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# System10

## Specification Guide

Fenestration Solutions for Public Sector  
& Commercial Applications



A BRAND OF THE VEKA UK GROUP

# The System10 Solution

## Introduction

System10 provides cost effective, energy efficient fenestration solutions for clients, specifiers, and contractors requiring windows, doors, and curtain walling systems for social housing, health and educational buildings and other commercial applications.

At the heart of the System10 solution is a tried and tested range of windows and doors, which has been installed in the public sector for over 25 years. Produced by Halo, a brand of The Veka Group, System10 is one of the leading fenestration systems in the UK.

According to internal statistics, System10 windows are installed in one in every five social housing refurbishment projects, giving the company unrivalled expertise in meeting the demands of procurement efficiency and best value principles.

System10 windows are complemented by a range of residential door options, including a high performance composite door, and a full curtain walling system, ideal for use in new build and refurbishment projects in the education sector.

Yet today, the System10 solution goes beyond the quality and range of its products. Halo has developed System10 to provide clients, specifiers, and contractors with an integrated but flexible supply chain aligned to the wider driving forces of the market, capable of meeting the project requirements of the largest programmes.

**System10 is the perfect partner, with a sustainable vision for the public sector.**

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# Sustainable Communities

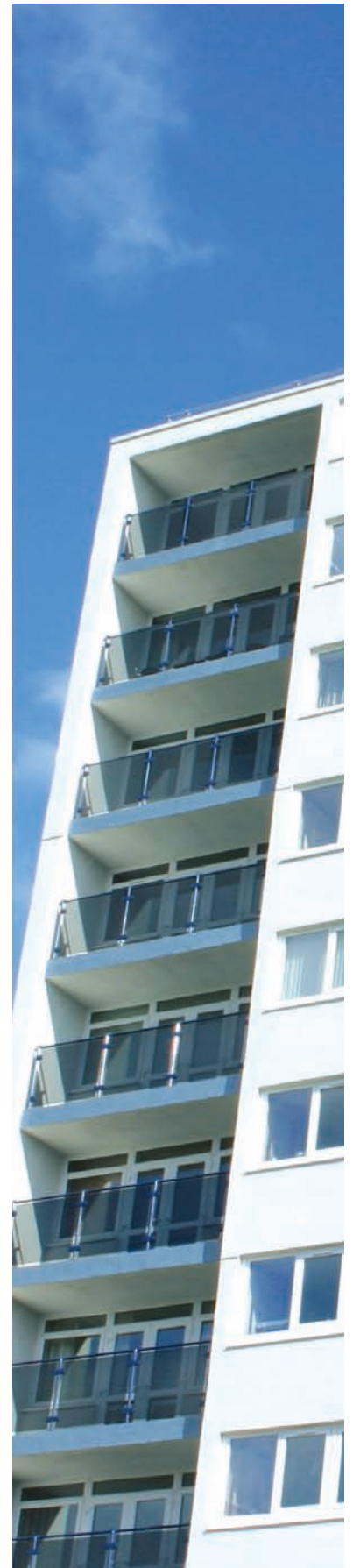
The social housing sector is embracing a wave of change in the provision of decent and affordable housing as a corner stone of the creation of sustainable communities.

Secure and stable communities need decent places to live, good health and educational facilities, spaces to play and zones of economic growth. Levels of investment in housing and stock refurbishment and new build development have increased, yet budgets remain stretched given the scale of the challenge. There are competing priorities for investment and the need to recognise the desires of tenants who want to influence decisions which affect their homes.

Similar challenges exist in the educational sector, where a major programme of refurbishment and the creation of new schools, with the Building Schools for the Future funding stream, is now underway. In the health sector, hospitals and health centres are also being refurbished and replaced as the NHS Estate is improved. To achieve these goals, clients, specifiers, and contractors need to work with supply chain partners who fully understand and have extensive experience in meeting the demands of the public sector.

System10 windows and doors have been widely specified by Local Authorities, Housing Associations, ALMO's (Arms Length Management Organisations), RSL's (Registered Social Landlords), LSVT's (Large Scale Voluntary Transfers) NHS Trusts and Local Education Authorities for many years. With contractor partners now tasked with delivering the total supply chain, Halo is ideally placed to meet the requirements of all its clients. The company is experienced in working in consultation with tenant's forums, local housing action groups and other community based housing organisations.

Halo is committed to helping create the sustainable communities of the future by providing sustainable products delivered by a sustainable supply chain.



# Corporate Social Responsibility

As a partner dedicated to serving the public sector, Halo understands the importance of acting in a socially responsible way, and in contributing to the wider social agenda in all projects.

This includes recognising the needs of all stakeholders including employees, suppliers, customers, the local community and the wider society. The goal is the triple bottom line of sustainability, which consists of social, environmental and economic benefits.

## Initiatives include:

### Community and Social Inclusion:

Engaging and involving tenants, through formal and informal forums and meetings, to ensure that the choice of products and the manner of installation takes their needs and wishes into account.

### Skills and Training:

Training local people can help to overcome short term skill shortages on the project and leave a longer lasting contribution to job creation.

Halo has established a network of Centres of Excellence with training partners and key clients to provide formal training programmes.

Whether beginners in the construction industry, long term unemployed or employees in need of re-skilling from other trades, tailored courses can be provided in a series of disciplines:

- Tenant Care
- Basic Site Health and Safety
- Surveying of Windows and Doors
- Maintenance of Windows and Doors
- Removal of Existing Windows
- Installation of New Windows and Doors
- Building Regulations Compliance

In addition, the company has extensive experience in working with supported workshops including disabled and non-disabled staff, as well as people with learning difficulties.

### Environmental Responsibility:

System10 products are designed with sustainability in mind and the company takes a holistic approach to environmental sustainability. Halo operates to the ISO 14001 Environmental Management Standard.

All PVC-U waste in the production process is recycled, and increasingly old PVC-U window frames removed from properties are collected and recycled in association with the Recovinyl initiative.

PVC-U windows are also thermally efficient and with the new Window Energy Ratings it is easier than ever to specify System10 products to help buildings meet the latest building standards.

### Health and Safety:

Halo has a rigorous Health and Safety policy and an excellent safety track record in its own production and distribution facilities. The company operate to OHAS 18001, the leading occupational Health and Safety system. Supply chain partners involved in the public sector are encouraged to operate to the same standards, ensuring a safe working environment for tenants, the local community and workers on site.

# Procurement Efficiency & Best Value

With the high levels of investment in the social housing sector, it is important that specifiers achieve value with public funding.

Yet, at the same time, the efficiency agenda, outlined in the Gershon review, needs to be balanced with the fundamental commitment to achieving Best Value, which remains a benchmark in the Re-thinking Construction and Accelerating Change initiatives and the heart of Government procurement, according to the OGC.

Halo's experience in the sector means that clients are assured of the highest lifetime value for the product installation, providing real long term savings on repair, maintenance and replacement cycles.

This is underpinned by a product development programme and design options which provide the opportunity for value engineering each project, with 'fit for purpose' solutions. These can provide immediate cost savings and tangible "cashable gains", when System10 is involved in projects at the earliest design stages.

## In Business Together

Embedded into the Halo culture is genuine partnering, through the innovative 'In Business Together' philosophy, which has been at the centre of the company's strategy since 1992.

As the name implies, this programme recognises that all stakeholders in a project are 'In Business Together' ...clients, specifiers, developer/contractors, tenants, the window system company, the fabricator and the installers.

Within this framework, In Business Together includes all parties in a continued process of education, knowledge sharing and skills development, to enable continuous improvement. Whether formalised in a project partnering contract or simply reflected in the working relationship, partnering is at the heart of System10 and Halo's continued growth in the public sector.



# Integrated Supply

Halo has developed a network of window and door fabricators throughout the UK who are all experienced in the social housing and public sector.

This network means the company has the resources and capabilities to supply the largest window refurbishment projects, combining production from various partners in a well-managed delivery programme.

This gives the best of both worlds: local service supported by nationwide resources.

Halo and its fabricator partners are also able to offer a “supply only” or a complete “plan, manufacture, supply, install, inspect and maintain” service, in a comprehensive “end to end” supply chain.

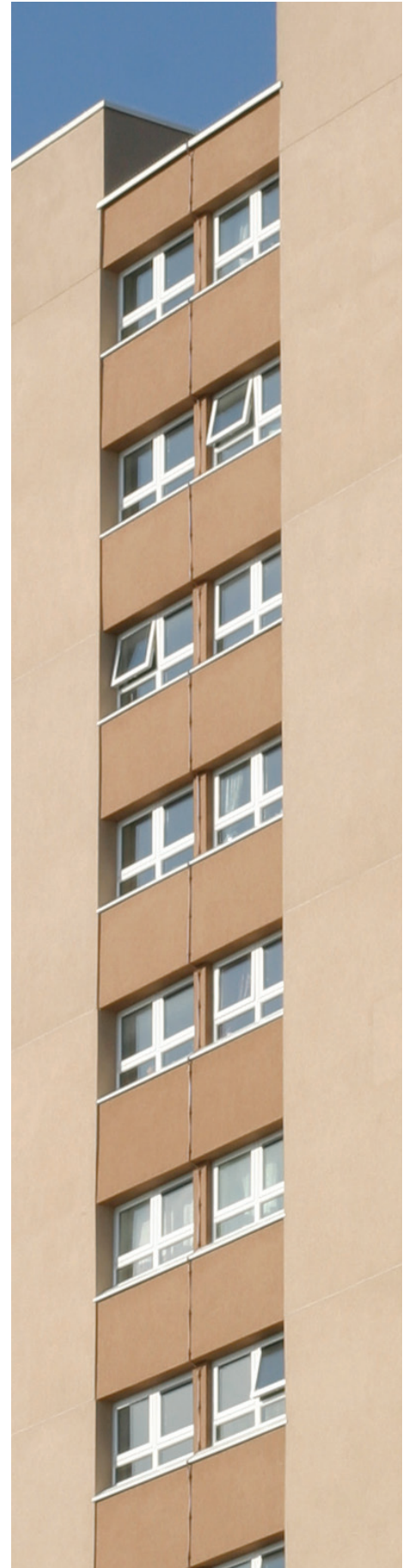
Whether supply only or a complete service, all projects have built-in “Just in Time” delivery and planning frameworks to meet site timescales.

All projects are managed through best practice project management techniques, customised to integrate with clients’ and major contractors’ own programmes.

A full range of Key Performance Indicators is established at the outset and each project is monitored and reviewed to generate improvements and learning for future partnerships.

Halo can offer integrated supply chain solutions throughout the country.

Whether it is developing bespoke product solutions, or delivering “hands on” supply chain management, Halo has a wealth of experience from which client and contractor partners can benefit.



# Product Innovation



Product innovation is essential to deliver the efficiency gains the public sector demands. As well as its tried and tested comprehensive range of products System10 recent developments include:

- High performance composite doors and fire doors for flats developments.
- Vertical sliding sash windows that are specified in many conservation areas.
- Curtain walling systems designed for fast fix erection to suit school holiday timescales.
- Participation in post consumer window recycling programmes

Halo use the principles of Eco Design in its product development:

## Reduce

- By modifying the design of our current window profile, we have managed to reduce the mass of material used (across the full product range) by 4.21%.
- The design of our new window system with additional screw ports means the amount of reinforcement being used has reduced by 8.5% on the sash and 48% on the outerframe, without compromising the quality and strength of the product.
- By slightly modifying the design of our Post Co-Extruded (PCE) gasket, without compromising on the quality of the product, we have reduced the mass of material used by 17% (grams per meter)
- Packaging - we have reduced cardboard use per stillage of product by 82%

## Re-use

- All hardware on a PVC-U window frame can be retro fitted; hence removing the need to replace the frame should the hardware fail.
- All gasket on a PVC-U window can be retro-fitted; hence removing the need to replace the frame should the gasket need replacing
- PVC-U frames are designed so sealed units can be replaced very easily without damaging the frame

## Recycle

- Within Halo we collect 100% of our own post-industrial material
- Halo incorporates as much post-industrial PVC material into our profile as possible. Our cavity closures, sills and thermal insert are all extruded using recycled PVC-U material.
- Our composite door substrate has been designed to use 100% recycled PVC-U material.
- Halo PVC-U window frames are designed so there is zero waste to landfill generated.
- All parts of the window are fully recyclable at the end of the window life: PVC-U profile, Glass, Hardware, Steel / Aluminium reinforcement, Gasket
- Halo is also at the forefront of addressing the environmental responsibilities of the wider PVC-U window industry.





Among the first to achieve the ISO 14001 Environmental Management System and develop low carbon window solutions, Halo has pioneered a unique partnership to recycle post consumer PVC-U windows and doors.

This is in accordance with the PVC-U window industry's voluntary commitment to Europe – Vinyl Plus.

Halo has been involved in a number of projects to remove and de-manufacture existing PVC-U windows and doors, which have been recycled and the bi-products returned to the wider supply chain.

With pressure on landfill availability in many areas, as well as the increasing costs, this proposition will provide a major benefit to users of System10, who now have the means to recycle post consumer windows from their housing stock.

## Investment & Resources

In the public sector market, a supplier's corporate and financial pedigree matters.

Halo has over 25 years track record in supplying public sector purchasers with excellent windows, composite doors and curtain walling systems and, as part of Veka Group, has the strength in depth that matters.

### Resources include:

- System design and development using the latest CAD technology
- In-house mixing plant
- 35 extrusion lines
- State of the art test laboratory
- Purpose built world class distribution centre providing over 99% 'on time in full' delivery performance

The key to the ongoing appeal of System10 Windows and Doors is the fact that they are continually reviewed against existing, as well as proposed legislation.

Halo designers ensure that product development addresses the technical needs of the products in line with the Building Regulations, the need to meet Best Value criteria and specific client requirements.

### Product Accreditation

- System10 meets all current accreditation standards required in the UK
- BSEN12608: 2003 Class A – Design and Extrusion of PVC-U Window and Door Profiles
- BS7412 – Manufacture of Windows and Doors
- BS7950 – Protection from forced entry
- PAS23/24 for Residential Doors

System10 windows comply fully with building regulations in England, Wales and Scotland.

- Part A - Structure (for bay windows)
- Part B - Egress
- Part E - Passage of Sound
- Part F - Ventilation
- Part K - Protection from collision
- Part L - Conservation of fuel and power
- Part M - Disabled access
- Part N - Safety glazing

and for Scotland

- Part J - Conservation of fuel and power
- Part K - Ventilation of buildings



# Proven Expertise

With over 25 years proven track record and a dedication to working in the public sector, Halo has the proven expertise you need in a window, door, and curtain walling systems partner.

System10 is the public sector brand for Halo, one of the largest window system extruders in the UK. Halo, itself a brand of The Veka Group, operates in all areas of the public sector market, new build housing (using traditional and modern methods of construction), and in the wider commercial construction market.

The extensive product range of System10 windows and doors has been specified for a wide range of applications including:

- High rise regeneration, supplying products which are safe to use, easy to clean and are practical for residents
- Traditional low rise refurbishment, including single family homes, multi-occupancy, hostel, community and sheltered housing
- New build social housing, including key worker and affordable homes
- Schools, including refurbishment of 1960s/1970s school facades with a cost effective, versatile curtain walling system
- Health sector including nursing accommodation and hospital/health centre refurbishment
- M.O.D. accommodation
- MMC, Off site and Advanced Panel construction projects

The depth of the System10 product range means that Halo is able to offer 'fit for purpose' solutions for all applications.



# Towards Sustainability

Halo has a sustainable vision for working with public sector partners.

At the heart, sustainability is all about meeting the needs of the present without compromising the ability of future generations to meet their own needs.

This applies globally, with issues such as climate change, but it also applies locally, where every project can be built with sustainable products by organisations who act responsibly.

The goal is the triple bottom line of sustainability, minimising environmental impacts, optimising economic impacts, and maximising social returns.

Halo is committed to this agenda in its own organisation and with its suppliers, its fabricator network and its installer partners. It is also committed to bringing these principles to its partnerships with clients, specifiers, and major contractors, who are meeting these challenges in their own way.

By working together, sharing resources and strategies, we have the potential to create truly sustainable supply chains which make a real difference to local communities.

## PVC-U and the Environment

There is much said about the impact of PVC-U on the environment, embracing many opinions and much debate. The recent Life Cycle Assessment of PVC-U and Competing Materials, commissioned by the European Commission, provides a balanced and impartial view.

**“For windows, the available studies conclude that there is no ‘winner’ in terms of a preferable material since none of the materials has an overall advantage for the standard impact categories. The most promising potential for lowering environmental impacts of windows is expected through the optimisation of the design.”**

Recently the BRE has endorsed a 35 year life expectancy for PVC-U windows and doors after looking into the evidence supporting the long term sustainability of PVC-U.

# The Triple Bottom Line - Towards Sustainability

Halo recognised the importance of sustainability for both clients and its business, as part of its all-encompassing System10 solution for the public sector.

System10 has tackled sustainability on all three levels of the 'triple bottom line':

- Social
- Economic
- Environmental

From a social perspective, System10 is leading the industry through its partnerships with supported businesses across the UK, working with disabled and disadvantaged people to equip them with skills in window fabrication and the ability to earn a living.

When linked with the unique network of System10 Centres of Excellence for Survey and Installation, a wide group of people can be catered for, as part of System10's ambition to help increase levels of social inclusion.

By working in partnership with public and private sector clients, System10 provides opportunities for disabled people and the long-term unemployed in a way that helps to address potentially restrictive skills shortages. The aim is to leave a lasting skills legacy, many years after Decent Homes has been delivered.

Where economic sustainability is concerned, PVC-U still offers, by some way, the Best Value solution of any of the window materials available today. System10 expands this Best Value still further by having such a comprehensive range of choice, giving clients a no-compromise approach to their fenestration needs.

Halo shows others in the industry the way forward, when it comes to the environmental aspect of sustainability.

This includes:

- Incorporating sustainability in to System10's vision, mission and core values
- Adopting the European Foundation of Quality Management (EFQM) business model, used by the business in its quest for world class status
- Adopting The Natural Step framework
- Being one of the original signatories of the PVC-U industry's voluntary agreement, Vinyl 2010. This sets out the industry's commitment to materials, recycling and sustainability
- Achieving ISO 14001 Environmental Management System for extrusion and PVC-U resin supply, and also working with other key suppliers, such as those in the steel reinforcing sector, to ensure they operate to such standards too
- The use of Calcium Organic as a "lead-free" stabiliser option
- Establishing a commercial partnership with a major university, aimed at developing commercialised post-consumer window recycling
- Measuring System10's carbon footprint and setting plans to reduce carbon emissions by 25% over 5 years
- Ensuring that sustainability is at the heart of System10's corporate social responsibility policy



- Leading in the adoption and promotion of the BFRC Window Energy Ratings scheme, aimed at promoting energy efficient windows nationwide
- Working with WRAP (Waste & Resources Action Programme), the not-for-profit company created in 2000 as part of the Government's nationwide waste strategies, on a major recycling project in Oldham. The findings of the 'Research into Waste Glass, Window and Doors from the Demolition and Replacement Industries' report subsequently contributed to the development of 'a good practice guide' to Recycling Your Window Waste





## Technical Information



# Casement Windows

The System10 Casement window range is designed to provide the maximum flexibility for fabricators and clients alike.

Based on a range of 62mm or 70mm sections, it utilises the same sash, bead, gaskets, and ancillary sections providing low stock holding potential for the fabricator, and low maintenance potential for the client. At the same time it provides the ideal range of products to suit any window replacement programme or building construction type within the social housing market.

The suite allows for the production of top hung and side hung casements to accept a full range of hardware, allowing full compliance with all the latest building regulations, and meeting all the latest product testing standards.

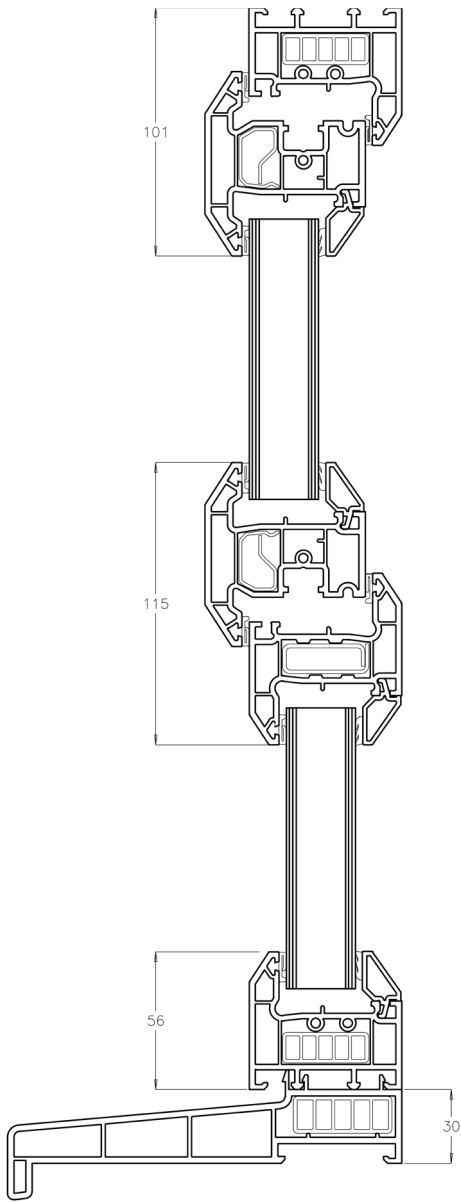
## System 10 Casement Windows – Key Features

- 62mm and 70mm frame depth allows maximum flexibility for fabricators and clients alike
- Internally beaded and externally beaded options
- PVC-U screw ports allow secure fixing of hardware
- Products designed to accept the latest hardware types
- Products enable compliance with latest building regulations
- Glazing options up to 40mm sealed unit depth
- Products tested to meet the performance requirements of BS6375 wind and water testing – classification severe
- Products tested to meet latest security standards of BS7950\*
- Achieves U-values as low as 0.8 W/m<sup>2</sup>K using triple glazing
- Achieves U-values as low as 1.3 W/m<sup>2</sup>K using double glazing
- Noise reduction up to 30dB (BS EN140)
- SmartSash Casement Window also available (see page 23 for details)

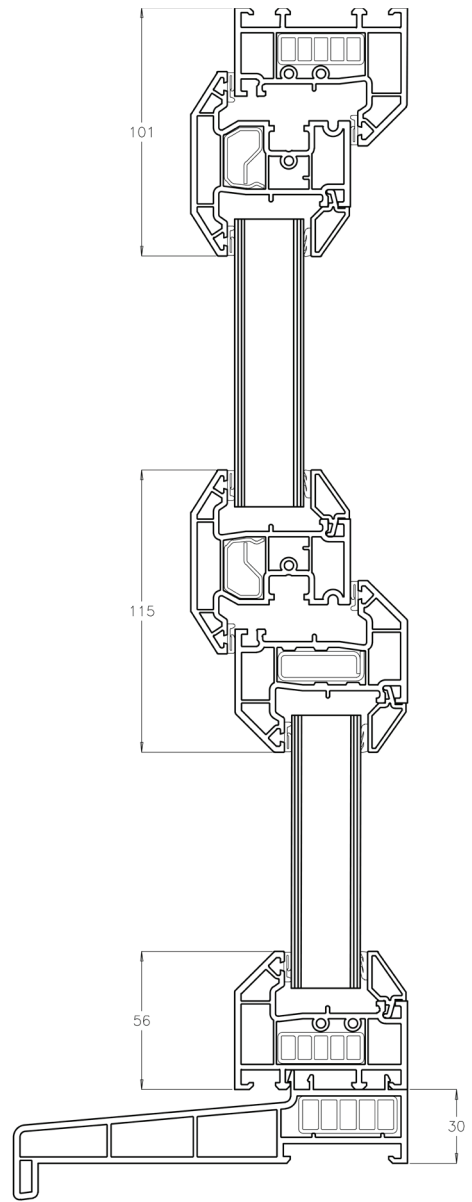
*U section design allows standard to be achieved using minimal reinforcing*







62mm Casement Window



70mm Casement Window



Casement Window

Full specifications for System10 Casement Windows can be downloaded from the NBS Plus web site at [www.thenbs.com](http://www.thenbs.com)

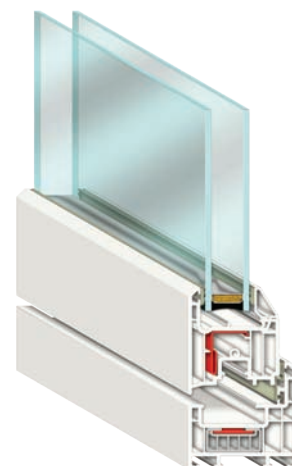
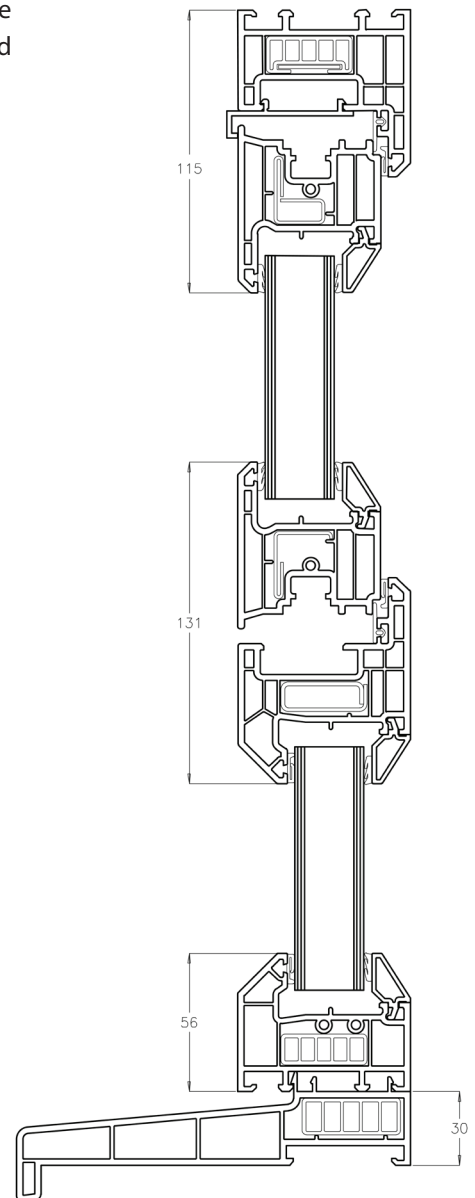


# Top Swing Windows

Top Swings are often used in new build or refurbishment projects where there is a high rise element, or where there is a requirement for cleaning to be carried out safely from the inside of the building.

## Top Swing - Key Features

- Unique 4 chamber profile system for enhanced thermal performance
- Unique twin seal system for weather performance
- Multi position child restrictors
- Window restricted in reversed position for safety in use and cleaning
- Window reverses within the axis of its own hinge and does not come into the room
- Side swing option available
- Windows tested to BS7950
- Achieves U-values as low as 1.3 W/m<sup>2</sup>K
- Noise reduction up to 30dB (BS EN140)



Top Swing Window



Full specifications for System10 Top Swing Windows can be downloaded from the NBS Plus web site at [www.thenbs.com](http://www.thenbs.com)



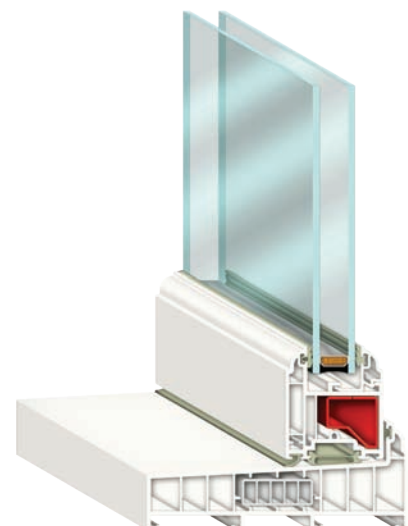
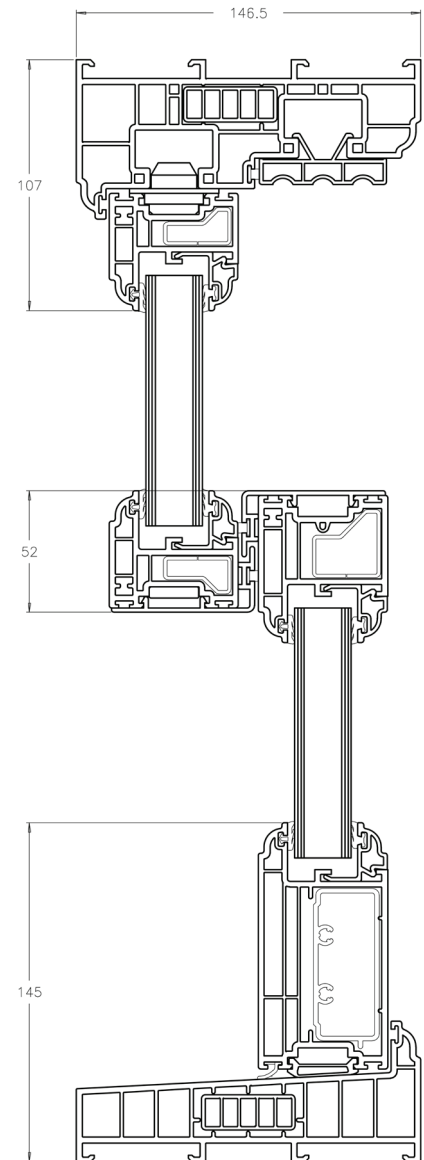
# Vertical Sliding Sash

The System10 traditional sliding sash window is designed to offer clients the potential to perfectly match the existing timber product in their housing stock.

Taking all the finest points of the traditional design, the System10 PVC-U version matches the aesthetic appeal while offering superior performance and maintenance benefits. Weights and pulleys are replaced by reliable spring and spiral balances, and a unique tilt facility to enable cleaning of sashes safely from the inside.

## System10 Vertical Sliders – Key Features

- Traditional front to back profile dimension to match existing box arrangements
- Sections designed to match traditional aesthetic appeal
- Deep bottom rail option
- Upper and lower sashes tilt inwards for ease of cleaning
- Traditional astragal Georgian bar arrangements
- Traditional hardware design and functionality
- Full range of style options and sizes to enable replacement of traditional products
- Achieves U-values as low as 1.4 W/m<sup>2</sup>K
- Noise reduction up to 30dB (BS EN140)



Vertical Sliding Sash Window



Full specifications for System10 Vertical Sliding Sash windows can be downloaded from the NBS Plus web site at [www.thenbs.com](http://www.thenbs.com)

### Conservation Option

WHS Halo has also developed a bespoke version of its Vertical Slider specifically for conservation areas.

Working with key clients and local planning departments to meet their specific design requirements, the new conservation version combines all the benefits of a PVC-U window, with very detailed design features.

### Conservation Vertical Slider - Key Features

- 'Mortice and Tenon' appearance in key joints
- Bevelled sashes
- Period Georgian bar
- Period Georgian bar Traditional travel stops
- Traditional horn detail
- Traditional hardware design



# Tilt and Turn/Pivot Windows

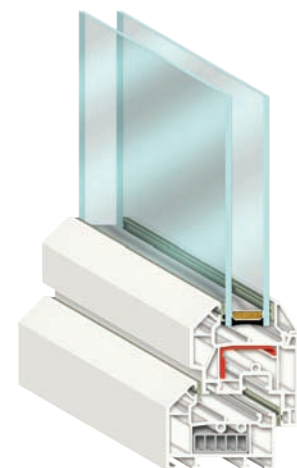
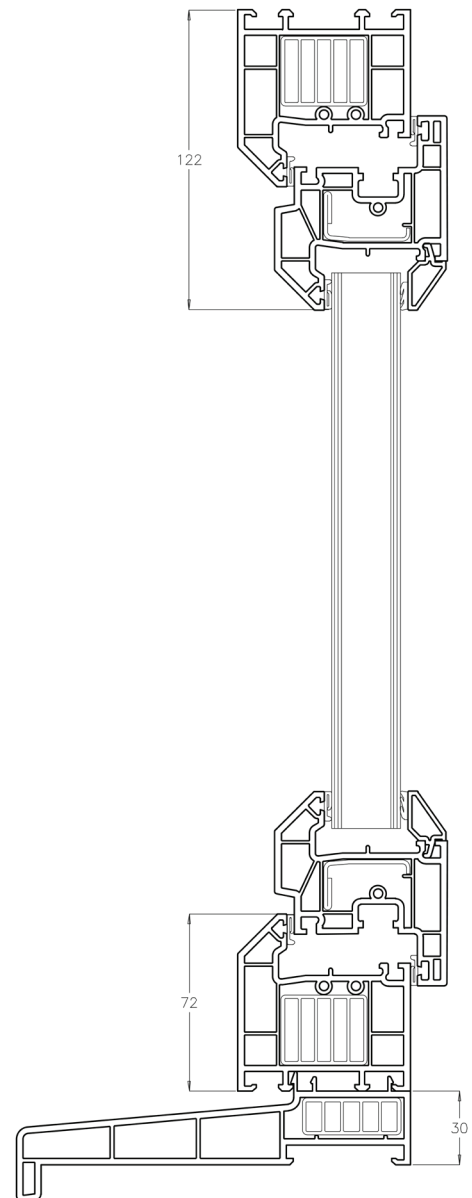
Like Top Swing Windows, Tilt and Turn and Pivot Windows are often used where there is a high rise element, or a requirement for cleaning to be carried out from the inside of the building.

## Tilt and Turn – Key Features

- Two operation windows, first or tilt position offers ventilation, second or turn position offers cleaning and egress
- Child restrictors and 'safe' locking handles provide safety in use features
- High security locking mechanisms
- Windows tested to BS7950
- Windows open inwards into the room
- Achieves U-values as low as 1.3 W/m<sup>2</sup>K
- Noise reduction up to 30dB (BS EN140)
- SmartSash Tilt and Turn Window also available (see page 23 for details)

## Saddle Pivot – Key Features

- Designed to replicate large timber pivots often found in high rise applications
- Large maximum sizes allow replacement of like with like
- Multi point 'perimeter' gearing enables high security, and maximum compression on weather seals, providing excellent weather performance
- Window restricted for child safety
- Window restricted in reversed position for safety in use and cleaning
- Window opens inwards into the room

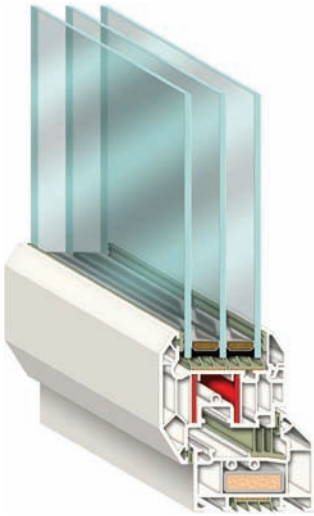


Tilt and Turn Window



Full specifications for System10 Tilt and Turn Windows can be downloaded from the NBS Plus web site at [www.thenbs.com](http://www.thenbs.com)

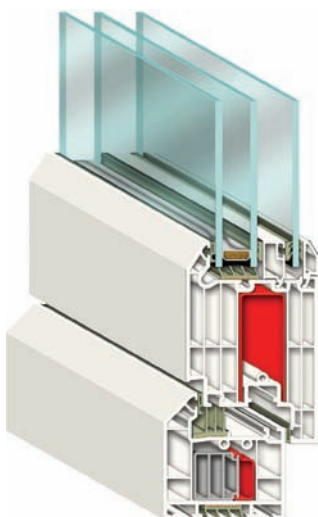
# SmartSash



SmartSash Casement Window



SmartSash Tilt and Turn Window



SmartSash Residential Door

SmartSash is a development of Halo's market leading System10 PVC-U windows and doors, capable of delivering a U-value as low as  $0.7\text{W/m}^2\text{K}$ , whilst using a standard 70mm outer frame depth and "off the shelf" glazing, hardware and other components. As a result, SmartSash is capable of delivering the most cost effective fenestration solution for achieving the U-values that meet tomorrow's standards today.

But the real benefit of SmartSash is the ability to upgrade thermal performance up to Code for Sustainable Homes level 6 at a later date by simply replacing the sash, or the glass unit only - not the whole frame, making best use of restricted budgets. Standard U-Value is  $1.3\text{W/m}^2\text{K}$  and almost any value between  $1.3\text{W/m}^2\text{K}$  and  $0.7\text{W/m}^2\text{K}$  can be achieved simply by varying standard components.

## SmartSash - Key Features

- Excellent thermal performance, U values as low as  $0.7\text{W/m}^2\text{K}$
- Noise reduction of up to 49Db
- Extremely cost effective triple glazing at the point of installation
- Cheaper and easier replacement of damaged glass or failed units - the cost of replacing failed sealed units is reduced by up to 50%.
- Internal blinds and the wiring for alarms and other security measures can be conveniently installed and easily maintained without having to replace entire units.

## Frame Options:

- Casement Windows
- Tilt and Turn Windows
- Residential Doors

For further information on this product please refer to the separate SmartSash brochure

Full specifications for System10 SmartSash windows and doors can be downloaded from the NBS Plus web site at [www.thenbs.com](http://www.thenbs.com)



# Curtain Walling System

The System10 curtain walling system is primarily used in the refurbishment or new building of schools, hospitals, office blocks, and other commercial constructions.

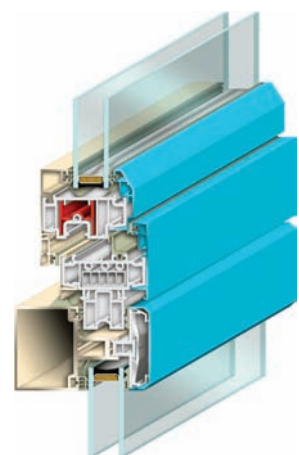
Using PVC-U in curtain walling projects has been made possible by the introduction of a thermally broken, aluminium sub-structure consisting of substantial horizontal and vertical cross members, constructed to form a grid system.

## Key Features

- System tested at Wintech to 2000 pascals in accordance with the CWCT standard
- Comprehensive range of standard transom/mullion options 30mm, 50mm, 70mm, 90mm providing total flexibility
- Full range of RAL colour options provides great design choices
- Integral drainage system and expansion joints
- Unique 'keyway' system for ease of installation PVC-U or aluminium cover caps
- Direct glaze and concealed pressure plate options for slim sightlines
- 90 and 135 degree corner options
- Accepts full range of standard aluminium double doors
- Design service for working drawings
- Extensive maximum size options
- Achieves U-values as low as 1.0 W/m<sup>2</sup>K using triple glazed\*
- Achieves U-values as low as 1.5W/m<sup>2</sup>K using double glazing\*
- Noise reduction up to 50dB (BS EN140)
- Can incorporate photovoltaic panels and solar shading options

\* based on BS EN14351-1 screensize

For further information on this product please refer to the separate Curtain Walling brochure



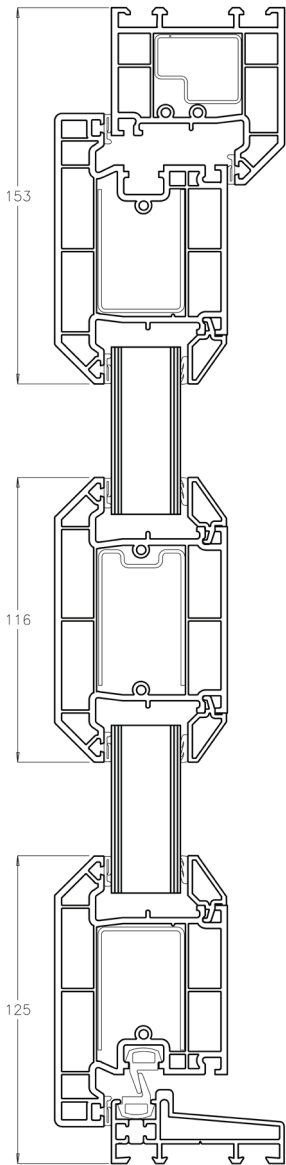
*Curtain Walling section showing direct glaze & frame glaze options*

Full specifications for System10 Curtain Walling can be downloaded from the NBS Plus web site at [www.thenbs.com](http://www.thenbs.com)

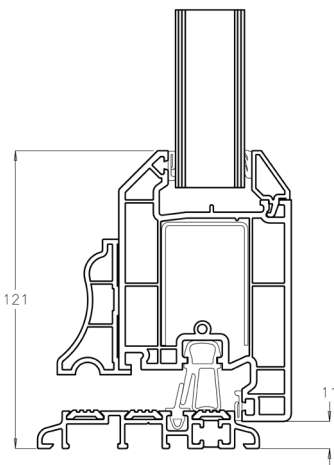




# Residential Doors



*Residential Door  
(Open Out version shown above)*



*Residential Door with Part M Threshold  
(Open In version shown above)*

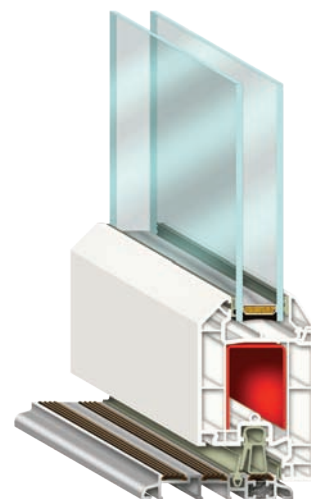
The System10 range incorporates four door types, standard PVC-U Residential Doors, Composite Doors, French Doors and Patio Doors. All products are designed to provide the highest standards of aesthetic appearance, durability, and security by incorporating the latest standards in hardware design.

## PVC-U Residential & French Doors – Key Features

- Open in and open out options
- Aluminium low level threshold
- Part M wheelchair access threshold option - single doors
- Products accept latest range of hardware for high security
- Residential doors tested to PAS 23/24
- Accepts full range of safety glazing or door panel systems
- French door overlap includes standard euro groove
- Achieves U-values as low as 1.5 W/m<sup>2</sup>K
- Noise reduction up to 32dB (BS EN140)
- SmartSash Residential Door also available (see page 23 for details)



*Residential Door  
with Part M Threshold*



*Residential Door*

Full specifications for System10 Residential Doors can be downloaded from the NBS Plus web site at [www.thenbs.com](http://www.thenbs.com)

# Double Rebated Composite Doors

Composite doors provide an attractive and effective solution for residential properties in the public sector.

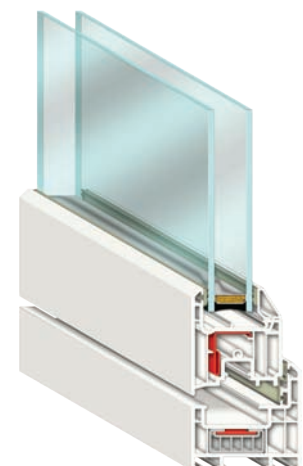
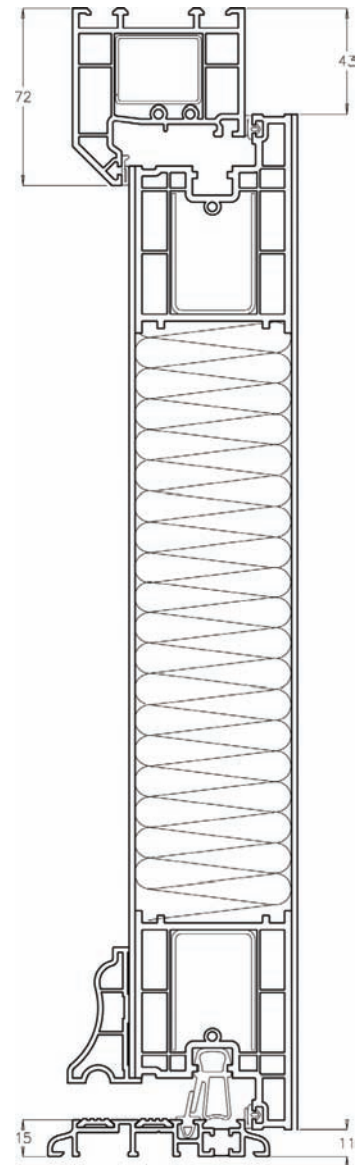
Double rebated composite doors offer a range of significant benefits over standard flush fit composite doors:

- 68mm door with twin seal for excellent weather performance and easy installation
- Improved security and rigidity
- Unique flood resistant door also available
- Achieves U-values as low as 0.8 W/m<sup>2</sup>K

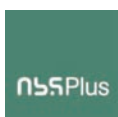
The range of System10 Double Rebated Composite Doors has been developed to offer the highest standards of weather performance, robust security, and attractive aesthetics, and are available in a range of styles and colours.

## Key Features

- Open in and open out options
- French door options
- Door construction is timber free
- Low aluminium thresholds including Part M
- Tested to PAS 23 and PAS 24
- Suites fully with System10 profile range
- Meets the requirements of Secured by Design
- High Thermal insulation
- Fully adjustable hinges
- All doors made to measure



Double Rebate Composite Door



Full specifications for System10 Composite and Fire Doors can be downloaded from the NBS Plus web site at [www.thenbs.com](http://www.thenbs.com)

# Fire Doors

System10 composite fire doors provide an effective and proven barrier in the event of a fire. Local authorities, housing associations and social landlords are required to ensure the safety and security of their tenants, and System10 composite fire doors provide this protection, to FD30S standards, without compromising the security and aesthetic qualities of our standard composite doors.

## Key Features

- Range of colours and styles
- Open in and open out options
- Door construction is timber free
- Low aluminium thresholds including Part M
- Tested to PAS 23 and PAS 24
- Suites fully with System 10 profile range
- Meets the requirements of Secured by Design
- High Thermal insulation
- Fully adjustable hinges
- All doors made to measure

For further information on this product please refer to the separate Fire Door brochure

Also available in the System10 composite door range:

- Cost effective flush fit composite doors
- Utility doors



*Double Rebate Composite Door*



*Double Rebate Flood Resistant Composite Door*



# Coloured Foils

An increasing number of specifiers and developers are seeking an alternative approach to fenestration aesthetics by choosing coloured frames. This has long been an option with steel/aluminium frames, but now a similar choice of colour finish is available through System10 PVC-U windows.

The high quality foils carry extensive guarantees and are well proven for high performance in all types of weather conditions including bright sunlight and high rainfall without any colour deterioration or fade.

For contemporary buildings many architects are now adopting a black/grey palette as well as using the more established blue/red/green colourways.

For both refurbishment and new build projects, the choice of a distinctive colour for the window frame exteriors can have an immediate impact on the building's presence.

Coloured foils can be added to the full range of System10 products including Casements, Tilt Turns, Top Swings, Pivot windows, Sliding Sash windows and Curtain Walling.

## Colour Options



*Ice Cream RAL9001*



*Fir Green RAL6001*



*Hazy Grey RAL7001*



*Gale Grey RAL7016*



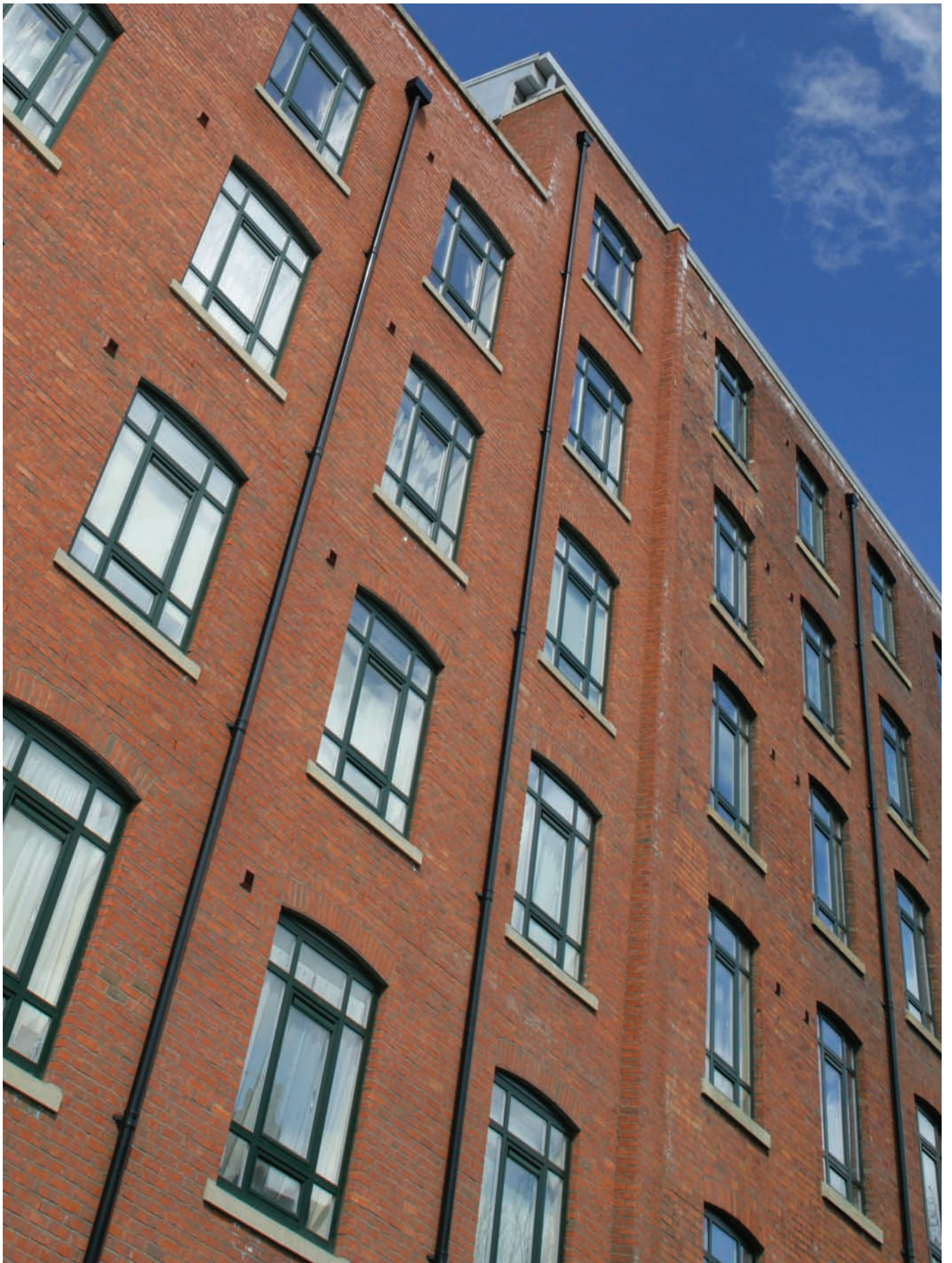
*Beck Brown RAL8022*



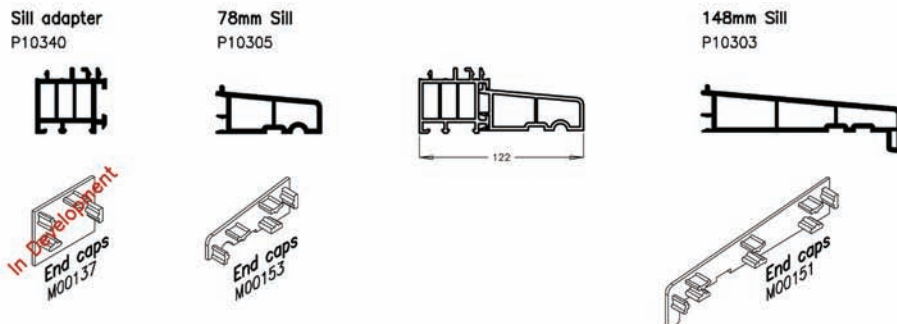
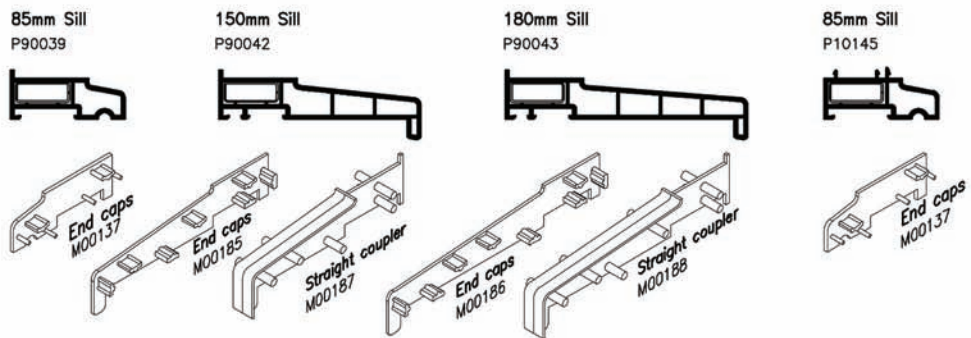
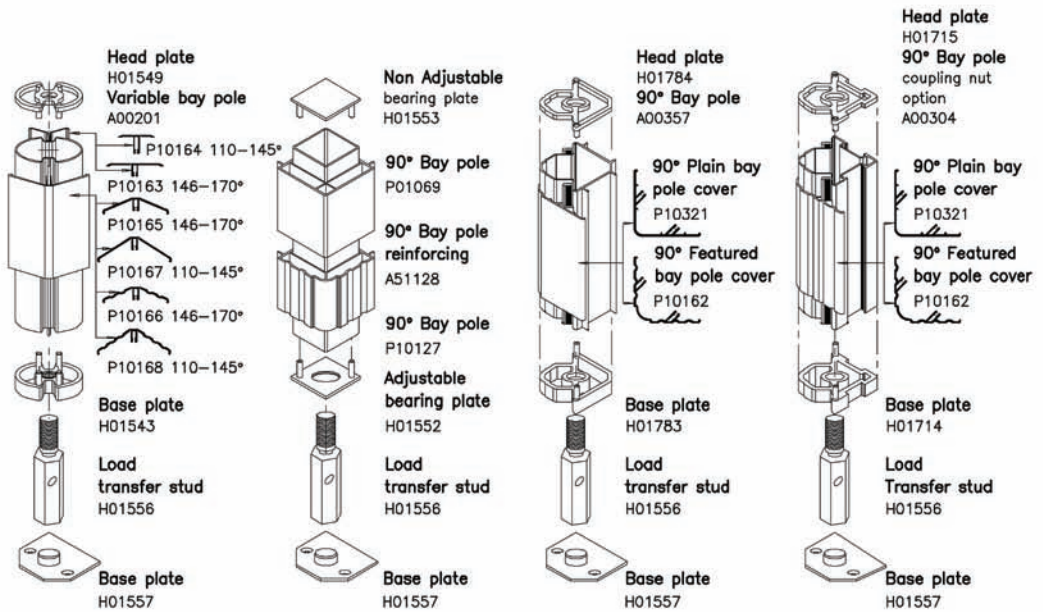
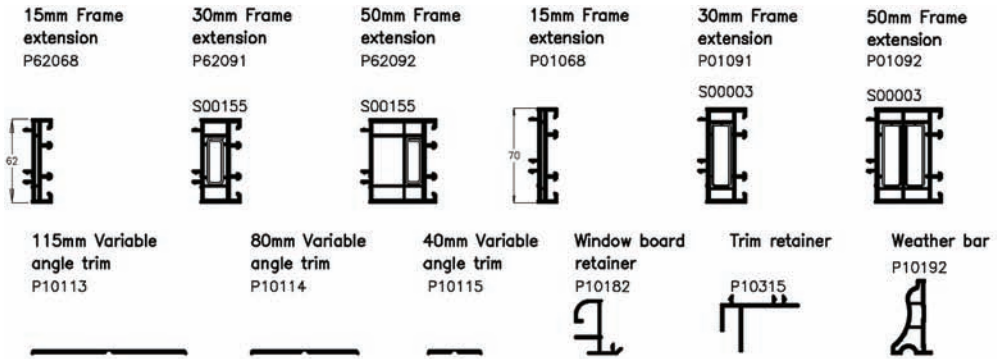
*Rioja Red RAL3005*



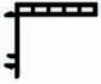
*Midnight Blue RAL5011*



# Ancillary Items



Odd leg  
frame  
extension  
P01087



Weather bar  
P10149



Odd leg  
frame  
extension  
P62200



Weather bar  
P10317



Trim retainer  
P01042



Georgian bar  
P01091



Trim coupling  
P01052



Georgian bar  
P01022



Georgian bar  
P01089



Trim profile  
P01043



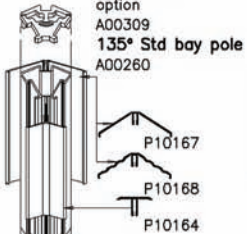
Head drip  
P51034



Eurogroove  
insert  
P10197



Head plate  
H01717  
135° Bay pole  
coupling nut  
option  
A00309  
135° Std bay pole  
A00260



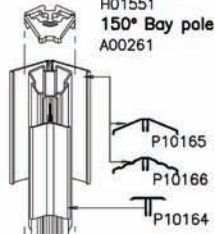
Base plate  
H01716

Load  
transfer stud  
H01556

Base plate  
H01557



Head plate  
H01551  
150° Bay pole  
A00261



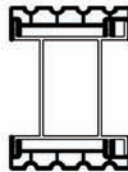
Base plate  
H01714

Load  
transfer stud  
H01556

Base plate  
H01557



Aluminium  
conservatory  
coupling  
A00301  
P10161 Cover



Aluminium  
expansion  
joint  
A00368  
P10323 Cover  
P10324 Cover



Aluminium  
mullion  
strengtheners  
A41147  
P10175 Cover



Aluminium  
coupling  
joint  
A00352  
P10323 Cover  
P10324 Cover



70mm  
Coupler  
P10318



Aluminium  
coupling  
joint  
A00307  
P10126 Cover



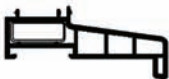
62mm  
Coupler  
P10319



Aluminium  
coupling  
joint  
A00307  
P10126 Cover



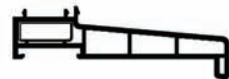
120mm Sill  
P01018



End caps  
M00022



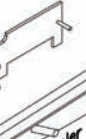
160mm Sill  
P01020



End caps  
M00025



90° Coupler  
M00196



Straight coupler  
(160mm sill)  
M00116



200mm Sill  
P01044



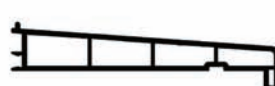
End caps  
M00033



95mm Sill  
P01059



198mm Sill  
P10304



End caps  
M00152

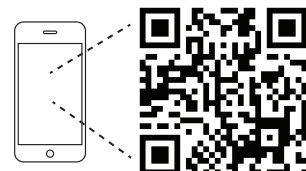


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