Contents

1. Scope of Works / Description of Systems of Plant & Equipment

SCOPE OF WORKS

Description of the Works

The works comprise of the following,

Design, supply and install windows, curtainwall and doors.

Location of the Works

Horton Road, Poyle, West Berkshire SL3 0BB

Contractor

Ardent Glazing Limited: First Floor Office Suite, ProAktive House, Sidings Court, White Rose Way, Doncaster DN4 5U

Winvic Job Number & Job Title

P2305 Panattoni, Poyle

2. Suppliers and Manufacturers Directory

ARDENT GLAZING LTD

Directory of Suppliers

Company Name	Company Address	Items Supplied	Telephone	E-mail
Alutech Commercial UK	Knights House 2 Parade Sutton Coldfield B72 1PD	Curtain Wall / Windows	0121 8244788	ukcommercial@alutech-group.com
Dual Seal Glass Limited	403 Leeds Road Huddersfield HD2 1XU	Glass	01484 420030	sales@dualsealglass.co.uk
Senior Architectural Systems	Eland Road Denaby Main Doncaster DN12 4HA	Doors	01709 772600	info@sasmail.co.uk

Ardent Glazing Ltd
ProAktive House
Sidings Court
White Rose Way
Doncaster
DN4 5NU
T: 01302 492240
E: Info@ardentglazing,co.uk
www.ardentglazing.co.uk
Company No: 13800842
VAT Reg: 400 0660 65
UTR: 85576 11756

Citation ISO Certification
Integrated Management System
ISO 9001: 2015
ISO 14001: 2015
REGISTERED
Certificate No:390932022

SafeContractor APPROVED

3. Manufacturers Information

1. General

This manual includes recommendations and requirements for care and maintenance of windows and doors of systems ALT BF73, ALT C43, ALT C48, ALT SL160, ALT W62 and ALT W72 to be followed for correct operation and serviceability of the product during use.

This manual is an integral part of the product provided by its installer to the user and shall be stored in a safe place for access and acknowledgement up to the disposal of the product.

In case the user fails to comply with the recommendations and requirements included in this manual, the user shall be fully liable for all possible damage and consequences associated.

1.1. Information about the product

Structures of windows and doors made of aluminium profiles are intended for use in residential, public and industrial buildings and premises where a normal temperature and humidity regime is maintained.

Open leaves of doors and sashes of windows in the unlocked/tilt position have merely basic functions and do not meet requirements set for tightness of joints, sound insulation, thermal insulation, waterproofing and protection against break-ins.

During closing, resistance of the window gasket is normal. Other forms of resistance are beyond the norm.

To close the windows and doors, use only the furniture installed as follows this manual.

The windows and doors shall be installed vertically. Installation of windows and doors of systems ALT BF73, ALT C43, ALT C48, ALT SL160, ALT W62 and ALT W72 in the tilt position shall be excluded.

1.2. Actions following the installation of the construction

Remains of mortar and drilling chips damage the external surfaces of elements of windows and doors and interfere with the correct operation of the construction. To avoid such situations, upon installation of the construction, immediately remove the associated waste from the surface of the frame and all moving elements. For proper cleaning of the product, follow the instructions provided in Section 4 (Care and maintenance).

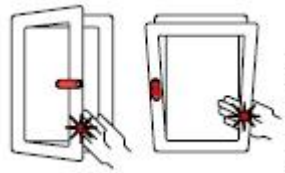
Remove the protective film from the external and internal side of the construction within 10 days following the installation. The adhesive agent of the protective film is sensitive to weather and sunlight, so, upon expiration of the above period, removal of the film can be problematic or even impossible.

Within 24 hours following the installation, keep the construction in the closed position – this period is necessary for proper polymerization of compounds of the joint. During finishing of front surfaces of window and door openings (overcoating, painting, etc.), the product shall be CLOSED. Take measures to protect the product from contacts with building materials. Protect the surfaces of the construction with masking tape; cover all joints, hinges, handles and locks with packing film.

Omission of the above actions following the installation makes the manufacturer's warranty void.

1.3. Warnings about risks to health/property

In the course of use of the windows and doors, dangerous situations entailing material damage and injuries may emerge. The information below is to prevent these situations.

a) 

Risk of crush

Crushing of body parts between the frame and the sashes creates risk of injuries.

b) 

Risk of fall of children and adults

An open sash in the turn position is an area of increased risk of fall. Do not leave open windows unattended. Use protective devices (such as locking window handles) to limit access for children or people with disabilities.

c) 

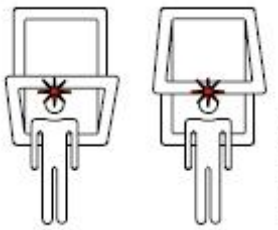
Risk of drop of objects

An open sash can be closed by draft and carry foreign objects. A dropped object can get damaged or injure people.

d) 

Risk of injury created by open sashes

Open sashes (sharp corners, leaves, handles, etc.) create risk of injury. Close the sashes during any indoor activity near the window. Besides, keep the sashes closed when there are children in the room.

e) 

Risk of injury created by sudden opening of sashes elements

By unlocking of the stopping system, tilting elements of the sashes can suddenly open/close.

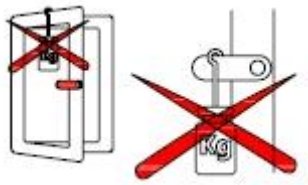
f) 

Risk of injury between the side edge of the leaf and the wall

The area between the wall and the edge of the window/door is an area of increased risk of injury. Close the leaf during any indoor activity near the window/door.

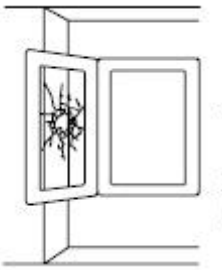
1.4. Warnings about risks of damage of the product

In the course of use of the windows and doors, dangerous situations entailing damage of the product and possible injuries may emerge. The information below is to prevent these situations:

a) 

Do not overload the sash or handle.

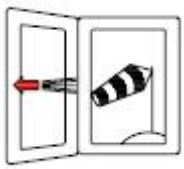
Additional load can cause deformation of elements of the frame or break of the handle.

b) 

Avoid big horizontal pressure or collision between the sash and the window jamb.

c) 

Do not put foreign objects between the window/door leaf and frame. Bars, wires and other foreign objects can damage or deform the profile or fixing elements or cause incorrect operation of the furniture.

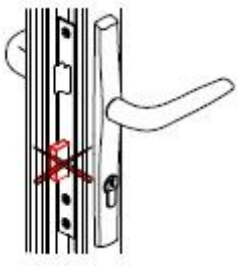
d) 

Do not leave the sashes open in case of strong wind.

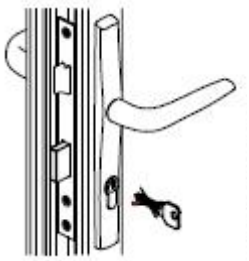
e) 

Turn handles in the intended direction only.

Use the handles of elements in the direction indicated in the manual for the actual model of the window/door and until stop only. Otherwise, handles and mechanisms can be damaged.

f) 

Do not close the window/door with the lock bolt extended. It can cause damage of the window/door frame and deformation of the lock elements.

g) 

Do not apply efforts when the operation of the lock is poor or hard. The lock mechanism or the key in the lock can be damaged.

h) 

Avoid operations with the lock cylinder installed. Damage or failure of the latch is possible.

i) 

For correct operation and avoidance of risks of injury, study manuals provided by the manufacturers of the mechanical/automatic drives enclosed in the product documentation.

5. Ventilation

The premises where the product is used shall meet the following microclimate requirements:
– relative humidity of air in the warm season: 30 % to 60 %;
– relative humidity of air in the cold season: 30 % to 45 %; and
– air temperature: 18 °C to 22 °C.

To avoid fogging of the glass and formation of condensate on the glass, beads and windowsills by increased humidity of the indoor air, ventilate the room at least 3 times a day for up to 15 minutes.

Extended ventilation is recommended in the warm season only.

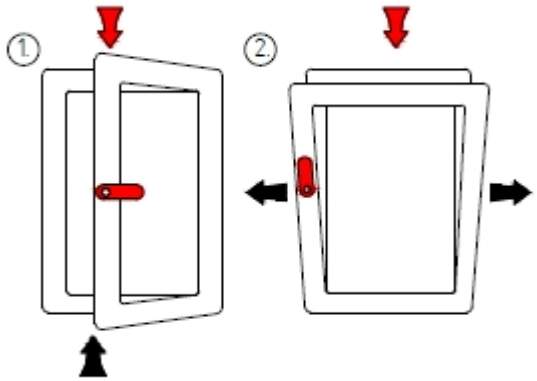
In the cold season (with temperature below 5 °C), the sashes shall be opened wide 3 times a day for 3 to 5 minutes.

The duration of ventilation shall be in view of the purpose of the premises.

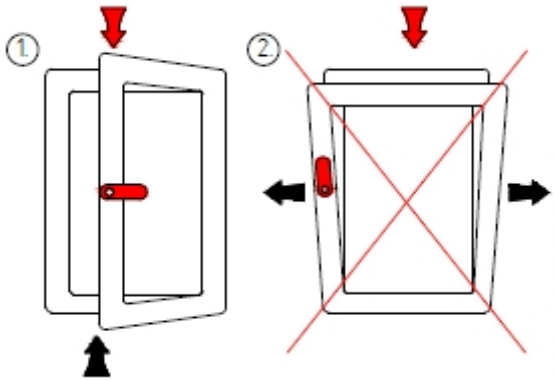
For more details, see the normative documents in effect in the region.

Manners of ventilation in view of the season:

Warm season



Cold season



Nickel Sulphide -Technical Comment

The creation process under which nickel sulphide (NiS) is formed is now widely known and understood; metallic nickel particles can be present in the raw ingredients used for glass manufacture.

These can combine with sulphur present in the atmosphere of the melting furnace to form microscopic inclusions in float glass.

NiS inclusions can occur in all float products, clear, tinted and/or coated, and are impossible to detect by any commercially viable process. All of the major float glass manufacturers, ensure that all equipment involved in processing contains no nickel bearing metals, such as stainless steel, and also make every effort to detect and eliminate metallic contamination before the raw ingredients enter the melting furnace through vigorous inspection procedures using appropriate detection equipment. None of the major float glass manufacturers can guarantee that supplied float product is free of NiS inclusions and the construction industry recognizes this fact.

In annealed (non-heat strengthened) product NiS inclusions are stable; however, during the heat strengthening process such inclusions can change their physical state. NiS particles reduce in size during the 'hot' phase of the heat strengthening process. The cooling phase (quench) 'freezes' the shrunken particle in an unstable, smaller state, without giving it the chance to revert to its larger natural state or original size.

Days, months or years later the inclusion will return to its natural state, exacerbated by temperatures associated with natural heating cycles caused by weather and building usage, the greater the temperature the in-situ glass is exposed to the quicker the reversion process. It is worth noting that not all

inclusions will lead to failure, but in very rare instances the NiS inclusion can be large enough to cause spontaneous breakage of heat strengthened glass.

In order to minimize the risk of post installation breakages, the glass may be heat soak tested after being toughened, which causes most glass with critical inclusions to break during the processing. There is a residual risk of nickel sulphide particles being in glass after the heat soak process, which is stated in the relevant product standards as 1 in 400 tons of glass on a statistical basis. However, because the incidence of nickel sulphide is random, there may be more or less than the expected number of breakages in any single project. Some projects having few or no breakages, but where nickel sulphide is included in the batch of glass, there may be more than would be expected.

However, it must be understood that with heat strengthening, this particular failure mechanism is extremely low when compared to heat soaked toughened glass, but a residual risk still remains.

There are many other types of inclusions that may result in spontaneous breakage including gas bubbles in the glass. These are not necessarily affected by the heat soak process, but may result in post installation breakage. Nickel Sulphide inclusions can only be confirmed by detailed inspection of a broken panel.

Since there is no commercially viable method for insulating glass unit manufacturers to detect or influence the number and type of microscopic inclusions within the float glass, combined with the fact that current heat soak regimes cannot eliminate the risk entirely. The replacement of glass in either Single or Insulating Glass Unit (IGU) format, and any associated costs, due to the Spontaneous fracture of toughened glass through NiS or any other inclusions, or any other failure mechanism, whether Heat-Soaked or not, is not covered under warranty.






OPERATION & MAINTENANCE MANUAL

Window, door and curtain wall systems

SENIOR ARCHITECTURAL SYSTEMS

INTRODUCTION

Senior Architectural Systems offers a complete range of integrated windows, doors and curtain wall systems.

Our team of experienced architectural advisers, together with our technical services department, are happy to advise on all issues relating to specification, technical data and calculations.

This document is intended to provide assistance with a range of operational and maintenance areas. For further information or support please contact us on 01709 772 600 or email info@sasmail.co.uk

CONTENTS

CASEMENT WINDOW

OPERATION

Despite having a variety of configurations, hinge and locking methods; the casement window is operated in the same manner. To operate the casement window, insert the key and depress the button (depending on the handle type) and rotate the handle through 90° to disengage the locking mechanism and open by pushing outwards. To lock the window, reverse the process.

CONFIGURATIONS

- Top-hung: the vent opens from the bottom of the window.
- Side-hung: the vent opens from a vertical side of the window.
- Bottom-hung: the vent opens from the head of the window.

HINGE OPTIONS

The casement window consists of being installed with either friction stays or butt hinges. Both are effective in supporting the weight of the window in the open and close cycle.

FRICTION STAYS

- **Standard Friction Stays** allow a quick and easy one handed operation which doesn't incorporate any sort of restrictor.
- **Restrictor Stays** open to a certain extent that is determined by positioning and fixing a slide bar to a pre-set position, which can permanently restrict the window to an opening angle.
- **Easy Clean Stays** have the same initial opening of the restrictor hinge and will open to a 90° angle. To move the window to the cleaning position, push down and slide the purple slide along. Fully closing this will reset the stay to its normal position.

RESTRICTORS ARMS

On outward opening windows supported by either standard butt hinges or friction stays, a restrictor can be added. This is independently fixed and is used to restrict the window and provide ventilation and child safety.

BUTT HINGES

Butt hinges aren't adjustable and are visible externally at the juncture of the frame and vent.

LOCKING OPTIONS

On all configurations, the three main methods of locking on the casement window consist of:

- Espagnolette Locking
- Cockspur Locking
- Shoot-bolt Locking

Espagnolette Locking
Espagnolette locking systems have a handle fitted in the centre of the vertical or horizontal stile, which operates gearing located within the window section. When the handle closes, the mushroom heads move into recessed keeps and engage, locking the window securely. When closed, the handle will sit equal to the rail. The vent can be secured by with a key supplied by the installer.

To operate, unlock using key and rotate handle through 90° to disengage the locking component and open the window. To lock, simply reverse the process.

Cockspur Locking
This is a surface mounted handle and engages against a nylon wedge on the visible upstand of the outer frame.

To operate, depress button and rotate through 90° to open the vent. To lock, simply reverse the process.

Shoot-bolt Locking
Shoot-bolt locking is has the concept of mushroom heads from espagnolette locking but also includes shoot-bolts situated at the corners of the opening vent of the windows that locate into fitted keeps on the frame of the window. This locking method is used for enhanced security purposes.

To operate, unlock using key or depress button and rotate about 90° and open the window. To lock, simply reverse the process.

FOLDING OPENERS

In most cases, folding openers are installed on high level windows. This system will have a 'folding cam' system, often linked by rods. There may also be a ring fitted, commonly known as a 'Tandem eye'. This is fitted so it may accept a hook which will usually be fitted on a pole.

To operate, the top arm operating eye is to be pulled upwards to 'unsnap' the folding opener. Rotate the eye away from the window and push down to achieve maximum opening position. To close vent, the top arm operating eye is to be pulled upwards then the tandem eye to be rotated in towards the window. 'Snap' down the top arm to achieve the locked closed position.

MAINTENANCE

WINDOW ESPAGNOLETTES

To ensure that your window espagnolettes function correctly, it is important that the maintenance procedure (shown in the adjacent diagrams) is carried out **every 12 months**.

HANDLES

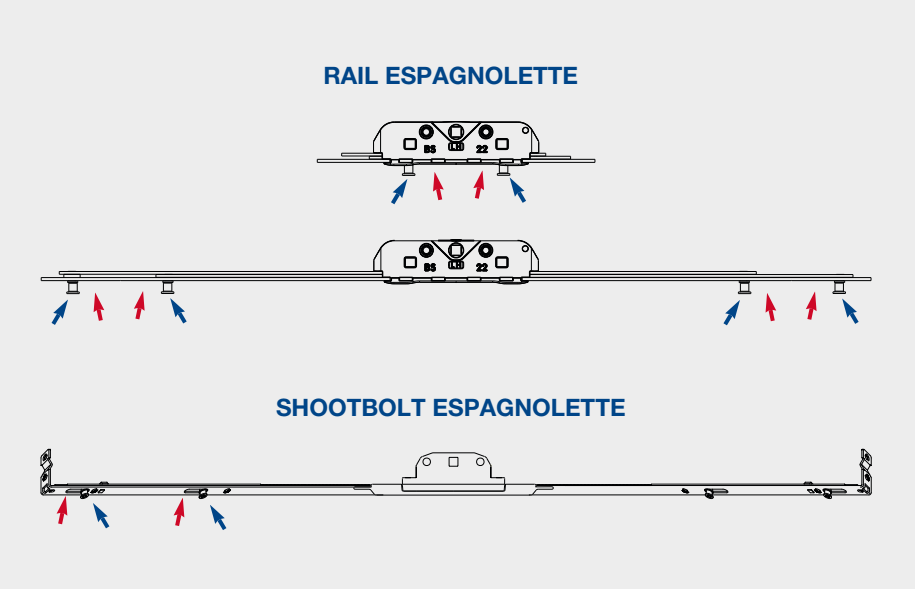
We recommend a maintenance check **every 6 months**:

- Ensure the handle is free from and building materials and debris which could affect the mechanism. The handle may be cleaned using warm soapy water or a mild detergent using a soft sponge. Ensure that the handle is thoroughly rinsed and dry after cleaning.
- All fittings must be inspected to ensure that they are firmly fixed. Where necessary all fixing screws have to be tightened, with all damaged/worn parts exchanged for original parts by a qualified technician.
- Lubricate the pivot points of handles using general light engineering oil with corrosion inhibitors such as 3 in 1.
- Over tightening of the fixing screws could apply unnecessary strain to the locking mechanism's gearbox therefore impairing the lock.

LOCK MECHANISMS

We recommend a maintenance check **every 12 months**:

- Ensure the lock is free from grime, dirt and any debris which could affect the mechanism. Lubricate the component using general light engineering oil such as 3 in 1.
- All fittings must be inspected to ensure that they are firmly fixed. Where necessary all fixing screws have to be tightened, with all damaged/worn parts exchanged for original parts by a qualified technician.
- Mechanism can be cleaned using detergent liquids or aerosol based cleaners.
- Ammonia based and abrasive cleaning fluids must not be used on any hardware, only use cleaners that have no effect on the corrosion protection properties of the fittings.
- Exposed components when the window is opened such as locking cams and hook bolts should be wiped with a soft cloth to rid of any residue lubricant and grime.

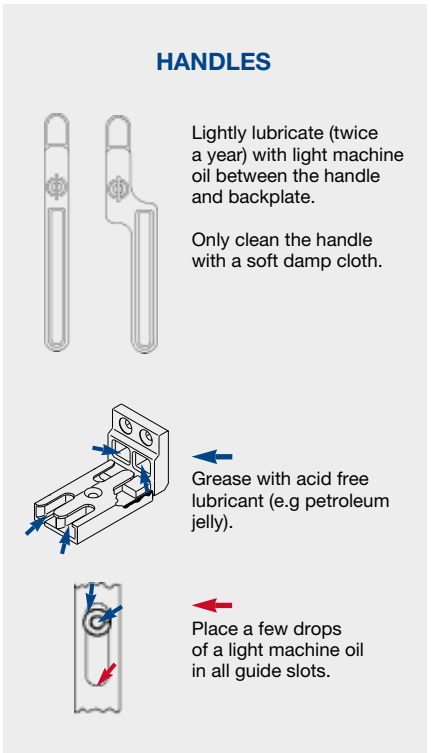


FRICTION STAYS

We recommend a maintenance check **every 6 months**:

- Friction stays, restriction arms and safety catches should be lubricated with light engineering oil such as 3 in 1.
- Remove any dirt and debris from the, pivot, sliding shoe and track, re-apply lubrication to the pivot points only.
- The friction stays are to be cleaned using a damp cloth, with a mild solution of warm soapy water.
- All fittings must be regularly inspected to ensure that they are firmly fixed. Where necessary all fixing screws have to be tightened, with all damaged/worn parts exchanged for original parts by a qualified technician.

A qualified technician must execute all major adjustments or replacements. Any attempts to complete repairs without the correct resources or product awareness could result in personal injury or damage to the mechanism.



TILT & TURN WINDOW

OPERATION

These versatile, inward opening windows are capable of two methods of operation: tilt mode to allow ventilation and a turn mode to allow cleaning on the external face and emergency exit. Locking is achieved by a series of cams (espagnolettes) which are positioned on a sliding mechanism around the periphery of the window. When the handle is in the 'closed' position (downwards) and the window is fully shut, the cams are engaged in the keeps installed around the outer frame.

The handle is rotated to one of three modes – 'closed', 'tilt' or 'turn'. Ensure that the window is completely shut before changing the handle position.

To operate the Tilt & Turn window, turn key to unlock if a locking handle has been fitted.

To select 'tilt', from the 'closed' position, rotate the handle through 90° until the handle is horizontal and pull inwards. The top of the window will tilt inwards to allow ventilation.

To select "Turn" from the "Tilt" position, close the window and rotate the upwards and pull inwards. To lock the window, push the window shut and rotate the handle downwards until it reaches the 'closed' position. This is 180° downwards. Secure using the key and ensure that it is removed when not in use. Do not attempt to open the window when the handle is in between any of the three positions.

MAINTENANCE

All aspects of the gearing should be visually checked **every 6 months** and adjusted if necessary:

- Fixings of link arm, handle, hinges, corner transmission and wedges.
- Ensure that the link arm friction is sufficient to keep the window in tilt position without affecting the normal operation of the window. If necessary the friction can be adjusted by the adjustment screw.
- Check the working of the mishandling device. The handle can only be turned a few degrees when the window is in open position, certainly do not force the handle.

HANDLES

We recommend a maintenance check **every 6 months**:

- Ensure the handle is free from and building materials and debris which could affect the mechanism. The handle may be cleaned using warm soapy water or a mild detergent using a soft sponge. Ensure that the handle is thoroughly rinsed and dry after cleaning.
- All fittings must be inspected to ensure that they are firmly fixed. Where necessary all fixing screws have to be tightened, with all damaged/worn parts exchanged for original parts by a qualified technician.
- Lubricate the pivot points of handles using general light engineering oil with corrosion inhibitors such as 3 in 1.
- Over tightening of the fixing screws could apply unnecessary strain to the locking mechanism's gearbox therefore impairing the lock.

GEARING

We recommend a maintenance check **every 12 months**:

- Lubricate the locking points with a light oil or grease.
- Corner transmissions, handles and mishandling device are greased during manufacture therefore no additional lubrication is necessary.
- When necessary any dust and dirt must be removed from the perimeter locking components as this could affect the smooth operation of the system.
- The system must not be cleaned with water and or other cleaning products as this could affect the lubricants and the corrosion resistance of the gear.
- All fittings must be regularly inspected to ensure that they are firmly fixed. Where necessary all fixing screws have to be tightened, with all damaged/worn parts exchanged for original parts by a qualified technician.

A qualified technician must execute all major adjustments or replacements. Any attempts to complete repairs without the correct resources or product awareness could result in personal injury or damage to the mechanism.

PIVOT WINDOW

OPERATION

The pivot window allows for maximum ventilation and allows the external surface of the window to reverse to allow sufficient cleaning. Pivots shall be suitable for horizontally or vertically hinging reversible windows. The pivot is available in restricted (with various degrees of restriction to a maximum of 100mm) or in unrestricted. The restrictor has a fully automatic ventilation stop at an angle of 10°, 15° or 22° and a spring loaded reverse stop at 180°.

To operate, depress the handle and rotate through 90° and push. If the pivot is restricted, this will open the window marginally to a restricted position. To free this restriction, push the restrictor down. This will allow reversal of the window and will automatically engage the reverse position at 180° for cleaning purposes. To close the window, simply reverse the process.

MAINTENANCE

HANDLES

We recommend a maintenance check **every 6 months**:

- Ensure the handle is free from and building materials and debris which could affect the mechanism. The handle may be cleaned using warm soapy water or a mild detergent using a soft sponge. Ensure that the handle is thoroughly rinsed and dry after cleaning.
- All fittings must be inspected to ensure that they are firmly fixed. Where necessary all fixing screws have to be tightened, with all damaged/worn parts exchanged for original parts by a qualified technician.
- Lubricate the pivot points of handles using general light engineering oil with corrosion inhibitors such as 3 in 1.
- Over tightening of the fixing screws could apply unnecessary strain to the locking mechanism's gearbox therefore impairing the lock.

LOCK MECHANISMS

We recommend a maintenance check **every 12 months:**

- Ensure the lock is free from grime, dirt and any debris which could affect the mechanism. Lubricate the component using general light engineering oil such as 3 in 1.
- All fittings must be inspected to ensure that they are firmly fixed. Where necessary all fixing screws have to be tightened, with all damaged/worn parts exchanged for original parts by a qualified technician.
- Mechanism can be cleaned using detergent liquids or aerosol based cleaners.
- Ammonia based and abrasive cleaning fluids must not be used on any hardware, only use cleaners that have no effect on the corrosion protection properties of the fittings.

GEARING

We recommend a maintenance check **every 6 months:**

- Gearing located on the vent should be cleaned using a soft, damp cloth or sponge with soapy water and thereafter wiped dry.
- All fittings must be regularly inspected to ensure that they are firmly fixed. Where necessary all fixing screws have to be tightened, with all damaged/worn parts exchanged for original parts by a qualified technician.
- Clean pivot using a damp cloth. **DO NOT LUBRICATE PIVOT.**

A qualified technician must execute all major adjustments or replacements. Any attempts to complete repairs without the correct resources or product awareness could result in personal injury or damage to the mechanism.

OVERSWING (REVERSIBLE) WINDOW

OPERATION

Overswing windows are fully reversible windows which are top hung and protrude outwards. When in operation, the opening vent is situated outside the building structure. There are multiple restricted positions that are used in the operation of the Overswing window.

To operate the Overswing window, turn the key and depress the button to unlock handle. Rotate the handle 90° upwards to disengage the locking component and open by pushing outwards. The window will open marginally to a restricted position. To enable the window to open further, depress the release lever located in the frame. To fully reverse the window, push the bottom of the window out as far as possible. Continue the reversal by gripping the top of the vent and pulling downwards until the vent restricts into the fully reversed position. To close the window, depress restrictor lever and push vent in the opposite direction until the restrictor re-engages. Again, depress restrictor lever and pull the window shut ensuring that the handle is turned back into the lock position.

DO NOT ATTEMPT TO DANGEROUSLY OVER REACH.

MAINTENANCE

HANDLES

We recommend a maintenance check **every 6 months**:

- Ensure the handle is free from and building materials and debris which could affect the mechanism. The handle may be cleaned using warm soapy water or a mild detergent using a soft sponge. Ensure that the handle is thoroughly rinsed and dry after cleaning.
- All fittings must be inspected to ensure that they are firmly fixed. Where necessary all fixing screws have to be tightened, with all damaged/worn parts exchanged for original parts by a qualified technician.
- Lubricate the pivot points of handles using general light engineering oil with corrosion inhibitors such as 3 in 1.
- Over tightening of the fixing screws could apply unnecessary strain to the locking mechanism's gearbox therefore impairing the lock.

LOCK MECHANISMS

We recommend a maintenance check **every 12 months:**

- Ensure the lock is free from grime, dirt and any debris which could affect the mechanism. Lubricate the component using general light engineering oil such as 3 in 1.
- All fittings must be inspected to ensure that they are firmly fixed. Where necessary all fixing screws have to be tightened, with all damaged/worn parts exchanged for original parts by a qualified technician.
- Mechanism can be cleaned using detergent liquids or aerosol based cleaners.
- Ammonia based and abrasive cleaning fluids must not be used on any hardware, only use cleaners that have no effect on the corrosion protection properties of the fittings.

GEARING

We recommend an Overswing maintenance check **every 6 months**:

- Lubricate the locking points with a light oil or grease.
- Gearing located on the vent should be cleaned using a soft, damp cloth or sponge with soapy water and thereafter wiped dry.
- Moving parts are to be lubricated with general light engineering oil.
- All fittings must be regularly inspected to ensure that they are firmly fixed. Where necessary all fixing screws have to be tightened, with all damaged/worn parts exchanged for original parts by a qualified technician.

A qualified technician must execute all major adjustments or replacements. Any attempts to complete repairs without the correct resources or product awareness could result in personal injury or damage to the mechanism.

REBATED DOOR SYSTEMS

SPW300 / SPW600 / Hybrid Series 1/ PURe® FOLD / Ali FOLD

OPERATION

SINGLE DOOR

Residential Doors are available in a variety of styles and operations. The doors are rebated meaning they are single action, opening either inwards or outwards.

To unlock the door, insert key in cylinder, turn to unlock and depress handle to disengage the lock mechanism and open the door outwards/inwards depending on the configuration.

To lock the door, ensure the door is fully closed to the stage where the latch engages. Lift the handle upwards until you feel hesitation, then resume action to overcome hesitation and engage the locking device and then release the handle.

DOUBLE DOOR

To operate double doors, ensure that the master door is always opened first to avoid spraining the locking mechanism. Your installer should have pointed out which is the master door and which is the slave door.

Dependant on the locking mechanism installed on the door, there are two methods of locking the slave door:

- Full slave locking
- Finger levers

Full slave locking has a shoot bolt which is handled operated, as the master door is. Once the master door is open, you can operate the slave door by depressing handle and open inwards/outwards depending on the configuration.

When there isn't a handle fitted to the slave door, this is finger lever operated. To operate, lift the finger lever located at the head and bottom of the slave door or integral to the keep and push or pull the door depending on the door configuration. To lock the slave door, reverse the process.

MAINTENANCE

HANDLES

We recommend a maintenance check **every 6 months:**

- Ensure the handle is free from and building materials and debris which could affect the mechanism. The handle may be cleaned using warm soapy water or a mild detergent using a soft sponge. Ensure that the handle is thoroughly rinsed and dry after cleaning.
- All fittings must be inspected to ensure that they are firmly fixed. Where necessary all fixing screws have to be tightened, with all damaged/worn parts exchanged for original parts by a qualified technician.
- Lubricate the pivot points of handles using general light engineering oil with corrosion inhibitors such as 3 in 1.
- Over tightening of the fixing screws could apply unnecessary strain to the locking mechanism's gearbox therefore impairing the lock.

LOCK MECHANISMS

We recommend a maintenance check **every 12 months:**

- Ensure the lock is free from grime, dirt and any debris which could affect the mechanism. Lubricate the component using general light engineering oil such as 3 in 1.
- All fittings must be inspected to ensure that they are firmly fixed. Where necessary all fixing screws have to be tightened, with all damaged/worn parts exchanged for original parts by a qualified technician.
- Mechanism can be cleaned using detergent liquids or aerosol based cleaners.
- Ammonia based and abrasive cleaning fluids must not be used on any hardware, only use cleaners that have no effect on the corrosion protection properties of the fittings.
- Keep locking keeps lubricated using petroleum jelly and ensure that excess oil is wiped clean with a soft cloth or a sponge.

We recommend a Residential Door maintenance check **every 6 months:**

- The frame and vent should be cleaned using a soft, damp cloth or sponge with soapy water and thereafter wiped dry.
- All fittings must be regularly inspected to ensure that they are firmly fixed. Where necessary all fixing screws have to be tightened, with all damaged/worn parts exchanged for original parts by a qualified technician.

A qualified technician must execute all major adjustments or replacements. Any attempts to complete repairs without the correct resources or product awareness could result in personal injury or damage to the mechanism.

NON-REBATED DOOR SYSTEMS

SD / SPW501

OPERATION

To operate a standard commercial door, unlock using key and push or pull depending on the door configuration. A majority of commercial doors will have a face mounted or concealed door closers. When the door is pushed or pulled into position, the closer will automatically revert to its neutral closed position, unless a hold-open closer is used. In this case, if this door is opened past 90°, the door will hold and remain open. The speed of this will depend on how the door closer has been set. The speed can also be adjusted to suit, please refer to door closer in Maintenance.

To lock the door, allow the door to self-close back into its neutral position. Insert key into cylinder and turn to engage the locking mechanism. The key should be removed from the door when not in use. If your door is fitted with automatic gearing, please refer to the manufacturers guide to operation.

PANIC EXIT DEVICES

Emergency exit devices can be fitted on the internal section of the door. It utilises a push bar or paddle handle which operates a latch. It is important to realise the internal bar/handles are designed to be pushed in an emergency to release the door and although the handles can be used to pull the door closed to reset the hardware (or close automatically), they are not intended to be used in high traffic areas where the handles are used to pull door closed on regular intervals.

DOOR CLOSERS

Providing the closing and final latching speeds of the door closer have been correctly set on installation, it should not be necessary to readjust at a later date. However, after the door closer has completed a short settling period, minor adjustments may be required. It should be noted that inexperienced tampering with the valve screws would cause irreparable damage. The following notes will enable the operator to make simple adjustments – if in any doubt please seek advice from the manufacturer.

It is important to realise that the two valve screws will adjust the closing and latching speeds of the door closer, they will not adjust the closing or opening forces in any way. It is very likely the door closer will require only very minor adjustment, perhaps one half turn of the valve screw. After any adjustment the door closing speed should be checked twice by opening the door fully and allowing it to close, before proceeding.

Care must be taken not to unscrew the valve head beyond the level of the closer body when increasing the closing speed. Turning the valve past this limit will allow oil to escape and the closer will need to be replaced. On the other hand f the valve is turned clockwise, decreasing the closing speed, adjustment must cease when resistance is felt as will be damaged along with the oil seal if excessive force is used.

MAINTENANCE

PROFILE

We recommend a maintenance check **every 12 months:**

- Ensure frames are free of grime and dirt by wiping with warm soapy water.
- Check drainage holes and remove any blockages which may have accumulated over time. Check for obstructions and ensure fixings are secure.

HANDLES

We recommend a maintenance check **every 6 months:**

- Ensure the handle is free from and building materials and debris which could affect the mechanism. The handle may be cleaned using warm soapy water or a mild detergent using a soft sponge. Ensure that the handle is thoroughly rinsed and dry after cleaning.
- All fittings must be inspected to ensure that they are firmly fixed. Where necessary all fixing screws have to be tightened, with all damaged/worn parts exchanged for original parts by a qualified technician.
- Lubricate the pivot points of handles using general light engineering oil with corrosion inhibitors such as 3 in 1.
- Over tightening of the fixing screws could apply unnecessary strain to the locking mechanism's gearbox therefore impairing the lock.

LOCK MECHANISMS

We recommend a maintenance check **every 12 months:**

- Ensure the lock is free from grime, dirt and any debris which could affect the mechanism. Lubricate the component using general light engineering oil such as 3 in 1.
- All fittings must be inspected to ensure that they are firmly fixed. Where necessary all fixing screws have to be tightened, with all damaged/worn parts exchanged for original parts by a qualified technician.
- Mechanism can be cleaned using detergent liquids or aerosol based cleaners.
- Ammonia based and abrasive cleaning fluids must not be used on any hardware, only use cleaners that have no effect on the corrosion protection properties of the fittings.

PANIC EXIT DEVICE

We recommend a **6 monthly** maintenance of the following:

- Check that the emergency exit hardware operates and the door can be opened in the correct manner. Ensure the door operates monthly and carry out routine maintenance as per door manufacturers instructions.
- With the door open depress the bar or paddle handle and release, the bolts should remain retracted whilst the door is in this open position.
- The top bolt should clear the underside of the transom by no less than 3mm. In most cases this will be level with the top of the door. With the door still open activate the trip mechanism, positioned at the top of the door on the closing face, the bolts should throw immediately.

- It is important that the catch operates correctly, especially in the case of fire doors and alarmed door which will otherwise remain ajar or unlocked. If adjustment is necessary remove the screws securing the nylon guide block in place. Take care not to allow it to drop down inside the stile.
- Remove the nylon block and lubricate the steel catch until the spring and catch operate freely.
- If the bolt position requires height adjustment, turn the bolt head until the correct projection is achieved. Ensure the bolt retracts completely when depressing the panic bar or handle.
- Refit the guide block by reverse procedure.
- Adjustment to the bottom bolt can be carried out in the same way.
- Check the housing to both door stiles for the push bar type or the single housing for the push paddle type. The housings can be removed by slackening the three 15/32" x 1/4" set screws with a 3mm Allen key. The active housing can be removed from the door by sliding out the connecting pin from the actuator pin. This will present the two shoulder bolts which should be secured firmly. If an outside rim cylinder has also been fitted two screws should also be visible. Check these screws are secure taking care not to over tighten. The operating mechanism can be lubricated with spray grease through the actuator pin slot and the housing reinstated by the reverse procedure.

If faults can not be rectified using the information above, contact the supplier for further advice.

CONCEALED OVERHEAD TRANSOM CLOSERS

We recommend a **6 monthly** maintenance of the following:

Detach the door (you may need a professional to carry out such a task), remove the cover plate and expose the closer. Tighten all fixing screws and bolts. Inspect the door bearing and wipe away any debris, check the bearing rotates freely and the bolt is secured firmly in the plate or threshold. Lubricate with grease if necessary. Tighten all fixings, including the three screws to the bottom rail of the door securing the pivot shoe. Replace the cover plate and remount the door. Tighten all the top arm fixings, particularly the clamp block screws and centre screw. Replace the name plate and clean down the door as per finisher's recommendations.

CONCEALED OVERHEAD TRANSOM CLOSERS SPEED ADJUSTMENT

Providing the closing and final latching speeds of the door closer have been correctly set on installation it should not be necessary to readjust at a later date. However, after the door closer has completed a short settling in period, minor adjustments may be required. It should be noted that inexperienced tampering with the valve screws would cause irreparable damage. The following notes will enable to operator to make simple adjustments – if in and doubt please seek advice from the manufacturer.

It is important to realise that the two valve screws will adjust the closing and latching speeds of the door closer, they will not adjust the closing or opening forces in any way. It is very likely the door closer will require only a very minor adjustment, perhaps only one half turn of the valve screw. After any adjustment the door closing speed should be checked twice, by opening the door fully and allowing it to close, before proceeding.

Care must be taken not to unscrew the valve head beyond the level of the closer body when increasing the closing speed. Turning the valve past this limit will allow the oil to escape and the closer will need to be replaced. On the other hand if the valve is past this limit will allow oil to escape and the closer will need to be replaced. On the other hand if the valve is turned clockwise, decreasing the closing speed, adjustment must cease when resistance is felt as will be damaged along the oil seal if excessive force is used.

A qualified technician must execute all major adjustments or replacements. Any attempts to complete repairs without the correct resources or product awareness could result in personal injury or damage to the mechanism.

INLINE / LIFT & SLIDE DOOR

OPERATION

For Inline/Lift & Slide Door operation guidance please refer to the relevant End User Guidance manual, which can be obtained from our website:

- PURe® SLIDE Inline Sliding End User Guidance
- PURe® SLIDE Lift & Slide End User Guidance
- Hybrid Lift & Slide End User Guidance

MAINTENANCE

BOTTOM PROFILE/TRACK

We recommend maintenance on the bottom profile **every month**:

- Overtime, dirt and general debris may gather in the bottom profile of your sliding door. Clean and if necessary, clear the drainage slots of any materials which may have collected over time.
- Keep the tracks free from obstruction and excessive dirt or water. Visible surfaces should be cleaned using a damp cloth and mild detergent, then wiped dry.

HANDLES

We recommend a maintenance check **every 6 months**:

- Ensure the handle is free from and building materials and debris which could affect the mechanism. The handle may be cleaned using warm soapy water or a mild detergent using a soft sponge. Ensure that the handle is thoroughly rinsed and dry after cleaning.
- All fittings must be inspected to ensure that they are firmly fixed. Where necessary all fixing screws have to be tightened, with all damaged/worn parts exchanged for original parts by a qualified technician.
- Lubricate the pivot points of handles using general light engineering oil with corrosion inhibitors such as 3 in 1.
- Over tightening of the fixing screws could apply unnecessary strain to the locking mechanism's gearbox therefore impairing the lock.

LOCK MECHANISMS

We recommend a maintenance check **every 12 months**:

- Ensure the lock is free from grime, dirt and any debris which could affect the mechanism. Lubricate the component using general light engineering oil such as 3 in 1.
- All fittings must be inspected to ensure that they are firmly fixed. Where necessary all fixing screws have to be tightened, with all damaged/worn parts exchanged for original parts by a qualified technician.
- Mechanism can be cleaned using detergent liquids or aerosol based cleaners.
- Ammonia based and abrasive cleaning fluids must not be used on any hardware, only use cleaners that have no effect on the corrosion protection properties of the fittings.

GEARING

We recommend a maintenance check **every 6 months**:

- All fittings must be inspected to ensure that they are firmly fixed. Where necessary all fixing screws have to be tightened, with all damaged/worn parts exchanged for original parts by a qualified technician.
- Locks, rollers, guides etc. should be checked and lubricated with general light engineering oil.

A qualified technician must execute all major adjustments or replacements. Any attempts to complete repairs without the correct resources or product awareness could result in personal injury or damage to the mechanism.

FOLDING SLIDING DOOR

OPERATION

For Folding Sliding Door operation guidance, please refer to the End User Guidance manual, which can be obtained from our website:

- PURe® FOLD Outward Opening End User Guidance
- PURe® FOLD Inward Opening End User Guidance
- Ali FOLD Outward Opening End User Guidance
- Ali FOLD Inward Opening End User Guidance
- Hybrid Folding Sliding Door End User Guidance

MAINTENANCE

BOTTOM PROFILE/TRACK

We recommend maintenance on the bottom profile **every month**:

- Overtime, dirt and general debris may gather in the bottom profile of your folding sliding door. Clean and if necessary, clear the drainage slots of any materials which may have collected over time.
- Keep the tracks free from obstruction and excessive dirt or water. Visible surfaces should be cleaned using a damp cloth and mild detergent, then wiped dry.
- Check on the tracks to ensure they are free of debris and in a suitable condition. If grease is applied, this will just retain dirt and dust therefore minimizing the lifespan of the wheels, so we recommend avoiding this.

HANDLES

We recommend a maintenance check every **6 months**:

- Ensure the handle is free from and building materials and debris which could affect the mechanism. The handle may be cleaned using warm soapy water or a mild detergent using a soft sponge. Ensure that the handle is thoroughly rinsed and dry after cleaning.
- All fittings must be inspected to ensure that they are firmly fixed. Where necessary all fixing screws have to be tightened, with all damaged/worn parts exchanged for original parts by a qualified technician.
- Lubricate the pivot points of handles using general light engineering oil with corrosion inhibitors such as 3 in 1.
- Over tightening of the fixing screws could apply unnecessary strain to the locking mechanism's gearbox therefore impairing the lock.

LOCK MECHANISMS

We recommend a maintenance check **every 12 months**:

- Ensure the lock is free from grime, dirt and any debris which could affect the mechanism. Lubricate the component using general light engineering oil such as 3 in 1.
- All fittings must be inspected to ensure that they are firmly fixed. Where necessary all fixing screws have to be tightened, with all damaged/worn parts exchanged for original parts by a qualified technician.
- Mechanism can be cleaned using detergent liquids or aerosol based cleaners.
- Ammonia based and abrasive cleaning fluids must not be used on any hardware, only use cleaners that have no effect on the corrosion protection properties of the fittings.

ROLLERS & PIVOTS

We recommend a maintenance check **every 6 months**:

- Wash with soap or mild detergent and warm water followed by rinsing with clean cold water and wipe dry.
- Apply a light application of corrosion preventative to all surfaces.

GUIDES

We recommend a maintenance check **every 6 months**:

- Guide roller and guide channel must be kept clear and free of obstructions.
- Wash with soap or mild detergent and warm water followed by rinsing with clean cold water and wipe dry.
- Apply a light application of corrosion preventative to all surfaces.

HINGES

We recommend a maintenance check **every 3 months**:

- Visible surfaces should be cleaned using a damp cloth and mild detergent, then wiped dry
- Apply a light application of corrosion preventative to all surfaces, using a dry cloth to remove excess.

A qualified technician must execute all major adjustments or replacements. Any attempts to complete repairs without the correct resources or product awareness could result in personal injury or damage to the mechanism.

HEAD OFFICE

Senior Architectural Systems Ltd, Eland Road, Denaby Main, Doncaster, South Yorkshire, DN12 4HA
Tel: 01709 772 600   Fax: 01709 772 601   E-mail: info@sasmail.co.uk

BRANCHES

Scotland - Unit 4 Dunlop Court, Deans Industrial Estate SW, Livingston, West Lothian, EH54 8SL
Tel: 01506 407 640   Fax: 01506 407 641

South - Unit 4 Leeway Industrial Estate, Newport, South Wales, NP19 4SL
Tel: 01633 277 880   Fax: 01633 277 121

Senior Glass Systems Ltd, Lakeside House, Hopper Hill Road, Eastfield, Scarborough, YO11 3YS
Tel: 01723 580 010   Fax: 01723 580 018   E-mail: sgenquiries@sasmail.co.uk

Visit our showroom at the Building Centre, Ground level, L4, Store Street, London, WC1E 7BT

www.seniorarchitectural.co.uk

1996/026

ALUMINIUM | HYBRID | GLASS

SENIOR ARCHITECTURAL SYSTEMS

Senior Architectural Systems is a major UK supplier of fenestration solutions, specialising in providing aluminium, timber and glass glazing systems to the highest standards.

4. As Built Drawings

3.1.4 AB PDF Windows & Curtain Walling

3.1.4 AB DWG Windows & Curtain Walling

3.1 AS-BUILT DRAWINGS

Please note that all drawings below are hyperlinked to the drawings listed in the below register. Please click on the drawing title to go directly to the drawing you wish to view.

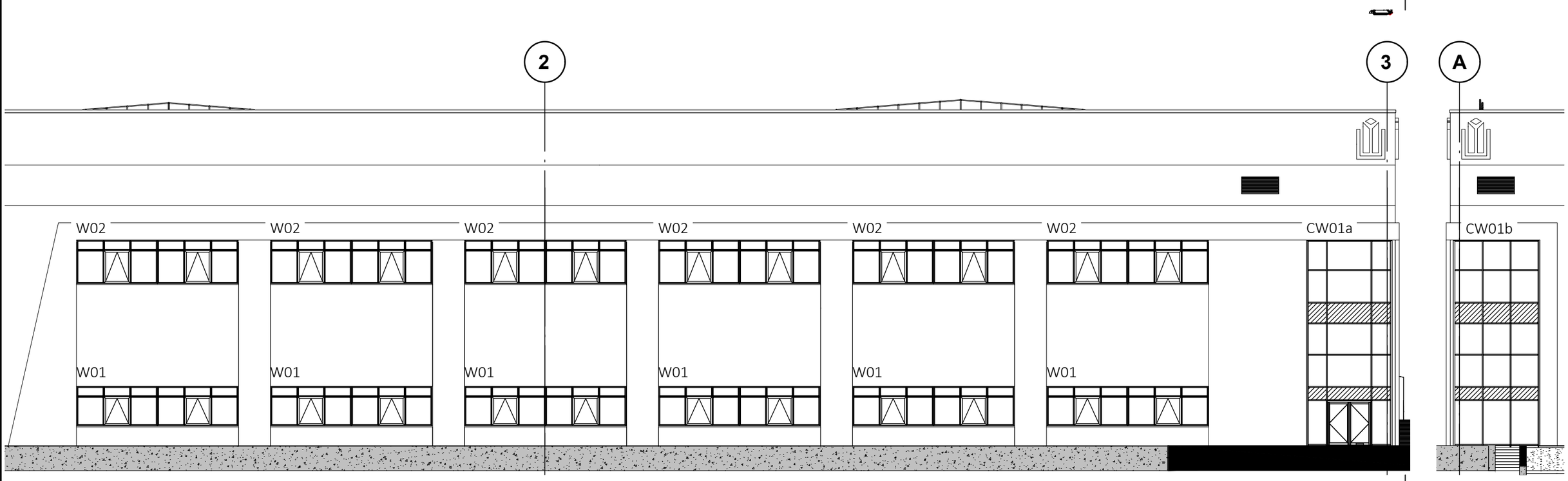
Drawing Register: Ardent Glazing

WINDOWS & CURTAIN WALLING

DRAWING NUMBER	DRAWING TITLE	REV
P23025-AGL-XX-XX-DR-X-0100	Main Elevations	AB
P23025-AGL-XX-XX-DR-X-0110	CW01 Schedule	AB
P23025-AGL-XX-XX-DR-X-0115	W01 Schedule	AB
P23025-AGL-XX-XX-DR-X-0400	CW01 Head Detail	AB
P23025-AGL-XX-XX-DR-X-0401	CW01 Cill Detail	AB
P23025-AGL-XX-XX-DR-X-0402	CW01 1st Intermediate Detail	AB
P23025-AGL-XX-XX-DR-X-0403	CW01 2nd Intermediate Detail	AB
P23025-AGL-XX-XX-DR-X-0404	CW01 Jamb Detail	AB
P23025-AGL-XX-XX-DR-X-0405	CW01 Corner Detail	AB
P23025-AGL-XX-XX-DR-X-0406	CW01 Door Horizontal Detail	AB
P23025-AGL-XX-XX-DR-X-0407	CW01 Door Vertical Detail	AB
P23025-AGL-XX-XX-DR-X-0410	Window Head Detail	AB
P23025-AGL-XX-XX-DR-X-0411	Window Cill Detail	AB
P23025-AGL-XX-XX-DR-X-0412	Window Jamb Detail	AB
P23025-AGL-XX-XX-DR-X-0413	Undercroft Window Head Detail	AB
P23025-AGL-XX-XX-DR-X-0414	Undercroft Window Cill Detail	AB
P23025-AGL-XX-XX-DR-X-0415	Undercroft Window Jamb Detail	AB
P23025-AGL-XX-XX-DR-X-0408	CW01 Right Hand Jamb	AB

ALL DIMENSIONS IN MILLIMETRES.
DO NOT SCALE FROM DETAIL. IF IN DOUBT ASK
TOLERANCES TO APPLICABLE BS
WINDOWS AND DOORS INDICATED IN ACCORDANCE WITH BS.EN.12519

Specification/Notes:



REV:	DESCRIPTION:	BY:	DATE:
AB	Drawing Updated to As Built Issue	MOH	12.07.24
C01	Drawing Updated to Construction Issue	MOH	05.04.24

STATUS: AS BUILT

ARDENT GLAZING LTD

CLIENT: WINVIC CONSTRUCTION LTD

ARCHITECT: UMC ARCHITECTS

SITE: PANATTONI POYLE

TITLE: MAIN ELEVATIONS

SCALE AT A3:	DATE:	DRAWN:	PROJECT NO:
NTS	23.02.23	MOH	C2401

DRAWING NO: P23025-AGL-XX-XX-DR-X-0100

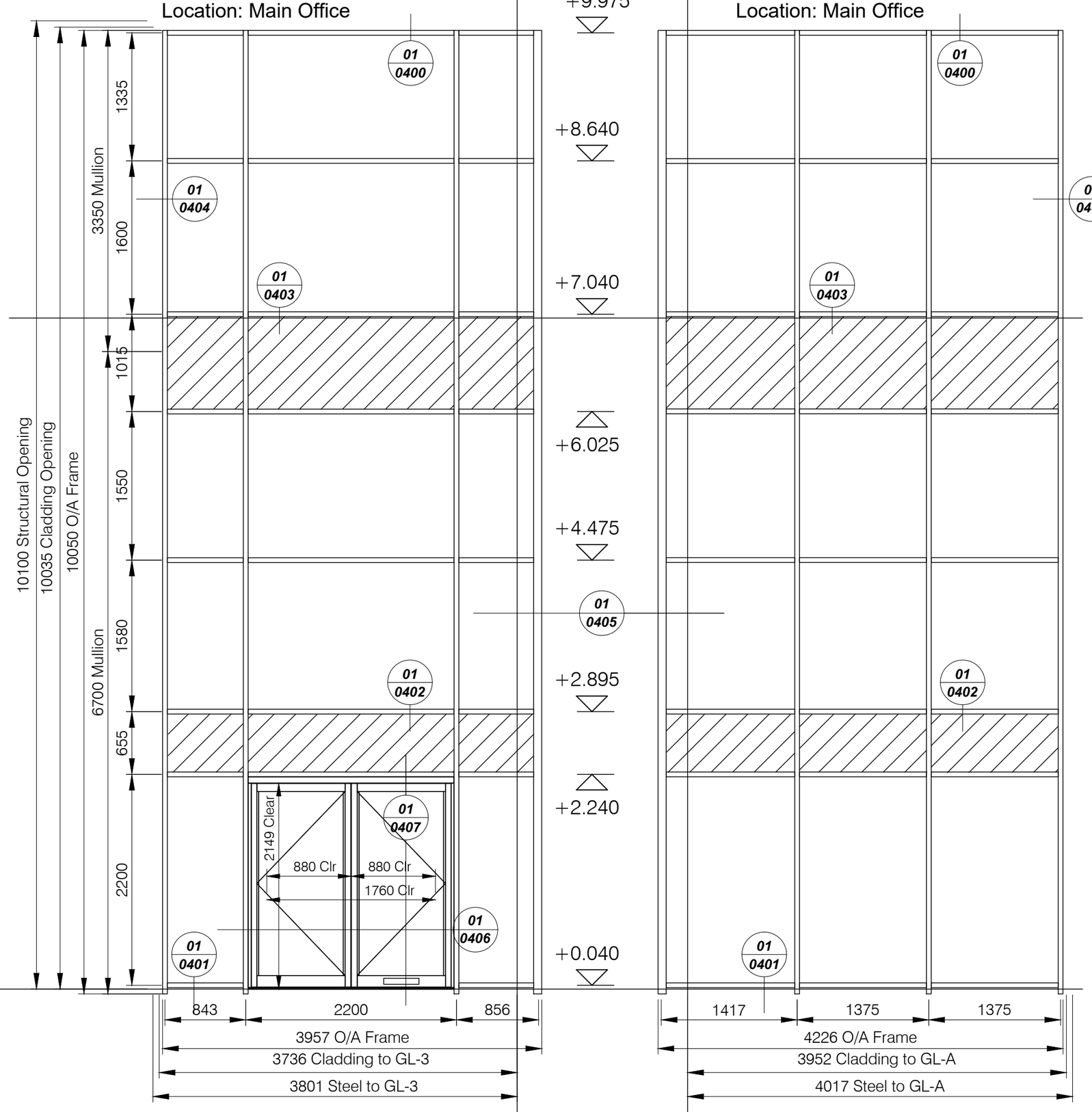
Revision AB

CWall Type CW01b - 1no. Required
Alutech F50 CWalling System
M: 140mm // T: 145mmm
Location: Main Office

3

A

CWall Type CW01b - 1no. Required
Alutech F50 CWalling System
M: 140mm // T: 145mmm
Location: Main Office



PLEASE REVIEW DRAWING 0416 FOR JAMB FIXING DETAIL. TOP HATS TO VERTICAL PFC TO BE INSTALLED PRIOR TO MULLION

ALL DIMENSIONS IN MILLIMETRES.
DO NOT SCALE FROM DETAIL. IF IN DOUBT ASK
TOLERANCES TO APPLICABLE BS
WINDOWS AND DOORS INDICATED IN ACCORDANCE WITH BS.EN.12519

Specification/Notes:

SYSTEM
ALUTECH F50 CWALLING SYSTEM

COLOUR
EXT: 7016 MATT 60 MICRONS (30% GLOSS)

GLASS
VISION GLAZING 28MM DGU
6MM TGH GREY TINT HST OUTER
16MM BLACK WARM EDGE SPACER
WITH ARGON FILLED CAVITY
6MM TGH CLEAR HST Low E INNER
LT = 38% / G = 0.35 / Ug = 1.1W/m²K

NON-VISION GLASS
NON-VISION GLAZING 28MM DGU
6MM GREY TINT TGH HST OUTER
16MM BLACK WARM EDGE SPACER
WITH ARGON FILLED CAVITY
6MM CLEAR TGH HST INNER WITH 7016
BACKING AND 100MM CLASS A1
INSULATION

IRONMONGERY
CW01 DOOR IRONMONGERY
MANUAL SWING DOORS
RH MASTER LEAF // LH SLAVE LEAF
CONCEALED OVERHEAD CLOSER
OPEN OUT, NO HOLD
600MM CRANK D S/S POLE HANDLES
(INT + EXT)
DEAD LOCK WITH EURO CYLINDER
(KEYED EXT + THUMB TURN INT)
S.A.A RAMPED THRESHOLD

REV:	DESCRIPTION:	BY:	DATE:
AB	Drawing Updated to As Built Issue	MOH	12.07.24
C01	Screen Height & Width Amended and Drawing Updated to Construction Issue	MOH	05.04.24

STATUS: AS BUILT

ARDENT GLAZING LTD

CLIENT: WINVIC CONSTRUCTION LTD

ARCHITECT: UMC ARCHITECTS

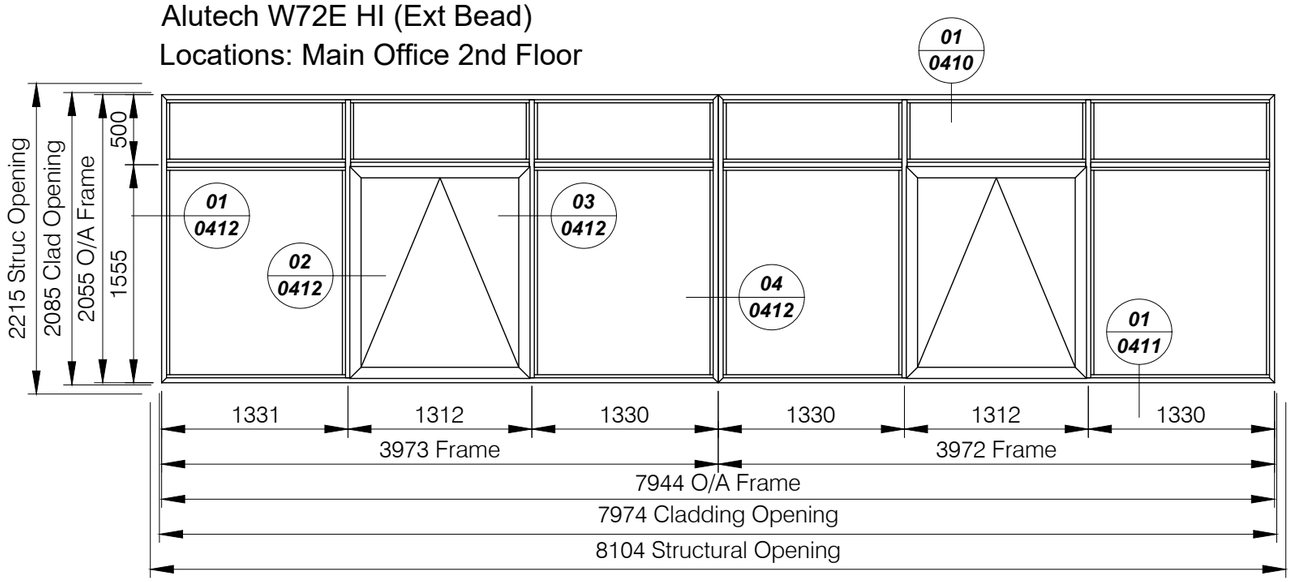
SITE: PANATTONI POYLE

TITLE: CW01 SCHEDULE

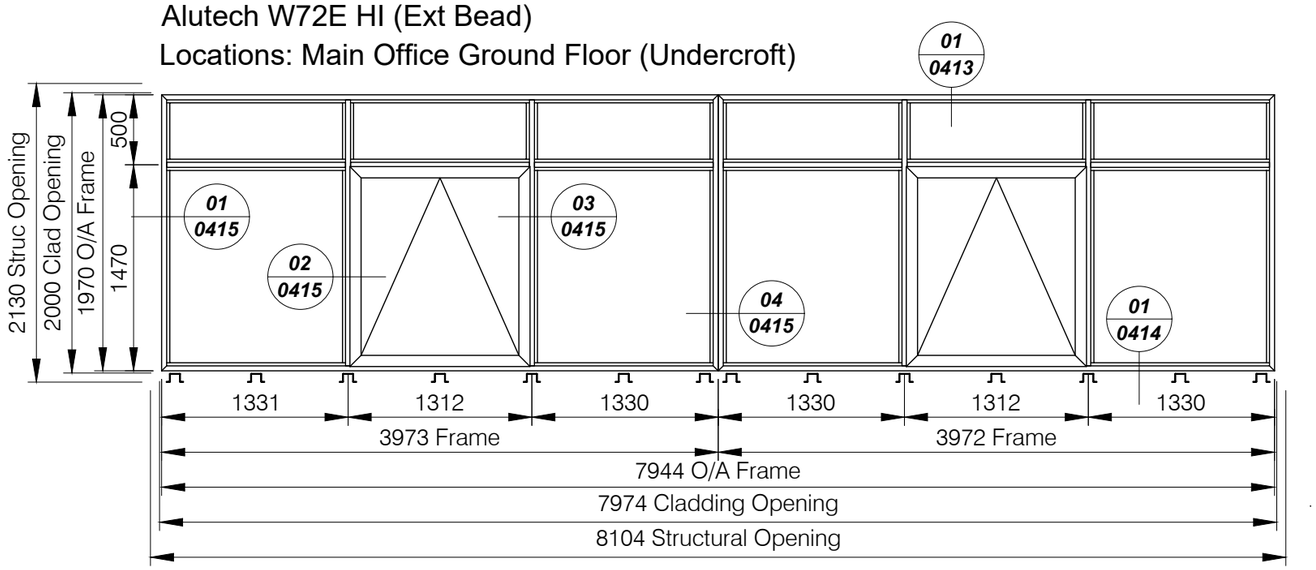
SCALE AT A3:	DATE:	DRAWN:	PROJECT NO:
NTS	23.02.23	MOH	C2401

DRAWING NO: P23025-AGL-XX-XX-DR-X-0110
Revision: AB

Window Type W02 - 6no. Required
Alutech W72E HI (Ext Bead)
Locations: Main Office 2nd Floor



Window Type W01 - 6no. Required
Alutech W72E HI (Ext Bead)
Locations: Main Office Ground Floor (Undercroft)



PLEASE NOTE;
UNDERCROFT WINDOWS TO HAVE INTERNAL FLASHINGS COATED RAL 7016 TO MATCH FRAMES.

ALL DIMENSIONS IN MILLIMETRES.
DO NOT SCALE FROM DETAIL. IF IN DOUBT ASK
TOLERANCES TO APPLICABLE BS
WINDOWS AND DOORS INDICATED IN ACCORDANCE WITH BS.EN.12519

Specification/Notes:

SYSTEM
ALUTECH W72E WINDOW SYSTEM

COLOUR
EXT: 7016 MATT 60 MICRONS (30% GLOSS)

GLASS
VISION GLAZING 28MM DGU
6MM TGH GREY TINT HST OUTER
16MM BLACK WARM EDGE SPACER
WITH ARGON FILLED CAVITY
6MM TGH CLEAR HST Low E INNER
LT = 38% / G = 0.35 / Ug = 1.1W/m²K

IRONMONGERY
SATIN CHROME LOCKING HANDLE
FRICTION HINGES
100MM RESTRICTORS

REV:	DESCRIPTION:	BY:	DATE:
AB	Drawing Updated to As Built Issue	MOH	12.07.24
C01	Window Heights Amended and Drawing Updated to Construction Issue	MOH	05.04.24

STATUS: AS BUILT

ARDENT GLAZING LTD

CLIENT: WINVIC CONSTRUCTION LTD

ARCHITECT: UMC ARCHITECTS

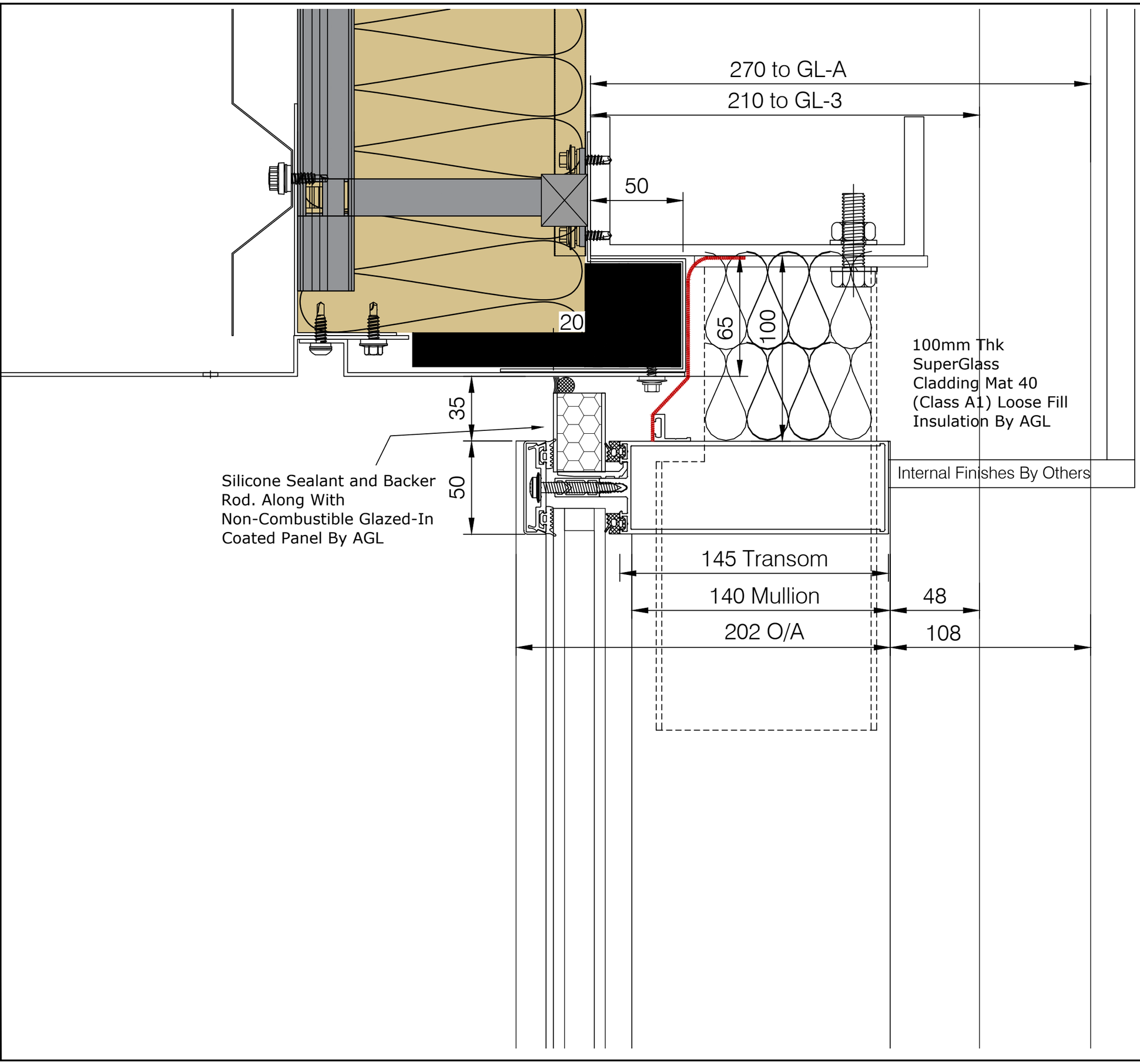
SITE: PANATTONI POYLE

TITLE: W01 SCHEDULE

SCALE AT A3:	DATE:	DRAWN:	PROJECT NO:
NTS	23.02.23	MOH	C2401

DRAWING NO: P23025-AGL-XX-XX-DR-X-0115

Revision: AB



ALL DIMENSIONS IN MILLIMETRES.
DO NOT SCALE FROM DETAIL. IF IN DOUBT ASK
TOLERANCES TO APPLICABLE BS
WINDOWS AND DOORS INDICATED IN ACCORDANCE WITH BS.EN.12519

Specification/Notes:

REV:	DESCRIPTION:	BY:	DATE:
AB	Drawing Updated to As Built Issue	MOH	12.07.24
C01	Drawing Updated to Construction Issue	MOH	05.04.24

STATUS: AS BUILT

ARDENT GLAZING LTD

CLIENT: WINVIC CONSTRUCTION LTD

ARCHITECT: UMC ARCHITECTS

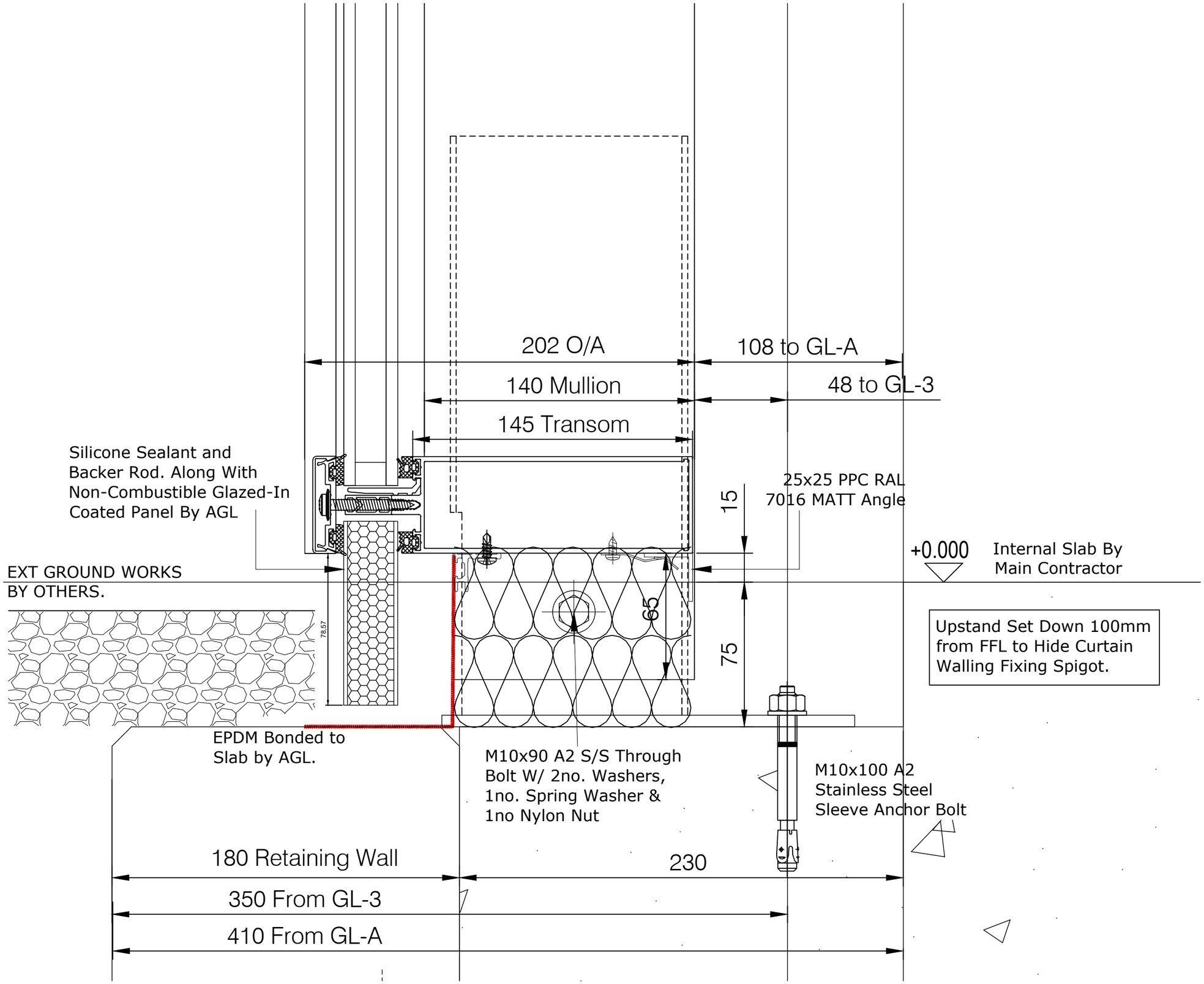
SITE: PANATTONI POYLE

TITLE: CW01 HEAD DETAIL

SCALE AT A3:	DATE:	DRAWN:	PROJECT NO:
NTS	23.02.23	MOH	C2401

DRAWING NO: P23025-AGL-XX-XX-DR-X-0400

Revision: AB



ALL DIMENSIONS IN MILLIMETRES.
DO NOT SCALE FROM DETAIL. IF IN DOUBT ASK
TOLERANCES TO APPLICABLE BS
WINDOWS AND DOORS INDICATED IN ACCORDANCE WITH BS.EN.12519

Specification/Notes:

REV:	DESCRIPTION:	BY:	DATE:
AB	Drawing Updated to As Built Issue	MOH	12.07.24
C01	Drawing Updated to Construction Issue	MOH	05.04.24

STATUS: AS BUILT

ARDENT GLAZING LTD

CLIENT: WINVIC CONSTRUCTION LTD

ARCHITECT: UMC ARCHITECTS

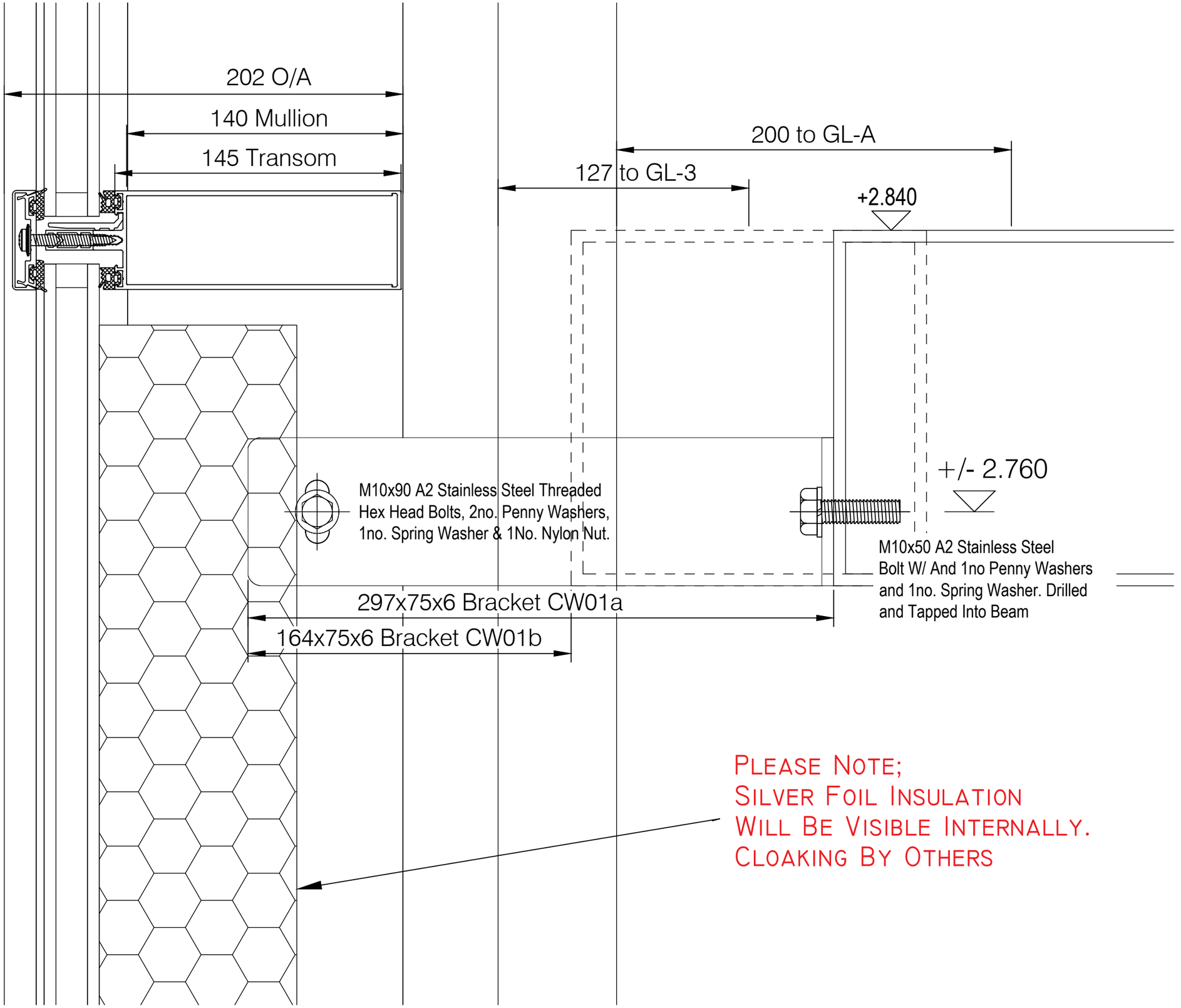
SITE: PANATTONI POYLE

TITLE: CW01 CILL DETAIL

SCALE AT A3:	DATE:	DRAWN:	PROJECT NO:
NTS	23.02.23	MOH	C2401

DRAWING NO: P23025-AGL-XX-XX-DR-X-0401

Revision: AB



ALL DIMENSIONS IN MILLIMETRES.
DO NOT SCALE FROM DETAIL. IF IN DOUBT ASK
TOLERANCES TO APPLICABLE BS
WINDOWS AND DOORS INDICATED IN ACCORDANCE WITH BS.EN.12519

Specification/Notes:

REV:	DESCRIPTION:	BY:	DATE:
AB	Drawing Updated to As Built Issue	MOH	12.07.24
C01	Steel Positions Amended and Drawing Updated to Construction Issue	MOH	05.04.24

STATUS: AS BUILT

ARDENT GLAZING LTD

CLIENT: WINVIC CONSTRUCTION LTD

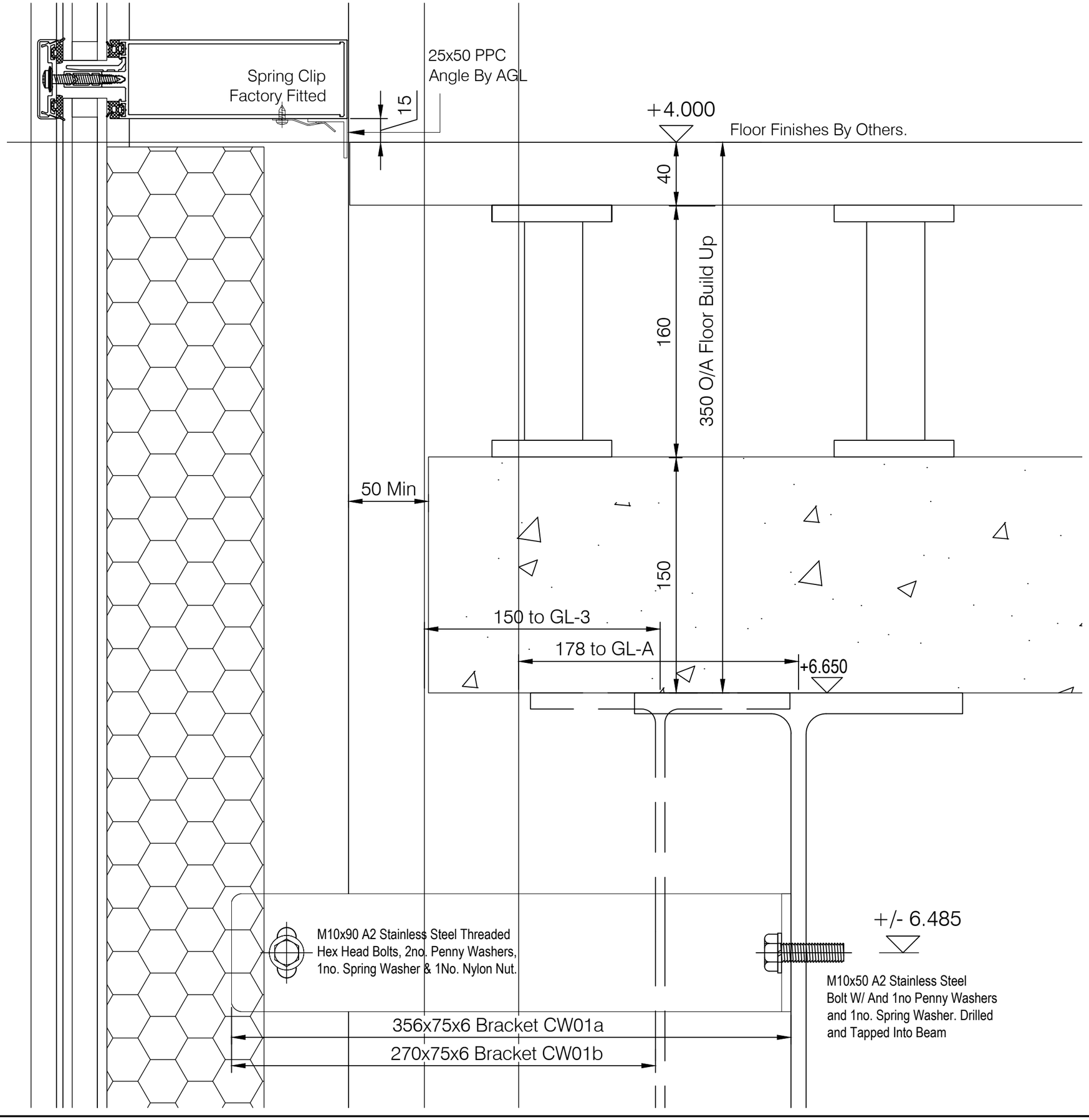
ARCHITECT: UMC ARCHITECTS

SITE: PANATTONI POYLE

TITLE: CW01 1ST INTERMEDIATE DETAIL

SCALE AT A3:	DATE:	DRAWN:	PROJECT NO:
NTS	23.02.23	MOH	C2401

DRAWING NO: P23025-AGL-XX-XX-DR-X-0402 | Revision: AB



ALL DIMENSIONS IN MILLIMETRES.
DO NOT SCALE FROM DETAIL. IF IN DOUBT ASK
TOLERANCES TO APPLICABLE BS
WINDOWS AND DOORS INDICATED IN ACCORDANCE WITH BS.EN.12519

Specification/Notes:

REV:	DESCRIPTION:	BY:	DATE:
AB	Drawing Updated to As Built Issue	MOH	12.07.24
C01	Drawing Updated to Construction Issue	MOH	05.04.24

STATUS: AS BUILT

ARDENT GLAZING LTD

CLIENT: WINVIC CONSTRUCTION LTD

ARCHITECT: UMC ARCHITECTS

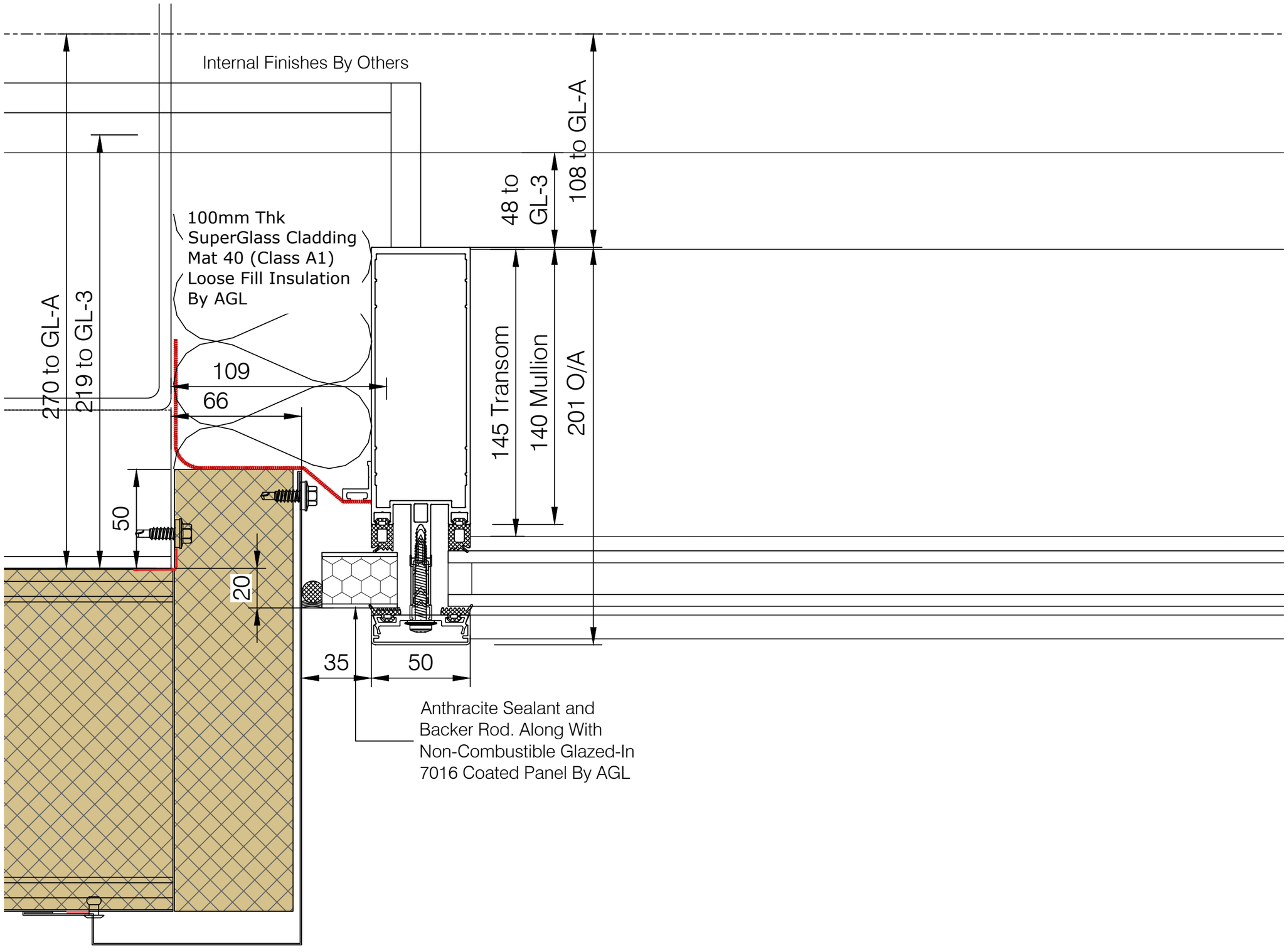
SITE: PANATTONI POYLE

TITLE: CW01 2ND INTERMEDIATE DETAIL

SCALE AT A3:	DATE:	DRAWN:	PROJECT NO:
NTS	23.02.23	MOH	C2401

DRAWING NO: P23025-AGL-XX-XX-DR-X-0403

Revision: AB



ALL DIMENSIONS IN MILLIMETRES.
DO NOT SCALE FROM DETAIL. IF IN DOUBT ASK
TOLERANCES TO APPLICABLE BS
WINDOWS AND DOORS INDICATED IN ACCORDANCE WITH BS.EN.12519

Specification/Notes:

REV:	DESCRIPTION:	BY:	DATE:
AB	Drawing Updated to As Built Issue	MOH	12.07.24
C01	Drawing Updated to Construction Issue	MOH	05.04.24

STATUS: AS BUILT

ARDENT GLAZING LTD

CLIENT: WINVIC CONSTRUCTION LTD

ARCHITECT: UMC ARCHITECTS

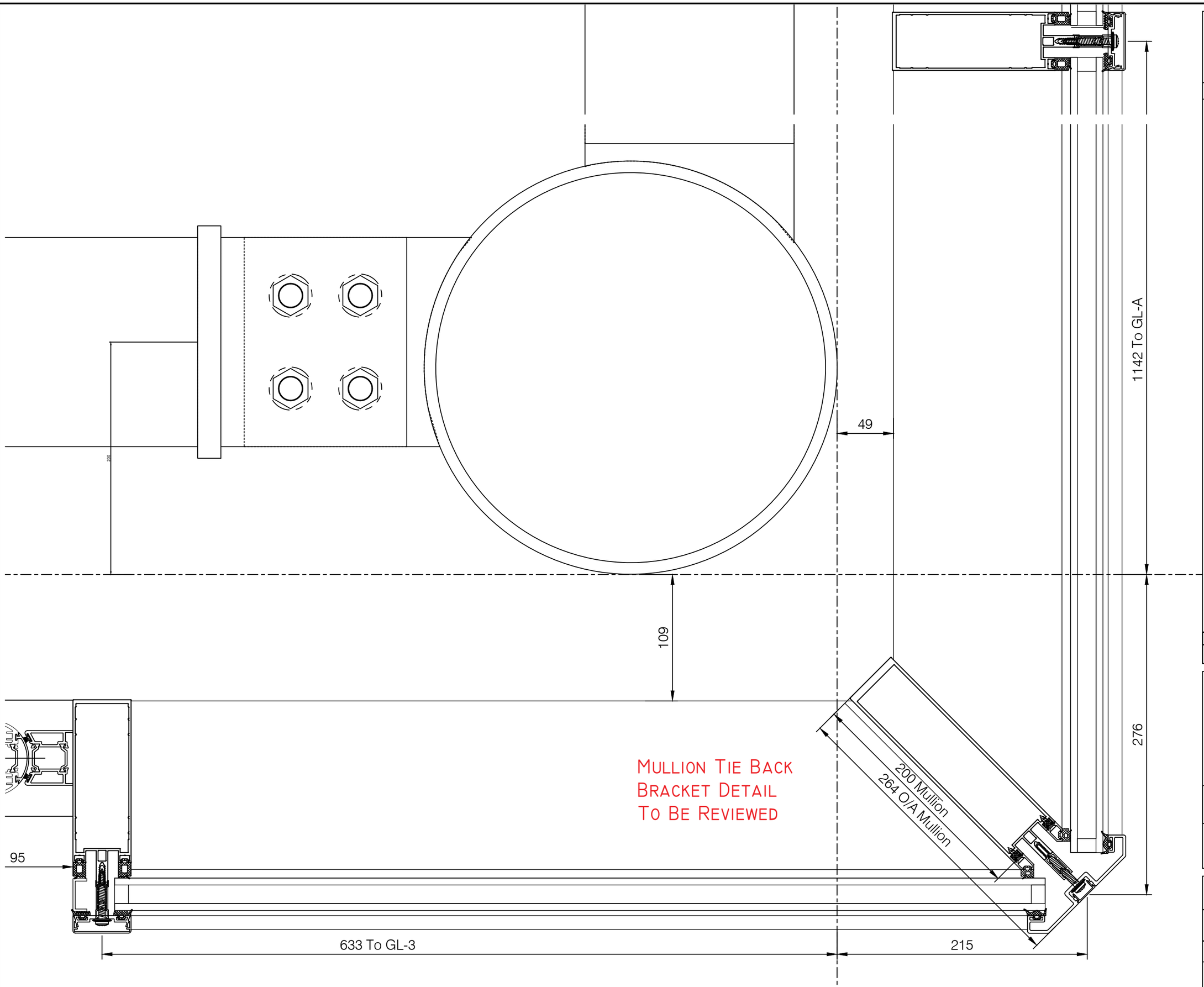
SITE: PANATTONI POYLE

TITLE: CW01 JAMB DETAIL

SCALE AT A3:	DATE:	DRAWN:	PROJECT NO:
NTS	23.02.23	MOH	C2401

DRAWING NO: P23025-AGL-XX-XX-DR-X-0404

Revision AB



ALL DIMENSIONS IN MILLIMETRES.
DO NOT SCALE FROM DETAIL. IF IN DOUBT ASK
TOLERANCES TO APPLICABLE BS
WINDOWS AND DOORS INDICATED IN ACCORDANCE WITH BS.EN.12519

Specification/Notes:

REV:	DESCRIPTION:	BY:	DATE:
AB	Drawing Updated to As Built Issue	MOH	12.07.24
C01	Drawing Updated to Construction Issue	MOH	05.04.24

STATUS: AS BUILT

ARDENT GLAZING LTD

CLIENT: WINVIC CONSTRUCTION LTD

ARCHITECT: UMC ARCHITECTS

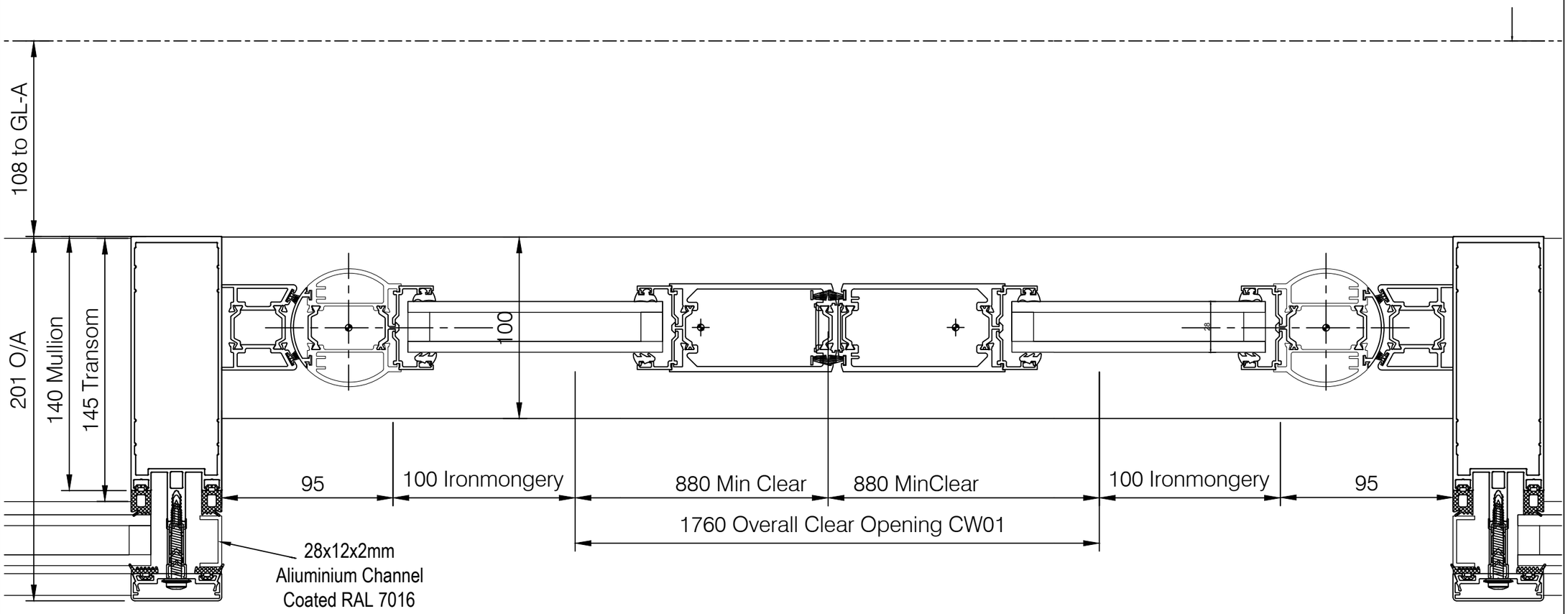
SITE: PANATTONI POYLE

TITLE: CW01 CORNER DETAIL

SCALE AT A3:	DATE:	DRAWN:	PROJECT NO:
NTS	23.02.23	MOH	C2401

DRAWING NO: P23025-AGL-XX-XX-DR-X-0405

Revision: AB



ALL DIMENSIONS IN MILLIMETRES.
DO NOT SCALE FROM DETAIL. IF IN DOUBT ASK
TOLERANCES TO APPLICABLE BS
WINDOWS AND DOORS INDICATED IN ACCORDANCE WITH BS.EN.12519

Specification/Notes:

REV:	DESCRIPTION:	BY:	DATE:
AB	Drawing Updated to As Built Issue	MOH	12.07.24
C01	Drawing Updated to Construction Issue	MOH	05.04.24

STATUS: AS BUILT

ARDENT GLAZING LTD

CLIENT: WINVIC CONSTRUCTION LTD

ARCHITECT: UMC ARCHITECTS

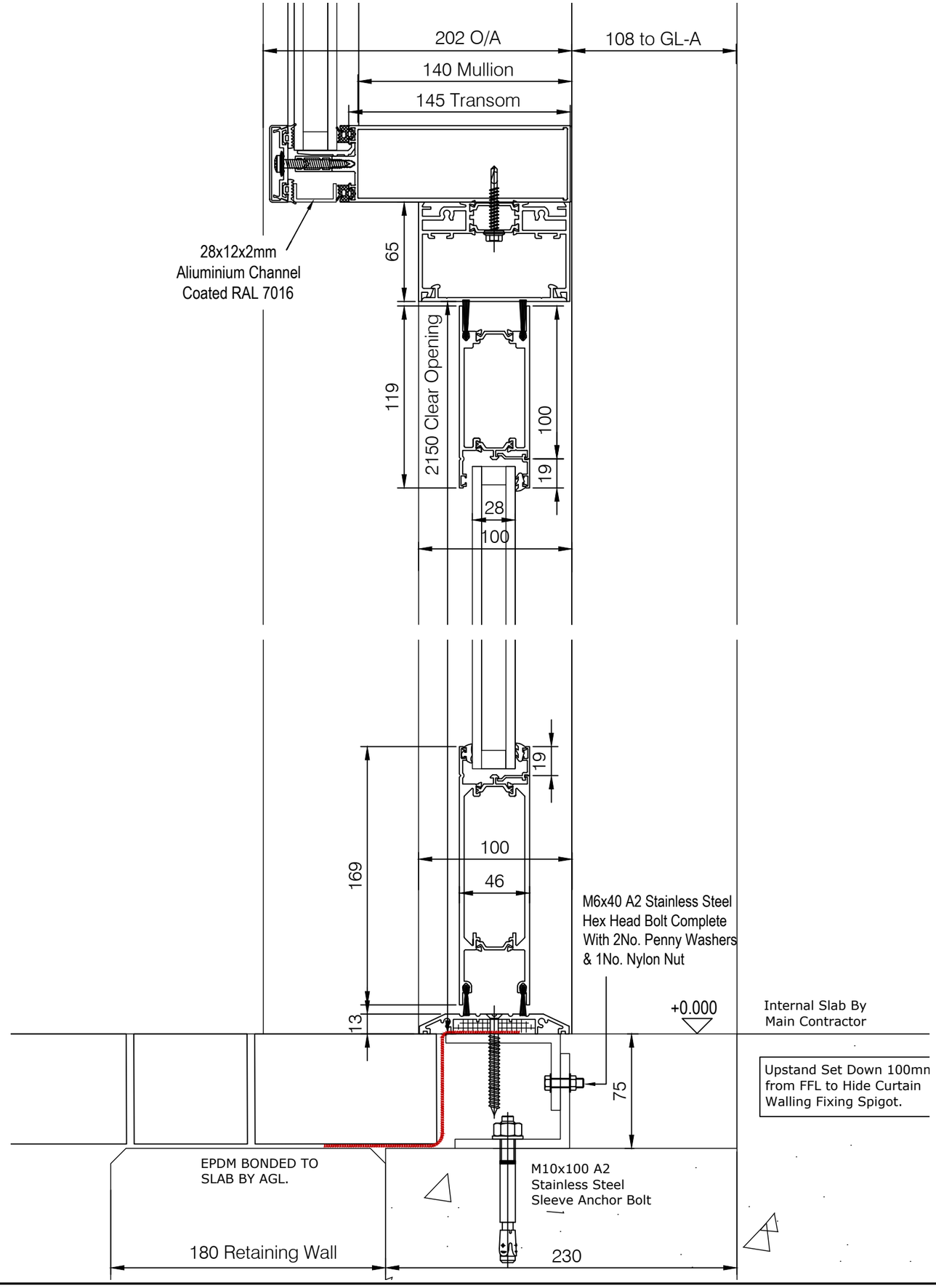
SITE: PANATTONI POYLE

TITLE: CW01 DOOR HORIZONTAL DETAIL

SCALE AT A3:	DATE:	DRAWN:	PROJECT NO:
NTS	23.02.23	MOH	C2401

DRAWING NO: P23025-AGL-XX-XX-DR-X-0406

Revision: AB



ALL DIMENSIONS IN MILLIMETRES.
DO NOT SCALE FROM DETAIL. IF IN DOUBT ASK
TOLERANCES TO APPLICABLE BS
WINDOWS AND DOORS INDICATED IN ACCORDANCE WITH BS.EN.12519

Specification/Notes:

REV:	DESCRIPTION:	BY:	DATE:
AB	Drawing Updated to As Built Issue	MOH	12.07.24
C01	Drawing Updated to Construction Issue	MOH	05.04.24

STATUS: AS BUILT

ARDENT GLAZING LTD

CLIENT: WINVIC CONSTRUCTION LTD

ARCHITECT: UMC ARCHITECTS

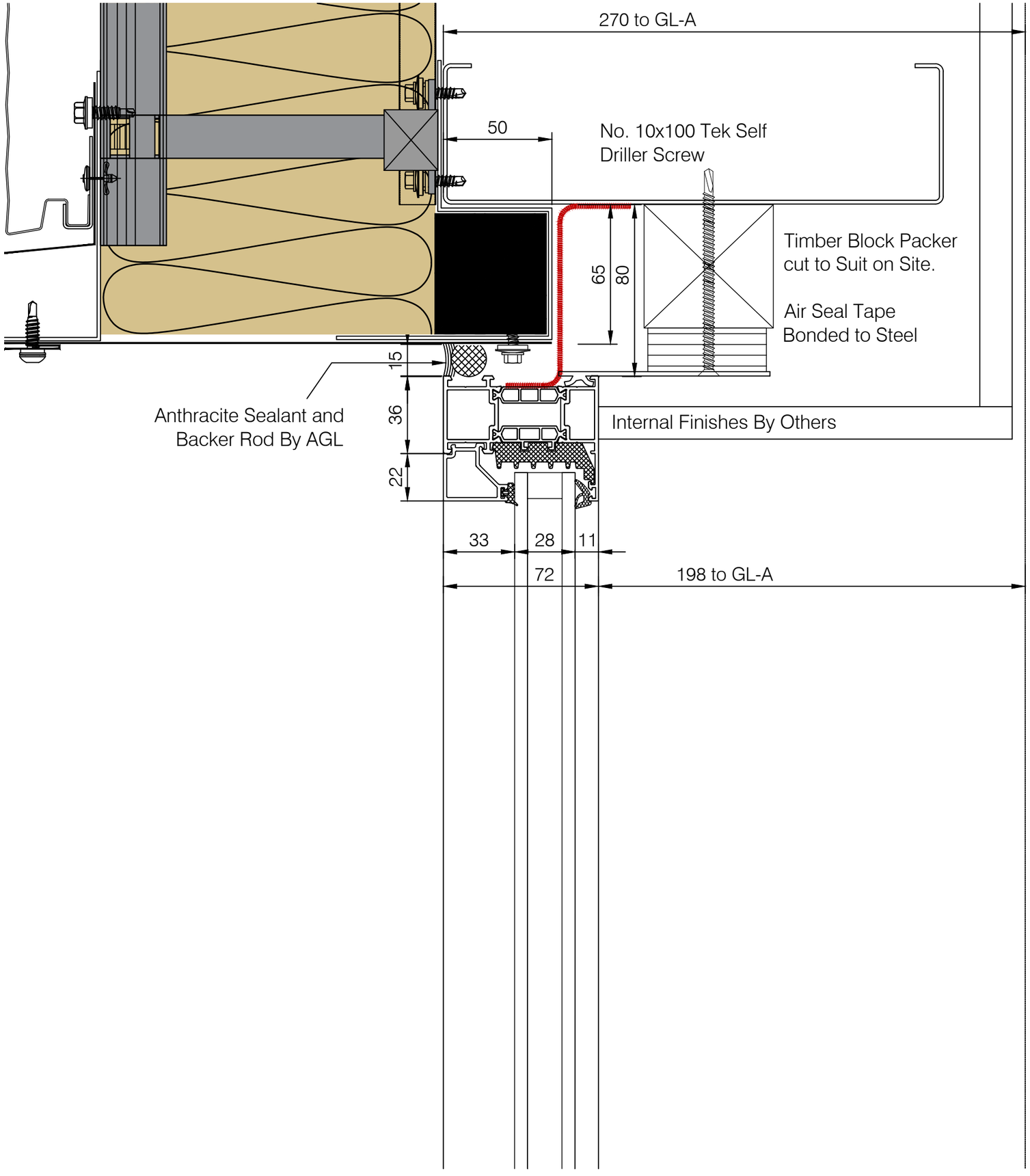
SITE: PANATTONI POYLE

TITLE: CW01 DOOR VERTICAL DETAIL

SCALE AT A3:	DATE:	DRAWN:	PROJECT NO:
NTS	23.02.23	MOH	C2401

DRAWING NO: P23025-AGL-XX-XX-DR-X-0407

Revision: AB



ALL DIMENSIONS IN MILLIMETRES.
DO NOT SCALE FROM DETAIL. IF IN DOUBT ASK
TOLERANCES TO APPLICABLE BS
WINDOWS AND DOORS INDICATED IN ACCORDANCE WITH BS.EN.12519

Specification/Notes:

REV:	DESCRIPTION:	BY:	DATE:
AB	Drawing Updated to As Built Issue	MOH	12.07.24
C01	Drawing Updated to Construction Issue	MOH	05.04.24

STATUS: AS BUILT

ARDENT GLAZING LTD

CLIENT: WINVIC CONSTRUCTION LTD

ARCHITECT: UMC ARCHITECTS

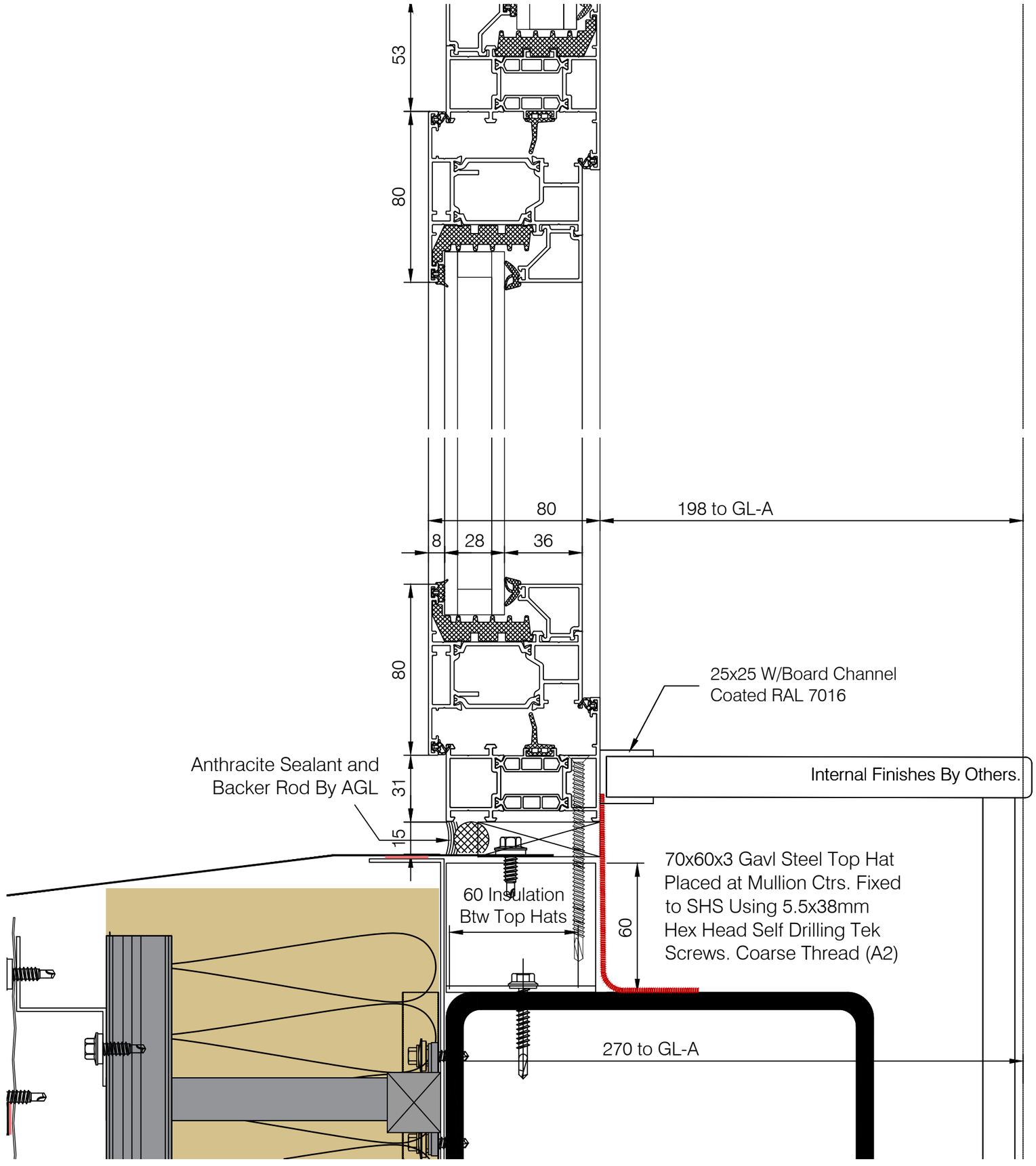
SITE: PANATTONI POYLE

TITLE: WINDOW HEAD DETAIL

SCALE AT A3:	DATE:	DRAWN:	PROJECT NO:
NTS	23.02.23	MOH	C2401

DRAWING NO: P23025-AGL-XX-XX-DR-X-0410

Revision: AB



ALL DIMENSIONS IN MILLIMETRES.
DO NOT SCALE FROM DETAIL. IF IN DOUBT ASK
TOLERANCES TO APPLICABLE BS
WINDOWS AND DOORS INDICATED IN ACCORDANCE WITH BS.EN.12519

Specification/Notes:

REV:	DESCRIPTION:	BY:	DATE:
AB	Drawing Updated to As Built Issue	MOH	12.07.24
C01	Drawing Updated to Construction Issue	MOH	05.04.24

STATUS: AS BUILT

ARDENT GLAZING LTD

CLIENT: WINVIC CONSTRUCTION LTD

ARCHITECT: UMC ARCHITECTS

SITE: PANATTONI POYLE

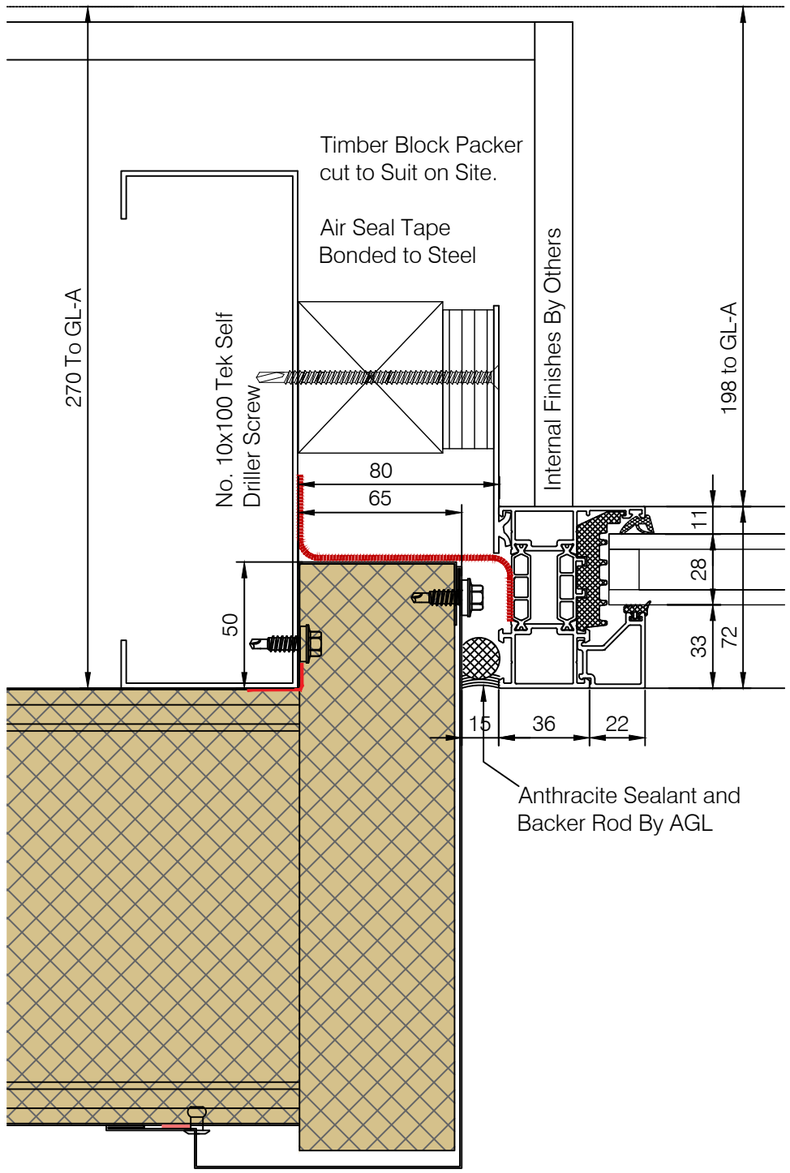
TITLE: WINDOW CILL DETAIL

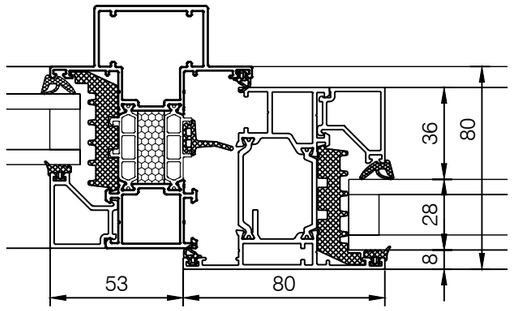
SCALE AT A3:	DATE:	DRAWN:	PROJECT NO:
NTS	23.02.23	MOH	C2401

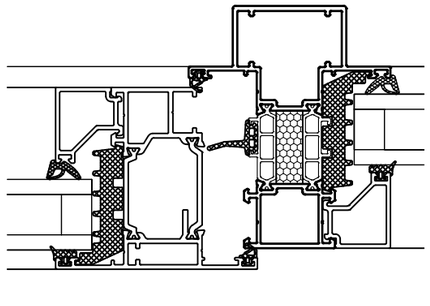
DRAWING NO: P23025-AGL-XX-XX-DR-X-0411 | Revision: AB

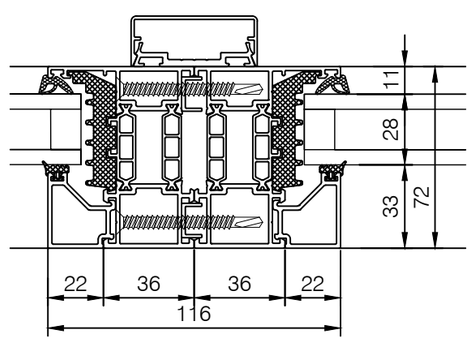
ALL DIMENSIONS IN MILLIMETRES.
DO NOT SCALE FROM DETAIL. IF IN DOUBT ASK
TOLERANCES TO APPLICABLE BS
WINDOWS AND DOORS INDICATED IN ACCORDANCE WITH BS.EN.12519

Specification/Notes:









REV:	DESCRIPTION:	BY:	DATE:
AB	Drawing Updated to As Built Issue	MOH	12.07.24
C02	Structural Bulb Mullions Added to Suit Structural Requirements	MOH	08.04.24
C01	Drawing Updated to Construction Issue	MOH	05.04.24

STATUS: AS BUILT

ARDENT GLAZING LTD

CLIENT: WINVIC CONSTRUCTION LTD

ARCHITECT: UMC ARCHITECTS

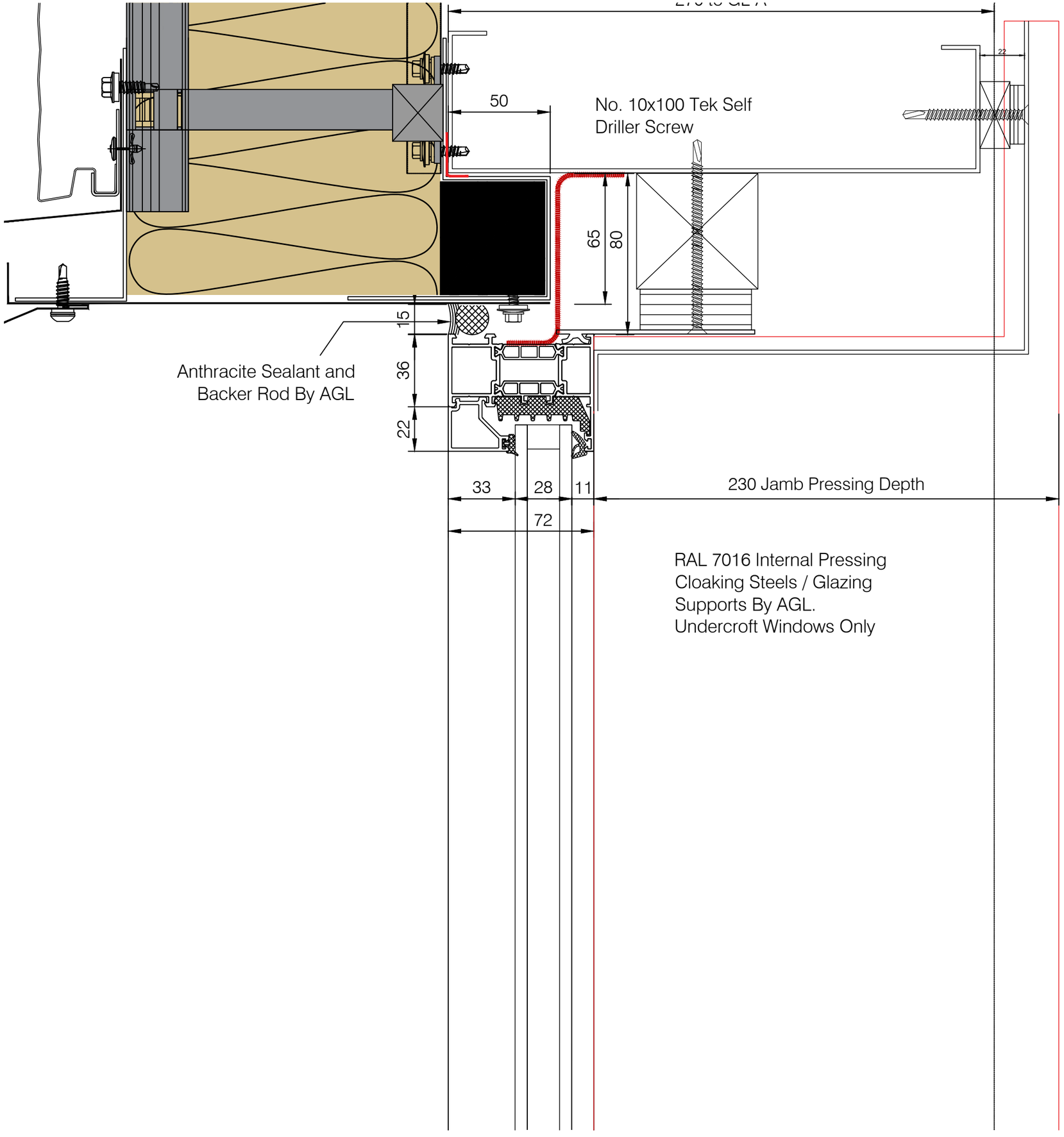
SITE: PANATTONI POYLE

TITLE: WINDOW JAMB DETAIL

SCALE AT A3:	DATE:	DRAWN:	PROJECT NO:
NTS	23.02.23	MOH	C2401

DRAWING NO: P23025-AGL-XX-XX-DR-X-0412

Revision: AB



ALL DIMENSIONS IN MILLIMETRES.
DO NOT SCALE FROM DETAIL. IF IN DOUBT ASK
TOLERANCES TO APPLICABLE BS
WINDOWS AND DOORS INDICATED IN ACCORDANCE WITH BS.EN.12519

Specification/Notes:

REV:	DESCRIPTION:	BY:	DATE:
AB	Drawing Updated to As Built Issue	MOH	12.07.24
C01	Drawing Updated to Construction Issue	MOH	05.04.24

STATUS: AS BUILT

ARDENT GLAZING LTD

CLIENT: WINVIC CONSTRUCTION LTD

ARCHITECT: UMC ARCHITECTS

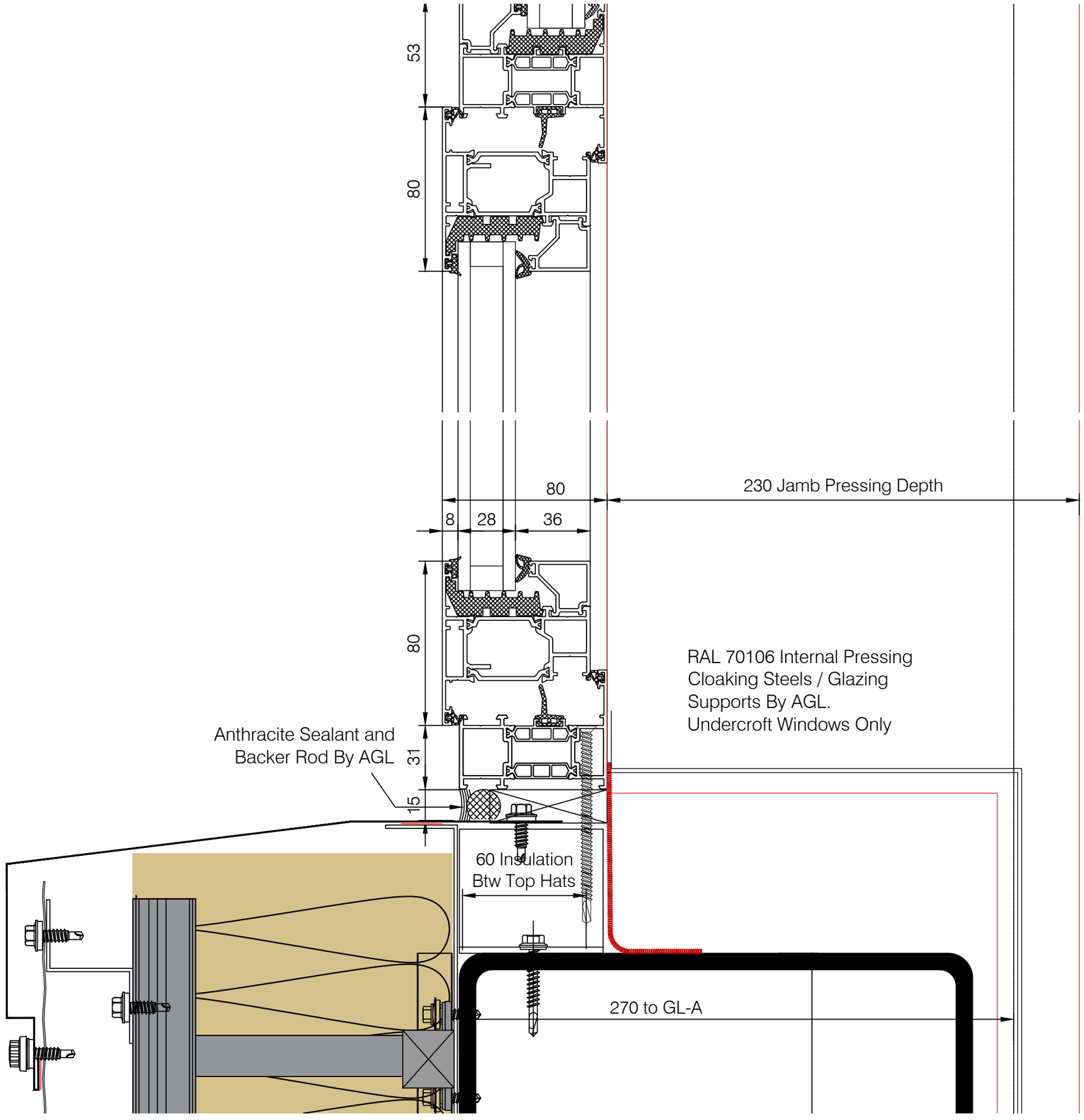
SITE: PANATTONI POYLE

TITLE: UNDERCROFT WINDOW HEAD DETAIL

SCALE AT A3:	DATE:	DRAWN:	PROJECT NO:
NTS	23.02.23	MOH	C2401

DRAWING NO: P23025-AGL-XX-XX-DR-X-0413

Revision: AB



ALL DIMENSIONS IN MILLIMETRES.
DO NOT SCALE FROM DETAIL. IF IN DOUBT ASK
TOLERANCES TO APPLICABLE BS
WINDOWS AND DOORS INDICATED IN ACCORDANCE WITH BS.EN.12519

Specification/Notes:

REV:	DESCRIPTION:	BY:	DATE:
AB	Drawing Updated to As Built Issue	MOH	12.07.24
C01	Drawing Updated to Construction Issue	MOH	05.04.24

STATUS: AS BUILT

ARDENT GLAZING LTD

CLIENT: WINVIC CONSTRUCTION LTD

ARCHITECT: UMC ARCHITECTS

SITE: PANATTONI POYLE

TITLE: UNDERCROFT WINDOW CILL DETAIL

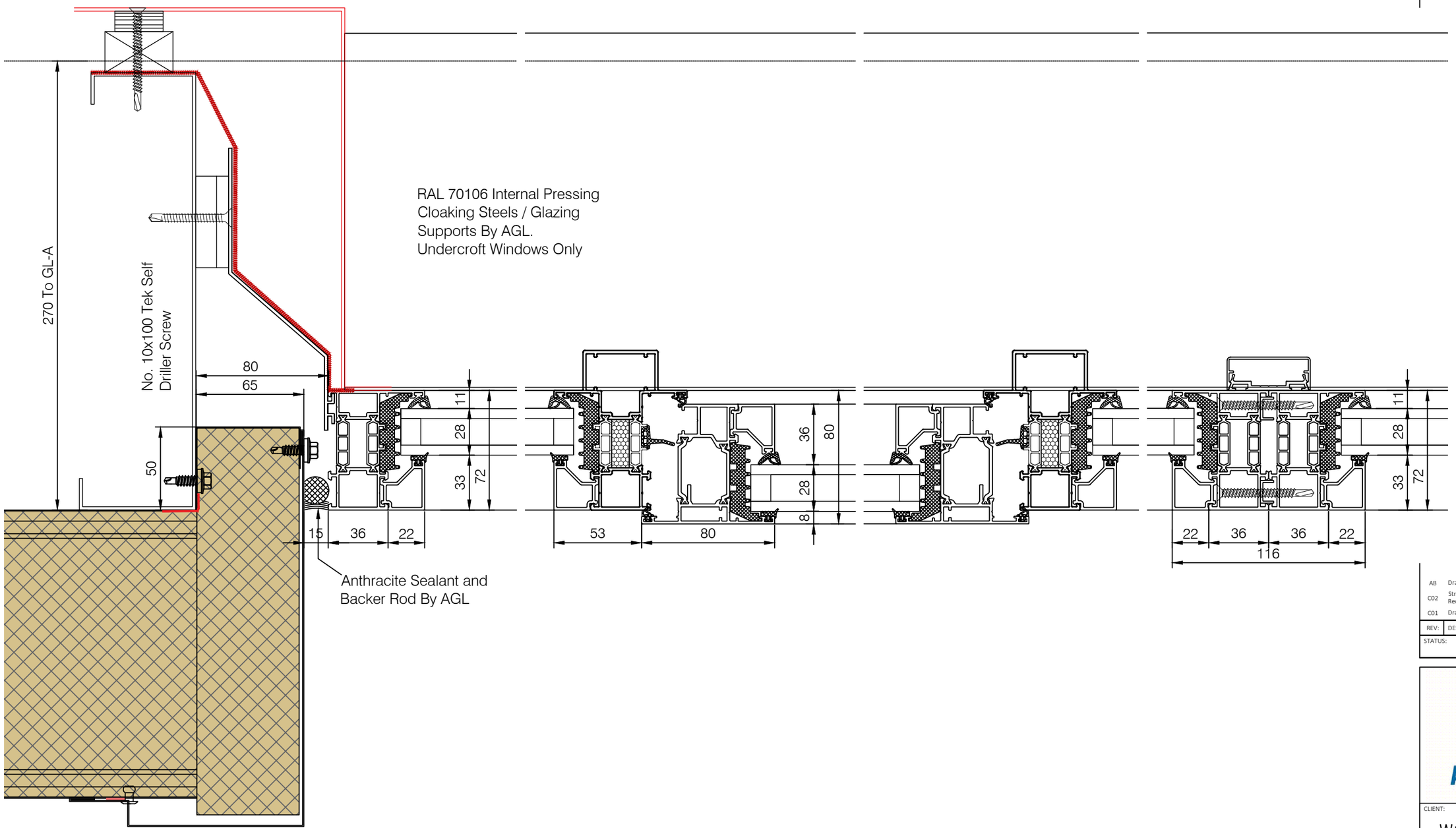
SCALE AT A3:	DATE:	DRAWN:	PROJECT NO:
NTS	23.02.23	MOH	C2401

DRAWING NO: P23025-AGL-XX-XX-DR-X-0414

Revision: AB

ALL DIMENSIONS IN MILLIMETRES.
DO NOT SCALE FROM DETAIL. IF IN DOUBT ASK
TOLERANCES TO APPLICABLE BS
WINDOWS AND DOORS INDICATED IN ACCORDANCE WITH BS.EN.12519

Specification/Notes:



RAL 70106 Internal Pressing
Cloaking Steels / Glazing Supports By AGL.
Undercroft Windows Only

REV:	DESCRIPTION:	BY:	DATE:
AB	Drawing Updated to As Built Issue	MOH	12.07.24
C02	Structural Bulb Mullions Added to Suit Structural Requirements	MOH	08.04.24
C01	Drawing Updated to Construction Issue	MOH	05.04.24

STATUS: AS BUILT

ARDENT GLAZING LTD

CLIENT: WINVIC CONSTRUCTION LTD

ARCHITECT: UMC ARCHITECTS

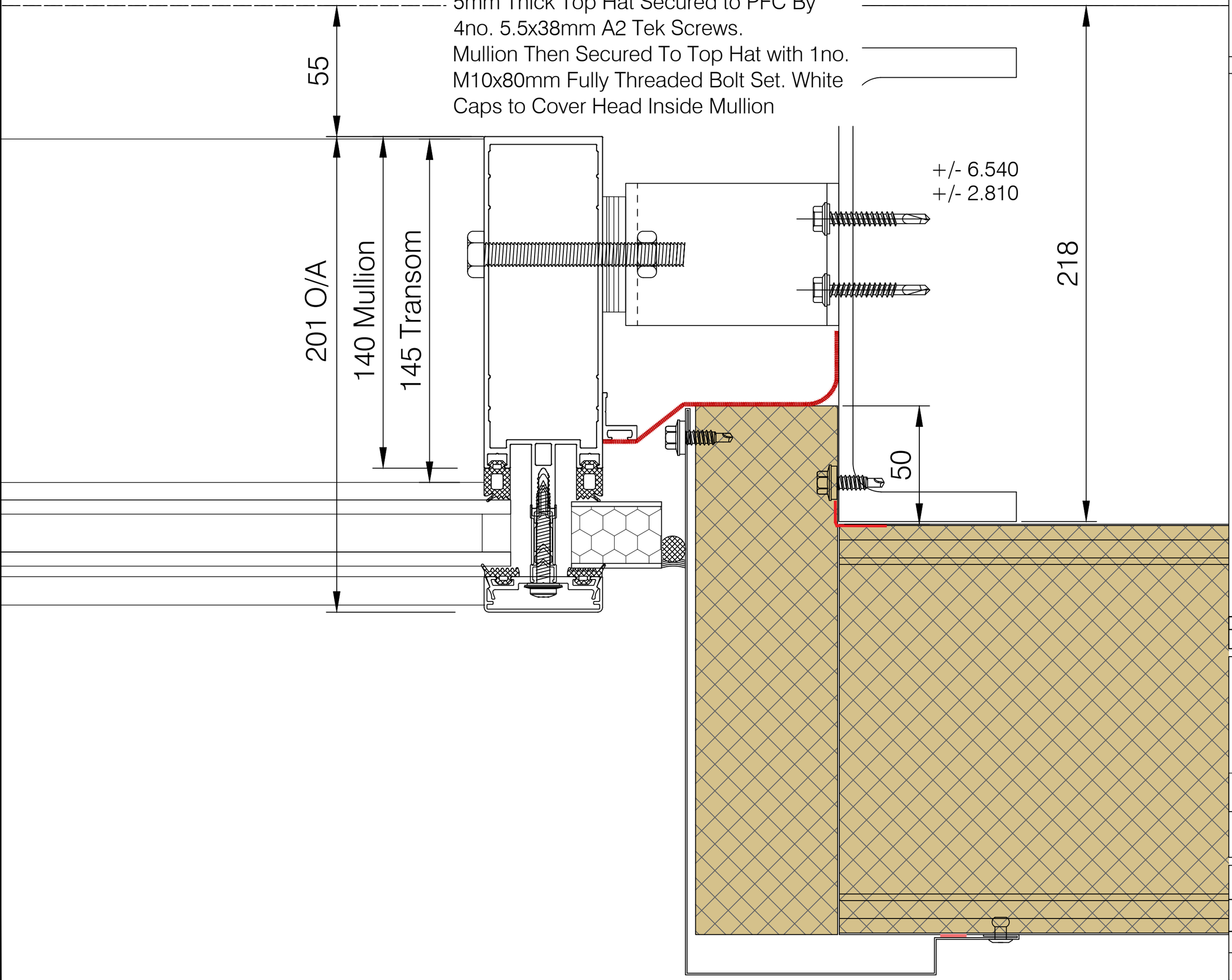
SITE: PANATTONI POYLE

TITLE: UNDERCROFT WINDOW JAMB DETAIL

SCALE AT A3:	DATE:	DRAWN:	PROJECT NO:
NTS	23.02.23	MOH	C2401

DRAWING NO: P23025-AGL-XX-XX-DR-X-0415

Revision: AB



ALL DIMENSIONS IN MILLIMETRES.
DO NOT SCALE FROM DETAIL. IF IN DOUBT ASK
TOLERANCES TO APPLICABLE BS
WINDOWS AND DOORS INDICATED IN ACCORDANCE WITH BS.EN.12519

Specification/Notes:

REV:	DESCRIPTION:	BY:	DATE:
AB	Drawing Updated to As Built Issue	MOH	12.07.24

STATUS: AS BUILT

ARDENT GLAZING LTD

CLIENT: WINVIC CONSTRUCTION LTD

ARCHITECT: UMC ARCHITECTS

SITE: PANATTONI POYLE

TITLE: CW01 RIGHT HAND JAMB

SCALE AT A3:	DATE:	DRAWN:	PROJECT NO:
NTS	13.06.23	MOH	C2401

DRAWING NO: P23025-AGL-XX-XX-DR-X-0408

Revision: AB

5. Testing & Commissioning Results and Certificates

winvic
DOING IT RIGHT.

SENIOR ARCHITECTURAL SYSTEMS

MATERIAL PERFORMANCE SUMMARY

COMPONENT	MATERIAL	DESIGN LIFE	LIFE EXPECTANCY	WARRANTY	NOTES
Aluminium Extrusions	Aluminium	30 Years	60+ Years	30 Years	n/a
Powder Coating	Polyester Powder	30 Years	25+ Years	25 Years	Clean/Maintain to agreed schedule
Anodising	Oxidation of Aluminium Surface	25 Years	25 Years	25 Years	Clean/Maintain to agreed schedule
Component Fixings	Stainless Steel	30 Years	60+ Years	10 Years	n/a
Thermal Barrier	Polyamide	30 Years	30+ Years	10 Years	n/a
Gaskets	Various materials based on application.	20-25 Years	20-25 Years	20-25 Years	Clean within glass/ window cleaning schedule

For hardware information, please refer to the subcontractors O&M manual

SENIOR ARCHITECTURAL SYSTEMS

Senior Architectural Systems is a major UK supplier of fenestration solutions to the highest industry standards

Dual Seal Glass Limited Warranty Analysis Report

NM User Danielle Adamson
NM Name C2401 - Panattoni

Customer Name	Order	PO TEXT1	PO TEXT2	This Order Contains
Ardent Glazing Ltd	**1135899**	**1698 Vision Units**	**C2401 Poyle**	**COATED TOUGHENED FLOAT TOUGH**

1st Glass	1st Spacer	2nd Glass	2nd Spacer	3rd Glass
6mm Tough Grey HST	16mm Warm Edge Spacer P.U. Black	6mm Tough Soft Coat 1.1 HST		

Customer Name	Order	PO TEXT1	PO TEXT2	This Order Contains
Ardent Glazing Ltd	**1135900**	**1698 Vision Units**	**C2401 Poyle**	**COATED TOUGHENED FLOAT TOUGH**

1st Glass	1st Spacer	2nd Glass	2nd Spacer	3rd Glass
6mm Tough Grey HST	16mm Warm Edge Spacer P.U. Black	6mm Tough Soft Coat 1.1 HST		

Customer Name	Order	PO TEXT1	PO TEXT2	This Order Contains
Ardent Glazing Ltd	**1135901**	**1699 Ceramic Units**	**C2401 Poyle**	**100mm Fabrock Plus Foiled (30MM) 100mm Fabrock Plus Foiled (DWG) CERAMIC TOUGHENED FLOAT TOUGH**

1st Glass	1st Spacer	2nd Glass	2nd Spacer	3rd Glass
6mm Tough Grey HST	16mm Warm Edge Spacer P.U. Black	6mm Ral 7016 Anthracite Grey HST		

Customer Name	Order	PO TEXT1	PO TEXT2	This Order Contains
Ardent Glazing Ltd	**1136562**	**1753**	**C2401**	**COATED TOUGHENED FLOAT TOUGH**

1st Glass	1st Spacer	2nd Glass	2nd Spacer	3rd Glass
6mm Tough Grey HST	16mm Warm Edge Spacer P.U. Black	6mm Tough Soft Coat 1.1 HST		

Customer Name	Order	PO TEXT1	PO TEXT2	This Order Contains
Ardent Glazing Ltd	**8000003**	**1838**	**C2401**	**COATED TOUGHENED FLOAT TOUGH**

1st Glass	1st Spacer	2nd Glass	2nd Spacer	3rd Glass
6mm Tough Grey HST	16mm Warm Edge Spacer P.U. Black	6mm Tough Soft Coat 1.1 HST		

PORTAL UK
Automatic Doors

Job Ref: 12711 | PASS: ✓

Site Address: Panattoni, Poyle, Horton road, Slough SL3 0BB

Date: 30/8/24

Make and Model: Sw300 Assa	Opening Width:
Door Type: Dable Swing	Location: main reception entrance

Times

Opening Time (s):	7
Closing Time (s):	10
Hold Open Time (s):	1

Activation Distances

Straight Approach -	Internal (m): Push Pad	External (m):	Push Pad
Side Approach:	/		

Safety Device / s

Hold Open Beams	
Number Fitted:	
Height above floor level (m):	/
Presence Sensors	
Field width (m):	
Field depth (m):	300mm
Hold open time (s):	30
Swing Only	
Overhead:	
Door mounted:	/

Drawing in Protection

Leading stile to jamb (mm):	/
Outer stile to mullion (mm):	/
Barrier rails/safety pocket screens:	Fitted
Finger guards:	/

Escape / Fail Open System

Type: Fire alarm

Signage fitted:	NONE	(Auto Door)	Keep Clear	(Push Button)	Other:
Commissioned from:	240v Mains			(Temp Supply)	
Keys given to:	↓		↓		
Customer Name:	A.J. Folkes			Signature	
Engineer Name:	Jake Boot			Signature	J

Comments: Mains + fire left for others to connect (Fire = red + black 110)

* Note for Ardent *

Doors really tight would recommend adjusting

6. Operation

General

1. Recommendations for technical maintenance and care during operation

1.1 At least once a year, clean elements of the aluminium structures and glass outside. Do not use gasoline, nitro solvents and cleaning agents containing acid, corrosive substances, powder (abrasives), as after their application, the surface loses its shine and becomes rough.

Perform cleaning and minor repairs of big building surfaces using the equipment that ensure the preservation of the structure, ease and safety of work (for example, swing stages moving along the façade on special guides, vehicles with elevating work platform, scaffold and other similar devices).

1.2 At least once a year, clean elements of the aluminium structures and glass inside. Do not use gasoline, nitro solvents and cleaning agents containing acid, corrosive substances, powder (abrasives), as after their application, the surface loses its shine and becomes rough.

For the maintenance of gaskets, use silicone-containing substances. It can help not only clean the gasket rubber from dirt, but also restore its elasticity and give water-repellent properties.

In the absence of special products, clean the gaskets using a soap solution. Then wipe dry the surface after removing the dirt in this manner.

1.3 At least once a year clean the infill and the glass inside by dry, semi-dry, or wet methods: for the dry method use special pastes, which must be applied on the glass and removed from it without subsequent washing; for the semi-dry method, wash the glass after applying the paste; wet cleaning must be performed with clean water or special solvents.

It is not allowed to use detergents that are aggressive to translucent infill material and sealing elements.

1.4 Ensure the construction dirt and dust are removed from the profile after installation; use non-metallic taping knives and brushes, remove dust with a vacuum cleaner.

1.5 Be sure to check that the protective film is removed from the profile after installation. The adhesive layer will damage the surface of the coating then exposed to ultraviolet radiation (sun light).

1.6 Use correctors in case of minor mechanical marks on the aluminium surface.

2. Warnings about the risks of the structure damage

2.1 Do not place space heaters and other heat sources with the temperature above 70 degrees at a distance more than 250 mm to the surface of the curtain wall.

2.2 Do not install any devices and equipment, including heaters on the elements of the aluminium structures from inside.

2.3 Do not install any devices and equipment without additional calculation on the elements of the aluminium structures from inside and outside.

Expose the profile and glass units to high temperature, shock loads, additional static and dynamic effects.

2.4 Do not remove ice or frozen snow from the structure.

2.5 Do not clean the structure with a knife, blade, glass paper, wire brush and other sharp and abrasive objects.

2. Operation of windows

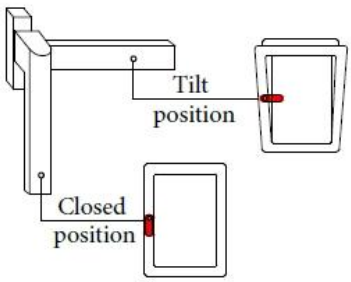
2.1. Window types

Perform any operation with the window handle without extra efforts and with the closed sash only.

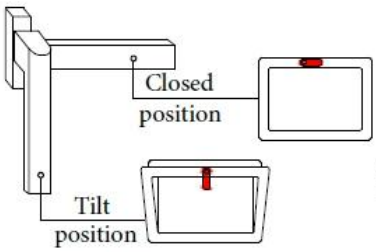
Limiters (stops) for maintenance of the windows shall be removed by specialists only!

2.1.1. Tilt windows

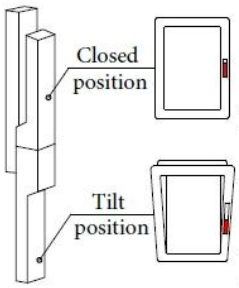
Variant 1 (Roto)



Variant 2

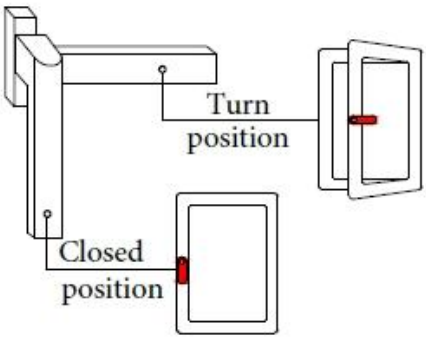


Variant 3 (Stublina)



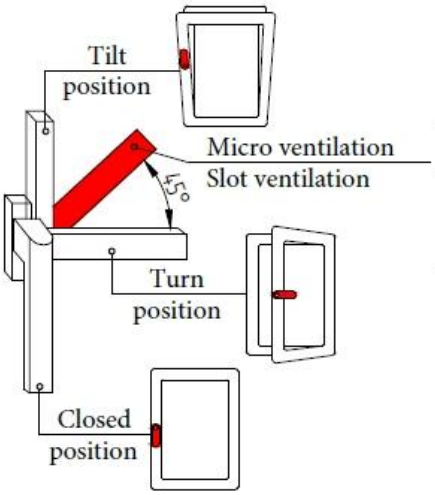
The handle has no upward position.

2.1.2. Turn windows



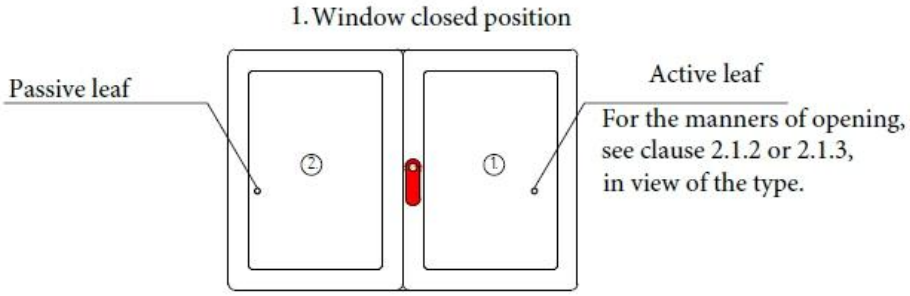
The handle has no upward position.

2.1.3. Tilt and turn windows



Avoid incorrect position of the handle by closing of the leaf. Release of the upper hinge is possible!

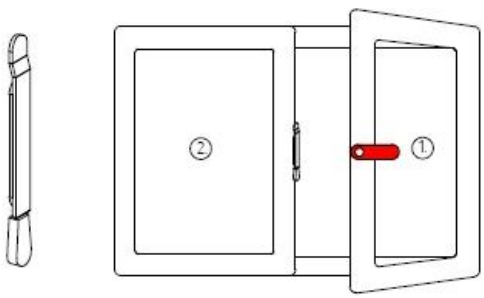
2.1.4. Double-sash window



The passive sash (2) opens with the turn position of the active sash (1) only!

Variant 1 (Roto)

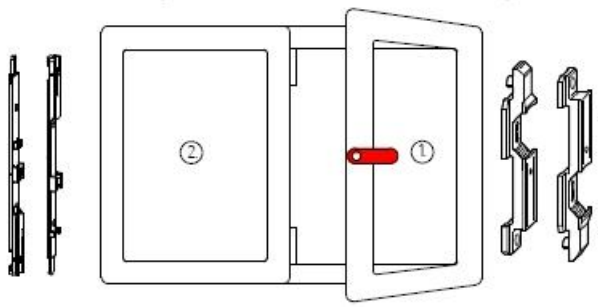
2. Closed position of the passive sash (2).
Turn position of the active sash (1)



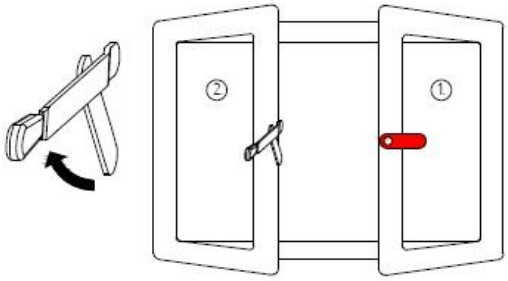
3. Open position of the passive sash (2).

Variant 2

2. Closed position of the passive sash (2).
Turn position of the active sash (1)

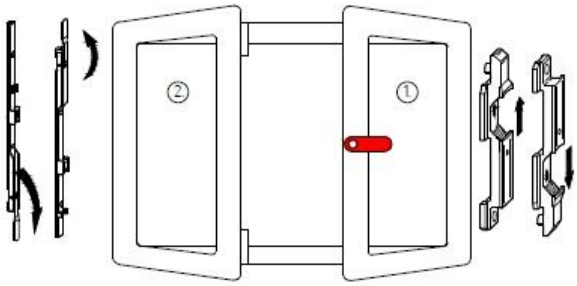


3. Open position of the passive sash (2).



Step 1. Turn the lock 90°upwards.

Step 2. Open the passive sash (2).



Step 1. Unlock the catches. Turn the tongues downwards and upwards.

Step 2. Open the passive sash (2).

To close the sashes, inverse the procedure.

2.2. Window furniture

2.2.1. Window handles

Roto Line without rosette

Stublina 1002

Stublina 1112

Roto Samba

-

-

Roto Line

Locking

-

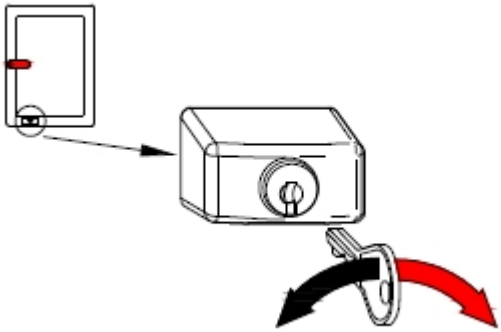
Stublina 1001

With removable handle

-

Stublina 1105

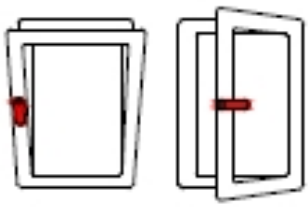
2.2.2. Locking device



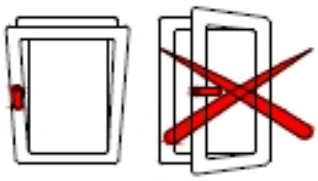
When the locking device is enabled, the turn position of the sash is locked. Only the tilt position of the sash is available.

When the locking device is disabled, all positions of the sash are available.

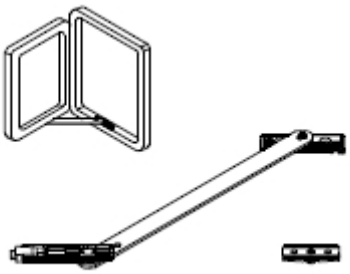
Step 1. The turn position is unlocked.



Step 2. The turn position is locked.



2.2.3. Opening limiter



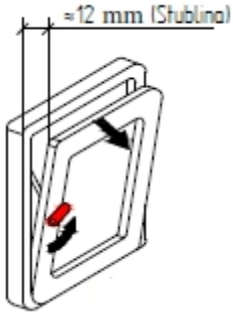
The opening limiter is used to limit the window opening angle in the turn position to 90°. The opening limiter prevents spontaneous moving of the sash from draft. The opening limiter needs no lubrication or service.

The limiter shall be removed by specialists only!

2.2.4. In-built micro ventilation (slot ventilation) device

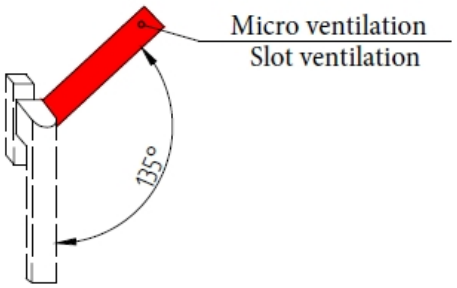
The micro ventilation device built in the turn and tilt furniture ensures inflow of fresh air into the premises without draft/ penetration of water.

To get the window in the micro ventilation position, follow the below procedure:



Step 2. Pull the sash with the handle.

Step 1. Turn the handle 135° upwards relative to the closed position.



To close the sash, inverse the procedure.

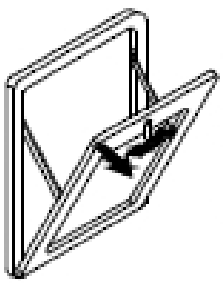
2.3. Removal of awning window arm for cleaning/maintenance of tilt windows

Before removing the awning window arm, put a support below the tilt sash!

The support shall be in view of the weight of the sash. This prevents the sash from falling! During operations, there shall be no people or foreign objects below the sash.

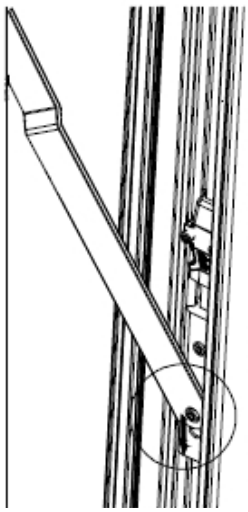
At least two persons shall remove the sash!

For removal of the tilt awning window arm to clean the window, follow the below procedure:



Step 1. Get the handle in the open position. See clause 2.1.1.

Step 2. Get the leaf in the tilt position by pulling it with the handle.



Step 3. Lower the stop spring to the slider.

Step 4. Disconnect the awning window arm from the slider.

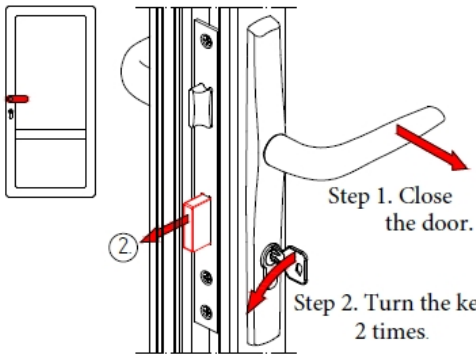
To close the sashes, inverse the procedure.

3. Operation of doors

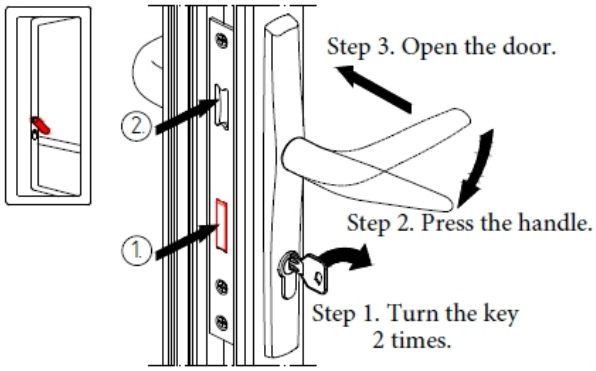
3.1. Door types

3.1.1. Single doors with a door handle

To close the door

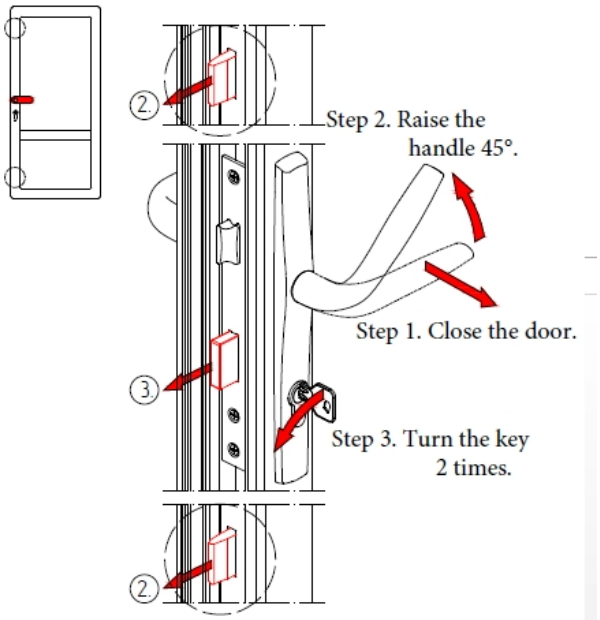


To open the door

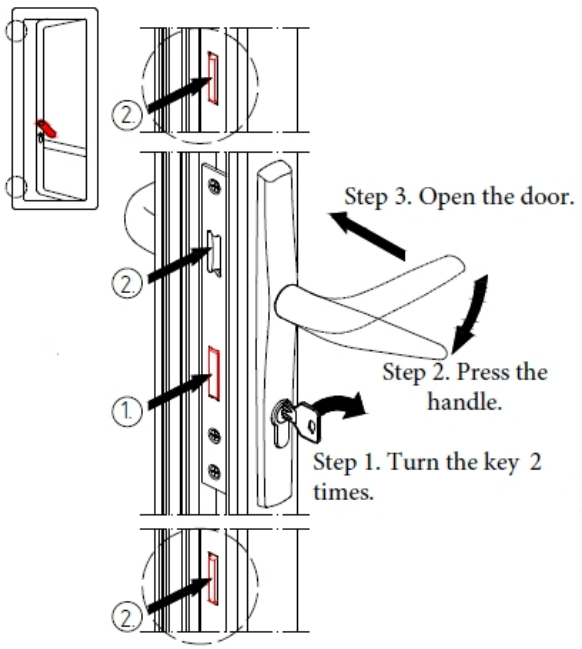


3.1.2. Single doors with multilock mechanisms

To close the door

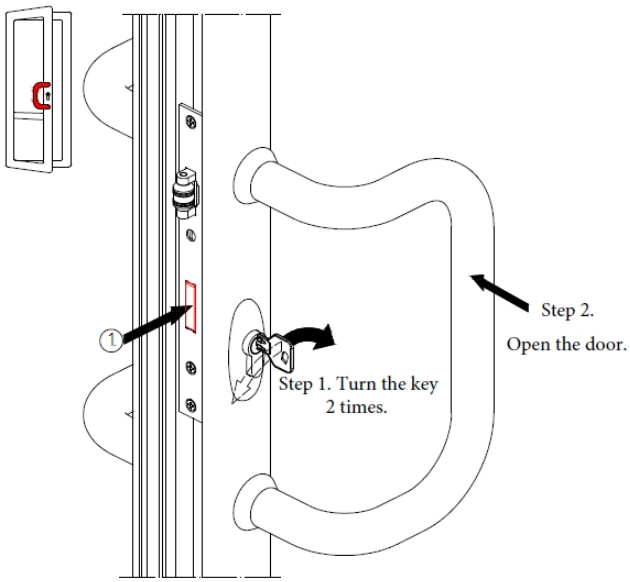


To open the door

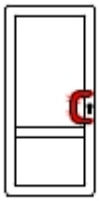


3.1.1. Single doors with a door handle

To open the door

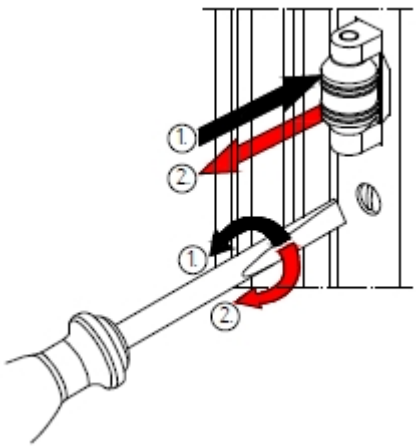


To close the door



To close the door, invert the procedure.

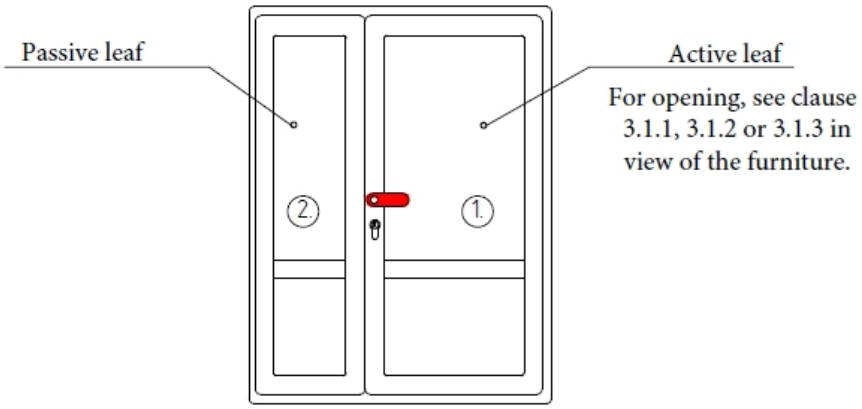
To adjust the roller, follow the below procedure.



If you fail to take Step 2 (Raise the handle 45°.) to close the door, the key will not turn in the lock.

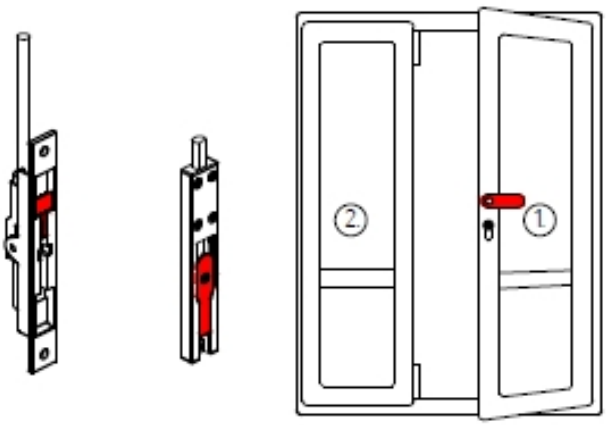
3.1.4. Double doors

1. Door closed position



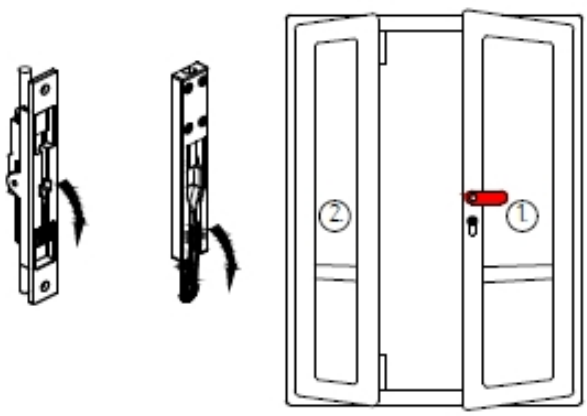
2. Closed position of the passive leaf (2). Open position of the active leaf (1)

Variant 1 Variant 2



3. Open position of the passive leaf (2)

Variant 1 Variant 2



To close the leaves, invert the procedure.

3.1.5. Folding sliding doors with a turn door

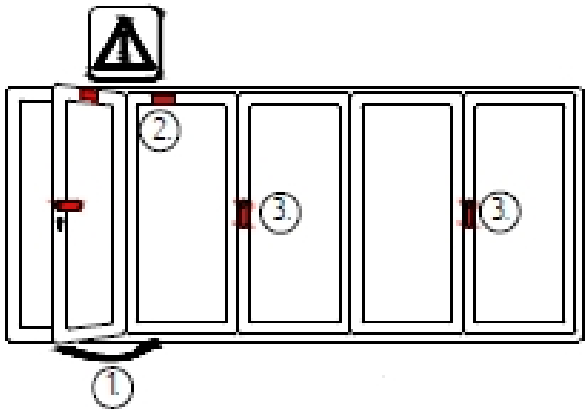
To open the door

1. Open the turn door 180° (see clauses 3.1.1 to 3.1.2) and connect it with the catch (2) installed at the next leaf.

2. Lock the door bolts with the handle key, if any.

3. To unlock the door bolts of the other leaves, turn the handle 90°.

4. Slide the folds, starting with the couple next to the turn door.



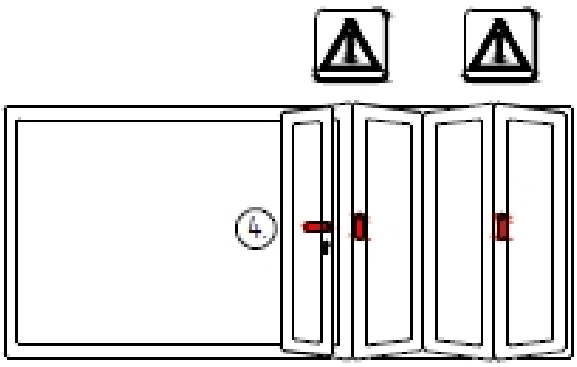
To close the door

1. To connect with the frame, slide each couple of the leaves.

2. Fix the leaves by locking the door bolts.

3. To lock the door bolts, use the key.

4. Check that all other leaves are closed/locked and finish with the turn door (see clauses 3.1.1 to 3.1.2).



Risk of injury!

Do not touch the folds during opening/closing.

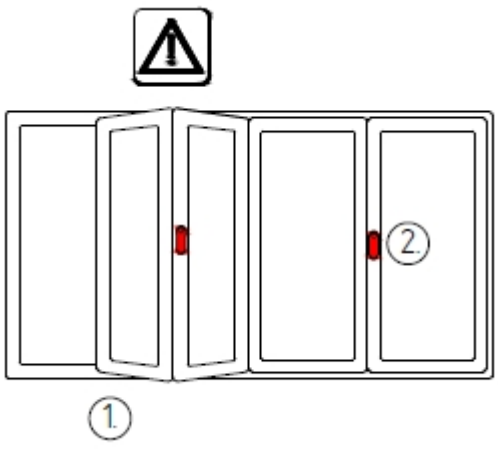
3.1.6. Folding sliding doors without a turn leaf

To open the door

1. Unlock the door bolts with the key, if any.

2. To unlock the door bolts of the other leaves, turn the handles 90°.

3. Slide the leaves.



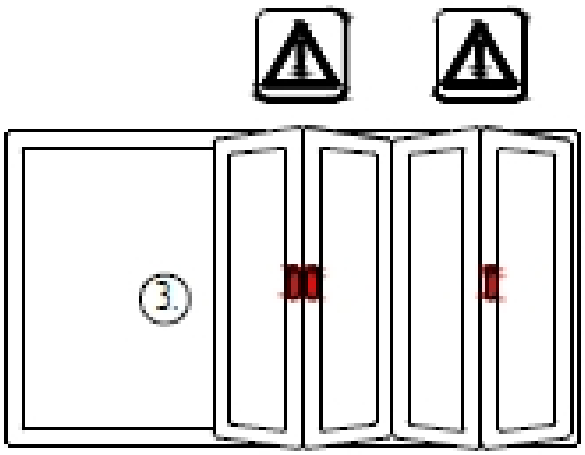
To close the door

1. To connect with the frame, slide each couple of the leaves backwards.

2. Fix the leaves by locking the door bolts.

3. To fix the door bolts (3), use the key.

Attention! To facilitate the closing procedure, use the pull handle.



Risk of injury!

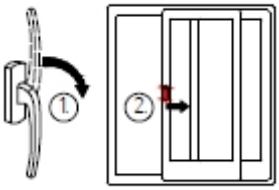
Do not touch the folds during opening/closing.

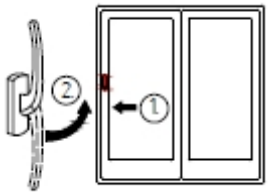
Do not leave the key inside the lock cylinder during opening/closing – this can cause damage of the key/profile.

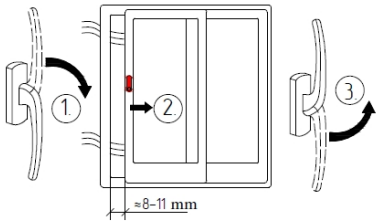
3.1.7. Lift and slide doors

Variant 1. Manual opening

Opening	Closing	Ventilation
1. Turn the handle 180° downwards.	1. To close the sashes, invert the procedure.	1. Turn the handle 180° downwards.
2. Open the sash.		2. Open the sash with a play between the frame and the sash ≈ 8 – 11 mm.
		3. Turn the handle 180° upwards.



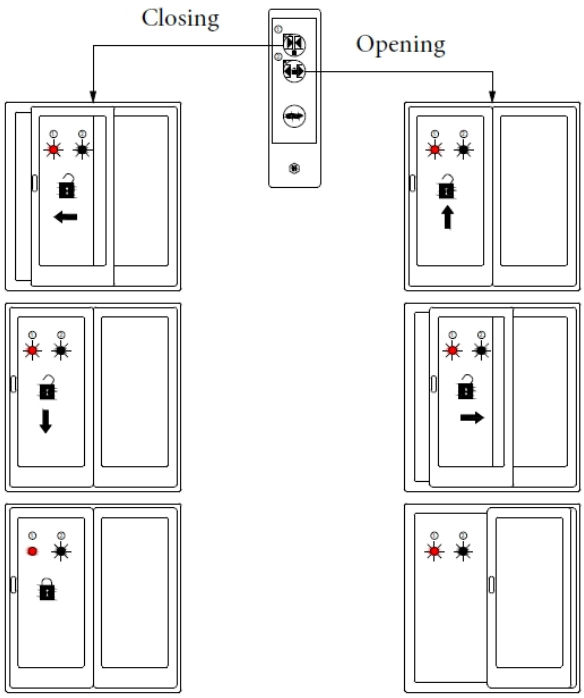




Risk of injury!

Do not touch elements in the area of movement of the sashes during opening/closing.

Variant 2. Automatic opening



- Continuous red indicator: The sash is unlocked or open
- Flashing red indicator: Failure
- Continuous green indicator (lit in 1 minute): The equipment is ready for operation
- Flashing green indicator: The equipment is occupied

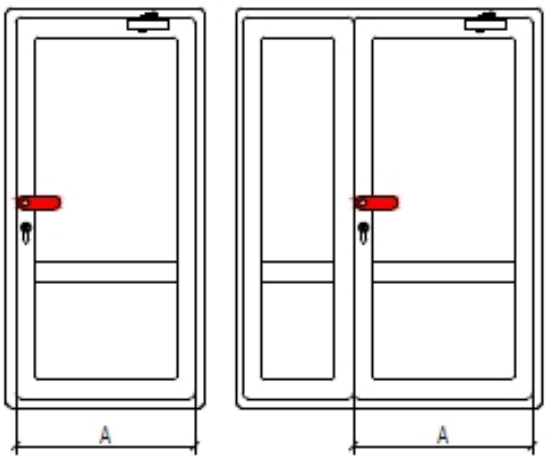
Do not leave the key inside the lock cylinder during opening/closing – this can cause damage of the key/profile!

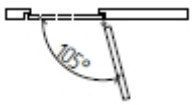
3.2. Door furniture

3.2.1. Door closers

A door closer automatically gets the door leaf in the closed position.

In case the door closer has no option of keeping the door fixed in the open position, the relevant leaf shall be equipped with the door holder (see clause 3.5.2).



Type of door closer / Maximum opening angle	Dorma TS Compakt 	Dorma TS Profil 
	850 ≤ A ≤ 950	850 ≤ A ≤ 1,100
	950 ≤ A ≤ 1100	1,100 ≤ A ≤ 1,250

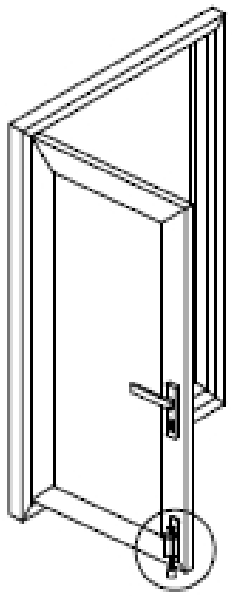
Some closers can fix the leaf in the wide-open position. To close the leaf, slightly pull it to the door closing direction, and then the leaf will close on its own.

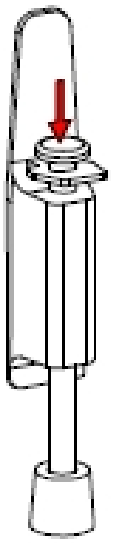
By installation of closers, follow the operation and maintenance manual of the manufacturers.

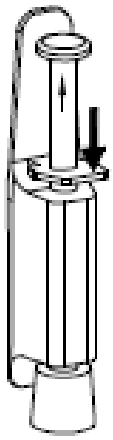
3.2.2. Door holder

A door holder is intended for fixing the door leaf in the open position and preventing the leaf from being closed from draft or by the door closer.

1. Lock 2. Unlock





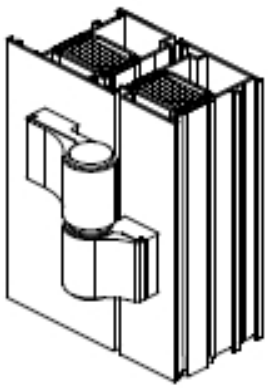


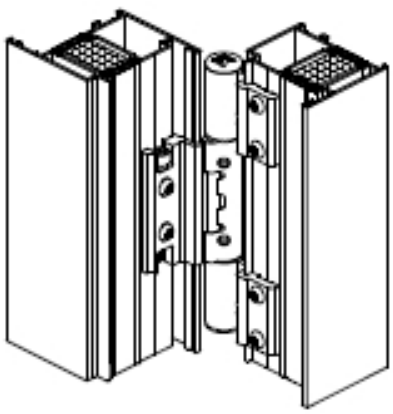
Door holders need no special care or lubrication.

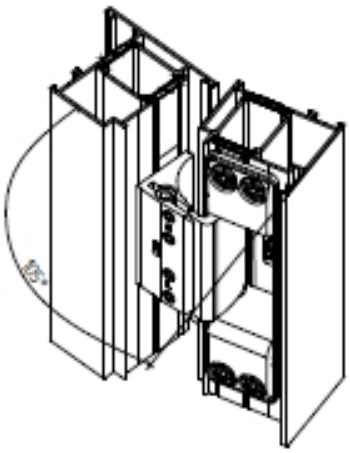
Door holders are not present in the Alutech Group of Companies range of products and scope of supply. For more details, see the operation and maintenance manual for the door holder.

3.2.3. Door hinges

Surface hinges Roller hinges Hidden hinges







- Door hinges need no special care or lubrication.
- Avoid contact of hinges with dust and waste from construction (finishing).
- In case of dirt, clean the hinges with a vacuum-cleaner or a soft brush.

- Adjustment of hinges shall be performed by specialists only.
- Doors with hidden hinges have structural closing limits (max. 105°). These doors shall be equipped with floor-level limiters or door closers with the 105° limit. Otherwise, quick wear or destruction of hinges is possible.

For more details, see the operation and maintenance manual for the door hinges.

7. Maintenance Procedures and Planned Maintenance

Cleaning and Maintenance Regimes

This maintenance schedule for P2305, Panattoni, Poyle, is to be followed from PC date 23.09.24 year on year to ensure all plant and equipment is kept within warranty.

Please keep a log of these inspections so that records can be checked should an issue arise.

Code; ✓ **Blue – Best Practice** ✓ **Red – Compulsory**

Item	Daily	Weekly	Monthly	3 Months	6 Months	9 Months	Annually	5 Yearly	Certificates	Regime
Alutech F50 Curtain Wall							✓			**Annually:** At least once a year, clean the elements of the aluminium structures and glass outside. **Do not use** gasoline, nitro solvents or cleaning agents containing acid, corrosive substances, powder (abrasives) as after their application the surface loses its shine and becomes rough. For the maintenance of gaskets, use silicone-containing substances. It can help not only clean the gasket rubber from dirt but also restore its elasticity and give water-repellent properties. In the absence of special products clean the gaskets using a soap solution, then wipe dry after removing the dirt in this manner. *Alutech F50 Curtain Wall Maintenance Manual.*
Alutech W72E Windows					✓		✓			Clean all surfaces of the aluminium structures and all mechanisms of the furniture on a regular basis. In combination with water, dirt accumulated on a component can damage the surface. Do not use aggressive agents, solvents or detergents. Use neutral soap and water. Do not use hard abrasive materials, use plastic/wooden scrapers, soft rags, brushes or a vacuum cleaner. **6 Monthly:** With the vacuum cleaner, remove dust/dirt from the area between the sealing and external frame carrier. Clean the drainage channel with a cotton bud. **Annually:** Wipe the gaskets with soap solution without aggressive detergents, this will keep the gaskets elastic and prevent sticking. *Alutech Windows & Doors Maintenance Manual.*
Dual Seal Glass		✓					✓			**Weekly:** Recommended low concentration of cleaning liquids can be used to remove visible dirt and prevent accumulation of dirt from bonding to or attacking the surface using a soft cloth. Rinse with clean water. **Annually:** Use low concentrate cleaning solution to remove visible dirt using a soft cloth. Rinse with clean water. *Dual Seal Appendix 1 Unit Maintenance*

Item	Daily	Weekly	Monthly	3 Months	6 Months	9 Months	Annually	5 Yearly	Certificates	Regime
Senior Architectural Systems - Doors			✓							**Monthly:** Clean frames with mild detergent and warm water, remove stubborn dirt with non-Abrasive proprietary. Clean seals with warm soapy water. Clean the internal glazing with window cleaner and dry lint free cloth, clean external glazing using a soft sponge/cloth with a mild detergent and warm water. *Senior Architectural System O & M Manual*

ALUTECH SYSTEMS

Guidance for Design Life (BS 7543: 2015)

System component	Predicted Service life	Short Term (table 1)	Replaceable (table 1)	Maintainable (Table 1)	Lifelong (table 1)	Category of Effects of failure (Table 2)	General notes
Aluminium extrusions	Indefinite	No	No	Yes	Yes	A, B, C, D, F & G	To protect, surface must be finished in the form of powder coating or anodising.
Powder Coating finish	25+ years	No	No	Yes	Yes	D & F	Regular cleaning espeically at coastal regions must be observed. In a non-aggressive environment, with normal use once every 12 months, in all other cases at least 2 times. Please refer to the Alutech O+M manual for the full guide.
Anodised finish	25+ years	No	No	Yes	Yes	D & F	Regular cleaning espeically at coastal regions must be observed. In a non-aggressive environment, with normal use once every 12 months, in all other cases at least 2 times. Please refer to the Alutech O+M manual for the full guide.
Thermal break	25+ years	No	No	Yes	Yes	A, B, C, D, F & G	With a vacuum cleaner remove and dust/dirst from the thermal break area. Any cleaning products please check their compatibility. Perform this operation every 6 months.
Alutech Sealants	25+ years	No	Yes	Yes	Yes	D & F	To be inspected regulary. The Alutech maitenance instructions as per the O+M manual must be aheared to. Any cleaning products must be checked for their compatibility via the COSHH data sheets. The storage conditions advised on the labels/packaging must be respected.
Butyl glazing tape	20+ years	No	Yes	No	No	D & F	The Alutech maitenance instructions as per the O+M manual must be aheared to. Any cleaning products must be checked for their compatibility via the COSHH data sheets. The storage conditions advised on the labels/packaging must be respected.

System component	Predicted Service life	Short Term (table 1)	Replaceable (table 1)	Maintainable (Table 1)	Lifelong (table 1)	Category of Effects of failure (Table 2)	General notes
Alutech fixings (Static loading only, Stainless Steel)	25+ years	No	Yes	Yes	Yes	A, B, C, D, F & G	Inspect frequently for wear/corrosion (through dissimilar metals. Replace or tighten as and when needed. To be carried out by a trained personel.
Internal glazing gasket (EPDM)	25+ years	No	Yes	Yes	Yes	D & F	Wipe the gaskets with a soap solution without aggressive detergents. This will keep the gaskets elastic and prevent sticking. Check for damage and replace.
External glazing gasket (EPDM)	25+ years	No	Yes	Yes	Yes	D & F	Wipe the gaskets with a soap solution without aggressive detergents. This will keep the gaskets elastic and prevent sticking. Check for damage and replace.
Weather seal gaskets (EPDM)	25+ years	No	Yes	Yes	Yes	D & F	Wipe the gaskets with a soap solution without aggressive detergents. This will keep the gaskets elastic and prevent sticking. Check for damage and replace.

Table 1 (taken from BS7543: 2015)

Category description	Life	Typical Examples
Short-term	Shorter life than the building and readily replaceable.	Door actuators and motors, taps
Replaceable	Shorter life than the building and replacement can be envisaged at design stage	Most floor finishes and services installation components.
Maintainable	Lasts, with periodic treatment, for the life of the building	Most external cladding, doors and windows
Lifelong	Lasts for the life of the building	Foundations and the main structural elements

Table 2 (taken from BS7543: 2015)

Catorgories of failure	Example
A	Danger to life (or injury)
B	Risk of injury
C	Danger to health
D	Costly repair
E	Costly because repeated
F	Interruption to building use
G	Security Comprimised
H	No Exception problems

Please use this document for guidance only, this does not consitute any form of guarentee or warranty. Details of our guarentee are avaliable as a separate document.

Refer to the official Alutech operation and maintenance manual for full maitenance/cleaning guidance.

Document revision 01 (Aug 2021)

3. Technical maintenance and operation of integrated windows and doors must be performed in accordance with the requirements of the appropriate document

Product	Glass cleaner
Product type	Highly concentrated glass cleaner
Description	Green viscous liquid
pH value	pH value (conc.) = approx. 8.5 pH pH value (1%) = 7.5
Article no.	6720-00100 — Bottle ,1 L
Article no.	6720-01000 — Jerry can, 10 L

Properties

Even a small amount of Glasrein is enough to make sure that it has an excellent cleaning ability to remove such common dirt accumulations as street dust, industrial emission, fingerprints etc. It gives the glass an incredible crystal-clean shine compared to other products and leave no streaks after drying. Glasrein does not contain aggressive components, does not irritate the hand skin and does not spoil the cleaning cloth. It is convenient for rubber gaskets and suitable for washing window profiles made of steel and anodized aluminium, as well as for lacquered wood frames.

Instruction for dosage

Mix no more than 20 ml of Glasrein to one bucket of water depending on the water contamination and hardness level. The product is characterized by extremely high efficiency. Overdosage should be avoided because it leads to the appearance of fat stains.

Special note

Initially Glasrein was developed as a cleaner for catering companies. However, it has been found that the high requirements set for developers such as intensive cleaning or washing greasy dishes, rinsing glassware without streaks, mirror shine after drying are ideal for window cleaning products. Therefore, today the product is increasingly used by companies that provide window cleaning services and large industrial consumers because of its unique properties that are not achieved with ordinary products. Glasrein not only provides a noticeable visual effect, but also reduces the cleaning time.

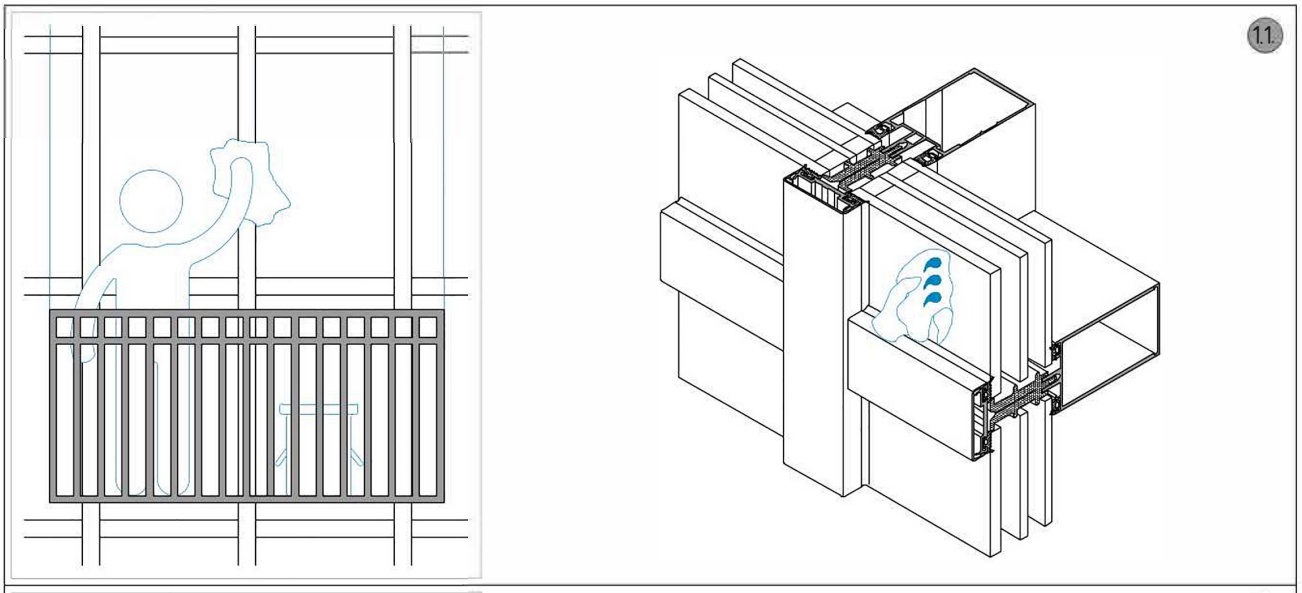
Ingredients

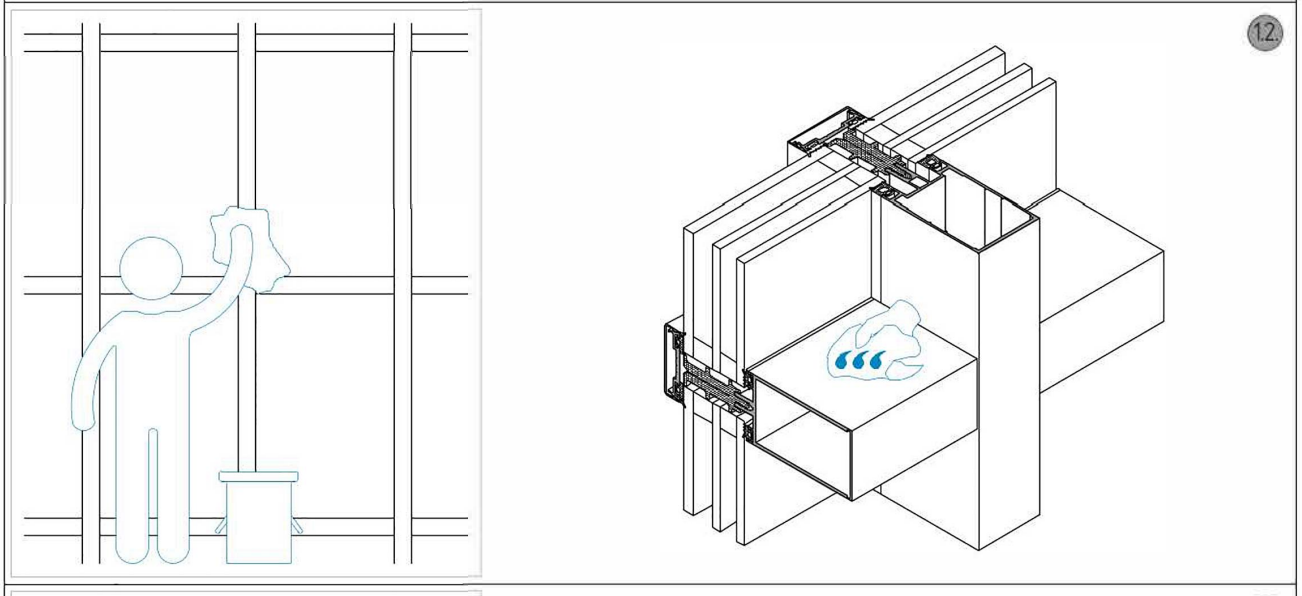
- anionic surfactants SAA5 — 15%;
- non-ionic surfactants SAA — less than 5%;
- BENZISOTHIAZOLINONE (BIT);
- METHYLISOTHIAZOLINONE (MIT).

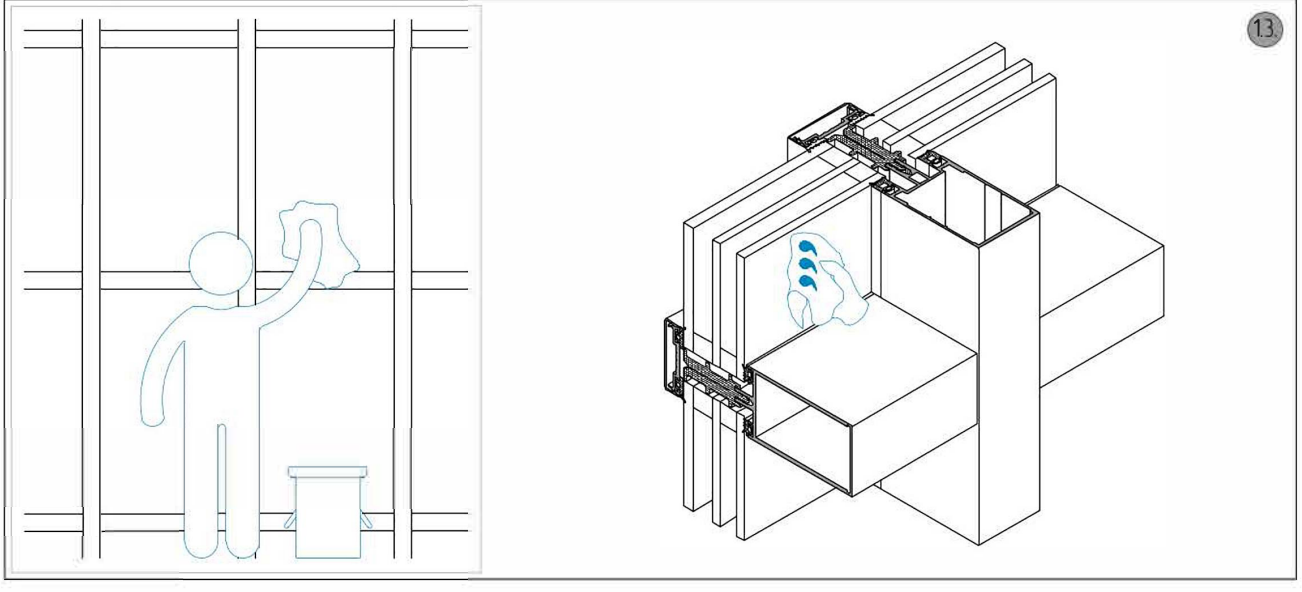
Environmental data

The surfactant included in the product is more than 98% biodegradable (in accordance with the OECD control method). The product does not contain phosphates and is registered with the Federal environmental protection agency under the number UBA 0677 0090.

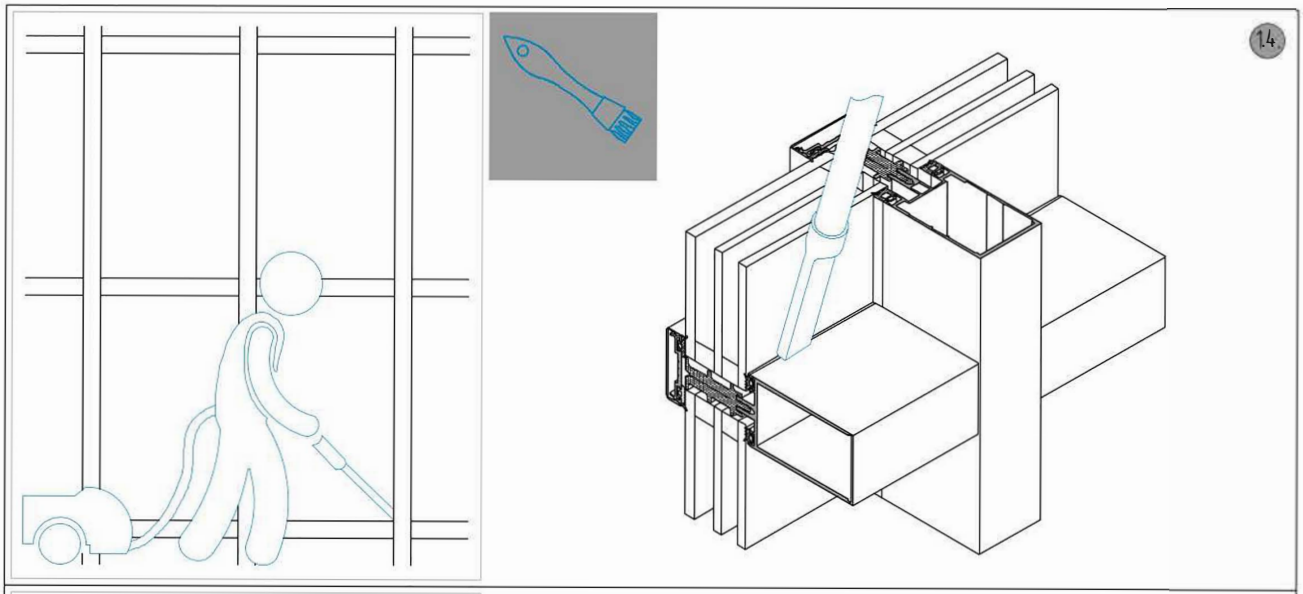
General

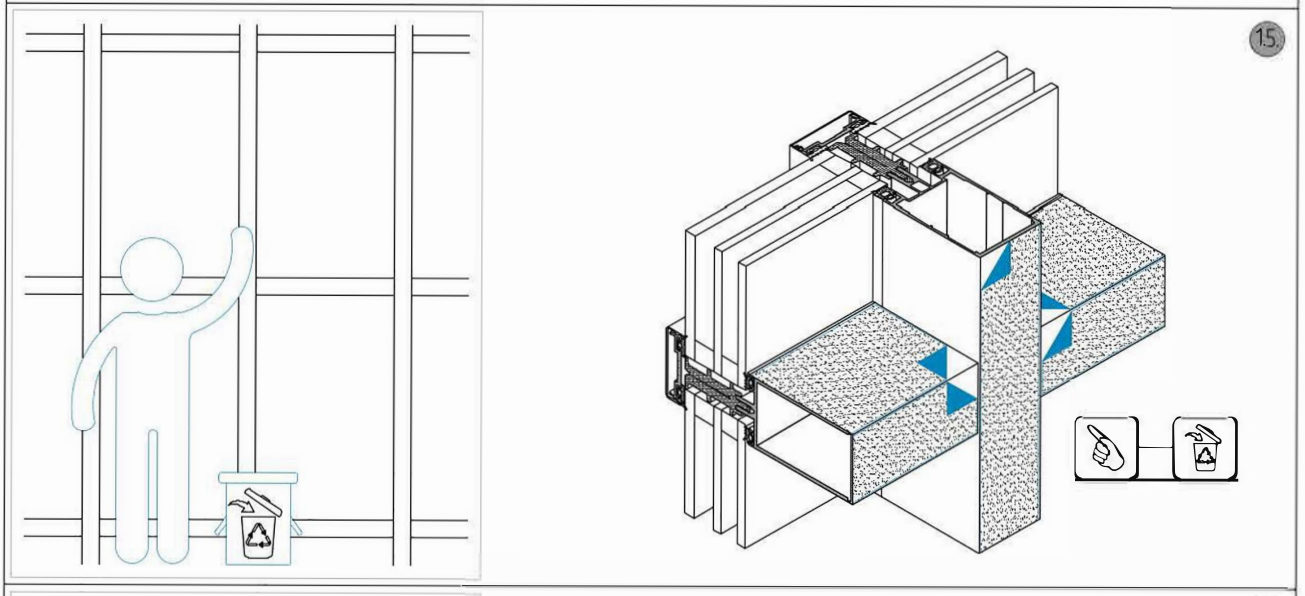


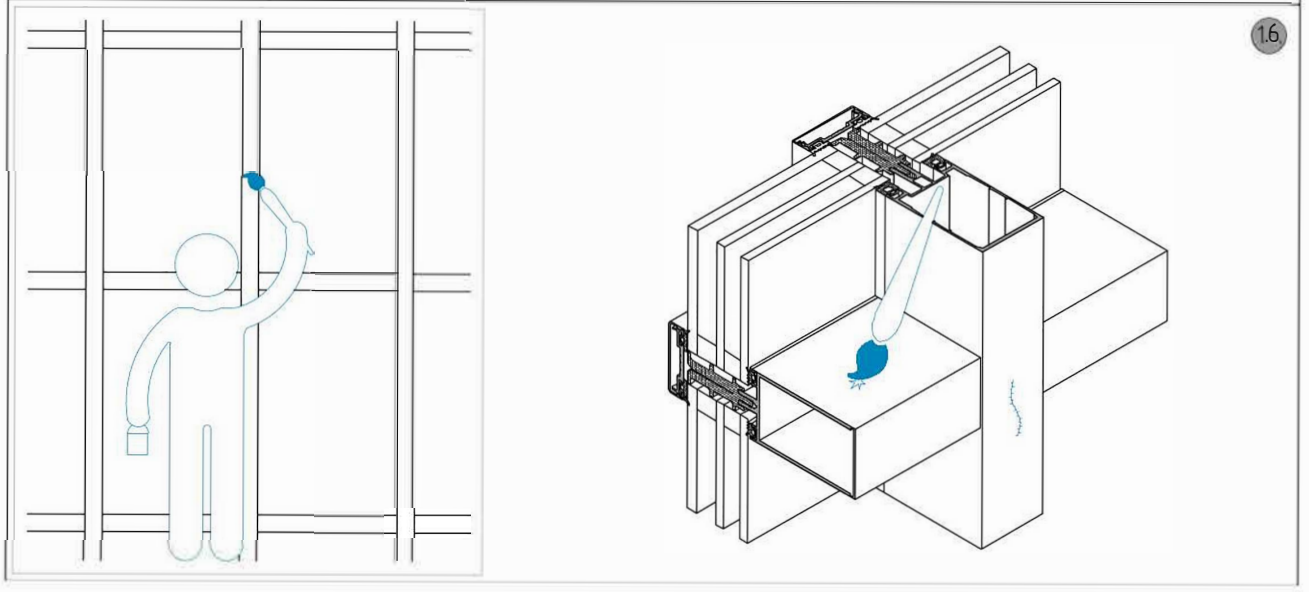




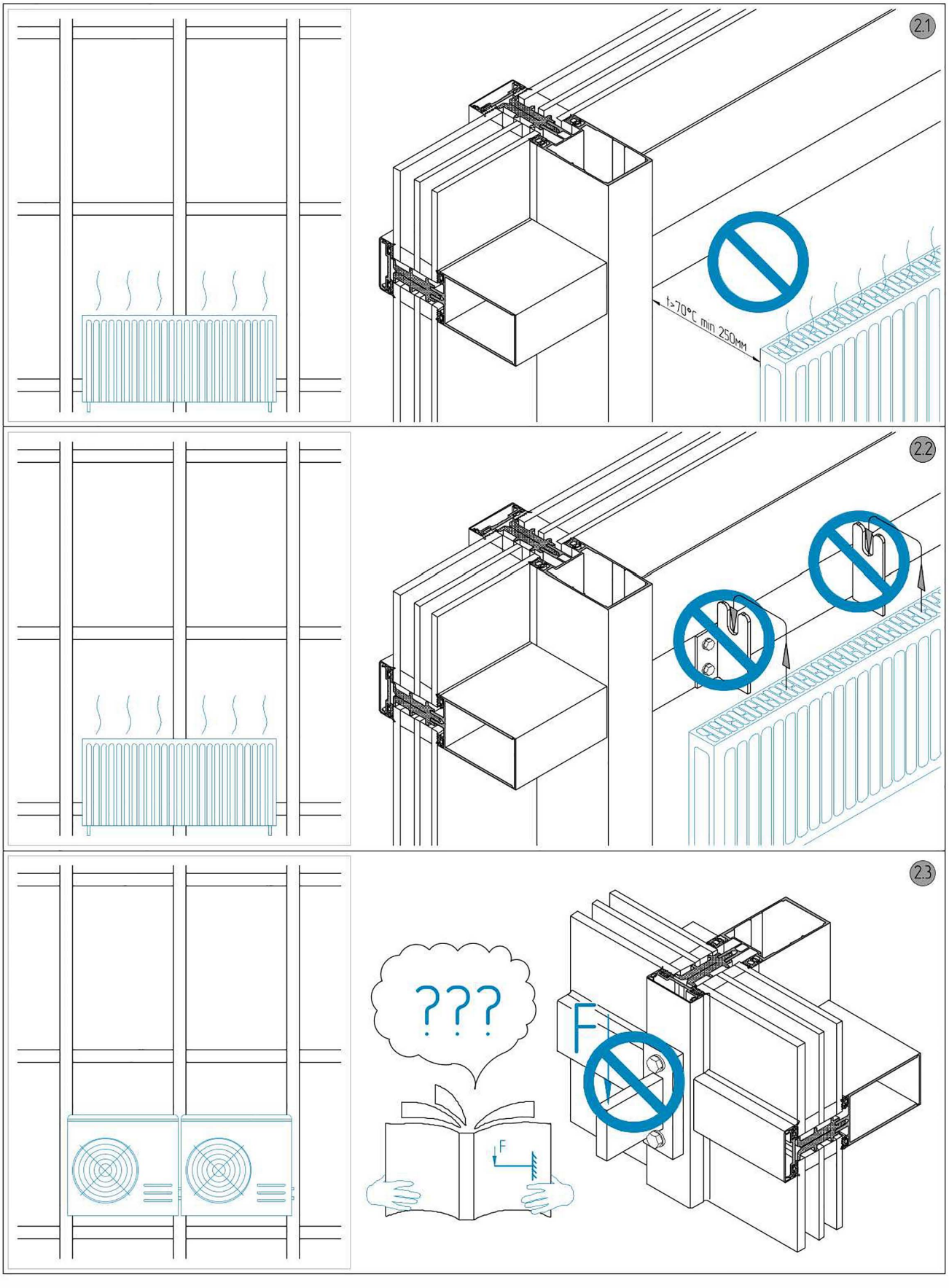
General



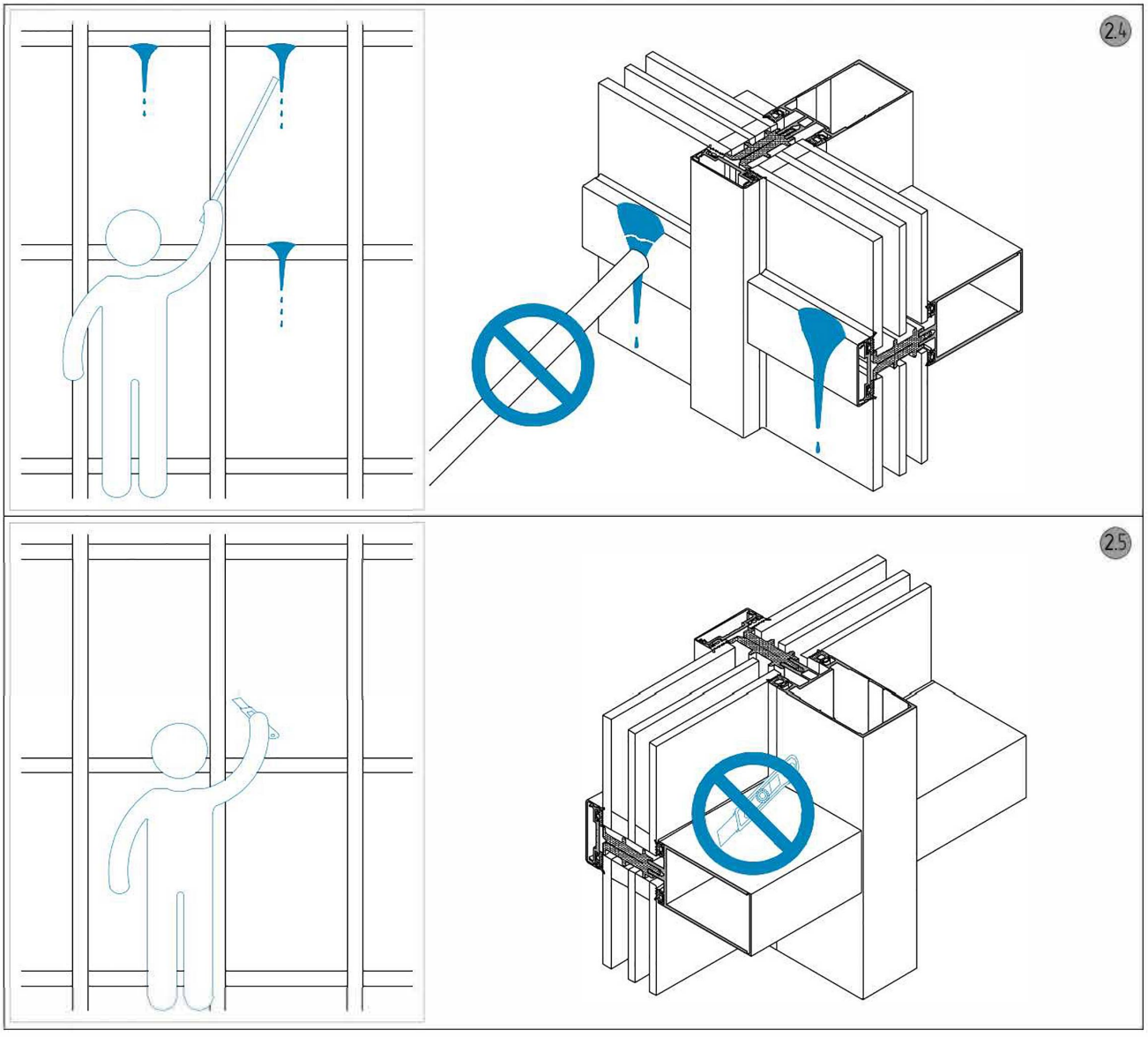




General

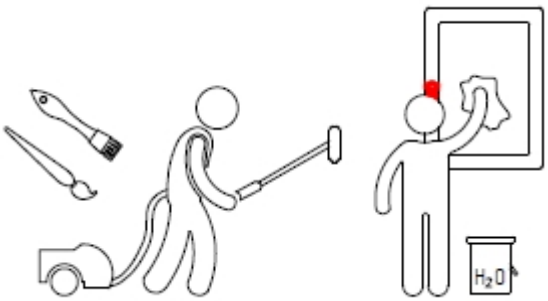


General



4. Care and maintenance

4.1. General instructions for cleaning and maintenance



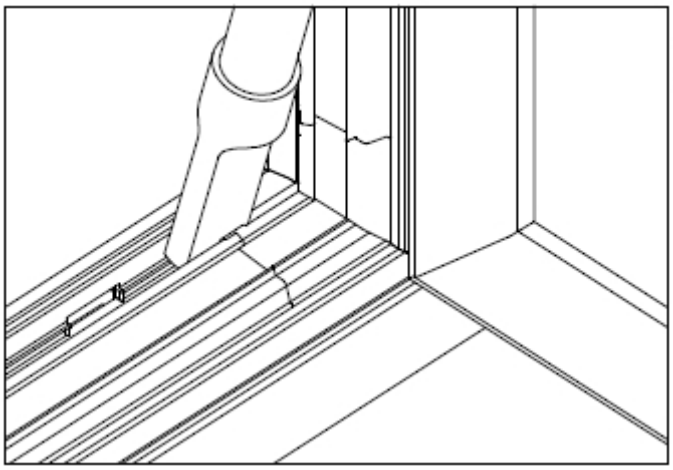
Clean all surfaces of the aluminium structures and all mechanisms of the furniture on a regular basis. In combination with water, dirt accumulated on a component can damage the surface.

Care kit recommended: Cleaning&Care manufactured by Weiss.

To protect the quality of surface of elements of the furniture with time, as well as to prevent wear resulting from corrosion, follow the below recommendations.

- Do not use aggressive agents, solvents or detergents (synthetic solvents, acetone, nitro solvents, etc.). Use neutral soap and water.
- Do not use hard abrasive materials (scrapers, metal brushes, rough sponges, etc.). Use plastic/wooden scrapers, soft rags, brushes or a vacuum cleaner.

4.1.1. Cleaning of drainage channels

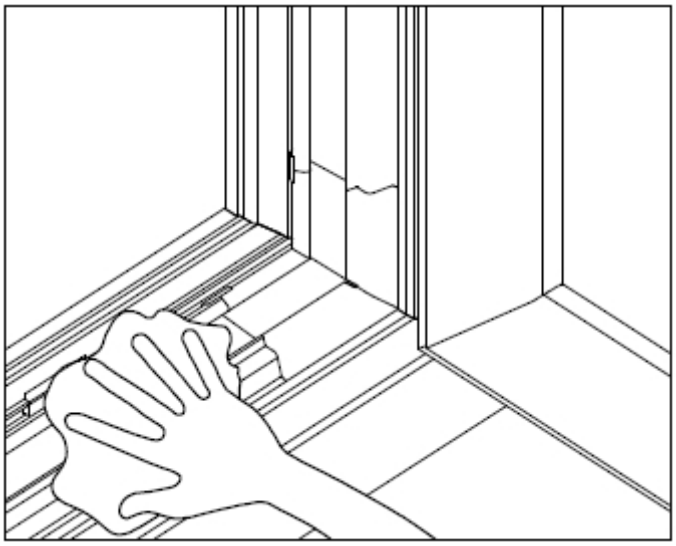


1. With the vacuum cleaner, remove dust/dirt from the area between the sealing and external frame carrier.

2. Clean the drainage channel with a cotton bud.

Perform this procedure at least 1 time in 6 months.

4.1.2. Check and lubrication of the gaskets



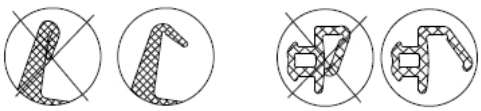
As may be required, wipe the gaskets with a soap solution without aggressive detergents.

This will keep the gaskets elastic and prevent sticking.

Perform this procedure at least 1 time a year.

Besides, check all gaskets for absence of damage, sticking or destruction:

- perimeter of the gaskets;
- joints of the gaskets.



To replace damage gaskets, apply to a specialized company.

4.2. Regularity of maintenance

The regularity of maintenance of elements of the aluminium structures is of great importance for their service life, functionality and integrity. The intervals between checks depend on the location and number of working cycles of the window/door. This is to be stated in the contract with the manufacturer. In case of defects revealed during a check, immediately apply to the relevant specialists.

Type of product	Use	Interval of maintenance	Max. number of cycles to the next maintenance
Doors (systems ALT C43, ALT C48, ALT W62 and ALT W72)	Limited use	1 time in 6 months	50,000 cycles
	Normal use		
	Heavy duty (schools, hospitals, public buildings. etc.)	1 time in 3 months	
Doors (systems ALT BF73, ALT SL160)	Limited use	1 time in 6 months	10,000 cycles
	Normal use		
	Heavy duty (schools, hospitals, public buildings. etc.)	1 time in 3 months	
Windows	Normal use	1 time in 12 months	5,000 cycles
	Heavy duty	1 time in 6 months	

The information regarding the regularity of maintenance of profiles and furniture provided in the table is for products installed in non-aggressive environment, provided the aluminium structures are not exposed to rain. In other cases, increase the regularity at least 2 times.

Here is an incomplete list of aggressive environments/ risk factors:
– close proximity to coasts (< 10 km), estuaries or large rivers (< 5 km);
– location above water;
– industrial areas with great emissions of chemicals, fluorides, gases and ore materials;
– transport impact (motorways, railways, airports, etc.);
– aggressive environment (swimming pools, industrial water treatment, laboratories, organic animal pollution, etc.).

Improper maintenance entails the risk of injury!

Improper maintenance can cause serious injuries/ damage of property.

Types of works and their performers

Type of work	Specialized company	End user
Tightening of fasteners	✔ Permitted	✘ Prohibited
Replacement of damaged fasteners	✔ Permitted	✘ Prohibited
Replacement of structural elements or furniture	✔ Permitted	✘ Prohibited
Adjustment of furniture	✔ Permitted	✘ Prohibited
Cleaning of dirt	✔ Permitted	✔ Permitted
Lubrication of moving and fixed elements of furniture	✔ Permitted	✔ Permitted

4.3 Cleaning and maintenance of windows

For the regularity of cleaning and service, see section 4.2 of this manual.

Avoid accidental removal of elements of the furniture in operation or during cleaning/maintenance.

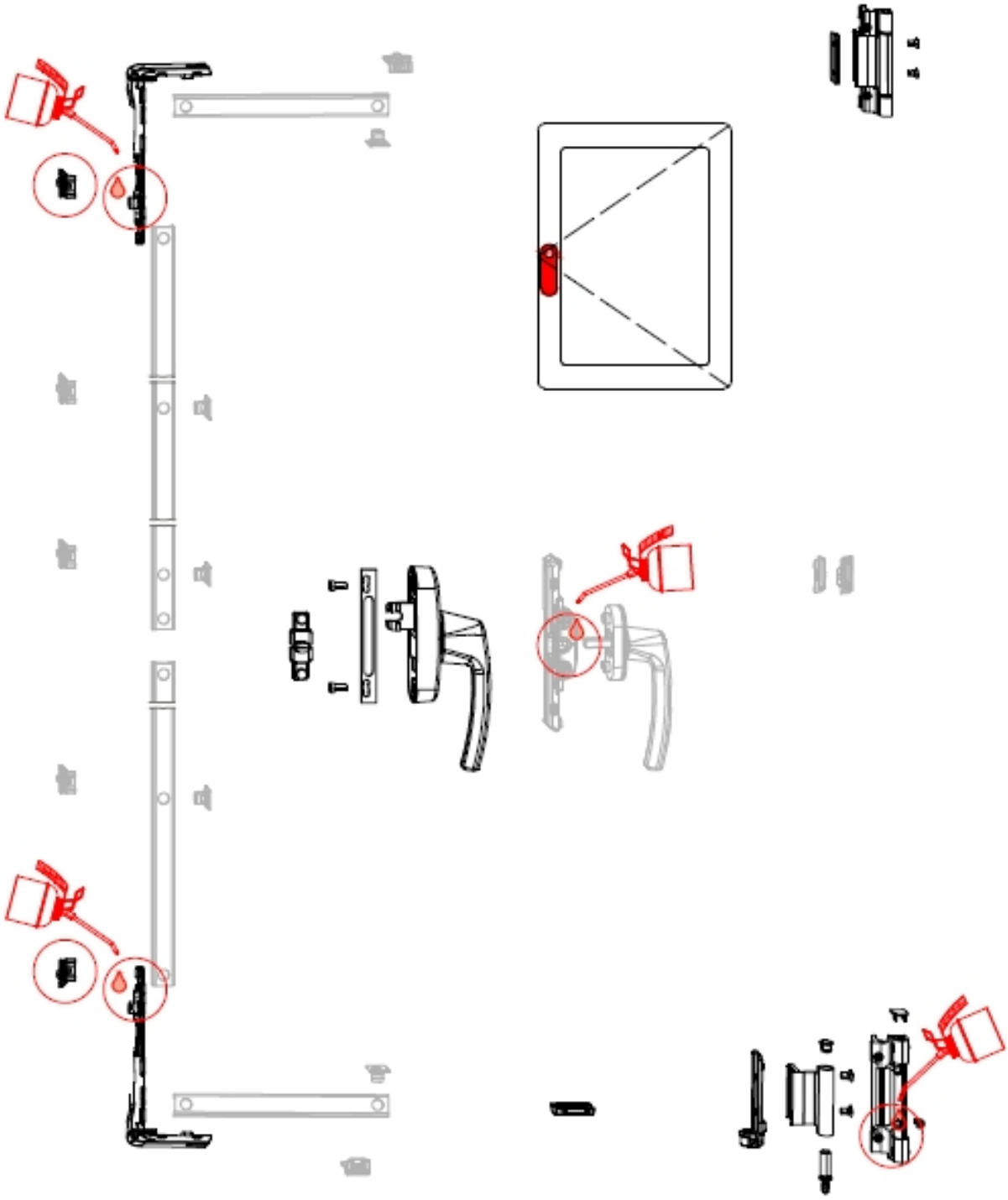
1. Check the efforts applied to turn the handle and close/open the window: they can insignificantly increase relative to the start of operation. To avoid accidental damage of elements of the furniture and product structure, in case of defective opening/closing, never apply extra efforts.

2. Check elements of the window for obstructions or dirt (building materials, dust, etc.). Clean the channels, drainage holes, slots and elements of the furniture with a vacuum cleaner or a soft rag and detergent with neutral pH, dissolved.

3. Check all safety-relevant elements of the window (hinges, opening limiters, etc.). Deformation or damage, as well as loose or missing fasteners shall be excluded. In case of the above defects, apply to the specialized company-installer of the product.

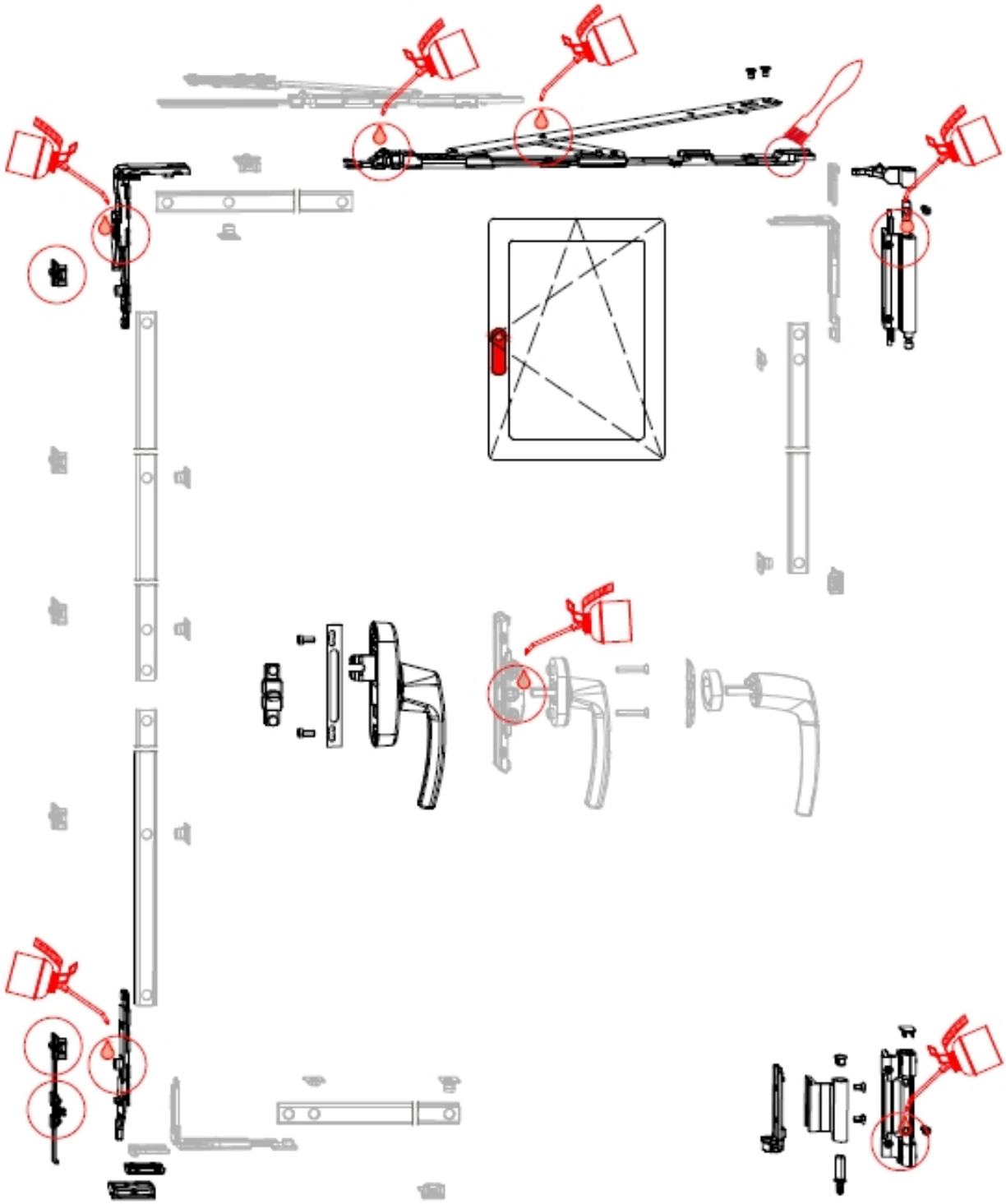
4. Lubricate all contacting metal parts exposed to friction. For the lubricating points and recommended compounds, see clauses 4.3.1 to 4.3.8.

4.3.1. Lubricating points of turn windows (furniture: Roto)



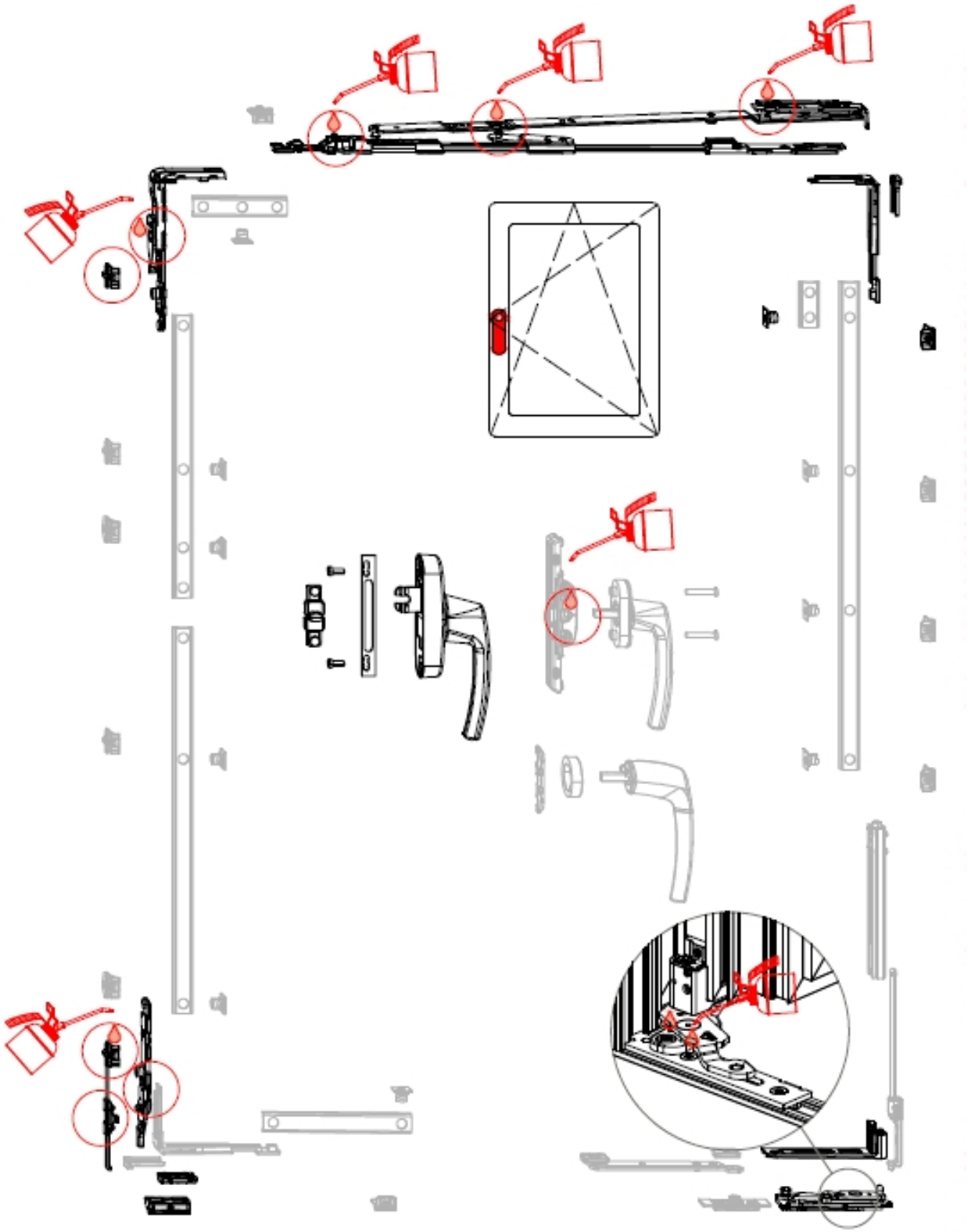
Recommended lubricating compound: brand compound Roto art. 783472

4.3.2. Lubricating points of tilt and turn windows (furniture: Roto)



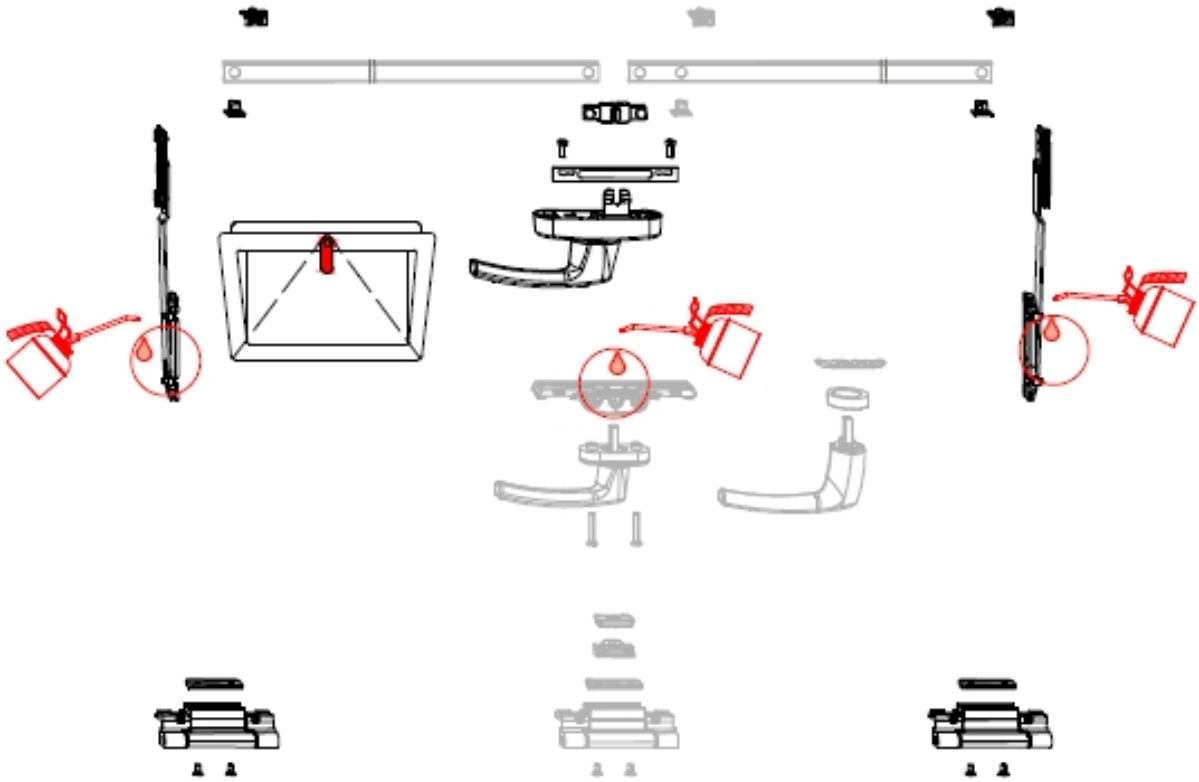
Recommended lubricating compound: brand compound Roto art. 783472

4.3.3. Lubricating points of tilt and turn windows with hidden hinges (furniture: Roto)



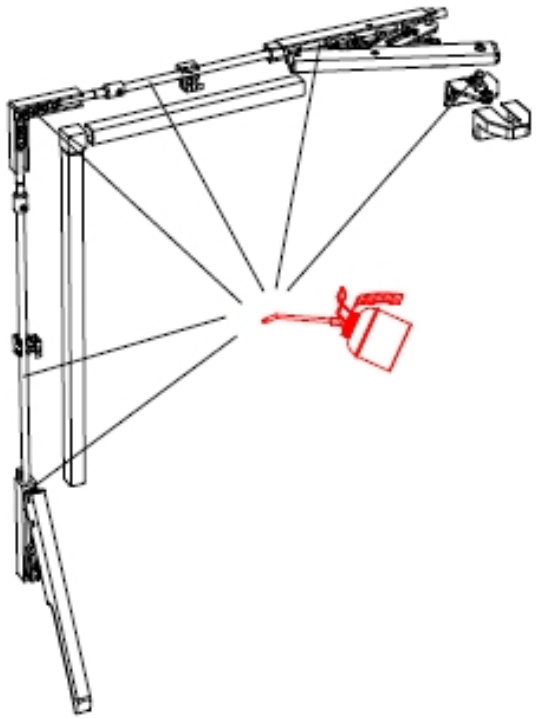
Recommended lubricating compound: brand compound Roto art. 783472

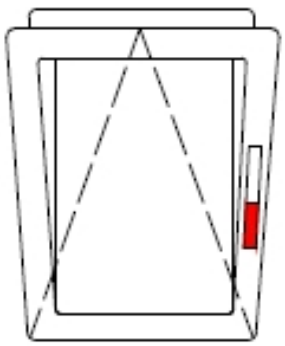
4.3.4. Lubricating points of tilt windows (furniture: Roto)



Recommended lubricating compound: brand compound Roto art. 783472

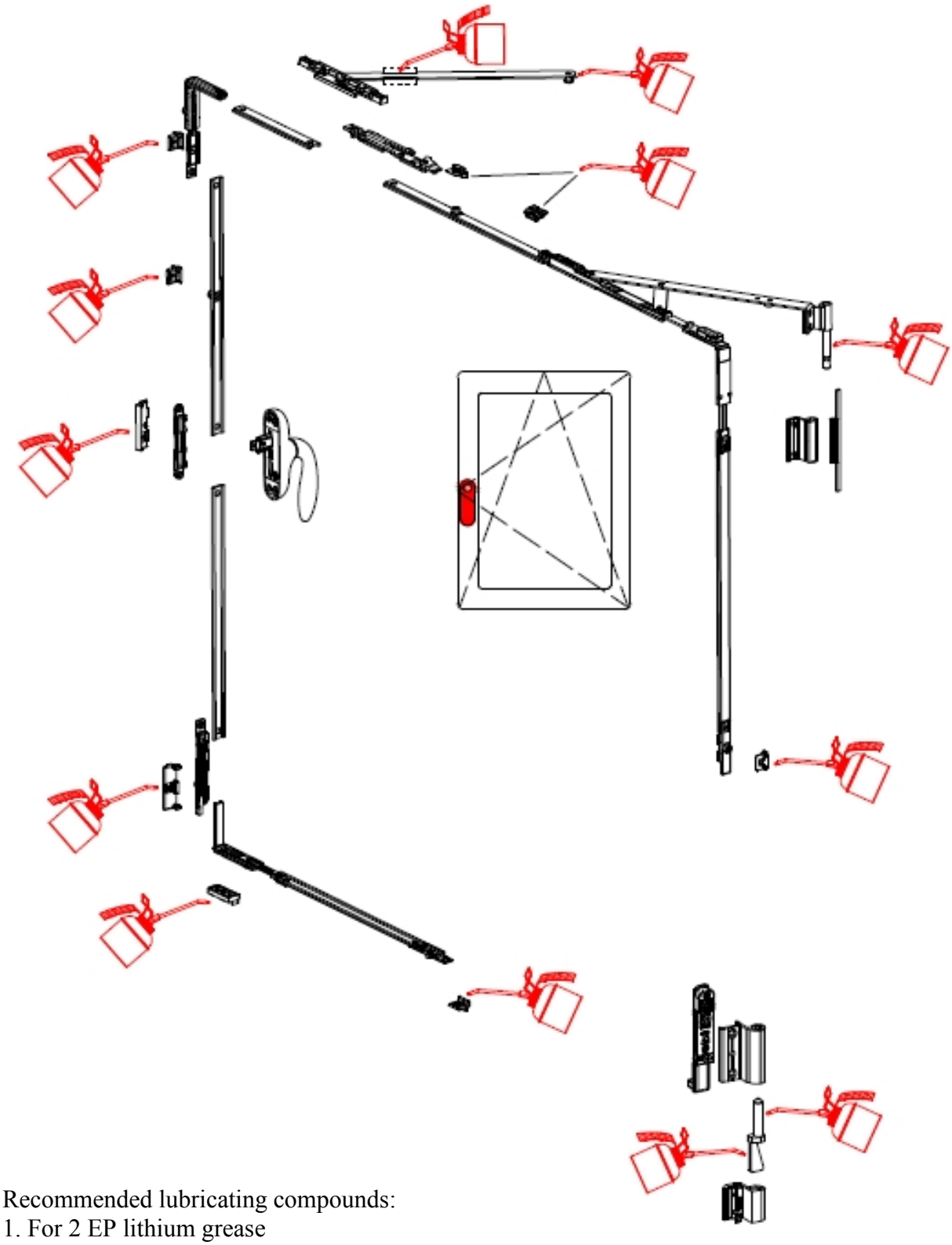
4.3.5. Lubricating points of tilt windows (furniture: Stublina)





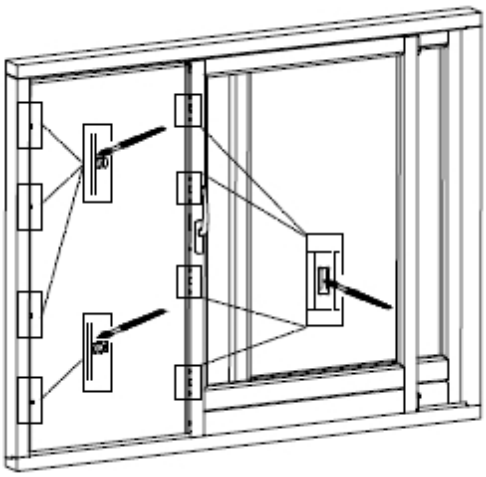
Recommended lubricating compounds:
1. For 2 EP lithium grease
2. ISO L – XCCHB 2
3. DIN 51 502:KP 2K-30
4. SRPS B.H3.624

4.3.6. Lubricating points of tilt and turn windows (furniture: Stublina)



Recommended lubricating compounds:
1. For 2 EP lithium grease
2. ISO L – XCCHB 2
3. DIN 51 502:KP 2K-30
4. SRPS B.H3.624

4.3.7. Lubricating points of lift and slide doors (furniture: Hautau)

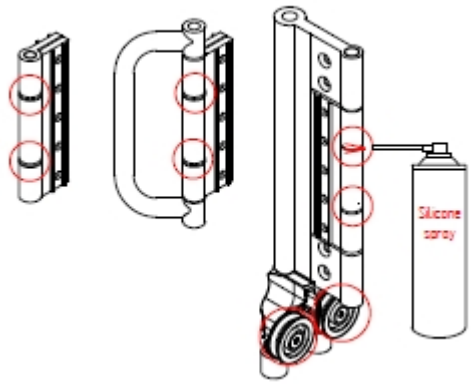


4.3.8. Lubricating points of folding and sliding doors (furniture: Debar)

Lubricate all moving elements of the doors:

- Hinges in the intermediate washer area
- Roller bearings and the steel guide
- Locks

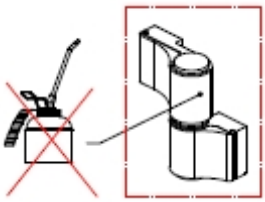
Use silicon spray to lubricate the furniture.



4.4. Cleaning and maintenance of doors

For the regularity of cleaning and maintenance, see section 4.2 of this manual.

4.4.1. Hinges



Check the efforts applied to open/close the lock, turn the handle and close/open the door: they can insignificantly increase relative to the start of operation. To avoid accidental damage of elements of the furniture and product structure, in case of defective opening/closing, never apply extra efforts.

Check the tightness of hinge fasteners on the frame and leaf and tighten them, as may be required. The torque shall be within the limits stated in the installation manual for the hinges.

Check the leaf for skewness. As may be required, adjust the position of the leaf with hinges according to their installation manual.

Door hinges need no additional lubrication within the period of use.

4.4.2. Door closers

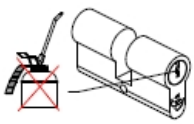
Regularly check elements of door closers for wear to ensure their function is correct and reliable.

1. Clean all elements of the closer with a vacuum-cleaner, brush or soft rag and a detergent with a neutral pH, dissolved.

2. Inspect elements of the closer for damage. Check the availability and tightness of all fasteners. To eliminate defects, apply to the specialized company-installer of the product.

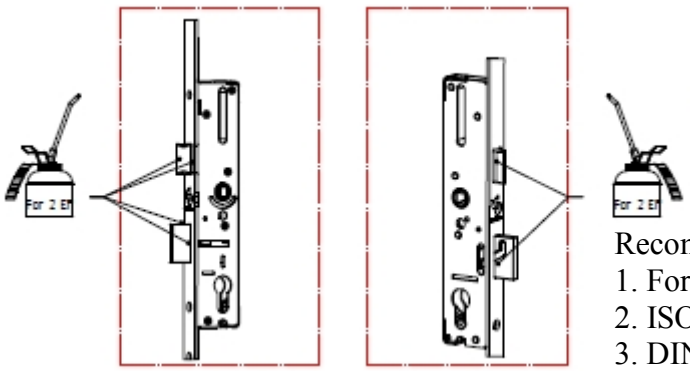
3. Check the smoothness and speed of operation of the closer by closing of the door. For any adjustment, apply to the specialized company-installer of the product.

4.4.3. Profile cylinder



Lubrication using graphite powder is recommended regularly or by first seizure of the key when entered in/ removed from the cylinder. Do not use oils for lubrication – this can cause accumulation of dust and damage the internal mechanism of the cylinder in future.

4.4.4 Lock



Recommended lubricating compounds:
1. For 2 EP lithium grease
2. ISO L – XCCHB 2
3. DIN 51 502:KP 2K-30
4. SRPS B.H3.624

1. With the door open/closed, try closing/opening of the lock with the profile cylinder and pressing on the set. The operation of the mechanisms shall be smooth, excluding any seizure.

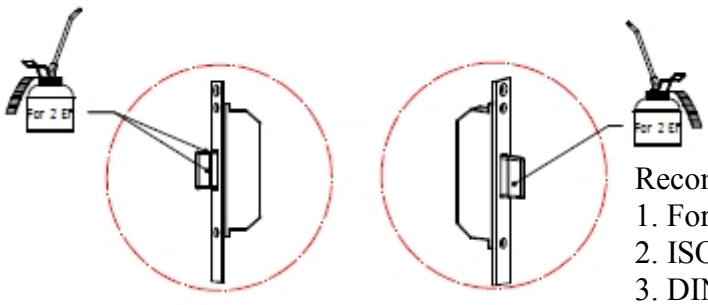
2. Check the fixation of the striking plate on the frame, close the door and check the contact between the leaf and the frame (correct pressing of the gasket). In case of defects, adjust the ledge with the striking plate (provided it is adjustable). See the lock installation manual.

3. Inspect the lock to make sure that the screws fixing it to the profile, as well as the screw fixing the cylinder are tightened until stop.

4. Open and close the door and make sure that all elements of the furniture work smoothly and are in a good condition. As the case may be, to remove the possible play resulting from settling of the door, adjust the position of the striking plate. See the lock installation manual.

5. Lubricate the contact area of the latch/ striking plate, as well as the internal mechanism of the lock via the latch holes (in the closed position) and the dead bolt (in the closed position).

In case of multilocking mechanisms, lubricate all additional locking elements.



Recommended lubricating compounds:
1. For 2 EP lithium grease
2. ISO L – XCCHB 2
3. DIN 51 502:KP 2K-30
4. SRPS B.H3.624

OVERALL GENERAL MAINTENANCE

MAINTENANCE

Senior Architectural Systems offers a range of systems which are easy to use and maintain but in order to ensure maximum lifespan it is important to maintain individual parts regularly.

In order to maintain the system warranty the following cleaning and maintenance instructions should be carried out at least **once per year.** However a more regular maintenance regime will be required if they are subjected to any of the following:

- Strong sunlight on south facing facades.
- Installed in a marine or industrial environment.

CURTAIN WALL

In terms of maintenance, not much can be done when it comes to Curtain Wall systems. We recommend frequent cleaning of the aluminium profile and glazing with warm soapy water using a soft sponge/cloth. All cleaned areas should be thoroughly rinsed and dried after. Gaskets may be cleaned using warm soapy water or a mild detergent using a soft cloth or sponge. Ensure no gaskets become dislodged when cleaning.

TIMBER

The wood frame should be dusted with the occasional use of domestic furniture polish and wiped clean regularly.

Wood is a natural product that can contain resin. Occasionally beads of crystallised resin may form on the surface of the frame. These beads can be removed by gently rubbing with a cloth dampened with meths or other alcohol based substance. After this process the lacquer must be re-applied to the repair area. The frames should be checked for breaches in surface treatment at least once per year.

If the surface has been damaged it should be repaired immediately using a water based lacquer, to prevent the wood from absorbing moisture. If any algae growth exists, a fungicidal wash is recommended as a pre-treatment for external wood.

Replacement: 40+ years.

GASKETS

Gaskets should be cleaned using warm water with a few drops of mild detergent. Contact with paint or wood preservative must be avoided.

The visible part of the surface of the product shall be cleaned **every 6 months** (e.g. in connection with window-cleaning, etc). When cleaning, use a lukewarm soap and water mixture or a 1.5% sodium bicarbonate solution, some dilute alcohol solution can be use when the surface is very dirty. Apply the solution on the product using a sponge or cloth; wipe the wet product with a clean soft cloth. When cleaning, do not use any sharp edged objects or tools e.g. wire brushes, emery paper, etc. and do not use any kind of strong solvents as white spirit, acetone, etc. Special requirements, like to have a more “glossy” surface, use products for treatment of rubber products, e.g. sold by traders in spare parts for cars. These surface treatment products should be used in accordance with the information from the respective agent.

When cleaning the gaskets, it is essential to ensure that a mild cleaning agent is used, which contains no organic solvents. Sharp acidic or caustic cleaners are also to be avoided. Commercial glass cleaners that contain ethanol or isopropanol are not a problem for the sealing-materials, as long as they are allowed to evaporate directly after use.

To prepare the gaskets optically, they can be treated with a suitable care product like glycerine, applied by softly rubbing on to the surface. Strong pressure on the gaskets while cleaning or applying a care or cleaning agent is to be avoided.

Replacement: 20-25+ years.

GLASS

This should be cleaned with a soft cloth and luke warm water with a few drops of mild detergent (detergents must not contain solvent or abrasive substances). Hard brushing, scrubbing or the use of steel wool will produce scratches and must therefore be avoided.

Replacement: 25+ years.

POWDER COATED FINISH

To retain the aesthetic qualities and ensure a long coating life, powder coated articles have to be cleaned.

The British Standard for powder coating on aluminium for external use, BS 6496:1984 (1991) states that a six monthly cleaning schedule is the maximum recommended frequency. Areas of high industrial pollution, marine or swimming pool environments (aggressive environments) will require different cleaning frequencies and other coating/ fabrication parameters should be considered on an individual project basis but generally cleaning should be carried out at least every 3 months. To retain a guarantee on the coated metal it is a mandatory requirement to have logged proof of cleaning on a monthly basis, which is to be retained by the building occupier. This is to be held for the lifetime of the guarantee, normally 15 to 25 years, except in aggressive environs where each building is given an individual time span for the powder coating guarantee.

To clean the building, mild detergent dissolved in warm water is to be used. Approved products to dilute are: Ajax Cream / Liquid Gumption / Flash and Ajax Liquid Abrasive cleaners, strong acidic or alkaline cleaners or cleaning products containing solvents, bleach, washing soda, caustic soda, hydrochloric acid brick wash etc. must not be used on or near the coated articles. The use of these cleaning agents will negate the guarantee for the coating, and will reduce its life span. An assessment of the cleaning product data sheet will be required to ensure safe working practise is observed by the cleaning contractor, ensure splashing and run off rinse is not going to be a problem to your employees or the Local Environmental Agency.

Replacement: 40+ years.

CONDENSATION

Water vapour is indefinitely present in the atmosphere. In a home environment the content is increased through daily activities such as cooking, boiling water, bathing etc.

To control condensation, sufficient ventilation is the best method. Achieve this by opening windows, fitting extraction units or by fitting wall vents to provide an air flow.

CLEANING DOS AND DON'TS

NATURAL ANODISED / ANOLOK FINISH

In order to protect the appearance of the materials, the finish must be regularly maintained. This is best carried out as part of the window cleaning programme.

Fabrications should be protected by tape during installation. Any adhesion residue should be removed with solvent recommended by the tape supplier. The anodised surfaces should be washed down every three months. In Heavy Industrial or Marine environments, this cleaning may need to be more frequent, but the condition of the surface will make this apparent. This should be carried out using a non-alkaline detergent (i.e. Tepol) in warm water and dried down with a cloth such as a chamois leather. Cleaning solutions should have a PH figure of between 6.5 and 7.5.

Use of a more aggressive cleaner will not compensate for the lack of regular maintenance. In fact the use of such a cleaner will damage the surface.

An unobtrusive area should be test cleaned before work begins. The cleaner should be in the same concentration as will be used and applied in the same manner. The cleaner should be allowed to dry on the surface to judge the effect on the finish. It may be necessary to scrub some surfaces, particularly in areas where dirt accumulates because rain does not wash away very fine deposits naturally. This should be carried out using Scotchbrite pads (fine or ultra fine), stiff bristle or nylon brush. In the case of tenacious deposits or smut reformation, it may be necessary to use more aggressive cleaners such as Floxal Reiniger or Scotchbrite pads. The latter problems usually only occur when the general cleaning is inadequate for the local environment. After all cleaning, surfaces should be washed down to prevent deposits remaining on the finish. A normal 25 micron Anolok film, located in a city, rural or marine atmosphere maintained as described, would be expected to give excellent performance for many years.

Replacement: 40+ years.

DO

- Carry out a trial in an inconspicuous area to make sure cleaning has no adverse affects.
- Clean frames with mild detergent and warm water every month to remove grime and dirt which may have built up over time.
- Remove stubborn dirt with a non-abrasive proprietary.
- Ensure drainage slots are free of blockages and clean regularly.
- Clean and lubricate hardware as necessary.
- Clean weather seals with warm soapy water and should they come loose and carefully re-insert them to their grooves.
- Clean the internal glazing using window cleaner and a dry lint free cloth.
- Clean the external glazing using a soft sponge/cloth with a mild detergent and warm water.

DON'T

- Use high pressure hose or steam cleaners.
- Use solvent based cleaners.
- Use steel wool, sandpaper, abrasive papers etc. to clean.
- Disturb sealants when cleaning.
- Use unnecessary force when cleaning the glass with leaded Georgian bars.
- Use abrasive cream cleaners or bleach when cleaning weather seals.

ALL MAINTENANCE AND ADDITIONAL WORK CARRIED OUT DURING THE MAINTENANCE PERIOD SHOULD BE REFERRED TO

ARDENT GLAZING LIMITED
FIRST FLOOR OFFIC SUITE,
PROAKTIVE HOUSE, SIDINGS COURT,
WHITE ROSE WAY, DONCASTER, DN4 5NU
Telephone: 01302 492240

ANY MAINTENACE OR ADDITIONAL WORK AFTER THE MAINTENANCE PERIOD SHOULD BE CARRIED OUT BY COMPETENT CONTRACTORS AND OR / OPERATIVES

A Site visit will be required before any remedial works can commence.

8. Spares Information

ARDENT GLAZING LTD

P23025 – Pannattoni, Poyle

19 August 2024

To Whom It May Concern

All framework and glass is manufactured offsite to project specific sizes so no spares provided/required.

Maintenance of the relevant systems should be carried out in accordance with the respective system guidance as noted at the specified intervals and fully documented, as per the Cleaning and Maintenance Regimes issued in your O & M Manual.

All system profiles extruded from T6063 Aluminium can be fully recycled along with the glass. Upon careful dismantling in accordance with task specific RAMS all relevant materials can be collected from site by the respective suppliers and recycled accordingly.

System consumables such as EPDM and thermo plastic rubber gaskets cannot be recycled.

Ardent Glazing Ltd
ProAktive House
Sidings Court
White Rose Way
Doncaster
DN4 5NU
T: 01302 492240
E: Info@ardentglazing,co.uk
www.ardentglazing.co.uk
Company No: 13800842
VAT Reg: 400 0660 65
UTR: 85576 11756

Citation ISO Certification
Integrated Management System
ISO 9001: 2015
ISO 14001: 2015
REGISTERED
Certificate No:390932022

SAFECONTRACTOR.COM
SafeContractor
APPROVED
ALCUMUS.COM

9. Guarantees and Warranties

winvic
DOING IT RIGHT.

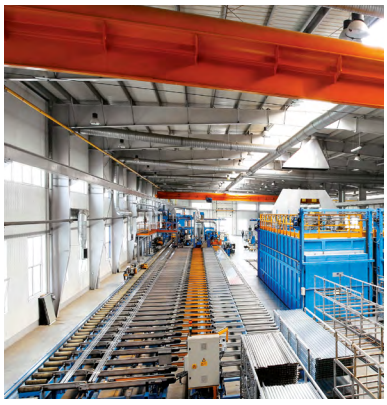
AluminTechno
ALUMINUM PROFILE SYSTEMS

ALUTECH GUARANTEE 2023–2024

Declaration of conformity

AluminTechno JLLC declares its own responsibility on products indicated in the Invoice:

Aluminium profiles	to which this declaration refers, are not dangerous to life, health and labor security, and do not harm the environment. AluminTechno JLLC aluminium profiles correspond to the European norms and standards DIN 12020-1 (profiles of the highest accuracy). Technical feature of flux also comply with the technical standards and norms of EN 573:3, EN 486:2009. Mechanical features of profiles correspond to requirements, noticed in EN-755-2. Tolerance range of profiles dimensions and shape comply with requirements EN12020-2.
Accessories	to which this declaration refers, are not dangerous to life, health and labor security, do not harm the environment. They also comply with the technical standards and norms of EU and CIS.
Sealants	to which this declaration refers, are not dangerous to life, health and labor security, and do not harm the environment. They also comply with the technical standards and norms of EN ISO 1183-1, 1183-2, ISO 7619-1, 7619-2, DIN 53504, ISO 815-1, ISO 815-2, DIN 53508.



Certificate of guarantee

AluminTechno JLLC provides a guarantee only for products, which are properly installed in accordance with norms, regulations and recommendations specified in AluminTechno JLLC technical catalogues.

AluminTechno
ALUMINUM PROFILE SYSTEMS

ALUTECH GUARANTEE 2023–2024

Object of guarantee

Products supplied by AluminTechno JLLC have the following properties and/or guarantees:

TÜV Certification	AluminTechno JLLC processes of engineering, development, production and delivery of extruded profiles and products made of them comply with the requirements of ISO 9001, which is confirmed by certificate TIC 15 100 2010947, issued by TÜV Thüringen e.V. The first certificate was issued in 2005. The environmental safety of AluminTechno products is confirmed by an international certificate of the environmental management system compliance with the requirements of ISO 14001: 2015, issued by TÜV Thüringen e.V.
Aluminium	■ Alloys: EN AW-6060, EN AW-6063. ■ Min. thickness of the coating—60 micrometers. ■ Min. thickness of profile—0.7 mm. ■ Tolerances for profile—in accordance with EN 12020-2.
Thermal breaks	■ Thermal break is made of polyamide PA 66 GF25. ■ Thermal break contributes to performance points toward LEED® Certification, the Green Building Rating System.
Coating	■ Production capacity—47000 tons of profiles per year. ■ Qualicoat class Seaside certificate. ■ Possibility of coating in all colors according to RAL catalogue, as well as special colors on clients request. ■ Types of surfaces: glossy, matt, structured. ■ The coating line can process profiles up to 7.0 m.
Anodizing	The largest complex on the territory of CIS countries: ■ Production capacity—10 000 tons of profile per year. ■ Possibility of anodizing in 9 colors. ■ Types of mechanical treatment of surface: scratch brushing and blasting. ■ The coating line can process profiles up to 7.2 m. ■ Qualanod certification.

Licence № 3900
Licence № 3900
Licence № 3000
WINTECH TESTING & CERTIFICATION
ROSENHEIM
le futur en construction

AluminTechno
ALUMINUM PROFILE SYSTEMS

ALUTECH GUARANTEE 2023–2024

Guarantee period

10 years:

Coating and anodizing	▪ Against flaking, corrosion (including micro corrosion) and filiform corrosion. ▪ Against discoloration and gloss loss colour variation beetween different batch with assumptions not greater than the tolerances determined by Qualicoat.
Thermal break	On adhesion and mechanical resistance between the thermal break and profile (the profile should be colored).
Sealing, plastic profiles	On the properties, functionality and stability of the form colour stability, corrosion resistance and compatibility resistance with other material in accordance with the certificates and parameters specified in the technical catalogs of the supplier.

3 years:

Hardware and electrical part	In full compliance with the technical specifications, based on the functionality and characteristics specified in the vendor's certificates and catalogs and according with project specification.

Conditions of a guarantee

The guarantee covers:

- The quality and composition of the aluminium alloy,
- the quality of the anodizing, coating,
- adhesion between thermal break and aluminium profile,
- the retention of thermal and mechanical properties of the insulating material—for a period of 10 (ten) years from the date of delivery of the goods.

All conditions for providing the guarantee, as well as conditions excluding the guarantee obligations are specified in the warranty contract attached to the contract for supplying of the goods.

Liability insurance

AluminTechno JLLC provides liability insurance as well as insurance against damages caused by the imperfection of the company's products (product safety insurance).

Insurance coverage territory: all countries.

Public Liability: £ 5 000 000 any one occurrence (five million pounds).

Insurance compensation procedure: In case of making damage to life or health of a citizen of a foreign country, the amount of insurance compensation and the procedure for its payment shall be established in accordance with the legislation of the country where the insured event occurred.

The following items are covered by the guarantee (as indicated on the order):

- Repairs on-site;
- Re-delivery of the faulty product;
- Fabrication costs;
- Removal and refitting costs.

Date of issue: 03.01.2023

Yury Sorokin
Export Director
AluminTechno JLLC

DUAL SEAL GLASS LIMITED - 5 YEAR WARRANTY

Project: C2401 – Panattoni Address: Horton Road, Poyle, West Berkshire SL3 0BB

Customer: Ardent Glazing Ltd Address: ProAktive House, Sidings Court, White Rose Way DN4 5NU

Issue Date: 12/07/24

1. This warranty applies to all insulating glass units manufactured by Dual Seal Glass Limited, in accordance with sealed unit quality standard EN 1279 and is valid for a period of 5 years from the date of delivery. It is only valid against insulating glass units supplied and manufactured by Dual Seal Glass Limited specifically for the project named above and is subject to the conditions set out below and the attached Dual Seal Glass Limited Warranty Analysis Report.

2. Dual Seal Glass Limited warrants that if any unbroken insulating glass unit is, through faulty manufacture;

    a. affected by material visual obscuration due to condensation; or
    b. in the case of coated glass, there is deterioration of the coating,

    Dual Seal Glass Limited shall at its discretion either supply a replacement insulating glass unit or pay the reasonable cost of a replacement insulating glass unit provided that;

    a. the Customer gives notice in writing to Dual Seal Glass Limited during the warranty period within a reasonable time of discovery that some or all of the insulating glass units do not comply with the warranty set out in clause 2;
    b. the insulating glass units are unbroken;
    c. Dual Seal Glass Limited is given a reasonable opportunity of examining such insulated glass units prior to deglazing or during deglazing;
    d. the Customer (if asked to do so by Dual Seal Glass Limited) returns such units to Dual Seal Glass Limited at the Customer's cost;
    e. Dual Seal Glass Limited concludes that the insulating glass units are defective;
    f. the insulating glass units have been maintained in accordance with Appendix 1 and Appendix 2 of this warranty; and
    g. the insulating glass unit(s) have been handled, stored, installed and maintained in accordance with current best practice as defined in British Standard 8000 Parts 0 & 7, BS 6262 or the Glass and Glazing Federation Data Sheet 4.2 (System Design and Glazing Considerations for insulating glass units) as amended, appropriate Glazing Compound Manufacturers' technical specifications and any subsequent recommendations of Dual Seal Glass Limited.

If after inspection Dual Seal Glass Limited concludes that the insulating glass unit(s) is/are not defective, the Customer shall be responsible for any cost associated with inspection e.g. site access costs.

3. Dual Seal Glass Limited shall not be responsible for any costs associated with the replacement of any insulating glass unit including but not limited to;

    a. installation, fitting, handling or storage of any insulating glass unit, panels, site access or other associated items; any glazing in respect of any replacement of any insulating glass unit and any associated
    glazing materials; and
    b. any decoration of any insulating glass unit.

The Customer shall be responsible for all costs associated with the replacement of the insulating glass unit(s).

4. Should the Customer require an independent inspection of the sealed glass unit(s), a mutually acceptable independent body such as the Glass and Glazing Federation shall be appointed, and any cost/charges incurred by doing so shall be paid by:

    a. Dual Seal Glass Limited if the decision is made in favour of the Customer; or
    b. the Customer, if the decision is made in favour of Dual Seal Glass Limited.

5. **This warranty does not apply in the following circumstances:**

    a. the defect arises as a result of Dual Seal Glass Limited following any drawing, design or specification supplied by the Customer;
    b. the Customer alters or repairs the insulating glass units without the written consent of Dual Seal Glass Limited;
    c. the insulating glass units have cavity widths of less than 12 millimeters;
    d. insulating glass units which have not been maintained strictly in accordance with current industry recommendations (copies are available upon request in writing to Dual Seal Glass Limited) and/or any recommendations/methods of the glazing system manufacturer;
    e. insulating glass units showing the optical phenomenon occasionally seen as interference colour bands, known as "Brewster's Fringes";
    f. insulating glass units which have been exposed to abnormal conditions in service or, have been used or transported at altitudes over 800 metres, unless the warranty has been specifically extended in writing to cover that use or transportation;
    g. insulating glass units intended for structural glazing systems requiring specific ultra violet tolerance factors, unless a design variation incorporating ultra violet resisting seals has been stated in the original specification by the Customer and confirmed in writing with Dual Seal Glass Limited;
    h. insulating glass units to which any surface coating or film have been applied after leaving the manufacturing site, unless approved in writing by Dual Seal Glass Limited;
    i. insulating glass units affected by influences beyond the control of Dual Seal Glass Limited, including (but not limited to) incorrect installation, poor maintenance, building subsidence or movement, frame distortion, nickel sulphide or other inclusions; and spontaneous breakage caused by inclusions in glass. Such breakages are a rare occurrence and are not covered by glass manufacturers whether the glass is heat soak tested or not.

6. Except as provided in clause 2, Dual Seal Glass Limited shall have no liability to the Customer in respect of the insulating glass units' failure to comply with the warranty. Dual Seal Glass Limited shall not be liable for any labour, materials, loss (including loss of profits), costs or damages (whether special or consequential or otherwise) howsoever caused or arising and whether direct or indirect.

7. All replacement insulating glass unit(s) supplied will be on a "like for like" basis using standard components available at the time of construction. Should it be necessary to source the replacement sealed unit from another supplier, this warranty would not apply for that product.

8. This warranty applies only to insulating glass units installed within the United Kingdom.

9. A claim is only valid when it is made in writing to Dual Seal Glass Limited, 403 Leeds Road, Huddersfield, West Yorkshire, HD2 1XU, prior to the fifth anniversary of the date of delivery of the insulating glass unit(s) from Dual Seal Glass Limited.

10. Any replacement for an insulating glass unit to be provided under the terms of this warranty shall be the nearest available equivalent product reasonably obtainable at the time of replacement and will be delivered to the Customer's normal place of business. Any replacement insulating glass unit shall have the benefit of this warranty for a term which expires the same date as the original term of **five years** referred to in this warranty.

11. This warranty does not form part of any contract of sale, but is not intended to affect, or otherwise replace, rights or obligations conferred by any contract of sale, or by common law.

12. Any claim under this warranty will be governed by the laws of England and Wales and shall be referred to a court having jurisdiction in England.

13. The benefit of this warranty is not assignable or transferable to third parties.

COMPLIANCE WITH DUAL SEAL GLASS LIMITED MAINTENANCE RECOMMENDATIONS IS ESSENTIAL. FAILURE TO COMPLY WITH THEM WILL INVALIDATE THIS WARRANTY.

Validation Date: 12.07.24

Print Name: DANIELLE ADAMSON

Signature: D. Adamson

Quality Technical Assistant of Dual Seal Glass Limited.

DUAL SEAL GLASS LIMITED – 5 YEAR WARRANTY

APPENDIX 1

INSULATING GLASS UNIT MAINTENANCE

General Principles

The fundamental principles underlying the correct glazing of well made insulating glass units in order to achieve a long service life are: -

- Prevention of prolonged contact of moisture with the edge seal of the unit
- Compatibility between the edge seal of the unit, the glazing materials and if applicable, coatings on the glass
- Protection of the edge seal of the unit against sunlight
- Quality of workmanship

It is important to realise that insulating glass units are fundamentally different from most single glasses, in that they have an organic edge seal. However well they are glazed, insulating glass units cannot be expected to have the same life expectancy as single glass.

Moisture Attack

The major enemy of insulated glass units is liquid water. If liquid water is trapped against the edge seal of a unit for a long period. Failure of the adhesive bond of the sealant to the glass will result. This will allow liquid water and / or moisture to pass between the edge sealant and the glass, which leads to excessive moisture vapour in the unit cavity and ultimately to condensation on the internal glass surfaces.
Under prolonged contact with liquid water, the insulated glass unit will fail prematurely. Even if failure of the adhesive bond of the sealant does not occur, the presence of liquid water in the glazing rebate will lead to premature failure of an insulated glass unit.
Water in the form of moisture vapour is able to permeate through the edge sealant into the insulated glass unit cavity. The rate of permeation of moisture vapour is dependent on the properties of the edge sealant and the concentration of moisture vapour. However low the rate of moisture vapour permeation, it is inevitable that, after a period of time, excess moisture in the insulated glass unit cavity will occur and condensation on the internal glass surfaces will result.
Moisture can penetrate into the frame rebate area, either through or around the glazing system, or through frame joints into the glazing system, from a variety of sources such as;

- Rainwater
- Window cleaning operations
- Condensation within frame sections
- Condensation on the room side or outside glass surfaces

All glazing systems must protect the edge seal of the insulated glass unit, either by preventing access of water to the seal, or by ensuring that any water which penetrates as far as the edge seal is soon removed by drainage / ventilation of the rebate area.

Glazing Workmanship

Site facilities and conditions and the skills of operators can vary considerably. Supervision is difficult and as a result the quality of workmanship may vary widely and with it the durability and reliability of the system.

The workmanship for on-site glazing must conform to BS 8000 Part 0 & 7 and to Glass and Glazing Federation Data Sheet 4.2.

Compared with on-site glazing, factory glazing has the advantages of being easier to control the quality of workmanship and of being carried out in a clean, dry atmosphere without problems of access to frames. Glazing contractors should be properly trained and conversant with good glazing practice.

Unit Handling and Storage

All insulated glass units must be handled with care. Insulated glass units should be checked on arrival, and that they conform to specification. If the insulated glass units are found to be wet, they must be dried. All insulated glass units must be stored inside away from sunlight (if stored outside, they must be ventilated to avoid the formation of condensation and protected from direct sunlight) to avoid thermal stress. All insulated glass units must be stored on their edge, in dry conditions, with adequate support to prevent distortion or bowing. Suitable soft surface supporting blocks should be used to prevent edge damage. Insulated glass units, which absorb a considerable amount of heat (solar control units), are particularly vulnerable in service if the edge is damaged. Reference should be made to the Glass & Glazing Federation Code of Practice: Use of Stillage's by Contractors.

Maintenance

Materials used in insulated glass units have been tested prior to manufacture and have been selected for their suitability in respect of long term, relatively maintenance free service life. Inspections of the installed glazing should be carried out after approximately one year and periodically thereafter as deterioration could take place as a result of incorrect application, vandalism or damage caused by birds. Where gaskets have been displaced or damage allowing liquid water to enter the rebate, a competent person with correct materials should repair them. Inspections should be carried out to check that the drainage holes or slots have not become blocked with debris.
It is advisable to examine the effectiveness of the seal of the exposed frame joints, which may determine the weather-tightness of the rebates. Failure to make the frames watertight may lead to excessive movement occurring due not only to swelling and shrinkage of the components but also to distortion. This will then cause excessive movement and stress in the glazing components, which may well exceed their movement capability resulting in failure of the glazing system, putting the insulated glass unit at much greater risk of premature failure.

Washing of Insulating Glass Units (without external coatings)

Glass needs to be periodically washed to remove visible dirt and to prevent accumulations of dirt from bonding to or attacking the surface. ***Glass should be cleaned as frequently as is needed to keep its appearance acceptable***. In some locations, and for some building owners, this cleaning will be more frequent than for others.
Glass is very durable when exposed to normal atmospheric conditions, but alkaline solutions, and some acids, can damage it. Cleaning materials from other parts of a building or leaching and efflorescence from concrete, bricks and mortar, or run-off from oxidising steel, can be particularly harmful. For this reason it is important to prevent any visible accumulation of deposits from remaining on the glass surface where they can slowly attack it.
Some deposits may not be directly harmful in themselves but by retaining moisture they can cause glass staining and etching. Other deposits may cause damage indirectly simply by being so firmly attached to the glass that it is damaged by the overly aggressive cleaning actions needed to remove the deposits. When cleaning glass, note that there is usually a layer of abrasive dust resting lightly on the surface.
The abrasiveness of this dust can easily scratch the glass if too much pressure is applied with too little cleaning solution. Proprietary window cleaning liquids, or dishwashing liquid detergents, in low concentrations (10 to 15 drops per 3 to 4 gallons) can be used as cleaning solutions. Dried paint splashes on

glass can be removed using paint solvents sparingly applied to a cloth, followed by detergent and water washing, taking care that the solvents do not damage glazing materials and the frame. Careful use of the flat edge, not the corner, of a new safety razor blade can be used to remove paint drops from plain, non-coated annealed glass. Razor blades or any metallic scraper should not be used on heat strengthened or fully tempered glass as fine scratches, which are only visible in full sunlight, can be created.

Recommended Procedure for Cleaning Glass without External Coatings

Commence cleaning as soon as the glass is visibly dirty.

- Avoid cleaning heat absorbing tinted glasses in direct sunlight, as the glass will be excessively hot for optimum cleaning.
- Flood the surface with water or cleaning solution to remove loose dust and grit.
- Hand wipe with clean wet cloths, using an approved detergent solution, until the glass is visibly clean.
- Rinse with clean water.
- Dry immediately with a clean lint-free cloth or squeegee. Do not allow metal squeegee holders to touch the glass surface.

Washing of Insulating Glass Units with External Surface Coated Glass (Self-cleaning)

Once all work is completed, rinse the glass well with water as soon as possible to remove all traces of dust, abrasives, etc. Rinse with clean water* to activate the coating after any prolonged dry spell. Any moisture remaining will soon evaporate to leave a clean surface. Avoid using a squeegee or any other metallic tools to clean the glass coating as this will damage the coating and the self-cleaning properties of the system will not work. Do not use any proprietary items containing silicone, as this substance will hinder the self-cleaning properties of the coating.

**If the water quality is very hard (greater than 180ppm combined content of calcium carbonate CaCO3 and magnesium carbonate MgCO3), rinsing water should be softened with a domestic water softener or by adding a couple of drops of detergent (such as dishwashing detergent) to a litre of water.*

DUAL SEAL GLASS LIMITED – 5 YEAR WARRANTY

APPENDIX 2

ANNUAL MAINTENANCE REPORT

Project: Location:

Fabricator/Installer: Installation date:

Frame system (s):

The following checks must be carried out on an annual basis and the result recorded on this form and a copy sent to Dual Seal Glass Limited as evidence of completion.

1. All insulating glass units must be checked for evidence of condensate between the glass panes
2. All insulating glass units have been cleaned in accordance with Dual Seal Glass Limited recommendations
3. All drainage and ventilation holes in the glazing systems are clear and functioning correctly

Date of maintenance		Dual Seal Glass Limited customer signature	Building owner representative signature
Year 1:			
Year 2:			
Year 3:			
Year 4:			
Year 5:			

A copy of this form must be supplied to Dual Seal Glass Limited immediately following each annual inspection, otherwise the warranty will be invalidated.
sales@dualsealglass.co.uk

10. Replacement Strategy

6. Recommendations

1. To ensure the validity of the product warranty, for repair/adjustment operations apply to the company-installer of your structures.

2. Replace all elements of the furniture for original spare parts only.

11. Demolition Decommissioning or Disposal

ARDENT GLAZING LTD

P23025 – Pannattoni, Poyle

19 August 2024

To Whom It May Concern

All framework and glass is manufactured offsite to project specific sizes so no spares provided/required.

Maintenance of the relevant systems should be carried out in accordance with the respective system guidance as noted at the specified intervals and fully documented, as per the Cleaning and Maintenance Regimes issued in your O & M Manual.

All system profiles extruded from T6063 Aluminium can be fully recycled along with the glass. Upon careful dismantling in accordance with task specific RAMS all relevant materials can be collected from site by the respective suppliers and recycled accordingly.

System consumables such as EPDM and thermo plastic rubber gaskets cannot be recycled.

Ardent Glazing Ltd
ProAktive House
Sidings Court
White Rose Way
Doncaster
DN4 5NU
T: 01302 492240
E: Info@ardentglazing,co.uk
www.ardentglazing.co.uk
Company No: 13800842
VAT Reg: 400 0660 65
UTR: 85576 11756

Citation ISO Certification
Integrated Management System
ISO 9001: 2015
ISO 14001: 2015
REGISTERED
Certificate No:390932022

SAFECONTRACTOR.COM
SafeContractor
APPROVED
ALCUMUS.COM