INTERPLAST GROUP
PROFILE SYSTEMS
PVC AND ALUMINUM DOORS
WINDOWS
SHUTTERS
**InnoNova_70.A5 elegance**
System for open tilt widows with very high thermal and noise insulation parameters. Five-chamber PVC profile made by the German company TROCAL, with 70mm wide frame. The combination of elegance and quality results in modern style windows and doors.

**EuroFutur classic**
is a 5-chamber system, 70mm, made by the German company KÖMMERLING, for fabrication of PVC windows. Innovative profile from the technical point of view, with patent protected geometry, exclusively good thermal insulation properties.

**InnoNova_70.A5 decostyle**
A system of open tilt windows and doors, lined with renolit film with wood patterns and ral colors. Five-chamber PVC profile made by the German company TROCAL, with 70mm wide frame. Classic appearance and finesse and warmth provided by wood like shades.

**Improved heat conservation due to the 70mm deep profile.**
5-chamber technology; modern design; a variety of color options and wood texture patterns; economic due to minimized inventory; additional noise, thermal and anti-burglary protection due to deep glazing rabbet; higher security with locking axis of 13mm; improved static features; optimized isothermal curve; optimized installation.

**InnoNova_70.A5 aluclip**
A system of open tilt windows and doors aluminum coated, optional painting in all colors as per ral & sable. Five-chamber PVC profile made by the German company TROCAL, with 70mm wide frame.

**4-chamber PVC system wind, rain, dust and weatherproof.**
Further PVC profiles are corrosion resistant in high humidity conditions, resistant to thermal deformation, resistant to acids, alkali and salts.

**TROCAL 88+**
Has been the measure of high quality requirements and excellence that cannot be achieved even with greater depths of the profile. Due to its extraordinary structural sturdiness, the new profile has become the standard of sustainable reliability and engineering perfection: The pleasant feeling and awareness of having discovered the right measure and the right product – for the current day and for the future. With TROCAL 88+ one can open a new exciting page in modern construction.

**6-chamber profiles for windows and doors of this range offer even better design, noise and heat insulation properties.**

**TROCAL 76**
High heat insulating TROCAL 76 with modern functional glazing delivers excellent heat insulation plus impressive cost and energy savings. With 76mm construction depth already achieves a Uf value of 1.1 W/(m²K).

**premilne**
A sliding system with high requirements for thermal insulation. Three-chamber PVC profile made by the German company TROCAL with 73mm wide frame. High quality and style contribute for a perfect design.

**premindoors**
A slide and lift system suitable for greater width and high thermal insulation requirements. Three-chamber profile PVC frame made by the German company TROCAL, with 150mm wide frame. Perfect balance among aesthetics, quality, coziness and security.
The solution for all architectural styles. TROCAL InnoNova_70.A5 classic features an offset arrangement of frame and sash and an attractively lean visible sight line to provide great potential for elaborate façade designs. Yet its convincing advantages are not only visual:

**Weather seal.**
This system features two seal levels. An internal and external permanently elastic weather seal provides the perfect protection between the sash and the window frame. Further advantage: the window's rebate is very easy to clean.

**Thermal insulation.**
The 70mm deep profiles with Uf-value for the frame of 1.3W/m²K a will meet the requirements of even the most stringent energy world wide. Combine standards economy and ecology, it pays off hortand longterm.

**Five chambers.**
The unique, honeycombed profile chambers enhance the window's inherent structural stability, while counteracting torsion.
With TROCAL 76 you can design a living environment that optimally reflects your personal preferences. The modern TROCAL 76 PVC-U window satisfies all requirements of design, function, construction physics and insulation, and it is also eco-friendly and durable. Discover the advantages of TROCAL 76.

- **Optimum heat insulation.** High heat insulating TROCAL 76 with modern functional glazing delivers excellent heat insulation plus impressive cost and energy savings. With 76 mm construction depth already achieves a Uf value of 1.1 W/(m²K).

- **Effective noise protection.** In combination with high quality functional glazing, the TROCAL 76 window provides optimum noise protection, thereby enhancing quality of life.

- **Excellent intrusion protection.** The window profiles are designed for use of special safety fittings and additional burglary prevention features.

- **Individual design.** Narrow profiles enlarge the transparent glass surfaces. There is also a comprehensive choice of foil colours and numerous combinations with individually coated aluminium.

- **Adds to your property’s value.** High quality, first-rate eco-friendly plastics and lasting convenience of operation permanently add to the value of your property.
Technology and design at the highest level.

**TROCAL 88+ Standard**

New premium window system TROCAL 88+ fulfils the requirements of aesthetics and quality oriented building owners who wish an elegant window design and expect functional properties that can provide the reatest possible level of comfortable living. This innovative system provides architects with an attractive range of design options for creative building.

- Enhanced thermal insulation with optimal thermal properties.
- Uf value 1.0 W/(m²K).
- Consistent six chamber technology carried not only by the profiles but on all functional levels. The chambers are dimensioned for the optimal thermal insulation.
- Enhanced Uw values, less condensation, and greater surface temperatures for greater cosiness. Slender visible sight lines for plenty of incoming light.
- Three sealing levels with thermo centre seal and innovative sash rebate gasket ensure good tightness against driving rain, the optimal windproof properties, and superior sound insulation.

- Reliable robustness and enormous structural integrity.
- Windows secured in place through special dowel chambers in the weather protected section.
- Low maintenance owing to arrangement of the window hardware in the weather protected section behind the thermo centre seal.

- Greater space and stability for sound insulation and security.
- 88 mm system depth for maximised sound insulation.
- Wide 24–54 mm glazing range for triple and special functional panes.
- Backlocked and supported locking plates for excellent protection against forced entry.

INTERPLAST GROUP
Beautiful new window world

EURO FUTUR CLASSIC

Euro Futur Classic
Window system with 70 mm installation depth, offset design, with grey seals.
Windows and doors are a part of your living space and your totally individual living design. The decision about the right window system should therefore be given your careful attention.

Windows emphasise the character of your house

Windows are amongst the most demanding construction elements of a house. Windows are more than just a means to a purpose. They give life to a facade and increase the material value of a house. Windows are construction elements with the most design variety. We provide you with everything you need for your unmistakably individual windows: Any possible window form and layout. Wide colour range. Bars - applied or internal between the insulating glazing. Elegant handles. From standard glazing to special glass to highly profiled glass, for example for your bathroom or front door to keep out unwanted eyes.

A plus in thermal insulation, noise protection and safety

Even our standard design window systems have excellent insulation and sound protection properties. These values can be improved even more with special thermal or noise protection glazing. In addition to the basis safety features of this window system, a top level of security can be achieved with regards to break-in prevention with security hardware, reinforced glass and locking handles.

Euro Futur Classic

♦ Modern window design of straight lines with slender profile faces
♦ Stable profile cross-section with excellent statics for long window durability
♦ The integration of an innovative, utility patent protected steel reinforcement system creates a 5-chamber structure with superior thermal protection properties and an Uf value of 1.4 W/m² K.
♦ Easy care and never needs painting
♦ Lead-free hard PVC, stabilised with environmentally-friendly calcium/zinc

greenline

Our window profiles are stabilised with environmentally-friendly calcium/zinc instead of lead. This not only improves environmental protection, it also improves quality through every life phase of the window – more resistant against weather, more durable gloss finish, more purity during recycling. Environmental protection that pays for itself.
That extra in quality of life

KBE System_70mm windows offer you solutions with added value. They are designed as state of the art integrated solutions and also provide many possibilities for individual design.

Efficiency
KBE System_70mm helps you to save heating costs to a measurable extent and raise the cosiness in your home. Featuring innovative five chamber technology and a larger installation depth, KBE System_70mm offers a perceptible thermal insulation. This also makes it ideal for thicker sound insulation glazing that better absorbs noise from outside.

Safety
The 70 mm installation depth and the 13 mm distance between axes offer considerable protection against forced entry. The larger installation depth can take thicker glazing, making it even more difficult to lever up the window. Moreover, these window systems can take security hardware that can be installed more deeply in the frame than usual.

KBE_system70mm
- 70 mm installation depth for thermal insulation
- 13 mm between axes for safety
- Five chamber technology
- Deeper glazing rebate for safety and thermal and sound insulation
- Modern design with individual laminate and colour variants

5-chamber double seal system with 70 mm installation depth

RAL – Gütegemeinschaft Kunststoff-Fensterprofile

QUALITY MANAGEMENT SYSTEM
OPENING WINDOW AND DOOR SYSTEM WITH THERMAL BREAK

E-45 belongs to the new generation of thermal insulated opening systems. With the primary concern to conserve energy in building structures, E45 is designed to meet a great variety of functional and aesthetic requirements.

Thanks to a wide range of profiles, the system offers a variety of design options, from classical, narrow face straight lines to rounded contours and the ability to construct a variety of complex typologies such as parallel sliding and tilting doors, parallel folding doors and opening frames using "concealed" sash giving uniform external appearance in combining opening and fixed frames.

The E45 system is a 60mm width sash (straight line profiles) and by implementing innovative design with variable length, 24mm to 30mm, polyamides, it renders superior performance characteristics in its category, with thermal insulation value of Uf = 1.9 W/m2 and sound reduction reaching 42db.

E-1000 is designed to meet all modern requirements in a building as far as construction, technology and aesthetics is concerned, while not exceeding budgeted costs.

Functional and complete regarding available typologies, the system allows you to choose among a wide variety of profiles for the construction of both curved and straight-line profiles.

E1000 is a compact 40mm and 48mm sash system (for straight and round profiles accordingly) that meets all the quality requirements and is certified according to the highest European standards. Finally, the system offers a wide range of accessories designed by ETEM that guarantee long lasting functionality and durability.

SLIDING SYSTEM WITH THERMAL BREAK

E-52 is a sliding system that belongs to the new generation of ETEM's thermo break systems and offers excellent thermal insulation and sound reduction characteristics in its category. Designed to fulfil aesthetic and functional needs, E52 offers a wide range of profiles, both for straight lines and rounded contours, that give the flexibility to construct a very wide range of typologies.

E52 is a 38mm width sash system ideal for medium to large openings. Its innovative design with features such as the use of polyamides up to 34mm wide, the ability of the system to carry heavy glass weights using Stainless Steel rails that ensure durability and functionality over time and the bility to construct frames with Anti Burglar certifications, are all features that, in combination with the very good technical characteristics, render E52 an excellent choice for a sliding Thermal Insulating system.

E-19 is a sliding system that combines functionality with security, longevity and aesthetics, features that are all standard in ETEM’s Architectural systems.

The system design is a 32mm width sash with a wide range of decorative solutions and proposals for all types of constructions. E19 is a system with excellent certifications in its category, such as Water and Air Tightness, ergonomic design, contemporary appearance, straight forward assembly and effortless functionality all of which are combined in the most economical use of materials which at the end render an affordable frame with the best quality to price ratio.

NEW SYSTEM WITH THERMAL BREAK

E-75 is an opening system specially designed and manufactured to meet the modern era Energy Conservation requirements in building construction.

Specially designed features such as internal insulating bars, multi chamber EPDM central gaskets and the specially designed 38mm polyamides give an excellent thermal insulation of Uf = 1.4 W/m2 and render E75 in compliance with the highest standards. The system offers a great variety of functional and aesthetic requirements and with wide range of profiles, the system classical straight line design options.

E-50 is one of the most modern thermal insulation systems ETEM. Designed for medium and large openings, E50 combines the trends in modern architecture with the needs arising from the strict standards for energy conservation.

E50 is a system designed to cover a wide range of requirements, in both existing and new buildings, that have medium size and large openings. The system is rigid and capable to operate under heavy loads resulting from the large glass surfaces, while it is subtle enough to be used for smaller windows. With 50mm sash width and innovative design, E50 is a robust system with excellent thermal insulation and water tightness characteristics rendering the system an ideal choice for the majority of residential and commercial applications.
ENERGY EFFICIENT GLAZING

The term 'Low-E' is an abbreviation of "Low Emissivity". Low-E films have low heat absorption and transmission features. Therefore, Low-E films reverse heat to a great extent, keeping it in the space where it had been generated, and at the same time these films let visible light inside. Emissivity is a relative figure indicating how much irradiation is produced by the surface of an object with the same wave length compared to a black body with equivalent temperature (absorbing all irradiation). In simple terms, the lower the value of emissivity of any glazed surface, the higher the quantity of energy reversed to the interior and the better insulation parameters. With normal film grades used for protection against heat and sunshine, this value is approx. 0.7, i.e. 30% reversal. With standard Low-E film grades this value is in the range of 0.35 to 0.4, i.e. 60-65%.

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### Heat Transfer Coefficients for Different Combinations of Industrial Grade Glazing

<table>
<thead>
<tr>
<th>Glazing Type</th>
<th>Heat Transfer Coefficient, K (W/m²K)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single glass pane</td>
<td>2.5</td>
</tr>
<tr>
<td>Double-glazed package</td>
<td>2.3</td>
</tr>
<tr>
<td>Triple-glazed package</td>
<td>1.9</td>
</tr>
<tr>
<td>Double-glazed package + K glazing</td>
<td>1.6</td>
</tr>
<tr>
<td>Double-glazed package + K glazing + Argon</td>
<td>1.5</td>
</tr>
<tr>
<td>Triple-glazed package + K glazing + Argon</td>
<td>1.1</td>
</tr>
</tbody>
</table>

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Fittings Siegenia Aubli (Germany) are widely used and known for the market due to its quality and variety of options for open action. Beside the classic horizontal open tilt wing, it further offers a multifunctional open system. The product range of Siegenia is in conformity with modern high technology requirements and architectural feasibility in manufacturing PVC windows and doors.

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Insect screens are custom made in consideration with the construction conditions. The so-called insect screens:
- are made of high quality aluminum frames and teflon coated fiberglass;
- maintenance-free;
- no reduction of visibility through windows;
- optional powder painting for insect screen aluminum profiles in ral colors;
- specifications of roller insect screens enable installation on all window types plus simultaneous installation with external roller shutters.

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Niobe E45

A system of tilt open windows and doors with very high thermal and noise insulation properties aluminum profiles made by ETEM with frame depth of 67mm. E45 belongs to a new generation of opening systems with discontinued thermal bridge. Top priority – care of energy saving feature. E45 aims at satisfying the majority of functional and aesthetic requirements.

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Alkyone E1000

System E1000 has been designed in conformity with all modern requirements for buildings. System E1000 offers: high aesthetic and functional level. Economically attractive solutions. Safe structures. Multiple solutions, in particular for interior doors. Suitable for sealing. Optional electrostatic powder painting in any ral color, wood pattern imitation, anodizing, etc.

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Cassiopea E3000

is a sliding system with discontinued thermal bridge, designed for severe operating conditions. The system was designed in consideration with modern architectural solutions to ensure maximum onset of solar irradiation for very large apertures. These systems utilized lift and open fixtures a skilful combination of easiness of movement even when very large frames are used.

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Calypso E52

is a type of sliding system that belongs to the new generation of systems with discontinued thermal bridge, made by ETEM. It offers excellent thermal and noise insulation properties for its class. This system was designed to the satisfaction of both aesthetic and functional demands. System E52 is ideal for medium and large size apertures, with innovative design. All functions of E52 in combination with excellent technical parameters rank this system as the best thermally insulated, open slide system.

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Danae E19

is a slide open system that combines functionality, durability and aesthetics plus all technical parameters adopted as standard for the architectural systems of ETEM. E19 is a system awarded with many certifications in its class.

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EXTERNAL ROLLER SHUTTERS

provide efficient protection against light, cold, dust, noise and curious look, and improved security for your home. Available options – PVC and aluminum.
INTERPLAST GROUP COMPANY IS A MAJOR MANUFACTURER OF ALUMINUM AND PVC WINDOWS AND DOORS. WE HAVE TWENTY YEARS OF EXPERIENCE IN THIS FIELD. WE ARE BASED IN SANDANSKI. OUR FACILITIES OCCUPY AN AREA OF 5000m², WITH BUILT UP AREA OF 1500m².

INTERPLAST GROUP OFFERS A WIDE RANGE OF PRODUCTS: ALUMINUM AND PVC WINDOWS AND DOORS, FITTINGS, SECURITY AND INTERIOR DOORS, SHUTTERS, INSECT SCREENS, SIDE HINGED SHUTTERS AND GARAGE DOORS.

SINCE THE VERY START OF OUR BUSINESS THERE IS A CONTINUING TENDENCY OF TOP QUALITY OF MATERIALS USED AND THEREFORE WE DO BUSINESS WITH CERTIFIED AND APPROVED MATERIAL VENDORS ONLY. WE FOCUS ON SUSTAINABLE HIGH QUALITY OF PRODUCTS AND SERVICES, ACHIEVED THROUGH CONTINUOUS IMPROVEMENT OF OUR PERSONNEL QUALIFICATIONS AND PURCHASES OF ART-OF-THE-DAY EQUIPMENT.

WE CAN OFFER YOU THE BEST SOLUTION TO MAKE YOUR HOME AND OFFICE A COZY AND A PLEASANT PLACE.

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