JURALCO

JURALCO EDGETEC® MEGAGRIP™ BALUSTRADE SYSTEM

ISSUE 7-24 v1

Juralco Aluminium Building Products Ltd designs and distributes specialist aluminium joinery systems through a national network of franchised fabricators and agents. For more than 25 years we have been at the forefront of specialist aluminium door and window products suitable for New Zealand joinery and building methods. Our comprehensive product range includes security and insect screens, balustrades and gates, shutters and awnings, louvre roofs, shower screens, wardrobe doors, organisers and internal doors.

The Juralco Edgetec® MegaGrip™ Balustrade System is designed for Frameless Sentry Glas® 25.52mm and 31.52mm, as Base fixed only, predominantly for Commercial use. The system is extremely versatile and can be made in a range of configurations to suit most modern architectural requirements and Wind Zones.

MegaGrip System - Product Overview

The MegaGrip System was developed for cantilevered structural balustrades for 25.52mm and 31.52mm SentryGlas; all without holes in the glass.

The unique design uses a special high strength hollow-core aluminium extrusion and special glass clamp kits that secure and locate the glass into a heavy aluminium section.

The MegaGrip System is only available as Base fixed. MegaGrip'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. Fully adjustable after installation: MegaGrip 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.

Complies With AS/NZS 1170:2002, NZS 4223.3.2016, NZ Building Code B1, B2, F2, F4 and F9

For Residential Occupancy Types A, and B/E and for Commercial Occupancy Types C1/C2, C3, C5 and D Occupancy Types as per AS/NZ 1170.1.2002.

Code	Type of Occupancy for part of the building or structure	Specific Uses	Glass
A	Domestic and Residential activities	All areas within or serving exclusively one dwelling including stairs, landings etc, but excluding external balconiesand edges of roofs.	25.52mm SentryGlas® 31.52mm SentryGlas®
B, E	Offices and work areas not included elsewhere including storage areas.	Light access stairs and gangways not more than 600mm wide Fixed platforms, walkways, stairways and ladders for access Areas not susceptible to overcrowding in office and institutional buildings; also industrial and storage building.	
C	Areas where people might congreate		
C1/C2	Areas with Tables or Fixed Seating	Areas with fixed seating adjecent to a balustrade, restaurant, bars etc.	
C3	Areas without obstacles for moving people and not suspectible to overcrowding	Stairs, Landings, and External Balconies, edges of roofs, etc	
C5	Areas susceptable to overcrowding	Theaters, Cinemas, grandstands, discotheques, bars, auditoria, shopping malls, (see also D), assembly areas, studios, etc	
D	Retail Areas	All retail areas including public areas of banks/building societies, (see also C5 for other areas where overcrowding may occur)	
F/G	Vehicular	Pedestrian areas in car parks including stairs, landings, ramps, edges of internal floors, footways, edges of roofs	

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Section 4855JG

Note 1 **Juralco Balustrade Systems building code compliance documentation requires all balustrade installations are to be completed in accordance with the requirements of our authorised installer certification.**

Note 2 **Frameless Glass Balustrades must conform to NZS 4223.3.2016**
See individual Layout pages for conformance details

Note 3 **The Dulux powder coating warranty period is conditional upon the Balustrade being maintained in accordance with the Dulux 'Care and Maintenance Instructions'. See Page 4 for warnings concerning coastal conditions.**
Contact your balustrade installer for a copy of the Care and Maintenance procedure.

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Juralco Aluminium Building Products Ltd (JABP)
Specifications for Juralco Edgetec® MegaGrip™ Balustrade System

1.Scope

- This specification details the documents the Juralco Edgetec® MegaGrip™ Balustrade System refers to in relation to the New Zealand Building Code, the manufacturer's documents, products used in the System, requirements in relation to fixing and surface finishing.

2. NZBC Compliance

- The Juralco Edgetec® MegaGrip™ Balustrade System has been reviewed by Lautrec Technology Group Ltd to demonstrate compliance with the structural requirements of the New Zealand Building Code and NZS 1170 : 2002 occupancy A, B, E ,A Other, C3, C5, D and F/G, NZS 3604 up to and including Extra High Wind Zone. 2.5kPa
- The Structural Engineering design includes the requirements of B1 Structure, B2 Durability, F2 Hazardous material and F4 Safety from falling, F9 Restricting access to Residential Pools, all from the Building Code.
- Glass used in the Juralco Edgetec® MegaGrip™ Balustrade System must conform to AS/NZS 2208. Complies with NZS 4223.3.2016
- Verification Method B1/VM1, B2/AS1, F4/AS1, F9/AS1
- Separation of dissimilar materials (as relates to B2 compliance) have been reviewed. For other combinations refer to NZS 3604:2011 Section 2.3.3 Separation and Section 4 Durability

3. Manufacturer's Documents

- The Juralco Edgetec® MegaGrip™ Balustrade System manual details all extrusions and components used for the fabrication and installation/fixing of the system.
- A Producer Statement 1(Design) is available.
  Copies of the above documents are available from:
  Juralco Aluminium Building Products Ltd
  48 Bruce McLaren Rd, Henderson, Auckland
  Phone 09 478 8018 Fax 09 478 7883 Email specify@juralco.co.nz
- Any deviation from the standard fabrication or installation/fixing must be accompanied by a site specific PS1 with site specific calculations and drawings

4. Products

- Only extrusions, components and hardware supplied by or specified by JABP may be used in the Juralco Edgetec® MegaGrip™ Balustrade System
- Aluminium extrusions, components and hardware – unless specified are manufactured to 6060 T5 specifications
- Stainless Steel components, hardware, fixings – all components to 304 or 316 grade
- Glass - all glass used in the Juralco Edgetec® MegaGrip™ Balustrade System must conform to the specifications as listed in the Juralco Edgetec® MegaGrip™ Balustrade System manual with each panel conforming to AS/NZS 2208 as confirmed by the Safety Stamp detailing the manufacturer's description and licence number.

5.Surface Finishing

- Juralco Aluminium Building Products Ltd is a Dulux Registered Applicator site, registration number 2101. JABP uses only Dulux branded powder coating materials
- Dulux Duralloy® powder coating systems are suitable for properties greater than 100m from high tide level AAMA 2603 performance. Residential buildings, 3 levels max. Warranty 10 yrs
- Dulux Duralloy Plus® powder coating systems are suitable for properties greater than 10m from high tide level. AAMA 2603 performance. Residential and Light commercial buildings, 3 levels max. Warranty 15 yrs
- Dulux Duratec® powder coating systems are suitable for properties greater than 10m from high tide level AAMA2603 and 2604 performance. All Residential and Commercial buildings. Warranty 25 yrs

6. Installation and Fixing

- The Juralco Edgetec® MegaGrip™ Balustrade System must only be installed in accordance with the Juralco Edgetec® MegaGrip™ Balustrade System manual
- Any deviation from that specified in the Juralco Edgetec® MegaGrip™ Balustrade System manual must only be in accordance with the site specific PS1 with site specific calculations and drawings listing the non standard details. Contact Juralco for more informations.
- The Juralco Edgetec® MegaGrip™ Balustrade System must only be fabricated/installed by a Juralco approved fabricator
- Upon completion of the installation the fabricator must supply the Council with a PS3 (Construction)

Important information - Powder Coating systems.

Powdercoat Systems The new standard Dulux powder coating system used by Juralco is Duralloy Plus®. Also Duralloy® and Duratec®. All as per specs above. Juralco Powder coated prices are for Duralloy Plus® and Duralloy® (same pricing). Duratec® prices on application.

Attachment to structures A PVC Tape or similar material spacer must be used to separate powder coated aluminium items from all concrete and steel structures. Failure to do so can lead to the chemicals in the structure affecting the powder coating, leading to corrosion.

Swimming Pools The chlorinated water in swimming pools can cause the deterioration of powder coated surfaces, leading to corrosion of the underlying surface. It is recommended that Powder coated surfaces be 1200mm min from a pool.

Care The Dulux powder coating warranty period is conditional upon the surface being maintained in accordance with the Dulux 'Care and Maintenance Instructions'. Download from Dulux or refer to the back page of this manual.

MegaGrip Balustrade System
Base Fixed below FFL

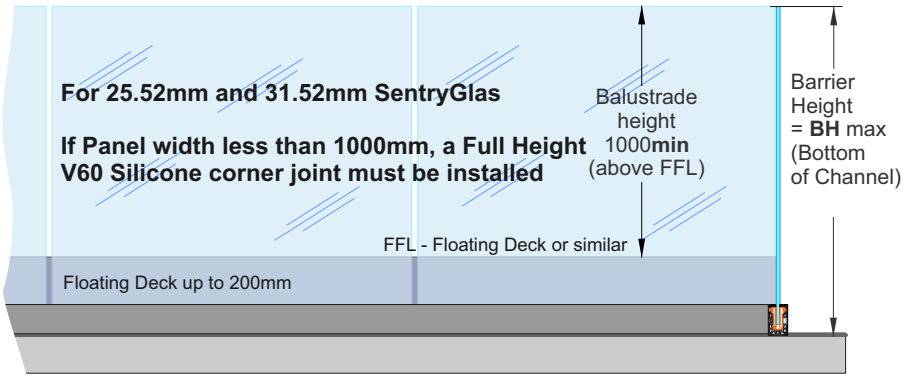
Glass must have a minimum strength of 100Mpa. Seen edges polished

Occupancy A, A other, C3			
Glass	Wind Zones	Barrier Height	Fixing Crs
25.52mm SG	Extra High	2000 mm	200mm

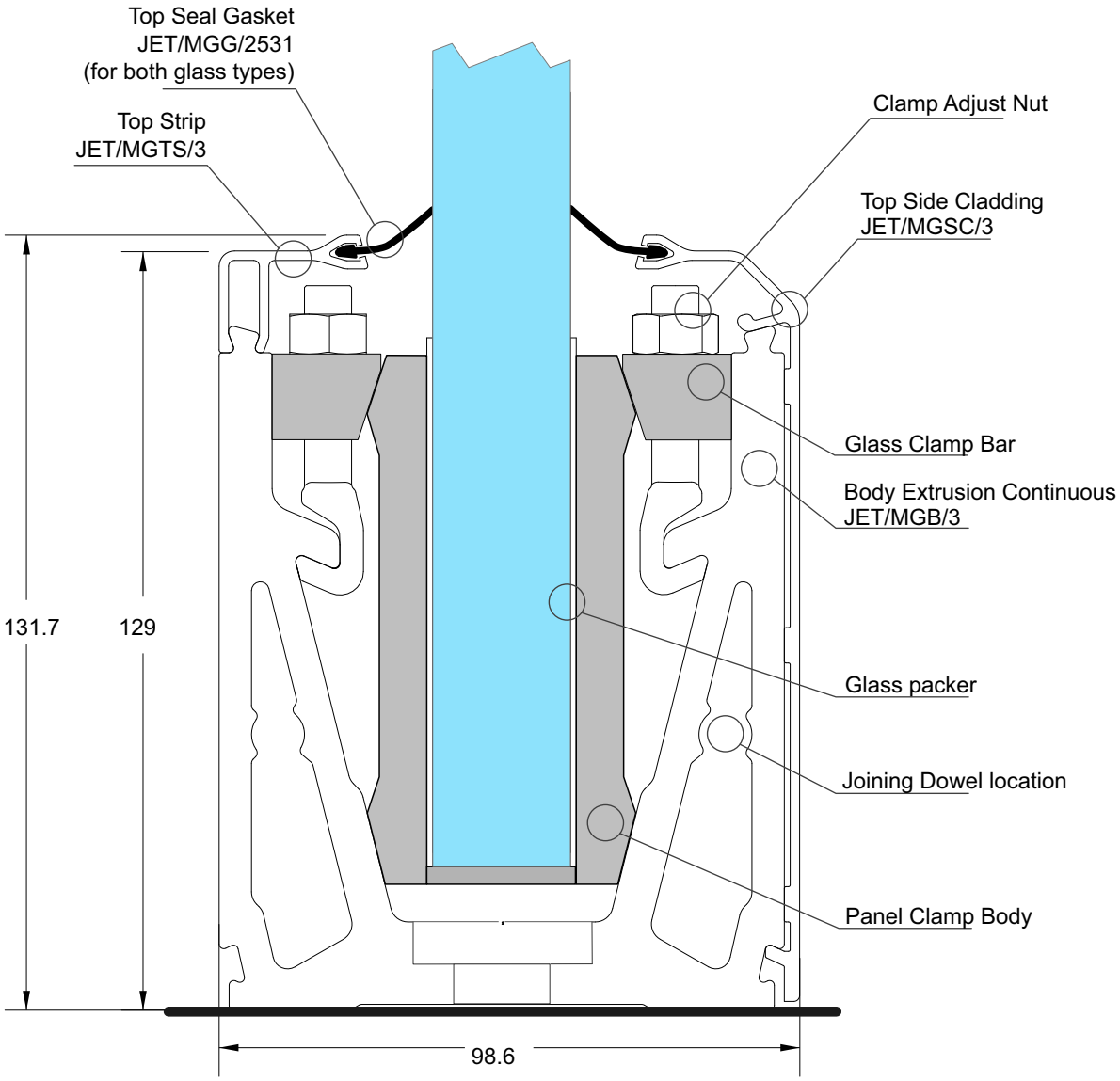
Occupancy C1/C2, D, F, G			
Glass	Wind Zones	Barrier Height	Fixing Crs
25.52mm SG	Extra High	1700 mm	200mm
31.52mm SG	Extra High	2000 mm	200mm

Occupancy C5			
Glass	Wind Zones	Barrier Height	Fixing Crs
25.52mm SG	Extra High	1300 mm	200mm
31.52mm SG	Extra High	1400 mm	200mm

MegaGrip Balustrade System Base Fixed below FFL



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



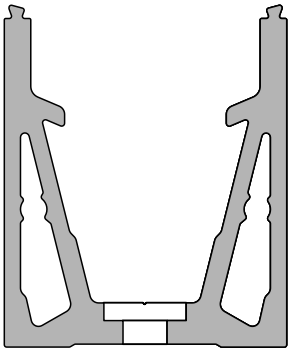
Base Fix only. SentryGlas 25.5mm and 31.5mm only

Juralco Edgetec® MegaGrip™ Balustrade System
Extrusions, Components

Top strip
JET/MGTS/3
Finishes: BNAT, SCC

BASE Fix

2 x Top strips

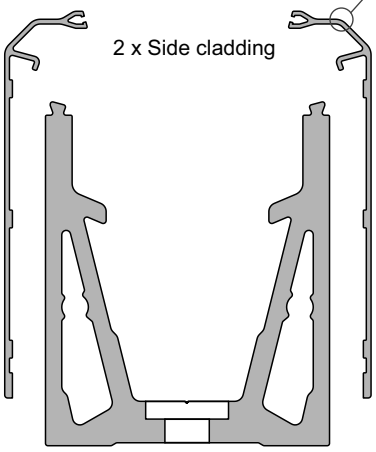


Brushed Nat Anodised with Top seals
Brushed Natural Only
JET/MGB/3

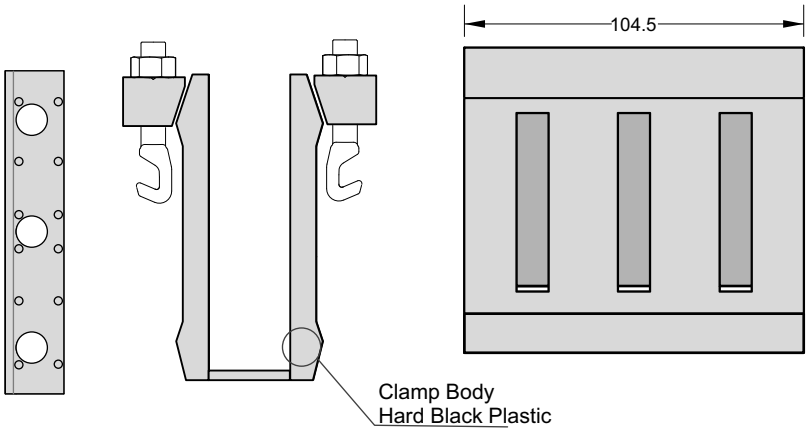
Top Side Cladding
JET/MGSC/3
Finishes: BNAT, SCC

BASE Fix

2 x Side cladding



SCC with Side Covers
Brushed Natural or SCC
JET/MGB/3



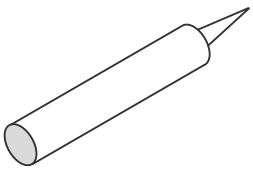
MegaGrip Glass Clamp - Black

JET/MGC/31.5/KIT	Glass Clamp Kit for 31.5mm Glass
JET/MGC/25.5/KIT	Glass Clamp Kit for 25.5mm Glass
JET/MGC/31.5	Glass Clamp for 31.5mm Glass
JET/MGC/25.5	Glass Clamp for 25.5mm Glass

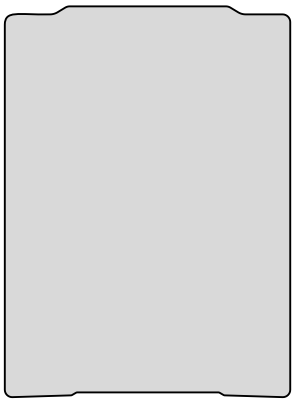
Joining Dowels
Set of x2
JET/PGD

Top Seal Gasket
JET/MGG/2531.
(for both glass types)

Rhodorsil V60 Clear Silicone
H/RTV419098



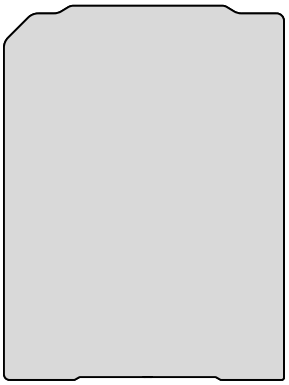
Construction Silicone



3mm Aluminium

MegaGrip End Plate
2 x Top Strips

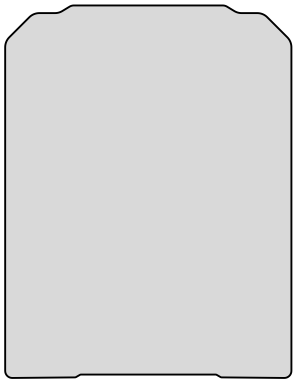
JET/MGEPB
Finishes: NAT, SCC



3mm Aluminium

MegaGrip End Plate
1 x Top Strips
1 x Side Cladding

JET/MGEPB1
Finishes: NAT, SCC



3mm Aluminium

MegaGrip End Plate
2 x Side Cladding

JET/MGEPB2
Finishes: NAT, SCC

Available as kits

Finishes:

BNAT = Brushed Natural Anodised, 20 micron

NAT - Natural Anodised 20 micron.

AMILL = Mill Finish

SCC = Duralloy Plus Powder coat

BASE Fix Kit:

Brushed Nat Anodised with Top seals

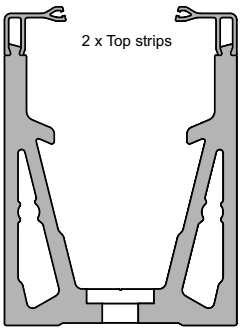
JET/MGB/25.5KIT/BNAT
JET/MGB/31.5KIT/BNAT

For 25.5 or 31.5mm glass. Specify Glass Thickness

Includes 1 x 3m Length BASE Fix Channel Pre-Drilled

2 x 3m Length Top Seal Strip BNAT

2 x Joining Dowels, 1 Set Of Glass Clamp Kits (12 pieces), 6m Length of Gasket



BASE Fix Kit:

SCC with Side Covers

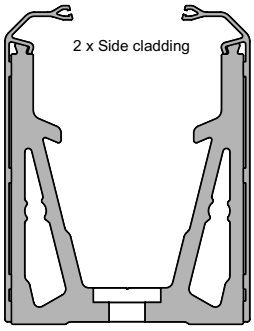
JET/MGB2/25.5KIT
JET/MGB2/31.5KIT

For 25.5 or 31.5mm glass. Specify Glass Thickness

Includes 1 x 3m Length BASE Fix Channel Pre-Drilled

2 x 3m Length Side Cladding SCC (Specify Powder Coat Colour)

2 x Joining Dowels, 1 Set Of Glass Clamp Kits (12 pieces), 6m Length of Gasket



BASE Fix Kit:

Brushed Nat Anodised with Side Covers

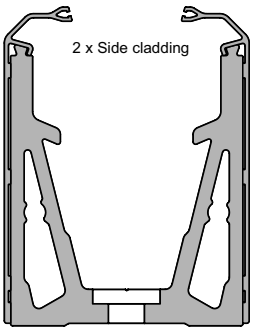
JET/MGB2/25.5KIT/BNAT
JET/MGB2/31.5KIT/BNAT

For 25.5 or 31.5mm glass. Specify Glass Thickness

Includes 1 x 3m Length BASE Fix Channel Pre-Drilled

2 x 3m Length Side Cladding BNAT

2 x Joining Dowels, 1 Set Of Glass Clamp Kits (12 pieces), 6m Length of Gasket



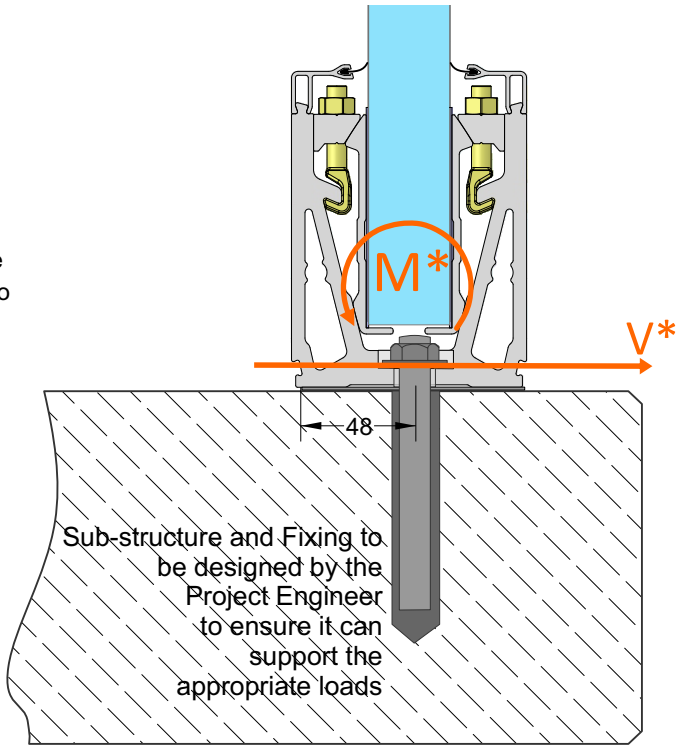
Note: 1x Side cladding, 1x Top Cap also available - For different variations please contact Juralco

The purpose of this page is to give a guide to structural engineers when designing the sub-structure and fixings in the case the standard details can't be met.

The substructure and fixings can be designed how the project engineer deems appropriate. The supporting structure which the barrier is connected must have adequate strength and stability to sustain all applied loads safely without excessive stress, deflection or distortion.

In the case when an atypical sub-structure and fixings are designed, the Generic PS1 will only cover the Channel and Glass system, not the sub-structure and fixings.

It is up to the Structural Engineer to supply a Site Specific PS1. Attach this page to the PS1 when atypical sub-structure and fixings have been used.



Dimension Table - Balustrade Occupancy for Extra High Wind Zones (up to and including)

Occupancy A, A other, C3						
Glass Thickness (mm)	Maximum Height (mm)	Fixing Centres (mm)	Design Action per Fixing			
			M* (kNm)	V* (kN)	SLS Wind (kPa)	ULS Wind (kPa)
25.52	2000	200	1.23	1.12	2.54	2.06
Occupancy C1/C2, F, G						
Glass Thickness (mm)	Maximum Height (mm)	Fixing Centres (mm)	Design Action per Fixing			
			M* (kNm)	V* (kN)	SLS Wind (kPa)	ULS Wind (kPa)
25.52	1700	200	1.58	1.13	2.54	2.06
31.52	2000	200	1.58	1.13	2.54	2.06
Occupancy C5						
Glass Thickness (mm)	Maximum Height (mm)	Fixing Centres (mm)	Design Action per Fixing			
			M* (kNm)	V* (kN)	SLS Wind (kPa)	ULS Wind (kPa)
25.52	1300	200	1.58	1.13	2.54	2.06
31.52	1400	200	1.58	1.13	2.54	2.06

Important Notes:

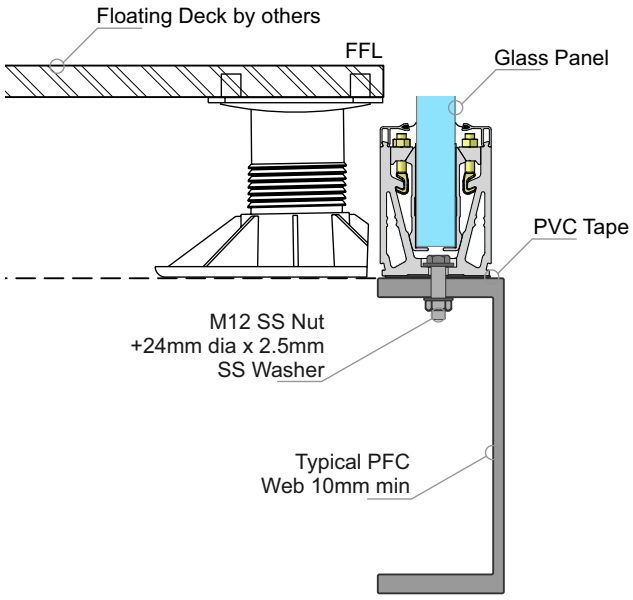
1 - Structural Engineer can design substrate to be suitable for loading requirement.
2 - See "AS/NZS 1170.1:2002 Structural Design action.
Permanent, imposed and other actions Table 3.3" for design loads.
3 - Barrier can not be installed to dimensions outside what is detailed in this manual
4 - The Generic PS1 will cover the balustrade ONLY in the case of a atypical structural design.
5 - All fixings must be Stainless Steel
6 - Minimum Glass Strength 100MPa, all edges polished
7 - If packers are required, use continuous packers with a maximum 20mm high. Packers can not be timber.
8 - Load values only applies to top mounted balustrade. Side mounted balustrades loads are different (page 12)

Juralco Edgetec® MegaGrip™ Balustrade System
Typical Fixing - Base Fix

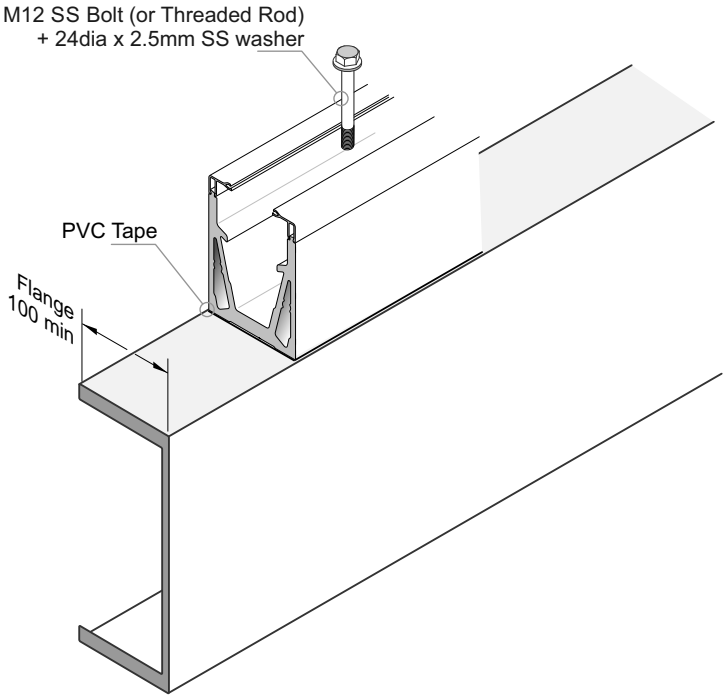
Typical BASE Fix to Steel - M12 SS, Bolt or Threaded Rod

Maximum Balustrade Height			
Normal Deck	Glass. SG	Barrier Height	Clamp C/C
A, A other, C3	25.52mm	2000	200
C1/C2, D, F, G	25.52mm	1700	200
	31.52mm	2000	200
C5	25.52mm	1300	200
	31.52mm	1400	200

General Notes:
1 - Glass Type - SentryGlas ONLY
2 - Rated up to and Including Extra High Wind Zone
3 - Fixing centers 200mm ONLY
4 - Barrier Height always from MegaGrip base
5 - All measurements mm
6 - Can be used in non domestic provided barrier height is greater than 1100mm
7 - Floating Deck up to 200mm max



Important Installation notes:
1 - The Project Engineer must ensure the structure can support the appropriate loads
2 - Substructure shown indicatively only
3 - Use Threadlok on all Clamp Pressure Screws
4 - All fixings must be Stainless Steel

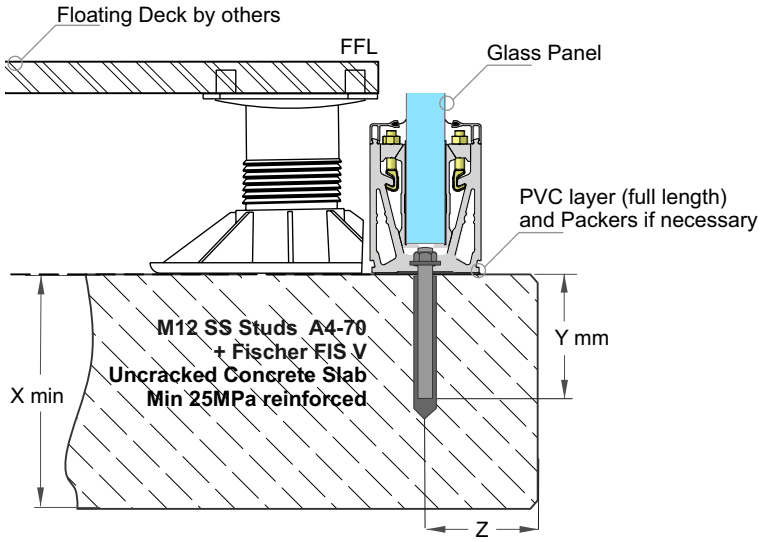


Juralco Edgetec® MegaGrip™ Balustrade System
Typical Fixing - Base Fix

Typical BASE Fix to Concrete - M12 SS Threaded Rod Stud

Maximum Balustrade Height, Fixed BELOW FFL.			
Normal Deck	Glass. SG	Barrier Height	Clamp C/C
A, A other, C3	25.52mm	2000	200
C1/C2, D, F, G	25.52mm	1700	200
	31.52mm	2000	200
C5	25.52mm	1300	200
	31.52mm	1400	200

Stud Depth			
Normal Deck up to 200 Max	Slab Thickness (X)	Anchorage Depth (Y)	Edge Distance (Z)
A, A other, C3	140	110	160
C/C2, D, F, G	200	125	190
C5			



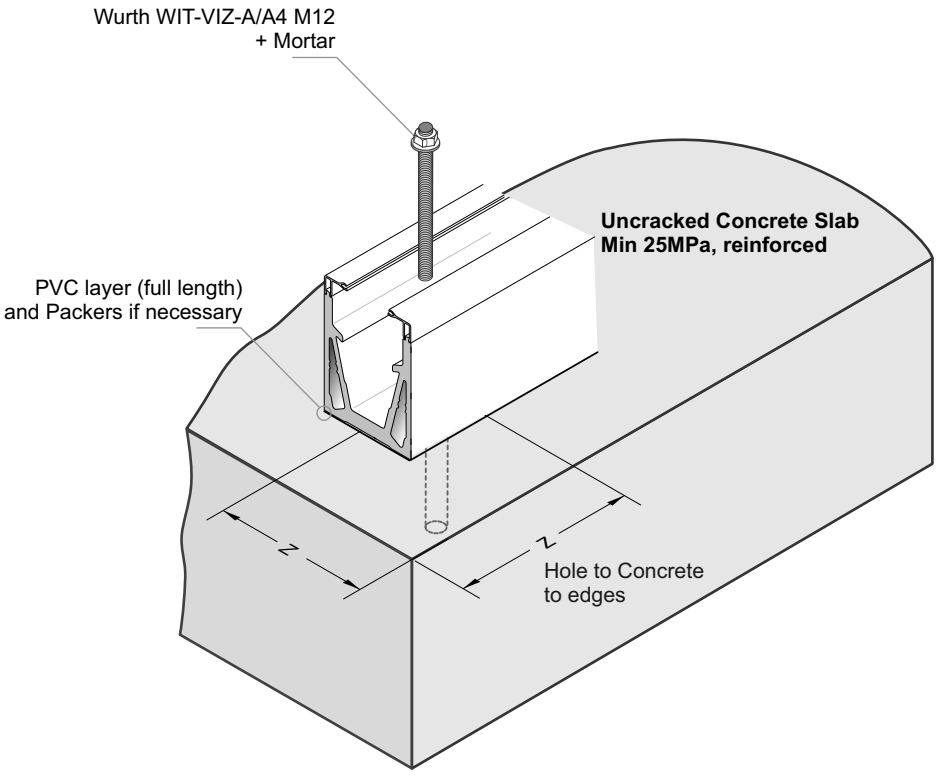
General Notes:
1 - Glass Type - SentryGlas ONLY
2 - Rated up to and Including Extra High Wind Zone
3 - Fixing centers 200mm ONLY
4 - Barrier Height always from MegaGrip base
5 - All measurements mm
6 - Can be used in non domestic provided barrier height is greater than 1100mm
7 - Floating Deck up to 200mm max

Important Installation Notes:
1 - The Project Engineer must ensure the structure can support the appropriate loads
2 - Substructure shown indicatively only
3 - Fixings must engage into the structural slab
4 - A PVC Tape layer must be installed between the Channel and Concrete
5 - Use Threadlok on Nut and on all Clamp Pressure Screws
6 - All fixings must be Stainless Steel

Installation details: Wurth WIT-VIZ-A/A4 M12

Thread diameter	M12
Drill hole diameter	= 14 mm
Drill hole depth	=(Y+10) mm
Anchorage depth	= Y mm
Drilling method	Hammer drilling
Drill hole cleaning	4 times blowing, 4 times brushing, 4 times blowing

No borehole cleaning required in case of using a hollow drill bit.

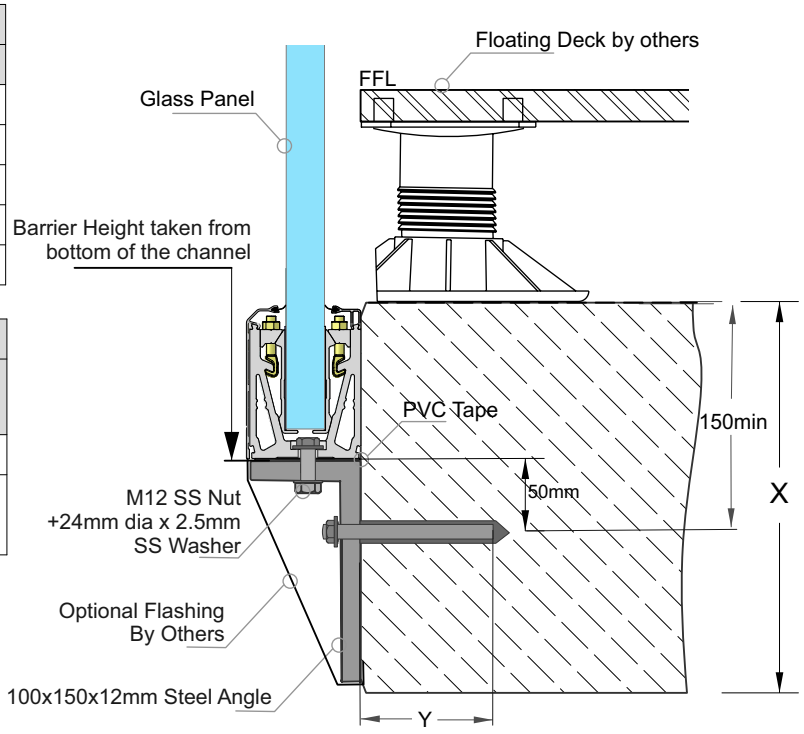


Juralco Edgetec® MegaGrip™ Balustrade System
Typical Fixing - Base Fix

Typical BASE Fix to Face Fix Steel Angle - M12 SS, Bolt or Threaded Rod

Maximum Balustrade Height, Fixed BELOW FFL			
Normal Deck	Glass. SG	Barrier Height	Clamp C/C
A, A other, C3	25.52mm	2000	200
C1/C2, D, F, G	25.52mm	1700	200
	31.52mm	2000	200
C5	25.52mm	1300	200
	31.52mm	1400	200

Stud Depth			
Normal Deck up to 200 max.	Slab Thickness (X)	Anchorage Depth (Y)	Edge Distance (Z)
A, A other, C3	250	95	100
C/C2, D, F, G	270	100	150
C5			



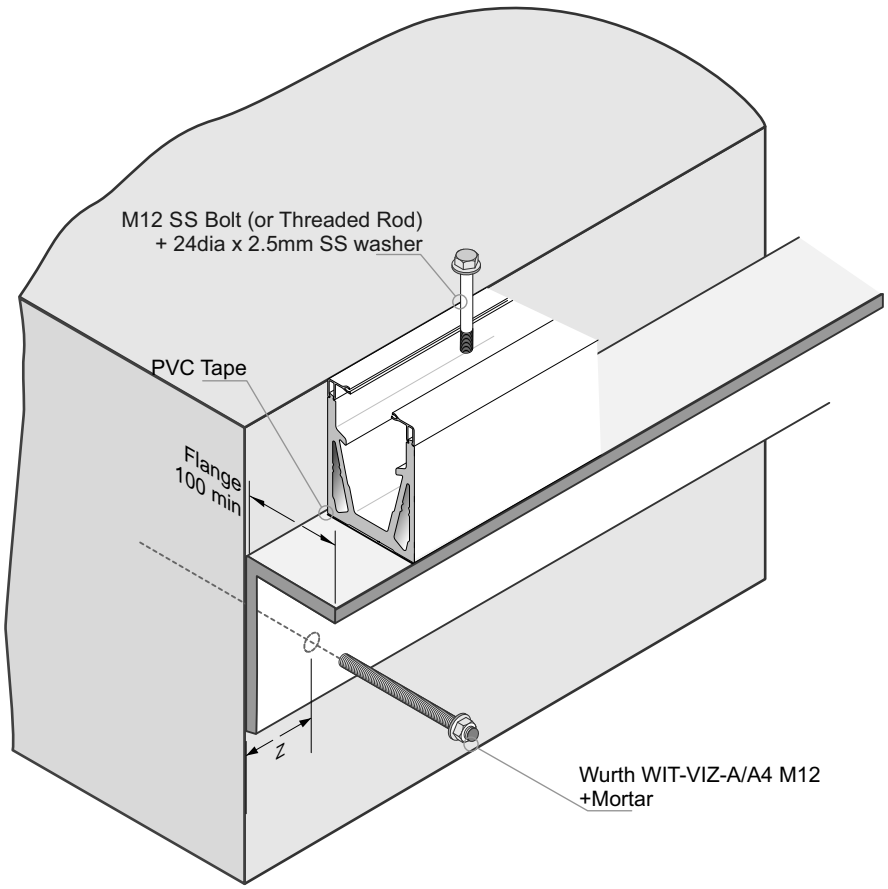
General Notes:
1 - Glass Type - SentryGlas ONLY
2 - Rated up to and Including Extra High Wind Zone
3 - Fixing centers 200mm ONLY
4 - Barrier Height always from MegaGrip base
5 - All measurements mm
6 - Can be used in non domestic provided barrier height is greater than 1100mm
7 - Floating Deck up to 200mm max

Important Installation notes:
1 - The Project Engineer must ensure the structure can support the appropriate loads
2 - Substructure shown indicatively only
3 - Use Threadlok on all Clamp Pressure Screws
4 - All fixings must be Stainless Steel

Installation details: Wurth WIT-VIZ-A/A4 M12

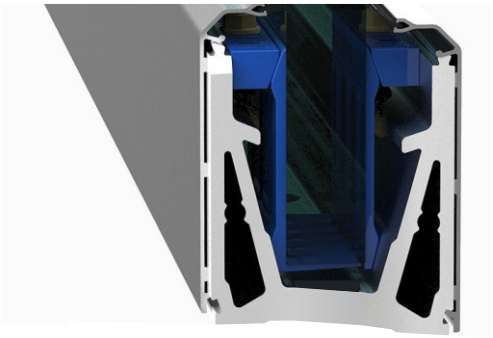
Thread diameter	M12
Drill hole diameter	= 14 mm
Drill hole depth	= 80 mm
Anchorage depth	= 70 mm
Drilling method	Hammer drilling
Drill hole cleaning	4 times blowing, 4 times brushing, 4 times blowing

No borehole cleaning required in case of using a hollow drill bit.



Fixing the Base Rail

The MegaGrip base rail should be placed onto its designated position and the holes marked on the substrate for drilling. Once the channel is level insert the fixings and tightened up to make the channel rigid. The fixings must be tightened in accordance with the manufacturer's instructions. M12 bolts must be used.



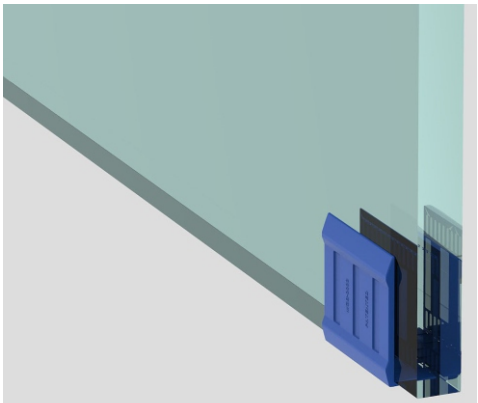
We strongly recommend measuring and ordering the glass once the channel has been installed. A minimum of 5mm gaps should be left between the glass panels. If cutting the channel make sure all metal filings (swarf) are removed.

Note: MegaGrip is counter-bored and suits standard hex head bolts. When fitting to metalwork a barrier between different metal types must be used. Additional waterproofing may be required.

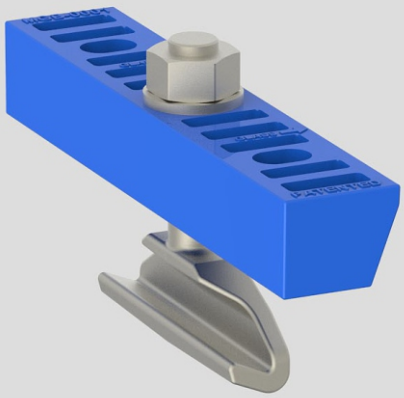
In extreme temperature changes the profiles may expand and contract. Small gaps may need to be left between profiles.

Glass slip clamp fitting

The glass slip clamps need to be placed onto the bottom of the glass. This requires lifting the glass off the floor sufficiently onto some plinths. Loosely attached the clamp halves to each other, they are designed so the fingers slide into each other. Slide these onto the bottom of the glass.



The clamps require even spacing using four per metre. On a metre wide panel the clamps need to be positioned so the centre of the clamps are 125mm from the edge of the glass and then at 250mm centres. Make sure the bottom of the clamps are squeezed tight on the glass. The glass can now be lowered into the channel, the clamps will need to avoid the bolt heads so a small amount of adjusting may be required.



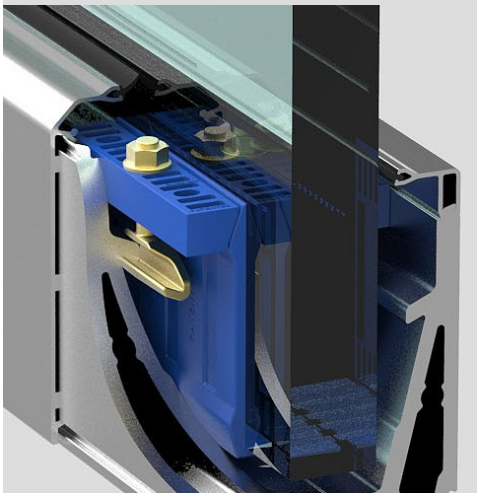
Preparing the Mega-Hook

The clamp bar needs to be slid over the threaded end of the Mega Hook, so that the hook is nearest the narrow part of the plastic bar. The nut needs to be loosely tightened so the bar can easily spin into the correct position when needed in the channel.

We would advise doing this prior to installation to save time on site.

Glass Clamp Bar Fitting

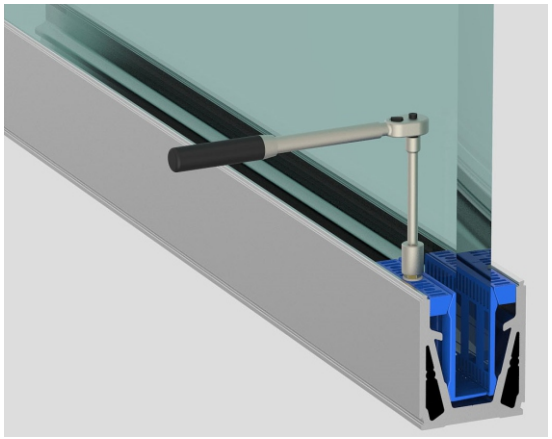
With the glass in the channel the hooks need to be fitted. The Mega-Hooks are designed to grip on the lip within the channel. Lower the hook next to the glass clamp, use the hook to catch the metal lip of the base channel and slide over so it lines up over the glass clamp.



The angled side of the plastic clamp bar must face the angled glass clamp/glass as shown. The glass may need to be pushed/pulled to allow the hooks into position.

Getting the glass level and fixed

Whilst the nuts are still loose place a spirit level on the glass, manoeuvre the glass in the desired position by pushing/pulling the glass. Now the nuts can be tightened which gives a fine adjustment.
By hand/ratchet screw the nuts tight down against the clamp bars before using a torque wrench with a 13mm Hex Socket.
All of the nuts must be tightened to 15Nm.

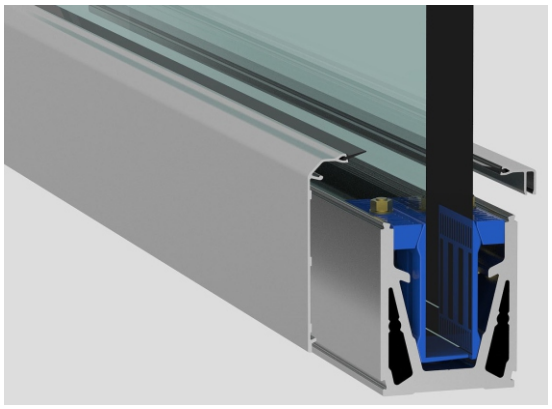


Beads

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.

Side Cladding

The side cladding hooks over the main channel, a securing tape or an adhesive to secure it against the channel must be used.



End Caps

End caps need adhering to the channel.
To keep water from submerging the glass we suggest drilling the thin end caps below the glass line with a min. 8mm hole.
Other draining methods may need to be considered depending on the size of the balustrade.

Cleaning

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 MegaGrip channel. We also recommend using a soft sponge or cloth to avoid damaging the channel or glass.
For more information follow the details on the operating & maintenance manual.

Powder Coating Care and Maintenance

Powder Coating Installation Care

Warning re use of solvents:
- In some cases strong solvents are recommended for thinning various types of paints and also for cleaning up mastics and sealants.
- These can be harmful to the extended life of the powder coated surface, and must not be used for cleaning purposes.
- It is important to note that the damage will not be visible immediately and may take up to l2 months to develop.

If paint splashes or sealants and mastics need to be removed then the following may be safely used:
Methylated Spirits, Ethyl Alcohol, Isopropanol or preferably a mild detergent in warm water.

Joinery Protection during Installation:
All the activity on a construction site means that your powder coated items may get knocked or scratched, splattered with mortar, plaster, textured coating or paint during the later stages of construction.

Please ensure that all powder coated articles are masked or covered at this time. It is far easier to prevent accidents than to try and correct them. Should your joinery receive mortar or paint splashes see that these are removed before cure and follow the instructions contained in this brochure.

Typical sticker used to warn other trades of the need to protect and mask off powder coated joinery (applies to anodised joinery also)

"IMPORTANT ALL TRADES"
This valuable aluminium joinery will suffer permanent damage from: plaster, mortar and paint splashes - Protect if splashes occur - Immediately wash down joinery with water or meths - Do not allow splashes to harden! ~ Do not use solvents! - Do not remove this label until final clean completed.

This photograph display damage that has occurred on site, post installation. The photo of the masked joinery displays clear signs of damage that could have occurred were it not masked. Please ensure that your joinery is protected right through the entire construction process.

Powder Coating Maintenance

External - Maintenance Program:
To extend the life of external powder coated articles and to comply with warranty requirements for powder coated aluminium joinery, a simple, regular maintenance program must be implemented.
The effects of ultra violet light, atmospheric pollution, dirt, grime and airborne salt deposits will all accumulate over time and must be removed or surface staining and weathering will occur, leading to an unsightly appearance.

For external coatings, cleaning should take place every six months. In areas where pollutants are more prevalent, such as beachfront houses and industrial or geothermal areas, then a cleaning program should be carried out on a more frequent basis ie. every one to three months.

Fences or Balustrades in close proximity to swimming pools must be washed down every six months, to clean off chlorine and salt deposits.

Cleaning your powder coating:
1. Carefully remove any loose surface deposits with a wet sponge.
2. Use a soft brush (non abrasive) and a mild household detergent (do not use solvents) in warm water, remove dust, salt and other deposits.
3. Rinse off with clean fresh water.

Restoring weathered or scratched surfaces:
Repair of Scuffed or Scratched surfaces
Dulux Spray Cans are available in all colour card colours.

Repair of Small Scratches or Chips.
Dulux Dabsticks are ideally suited for the repair of small scratches.
Dabsticks may not be available in all colour card colours.

Repair of Weathered areas .
Dulux Gloss Up is a light to medium cutting cream ideally suited for gloss restoration and has been specifically designed for this purpose.
Gloss Up contains no waxes or silicone and is a one step system.

Contact Dulux Powder Coatings , ph 0064 9 441 8244

Glass Care and Maintenance

Glass Cleaning and Maintenance

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

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

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

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

Scratches and Metal Scrapers

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

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

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

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

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

Glass Cleaning, Do’s and Don’ts

DO NOT..

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

DO...

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

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

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Care and Maintenance of Stainless Steel

Introduction

Stainless steels are selected for applications where their inherent corrosion resistance, strength and aesthetic appeal are required. However, dependent on the service conditions, stainless steels will stain and discolour due to surface deposits and so cannot be assumed to be completely maintenance-free. In order to achieve maximum corrosion resistance and aesthetic appeal, the surface of the stainless steel must be kept clean. Provided the grade of stainless steel and the surface finish are correctly selected, and cleaning schedules carried out on a regular basis, good performance and long service life will result.

For the correct selection of a Stainless Steel grade, with respect to Location, see Table below.

Factors affecting maintenance

Surface contamination and the formation of deposits on the surface of the stainless steel must be prevented. These deposits may be minute particles of iron or rust generated during construction. Industrial and even naturally occurring atmospheric conditions can produce deposits which can be equally corrosive, e.g. salt deposits from marine conditions.

Working environments can also provide aggressive conditions such as heat and humidity in swimming pool buildings. These conditions can result in surface discolouration of stainless steels and so maintenance on a more frequent basis may be required.

Modern processes use many cleaners, sterilizers and bleaches for hygienic purposes. Proprietary solutions, when used in accordance with makers' instructions, should be safe but if used incorrectly (e.g. warm or concentrated), may cause discolouration or corrosion on stainless steels. Strong acid solutions are sometimes used to clean masonry and tiling of buildings. These acids should never be used where contact with metals, including stainless steel, is possible. If this happens, the acid solution must be removed immediately, followed by dilution and rinsing with clean water.

Maintenance programme

With care taken during fabrication and installation, cleaning before 'hand-over' should not present any problems. More attention may be required if the installation period has been prolonged or hand-over delayed. Where surface contamination is suspected, immediate cleaning after site fixing should avoid problems later.

The frequency of cleaning is dependent on the application. This may vary from once to four times a year for external applications, Recommendations on cleaning frequencies in architectural applications are shown below.

Cleaning frequency

Reccommended Cleaning for various grades of Stainless Steel		
Location	304 Grade	316 Grade
Surbarban or Rural	Clean at 6-12mth intervals or as necessary	
Industrial or Urban	Clean at 3-6mth intervals	Clean at 6-12mth intervals
Coastal or Marine	Not recommended	

Reference:

British Stainless Steel Association (SSAS Information fact sheet No.7.20)
https://bssa.org.uk/bssa_articles/maintenance-and-care-of-stainless-steel

Introduction

Aluminium anodisation is an electrochemical process that increases the thickness of the natural oxide layer on the surface of aluminium. This oxide layer is highly durable, corrosion-resistant, and can be dyed to create various colors. This process not only enhances the material's appearance but also improves its resistance to wear, corrosion, and environmental damage. However, it is still important to care for you anodised products.

Care Instructions for Anodised Aluminium Joinery

Anodised aluminium is durable, but regular cleaning is essential to preserve its finish. Grime and moisture, especially when contaminated with sulphur, can deteriorate the surface.

Cleaning

Wash with warm water and mild soap, using a soft cloth or fine brush. Avoid stiff brushes or abrasives to prevent surface damage. Do not use acid or alkali cleaners, as they can harm the anodic film. For tough grime, use white spirit, turpentine, kerosene, or a liquid scourer, followed by wiping with a dry rag. Keep solvents away from vinyl glazing gaskets.

Rinse thoroughly to remove any cleaning residue, especially in crevices, and dry the glass to prevent marks**.**

Cleaning Frequency

Rural: Every 6 months
Urban: Every 3 months
Industrial/Marine (within 1 km of sea): Warm water detergent wash every 6 months, plus monthly cold water rinse.