

THE SASH
WINDOW
WORKSHOP

CASEMENT WINDOWS - TECHNICAL GUIDE





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HISTORY OF THE CASEMENT WINDOW

Throughout the centuries, including the present day, casement windows take pride of place on anything from prestigious buildings to cottages and farmhouses.

During the second half of the 18th Century traditional casement windows became the most prominent window type. The successor to the stone mullioned window, casement windows consisted of glazing bars joining the classic formation consisted of six panes per casement.

During the early 1800s the section of the window that opened, the 'casement', was comprised of iron with lead latticing to the glass.

The popularity of the picturesque Cottage Orne style towards the end of the Regency period (1811 - 1820), which was characterised by timber features that were heavily decorated and thatched roofs, meant that metal windows with leaded lights enjoyed a resurgence during this time. This style first surfaced in the 16th and 17th Centuries.

By the start of the Victorian era, around 1840, opening casements and frames were constructed from timber in their entirety.

Timber casement windows became ever more elaborate in design and towards the middle of the 19th Century, they featured smaller panes and Gothic arches.

Developments in glass technology later in the 1800s meant that the number of casements per window dropped down from six to two, with one horizontal bar connecting the panes. Crown glass (17th Century), which often contained air bubbles and concentric ripples as a result of the way it was manufactured, was superseded by polished plate glass, which saw a sheet of glass grinded and polished by hand. By the 19th Century the grinding and polishing process was replaced by steam powered machine.

The higher quality of polished plate glass, allowed for larger casement window panes that are still in evidence today.

By the advent of the Edwardian period in the early 20th Century (1901 to 1910) there was again growing interest in evoking the charm of 16th Century Tudor homes, reintroducing timber-framed, tiled houses, and of course multi-paned casement windows.

While there are many parallels between the casement windows crafted in centuries gone by and those manufactured today, there are also distinct differences. Early casement windows were usually painted and were set flush within their frames (single rebated), and featured single glazing and glazing bars that were both slim and moulded. In contrast, casement windows in the modern era are normally positioned outside the main frame, feature no mouldings, have cills that are protruding and are also available in double-glazing options.



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Our casement windows have been designed to meet the discerning needs of the owners of period properties and for those who want windows with charm, warmth and an authentic feel. They are made to be the best windows available.

We try very hard to replicate as close as possible the proportions and designs of traditional casement windows, whilst incorporating the latest manufacturing techniques and use only materials to produce windows to the highest specifications, thereby enabling the best possible performance, combining minimum maintenance with maximum lifespan.

We would not for example expect to make our windows in any timber with a classification less than “durable” as we do not believe this appropriate for the British climate. We expect our windows to have a minimum service life of 60 years if properly maintained.

We control all the processes in the manufacture and installation of our windows in house.

We comply to the following:

- European Manufacturing Standard EN 14351
- European Glazing Standard EN 1279
- Our new products are CE marked
- FSC certification for 95% of the timber that we use

We make the following types of Casement Windows:

CASEMENT TYPES
Traditional opening outward opening flush casement windows
Opening out storm proofed casement windows
Traditional hanging inward opening casement windows
Multiple aspect casement bay windows
Bowed casement windows / arched windows and windows of different shapes or patterns either inward or outward opening

* See technical drawings of traditional or flush reveal

Most of our windows are made to standard details, which incorporate a large degree of design flexibility for our clients, however if specialist, or even unique, detail is required then this presents no issue for us.

Our aim is to produce the very best windows for our clients, meeting the highest aesthetic and technical standards.



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SPECIFICATIONS FOR CASEMENT WINDOWS

Timber Specifications

Window frame	Accoya
Cill section	Durable hardwood
Sashes	Accoya
Glazing Beads and bonded glazing bars	Accoya

Paint finish

STANDARD	OPTIONS AT EXTRA COST
3 coats of factory applied Sigma white semi gloss paint, 2 x primer base coats, 1 x top coat	Bespoke paint finish

Glazing bar detail

Either heritage individually glazed panes or applied bars. The following glazing bar options are available at no extra charge:

BAR WIDTH	Ovolo Bonded	Ovolo Heritage	Lambs Tongue Bonded	Lambs Tongue Heritage
16mm	✓			
20mm	✓		✓	
24mm	✓	✓	✓	✓
25mm	✓		✓	
28mm	✓		✓	

Standard Glazing Specifications

	STANDARD DOCUMENT L WINDOW	HERITAGE DOUBLE GLAZED INDIVIDUAL PANES
Internal glass	4mm Planitherm Total +	4mm Planitherm Total +
Airspace	10mm	4mm
Gas	Argon**	Argon**
External glass	4mm low iron	4mm low iron
U value		1.4
Max glass thickness	23mm	16mm
Spacer colour	white*	white*
Glazing Tape	white*	n/a
External finish	Single pane with bonded bar, intermediate bars as necessary	Individually glazed panes faced with Dry seal

* Black glazing tape available on request ** Krypton Gas available for windows at extra charge

Toughened glass is supplied as required by law and a wide range of other glass types including acoustic laminates are available on request.

Standard Ironmongery

WINDOW TYPE	IRONMONGERY**	STANDARD FINISHES
Traditional casement window	either : 75mm butt hinges , TSWW casement handle and stay for each opening leaf, flip over locks / Egress stay pin. or : 75mm butt hinges , integrated multi point lock system, with key (locking) handle / Egress stay pin.	Brass, satin chrome or brushed chrome
Storm proofed casement window	either : 75mm butt hinges , bulb end casement handle and stay for each opening leaf, flip over locks / Egress stay pin. or : 75mm butt hinges , integrated multi point lock system, with key (locking) handle / Egress stay pin.	Brass, satin chrome or brushed chrome

** A full range of casement window ironmongery and finishes available at extra cost

Weathersealing

Full weatherstripping integrated on all windows.

Installation

Casement windows are available supply only or supply and fit by TSWW installation staff.



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TSWW CASEMENT WINDOW PERFORMANCE

Thermal efficiency

All of our double glazed windows are designed to meet Document L requirements and optimise aesthetic with thermal efficiency; we use the very best materials available to achieve this.

Our windows can also meet the highest Window Energy Ratings, if that is what is required.

The following independent Buildcheck U-Value calculation documents are available from the Commercial section of our website:

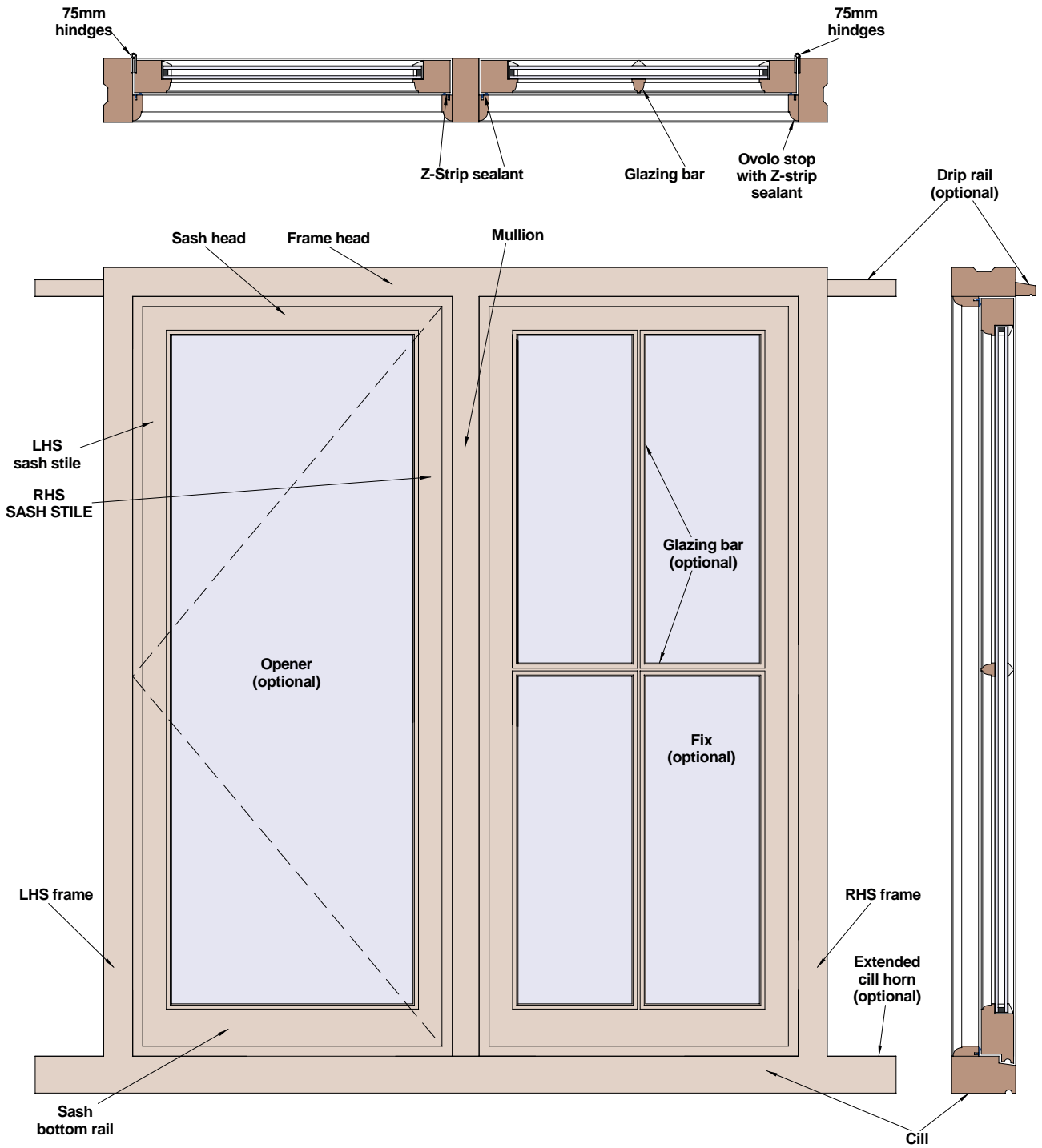
www.sashwindow.com/commercial/u-values

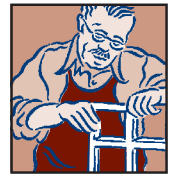
- Accoya Casement/Accoya A Rated U14332-9 BFRC Report.pdf
- Accoya Casement /Accoya C Rated U14332-3 BFRC Report.pdf
- Hardwood Casement/H Wood B Rated U14332-5 BFRC Report.pdf

Noise reduction

We are frequently asked by our clients to produce noise reducing solutions in windows. If this is what is required, please read carefully the glazing and noise reduction section of this site.

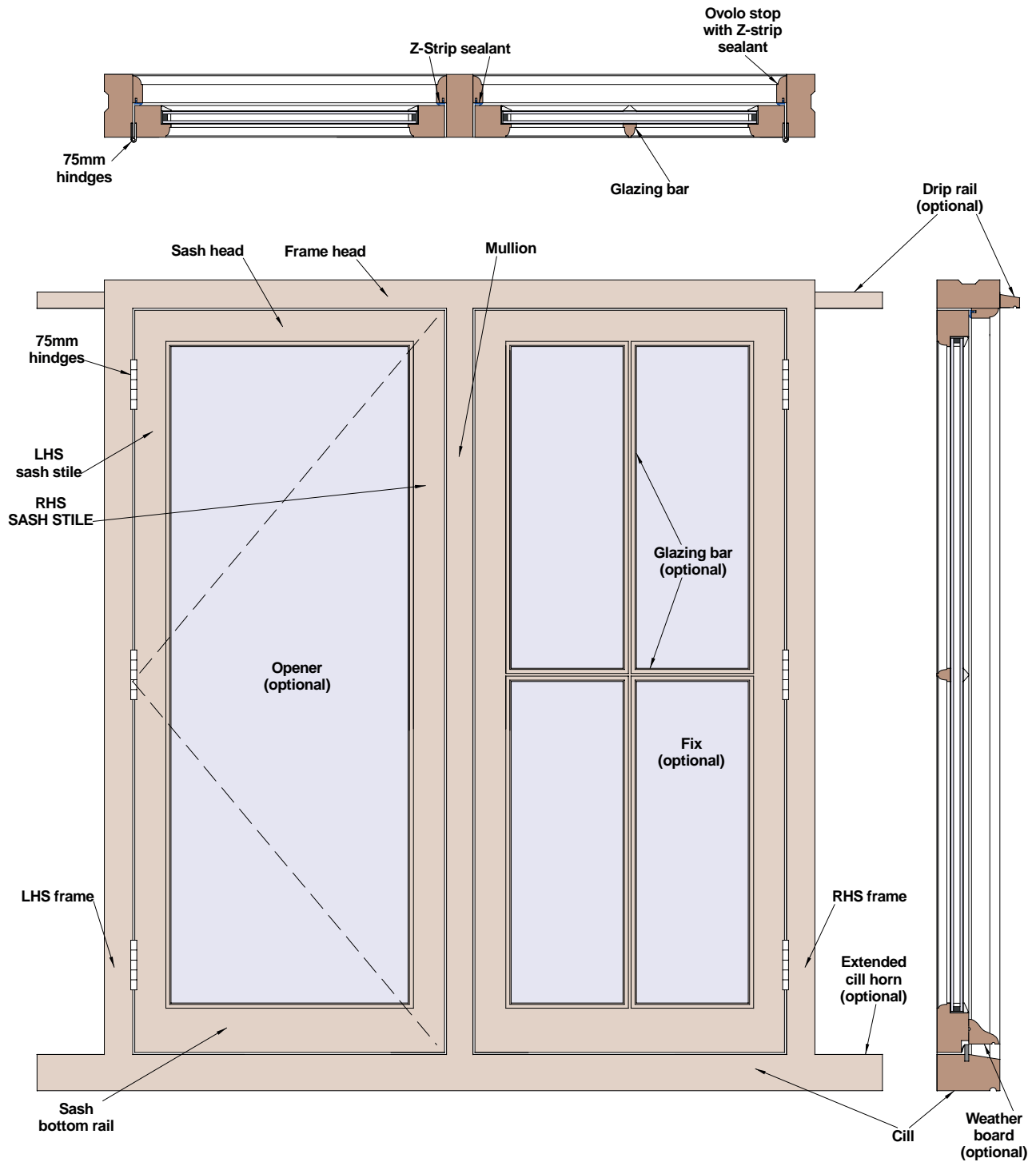
FLUSH CASEMENT WINDOW - OPEN OUT



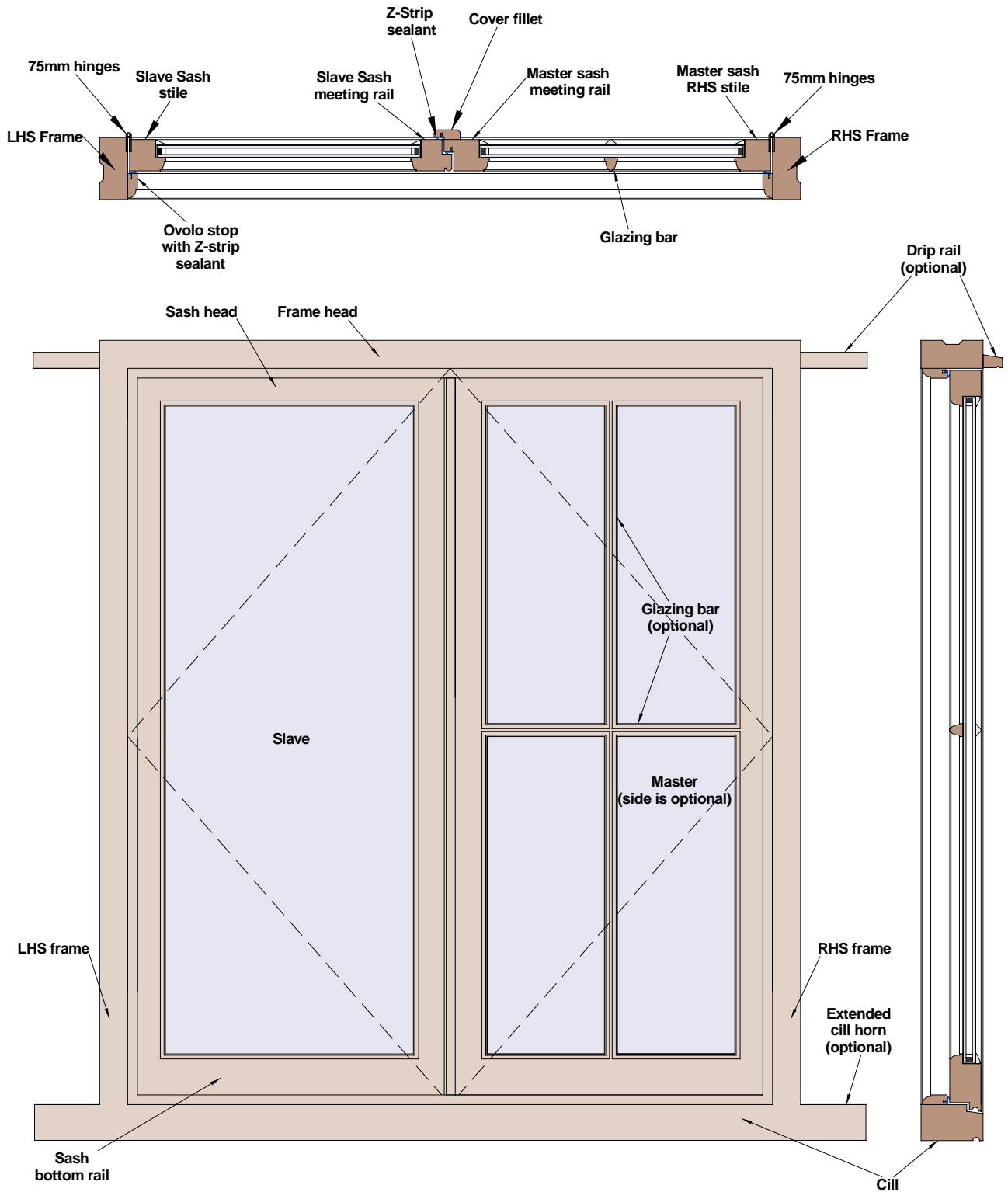


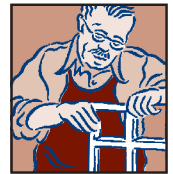
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FLUSH CASEMENT WINDOW - OPEN IN



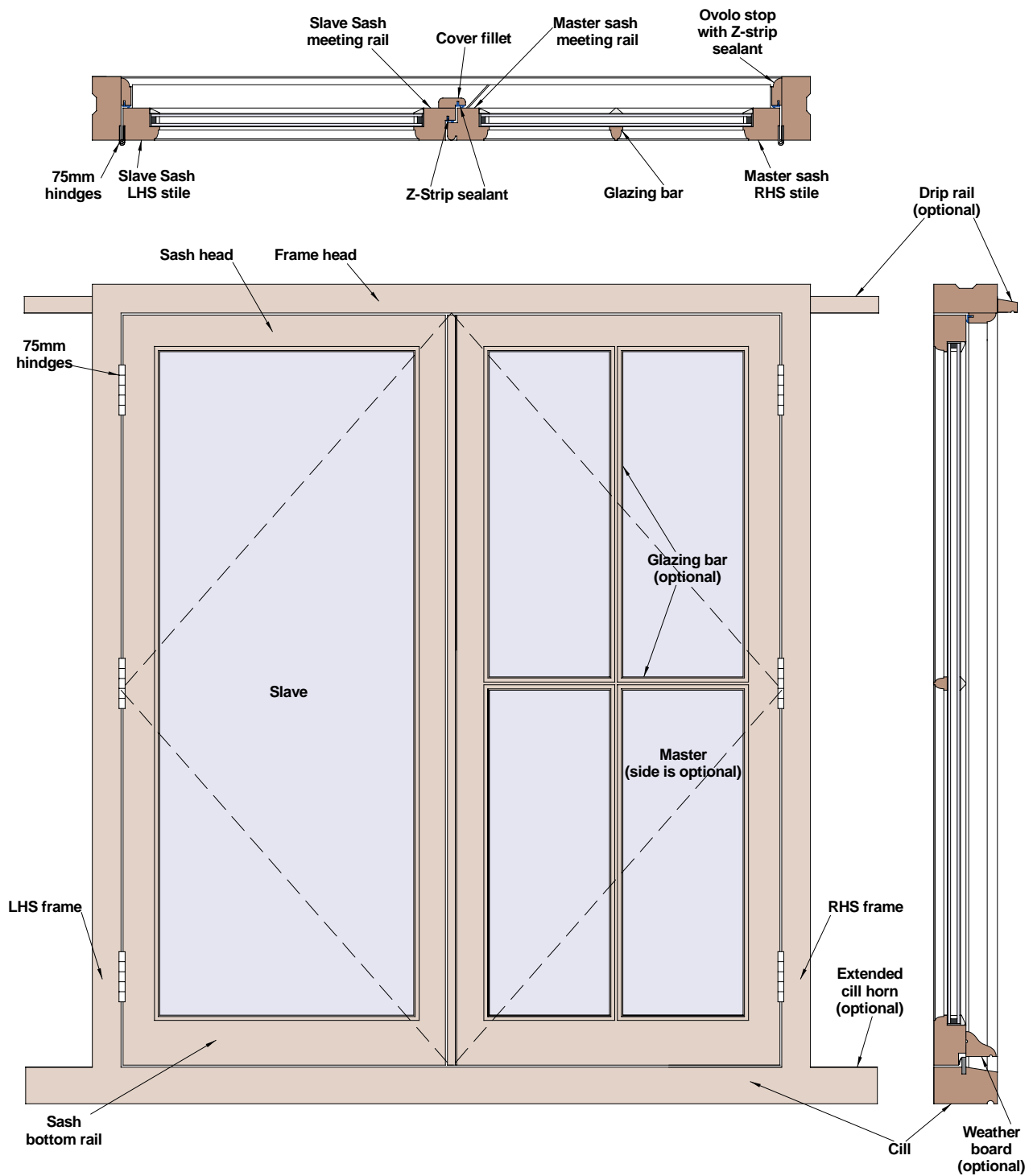
FRENCH CASEMENT WINDOW - OPEN OUT



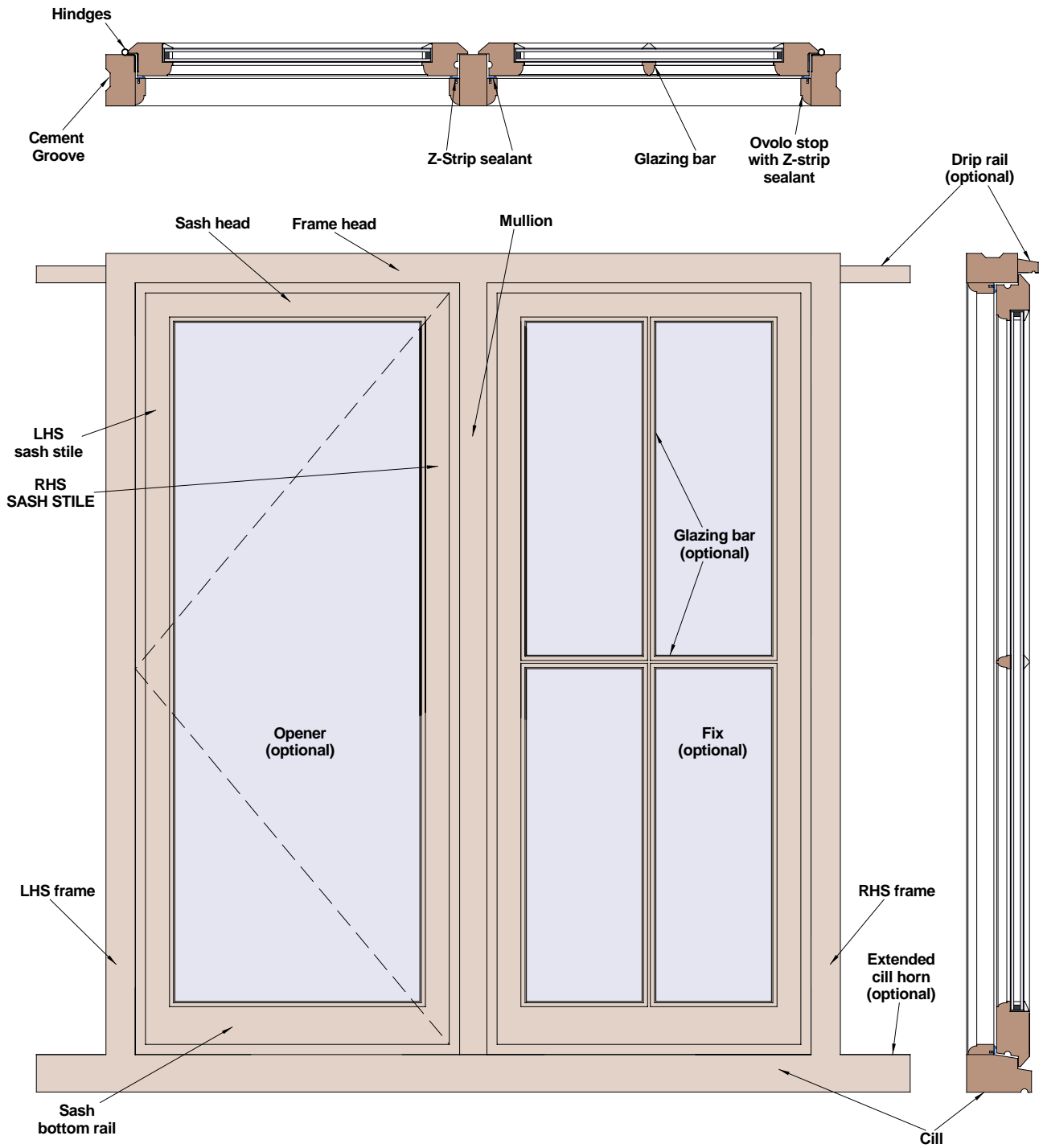


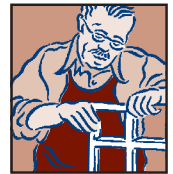
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FRENCH CASEMENT WINDOW - OPEN IN



STORM CASEMENT WINDOW - OPEN OUT



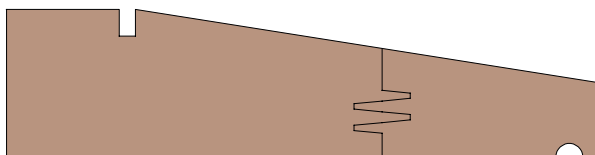
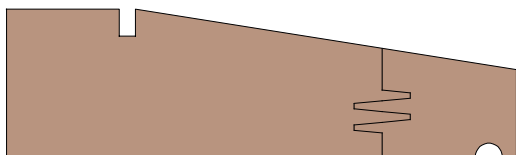
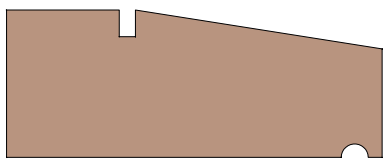
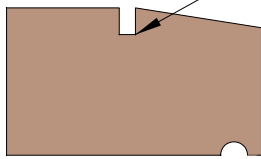


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CILL SELECTION FOR CASEMENT WINDOWS

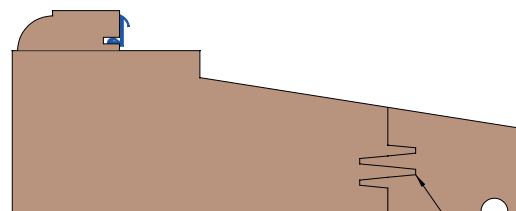
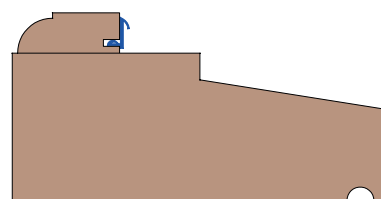
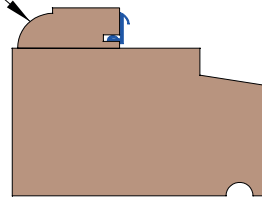
Opening IN

Water Bar groove

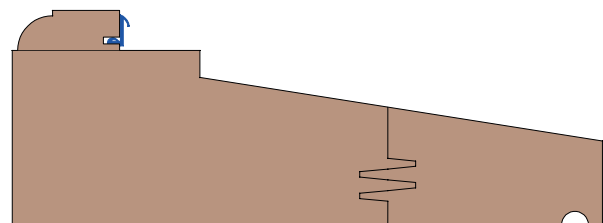


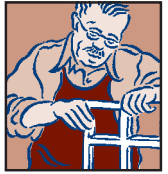
Opening OUT

Ovolo stop
with
Z-Strip



Glue finger joint



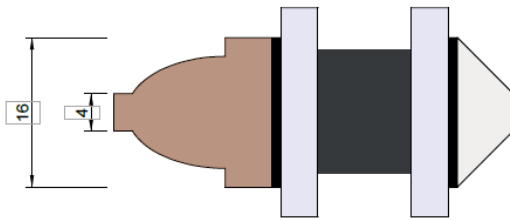


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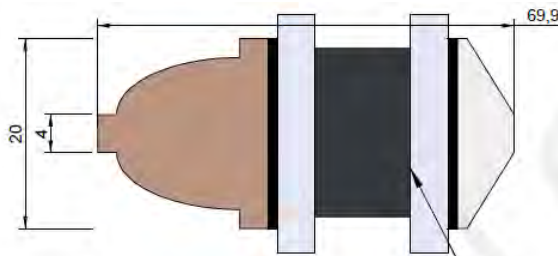
GLAZING BARS

Glazing bar details to sashes - Cross Section

16 Ovolo 4x10 - 4 Low E : 10mm : 4 Low Iron



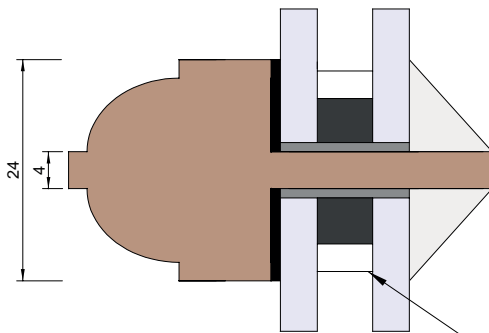
20 Ovolo 6x13 - 4 Low E : 10mm : 4 Low Iron



Other options:
- 24/30mm Ovolo or Lambs Tongue

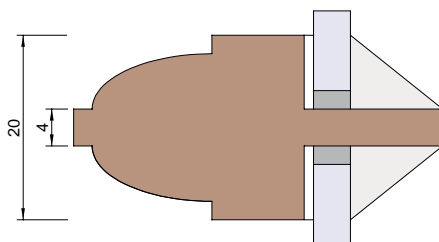
Available colours : Charcoal or White

24 Heritage Ovolo 8x10 - 4 Low E : 6mm : 4 Low Iron



Available colours : Black or White

20 Single glaze Ovolo 6x13 - 4mm Low Iron



Other options:
- 16/24 mm Ovolo or Lambs Tongue



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ADDITIONAL DOCUMENTS

The following documents are available from the Commercial section of our website:

www.sashwindow.com/commercial

- TSWW Supply and Install Warranty
- TSWW Supply Only Guarantee
- TSWW Window and Door Maintenance Guidelines
- Insurance backed guarantees and deposit protection

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