

Uniclass L3811+L411+L413:P43	EPIC C421+D11+D13:X46
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December 2007



Dualframe

Aluminium windows, doors
& window walling

DUALFRAME

Dualframe is an advanced window and door suite aesthetically enhanced for commercial or residential applications and fully integrated with the Sapa product range.

Dualframe signifies a new era in aluminium fenestration, with products that have been specifically designed to comply with the changes to the Building Regulations which apply to thermal performance, both now and in the future.

Dualframe is an integrated aluminium door and window suite with ultra slim lines and beautiful styling, making it the perfect choice for use in both residential and commercial applications.

Designed using the latest thermal break technology, Dualframe complies to Part L of the Building Regulations using only hard coat, low emissivity glass with standard edge spacers to the double glazed units. Where required, Dualframe 75 casement can achieve an 'A' Window Energy Rating.

Not only does Dualframe perform well, its elegant good looks are available in a vast choice of finishes and colours. Different colours can even be selected internally and externally for a perfect finish to any project.



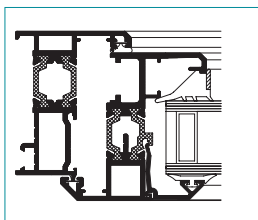
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55mm Casement Window

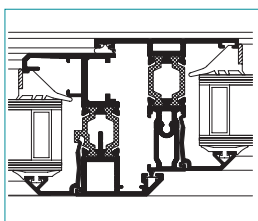
Top or side hung and fixed lights with slim sight lines

Kitemarked to BS7950 'Specification for enhanced security performance of casement and tilt/turn windows for domestic applications' and BS4873 'Specification for Aluminium Alloy Windows', the 55mm Casement Window offers project specifiers a secure and attractive product for a range of commercial or residential applications.



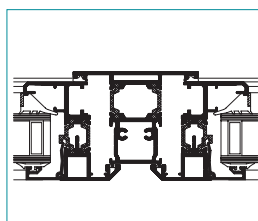
Jamb

Vents are designed to accept the full depth Eurogroove to ensure compatibility with a wide range of industry standard hardware.



Mullion/vent

Available with a multipoint locking system as standard and stainless steel projecting friction hinges, other hardware can be specified that allow for remote operation, trickle ventilators, restricted and egress friction stays plus a range of other options.



Mullion vent/vent

- Can be internally or externally beaded
- Chamfered or 'softline' profiles available to achieve traditional or contemporary appearance
- Standard or heavy duty options available
- Unique polyamide strip with integral bead retention leg to minimise external projection of the opening light (Patent GB2377470)
- Meets Secured By Design specification



55MM CASEMENT WINDOW WEATHER PERFORMANCE:

	Opening Lights	Fixed Lights
Water Tightness	600 Pascals	600 Pascals
Air Permeability	600 Pascals	600 Pascals
Wind Resistance	2400 Pascals*	2400 Pascals*

* Exposure category varies with width/height of window and mullion/transom used.

55mm Pivot Window

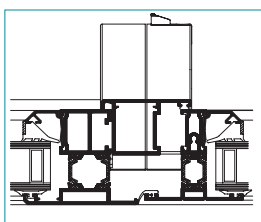
Horizontal or vertical pivot windows and fixed lights

Offering slim sight lines and dual colour functionality, the pivot window makes cleaning easy from the inside and gives flexible ventilation. Suitable for residential, education, healthcare and commercial applications.

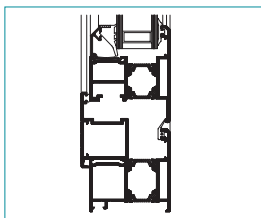
Vents are designed to accept the full depth Eurogroove to ensure compatibility with a wide range of industry standard hardware.

The pivot window system features an optional locking restrictor to provide extra levels of safety where the application demands it.

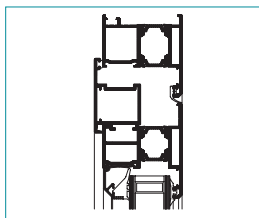
- *Internally beaded*
- *Optional trickle vent*
- *Curtain walling outerframe available*
- *Will couple to other Dualframe 75mm and 55mm systems as well as Elegance 52 curtain walling.*



Mullion/vent



Cill/vent



Head/vent



55MM PIVOT WINDOW WEATHER PERFORMANCE:

	Opening Lights	Fixed Lights
Water Tightness	600 Pascals	600 Pascals
Air Permeability	600 Pascals	600 Pascals
Wind Resistance	2400 Pascals*	2400 Pascals*

*Exposure category varies with width/height of window and mullion/transom used.

55mm Tilt Before Turn Window

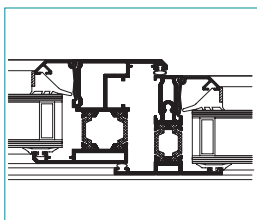
Tilt before turn windows with slim sight lines - tilt for ventilation and turn for cleaning

Particularly suitable for high rise applications, the tilt before turn window makes cleaning easy from the inside and gives secure ventilation.

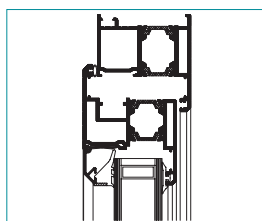
Kitemarked to BS7950 'Specification for enhanced security performance of casement and tilt/turn windows for domestic applications' and BS4873 'Specification for Aluminium Alloy Windows'.

Vents are designed to accept the full depth Eurogroove to ensure compatibility with a wide range of industry standard hardware.

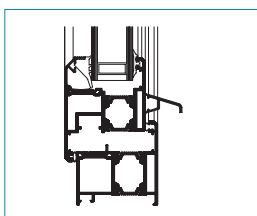
- *Internally beaded*
- *Design variants include: chamfered profiles, curtain walling outerframe*
- *Will couple to other Dualframe 75mm and 55mm systems as well as Elegance 52 curtain walling*
- *Meets Secured By Design specification*



Mullion/vent



Head/vent



Cill/vent



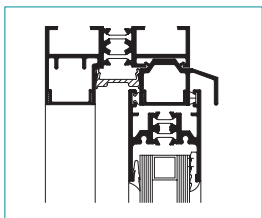
55MM TILT BEFORE TURN WINDOW WEATHER PERFORMANCE:

	Opening Lights	Fixed Lights
Water Tightness	600 Pascals	600 Pascals
Air Permeability	600 Pascals	600 Pascals
Wind Resistance	2400 Pascals*	2400 Pascals*

*Exposure category varies with width/height of window and mullion/transom used.

Horizontal & Vertical Sliding Windows

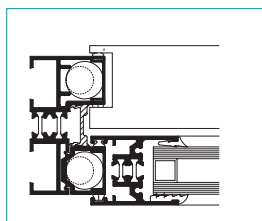
Sliding window system combines high performance with ease of operation



VSW head

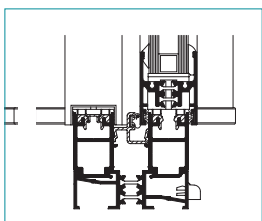
The Dualframe Vertical Sliding Window can be constructed to form 2-pane windows with an overall maximum height of 2700mm.

Offering the same slim sightlines, easy functionality and dual colour capability as the rest of the Dualframe system the sliding window systems can be used in conjunction with the rest of the Dualframe system.



VSW jamb

Vertical sliding sashes combine ease of operation with optional anti-ligature design hardware making this system the perfect solution for applications such as hospitals. Where safety is of critical importance, an optional slider restrictor, offering releasable, locking or permanent options, is available.



HSW sill

- *Wrap-around glazing*
- *VSW anti-ligature finger pull option - ideal for healthcare and secure unit applications.*
- *Optional trickle vent*
- *Curtain walling outerframe available*
- *Couples to other Dualframe 75mm and 55mm systems, the Monoframe system and Elegance 52 curtain walling.*



VS & HS WINDOW WEATHER PERFORMANCE:

	Vertical window	Horizontal window
Water Tightness	600 Pascals	200 Pascals
Air Permeability	600 Pascals	300 Pascals
Wind Resistance	2000 Pascals*	2000 Pascals*

*Exposure category varies with width/height of window and interlock cover used.

Window Wall

The cost-effective alternative to traditional curtain walling

Dualframe Window Wall has been designed to offer a cost-effective alternative to curtain walling for facades of up to two storeys and offers a series of unique benefits.

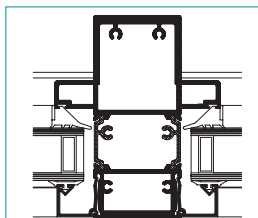
The visual consistency of the mullion and outer-frame sightlines provide an attractive design solution for projects featuring large runs of glazing such as penthouses, apartments and offices.

Window Wall offers the strength needed for facades yet it remains as easy to install as ground floor framing or traditional windows.

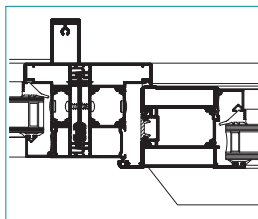
The system can be pre-assembled and glazed in the factory to minimise on-site costs and time.

Window Wall is also simple to glaze and re-glaze making it ideal for schools and public buildings.

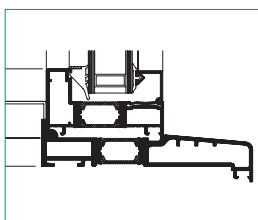
- *High strength for up to two-storey facades*
- *Easy to install and maintain*
- *Will couple to other Dualframe 75mm and 55mm systems as well as Elegance 52 curtain walling and 202 commercial doors.*



Integral mullion - opener/opener



Fixed light door



Cill/fixing light



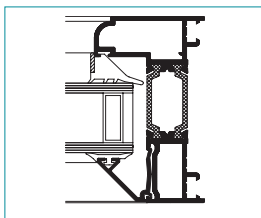
WINDOW WALL WEATHER PERFORMANCE:

Weather Tightness	600 Pascals
Air Permeability	600 Pascals
Wind Resistance	2400 Pascals*

** Exposure category varies with width/height of window and mullion/transom used as these are the only unsupported members.*

75mm Casement Window

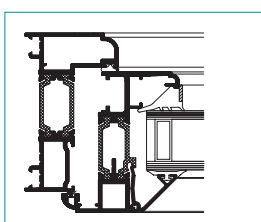
**Top & side hung windows and fixed lights.
Suitable for direct fixing to structure**



Fixed light jamb

Dualframe 75mm Casement is suitable for installation in new build or refurbishment projects, particularly residential, educational and light commercial applications.

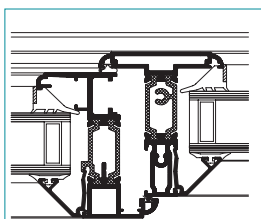
Standard or 'softline' transoms, mullions and outerframes are available to achieve a traditional or contemporary appearance.



Jamb/vent

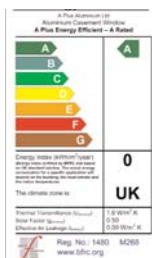
Vents are designed to accept the full depth Eurogroove to ensure compatibility with a wide range of industry standard hardware.

Kitemarked to BS7950 'Specification for enhanced security performance of casement and tilt/turn windows for domestic applications' and BS4873 'Specification for Aluminium Alloy Windows'.



Mullion/vent

- *Can achieve an 'A' Window Energy Rating.*
- *Can be internally or externally beaded*
- *Chamfered or 'softline' profiles available to achieve traditional or contemporary appearance*
- *Unique polyamide strip with integral bead retention leg to minimise external projection of the opening light (Patent applied for)*
- *Meets Secured By Design specification*



Official Police Security Initiative



75MM CASEMENT WINDOW WEATHER PERFORMANCE:

	Opening Lights	Fixed Lights
Water Tightness	600 Pascals	600 Pascals
Air Permeability	600 Pascals	600 Pascals
Wind Resistance	2400 Pascals*	2400 Pascals*

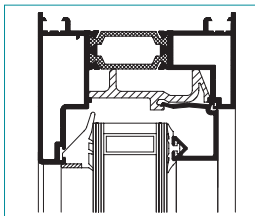
*Exposure category varies with width/height of window and mullion/transom used.

75mm Reversible Window

Direct fix top-hung window that fully reverses for ease of cleaning. Can be combined with fixed lights and mullions.

The Dualframe Reversible Window System has a wide range of applications where specifiers wish to incorporate windows that can be safely and completely reversed for cleaning.

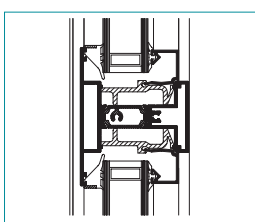
Reversible sashes incorporate hardware which ensures balanced operation in use. Safety catches prevent inadvertent reversal.



Fixed head

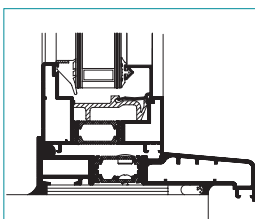
The reversing action does not interfere with items around the window, such as curtains, objects placed on window boards or reveals.

Vents are hung on top overswing hinges with integral restrictors which engage at initial opening stops and fully reversed position for safe cleaning.



Fixed light transom

- *Internally beaded*
- *Integral restrictors provide for safe operation*
- *Will couple to other Dualframe 75mm systems*



Fixed light cill



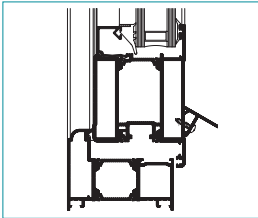
REVERSIBLE WINDOW WEATHER PERFORMANCE:

	Opening Lights	Fixed Lights
Water Tightness	600 Pascals	600 Pascals
Air Permeability	600 Pascals	600 Pascals
Wind Resistance	2400 Pascals*	2000 Pascals*

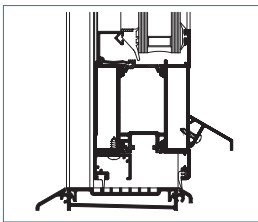
**Exposure category varies with width/height of window and mullion/transom used.*

75mm High Performance Entrance Door

A suite of profiles which can be constructed to form single or double, open in or open out doors.



Open out/glaze-in cill



Low threshold cill

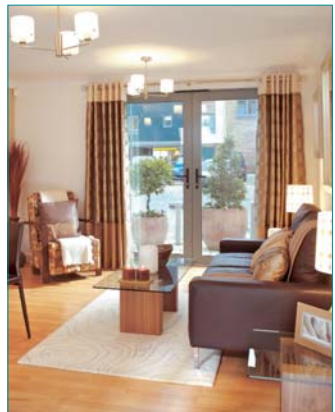
Suitable for both the domestic and light commercial markets, the Dualframe door can be used to achieve both traditional and contemporary styling.

Tested and awarded Kitemarks for PAS23-1:1999 (General Performance Requirements for Door Assemblies) & PAS24-1:1999 (Enhanced Security Performance Requirements for Door Assemblies) for the open in, open out and the low threshold option.*

Unique polyamide strip with integral bead retention leg to minimise projection of door leaf profile (Patent applied for). Stiles are designed to accept full length Eurogroove to ensure compatibility with a wide range of hardware.

- Options include internal or external glazing; standard or 'softline' frames; standard, heavy duty or anti-finger trap
- Weather rated low threshold cill option
- Unique polyamide strip with full depth Eurogroove
- Couples to Dualframe 75mm and 55mm systems, Dualframe roof, Moniframe system and Elegance 52 curtain walling
- Meets Secured By Design specification

* Consult Sapa for relevant product specifications



75MM ENTRANCE DOOR WEATHER PERFORMANCE*:

	Single Open in	Single Open out	Double Open in	Double Open out
Water Tightness	300pa	600pa	200pa	600pa
Air Permeability	300pa	600pa	300pa	600pa
Wind Resistance	1200pa*	2400pa*	2400pa*	2400pa*
Low threshold option	Single Open in	Single Open out	Double Open in	Double Open out
Water Tightness	150pa	300pa	200pa	300pa
Air Permeability	300pa	600pa	200pa	600pa
Wind Resistance	2400pa*	2400pa*	1200pa*	1200pa*

* Exposure category varies with width/height of door and mullion/transom used as they are the only unsupported members.

Adaptors & Couplers

Excellent system compatibility and flexibility with a wide range of Dualframe adaptors and couplers

Adaptors & Couplers

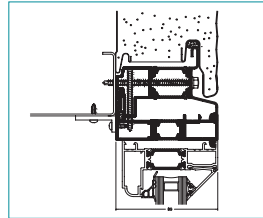
Complex composite and bay units can be constructed using the wide variety of couplers and adaptors available with the Dualframe system:

- Baypoles
- 90° Coupler
- Expansion Coupler
- Cladding Adaptor

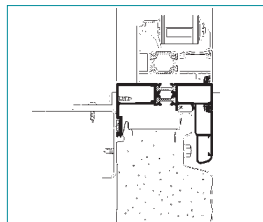
Kingspan Cladding Adaptor

This suite of adaptor profiles can be constructed to allow the integration of face drained Dualframe 55mm and 75mm windows into horizontally laid Kingspan architectural wall and Optimo™ wall panel range.

Dualframe can be integrated into both full and cut panels of varying thicknesses: Dualframe 55mm can be inserted into panels of 60mm, 70mm and 80mm thicknesses, whilst Dualframe 75mm can be inserted into 80mm thick panels.



70mm Panel head



70mm Panel sill



CLADDING ADAPTOR WEATHER PERFORMANCE*:

Water Tightness	300 Pascals
Air Permeability	600 Pascals
Wind Resistance	2400 Pascals**

* Kingspan panels combined with Dualframe windows

** Exposure category varies with width/height of window and mullion/transom/outerframe jamb used.

INNOVATION IN BUILDING SYSTEMS

Dualframe is just one part of our extensive product range and signifies a new era in aluminium fenestration, with products that have been specifically designed to comply with the ever increasing complexity of Building Regulations, British Standards and other regulatory demands.

Our field based Project Consultants, working with our in-house Contracts Design and Administration team, provide UK specifiers with specialist advice concerning the correct application of products, giving guidance on Building Regulations, British Standards and other issues such as product specifications, usage, maintenance and safety. Complementary to this, our Product Support Department has an invaluable reservoir of experience on every aspect of our product range.

Dualframe is a trademark of Sapa Building Systems Limited. Our policy is one of continuous development and consequently we reserve the right to vary the products and their performance specification shown in this literature without notice. The images shown in this brochure are for illustration purposes only and must not be relied upon for specification.

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Brochure reference DFC82 1207



Certificate No. FM 533422



BS 4873
KM 533378



BS 7950/4873
KM 533381



PAS 23-1 & PAS 24-1
KM 533383



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The Sapa logo, with the word 'sapa' in a bold, lowercase, teal sans-serif font, followed by a colon consisting of two small circles.