

BYGONE
COLLECTION

Harmony
SASH WINDOWS



Technical Specification Pack

masterframe[®]
SASH WINDOWS



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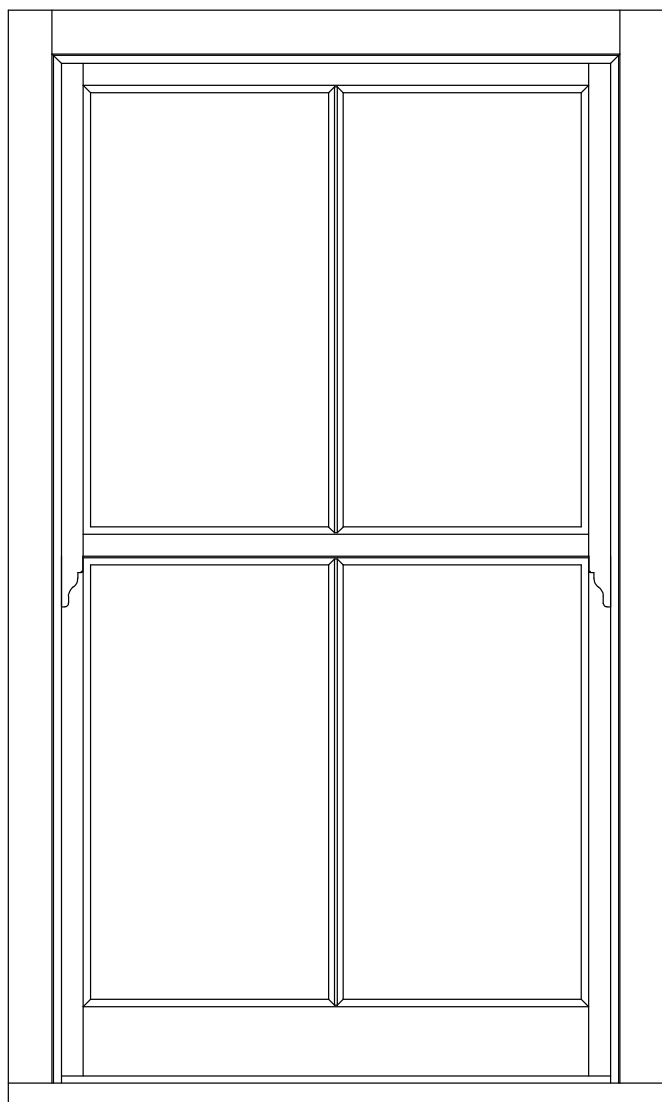


ELEVATION DRAWINGS

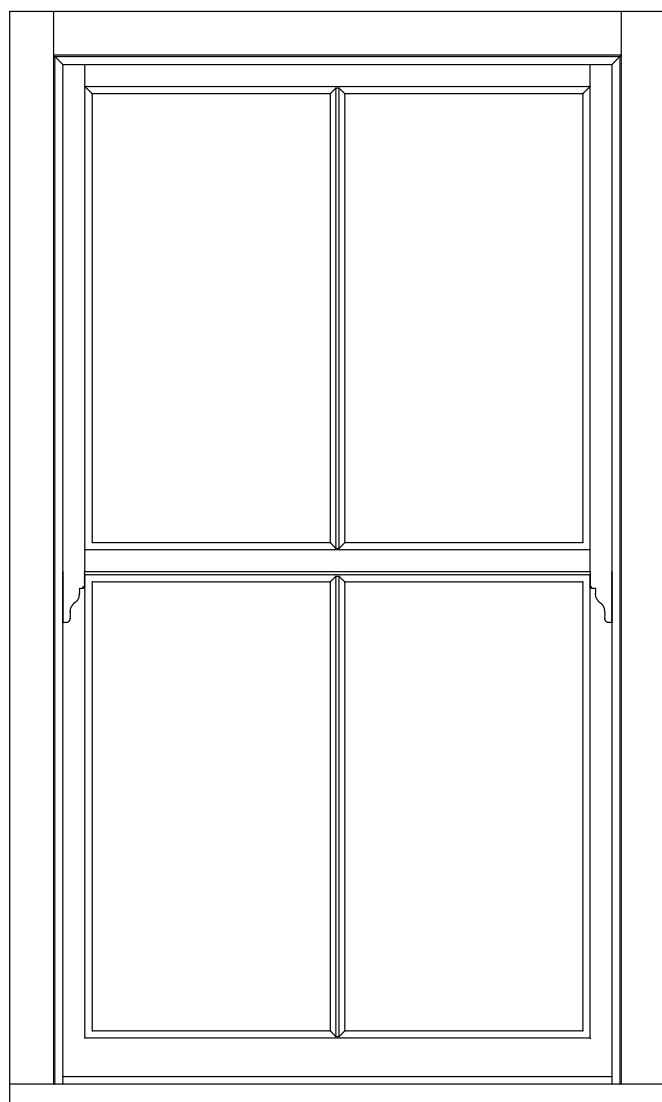
masterframe[®]
SASH WINDOWS

External

with DBR



without DBR



Windows depicted show Timberweld[®] construction.

www.masterframe.co.uk

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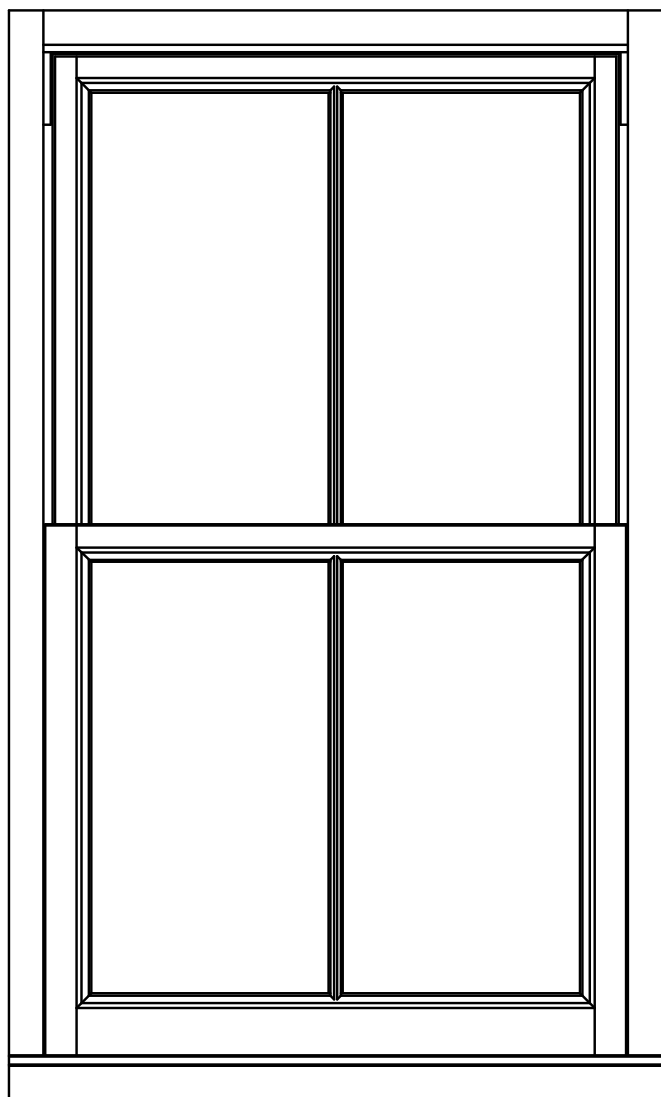
Bygone\Harmony Technical Pack\R Raymond\May 2026\G:Masterframe\Sales\Sales Masterforms\Bygone Literature\Technical Packs\Rev 1

ELEVATION DRAWINGS

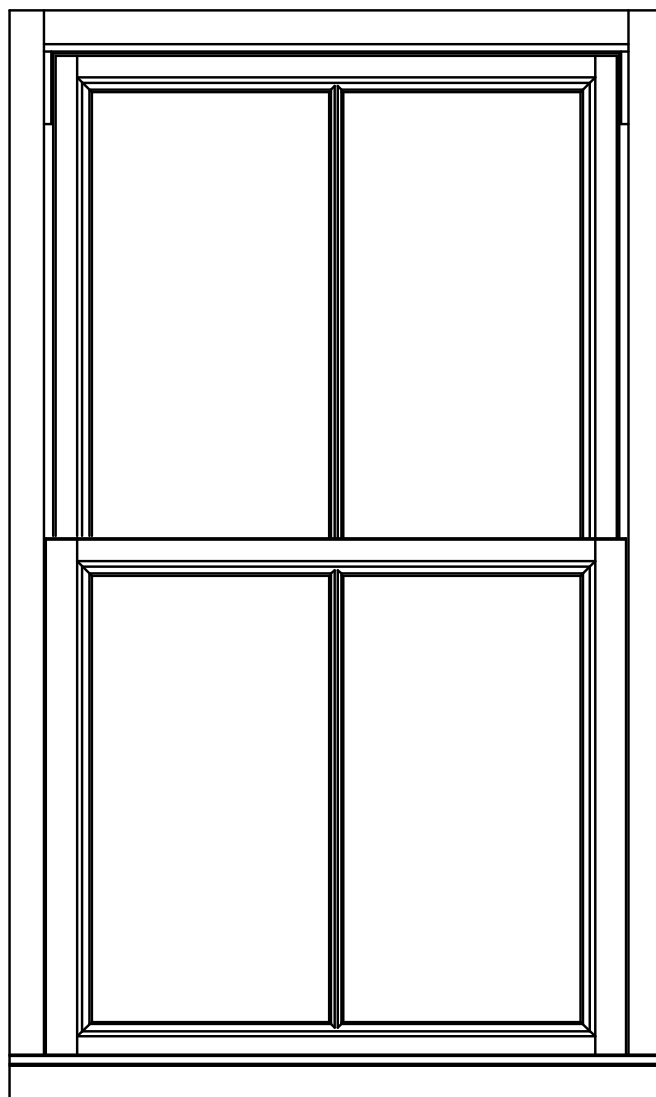
masterframe[®]
SASH WINDOWS

Internal

with DBR



without DBR



TIMBERWELD[®]
PERFECTLY SEALED WINDOW FRAMES

Windows depicted show Timberweld[®] construction.

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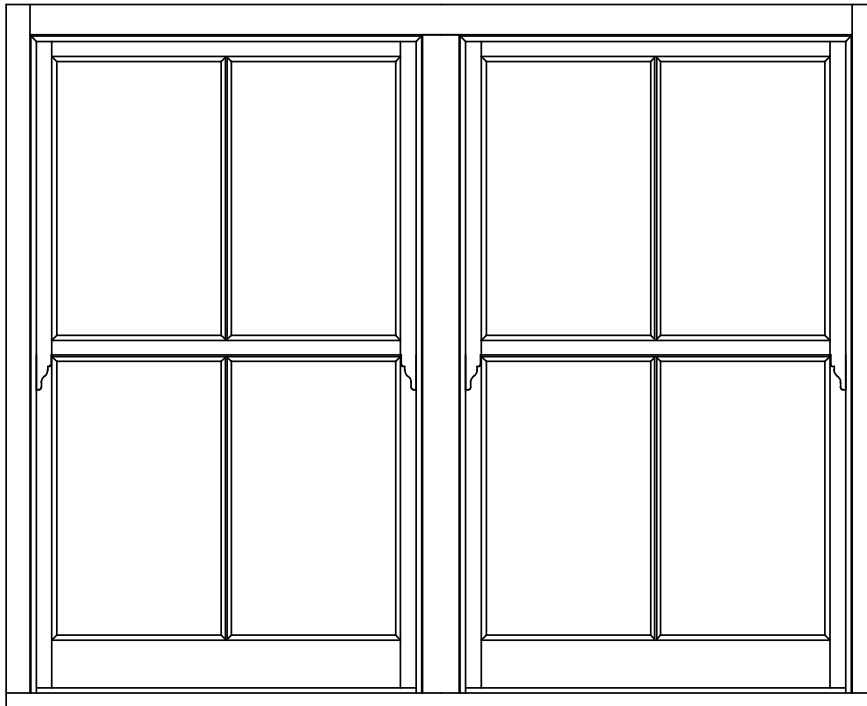
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Bygone\Harmony Technical Pack\R Raymond\May 2026\G:Masterframe\Sales\Sales Masterforms\Bygone Literature\Technical Packs\Rev 1

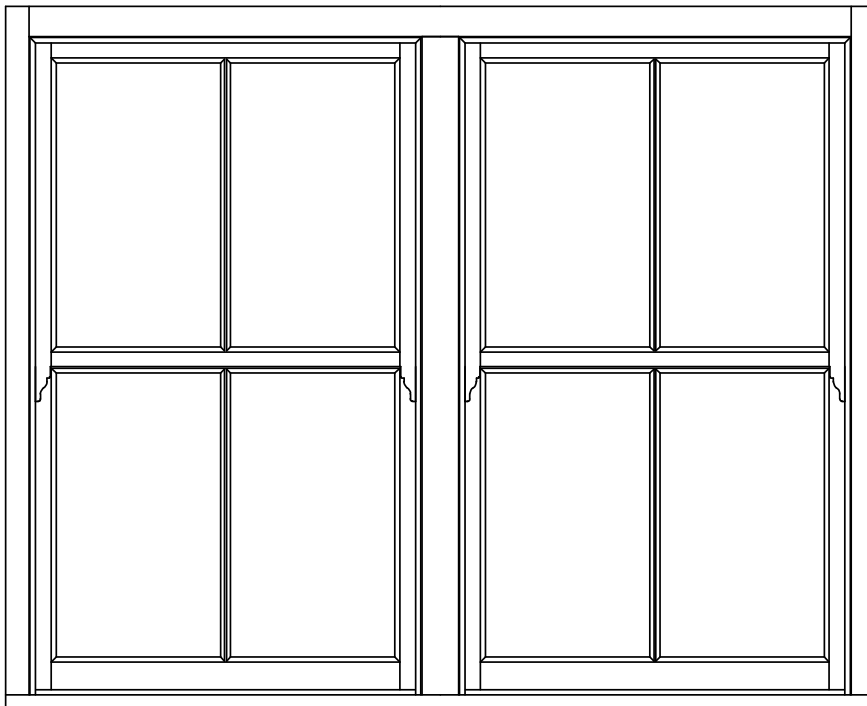
ELEVATION DRAWINGS COUPLED FRAMES STYLE 2

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SASH WINDOWS

External with DBR



External without DBR



Windows depicted show
Timberweld[®] construction.

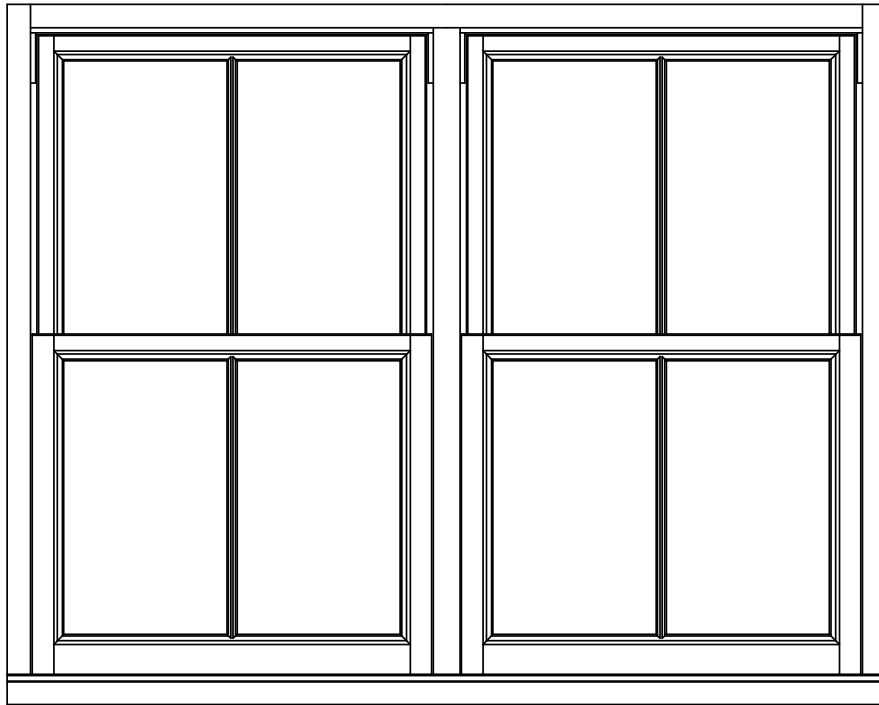
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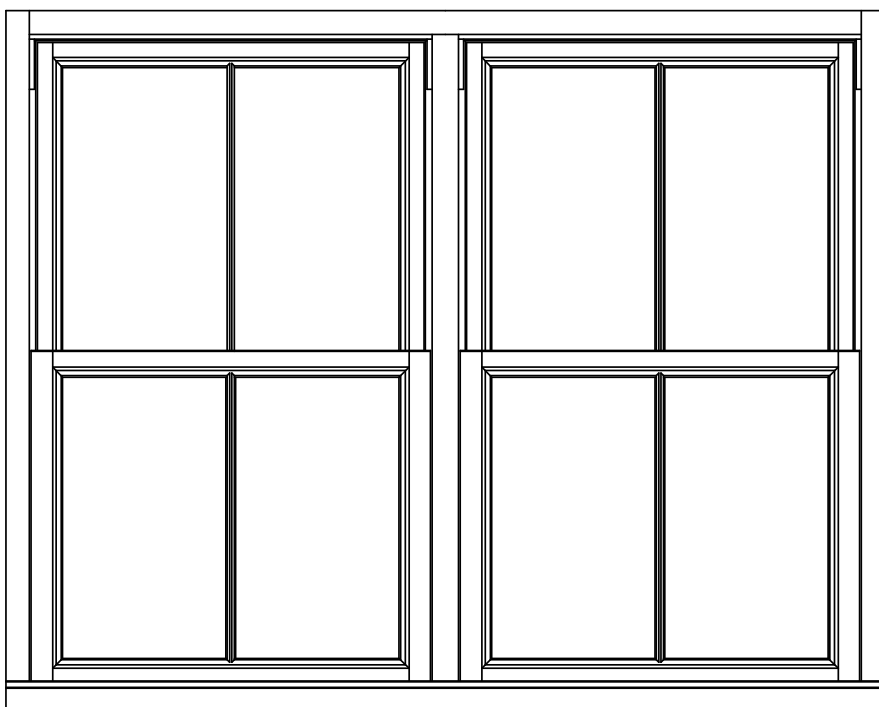
ELEVATION DRAWINGS COUPLED FRAMES STYLE 2

masterframe[®]
SASH WINDOWS

Internal with DBR



Internal without DBR



Windows depicted show
Timberweld[®] construction.

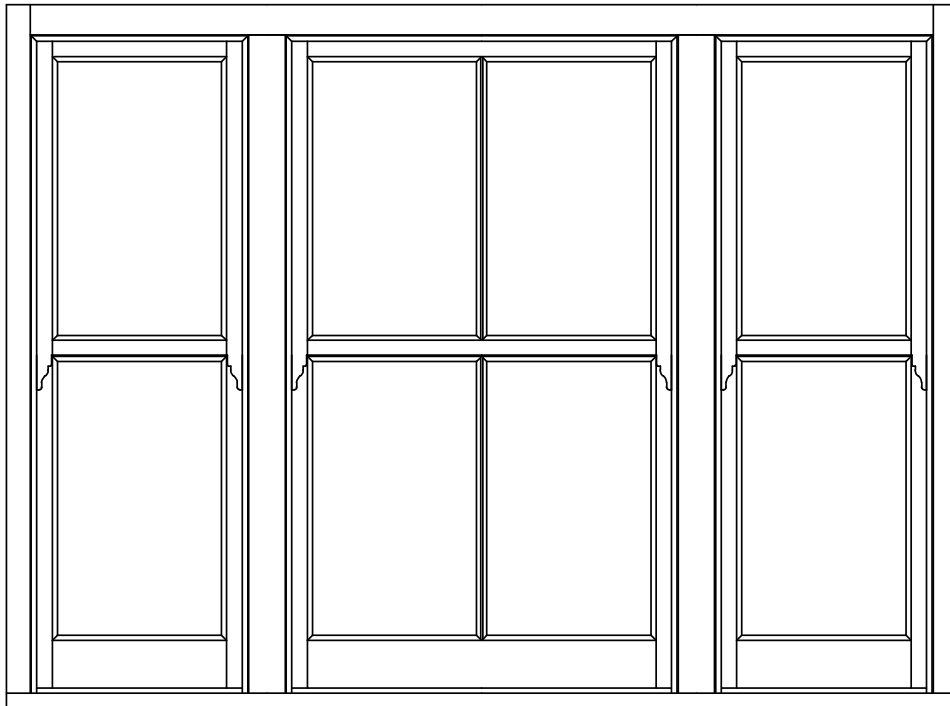
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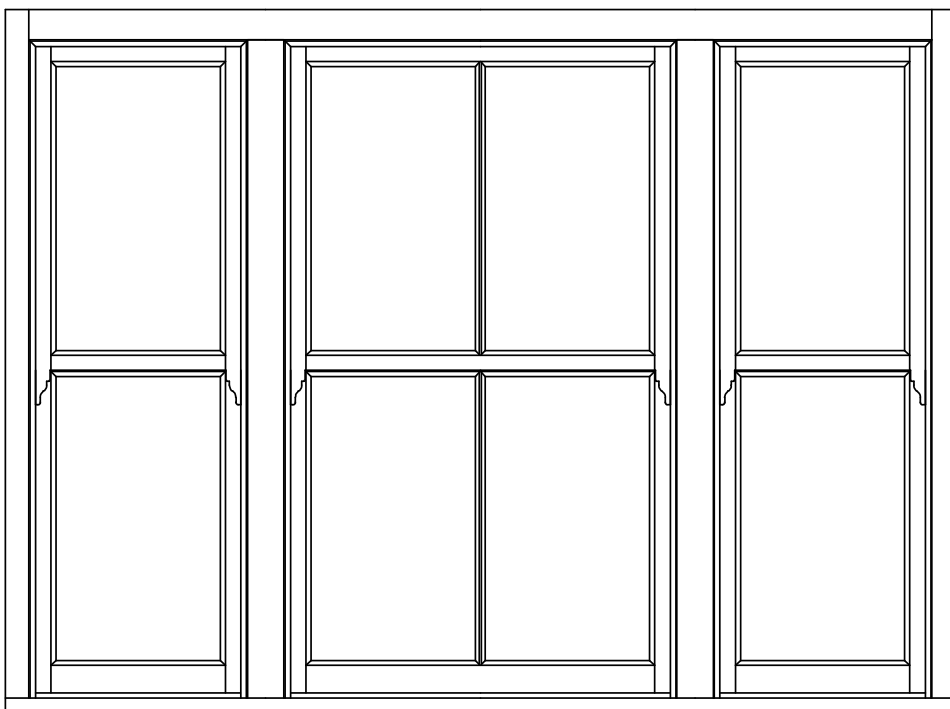
ELEVATION DRAWINGS COUPLED FRAMES STYLE 3

masterframe[®]
SASH WINDOWS

External with DBR



External without DBR



Windows depicted show
Timberweld[®] construction.

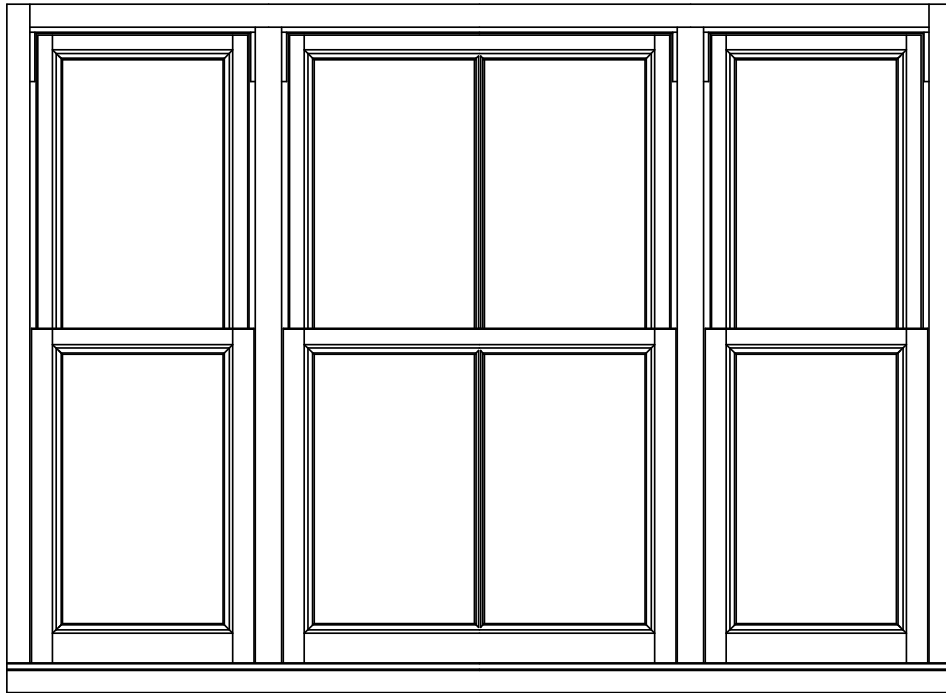
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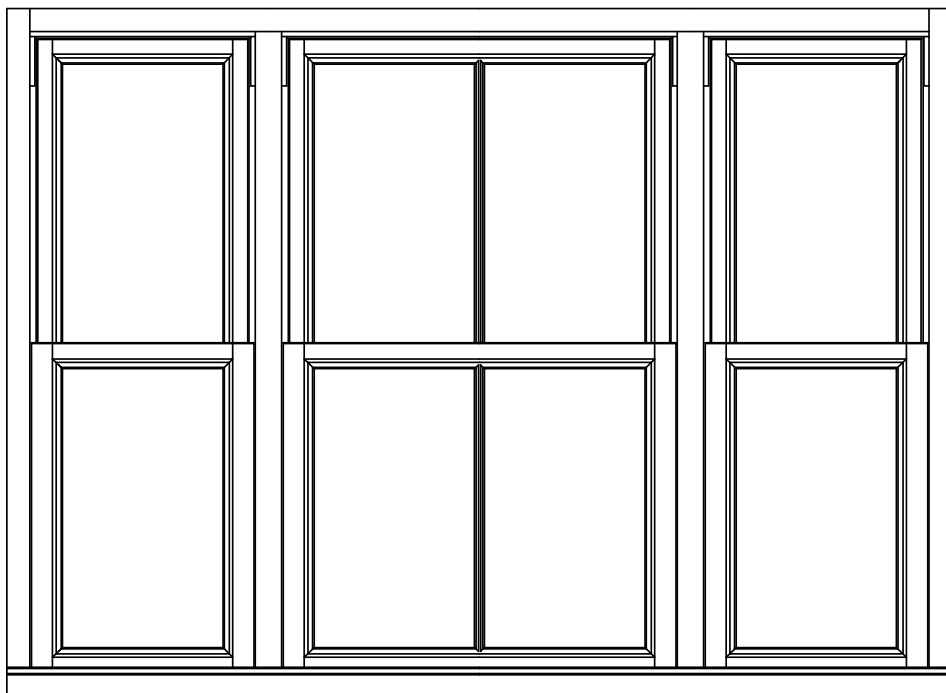
ELEVATION DRAWINGS COUPLED FRAMES STYLE 3

masterframe[®]
SASH WINDOWS

Internal with DBR



Internal without DBR



Windows depicted show
Timberweld[®] construction.

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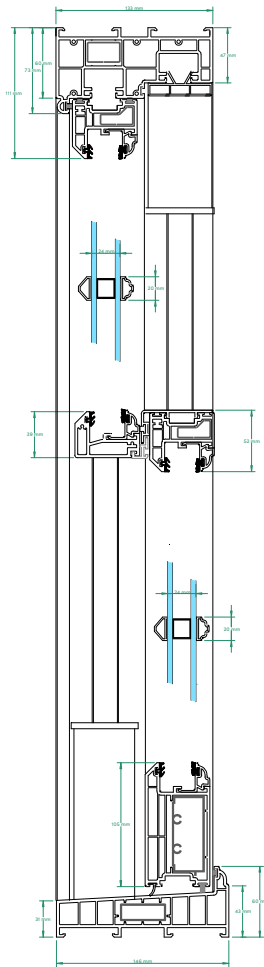
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CROSS SECTION

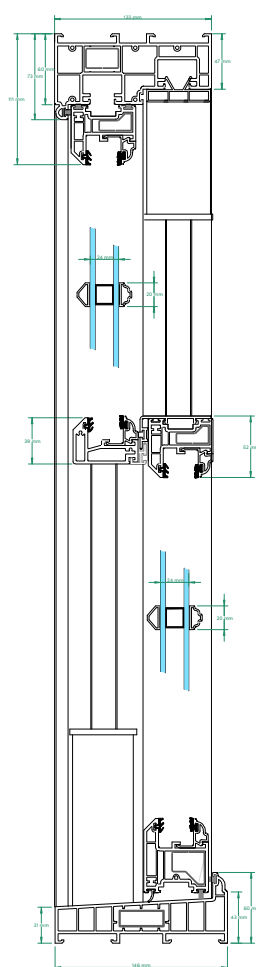
masterframe[®]
SASH WINDOWS

Vertical Cross Section

with DBR

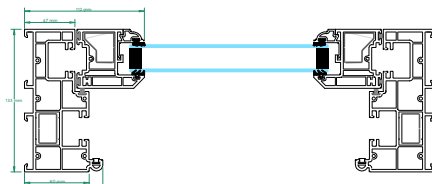


without DBR

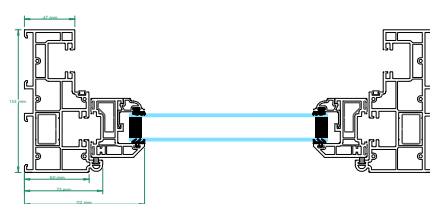


Horizontal Cross Section

bottom sash



top sash



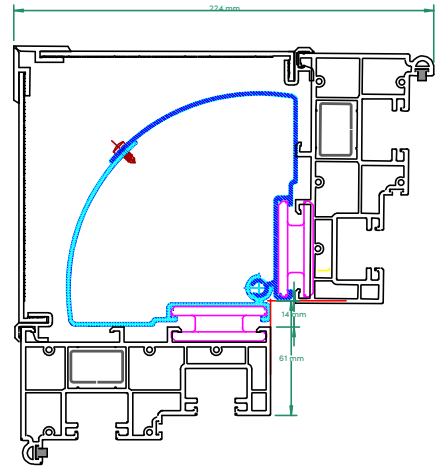
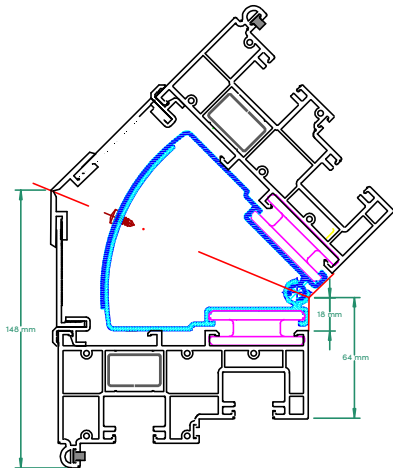
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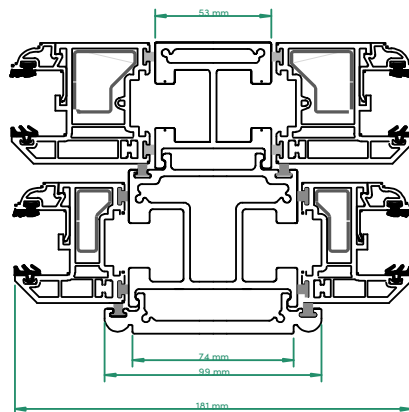
CROSS SECTION

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SASH WINDOWS

Bay Sections



Coupled Frames



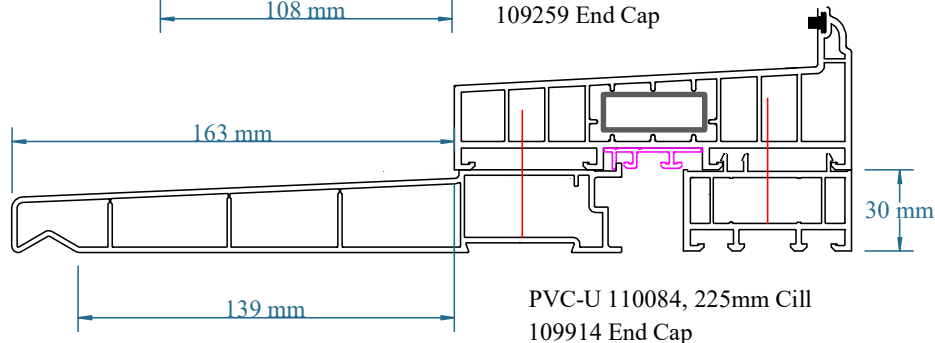
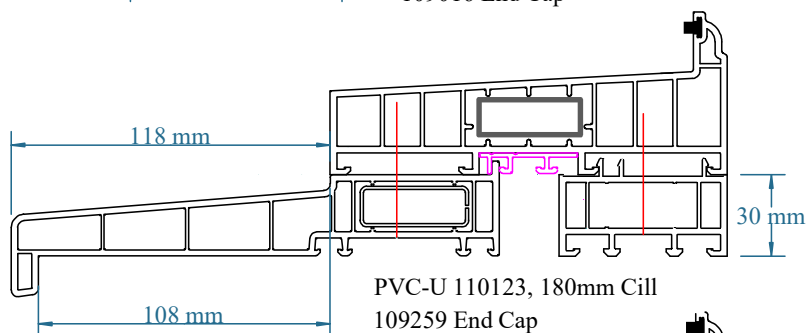
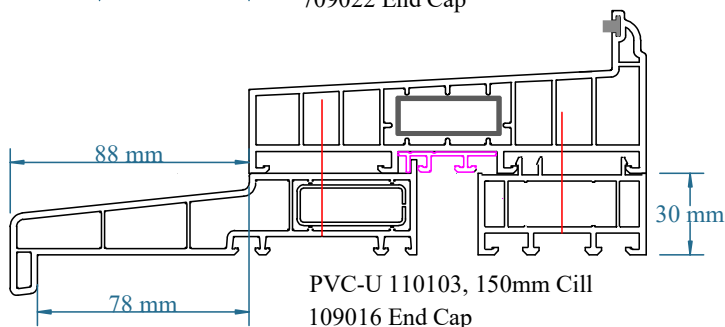
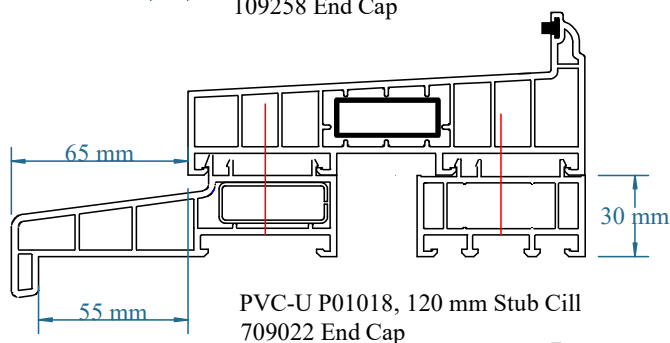
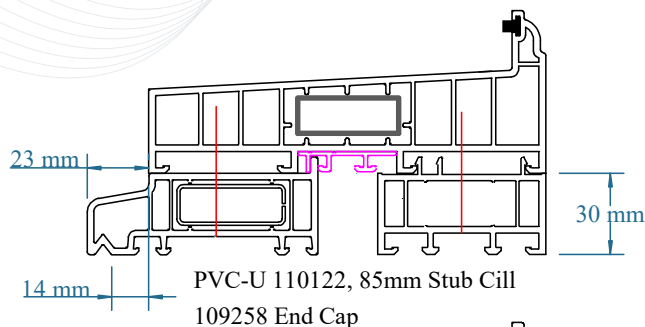
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PROJECTING CILL OPTIONS

masterframe[®]
SASH WINDOWS

Projecting cill in conjunction with
optional PVC-U integral cill



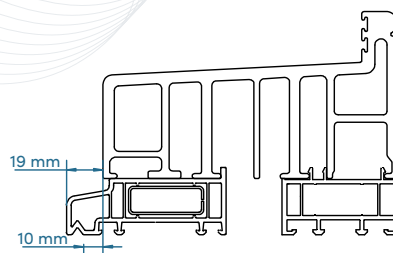
Screw fix cills and
packers to Integral
cill @ 300mm centres,
using 3.9mm or 4.3mm
by 40mm or max
45mm screws.

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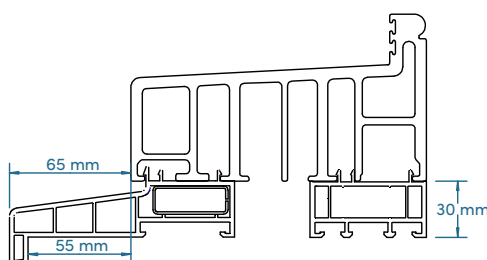
FEEL FREE TO CONTACT US ANY TIME! Tel: 01376 510410 Email: sales@masterframe.co.uk

GRP PROJECTING CILL OPTIONS

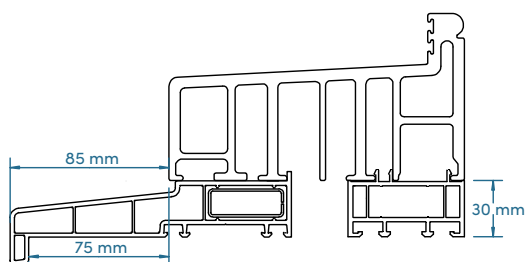
masterframe[®]
SASH WINDOWS



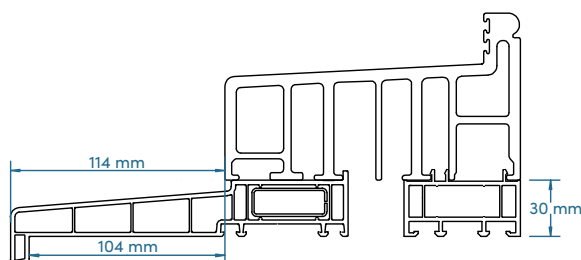
PVC-U 110122, 85mm Stub Cill
109258 End Cap



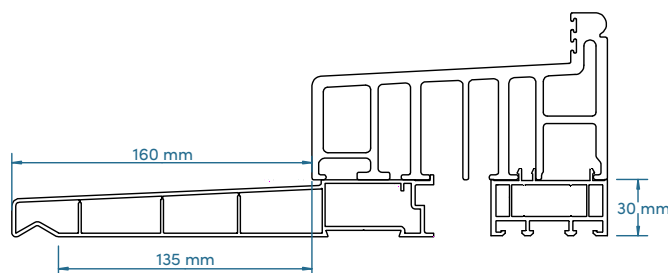
PVC-U P01018, 120 mm Stub Cill
709022 End Cap



PVC-U 110103, 150mm Cill
109016 End Cap



PVC-U 110123, 180mm Cill
109259 End Cap



PVC-U 110084, 225mm Cill
109914 End Cap

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SPECIFICATION



Standard Specification

Timberweld® butt-jointed construction	✓
Super-Slim 39mm mid-rail	✓
Slim integral mullion	✓
Continuous run-through sash horns	✓
Deep bottom rail	✓
White woodgrain foil finish	✓
24mm argon filled double glazing with 1.5U-value	✓
18mm krypton filled double glazing with 1.4U-value ^{††}	X
Standard internal ovolo glazing bead	✓
Exclusive deep internal ovolo glazing bead	X
Beehive furniture (Champagne Gold, Chrome, Satin Chrome, Polished Bronze or Polished Brass)	✓
Woolpile in Grey or White	✓
Scroll handles	✓
High grade Torso balance springs	✓

Chargeable Options

Antique cream woodgrain foil finish	✓
Bespoke colour matching	✓
Mitred joints	X
Acorn furniture	✓
Pumpkin furniture	✓
Textured obscure patterned glass	✓
Sandblasted, satin, etched or patterned glass	✓
Toughened, acoustic or laminated glass	✓
10mm FINEO vacuum insulating glazing with 1.2U-value	X
Bespoke Georgian bar design	✓
Trickle Vents in Sash or Frame	✓
Projecting cill - 85mm, 120mm, 150mm, 180mm or 225mm	✓
Internal Staff Bead Trim	✓
Arched or shaped heads	✓
London sash	✓
London sash and frame	✓
GRP deep cill	✓
Frame vent concealer trim	✓

* Only available in film format on FINEO glass ** Not available with FINEO glass *** If using FINEO glass then no shapes or arches in TXG

† Acoustic and laminated not available with FINEO glass. †† 147mm integral cill only. 'A' rated as standard - 'B' rated when specified with a 6mm or laminated pane



Company:		Your order no.:	
Your reference:		Requested del date:	
Page:	of	Required U Value or WER:	

Sprayed: Internal ☐ External ☐ (Foiled windows only) Colour:	Finish: White Foil ☐ Cream Foil ☐ Timberweld® Joints with 39mm slim meeting rail as standard	Continuous Horns: Yes ☐ No ☐ Bottom Rail: 105mm Deep ☐ 63mm Large ☐	Internal Staff Bead: Yes ☐ No ☐ Spacer Bar: White ☐ Black ☐ Grey ☐	Furniture Colour: Champagne Gold ☐ Chrome ☐ Polished Bronze ☐ Polished Brass ☐ Satin Chrome ☐ Woolpile: Grey ☐ White* ☐	Limit Stops: Yes ☐ No ☐ Furniture Style: Acorn ☐ Beehive ☐ Pumpkin ☐	Fixing Lugs: Yes ☐ No ☐ Integral Cill: 55mm GRP Deep Cill 158mm Depth ☐ 31mm PCV-U Cill 147mm Depth ☐
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Please identify any Georgian designs, toughened glass, laminated glass, obscured glass (providing pattern) & fixed sashes

Quantity					
Location					
Manufacture Width					
Manufacture Height					
Transom Drop					
Trickle Vent Placement	No ☐ Frame ☐ Sash ☐ Frame & Concealer ☐	No ☐ Frame ☐ Sash ☐ Frame & Concealer ☐	No ☐ Frame ☐ Sash ☐ Frame & Concealer ☐	No ☐ Frame ☐ Sash ☐ Frame & Concealer ☐	No ☐ Frame ☐ Sash ☐ Frame & Concealer ☐
EA Requirement	mm²				
Projecting Cill	No ☐ 85 ☐ 120 ☐ 150 ☐ 180 ☐ 225 ☐	No ☐ 85 ☐ 120 ☐ 150 ☐ 180 ☐ 225 ☐	No ☐ 85 ☐ 120 ☐ 150 ☐ 180 ☐ 225 ☐	No ☐ 85 ☐ 120 ☐ 150 ☐ 180 ☐ 225 ☐	No ☐ 85 ☐ 120 ☐ 150 ☐ 180 ☐ 225 ☐
Egress Compliance	No ☐ Yes ☐	No ☐ Yes ☐	No ☐ Yes ☐	No ☐ Yes ☐	No ☐ Yes ☐

Please identify any Georgian designs, toughened glass, laminated glass, obscured glass (providing pattern) & fixed sashes

Quantity					
Location					
Manufacture Width					
Manufacture Height					
Transom Drop					
Trickle Vent Placement	No ☐ Frame ☐ Sash ☐ Frame & Concealer ☐	No ☐ Frame ☐ Sash ☐ Frame & Concealer ☐	No ☐ Frame ☐ Sash ☐ Frame & Concealer ☐	No ☐ Frame ☐ Sash ☐ Frame & Concealer ☐	No ☐ Frame ☐ Sash ☐ Frame & Concealer ☐
EA Requirement	mm²				
Projecting Cill	No ☐ 85 ☐ 120 ☐ 150 ☐ 180 ☐ 225 ☐	No ☐ 85 ☐ 120 ☐ 150 ☐ 180 ☐ 225 ☐	No ☐ 85 ☐ 120 ☐ 150 ☐ 180 ☐ 225 ☐	No ☐ 85 ☐ 120 ☐ 150 ☐ 180 ☐ 225 ☐	No ☐ 85 ☐ 120 ☐ 150 ☐ 180 ☐ 225 ☐
Egress Compliance	No ☐ Yes ☐	No ☐ Yes ☐	No ☐ Yes ☐	No ☐ Yes ☐	No ☐ Yes ☐

Additional Notes:

Client Details

Name:	
Address:	
Email:	

Dear Customer, the performance requirements to comply with the building regulations are effective from 15th June 2022. These new changes include higher thermal performance, and increased ventilation provision where technically feasible. Please carefully check the specification of your order / enquiry to ensure this meets your needs. Where it is not technically feasible to comply fully with AD F, where requested we will include the maximum possible to comply with this clause of the regulation. *In addition, Masterframe will not be held liable for White Woolpile becoming dirty or discoloured during installation or operation. Please enter your name to confirm acceptance

Bygone Harmony: Exclusive Staff Bead 133mm frame, chamfered 'putty line' external and Ovolo 'Sculptured' internal, tilt rests applied up to 35kg sash weight, Deep Bottom Rail, 4/16/4 Low 'E' & Low Iron glazing, Georgian where requested will be a plant-on bar. Energy BFRC "A" rated and CE mark compliant as standard. Furnished window frames over 926mm wide and/or with a central vertical Georgian bar will be fitted with 2 cam catches and keeps for security and balance. PAS24/SBD BS7950 as standard. All sizes to be overall manufacture sizes and include cills and packers. All windows viewed externally.



Company:

Your reference:

Page: of

Your order no.:

Requested del date:

Required U Value or WER:

Sprayed:
Internal ☐
External ☐
(Foiled windows only)
Colour:

Finish:
White Foil ☐
Cream Foil ☐
Timberweld® Joints with 39mm slim meeting rail as standard

Continuous Horns:
Yes ☐
No ☐
Bottom Rail:
105mm Deep ☐
63mm Large ☐

Internal Staff Bead:
Yes ☐
No ☐
Spacer Bar:
White ☐
Black ☐
Grey ☐

Furniture Colour:
Champagne Gold ☐
Chrome ☐
Polished Bronze ☐
Polished Brass ☐
Satin Chrome ☐
Woolpile:
Grey ☐
White* ☐

Limit Stops:
Yes ☐
No ☐
Furniture Style:
Acorn ☐
Beehive ☐
Pumpkin ☐

Fixing Lugs:
Yes ☐
No ☐
Integral Cill:
55mm GRP Deep Cill 158mm Depth ☐
31mm PCV-U Cill 147mm Depth ☐

Please identify any Georgian designs, toughened glass, laminated glass, obscured glass (providing pattern) & fixed sashes

Quantity					
Location					
Manufacture Width					
Manufacture Height					
Trickle Vent Placement	No ☐ Frame ☐ Sash ☐ Frame & Concealer ☐	No ☐ Frame ☐ Sash ☐ Frame & Concealer ☐	No ☐ Frame ☐ Sash ☐ Frame & Concealer ☐	No ☐ Frame ☐ Sash ☐ Frame & Concealer ☐	No ☐ Frame ☐ Sash ☐ Frame & Concealer ☐
EA Requirement	mm²				
Projecting Cill	No ☐ 85 ☐ 120 ☐ 150 ☐ 180 ☐ 225 ☐	No ☐ 85 ☐ 120 ☐ 150 ☐ 180 ☐ 225 ☐	No ☐ 85 ☐ 120 ☐ 150 ☐ 180 ☐ 225 ☐	No ☐ 85 ☐ 120 ☐ 150 ☐ 180 ☐ 225 ☐	No ☐ 85 ☐ 120 ☐ 150 ☐ 180 ☐ 225 ☐
Egress Compliance	No ☐ Yes ☐	No ☐ Yes ☐	No ☐ Yes ☐	No ☐ Yes ☐	No ☐ Yes ☐

Please identify any Georgian designs, toughened glass, laminated glass, obscured glass (providing pattern) & fixed sashes

Quantity			
Location			
Manufacture Width			
Manufacture Height			
Trickle Vent Placement	No ☐ Frame ☐ Sash ☐ Frame & Concealer ☐	No ☐ Frame ☐ Sash ☐ Frame & Concealer ☐	No ☐ Frame ☐ Sash ☐ Frame & Concealer ☐
EA Requirement	mm²		
Projecting Cill	No ☐ 85 ☐ 120 ☐ 150 ☐ 180 ☐ 225 ☐	No ☐ 85 ☐ 120 ☐ 150 ☐ 180 ☐ 225 ☐	No ☐ 85 ☐ 120 ☐ 150 ☐ 180 ☐ 225 ☐
Egress Compliance	No ☐ Yes ☐	No ☐ Yes ☐	No ☐ Yes ☐

Additional Notes:

Windows will use an integral 99mm slim mullion

Client Details

Name:

Address:

Email:

Dear Customer, the performance requirements to comply with the building regulations are effective from 15th June 2022. These new changes include higher thermal performance, and increased ventilation provision where technically feasible. Please carefully check the specification of your order / enquiry to ensure this meets your needs. Where it is not technically feasible to comply fully with AD F, where requested we will include the maximum possible to comply with this clause of the regulation. *In addition, Masterframe will not be held liable for White Woolpile becoming dirty or discoloured during installation or operation. Please enter your name to confirm acceptance

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Company:

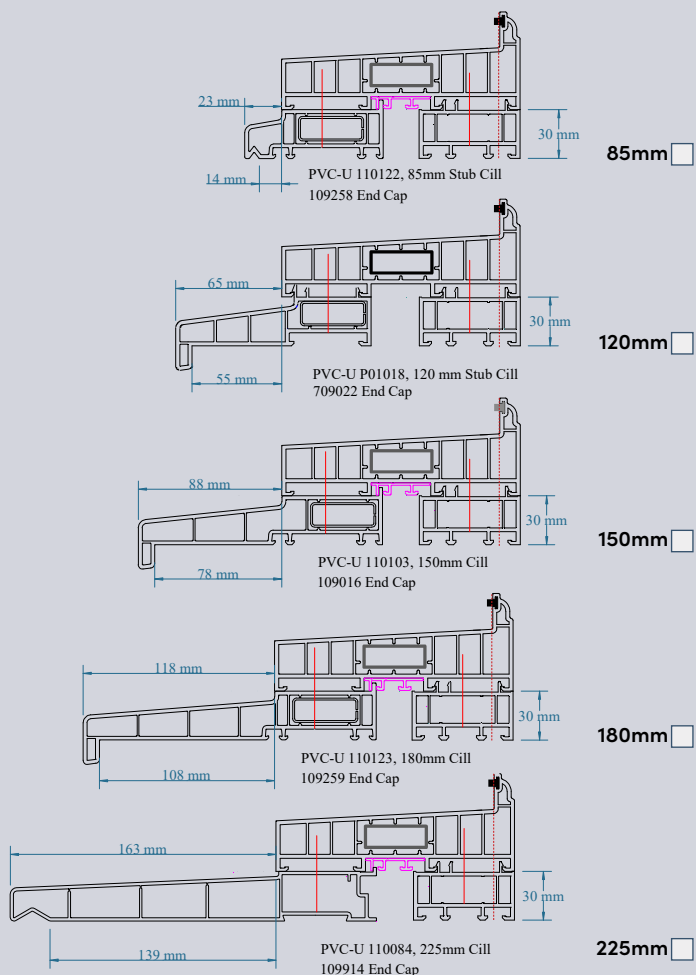
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Your order no.:

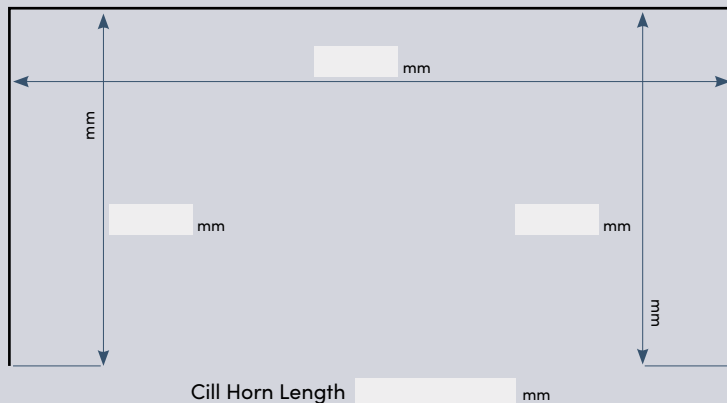
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Requested del date:

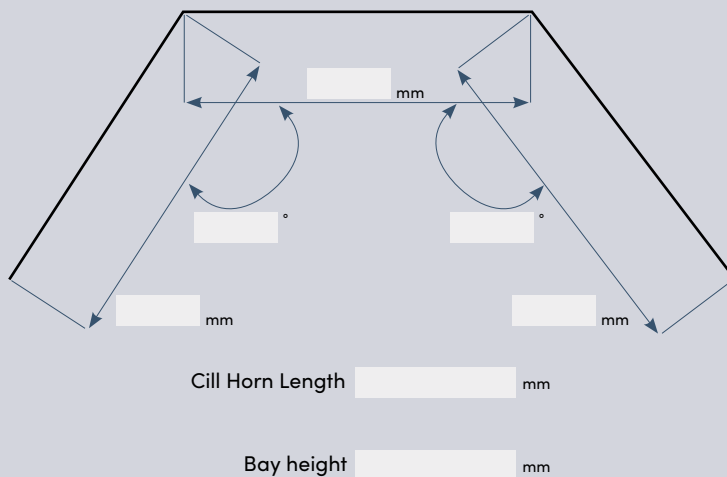
Projecting Cill Requirements - Tick Required Option



Square Bay



Angled Bay



The bay layout dimensions should be the total internal bay widths, taken at the red datum line.
Cill horn lengths will be the cill dimensions beyond the product sides.
133mm frame ranges will be supplied with 300mm integral cill horns.

Requirements

- Bay posts only ☐
- White foil trims only ☐
- Standard PVC trims only ☐
- Bay posts and white foil trims ☐
- Bay posts and standard PVC trims ☐

Where posts are supplied, fixing nuts and spanner will be included in your pack.

Please note - our bay posts are not load bearing

Telephone: 01376 510410

4 Crittall Road, Witham, Essex CM8 3DR

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BAY CORNER KIT CONTENTS

Trims

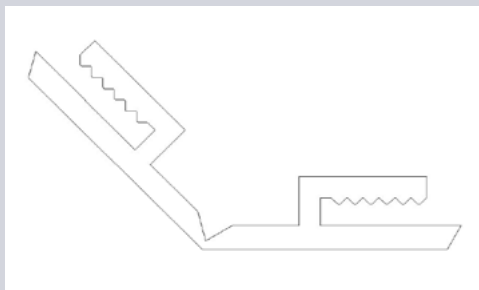
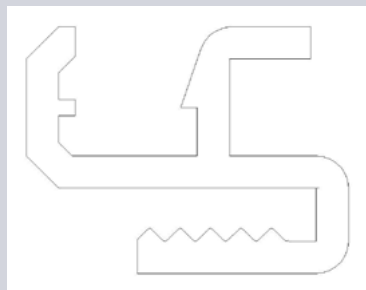
- 2 x P01042 - full height of window
- 1 x P01052 - full height of window
- 2 x P01043 - full height of window, trimmed to correct width for angle
- 1 x P10115 - full height of window

Parts

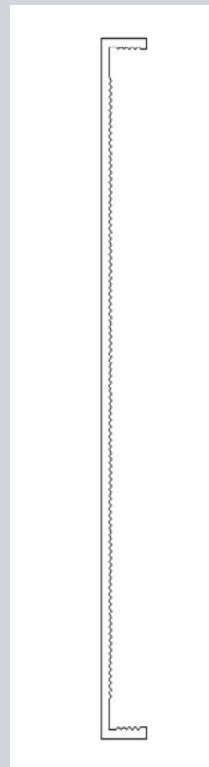
- 10 x coupling nuts
- 1 x spanner for coupling nuts
- Projecting cill as per order
- 30 x 70mm packer to suit projecting cill as per order

P01042

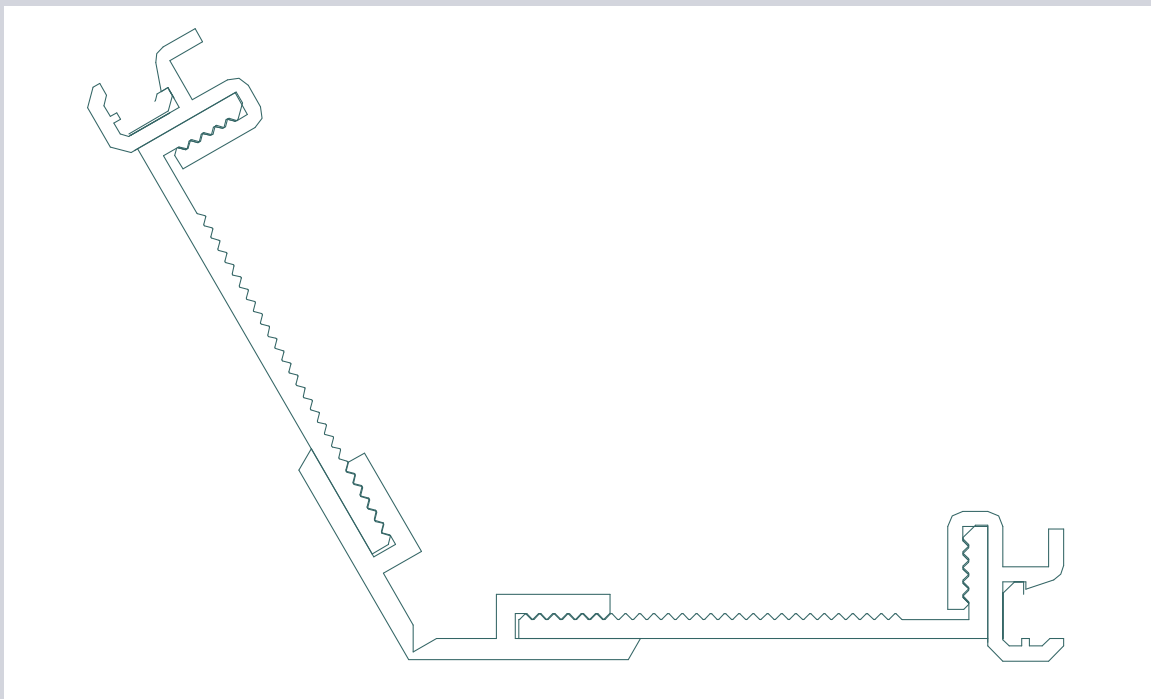
P01052



P01043



Assembled external trims



Telephone: 01376 510410

4 Crittall Road, Witham, Essex CM8 3DR

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SURVEYING BAY WINDOWS

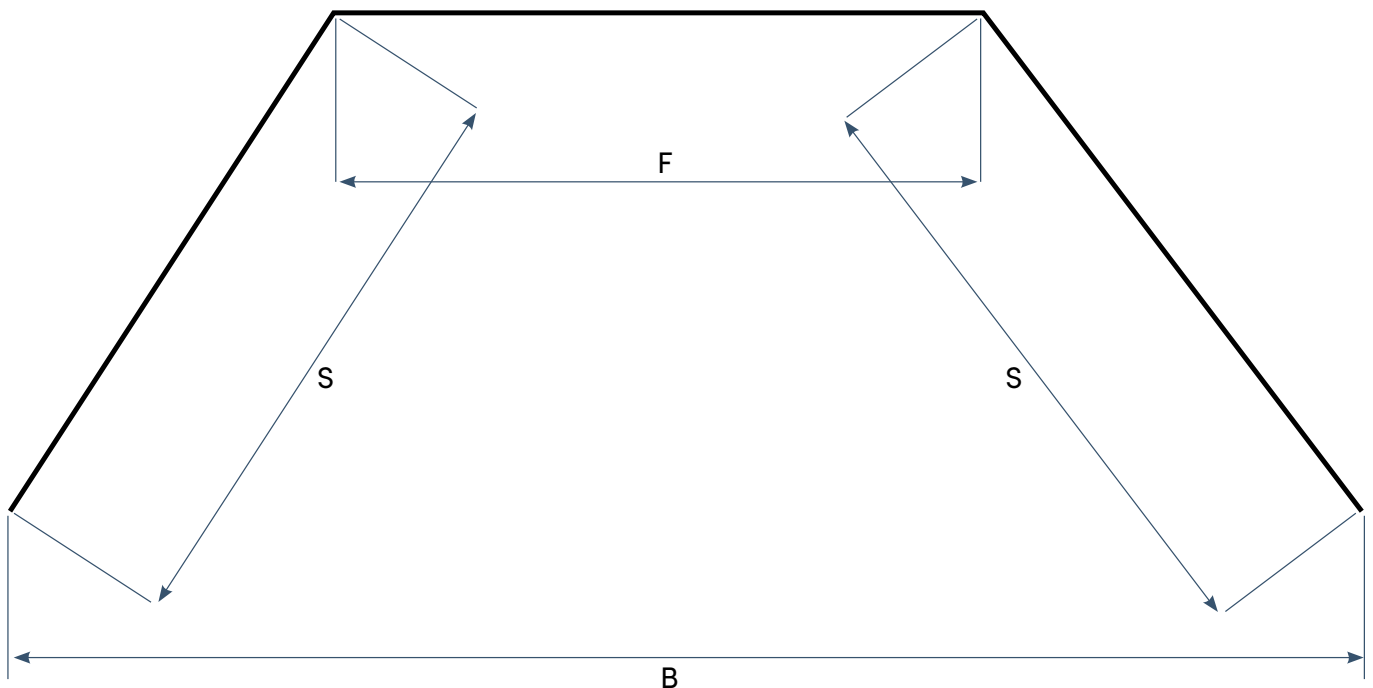
The first most important point to make regarding any PVC-U bay window is to reiterate the point that the PVC-U is not load bearing, it cannot take the load of the façade or roof above the window.

Ideally it would be best to measure the bay from the inside, but Masterframe can work from external sizes if it is easier to obtain providing the segment sizes to the external point of the bay corners and angles are known. If working from the inside then the segment sizes to the internal point of the bay corner and either bay angles or, back span of the bay is required.

The sizes taken must be the window sizes and not the cill sizes.

Masterframe will make the deductions from these sizes to accommodate the bay post. This bay post will be provided 100mm smaller than the bay window height in order to allow for a structural pole (not supplied by Masterframe) to be inserted inside the bay posts (provided by Masterframe) to hold the sash windows in place.

Please note bay posts are not load bearing.

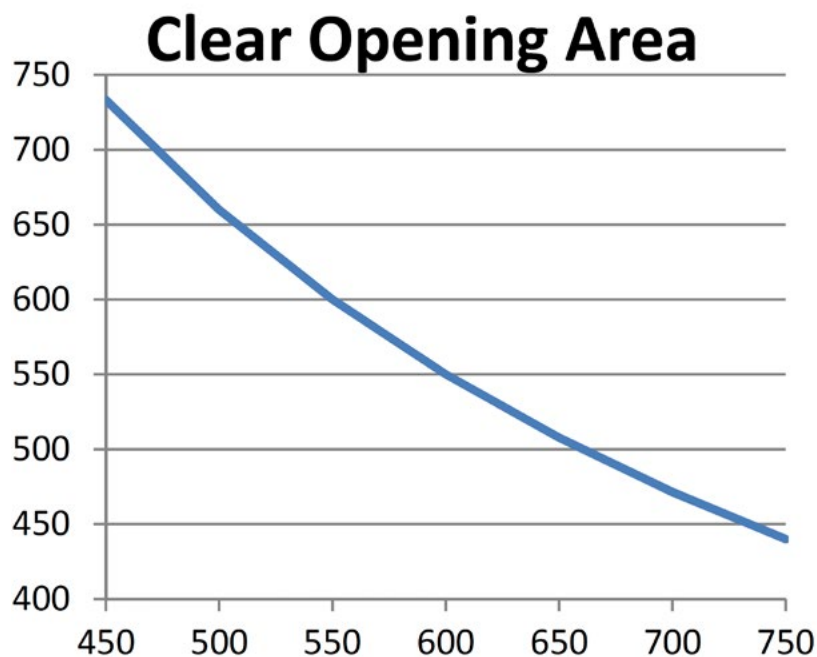


PROVISION OF EGRESS

Calculations for the clear opening area.

Harmony Collection Overall width minus 146,
Transom drop minus 205

Now plot the results of the calculation on the graph, any result which falls above the line will be compliant with AD B. Any result falling below the line should be referred back to Masterframe where egress options can be discussed to overcome the situation.



APPROVED DOCUMENT L 2021 GUIDANCE

Introduction

The new revision to the approved document L, Conservation of fuel and power, Volume 1: Dwellings was published in December 2021.

This document gives guidance on one way to meet the building regulations, but alternative methods can be used if it can be proven to comply. In essence though, everyone follows the guidance in the approved Documents.

This document has been produced to summarise the important parts of AD L and give guidance to the reader on the information and specification of products needed not to fall foul of the regulations. It is written primarily with fenestration products in mind and, more so PVC-U sash windows.

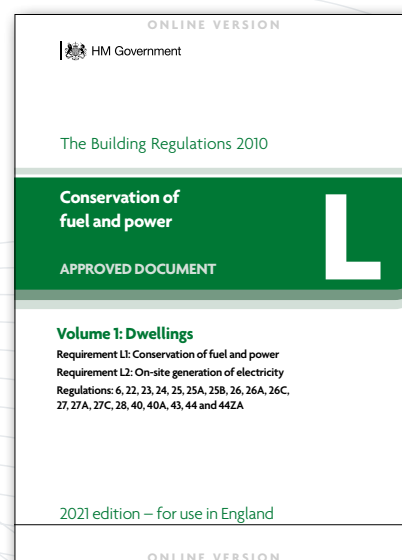
The first thing to recognise and understand is that with these new changes the supplying and installation of fenestration products has become more complicated. The previously performance threshold in essence meant that as long as the fenestration product had a soft coat Low Emissivity glass, then it was almost guaranteed that the product would meet the requirement. Sadly, this is no longer the case which throws up an interesting question, how are the competent persons schemes and Local Building Control going to assess the product performance.

Approved Document Guidance key points.

The notional U-value figure, used in the SAP calculation for new build dwellings is 1.2 W/m²K. This is most likely to become a figure that architects and specifiers will use in tender documents. It is not the minimum performance value for window products, but if products of a lesser performance are used, it may require consequential improvements to other building elements to compensate.

The limiting U-value, the minimum performance for windows in new build development is 1.6W/m²K. There is no Window Rating option for new build dwellings.

The limiting U-value for windows in an extension or replacement windows is 1.4W/m²K or Window Energy Rating Band "B".



Impact

From Masterframe Windows point of view the minimum performance for New build dwellings has not really changed anything for us. Our standard Insulating Glass Unit (IGU) specification and window design has always achieved a $1.6\text{W/m}^2\text{K}$ value. However, I suspect that the requirements from developers moving forward will be for improvements on this value.

Currently within our range we have various glazing options, which will accommodate U_{window} performance as low as $1.4\text{W/m}^2\text{K}$ for a double glazed IGU and $1.2\text{W/m}^2\text{K}$ for our new Neosash® Window.

For the replacement market I am afraid it gets a little more complicated, in order to achieve compliance via a U-value route, a change of IGU specification from our standard is required for an improved glazing performance.

However, the good news is that compliance via the WER route can be achieved using our standard IGU specification as all our products are "A" rated as standard. This is by far the easiest route to compliance for replacement windows.

Further information

Additional topics to the thermal performance which needs considering. The guidance puts mention to the continuity of insulation and how gaps in insulation can have a significant impact on heat loss and creates a risk for condensation and mould. Windows and doors should be installed in such a way that the thermal integrity is maintained and, as such windows should be sealed with a tape between the window and the structure. Trims and sealant is to be used in addition to the tape. The competent person schemes, such as Fensa will require photographic evidence of the sealing tape use.

The fitting of the windows should be carried out in accordance with BS8213-4 and the position of the windows should be between 30mm & 50mm set back from the front façade for a flush fit window, this is more than the 25mm stated in BS8213-4. There is no mention of the correct position or mention of the amount of outerframe that should be hidden behind a reverse brick detail, although a minimum of 12mm is again stated in BS8213-4.

Into New build developments the use of fully insulated cavity closer is also specified.

Source: www.gov.uk/government/collections/approved-documents

APPROVED DOCUMENT F 2021 GUIDANCE

Introduction

The new revision to the approved document F, Ventilation, Volume 1: Dwellings was published in December 2021.

This document gives guidance on one way to meet the building regulations, but alternative methods can be used if it can be proven to comply. In essence though, everyone follows the guidance in the approved Documents.

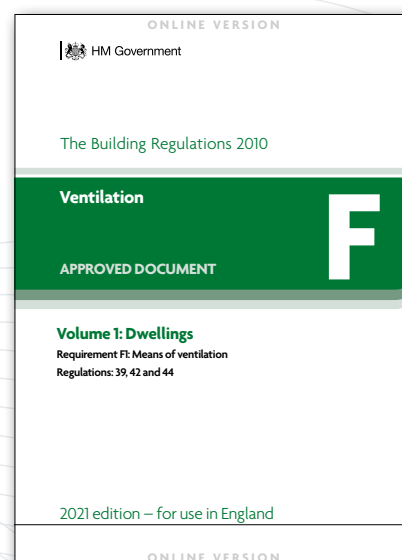
This document has been produced to summarise the important parts of AD F and gives guidance to the reader on the information and specification of products needed not to fall foul of the regulations. It is written primarily with fenestration products in mind and, more so PVC-U sash windows.

There is a cross over between AD F, Ventilation and AD O, Overheating, where the requirements are far more onerous and complicated. See separate guidance document.

The first thing to recognise and understand is, that with these new changes the supplying and installation of fenestration products has become more complicated. The fall-back position to fit trickle vents to windows if the existing windows have vents has been removed, so in essence all windows may require trickle vents.

Approved Document Guidance key points

There are certain types of dwellings which are exempt and can get derogation from these regulations, these are listed in the manual to the building regulations and contain, but not limited, Crown buildings, Civil Aviation buildings, buildings not visited by people, (Plant rooms), listed buildings, dwellings in conservation areas and historic buildings constructed with a vapour permeable structure, such as, for example, but not exclusively wattle & daub, cob, or lime mortar. In such cases approval from the local building control and or conservation officer should be sought prior to the finalisation of installation contract.



First off let's review the purge ventilation. Purge ventilation can be provided by opening windows or mechanical fans, again by far the most common is an opening window. Table 1.4

Extract Table 1.4 Purge Ventilation Openings

Opening	Minimum total free area
Hinged or Pivot, opening angle 15° to 30°	1/10 th of room floor area
Hinged or Pivot, opening angle ≥ 30°	1/20 th of room floor area
Sash Windows	
External Door	

Further information

Where the AD talks about background ventilation, there is a common assumption that it is referring to window trickle vents as this is in most cases the method of ventilation, but the truth is that it is the room background ventilation which included air bricks or alternative ventilation provisions.

Background ventilation in new-build dwellings:

Where a permanent mechanical extract system is being used, then there is no requirement to have any background ventilation in the wet rooms and only 4000mm² ea for each habitable room providing, a minimum number of background ventilators equals the sum of the total number of bedrooms + two.

If a property has a mechanical HVAC system, ventilation with heat recovery then there should be no background ventilators to eliminate unwanted air pathways.

In all other cases, background ventilation must be provided to meet the requirements of table 1.7. Where it states in the table single storey dwellings, this can be a bungalow, a flat or apartments where the individual dwelling is on a single storey.

Extract Table 1.7 Minimum Equivalent Natural Background Ventilation Area

Room	Minimum ea of ventilators for multiple floor dwellings	Minimum ea of ventilators for single floor dwellings
Habitable Room	8,000mm ²	10,000mm ²
Kitchen	8,000mm ²	10,000mm ²
Utility room	No Minimum	No Minimum
Bathroom	4,000mm ²	4,000mm ²
Sanitary accommodation (WC)	No Minimum	No Minimum

Where the dwelling has only exposed façade, or 70% of the windows and doors are on the same facade, then expert advice should be sought.

In open plan accommodation, where the kitchen and living room is not separate, no fewer than three ventilators of the same ea should be included. i.e 24,000mm² or 30,000mm²

Background ventilation in existing dwellings:

This section of the guidance is a little confusing, there is section for minor and major refurbishment works and then a paragraph afterwards for replacing windows only. The difference between the two is the impact the works are having on the property. If the refurbishment is a combination of trades, then the simplified method using the table is to be followed, if the replacing windows and doors only, then you can follow this section. In essence though the only difference between the two sections is when the existing windows have trickle vents already fitted.

Simplified Method

The simplified method assumes that the existing property has adequate means of ventilation through a combination of purpose made ventilation and infiltration.

In order to use the simplified method to determine the required ventilation provisions there is a table 3.1 to use.

Clause 3.8 must be followed to calculate the number of minor and major measures involved. The calculation should include

- Energy efficiency measures fitted since the original dwelling was constructed, to consider accumulation of measures.
- Energy efficiency measures planned for the future.

Table 3.1 defines an activity to a minor or major measure

Extract Table 3.1 Energy Efficiency Measures

Description of Work	Category
a. Renewing Loft insulation	Minor
b. Loft conversions	Minor
c. Cavity wall insulation	Minor
d. External or internal wall insulation $\leq$ 50% external wall	Minor
e. External or internal wall insulation $\geq$ 50% external wall	Major
f. Replacing $\leq$ 30% windows and doors	Minor
g. Replacing $\geq$ 30% windows and doors	Major
h. Replacing a loft hatch with insulated one	Minor
i. Sealing around services (Pipework)	Minor
j. Sealing around or insulating suspended floor	Minor
k. Removing chimney	Major

- Notes:
- If energy efficiency measures involves only replacing windows then the alternative approach can be followed.
 - Draught proofing on its own, not as part of building works does not necessarily constitute as building works and in this case would not be counted.

Once the nature and extent of all known planned building works have been identified, then the following actions should be undertaken from the table below.

Extract Diagram 3.1 Chart for Categorising Ventilation Impact

		Number of Minor Works						
		0	1	2	3	4	5	6
Number of Major Works	0	Category A						
	1	Category B						
	2							
	3		Category C					
	4							

Category A, it is likely that the energy efficiency measures have not reduced the ventilation provision, so no additional ventilation provisions are required.

Category B, ventilation provision has been reduced and therefore further ventilation provisions are required. The rooms should be upgraded to table 1.7 for properties with natural ventilation, with or without intermediate extract fans, 1.60 – 1.66 for background ventilation with continuous mechanical extract ventilation.

Category C, Ventilation provisions has been significantly reduced. Seek expert advice for properties with natural ventilation, with or without intermittent extractor fans and follow sections 1.60 – 1.66 (Table 1.7) for properties with continuous running extract fans.

Appendix D is a checklist to get clarity on existing dwelling ventilation provisions. If any answers to the questions are no, then additional ventilation provisions are required.

Replacing Windows Only

As an alternative if only replacing windows and doors and not any of the other listed energy efficiency measures are included, been already completed or planned, the following can be used. I expect this is the method which is going to be easiest for installers replacing windows.

Clause 3.14. If the existing windows have background ventilators then the new should include background vents which are not smaller than the original outgoing product.

Furthermore, if the size is not known then the new windows should have vents the same size as windows being replaced without vents.

Clause 3.15. Replacing windows without vents is likely to affect the ventilation provision so vents are required but can be to a slightly different criteria.

- Habitable Rooms – Minimum 8000mm² ea
- Kitchens – Minimum 8000mm² ea
- Bathroom – Minimum 4000mm² ea

If the dwelling has continuous running extract fans then this can be simplified to 4000mm² ea to each habitable room.

Note: If it is not technically feasible to adopt the minimum equivalent areas set out in paragraph 3.15, the background ventilators should have an ea as close to the minimum value as is feasible. The GGF / Competent persons schemes are accepting the definition of "Technically Feasible" is something which is easily achievable and convenient. This means that products do not need to be redesigned to include materials which are not normally in your inventory, for example designing or sourcing a new overframe vent.

In summary the requirements using the replacement windows and doors method differs only very slightly to the simplified method, in as much that if the original windows had vents and it is possible to determine the ea of those vents, then it is legitimate to replace like for like and if not, then the requirements to fit ventilators, or ensure that the equivalent ventilation is present is to the slightly lesser onerous multiple floors provisions, regardless of property type.

In all cases the critical thing is documentation, or photographic evidence. The competent person schemes will check this documentation to confirm what is or isn't technically feasible and what ea vents were in the outgoing product if known.

Impact

As much as most people do not like ventilators, they do have a position in the marketplace to provide background fresh air and manage the route to all evil when it comes to condensation, Relative Humidity. It is not legal to draft up and have signed any kind of disclaimer to omit ventilators, the requirements must be adhered to.

Some of the requirements though, to fit 8,000mm² and 10,000m² will not be possible on our smaller width sash windows. The table below details out the size parameters for fitting ventilators to ascertain what is technically feasible.

Window & Ventilation Parameters

Ventilation Provision	Minimum Frame Vent Window Size	Minimum Sash Vent Window Size
Glazpart 2500mm ² ea	596	706
Glazpart 4000mm ² ea	740	850
Glazpart 5000mm ² ea	815	925
Glazpart 5000mm ² ea (2 x 2500mm ²)	742	1177
Glazpart 8000mm ² ea (2 x 4000mm ²)	1030	1330
Glazpart 10000mm ² ea (2 x 5000mm ²)	1180	1480

Furthermore, for some designs it is not technically feasible to fit trickle vents, these include arched head windows.

Source: www.gov.uk/government/collections/approved-documents

FURNITURE

masterframe[®]
SASH WINDOWS



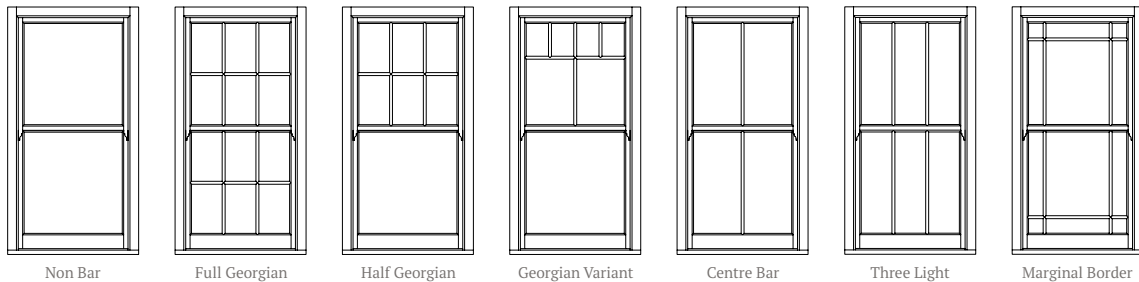
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TYPICAL STYLES

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SASH WINDOWS



Non Bar

Full Georgian

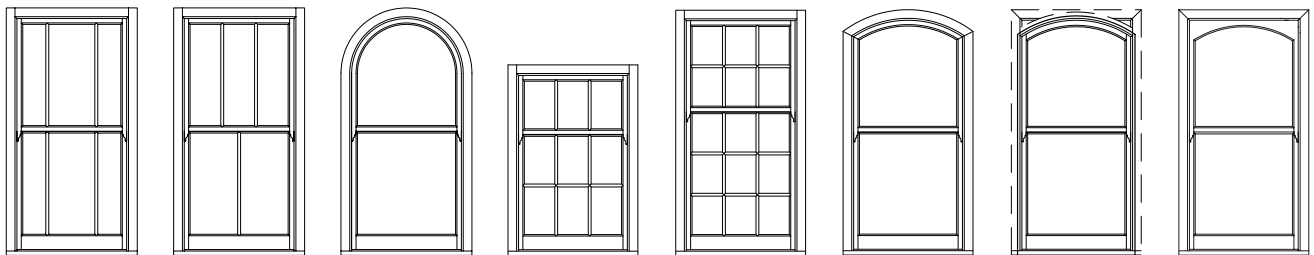
Half Georgian

Georgian Variant

Centre Bar

Three Light

Marginal Border



Marginal or "Off Set" Three Light

Asymmetric

True Arch*

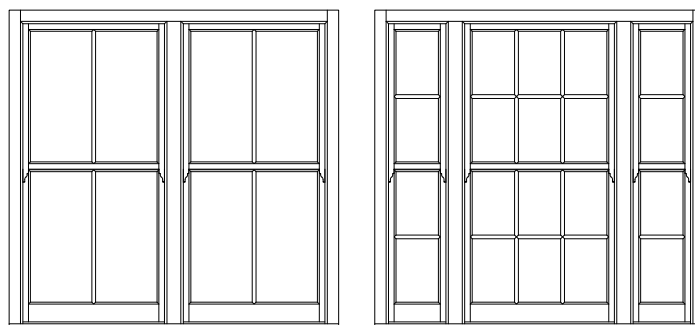
1/3rd Split

2/5ths split

Swept Head*

London Sash & Frame

London Sash Only



Slim mullion Style 2

Slim mullion Style 3

All windows depicted show mechanical butt jointed construction and slim mid rail (representative of Bygone Harmony & Symphony). *not available with FINEO TXG glass

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