitution allowed - any variation from the details above and design tables will require specific design.

6) No substitution allowed - any variation from the details above and design tables will require specific design.

7) Timber boundary joists (min SG8 timber) with adequate fixing to deck structure for loads specified on PosiGlaze balustrade system design table (refer note 2).

Refer to PosiGlaze balustrade system design table for required glass thickness, fixing spacings and fixing loads according to AS/NZS 1170.1:2002 for the occupancies listed above. Refer to design tables and elevations for post failure requirements. Interlinking rail / clips not shown for clarity. ‘\(H\)’ refers to top of barrier.

### NOTES:

1. Capacity of structure is to be of sufficient strength to support loads \(M^*\) and \(T^*\) specified on PosiGlaze balustrade system design table. Structure capacity to be verified by building engineer where applicable or checked to NZS3604 requirements prior to fixing balustrade.

2. Timber decks designed to NZS 3604:2011 guidelines will meet loading requirement, except for decks including cantilever floor joists where specific design is required.

3. Max loading to comply with AS/NZS 1170.1:2002 Minimum Imposed Actions for Barriers Occupancy, shown at top of drawing, for design in accordance with PosiGlaze balustrade system design table.

4. Penetration through a membrane must be completed in accordance with written instructions of the membrane manufacturer.

5. For fixing to timber substrates, the installer shall ensure that the bolt / coach screw is sufficiently tightened to reduce movement of the bolt head and washer. Care should be taken not to over tighten the fixings that would cause crushing of the timber or compromise the thread leading to anchor pull-out.

6. No substitution allowed - any variation from the details above and design tables will require specific design.
POSIGLAZE PG120S & PG180S BALUSTRADE SYSTEM

Timber Fixing Detail

<table>
<thead>
<tr>
<th>Drawing No.</th>
<th>Revision</th>
<th>Fixing Type</th>
<th>Occupancy</th>
</tr>
</thead>
<tbody>
<tr>
<td>PG120S-180S/T/CS</td>
<td>R10</td>
<td>PG120S &amp; PG180S with coach screw</td>
<td>A, B, E, C3</td>
</tr>
</tbody>
</table>

NOT SUITABLE FOR OCCUPANCY C1/C2, D OR C5

Refer to PosiGlaze balustrade system design table for required glass thickness, fixing spacings and fixing loads according to AS/NZS 1170.1:2002 for the occupancies listed above. Refer to design tables and elevations for post failure requirements. Interlinking rail / clips not shown for clarity. ‘H’ refers to top of barrier.

NOTES:

1) Capacity of structure is to be of sufficient strength to support loads M* and T* specified on PosiGlaze balustrade system design table. Structure capacity to be verified by building engineer where applicable or checked to NZS3604 requirements prior to fixing balustrade.

2) Timber decks designed to NZS 3604:2011 guidelines will meet loading requirement, except for decks including cantilever floor joists where specific design is required.

3) Max loading to comply with AS/NZS 1170.1:2002 Minimum Imposed Actions for Barriers Occupancy, shown at top of drawing, for design in accordance with PosiGlaze balustrade system design table.

4) Penetration through a membrane must be completed in accordance with written instructions of the membrane manufacturer.

5) For fixing to timber substrates, the installer shall ensure that the bolt / coach screw is sufficiently tightened to reduce movement of the bolt head and washer. Care should be taken not to over tighten the fixings that would cause crushing of the timber or compromise the thread leading to anchor pull-out.

6) No substitution allowed – any variation from the details above and design tables will require specific design.

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Balustrade Systems
**POSIGLAZE SYSTEM**

**SAFELITE® STF (Sentry®) 13.52mm**

**Panel Width Notes:**
- Balustrade stiffener brackets or interlinking rail required for panels <1100mm.
- Minimum panel width where two or more panels are in a straight line = 1000mm.
- Minimum width for short return panel = 200mm.

**FOR OCCUPANCIES C1, C2 & D:**
1100mm Minimum Width Applies.

**FOR OCCUPANCIES A, A other, C3, B & E ONLY:**
Panel Widths < 1100mm require balustrade stiffener brackets or interlinking rail (Edgetec® or S40).

**GLASS & FIXING SPECIFICATIONS:**
Refer to design table for maximum glass height, maximum fixing spacing and design loads to structure.

**IMPORTANT NOTE:** The substructure to which the balustrade is to be attached must be designed by a structural engineer to resist the relevant balustrade actions as per B1/VM1.

**SAFELITE® STF (Sentry®) 17.52mm**

**Panel Width Notes:**
- Balustrade stiffener brackets or interlinking rail required for panels <1700mm.
- Minimum panel width where two or more panels are in a straight line = 1000mm.
- Minimum width for short return panel = 200mm.

**FOR OCCUPANCIES A, A other, C3, B & E ONLY:**
Panel Widths < 1700mm require balustrade stiffener brackets or interlinking rail (Edgetec® or S40).

**Residential & Commercial**
- Occupancy types A, A other, C3, B and E.

**GLASS & FIXING SPECIFICATIONS:**
Refer to design table for maximum glass height, maximum fixing spacing and design loads to structure.

**IMPORTANT NOTE:** The substructure to which the balustrade is to be attached must be designed by a structural engineer to resist the relevant balustrade actions as per B1/VM1.
POSIGLAZE ELEVATION
SAFELITE EVA Glass

POSIGLAZE SYSTEM
SAFELITE® EVA 15.2mm, 17.2mm

PANEL WIDTH NOTES:
Minimum panel width where two or more panels are in a straight line = 1000mm.
Minimum width for short return panel = 200mm.

Residential & Commercial
Occupancy types A, A other, C3, B and E.

GLASS & FIXING SPECIFICATIONS:
Refer to design table for maximum glass height, maximum fixing spacing and design loads to structure.

IMPORTANT NOTE: The substructure to which the balustrade is to be attached must be designed by a structural engineer to resist the relevant balustrade actions as per B1/VM1.

J brackets must be MFG HB50 range
MINIMUM PANEL WIDTH 1000mm

MAXIMUM PANEL WIDTH 1900mm
rail on glass

MAXIMUM PANEL WIDTH 1700mm
rail on J bracket

Panel gap:
MIN 14mm
MAX 20mm

MIN 50mm
MAX 100mm

125mm MAX
overhang at ends

250mm MAX clamp spacing

FULL HEIGHT SILICONE BUTT JOIN REQUIRED AT CORNER

BALUSTRADE STIFFENER BRACKETS OR INTERLINKING RAIL (EdgeFix or S40) REQUIRED

MINIMUM PANEL WIDTH 1000mm

MAXIMUM PANEL WIDTH 1900mm

POSIGLAZE SYSTEM
SAFELITE® EVA 19.2mm

PANEL WIDTH NOTES:
Minimum panel width where two or more panels are in a straight line = 1000mm.
Minimum width for short return panel = 200mm.

Residential & Commercial
Occupancy types A, A other, C3, B and E.

GLASS & FIXING SPECIFICATIONS:
Refer to design table for maximum glass height, maximum fixing spacing and design loads to structure.

IMPORTANT NOTE: The substructure to which the balustrade is to be attached must be designed by a structural engineer to resist the relevant balustrade actions as per B1/VM1.

J brackets must be MFG HB50 range
MINIMUM PANEL WIDTH 1000mm

MAXIMUM PANEL WIDTH 1900mm
rail on glass

MAXIMUM PANEL WIDTH 1700mm
rail on J bracket

Panel gap:
MIN 14mm
MAX 20mm

MIN 50mm
MAX 100mm

125mm MAX
overhang at ends

250mm MAX clamp spacing

FULL HEIGHT SILICONE BUTT JOIN REQUIRED AT CORNER

BALUSTRADE STIFFENER BRACKETS OR INTERLINKING RAIL (EdgeFix or S40) REQUIRED

MINIMUM PANEL WIDTH 1000mm

MAXIMUM PANEL WIDTH 1900mm

www.metroglass.co.nz
Balustrade Systems
POSIGLAZE ELEVATION
TEMPAFLOAT Glass

POSIGLAZE SYSTEM
TEMPAFLOAT® 12mm

PANEL WIDTH NOTES:
Minimum panel width where two or more panels are in a straight line = 1000mm.
Minimum width for short return panel = 200mm.

Residential & Commercial
Occupancy types A, A other, C3, B and E.

GLASS & FIXING SPECIFICATIONS:
Refer to design table for maximum glass height, maximum fixing spacing and design loads to structure.

INTERLINKING RAIL REQUIRED:
$25 (on glass only, MAX 1700mm panels)
$40 & Edgetec® (on MFG HB50 J brackets, MAX 1700mm panels)
$40 & Edgetec® (on glass, MAX 1900mm panels)

Panel gap:
MIN 14mm
MAX 20mm

Panel gap:
MIN 14mm
MAX 20mm

250mm MAX clamp spacing

125mm MAX overhang at ends

IMPORTANT NOTE: The substructure to which the balustrade is to be attached must be designed by a structural engineer to resist the relevant balustrade actions as per B1/VM1.

POSIGLAZE SYSTEM
TEMPAFLOAT® 15mm

PANEL WIDTH NOTES:
Minimum panel width where two or more panels are in a straight line = 1000mm.
Minimum width for short return panel = 200mm.

Residential & Commercial
Occupancy types A, A other, C3, B and E.

GLASS & FIXING SPECIFICATIONS:
Refer to design table for maximum glass height, maximum fixing spacing and design loads to structure.

INTERLINKING RAIL (S40 or Edgetec®) REQUIRED

Panel gap:
MIN 14mm
MAX 20mm

Panel gap:
MIN 14mm
MAX 20mm

250mm MAX clamp spacing

125mm MAX overhang at ends

J brackets must be MFG HB50 range
POSIGLAZE SYSTEM
POOL FENCE ONLY (BASE FIX)

GLASS & FIXING SPECIFICATIONS:
Refer to design table for maximum glass height, maximum fixing spacing and design loads to structure.

APPLIES TO FREE STANDING POOL FENCES NOT PROTECTING A FALL OF > 1000mm.
As of Jan 2017, complies with Building Code clause F9 & section 162C of the building Act.

IMPORTANT NOTE: The substructure to which the balustrade is to be attached must be designed by a structural engineer to resist the relevant balustrade actions as per B1/VM1.
**POSIGLAZE ELEVATION**
Stair Balustrade

**POSIGLAZE SYSTEM**
STAIR BALUSTRADE

**GLASS & FIXING SPECIFICATIONS:**
Refer to design table for maximum glass height, maximum fixing spacing and design loads to structure.

**IMPORTANT NOTE:** The substructure to which the balustrade is to be attached must be designed by a structural engineer to resist the relevant balustrade actions as per B1/VMI.

**TEMPAFLOAT®**
Toughened Safety Glass

**SAFELITE® EVA**
Laminated Safety Glass

**SAFELITE® STF (Sentry®)**
Laminated Safety Glass with Rigid Interlayer

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<table>
<thead>
<tr>
<th>Type</th>
<th>LIC. No.</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>T</td>
<td>2625</td>
<td>Christchurch (T-TL)</td>
</tr>
<tr>
<td>TL</td>
<td>2603</td>
<td>Wellington (T-TL)</td>
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<tr>
<td>A</td>
<td>2718</td>
<td>Tauranga (T-TL)</td>
</tr>
<tr>
<td></td>
<td>2518</td>
<td>Auckland (T-TL)</td>
</tr>
</tbody>
</table>
POSIGLAZE RAIL & BRACKETS
Balustrade 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**
17.52—21.52mm GLASS
300150

**CORNER BRACKET**
17.52—21.52mm GLASS
300152

**WALL BRACKET**
17.52—21.52mm GLASS
300154

FULL HEIGHT FULL WIDTH SILICONE IN ACCORDANCE WITH DOWSIL PREPARATION AND INSTALLATION INSTRUCTIONS.

Maximum 180° glass to glass.

Stiffener bracket - No holes required.

Suit glass from 13.5 — 15.5mm.

Suit glass from 17.52 — 21.52mm.

Duplex 2205. Stainless Steel Satin finish.
**POSIGLAZE RAIL & BRACKETS**

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
**POSIGLAZE RAIL & BRACKETS**

**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) 80x22x5mm
- **Edgetec® 220 Rail Vertical Adjustable Joiner** (#301990)
- **Edgetec® 220 Rail Horizontal Fixed Joiner (#301985)**
- **Edgetec® 220 Rail Horizontal Adjustable Joiner** (#301988)

- **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

**IMPORTANT NOTE:** Conforming to NZS 4223.3:2016 and Building Code Clause B1/AS1 Cl 7.3.1
POSIGLAZE RAIL & BRACKETS
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
S25-02
S25 RAIL - SPLICE CONNECTION DETAIL
All fixings to be stainless steel

S25 LINK RAIL SECTION
300738

Ø5mm HOLE FOR MS GRUB SCREW

S25 LINK RAIL INLINE JOINER
300864

THREADED HOLE FOR MS GRUB SCREW

M5x6mm GRUB SCREWS WITH TUBE LOCK LOCTITE (301978 & 300961)

S25 LINK RAIL JOINER
300861

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

S25 LINK RAIL SECTION
300738

Ø5mm HOLE FOR MS GRUB SCREW

S25 LINK RAIL 90° CORNER
300861

M5x6mm GRUB SCREWS WITH TUBE LOCK LOCTITE

IMPORTANT NOTE: Conforming to NZS 4223.3.2016 and Building Code Clause B1/AS1 Cl 7.3.1
POSIGLAZE RAIL & BRACKETS

S25 Link Rail

**S25-04**

**S25 RAIL WALL BRACKET**

All fixings to be stainless steel

**S25 LINK RAIL WALL BRACKET**

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 in accordance with NZS3101.

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


Balustrade Systems

www.metroglass.co.nz
S25-06
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 = 140\text{mm}.
3. Blockwall must be corefilled / Reinforced & is to be designed & detailed in Accordance with NZS4230 or NZS4229.
4. Minimum corefill concrete Strength = 175\text{MPa}.

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 = 5\text{mm}.
4. Minimum steel grade = 300\text{MPa}.

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 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
POSIGLAZE RAIL & BRACKETS

S40 Link Rail

S40-02
S40 RAIL - SPLICE CONNECTION DETAIL

All fixings to be stainless steel

S40 LINK RAIL SECTION
300739

Ø5mm HOLE FOR MS GRUB SCREW

S40 LINK RAIL INLINE JOINER
300869

TAP HOLE FOR MS GRUB SCREW

S40 LINK RAIL 90° CORNER
300866

S40 LINK RAIL - SPLICE CONNECTION ELEVATION

TAP 4 OFF MS THREADED HOLE FOR GRUB SCREWS

M5x6mm GRUB SCREWS WITH TUBE LOCK LOCTITE (301978 & 300961)

S40 RAIL conformed to NZS 4223.3.2016 and Building Code Clause B1/AS1 Cl 7.3.1

TAP 4 OFF M5 THREADED HOLE FOR GRUB SCREWS

M5x6mm GRUB SCREWS

WITH TUBE LOCK LOCTITE (301978 & 300961)

S40 LINK RAIL JOINER

S40 LINK RAIL JOINER

S40 LINK RAIL JOINER

SECTION D-D

S40 LINK RAIL FIXED 90° CORNER

S40 LINK RAIL FIXED 90° CORNER

Section E-E

S40 RAIL conformed to NZS 4223.3.2016 and Building Code Clause B1/AS1 Cl 7.3.1

IMPORTANT NOTE: Conforming to NZS 4223.3.2016 and Building Code Clause B1/AS1 Cl 7.3.1
**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 with at least 8 mm in diameter in accordance with NZS3101.

**IMPORTANT NOTE:** Conforming to NZS 4223.3.2016 and Building Code Clause B1/AS1 Cl 7.3.1
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, \( n^* = 0.9 \text{kN} \) - 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.

**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, \( n^* = 0.9 \text{kN} \) - inwards, outwards or down.
2. Minimum stud size = 90x45.
4. Timber stud wall to be designed & detailed in accordance with nzs3603 or nzs3604.

**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, \( n^* = 0.9 \text{kN} \) - 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
POSIGLAZE RAIL & BRACKETS

For attaching EDGETEC® 220 (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 Semi Frameless Post Extrusion
Base Fix Post as an end Post

IMPORTANT NOTE: Conforming to NZS 4223.3.2016 and Building Code Clause B1/AS1 Cl 7.3.1
POSIGLAZE RAIL & BRACKETS

For attaching S25 Link Rail (on glass) to a Semi Frameless AP65 Post Interlinking Top Rail (where wall fixing not suitable)

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

- **AP65 TOP CAP**
- **AP65 POST**
- **S25 RAIL**
- **S25 RAIL GASKET**
- **GGLASS PANEL**
- **SELT TAPPING SS SCREWS**

**AP65 Structural Post & S25 Rail Plan**

- **SELF TAPPING SS SCREWS**
- **AP65 POST & TOP CAP**
- **S25 RAIL WALL BRACKET**
- **S25 RAIL GASKET**
- **S25 RAIL**

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**PosiGlaze Side Fix**

- **EPDM**

145mm for M10 coachscrews to 2x190x45 posts, 95mm for M10 bolts & nuts to 2x140x45 posts, 60mm for M10 bolts & nuts to steel. 60mm for M10 studs to concrete.

**S25 Rail & AP65 Semi Frameless Post Extrusion Side Fix Post as an end Post**

- **3mm SPACER**
- **EPDM (ex 302099)**
- **EPDM layer (ex 302101)**

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**PosiGlaze Base Fix**

- **EPDM (3020101)**

**AP65 Semi Frameless Post Extrusion PosiGlaze Base Fix Base Fix Post as an end Post**

- **120x80 2 Hole Base Plate**
- **120x80 4 Hole Base Plate**
- **110x100 4 Hole Base Plate**

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**IMPORTANT NOTE**: Conforming to NZS 4223.3.2016 and Building Code Clause B1/AS1 Cl 7.3.1
POSIGLAZE RAIL & BRACKETS
For attaching S40 Link Rail (on glass) to a Semi Frameless AP78 Post Interlinking Top Rail (where wall fixing not suitable)

AP78 Structural Post & S40 Rail
Side Elevation

PosiGlaze Side Fix

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

PosiGlaze Base Fix

AP78 Semi Frameless Post Extrusion
Base Fix Post as an end Post

Important note: Conforming to NZS 4223.3:2016 and Building Code Clause B1/AS1 Cl 7.3.1
**POSIGLAZE SYSTEM**

**Installation / Fitting Instructions**

**BASE FIX (PG120B)**

<table>
<thead>
<tr>
<th>Product</th>
<th>Installation / Fitting Instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base Rail</td>
<td>The PosiGlaze base channel should be placed onto its designated position and the holes marked onto the substrate for drilling. Once the shoe is lined up with the holes and is level, the fixings should be tightened up to make the channel rigid. The fixings must be tightened in accordance with the manufacturer’s instructions. M10 or M12 bolts can be used.</td>
</tr>
<tr>
<td>Glass Slip Clamp Fitting</td>
<td>The glass slip clamps need to be placed onto the bottom of the glass. This requires lifting the glass off the floor sufficiently and pushing into place or applying the clamps to the bottom of the glass. The slip clamps require even spacing. When 4 clamps are used on a metre wide panel the clamps need to be positioned 125mm in from the edge of the glass and then at 250mm centres. The glass can now be lowered into the channel. Refer to Metro PS1 for details.</td>
</tr>
<tr>
<td>Glass Clamp Bar Fitting</td>
<td>Once the glass is in the channel the clamp bars must be positioned into the top of each glass slip clamp. Firstly, screw the bolt into the clamp bar until the head of the bolt just reaches the bar. Screw the bolt into the flat side as the shaped side of the bar will sit nearest to the glass. Each clamp bar can now be inserted into the glass slip clamps. As shown in the image to the left.</td>
</tr>
<tr>
<td>Getting Glass Level and Tightening Bolts</td>
<td>Place a spirit level on the glass to get the glass in the correct position. The bolts now need tightening equally to keep the same pressures on the glass. To adjust the glass into position the bolts can be unscrewed back towards the wall of the channel. To achieve the correct positioning firstly square up and level each end of the glass and tighten the bolts. Then tighten the bolts on the intermediate clamp bars. Give the bolts an additional half turn to ensure that the glass is securely held in place. You must use an adhesive, such as Loctite, on the threads.</td>
</tr>
<tr>
<td>Top Seal Strip</td>
<td>The gasket requires feeding into rebates on the smaller profiles, do not stretch the gasket. Once the gasket is flush with each end of the strip it can now be cut and clipped onto the top of the channel. This can be done by pressing firmly down on the profile working from one end to the other. A soft mallet may be required, knocking the right angled corner.</td>
</tr>
<tr>
<td>Cleaning</td>
<td>Once everything is correctly in place and the job is complete, the glass and channel need to be cleaned. Use a non-abrasive glass cleaner on the glass and warm soapy water on the PosiGlaze channel. We also recommend a soft sponge or cloth, again to avoid any risk of scratching. For full care and maintenance guidelines please refer to our comprehensive guide page 716.</td>
</tr>
</tbody>
</table>

**IMPORTANT NOTE:** The guide above is simplified, and should in no way be referenced in isolation. For full comprehensive substrate fixing details please refer through to the PS1.

A fitting video is also available on our website www.metroglass.co.nz
## POSIGLAZE SYSTEM
### Installation / Fitting Instructions

<table>
<thead>
<tr>
<th>Product</th>
<th>Installation/Fitting Instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fixing the Channel</strong></td>
<td>The side drilled channel should be placed onto its designated position and the holes marked onto the substrate for drilling. Once the shoe is lined up with the holes and level the fixings should be tightened up to make the channel rigid. The fixings must be tightened in accordance with the manufacturer’s instructions. M10 or M12 bolts in concrete can be used. M10 bolt / nut or coachscrews can be used for steel and timber substrates.</td>
</tr>
<tr>
<td><strong>Glass Slip Clamp Fitting</strong></td>
<td>The glass slip clamps need to be placed onto the bottom of the glass. This requires lifting the glass off the floor sufficiently and pushing into place or applying the clamps to the bottom of the glass. The slip clamps require even spacing. When 4 clamps are used on a metre wide panel the clamps need to be positioned 125mm in from the edge of the glass and then at 250mm centres. The glass can now be lowered into the channel. Refer to Metro PS1 for details.</td>
</tr>
<tr>
<td><strong>Glass Clamp Bar Fitting</strong></td>
<td>Once the glass is in the channel the clamp bars must be positioned into the top of each glass slip clamp. Firstly, screw the bolt into the clamp bar until the head of the bolt just reaches the bar. Screw the bolt into the flat side as the shaped side of the bar will sit nearest to the glass. Each clamp bar can now be inserted into the glass slip clamps. As shown in the image to the left.</td>
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<tr>
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<td>Place a spirit level on the glass to get the glass in the correct position. The bolts now need tightening equally to keep the same pressures on the glass. To adjust the glass into position the bolts can be unscrewed back towards the wall of the channel. To achieve the correct positioning firstly square up and level each end of the glass and tighten the bolts. Then tighten the bolts on the intermediate clamp bars. Give the bolts an additional half turn to ensure that the glass is securely held in place. You must use an adhesive, such as Loctite, on the threads.</td>
</tr>
<tr>
<td><strong>Top Seal Strip &amp; Side Cladding</strong></td>
<td>The gasket requires feeding into rebates on the smaller profiles, do not stretch the gasket. Once the gasket is flush with each end of the strip it can now be cut. The top seal strip needs to be loosely sat on the ridge of the channel and can be fixed by pressing firmly down on the profile working from one end to the other. A soft mallet may be required, knocking the right angled corner. The side cladding will need a double sided tape or adhesive on the channel, it then simply hooks over the ridge.</td>
</tr>
<tr>
<td><strong>Cleaning</strong></td>
<td>Once everything is correctly in place and the job is complete, the glass and channel need to be cleaned. Use a non-abrasive glass cleaner on the glass and warm soapy water on the PosiGlaze channel. We also recommend a soft sponge or cloth, again to avoid any risk of scratching. For full care and maintenance guidelines please refer to our comprehensive guide page 716.</td>
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