

# Sash Window – Technical Guide

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## 1 Introduction

We manufacture all of our windows & doors in-house. We are constantly improving our procedures & processes to ensure the highest quality finish. We have made significant investment to bring large portions of the production process in-house, meaning that when you engage our services everything from the measurements, to the machining, joining, painting, manufacture of glazing and installation will all be done by a member of staff who is employed by our company.

### 1.1 Our Sash Windows

We have spent years honing the design and quality of our windows & doors to bring us to the point now where, we believe, we can offer our customers the highest quality product combining aesthetics, traditional styles, security, insulation, longevity and more.

The specifications set out in this document have been refined over the years, with decades of experience going into the final designs.

One of the most important considerations in these designs is the longevity of the products. We understand that replacing your windows is a costly endeavour and our customers would not want to be replacing the same window every 10 years.

Wandsworth Sash Windows is a trading name of Sanford Group Limited  
 Company Reg. No.: 10550497 VAT Reg. No.: 263 2750 10  
 Directors: N Smith M Smith T Smith

We also take traditional designs & styles into account when manufacturing windows & doors, trying to ensure replacement windows are as sympathetic to traditional styles as possible.

Some parts of your new windows may not be the same as your original. This is because we need to combine all of these considerations to ensure we provide the highest quality window, which is exactly what we do.

## 1.2 Types of Sash Window

Sash windows can generally be split into two types, which are the different mechanisms for the windows. These are:

- ❖ Box Sash Window – Also referred to as a weight & cord sash window. Designed to be fitted behind brick reveals, or in properties with exposed box frames.
- ❖ Spiral Balance Sash Window – Designed to be fitted into flush openings (such as dormers).

Most of our sash windows are manufactured to standard section dimensions and details. We also have a variety of options within these standard details.

If specialist, unique or completely bespoke details or sections are required, then this is no issue for us. If you require something completely bespoke, you should advise a member of our team about this and they will put you in touch with one of our CAD designers who will work with you to provide a quotation for your bespoke details.

Unless otherwise specified on your quotation or Order Confirmation, your order will be produced to our standard sectional and technical details set out in this document.

## 2 Specification

### 2.1 Paint Finish

We apply the following coats to all joinery<sup>1</sup>:

- Two coats of primer base coats
- One coat of top coat

We have found that the best paint system available is Teknos, giving the best possible coating & protection of the timber.

Paint Colour	Finish	Specification
Primer	N/A	Teknos Antique White Anti Stain Aqua 2901 Isolating Primer
White	Gloss	Teknos Aquatop 2600 Clean White Gloss Opaque Top Coat
White	Satin	Teknos Aquatop 2600 Clean White Semi Matt Opaque Top Coat
Colour Match	Gloss	Teknos Aquatop 2600 Colour Match Gloss Opaque Top Coat
Colour Match	Satin	Teknos Aquatop 2600 Colour Match Semi Matt Opaque Top Coat

<sup>1</sup> Unless otherwise specified on a Quotation or Order Confirmation.

White gloss and white satin paint with a single finish on each item are included as standard.

Dual finish of white gloss & white satin paint, and colour matches are an optional extra.

Any custom paint finish specified, such as Farrow & Ball or Dulux, will be colour matched by Teknos<sup>1</sup>.

## 2.2 Draught Proofing

As sash windows are designed to slide within a frame, the best form of draught sealing is a brushpile. Brushpile draught seals are manufactured by Mighton Products.

Brushpile draught seals have a low friction pile with single polypropylene fin which provides 50% easier sash movement while providing maximum resistance to air and water penetration.

The position these are fitted in are as follows:

Service Type	Position
Sash Replacement (new sashes fitted into existing box frames).	Staff & parting beads.
Complete Replacement (new box frame and sashes)	Concealed draught excluders within the sash stiles.

As standard, we do not fit draught excluders across the midrails of sashes.

## 2.3 Glazing

The standard specification of the glazing in our sash windows is specified below.

	Complete Replacement	Sash Replacement (45mm sashes)
Internal Pane	4mm Pilkington KA	4mm Pilkington KA
Spacer Size	16mm	16mm
Spacer Type	Super Spacer	Super Spacer
Spacer Colour <sup>2</sup>	White	White
Gas <sup>3</sup>	Argon	Argon
External Pane	4mm Float	4mm Float
U Value <sup>4</sup>	1.2	1.2
Glazing Bars	Single pane with applied bars	Single pane with applied bars

	Sash Replacement (40mm sashes)	Sash Replacement (35mm sashes)
Internal Pane	4mm Pilkington KA	4mm Pilkington KA
Spacer Size	10mm	8mm
Spacer Type	Super Spacer	Super Spacer
Spacer Colour <sup>2</sup>	White	White
Gas <sup>3</sup>	Argon	Argon

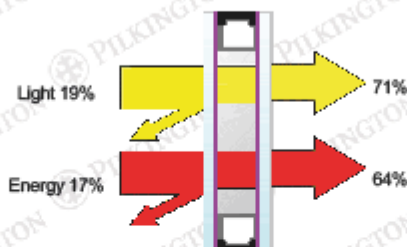
<sup>2</sup> Alternative spacer colours available upon request.

<sup>3</sup> Krypton gas available at extra charge.

<sup>4</sup> Centre pane U Value of the unit.

<b>External Pane</b>	4mm Float	4mm Float
<b>U Value<sup>4</sup></b>	1.6	2.1
<b>Glazing Bars</b>	Single pane with applied bars	Single pane with applied bars

The specifications in more detail with calculations from the glass manufacturer follows on the next pages.



**DESCRIPTION**

Position	Product	Process	Thickness (nominal) mm	Weight kg/m <sup>2</sup>
<b>Pilkington Insulight™ Therm</b>				
Glass 1	Pilkington K Glass™ A	Annealed	4.0	
Cavity 1	Argon (90%)		16.0	
Glass 2	Pilkington K Glass™	Annealed	4.0	
Product Code	4KA-16Ar-K4		24.0	20.00

**PERFORMANCE**

Light			Energy		
Transmittance	LT	71%	Direct Transmittance	ET	56%
	UV %	33%	Reflectance	ER	17%
Reflectance Out	LR out	19%	Absorptance	EA	26%
Reflectance In	LR in	19%	Total Transmittance	g	64%
<b>Performance Code</b>			Shading Coefficient Total		0.74
U <sub>g</sub> -value/Light/Energy			1.2 / 71 / 64		
Ra			98		
The values of some of characteristics are displayed as NPD. This stands for No Performance Determined.					
Sound Reduction			R <sub>w</sub> (C;C <sub>tr</sub> ) dB	31 (-2; -5)	
Thermal Transmittance			W/m <sup>2</sup> K	1.2	

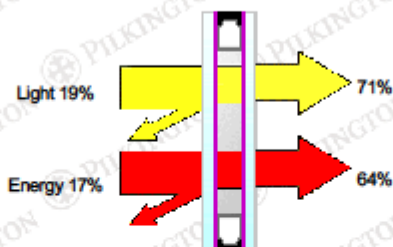
Pilkington Spectrum allows you to combine a wide range of products available from Pilkington and determine their key properties such as light transmittance, g value and U value. The program includes restrictions that prevent some combinations being selected that may be considered unwise or impractical. Even with these restrictions, it is still possible to create product combinations that may not be available from your supplier. Please check with your supplier that your chosen product combination is possible, available in the sizes required and in a timescale appropriate to your project. Furthermore, it is essential that you check that your product combination is appropriate for satisfying local, regional, national and other project-specific requirements.

Calculations are made according to EN standards 410 and 673/12898

Pilkington Spectrum Version UK:7.3.1

29/09/2021





**DESCRIPTION**

Position	Product	Process	Thickness (nominal) mm	Weight kg/m <sup>2</sup>
<b>Pilkington Insulight™ Therm</b>				
Glass 1	Pilkington K Glass™ A	Annealed	4.0	
Cavity 1	Argon (90%)		10.0	
Glass 2	Pilkington K Glass™	Annealed	4.0	
Product Code	4KA-10Ar-K4		18.0	20.00

**PERFORMANCE**

Light			Energy		
Transmittance	LT	71%	Direct Transmittance	ET	56%
	UV %	33%	Reflectance	ER	17%
Reflectance Out	LR out	19%	Absorptance	EA	26%
Reflectance In	LR in	19%	Total Transmittance	g	64%
<b>Performance Code</b>			Shading Coefficient Total		0.74
U <sub>g</sub> -value/Light/Energy		1.6 / 71 / 64	Shading Coefficient Shortwave		0.65
Ra		98	Sound Reduction	R <sub>w</sub> (C;C <sub>p</sub> ) dB	NPD
The values of some of characteristics are displayed as NPD. This stands for No Performance Determined.			Thermal Transmittance	W/m <sup>2</sup> K	1.6

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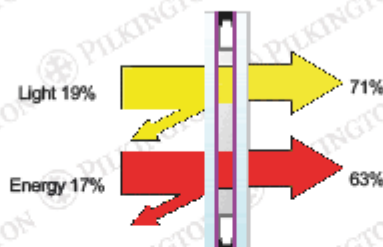
Calculations are made according to EN standards 410 and 673/12898

Pilkington Spectrum Version UK:7.3.1

29/09/2021







**DESCRIPTION**

Position	Product	Process	Thickness (nominal) mm	Weight kg/m <sup>2</sup>
<b>Pilkington Insulight™ Therm</b>				
Glass 1	Pilkington K Glass™ A	Annealed	4.0	
Cavity 1	Argon (90%)		6.0	
Glass 2	Pilkington K Glass™	Annealed	4.0	
Product Code	4KA-6Ar-K4		14.0	20.00

**PERFORMANCE**

Light			Energy					
Transmittance	LT	71%	Direct Transmittance	ET	56%			
	UV %	33%	Reflectance	ER	17%			
Reflectance Out	LR out	19%	Absorptance	EA	26%			
Reflectance In	LR in	19%	Total Transmittance	g	63%			
<b>Performance Code</b>			Shading Coefficient Total	0.72				
U <sub>g</sub> -value/Light/Energy			2.1 / 71 / 63		Shading Coefficient Shortwave	0.65		
Ra			98		Sound Reduction	R <sub>w</sub> (C;C <sub>p</sub> ) dB	NPD	
The values of some of characteristics are displayed as NPD. This stands for No Performance Determined.						Thermal Transmittance	W/m <sup>2</sup> K	2.1

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Calculations are made according to EN standards 410 and 673/12898

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29/09/2021



### 2.3.1 Noise Reduction/Acoustic Performance

The acoustic performance of our standard double glazed units are shown on the specifications in the previous pages.

For more information on acoustic performance, please consult our Glass Guide.

### 2.4 Ironmongery

There is a wide array of ironmongery items and finishes available. Our ironmongery catalogue contains the ironmongery items that we stock as standard, but if you see anything you like online that isn't in the catalogue, just let us know and we can discuss this with you.

The ironmongery for your order will be specified on your quote and Order Confirmation. Ensure you double check that this is exactly what you are hoping for.

## 3 Section Details

The following pages show standard specification and dimensional details. If you have any questions about this, please ask us and we will be happy to help.

These section details are split into three sections:

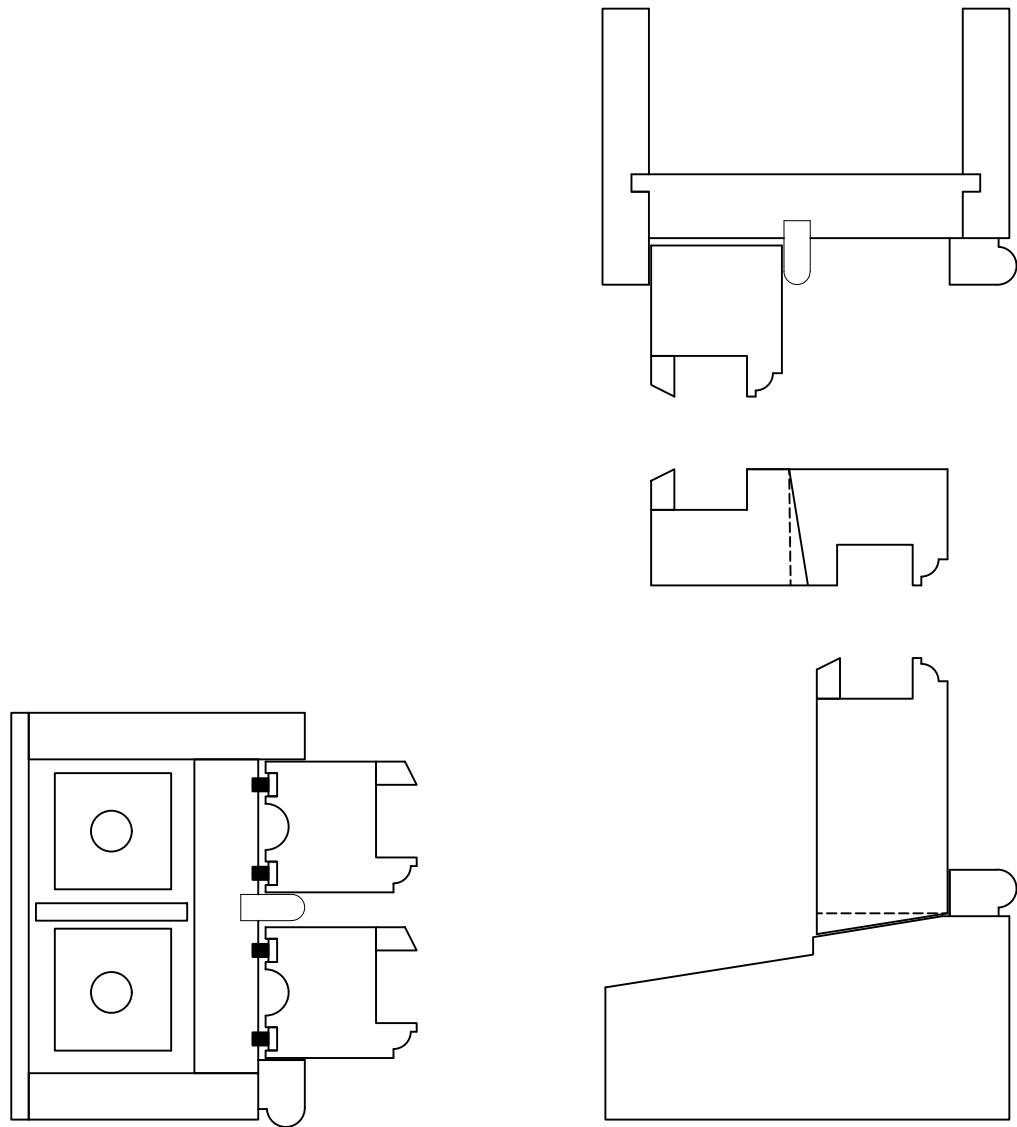
- ❖ Box Sash Windows – This is for the complete replacement service (box frame & sashes).
- ❖ Spiral Balance Sash Windows – This is for the complete replacement service (spiral frame & sashes).
- ❖ Sash Replacement – This is for new sashes fitted into the existing box frames, for either box sash windows or spiral balance sash windows.

After this, there are some general drawings that are in relation to any of the above three options. These are:

- ❖ Horn Design Options.
- ❖ Sections through Glazing Bars.



### 3.1.1 Section Drawing Overview – Box Sash Window



Scale  
1:5 @ A4

Drawn By Nathan Smith	Date Drawn 05.09.2022
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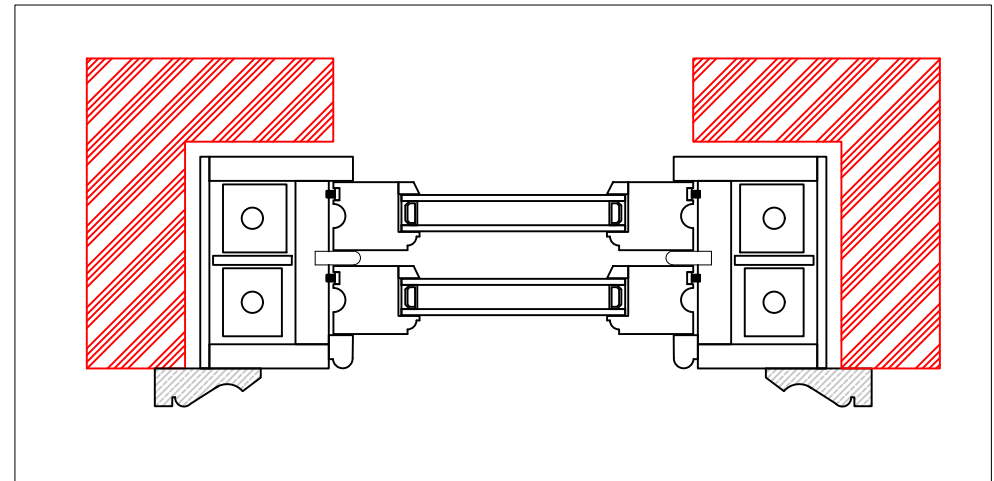
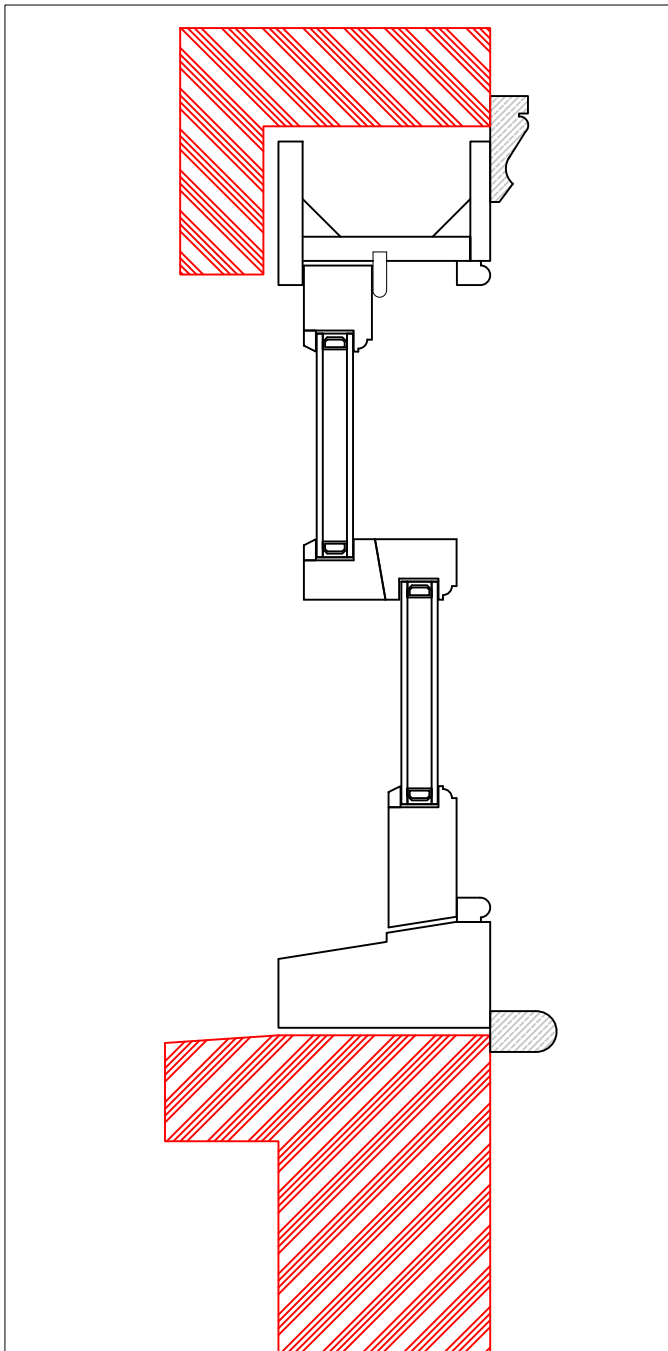


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Drawing Status  
**B-STATUS**

Job No Box Sash Window	Drawing No 3.1.1	Revision 02
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### 3.1.2 Typical Installed Detail – Box Sash Window



Scale  
1:5 @ A4

Drawn By Nathan Smith	Date Drawn 17.09.2021
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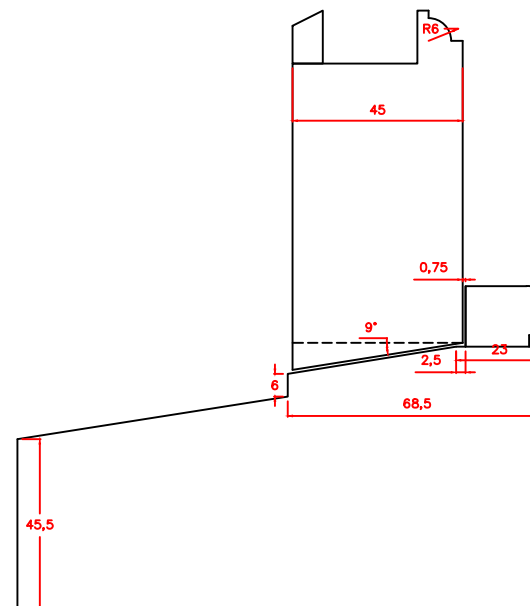
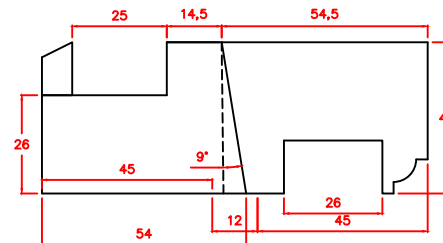
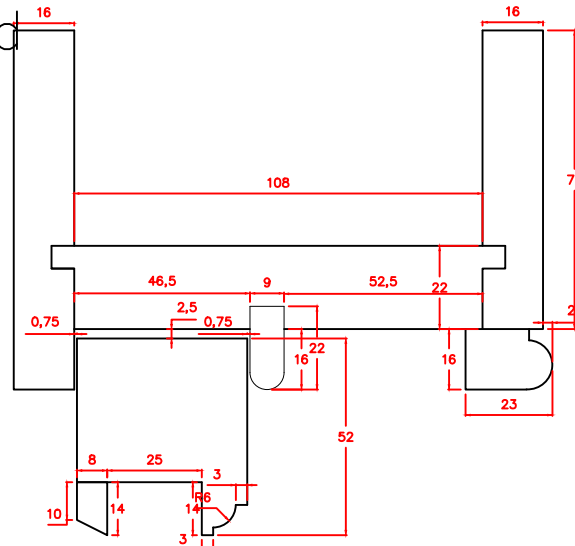
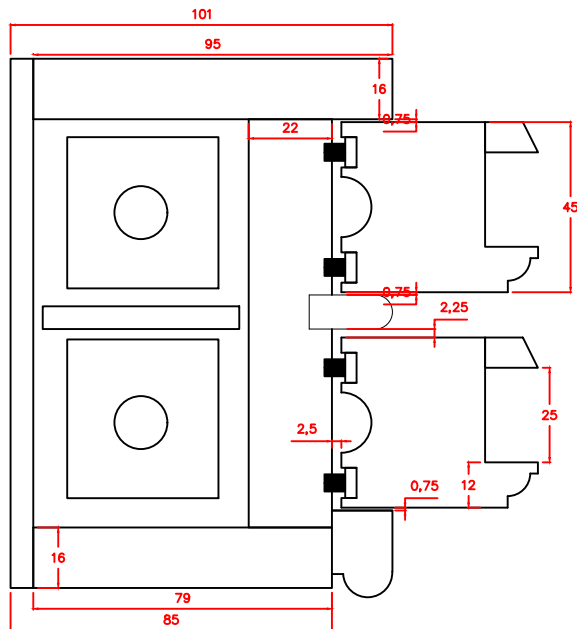
	
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Drawing Status  
**B-STATUS**

Job No Box Sash Window	Drawing No 3.1.2	Revision 01
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### 3.1.3 – Section Drawing Detailed – Box Sash Window



Scale  
1:2 @ A4

Drawn By  
Nathan Smith

Date Drawn  
05.09.2022



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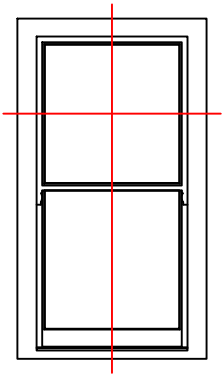
Drawing Status  
**B-STATUS**

Job No  
Box Sash Window

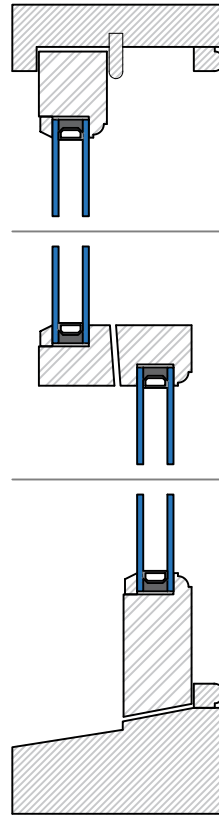
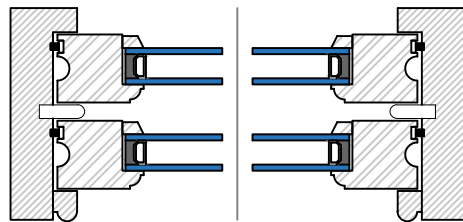
Drawing No  
3.1.3

Revision  
02

### 3.2.1 Section Drawing Overview – Spiral Sash Window



Elevation Drawing  
1:50 @ A4



Scale  
1:5 @ A4

Drawn By  
Nathan Smith

Date Drawn  
17.09.2021



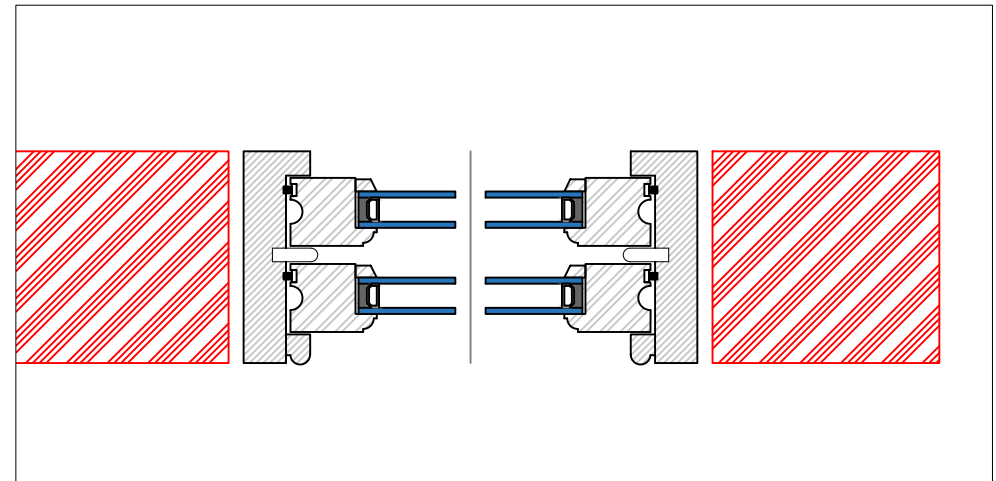
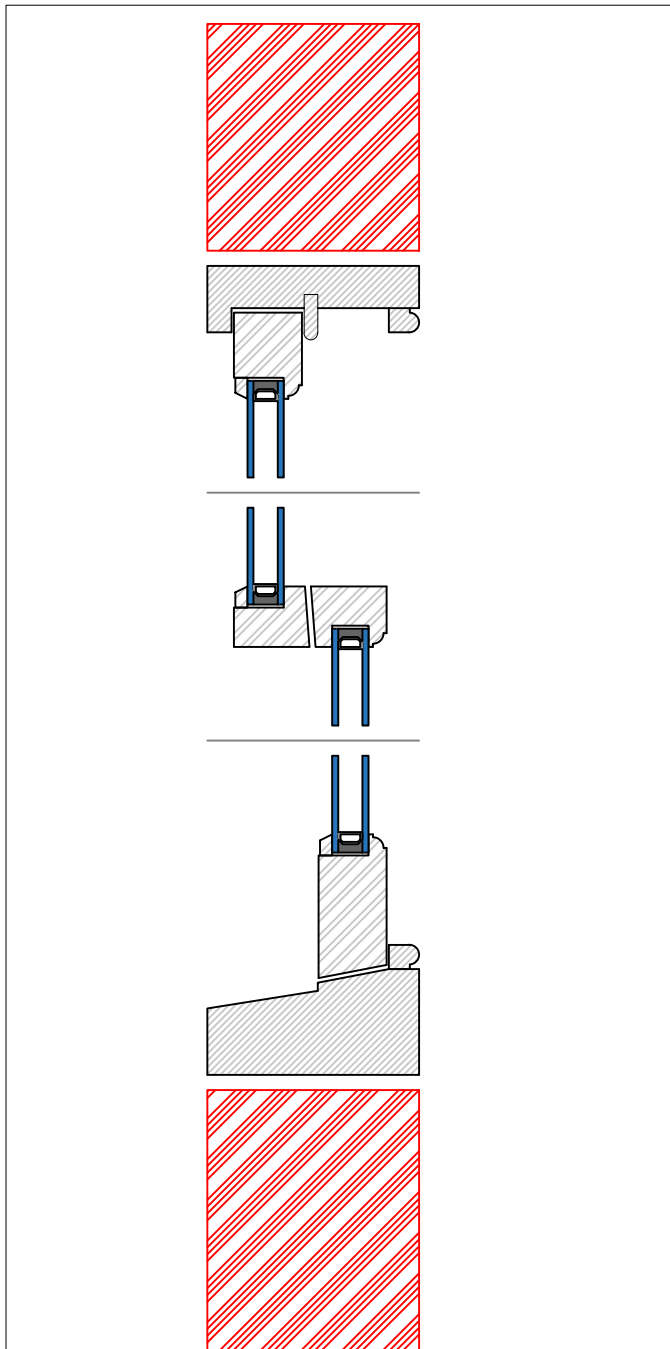
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Drawing Status  
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Job No Sp. Sash Window	Drawing No 3.2.1	Revision 01
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### 3.2.2 Typical Installed Detail – Spiral Sash Window



Scale  
1:5 @ A4

Drawn By  
Nathan Smith

Date Drawn  
17.09.2021



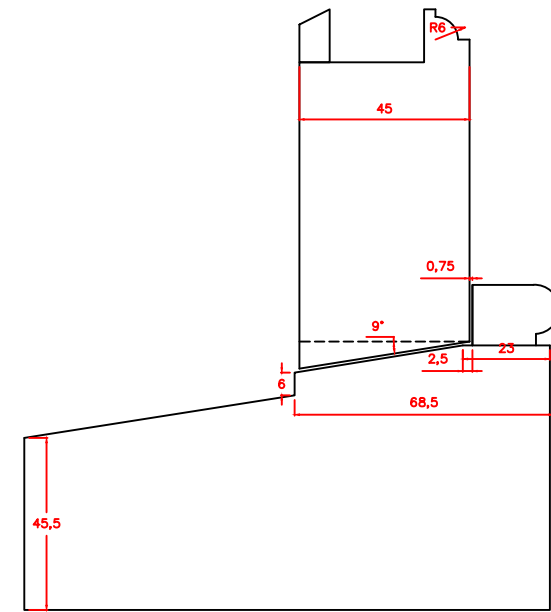
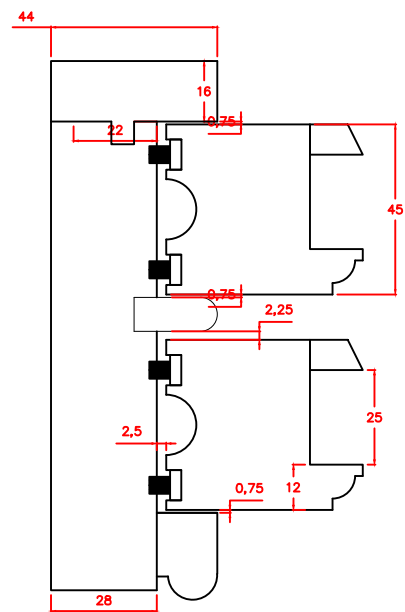
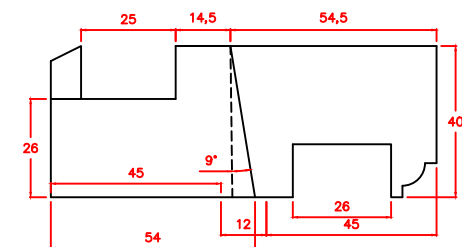
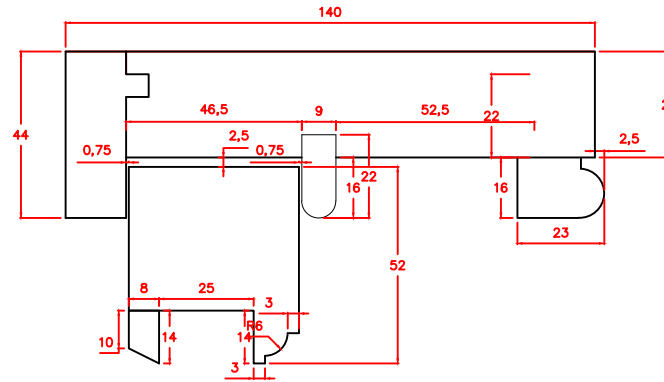
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Drawing Status  
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Job No Sp. Sash Window	Drawing No 3.2.2	Revision 01
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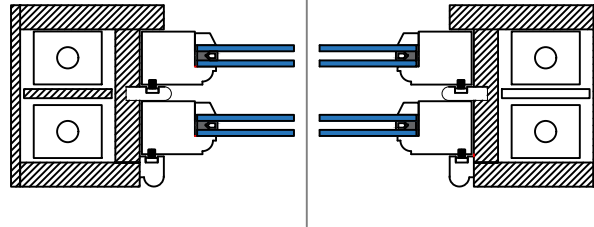
### 3.2.3 – Section Drawing Detailed – Spiral Sash Window



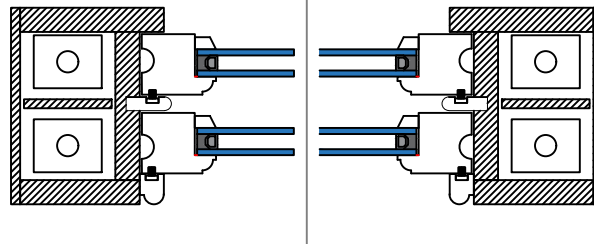
Scale 1:2 @ A4		
Drawn By Nathan Smith	Date Drawn 05.09.2022	
		
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Drawing Status <b>B-STATUS</b>		
Job No Sp. Sash Window	Drawing No 3.2.3	Revision 02

### 3.3.1 Section Drawing Overview – Sash Replacement

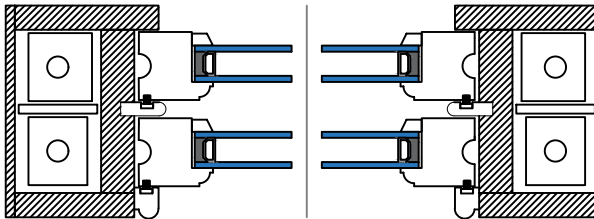
35mm thick sashes



40mm thick sashes



45mm thick sashes



Note: Unless otherwise specified, shaded areas will not be replaced.

The spacing dimensions between sashes and beads can vary on replacement sashes due to the make up of the existing box frame. Dimensions supplied on this document are setting out the manufacture profile of new joinery, and do not dictate the precise dimensions of spacing in the existing frames.

Scale 1:5 @ A4
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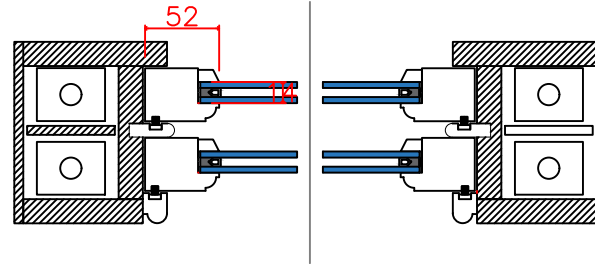
Drawing Status <b>B-STATUS</b>
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Job No Sash Replacement	Drawing No 3.3.1	Revision 01
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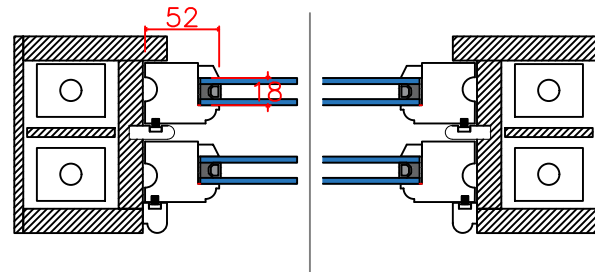


### 3.3.2 Section Drawing Overview – Sash Replacement

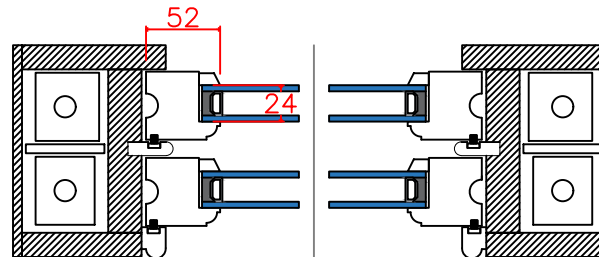
35mm thick sashes



40mm thick sashes



45mm thick sashes



Scale  
1:5 @ A4

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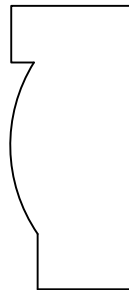
Drawing Status  
**B-STATUS**

Job No Sash Replacement	Drawing No 3.3.2	Revision 02
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# 3.4.1 – Horn Design

Victorian Horn



Scale  
1:2 @ A4

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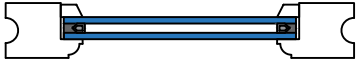



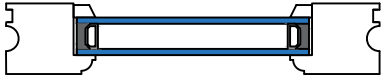
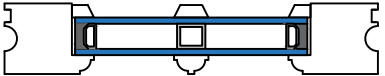
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Drawing Status  
**B-STATUS**

Job No General	Drawing No 3.4.1	Revision 02
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### 3.4.2 – Section Through Glazing Bar

Without glazing bars	With glazing bars	
		35mm thick sashes Sash Replacement
		40mm thick sashes Sash Replacement
		45mm thick sashes Sash Replacement & Complete Replacement

Scale  
NTS

Drawn By Nathan Smith	Date Drawn 17.09.2021
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Drawing Status  
**B-STATUS**

Job No General	Drawing No 3.4.2	Revision 01
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