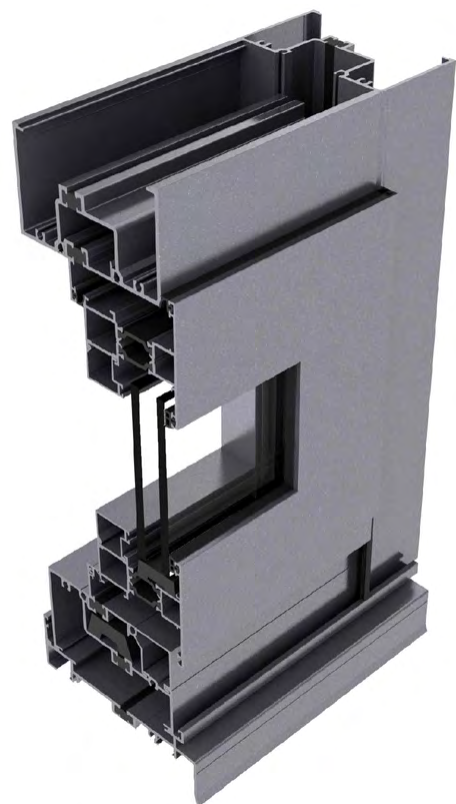


U-Max™ THERMAL BREAK Multi Locking Sashes

U-Max Framing Systems: UMULTILOCK - 1

Multi Locking Awning & Casement Sashes



FEATURES:

- Sash Adaptor Mitre cut - adaptable to Centre & Front Glaze
- Multi Locking as a turn handle - sill mounted as an awning
- Multi Locking as a turn handle - side mounted as a casement
- 180kg as an Awning Window
- 72kg Sash weight as a Casement Window
- Capable of 2.4 x 1.2m Sashes subject to limits in stay charts for Awnings or Casements
- Optional Beads allow 6mm - 50mm Glass thicknesses

FABRICATION:

- Mitre cut
- Stainless Steel Corner Chevrans provide superior strength & can be conceal glued
- Sash is crimped for strength
- Requires specialist machining to fit locks & other hardware

PRODUCT APPLICATIONS:

- Very large Sashes due to multi locking function
- High windload areas
- Improved Acoustics through wide range of glass types
- Operable blinds in IGUs

LIMITATION:

- No screen option unless winder operated or retractable screens

HARDWARE SELECTION:

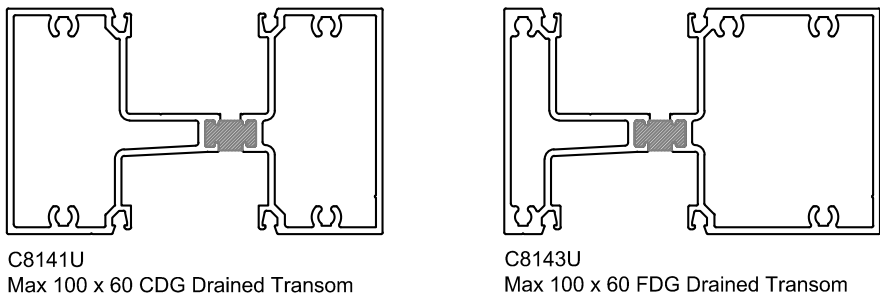
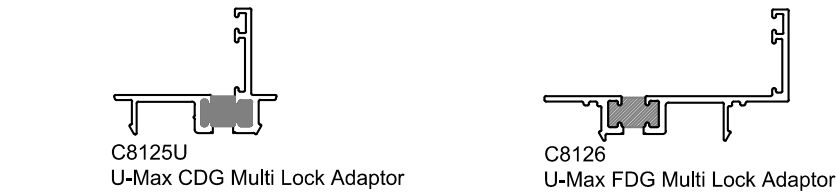
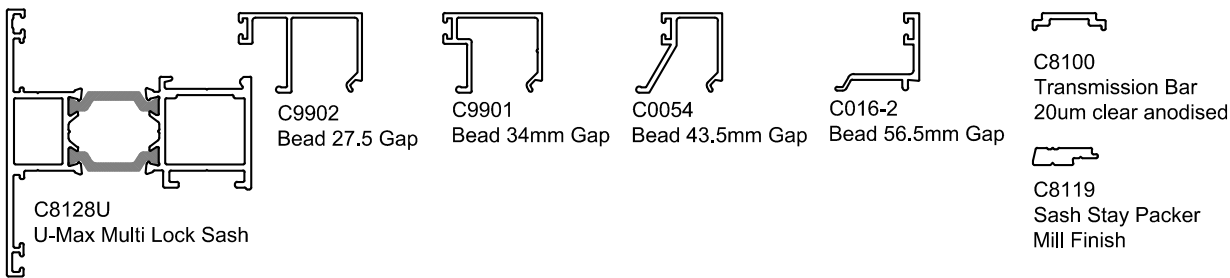
Selecting the correct hardware for application is determined by many factors that change on a project by project basis. Careful consideration needs to be given to opening type, size & weight, wind loads, location within the building, security, ease of operation, budget, serviceability & aesthetic requirements.

Typical hardware is shown throughout our catalogues to depict opening types & function. There are a range of sash types available to cover a variety of applications. Once the opening type has been selected, it is the responsibility of the fabricator to determine hardware suitability with the hardware manufacturer, ensuring their selection meets project requirements.

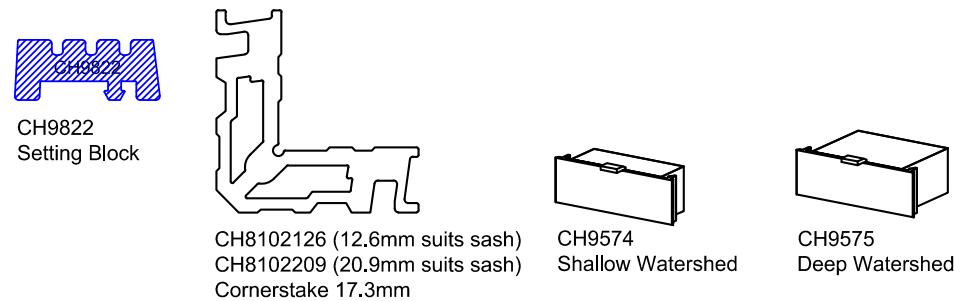
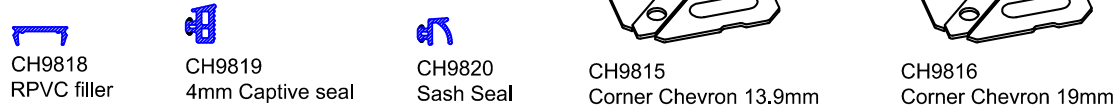
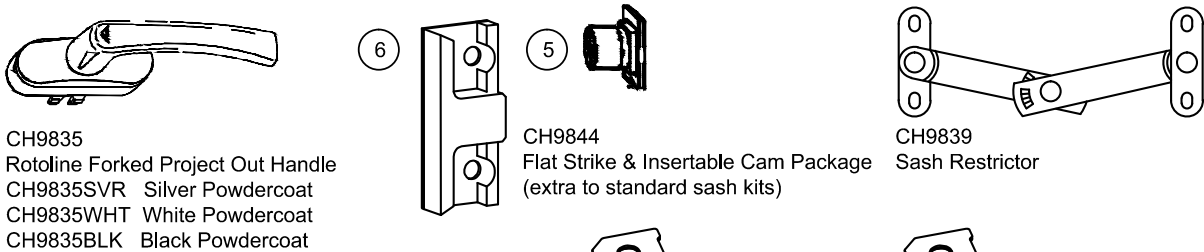
U-Max™ THERMAL BREAK Multi Locking Sashes

U-Max Framing Systems: UMULTILOCK - 2

Extrusion ID

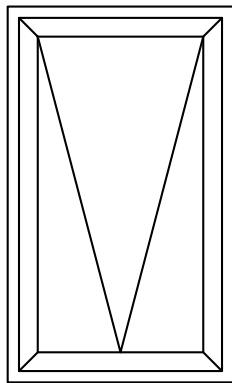


Component ID



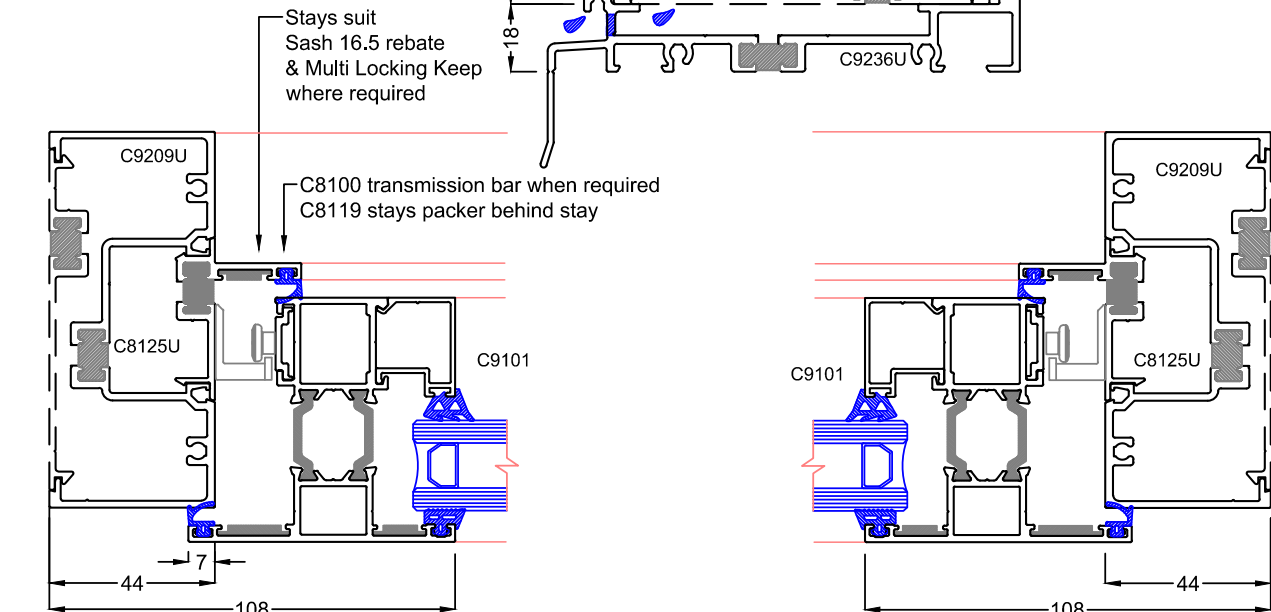
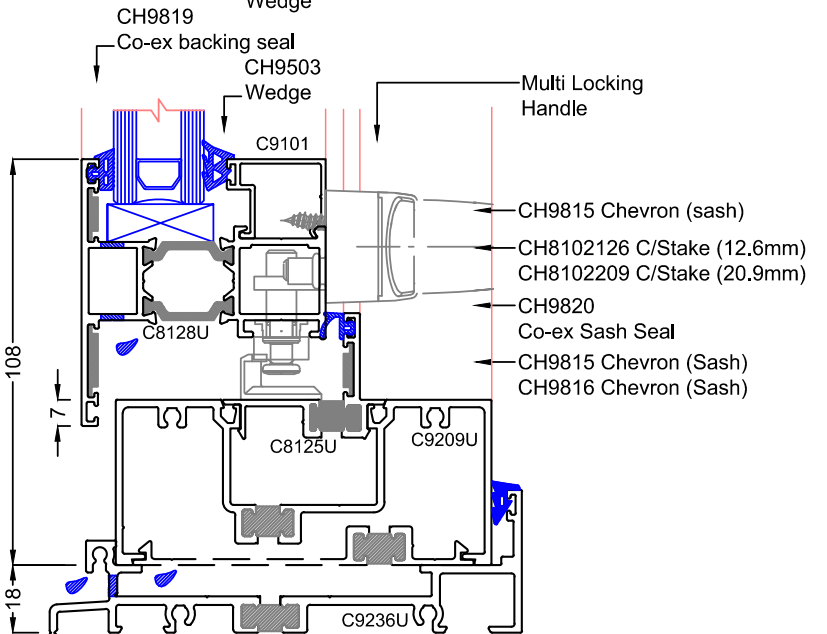
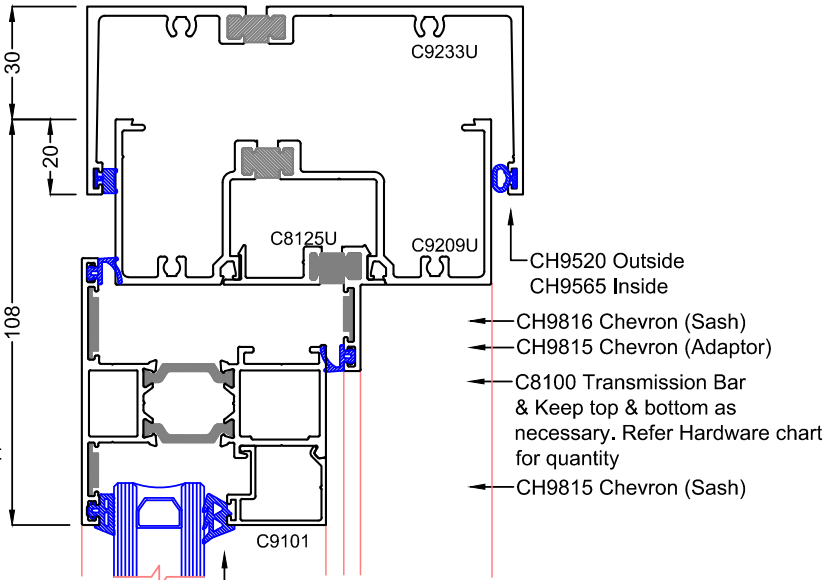
Multi Locking Awning Sash in 100 Centre Glaze

44mm Frame shown for clarity, C9200U 60mm frame can also be used



- Adapts to U-Max 100 Centre Glazed, 150 Offset
- Maximum Sash weights generally are 130kg. Refer Hardware specification
- Handle Operated key locking & multi locking
- Not recommended for use with winders
- Max Height 2100mm
- Max width 1200mm
- Generally suited to 24-40mm IGU

Cutting			
C8125U	Sash Adaptor	DOH + 21	MC
C8125U	Sash Adaptor	DOW + 21	MC
C8128U	Sash	DOH + 14	MC
C8128U	Sash	DOW + 14	MC
	Bead	DOH - 128	
	Bead	DOW - 92	

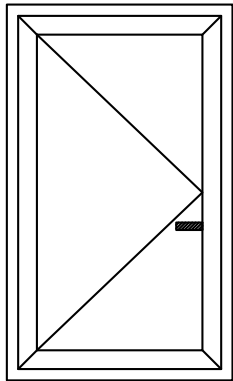


U-Max™ THERMAL BREAK Multi Locking Sashes

U-Max Framing Systems: UMULTILOCK - 3

Multi Locking Casement Sash in 100 Centre Glaze

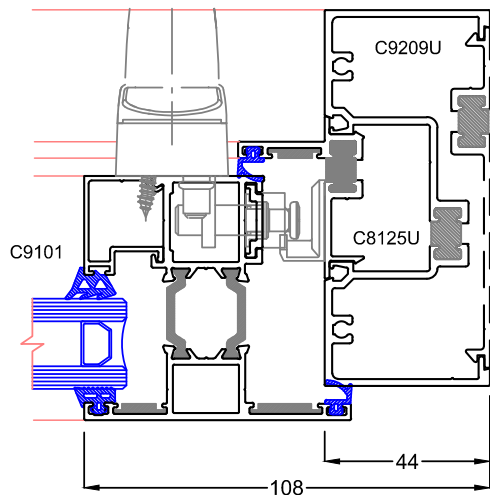
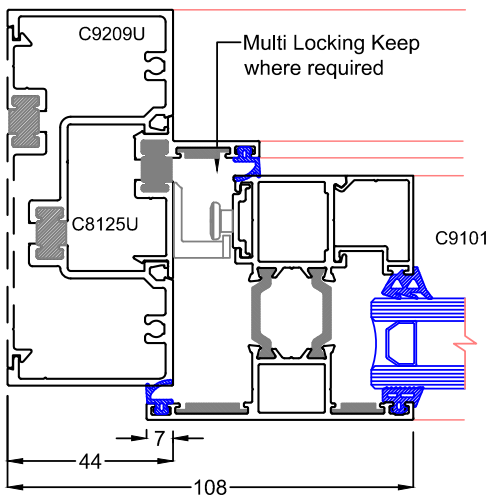
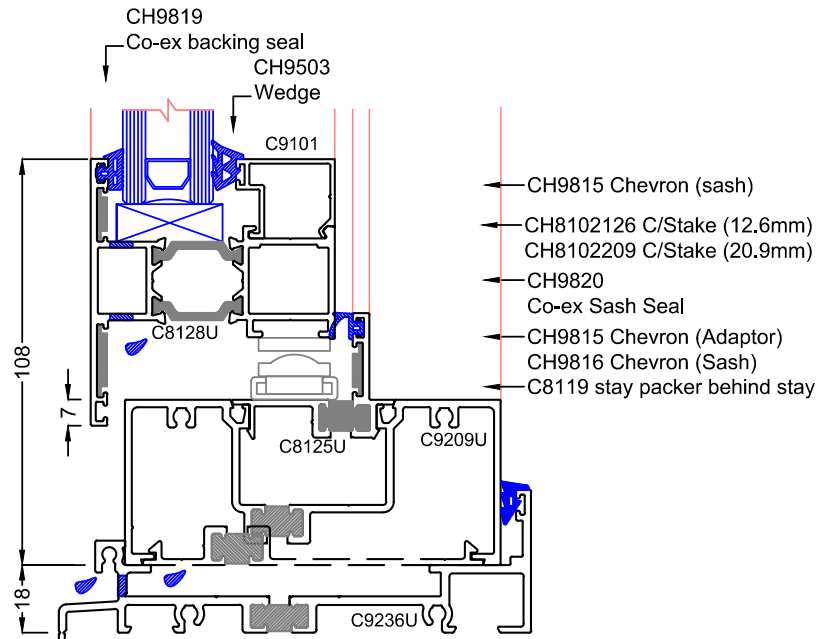
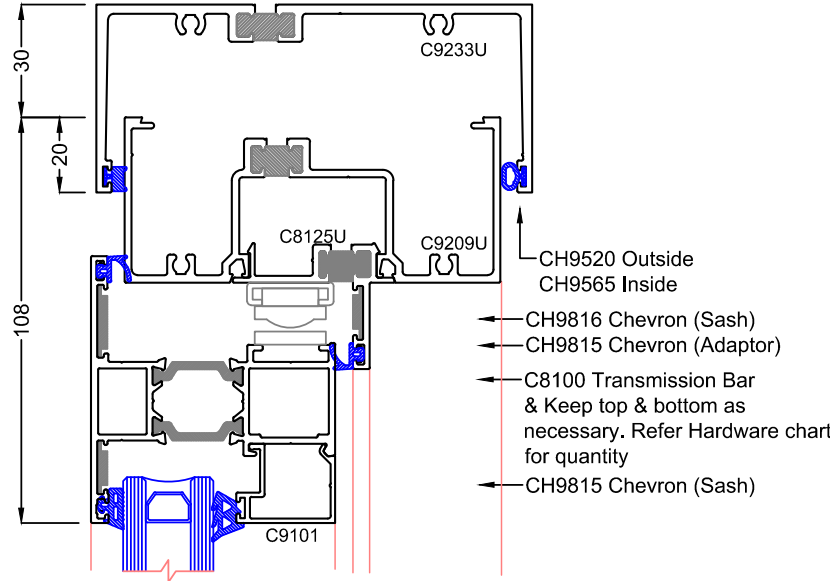
44mm Frame shown for clarity, C9200U 60mm frame can also be used



Left Hand Sash as viewed from Outside.

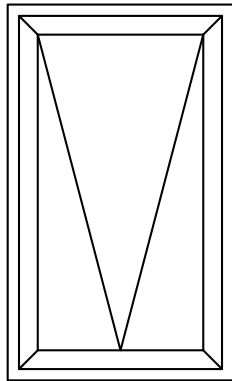
- Adapts to Max 100 Centre Glazed, 150 Offset, 100 & 150 Front Glazed
- Maximum Sash weights generally are 72kg. Refer Stay Charts
- Handle Operated key locking & multi locking
- Not recommended for use with winders
- Max Height 2400mm
- Max width 900mm
- Generally suited to 24-40mm IGU

Cutting			
C8125U	Sash Adaptor	DOH + 21	MC
C8125U	Sash Adaptor	DOW + 21	MC
C8128U	Sash	DOH + 14	MC
C8128U	Sash	DOW + 14	MC
	Bead	DOH - 128	
	Bead	DOW - 92	



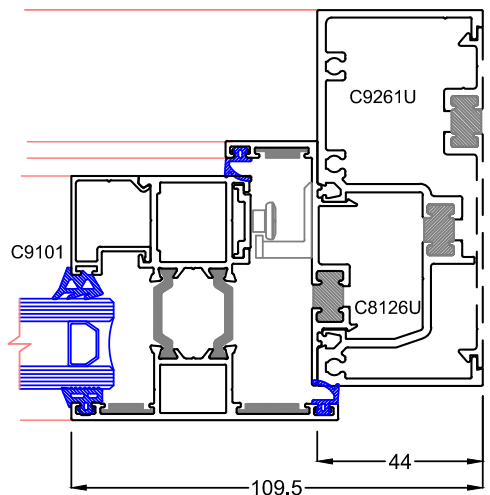
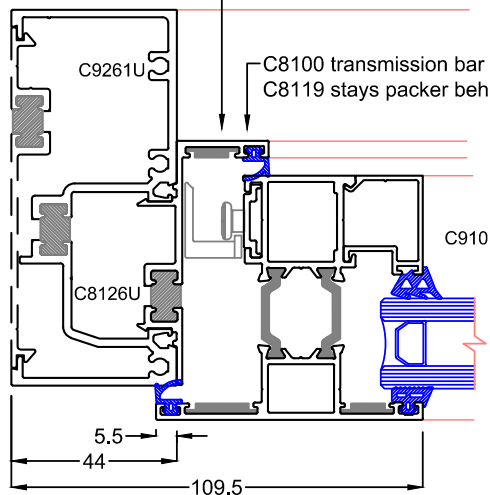
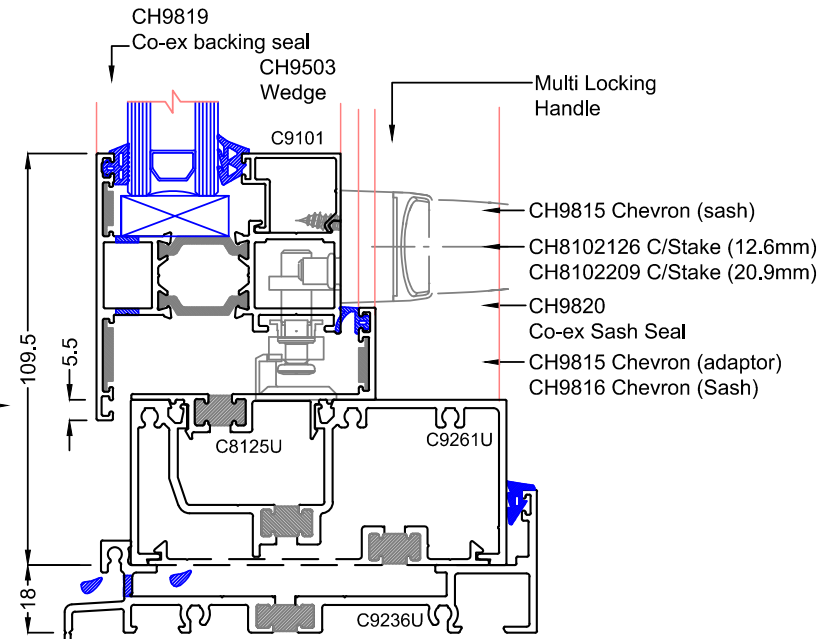
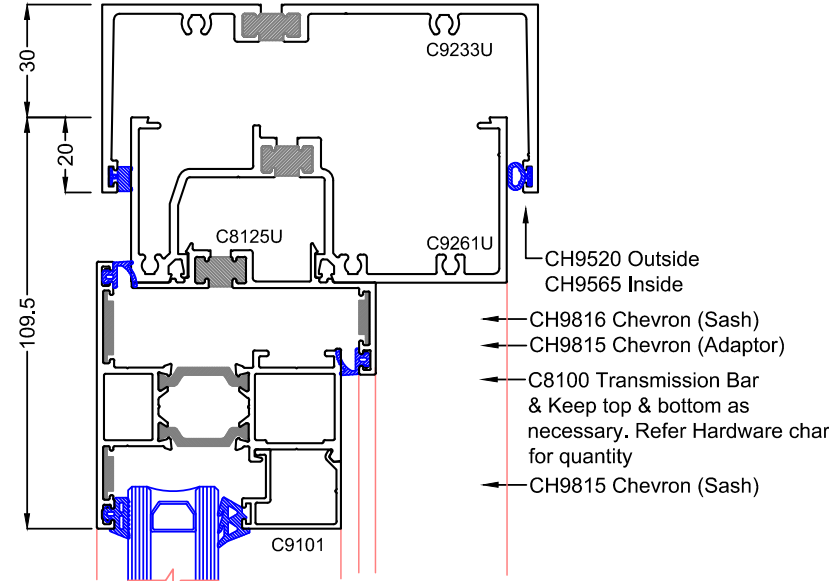
Multi Locking Awning Sash in 100 Front Glaze

44mm Frame shown for clarity, C9250U 60mm frame can also be used



- Adapts to U-Max 100 & 150 Front Glazed
- Maximum Sash weights generally are 130kg. Refer Hardware specification
- Handle Operated key locking & multi locking
- Not recommended for use with winders
- Max Height 2400mm
- Max width 1200mm
- Generally suited to 24-40mm IGU

Cutting			
C8126U	Sash Adaptor	DOH + 21	MC
C8126U	Sash Adaptor	DOW + 21	MC
C8128U	Sash	DOH + 11	MC
C8128U	Sash	DOW + 11	MC
	Bead	DOH - 95	
	Bead	DOW - 131	



Note the difference in cutting compared to Centre Glaze, the sash adaptor adds 1.5mm

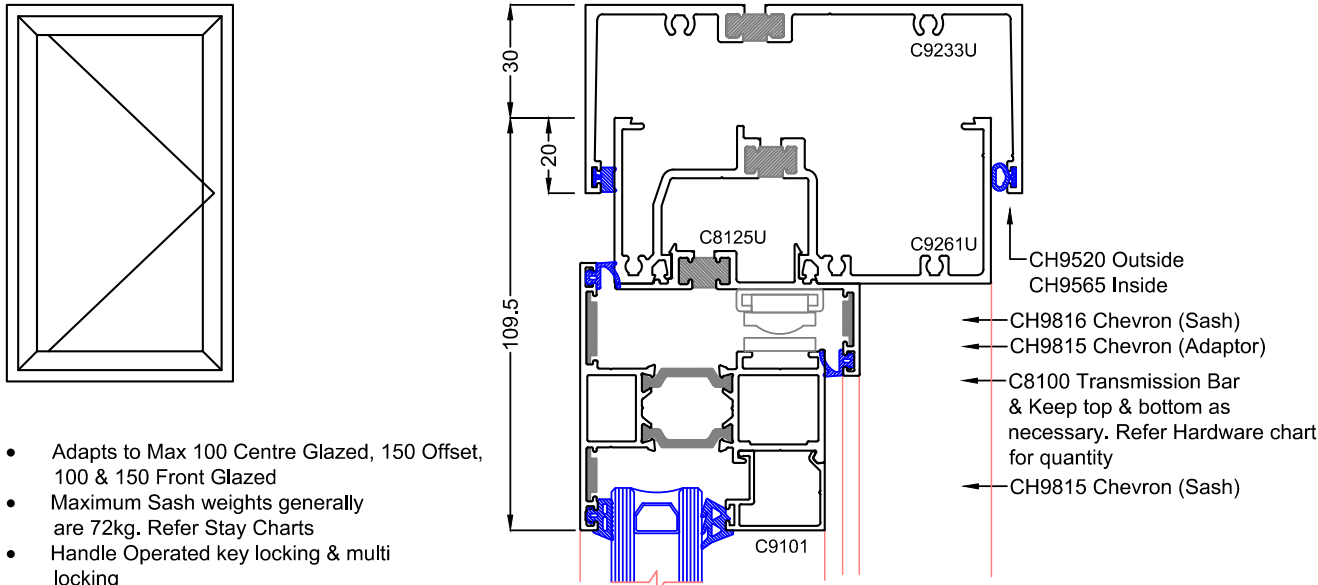
Stays suit Sash 16.5 rebate & Multi Locking Keep where required

C8100 transmission bar when required
C8119 stays packer behind stay

U-Max™ THERMAL BREAK Multi Locking Sashes
U-Max Framing Systems: UMULTILOCK - 4

Multi Locking Casement Sash in 100 Front Glaze

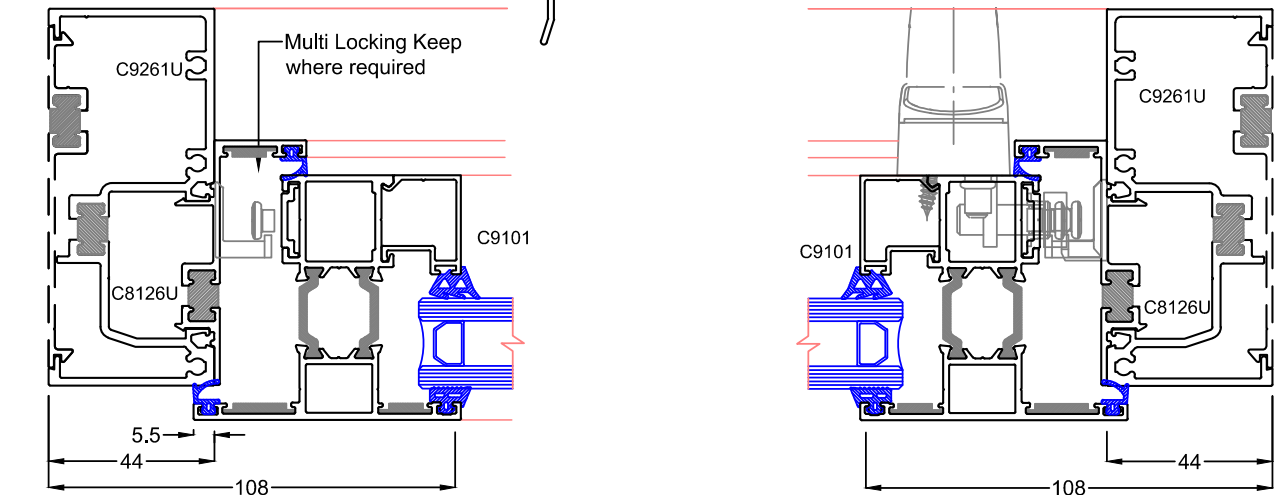
44mm Frame shown for clarity, C9250U 60mm frame can also be used



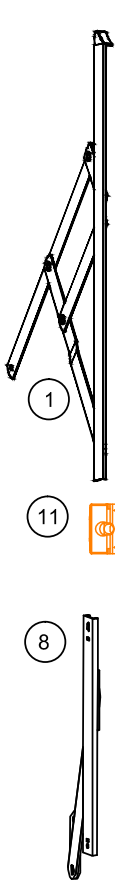
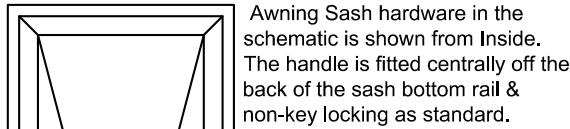
- Adapts to Max 100 Centre Glazed, 150 Offset, 100 & 150 Front Glazed
- Maximum Sash weights generally are 72kg. Refer Stay Charts
- Handle Operated key locking & multi locking
- Not recommended for use with winders
- Max Height 2400mm
- Max width 1000mm
- Generally suited to 24-40mm IGU

Cutting			
C8126U	Sash Adaptor	DOH + 21	MC
C8126U	Sash Adaptor	DOW + 21	MC
C8128U	Sash	DOH + 11	MC
C8128U	Sash	DOW + 11	MC
	Bead	DOH - 95	
	Bead	DOW - 131	

Note the difference in cutting compared to Centre Glaze, the sash adaptor adds 1.5mm



Multi Locking Awning Hardware ID

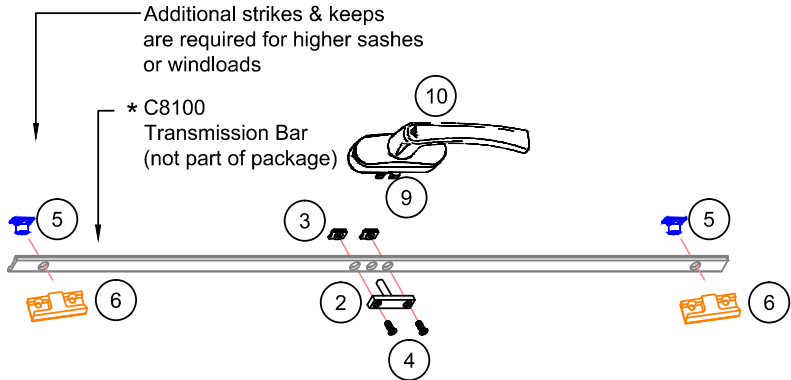


ROTO Awning Sash Hardware

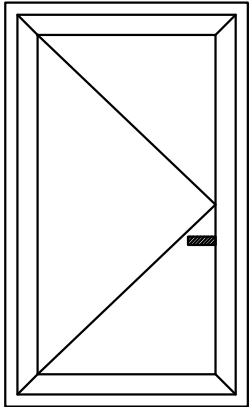
This hardware operates by a non keylocking handle, mounted on the stile of the sash.

- Items in light tones are width & height dependant.
- Items in red are optional & or application specific. Please refer to Bill of Materials information.

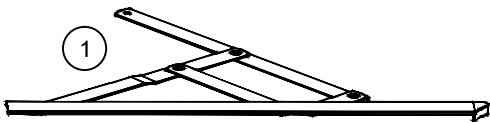
Ref #	Description	Qty
1	S/S Friction Stay	Pair
2	T connector 30mm	1
3	Security Connector for Handle	1
4	CSK Screw M5 x 8mm	1
5	Insertable Mushroom Cam 9.8mm	2
6	Striker	2
7	Centre Closer (Snubber) 16mm	Pair
8	Restrictor - 250mm Open Out 16mm	1
9	26mm Fork for Geared Handle	1
10	Rotoline Handle for Project Out (not part of pkg)	1
11	S7280 Adjustment Block	1
*	C8100 Transmission Bar (clear Anodised) not part of pkg	



U-Max™ THERMAL BREAK Multi Locking Sashes
U-Max Framing Systems: UMULTILOCK - 5
Multi Locking Casement Hardware ID



Left Hand Casement Sash depicted as viewed from Outside. The hardware schematic view below however is viewed from Inside.



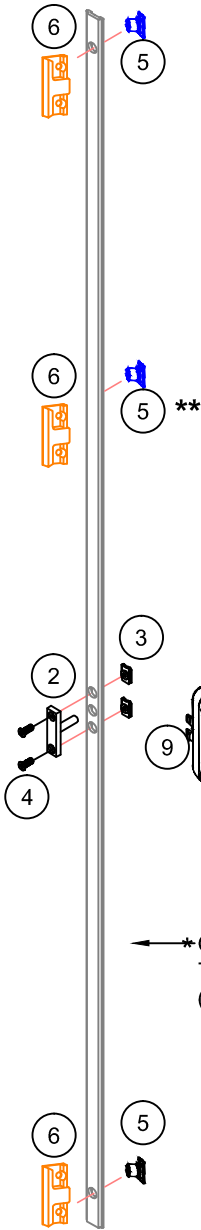
ROTO Casement Sash Hardware

This hardware operates by an non keylocking handle, mounted on the stile of the sash.

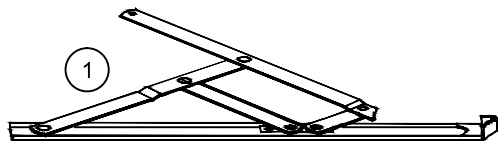
- Items in light tones are width & height dependant.
- Items in red are optional & or application specific.

Please refer to Bill of Materials information.

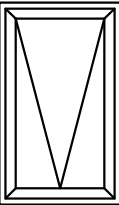
Ref #	Description	Qty
1	S/S Friction Stay	Pair
2	T connector 30mm	1
3	Security Connector for Handle	1
4	CSK Screw M5 x 8mm	1
5	Insertable Mushroom Cam 9.8mm **	2
6	Striker **	2
7	Centre Closer (Snubber) 16mm	Pair
9	26mm Fork for Geared Handle	1
10	Rotoline Handle for Project Out (not part of pkg)	1
*	C8100 Transmission Bar (clear Anodised) not part of pkg	



← *C8100
Transmission Bar
(not part of package)



Awning Hardware Packages



Hardware is variable dependant on Sash Height, Width, weight & handle finish.
Select: Kit + Handle for a complete bill of materials

CHTH1 Project Out Sash Sash Height 300 - 500mm up to 40kg		
Ref #	Description	Qty
1	203mm Friction Stay	Pair
2	T Connector 30mm	1
3	Security Connector for Handle	1
4	CSK Screw M5 x 8	2
5	Insertable Mushroom Cam 9.8mm	2
6	Strike for 767006	2
7	Centre Closers (Snubber) 16mm	2
8	26mm Fork for Geared Handle	1

CHTH3 Project Out Sash Sash Height 701 - 1200mm up to 55kg		
Ref #	Description	Qty
1	406mm Friction Stay	Pair
2	T Connector 30mm	1
3	Security Connector for Handle	1
4	CSK Screw M5 x 8	2
5	Insertable Mushroom Cam 9.8mm	3
6	Strike for 767006	3
7	Centre Closers (Snubber) 16mm	1
8	26mm Fork for Geared Handle	1

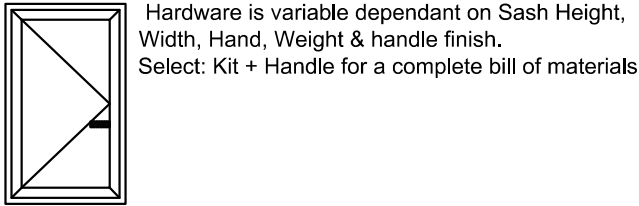
CHTH5 Project Out Sash Sash Height 1201 - 1500mm up to 120kg		
Ref #	Description	Qty
1	660mm Friction Stay	Pair
2	T Connector 30mm	1
3	Security Connector for Handle	2
4	CSK Screw M5 x 8	2
5	Insertable Mushroom Cam 9.8mm	3
6	Strike for 767006	3
7	Centre Closers (Snubber) 16mm	1
8	26mm Fork for Geared Handle	1
10	Restrictor - 16mm Stack Height	1
11	S7280 Adjustment Block	1

CHTH2 Project Out Sash Sash Height 501 - 700mm up to 45kg		
Ref #	Description	Qty
1	203mm Friction Stay	Pair
2	T Connector 30mm	1
3	Security Connector for Handle	1
4	CSK Screw M5 x 8	2
5	Insertable Mushroom Cam 9.8mm	2
6	Strike for 767006	3
7	Centre Closers (Snubber) 16mm	3
8	26mm Fork for Geared Handle	1

CHTH4 Project Out Sash Sash Height 1201 - 1500mm up to 75kg		
Ref #	Description	Qty
1	559mm Friction Stay	Pair
2	T Connector 30mm	1
3	Security Connector for Handle	1
4	CSK Screw M5 x 8	3
5	Insertable Mushroom Cam 9.8mm	2
6	Strike for 767006	2
7	Centre Closers (Snubber) 16mm	1
8	26mm Fork for Geared Handle	1
10	Restrictor - 16mm Stack Height	1

CHTH6 Project Out Sash Sash Height 1201 - 1500mm up to 180kg		
Ref #	Description	Qty
1	660mm HD Friction Stay	Pair
2	T Connector 30mm	1
3	Security Connector for Handle	2
4	CSK Screw M5 x 8	2
5	Insertable Mushroom Cam 9.8mm	3
6	Strike for 767006	3
7	Centre Closers (Snubber) 16mm	1
8	26mm Fork for Geared Handle	1
10	Restrictor - 16mm Stack Height	1
11	S7280 Adjustment Block	1

U-Max™ THERMAL BREAK Multi Locking Sashes
U-Max Framing Systems: UMULTILOCK - 6
Casement Hardware Packages



CHSH1	Casement Sash Sash Width 380 - 550mm up to 40kg	
Ref #	Description	Qty
1	305mm SS Friction Stay	Pair
2	Run Up Block - removed from package	
3	T Connector 30mm	1
4	Security Connector for Handle	1
5	CSK Screw M5 x 8	2
6	Insertable Mushroom Cam 9.8mm	2
7	Strike for 767006	2
8	Centre Closers (Snubber) 16mm	1
9	26mm Fork for Geared Handle	1

CHSH3	Casement Sash Sash Width 701 - 900mm up to 72kg	
Ref #	Description	Qty
1	405mm SS 4 Bar Csmnt Egress Stay	Pair
2	Run Up Block - removed from package	
3	T Connector 30mm	1
4	Security Connector for Handle	1
5	CSK Screw M5 x 8	2
6	Insertable Mushroom Cam 9.8mm	3
7	Strike for 767006	3
8	Centre Closers (Snubber) 16mm	1
9	26mm Fork for Geared Handle	1

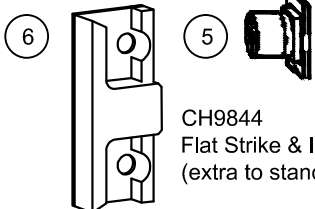
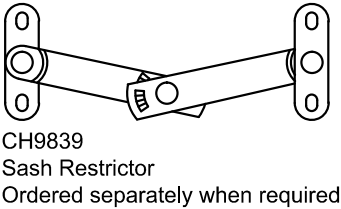
CHSH2	Casement Sash Sash Width 551 - 700mm up to 45kg	
Ref #	Description	Qty
1	405mm SS Friction Stay	Pair
2	Run Up Block - removed from package	
3	T Connector 30mm	1
4	Security Connector for Handle	1
5	CSK Screw M5 x 8	2
6	Insertable Mushroom Cam 9.8mm	3
7	Strike for 767006	3
8	Centre Closers (Snubber) 16mm	1
9	26mm Fork for Geared Handle	1



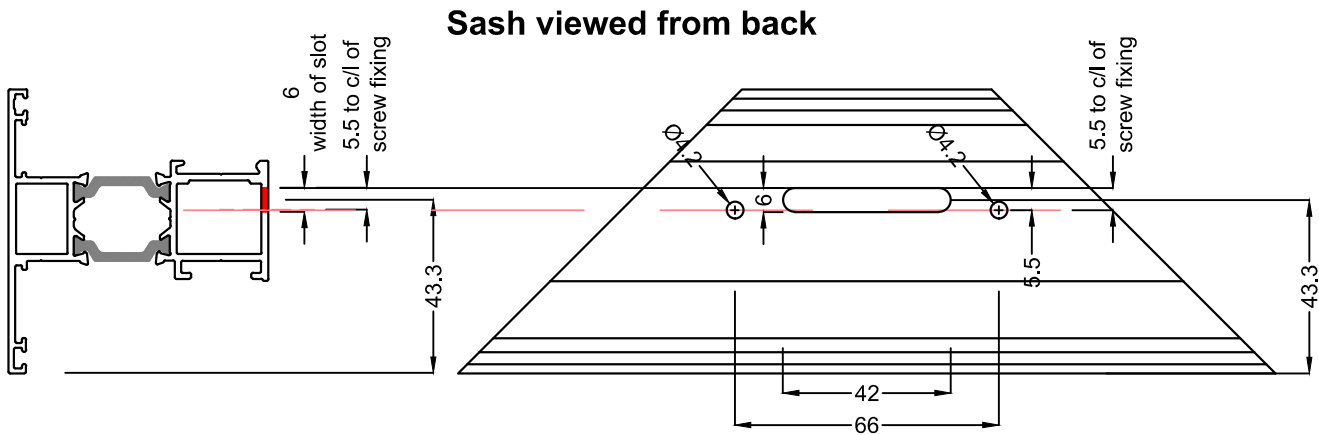
CH9835
Forked Handle non key locking
suits awning & casement

Rotoline Handle (suits fork)		
Ref #	Code	Finish
10	CH9835SVR	Silver Powdercoat
10	CH9835WHT	White Powdercoat
10	CH9835BLK	Black Powdercoat

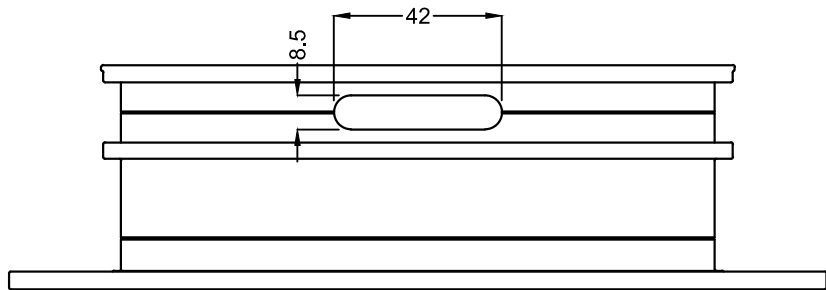
Example for Ordering
1800 x 1200 awning, White Handle
CHTH4 Kit + CH9835WHT Handle



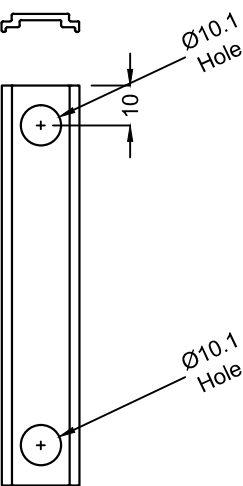
Multi Locking Sash Machining



Sash viewed from underneath

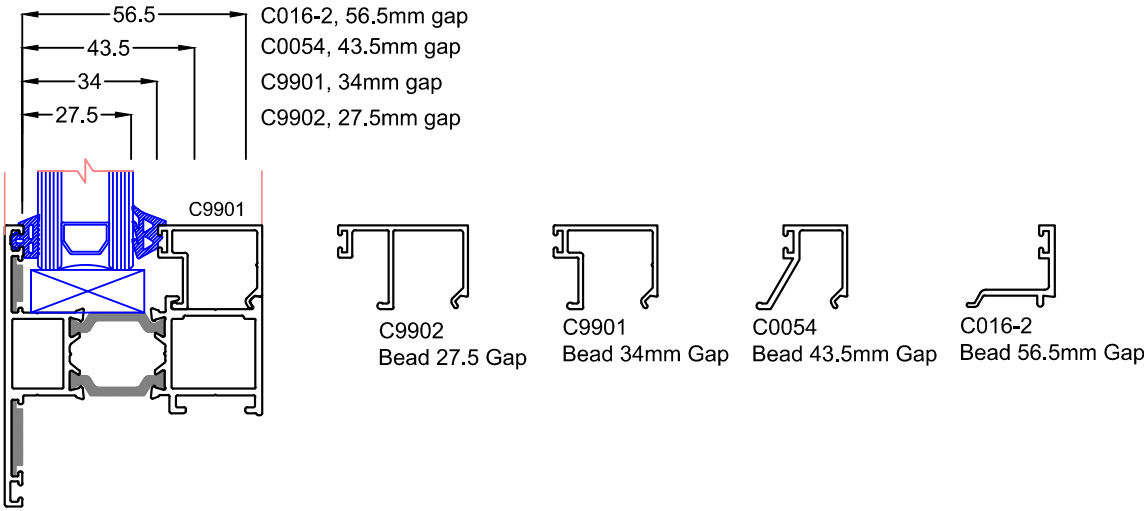


Transmission Bar Machining



U-Max™ THERMAL BREAK Multi Locking Sashes
U-Max Framing Systems: UMULTILOCK - 7

Sash Glazing Details




Glazing Tape selection


Tremco 800, butyl tape available from 1.2mm thickness.
Tremco polyshim butyl with EPDM spacer, 3.2mm thick

U-Max Multi Locking Sash	Glass thickness	Example	Bead	Pocket	Glazing wedge	Gap
	22mm	4/14/4	C9902	27.5mm	CH9503	5.5mm
	24mm	6/12/6	C9902	27.5mm	CH9502	3.5mm
	26mm	8/12/6	C9901	34mm	silicone	8mm
	28mm	4/20/4	C9901	34mm	CH9503	7mm
	30mm	6/20/6	C9901	34mm	CH9501	4mm
	31-35mm		C0054	43.5mm	silicone	
	36mm	10/20/6	C0054	43.5mm	CH9503	7mm
	36mm	4/12/4/12/4	C9901	43.5mm	CH9503	7mm
	42mm	6/12/6/12/6	C016-2	56.5mm	silicone	
	up to 53mm		C016-2	56.5mm		


Glazing Wedges




CH9819
4mm co-ex backing
Aprène




CH9500
3mm wedge PVC



CH9501
4mm wedge PVC

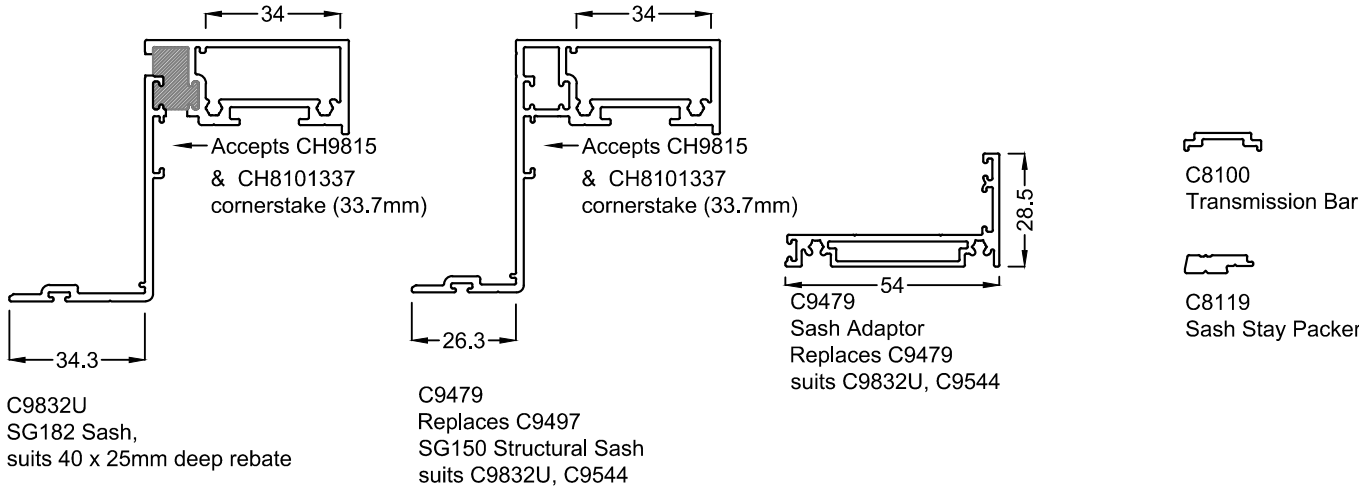


CH9502
5mm wedge PVC

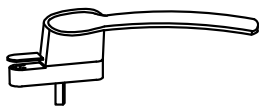


CH9503
7mm wedge PVC

Structural Sash Extrusion ID

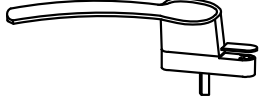


Component ID



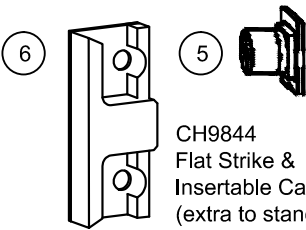
CH9840
RH Top Mounted Project Out handle

CH9840 RH Handle & Cover		
Ref #	Code	Finish
6 & 7	CH9840SVR	Silver Powdercoat
6 & 7	CH9840WHT	White Powdercoat
6 & 7	CH9840BLK	Black Powdercoat

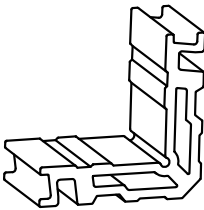


CH9841
LH Top Mounted Project Out handle

CH9841 LH Handle & Cover		
Ref #	Code	Finish
6 & 7	CH9841SVR	Silver Powdercoat
6 & 7	CH9841WHT	White Powdercoat
6 & 7	CH9841BLK	Black Powdercoat



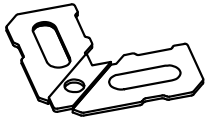
CH9844
Flat Strike & Insertable Cam Package
(extra to standard sash kits)



CH8101337
Cornerstake 33.7mm
suit C9478, C9832U Sashes



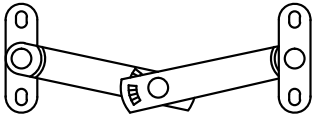
CH9580
Sash Gusset
Suit C9544



CH9815
Corner Chevron 13.9mm
Suit C9832U Sash

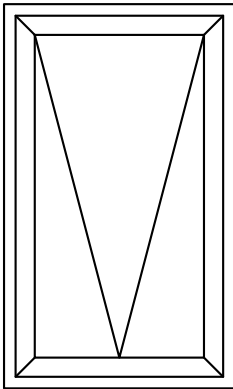


CH13NEW
Sash Bulb Seal
suit C9241



CH9839
Sash Restrictor

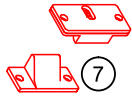
U-Max™ THERMAL BREAK Multi Locking Sashes
U-Max Framing Systems: UMULTILOCK - 8
Multi Locking Top Mounted Awning Hardware ID



Awning Sash hardware in the schematic is shown from Inside. The handle is non-key locking as standard but can be supplied keyed. The handle is fitted centrally off the back of the sash bottom rail.

ROTO Top Mounted Awning Sash Hardware

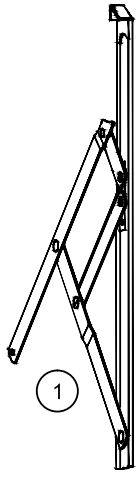
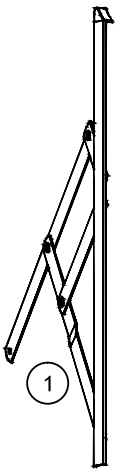
This hardware operates by a non keylocking handle, mounted on the stile of the sash. Key locking is also available.



ROTO Structural Awning Sash Hardware

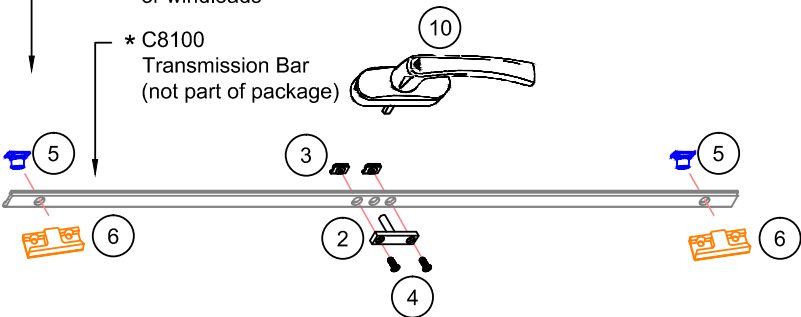
This hardware operates by an non keylocking handle with spindle, mounted on the top of the sash bottom rail. Items in light tones are width & height dependant. Items in red are optional & or application specific. Please refer to Bill of Materials information.

Ref #	Description	Qty
1	S/S Friction Stay	Pair
2	T connector 30mm	1
3	Security Connector for Handle	1
4	CSK Screw M5 x 8mm	1
5	Insertable Mushroom Cam 9,8mm	2
6	Striker	2
7	Centre Closer (Snubber) 16mm	Pair
8	Restrictor - 250mm Open Out 16mm	1
10	Rotoline RH Top Mounted Handle & spindle (not part of this pkg)	1
11	S7280 Adjustment Block	1
*	C8100 Transmission Bar (clear Anodised) not part of pkg	



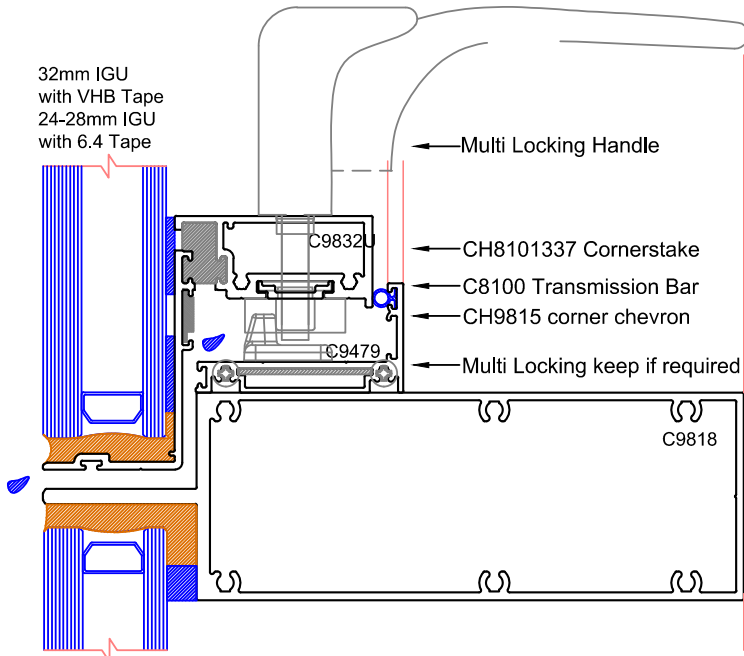
Additional strikes & keeps are required for higher sashes or windloads

* C8100 Transmission Bar (not part of package)



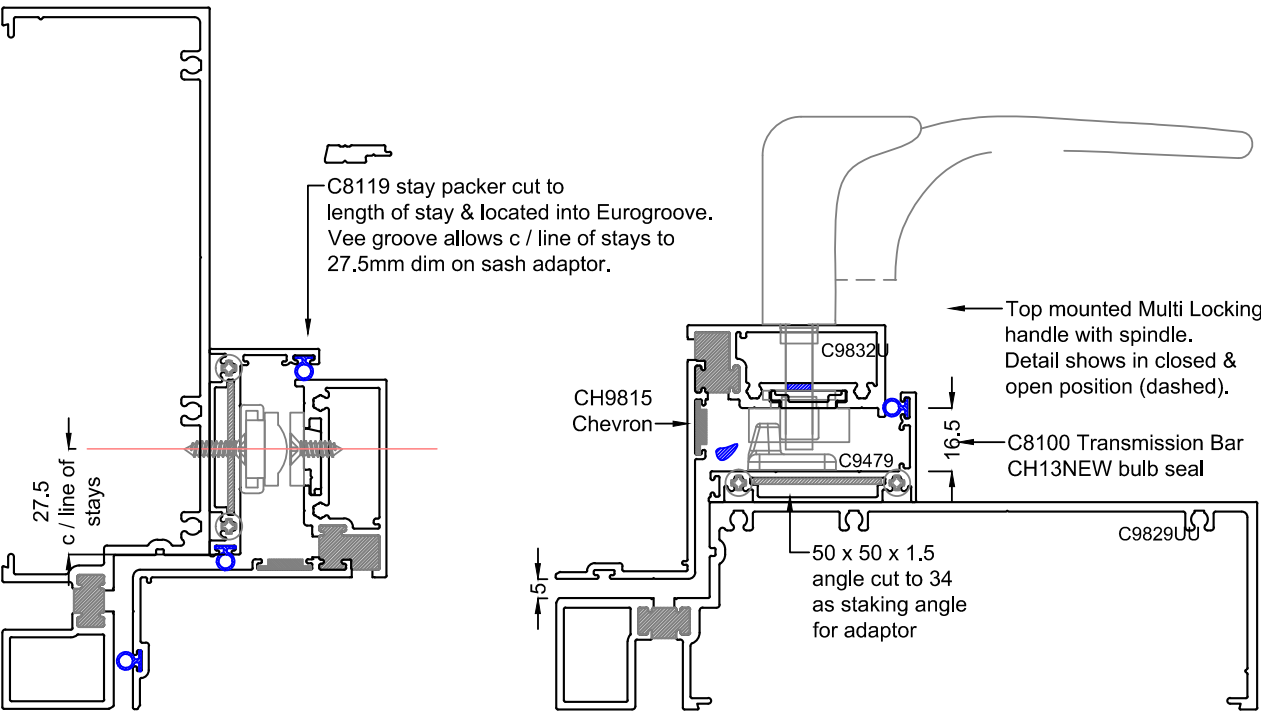
Structural Sashes

The detail below is applicable with all structural glazed sashes using "top loaded handles".



C9478 & C9832U Structural Sashes

Stays are supported by a packer located into the sash and through fixed into vee groove on the packer to allow a location point.



U-Max™ THERMAL BREAK Multi Locking Sashes
U-Max Framing Systems: UMULTILOCK - 9
Structural Sash Hardware Packages

Hardware is variable dependant on Sash Height, Width, Weight & handle finish.
Select: Kit + handle for a complete bill of materials

CHTHC1	Project Out Sash Rebate Height 300 - 500mm up to 40kg	
Ref #	Description	Qty
1	203mm SS Friction Stay	Pair
2	Top Hung Centre Gear	1
3	Insertable Mushroom Cam 9.8mm	2
4	Strike for 767006	2
5	Centre Closers (Snubber) 16mm	1

CHTHC3	Project Out Sash Rebate Height 701 - 1200mm up to 55kg	
Ref #	Description	Qty
1	406mm SS Friction Stay	Pair
2	Top Hung Centre Gear	1
3	Insertable Mushroom Cam 9.8mm	3
4	Strike for 767006	3
5	Centre Closers (Snubber) 16mm	1

CHTHC5	Project Out Sash Rebate Height 1201 - 1500mm up to 120kg	
Ref #	Description	Qty
1	660mm SS Friction Stay	Pair
2	Top Hung Centre Gear	1
3	Insertable Mushroom Cam 9.8mm	3
4	Strike for 767006	3
5	Centre Closers (Snubber) 16mm	1
8	Restrictor - 250mm 16mm Stack Height	1
9	S7280 Adjustment Block	1

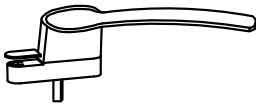
CH9840 Top Mounted Handle & Cover		
Ref #	Code	Finish
6 & 7	CH9840SVR	Silver Powdercoat
6 & 7	CH9840WHT	White Powdercoat
6 & 7	CH9840BLK	Black Powdercoat

Example for Ordering
1800 x 1200 Sash, 50kg
CHTHC6 Kit + CH9840SVR handle

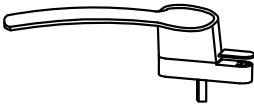
CHTHC2	Project Out Sash Rebate Height 501 - 700mm up to 45kg	
Ref #	Description	Qty
1	305mm SS Friction Stay	Pair
2	Top Hung Centre Gear	1
3	Insertable Mushroom Cam 9.8mm	3
4	Strike for 767006	3
5	Centre Closers (Snubber) 16mm	1

CHTHC4	Project Out Sash Rebate Height 1201 - 1500mm up to 75kg	
Ref #	Description	Qty
1	559mm SS Friction Stay	Pair
2	Top Hung Centre Gear	1
3	Insertable Mushroom Cam 9.8mm	2
4	Strike for 767006	2
5	Centre Closers (Snubber) 16mm	1
8	Restrictor - 250mm 16mm Stack Height	1

CHTHC6	Project Out Sash Rebate Height 1201 - 2500mm up to 180kg	
Ref #	Description	Qty
1	660mm SS HD Friction Stay	Pair
2	Top Hung Centre Gear	1
3	Insertable Mushroom Cam 9.8mm	3
4	Strike for 767006	3
5	Centre Closers (Snubber) 16mm	1
8	Restrictor - 250mm 16mm Stack Height	1
9	S7280 Adjustment Block	1

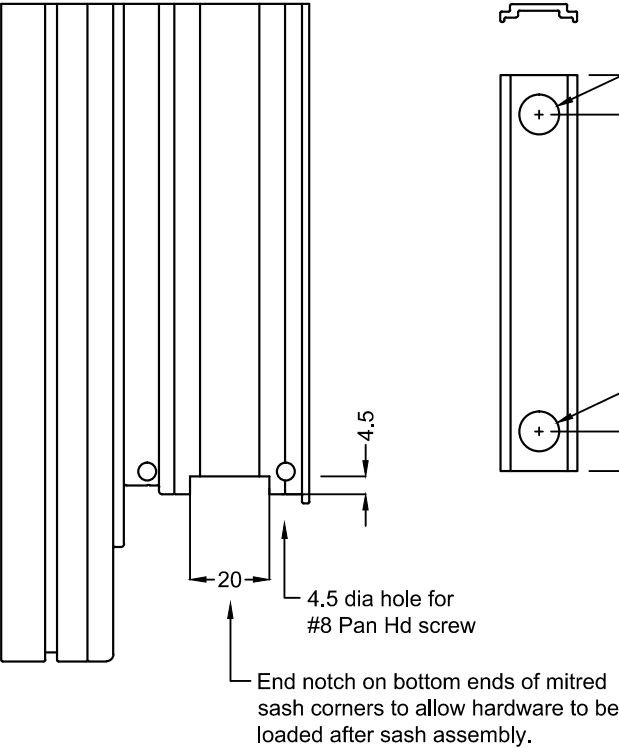


CH9840
RH Handle Package
(Standard Hand for awnings)
Top Mounted Project Out
Handle & Cover with spindle

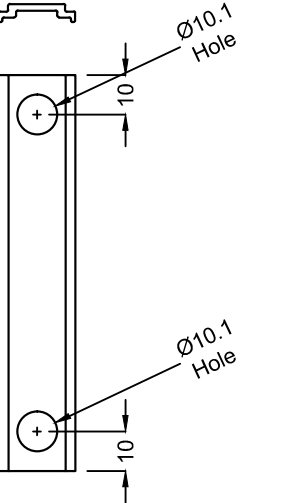


CH9840
LH Handle Package
Top Mounted Project Out
Handle & Cover with spindle

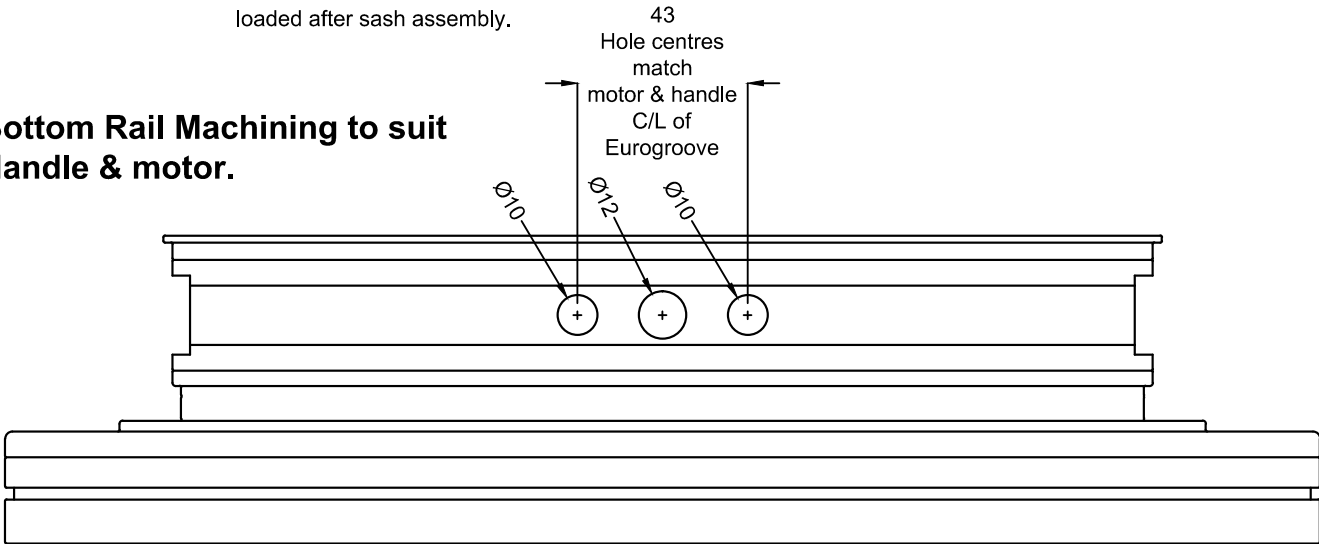
Sash Machining



Transmission Bar Machining



Bottom Rail Machining to suit
Handle & motor.



1. Machine sash & transmission bars in readiness for assembly
2. Shorten Square spindle to correct length
3. Mark C/L for handle & drill from Eurogroove side for handle assembly
4. Engage chevrons & cornerstake in bottom rail
5. Insert cornerdrive into sash stiles
6. If the cornerdrive connects to transmission bars insert cam & transmission bar with cam
7. Feed gearbox with assembled transmission bars onto sash rail
8. Bring sash corners together and engage corner drive with transmission bars and check they work correctly
9. Fit handle to gearbox
10. Assemble sash corners and screw assemble
11. When sash stile assembled, lock off corner drive with horseshoe corner key
12. Glue in chevron if required
13. Irrespective of sash assembly screws at corners ensure an additional screw fixing is fitted to secure sash through sash stile into corner stake.

