



JURALCO EDGETEC® ATLANTIC and MALIBU GLASS POOL GATE SYSTEM

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, shower screens, wardrobe doors and organisers and internal doors.

The Juralco Edgetec[®] Glass Pool Gate System can use 10, 12mm Toughened Glass or 13.52mm SentryGlas[®] panels.

The system suitable for use with Juralco Frameless or SemiFrameless

Pool Fencing systems

- Note 1 This system utilises adjustable hydraulic self closing hinges (non hold open) and an automatic latch. The Hydraulic hinges are available in two types.
 - 1 Glass to Glass type, suitable for all Juralco Frameless Glass Pool systems 10mm,12mm and 13.52mm SentryGlas®
 - 2 Wall or Post to Glass type, suitable for Juralco EDGE Pool system 10mm 12mm Glass
- Note 2 If the Fence requested is to enclose an area containing water greater than 400mm deep it must comply with the relevant legislation, which as from Jan 2017 is the Building Code clause F9 and section 162C of the Building Act. The Juralco Glass Pool Gate system complies.
- Note 3 For 10mm to 12mm Toughened Glass, as applicable. Glass must have a minimum strength of 100MPa. All edges polished



Juralco Aluminium Building Products Ltd (JABP)

Specifications for Juralco Edgetec® Atlantic and Malibu Glass Pool Gate Systems

1.Scope

- This specification details the documents the Juralco Edgetec® Atlantic and Malibu Glass Pool Gate Systems refers to in relation to the New Zealand Building Code, the manufacturer's documents, products used in the System, and requirements in relation to fixing and surface finishings.

2. NZBC Compliance

- The Juralco Edgetec® Atlantic and Malibu Glass Pool Gate Systems has been reviewed by Lautrec Technology Group Ltd to demonstrate compliance with the structural requirements of the New Zealand Building Code and AS/NZS 1170: 2002 occupancy A, A Other and C3, NZS 3604 Low, Medium, High, Very High Wind Zone, max design wind pressure 2.04 kPa
- The Structural Engineering design includes Building Code requirements, B1 Structure, B2 Durability, F2 Hazardous material and Clause F9.
- Verification Method B1 / VM1, B2/AS1
- Complies with NZS 4223.3.2016

3. Manufacturer's Documents

- The Juralco Edgetec® Atlantic and Malibu Glass Pool Gate Systems 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® Atlantic and Malibu Glass Pool Gate Systems
- Aluminium extrusions, components and hardware unless specified are manufactured to 6060 T5 specifications
- Stainless Steel components, hardware, fixings all components to 316 grade

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® Atlantic and Malibu Glass Pool Gate Systems must only be installed in accordance with its Manual
- Any deviation from that specified in the Juralco Edgetec® Atlantic and Malibu Glass Pool Gate Systems manual must only be in accordance with the site specific PS1 with site specific calculations and drawings listing the non standard details
- The Juralco Edgetec® Atlantic and Malibu Glass Pool Gate Systems must only be fabricated/installed by a Juralco approved fabricator
- Upon completion of the installation the fabricator must supply the owner with a PS3 (Construction)

Important information - Powder Coating systems.

<u>Powdercoat Systems</u> 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.

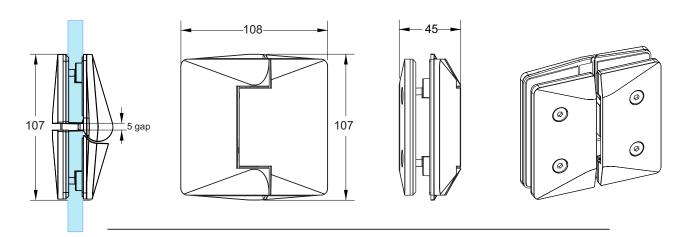
<u>Swimming Pools</u> The chlorinated water in swimming pools can cause the deterioration of powder coated surfaces, leading to corrosion of the underlying surface. It is recommended that Powder coated surfaces be 1200mm min from a pool.

<u>Care</u> 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.

Juralco Glass to Glass Hydraulic Hinges for Pool Gates using 10mm, 12mm Toughened Glass or 13.52mm SentryGlas®

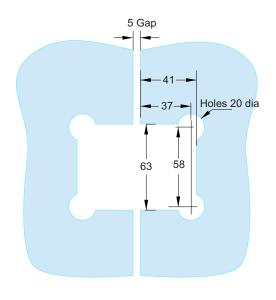
Suitable for all Juralco Frameless and SemiFrameless Glass Pool Fencing systems

530 Series GLASS TO GLASS HINGE SET



TECHNICAL DATA

- Duplex 2205 stainless steel
- Soft close with adjustable speed
- Single action
- Non-hold open
- Anti-foot hold non-climable
- Suitable for 10-12mm Toughened glass, 13.52mm SentryGlas®
- Passed 25,000 cycle test
- Not recommended for Childcare centres or High traffic areas.
- Fixings included
- Passed 640 hour salt spray test
- Door Weight max 70kg (2 x Hinges min)
- Door Dimensions max H 2400 x W 950mm (Inside a Building) (note this reduces to H 2100mm for 13.52 SentryGlas®) Door Dimensions max H 1500 x W 950mm (Outside)
- Finishes are Satin, Mirror Polish, Satin Black (Satin White powdercoat and Satin Gold
 special order only)



GLASS CUTOUT

PRODUCT CODES

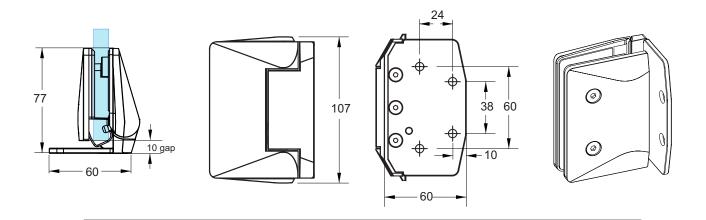




Juralco Glass to Glass Hydraulic Hinges for Pool Gates using 10mm, 12mm Toughened Glass or 13.52mm SentryGlas®

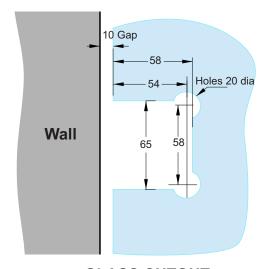
Suitable for all Juralco Frameless and SemiFrameless Glass Pool Fencing systems

530 Series GLASS TO WALL HINGE SET



TECHNICAL DATA

- Duplex 2205 stainless steel
- Soft close with adjustable speed
- Single action
- Non-hold open
- Anti-foot hold non-climable
- Suitable for 10-12mm Toughened glass, 13.52mm SentryGlas®
- Passed 25,000 cycle test
- Not recommended for Childcare centres or High traffic areas.
- Fixings included
- Passed 640 hour salt spray test
- Door Weight max 70kg (2 x Hinges min)
- Door Dimensions max H 2400 x W 950mm (Inside a Building) (note this reduces to H 2100mm for 13.52 SentryGlas®)
 Door Dimensions max H 1500 x W 950mm (Outside)
- Finishes are Satin, Mirror Polish, Satin Bblack (Satin White powdercoat and Satin Gold
 special order only)



GLASS CUTOUT

PRODUCT CODES







JET/A530W/SSS



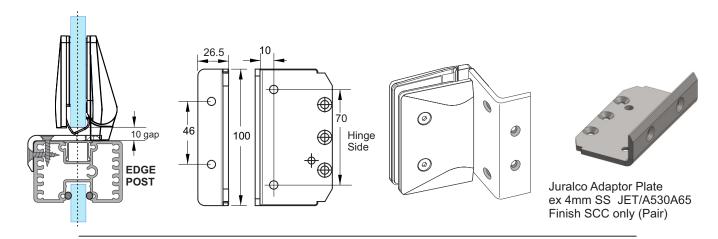
JET/A530W/BLK



Juralco Glass to Glass Hydraulic Hinges for Pool Gates using 10mm, 12mm Toughened Glass or 13.52mm SentryGlas®

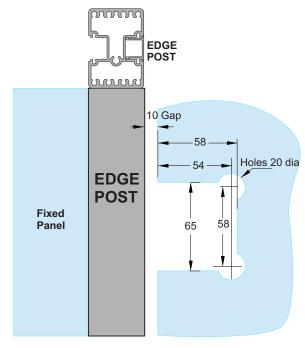
Suitable for all Juralco Frameless and SemiFrameless Glass Pool Fencing systems

530 Series GLASS TO POST HINGE SET (Adaptor Plate for Wall fix Model)



TECHNICAL DATA

- Duplex 2205 stainless steel
- Soft close with adjustable speed
- Single action
- Non-hold open
- Anti-foot hold non-climable
- Suitable for 10-12mm Toughened glass, 13.52mm SentryGlas®
- Passed 25,000 cycle test
- Not recommended for Childcare centres or High traffic areas.
- Fixings included
- Passed 640 hour salt spray test
- Door Weight max 70kg (2 x Hinges min)
- Door Dimensions max H 2400 x W 950mm (Inside a Building) (note this reduces to H 2100mm for 13.52 SentryGlas®)
 Door Dimensions max H 1500 x W 950mm (Outside)
- Hinge Finishes are Satin, Mirror Polish, Satin Black (Satin White powdercoat and Satin Gold
 - special order only). Adaptor Plate, Powder coat only.



GLASS CUTOUT

PRODUCT CODES. As add-ons to these Wall Hinges.

Finish SCC Powdercoat only to Match EDGE post.

Hinge only

JET/A530W/PSS

JET/A530W/SSS

JET/A530W/BLK

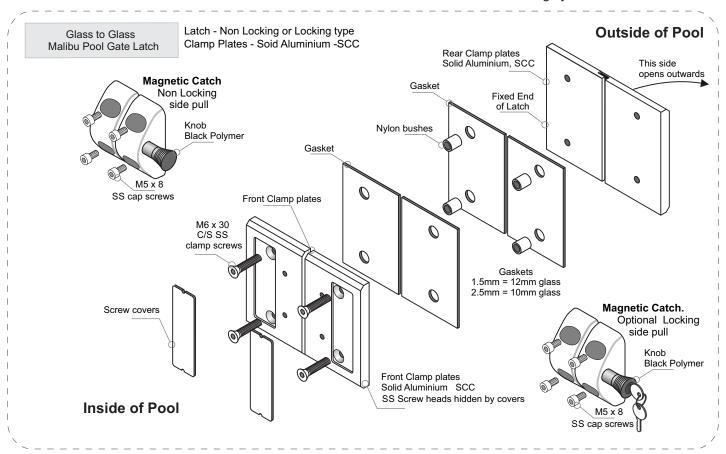


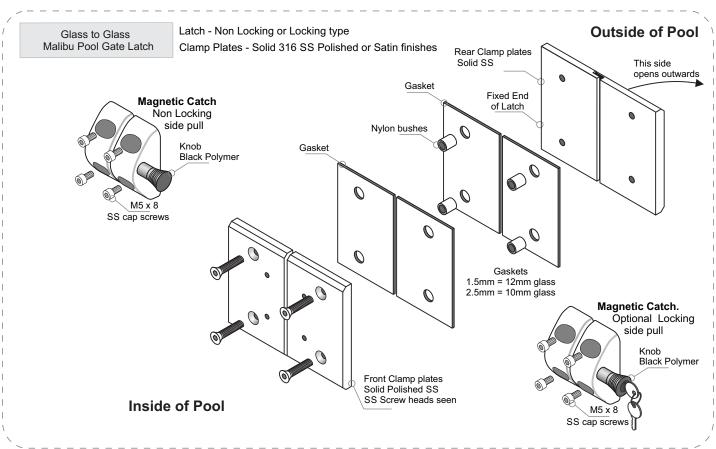
Adapter Plates only as a Pair

Juralco Adaptor Plate ex 4mm SS JET/A530A65 Finish SCC only Pair

Juralco Malibu Glass to Glass Latches for Pool Gates using 10mm,12mm Toughened Glass or 13.52mm SentryGlas®

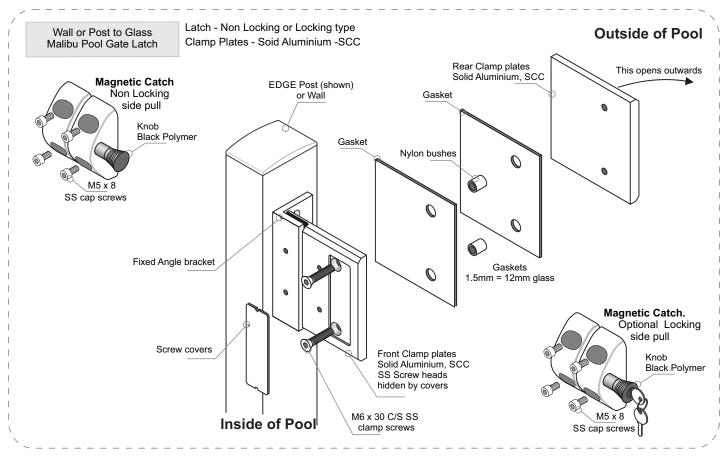
Suitable for all Juralco Frameless and SemiFrameless Glass Pool Fencing systems

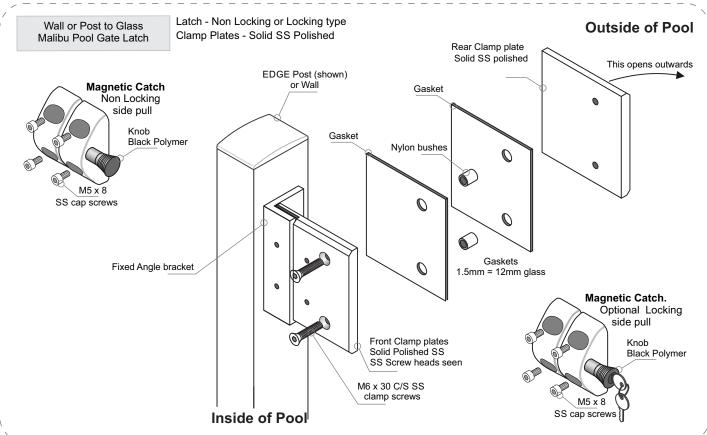




Juralco Malibu Glass to Glass Latches for Pool Gates using 10mm,12mm Toughened Glass or 13.52mm SentryGlas®

Suitable for all Juralco Frameless and SemiFrameless Glass Pool Fencing systems



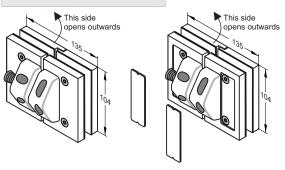


Juralco Malibu Glass to Glass Latches for Pool Gates using 10mm,12mm Toughened Glass or 13.52mm SentryGlas®

Suitable for all Juralco Frameless and SemiFrameless Glass Pool Fencing systems

Malibu Glass to Glass Latches

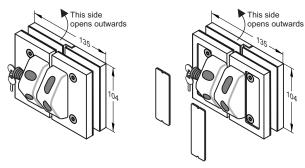
Note: Can be assembled as RH or LH



Non Locking types

Clamp Plates 316SS Polished or Satin finishes Latch Non Locking type JET/MGL180/PSS JET/MGL180/SSS

Clamp Plates Aluminium Latch Non Locking type JET/MGL180



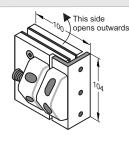
Locking types

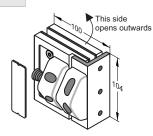
Clamp Plates 316 SS Polished or Satin finishes Latch Locking type JET/MGL180L/PSS JET/MGL180L/SSS

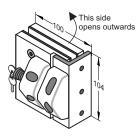
Clamp Plates Aluminium Latch Locking type JET/MGL180L

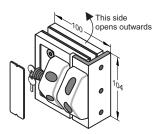
Malibu Wall or Post to Glass Latches

Note: Can be assembled as RH or LH









Non Locking types

Clamp Plates 316 SS Polished or Satin finishes Latch Non Locking type JET/MGL90/PSS JET/MGL90/SSS

Clamp Plates Aluminium Latch Non Locking type JET/MGL90

Locking types

Clamp Plates 316 SS Polished or Satin finishes Latch Locking type JET/MGL90L/PSS JET/MGL90L/SSS

Clamp Plates Aluminium Latch Locking type JET/MGL90L

Juralco Edgetec® Glass Pool Gate - Atlantic and Malibu Systems Side Pull Latch Fitting

PLEASE CAREFULLY READ ALL OF THE INSTRUCTIONS PRIOR TO INSTALLATION

Step 1 - Mounting the Side Pull Latch on a gate - Glass to Glass instructions below. Modify slightly for Glass to Post.

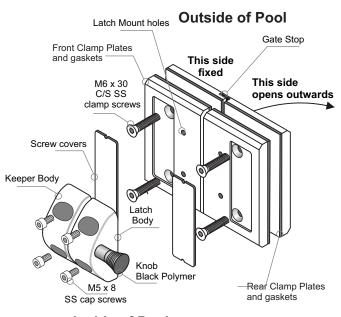
- First attach the 2 x Front and 2 x Back Clamp Plates (using the Gaskets and Nylon bushes to protect the Glass) to the Glass. Nip up the M6 x 30SS screws
- The Side Pull Latch to be mounted on the inside of the Gate (Front Clamp plates)
- Use the M5 x 8 cap screws supplied to lightly fix the Keeper and Body of the Side pull latch to the Front Clamp Plates. The Latch body on the Gate and the Keeper body on the Fixed side.
- The Glass Gap to be 10mm max. The Latch Gap to be 8mm min. 12mm max -10mm recommended
- Use the Vertical adjustment slots on the Keeper Body to line up the Latch.
- Use the Horizontal adjustment slots on the Latch Body to create the correct gap. Nip up tight, clip 4 x caps in place.

Step 2 - Testing the Side pull latch

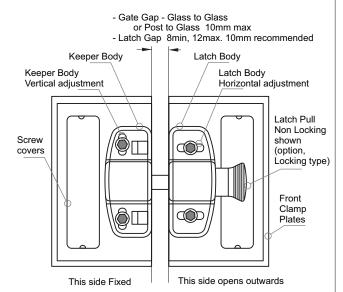
It is important to test the latching of the Side pull latch by shutting it at various speeds or, in case of a self-closing gate, letting go from various operating angles. The latch should engage properly. If not check the following:

- Make sure the gate is hung properly and the gate and fence post are parallel.
- Make sure the latch pin sits in the center of the latch pin recess in the Keeper body.
- Make sure the tension on the self-closing hinges, is not too low or too high.

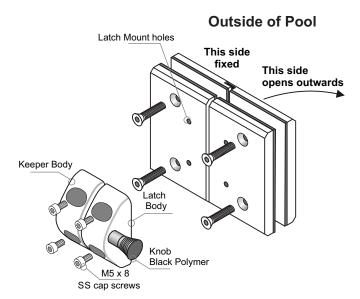
Features the same for both Types



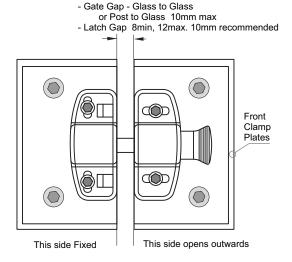
Inside of Pool



Shown Solid Aluminium Clamp Plates - SCC



Inside of Pool

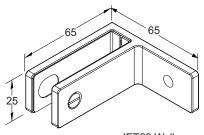


Shown Solid 316 SS Clamp Plates - Polished or Satin SS



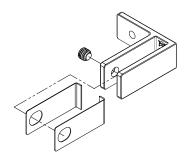
Juralco Glass to Glass Stiffener Brackets
For aligning 10mm,12mm Toughened Glass or 13.52mm SentryGlas® Panels

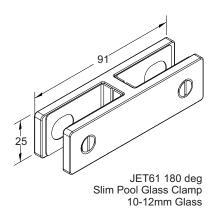
Suitable for all Juralco Frameless Glass Pool Fencing systems all ex Duplex 2205 Stainless Steel



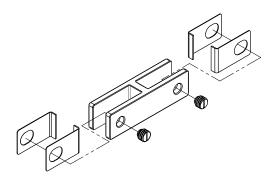
JET62 Wall Slim Pool Glass Clamp 10-12mm Glass

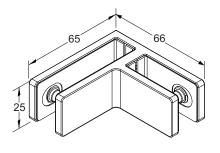
Finishes PSS, SSS, SCC





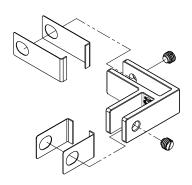
Finishes PSS, SSS, SCC





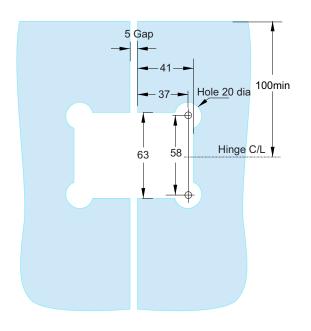
JET60 90 deg Slim Pool Glass Clamp 10-12mm Glass

Finishes PSS, SSS, SCC



Juralco Glass Pool Gate System - Glass Cutouts for Hinges

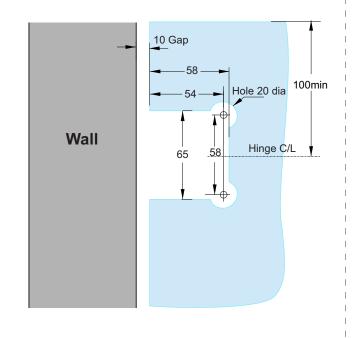
Edgetec Atlantic 530 Hinge - Glass to Glass



Hinge notes

- Glass gap 5mm (not adjustable)
- Adjust closing speed to ensure gate closes from a stationary point 150mm from the closed position.
- Gate must open outwards

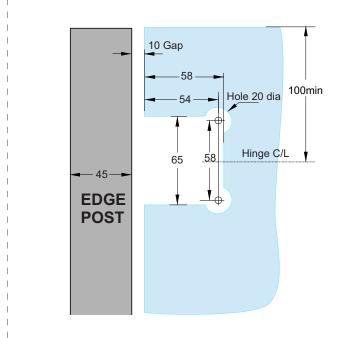
Edgetec Atlantic 530 Hinge - Glass to Wall



Hinge notes

- Glass gap 10mm (not adjustable)
- Adjust closing speed to ensure gate closes from a stationary point 150mm from the closed position.
- Gate must open outwards

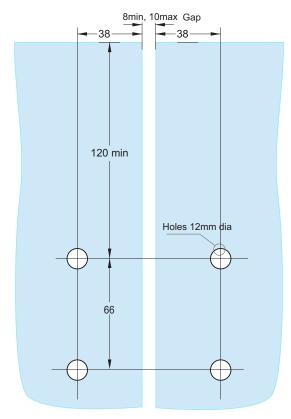
Edgetec Atlantic 530 Hinge - Glass to EDGE Post



Hinge notes10mm (not adjustable)

- Adjust closing speed to ensure gate closes from a stationary point 150mm from the closed position.
- Gate must open outwards

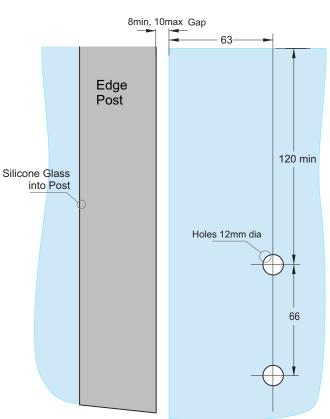
Malibu Latch - Glass to Glass



Latch notes

- Glass gap 10mm max. Holes 12mm dia
- Latch to be mounted on inside of gate and latch C/L must be at least 150mm from top.

Malibu Latch - Post (or Wall) to Glass



- Latch notes
- Glass gap 10mm max. Holes 12mm dia
- Latch to be mounted on inside of gate and latch C/L must be at least 150mm from top.

Specifications. For 2 x Hinges, 70kg max weight

Glass Thickness 10mm Hinge and Latch packers, 1.0mm each side

Gate Height max = 2400mm (Interior) Gate width max = 950mm Gate Weight max = 58 kg (= 2.28sqm)

Gate Height max = 1500mm (Exterior) Gate width max = 950mm Gate Weight max = 36 kg (= 1.42sqm)

Glass Thickness 12mm Hinge and Latch packers, 1.0mm each side

Gate Height max = 2400mm (Interior) Gate width max = 950mm Gate Weight max = 70 kg (= 2.28sqm)

Gate Height max = 1500mm (Exterior)

Gate width max = 950mm

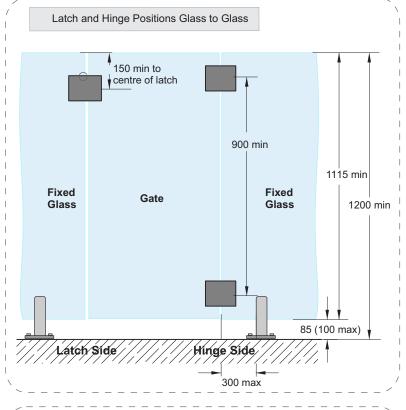
Gate Weight max = 44 kg (= 1.42sqm)

Glass Thickness 13.52mm SentryGlas® Hinge and Latch packers, 1.0mm each side

Gate Height max = 2100mm (Interior) Gate width max = 950mm

Gate Weight max = 70 kg (= 2.0sqm)

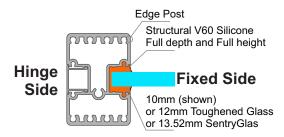
Gate Height max = 1500mm (Exterior) Gate width max = 950mm Gate Weight max = 49 kg (= 1.42sqm)



Hinge - Auto close. Adjustable Closing Speed and angle. Non Hold open Latch, Side pull magnetic. Gap = 8mm min -12mm max Gate to open outwards; Latch to be mounted on inside. Installation to conform to NZS8500:2006 Complies with NZBC Clause F9

Latch and Hinge Positions - Glass to Post 150 min to centre of latch 900 min 1100 min Fixed **Fixed** Gate Glass Glass 1200 min 100 max atch Side Hinge Side

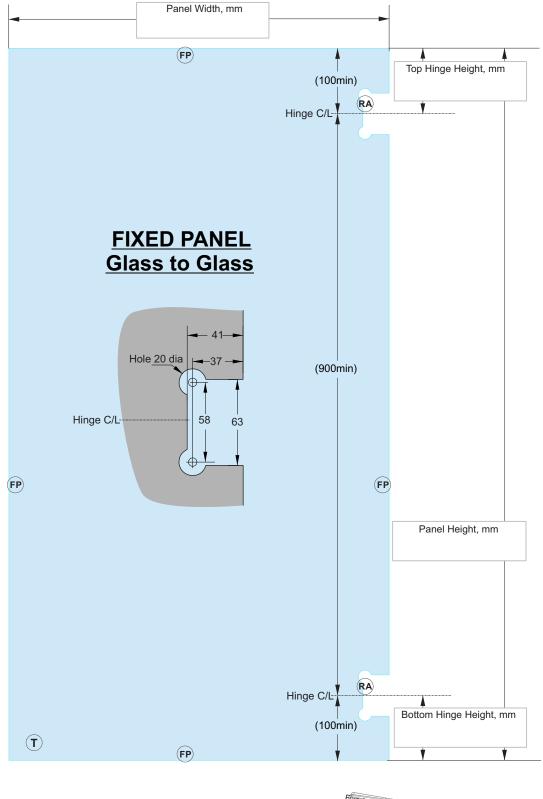
Silicone Fixed Glass into Post for Full height

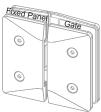


To prevent the Post pulling away from the Glass as the Gate opens it is essential to attach the Glass to the Post with Structural V60 Silicone to the Full depth on both sides and to the Full height of the Post. Allow a minimum of 48hrs to cure hard. Use small packers top and bottom to centralise the Glass in the Pocket.

Glass Order Sheet 1

Glass to Glass - Fixed Glass/Atlantic 530 Hinge Mount for Gate





Toughened Stamp (T)

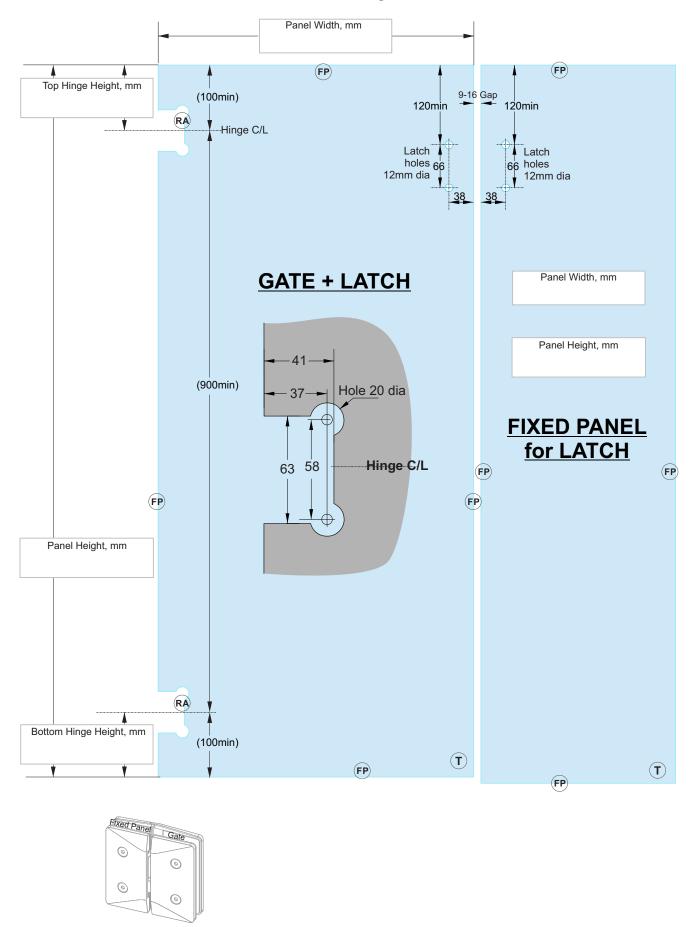
Flat Polish Edges (FP)

Rough Arris Edges RA

No Sharp Corners

Glass Order Sheet 2

Glass to Glass - GATE/Atlantic 530 Hinge Mount for Gate + Malibu latch



Toughened Stamp (T)

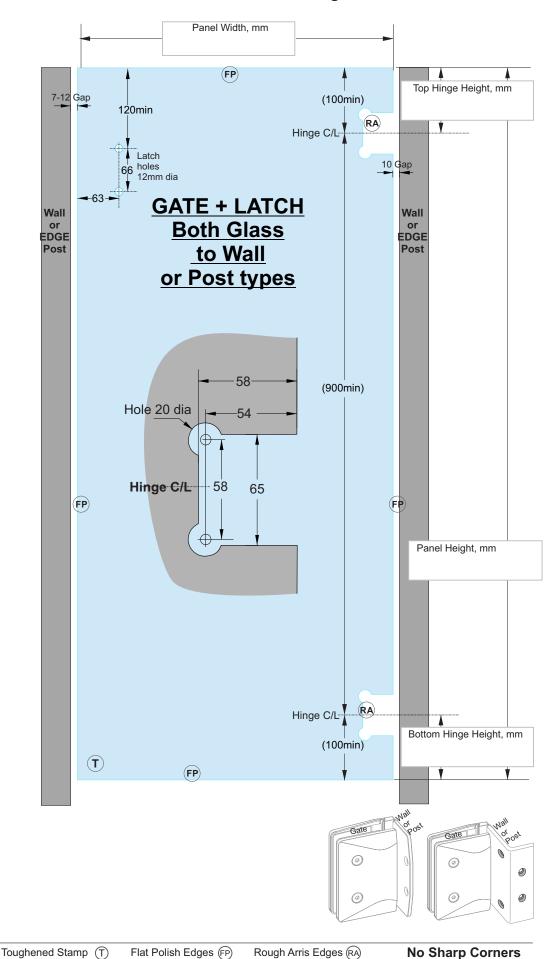
Rough Arris Edges (RA)

Flat Polish Edges (FP)

No Sharp Corners

Glass Order Sheet 3

Glass to Wall or Post - GATE/Atlantic 530 Hinge Mount for Gate + Malibu latch



Juralco Glass Pool Gate System - 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



Juralco Glass Pool Gate System - 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 I2 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.



All pages © Copyright Juralco Aluminium Building Products Ltd, 2023







Juralco Glass Pool Gate System - Stainless Steel Care and Maintenance

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	