

## Specification

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## Scope

This specification details materials, construction, finish and size limitations for the Dualframe 75mm Casement window system. This range is designed to meet high performance requirements in a variety of applications. The suite of profiles can be constructed to form fixed lights and top or side hung windows.

## Materials

Aluminium profiles are extruded from aluminium alloy 6063 or 6060 T6 complying with the recommendations of BS EN 755-9:2001. Polyester powder coat finishes are available to BS EN 12206-1:2004 in a wide range of colours. Anodised finishes are to BS 3987 Grade AA25 etch silver as standard, with a range of special anodised finishes on application.

Weatherstripping is polypropylene backed woven pile and polyurethane foam enclosed in a polythene sheath set in undercut grooves in the sash.

The thermal barrier is achieved using two polyamide extrusions separating the internal and external faces.

## Construction

Frame members are mitre cut at 45°. Corners are reinforced with stainless steel corner ties and extruded aluminium corner cleats. All joints shall be sealed during fabrication against water entry.

The thermal barrier section is achieved using two separate aluminium extrusions and two polyamide extrusions mechanically jointed to form a single compound profile, except on some coupling mullions where a “pour and cut” polyurethane resin thermal break is used.

## Hardware

Vents are hung on stainless steel variable geometry friction hinges. Espagnolette locks are constructed in zinc die castings, and zinc plated. Handles can be colour matched. Optional Vector Excluder hinge protectors must be fitted when enhanced security to BS7950 is required.

## Assembly and Installation

Detailed instructions are provided in this publication, which must be strictly conformed to.

## Glazing

Drainage in accordance with details listed in this manual meets the requirements of “ventilated and Drained Glazing System”, as specified in BS6262. Glass must conform to BS6262 for thickness and type. Insulating glass units of 24mm, 28mm and 32mm can be accommodated.

Fixed/Opening Lights : Glass set against extruded synthetic rubber gaskets retained in undercut grooves within an aluminium bead profile. Final retention of the glass is achieved by the application of a co-extruded PVCu / synthetic rubber wedge gasket between the inner face of the glass and the frame.

Compliance with the requirements of all current Regulations and Standards is the responsibility of the manufacturer.

Sapa's policy is one of continual system development and we reserve the right to incorporate design improvements and changes. Every effort is made to ensure that all details are correct at time of publication. However, it is the responsibility of the customer to check the accuracy of the relevant facts and information before entering into any contract or other commitment. Up to date information is freely available from the Sapa Building Systems Webshop.

All Products and systems which Sapa supply are supplied subject to Sapa's standard Terms and Conditions of Sale current from time to time.

## Performance (Weather)

When tested in accordance with BS6375:Part 1:1989 all products listed in this manual, when manufactured installed and glazed strictly to the enclosed details, will exceed exposure category “2400 Special”. (See below)

### Opening Lights

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

### Fixed Lights

Water 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. An accurate figure can be obtained using BS6399:Part 2 calculations and inertia values given on pages 3-11 to 3-20.

Maximum fixed light area = 5m<sup>2</sup>. Intermediate integral mullion/transom and coupling mullion strength requirements must be calculated using BS6399:Part 2 calculations and inertia values given on pages 3-11 to 3-20.

## Specification

### Size Limitations

#### Note

All sizes given are in millimetres, all vent maximum and minimum sizes relate to the overall size of the vent frame and not the outerframe.

Vent frame = "B" size + 12mm (see page 4-1 for an explanation of "B" size)

#### Fixed Light

Maximum area 5 sq.m

#### \*Butt Hinge

Each hinge will carry a maximum of 20Kg in both side hung and top hung applications. Where a top hung vent is hung from a transom, this figure should be reduced to 15Kg per hinge and the maximum width of the vent restricted to 1500mm.

Fit two hinges where the hinge side of the vent is up 900mm.

Where the hinge side of the vent exceeds 900mm, fit an additional central hinge up to 1500mm. Where the hinge side of the vent exceeds 1500mm, fit four hinges equally spaced.

Never fit butt hinges to 57mm or 66mm wide mullions or transoms. Always use minimum 72mm Mullion/Transoms.

These butt hinges are primarily designed for use with folding openers, remote operating gear or electronic actuators. Where they are fitted in conjunction with epag gear or cockspur handles, suitable friction restrictors must also be used.

The min. width of side hung vent/height of top hung vent when using espag gear = 600mm. When using cockspur locking or folding openers = 300mm.

Butt hinges must not be used on Reverse Rebate Adaptor (DF735) or adjacent to overlapping couplers (DF711, DF723, DF724, DF725, 16021, 22 & 23).

Note that a weatherbar must always be fitted over butt hinge opening lights, unless there is a soffit or similar to give protection. Therefore DF300 outerframe cannot be used where a soffit does not exist because the weatherbar cannot be fitted.

#### Standard Casement

Side Hung				Butt Hinge
Stay Size	8"	12"	16"	700
Max Width	400	600	700	700
Max Height	1200	1300	1300	1300
Max Weight	18kg	22kg	24kg	*
Min Width	302	358	601	*
Min Height	**424	**424	**424	**424

\*\* Minimum sizes can be reduced to 302 when using Cockspur handles

#### Top Hung

Stay Size	6"	8"	10"	12"	16"	20"	24"	Butt Hinge
Max Width	1200	1200	1200	1200	1200	1200	1200	1200
Max Height	300	350	400	550	750	1000	1200	1200
Max Weight	10kg	12kg	16kg	20kg	21kg	24kg	35kg	*
Min Width	**424	**424	**424	**424	**424	**424	**424	**424
Min Height	250	301	351	401	551	751	1001	*

#### Heavy Duty Casement

Side Hung			Butt Hinge
Stay Size	10"	16"	
Max Width	660	838	838
Max Height	1524	1829	1829
Max Weight	37kg	45kg	*
Min Width	302	661	*
Min Height	**424	**424	**424

#### Top Hung

Stay Size	10"	12"	16"	22"	Butt Hinge
Max Width	1600	1600	1600	1600	1600*
Max Height	635	787	1090	1500	1500
Max Weight	38kg	47kg	55kg	75kg	*
Min Width	**424	**424	**424	**424	**424
Min Height	302	636	788	1091	*