



Sterling Advanced Detachable Restrictor

Technical Manual

Overview

Applications

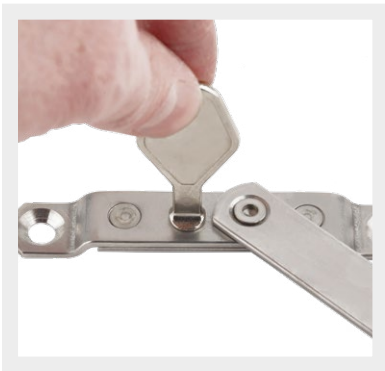
- Windows where a restricted opening is required
- Suitable for use with all Securistyle hinges

Product Features

- Key-operated detachable restrictor for restricted windows - key sold separately
- Unique locking pin design allowing simple detachment/engagement of the restrictor stay via a key for authorised release only
- Austenitic stainless steel as standard
- Crack stop design for a positive stop
- The range includes 15.9mm and a 13mm bracket that has been designed to suit both standard and slim channels in aluminium profiles

Customer benefits

- Fixed restriction to a wide range of opening angles
- Key-releasable restriction for cleaning/maintenance
- Securistyle quality and guaranteed performance



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Application and Selection

Application

General:

The Detachable Restrictor Stays give an opportunity to permanently restrict opening vents and are particularly useful in applications where occupant safety is required or where windows open out onto corridors or gangways. Key-operated for cleaning/maintenance requirements.

Operation:

In normal operation the restrictor stay allows the vent to open until the slider engages against the crack stop of the track.

The user can then detach the restrictor through the use of a release key.

Selection

General:

Designed to be fitted to the same part of the profile as the hinge vent arm and track will suit virtually any profile that can use Securistyle Commercial Hinges.

For key-releasable restrictions of commercial windows:

- SADR4
- SADR6
- SADR8
- SADR10

For key-releasable restriction of commercial windows with Slim Line bracket variant:

- SADR54
- SADR56
- SADR58
- SADR510

The Sterling Advanced Detachable Restrictor has been approved by the New York City Department of Health (NYCDoH) for compliance with its falls programme—testifying to its safety when used in high-rise commercial buildings such as office towers and hotels. NYCDoH approval applies to casement, awning & hopper style windows.



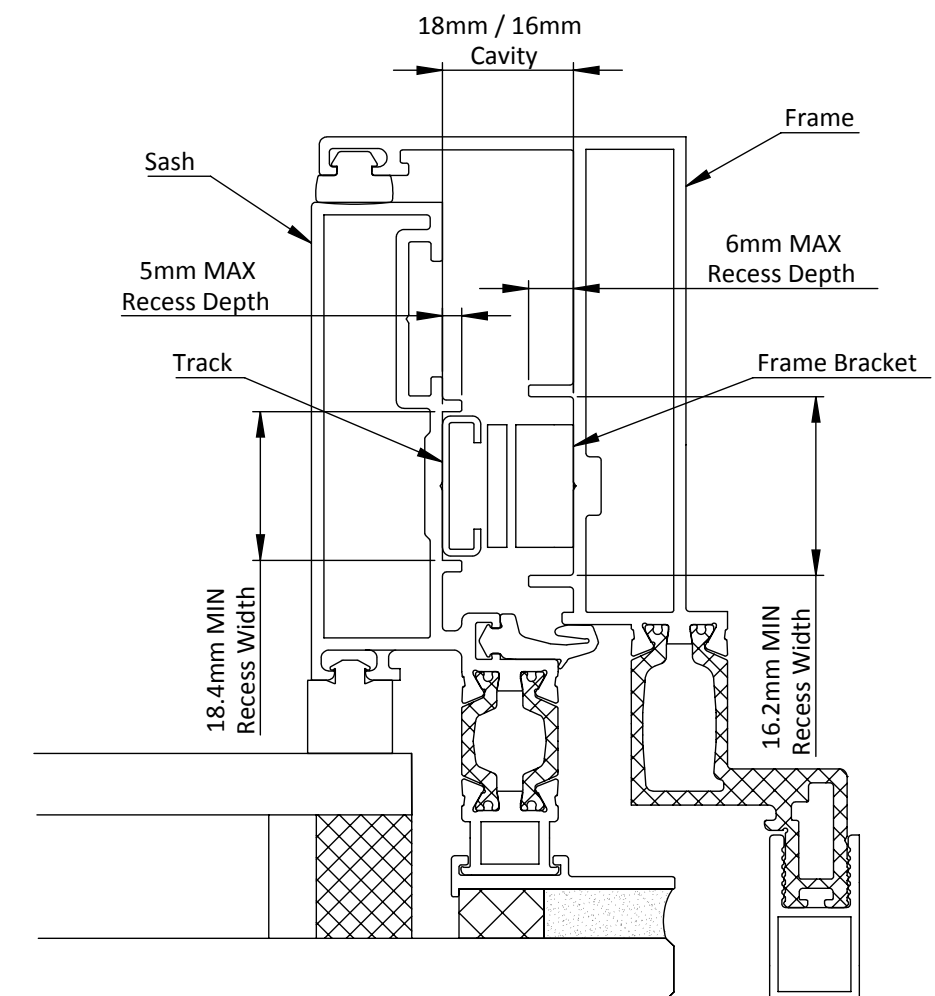
Fitting Instructions: Position and Clearances

Commercial Detachable Restrictor Stays with Standard Bracket

General:

The Commercial Detachable Restrictor Stays are designed to be fitted between two flat and parallel rigid faces that conform to the measurements shown below.

The vent and outer frame location recess or upstand, if any, must be as shown in Fig. 1.



Standard Bracket - Fig. 1

Not to scale
All dimensions are in mm

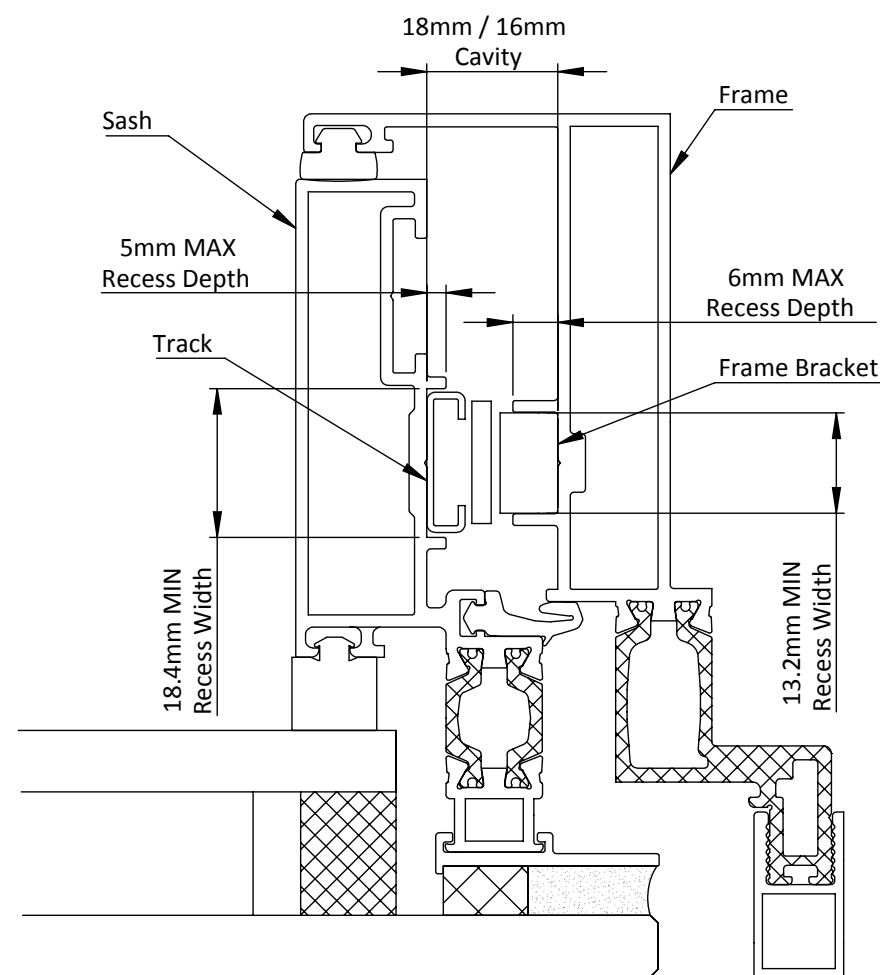
Fitting Instructions: Position and Clearances

Commercial Detachable Restrictor Stays with Slim Line Bracket

General:

The Commercial Detachable Restrictor Stays with Slim Line bracket are designed to be fitted between two flat and parallel rigid faces that conform to the measurements shown below.

The vent and outer frame location recess or up stand, if any, must be as shown in Fig. 2.



Slim Line Bracket - Fig. 2

Not to scale
All dimensions are in mm

Fitting Instructions: Vent and Frame Preparation and Fitting

Preparation

No routing of the profile is required unless the profile silhouette does not conform to the clearance requirements (see Fig. 1 & 2).

Fitting:

Position the Restrictor Stay track inline with the hinge vent arm, parallel with any sideways hinge location features.

The closer the Detachable Restrictor Stay is positioned to the hinge the greater the opening angle of the vent will be, subsequently the further away the Vent Bracket is positioned from the hinge the smaller the opening angle of the vent will be. (As Fig. 1 & 2 but with the Vent Bracket attached to the Frame and the Track attached to the Vent).

The recommended angle for 'A' (Fig 3) $55^{\circ} \pm 5^{\circ}$.

Fixing:

Insert fixings through the holes in the track once you are satisfied with its position. If possible pick up on any screw location ports* and/or reinforcement.

*Certain profiles incorporate a groove to assist with screw positioning/insertion.

Fitting Instructions: Vent and Frame Preparation and Fitting

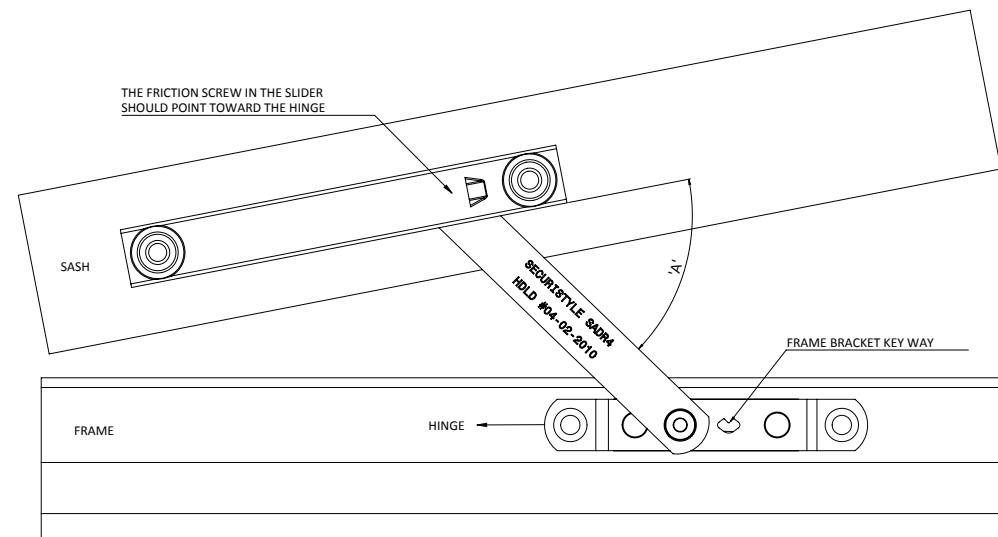


Fig. 3

Fixing

Insert fixings through the holes in the Frame Bracket once you are satisfied with its position. If possible pick up on any screw location ports* and/or reinforcement.

*Certain profiles incorporate a groove to assist with screw positioning/insertion.

For screw specification refer to the subsequent section.

Fitting Instructions: Detachable Restrictor Stays

Detachable Restrictor Key Release

Operation:

To release the Detachable Restrictor Pivot Arm from the Frame Bracket the user must insert the Release Key into the Key Way of the Frame Bracket and rotate it in a clockwise direction through 90°. See Fig. 4.

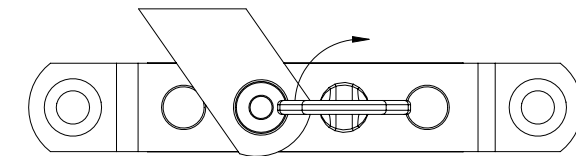


Fig. 4

The user then detaches the Pivot Arm clear from the Frame Bracket. See Fig. 5.

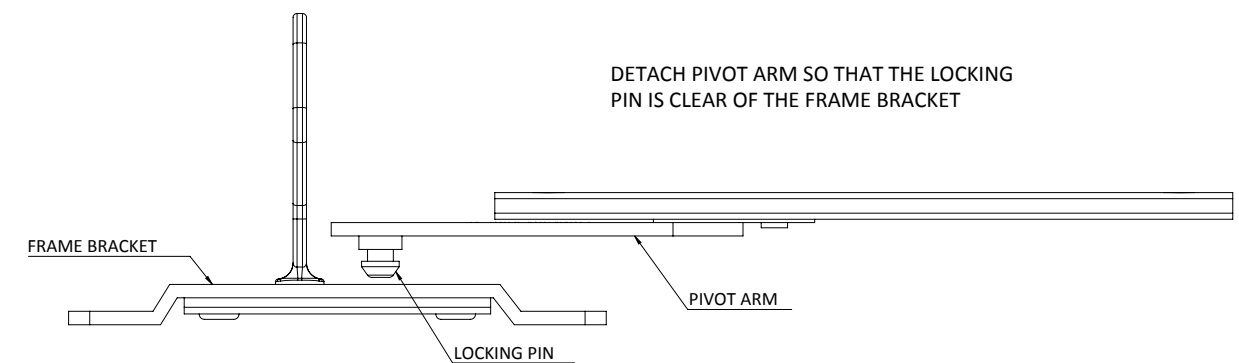


Fig. 5

Fitting Instructions: Screws and Rivets

Fixing Screws

Commercial Detachable Restrictor Stays – Use countersunk No.10 self-tapping screws or M5 screws and M5 Rivnuts or a specialist equivalent i.e. with special threads for PVCu.

The following constraints should be strictly adhered to:

- Screw manufacturers recommended pilot hole sizes must be adhered to at all times and if any instructions are supplied by window system manufacturers/suppliers, such as “screw into reinforcement”, it is important that they are followed
- When fitting the Restrictor Stays extreme care must be taken not to strip the thread as deterioration in performance will result
- It has been seen that Austenitic and certain types of Modified Martensitic fixings provide superior corrosion resistance when subject to BS EN ISO 9227: 2022

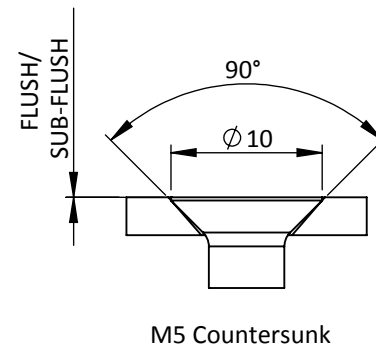


Fig. 6

Note: It is the responsibility of the window manufacturer to ensure that all fixings have adequate strength to support the weight of the window vent and the forces exerted upon it over the full life of the window.

Not to scale
All dimensions are in mm

Performance and Maintenance

Environmental Constraints

Normal operating conditions for all restrictors are:

- Operating temperature range -20°C to +60°C
- Operating humidity ranges 10% Relative Humidity to 95% Relative Humidity

The materials used will not degrade due to ultraviolet light, or when using neutral acidity nonsolvent cleaning chemicals, at a rate faster than other parts of the window assembly. However, the practice of cleaning brickwork with acidic-based products will have serious effects if allowed to come into contact with the hardware. Corrosion or failure of hardware as a result of this practice will not be covered by the warranty issued on such products.

For further advice on procedures for protecting the window during this operation, please contact the window manufacturer or hardware supplier.

Maintenance and Lubrication

As with most mechanical devices, Restrictor Stays require periodic maintenance and lubrication. The hinge in general and particularly the pivots, sliding shoe, and track must be kept free from dirt, debris, and any obstructions at all times.

- **At the Time of Installation** - Lubricate all pivot points with light machine oil and wipe away any excess, one drop per pivot is sufficient. We suggest one of the following lubricants or equivalent:
 - a. General light engineering oil with corrosion inhibitors such as Castrol Everyman or 3 in 1 oil (available in aerosol can for convenience)

Note: Solvent based aerosol sprays e.g. WD40 are not suitable for this application.
- **Every Five Years** - Carry out the following checks every five years:
 - a. Clean any dirt or debris from the restrictor and clear any obstructions from the pivots, sliding shoe and track
 - b. Apply lubrication as detailed above
 - c. Check the tightness and security of all fixing screws and rivets

Operating Life

To attain optimum operating life all criteria listed above under environmental constraints and maintenance and lubrication must be adhered to.

All Restrictor Stays will function normally for up to 30,000 cycles under normal conditions of use. This performance is subject to compliance with Securistyle's installation and maintenance instructions.

Performance and Maintenance

Corrosion Resistance

When subjected to a neutral salt spray test to BS EN 1670: 2007 the restrictor remains functional after 480 hours. There is no significant surface pitting caused by corrosion. Some surface discolouration is to be expected.

If a restrictor is fitted in an area where it is exposed to a corrosive atmosphere, e.g. salt-laden sea air in coastal locations, we recommended that in addition to the general maintenance and lubrication:

- All metal surfaces are lightly coated with lubrication oil or sprayed with a proprietary anti-corrosion spray. It is important to follow the manufacturer’s instructions for any products used
- Maintenance operations may need to be carried out more frequently. This is dependent on the severity of the prevailing conditions

Product Specification

Product and Materials Specification

The following is a guide to the materials used for Detachable Restrictor Stays.

Surface Finish - All surface finishes are of good commercial quality.

- 2.5mm stainless steel components (links) are of cold rolled finish and are edge dressed to remove the sharp edges as far as is practical
- 0.9mm stainless steel components (track) are of bright cold rolled finish
- Stainless steel components will not display surface blemishes, pits or scratches of greater than 20 sq. mm or 0.25mm maximum depth
- Plastic components are of uniform finish and colour. Visible surfaces will not display blemishes, pits or scratches of greater than 15 sq. mm or 0.2mm maximum depth

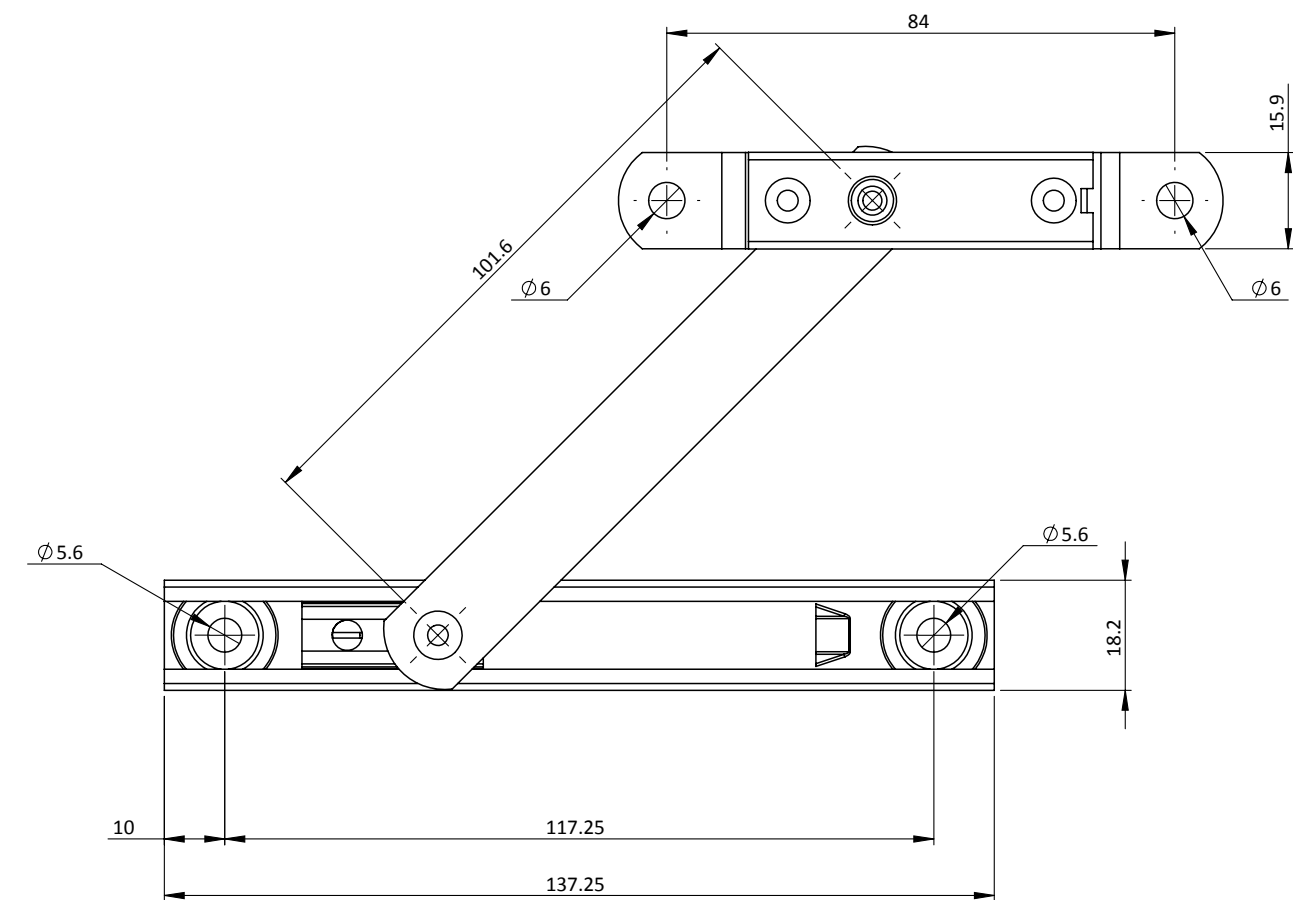
Standards Applicable for Restrictor Stays

The relevant standards applicable are:

Austenitic Stainless Steel	
Links	Stainless steel to BS EN 10088-2 GRADE 1.4301: 2014
Track	Stainless steel to BS EN 10088-2 GRADE 1.4301: 2014
Pivot Rivets	Stainless steel to BS EN 10263-5 GRADE 1.4567: 2017
Other Materials for Detachable Restrictor Stays	
Slider Inner	Stainless Steel to BS EN 10088-2 GRADE 1.4301: 2014
Slider Outer	13% Glass Filled Nylon
Friction Screw	Austenitic Stainless Steel to BS EN 10088-3:2014
Link and Track Dimensions	
Link thickness	2.39mm to 2.61mm
Link width	15.9mm to 16.1mm
Track rolled section height	4.79mm to 5.23mm
Track roller section width	18.02mm to 18.36mm

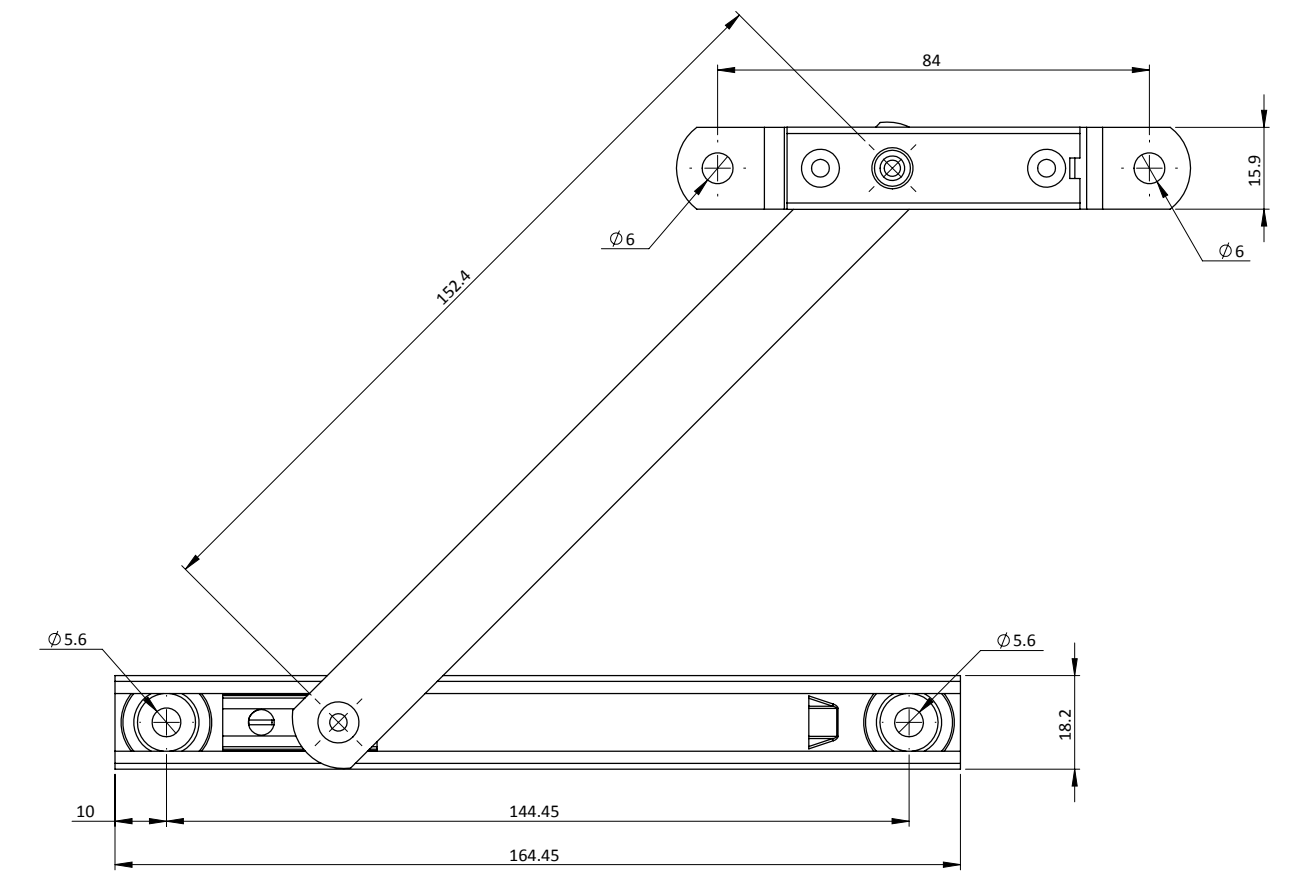
Assembly Sheets

4" Advanced Detachable Restrictor Assembly
Part Number: SADR4



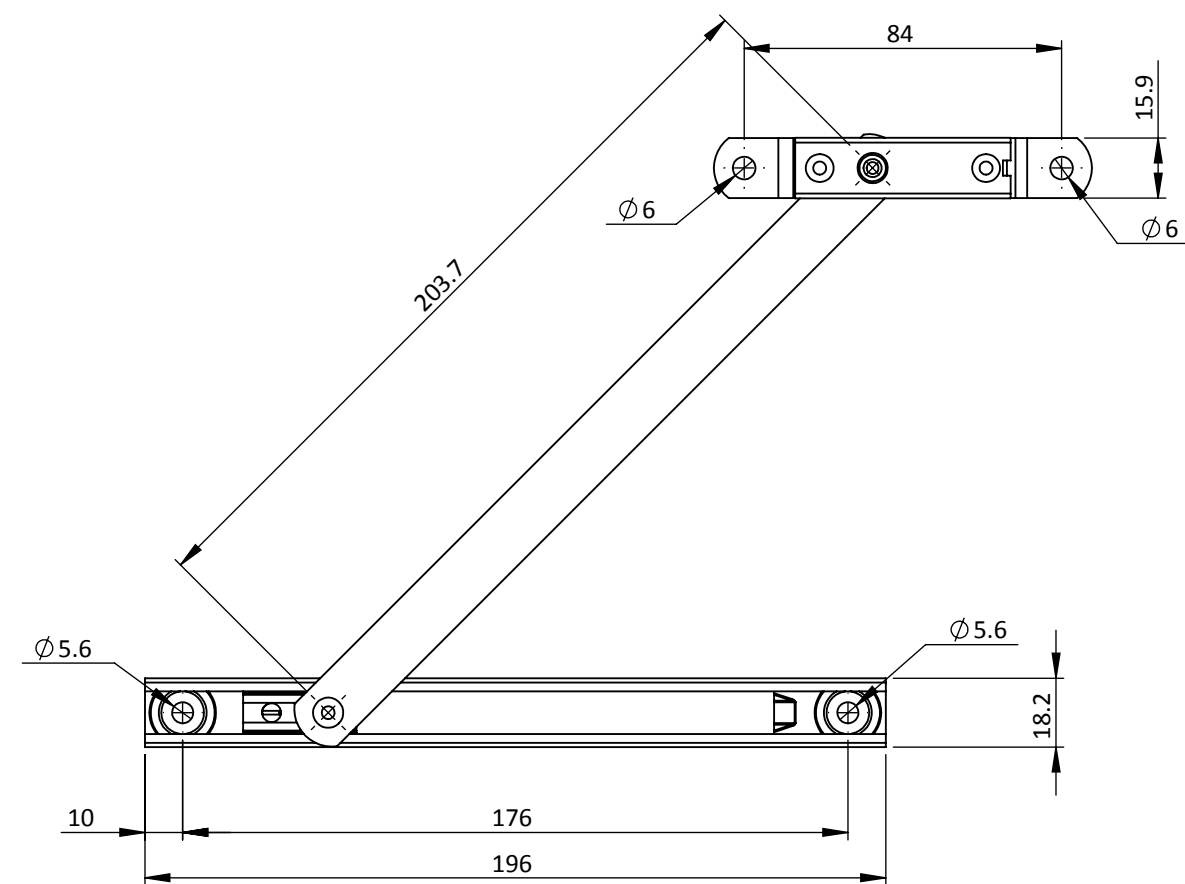
Assembly Sheets

6" Advanced Detachable Restrictor Assembly
Part Number: SADR6



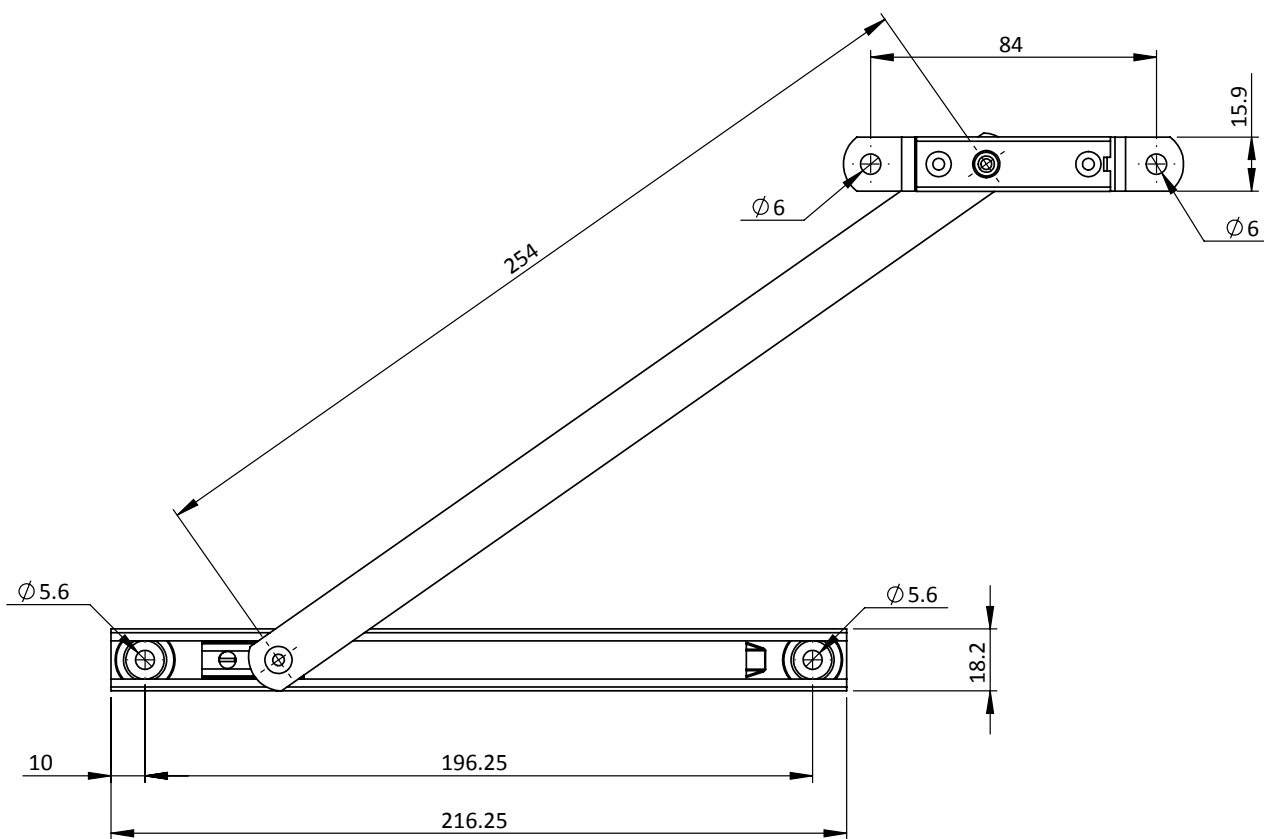
Assembly Sheets

8" Advanced Detachable Restrictor Assembly
Part Number: SADR8



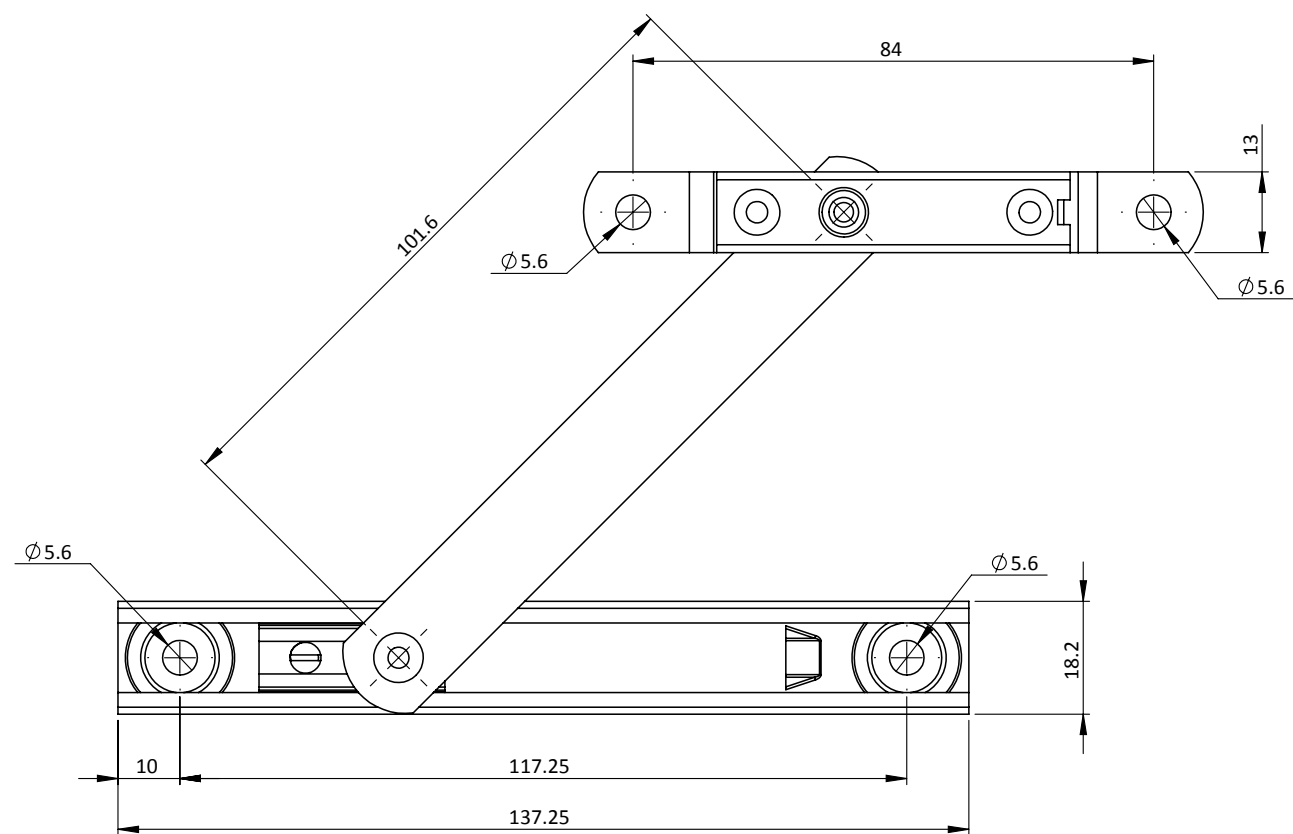
Assembly Sheets

10" Advanced Detachable Restrictor Assembly
Part Number: SADR10



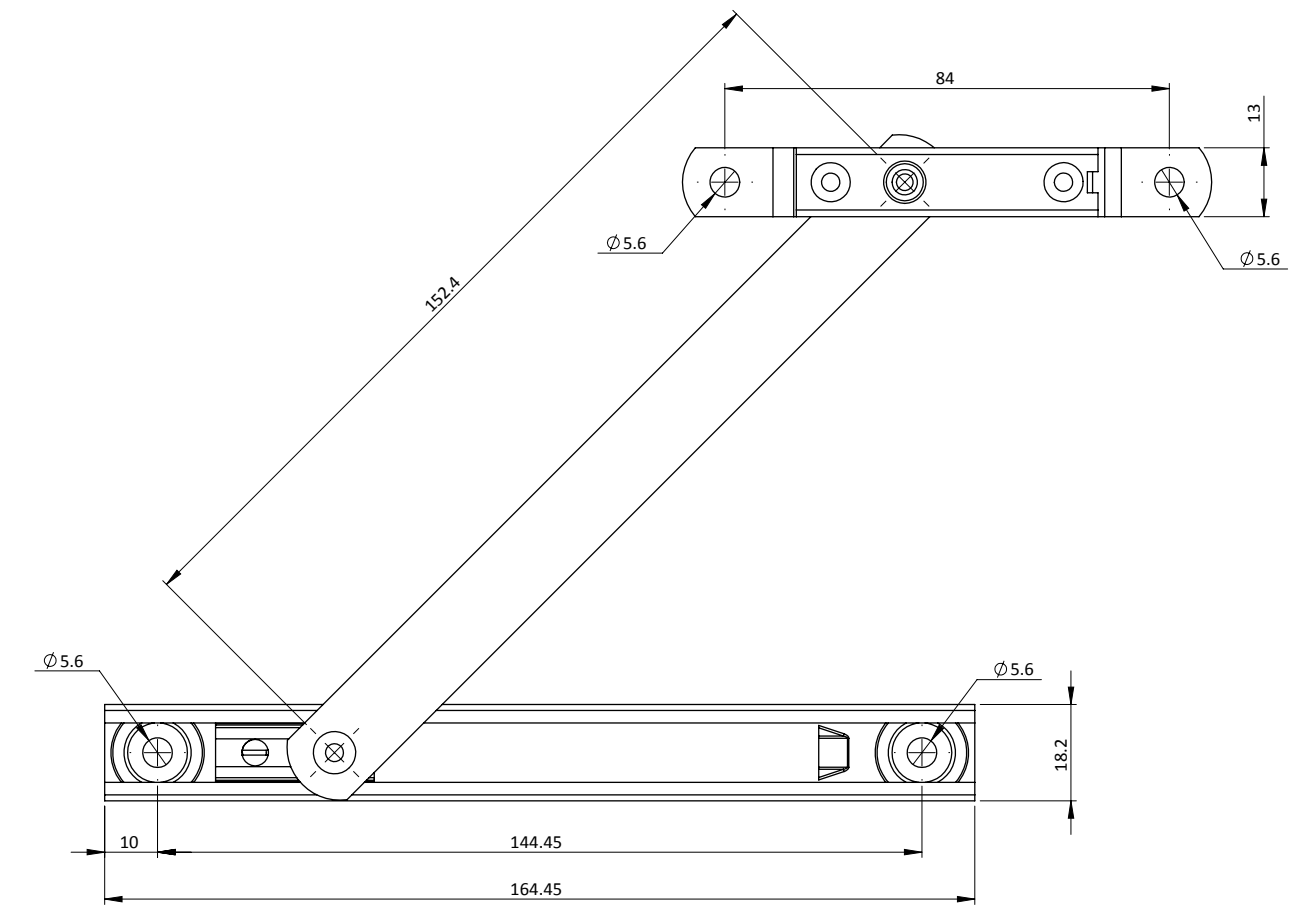
Assembly Sheets

4" Advanced Detachable Restrictor Slim Line Assembly
Part Number: SADRS4



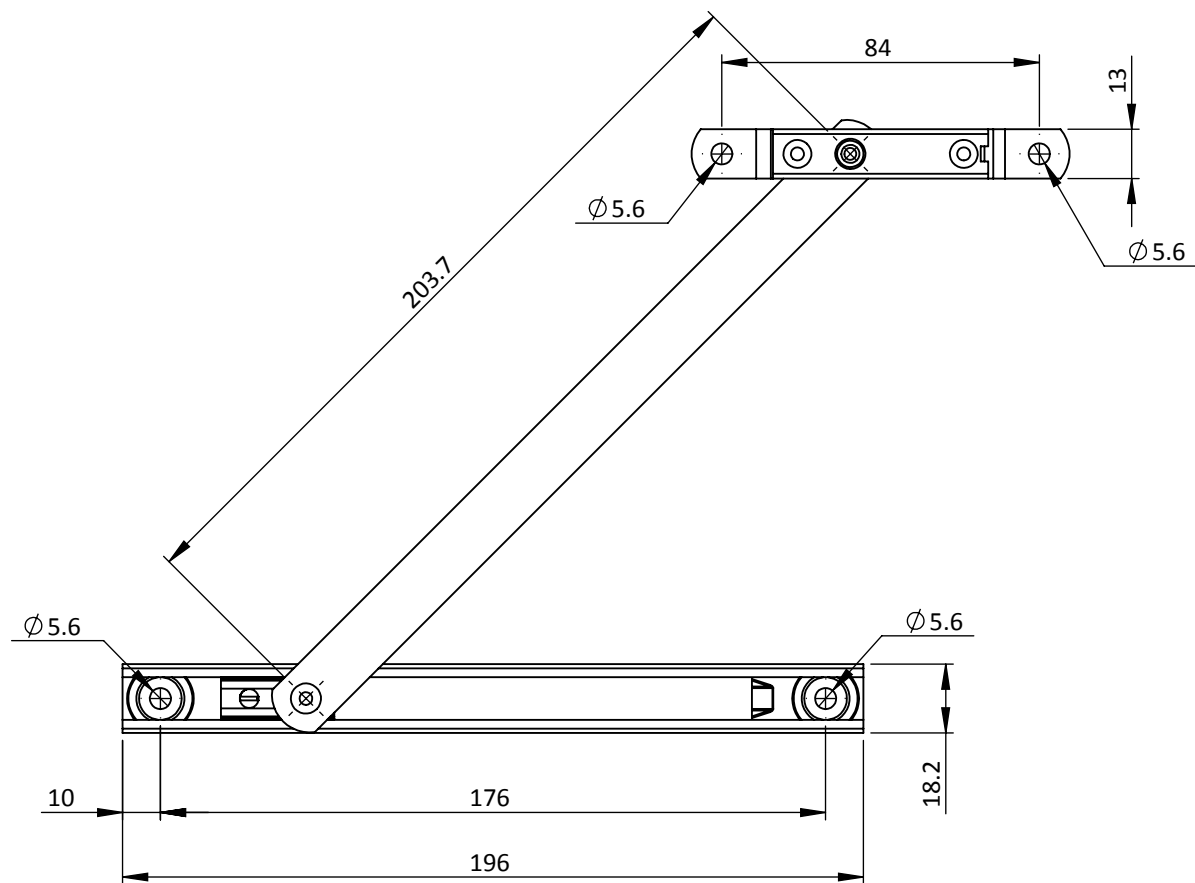
Assembly Sheets

6" Advanced Detachable Restrictor Slim Line Assembly
Part Number: SADRS6



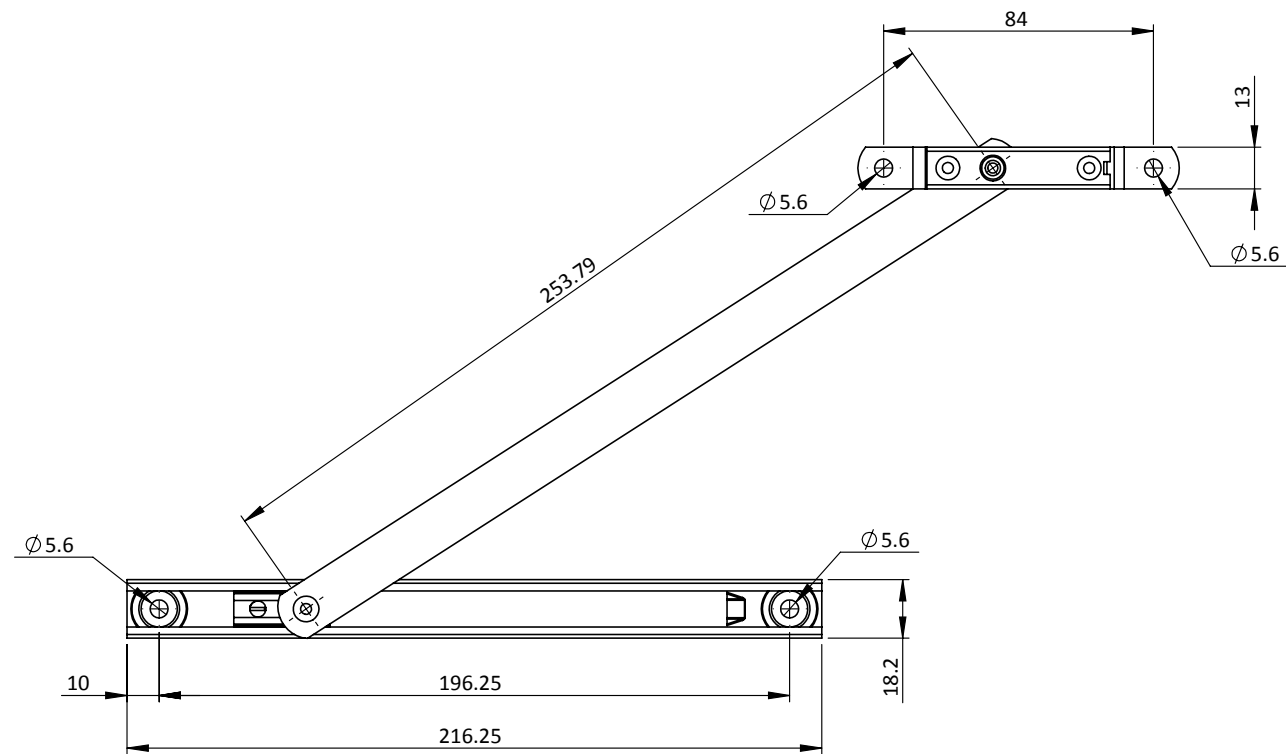
Assembly Sheets

8" Advanced Detachable Restrictor Slim Line Assembly
Part Number: SADR8



Assembly Sheets

10" Advanced Detachable Restrictor Slim Line Assembly
Part Number: SADR10



Restrictor Release Key
Part Number: R7437



This manual is to be used in conjunction with the following part codes: SADR** and SADR**

Disclaimer:

It is the responsibility of the user to ensure that this document is at the latest issue. Due to our policy of continual product improvement we reserve the right to alter specifications without notice. It is the responsibility of the window and or door manufacturer to ensure that the finished window and or door meets the required performance and safety specification.

Part of ASSA ABLOY

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