The Royale Collection
Aluminium windows and doors
Optio Casement Window

Strong, secure, superior.

Built to the highest UK standards, this effective and high performance solution offers clean lines and advanced functionality. Available in a 70mm frame depth, casement windows are the perfect choice for both residential and light commercial projects, whether new build or renovation. Windows are also made to project in or out.

Optio Casement Window

**Performance and accreditation**
- **U-value (double glazing)**: 1.4 W/m²K
- **U-value (triple glazing)**: 1.2 W/m²K
- **Window energy rating (WER)**: B - C
- **Green guide rating**: A rated
- **Acoustic performance (dB)**: Rw (C;Ctr) 42 (-1;-5) dB
- **Air tightness (Pa)**: Class 4 (600 Pa)
- **Water tightness (Pa)**: Class 9a (600 Pa)
- **Wind load (Pa)**: Class E2400 (2400 Pa)
- **Security PAS 24**
- **3rd party certification**: Q-mark
- **Secured by design**: Yes

**Configurations**
- **Opening**: Open out
  - Top hung
  - Side hung
  - Bottom hung
  - Fixed light
  - Multi-light
  - French casement

**Size limits**
- **Top hung (max weight)**: 180 Kg
- **Side hung (max weight)**: 55 Kg
- **Bottom hung (max weight)**: 60 Kg (3 hinges)
- **Fixed light (max weight)**: 250 Kg

**System features**
- **Frame depth**: 70mm
- **Dual colour option**
- **Multi-point locking**
- **Glazing options**: Internal and external bead
- **Glazing thickness**: 24mm - 40mm
- **Sightline (Frame to Vent)**: 75mm
- **Sightline (Vent to Mullion)**: 89mm
- **Sightline (Fixed Light)**: 43mm

**Aesthetics**
- **Chamfered**
- **Square**

58BW

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Optio
Contemporary Window

Modern, stylish, flexible.

Built to the highest UK standards, this effective and high performance solution is delivered to you designed to reflect your vision. Available in a mix of frame depth, sightline options, glazing thicknesses, handle options and latches, whether you are looking for a minimal or traditional finish, Optio can deliver to project to suit.

**DESIGN FEATURES**
- Certified under the Secured by Design scheme
- French casement
- Tilt turn window
- Option to include cill B
- Integrated deep head profiles for ease of trickle ventilation
- Mitred corners for improved thermal envelope design to improve thermal performance

**OPTIONS**
- Choice of frame heights
- Project or project out options
- Internally geared to accommodate lifemtime high rise projects
- Meeting blocks – choice
- Available in a range of single or dual colour and anodised finishes
- Available in the following aesthetics: Chamfered and square
- Available in the following configurations: Top hung, side hung, tilt & turn hung, seal tight, multi-float and horizontal casement
- Available in the following series: EPS
- Double casement option allowing for internal glazing without the risk of aluminium seals
- Distributed fixing design for ease of installation
- Designed to be fully gas sealed to accommodate standard fixing hardware

**PERFORMANCE AND ACCREDITATION**
- Tested to PAS 24
- Green guide rated B
- Tested to PAS 24 Part 2, 1230mm x 1480mm Side hung next to fixed light with Ug: 0.7 W/m²K using AW603 outerframe and AW610 vent

**SPECIFICATIONS**
- Multi-point locking
- Dual colour option
- Frame depth
  - Fixed light (max weight) 250 Kg
  - Side hung (max weight) 55 Kg
- Glazing (Fixed Light) 43mm
  - Sightline (Fixed Light) 75mm
  - Sightline (Vent to Mullion) 75mm
  - Glazing thickness 24mm - 40mm
- Glazing options Internal and external bead
- U-value (double glazing) 1.4 W/m²K
- Acoustic performance (dB) Rw (C;Ctr) 42 (-1;-5) dB
- Wind load (Pa) Class E 2400 (2400 Pa)

**SCHEMATICS**
- CAD CROSS SECTIONS
- OPTIONS
- GLAZING 24mm – 40mm
- Unique polyamide thermal break design to improve thermal performance
- Green guide rated B
- Tested to PAS 24
- Secured by design

**SIGHTLINE (VENT TO MULLION)**
- 89mm
  - Sightline (Fixed Light) 75mm
  - 75mm

**SIGHTLINE (FIXED LIGHT)**
- 43mm
  - Sightline (Fixed Light) 75mm

**CROSS-SECTION**
- French casement
- Opening Open out
- Configurations: top hung, side hung, fixed light, multi-light
- Multi-light
- Opening Open out
- Secured by design
- Wind load (Pa) Class E2400 (2400 Pa)
- Acoustic performance (dB) Rw (C;Ctr) 42 (-1;-5) dB
Optio Tilt Before Turn Window

Innovative, versatile, intelligent. Built to the highest UK standards, this effective and high-performance solution offers clean lines and advanced functionality. Available in a 70mm frame depth, tilt before turn windows are the perfect choice for both residential and light commercial projects, whether new build or renovation. Windows can also be made to project in or out.

Optio Tilt Before Turn Window

**Performance and accreditation**
- **Inward opening**
  - U-value (double glazing) - 1.4 W/m²K
  - U-value (triple glazing) - 1.2 W/m²K
- **Window energy rating (WER)**: B – C
- **Green guide rating**: A rated
- **Acoustic performance (dB)**: Rw (C;Ctr) 42 (-1;-5) dB
- **Air tightness (Pa)**: Class 4 (600 Pa)
- **Water tightness (Pa)**: Class 9a (600 Pa)
- **Wind load (Pa)**: Class E2400 (2400 Pa)
- **Security PAS 24**
- **Secured by design**: Yes

**Configurations**
- **Opening**: Open in
- **Fixed light

**Size limits**
- **Top hung (max weight)**: 180 Kg
- **Side hung (max weight)**: 55 Kg
- **Bottom hung (max weight)**: 60 Kg (3 hinges)
- **Fixed light (max weight)**: 250 Kg

**System features**
- **Frame depth**: 70mm
- **Dual colour option
- **Multi-point locking
- **Glazing options**: Internal and external bead
- **Glazing thickness**: 24mm – 40mm
- **Sightline (Frame to Vent)**: 75mm
- **Sightline (Vent to Mullion)**: 89mm
- **Sightline (Fixed Light)**: 43mm

**Aesthetics**
- **Chamfered
- **Square

**Certified under the Secured By Design scheme**
- Tested to PAS 24
- Green guide rated B
- Integrated deep profiles for ease of trickle ventilation
- Unique polyamide thermal break design to improve thermal performance

**OPTIONS**
- **Design features**
- **Configuration**: fixed light
- **Dedicated fixing straps for ease of installation
- **Designed with a brass groove to accommodate standard securing hardware

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**Dimensions**
- **Top Hung (max weight)**: 180 kg
- **Side Hung (max weight)**: 55 kg
- **Bottom Hung (max weight)**: 60 kg (3 hinges)
- **Fixed Light (max weight)**: 250 kg
**Optio Entrance Door**

**Popular, reliable, secure.**

Product image and detailed specifications for the Optio entrance door system is suitable for both light and medium-duty use. Designed with security and flexibility in mind, every door in the range is available in single and double configurations making them ideal for varied applications.

**DESIGN FEATURES**

- **Thermally broken**
- **Low threshold**
- **Panel door**
- **Feature design**
  - rounded contours

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Performance &amp; accreditations</th>
<th>Double open in</th>
<th>Double open out</th>
<th>Single open in</th>
<th>Single open out</th>
</tr>
</thead>
<tbody>
<tr>
<td>U-value (double glazing)</td>
<td>1.7 W/m²K</td>
<td>1.7 W/m²K</td>
<td>1.7 W/m²K</td>
<td>1.7 W/m²K</td>
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<tr>
<td>†U-value (triple glazing)</td>
<td>1.4 W/m²K</td>
<td>1.4 W/m²K</td>
<td>1.5 W/m²K</td>
<td>1.5 W/m²K</td>
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<td>Fire (EN1631-3)</td>
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<td>npd</td>
<td>npd</td>
<td>npd</td>
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<tr>
<td>Smoke (EN1631-3)</td>
<td>npd</td>
<td>npd</td>
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<tr>
<td>Security PAS 24</td>
<td>PAS 24</td>
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<td>3rd party certification</td>
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<td>Q-mark</td>
<td>Q-mark</td>
<td>Q-mark</td>
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<tr>
<td>Secured by design</td>
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<td>Yes</td>
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<td>Yes</td>
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<tr>
<td>Durability EN1191 category</td>
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<td>50,000 Cycles</td>
<td>50,000 Cycles</td>
</tr>
</tbody>
</table>

**Hardware**

- Multi-point locking
- Barrel hinges

**Finishes**

- Single colour
- Dual colour
- Textured

**Maximum sizes and weights**

| Maximum door leaf size       | 1020mm x 2160mm | 1020mm x 2160mm | 1020mm x 2160mm | 1020mm x 2160mm |
| Maximum door leaf weight     | 90 Kg           | 90 Kg           | 90 Kg           | 90 Kg           |
| Maximum glazing thickness    | 24mm – 40mm     | 24mm – 40mm     | 24mm – 40mm     | 24mm – 40mm     |

**Accessories**

- Cloaking feature conceals lock and prevents any access to locking points
- Standard single & security hardware using same prepped detail
- Glazing 24mm – 40mm

**System depth**

- 58mm or 70mm frame depth to accommodate varying types of applications
- Low threshold option for Part M – Building regulation

**Available options**

- Single or double door configuration
- Available in single or double door configuration

**Select your 58BD**

- Available in a wide range of styles and formats, our stylish aluminium entrance door system is suitable for both light and medium-duty use. Designed with security and flexibility in mind, every door in the range is available in single and double configurations making them ideal for varied applications.
Optio
Bi-fold Door

Welcoming, stunning, practical.

An elegant combination of form and function, our BI-folding double glazing system allows maximum control over the style and operation of the doors.

The system also boasts a unique pop-out handle that allows for square stacking panels when doors are fully open.

Specifications
- U-value (Double Glazing) - Folding Doors are calculated using EN ISO 10077 - Part 2, 3000mm x 2180mm, 3-3-0 Door with Ug: 1.0 W/m²K using P-06-100 outerframe and P-06-200 vent. Single and Double Door value is calculated using EN ISO 10077 - Part 2, 2000mm x 2180mm Double Door with Ug: 1.0 W/m²K using P-06-100 outerframe and P-06-200 vent.
- U-value (Triple Glazing) - Folding Doors are calculated using EN ISO 10077 - Part 2, 3000mm x 2180mm, 3-3-0 Door with Ug: 0.7 W/m²K using P-06-100 outerframe and P-06-200 vent. Single and Double Door value is calculated using EN ISO 10077 - Part 2, 2000mm x 2180mm Double Door with Ug: 0.7 W/m²K using P-06-100 outerframe and P-06-200 vent.

Options
- Charcoal and double bead options
- Glazing thinner - all doors available in range of opening configurations
- Available with heavy duty glazing - BSF70 HD
- Available in range of anodised colour finishes
- Low threshold 15mm step height
- 3D configurations available in and open out
- Charcoal and square panel options
- Stackable top and bottom of the recess to maximise space
- Dedicated bottom bar and guide for consistent operation and smooth, flush fit
- Double lock 8mm chamfer allowing greater stability
**BSC94**

**Optio Inline Sliding Door**

Modern, versatile, premium.

A premium sliding door with slim sightlines, available in a wide range of sliding configurations using single, dual and triple track systems. The BSC94 offers a high level of security and performance, with a certified PAS 24 and up to 400kg panel weight. Available in a variety of frame heights including standard height and extra height options, with a choice of dual or triple glazing options.

**Performance and Accreditation**

<table>
<thead>
<tr>
<th>Glazing Type</th>
<th>U-value (W/m²K)</th>
<th>Configuration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Double Glazing</td>
<td>1.7</td>
<td>Mono Rail</td>
</tr>
<tr>
<td>Triple Glazing</td>
<td>1.5</td>
<td>Mono Rail</td>
</tr>
<tr>
<td>Double Glazing</td>
<td>1.9</td>
<td>Dual Rail</td>
</tr>
<tr>
<td>Triple Glazing</td>
<td>1.6</td>
<td>Dual Rail</td>
</tr>
</tbody>
</table>

**Green Guide Rating**

- C rated

**Acoustic Performance (dB)**

- Rw (C;Ctr): 36 (-1;-3)

**Air Tightness (Pa)**

- Class 4 (600 Pa)

**Water Tightness (Pa)**

- Class 7a (300 Pa)

**Wind Load (Pa)**

- C4 (1600 Pa)

**Security – PAS24**

**Configuration & Frame**

- Mono rail (105mm)
- Dual rail (94mm)
- Tri rail (155mm)

**Max Vent Weight**

- 400kg

**Max Frame Height**

- 3000mm

**Max Frame Height with Security Features**

- 2600mm

**System Features**

- Dual colour option
- Multi-point locking
- Glazing options: Internal, Internal
- Glazing thickness: 20mm-31mm
- Sightlines: 85mm, 45mm

**Options**

- Available in UPVC grade
- Stowage of door available
- Multiple sliding configurations
- Various door finish options
- Available in single and dual colour; anodised finish also available
- Range of hardware and security features

**Notes**

- *U-Values based on CEN size door (2000mm x 2180mm).
- **Sound insulation values are Rw reduction values and are based on tests using acoustic glazing.
- ***All weather test data taken from BS EN 6375-1 based upon highest performing door configuration.
- ****Based on using double rollers.
- +Dependent on wind load and lock variation.

Please visit www.aluk.co.uk to download all BIM components and CAD files.
Ready for the Royale treatment?