Windows
Infinite technical and design options ... 

A traditional long house in Normandy to be restored, a family home in Provence to be fitted out, a project for a contemporary villa or a townhouse to be modernised. Whatever the project, aluminium adapts to all styles and desires and offers a wide choice of opening systems. It also has a role to play in all public or private service buildings where it provides a perfect combination of design and performance.

With its 100 years experience in the design of aluminium architectural systems, KAWNEER has developed a complete, coherent and compact product offer that places emphasis on thermal insulation, maximising light and respect for the environment.

To meet all design requirements, architects and clients are offered a wide choice of windows with visible opening frames, windows with concealed opening frames and louvered shutter windows with directional slats.

From a professional point of view, KAWNEER windows improve production times as well as the time required on site.
1470 and AA765 Kalory windows with visible opening frames comply with 2005 Thermal Regulations and guarantee an incomparable level of comfort. Thanks to their technical characteristics and under certain conditions, these windows can qualify for tax incentives. In addition, Kalory windows adapt to all types of building construction and renovation projects and integrate perfectly into 1485 Kajole verandas. Thanks to their technical characteristics and under certain conditions, these windows can qualify for tax incentives. In addition, Kalory windows adapt to all types of building construction and renovation projects and integrate perfectly into 1485 Kajole verandas.

THE 1470 KALORY GENERATION

Integrated finishes

From the outside, the 1470 Kalory visible opening frame windows and French windows offer an elegant aesthetic reminiscent of the fine lines provided by wood windows. An 83 mm wide strip of aluminium is visible along the sides and a 117 mm strip in the centre (2 leaf version).

From the inside, users are provided with a refined aesthetic expressed by the slightly rounded profiles. To meet all interior styles, two types of beading are proposed:

• Square beading (sharp edged and straight cut)
• Moulded beading (mitre cut).

Depending on the colour chosen for the joinery, joints can be either black or grey:

• central joint
• cover joint
• interior / exterior glazing joint.

Thanks to its thermal break technology, the 1470 Kalory visible opening frame window can be adapted almost infinitely with a two-colour finish.

Integrated openings

The 1470 Kalory visible opening frame allows a wide range of openings:

• Inward-opening windows, 1 and 2 leaves
• Tilt and turn, 1 and 2 leaves
• Bottom hung and top hung
• Tilting sash
• Interior or exterior opening casement door with or without key lock.

Integrated performances

The 1470 Kalory window has a 52 mm wide frame base that is perfectly compatible with Kasting sliding units and Kanada doors. It complies with the C.S.T.B’s Axis Technique (technical assessment of new building methods) no. 20915-32) and has successfully passed a number of exacting tests. Everything has been designed in the greatest detail to ensure the widest range of possibilities. For example, a specific version permits the assembly of ribbon frames that resolve expansion problems and junctions with interior partitions. Similarly, KAWNEER manufactures anti-intrusion tilt and turn windows on its own production site with A2P, level R1 certification (ready for assembly).

For installation professionals, the 1470 Kalory window is the guarantee of a high quality window that is fast and easy to manufacture:

• Profiles with NF CSTBat labelling for NF production certification
• Machining using dies
• 100 mm one-piece frames for rapid installation in new buildings
• Vulcanised moulding for the central joint
• Butt hinges for cleats
• Clamp on hinges
• 15/10 th groove to host all standard finishes or pressed metal sheets.

KALORY windows

Visible opening frames with reinforced thermal insulation

1470 and AA765 Kalory windows with visible opening frames comply with 2005 Thermal Regulations and guarantee an incomparable level of comfort. Thanks to their technical characteristics and under certain conditions, these windows can qualify for tax incentives. In addition, Kalory windows adapt to all types of building construction and renovation projects and integrate perfectly into 1485 Kajole verandas. Thanks to the considerable variety of technical solutions, the Kalory range can be used for doors and windows with or without locks, as well as incorporated into combined units.

THE 1470 KALORY GENERATION

Integrated finishes

From the outside, the 1470 Kalory visible opening frame windows and French windows offer an elegant aesthetic reminiscent of the fine lines provided by wood windows. An 83 mm wide strip of aluminium is visible along the sides and a 117 mm strip in the centre (2 leaf version).

From the inside, users are provided with a refined aesthetic expressed by the slightly rounded profiles. To meet all interior styles, two types of beading are proposed:

• Square beading (sharp edged and straight cut)
• Moulded beading (mitre cut).

Depending on the colour chosen for the joinery, joints can be either black or grey:

• central joint
• cover joint
• interior / exterior glazing joint.

Thanks to its thermal break technology, the 1470 Kalory visible opening frame window can be adapted almost infinitely with a two-colour finish.

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• 100 mm one-piece frames for rapid installation in new buildings
• Vulcanised moulding for the central joint
• Butt hinges for cleats
• Clamp on hinges
• 15/10 th groove to host all standard finishes or pressed metal sheets.

EXAMPLE OF PERFORMANCES OBTAINED WITH THE 1470 KALORY WINDOW

Air/Water/Wind: A/I*3 W/A*9 A/W*C3 (2 leaf window, 1200 x 1800) - Sound insulation: 39 dB

<table>
<thead>
<tr>
<th>Type</th>
<th>Dimension</th>
<th>Ug (glazing)</th>
<th>Use (bare window)</th>
<th>Up (window with light control)</th>
</tr>
</thead>
<tbody>
<tr>
<td>OP 1 leaf</td>
<td>1,280 x 1,450</td>
<td>1.1</td>
<td>1.5 W/m²K</td>
<td>1.5 W/m²K</td>
</tr>
<tr>
<td>PF 2 leaves</td>
<td>1,480 x 2,180</td>
<td>1.1</td>
<td>2.1 W/m²K</td>
<td>1.8 W/m²K</td>
</tr>
</tbody>
</table>

SWV = 0.45 for optimal summer/winter comfort.
AA765 KALORY EVOLUTION GENERATION

Integrated finishes
From the outside, the visible opening frame AA765 Kalory windows and casement doors offer a discreet and refined design. The sides have a 96 mm wide aluminium strip and the central area a 112 mm strip (2 leaf version). All rainwater drainages are hidden in the lower frame rail, thus avoiding any view of traditional drainage covers. In addition, KAWNEER can provide two curved or straight opening units adaptable to all interior styles.

From the inside, users can choose between the aesthetics of a centred handle and a surface-mounted locking casement bolt. To provide a wide choice of finishes, two types of glazing beads are available:
- Square glazing beads (sharp-edged and straight cut)
- Curved glazing beads (mitre cut and straight cut).

Depending on the colour chosen for the joinery, either grey or black joints are available:
- Interior and exterior cover joints
- Interior / exterior glazing joint.

Thanks to its thermal break technology, the AA765 Kalory visible opening frame window can be adapted almost infinitely with a two-colour finish.

Integrated openings
The visible Generation AA765 Kalory opening frames offer a wide range of opening types:
- Inward-opening windows, 1 and 2 leaves
- Tilt and turn, 1 and 2 leaves
- Bottom hung,
- Interior or exterior opening casement door with or without key lock.

Integrated performances
The AA765 visible frame opening window can accept glazing up to 54 mm thick. It combines very well with Kasting sliding units and Kanada doors and fits perfectly into KAWNEER facade systems.

A wide choice of adaptation profiles are available for all types of installations, whether for new buildings or renovation projects:
- Units for new works, including all insulation work: 100, 120, 140 and 160 mm
- 52 mm base with 15/10th clamping grooves for installation in reveals
- 52 mm base for special frontal installation for renovation works, on existing wood frames.

Depending on safety requirements, a complete offer of specially designed glazing beads is available.

For installation professionals, everything has been studied down to the last detail to fully optimise production and site installation times:
- Machining using dies
- No central joint
- Industrial hardware accessories
- Pre-assembled joints on white lacquered profiles
- Clamp on hinges
- Extra-fast fixing of the casement bolt case
- Galvanised steel fixing ties and 1/4 turn clamp for installation in new buildings.

### EXAMPLE OF PERFORMANCES OBTAINED WITH THE AA765 KALORY WINDOW

<table>
<thead>
<tr>
<th>Type</th>
<th>Dimension</th>
<th>Up (glazing)</th>
<th>Use (bare window)</th>
<th>Up (window with light control)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIF 1 leaf</td>
<td>1250 x 1480</td>
<td>1.1</td>
<td>1.9 W/m².K</td>
<td>1.7 W/m².K</td>
</tr>
<tr>
<td>CIF 2 leaves</td>
<td>1480 x 2180</td>
<td>1.1</td>
<td>2.0 W/m².K</td>
<td>1.8 W/m².K</td>
</tr>
</tbody>
</table>

SW = 0.45 for optimal summer/winter comfort
The concealed opening 1450 and AA765 Kassiope windows comply with 2005 Thermal Regulations, guaranteeing excellent comfort levels. Thanks to their technical characteristics and under certain conditions, these windows can be subject to tax incentives. They adapt completely to all types of new buildings and renovation projects and integrate perfectly with 1485 Kajole verandas. A wide variety of technical solutions mean that the units can be used for windows and casement doors, with or without locks, and for combinations with other ranges.

1450 KASSIOPEE GENERATION

Integrated finishes

From the outside, the concealed opening 1450 Kassiope windows and casement doors provide a fine design line reminiscent of traditional windows. They reveal a 70 mm wide strip of aluminium on the sills and a 79.5 mm strip over the central area (two-leaf version with integrated cover moulding). Thanks to this technology, openings are completely invisible once the windows are closed.

From the inside, users can profit from the vast amount of light pouring through (+15% compared to a standard window) and a refined aesthetic based on the slightly rounded forms of the profiles.

Depending on the colour chosen for the joinery, either black or grey joints and glazing beads can be used:
- Black glazing bead with co-extruded black joint
- White glazing bead with co-extruded grey joint
- Interior / exterior glazing joint.

Thanks to its sophisticated technology, the concealed opening 1450 Kassiopee is an economic window that can be adapted almost infinitely thanks to its two-colour finish.

KASSIOPEE windows open with
Concealed reinforced thermal insulation

Integrated openings

The concealed opening 1450 Kassiopee can be used for a wide range of openings:
- Inward-opening windows, 1 and 2 leaves
- Tilt and turn, 1 and 2 leaves
- Bottom hung
- Inward-opening casement door, with or without key lock.

Integrated performances

The 1450 Kassiopee window can hold glazing up to 31 mm thick and be combined with Kasting sliding units and Kanada doors. It also integrates perfectly into KAWNEER facade systems. The range has C.S.T.B. approval (no. 036-15-33) and has successfully passed the strictest tests.

KAWNEER proposes its internally produced anti-intrusion tilt and turn windows with A2P level R1 certification (ready to install).

For installation professionals, the 1450 Kassiopee window provides the assurance of a quality window that is simple and easy to install:
- Profiles with NF CSTBat labelling for NF production certification
- Machining using dies
- Straight cut assembly for window units in new buildings
- Adjustable glazing angle shims
- Clamped on hinges
- Operating gear
- Galvanised steel fixing ties and 1/4 turn clamp for installations in new buildings.

KASSIOPEE windows

EXAMPLE OF PERFORMANCES OBTAINED WITH THE HIDDEN OPENING 1450 KASSIOPEE WINDOW

<table>
<thead>
<tr>
<th>Type</th>
<th>Dimension</th>
<th>Ug (glass)</th>
<th>Uw (bare window)</th>
<th>Ujn (window with light control)</th>
</tr>
</thead>
<tbody>
<tr>
<td>OP 1 leaf</td>
<td>1250 x 1480</td>
<td>1,1</td>
<td>1,9 W/m²K</td>
<td>1,7 W/m²K</td>
</tr>
<tr>
<td>PP 2 leaves</td>
<td>1480 x 2180</td>
<td>1,1</td>
<td>1,9 W/m²K</td>
<td>1,7 W/m²K</td>
</tr>
</tbody>
</table>

SW = 0,45 for optimal summer/winter comfort.
AA765 KASSIOPEE
EVOLUTION GENERATION

Over and above the design aspects, the great assets represented by this window lie in the time saved in the manufacturing process, essentially due to the installation of joints and hardware.

Integrated finishes

Like the 1450 Kassiopée window, the new generation AA765 Kassiopée window offers a fine line aesthetic.

Seen from the inside, users will be able to profit from considerable extra light, + 15 % when compared with a standard window, and a well-detailed and refined aesthetic thanks to the following characteristics:

• Angle support for a perfect join between the opening profile sections
• Finish cover
• Centred cover moulding
• Straight shaped vent
• Intermediary rail with view of 74 mm aluminium strip
• Virtually invisible glazing joints and cover mouldings
• 3 types of handle: Optima - Harmonie - Prestige.

Depending on the colour chosen for the joinery, either grey or black joints are available:

• Glazing joint for the fixed unit
• Interior glazing joints
• Exterior joiner cover

Concealed opening AA765 Kassiopée windows and casement doors can be adapted almost infinitely thanks to their two-colour finish.

Integrated openings

The hidden opening frame AA765 Kassiopée unit can be used for all types of openings:

• Inward-opening windows, 1 and 2 leaves
• Tilt and turn, 1 and 2 leaves
• Bottom hung
• Casement door with or without intermediary rail
• Inward opening casement door with or without key lock.

EXAMPLE OF PERFORMANCES OBTAINED WITH THE HIDDEN OPENING AA765 KASSIOPEE
AIR/WATER/WIND: 4/4/4 WINeC2 (1 leaf window, 1292 x 892) - Sound insulation: 35 dB

<table>
<thead>
<tr>
<th>THERMAL INSULATION</th>
<th>Type</th>
<th>Dimension</th>
<th>Ug (glass)</th>
<th>Uw (bare window)</th>
<th>Ujn (window with light control)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIR/WATER/WIND</td>
<td>1 leaf</td>
<td>1292 x 892</td>
<td>1.1</td>
<td>1.8 W/m²K</td>
<td>1.6 W/m²K</td>
</tr>
<tr>
<td></td>
<td>2 leaves</td>
<td>1480 x 2180</td>
<td>1.1</td>
<td>1.8 W/m²K</td>
<td>1.6 W/m²K</td>
</tr>
</tbody>
</table>

SW = 0.45 for optimal summer/winter comfort

Architect: Mrs E. BALLION - Heritage architect
KARAIBES windows
Under the tropical sun...

The visible opening frame 1420 Karaïbes window has been designed for use in countries that do not require high thermal performance levels. However, its remarkable technical and aesthetic characteristics make this a high quality window.

It adapts perfectly to use in new building and renovation projects and can be integrated into 1416 Kajou and Kadrille facades. It can also be combined with other standard insulated sliding openings and doors from the KAWNEER range.

This well-proven system permits all types of window and casement door openings, both with or without locks, and can easily be combined with other KAWNEER series.

Integrated finishes
From the outside, 1420 Karaïbes windows and casement doors offer a fine line aesthetic reminiscent of traditional windows. The side areas reveal an 84 mm wide aluminium strip and a 110 mm strip over the central area (two leaf version with integrated cover moulding).

From the inside, the slightly rounded profiles give 1420 Karaïbes a remarkably discreet charm. Depending on the aesthetic finish sought, architects can choose between several finishes:
- Square glazing beads (straight cut)
- Moulded glazing beads (mitre cuts)
- 3 lines of ergonomic handles: Optima, Harmonie, Prestige
- Black or grey glazing joints

Integrated performances
The 1420 Karaïbes window can accept glazing up to 31 mm thick. This well-proven window system adapts well to all types of new building and renovation projects. If necessary, a wide choice of joint covers and jamb linings can be used to pick up all external insulation: 100, 120, 140 and 160 mm.

Professionally, 1420 Karaïbes is the assurance of a high quality window that is simple and easy to install:
- Assembly by mitre cut and screwed angle sections
- Machining using dies
- Vulcanised angle for the central joint
- Adjustable glazing angle shims
- Clamp on hinges
- Operating gear
- 15/10" groove to host all standard cladding and pressed metal sheets.

The 1426 KAJOU louvered shutter
A little corner of paradise

The 1426 Kajou louvered shutter has been designed for use in hot countries where there is a need for controlled and constant ventilation of living spaces, a tight weather seal when closed and intrusion protection. The variety of proposed aesthetic solutions, associated with its excellent mechanical qualities, ensure a high quality louvered shutter with a long service life.

It adapts perfectly to all new building work and renovation projects, and integrates perfectly into all joinery systems (sliding units, windows, doors, full access) and facades in the KAWNEER range.

Integrated finishes
Depending on the aesthetic sought, three directional slat versions are proposed:
- Aluminium slats
- Glass slats (max. 6 mm thick)
- Wood slats (max. 6 mm thick).

Aluminium slats present a large number of advantages. They better control solar gain by acting as a sun-break. The natural qualities of this material make it able to resist violent winds and completely eliminate standard maintenance works.

The quality of the components used as well as the manufacturing and assembly processes allow most louvered shutter dimensions to be produced:
- Min.: 200 mm wide by 343 mm height
- Max.: 900 mm wide by 2,200 mm height.

For installation professionals, the 1426 Kajou louvered shutter is a reliable solution and every component has been specifically studied to simplify the manufacturing process and installation on site:
- Pre-drilled side uprights for rapid positioning of the slats
- Pre-drilled casement bolt rod for rapid installation of the movement system
- Clipped assembly of the operating handle
- Rapid fixing to the pre-frame
- Removable handle to simplify maintenance.

EXAMPLE OF PERFORMANCES OBTAINED WITH THE 1426 KAJOU LOUVERED SHUTTER
AIR/WATER/WIND: A′P/W′A′ W′C′3 (2 leaf shutter, 1420 x 1240 mm)
SOUND INSULATION: UP TO 39 DB

EXAMPLE OF PERFORMANCES OBTAINED WITH THE 1420 KARAÏBES WINDOW
AIR/WATER/WIND: A′P/W′A′ W′C′3 (2 leaf window, 1420 x 1240 mm)
SOUND INSULATION: UP TO 39 DB
Finishes
KAWNEER provides a wide range of finishes able to meet all the needs of architects and clients.

Native Rust® Exclusive KAWNEER shade

Integrated colour chart
- Over 300 painted colours (lacquer thickness: 60 microns)
- Standard marine quality treatment

Arboreal colour chart 9 imitation wood shades

Textural colour chart 10 shades
- Providing 11 grain and speckle shades

Textural colour chart

Anodised colour chart providing 40 anodised shades (class 20)
- A few examples