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ETEM in brief



ETEM is a leading aluminium extrusion company in South Eastern Europe. It was founded in 1971 and is part of the Viohalco Group, the largest metal processing Group in South Eastern Europe with activities in aluminium, steel, copper and cable products.

ETEM specializes in the design, production and promotion of aluminium systems for architectural and industrial applications. A large portfolio of architectural systems is available, able to satisfy from the simplest to the most advanced customer requirements. Products are widely exported all over the world and are certified in accordance to the strictest international standards.

Several years ago, ETEM made a breakthrough in the production of aluminium composite panels for architectural applications, introducing etalbond®, etalbond light® and etalbond FR®. ETEM not only is the first composite panel manufacturer in South Eastern Europe, but it is among the few of its kind in Europe, holding a dominant and leading market position in several countries in Europe, Asia and Africa.

Since 2000, the company set the routes for expanding into the automotive industry by supplying critical, state-of-the art aluminium profiles. Today, ETEM is accredited as key supplier of some of the biggest European automotive companies such as PORSCHE, AUDI and BMW.



Opening and Sliding Systems



Having the solution to every single demand

ETEM Opening and Sliding Systems are intended to suit every single application regardless of its complexity, local building standards or weather conditions. They include both thermal and non thermal insulated systems, while various options are available in terms of style, insulation levels and colours. Moreover, systems are compatible with a vast variety of fittings and accessories, thus allowing end users to personalize them according to their own aesthetic and design requests.

A critical factor behind the development of Opening and Sliding Systems has been the emphasis towards the application of uneven aluminium cross sections. Systems are designed to reach the highest standards in terms of mechanical properties and thermal, sound, air and water insulation without adding in the weight of profiles, providing a highly competitive and value-for-money proposal to every customer.

Main attributes of ETEM architectural systems:

- Thermally and acoustically insulated.
- Extensive design and colour variety.
- Large glass surfaces.
- Easy to use and maintain.
- New technologies and automation can be integrated.



Curtain Walls



Meeting the requirements of contemporary architecture

ETEM curtain walls are designed to meet the requirements of contemporary architecture. Different styles such as structural, semi-structural or classic structure are available to satisfy the highest standards and support any aesthetic concept. Aluminium composite panels (Etabond®, produced by ETEM) can also be incorporated in curtain wall systems, therefore expanding customers' options.

Anti-vandal and bulletproof properties are also available through E-85, a system that has been certified accordingly to the corresponding international standards.

The latest development in ETEM's portfolio is E-90, a new thermally insulated curtain wall system, ideal for high-rise buildings or where rapid on-site assembly is requested. E-90 is a modern modular curtain wall system where all modules are pre-fabricated at the workshop and only installation of ready modules is done on site.



Sun Control Protection



Control the sun

E-66 is a sun control protection system which offers an aesthetically pleasant shading solution for energy sustainability, sun protection, temperature control and comfort in the building. The system is ideal for every single application, ranging from small apartments to small and big buildings.

Different shapes, from Z curves to spindle-shaped louvers, cover every aesthetic or design request.

E-66 can be located horizontally, vertically or projected outwards depending on the sunlight angle.

The system can be fixed or motorized for opening and closing purposes. External sensors for light control are also available allowing louvers to move automatically depending on the sunlight angle.



Ventilated Façade Systems

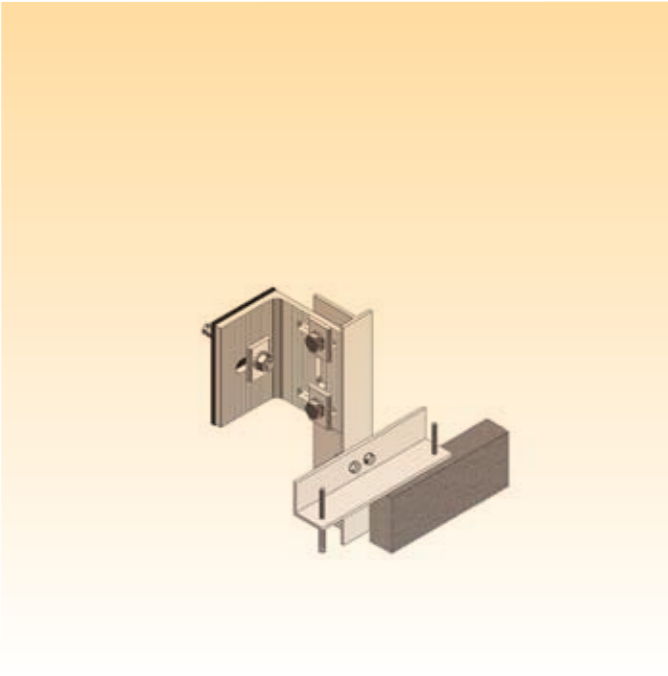
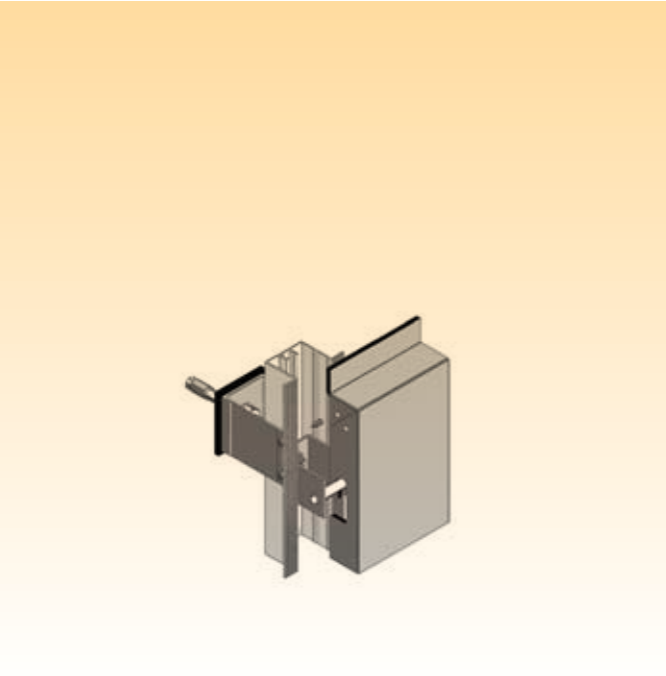
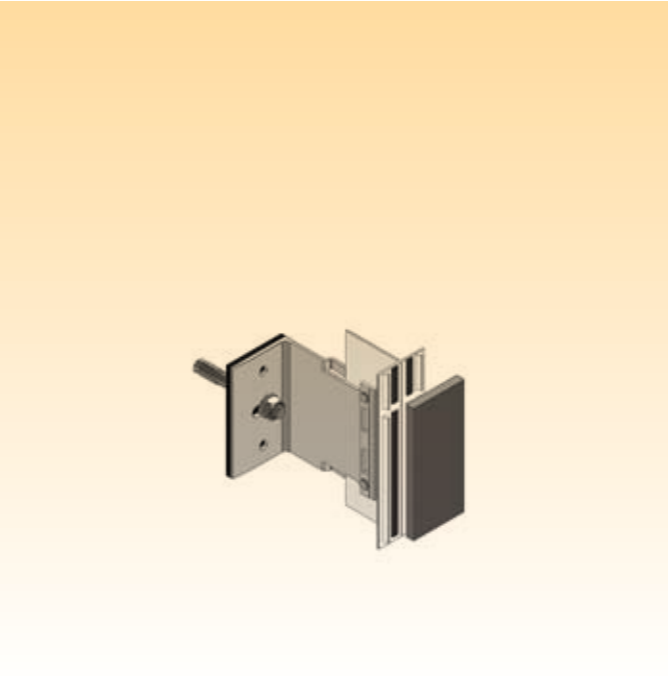


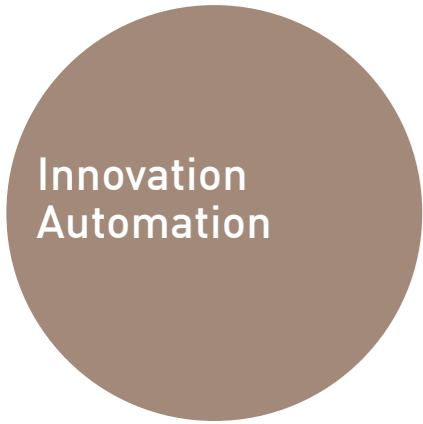
A new vision in infrastructure and architectural design

The diversity of façade materials observed over the past few years forms a new vision in infrastructure and architectural design. ETEM Ventilated Façade Systems allow the use of such materials in contemporary buildings. Designed according to the strictest European standards and norms, these systems offer aesthetic quality and high security as well as energy saving through effective insulation.

These systems are installed on the external surface of the building usually leaving an air space of at least 40mm deep. The air gap is essential for activating the natural ventilation which allows the building to breathe and eliminates the condensation inside the premises. As a result, the building is protected from overheating during the summer and freezing during the winter.

Further, the presence of air gap between the cladding material and the thermal insulation provides high level of noise insulation, a key factor in urban areas.





Make your life easier

New innovative products provide superior added value in terms of comfort, design and security. New technologies and automation can now be integrated in aluminium systems to enhance comfort and provide flexibility of use, as they can be centrally controlled through a remote access unit or a main building control system.





Lift and slide systems like the E-3000 can be easily operated at the touch of a button either on a fixed switch or remotely.

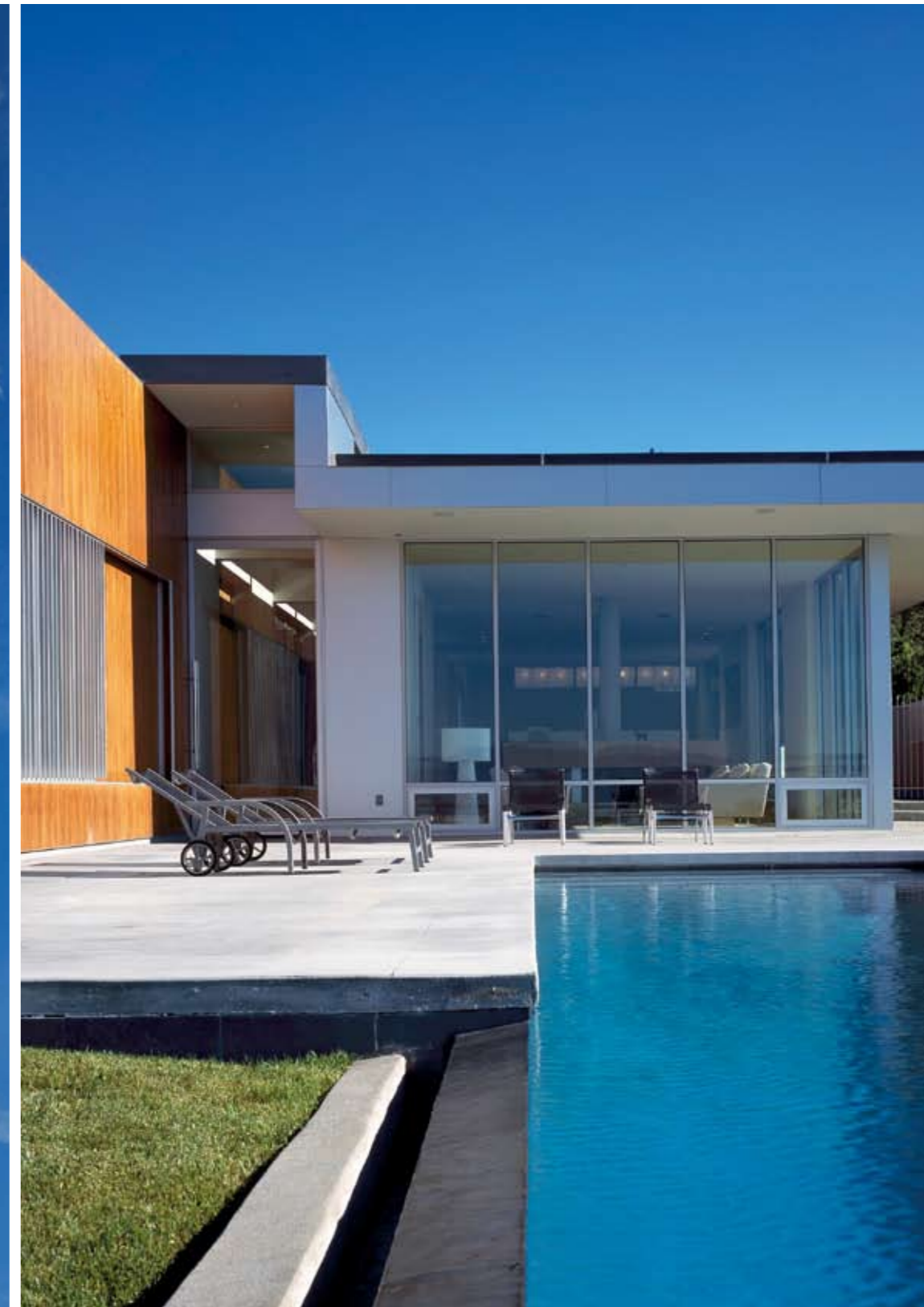
Sliding systems like E-52 can be easily operated through a remote control unit allowing the user to open/close the glazing or shutter leaves.

Opening systems like E-40 and E-45 can incorporate venetian blinds inside the double glazing frames and can be controlled manually, electronically or automatically, moving and rotating according to sun's position.

All technologies can be associated with external sensors for light, rain and wind, allowing full automation along with remote control of the systems.

Furthermore, when installing a Main Control Unit, all systems can be accessible through a TV Set or even through a mobile phone.

			
Main control unit	Wind sensor	Light sensor	Rain sensor





Bond with excellence

Etalbond® is a technologically advanced product, designed to facilitate creative architectural design, through its unique features. Curved and level surfaces in vibrant colours create a new elegance in buildings and constructions of all kinds.

Attractive and versatile, etalbond is the ultimate cladding solution for interior and exterior surfaces in new constructions and renovations. The material is rigid, light, durable and has good insulating properties, resulting in energy-efficient buildings. Additionally, it is easily both formed into a variety of shapes and installed.

Etalbond® is outstandingly suitable in adverse environmental conditions such as polluted urban and industrial areas, since the panels are practically maintenance-free: cleaning is simple.

The continuous innovation of modern times makes etalbond a natural ally for architects adding to the design of a building and hence to the character of a whole area, even a town or city.

Etalbond® FR

ETEM, a company with a proven record of social responsibility, has developed and is currently producing etalbond® FR (Fire Resistant). Etalbond® FR complies with the most stringent fire-related European standards, having obtained the required fire safety certificates. In the future, when safety regulations for new building projects shall mandate the use of strictly selected materials of similar properties, ETEM will be there.



Opening and Sliding Systems Table



Opening Systems			
System	E-40	E-45	E-2004
Dimensions			
Min sightline fixed frame	45mm	45mm	53,5mm
Min sightline inward opening vent	83mm	83mm	94mm
Min sightline inward opening with "hidden" vent	70,5mm	70,5mm	94mm
Min sightline outward opening vent	115mm	115mm	124mm
Min sightline outward opening door	115mm	115mm	124mm
Min sightline transcom	67,4mm	67,4mm	77mm
Profile depth frame	52mm – 180mm	60mm – 188mm	63,5mm - 180 mm
Profile depth Vent	59,5mm	67,5mm	63,5mm - 71mm
Maximum window (width x height)	900 X 2200mm	1000 X 2200mm	1000 X 2200mm
Maximum door (width x height)	1000 X 2200mm	1000 X 2300mm	1000 X 2300mm
Maximum rotating window horizontally (width x height)	2000 X 1800mm	2000 X 1800mm	2000 X 1800mm
Maximum rotating window vertically (width x height)	1300 X 2000mm	1300 X 2000mm	1300 X 2000mm
Glazing			
Rebate height	21mm	21mm	21mm
Infill thickness fixed frame	6mm – 34mm	10mm – 42mm	18mm - 45mm
Infill thickness vent frame	6mm – 34mm	10mm – 42mm	18mm - 45mm
Glazing method	EPDM Gaskets		
Performance			
Thermal break frame	16mm - 20mm	24mm - 30mm	20mm
Thermal insulation	Uf 1,9 W/(m2*k)	Uf 1,9 W/(m2*k) - Uf 2,1 W/(m2*k)	Uf 2,7 W/(m2*k)
Air permeability	Class 4	Class 4	Class 4
Wind resistance	CS	CS	CS
Acoustic insulation	Rw=34-41dB	Rw=36-42dB	Rw=39-44dB



Sliding Systems		
System	E-52	E-3000
Dimensions		
Visible frame height		
Visible frame and vent height	43,7mm	58mm
Visible frame and vent height	133mm	145mm
Overall system depth frame	83,4 – 140,9mm	146mm - 225mm
Overall system depth vent	38mm	60mm
Maximum window (width x height)	2300mm x 1700mm	2500mm x 1800mm
Maximum door (width x height)	2000mm x 2200mm	2100mm x 2300mm
Maximum door (width x height) with additional profiles	2400mm x 2700mm	3000mm x 2650mm
Maximum weight per vent	200 kgr	350 kgr
Remote control	Yes	Yes
Blinds inside the glazing	Yes (12,5mm)	Yes (12,5 mm - 25mm)
Sealing method	Silicon Brushes	Silicon Brushes and EPDM gaskets
Glazing		
Infill thickness	20mm – 28mm	14mm – 42mm
Rebate height	Not used	21mm
Glazing method	EPDM gaskets	
Performance		
Thermal break frame	14,6 – 24mm	20mm
Thermal break vent	34mm	20mm
Thermal insulation		Uw 2,0 W/(m2*k)
Air permeability	Class 3	
Wind resistance	C4	
Acoustic insulation		



Curtain Walls Table



Curtain Walls				
System	E-6400	E-8000	E-85	E-90 Unitized Modular System
Style Variants	Façade with Pressure plate and cover plate Semi Structure Glazing Classic Structure Glazing	Façade with Pressure plate and cover plate Semi Structure Glazing Classic Structure Glazing	Façade with Pressure plate and cover plate Four side Structure Glazing Two side Vertical Structure Glazing Two side Vertical Structure Glazing	Façade with Pressure plate and cover plate
Inside Visible Width	60mm	60mm	50mm	90mm
Outside Visible Width	60mm	60mm	50mm	90mm
Depth mullions	65mm - 150mm	50mm - 170mm	50mm - 170mm	139mm - 140mm
Depth transoms	65mm - 150mm	20mm - 88,5mm	15mm - 205mm	64mm - 136mm
Inertia mullions (lx: wind load)	156,6cm ⁴ - 1942,4cm ⁴	54,4cm ⁴ - 1325,8cm ⁴	27,6cm ⁴ - 1326cm ⁴	311cm ⁴ - 380,3cm ⁴
Inertia transoms (lx: wind load)	156,6cm ⁴ - 1942,4cm ⁴	20,1cm ⁴ - 128,5cm ⁴	8,7cm ⁴ - 665,6cm ⁴	89,7cm ⁴ - 535,2cm ⁴
Inertia transoms (ly: glass load)	46,2cm ⁴ - 149,3cm ⁴	12,6cm ⁴ - 33,3cm ⁴	12cm ⁴ - 51,4cm ⁴	35,9cm ⁴ - 120,7cm ⁴
Exterior face caps	60mm	60mm	50mm	60mm - 90mm
Glazing	Fixing by pressure plate	Fixing by pressure plate Structural sealed glazing on cassettes	Fixing by pressure plate Clamped solution	Fixing by pressure plate
Glass Thickness	8mm - 26mm	22mm - 38mm	25mm - 52mm	23mm - 40mm
Tyrer of vents	Inside opening windows E-2300	Projected window E-8000 and inside opening windows E-40, E-45	Projected window E-85 and inside opening windows E-40, E-45, E-2004	Inside opening windows E-40, E-45, E-2004
Roof application	No	No	Yes	No



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