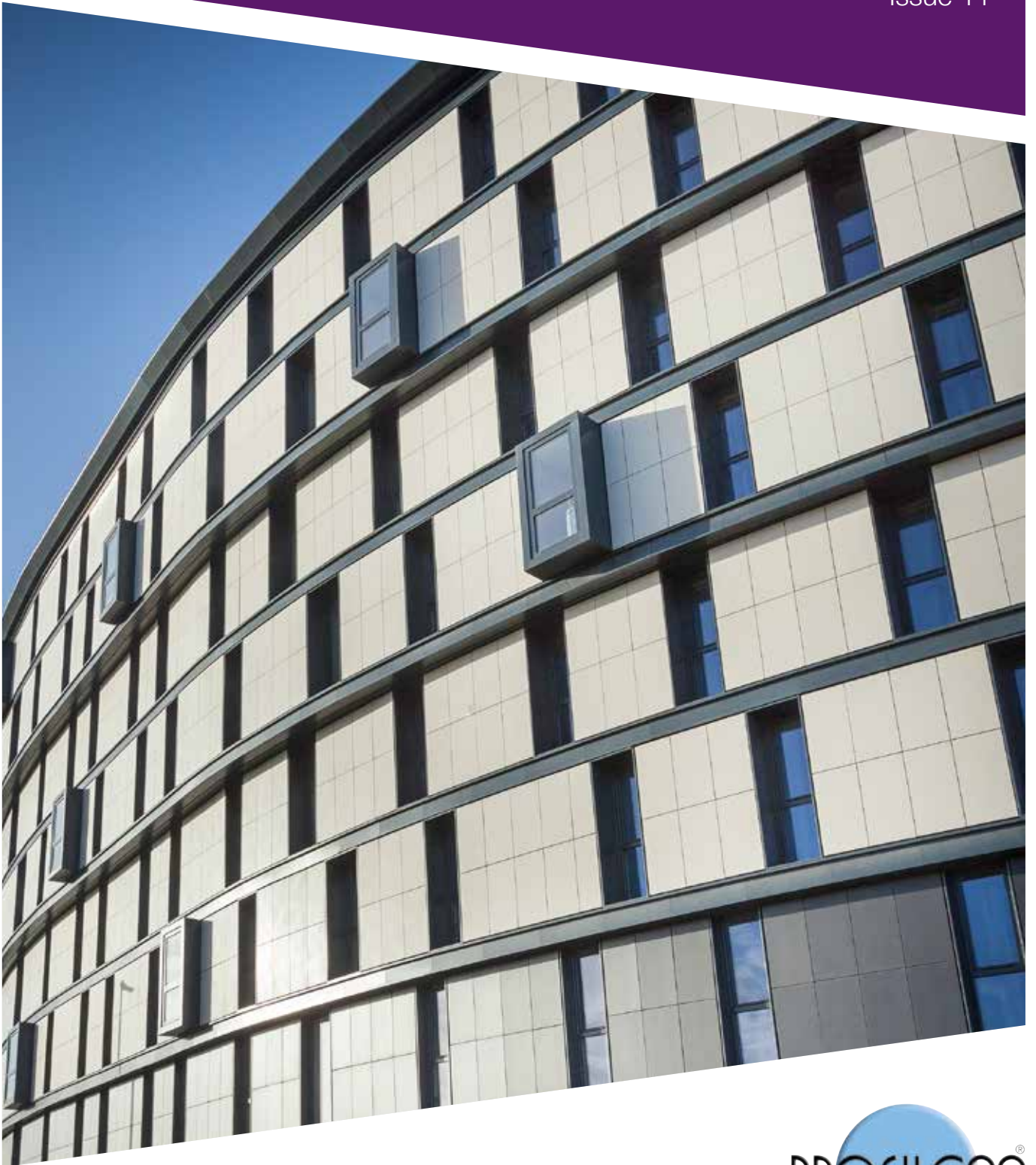


SPECIFICATION GUIDE

Issue 11



THE BEST WINDOWS ARE MADE FROM



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This Guide explains our range of profiles and hardware in detail and provides an overview of the services we provide to architects and specifiers alike. A comprehensive study, it's been designed to enable you to access all the information you could ever need to specify the right solution.

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Why specify Profile 22?

Profile 22 is one of the most versatile and proven window and door systems on the market. Leading the market in PVC-U window and doors, Profile 22 boasts more than 40 years' experience in both new-build and refurbishment. Whatever your project, Profile 22 can provide a combination of PVC-U profile and hardware to meet your needs.

This Guide explains our range of profiles and hardware in detail and provides an overview of the services we provide to architects and specifiers alike. A comprehensive study, it's been designed to enable you to access all the information you could ever need to specify the right solution.

Whilst every effort has been made to ensure this document is technically accurate, changes to legislation occur that may affect the specification of our products. All information is correct at the time of publication. However if you are in doubt please contact our technical department who will be happy to advise, or alternatively consult the relevant websites for up-to-date information concerning current Building Regulations.

About Profile 22

With Profile 22 you are in safe hands. We possess the UK's most widely specified PVC-U window and door system, having been used for projects across the country for almost every Local Authority, Registered Provider and House Builder. Whatever your project, we have a product range to suit, backed up by unrivalled technical support, knowledge of contracts, government initiatives and industry expertise.

To make product specification even easier, you will find all of our products listed on RIBA nbsPlus, ribaproductselector.com and bimstore.co.uk

RIBA 



[bimstore.co.uk](https://www.bimstore.co.uk)

At the forefront of
the industry

THE BEST WINDOWS ARE MADE FROM 



The Profile 22 System

Profile 22 is unique in that it is a genuinely complete system. What really makes us different to other systems companies is that we can offer a 'complete suite' of specially designed window and door hardware under our successful Safeware brand. So by specifying Profile 22, you can deal with one company for the whole window system, including PVC-U profiles as well as hardware.

Our team has extensive construction industry experience, from engineering skills to actually fitting windows for a living. Through continuous improvement and adapting our products to meet future market and regulation demands, Profile 22 launched four new products in 2016 including two new marketing leading systems – Optima.

Profile 22 is a comprehensive PVC-U window and door system comprising the following three main product ranges:

Optima
CHAMFERED SYSTEM
Optima-C is a fully chamfered 70mm depth slim, modern design

Optima
SCULPTURED SYSTEM
Optima-S is a fully sculptured 70mm depth system with a distinctive decorative appearance

Optima
FLUSH CASEMENT SYSTEM
Optima-F is a 70mm system offering an attractive flush external finish

Profile 22 at a Glance

- Based in Telford in a 350,000 sq ft factory and head office.
- Working with PVC-U windows since 1976.
- 52,000 frames made using Profile 22 every week.
- Part of the £300m Epwin Group Plc.
- Dedicated specification team.
- A nationwide network of certified Approved Window Contractors manufacturing and installing high quality PVC-U windows and doors.

Hardware

We offer security locking systems and other associated window and door hardware to make product specification simple, so you only have to deal with one company.

This is possibly why we are the supplier of choice for window and door systems in the UK.

The Safeware range of hardware is unique to Profile 22.

Designed especially for our systems, it covers our complete range of window and door products and provides you with an unrivalled choice. One of the many benefits of working with us is that we can offer you the flexibility to choose exactly the level of security and aesthetics that you need. When correctly specified, our range of hardware will comply with all relevant Building Regulations and associated legislation.

The range is designed to offer performance and value rather than just price. Safeware products are manufactured to the highest levels of quality to perform and last. Our hardware meets PAS24 and the requirements of Secured by Design on complete windows and door systems.



Specification and Advisory Services

Planning is essential for any project, in terms of who is involved and of each action required. Developing close relationships is crucial in building a secure foundation for future social housing refurbishment projects, and is principally about all parties working together to provide a decent home within a sustainable community for residents, measured against key performance indicators and mutually agreed benchmarks.

In addition to planning the funding resource for its properties, specifiers must select products and suppliers which can guarantee continuity of supply, best value, sustainability, green credentials, guarantees, excellent whole-life costings and strong product features. Importantly suppliers should be selected who have the ability to commit to supply agreements for the long-term, within which all parties are able to demonstrate compliance to the specification, key performance indicators and timescales of the project.

Profile 22 prides itself in helping specifiers to make the right choice of products for the specific application and project. Whether it be refurbishment or new build, we can assist you with project planning, designs, product and supplier selection; working together with all parties involved. Profile 22 can offer guidance in achieving a specific brief in-line with client's requirements such as the need for guaranteed continuity of supply, best value, sustainability, guarantees, excellent whole-life costings and creative building aesthetics.

The following factors should always be considered when making an informed selection of products:

- Security
- Safety
- Energy efficiency
- Long and short term maintenance provisions
- Environment
- Sustainability
- Choice of products
- Supply continuity

Profile 22's involvement at the design stage of a product is highly valuable, and our team work collaboratively with Architects, Local Authorities, Housing Associations, procurement consortia, house builders and contractors. Our network of Approved Window Contractors can develop a product offer and service, specific to the individual project.



Specification Support Services

The role of the Specification Manager is to advise our clients on the correct application for our systems, which involves:

- Site surveys to ensure appropriate design
- Advice on specifications and current Building Regulations
- Providing specifications with section drawings of our system for the tender document
- Supply of sample windows for planning approval
- Forward planning and budgeting advice

Priority Support

Customer support is a priority. One call to Profile 22 and you are offered assistance for every stage of the project, including a no-obligation consultation, specific design requirements, full specification, surveying and structural calculations, an extensive choice of quality and durable products - through both field and technical support teams. Telephone 01952 290910, www.profile22.co.uk

Support Service

- Approved Window Contractors network
- Resident choice meetings
- In-house window testing facility

Design Service

An in house design facility including:

- Window energy ratings
- Structural calculations
- Wind loading calculations
- Load bearing calculations
- Section details for specifications
- Site visits to ensure the specification is being adhered to

Working Together

We recognise that the most effective way that our organisation's respective business goals can be achieved is through working collaboratively. By establishing short and long-term agreements with supply chain members we can exceed the expectations of our clients.

The key elements when setting up an agreement are:

- Commitment
- Self-assessment
- Selection
- Mutual objectives
- Problem resolution
- Continuous improvement
- Contractual information
- Risk and reward issues
- Communication

Profile 22 is committed to the importance of working with Local Authorities, Housing Associations, procurement consortia, ALMO's, house builders and contractors in line with the latest government guidance.

A network of Approved Window Contractors

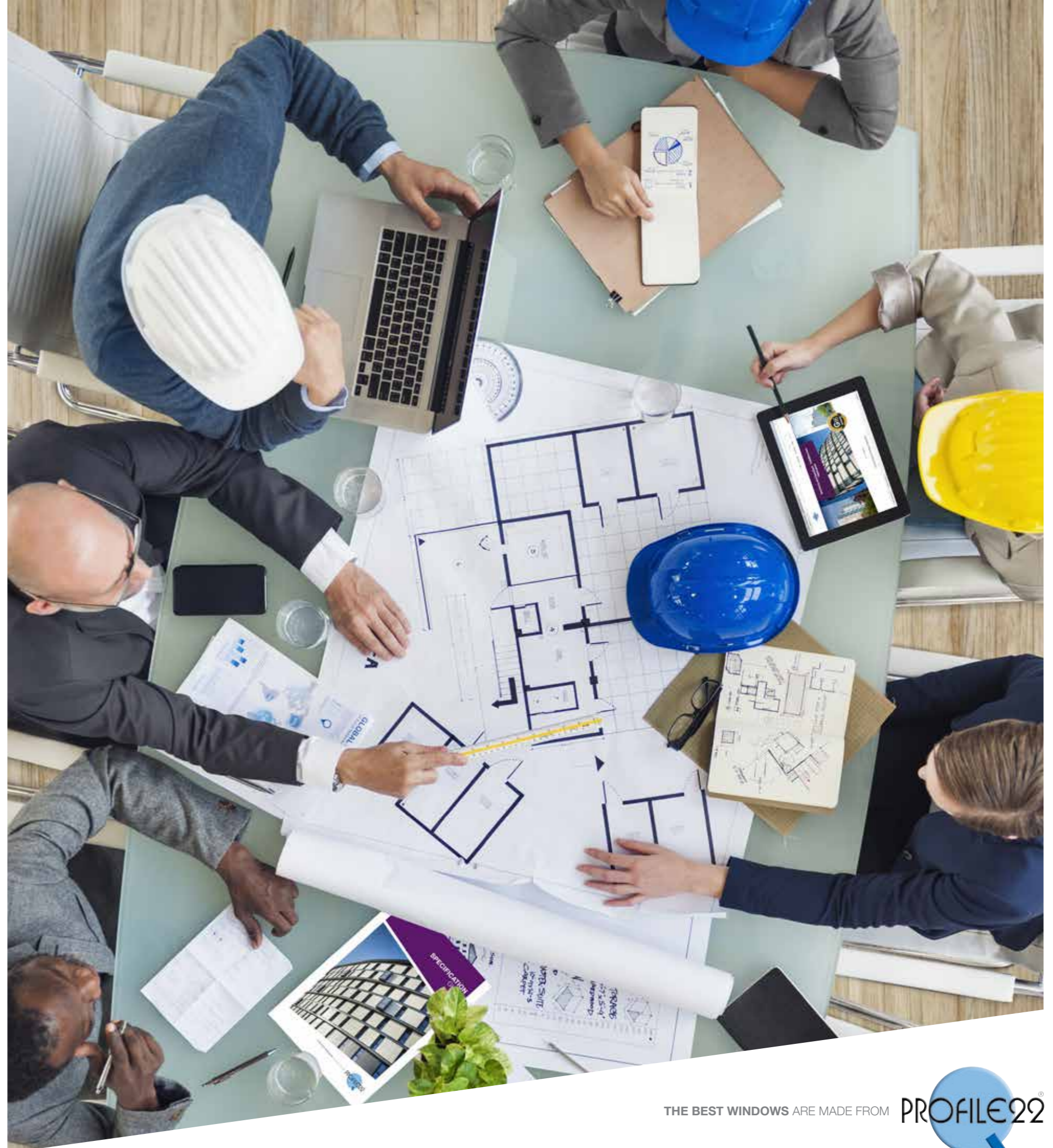
We work closely with a network of Approved Window Contractors, promoting efficiency and mutually-beneficial working practices during short and long-term projects. Our Approved Window Contractors make and fit all products under full contract management and project-planning facilities for future sustainable housing.

Our network of Approved Window Contractors are regulated to ensure they maintain high standards, whatever the contract size, to ensure your windows and doors programme exceed their key performance indicators and meet your specification.

Resident Liaison

We know well-managed resident liaison brings added value to the overall project management and lead to increased resident satisfaction levels. We will work alongside the manufacturer in liaising with residents, attending residents' meetings and offering advice on specified products, styles and hardware selection to ensure their peace of mind.

Our Approved Window Contractors will take every care to ensure residents' lives are not disrupted and their homes become more secure, safe and energy efficient.



Approved Window Contractors Network

As specifiers, we know that you'd like to ensure that every product you select for your clients is of the highest quality and is backed-up by exemplary service.

Profile 22 offers an Approved Window Contractors Scheme, open to our entire commercial network of manufacturers.

This proves that they have met certain minimum standards such as constructionline/EXOR, quality accreditations, operate recycling initiatives and have attended our commercial awareness training programme.

Our scheme is monitored to ensure high standards are maintained. All of our Approved Window Contractors possess a certificate and should display the unique logo when submitting tenders:

A list of our Approved Window Contractors can be requested online or telephone us on 01952 290910.

Our Approved Window Contractors have a wealth of experience in the management of large contract supply and installation and demonstrate a thorough knowledge of site practices to ensure they work effectively with other trades and towards on-time and on-budget completion.

Profile 22 has become the window system of choice with manufacturers for its high-quality specification and our commitment to support and to work as part of their team. We are able to assist in maintaining standards - through production planning and development and ongoing product training, including specialist courses for surveyors and installers.



Training and CPD Seminars

We offer a wide range of training services including the choice of Continuous Professional Development (CPD) certified seminars. Our courses aim to improve the knowledge of all who attend them and can assist in your professional development, earning your valuable CPD points.

Courses run throughout the year, and are held at our Telford customer service centre, regional venues, or at your premises. Please contact us for further details or for our latest list of courses.

CPD Seminars

We currently provide various online CPD seminars to assist your professional development and to provide advice and assistance to our clients:

- The specification of advanced performance windows and doors.
- Windows and doors for education.

Our CPDs are approved by the Construction Service and earn CPD points.

As Building Regulations change we will be offering more CPD certified seminars. Visit our website to see the latest CPDs on offer.

<http://www.profile22.co.uk/commercial>



Training and
Development

Quality Assurance



BS EN ISO 9001
BSI Registered firm scheme: Quality management systems - requirements.



BS EN ISO 14001
Manufactured under an ISO14001 Registered Environmental Management System.



BS EN ISO 18001
Occupational health and safety management systems.



BS EN 12608/PAS24 WINDOW SYSTEM SUPPLIER
Enhanced security performance requirements for window assemblies.



BS EN 12608/PAS24 DOOR SYSTEM SUPPLIER
Enhanced security performance requirements for door assemblies.



BS 8529/PAS24 DOOR SYSTEM SUPPLIER
General and enhanced security performance requirements for composite door assemblies.



SECURED BY DESIGN
Secured By Design is the UK Police flagship initiative supporting the principles of 'designing out crime' by use of effective crime prevention and security standards.



BES 6001
Responsible sourcing of construction products.



Environment

Sustainable Credentials

At Profile 22 Systems we take our corporate social responsibility and environmental policy seriously, and are committed to ensuring sustainable communities for all - both now and in the future.

According to the Department for Communities and Local Government, homes account for around 27% of the UK's carbon emissions, a major cause of climate change. As part of its commitment to reducing carbon emissions, the policy is now to achieve an improvement of at least 80% less carbon emissions from new homes by 2050 (compared to 1990).

Profile 22 and its parent company, Epwin Group Plc, has long since been committed to supporting Government policy and looking to ensure its projects and operations meet national and local needs, supporting the sustainable development of communities.

Importantly the company actively looks to ensure the involvement of all stakeholders, the protection of the environment and the reduction of consumption of energy and natural resources.

Sustainability Integration

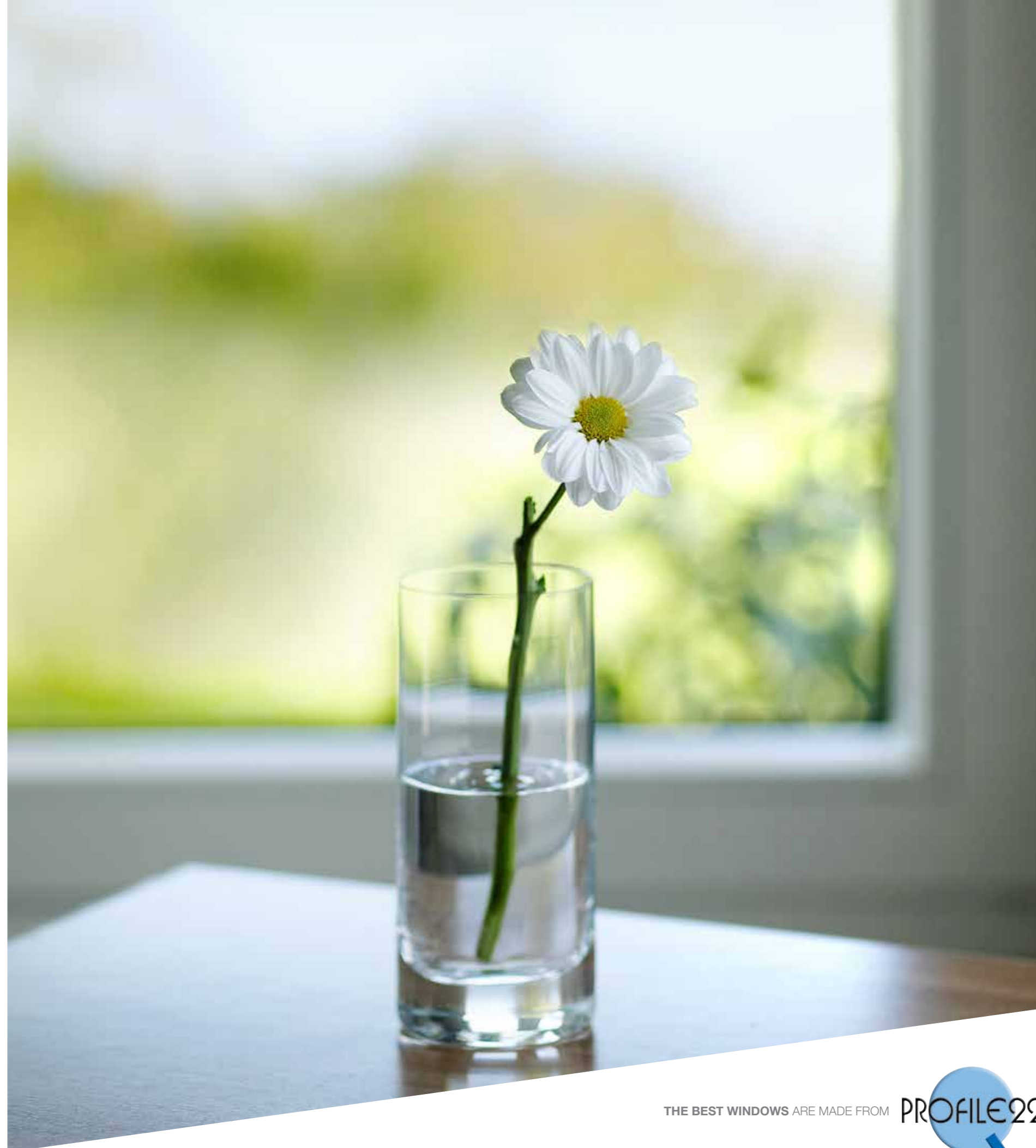
Profile 22 is committed to integrating the three key elements of sustainability:

- Economic sustainability concerns the increase of profitability by making more efficient use of resources, whether human, natural or energy.
- Social sustainability recognises the needs of everyone affected by a project, within the supply chain, and importantly the end-users and local communities.
- Environmental sustainability considers the protection of the environment from the impact of the emissions and waste, and the careful use of natural resources.

As an experienced supplier to the commercial sector, Profile 22 is committed to ensuring all elements of its business are in line with the principles of sustainability, evolving its structure to provide complete project management for both new-build and refurbishment environments.

The process involved in the supply of products for sustainable construction involves all materials that are utilised being manufactured by the most environmentally friendly methods with minimum impact upon the environment, including the use of recycled material in its production.

We understand that clients wish to use materials and systems that have a lower fundamental impact on both the environment and local communities. The more efficient use of energy and materials is essential with minimal impact on the local community and excellent whole-life costings, with products being sustained for longer periods of time with negligible maintenance requirements.



Integration of social, environmental and economic sustainability

- Adherence to the requirements of the Environmental Management System BS EN ISO 14001.
- Adherence to the requirements of the Responsible Sourcing standard BES 6001.
- Operation of a health and safety programme in line with OHSAS 18001 to ensure a safe environment for employees, supply chain partners and residents.
- Member of the BPF Windows Group, ensuring best practice across the industry, engagement with local and national government and open dialogue.
- Commitment to supporting local communities across the UK, supporting all project stakeholders and ensuring we deliver positive outcomes for all.
- Support of local and national charities.
- Committed to providing equal employment opportunities across the UK and providing training.
- Compliance to latest Building Regulations and quality standards across our product ranges and quality control processes.

BES 6001 demonstrates that the company can ensure and then prove that their products have been made with constituent materials that have been responsibly sourced. The standard describes a framework for the organisational governance, supply chain management and environmental and social aspects that must be addressed in order to ensure the responsible sourcing of construction products. The company has achieved a rating of Very Good.

We operate a continual monitoring and programme of development to ensure adherence to the latest government initiatives and regulations, to ensure our environmental credentials are optimised at all times throughout our operations.



Environmental Management

Profile 22 operates an environmental policy that is implemented by all our employees and follows a programme of continual improvement by the operation of an Environmental Management System to the requirements of BS EN ISO 14001.

Our environmental management includes:

Reduction of waste levels from company processes, and where practical, recycling waste materials. All scrap material levels are monitored and reduced in accordance with quality procedures and strict targets.

- Operation of office recycling including materials such as paper, ink cartridges, batteries and mobile phones with collections in aid of charity.
- Monitoring energy use and energy-efficiency, including the development and enhancement through a continual programme of improvement.
- Monitoring fuel use and promoting fuel-efficiency, through technology, careful planning and careful driving for all deliveries and field-based employees.
- Provision of detailed employee environmental training, induction and procedures relevant to their task and responsibilities.
- Ensuring our activities have minimal impact on local communities and do not create a nuisance to our neighbours.
- Comprehensive supplier selection process to ensure we work with companies who share our environmental commitment.
- Customer and client advice and support on optimising their environmental management.

We operate a continual programme of improvement and annually reviewed objectives and targets that facilitate the successful operation of this policy at Profile 22 and across the Epwin Group in line with latest government guidelines.

THE BEST WINDOWS ARE MADE FROM





Life Cycle Optimisation

Profile 22 and its supply chain partners are committed to the environment and offering sustainable whole-life costings for improved communities throughout every stage of production to site, through both its manufacturing processes and through its products.

The Building Research Establishment (BRE) has given PVC-U a reference service life of 35 years. More impressively still, the British Standards Institute suggest that this extends to in excess of 40 years when PVC-U profile is manufactured to accredited standards.

Given that research shows that each PVC-U product can be recycled more than 10 times and still maintain performance, through the recycled process of PVC-U has a total life span of over 350 years, making its credentials as a sustainable material unquestionable.

Energy-Efficient Products

Profile 22 strongly supports the government's view on energy-efficient products. Energy-efficient products have a major role to play in reducing household emissions and increasing energy-efficiency of existing homes.

Our industry is committed to producing energy-efficient products, developing new technology to ensure optimum reduction of heat loss in line with the introduction of Window Energy Ratings (WER), which has been endorsed by the Energy Savings Trust.

- Profile 22's energy-efficient windows, achieve a window energy rating (WER) of grades A++, A+, A, B and C.
- High-performance windows reduce heat loss by more than 20%.
- Reduces our impact on the environment.
- Energy-rated Advanced Performance PVC-U windows are one of the most effective ways to save energy and reduce CO2 emissions.
- Can reduce heating bills by an estimated 10% every year.
- Triple glazed options are available for greater thermal performance.



Committed to the Environment

Product Innovation

Profile 22 prides itself in developing window and door products that are aesthetically pleasing with class-leading performance and innovative features. We utilise leading edge design techniques combined with our technical skills to continuously improve our products. We are committed to investing in leading manufacturing technologies, in order that we can offer the best performing products and the widest choice of styles for all types of applications. This ensures that we consistently exceed the expectations of those who fabricate, specify and install our windows and doors.

Our brand-new Optima range offers exceptional performance in energy efficiency, weather protection and security. Quite simply, our window systems are the best on the market and we'll show you why.

Our latest product development is our new flush casement window system, which is a popular choice for contemporary, character properties and conservation areas. Now it is easy to achieve a flush appearance without compromising on warmth and comfort, the flush system offers the very best performance, security and range of colours to complement any building design.

Our flush tilt and turn window, which offers a perfect combination of optimised thermal performance and outstanding aesthetics, is manufactured using low carbon technology to reduce production emissions. It uses our innovative Aeroframe™ thermal wall technology, there are at least five chambers in our profiles to maximise thermal performance.

Our flush casement and flush tilt & turn complements our other innovative products including our market-leading fully reversible and vertical slider. All of our new products combine all the benefits of modern PVC-U and functionality with stunning character and design.

Welcome to the next generation of PVC-U windows.



THE BEST WINDOWS ARE MADE FROM



Triple glazing

When greater thermal performance is required, you now have the option of upgrading your specification from double to triple glazing. Capable of achieving a U-value as low as 0.8W/m²K our triple glazed solution has the added benefit of improved acoustic performance.



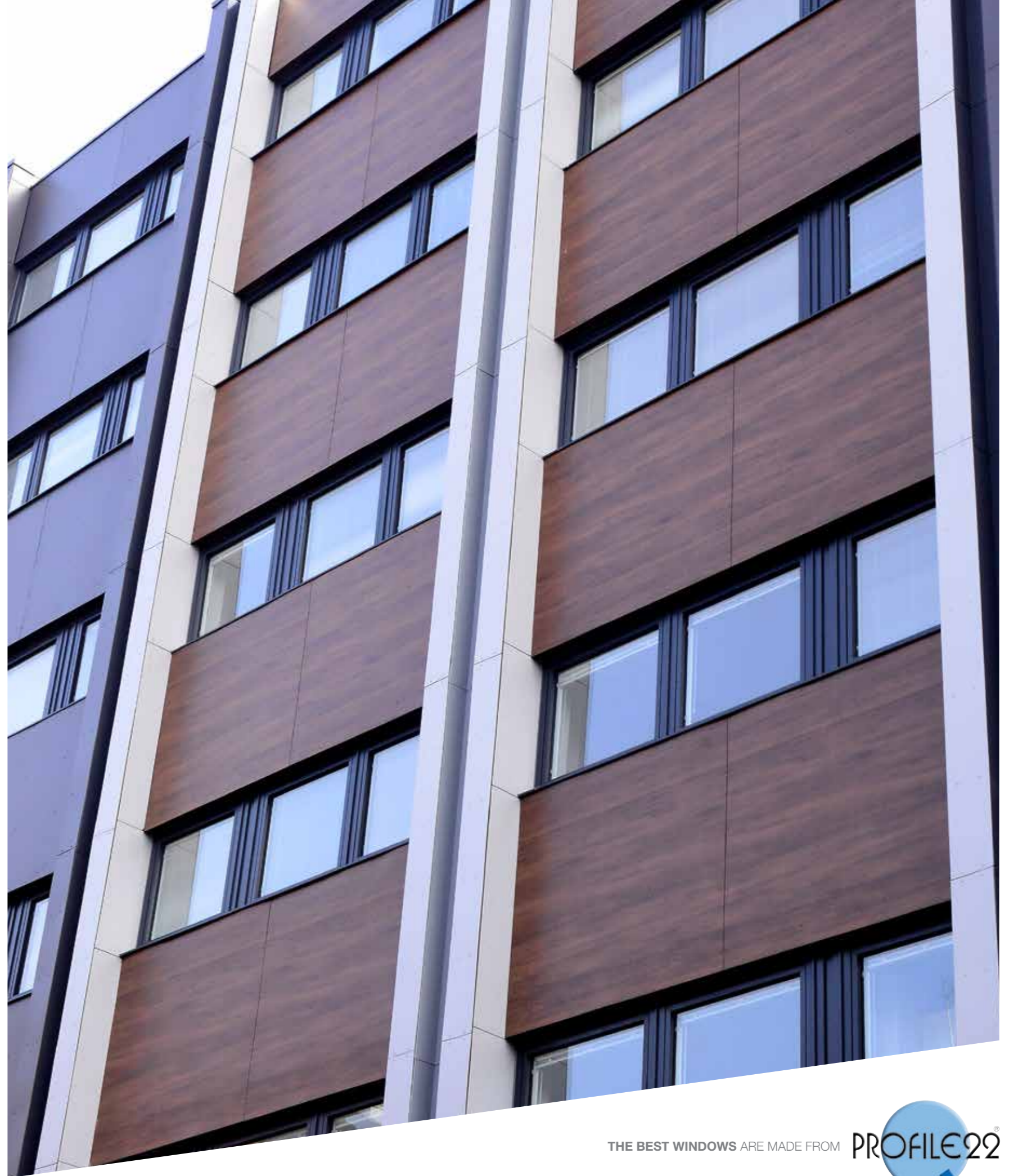
Recycled thermal insert

Recycled thermal inserts are made from recycled composite material (RCM) with the primary purpose of providing greater thermal insulation to window and doors. Used together with aluminium or steel reinforcements, the inserts are designed to improve screw retention and to ensure the perfect positioning of hardware. Developed as part of our proactive stance to increase the sustainable credentials of our product range, RCM offers better thermal efficiency and has a minimum life cycle of 35 years.



Benefits:

- Excellent thermal performance
- Improved WERs and U-values
- Superior screw retention for hardware
- Compatible with both internally and externally glazed sashes
- Suits chamfered and sculptured systems
- Made from 100% recycled material



Product
Overview



Casement Windows

Optima C is a chamfered 70mm-depth system designed for the production of casement, Tilt and Turn, French casements and residential and French doors. The slim, chamfered shape is clean, attractive and suitable for a wide range of projects.

The ever popular casement window is better than ever when made using Optima's slim, chamfered profiles. Almost any size or layout is possible, and there are all the components required for bays, bows and conservatories. Frames can be customised to suit modern or period properties and the system is equally suitable for residential, commercial, education or healthcare projects.

Traditional, outwards-opening styling is updated with modern, durable, easy-to-maintain materials, secure and reliable hardware and thermal performance that can reach the U-values required by Passivhaus standards – all this, in a system that has been designed for efficient fabrication and trouble-free fitting.

These 70mm depth, open-out windows are available in a variety of single or multi-light styles, using top hung vents, side hung casements and fixed lights, either internally or externally glazed, available in 28 colours with a variety of dual-colour options, fabricated to BS 7412. Round head, circular or lancet windows (Gothic arched) may be supplied depending on size, style and application.



Optima-C A 70mm depth system with a chamfered design.



Optima-S A 70mm depth system with a sculptured design.

PERFORMANCE		
TEST	VALUE	CLASS
AIR PERMEABILITY	600Pa	3
WATER TIGHTNESS	600Pa	9A
WIND RESISTANCE	2400Pa	2400
Overall BS EN 6375-1	2400	



SAFWARE

Safeware Hardware

Vents and casements are hinged using stainless steel friction hinges, or the option of butt hinges with security pin. Locking or non-locking handles are available in a variety of finishes.

All hardware meets the requirements of BS 7412. When fitted with high security hardware, windows meet the requirements of PAS24.

Locking

The windows are fitted with mushroom-headed espagnolettes or shootbolts for added security, both options with night vent facility.

Ventilation

In addition to the night vent, controllable or permanent ventilators are offered as an optional extra, fitted within the head profile of the window.



Run Up Block



Security Clip
(External glazing only)



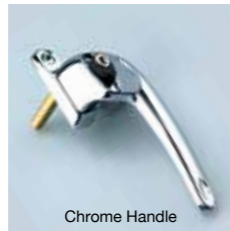
Dedicated Keeps



Hinge Protector



Shootbolt Extension



Chrome Handle



Defender Hinge



Rail Espags



Flush Casement Windows

Profile 22 flush casement windows mimic the traditional appearance of period properties, whilst offering superb energy efficiency and lower heating bills. They offer the perfect solution for planners in areas protected by conservation orders looking for a flush 'sash' casement that replicates the 19th century timber window design, whilst offering modern features and benefits.

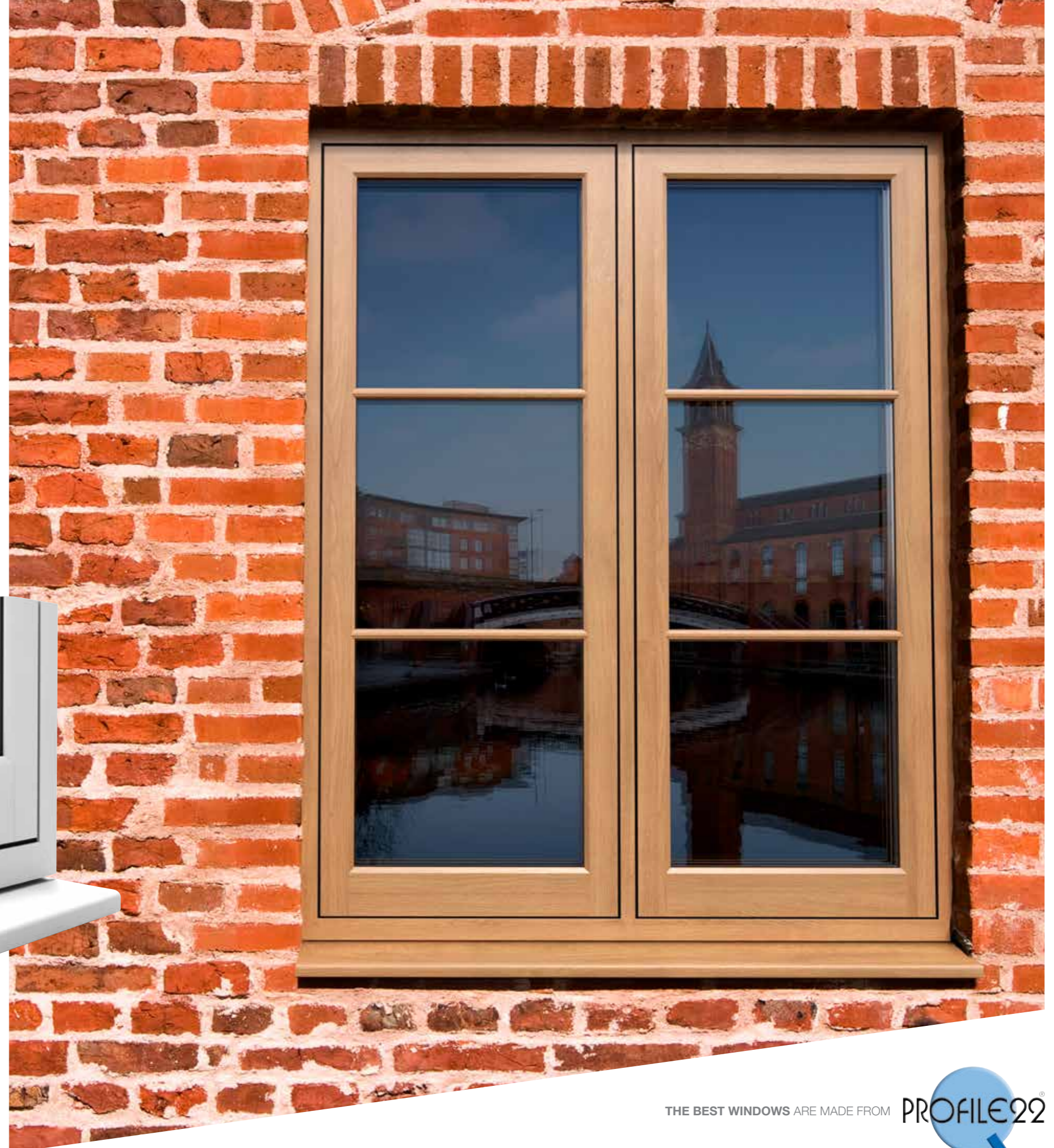
A flush casement is where the opening windows sits flush in a frame rather than standing proud. The simple lines and proportions also mean it has masses of potential even in more modern buildings. Providing an exceptional level of energy efficiency and an attractive modern aesthetic, the flush casement window from Profile 22 is an ideal choice for older properties with character and heritage to preserve.

Profile 22 flush casement windows offer a contemporary bevelled appearance on the outside with bevelled or sculptured options for the inside. We believe our flush casement is the best on the market far surpassing the others on the market in terms of authentic design and energy efficiency. Every detail is thought of from the ancillaries, trims, to the finishing details such as dummy sashes for perfect balance, deep bottom rails and the option of mechanical jointing.

In the past PVC-U windows have not been favourable due to their bulky appearance; however this new design is virtually indistinguishable from timber. The window system is available in a range of attractive colours to enhance any property.



Optima-F is a 70mm system offering an attractive flush external finish



Profile

Acrylic modified high quality impact resistant white PVC-U extrusion, producing a rigid multi-chambered profile to BS EN 12608 manufactured to BS EN ISO 9001.

Reinforcement

A multi-chamber profile allows for fully enclosed reinforcement. Recycled thermal inserts, aluminium and/or steel reinforcements are used in accordance with recommendations.

Glazing

Double glazing to BS 6262 can be supplied using 24mm insulating glass units. If required, U-values as low as 1.2W/m²K can be achieved.

Ventilation

Controllable or permanent ventilators can be fitted into the head of the frame immediately above the sash.

Performance

The flush casement is a multi-chamber system and achieves a WER 'A+' rating when glazed with argon filled double glazed units.

The system eliminates the need for expensive Krypton gas filled units, insulation in the profiles; therefore reducing costs to a minimum.

PERFORMANCE		
TEST	VALUE	CLASS
AIR PERMEABILITY	600Pa	3
WATER TIGHTNESS	600Pa	9A
WIND RESISTANCE	2400Pa	CE2400
Weather rating tested to BS 6375-1		
Overall BS EN 6375-1	2400	



Tilt and Turn

An ideal solution for any medium or high-rise property or one with external access issues, Tilt and Turn windows offer a streamlined, contemporary appearance that suits many styles of architecture. These windows are practical: tilting inwards to provide secure ventilation, they can also be swung right into a room to allow cleaning of the outer pane or simply to give a wide-open feel to a room.



Optima-C A 70mm depth system with a chamfered design.



Optima-S A 70mm depth system with a sculptured design.

Child safety restrictors and locking handles can be incorporated as appropriate. Tilt and Turn windows made with Optima's slim, but strong, profiles offer the minimalist appearance combined with the advanced all-round locking of highly-secure frames.

Many applications are demanding higher specification windows and Optima Tilt and Turns can achieve the very best window energy ratings of A++ and U-values of 0.8 W/m²K.

Product features

- Optional Sash & Outer Frame Centre Seals
- Double Chamfered or Sculptured Edge Design
- 24/28/36/40 & 44mm Glazing Options
- 5 Chamber Sash
- 5 Chamber Outer Frame
- Optional RCM Thermal Inserts create up to 6 chamber sash and 8 chamber outer frame

Versatility and strength

Not only are Optima's profiles stronger, but they are built for increased insulation and weather protection which makes them the perfect choice for installation in high, exposed or difficult access locations.

The benefit of our increased overlap isn't just one of improved weather protection – it also increases the glass to frame ratio, giving the benefit of increased solar gain and satisfying consumer demand for slimmer frames and more natural light. A range of ancillaries means that Tilt and Turns can be combined with fixed panes, or incorporated in bays with a wide choice of woodgrain and coloured foils, there is a finish to suit every type of building material or construction project.



Glazing

Glazing can be supplied as either double-glazed (24, 28mm or triple-glazed 36, 40 and 44mm) finished glass units depending on thermal or acoustic requirements.

Performance

Double weatherseals with an 8mm cover ensure the performance meets the requirements of BS 6375 Part 1. Optional additional 2 seals in centre outerframe and sash.

Actual performance will depend on size and style.

PERFORMANCE	
TEST	VALUE
AIR PERMEABILITY	600Pa
WATER TIGHTNESS	600Pa
WIND RESISTANCE	2400Pa



Safeware Hardware

The Tilt before Turn safety feature ensures the 'Tilt' or ventilation option occurs first, followed by the 'Turn' or cleaning option. The mechanism comprises bichromate finished steel multi-point espagnolette locking, operating around the sash. The number of locking points is dependent upon the window size.

An anti-switch barrier is fitted to prevent selection from tilt to turn, while in the tilt mode and vice versa. The window must be closed before the alternative mode may be selected. A locking handle may be fitted for added security at ground floor level.

Our hardware meets PAS24 which surpasses the requirements of Secured by Design on complete windows and door systems.

Ventilation

In addition to the tilt mode, controllable or permanent ventilators are offered as an optional extra, fitted within the head profile of the window.



U-value as low as
0.8W/m²K

Flush Tilt and Turn

Our externally Flush Tilt-Turn window is specially designed to avoid the overlapping of the framework that is often synonymous with PVC-U systems. The sash is neatly positioned inside the frame of the window to create an elegant and sleek 'flush' appearance. The functionality of the window has all round locking, is internally glazed and opens inwards providing excellent security and weather tightness.

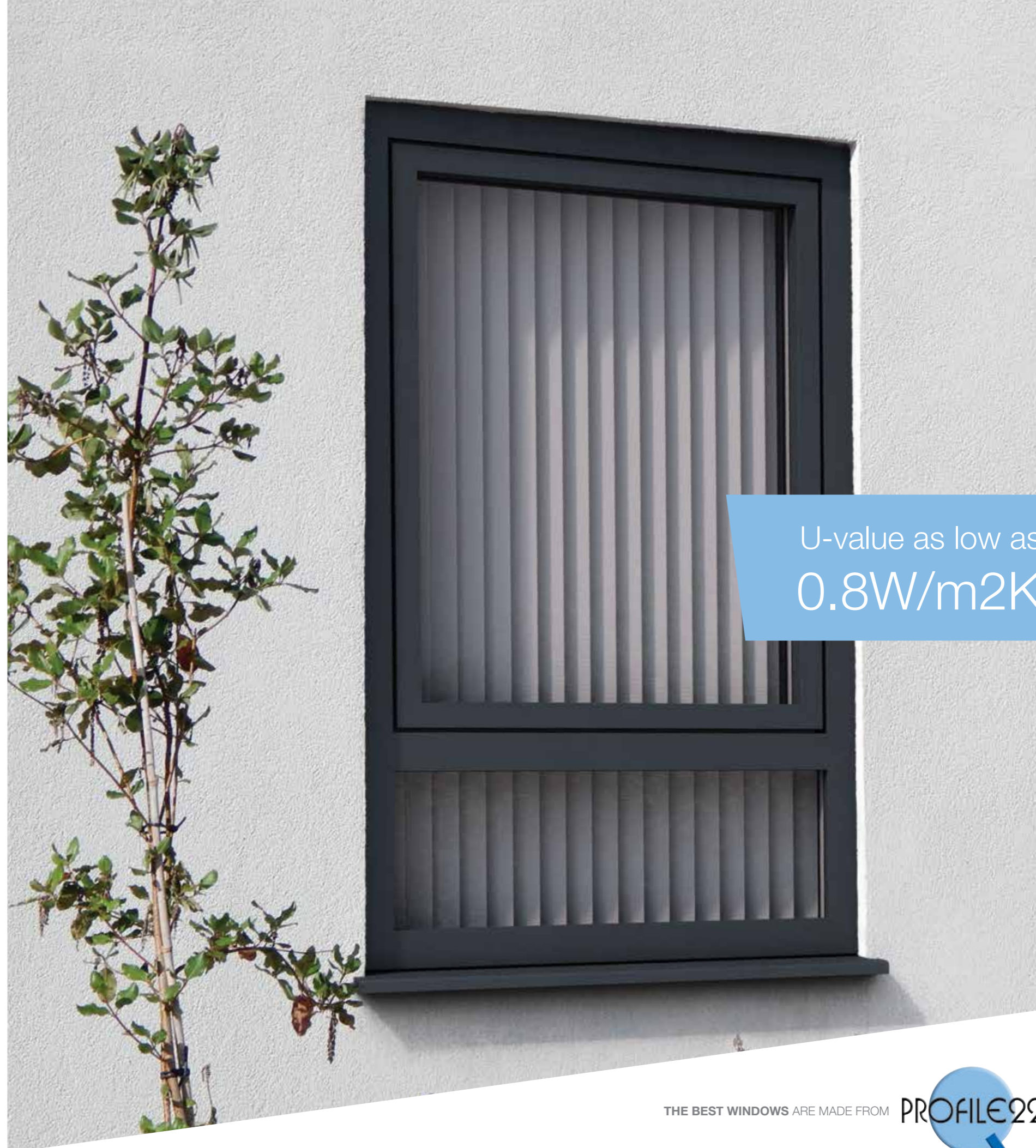
From apartment buildings to housing, to hotels and offices, to hospitals and universities, applications for the Flush Tilt-Turn window are endless. The Flush Tilt-Turn window is especially suited to medium to high rise buildings and when specifiers are seeking a larger-sized window. The window opening up to 2300 x 1450mm maximum, allows for a generous flood of natural light and ventilation into the building.

Product features

- Flush, urban and modern design
- No overlapping of framework externally
- High performance centre seal system – optional
- Triple glazing can achieve u-values in-line with "Passivhaus" to 0.8 W/(m².K)
- Achieves WER A++

This Flush Tilt-Turn window boasts a 6-chamber sash and a 5-chamber outer frame, which achieves a WER 'A++' rating when glazed with argon-filled triple glazing.

The system eliminates the need for expensive Krypton gas filled units, insulation in the profiles or expensive special reinforcing; therefore reducing cost. Also through our commitment to continuous improvement we have developed the highly innovative 'Aeroframe', which has been integrated into this new window system allowing for greater thermal performance through its complex 'thermal barrier' technology.



U-value as low as
0.8W/m²K

Performance

The flush tilt & turn window is a 5 chamber system and achieves a WER 'A++' rating when glazed with argon filled triple glazing. The system eliminates the need for expensive Krypton gas filled units, insulation in the profiles therefore keeping costs to a minimum.

PERFORMANCE		
TEST	VALUE	CLASS
AIR PERMEABILITY	600Pa	4
WATER TIGHTNESS	600Pa	8A
WIND RESISTANCE	2400Pa	AE2400
Weather rating tested to BS 6375-1		
Overall BS EN 6375-1	2400	

Reinforcement

A multi-chamber profile allows for fully enclosed reinforcement. Aluminium and/or steel reinforcements are used in accordance with recommendations.

Glazing

Double/triple glazing to BS 6262 can be supplied using 28, 36 and 44mm insulating glass units, depending on thermal and acoustic requirements.

Hardware

Fully concealed gearing which meets the requirements of BS 7412. Windows fitted with high security hardware meet the requirements of PAS 24.

Ventilation

Controllable or permanent ventilators can be fitted into the head of the frame if required.



Fully Reversible Windows

Especially designed for medium-high rise applications and inaccessible locations, our new Fully Reversible Window has been manufactured using low carbon technology and pioneers our 'thermal barrier' technology.

These 70mm Fully Reversible Windows have their own unique appearance designed with a deep-beveled edge to the window profile giving it a striking, but modern look. The window easily rotates 180° allowing for safe and easy cleaning of the outside pane without the window entering the room space itself; avoiding snagging of curtains or blinds. Its high security locking and child resistant safety catches, and weather performance ensures its maximum safety and security.

Performance

Also through our commitment to continuous improvement we have developed the highly innovative 'Aeroframe', which has been integrated into this new window system allowing for greater thermal performance through its complex 'thermal barrier' technology. This Fully Reversible Window is a 5 chamber system and achieves a WER 'A+' rating when glazed with argon filled triple glazing. The system eliminates the need for expensive Krypton gas filled units, insulation in the profiles or expensive special reinforcing; therefore reducing cost.

PERFORMANCE		
TEST	VALUE	CLASS
AIR PERMEABILITY	600Pa	4
WATER TIGHTNESS	250Pa	6A
WIND RESISTANCE	2000Pa	A5
Overall BS EN 6375-1	2000	

Reinforcement

Specific members are reinforced with galvanised mild steel to BS 7412 sealed within the profile central cavity.





U-value as low as
0.8W/m²K

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Window Operation

- 1  The window can rest in the narrow night ventilation position or with approximately 100mm opening
- 2  The window can also rest in a more open position approximately 300mm opening
- 3  Once the safety catch is released the window can be completely rotated
- 4  The window rotates without entering the room space
- 5  The special hinge assembly brings the outside of the window to the inside of the room
- 6  The fully reversed window engages on a safety catch and allows safe and easy cleaning of the outside pane

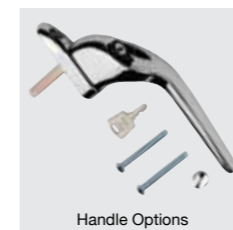
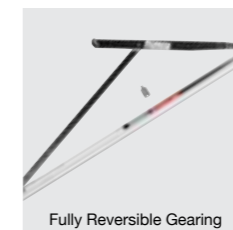


Safeware Hardware - Locking

Security features multi-point mushroom espagnolette, with night vent facility and lockable handles (dependant upon fire egress requirements)

Ventilation

Controllable or permanent ventilators can be fitted into the head of the frame.



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Vertical Sliding Windows

Our market leading Vertical Sliding window system is an authentic looking sash window with Ovolo finishing. All the benefits of a high performance modern material are combined to deliver a window that delivers a cost effective solution to retaining the characteristics and design of period buildings.

The PVC-U Ovolo frames provide optimum strength, superior thermal protection and excellent weathering performance and with the minimum maintenance, will retain their appearance year after year.

Performance

Thermal properties are enhanced through the use of 24mm glazing as standard. Excellent weathering performance is increased with a pile seal detail on the sash edges and outer frame and air flow specification can be achieved through the use of trickle or glazed-in vents to suit particular applications as required. Kitemarked to BS EN 12608 and PAS24 approved.

Reinforcement

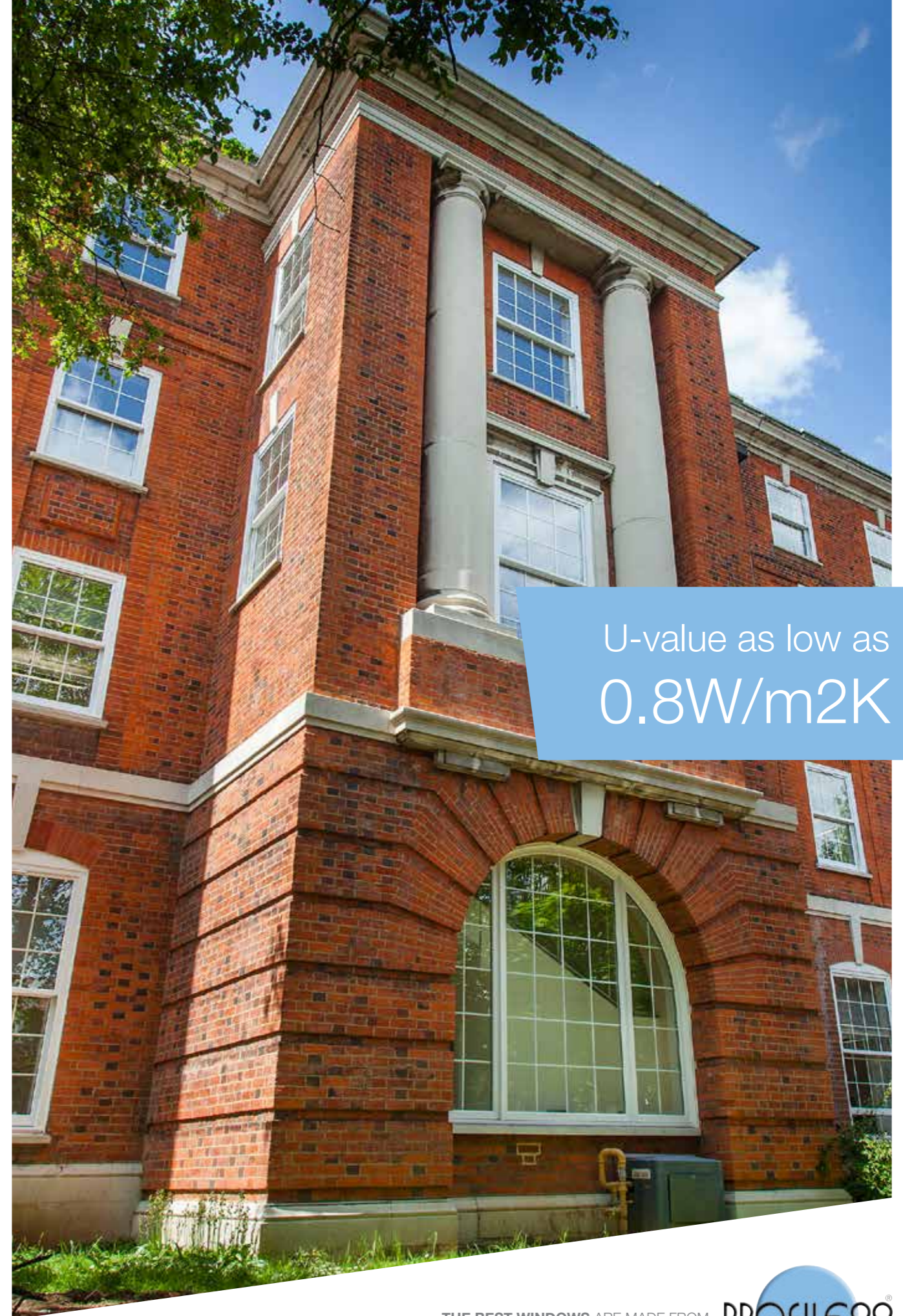
Structural strength is enhanced through the use of steel or aluminium reinforcements to BS 7412 through the internal chambers of the profile and to further increase stability, all fixings and hardware can be secured to the reinforcements or RCM.

Product Specifications

Acrylic modified high quality impact resistant white PVC-U extrusion, producing a rigid multi-chambered profile to BS EN 12608 manufactured to BS EN ISO 9001.

- Outer frame dimension is 128mm
- Internally glazed with 24mm glazing
- Various glazing configurations can be specified to achieve a range of U-values
- Recommended maximum size for a standard configuration is up to 1600mm wide and 3000mm high
- Accommodates a variety of hardware including balances, pivot bars and locking mechanisms all of which should be fitted in accordance with the Profile 22 technical manuals

PERFORMANCE		
TEST	VALUE	CLASS
AIR PERMEABILITY	600Pa	3
WATER TIGHTNESS	300Pa	5A
WIND RESISTANCE	1600Pa	A4
Overall BS EN 6375-1	1600	



U-value as low as
0.8W/m²K

Residential and French Doors

We don't believe that compromise should be considered when it comes to doors. Optima provides the highest-quality finish, durability, performance and security along with effortless function and style. We've looked at every aspect of the system's design, from how each component works together to the thickness and position of every internal web. We've tested and checked every aspect of weathering and thermal performance. Optima delivers on every count.



Optima-C A 70mm depth system with a chamfered design.



Optima-S A 70mm depth system with a sculptured design.

Residential and French doors built with Optima's chamfered profiles are suitable for all types of installation, including residential, new build, refurbishment or commercial projects. And like Optima windows, they have been designed for straightforward fabrication and hassle-free fitting on site.

Opening more doors

French and residential doors are always popular and Optima is ideal for both. With a vast range of possible configurations, Optima doors can suit any type of building and cope with any amount of traffic. Fully compliant, the system meets all the requirements of Building Regulations and PAS24 but is also aesthetically pleasing – crucial for providing a warm welcome to a home or as attractive feature glazing. And for a perfect finish across the whole of a project, door profiles are a perfect match for Optima's chamfered windows. Residential doors can be built incorporating single or double side screens with a choice of glazing gaps ranging from 24 to 44mm. Low threshold options are available as are open-out options for fire or safety doors. Required energy-performance levels can be achieved using cost-effective, recycled thermal inserts.

The Optima system fits off-the-shelf hardware and is ready for the most secure locking systems on the market. French doors can be configured to open inwards or outwards and in combination with fixed lights can offer a dramatic sweep of glazing, capable of transforming a room. French doors are also ideal for porches, sunrooms, conservatories or garden offices, even installed on the first floor of a house with a Juliet balcony.



U-value as low as
0.8W/m²K

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Product features

- Optional Sash & Outer Frame Centre Seals
- Double Chamfered or Sculptured Edge Design
- 24/28/36/40 & 44mm Glazing Options
- 5 Chamber Sash
- 5 Chamber Outer Frame
- Optional recycled thermal inserts create up to 6 chamber sash and 7 chamber outer frame
- Part Q & M Compliant

Profile

Acrylic modified high quality impact resistant white PVC-U extrusion, producing a rigid multi-chambered profile, conforming to the requirements of BS EN 12608, manufactured to BS EN ISO 9001.

Reinforcement

Leaf styles and top and bottom rails, together with outer frame jambs, are reinforced for strength and security with galvanised mild steel to BS 7412, sealed within the profile central cavity. Outer frames can alternatively use recycled thermal inserts.

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Secured by Design is a scheme run by the Police to help homeowners choose security products that meet rigorous Police-approved standards. When you see the Secured by Design hallmark you know you are choosing products that have been rigorously tested and approved by the Police. To achieve accreditation the lock must withstand a series of tests, including a simulated break-in.

Glazing

Double-glazing to BS 6262 can be supplied, using 4mm or 6mm safety glass, depending on thermal or acoustic requirements. Double glazed units conform to BS EN 1279. Glazing options include patterned glass; Georgian bars and leading, all internally glazed with post co-extruded beads.

Performance

Double weather seals ensure the performance meets the requirements of BS 6375 Part 1, as shown below. A weather bar is fitted on all open-in doors.

PERFORMANCE		
TEST	VALUE	CLASS
AIR PERMEABILITY	300Pa	2
WATER TIGHTNESS	100Pa	3A
WIND RESISTANCE	1200Pa	A3
Single and double doors		
Overall BS EN 6375-1	1200	



Doors with Side Screens

Residential door and sidescreen units may be produced in a variety of styles, with a range of panel options to suit requirements. Open-out or open-in windows can be incorporated into the screens. Units can be supplied in white or woodgrain.



Optima-C A 70mm depth system with a chamfered design.



Optima-S A 70mm depth system with a sculptured design.

Typical Style Options

- Full length glass screens
- Single or double midrails
- Glass over glass
- Glass over infill panel
- Flag screens Fanlights over etc.

Extras

Letterplates may be incorporated in screen midrails, or infill panels.

Glazing

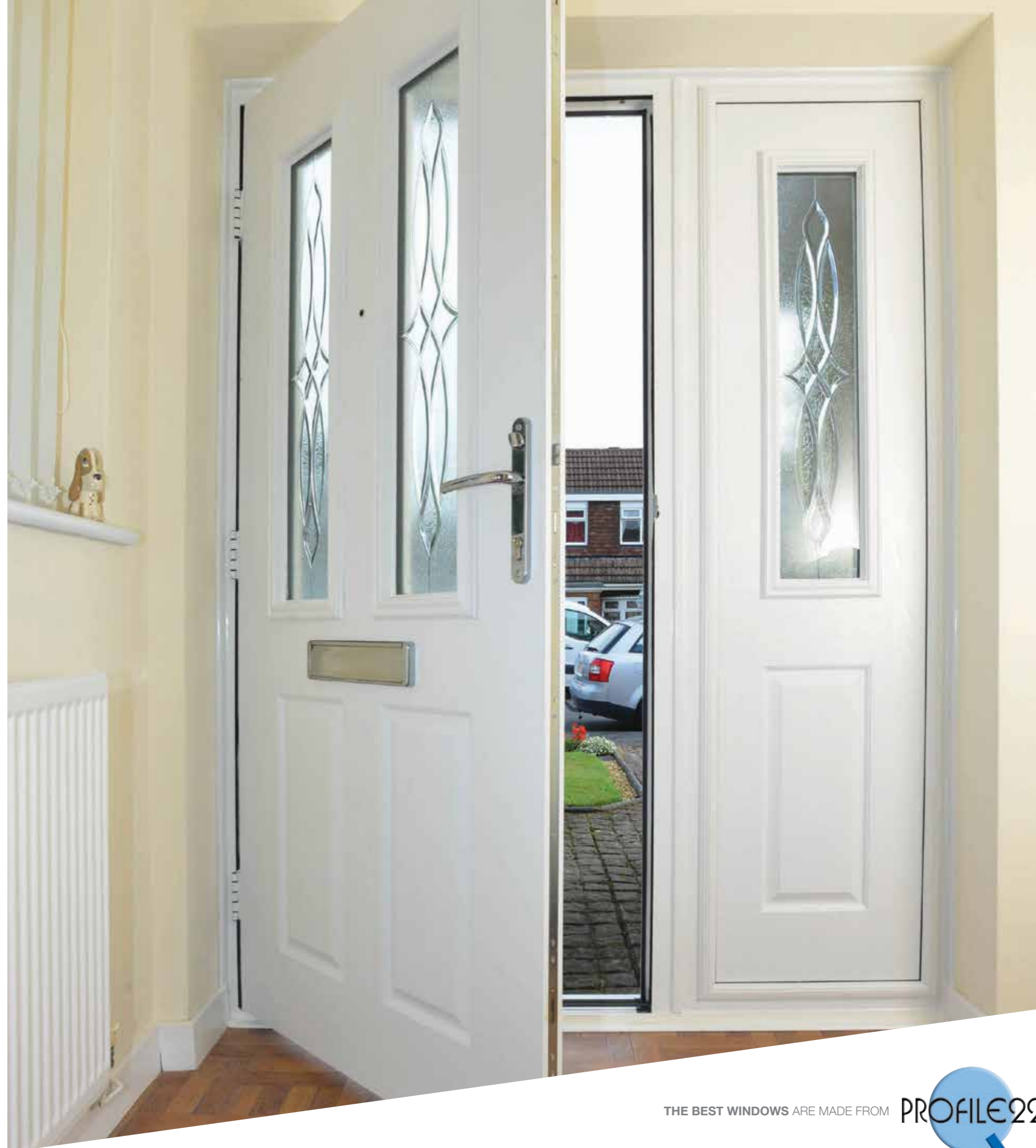
Screens may be single or double glazed to BS 6262, using annealed or safety glass depending upon application. Double glazed units conform to BS EN 1279. Glazing options include patterned glass, Georgian bars and leading, all internally glazed with co-extruded or standard bead.

Sizes

The maximum size of one piece door/sidescreen units will depend on style and glass size limitations, (refer to BS 6262). In certain application where the site requirements demand, or where additional structural stability is required, it is recommended that the units are coupled.

Reinforcement

Specific members are reinforced with galvanised mild steel to BS 7412 sealed within the profile central cavity.

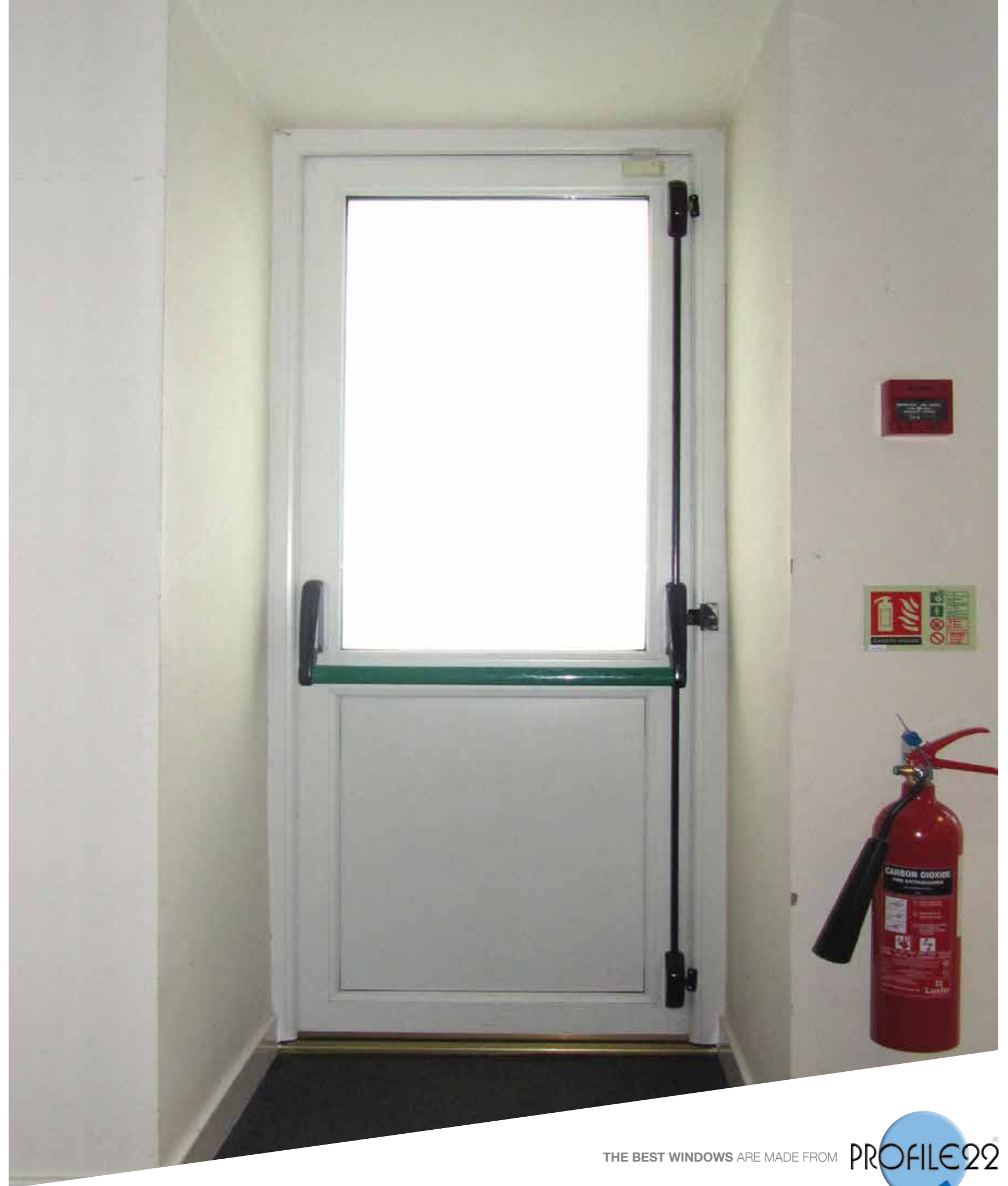


Emergency Doors

Special doors can be supplied fitted with Panic Bars for emergency or fire exits etc. Single doors use either multi-roller or head and threshold shootbolts. Double doors use shootbolt mechanisms.

All doors are fitted with midrails and are bar operated. Standard or low thresholds may be supplied to suit requirements. In addition to single or double doors, combination units are offered comprising single residential door for normal access, with single panic bar door adjacent for emergency.

All doors conform to our residential door specification. Additionally, panic bar mechanisms meet the requirements of BS EN 1125 as specified and approved by fire officers and local authorities.



Composite Doors

Composite doors are offered with 70mm depth outer frame. Supplied as 44mm or 48mm GRP, PVC-Polycarbonate or Steel Skinned Composite door leaves, they are available in a wide range of styles and finishes.

All are integrally glazed; either open-in or open-out, with a dedicated low threshold system, which meets the requirements of regional Building Regulations. The framing system is designed to accommodate single door sets, double door sets and either common mullion combined or coupled door sets.

The glazing rebate accommodates unit thicknesses from 24mm up to 44mm, providing the facility for glass or like-panel inserts.

Profile (outer frames/mullion/transoms)

Acrylic modified high quality impact resistant white PVC-U extrusion, producing a rigid multi-chamber. Profile, conforming to the requirements of BS EN 12608, manufactured to BS EN ISO 9001.

Reinforcement

Outer frames are reinforced with steel or aluminium reinforcing (to BS 1474), inserted within the centre of the main chamber of the profile. Mullion and Transom profiles are reinforced with steel reinforcing (to BS 1474). Outer frames can alternatively use recycled thermal inserts.

Glazing

Door leaves are integrally glazed by internal cassette glazing, or alternatively, integral insertion of the glass units within the door leaf. Secure glazing - meeting the requirements of PAS24 can be offered. Glass units to BS 6262 can be supplied. Glass can be offered in a wide range of styles, patterns and designs.

Performance

Composite doors have been type approved tested to the exacting requirements of BS8529/PAS 24 General and Enhanced Security Performance requirements for composite door assemblies - single leaf, external door assemblies to dwellings and PAS 24-1/BS EN 12608 Enhanced Security Performance requirements for door assemblies -single leaf, external door assemblies and dwellings.





SAFWARE

Safeware Hardware

A complete hardware range specially designed for composite doors.

We have been working with composite door manufacturers since the very early days of these products. So we know what's needed to create an effective, high quality hardware range for composite doors. Our range is complete and allows you to source all the hardware you need from one supplier.

This range meets the usual high standards that you'd expect from Safeware – reliable, constant stocking, high quality, durability and high performance.



RCM thermal inserts

- Doesn't rust or corrode
- Thermally efficient
- Excellent screw retention for hardware anchorage
- Easy to handle, easy to cut, easy to drill

Wrap-around lock

- High security multipoint locking system
- Available in white or brown
- Lever/lever or lever/pad option in one lock

Hinges and hinge strip

- Attractively finishes the hinge side
- Available in white or brown
- Suits Mk 6 door hinge

Letterplates

- Standard black surround available in 10 inch or 12 inch
- All aluminium in gold or silver also available in 12 inch
- Chrome available in 12 inch with black surround only

Handles

- Aluminium anodised or powder coated
- Spring cassette
- Brass or chrome
- Designer range available

Knockers & eye viewers

- Brass or chrome viewers
- Aluminium door knockers
- Extensive range

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Patio Door System

Profile 22 sliding patio doors are a versatile option and ideal for both conservatories and porches. Handle and locking system provides improved aesthetics and security through outward opposing hooks which prevent the leaf from being lifted from its frame. Post co-extruded sashes result in an easier, faster, cost efficient solution.

- Specially developed extrusion
- Slim stepped 86mm outer frame for minimal plaster cutback
- Multi chambered profile for greater thermal insulation
- Lowlime gaskets extruded to sash frame for greater visible glass area
- Fully integrated 60mm chamfered sashes
- 2/3/4 pane
- 3 woodgrain finishes plus, woodgrain on white
- Mechanically joined frame option for restricted access
- Stainless steel easy glide track system.
- Concealed drainage and double wool piling for improved draft proofing
- Designed for trouble free installation
- Excellent weather protection and heat conservation
- Secure by Design option
- Triple Track patio, offering up to 6 pane option, also available.



Curtain Walling

A purpose developed curtain walling system designed to extend the highly specified window and door system from Profile 22 in the commercial sector. Our curtain walling offers architects and specifiers best value, greater choice and flexibility for large fenestration screens within the refurbishment and new build sectors.

This system can accommodate the full range of window and door systems for a wider choice of product, and to make replacement of individual glazed units easier in the event of damage or breakage.

Specifiers can choose from direct glaze insulation or spandrel panels. Importantly it offers long term maintenance and cost benefits, if in the unlikely event a glazed unit does need to be replaced, the system accepts individual glazed frames. The bead is simply removed and the new glass unit slotted in from the inside, for a simple and quick replacement.

The curtain wall system from Profile 22 combines quality, sustainability, aesthetics, price and performance – making it the ideal choice when creating large areas of fenestration.

Suitable applications

- Education buildings
- Offices
- Hospitals
- Factories
- Shop fronts
- Large stairwell screens
- Other commercial developments

Product Features

- High performance
- PVC-U clad, thermally broken aluminium system
- Fully compatible
- Improved building aesthetics
- Accredited system - BSI tested
- Popular choice amongst specifiers
- Glazing options
- Tried and tested solution
- Diverse colour range
- Uniformity of product texture



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Winfit/Winfast

The Profile 22 Cavity Closer is a former and damp proof course; available in standard and check reveal options for building into reveals in new build constructions.

The former is suitable for cavity sizes of 75 mm to 150mm (130mm for check reveal) and will accept 70mm PVC-U systems.

The former is placed in situ and the brick and blockwork built around. The windows and doors can be fitted at a later point in the building construction, reducing the potential for damage.

The Profile 22 cavity closer meets the NHBC standards and offers the thermal and energy efficiency performance required for compliance with the Accredited Construction Details of Part L of the Building Regulations.

Product Benefits:

- Suitable for all new build applications including entrance doors and French doors
- Guarantees size of aperture no need to visit site to measure
- Allows windows to be fitted later in the build reducing risk of damage
- Simplifies brick laying and window fitting giving a perfect fit every time.

Key product features

- Window and door former for timber frame, brick or block construction
- Allows windows to be fitted from the inside or outside
- Ensures compliance with Building Regulations
- Head vent provides overhead ventilation to Approved Document F
- Designed for 75-150mm cavities
- Can be mechanically jointed
- Acts as a horizontal and vertical damp proof course
- 98% recycled content (cavity closer)
- Can be used with any PVC-U or timber window or door system.



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Colour Options

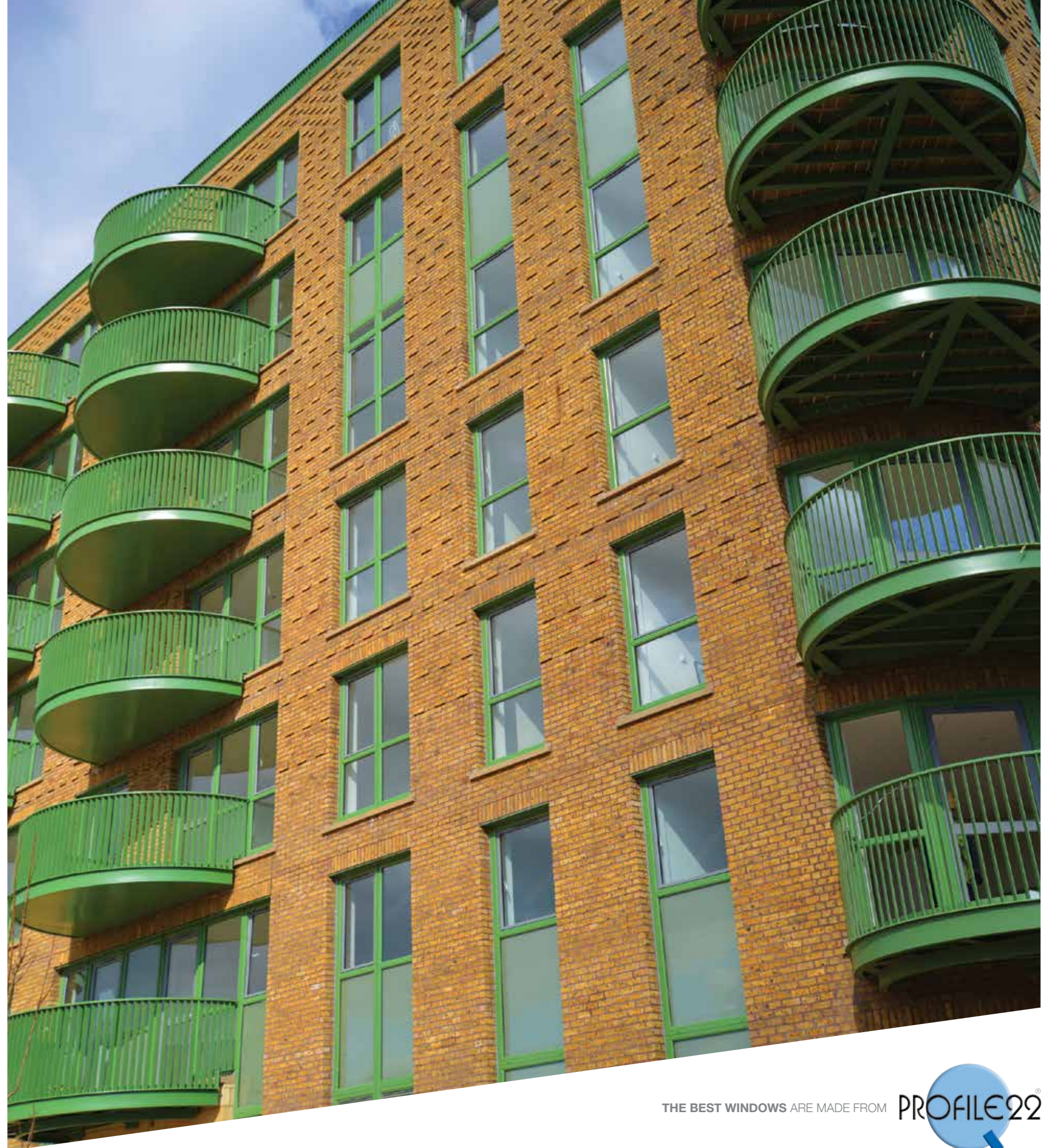
Profile 22 offers a diverse range of coloured foil finishes designed to achieve a long-lasting, maintenance free and cost effective option for PVC-U windows and doors. Colour options are the perfect partner when you are looking to blend into existing framework, street scenes or wishing to create a contrast on a rendered building. Dual colour tone options are also available for when your design demands a coloured exterior, whilst maintaining a bright white interior.

Our extended range of five authentic wood-effects from delicate Irish Oak to rich Siena PR. The white wood-effect has a subtle, matt finish, perfectly mimicking wood. Other colours in our palette include five shades of grey and deep Black Brown. Also included are two brand new, exclusive shades: the 'on-trend' Cream – proving very popular on new and renovated properties and the subtle Chartwell Green.

All foil products are approved to RAL-GZ716/1 part 7, tested to BS 7722 for new build developments. Bespoke colours are available on request.



To discuss any specific colour requirements please contact us.



Building Regulations

All of our products have been designed to be fully compliant with the latest Building Regulations in respect of windows, doors and hardware. In the technical section of this guide, guidance is given on the regulations affecting usage of our products such as:

- Document B - Fire Safety and Means of Escape
- Document E – Sound Performance
- Document F - Ventilation
- Document L - Thermal Performance (incorporating Scottish Document J and Document L - Republic of Ireland)
- Document M – Wheelchair access
- Document K - Protection from falling, collision and impact
- Document Q – Security: Dwellings

The ongoing development of the Building Regulations reflect the Government's commitment to reduce CO2 emissions, aimed at saving one million tonnes of carbon every year. The regulations are therefore subject to change and we would like to bring to the attention of the reader that the information contained within our technical guide is correct at the time of going to print. We recommend that you check for the most up to date legislation relating to Building Regulations by going on line and searching under 'Building Regulations ' or going direct to www.communities.gov.uk.



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Contact Us

Profile 22 at your service

For more information on any of the products shown, please contact us and we will put you in-touch with your nearest Approved Window Contractor.

Specification & Technical Guide

In addition to this guide we also offer a technical guide which includes more in-depth technical details, CAD drawings, wall charts etc. This is available for download from our website profile22.co.uk/commercial/specification-technical-guides.

Join us

To ensure you have the latest copy of our Specification & Technical guide visit us at profile22.co.uk/commercial or call 01952 290910.



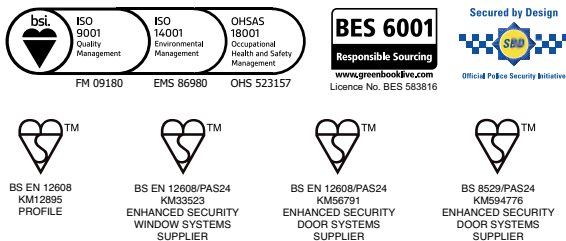
For further information

call 01952 290910

Email: specifier@profile22.co.uk

www.profile22.co.uk

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PROFILE 22 is an international PVC-U profile system supplied to local independent manufacturers and installers who contract to install windows, doors and conservatories. PROFILE 22 SYSTEMS cannot be held accountable for manufacture or installation by independent companies. All information in this publication is provided for guidance only and is given in good faith. As it is company policy to continually improve products, methods and materials, changes of specification may be made from time to time without prior notice. This statement does not affect your statutory rights. © PROFILE 22. Part of the Epwin Group Plc. PR016368

