

# Product Specification

making the difference

Windows and Doors Specification Guide

# CONTENTS

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About Us	Page 3
Why Specify Duraflex?	Page 4
How Do We Do It?	Pages 5 - 6
Q- Lon	Page 7
Environment & Recycling	Page 8
Energy Ratings & U Values	Page 9
Product Standards	Page 10
Technical Support	Page 11
Finishes	Page 12
Features Key	Page 13
Product Range - Casement Window	Page 14 - 15
Product Range - Tilt & Turn	Page 16 - 17
Product Range - Pivot Window	Page 18 - 19
Product Range - Residential Door	Page 20 - 21
Product Range - French Door	Page 22 - 23
Product Range - Patio Door	Page 24 - 25
Product Range - Bi Fold Door	Page 26 - 27
Product Range - Reversible	Page 28 - 29
Product Range - Cavity Closer	Page 30- 31
Product Range - Stable Door	Page 32 - 33
Product Range - Composite Door	Page 34
Product Range - Hardware	Page 36 - 38
Contact Us	Page 39

## ABOUT US

Duraflex is one of the largest extruders of PVC-u profile for the Window Industry in the UK. We supply Householders, Builders, Developers, Local Authorities and Housing Associations through a nationwide network of window fabricators and installers.

Backed by over twenty years of PVC-u extrusion experience in the window and door sector, Duraflex create the ideal environment for innovative product design, quality production, reliable logistics and all the necessary customer support services.

## PURPOSE BUILT FACILITY

Completed in 2004, we operate from a 275,000 sq/ft state of the art, purpose built facility in Tewkesbury that consists of the office, factory and warehouse.

Duraflex are now the largest single site extruder of hollow PVC-u profile in the UK.

## BRITISH AND EUROPEAN STANDARDS

All products conform to British and European standards surrounding manufacture and performance. The 'Secured By Design' accreditation for products and hardware is a unique achievement which fully justifies our policy of continuous quality control and development.

## INDUSTRY LEADING PRODUCTS AND SERVICES

Staffed by people who understand the specialist needs of the industry means Duraflex are able to provide customers with continually evolving, industry leading products and services to meet the exacting demands of the changing marketplace.

## COMPANY HISTORY

- 1953 - Duraflex formed selling Aluminium products
- 1970 - Acquired by RTZ and moved into the doors and windows sector
- 1980 - Bought PVC-u fabrication plant from Glostal
- 1990 - Developed own PVC-u extrusion operation
- 1995 - Acquired by Caradon Group and CDW Ltd formed
- 1997 - Launched the Diamond Suite
- 1999 - Acquired by Latium Group and formed new Duraflex team
- 2000 - Launched new patio and integrated 70mm and Featured System
- 2002 - Duraflex becomes a Limited company and is bought by the MASCO Corporation
- 2004 - Move of Factory, Warehouse and Office to one state-of-the-art, purpose built facility in Tewkesbury
- 2007 - Achieved ISO 14001 Environmental accreditation and won the regions Environmental 'Business of the Year' award.



Duraflex Site in Tewkesbury

Duraflex is part of the Masco Corporation, one of the world's largest manufacturers of brand-name products for the home improvement and new home construction markets. [www.ukwg.co.uk](http://www.ukwg.co.uk)

For further information on any of our products or services please us call on **08705 351351** or email us at [info@duraflex.co.uk](mailto:info@duraflex.co.uk).

# WHY SPECIFY DURAFLEX?

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Duraflex offers a wide range of doors and windows designed to meet the exacting demands of the commercial industry. With over 55 years experience in the windows market, we have the skills and expertise to ensure that whatever your project, we can provide the PVC-u solutions to meet your needs.

This guide has been designed to give you information on the Duraflex system in order to help you match the product to your exact needs.



Backed by over 20 years of PVC-u extrusion experience in the window and door sector, Duraflex create the ideal environment for innovative product design, quality production, reliable logistics and all the necessary customer support services.



# HOW DO WE DO IT?

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Correct specification for any window or door is paramount to ensuring you get what you want; dealing with Duraflex through one of its many fabricators throughout the UK is a good starting point. It is necessary to be clear on your requirements, deal with facts, be precise on what you wish to achieve, if you are unclear on any of these issues Duraflex can help provide the details needed for an 'informed decision'.

## RAW MATERIALS

Duraflex source all of its raw materials from reputable world wide suppliers who have served the industry for many years. The 'window grade' formulations based on Calcium Organic stabilizers ensure the addition of no 'heavy metals' and have been proved within the market place over many years through natural and artificial weathering.

Produced internally at Duraflex, the blend of PVC and all associated additives are tightly controlled with 'state of the art' blending equipment to ensure consistency and the highest quality levels. Waste reduction and environmental considerations are very important to Duraflex, fabricator off-cuts and own generated extrusion waste is recycled in a number of 'non-critical' applications.

## PROFILE

The Duraflex Diamond suite is ideal if you are looking for reduced stock holding and a range of sections compatible with each other. Produced in both the traditional bevelled (putty line) frame and bead system or the traditionally defined featured system, profile is available to suit all market needs with the featured system boasting clear 'sharp' lines giving a well defined shape to both white and coloured sections. It is available in a range of outerframe depths (slim, intermediate and large) to suit all construction methods.

## COLOUR

Whilst the majority of windows produced are white in colour there have, over the past few years, been an increasing requirement for coloured finishes including woodgrain effect. A wide range of alternative coloured laminate finishes are available, these are applied to either a white or brown substrate using water based primer/adhesive system compliant with the latest European legislation, all of which have been assessed and obtained BBA certification.

## Q-LON WEATHERSEALS

Duraflex supply all their mainframe sections with pre-inserted Q-Lon weatherseal. Q-Lon is a sheathed composite gasket which is widely used in Scandanavian countries due to its high performance across a wide temperature range. It has excellent acoustic, thermal and recovery properties which is backed by a lifetime guarantee.

# HOW DO WE DO IT?

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## THERMAL PERFORMANCE

In line with governments desire to reduce CO<sup>2</sup> emissions, building regulations require tightening of building thermal efficiency including windows and doors. The Duraflex Diamond suite is able to attain the highest Window Energy rating (WER) available currently for replacement windows, achieve 'New Build' 'U' value desires and where appropriate can exceed door 'U' value requirements.

## ACOUSTIC PERFORMANCE

Use of the Q-Lon seal ensures a high acoustic rating can be achieved although the overall performance level available is very dependant on the glass specification. Testing at Salford University with the casement windows confirms an acoustic reduction of 39db using laminated glass to one pane (full specification and details available on request).

## SECURITY

Widows and doors have been tested to the stringent requirements of BS7950 for windows and PAS24 for doors enabling, with the appropriate locking mechanisms, a high level of security to be achieved, meeting the requirements of SBD (Secured by Design).

## HARDWARE

A range of hardware is available for use on the Duraflex Diamond suite which has been assessed as appropriate. All product for use in a security situation has been physically tested to the relevant standards and all products assessed for corrosion resistance and endurance.

## TRAINING

All personnel within operations (Extrusions, Lamination, Blending and Warehousing) undergo NVQ level 2 as part of their overall training.

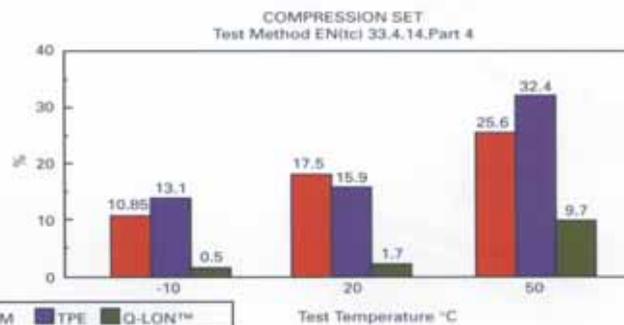
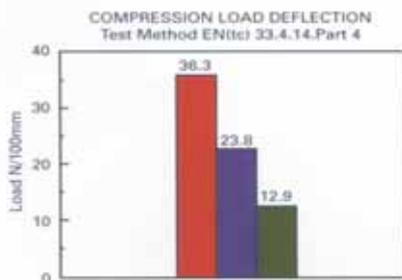
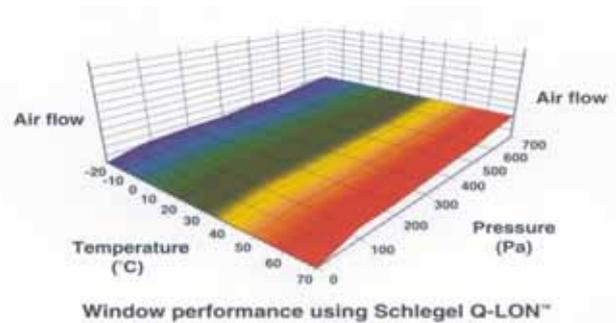
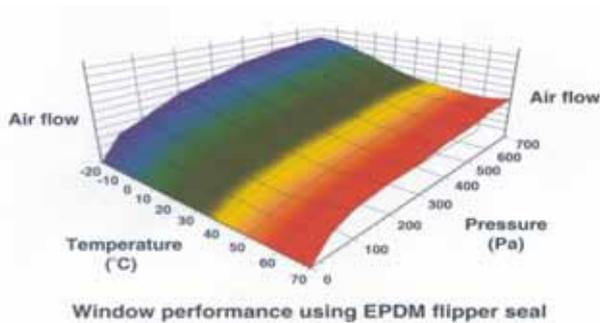
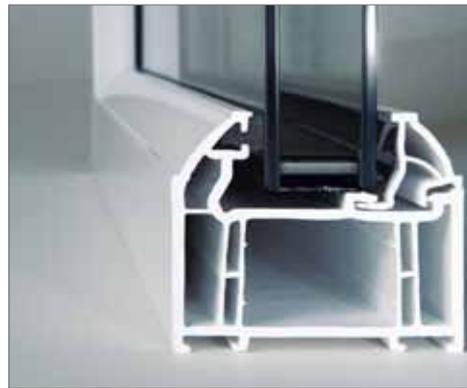
All existing company personnel have been trained and all new inductees are trained in our ISO 9001 and ISO 14001 operating requirements, this ensures a high level of knowledge throughout all functions resulting in a 'right first time' and 'continuous improvement' culture.

There are gaskets. Then there's Q-Lon - it has excellent compression recovery of 99%, giving constant height at corners for improved weathering. Furthermore, it provides low operating forces on gearing which in turn ensures ease of operation for the user.

Weatherseal performance matters in windows, that's why the Diamond Suite is supplied with Q-Lon pre-inserted into all sections.

## TRUST THE WORLD'S BEST WEATHERSEAL GASKET

- Best acoustic and thermal performance across the widest temperature range
- 99% memory recovery. Retains shape year after year
- Low operating forces reduce wear and tear and gives ease of operation
- Leaves no rigid sprue after welding
- Lifetime guarantee.



# ENVIRONMENT & RECYCLING

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The issue of environmental change is one that affects us all, from global warming to conservation to energy consumption, and the ways in which we can help to lessen the impact are endless.

## CALCIUM ORGANIC

Two of the initiatives of Vinyl 2010 were the total elimination of Cadmium from PVC-u formulations and phasing out the use of lead based stabilisers. This latter requirement was to take place before 2015 with staged reductions being achieved by 2005 and 2010.

Extensive trials have been carried out over the past few years resulting in Duraflex making the switch to the alternative during 2008, well ahead of the scheduled deadline and with no impact on its current Kitemark and accreditation status.

## ECO FRIENDLY LAMINATION

Duraflex laminates all its woodgrain or colour finish profiles in-house. Changes in European Legislation required previously used solvent based primer to be removed. During the latter part of 2006 and into 2007 Duraflex carried out a number of trials to ensure compliance with the new regulations and a smooth uninterrupted transition to a new eco-friendly primer system.

Approximately £¼ million investment on new machines was required to facilitate this change which resulted in Duraflex changing to the new system in October 2007.

## DURAFLEX COMMITMENT TO RECYCLING

From our drive to be more environmentally friendly and reduce scrap, Duraflex have introduced a number of initiatives to reduce the amount of waste created during the extrusion process.

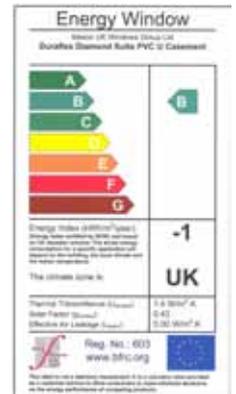
The majority of scrap produced is recycled in-house with very little (less than 1%) non-recoverable scrap being sent off-site for recycling in other non critical applications (pipes, conduit, furniture etc). Furthermore, Duraflex attend ISO 14001, Environmental Management System, and follows these guides with year on year continuous improvements to reduce our impact on the environment.



# ENERGY RATINGS & U VALUES

## WER

Window Energy Rating - The future of energy efficient windows from the BFRC.



## BFRC - WHAT'S IT ALL ABOUT?

The Government has set itself a specific target of ensuring all new homes built after 2016 are zero carbon and owners of existing properties are encouraged and supported in improving the energy efficiency of their dwellings. This is in addition to the general requirement of an overall carbon emission reduction as set out by the Kyoto agreement.

To highlight this topic and enable a system which is both an independent source of information and also easy to understand, the BFRC (British Fenestration Rating Council) together with CERTASS and BSI have introduced a performance label (WER - Window Energy Rating) clearly defining the energy efficiency of windows from any manufacturer. Windows are scored on a scale of A - G, with an 'A' rated product being more energy efficient than one which is G rated. This allows individuals to quickly and easily choose the windows most suitable for their needs. Changes to the Building Regulations in October 2010 require any replacement domestic window to achieve a minimum rating of 'C'.

## ENERGY EFFICIENCY

In an ideal world, 'A' rated windows would be installed in each home in the UK. However, recognising that a balance needs to be made between the availability and cost-effectiveness of such products, those which are given a rating of 'C' and higher are recognized as energy efficient, Those achieving a rating of 'B' or above can officially be endorsed with the Energy Saving Trust 'Recommended' logo, subject to the EST scheme membership.

The use of the performance label and rating system is similar to that as used currently on other domestic items such as fridges, freezers, ovens etc. and has been extended to other generally used products such as cars etc. It is being considered on products where energy efficiency can be monitored and measured.

## U VALUE

Whilst the WER measurement is seen as the more comprehensive method to define energy efficiency of windows, taking into account not only the whole window U value but also the positive solar gain and window air leakage, the changes to the Building Regulations which came into affect on 1st October 2010 did allow the U Value only to be used as the means of demonstrating compliance with the new regulations. The 'U' value is a measure of the effectiveness of the window to retain heat within the building; it does not take into effect solar gain (g value). This is considered an important benefit to the householder and is sometimes referred to as 'free' energy; it allows heat from the suns rays to warm the building interior even on 'cloudy' days, the degree of effectiveness being dependant on the glass specification. The new Building Regulations (AD L1B) require a domestic replacement window to achieve EITHER a WER of 'C' as indicated above OR a window 'U' value of 1.6 W/m<sup>2</sup>K.



# PRODUCT STANDARDS

## QUALITY ASSURANCE

Duraflex is committed to providing our customers with the best quality windows and doors. To achieve this goal we have devoted time, effort and expense into obtaining all relevant Standards and Accreditations the industry has to offer.

Duraflex holds Certificate No. FM 10093 and operates a quality managed system which complies with the requirements of BS EN ISO 9001 and EMS 514848 for ISO 14001 for the following activities:

- The supply of plastic window components and the production of PVC-u profile extrusions.
- The design, development, manufacture and supply of various building products and systems.
- The processing of PVC-u power for use in extrusion process.
- Sales and marketing of various building products and systems.
- Quality systems and administrative functions.
- Warehouse and distribution activities.

Duraflex Diamond Suite holds BSEN 12608 and BS 7950/BSEN 12608. KM 12894 and KM 33502.

## ACCREDITATIONS

	Assessment report Numbers 1576 and 2662. The Duraflex Diamond Suite 65mm & 70mm Tilt & Turn, Casement Windows and Residential Doors.	 BSEN12608:2003 KM12894	Specification for white PVC-U extruded hollow profiles with heat welded corner joints for plastic windows. Duraflex 65mm Diamond Suite Window system.
	Certificate No 04/4902 Duraframe Cavity Closer.	 BSEN12608:2003 KM12894	Specification for white PVC-U extruded hollow profiles with heat welded corner joints for plastic windows. Duraflex 70mm Diamond Suite window system.
	Windows simulated and achieve a range of window energy ratings (wers) from A to E. Duraflex Diamond system also achieves "U" values from the current building regulations ranging from 2.0 W/m <sup>2</sup> k to a value of 1.3W/m <sup>2</sup> k.	 BS 7950 KM33502	Specification for enhanced security performance of windows for domestic applications. Duraflex 65mm casement and tilt & turn.
	BSI Registered. Quality Management System. BSENISO 14001:2004.	 PAS23 KM79769	Specification for enhanced security performance of windows for domestic applications. Duraflex 70mm casement and tilt & turn.
	BSI Registered. Environmental Management System. BSENISO 9001:2008.	 PAS24 KM79769	Specification for performance of domestic residential doorsets.
	Secured By Design - Police Initiative	 PAS24 KM79769	Specification for enhanced security performance of domestic residential doorsets.
			BPF Windows Group provide codes of practice, guidelines & recommendations for windows, doors & conservatories.

# TECHNICAL SUPPORT

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At Duraflex, we understand that technical support is imperative. Our experienced team provide a 'one stop' service for resolving all technical product and specification queries.

## IN-HOUSE TECHNICAL ASSIST TEAM

At Duraflex our experienced in-house support team provides a 'one stop' service for resolving your technical enquiries - from industry regulations and accreditation changes to product information.

### TECHNICAL ASSIST PROVIDES:

- Technical Assist electronic support/HelpLine Mail
- Helpline - Direct phone line to our experienced Technical Support Team
- Manufacturing and Survey advice
- Assist with factory layouts and planning
- Wind loading calculations and advice
- Accreditation, Regulations and Standards advice
- Bespoke customer Profile Wall Charts
- Product and Training manuals
- Thermal Calculations - fully approved simulator status
- New product design and support
- New product launches - distribution of product data regarding new products
- Hardware compatibility advice
- Environment support

## EXTERNAL TECHNICAL TEAM

A dedicated team of mobile service engineers covering the UK and Ireland bring their expertise to suit your needs by providing personal on-site support to assist your company.

- Product fabrication training
- Factory layout advice
- New product training
- Machinery advice
- Customer changeover support
- Development calls

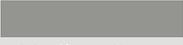
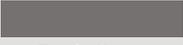
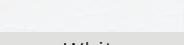


# FINISHES

Foils allow you to further bespoke the look of a building and create individuality. Furthermore, all our foils are supplied on 100% calcium organic material and applied using our eco friendly process.

All foils are available in these options: Foil on the outside and white on the inside, foil both internally and externally and also white outside with foil inside, the choice is yours.

All Duraflex foils are available on brilliant or warm white profiles and bevelled or featured options.

<b>PROFILE COLOUR</b>	 Brilliant White	 Warm White			
<b>STANDARD WOODGRAIN</b>	 Rosewood	 Golden Oak			
<b>PRESTIGE WOODGRAIN</b>	 Irish Oak	 Antique Teak	 Rustic Cherry	 Soft Cherry	
<b>SOLID COLOURS</b>	 Grey  Blue	 Medium Grey  Red	 Dark Grey  Green	 Cream  White	 Black

All foiled using Eco Friendly lamination, without the use of hazardous solvents.

Woodgrain on white achieves the look of traditional hardwood frames on the outside and brilliant white frames on the inside.

Other colours available on request and subject to extended lead times.

# FEATURES KEY

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To help you source all the information you require, we have put together this simple key which shows the features and benefits of each product.

They are attributed to each specific product page to simplify their key features.



Q-Lon - 99% compression recovery, high performance acoustic and weathersealing properties with lifetime guarantee



Lead Free - environmentally friendly, calcium organic lead free formulation (ph)



Finishes - comprehensive range of natural wood and solid colour foils.



BFRC - Registered window energy rating scheme (inc. U values)



Secured By Design - Highest level of security performance registration.



Structural - comprehensive range of coupling sections to suit various applications.



ISO:14001 - Environmental Management System



ISO:9001 - Business Management System



BBA - Product test accreditation to European and British standards.



BSI - Product test accreditation to European and British standards.



BM Trada - Product compliant to performance specification, covering all products to British and European standard.

# PRODUCT RANGE - CASEMENT WINDOW

## FEATURES

### FRAME OFFERING

- Choice of 3 outer frame heights, 46mm, 58mm and 68mm.
- Choice of 3 transom heights - 63mm, 72mm and 86mm.
- Dedicated sash.
- All sections available fully featured and bevelled.
- Available fully welded or mechanically jointed transoms.

### WEATHERSEALS

- High performance Q-Lon gasket supplied in all mainframe sections.

### REINFORCING

- Galvanised steel range to suit topography requirements.
- Aluminium range for mechanical joint requirements.
- Range of thermal reinforcements for higher 'U' valve and ERP requirements.
- All reinforcements are designed to achieve required security and weathering requirements.

### FINISHES

- Warm white and brilliant white, on non lead PVC-U.
- Range of solid colour and woodgrain foils.

## TEST RESULTS

Frame Type	Size	Air Permeability	Water Tightness	Wind Resistance	Standard	Accreditation Body
Projecting top hung	1200 x 1200	450Pa	300Pa	2400Pa	BS6375-1:2004	BSI
Projecting side hung	800 x 1500	600Pa	300Pa	2400Pa	BS6375-1:2004	BBA
Projecting side hung Externally Glazed	700 x 1350	300Pa	Class E1050	2000Pa	BS6372-1:2004	BSI
Fixed Window	2000 x 2000	600Pa	300Pa	2000Pa	BS6375-1:2004	BSI
Mock Horn	900 x 1800	300Pa	Class E1050	2400Pa	BS6375-1:2004	BSI
Multilight (th/sh-f)	2400 x 1200	450Pa	Class E600	1200Pa	BS6375-1:2004	BSI

## GLAZING

- Choice of 3 glazing thicknesses - 24mm, 28mm double glazed units and 36mm triple glazed.
- Astrical, Georgian bars in 20mm and 28mm widths.

## ANCILLARIES

- Comprehensive range of add-ons, couplers, corner posts, bay poles available to suit any installation.
- Mock horns available, mechanically jointed for traditional aesthetics.

## HARDWARE

- Full depth eurogroove, accepts a comprehensive range of espagnolette and shootbolts.
- Positioned to the inside of the sash allowing for night vent locking if required.

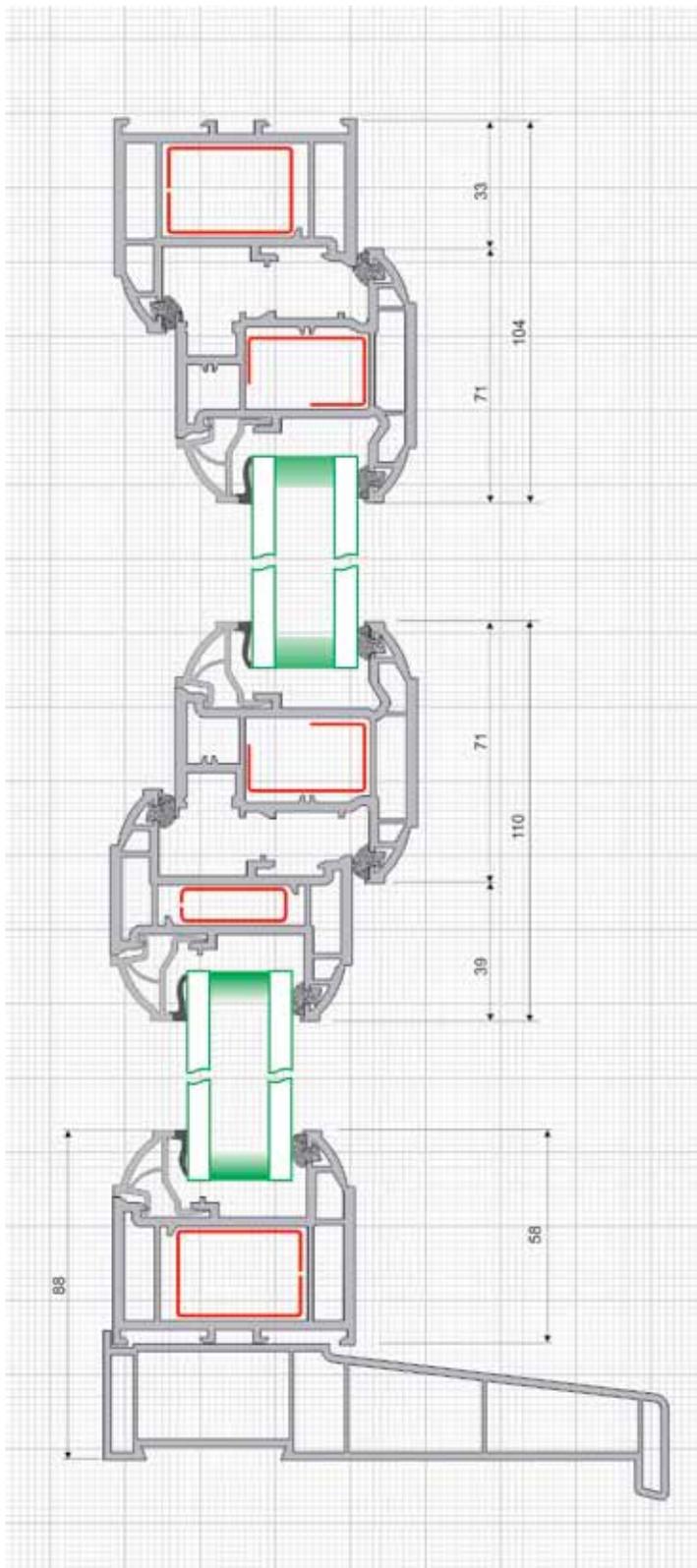
## VENTILATION

- Proprietary ventilation devices can be used on all designs.
- A range of head details available including large outerframe, head extension and dedicated one piece head vent (see cavity closer for further details).

## PERFORMANCE

### SECURITY

- Range of hardware available with varying degrees of security, up to enhanced security and Secured By Design status.
- Glass clips for externally glazed windows also available to adhere SBD.



Scale 1:2

## GENERAL FEATURES



## THERMAL

1st October 2010 saw the minimum thermal requirement for domestic replacement windows set at a minimum WER of 'C' or a minimum 'U' value of 1.6 W/m<sup>2</sup>K, doors in a similar situation are required to meet a minimum 'U' value of 1.8 W/m<sup>2</sup>K (1.6 W/m<sup>2</sup>K in Scotland).

A very large number of simulations have been carried out by 'approved' simulators at Duraflex providing a comprehensive range of WER's (Window Energy Ratings) for A, B and C ratings and 'U' values as low as 0.8W/m<sup>2</sup>K using the 'standard' European window style and size.

## ACOUSTIC

Acoustic testing has been carried out at Salford University using standard sealed units and those comprising laminated glass, a maximum reduction of 39db was achieved. In addition testing has been carried out on windows fitted with ventilators in both open and shut situations.

# PRODUCT RANGE - TILT & TURN WINDOW



## FEATURES

### FRAME OFFERING

- Dedicated outerframe - 68mm height.
- Choice of 3 transom heights - 63mm, 72mm and 86mm.
- Dedicated sash.
- All sections available featured and bevelled.
- Available fully welded or mechanically jointed.

### WEATHERSEALS

- High performance Q-Lon gasket supplied in all mainframe sections.

### REINFORCING

- Galvanised steel range to suit topography requirements.
- Aluminium range for mechanical joint requirements.
- All reinforcements are designed to achieve required security and weathering requirements.

## TEST RESULTS

Frame Type	Size	Air Permeability	Water Tightness	Wind Resistance	Standard	Accreditation Body
Tilt & Turn	1200 x 1200	600Pa	450Pa	2400Pa	BS6375-1:2004	BSI

### FINISHES

- Warm white and brilliant white, on non lead PVC-u.
- Range of solid colour and woodgrain foils.

### GLAZING

- Choice of 3 glazing thicknesses - 24mm, 28mm double glazed units and 36mm triple glazed.
- Astrical, Georgian bars in 20mm and 28mm widths.

### ANCILLARIES

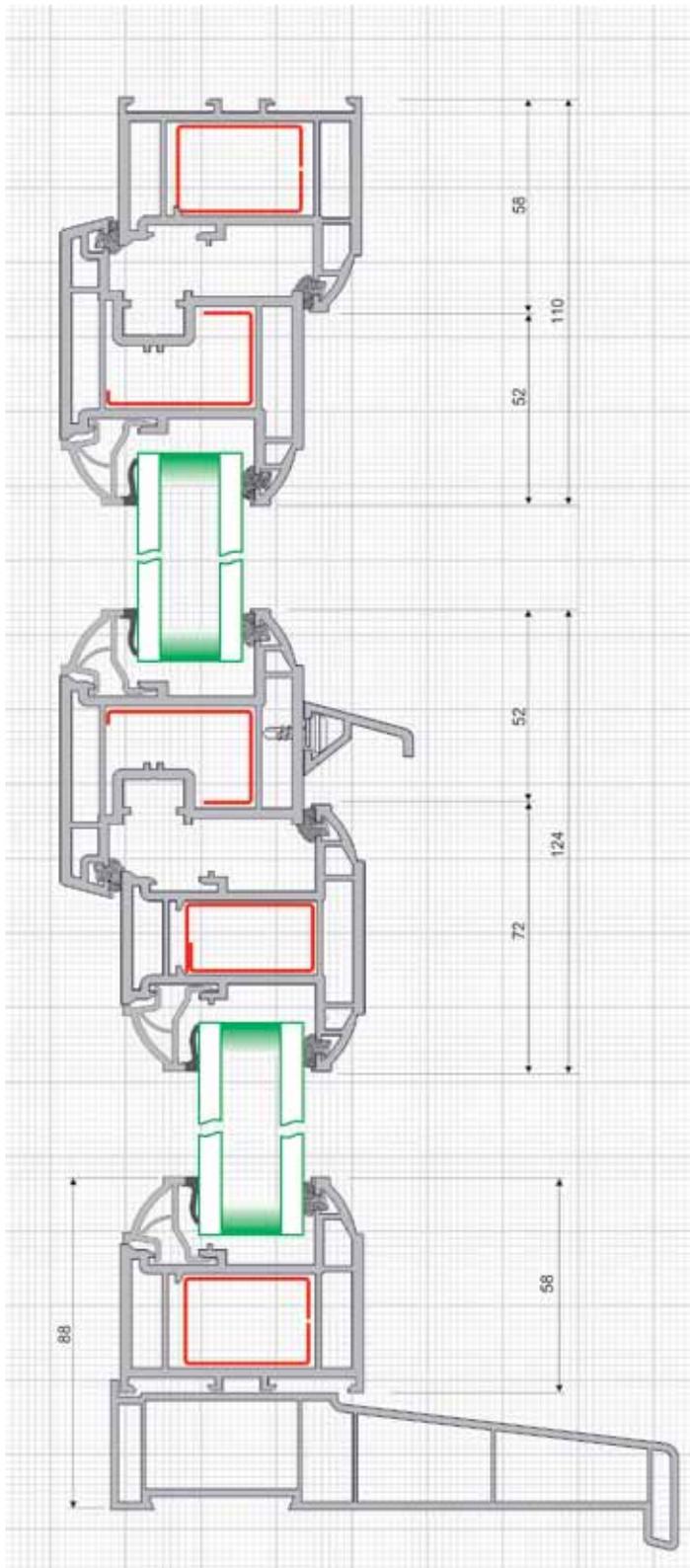
- Comprehensive range of add-ons, couplers, corner posts, bay poles available to suit any installation.
- Plant on mock horn available to produce traditional aesthetics with tilt and turn opening features.

### HARDWARE

- Full depth eurogroove positioned centrally, accepts a wide range of perimeter locking and concealed hardware.

### VENTILATION

- Proprietary ventilation devices can be used on all designs.
- A range of head details available including large outerframe, head extension and dedicated one piece head vent (see cavity closer for further details).



Scale 1:2

## PERFORMANCE

### SECURITY

- A wide range of hardware options available.
- Concealed and perimeter locking options.
- Enhanced security, Secured By Design hardware also available.

### THERMAL

- A large number of simulations have been carried out by 'approved' simulators at Duraflex providing a comprehensive range of WER's (Window Energy Ratings) for A, B and C ratings and 'U' values to 1.4W/m<sup>2</sup>k using standard readily available components.



## GENERAL FEATURES



# PRODUCT RANGE - PIVOT WINDOW

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## FEATURES

### FRAME OFFERING

- Choice of 2 outerframe heights - 56mm and 68mm.
- Choice of 3 transom heights - 63mm with dedicated half frame.
- Dedicated sash.
- All sections available fully featured and bevelled.

### WEATHERSEALS

- High performance Q-Lon gasket supplied in all mainframe sections.

### REINFORCING

- Galvanised steel range to suit topography requirements.
- Aluminium range for mechanical joint requirements.
- Range of thermal reinforcements for higher 'U' value and ERP requirements.
- All reinforcements are designed to achieve required security and weathering requirements.

### FINISHES

- Warm white and brilliant white, on non lead PVC-u.
- Range of solid colour and woodgrain foils.

### GLAZING

- Choice of 3 glazing thicknesses - 24mm, 28mm double glazed units and 36mm triple glazed.
- Astrical, Georgian bars in 20mm and 28mm widths.

### ANCILLARIES

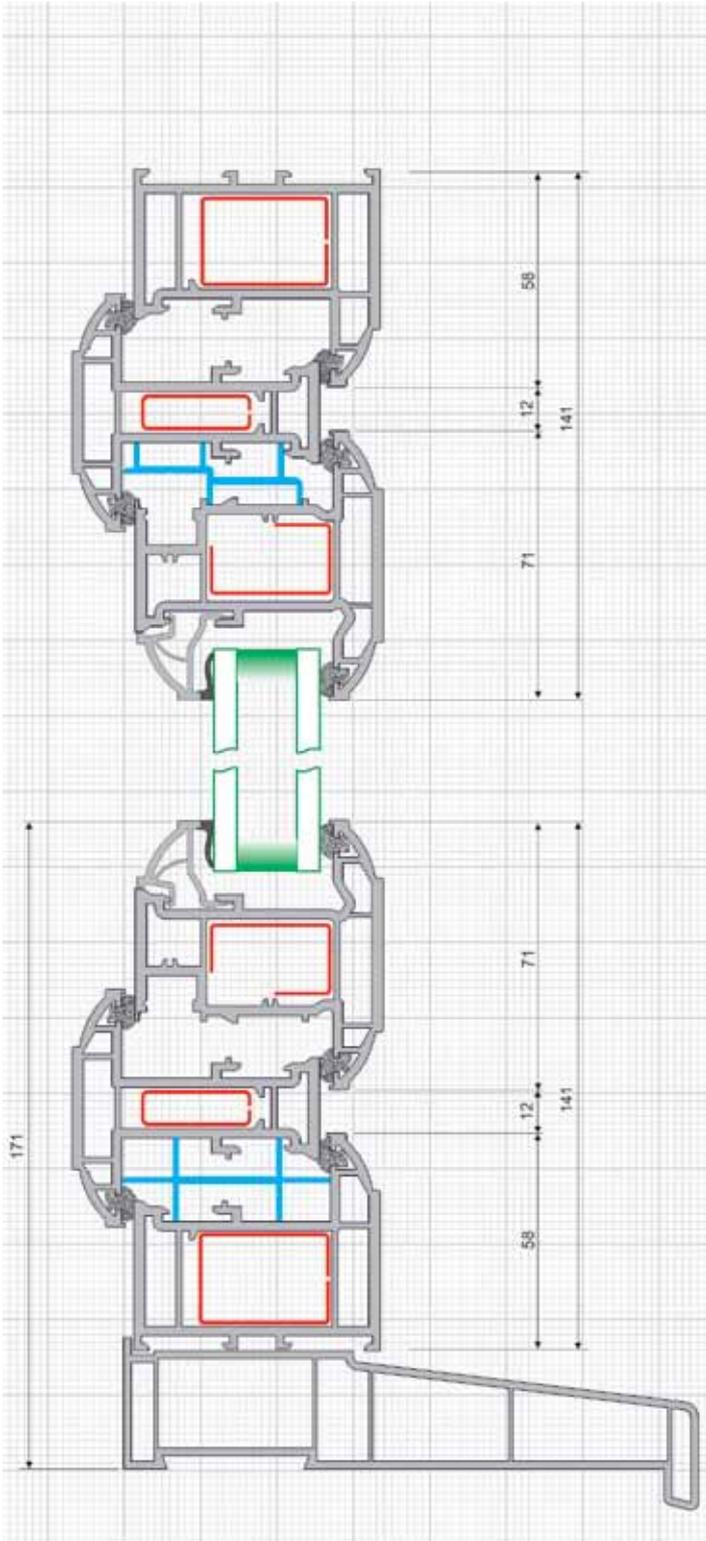
- Comprehensive range of add-ons, couplers, corner posts, bay poles available to suit any installation.

### HARDWARE

- Full depth eurogroove, accept espagnolette, shootbolt and perimeter locking with shootbolts.

### VENTILATION

- Proprietary ventilation devices can be used on all designs.
- A range of head details available including large outerframe, head extension and dedicated one piece head vent (see cavity closer for further details).



Scale 1:2

## PERFORMANCE

### SECURITY

- Range of hardware with full perimeter locking options. 180° pivot hinges with 22° and 180° restriction.



## GENERAL FEATURES



# PRODUCT RANGE - RESIDENTIAL DOOR

## FEATURES

### FRAME OFFERING

- Dedicated 68mm outerframe with options of 46mm for low PVC-u threshold.
- Choice of 3 transom heights - 63mm, 72mm and 86mm.
- Choice of open in and open out sashes.
- Available fully featured or bevelled.
- Available fully welded or mechanically jointed transoms.
- Choice of 2 aluminium low thresholds, disability at 15mm high and refurb with access ramps at 24mm high.

### WEATHERSEALS

- High performance Q-Lon gasket supplied in all mainframe sections.

### REINFORCING

- Galvanised steel range to suit topography requirements.
- Galvanised steel lock prep steel.
- Aluminium range for mechanical joints.
- All reinforcements are designed to achieve required security and weathering requirements.

### GLAZING

- Choice of 3 glazing thicknesses - 24mm, 28mm double glazed units and 36mm triple glazed.

## TEST RESULTS

Frame Type	Size	Air Permeability	Water Tightness	Wind Resistance	Standard	Accreditation Body
single door, open in, int glazed, glass/glass	1050 x 2150	300Pa	200Pa	1200Pa	BS6375-1:2004 PAS23	BSI
single door, open in, int glazed, glass/panel	1050 x 2150	300Pa	200Pa	1600Pa	BS6375-1:2004	BSI
single door, open out int glazed glass/glass	950 x 2100	600Pa	200Pa		PAS23	BSI
single, open in, int glazed, coupled sidelight, glass/glass	1500 x 2150	450Pa	300Pa	1600Pa	BS6375-1:2004	BSI
single, open out, int glazed, coupled sidelight, glass/panel	1500 x 2150	300Pa	300Pa	1600Pa	BS6375-1:2004	BSI

- Astrical, Georgian bars in 20mm and 28mm widths.

### ANCILLARIES

- Comprehensive range of add-ons, couplers, corner posts, bay poles available to suit any installation.

### HARDWARE

- Fully depth eurogroove, accept comprehensive range of multi-point locks.
- Range of knuckle, rebate and flag hinges available.

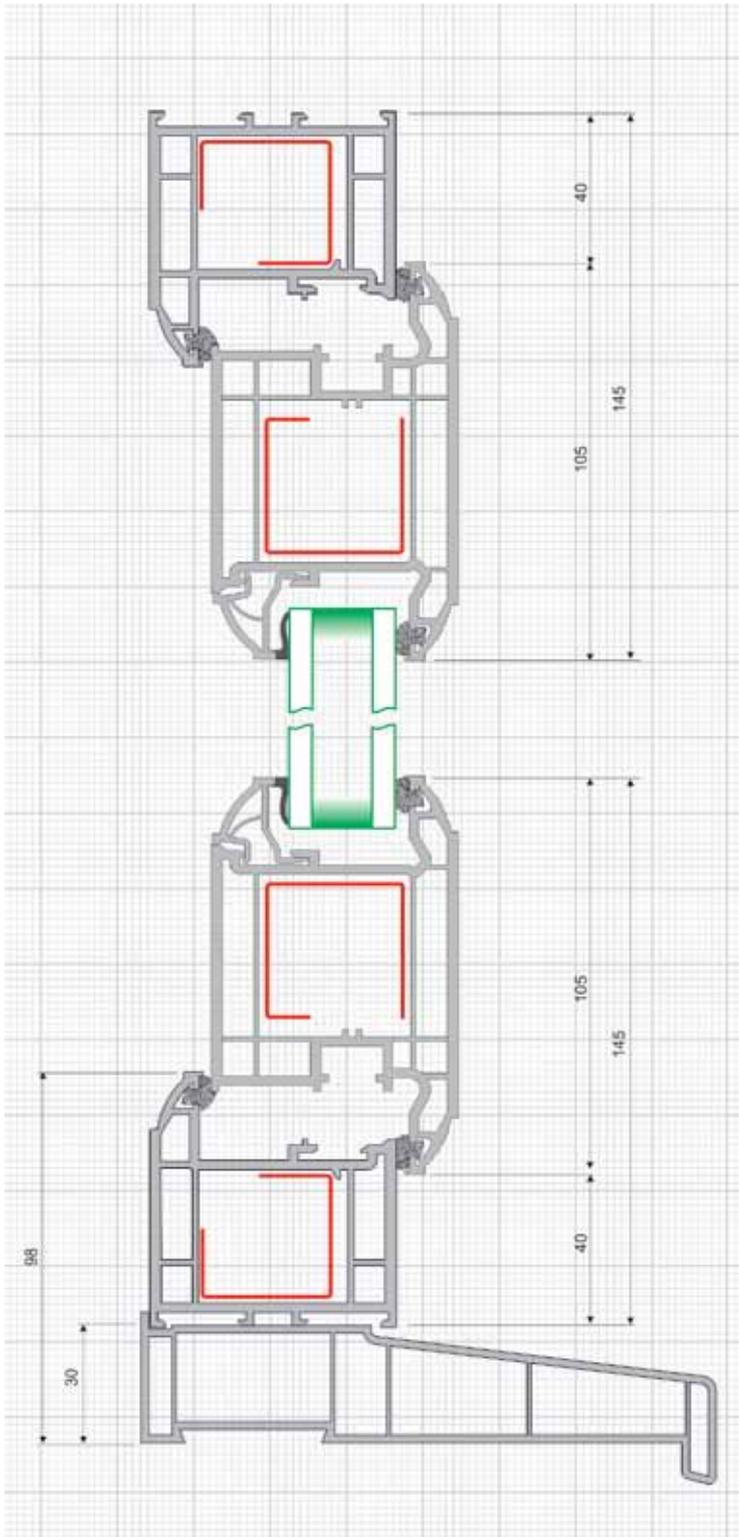
### VENTILATION

- Proprietary ventilation devices can be used on all designs.
- A range of head details available including large outerframe, head extension and dedicated one piece head vent (see cavity closer for further details).

## PERFORMANCE

### SECURITY

- Choice of multi-point high security locks along with pencil, rebate and flag hinge options.
- Available to achieve Secured By Design status.



Scale 1:2

## THERMAL/ACOUSTIC

- No Energy Rating system exists currently for doors (May 2011) although a scheme is expected to be introduced during summer 2011.
- 'U' value simulations have been carried out to ensure the revised Building Regulations of October 1st 2010 requiring a minimum 'U' value of 1.8 W/m<sup>2</sup>K (1.6 W/m<sup>2</sup>K in Scotland) are met. Further detailed simulations are being carried out and added to our already comprehensive portfolio.



## GENERAL FEATURES



# PRODUCT RANGE - FRENCH DOOR



- Choice of 2 aluminium low thresholds, disability at 15mm high and refurb with access ramps at 24mm high.
- Dedicated one piece double door adaptor.

## WEATHERSEALS

- High performance Q-Lon gasket supplied in all mainframe sections.

## REINFORCING

- Galvanised steel range to suit topography requirements.
- Galvanised steel lock prep steel.
- Aluminium range for mechanical joints.
- All reinforcements are designed to achieve required security and weathering requirements.

## GLAZING

- Choice of 3 glazing thicknesses - 24mm, 28mm double glazed units and 36mm triple glazed.
- Astrical, Georgian bars in 20mm and 28mm widths.

## FEATURES

### FRAME OFFERING

- Dedicated 68mm outerframe with options of 46mm for low PVC threshold.
- Choice of 3 transom heights - 63mm, 72mm and 86mm.
- Choice of open in and open out sashes.
- Available fully featured or bevelled.
- Available fully welded or mechanically jointed transoms.

## ANCILLARIES

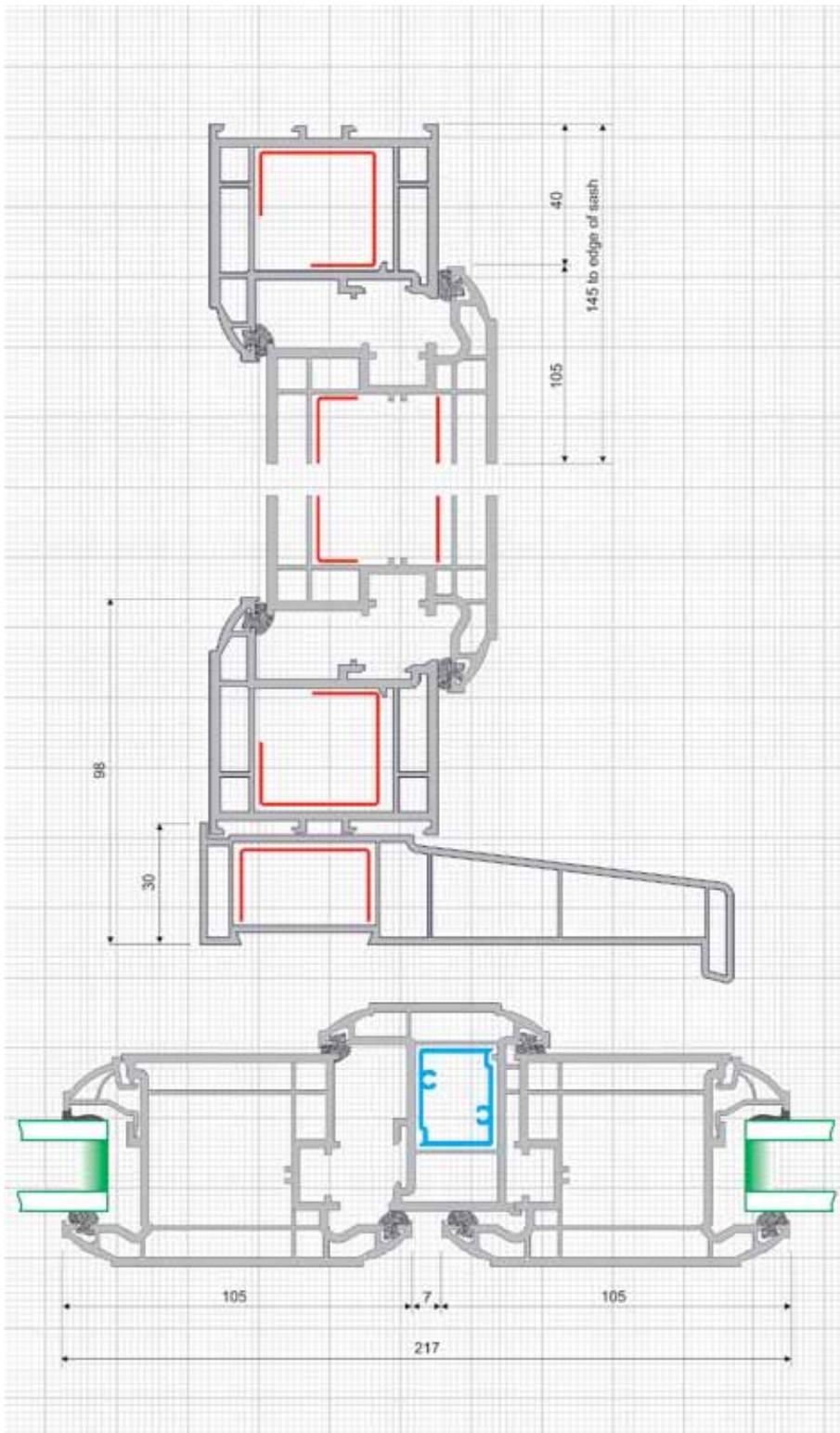
- Comprehensive range of add-ons, couplers, corner posts, bay poles available to suit any installation.

## HARDWARE

- Fully depth eurogroove, accept comprehensive range of multi-point locks.
- Range of knuckle, rebate and flag hinges available including slave locking shootbolts and fingerbolts.

## TEST RESULTS

Frame Type	Size	Air Permeability	Water Tightness	Wind Resistance	Standard	Accreditation Body
double door, open in, int glazed, glass/glass	1800 x 2150	300Pa	450Pa	1200Pa	BS6375-1:2004	BSI
double door, open out, int glazed, fully glazed	1800 x 2150	450Pa	300Pa	1200Pa	BS6375-1:2004	BSI



Scale 1:2

## VENTILATION

- Proprietary ventilation devices can be used on all designs.
- A range of head details available including large outerframe, head extension and dedicated one piece head vent (see cavity closer for further details).

## PERFORMANCE

### SECURITY

- Choice of multi-point high security locks along with pencil, rebate and flag hinge options.
- Slave door lock options to include shootbolts activated by central handle or top and bottom finger bolts.
- Available to achieve Secured By Design status.

### THERMAL/ACOUSTIC

- No Energy Rating system exists currently for doors (April 2011) although a scheme is expected to be introduced during summer 2011.
- 'U' value simulations have been carried out to ensure the revised Building Regulations of October 1st 2010 requiring a minimum 'U' value of 1.8 W/m<sup>2</sup>K (1.6 W/m<sup>2</sup>K in Scotland) are met. Further detailed simulations are being carried out and added to our already comprehensive portfolio.

## GENERAL FEATURES



# PRODUCT RANGE - PATIO DOOR



## REINFORCING

- Range of aluminium and galvanised steel reinforcements.

## FINISHES

- Warm white and brilliant white, on non lead PVC-u.
- Range of solid colour and woodgrain foils.

## GLAZING

- 28mm double glazed units.
- Astrical, Georgian bars in 20mm and 28mm widths.

## ANCILLARIES

- Comprehensive range of add-ons, couplers, corner posts, bay poles available to suit any installation.

## HARDWARE

- Full depth eurogroove in sash.

## FEATURES

### FRAME OFFERING

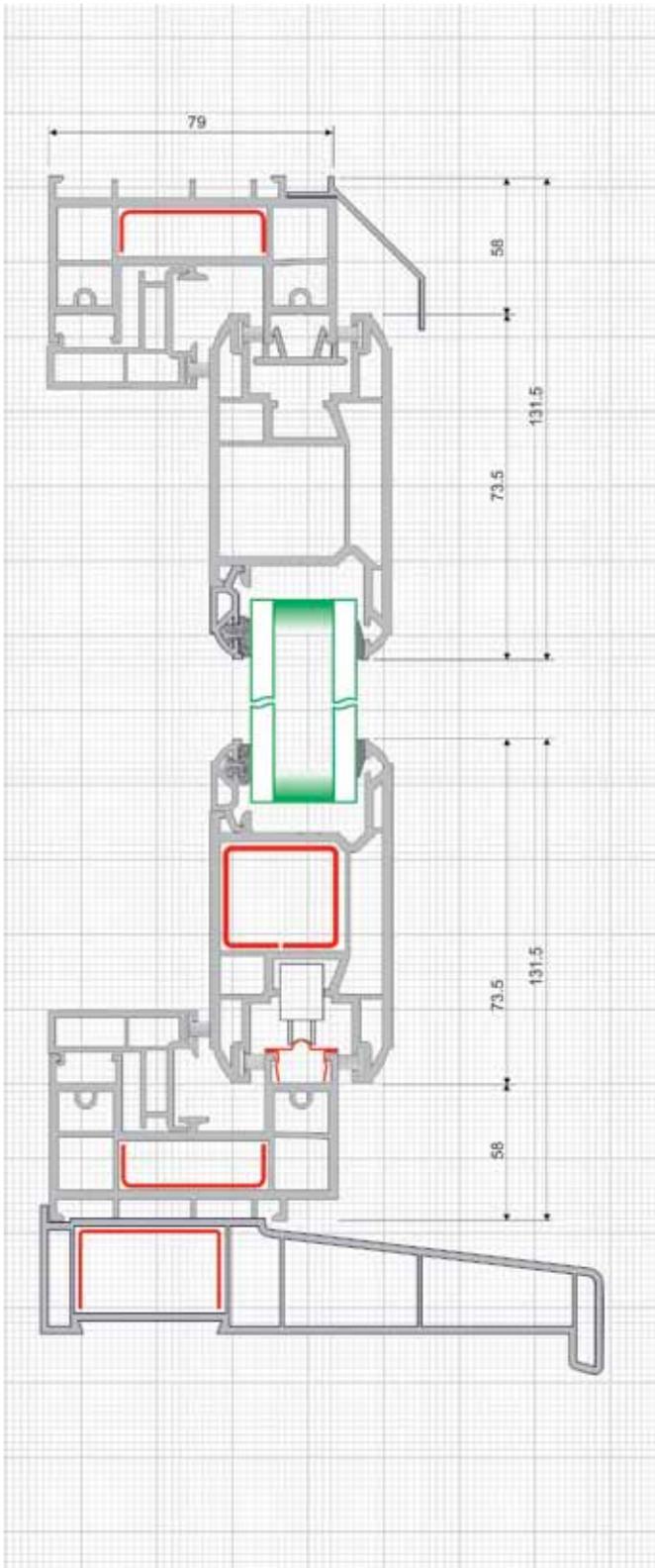
- Dedicated outerframe height of 46mm.
- Sash heights of 95mm.
- Aluminium low threshold cill height of 27 mm.
- Dedicated midrail accepts letterboxes.
- All sections available featured and bevelled.

### WEATHERSEALS

- Range of fin-woolpile seal and Q-Lon gasket to all glazing beads.

## TEST RESULTS

Frame Type	Size	Air Permeability	Water Tightness	Wind Resistance	Standard	Accreditation Body
2 pane external slider	2400 x 2100	600Pa	200Pa	900Pa	BS6375-1:2004	BBA
2 pane internal slider	2400 x 2100	300Pa	150Pa	900Pa	BS6375-1:2004	BBA



Scale 1:2

## GENERAL FEATURES



## THERMAL/ACOUSTIC

- No Energy Rating system exists currently for doors (April 2011) although a scheme is expected to be introduced during summer 2011.
- 'U' value simulations have been carried out to ensure the revised Building Regulations of October 1st 2010 are met. Further detailed simulations are being carried out and added to our already comprehensive portfolio.

# PRODUCT RANGE - BI-FOLD DOOR



## FEATURES

### FRAME OFFERING

- Outerframe height of 68mm.
- Dedicated aluminium one-piece cill and track with PVC-u frame, height of 106mm.
- Sash heights of 116mm with aluminium sash adapters to hinge fixings.
- Choice of fully featured or bevelled.
- 2, 3, 4, 5 and 6 pane options with single and multi-opening combinations.

### WEATHERSEALS

- High performance Q-Lon gasket supplied in all mainframe sections.

### REINFORCING

- Galvanised steel sash and frame reinforcement.

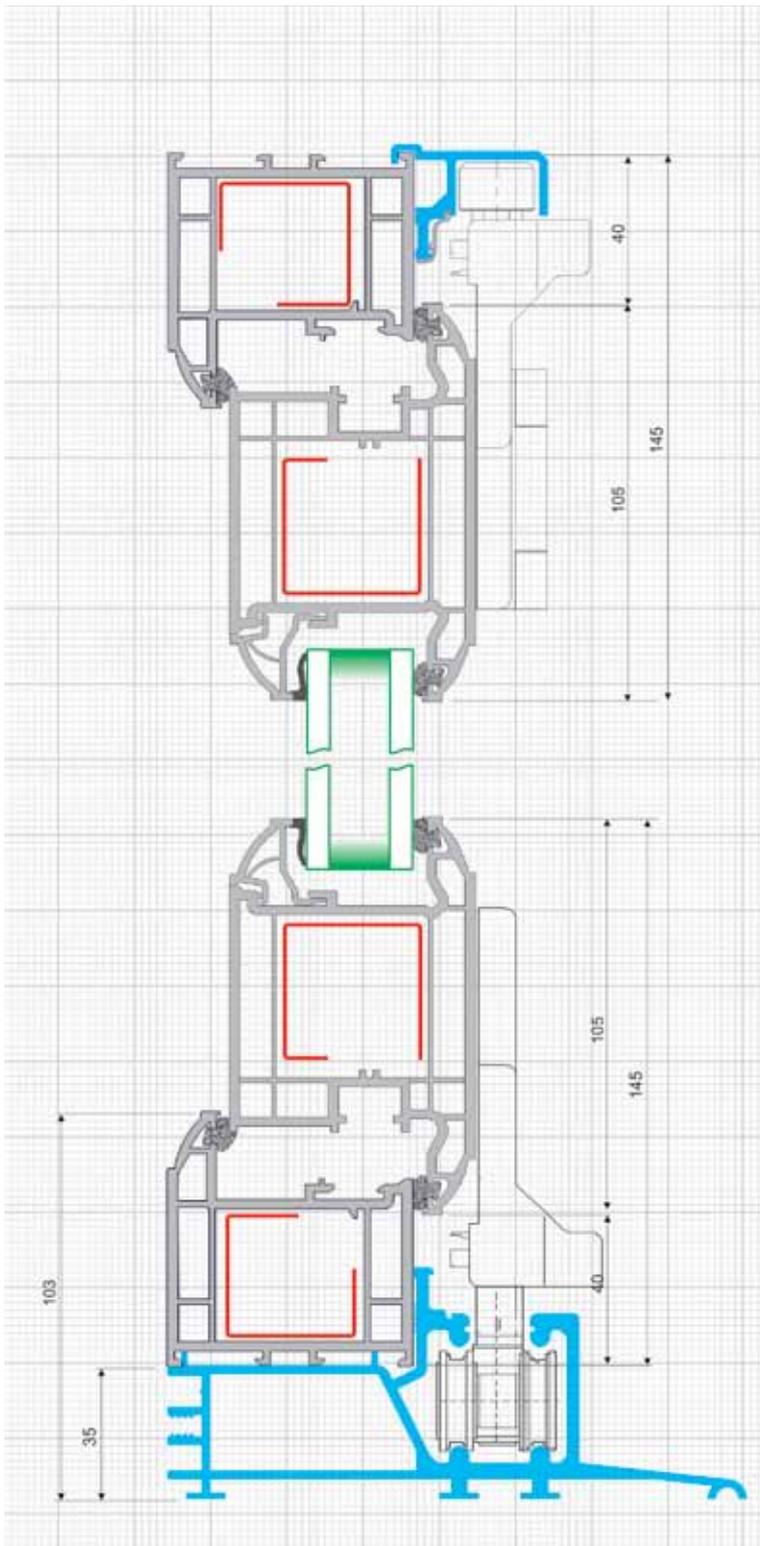
## FINISHES

- Warm white and brilliant white, on non lead PVC-u.
- Range of solid colour and woodgrain foils.

## GLAZING

- Choice of 3 glazing thicknesses - 24mm and 28mm double glazed units and 36mm triple glazed.
- Astrical, Georgian bars in 20mm and 28mm widths.





Scale 1:2

## ANCILLARIES

- A comprehensive range of ancillaries, including add-ons, corner posts and couplers to suit any application.

## HARDWARE

- Full depth eurogroove to all sashes, accepting various multi-point and perimeter locks.
- Dedicated hinge and roller sets to suit required opening combinations.

## VENTILATION

- Proprietary ventilation devices can be used on all designs.
- A range of head details available including large outerframe, head extension and dedicated one piece head vent (see cavity closer for further details).

## PERFORMANCE

### THERMAL/ACOUSTIC

- No Energy Rating system exists currently for doors (April 2011) although a scheme is expected to be introduced during summer 2011.
- 'U' value simulations have been carried out to ensure the revised Building Regulations of October 1st 2010 are met. Further detailed simulations are being carried out and added to our already comprehensive portfolio.

## GENERAL FEATURES



# PRODUCT RANGE - REVERSIBLE



## FEATURES

### FRAME OFFERING

- Choice of outerframe heights of 56mm and 68mm.
- Choice of 2 transoms, 72mm and 86mm.
- Dedicated sash and half frame section for all openers.
- Available with featured and bevelled frames and transoms.

### WEATHERSEALS

- High performance Q-Lon gasket supplied in all mainframe sections.

### REINFORCING

- Galvanised steel range to suit topography requirements.
- Aluminium range for mechanical joint requirements.
- Range of thermal reinforcements for higher 'U' value and ERP requirements.
- All reinforcements are designed to achieve required security and weathering specifications.

## FINISHES

- Warm white and brilliant white, on non lead PVC-u.
- Range of solid colour and woodgrain foils.

## GLAZING

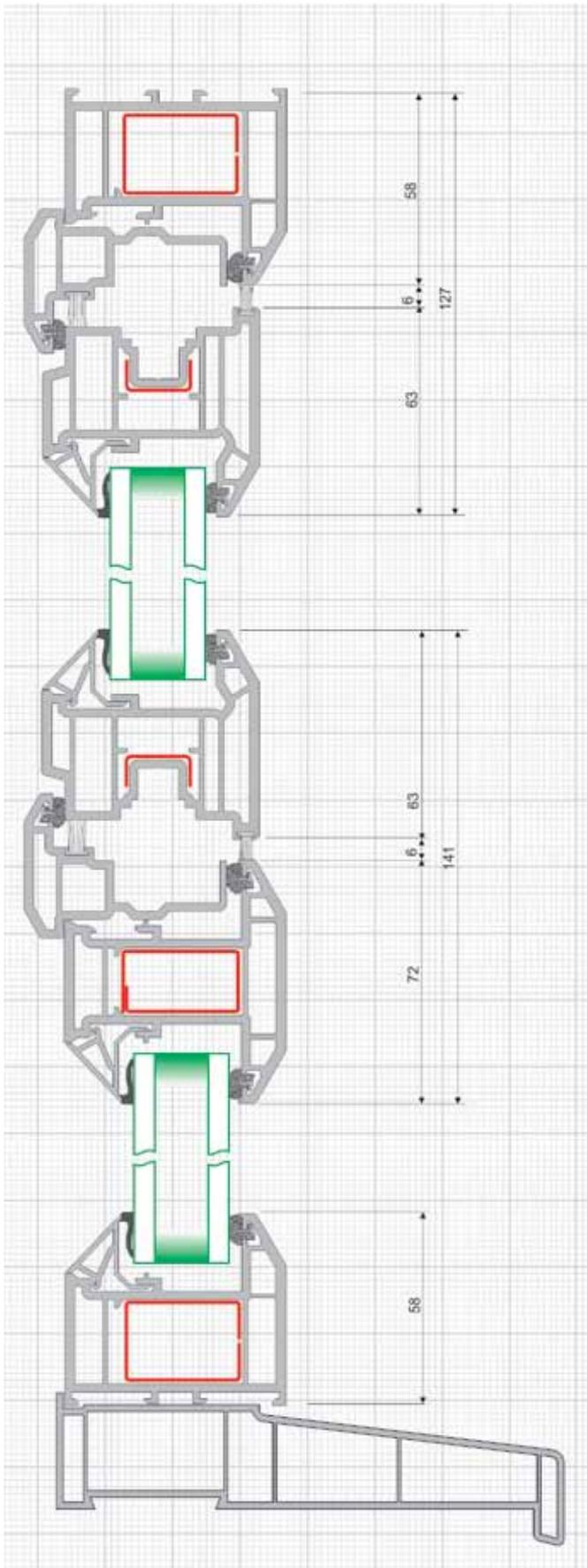
- Choice of 3 glazing thicknesses - 24mm, 28mm double glazed units and 36mm triple glazed.
- Astrical, Georgian bars in 20mm and 28mm widths.

## ANCILLARIES

- Comprehensive range of add-ons, couplers, corner posts, bay poles available to suit any installation.
- Mock horns available, mechanically jointed for traditional aesthetics.

## HARDWARE

- Full depth eurogroove to all sashes and capability of incorporating hinges to suit all topography.



Scale 1:2

## VENTILATION

- Proprietary ventilation devices can be used on all designs.
- A range of head details available including large outerframe, head extension and dedicated one piece head vent (see cavity closer for further details).

## THERMAL/ACOUSTIC

- No Thermal or acoustic testing/simulation have been carried out to date, plans are in place to rectify this.

## PERFORMANCE

### SECURITY

- Range of multi-point locks available to suit required level of security including Secured By Design.
- Comprehensive range of bespoke reversible hinges to all sash sizes.

Our reversible window system will be launched Quarter 4 2011.

Competence product testing will be completed, including Secured By Design and BBA.

Our fully reversible window is designed to be manufactured with casement and tilt & turn side light combinations, making it the most versatile system on the market.

## GENERAL FEATURES



# PRODUCT RANGE - CAVITY CLOSER

A comprehensive range of Cavity Closers and an overhead vent that provides an accurate template during construction, insulates the cavity and ensures efficient window installation.

## FEATURES

### FRAME OFFERING

- Suitable for cavity widths of 75mm, 90mm, 100mm, 115mm, 125mm and 150mm.
- All widths suitable for flush and check reveal applications.
- One piece overhead vent section with deep inner reveal to suit all head construction details and recessed outer grill.

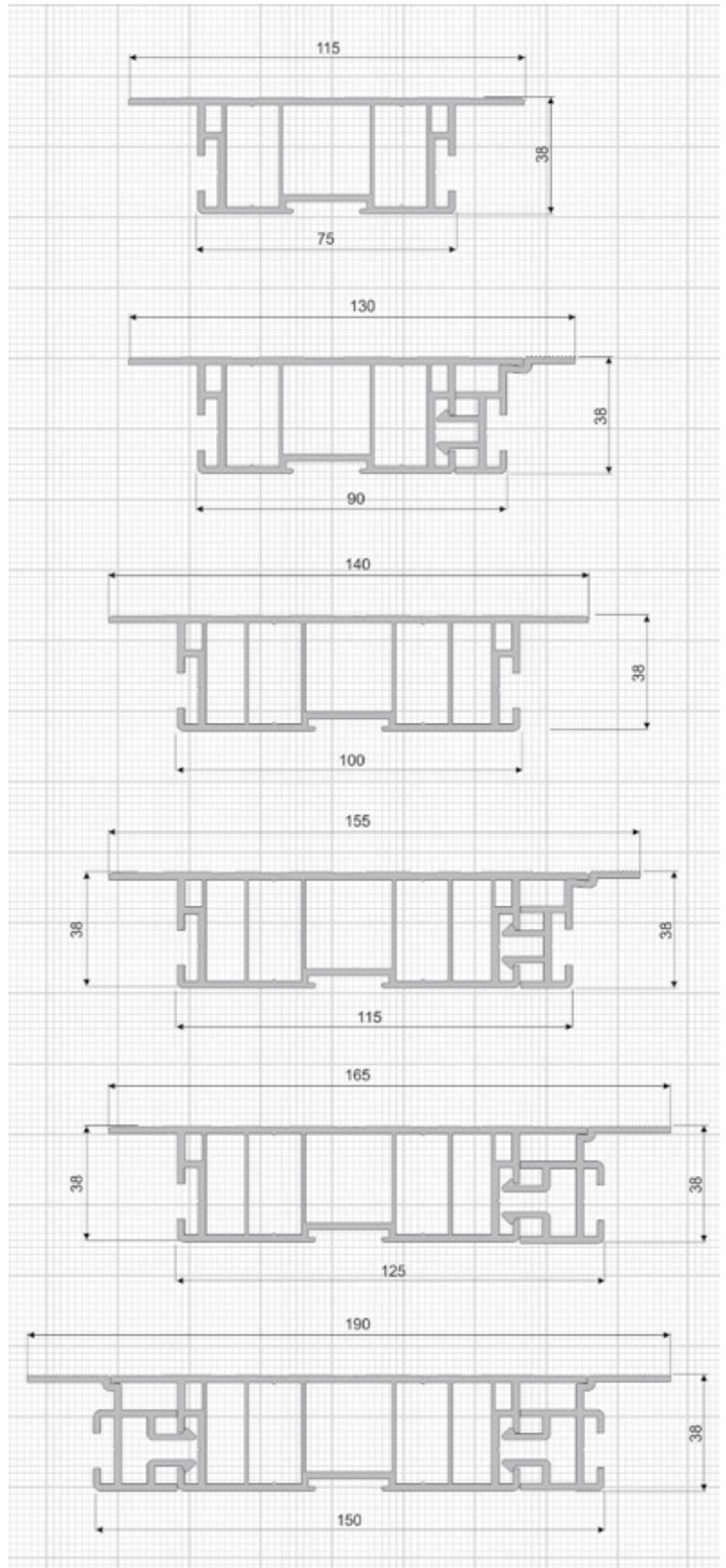
### FINISHES

- 100% recycled material, no finish required.

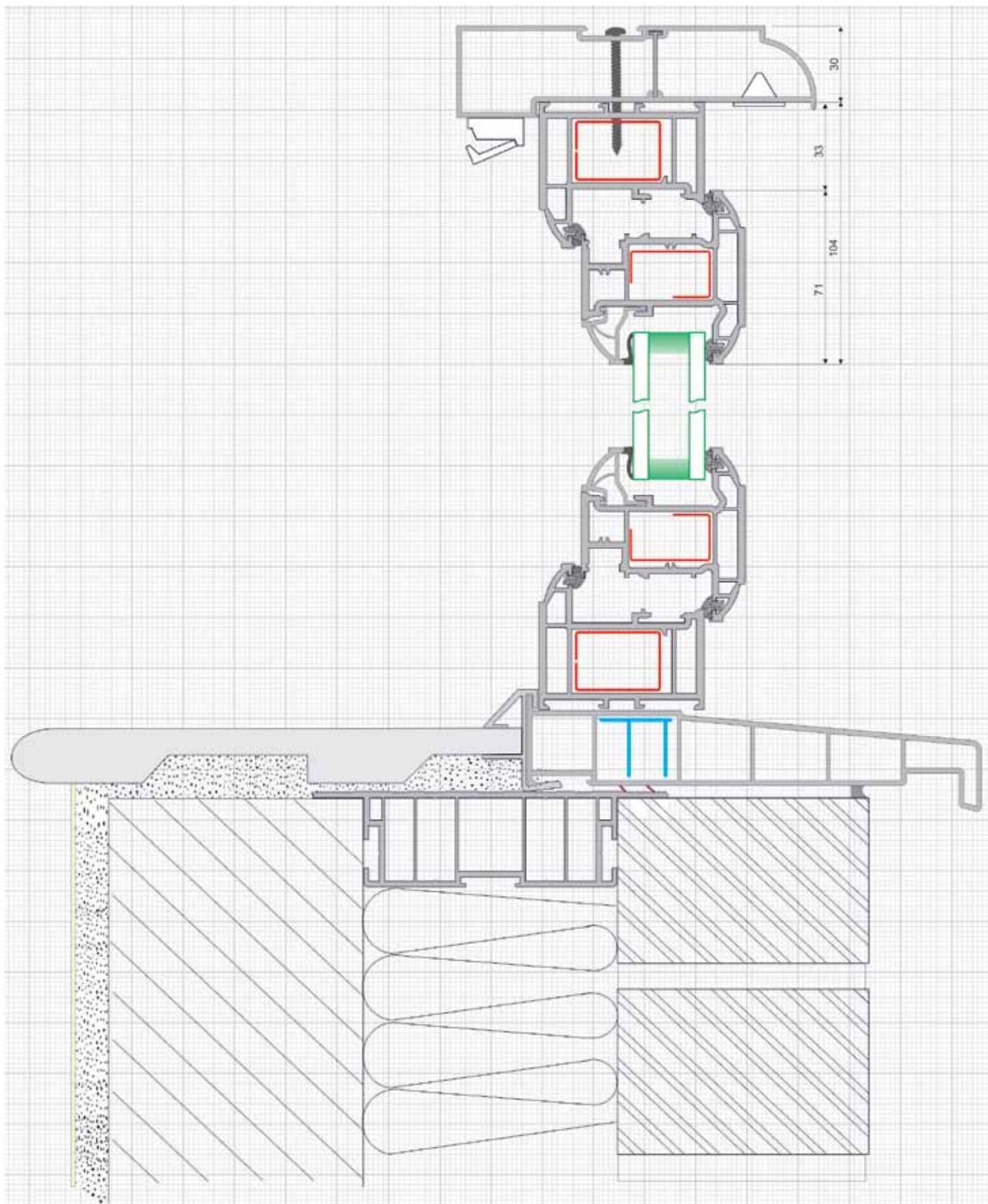


The Duraframe Cavity Closer system benefits from achieving BBA certification (cert ref. 04/4092). Comprehensive test data can be found in the certificate obtainable from either Duraflex or via an online search [www.bbacerts.co.uk](http://www.bbacerts.co.uk)

## GENERAL FEATURES



# PRODUCT RANGE - DURAVENT



Scale 1:2

# PRODUCT RANGE - STABLE DOOR

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## FEATURES

### FRAME OFFERING

- Dedicated 68mm outerframe with options of 46mm for low PVC-u threshold.
- Choice of 3 transom heights - 63mm, 72mm and 86mm.
- Choice of open in and open out sashes.
- Available fully featured or bevelled.
- Available fully welded or mechanically jointed transoms.
- Choice of 2 aluminium low thresholds, disability at 13mm high and refurb with access ramps at 24mm high.
- Dedicated sash adapter with Q-Lon gasket to provide excellent weather performance.

### WEATHERSEALS

- High performance Q-Lon gasket supplied in all mainframe sections.

### REINFORCING

- Galvanised steel range to suit topography requirements.
- Galvanised steel lock prep steel.
- Aluminium range for mechanical joints.
- All reinforcements are designed to achieve required security and weathering requirements.

### GLAZING

- Choice of 3 glazing thicknesses - 24mm, 28mm double glazed units and 36mm triple glazed.
- Astrical, Georgian bars in 20mm and 28mm widths.

### ANCILLARIES

- Comprehensive range of add-ons, couplers, corner posts, bay poles available to suit any installation.

### HARDWARE

- Fully depth eurogroove, accept comprehensive range of multi-point locks.
- Range of knuckle, rebate and flag hinges available.

### VENTILATION

- Proprietary ventilation devices can be used on all designs.
- A range of head details available including large outerframe, head extension and dedicated one piece head vent (see cavity closer for further details).

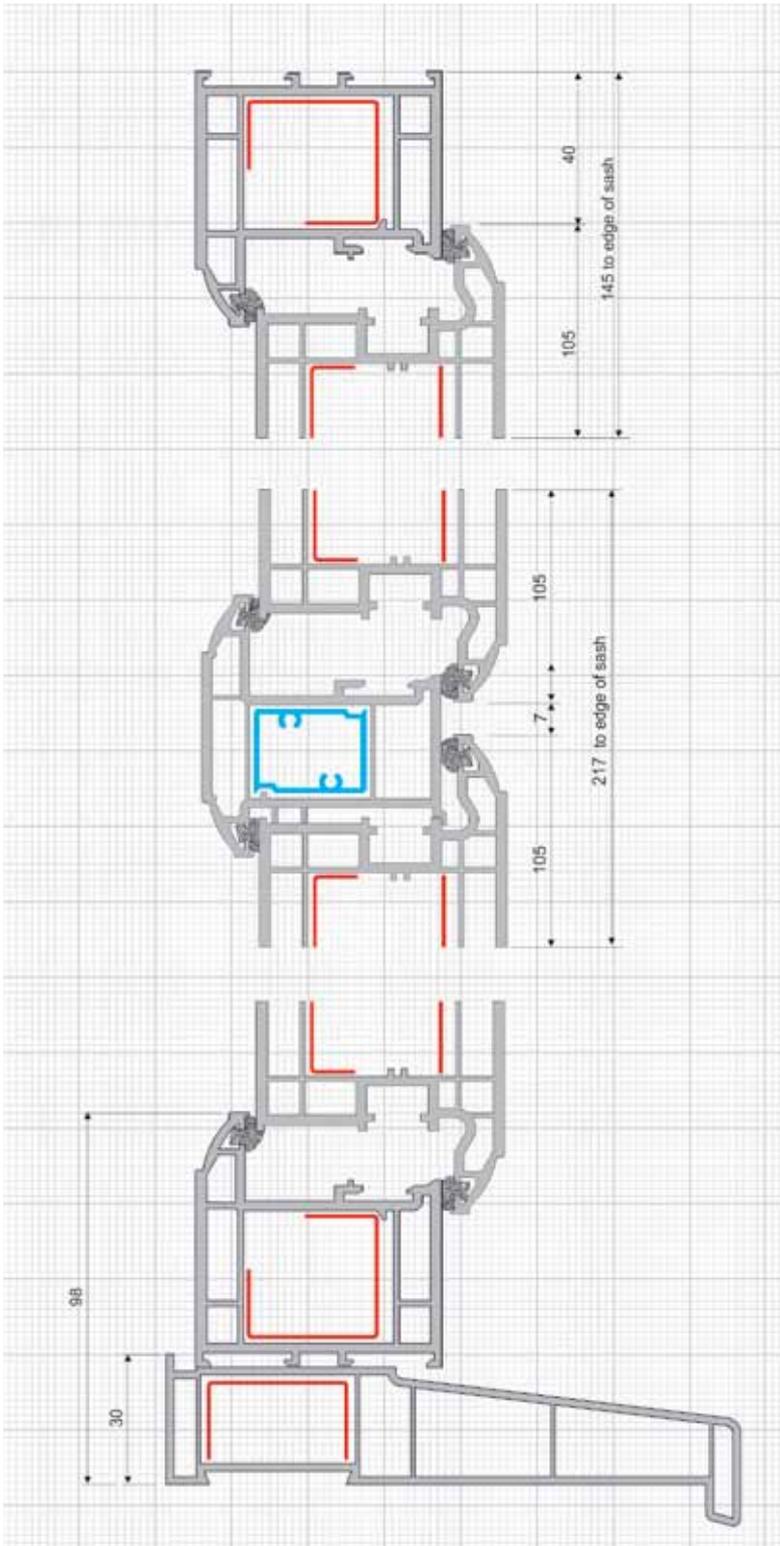
## PERFORMANCE

### SECURITY

- Choice of multi-point high security locks along with pencil, rebate and flag hinge options.
- Available to achieve Secured By Design status.

### THERMAL/ACOUSTIC

- No Energy Rating system exists currently for doors (April 2011) although a scheme is expected to be introduced during summer 2011.
- 'U' value simulations have been carried out to ensure the revised Building Regulations of October 1st 2010 are met. Further detailed simulations are being carried out and added to our already comprehensive portfolio.



Scale 1:2

## GENERAL FEATURES



# PRODUCT RANGE - COMPOSITE DOOR

## FEATURES

### FRAME OFFERING

- Dedicated composite door outerframe height of 68mm with matching sidelight frame.
- 88mm mullion for intergrated side and top light options.
- Choice of 2 sidelight transom/midrail heights of 72mm and 116mm.
- Aluminium disability low threshold with centre flipper seal.
- All sections available fully featured.

### WEATHERSEALS

- Outerframes incorporate a triple sealing system which includes the Q-Lon flipper gasket for improved compression and weathering.
- Aluminium low threshold incorporating double sealing system.

### REINFORCEMENT

- Dedicated galvanised steel and aluminium reinforcements.

### FINISHES

- Framing predominantly white, for use with solid coloured slabs. Available in woodgrain finishes to match woodgrain effect door slabs.

### GLAZING

- Fixed lights can be glazed with 24mm and 28mm unit widths, dedicated beads for glazing 44m slabs.

### ANCILLARIES

- A comprehensive range of ancillaries, including add-ons, corner posts and couplers.

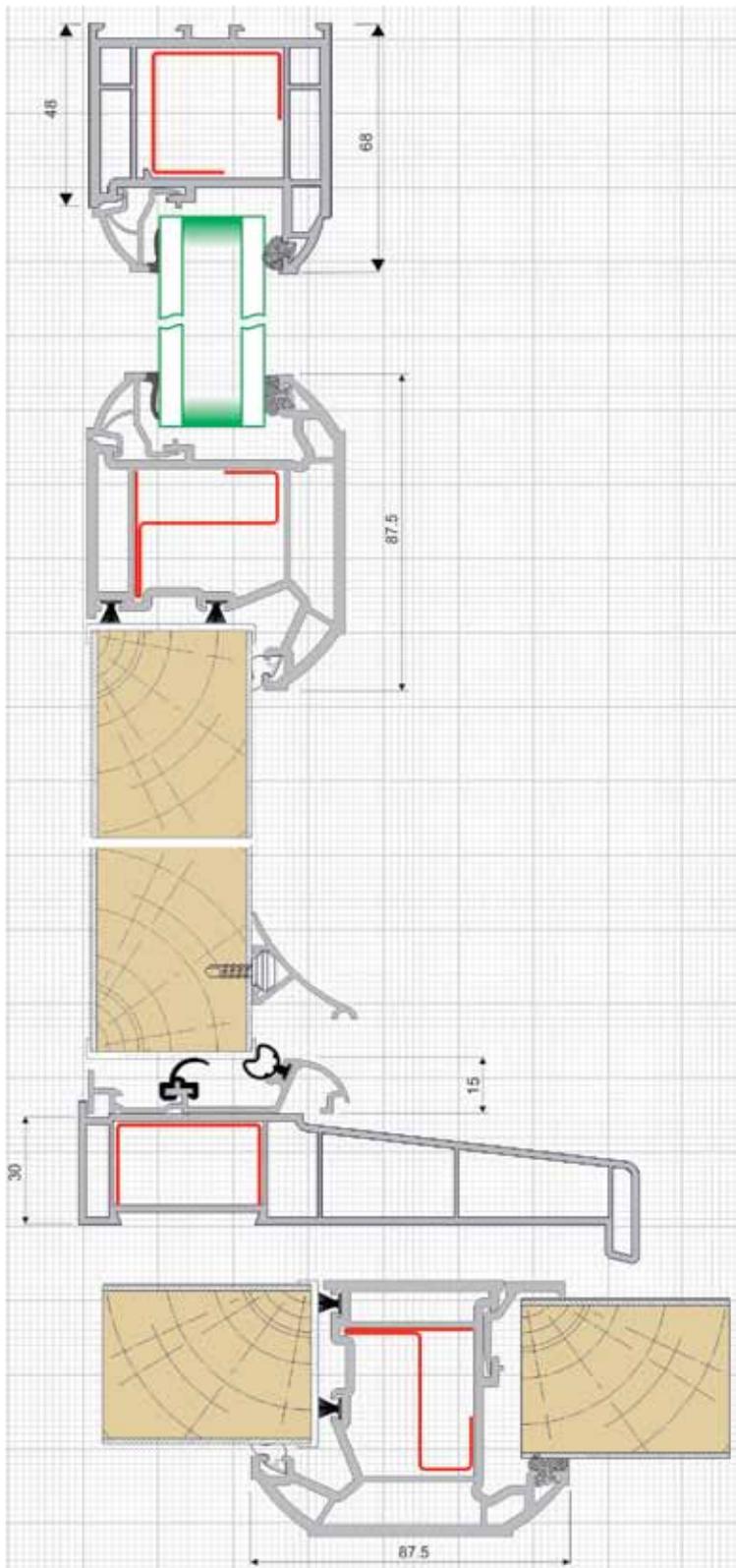


### HARDWARE

- Designed to accept multi-point locks and various hinge types to achieved desired security levels.
- Handles, hinges and letterplates available in white, black, gold and chrome.

### VENTILATION

- Proprietary ventilation devices can be used on all designs.
- A range of head details available including head extensions and one piece head vent with facility of recessed outer grill.



Scale 1:2

## GENERAL FEATURES



## PERFORMANCE

### SECURITY

- Multi-point high security locks available with hook and deadbolt locking to achieve Secured By Design status.

### THERMAL/ACOUSTIC

- No Energy Rating system exists currently for doors (April 2011) although a scheme is expected to be introduced during summer 2011.
- 'U' value simulations have been carried out to ensure the revised Building Regulations of October 1st 2010 are met. Further detailed simulations are being carried out and added to our already comprehensive portfolio.



# PRODUCT RANGE - HARDWARE



## PADDOCK LOCK MASTER DOOR LOCK

The UK's best selling multi-point locking system, available to suit a wide range of residential door applications.

### PRE-COMPRESSION ROLLER SYSTEM

Paddock's patented pre-compression locking system ensures smooth and effortless operation, by compressing the door against the weather seal before engaging its security locking points.

### VERSATILITY

Available with a range of specialist security locking points including hooks, deadbolts and Paddock's unique hook and anti-jimmy pin, combination locking point, combined with roller cam compression points and optional vertical shootbolts, the Lockmaster is designed to be the lock of choice for almost every residential door application.

### STRIKER

Fully adjustable roller housings ensure ease of installation and extended service life. Metal hooks housing provide extended service life.

### PRODUCT OVERVIEW

- 10 point locking system for maximum security and peace of mind
- 4 pre-compression rollers allowing door to seal prior to hooks engaging for smooth operation
- 3 opposing steel hooks to maximise strength
- 2 anti-lift bolts preventing door lock being dislodged from keeps
- 1 Centre latch for ease of day to day operation, incorporating dead-lock action when bolts and locks are engaged for added security
- Unique rebate door hinge providing security with traditional styling
- 1 piece steel keep for enhanced security
- Trivalent silver finish for extended service life
- Unique ergonomic modern handle design
- Various locking options available
- One-piece and multi piece keep options
- Britain's best selling multi-point door lock
- Packers to profile relate keeps
- High security shootbolt facility
- Master/Slave door lock options
- Dedicated french door solution



## CASEMENT LOCKING SYSTEMS

### PRODUCT OVERVIEW

A wide range of locking systems to suit new build, commercial and domestic applications. All products are manufactured to ensure quality, reliability and security

- Yale multi-point security shootbolt
- Encloser “rail lock” with twin opposing cams
- Espagnolette multi-point lock.

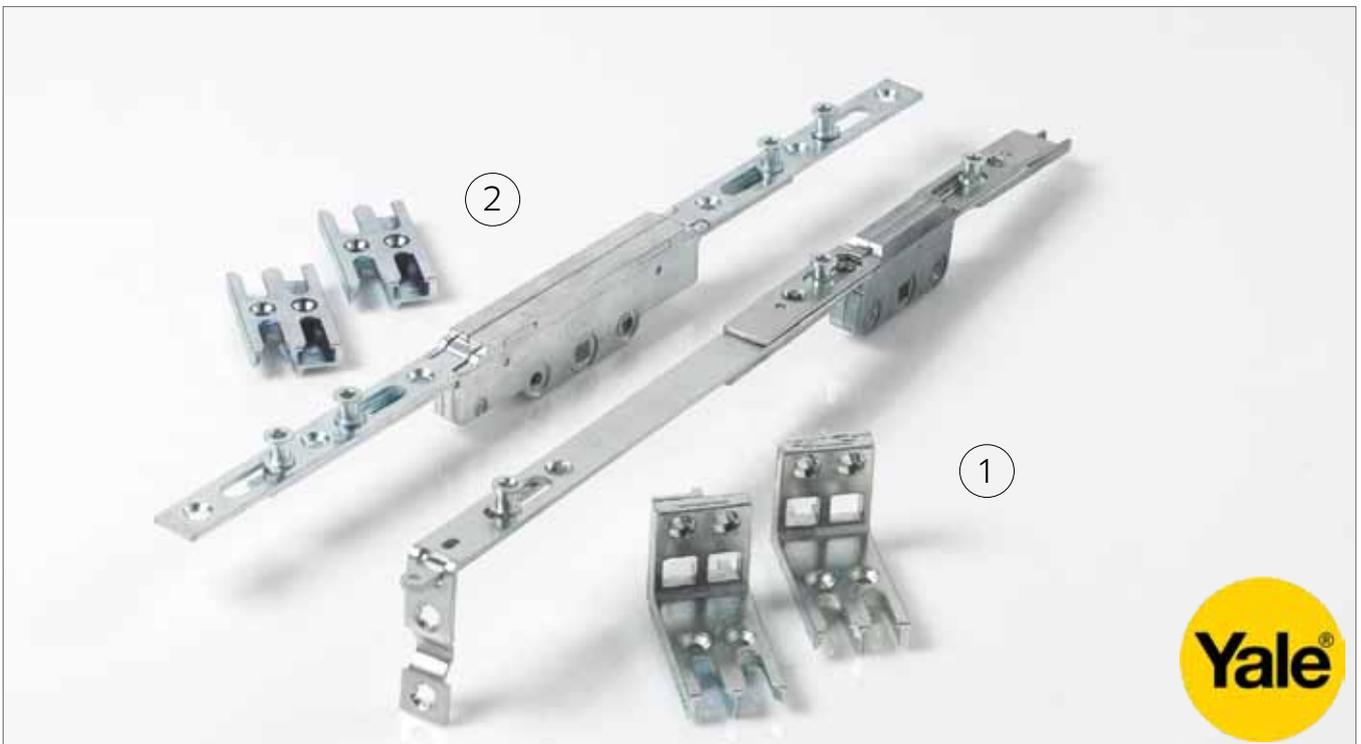
### 1. YALE SHOOTBOLT

High security shootbolt engineered to provide versatility, reliability and the most stringent security applications.

2 centre opposing cams together with cam and shootbolt to both corners providing a minimum of 6 locking points to all windows. Cast keeps with night vent facility complete this high security lock offering.

### 2. ENCLOSER

The encloser features a slim gearbox with opposing mushroom cams along the espag rod which “enclose” from both sides into each cast keep for maximum security.



### 3. ESPAGNOLETTE

High performance espagnolette designed with night vent facility and cast keeps. Uniquely designed gearbox provides a smooth operation.

# PRODUCT RANGE - HARDWARE

## HANDLES, HINGES AND LETTERPLATES

The Duraflex range of hardware combines contemporary aesthetics with the best of modern design, available in a wide range of finishes and offering outstanding performance and reliability to both the domestic and commercial markets.

### PRODUCT OVERVIEW

- Residential single and double door handles in lever/lever and lever/pad
- Casement window handles, both in line and cranked
- Tilt and turn handle with two stage locking
- 3D adjustable flag hinges for residential doors
- Letterplate range with four sided seal and built-in draft excluder
- Products supported with 10 year mechanical and 2 year PVD Finish Guarantees.

3D adjustable flag hinge to facilitate optimum fixings. Designed with soft sculptured shape that enhances the overall appearance of the door. Meets requirements of BS PAS024. (+/- 5mm horizontal, +5/-0 vertical and +/- 2mm compression adjustment).



In-line and cranked casement window handle offering outstanding performance and reliability. Features include positive stop location and push to open locking. Designed to suit new build and commercial sectors while still retaining aesthetics and contemporary design.



Lever/lever door handles designed with 32mm wide extended backplate and two twin internal sprugs cassettes to ensure positive and precise locking operation.  
\* 216mm handle centres, top fixing 75mm above grip.



Lever/pad door handle with ergonomically designed grip, with 32mm wide extended backplate and two twin internal sprugs cassettes to ensure positive and precise locking operation.  
\* 216mm handle centres, top fixing 75mm above grip.



Tilt before turn handle to suit domestic and commercial applications. Achieves two-stage key operation which includes tilt only facility to control ventilation, along with fully locked position.



Strong, elegant and stylish letterplate suitable for PVC and composite doors. Conforms to BS EN13724 regarding mail size, designed with four sided external flap seal and brush pile draught excluder. Flaps and main body manufactured from precision zinc alloy for high performance coating and incorporates spring steel mechanisms.



# CONTACT US

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