TECHNICAL MANUAL

TM-0111 Issue 1 June 2025

Stellar Inline Patio Installation Guide

Epwin™ window systems

INLINE PATIO DOOR INSTALLATION

INTRODUCTION

This manual contains information of a technical nature and consequently is only intended for use in the course of a business by persons who are skilled in the subject matter covered.

Although reasonable care has been taken in the preparation of this manual, Stellar Aluminium Systems does not accept any liability for damage resulting (whether directly or indirectly) from the use of the information contained in this manual.

Accordingly this manual is supplied on the basis that the user accepts all risks associated with the use of the information contained within it.

General

BS 8213-4:2007 “Code of Practice for the Survey and Installation of Windows and External Doorsets” gives recommendations for the surveying and installation of non-load bearing windows and external doorsets, to be installed vertically (within 15°) into the external face of buildings. It gives guidance on the good practices for successful surveying and installation which must be followed in addition to the following advice.
TSO publication ‘Limiting thermal bridging and air leakage: Robust construction details for dwellings and similar buildings” also gives good advice for new-build applications.

All aspects of this document should be followed with particular attention given to the product’s suitability for its location and the presence of any dead loads. Wherever possible the survey should identify any necessary variations to the standard installation techniques such as lug fixing or direct fixing. Fixing methods are determined by the construction of the structural opening and the method of drainage. If you are at all unsure then please contact your Stellar supplier. Any finished floor level should clear the bottom of a sash by at least 5mm in closed and open position, to avoid any interference cause by installation tolerances and unevenness.

Safety

A risk assessment must be carried out by the window / door designer[1] to determine the suitability of the window / door style to be installed. Particular reference should be made to BS 4873-1 “Windows Doors and Rooflights - Design for safety in use.....”.

Reference must also be made to Building Regulations to determine -

- Any requirements for fire egress and clear opening requirements.
- Installation positions of safety glazing
- Structural requirements for any load bearing bays etc
- Ventilation requirements

This list is not exhaustive. A record of the risk assessment must be kept.

Survey Notes

The manufacturing sizes should be determined by measuring the structural opening using the methods described in BS 8213-4:2007 Code of Practice for the Survey and Installation of Windows and External Doorsets. Generally three measurements of width and height should be taken and the squareness of the aperture determined by, for example, taking diagonal measurements (see Figure 1). The smallest measurement of width and of height is used to determine manufacturing sizes.

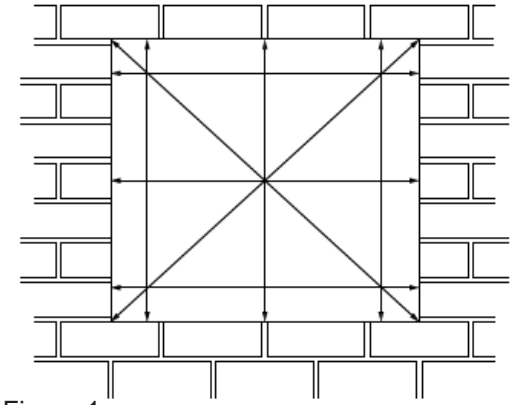


Figure 1

Manufacturing Sizes

Below are the recommended deductions (mm) from structural opening sizes. (Note these are the deductions from the total height or width, not “per side”. When calculating height deductions consideration must also be given to any mortar bed at the cill.

Up to 1.5m	Over 1.5m to 3.0m	Over 3.0m to 4.5m	Over 4.5m
10	10	15	20

1. The window / door designer is the person or organisation taking the order from the purchaser.

INLINE PATIO DOOR INSTALLATION

General
Personal protective equipment should be worn at all times during installation and on building sites.

In order to protect surroundings from dust and debris, it is recommended to use dust sheets where possible.

Preparation of Structural Opening
Check that the opening is the correct size for the new frame (N.B.: For replacement work this should be done prior to removal). Check that any DPC's are sound and not "bridged" by any render or plaster. Check for the practicality of fixings to the lintels.

Installing the Frame
Frames should be bedded onto mortar with levelling packers. Lift the frame onto the bedding and adjust in the opening to be square, plumb and straight. Use temporary wedges to set the frame square in the opening. Wedge shims between frame and brickwork to achieve final positioning of frame. Use diagonal measurement across opposite corners of the outer frame to check.

Fix the frame with the appropriate frame fixings 125mm from each corner and 100mm either side of meeting stiles and at a maximum of 800mm centres (In accordance with BS 8213-4:2007).

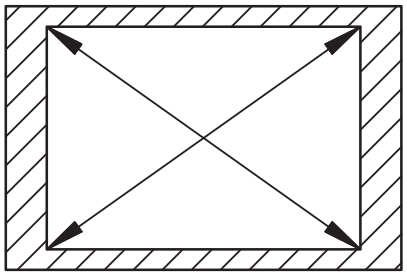
Defects
A check should be made for defects around openings, both internally as well as externally. If any are found, the customer should be informed and an agreement reached on the responsibility before work commences.

Wiring and Cables
The position of any existing wiring (e.g for TV aerials, telephone or power) should be noted. Provison should be made to route these around the new patio. To avoid water ingress, they should not pass through any part of the frame.

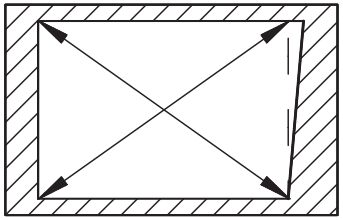
Lintels
Special attention should be paid to the position of any lintel above the structural opening. If no lintel exists, and the area would impose a load on the doors, one should be provided. Agreement should be reached with the customer to determine responsibilty before work commences.

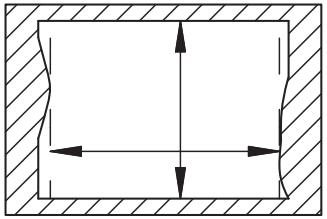
Measurement
If preliminary checks are satisfactory, the structural openings should be measured as follows:

The squareness should be assessed by checking the diagonals.
If the two measurements differe by less than 10mm, the actual horizontal and vertical sizes should be taken. (see below)



If the diagonals differ by more than 10mm use a spirit level or plumb bob level to detirmine the usable area. Measurements are then taken at a number or places and smallest sizes noted. (see below)





Under normal circumstances, every door should be measured. When this is not possible a suitable method of deirmining sizes should be agreed and confirmed e.g for new build projects.

Cills and Frame Packers
Survey dimensions should include cills and frame packers. Allowance for cills and frame packers must be included when calculating frame manufacturing sizes.

Frame Positioning

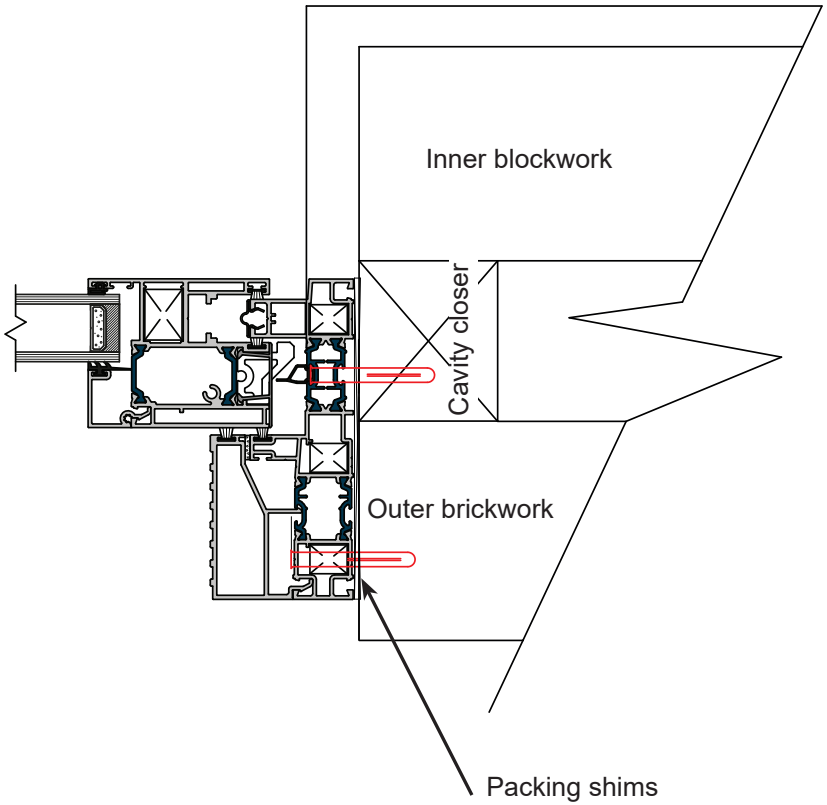
Position the frame as recommended in Annex B of BS 8213-4:2007 “Code of Practice for the Survey and Installation of Windows and External Doorsets” On new build applications see TSO publication ‘Limiting thermal bridging and air leakage: Robust construction details for dwellings and similar buildings” for recommended frame positioning.

Below is a suggested fixing detail for new-build and replacement applications.
Do not fix through the thermal break on the opening side beneath the covertrims as it will not allow for the cover trim to be housed in its correct position.

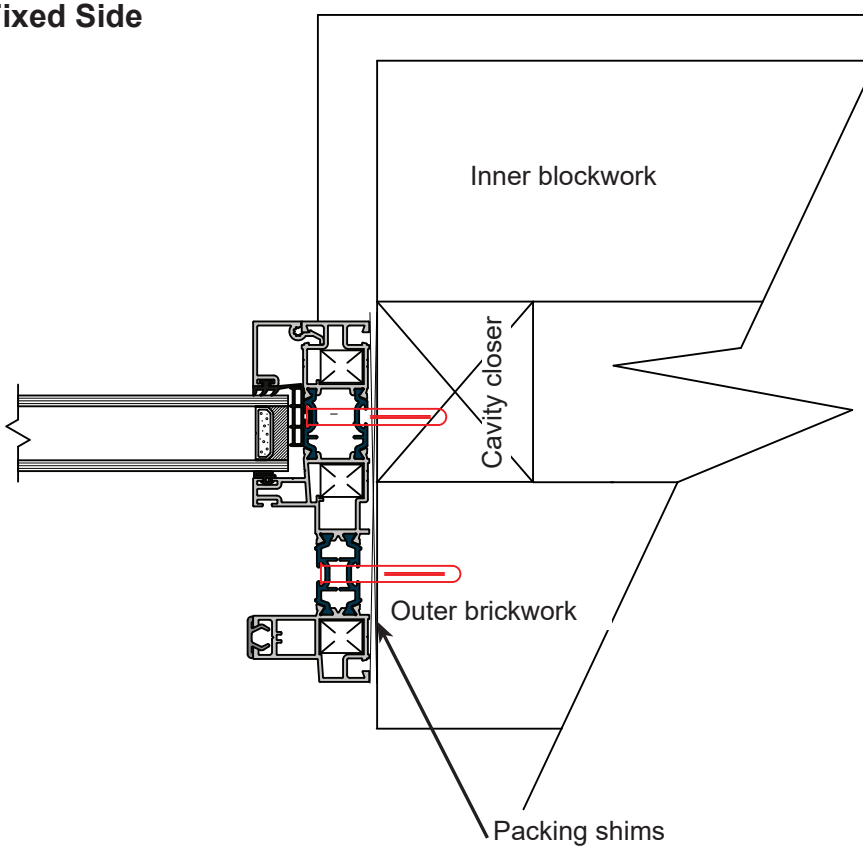
Cover trims may be removed from the frame for better access to fixing positions. However, for final fixing the backing on the double sided tape should be removed for refitting the cover trims.

NOTE that any fixings through the cill must be carefully sealed to prevent water ingress.

Opening Side



Fixed Side



Fixing

Secure the frame to the substrate using either location points shown on page 3 for the opening side as well as the fixed side. Drill a clearance hole through the frame, next drill a hole in the substrate using an appropriate masonry bit. The diameter of the hole you are drilling will depend on the type and size of fixing you are using to secure the frame to the opening.

Fully check the frame has not moved by repeating the frame alignement checks as previously stated. Repeat this process for fixing the frame at the remaining points, thoroughly checking the alignment after making each fixing.

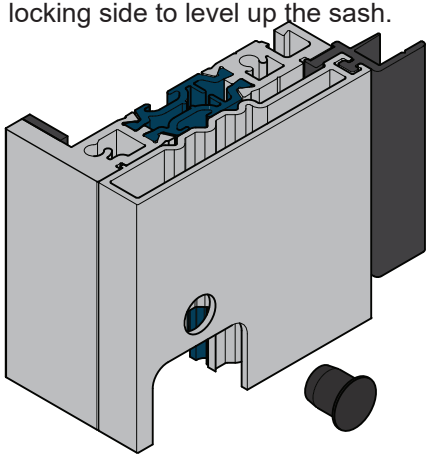
The fixings in the head should be fitted flush and the head should be fixed to the lintel using the appropriate fixings, position fixings 125mm ± 25mm from each end and 100mm each side of the mullions. It is important that these are not over tightened.

At this stage, and before glazing the slider, it should be checked for correcct operation and frame movement when closing and locking.

It is important that the sliding door is checked for being level, as this could cause the interlock to not correctly seal.

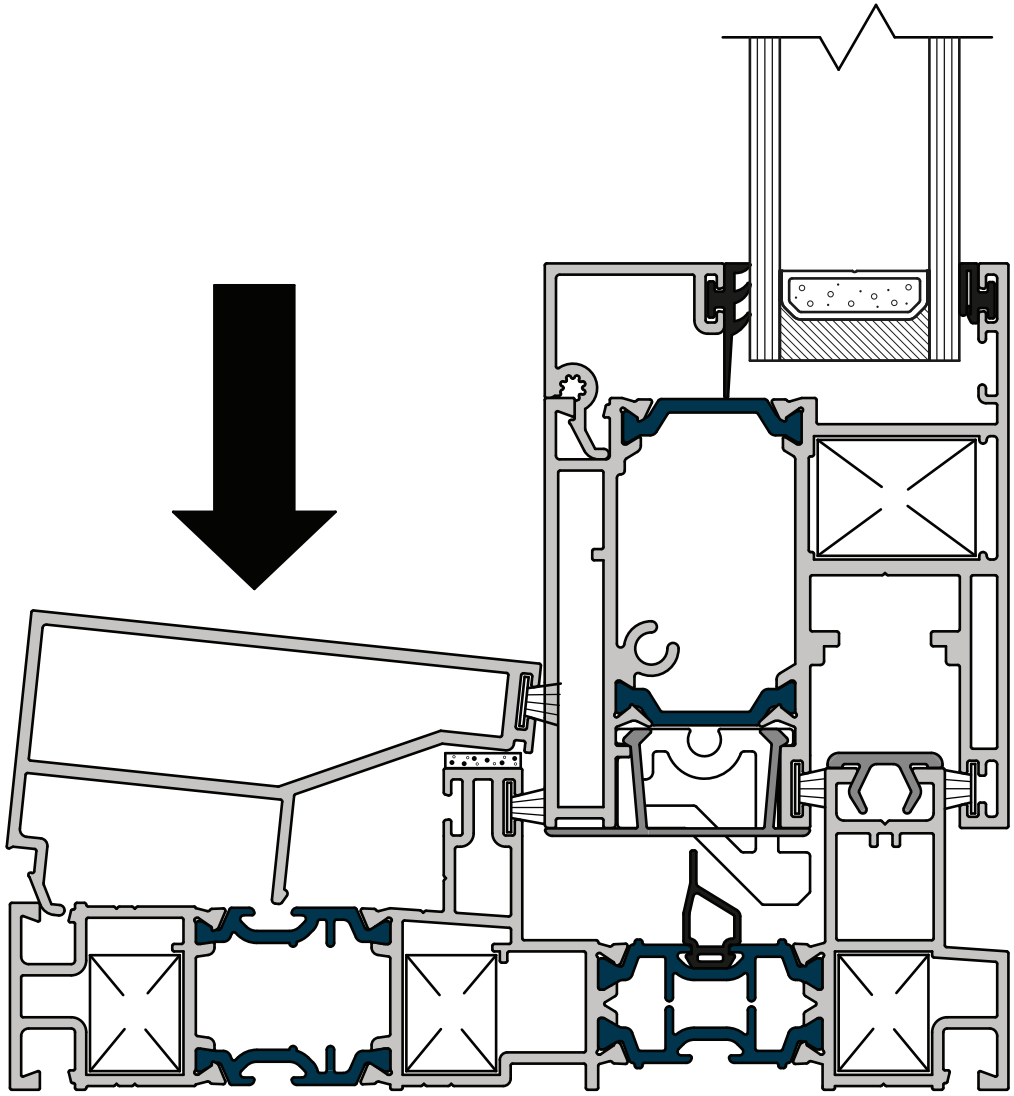
ADJUSTMENT

The sliding sash jamb has a black plug situated on the capping at the bottom, remove this cap and insert a Philips screwdriver, this will need to be at least 150mm long to access the adjustable roller, with the level sat on the door turn clockwise or anti-clockwise on jamb and locking side to level up the sash.



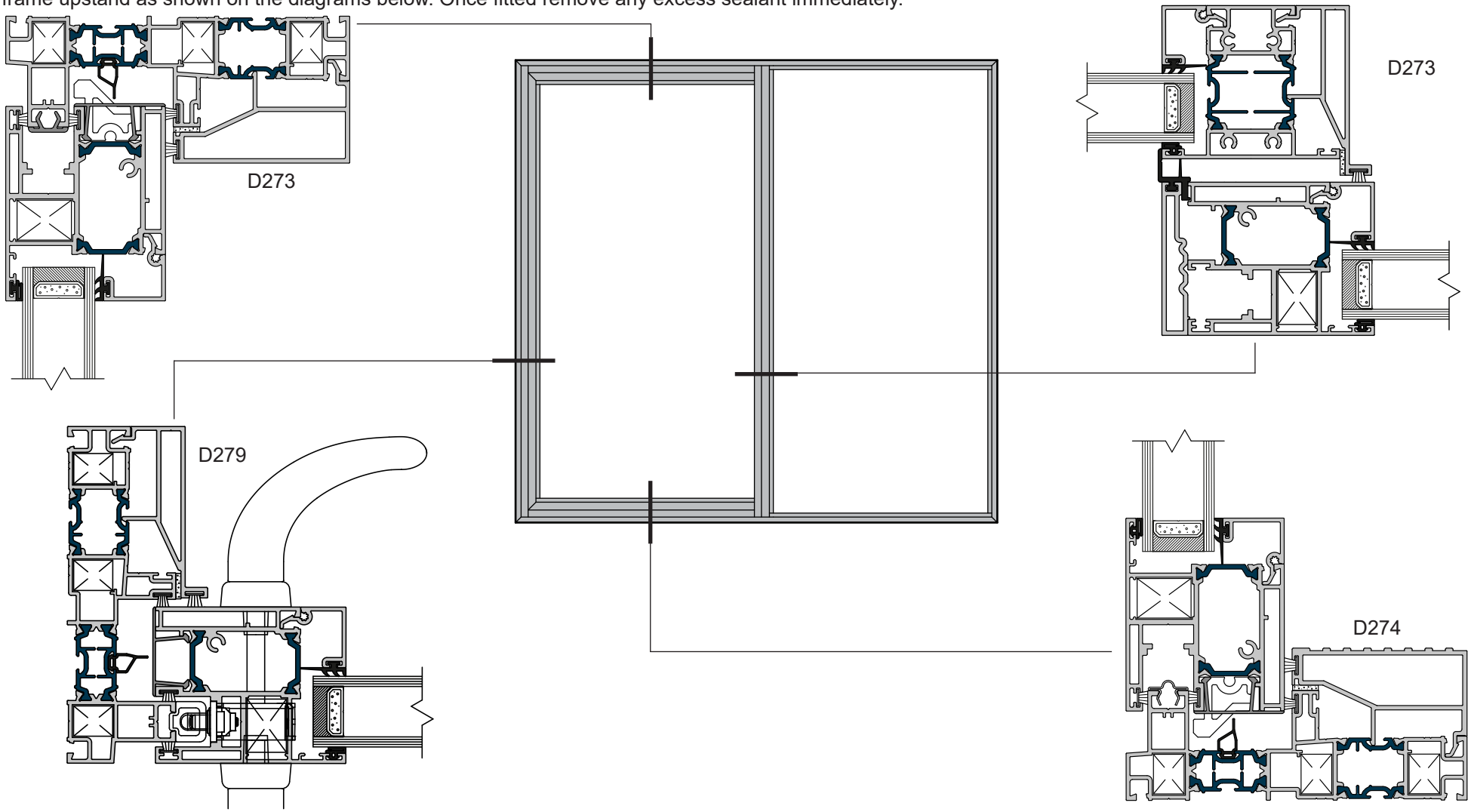
Cover Trim Fitting

The cover trim should be square cut to length as per to relevant cutting calculation and knocked into place using a hammer with a non marking head and a timber block as to spread the load across the cover trim ensuring they do not get damaged.



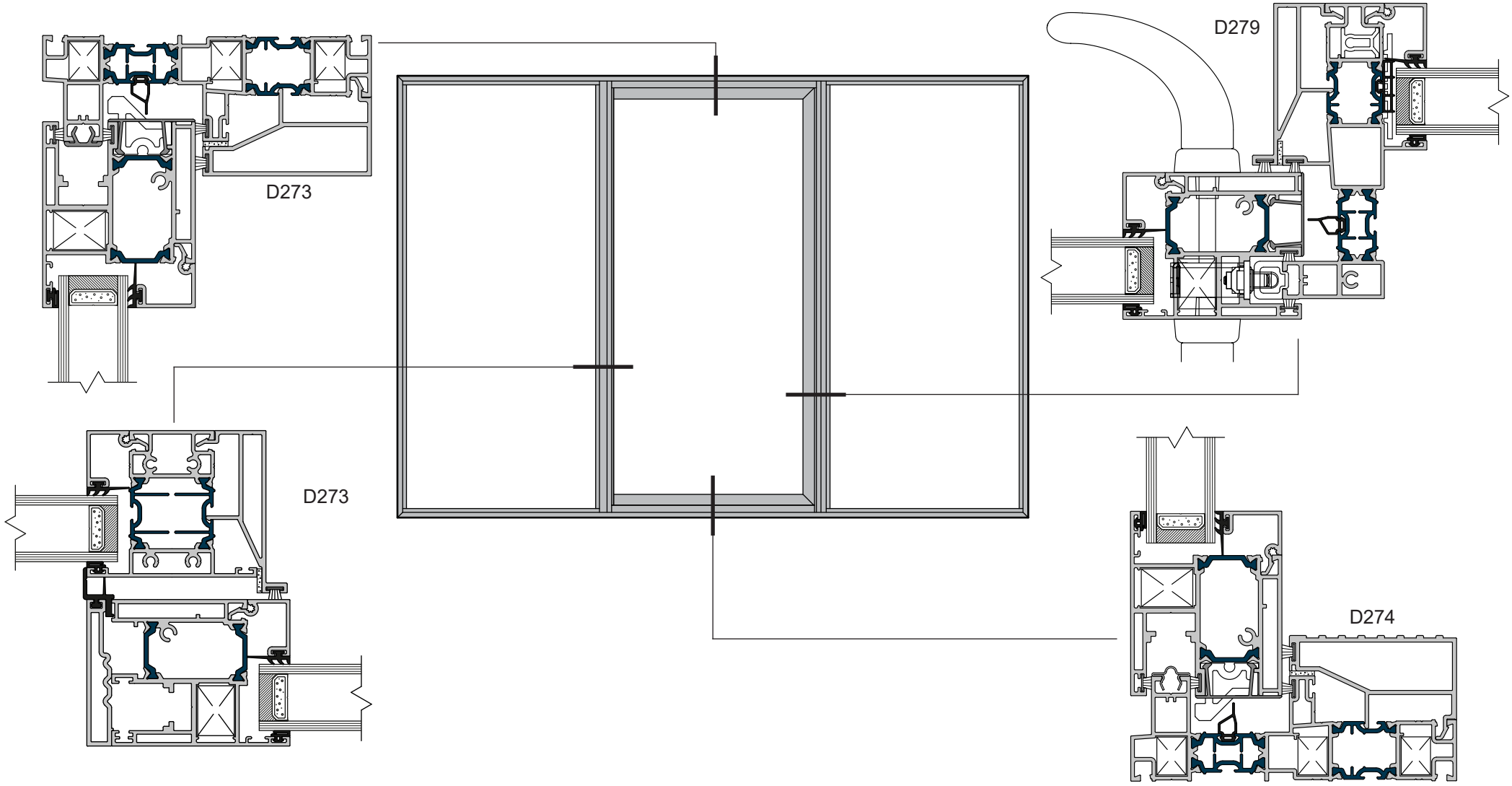
HEAD, JAMB AND THRESHOLD TRIM ASSEMBLY (END SLIDING DOOR & FOUR PANE CENTRE SLIDING DOOR)

The D273 head trim and D274 threshold trims are used to cover the opening portions of the outer frame at the head and cill of the door. The D279 jamb trim covers the exposed sections of outerframe and interlock either side of the opening sash. The D279 is square cut to length as per to relavant cutting calculation and knocked into place using a glazing hammer with non marking head and timber block to spread the load across the cover trims ensuring they dont get damaged. Then the D273 head trim has to be cut at either end to fit around the D279 jamb trim. Prior to fitting seal all mating surfaces including the ends of the trims and ensure DG203 glazing tape is stuck in place between the trim and outerframe upstand as shown on the diagrams below. Once fitted remove any excess sealant immediately.



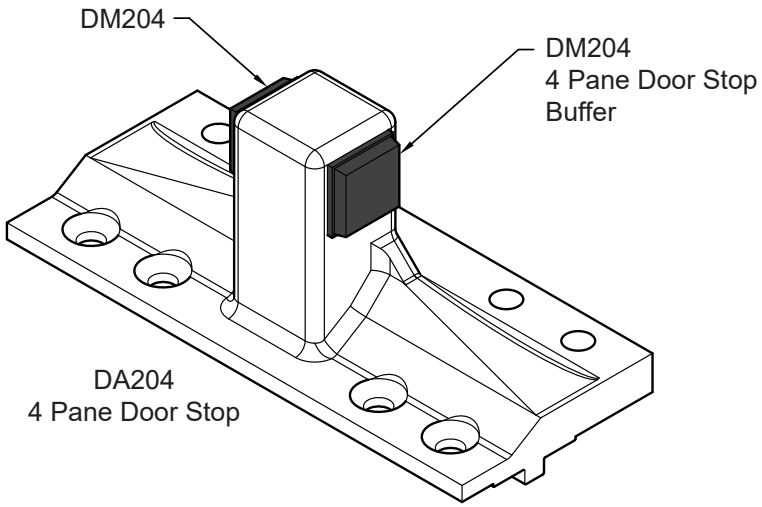
HEAD, JAMB AND THRESHOLD TRIM ASSEMBLY (CENTRE SLIDING DOOR)

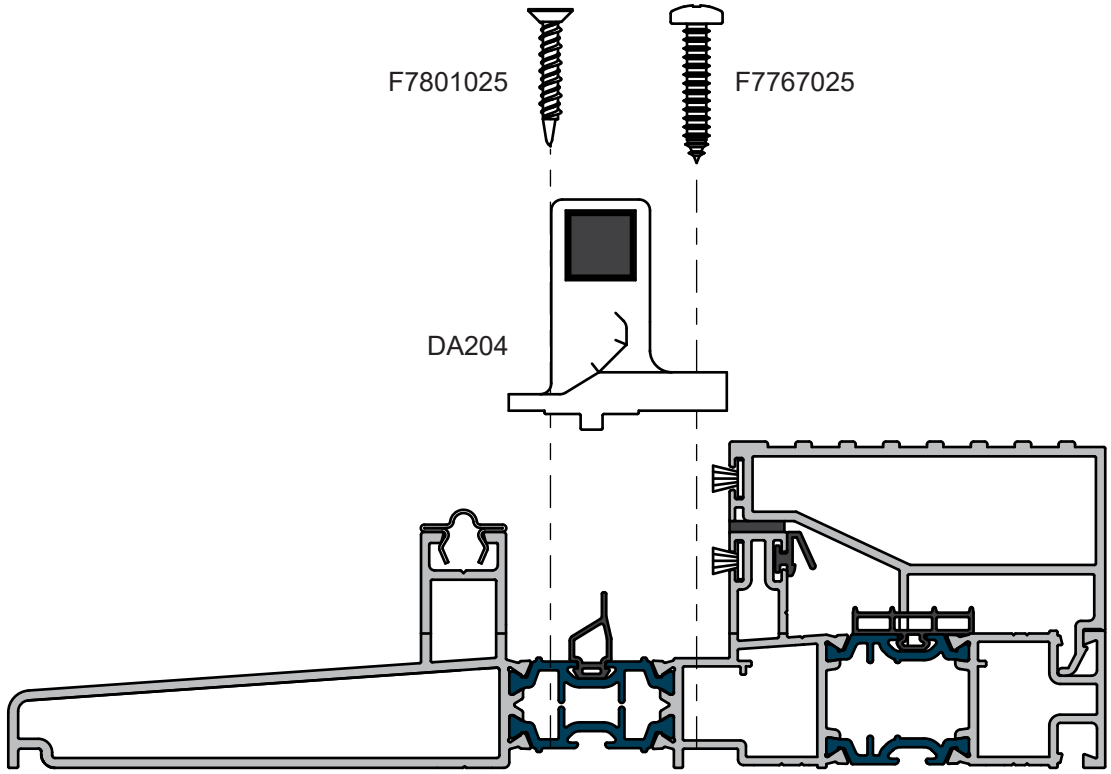
On three pane centre sliding doors where the three pane mullion is used, the D279 will be fitted to it. The D279 is square cut to length as per to relavant cutting calculation and knocked into place using a rubber headed hammer and timber block to spread the load across the covertrims ensuring they don't get damaged. Then the D273 head trim has to be cut at either end to fit around the D279 jamb trim. Prior to fitting seal all mating surfaces including the ends of the trims and ensure DG203 glazing tape is stuck in place between the trim and outerframe upstand as shown on the diagrams below.



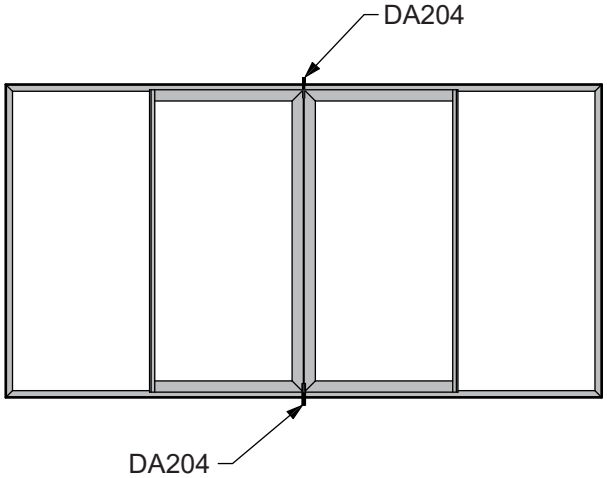
FOUR PANE STOP

All four pane doors will require the DA204 stop fitting at the head and cill between the two meeting styles as shown below. It is fixed in place using 4 off F7767025 into the aluminium section of the outer frame and 4 off F7801025 into the polyamide setion of the outer frame. Ensure DM204 buffers are fitted to the stop as shown below. They are self adhesive buffers that locate eiter side of the stop to prevent the door sash contacting the metal stop.



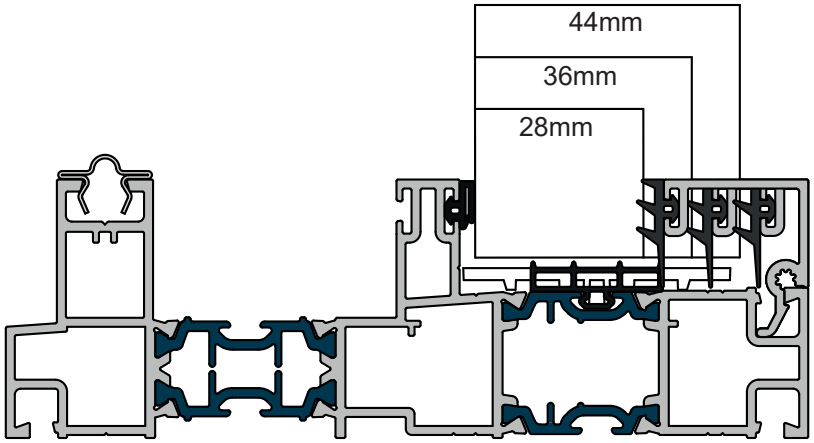


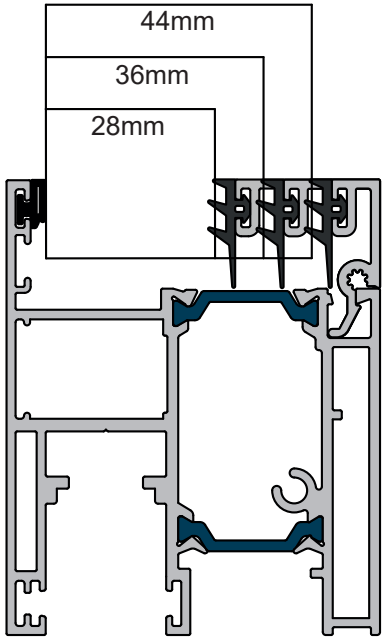
DA204 POSITIONING

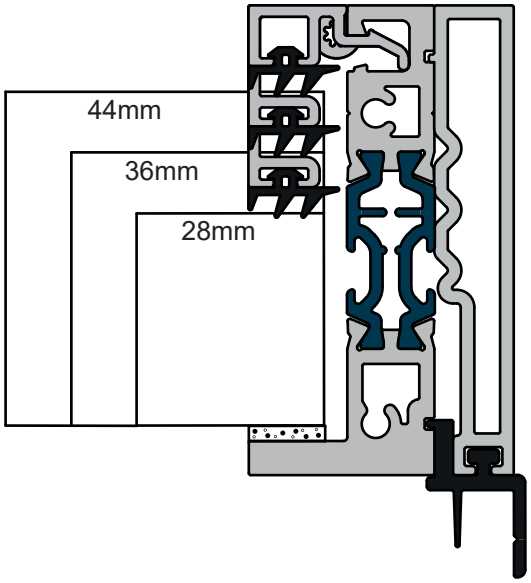


GLAZING

All glazing should be in accordance with BS6262 and all current codes of practice.
The sliding patio door can accomodate 28mm, 36mm & 44mm glazing units as shown below. When using the slim interlock, either the DQ250, DQ252 & DQ254 slim interlock beads need to be used depending on what size unit is being fitted.







Note: Before assembly apply DG203 glazing tape to the rebate upstand as shown above. The surface must be clean, dry, grease free and dust free before applying the tape. Clean the profiles with isopropyl alcohol (IPA) wipes and allow to dry before applying the tape. Remove protective tape when glazing the fixed light to allow glass to bond to it. The tape can be applied to full length prior to cutting.

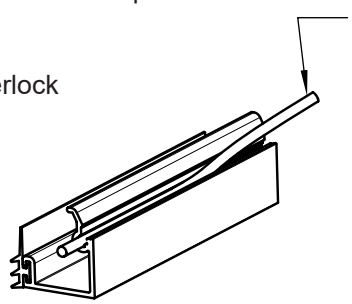
GLAZING BEADS			
	28mm GLAZING	36mm GLAZING	44mm GLAZING
POSITION	BEAD	BEAD	BEAD
D201 OUTER FRAME	WQ50	WQ52	WQ54
D231 SASH	WQ50	WQ52	WQ52
D237 SLIM INTERLOCK	DQ250	DQ252	DQ254
D210 WIDE INTERLOCK	WQ50	WQ52	WQ54
D211 3 PANE MULLION	WQ50	WQ52	WQ54

GLAZING

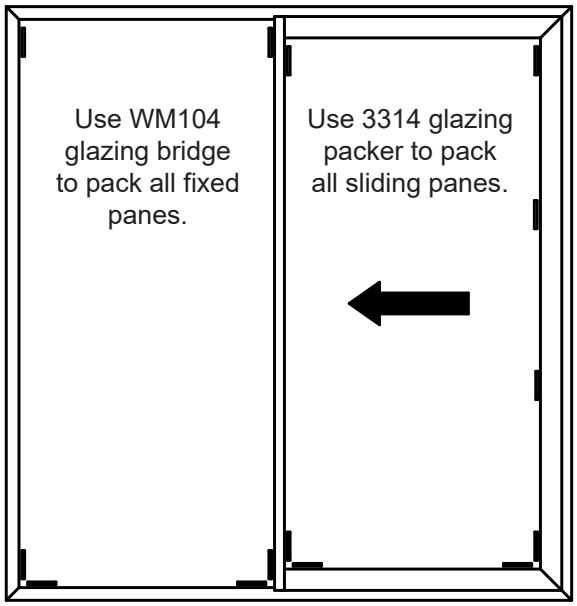
All glazing should be in accordance with BS6262 and all current codes of practice.
Fixed light glazing requires WM104 glazing bridge installing in the centre seal groove, in all 4 corners making sure not to block acces to any drainage holes.
The sliding sash uses the 3314 glazing packer in all corners of the sash, locating into the recessed chanel below the glazing. Additional glazing packers can be used to square up the sash with the outer frame to ensure smooth operation and weather sealing. Extra packing points will need adding wherever there is a locking point and opposite any locking point to prevent any movement in these areas.
When installing the lower horizontal beads, the WG10 sealing cord will need to be fitted into the glazing bead and a bead of silicone applied between the profile and bead.
Ensure the interlocks are plumb and straight when bonding the glass to the double sided glazing tape (DG203).

Note: Glaze the sliding sash first. Remove the protective tape from the double sided tape located on the interlock. At this stage ensure the interlock is plumb and straight before bonding the glass in situ.

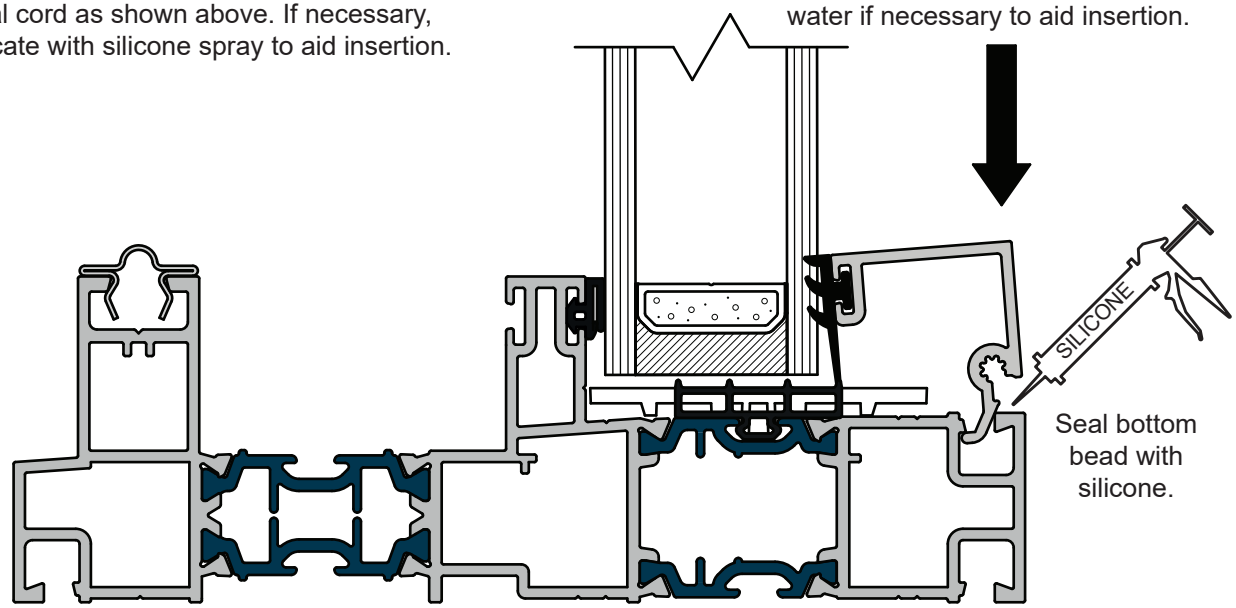
For De-Glazing guidance please refer to the Stellar De-Glazing guide



Knock beads in carefully using a wooden block or similar to protect the bead from damage. Lubricate gasket with soapy water if necessary to aid insertion.



On sash bottom beads only, fit WG10 seal cord as shown above. If necessary, lubricate with silicone spray to aid insertion.



Seal bottom bead with silicone.

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