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THE NEW HYBRID RANGE
Facade & Window Systems



HYBRID™
SYSTEMS



Kingfisher Windows supplies aluminium facades, windows and doors to the commercial and residential construction markets. Operating from three strategically situated service centres at Doncaster, Newport and Livingston the company maintains its original emphasis on customer service, local availability and forming long term, mutually beneficial relationships with specifiers and fabricators.

Senior's mission is to offer high performance products which meet the requirements of each project so the fabricator can be competitive and the client confident.

Product Portfolio

Aluminium shopfronts, ground floor treatments, doors, curtain wall, commercial windows, residential windows residential doors, patio doors...

and introducing the:



Timber/Aluminium Facade & Window Systems

Designed for the UK
Manufactured in the UK



THE NEW HYBRID RANGE Facade & Window Systems

The New Hybrid Range from Kingfisher Windows



Hybrid is a new concept in facade supply. In addition to the existing range of high performance aluminium products Senior now offer a range of composite windows, doors and curtain wall combining the long life and low maintenance of aluminium externally with all the benefits of engineered timber internally. These are available from stock through a national network of fabricators so that clients and contractors can have either product from the same source, or combine the products on an individual project without having to change supplier or installer.

The benefits of this new approach are:

Availability

Timber for the internal frames is available from stock within the UK with aluminium outer frames available in any polyester powder colour from Senior's in house paint facilities.

Quality

All Senior Aluminium service centres are fully ISO9000 accredited. The machinery necessary to fabricate Hybrid is only available from Senior ensuring consistency of quality from any fabricator.

Thermal Efficiency

Hybrid windows have the thermal efficiency of timber combined with the latest glass technology to produce U Values well below the current and anticipated future Building Regulation requirements.

Low Maintenance

Hybrid windows provide the advantages of fully pre treated engineered timber internally, so any possibility of warping or twisting is eliminated. This combined with the benefits of powder coated aluminium windows externally means maintenance is minimal.

Choice of Appearance

Hybrid windows have either natural or painted timber internally. Because the internal is fabricated from engineered timber there is no requirement to paint as there are no knots to obscure. Externally Hybrid offers a choice of finishes in polyester powder paint - virtually all RAL colours in either gloss, satin or matt. Anodised external finish is also available.



Sustainability

All timber used in Hybrid is from sustainable forests. Aluminium components are from hydro electric smelters. Any waste is fully recycled.

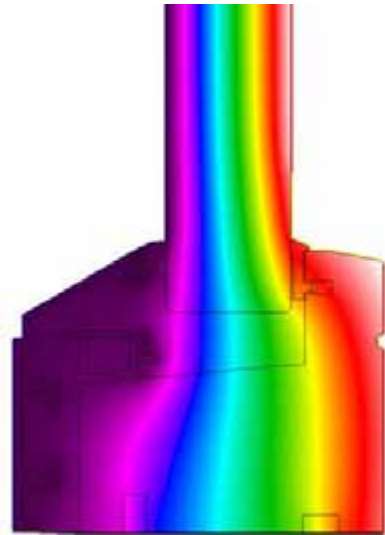
Environmental Responsibility

At the end of their service life Hybrid windows - timber, glass, aluminium and fittings - are all fully recyclable.





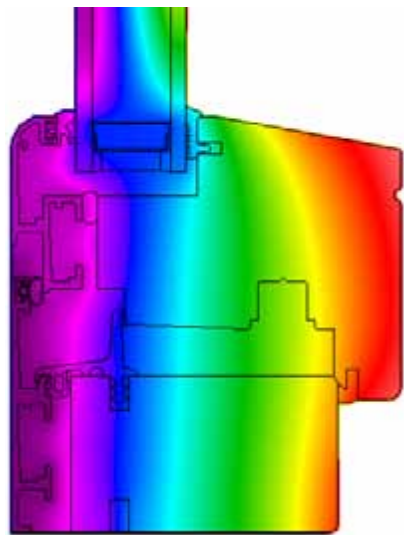
Thermal Properties



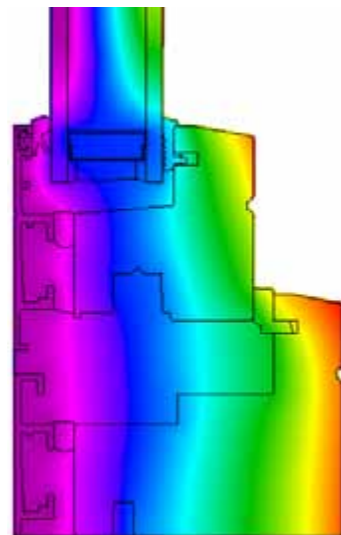
Fixed Lights



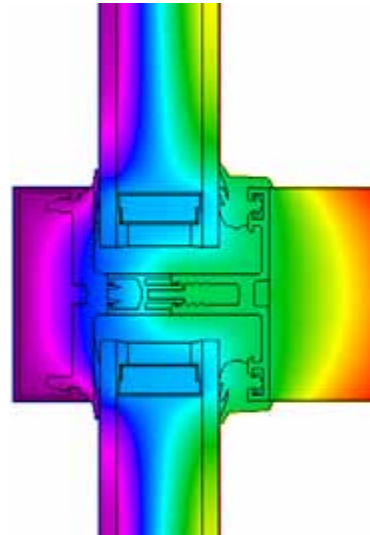
Casement



Tilt & Turn



Overswing



Curtain Wall

Colour Legend



U Values well below current and anticipated future Building Regulation requirements



U Value Glass

(centre pane)

	1.9				1.7				1.5				1.2				1.1			
	S1	S2	S3	S4	S1	S2	S3	S4	S1	S2	S3	S4	S1	S2	S3	S4	S1	S2	S3	S4
Fixed Lights	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	1.9	1.8	1.8	1.8	1.7	1.6	1.6	1.7	1.6	1.6	1.5
Casement	2.2	2.2	2.1	2.1	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.8	1.8	1.7	1.6	1.6	1.8	1.7	1.6	1.5
Tilt & Turn	2.1	2.1	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.7	1.7	1.6	1.6	1.7	1.6	1.5	1.5
Overswing	2.4	2.3	2.3	2.2	2.3	2.2	2.1	2.1	2.2	2.1	2.0	2.0	2.0	1.9	1.8	1.7	2.0	1.8	1.7	1.7

Size of Window S1 0.80m x 0.80m
 S2 1.00m x 1.00m
 S3 1.20m x 1.20m
 S4 1.23m x 1.48m

Please Note:

Please Note: U-values are for guidance using standard double glazed units with aluminium spacer bars. Further improvements are possible using other glazing configurations

Thermal Properties

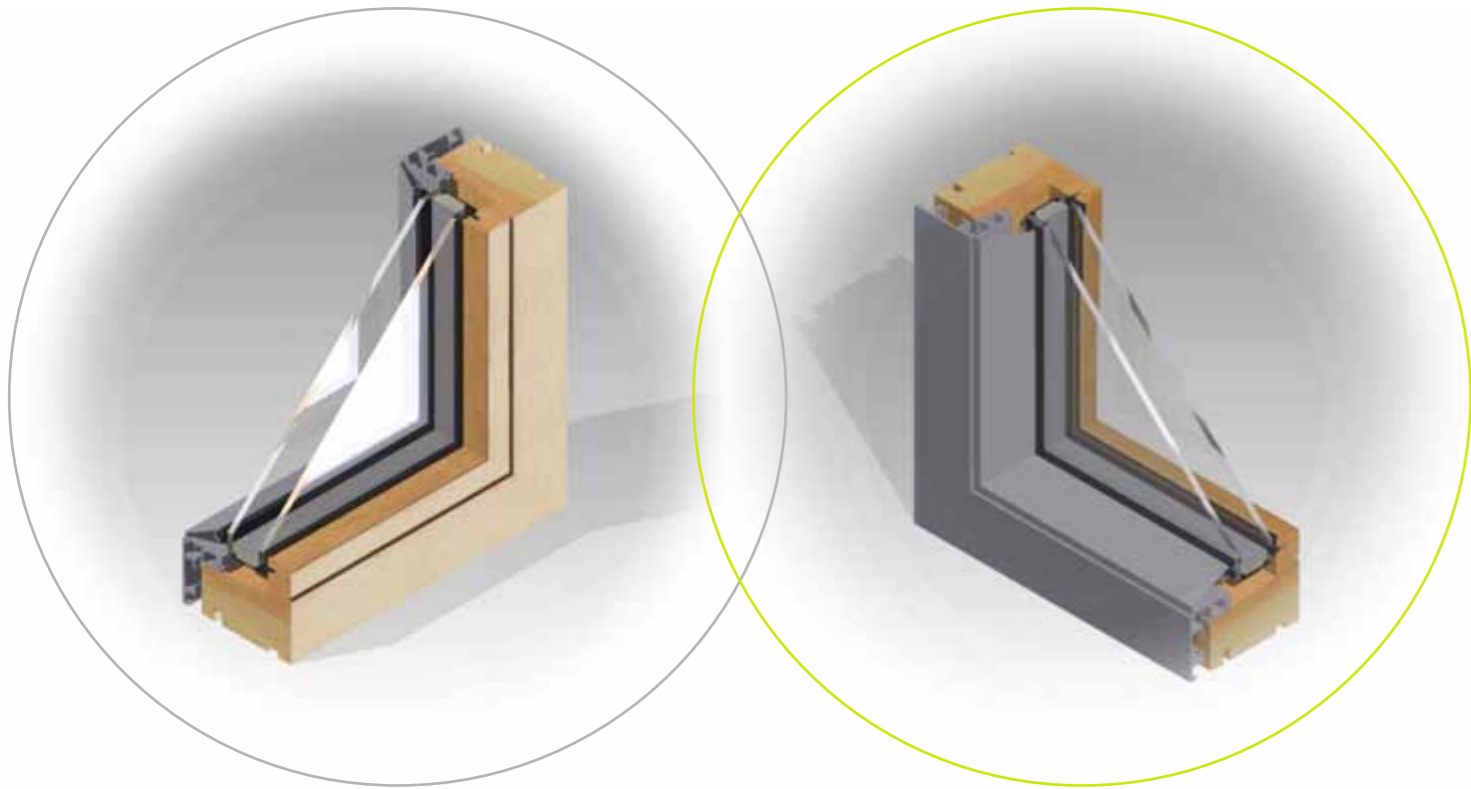
With the thermal efficiency of timber, the thermal images show the heat transfer through the Hybrid Systems. With the internal temperature of the frame maintaining the 20°C room temperature, heat loss and condensation risk is minimised. Further improvements are possible with warm edge spacer technology on the double glazed units, reducing the cold bridging at the edge of the glass. Kingfisher's are committed to improving thermal efficiency and helping to improve the environment.



THE NEW HYBRID RANGE
Facade & Window Systems

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Fixed Lights



Overview

The Hybrid Window System is an 83mm high performance window system that achieves very high thermal insulation values providing low U Values well below the current and anticipated future Building Regulation requirements.

Comprising the insulating benefits of timber on the inside and the durability of aluminium on the outside, the system includes top hung, side hung, Tilt and Turn, Overswing and fixed light combination windows.

Construction

Hybrid Fixed Lights are constructed using mitred joints on both the aluminium and the timber frames. Using a mechanical corner joint on the aluminium

and patented dovetail keys on the timber enables the frames to be constructed without the need for complicated production processes. Integral transoms and mullions are inserted by scribing the ends and screw fix to the frame.

They can be constructed with a number of opening light configurations from the Casement, Tilt and Turn and the Overswing range.

Performance

The Hybrid Window has been tested in accordance with BS6375 Part 1 : 2004 (performance of windows and doors – classification of weathertightness and guidance on selection and specification). Test reports are available from all Service Centres.

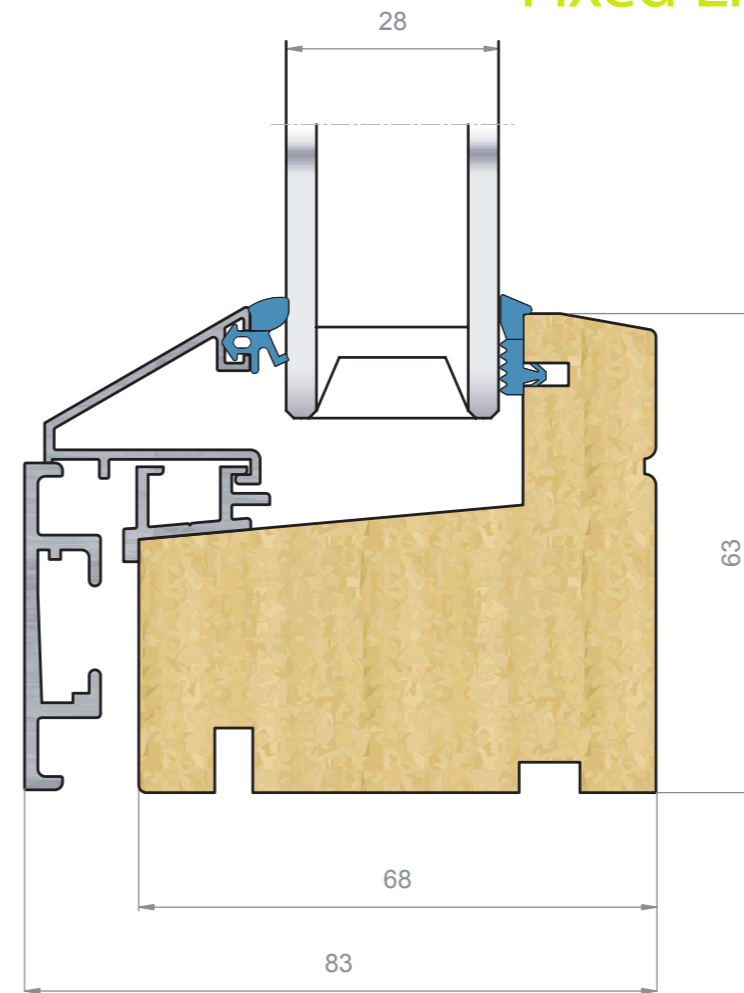


THE NEW HYBRID RANGE
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Fixed Lights

Section through Fixed Lights



Glazing

Double glazing is standard and should be carried out to the recommendations of BS6262. A variety of glass options are available to maximise thermal and acoustic performance. The glazing is inserted between the aluminium and timber frames for maximum security.

Finishes

The external aluminium is available in anodised or powder coat. The internal timber is available in clear lacquered or water based paint.

Size	S1 0.80 x 0.80 meters	S2 1.00 x 1.00 meters	S3 1.20 x 1.20 meters	S4 1.23 x 1.48 meters
1.9	2.2	2.2	2.1	2.1
1.7	2.1	2.0	2.0	2.0
1.5	2.0	1.9	1.8	1.8
1.2	1.8	1.7	1.6	1.6
1.1	1.7	1.6	1.6	1.5

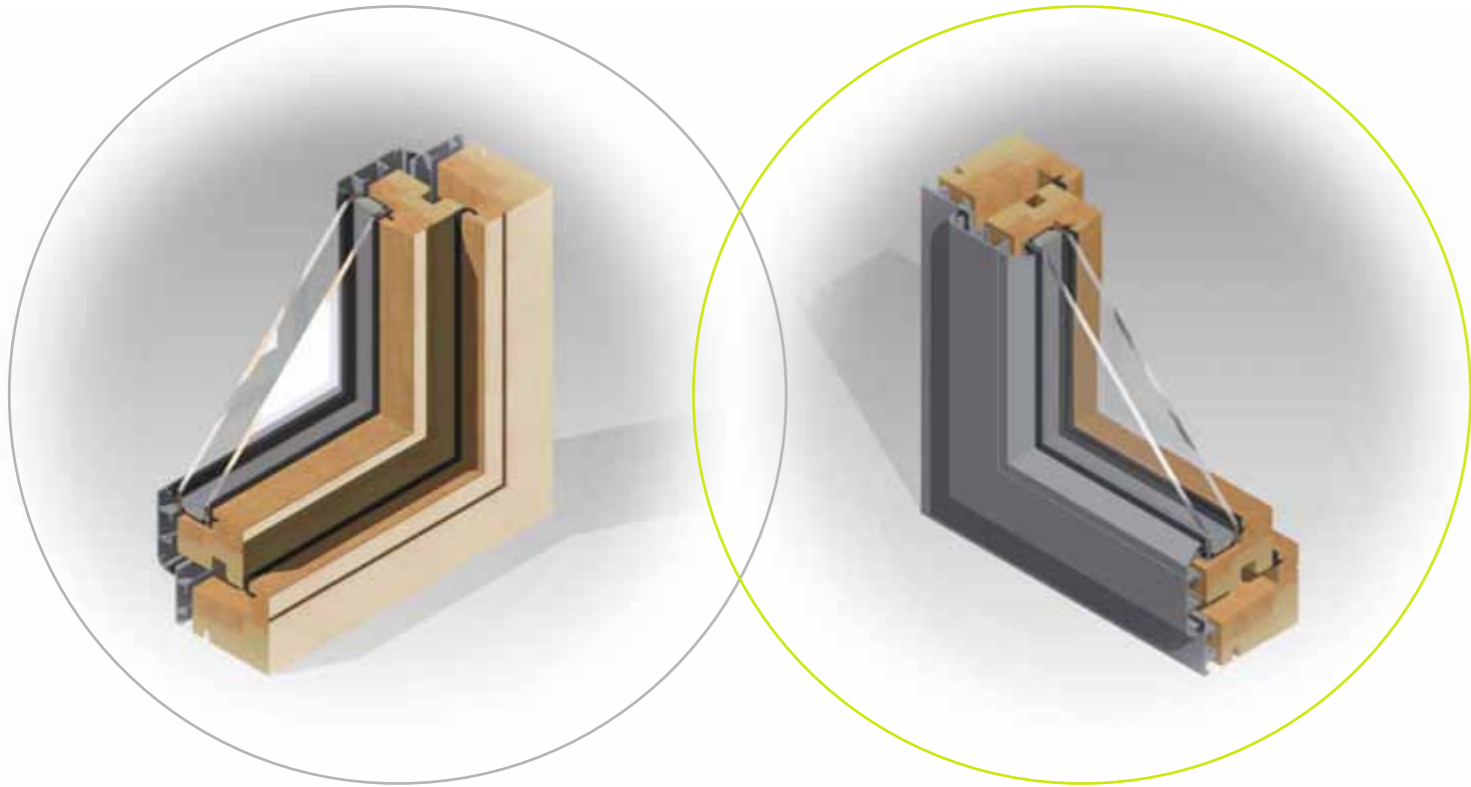
Please Note

Sizes are for guidance using typical hardware. Other sizes maybe accommodated. Contact Senior Aluminium Systems for advice.

THE NEW HYBRID RANGE
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HYBRID
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Casement



Overview

The hybrid Casement is an 83mm high performance window system that achieves very high thermal insulation values providing low U Values well below the current and anticipated future Building Regulation requirements.

Comprising the insulating benefits of timber on the inside and the durability of aluminium on the outside, the system includes top hung, side hung and fixed light combination windows.

Construction

Hybrid Casement Windows are constructed using mitred joints on both the aluminium and the timber frames. Using a mechanical corner joint on the aluminium and patented dovetail keys on

the timber enables the frames to be constructed without the need for complicated production processes. Integral transoms and mullions are inserted by scribing the ends and screw fix to the frame.

Opening lights are designed to be inserted directly into the outerframe using friction stays.

Performance

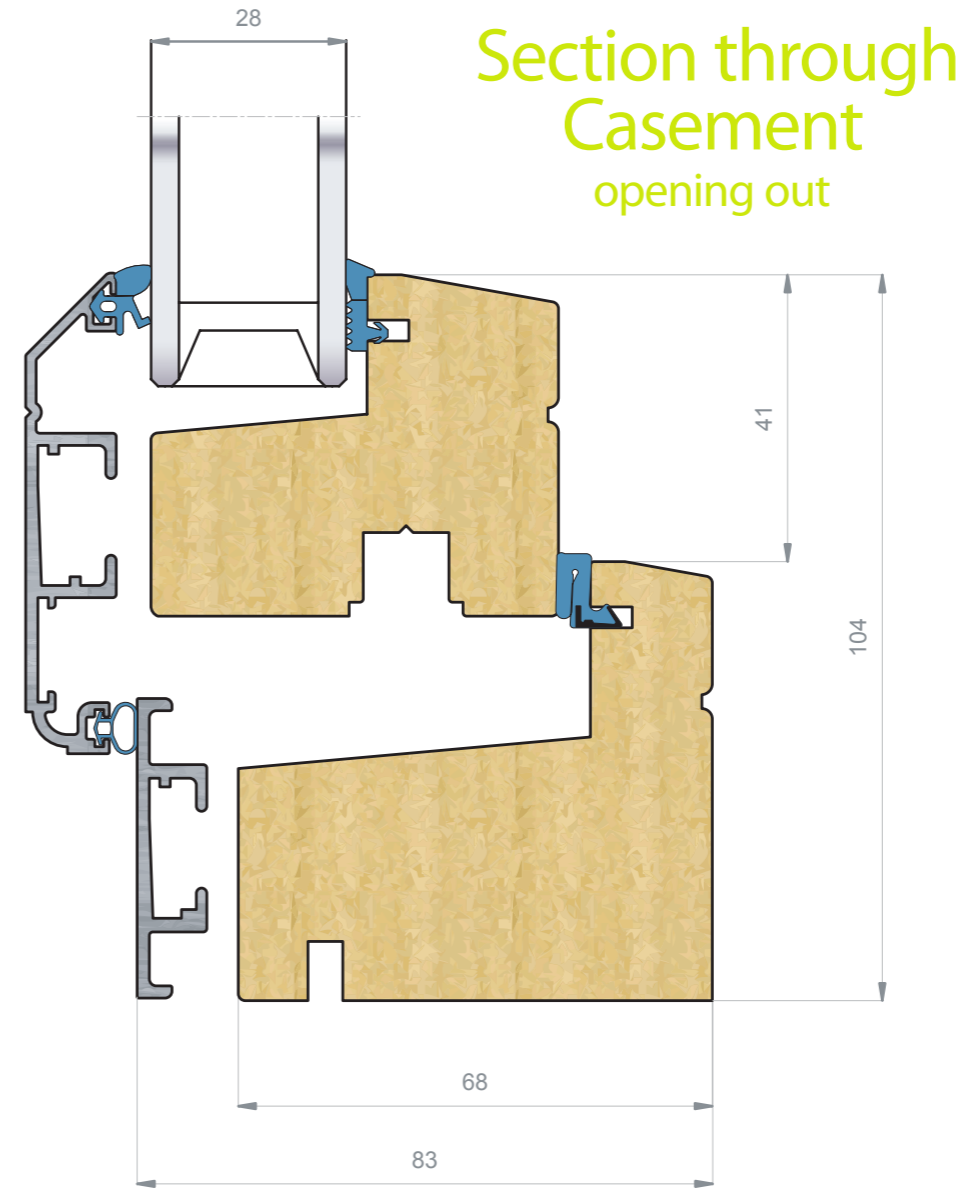
The Hybrid Casement Window has been tested in accordance with BS6375 Part 1 : 2004 (performance of windows and doors – classification of weathertightness and guidance on selection and specification). Test reports are available from all Service Centres.



THE NEW HYBRID RANGE
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Casement



Glazing

Double glazing is standard and should be carried out to the recommendations of BS6262. A variety of glass options are available to maximise thermal and acoustic performance. The glazing is inserted between the aluminium and timber frames for maximum security.

Finishes

The external aluminium is available in anodised or powder coat. The internal timber is available in clear lacquered or water based paint.

	Tophung	Sidehung	Open in & Tilt-turn	Top Swing
Maximum Width	1500	900	1500	1500
Maximum Height	1500	1500	2100	1500

Size	S1 0.80 x 0.80 meters	S2 1.00 x 1.00 meters	S3 1.20 x 1.20 meters	S4 1.23 x 1.48 meters
Glass CPU				
1.9	2.2	2.2	2.1	2.1
1.7	2.1	2.0	2.0	2.0
1.5	2.0	1.9	1.9	1.8
1.2	1.8	1.7	1.6	1.6
1.1	1.8	1.7	1.6	1.5

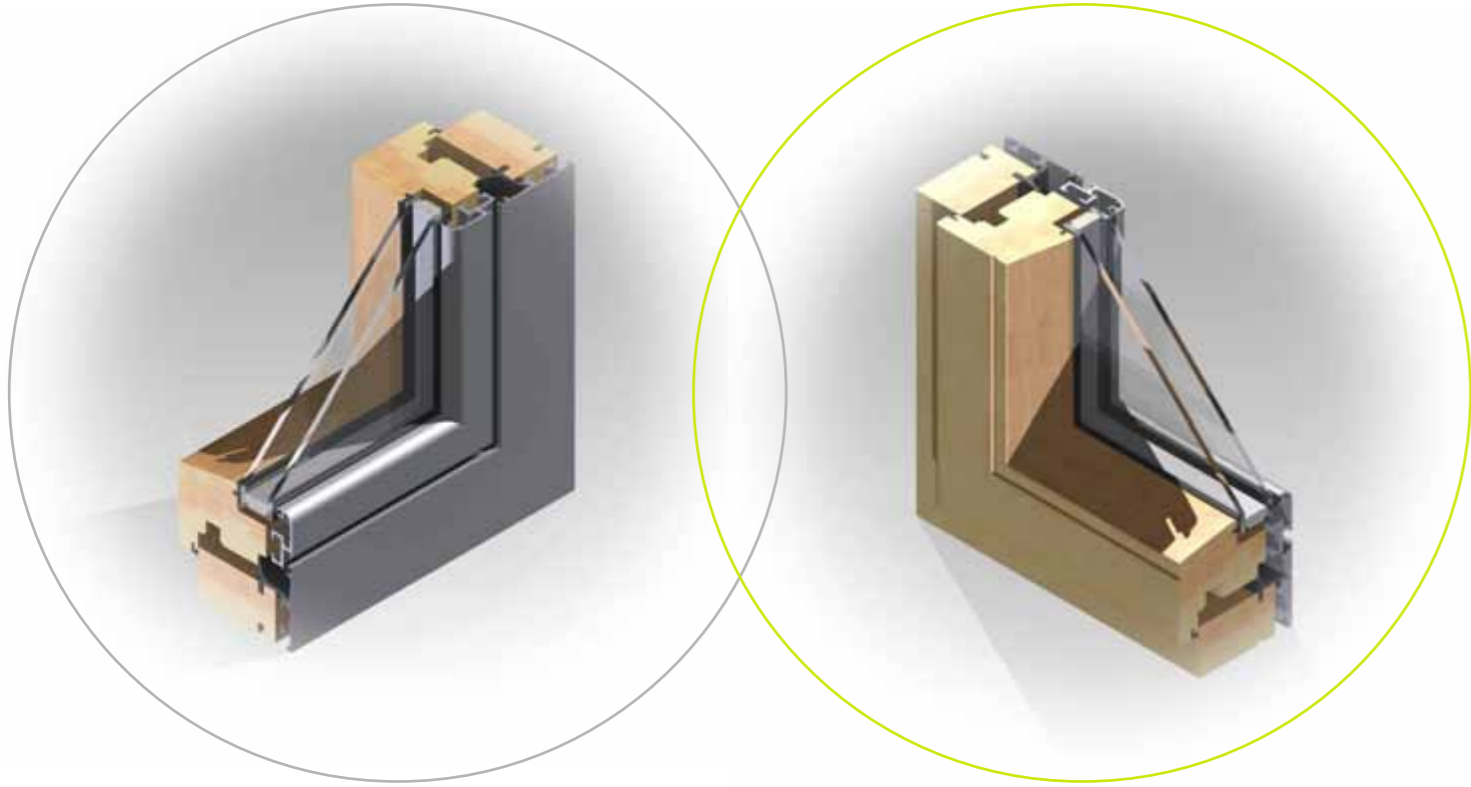
Please Note

Sizes are for guidance using typical hardware. Other sizes maybe accommodated. Contact Kingfisher Windows for advice.

THE NEW HYBRID RANGE
Facade & Window Systems

HYBRID
 SYSTEMS

Tilt & Turn



Overview

The Hybrid Tilt and Turn is an 83mm high performance inward opening window system that achieves very high thermal insulation values providing low U Values well below the current and anticipated future Building Regulation requirements.

Comprising the insulating benefits of timber on the inside and the durability of aluminium on the outside, the system includes bottom hung or turn only, french windows and fixed light combination windows.

Construction

Hybrid Tilt and Turn Windows are constructed using mitred joints on both the aluminium and the timber frames. Using a mechanical corner joint on the aluminium and patented

dovetail keys on the timber enables the frames to be constructed without the need for complicated production processes. Integral transoms and mullions are inserted by scribing the ends and screw fix to the frame.

Opening lights are designed to be inserted directly into the outerframe using proprietary hardware.

Performance

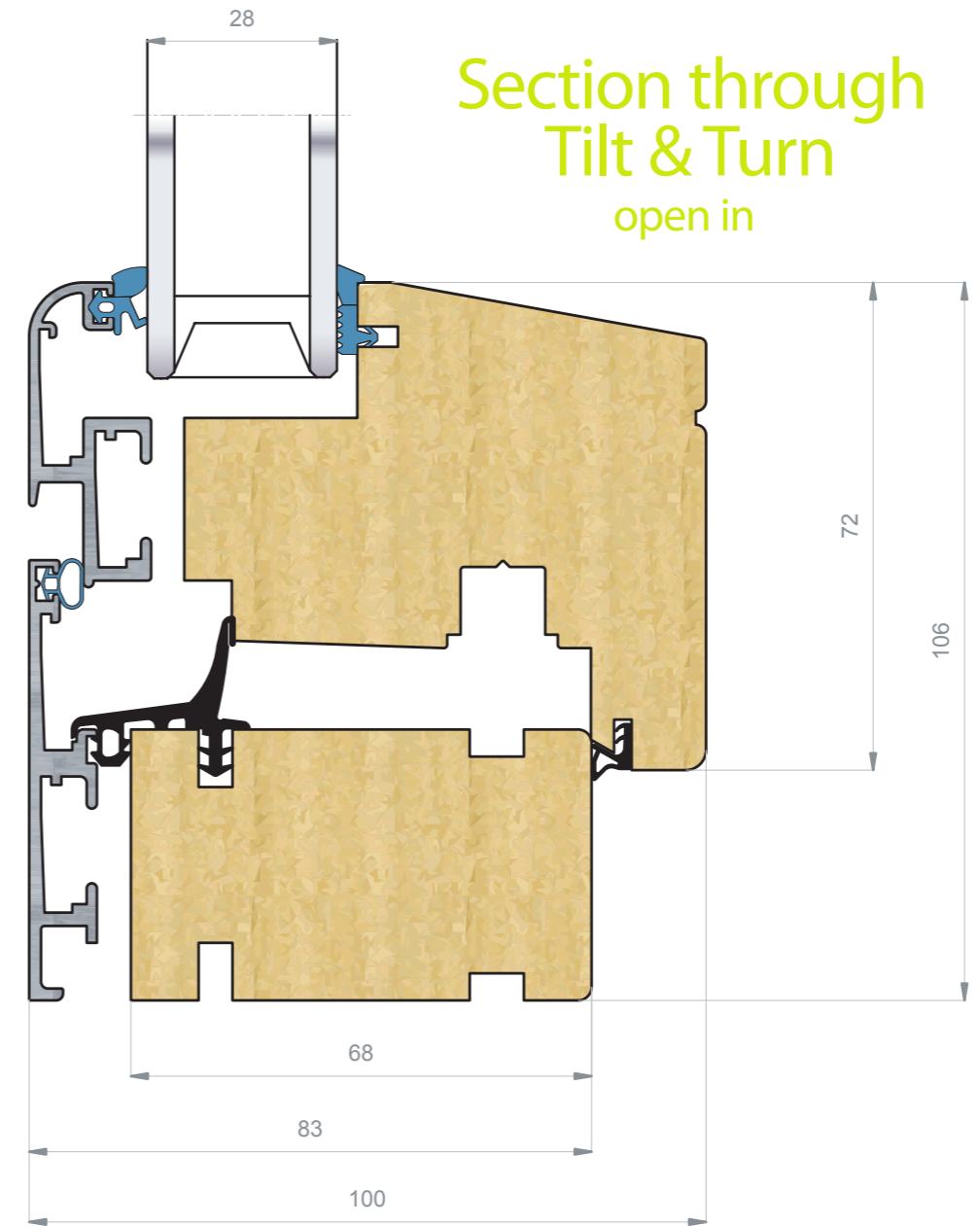
The Hybrid Tilt and Turn Window has been tested in accordance with BS6375 Part 1 : 2004 (performance of windows and doors – classification of weathertightness and guidance on selection and specification). Test reports are available from all Service Centres.



THE NEW HYBRID RANGE
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Tilt & Turn



Glazing

Double glazing is standard and should be carried out to the recommendations of BS6262. A variety of glass options are available to maximise thermal and acoustic performance. The glazing is inserted between the aluminium and timber frames for maximum security.

Finishes

The external aluminium is available in anodised or powder coat. The internal timber is available in clear lacquered or water based paint.

	Tophung	Sidehung	Open in & Tilt-turn	Top Swing
Maximum Width	1500	900	1500	1500
Maximum Height	1500	1500	2100	1500

Size	S1 0.80 x 0.80 meters	S2 1.00 x 1.00 meters	S3 1.20 x 1.20 meters	S4 1.23 x 1.48 meters
Glass CPU	2.1	2.1	2.1	2.1
1.9	2.1	2.1	2.1	2.1
1.7	2.0	2.0	1.9	1.9
1.5	1.9	1.8	1.8	1.8
1.2	1.7	1.7	1.6	1.6
1.1	1.7	1.6	1.5	1.5

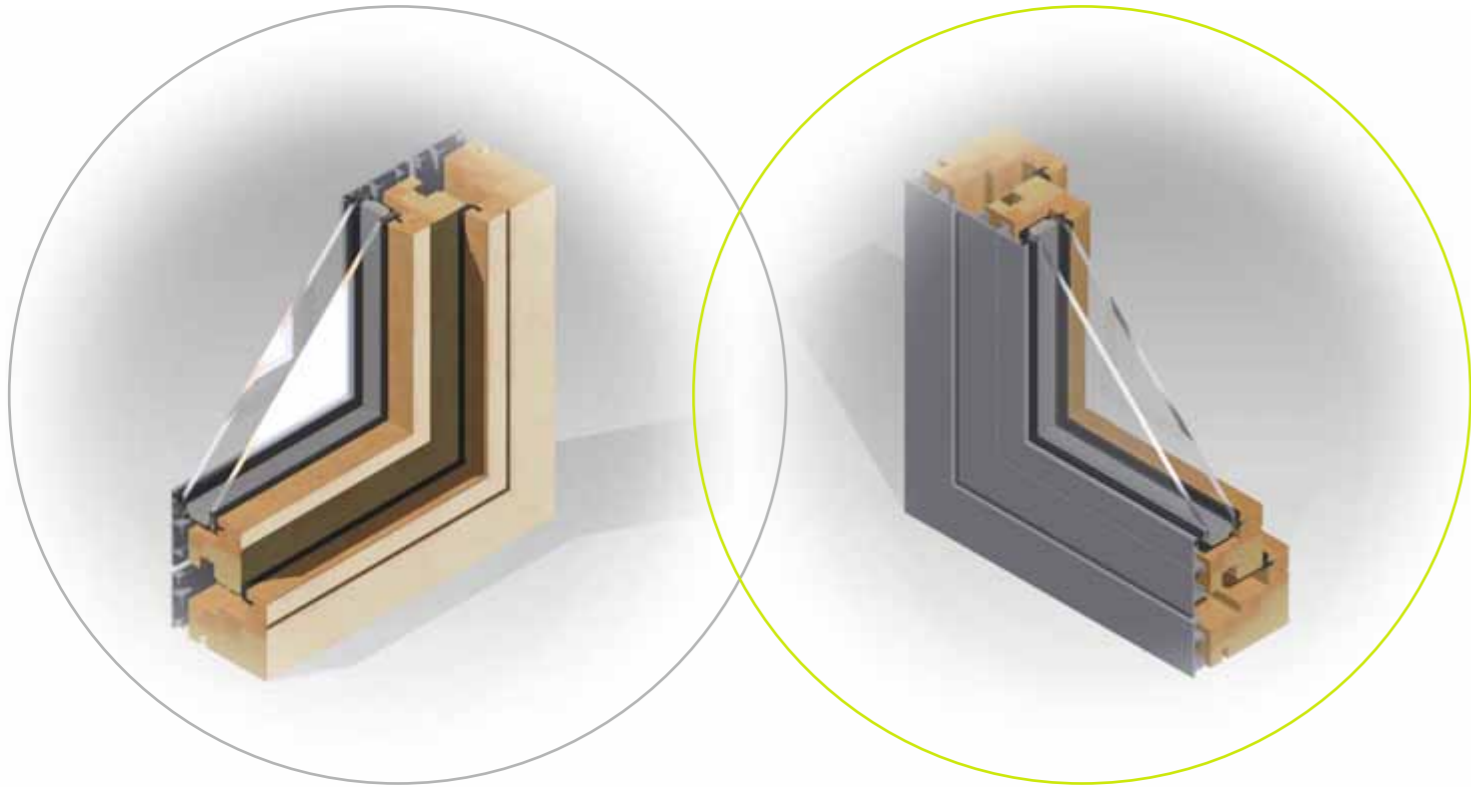
Please Note

Sizes are for guidance using typical hardware. Other sizes maybe accommodated. Contact Kingfisher Windows for advice.

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Overswing



Overview

The Hybrid Overswing is an 83mm high performance inward opening window system that achieves very high thermal insulation values providing low U Values well below the current and anticipated future Building Regulation requirements.

Comprising the insulating benefits of timber on the inside and the durability of aluminium on the outside, the system includes top turn and side turn windows and fixed light combination windows.

Construction

Hybrid Overswing Windows are constructed using mitred joints on both the aluminium and the timber frames. Using a mechanical corner joint on the aluminium and patented dovetail keys on

the timber enables the frames to be constructed without the need for complicated production processes. Integral transoms and mullions are inserted by scribing the ends and screw fix to the frame.

Opening lights are designed to be inserted directly into the outerframe using proprietary hardware.

Performance

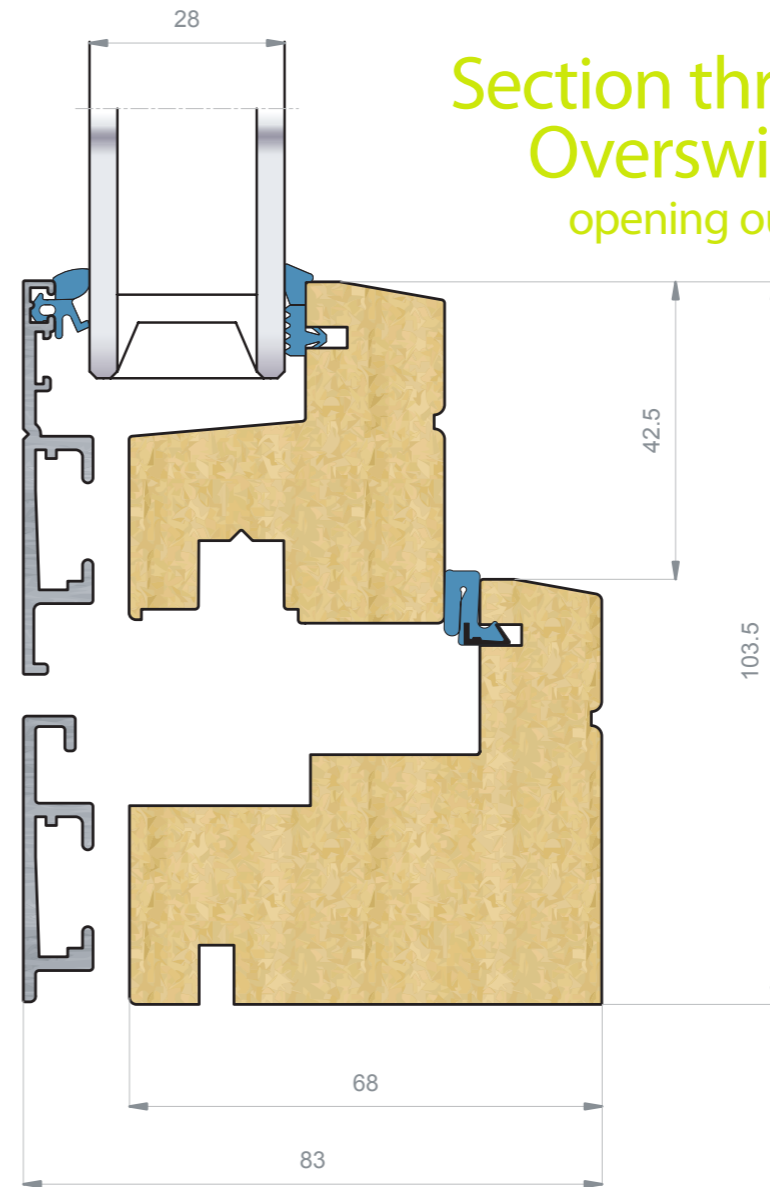
The Hybrid Overswing Window has been tested in accordance with BS6375 Part 1 : 2004 (performance of windows and doors – classification of weathertightness and guidance on selection and specification). Test reports are available from all Service Centres.



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Overswing



Section through Overswing opening out

Glazing

Double glazing is standard and should be carried out to the recommendations of BS6262. A variety of glass options are available to maximise thermal and acoustic performance. The glazing is inserted between the aluminium and timber frames for maximum security.

Finishes

The external aluminium is available in anodised or powder coat. The internal timber is available in clear lacquered or water based paint.

	Tophung	Sidehung	Open in & Tilt-turn	Top Swing
Maximum Width	1500	900	1500	1500
Maximum Height	1500	1500	2100	1500

Size	S1 0.80 x 0.80 meters	S2 1.00 x 1.00 meters	S3 1.20 x 1.20 meters	S4 1.23 x 1.48 meters
Glass CPU				
1.9	2.4	2.3	2.3	2.2
1.7	2.3	2.2	2.1	2.1
1.5	2.2	2.1	2.0	2.0
1.2	2.0	1.9	1.8	1.7
1.1	2.0	1.8	1.7	1.7

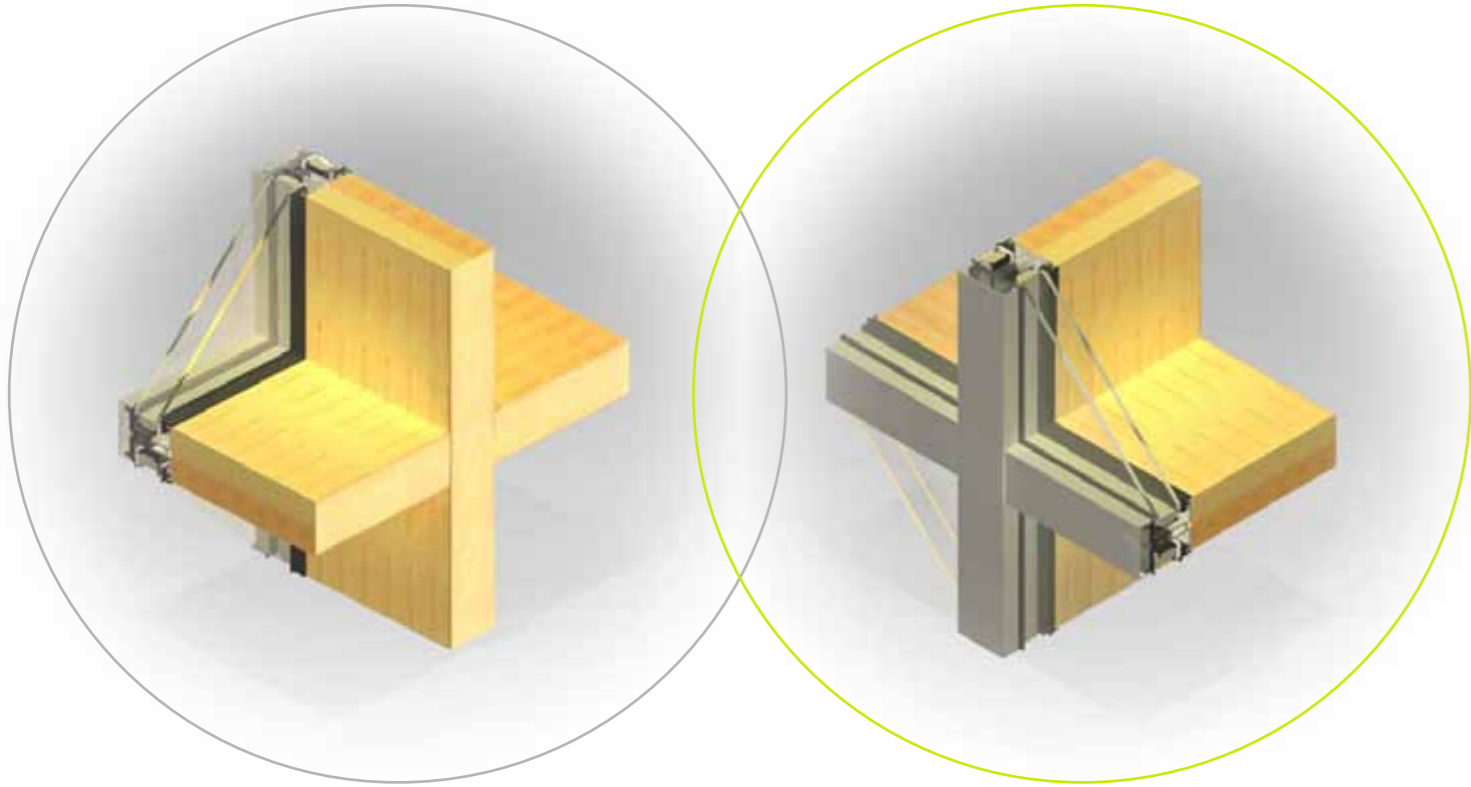
Please Note

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THE NEW HYBRID RANGE
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HYBRID
SYSTEMS

Curtain Walling



Overview

The Hybrid Curtain Wall is an 50mm high performance, zone drained stick system that achieves very high thermal insulation values providing low U Values well below the current and anticipated future Building Regulation requirements.

Comprising the insulating benefits of timber on the inside and the durability of aluminium on the outside, the Curtain Wall can incorporate all of the Senior Hybrid and Aluminium Windows and Doors.

Construction

Hybrid Curtain Walls are constructed using vertical mullions with face fixed horizontal transoms on both the aluminium and the timber profiles. A range of transom and mullion sections

are available to maximise performance.

Performance

The Hybrid Curtain Wall has been tested in accordance with the CWCT curtain wall standard and the European EN 13830: 2003.

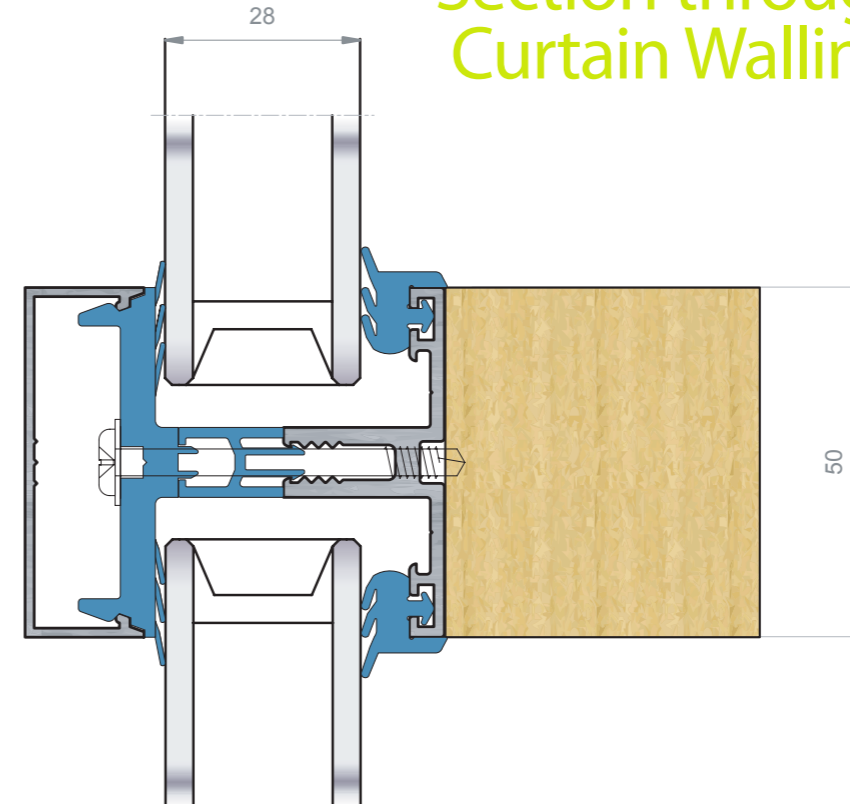


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Curtain Walling

Section through
Curtain Walling



Glazing

Double glazing is standard and should be carried out to the recommendations of BS6262. A variety of glass options are available to maximise thermal and acoustic performance. The glazing is inserted between the aluminium and timber frames for maximum security.

Finishes

The external aluminium is available in anodised or powder coat. The internal timber is available in clear lacquered or water based paint.

Further information

For further information on any of the products, specifications and finishes within this brochure please contact: Kingfisher Windows or visit the website

www.kingfisherwindows.co.uk





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