

Technical Product Guide



Welcome

to The Formula One Range™ Technical Product Guide.

We hope that this will help you to make an informed decision based on the products we offer.


THE CONCEPT

The Concept of our Windows & Doors has been derived from over a decade of manufacturing, coupled with our Research and Development Team having over 25 years experience in the manufacture of the best quality products in the industry.

The products we use are chosen for their quality, design and sustainability, this is why we believe that you will be totally happy with your purchase.

Our authorised installers and dealership are chosen for their integrity and honesty and we know that you will be looked after from start to finish. The requirements for durability, sustainability and maintainability, is why our installers and dealerships choose our products.

Our Authorised Installers tailor the price to suit our product, unlike other installers that may tailor any products to fit the price. We recommend that you always ask to see a sample of the product you expect to receive.



Attention
to detail

UK Manufacturing coupled with German Innovation & Design

Fenster mit Deutsch Technik und design

A Winning Formula

The Formula One range is manufactured using a fully integrated profile suite. The fully sculptured and asymmetric profiles with matching glazing bead result in a range of windows and doors that are attractive in appearance with classic styling and curve appeal.

HIGH IMPACT, HIGH PERFORMANCE PVCU...

All Frames are manufactured using High Impact, high performance PVCu conforming to BS EN 12608:2003 this ensures that the profiles are extruded to a defined European Standard of quality and consistency, covering aesthetic appearance, dimensions, colour fastness and strength of welds.

All windows and doors are manufactured to BS7412/BS7413, the specification for PVC-U extruded profiles with heat welded corner joints.

At the heart of the Formula One Range is its' energy efficiency credentials, achieving an 'A, & B' grade energy rating with ease utilising compound steel reinforcements to meet thermal performance whilst maintaining the required structural performance.

WHAT YOU GET..

- > Five chamber, 70mm energy efficient design
- > Internal Glazing Beads for extra security and meets weather tightness standard BS 6375
- > A low-line PCE Co-Extruded Gasket providing outstanding weather performance whilst complementing the elegant sightlines. Severe weather rating for windows and doors openings and glazing is achieved by double seal using TPE (Thermoplastic Elastomer) gaskets, fusion welded at each corner to eliminate shrinkage, to BS 4255-1 and BPF 345/2.
- > Deep drainage furrow
- > Profile thickness for firm hardware anchoring.
- > Profile specific galvanised steel reinforcement to BS EN 10346:2009.
- > Glass units are "Argon" gas filled super spacer, Warm edge technology double glazed units tested to BS EN1279-2& 3 / BS EN 12150.

WINDOWS

Manufactured in accordance with ISO 9001:2008 which is the British Standards Quality Assurance System, and associated security hardware conforms to BS 7950, the specification for enhanced security performance. Our security enhanced windows are also passed by the Association of Chief Police Officers specification Secure by Design. (See windows on pages 2-3)

DOORS

Manufactured to the defined performance and testing assessments of British Standard PAS 23. The doors are also manufactured to the British Standard for Enhanced security PAS 24. Our security enhanced doors are also passed by the Association of Chief Police Officers specification Secure by Design. (See doors on page 4)

FRAMES

Fusion welded and NOT screwed together, which provides better cohesion and corrosion stability.

The main profile depth of 70mm with integrated 5 chambers (front to back) are at the core of the design philosophy. All Outer Frame PVCu walls are approaching 4mm thickness and incorporate 2 chambers either side of the reinforcement chamber which prevents thermal bridging and provides a superb thermal insulation performance. The advanced design features will also allow the system to meet with any potential future requirements of the UK Building Regulations that may well call for more thermally efficient windows.

ENVIRONMENTAL BENEFITS

The windows can be energy rated to an Energy Rating of 'A' which provides a net energy gain of 2KWH/m2/per year to the household.

We operate with due diligence to the environment which makes our products ecologically sound and sustainable with post consumer waste PVC-U being recycled whenever possible.

Main frame profiles are Zinc Calcium Organic lead free.

(See our performance ratings on page 8)

TRICKLE VENTS

Compliance to building document F 2006 and tested in accordance with BS EN 1026:2000& BS EN 1027:2000 weather performance. Independently acoustically tested in accordance with BS EN 20140-10:1992, ISO 140-10:1991.

GLAZING

Tested to BS EN1279-2& 3 / BS EN 12150.

LOCKS

Police preferred specification Secure By Design and exceed the requirements BS EN 1670: 2007.

KEEPS

Police preferred specification Secure By Design and exceed the requirements BS EN 1670: 2007.

EXTERIOR PROFILE

High performance PVCu conforming to BS EN 12608:2003



HINGE

Produced from stainless steel and offer excellent load bearing characteristics and Meet the requirements of BS6375.

SEAL

Provides outstanding weather performance to BS 4255-1 and BPF 345/2.

HANDLE

All handles are die cast for strength and durability.

INTERIOR PROFILE

Internally beaded, high performance PVCu conforming to BS EN 12608:200.



WINDOW LOCKS

Window locks are high security and compliant with the police preferred specification Secure By Design. They have multipoint locking with facilities for back- ground ventilation and have been tested to withstand 50,000 operation cycles.

SHOOTBOLTS

Excalibur plus locks include Twin Die Cast clawbolts, large steel mushroom espagnolette cams and double high strength steel shootbolts. Tested to over 100,000 operations of opening and closing the window. Should you also happen to leave your window open in poor weather, Excalibur Plus has been successfully tested to over 240 hours of intense salt spray based corrosion, exceeding the requirements BS EN 1670: 2007.

TWIN CAM SECURITY LOCKS

The gearbox mechanism drives opposable mushroom cams together, meaning that if the window is forcibly attacked the cams pull in towards each other in the zinc alloy keep to increase resistance to "jimmying" in both directions.

Night ventilation lockable as standard.

OPTIONAL SECURITY

Optional anti-jimmy steel excluders can also be fitted to the hinge side of casement windows.

WINDOW HINGES

All window hinges are manufactured here in the UK and are produced from stainless steel and offer excellent load bearing characteristics, with resistance to fatigue and corrosion. The range has options for egress, easy clean and opening restriction to conform to building regulations where appropriate. Adjustable friction and security spikes into metal keeps (not plastic).

Bedroom casement windows will be fitted with special "Egress" style hinges, to provide an adequate means of escape for fire in accordance with UK Building Regulations.

Produced from stainless steel and offer excellent load bearing characteristics and Meet the requirements of BS6375.

WINDOW HANDLES

Window handles are key locking with operational crank design for ease of operation with a closing contact stop to stop override.
(See handle options on page 7)





HINGES
Weight loading and restrictive to the performance requirements of PAS023 / PAS024.



GLAZING
Tested to BS EN1279-2& 3 / BS EN 12150.

LOCKS
Multi point extra throw clawbolts and meet the performance requirements of PAS023/PAS024.

HANDLE
All handles are die cast for strength and durability.



PROFILE
Internally beaded, high performance PVCu conforming to BS EN 12608:200.

KEEPS
Police preferred specification Secure By Design and exceed the requirements of PAS023 / PAS024.

DOOR LOCKS
Door locks include 2 deep throw stainless steel hook bolts, 2 deep throw deadbolts, centre latching facility with centre hook and 2 roller cams interspaced along the whole length of the lock with a stainless steel faceplate.

Combination locking provides improved security, weather-proofing and shuts out unwanted visitors.

All locate into high tensile metal keeps.

DOOR HANDLES
Door handles are corrosion resistant with multipoint locking controlled cylinder. (See handle options on page 7)



PATIO DOORS
Patio doors include a high security anti jacking system with a 6 point hook lock. The slider is fitted with double rollers and runs on a stainless steel easy glide track. The system also incorporates double wool piling for improved draught proofing.



Options

HANDLES
All handles are die cast for strength and durability and are available in a range of colours. The hard wearing and decorative surface finish is produced using advanced coating technology known as Physical Vapour Disposition (PVD), which offers improved levels of corrosion and scratch resistance. Monkey Tail handles available in black, gold, chrome and smoked chrome.

Window handle colour options:



Door handle colour options:



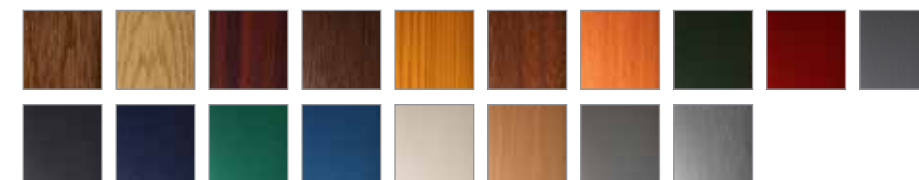
DOOR HINGES
Doors are fitted with fully adjustable 3D hinges that carry an impressive weight loading capability. The hinges exceed the performance requirements of PAS023/PAS024.

Door hinge colour options:



FINISHES
PVC-u profiles are available in White, Rosewood, Black and Golden Oak as standard and can be produced to give a choice of internal and external finishes. Many other colours are also available to order, including White, Mahogany, Cream, Green, Red, Blue, Walnut, Birch, Natural Oak and many more in foiled finishes.

Other profile colour options:



Performance

ENERGY RATINGS EXPLAINED

All our windows are rated for their energy efficiency. Many people will be familiar with the ratings that are given to white goods such as fridges and washing machines, which are graded between A – G, depending on their environmental efficiency – A being the best and most efficient. What is less known is that the same system can be applied to windows and doors also!

RATING VALUE (A – G)

This is the most recognisable and visible element of the label, showing clearly the products energy efficiency in coloured bands, from the dark green A (the best rating) through to the dark red G (the lowest rating and therefore the least efficient). Obviously, products valued at "A" are the most preferable. Building regulations currently stipulate a minimum requirement of "C" (or a U value of 1.6 w/m2K).

THERMAL TRANSMITTANCE (U VALUE)

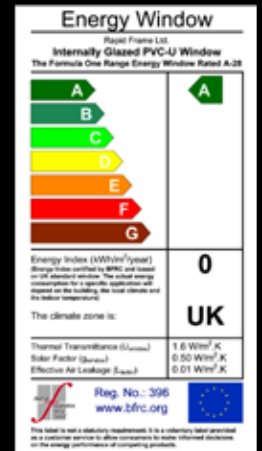
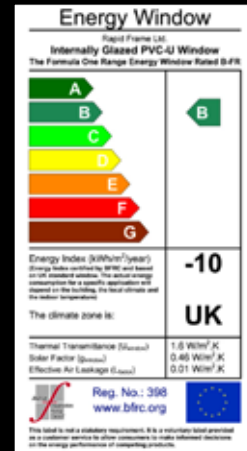
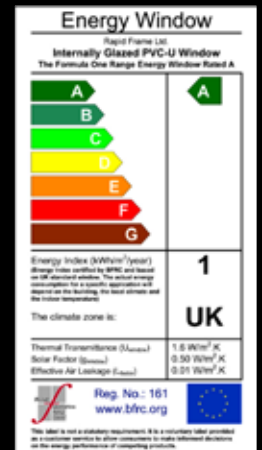
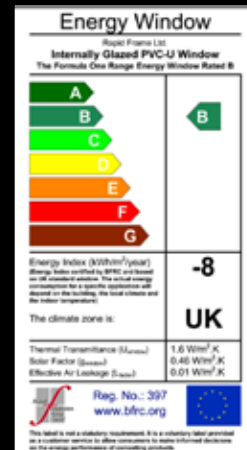
This indicates the amount of heat energy transmitted through a door or window, set out in watts per metre² per degree Kelvin. This is a contributing factor to the Rating Value above. The lower the U-Value, the less energy is lost, and the more efficient and economical the unit.

SOLAR FACTOR (G-VALUE)

This represents the amount of solar energy that is gained through the window. The higher the value, the more energy gained and the greater the saving.

EFFECTIVE AIR LEAKAGE (L-VALUE)

This is the amount of air that permeates through the window weather seals, also a contributing factor to the Rating Value above. Modern high performance windows will have a low air leakage rate.



BS 7950/7412
Licence No.
KM569233



ISO 9001:2008
Licence No.
FM 513636



BS 7412
Licence No.
KM 569232



Police Preferred Specification



Certification mark



Selected products supplied and manufactured by Rapid Frame Limited are certified to the above accreditations.

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