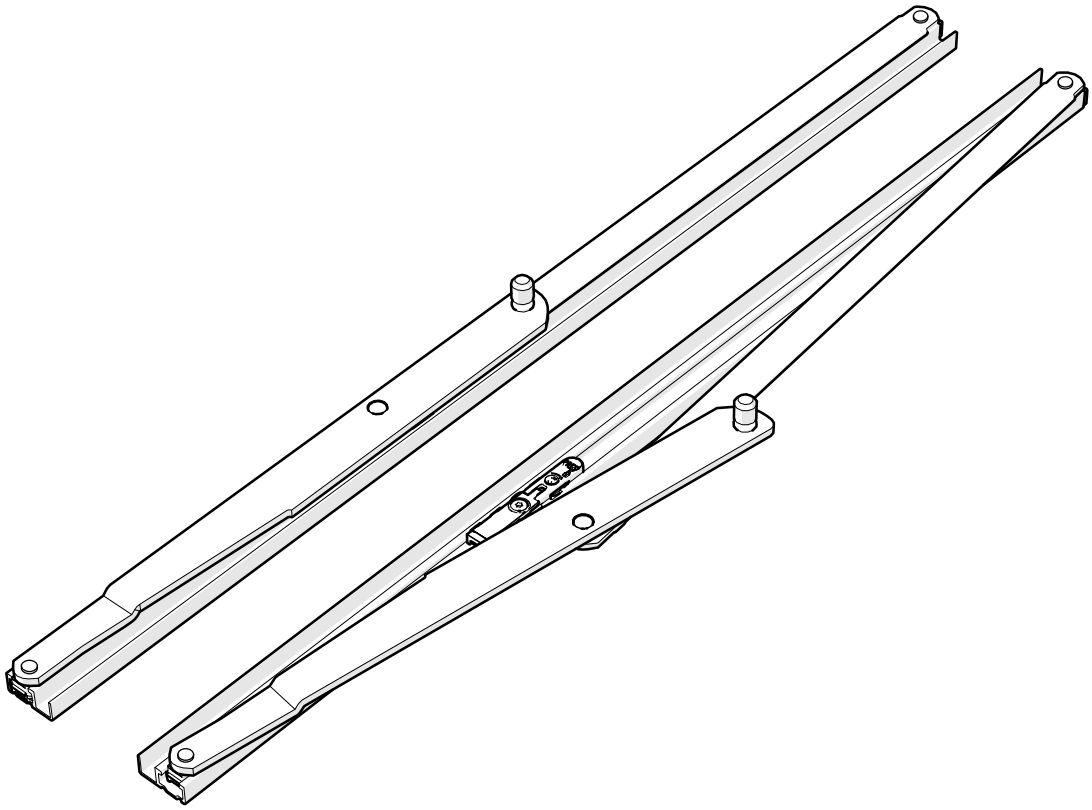
Yale Revolution Window Hinge

Product Overview

Issue: May 2017



PRODUCT FEATURES

- Can be fitted to all standard fully reversible profiles (32mm x 12mm).
- Quick and easy to install in:
  - PVC
  - Aluminium
  - Timber
- 27 module sizes covering sash heights from approximately 290mm - 1790mm.
- Carry capacity up to 80kg.
- The sash fully rotates on the outside of the building.
- Patented configurable dual closing function
  - Anti blow back
  - Easy close
- Unique key-lockable safety restrictor.
- Performs to:
  - BS 6375 Parts 1 & 2
  - BS EN 14351 Part 1
  - BS 8213 Part 1
  - BS EN1670 Grade 4
- Profile specific security accessories are available to achieve PAS24.
- Fire egress options are available on certain sizes.
- 10 year guarantee.

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Product Features

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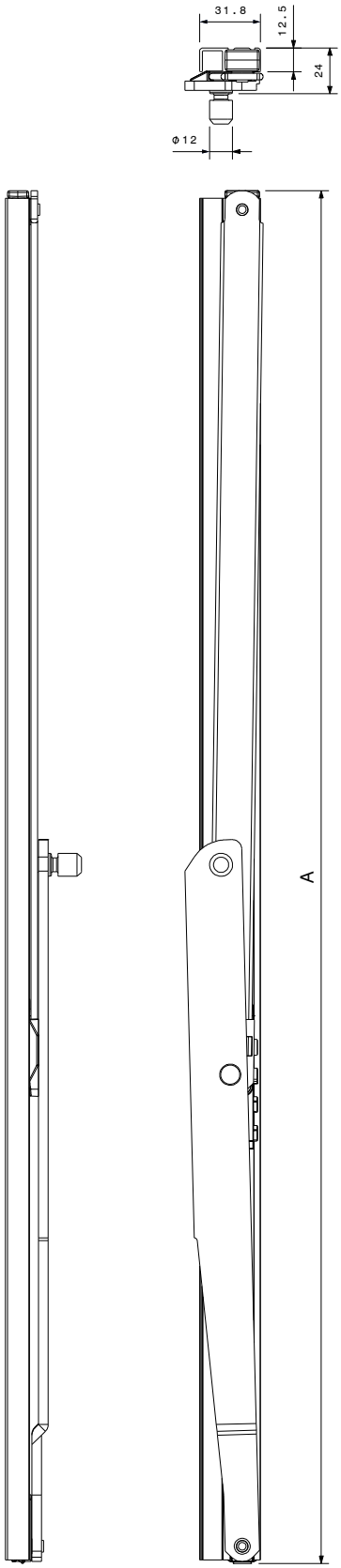

PART CODES AND VARIANTS

Module Size	Part Number	Built-in Restrictor	Maximum Weight	Dimension A Overall Length (mm)
M4.0	YREV-M040-SL		80Kg	318
M4.5	YREV-M045-SL		80Kg	368
M5.0	YREV-M050-SL		80Kg	418
M5.5	YREV-M055-SL		80Kg	468
M6.0	YREV-M060-SL	•	80Kg	518
M6.5	YREV-M065-SL	•	80Kg	568
M7.0	YREV-M070-SL	•	80Kg	618
M7.5	YREV-M075-SL	•	80Kg	668
M8.0	YREV-M080-SL	•	80Kg	718
M8.5	YREV-M085-SL	•	80Kg	768
M9.0	YREV-M090-SL	•	80Kg	818
M9.5	YREV-M095-SL	•	80Kg	868
M10.0	YREV-M100-SL	•	80Kg	918
M10.5	YREV-M105-SL	•	80Kg	968
M11.0	YREV-M110-SL	•	80Kg	1018
M11.5	YREV-M115-SL	•	80Kg	1068
M12.0	YREV-M120-SL	•	80Kg	1118
M12.5	YREV-M125-SL	•	80Kg	1168
M13.0	YREV-M130-SL	•	80Kg	1218
M13.5	YREV-M135-SL	•	80Kg	1268
M14.0	YREV-M140-SL	•	80Kg	1318
M14.5	YREV-M145-SL	•	80Kg	1368
M15.0	YREV-M150-SL	•	80Kg	1418
M15.5	YREV-M155-SL	•	80Kg	1468
M16.0	YREV-M160-SL	•	80Kg	1518
M17.0	YREV-M170-SL	•	60Kg	1618
M18.0	YREV-M180-SL	•	60Kg	1718

Note: For sash sizes, please see profile specific instructions (on page 013).

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Installation Instructions: Overview

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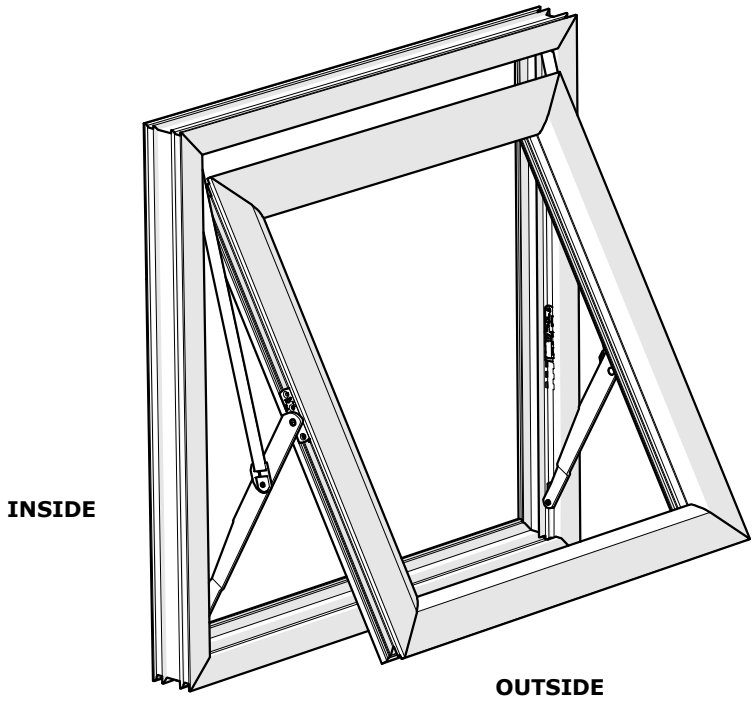
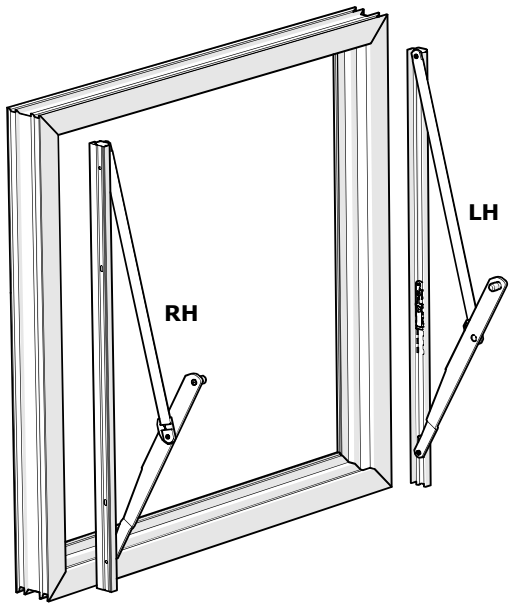


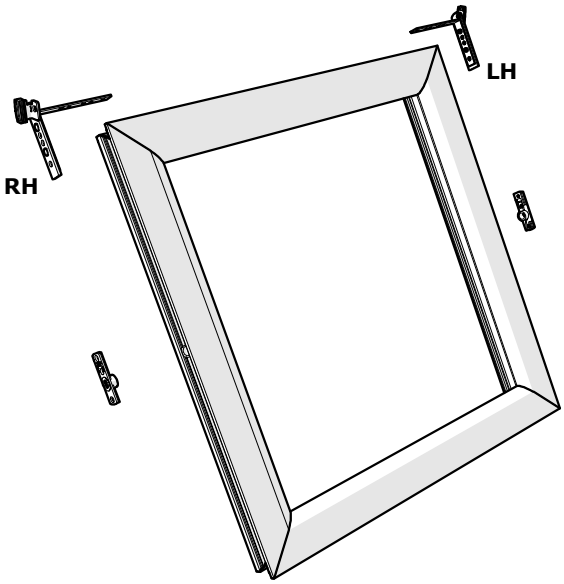
FITTING THE HINGE TO THE FRAME

- The left hand hinge can be identified by the presence of the restrictor mechanism, this hinge is fitted to the left hand side of the frame when viewed from the inside (for frame hardware installation please see page 004).

FITTING THE ACCESSORIES TO THE SASH

- The left hand bracket is fitted to the top left hand corner of the sash when viewed from the inside. The sash castings are fitted on the sides of the sash (for sash hardware installation please see page 005).





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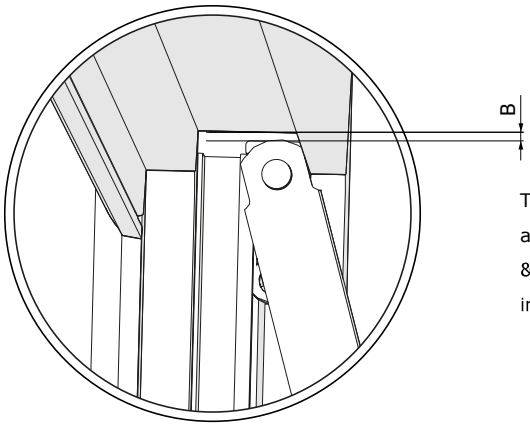
Installation Instructions: Frame Preparation

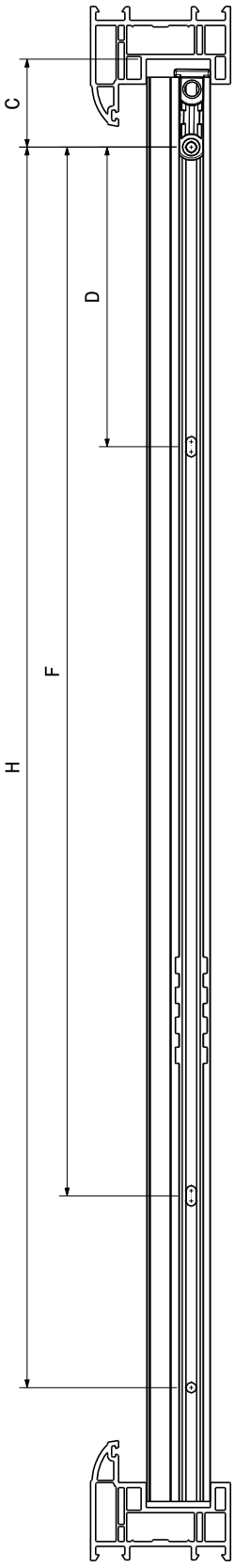
Issue: May 2017



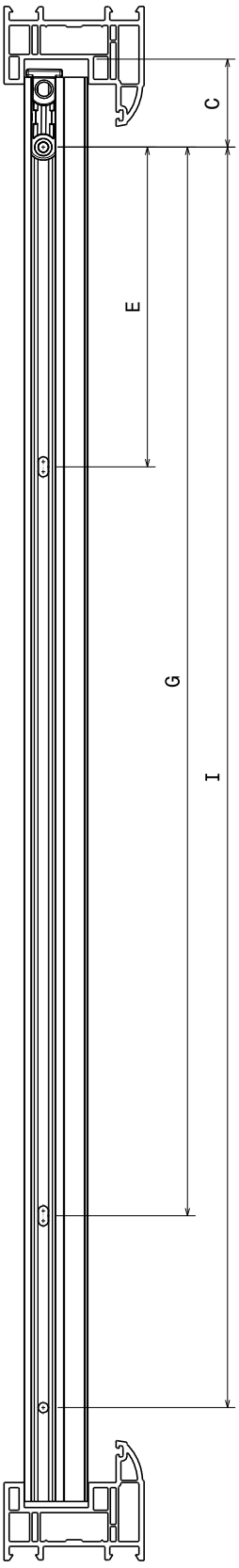
The hinge is positioned in accordance with dimensions B & C (please see profile specific instructions page 013).

FRAME FIXING POSITIONS

Module Size	Dimension (mm)					
	D	E	F	G	H	I
M4.0	-	-	-	-	221	231
M4.5	-	-	-	-	271	281
M5.0	-	-	221	231	321	331
M5.5	-	-	221	231	371	381
M6.0	100	110	-	-	421	431
M6.5	131.5	141.5	-	-	471	481
M7.0	112	122	-	-	521	531
M7.5	143	153	480	490	571	581
M8.0	150	160	525	535	621	631
M8.5	189	199	571	581	671	681
M9.0	221	231	625	635	721	731
M9.5	226.5	236.5	621	631	771	781
M10.0	238	248	671	681	821	831
M10.5	243	253	671	681	871	881
M11.0	256	266	721	731	921	931
M11.5	296	306	771	781	971	981
M12.0	290	300	821	831	1021	1031
M12.5	286	296	821	831	1071	1081
M13.0	316	326	871	881	1121	1131
M13.5	353.5	363.5	921	931	1171	1181
M14.0	353	363	971	981	1221	1231
M14.5	381	391	971	981	1271	1281
M15.0	380	390	1021	1031	1321	1331
M15.5	384.5	394.5	1021	1031	1371	1381
M16.0	415	425	1071	1081	1421	1431
M17.0	448	458	1121	1131	1521	1531
M18.0	479	489	1171	1181	1621	1631



Lh Channel
Fixing Dimensions



Rh Channel
Fixing Dimensions

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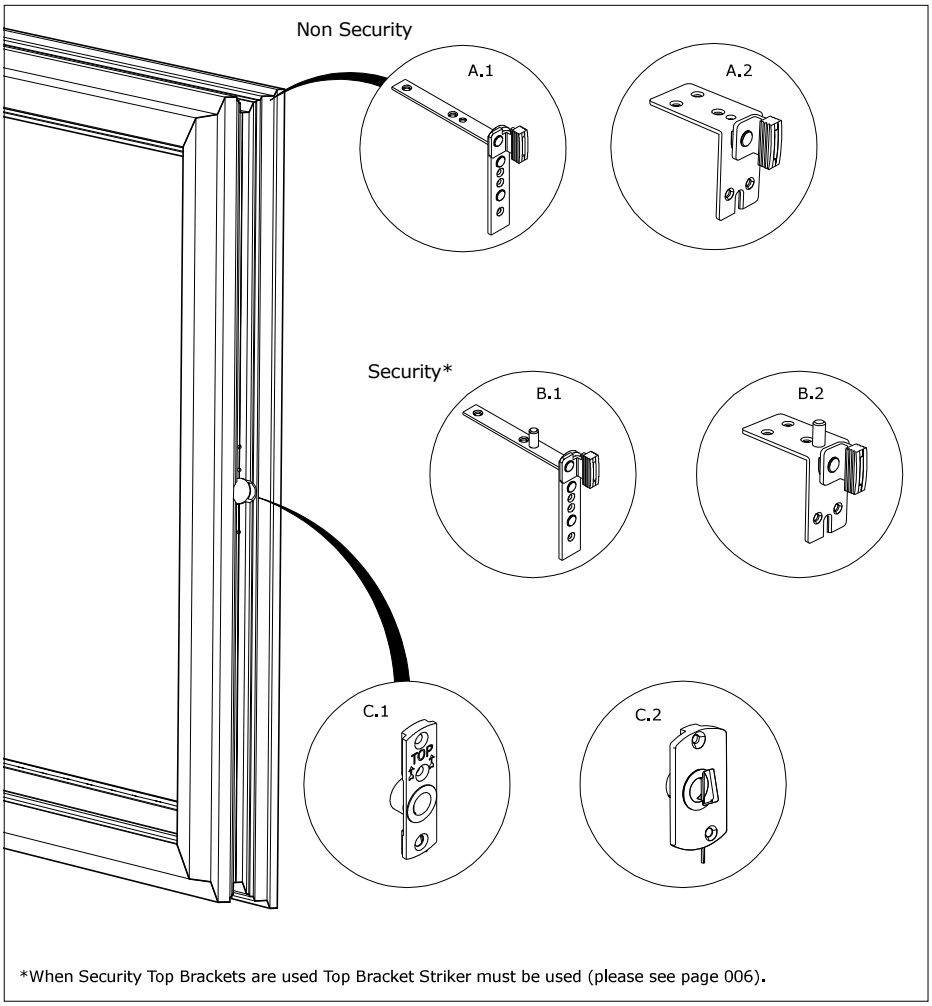
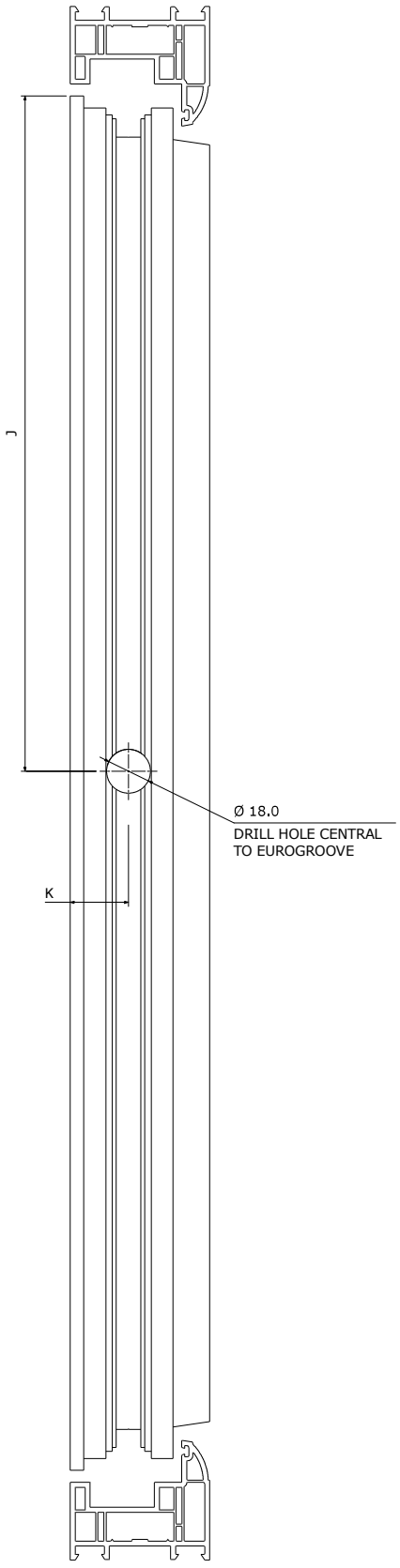
Yale Revolution Window Hinge

Installation Instructions: Sash Preparation

Issue: May 2017



*When Security Top Brackets are used Top Bracket Striker must be used (please see page 006).



Applicable To Both Sides Of Sash

SASH FITTING

- The correct Sash Hardware must be selected.
- A.1 and A.2 are examples of a Non-Security Top Bracket Assembly.
- B.1 and B.2 are examples of a Security Top Bracket Assembly.
- (Left hand top bracket shown)
- C.1 and C.2 are examples of Sash Castings
- The Sash Casting is positioned in accordance with dimensions 'J' & 'K' (please see page 013).

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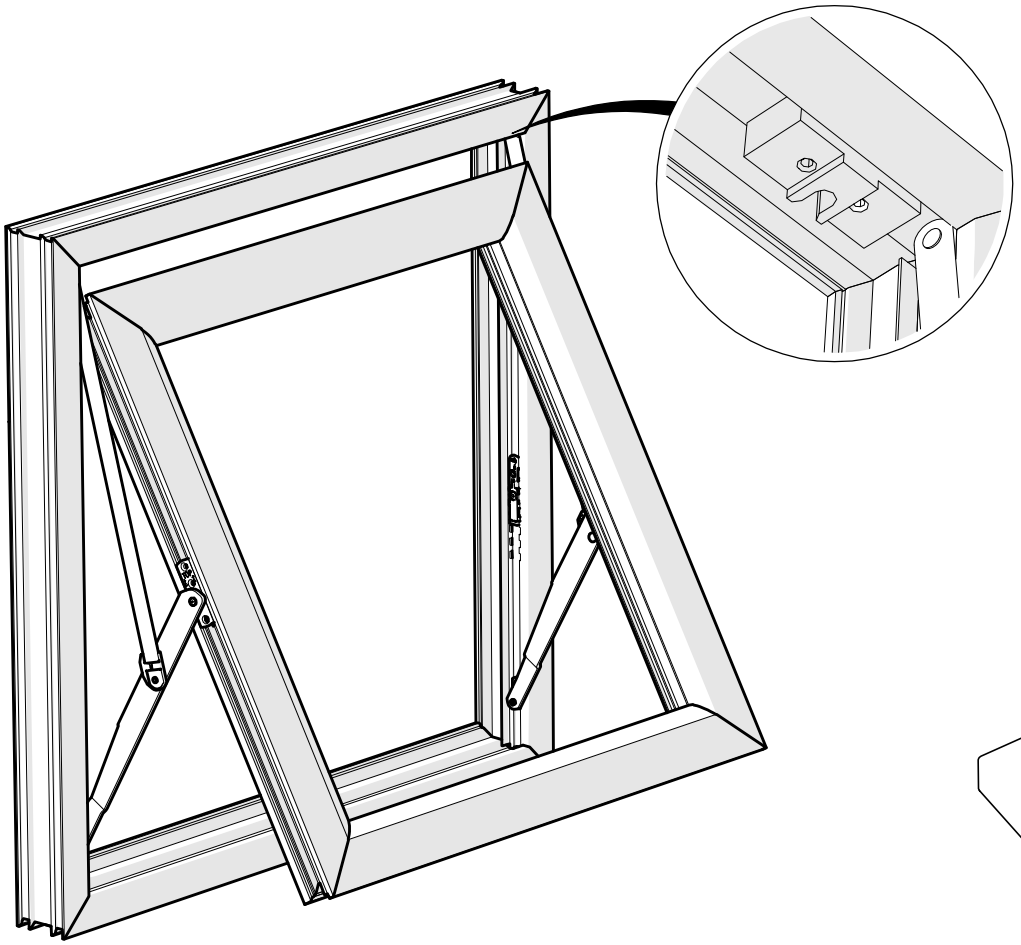
Yale Revolution Window Hinge

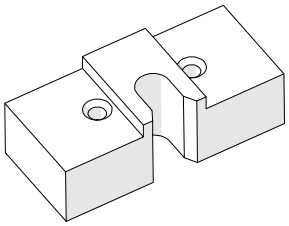
Installation Instructions: Security Accessories

Issue: May 2017

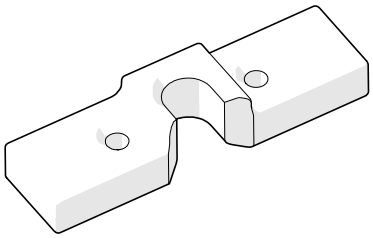
FITTING OF THE TOP BRACKET STRIKER

- The correct Top Bracket Striker must be selected.
- For dimension 'L', please see profile specific instructions (page 013). (Please note: packer is to be fitted in both corners of the frame).
- Top Bracket Striker is located in the groove at the top of the window frame.

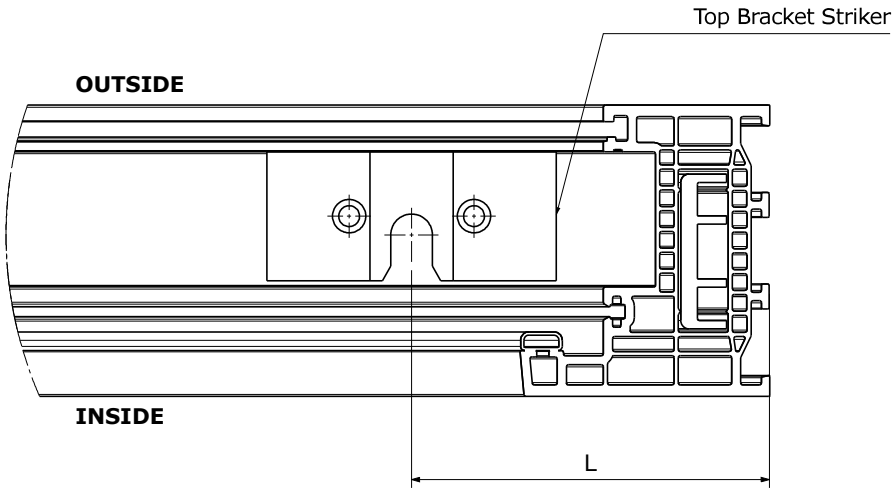




Top Bracket Striker - R9163



Top Bracket Striker - R9405



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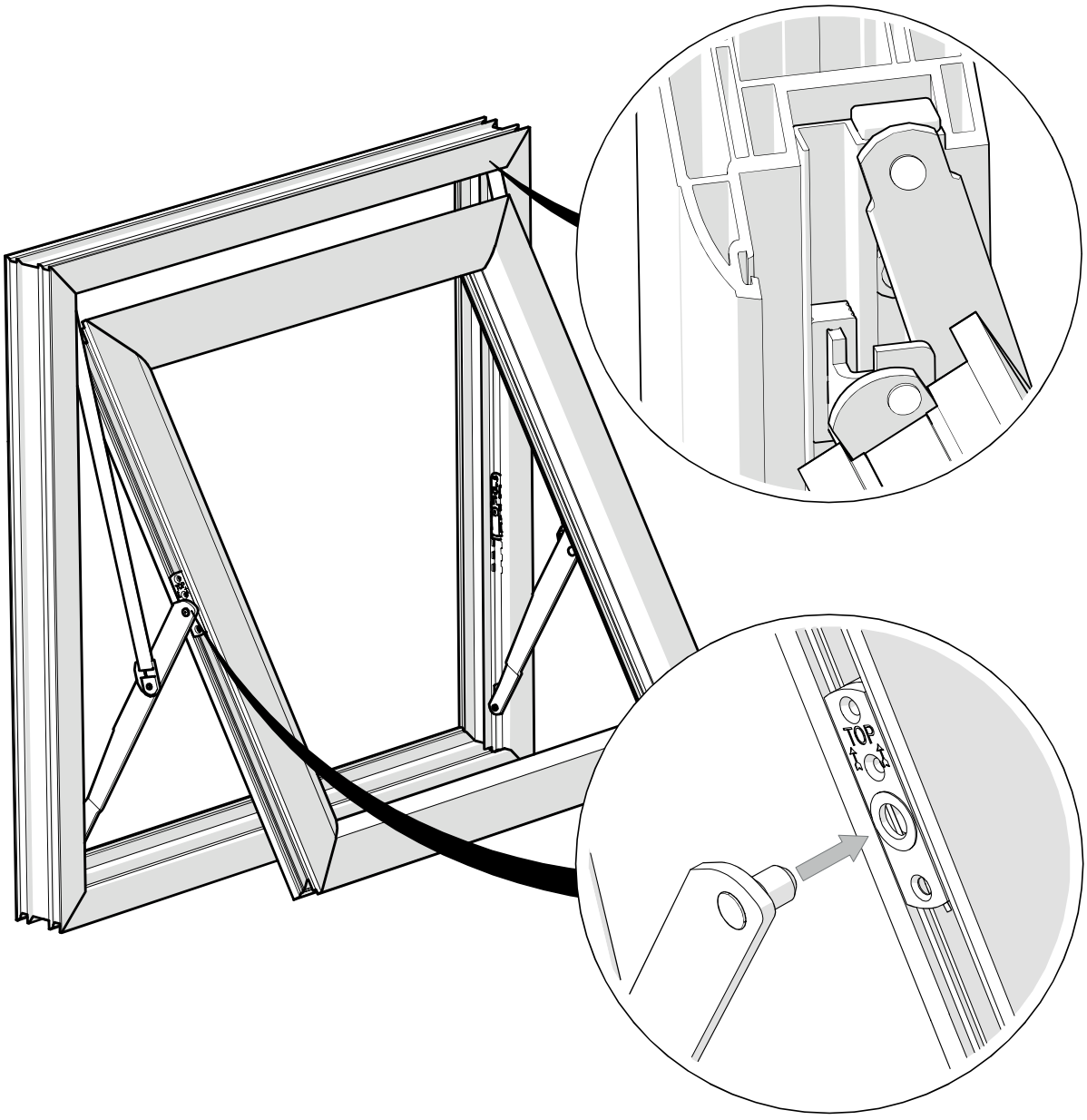
Installation Instructions: Assembly Of Sash Into Frame

Issue: May 2017

LOCATING TOP BRACKET ASSEMBLY

- Ensure the top bracket assembly glider is located within the glider channel section of the hinge - applicable to both sides.



LOCATING SASH BOLT

- Ensure the sash bolt of the hinge is inserted fully in to the sash casting, until it clicks in to place - applicable to both sides.

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Yale Revolution Window Hinge

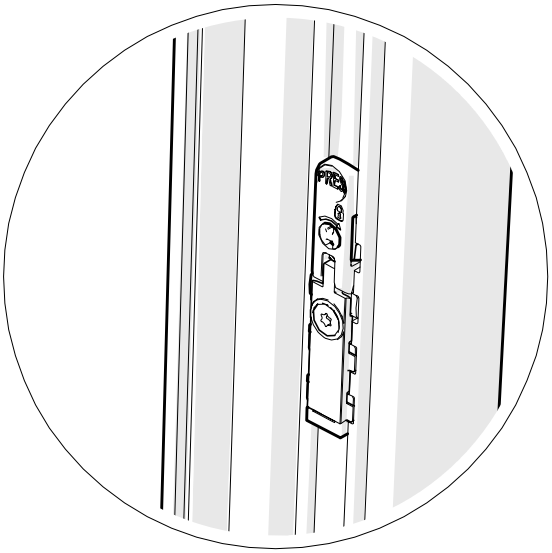
Product Operation: How To Change Configuration

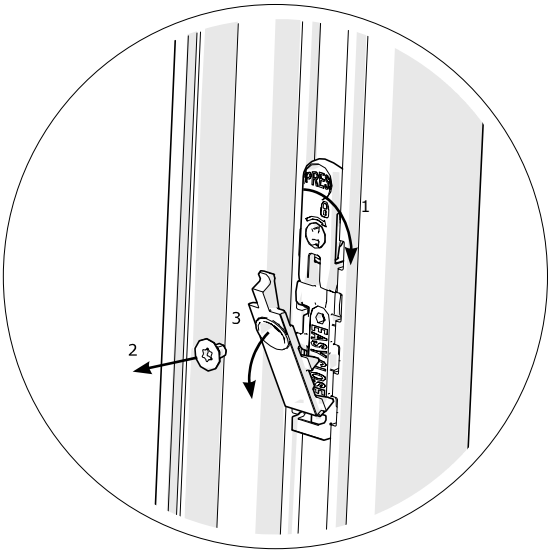
Issue: May 2017

RESTRICTION POSITION

The Yale Revolution Window Hinge can be configured to either of the following;

- Anti-Blow Back
- Easy Close





ANTI-BLOW BACK

Product as supplied will hold the sash in the set restricted positions when under moderate wind load.

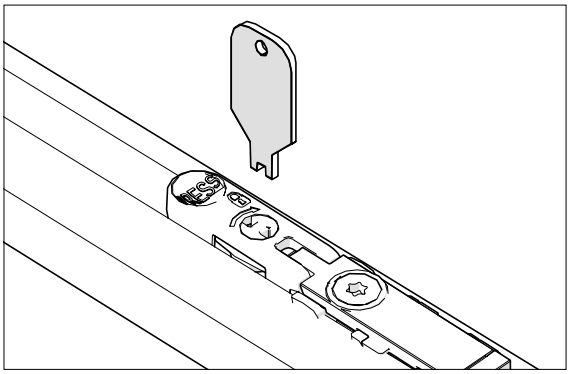
EASY CLOSE

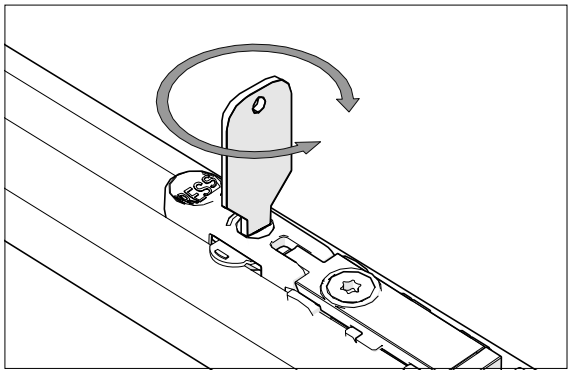
Product function can be changed by re-configuration of the sash release lever, this allows the sash to be easily closed without any user interaction. This can be done by:

1. Using the key to engage the lock out feature
2. Removing the retaining screw (M4 x 6mm) (T20 Torx drive required)
3. Removing the insert
4. Disengaging the lockout feature

KEY OPERATED LOCK OUT FEATURE

- Insert the key into the restrictor lever lock and rotate 90° (clockwise) to ensure that the window cannot be accidentally derestricted.
- Reverse this procedure to take the hinge out of this mode.





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Yale Revolution Window Hinge

Product Operation: Anti-Blow Back

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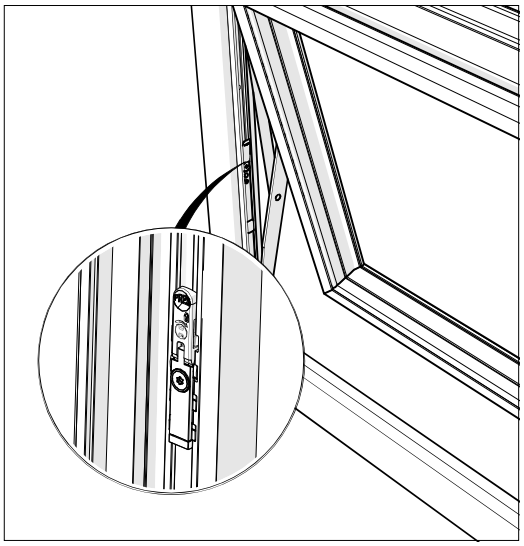
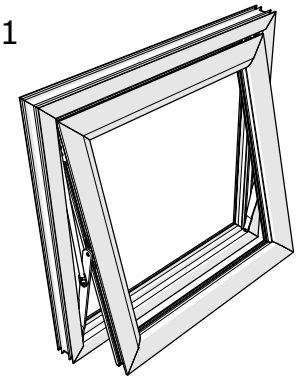


RESTRICTOR LEVER

- The restrictor lever can be found on the left hand hinge, when viewed from the inside.
- The restrictor lever must be pressed to open and close the sash, when locked out.
- Please note: the restrictor lever is only present in module sizes M6.0 and above.

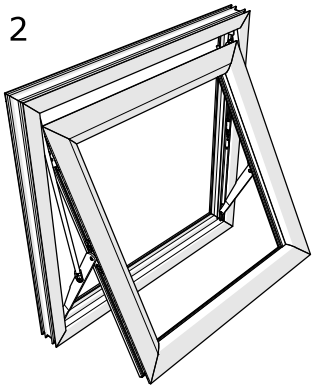
1



SAFETY POSITION

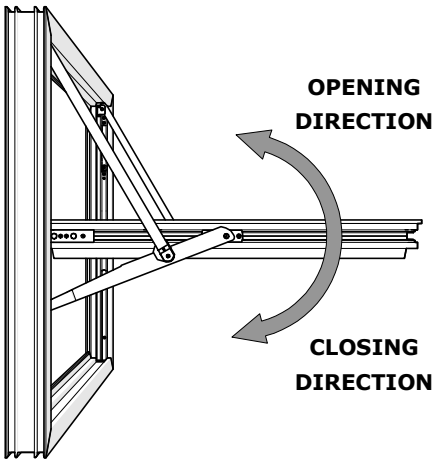
- Open the window until the hinge locks the sash out and restricts at the first position.
- The restrictor lever will then need to be pressed in order to release the sash from this position (this could be to open or close).

2

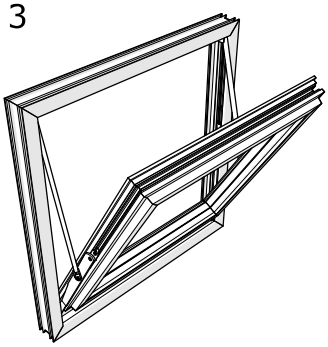


VENTILATION POSITION

- Continue to open the window further until it locks out and restricts at the second position.
- The restrictor lever will then need to be pressed in order to release the sash from this position (this could be to open or close).



3



WASH POSITION

- Fully reverse the sash until it engages into this third position.
- The restrictor lever will then need to be pressed in order to release the sash from this position (to close).

At each of the above positions the key operated lock out feature can be used to prevent the restrictor being released.

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Yale Revolution Window Hinge

Product Operation: Easy Close Operation

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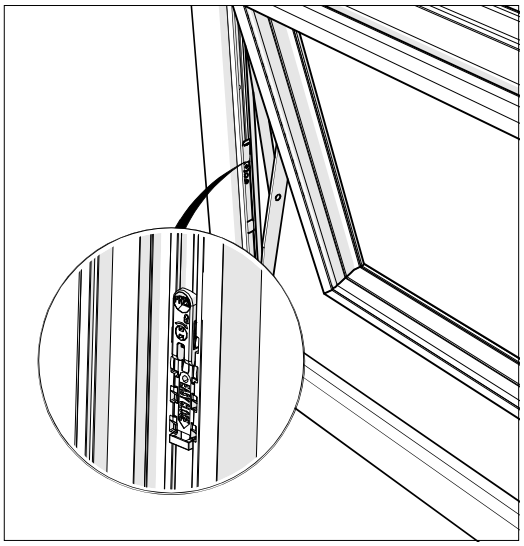

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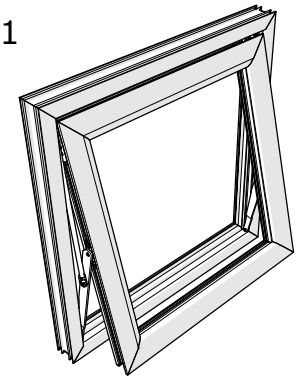
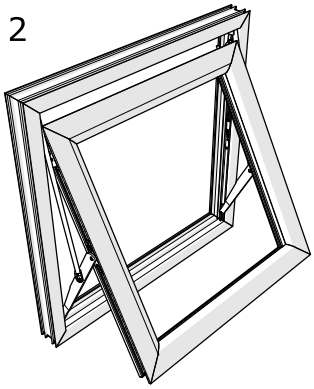


SAFETY POSITION

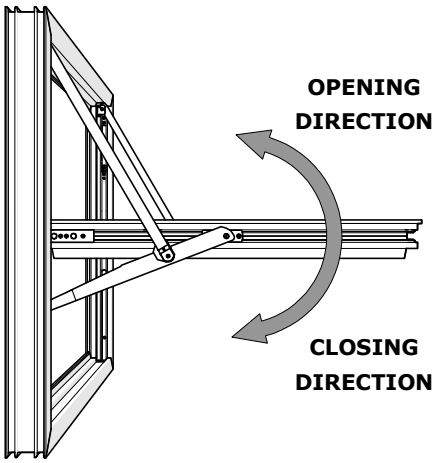
- Open the window until the hinge locks the sash out and restricts at the first position.
- The restrictor lever will then need to be pressed in order to open the window further (there is no need to press the button to close the window).

2

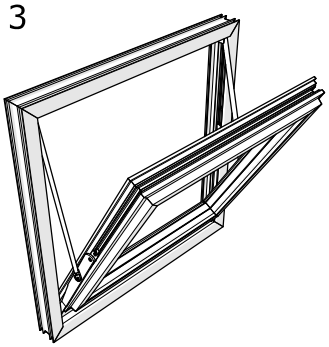


VENTILATION POSITION

- Continue to open the window further until it locks out and restricts at the second position.
- The restrictor lever will then need to be pressed in order to open the window further (there is no need to press the button to close the window).



3



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Installation Instructions: Accessories

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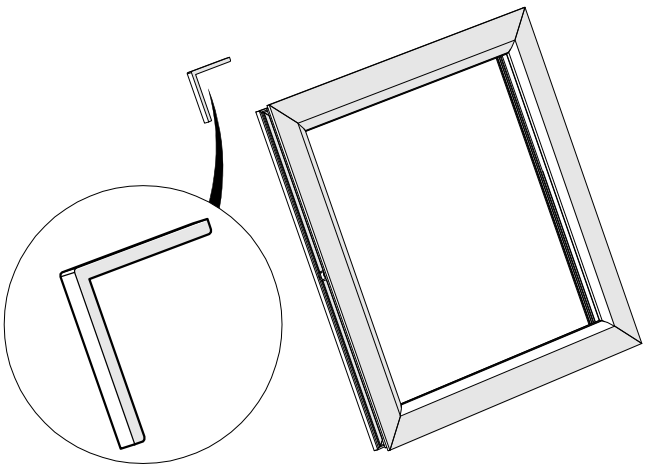
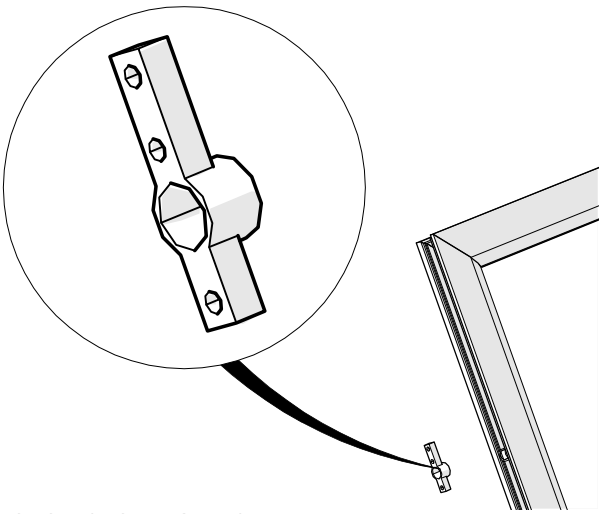


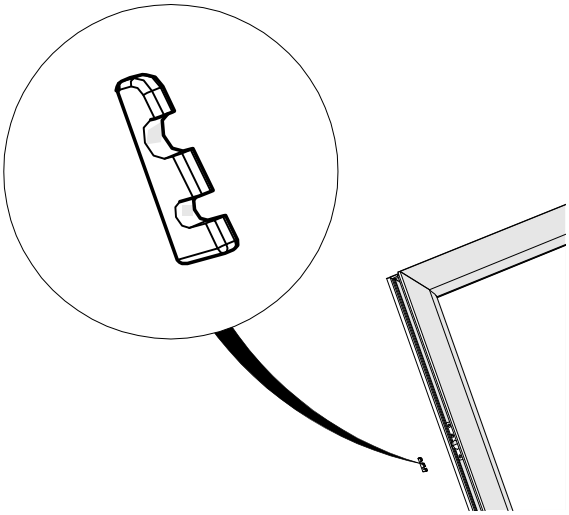
1. TOP BRACKET PACKER (2-OFF REQ'D) (R9164)

- Can be fitted into the eurogroove beneath the Top Bracket Assemblies to conceal the fixing screws.
- Includes groove to allow water drainage from head of sash.



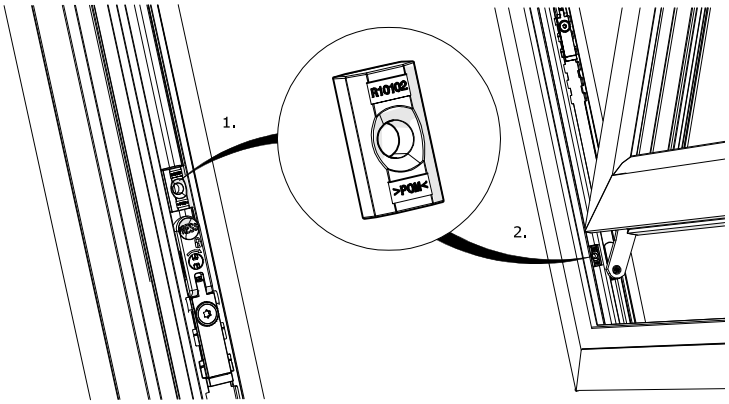
2. SASH CASTING PACKER (2-OFF REQ'D) (R9177)

- Can be fitted into the eurogroove beneath the Sash Castings to conceal the fixing screws.
- The use of this item will require the locating hole diameter be increased to 22mm from the standard 18mm (as shown on page 005).



3. SASH CASTING PACKER (RED) (2-OFF REQ'D) (R9224)

- Can be fitted underneath the Sash Castings to provide the window manufacturer a visual indication that the hinge has securely engaged into the sash casting with the retaining spring held in place.



4. TRACK STOP (R10102)

Can be used in two applications.

1. Can be fitted into the hinge channel to support the mechanism to reduce the risk of damage to the window through misuse or excessive force being applied which causes the sash to be forced free from the frame.

The sash is rotated till horizontal and the Track Stop is screwed into position above the slider/ restrictor.

2. Can be fitted into the hinge channel to limit the rotation of the sash to prevent clash with low lintels when reversed beyond the wash position.

The sash is rotated until engaged into the wash position and the Track Stop is screwed into position beneath the top bracket glider.

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Yale Revolution Window Hinge
Specification

Issue: May 2017

MATERIALS

- Links: Material - Cold Rolled Carbon Steel. Grade CS4 (BS 1449). Finish - Plated with Zinc, Full Trivalent Passivate and Lacquer
- Rivets: Material - Austenitic Stainless Steel Wire. Grade 304 (BS EN 10263).
- Channels: Material - Aluminium Alloy. Grade 6063-T6 (BS EN 755). Finish - Powder coat
- Washers: Material - Nylon
- Sliders: Material - Nylon
- Die-Cast Components: Material - Zinc Alloy. Grade ZL3 (BS EN 1774). Finish - Plated with Zinc, Full Trivalent Passivate and Lacquer

MAINTENANCE AND LUBRICATION

- The Revolution hinge aluminium channels must not be painted after installation.
- The channels should be lightly lubricated with a white neutral grease (e.g. Vaseline), and the hinge pivot points should be kept lightly oiled, at 6-12 month intervals depending on local conditions.

SUGGESTED FITTING SEQUENCE

- Fit the Revolution hinges on to the frame as shown on page 004.
- Fit the accessories on to the sash as shown on page 005.
- Install the sash into the frame as shown on page 007.

TESTING AND ACCREDITATION

- BS 6375 Part 1: Severe weather resistance
- BS 6375 Part 2: Load bearing safety devices
- EN14351-1:2006 Clause 4.8 – Load-bearing capacity of safety devices
- PAS24: Enhanced security of whole windows and doors
- BS8213: Safety in use and cleaning of windows

ENVIRONMENTAL CONSTRAINTS

- Normal operating temperature range is -20°C to +60°C.
- Normal operating humidity range is 10% RH to 90% RH.
- Materials used will not degrade, due to ultra violet light or when using neutral acidity non-solvent cleaning chemicals, at a rate faster than other parts of the window assembly.

RECOMMENDATIONS

- The window should be installed square and care taken not to damage the aluminium channel of the hinge.
- Austenitic Stainless Steel fixing screws are recommended to provide enhanced corrosion resistance. It is also recommended that users consult with a screw specialist to determine the optimum form and type.

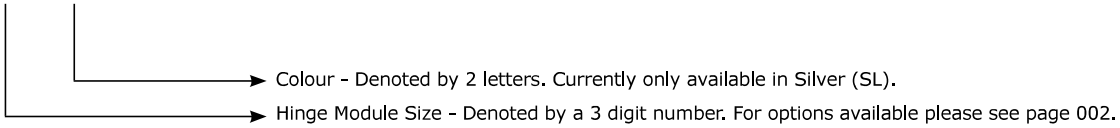
COMPATIBLE PRODUCTS

- Virage Window Handle
- Defender Window Lock
- Encloser Window Lock

DETERMINING THE FULLY REVERSIBLE HINGE PART CODE

- Each part code contains 2 pieces of variable information: the hinge module size and channel colour (part number below denotes a M12.0 hinge).

YREV-M120-SL



DISCLAIMER

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Yale Revolution Window Hinge

Profile Specific Compatibility

COMPATIBILITY LIST

The following profiles have been verified by Yale DWS Technical department on profile specifications provided by the following suppliers on or before the issue date of this Technical Manual.

If you wish to use this product on a system not specified below, you must contact Yale DWS before we can offer any product guarantee.

014 Sheerframe 8000 Fully Reversible (PVC)
016 Profile 22 Fully Reversible (PVC)
018 Spectus Fully Reversible (PVC)
020 Rehau Total70R Fully Reversible (PVC)
022 Deceuninck Fully Reversible (PVC)
024 Halo System 10 Fully Reversible (PVC)
026 Veka Matrix 70mm Fully Reversible (PVC)
028 Duraflex Fully Reversible (PVC)
030 System 2000 HS1 Fully Reversible (Timber)
032 Profile B Fully Reversible (Timber)
034 SMART Alitherm 700 Fully Reversible (Aluminium)
036 SAPA Dualframe 75si Fully Reversible (Aluminium)
038 Senior Architectural Systems SPW600e Fully Reversible (Aluminium)

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