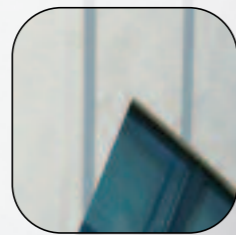


build for life



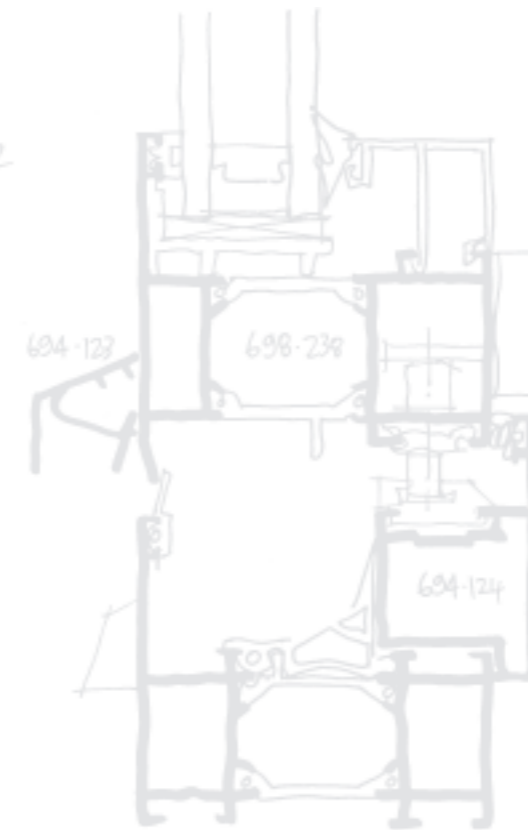
# Kawneer Window Systems



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*Kawneer 602  
Series pivot  
window.*



*multi point locking*

## Kawneer, a global systems company

Kawneer offers a comprehensive range of architectural aluminium building products and systems for commercial construction-entrances, framing systems, windows and curtain wall systems.

Since its beginnings a century ago, Kawneer has been recognized as an innovator. Through the years, we've balanced experience with innovation. We've listened to our customers, and we are dedicated to providing the tools our customers need to succeed.

Our unrivalled team has a wealth of experience working closely with architects, contractors and clients to develop project solutions from their earliest concepts. We are committed to injecting innovation into new product development to ensure our products meet the most exacting engineering and technical standards whilst overcoming sophisticated design challenges. Kawneer's global design expertise, combined with aluminium's flexibility and recyclability, makes our building systems and products the right solutions for today and tomorrow.

## Introduction

### Committed to the success of your project

Kawneer products are made from materials of the highest quality and designed with the benefit of many years of construction experience. Because we control every stage of the process, from mining the bauxite ore through to designing individual systems, we offer a unique resource to architects and contractors. Our engineers and designers can support you through every stage of the design and installation process, ensuring a successful outcome.

### Need something special?

Kawneer offers the world's greatest pool of talent in architectural glazing systems, and we can design custom solutions that will help you to realise your most daring concepts. So don't compromise - by working with Kawneer you can achieve a solution to your most challenging architectural concept.

### Total Performance

High performance is an essential ingredient for all building components nowadays – it is demanded by users and required by current building regulations. Throughout our history we have kept ahead of both the market and regulatory requirements to offer glazing solutions that surpass even the most demanding specifications, and our products meet or exceed all required standards of thermal performance.

We have developed leading-edge production techniques to ensure that manufacturing efficiency is optimised, and environmental impact is minimised, and our right-first-time quality management systems have been devised to minimise waste and exceed the requirements of current ISO 9001 standards.

### Why Aluminium?

Kawneer has been producing advanced glazing solutions in this versatile material for many decades. Aluminium is a near-perfect material for architectural glazing products, and has practical advantages over all other available choices, including inherent resistance to corrosion and very low whole-life costs. Aluminium is also an environmentally friendly material and possibly one of the best options for energy saving within the construction industry. In the building sector vast amounts of aluminium are collected for recycling, with rates as high as 92-98%, and more than 50% of the energy used in aluminium production comes from hydro-electric schemes.

Cala Homes, Glasgow Harbour

RMJM Architects



## Introduction

The Kawneer AA®600 Series has been designed to give specifiers a totally integrated system. It has been developed to set new standards in window and door systems through its unrivalled flexibility of design and outstanding weather and thermal performance.

The Kawneer AA®600 Series is a high performance, totally integrated and fully co-ordinated window and door system. A polyamide thermal break offers dual colour and enhanced thermal performance.

The range can suite with Kawneer's curtain walling and framing products and is suitable

for installation in low or high rise buildings for commercial and domestic new build or refurbishment projects.

Aluminium framing construction incorporates extruded polyamide thermal break profiles which mechanically interlock with inner and outer aluminium extrusions in a bi-tubular configuration to produce fixed frames or opening frames to suit performance and cost requirements.

With the use of extruded gasket profiles, this system achieves its weather sealing performance by means of drained and ventilated rebates on a pressure equalised design principle. The system has been designed with no visible gasket line to enhance the overall appearance.

The window system has been exclusively designed, developed and tested by Kawneer UK and is solely extruded at the Kawneer plant in the UK using proven technology. Installation contracts are carried out by fully trained Kawneer authorised installers.

# AA®600 Series

## Construction

Mechanical corner cleats crimped and bonded together with stainless steel corner brace.

Weathering is achieved by the use of single and dual durometer, EPDM gaskets - all with non-shrinkage cord.

Pressure equalised system.

## Glazing

Glazing and panels up to 38mm thickness can be accommodated.

Details of the Kawneer product tests are available from the Technical Services Department at Runcorn.

## Weather Performance to BS6375-1 : 2004

	<b>Air Infiltration</b> BS EN 12207 :1999	<b>Watertightness</b> BS EN 12208 : 2000	<b>Wind Resistance</b> BS EN 12210 :1999
601 Casement	Class 4	Class 9A	
602 Pivot	Class 4	Class 9A	
603 Tiltturn	Class 4	Class 9A	CE2400
603 Tilt Slide 2-pane	Class 4	Class 9A	Class B5
603 Tilt Slide 4-pane	Class 4	Class 8A	Class C4





Berkeley Square, Plymouth

Architects Design Group

## Introduction

Kawneer's AA®601 Casement Window is a member of the AA®600 Series Window & Door System designed to optimise thermal performance in compliance with Document L.

The AA®601 Casement is available as a top or side hung window and can be single or dual colour with a polyamide thermal break for excellent thermal performance.

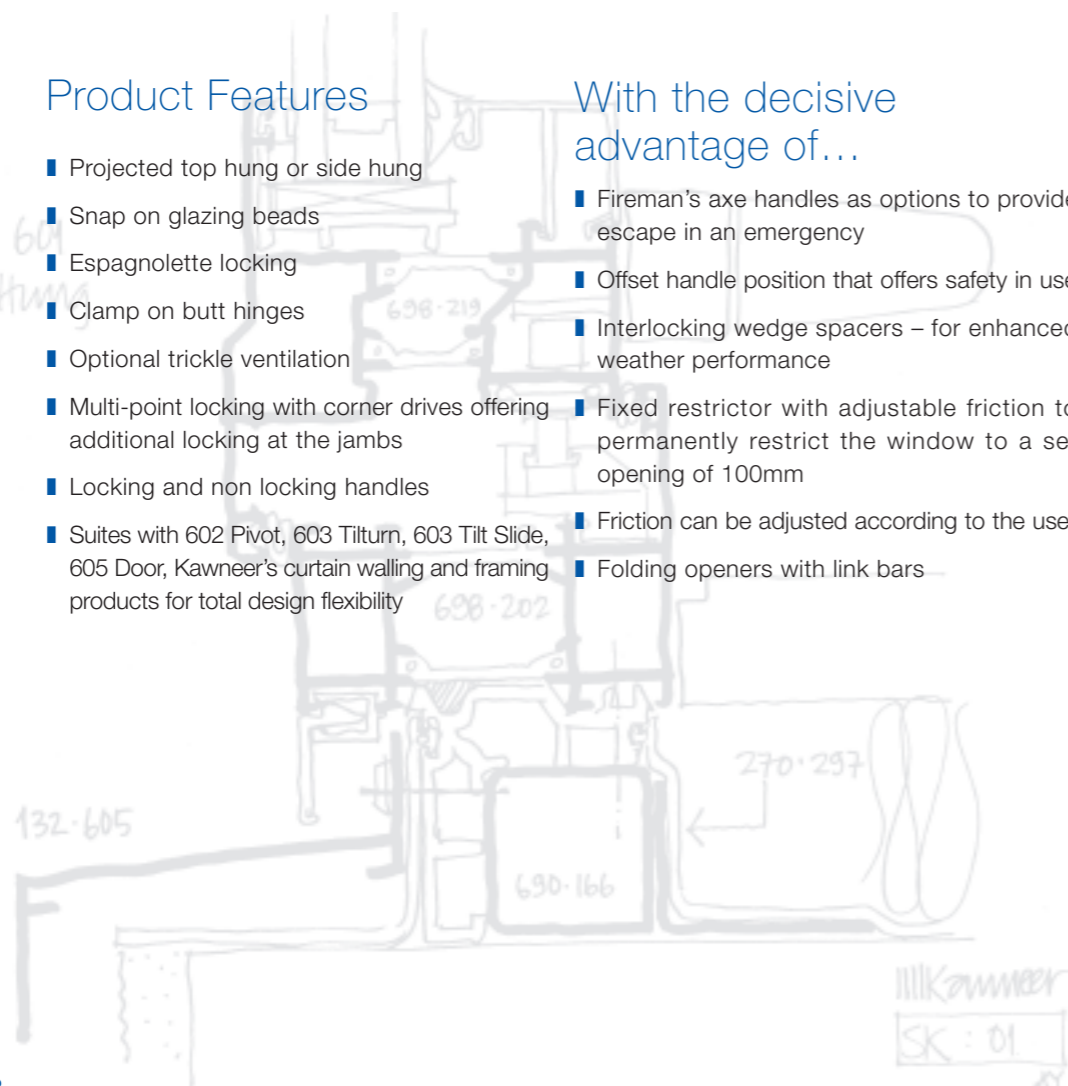
# AA®601 Casement Window



## Product Features

- Projected top hung or side hung
- Snap on glazing beads
- Espagnolette locking
- Clamp on butt hinges
- Optional trickle ventilation
- Multi-point locking with corner drives offering additional locking at the jambs
- Locking and non locking handles
- Suites with 602 Pivot, 603 Tiltturn, 603 Tilt Slide, 605 Door, Kawneer's curtain walling and framing products for total design flexibility
- Fireman's axe handles as options to provide escape in an emergency
- Offset handle position that offers safety in use
- Interlocking wedge spacers – for enhanced weather performance
- Fixed restrictor with adjustable friction to permanently restrict the window to a set opening of 100mm
- Friction can be adjusted according to the user
- Folding openers with link bars

## With the decisive advantage of...



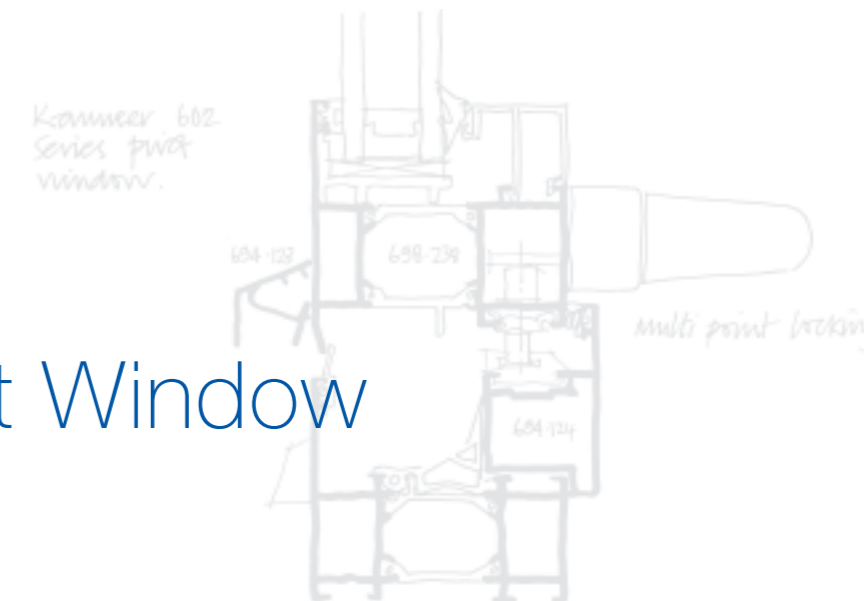
## Introduction

The Kawneer AA®602 Pivot window is based on the tried and tested design principles of the Kawneer AA®600 series window and door system. The pivot window is available in horizontal or vertical applications which makes it a suitable window for most instances.

The AA®602 pivot is especially user friendly with the chamfered vent for ease of operation; this with the unique gasketed pivot that remains watertight without the use of sealants gives the end user peace of mind.

The addition of an automatic restrictor of 10 or 15 degrees makes operation and safety in use paramount. This, coupled with the ventilation at the top and bottom of the window for full circulation of air makes the pivot the first choice for hospitals and offices.

The vertical pivot complies with the HTM 55/ BS 8213 which makes it suitable for hospitals, schools and residential apartments.



# AA®602 Pivot Window

## Product features

- Horizontal and vertical pivot option
- Chamfered vent for ease of operation
- Snap on glazing beads
- Espagnolette locking
- Optional trickle ventilation
- Multi-point locking with corner drives offering additional locking at the jambs
- Locking and non locking handles
- Available with integral automatic restrictor with 10° or 15° and reverse stop at 170° and integral adjustable friction mechanism active from 0°-170°
- Restrictor is on the front face of the pivot for ease of access
- The Pivot is exclusively designed for Kawneer in line with the extrusion for aesthetics and performance
- Horizontal pivot maximum sash weight 150kg
- Vertical pivot maximum sash weight 110kg
- Colour co-ordinated pivots and handles
- Pivot has integral skirt and sealed angular legs for optimum weathering

- Suites with the 601 Casement, 603 Tiltturn, 603 Tilt Slide, 605 Door, Kawneer's curtain walling and framing products for total design flexibility

## With the decisive advantage of...

- The duo durometer gasket gives no gasket line finish for better aesthetics
- Choice of vent options for greater flexibility
- Chamfered vent and adjustable friction mechanism for a smooth and positive operation



University of Cambridge Centre for Mathematical Sciences

Edward Cullinan Architects





# Neptune Marina

## Case Study

Neptune Marina is a stunning and contemporary eight-storey addition to the Ipswich waterfront, comprising more than one hundred apartments and ground floor commercial units. The luxury penthouse apartments, constructed with curtain wall glazing, have terraced gardens with panoramic views over Ipswich and the River Orwell.

Kawneer's innovative products were selected for the project on the basis that the systems are proven with a great track record, which guaranteed performance even in an adverse coastal climate.

Curtain wall shops front onto Duke Street, with the Marina offices and a restaurant on the ground floor. Apartments utilise Kawneer AA@603 Tiltturn windows and Kawneer sliding doors leading onto projecting balconies. The development had to meet stringent acoustic requirements, and Kawneer's AA@603 Tiltturn windows contributed to the development's Part E acoustic requirements.

To meet tight schedules, the glazing was installed into the inner skin of blockwork with the exterior render wall system being installed later. The Penthouses were all constructed using Kawneer curtain wall, with the larger apartments having two-storey, full height glazing to maximise vision. Many elevations also had curved heads to follow the curvature of the roofs. Kawneer curtain wall was installed to ground and first floor offices, as well as shopfronts and restaurant areas and the high level Penthouses.





Bryant Homes, Glasgow Harbour  
Cooper Cromar Architects

## Introduction

The Kawneer AA®603 Tiltturn window (tilt in for ventilation – turn in for cleaning) is the ideal solution for ground floor applications where an outward window could cause injury to passers by. It is also ideal for multi-storey applications as the window can be cleaned safely from inside the building with the window in the turn mode.

The AA®603 Tiltturn is suitable for new build or refurbishment projects.

# AA®603 Tiltturn Window



## Product Features

- Tilt before turn
- Tilt for ventilation, turn for cleaning
- Snap on glazing beads
- Optional trickle ventilation
- Multi point locking
- Locking and non locking handles
- Side hung and bottom hung
- Clamp on hinges
- Friction on the stay arm
- Built in vertical and horizontal adjustment of opening vent
- Suites with the 601 Casement, 602 Pivot, 603 Tilt Slide, 605 Door, Kawneer's curtain walling and framing products for total design flexibility

## With the decisive advantage of...

- Tilting provides draught free baffled ventilation
- The full opening in the turn position allows easy cleaning plus an escape route in an emergency

## Security

Kawneer's AA®603 Tiltturn Window has been tested to the BS 7950:1997 Standard, Incorporating Amendment No.1 - Specification for enhanced security performance, proven by stringent laboratory testing, carried out at the Building Research Establishment (BRE).

*Kawneer Series 603  
Tilt turn window*

## Introduction

The Kawneer AA®603 Tilt Slide Door is available in a variety of single or double tilt slide combinations providing flexibility to suit individual project requirements.

The Kawneer AA®603 Tilt Slide Door is especially user friendly. Sliders in the top guide rail and high precision bearings in the wheels ensure that even large and heavy doors operate with ease and very smoothly, giving the end user extra peace of mind.

The Kawneer AA®603 Tilt Slide Door has been installed in applications such as executive homes, flats and apartments in a variety of colour options.

# AA®603 Tilt Slide Door

## Product Features

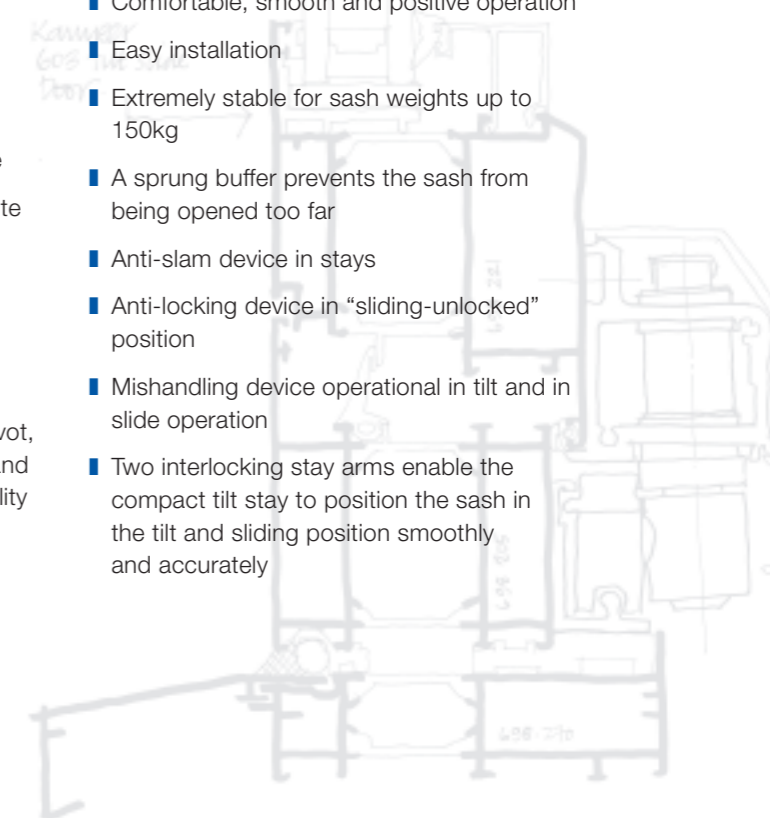
- Tilt and slide door, tilt for ventilation and slide for access
- The doors can be opened from the inside or outside, allowing internal or external access to the building
- Snap on glazing beads
- Locking and non-locking handles
- Locking handle from inside and outside
- Choice of handle design – option to suite with and complement Tiltturn handle
- Compact tilt stay
- Standard gear
- Full peripheral central locking
- Suites with the 601 Casement, 602 Pivot, 603 Tiltturn, Kawneer's curtain walling and framing products for total design flexibility

## Construction

The AA®603 Tilt Slide Door is a pressure equalised system and has mechanical corner cleats crimped and bonded together with a stainless steel corner brace. Weathering is achieved by the use of EPDM gaskets.

## With the decisive advantage of...

- Choice of vent options allowing for internal or external access
- Comfortable, smooth and positive operation
- Easy installation
- Extremely stable for sash weights up to 150kg
- A sprung buffer prevents the sash from being opened too far
- Anti-slam device in stays
- Anti-locking device in "sliding-unlocked" position
- Mishandling device operational in tilt and in slide operation
- Two interlocking stay arms enable the compact tilt stay to position the sash in the tilt and sliding position smoothly and accurately





## Introduction

The Kawneer AA®605 Swing Door is a high performance thermally efficient door due to the polyamide thermal break that is incorporated into the aluminium profile. With the use of extruded gasket profiles, this system achieves its weathering performance by means of drained and ventilated glazing rebates.

Designed for direct fix to masonry, window and door composites or ribbon windows, the range can suite with the Kawneer curtain walling and framing systems and is suitable for low or high rise buildings.

The 605 is available as a single action open-in or open-out swing door and can be single or dual colour.

## Construction

The AA®605 Swing Door is a three chamber pressure equalised system and has mechanical corner cleats crimped and bonded together with a stainless steel corner brace. Weathering is achieved by the use of single and dual durometer, EPDM gaskets, all with non-shrinkage cord.

## Security

Kawneer's AA®605 Door has been tested to the PAS 23 and PAS 24 Standards for the enhanced security performance of single leaf external doors, proven by stringent laboratory testing, carried out at the Building Research Establishment (BRE). The newly tested AA®605 Door is suitable for both light and medium duty requirements, making it ideal for low to medium frequency use in dwellings and commercial applications.

# AA®605 Swing Door



**Cheltenham Racecourse**  
Stephen Limbrick Associates

## Product Features

- Low (for easy wheelchair access) or mid/rebated threshold
- Specifically designed anti-finger trap protector
- Snap on glazing beads
- Choice of locks: multi-point or single with latch, roller or deadbolt
- Adjustable two or three part hinges
- Suites with the 601 Casement, 602 Pivot, 603 Tiltturn, Kawneer's curtain walling and framing products for total design flexibility

## With the decisive advantage of...

- Low threshold provides improved accessibility for all users
- Finger guard design provides safety in use
- Internally glazed vents offer added security and ease of glazing
- Suitable for use in medium traffic locations



**Kinnaird House**  
Trehearne Architects



## Introduction

The Kawneer GT70 Window is an elegant aluminium fenestration solution designed specifically to replicate the appearance of steel windows. Suitable for installation in new build or refurbishment projects, the GT70 window combines the optimum technical performance expected of today's aluminium windows, with the fine sightlines characteristic of original steel windows. These slender sightlines are enhanced further by optional bevelled designed feature caps adding a unique sculptured effect to the external surface of the building.

# GT70 Window



## Construction

Framing construction incorporates fill and debridge thermal break with resin. All frames have mechanically jointed and adhesive bonded corners. Installation can be by the direct fix method or by twist in fixing lugs.

## Glazing

Inward opening windows are internally glazed and outward opening windows are externally glazed, with a maximum glass thickness of 54mm for fixed lights and vents (inside glazed) and 33mm (outside glazed).

## Weather Performance

**Air Infiltration** Grade C at 600Pa  
**Watertightness** no leakage at 600Pa  
**Wind Resistance** up to 2000Pa\*

\*2000 special is dependant upon correct mullion and transom selection to suit span and spacing per project.

## Product Features

- Fine sightline characteristics of steel windows
- Suitable for composite and ribbon windows
- Option for open out or open inwards
- A range of structural and coupling mullions available
- Special bevelled beads
- Concealed drainage system

## With the decisive advantage of...

- Particularly suitable for refurbishment projects
- Replication of steel with additional benefits associated with aluminium such as the high strength to weight ratio
- Offers wide choice of aesthetics

## Case Study

The sympathetic refurbishment of formerly derelict Woodhouse Mill, a six-storey Grade II listed building situated on the banks of the Rochdale canal on the outskirts of Todmorden, features Kawneer's GT70 windows as replacements for the mill's original steel windows.

Built in 1832, Woodhouse Mill was on the Listed Buildings At Risk register until local business man, Charles Moran of Langdale Estates Ltd, had the vision to save the building and turn it into a stylish residential development.

The refurbishment process involved extensive consultation with planners and bodies such as English Heritage and the Victorian Society, with the intention to retain as many of the mill's original features as possible.

Commenting on the refurbishment of the fenestration, Graham Newton of Ramsden Barrett Architects says, "The Kawneer GT70 window was chosen because of its slim sightlines, which makes it a suitable choice for refurbishment projects like Woodhouse Mill, where there is a requirement to retain the traditional elegance of the original steel windows".



**Woodhouse Mill, Todmorden**

Ramsden Barrett Architects



Kawneer Permacover™ is a high quality polyester powder paint finish, offering over 130 standard and 31 metallic paint colours and providing outstanding resistance to environmental conditions. Kawneer Permacover™ has 15 year gloss and a 25 year matt and metallic guarantees subject to application and Kawneer acceptance in marine, industrial, swimming pools or other aggressive atmospheres.

Kawneer Permanodic® is a range of subtle co-ordinated colours which have been researched and developed for architectural systems. Kawneer Permanodic® is a tried and tested anodising process, proven in accelerated laboratory tests, extensive field trials and contract experience. Subject to compliance with Kawneer's requirements, a 25 year finishes guarantee can be obtained from our Head Office.

## Supporting Your Projects

### Authorities

**ISO 9001:2000**

Quality Management System

**BS EN 12020**

Extruded precision aluminium profiles

**BS 3987**

Specification for anodic coatings

**BS 6496**

Specification for powder organic coatings

**BS 6375 Part 1: 2004-11-02**

Classification for weathertightness

**BS 6375 Part 2:1987**

Specification for operation and strength

**BS 4873**

Specification for aluminium alloy windows

**BS 7950:1997**

Incorporating Amendment No.1 -  
Specification for enhanced security  
performance

**BS 4255 Part 1**

Specification for non-cellular gaskets

**BS EN ISO 12567-1:2000**

NPL hot box test

**ASTM C509-94**

Specification for cellular gaskets

### Technical Assistance

Kawneer's regionally based team of Architectural Advisers are able to provide product information and support and can be contacted through the Head Office at Runcorn. Information on Kawneer's extensive range of Curtain Wall, Window and Ground Floor Treatment solutions can also be obtained from our Head Office at Runcorn.

Kawneer UK Ltd is part of Alcoa Building and Construction Systems, and enjoys the extensive resources of the entire Alcoa organisation, allied to the specific glazing systems experience of Kawneer's many operations around the world. As a result of this our partners and customers have direct access to one of the largest pools of technical expertise in the construction industry.





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Kawneer's continuous development and engineering programmes may bring about product changes. Kawneer reserve the right to introduce without notice such changes which will not detract from the product's performance.  
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