

# Optima<sup>TM</sup>

CHAMFERED SYSTEM



THE BEST WINDOWS ARE MADE FROM



# Optima<sup>TM</sup>

CHAMFERED SYSTEM







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# Optima<sup>TM</sup>

## CHAMFERED SYSTEM

## Optima – welcome to the very best PVC-U system

When we named our Optima system, we wanted the name to reflect what we truly believe – that this system is the ideal. Optima is an advanced, high-performance system that's complete and very attractive. It incorporates features that rival systems don't, but it doesn't use gimmicks or quick fixes – it's a product from Profile 22 and it has been thoroughly tested, accredited and proven.

Profile 22 is part of the Epwin Group, a British business that has been manufacturing low-maintenance building products for 40 years. Profile 22's systems are used in all sectors: domestic, commercial, healthcare, education and industry, and are the most widely-specified PVC-U systems for windows and doors. Optima is the latest chapter in a great British success story.

With Optima, Profile 22 has produced something quite outstanding. Not only is Optima a better-designed system, with improved performance, but it's also produced to exceptional quality standards. Investment in state-of-the-art machinery, tooling and manufacturing processes has improved surface finish, cut waste and delivered environmental benefits.

Optima is ready for today and for tomorrow.

It's for fabricators. It's for installers..

Optima is for anyone who wants to enjoy the benefits of the best PVC-U windows and doors.





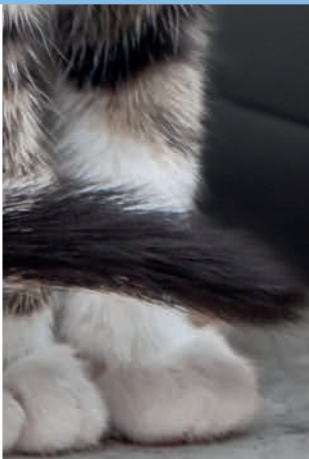
Achieves  
WER A++

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Achieves a  
**0.8 U-value**





## Optima - the optimum chamfered system

Optima is an easy-to-install, fully-integrated, 70mm-depth system designed for the production of casement, Tilt and Turn, and French casement windows; residential and French doors. The slim, chamfered shape is clean, attractive and suitable for a wide range of projects.

### Optima gives you more

**More thermal chambers:** 6 in the outerframe (8 with RCM Thermal Inserts) and 5 in the sash (6 with RCM Thermal Inserts) delivering optimal thermal performance and structural rigidity.

**More choice:** a broader range of range cills, baypoles, accessories and packers allowing you the flexibility you need.

**More glazing options:** the widest choice of glazing options on the market giving you the ability to build cost-effective, energy-efficient windows.

**More seals:** optional centre seals to the outerframe and sash for improved insulation and weather protection.

### The benefits of better design

- Deeper drainage channels carry water away quickly and **improve weather performance.**
- A central Eurogroove gives **superior security and strength.**
- Deep add-on legs allow **extra tolerance during frame installation.**
- Strategic, local wall thickening for **better screw and hardware retention.**
- 10mm overlap for improved **weatherability.**
- Narrower frame for more light and **improved solar gain.**



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# The Optima product range







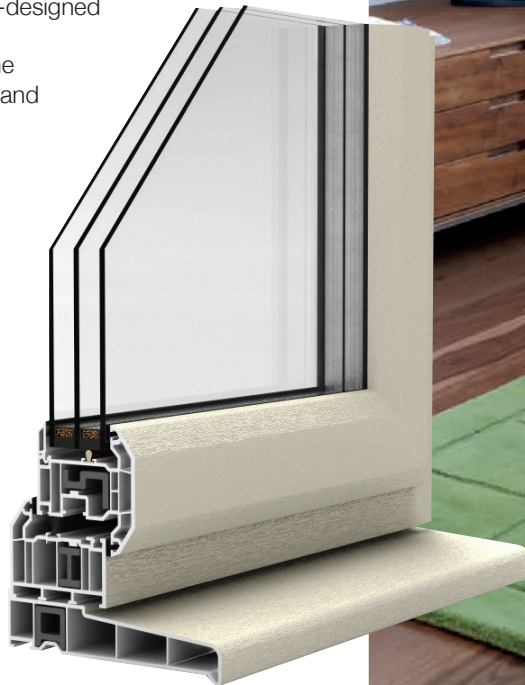


## The Optima product range

We all understand the problems of stockholding, but we all know that customers want choice.

We've balanced these two conflicting needs with a range of components that are integrated, flexible and compatible with other products in the Profile 22 portfolio. An extensive range of ancillaries means that you can satisfy all requirements for a perfectly finished installation and offer windows to suit any type, style or age of property. Whatever project you're working on, from a single domestic window to a large bespoke conservatory or a huge refurbishment in the commercial sector, we've got what you need: advanced systems that perform brilliantly, look great and are practical and simple to fabricate and install.

The Optima chamfered system is perfect for replacing timber or aluminium frames or for upgrading from early-generation PVC-U. Design features and a range of glazing options offer multiple, cost-effective ways to achieve the required thermal performance. Optima's build quality and purpose-designed elements reduce the risk of snagging problems. Engineered for a long, trouble-free life, it meets the requirements of UK and EU Building Regulations and PAS24. It is, of course, approved by the British Standards Group and can be fabricated into products which meet the Secured by Design specification.







## Casement windows

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.

### Product features

- Optional Outer Frame Centre Seal
- Optional Sash Central Seal
- Double Chamfered Edge Design
- Glazing Options up to 44mm Triple Glazed
- 5 Chamber Sash
- 6 Chamber Outer Frame
- Optional RCM Thermal Inserts create up to 6 chamber sash and 8 chamber outer frame
- 10mm Cover on Weather Seals







## The new classic casement

Optima combines all the benefits of advanced design in a slim, attractive profile that's perfect for casement windows. The 70mm depth frame has been developed to be easy to install and fabricate. Attention to the small – but critical – details of design ensures that frames made from Optima profiles will be easy to use, strong and secure, and have a long life. Almost any layout is possible, including top-hung vents, side-hung casements and fixed lights. Larger frames will benefit from Optima's structural rigidity, and a broad range of ancillary products offer the perfect finish to any installation.

The Optima system allows windows to be manufactured to meet different requirements. A choice of 24mm or 28mm double glazing is complemented by 36, 40 and 44mm triple-glazing options. The 6-chambered outerframe and 5-chambered sash can be made into 8 or 6 chambered sections with recycled composite inserts that improve thermal performance and are simple and safe to use. For customers who want quite exceptional insulation and weather protection, optional third seals to the sash and outerframe provide another effective barrier to the elements. A 13mm stack hinge increases the overlap to 10mm and reduces the overall frame width, improving G-values and providing the all-important slim sightlines. Optima windows can achieve a WER of A++ and a U-value of 0.8W/m<sup>2</sup>K.



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## French casement windows

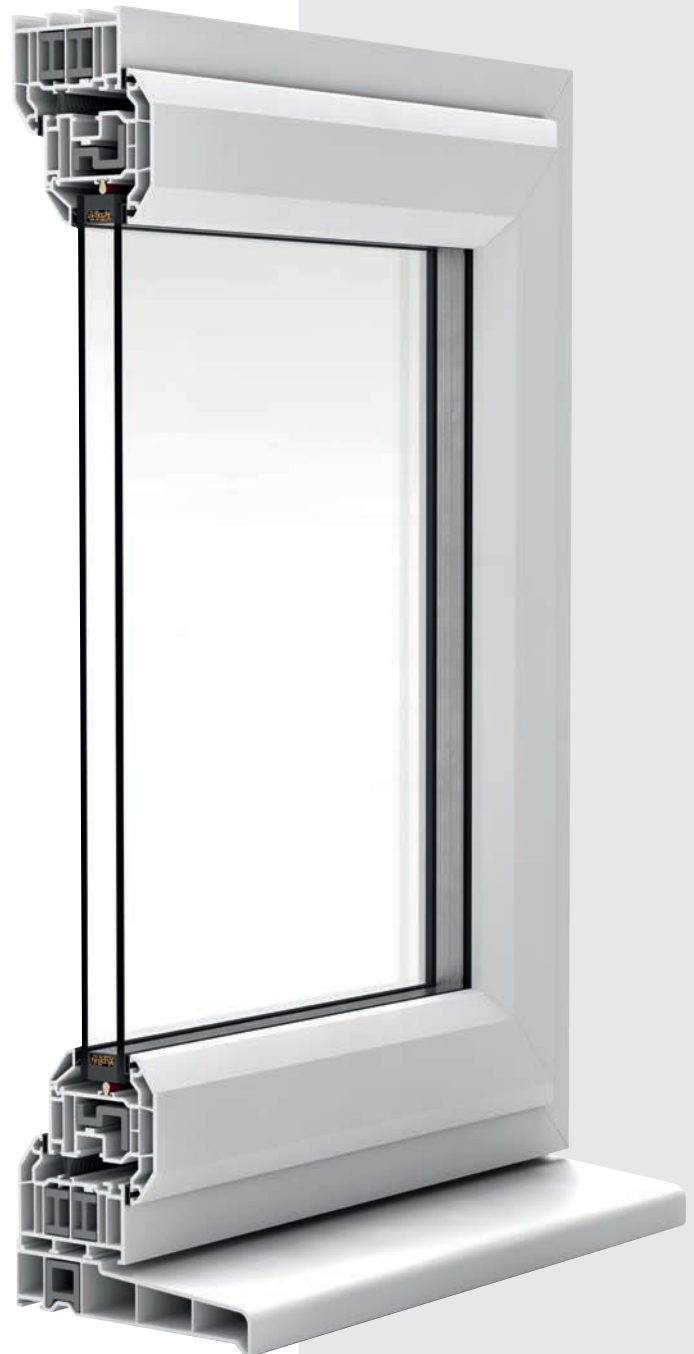
Optima's slim, chamfered profiles are ideal for French casement windows, providing a secure, insulating and weatherproof alternative to traditional timber designs.

Particularly suitable for smaller window apertures, the symmetrical opening panes offer extra ventilation and the possibility of an emergency escape route. With no fixed central mullion, views aren't restricted, allowing homeowners a neat, uncluttered appearance.

Optima's French casements offer excellent weather-tightness and insulation and the structural strength of Optima's sash design ensures that security is never compromised. There is a full range of finishes and colours to suit any property, architecture style or geographic location.

### Product features

- Optional Outer Frame Centre Seal
- Optional Sash Central Seal
- Double Chamfered Edge Design
- Glazing Options up to 44mm Triple Glazed
- 5 Chamber Sash
- 6 Chamber Outer Frame
- Optional RCM Thermal Inserts create up to 6 chamber sash and 8 chamber outer frame
- 10mm Cover on Weather Seals







## Always stylish, always in demand

Optima's traditional, French-style casement windows open up more market opportunities. Our investment in advanced tooling and extrusion technology has delivered superb quality profiles, with every detail, internal and external dimension spot on. In appearance, they replicate the timber originals but in all aspects of performance they excel.

Bubblex gaskets, permanently bonded to the profiles, offer consistent compression and seal the windows to prevent air leakage. Deep drainage channels clear water away from the frames and sealed-units preventing damage. A central Eurogroove to the sashes and perfectly-placed wall thickening ensures reliable hardware fixing and secure windows. Secure clip-in beads make glazing simple and fast with no need to add security glazing clips. Add thermal inserts to the outerframe and sash and the windows are even more energy efficient with extra air chambers providing essential insulation. It's a simple and cost effective way to achieve improved window energy ratings without resorting to the most expensive gas-filled units.

With glazing options ranging from 24 to 44mm, there is a solution for every home and budget. Properties in exposed locations really will feel the benefit of increased overlap on the frames, but all customers will enjoy the appearance of reduced overall frame width and Optima's classic, chamfered lines.



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## Tilt and Turn windows

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. 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 homeowners like, combined with the advanced all-round locking of highly-secure frames.

### Product features

- Optional Sash & Outer Frame Centre Seals
- Double Chamfered 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 7 chamber outer frame







## Versatility and strength

Optima introduces new standards to Tilt and Turn technology. 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. Quite simply, Optima Tilt and Turns are designed to be easy to fit and then to be trouble free whatever the weather throws at them. For commercial and domestic projects, the outstanding performance of Optima's chamfered system makes it the ideal Tilt and Turn window.

Customers from all sectors 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/m<sup>2</sup>K. 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 or conservatories and with a wide choice of woodgrain and coloured foils, there is a finish to suit every type of building material or construction project.

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## 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.

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.

### Product features

- Optional Sash & Outer Frame Centre Seals
- Double Chamfered 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 7 chamber outer frame
- Part Q & M Compliant







## 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.



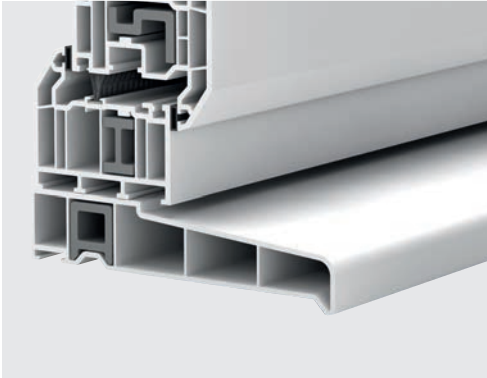
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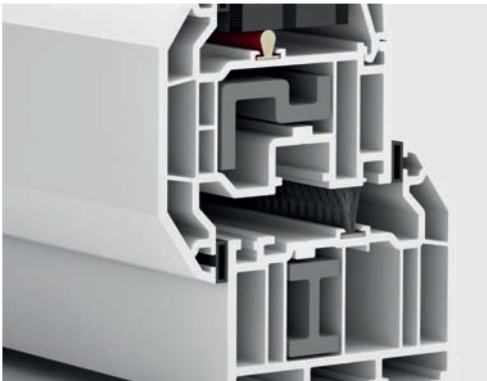
## Optima ancillaries

The right ancillaries finish a job. Without them, possibilities would be limited. With Optima, all ancillaries are made to fit and function perfectly with the main suite. You can customise a frame, make it better insulated, match other glazing, add detail and you know that you are enhancing the result. Optima ancillaries have the same, high-quality finish and durability as our main system components and are available in our full range of colours and finishes.



### Cills

Complete with end caps and couplers, our cill sizes range from a modest 85mm to a substantial 225mm. There's a single reinforcing size to help keep your stockholding under control and steel and recycled composite materials (RCM).



### Thermal Inserts

Thermal inserts are an effective way to achieve better U-values and WERs without the cost of the most highly-insulating sealed units. Simple to use and cut, they slot inside the profiles during fabrication, increasing the number of insulating chambers. What's more, they're made from recycled materials, enhancing your green credentials.

### Baypoles

A range of baypoles enables the installation of strong and robust bay and bow windows. With variable, square and fixed angle variants, all shapes and sizes of immaculately-finished installation are possible.



### Couplers

Couplers are available in a range of sizes from 3mm to 29mm.

### Packers

Packers are available in four sizes ranging from 15mm to 50mm.

### Astragal Bars

A choice of sculptured and chamfered glazing bars is available in all Optima colours and finishes.



### Weatherbars

Ideal for Optima French or residential doors, weatherbars provide the important finishing touches to an installation.

### Casement Horns

Run-through casement horns and cover caps are available in all Optima colours and finishes.





## Optima colours

Being able to offer a wider selection of coloured and woodgrain finishes gives your business a competitive edge and more opportunities. Fashions and styles change. Solid colours and subtle creams are replacing the dominance of white. Customers are selecting finishes that respect their building materials, the age of their properties and their local surroundings. Optima offers more colours direct from stock. And if we don't stock the finish you want, we'll use our FoilExpress service to get it to you. Our service is rapid and our minimum order quantity is a single length.

All Optima foils are top quality and fully guaranteed. The biggest difficulty your customers will have is in deciding which of our many finishes they prefer, but samples and swatch books are available to help.

### Stock Colours

#### Standard



#### Premium



#### Premium Plus



#### Systems Key

- = Optima-C
- = Optima-S
- = FRW
- = Flush Casement
- = Flush Tilt & Turn
- = CD70
- = PD86
- = Vertical Slider

The colour options available on profiles offered within each system, as indicated by the System Key, may be restricted to selected popular sections. If in any doubt, please speak to your Customer Service Advisor for availability.

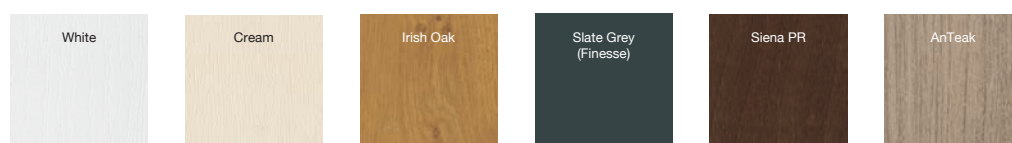
Rosewood = Black Cherry, Light Oak = Golden Oak

### Foil Express Colours

#### Premium



#### Premium Plus



Available on a choice of White, Brown, Tan or Cream base

## Optimum performance

Optima is one of the most energy-efficient 70mm systems available. Its brilliance lies in the adaptable nature of the system. Its components and options allow the fabrication of windows that perform to your required standards. Customers with exceptional levels of insulation in their homes can opt for the ultimate triple-glazed frames. Others, working to a budget, can improve their insulation without breaking the bank. It's simply a case of building the performance you want. Of course, Building Regulations dictate minimum standards, but it's worth knowing that Optima can easily achieve the very top end of the energy-efficiency scale. It can reach the latest A++ WERs and a remarkable U-value of just 0.8 W/m<sup>2</sup>K. That's the Passivhaus standard.

### Insulation from the inside

Our clever little thermal inserts are easy to work with, safer (and quieter) than steel in fabrication and make a real improvement in insulation. By increasing the number of effective air chambers within an outerframe from 6 to 8 and in a sash from 5 to 6, they help to keep homes warmer. Their use can mean that you can achieve your desired window energy rating without resorting to the most expensive, hi-tech sealed units.

### Optional extras

Our optional third seal is a revolution in the glazing industry. Available for the sash or the outerframe, you can even use it on both to take thermal performance to even higher levels.

### U-values and WERs

#### Typical U-values

Achieves 1.2 W/m<sup>2</sup>K with double glazing\*

Achieves as low 0.8 W/m<sup>2</sup>K with triple glazing

\* 1.3 W/m<sup>2</sup>K on flush casement window

\*\* Triple Glazing not available on Flush Casement Window or Vertical Sliding Sash Window

#### Typical WERs

Achieves A+ with double glazing\*

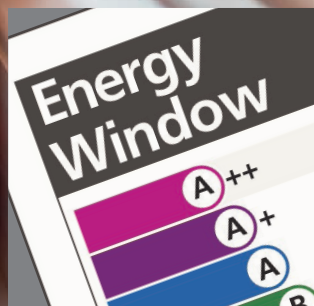
A++ achievable with triple glazing\*\*

\* Except Flush Casement Window

\*\* Except Flush Casement Window and Vertical Sliding Sash

### U-Comply N

Our online tool allows fabricators to calculate the thermal performance and transmittance of any number of Casement and Tilt and Turn window specifications. Approved by the British Standards Institute, U-Comply N reports can be used to prove compliance with the requirements of CE Marking.





## Optimum care

One thing that we're very proud of is our attitude to environmental issues. We understand that PVC-U has its detractors – those for whom timber is the only 'green' choice – but we're working hard to dispel the myths about this remarkable and ultimately sustainable material.

Its low-maintenance qualities, long life span and recyclability are key to any assessment of its green credentials. Our windows are manufactured to BS 7412 and are estimated to have a life in excess of 40 years, after which they can be recycled. PVC-U itself can be recycled more than ten times, giving a total lifespan of several hundred years. Wherever we can, we use recycled materials in our products.



We keep all our operations in Great Britain. That allows us complete control over our production, emissions and environmental impact. It means that we avoid shipping from overseas and that we know and understand the working conditions of everyone who manufactures Optima. We've invested in advanced plant and technology to cut our consumption of water and energy and all of our sites operate to the environmental policy standard ISO 14001. The Building Research Establishment has awarded us BES 6001: a standard which ensures the responsible sourcing of construction products by monitoring our methods, our supply chain and environmental and social aspects of our operation.

We're doing our bit. By choosing Optima, you're doing the same.



# Main Profiles

OUTER FRAMES

QC01  
OUTER FRAME

QC02  
OUTER FRAME

QC03  
OUTER FRAME

TRANSOMS/MULLIONS

QC10  
'T' TRANSOM/  
MULLION

QC11  
'Z' TRANSOM/  
MULLION

QC16  
'T' TRANSOM/  
MULLION

QC17  
'Z' TRANSOM/  
MULLION

WINDOW SASHES

QC30  
CASEMENT 'T'  
SASH

QC33  
TILT & TURN  
SASH

DOOR PROFILES

QC40  
'Z' DOOR SASH

QC41  
'T' DOOR SASH

QC14  
MIDRAIL

QC44  
FLOATING MULLION

FLUSH CASEMENT

QC32  
FLUSH CASEMENT  
SASH

QC34  
DEEP BOTTOM RAIL

FLUSH CASEMENT USES  
QS65 GLAZING BEAD FOR  
24mm GLAZING

GLAZING BEADS

QS51  
24mm BEAD

QC50  
28mm BEAD

QS50  
28mm BEAD

QS65  
36mm BEAD

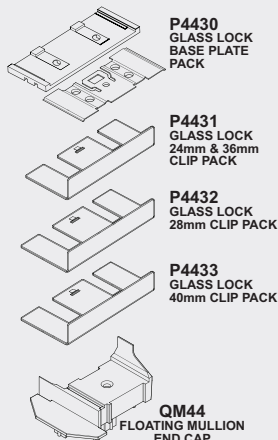
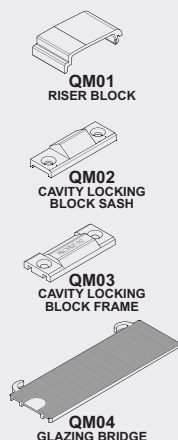
B55  
40mm BEAD

B66  
44mm BEAD

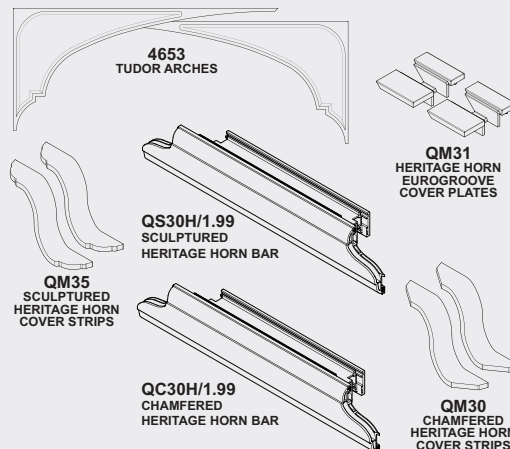


# Ancillary Profiles

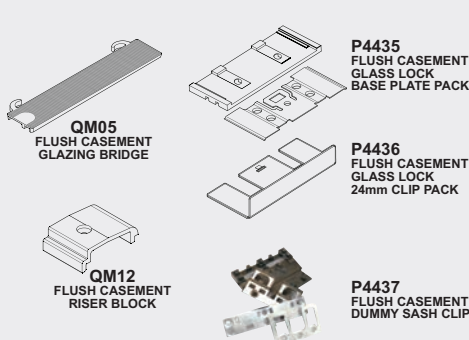
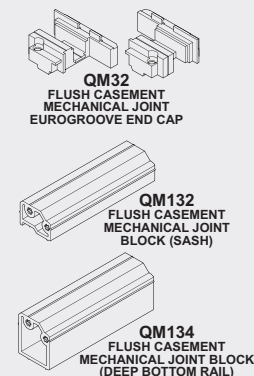
## FUNCTIONAL COMPONENTS



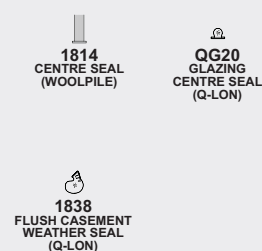
## DECORATIVE COMPONENTS



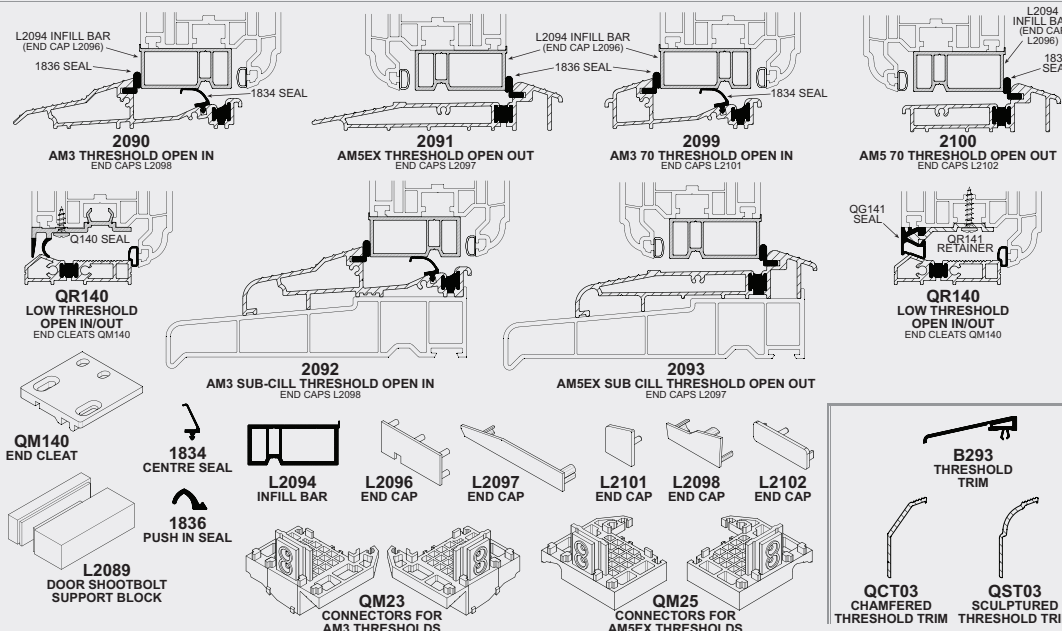
## FLUSH CASEMENT COMPONENTS



## GASKETS & WEATHERSEALS



## THRESHOLDS & ASSOCIATED COMPONENTS



## Optima – giving your customers the best

We work on the principle that customers are people like us – people who want the good things in life and value the important things like home, family and security. We believe that our customers care about the planet and care about doing a great job for their customers. That's why we developed the Optima system.

Optima is complete, fully integrated and aesthetically pleasing with fantastic performance. We know that it makes better windows and doors and because we've committed some of the best designers in the industry to the development of Optima, it's a system that works for everyone: for installers, fabricators and consumers.

Everything you need is included in this system – there's more choice, more ancillaries, more colours and finishes and we believe that Optima can give you access to more opportunities, more markets and more sales.

To give your customers the best, use Optima. Get in touch.





## Our Guarantee

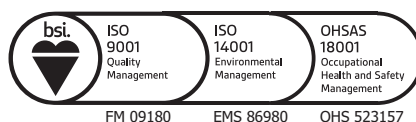
Optima is made by Profile 22, a long established British business with a reputation for delivering consistently high-quality, trusted and reliable products. Profile 22's window and door systems are the most widely specified in the UK.

The Optima system is new and parts of it are revolutionary, but it's undergone stringent testing. We wouldn't have it any other way. We've subjected windows and doors to extreme conditions and we've got the experts in to prove it. Our standards are high and we'll keep pushing them higher as we keep on investing in the latest manufacturing and testing equipment.

### Our products are:

- Kitemarked
- Conform to all relevant British standards
- Produced under an ISO 9001 Quality Management system
- Meet the requirements of ACPO's Secured by Design scheme.

All parts of the Optima system are fully guaranteed. Our white profiles carry a ten-year guarantee. For foiled profiles, the guarantee varies according to the finish. Full details are available upon request.



BS EN 12608  
KM12895  
PROFILE



BS EN 12608/PAS24  
KM33523  
ENHANCED SECURITY  
WINDOW SYSTEMS  
SUPPLIER



BS EN 12608/PAS24  
KM56791  
ENHANCED SECURITY  
DOOR SYSTEMS  
SUPPLIER



BS 8529/PAS24  
KM594776  
ENHANCED SECURITY  
DOOR SYSTEMS  
SUPPLIER

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For more information about Profile 22 products speak to your installer or visit our website at

[www.profile22.co.uk](http://www.profile22.co.uk)

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