



Secco Sistemi is an Italian brand that symbolises innovation and design awarded with "Compasso d'Oro". It has been contributing to the evolution of the engineering of doors and windows for 70 years, inventing systems and profiles that have become benchmarks for the industry of this sector, and continuing to improve them and interpret the latest projects and trends of contemporary architecture. So far 340 profiles have been developed in 4 select metals - galvanised steel, stainless steel, corten steel and brass - and in 9 different finishes with an annual production of 2.8 million linear metres of profiled bars for 280,000 doors and windows.







Tadao Ando, Archea, Arup, Omrania, P&T Group, Stanton Williams, Winkinson Eyre, David Chipperfield, Antonio Citterio, Foster + Partners, Massimiliano Fuksas, Zaha Hadid, Herzog & de Meuron, Rem Koolhaas, Giovanni Michelucci, Pier Luigi Nervi, Jean Nouvel, Renzo Piano, Giò Ponti, Carlo Scarpa, Tobia Scarpa, Wilmotte & Associés...

Secco Sistemi has worked with the masters of contemporary architecture and collaborates with professional figures from all over the world, sharing with them the passion for materials, the extreme care for detail and the culture of the project itself





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# designing with steel

research and innovation, tradition and experience in designing profiles and systems to meet the highest aesthetic and performance requisites

In 70 years of history Secco Sistemi has designed and created numerous innovative systems of metal profiles for doors and windows for use in the field of architecture, thus contributing to the evolution to the engineering of these architectonic elements, developing the design and the performance, the efficiency and functionality, while further enhancing the strength and beauty of the materials implemented.

Secco Sistemi has identified structural and mechanical solutions for reducing the visible sections of the profiles to the minimum and for satisfying the most demanding requirements of heat and sound insulation, of resistance to break-in, resistance to wind and to fire: for doors, windows and façades, for windows and doors of large dimensions and for all types of openings, whether sliding, tilt-and-turn, pivot or hinged.

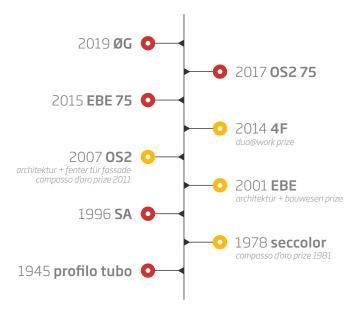
Today Secco Sistemi, thanks also to Secco Lab, applies its engineering technology to all the components of the system, from the tubular profile to the thermal break, including also the accessories, special items, mechanisms for automatization and any special working of the metals.



## shaping steel

for the past 70
years Secco Sistemi
has been making
advanced technological
developments in the
production of metal
profiles for the building
sector - today there
are over 280 profiles
available in 4 materials

Metal profiles were first used to make doors and windows in the second half of the nineteen-forties, following the development of the technique of folding or bending the sheet metal which allowed, however, only the production of open profiles. It was 'Secco Industrie' back in the nineteen-fifties that realized the first machinery for 'continuous' profiling, equipped with a series of rollers which generated the tubular profile in steel, thanks to a combined system of the metalworking technology of hemming and welding. In seventy years of constant and progressive technological development, Secco Sistemi has established itself as a leading firm in the sector of metal profiles for construction work, combining tradition with innovative technology, the craftsman's eye for detail and industrial production, and transforming this into constant evolution, as represented by the over 280 profiles currently available in 4 different materials - galvanised steel, stainless steel, corten steel and brass - and in 8 finishes. Two million linear metres of profiled bars for 200,000 doors and windows produced annually are clear evidence of the vitality of this company that has an aptitude for anticipating market requirements, ever more demanding in terms of technical and functional performance, and for satisfying the shifting tendencies in the field of architecture regarding materials and trends in construction.



# the nature of steel

natural, solid and precious, long-lasting. These are the four materials used by Secco Sistemi: galvanised steel, stainless steel, corten steel and brass

Of the highest quality, the metal alloys used by Secco Sistemi have precise characteristics: they are natural, whole and safe, ductile and versatile. Furthermore, while appreciated for their structural resistance and duration over time, necessitating little maintenance, they are also recyclable and re-usable.

These materials - galvanised steel, stainless steel, corten steel and brass - with their different surfaces and finishes and particular manufacturing present extraordinary potentiality of expression, and are capable of interpreting and transforming the design project into a concrete reality while perfectly blending into the surroundings and many landscapes that differ for environment and climate, tradition and culture. In-depth knowledge of the material properties and their manufacturing while fully respecting their characteristics and beauty is what distinguishes Secco Sistemi's work and what enables us, in collaboration with the designers right from the preliminary phases onwards, to identify optimal solutions using the select material.



## building with steel

a network of over 500 selected partners for realizing the final product in countries all over the world and for ensuring top quality

Secco Sistemi's fine aim is to provide national and international markets with tailor-made solutions for top-level construction. This is possible thanks to a well-consolidated network of over 500 window & door specialists, partners with vast experience and proven professional attributes. Drawing on their highly specialized and qualified competence, the technical and marketing personnel of Secco Sistemi take responsibility for the training of numerous partners, interacting to create a synergic flow of experience and information aimed at constant improvement of the systems proposed. This continuous cooperation between the firm and partners constitutes a fundamental condition for furnishing both the designer and the end customer with high-quality products, capable of satisfying the highest requirements on the market in terms of design, efficiency, performance, energy saving and safety.



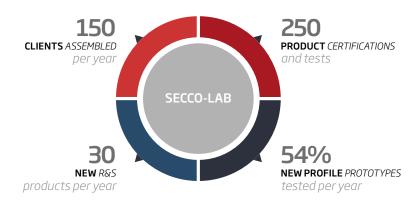


## seccolab

Secco Lab is
Secco Sistemi's
instrument for
the development of
ideas and prototypes,
for the certification
of products
and services,
for consultancy
and for training

Secco Lab is the in-house laboratory of Secco Sistemi in which, by means of specific sophisticated equipment, ideas and projects are tested, prototypes are conceived or special solutions studied. The partnership with the German institute IFT Rosenheim of testing and certification enables the company to carry out trials, tests and certification of every new product, thanks to the Secco Lab which is authorised for official testing.

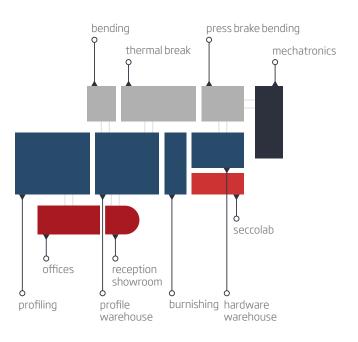
Research at Secco Sistemi aims at constant improvement of the production processes and the supplying of services, and is systematic through the activity of Secco Lab, regarding both the testing of new systems and the further enhancement or evolution of those already on the market, to reduce production times or to simplify construction. Secco Lab also represents an instrument of training on the product, with a view to sharing with all those concerned – from the project to actual construction, from the professional experts to the staff in the workshops – the potentiality of the whole Secco Sistemi process, from the solutions proposed to the services of consulting offered.



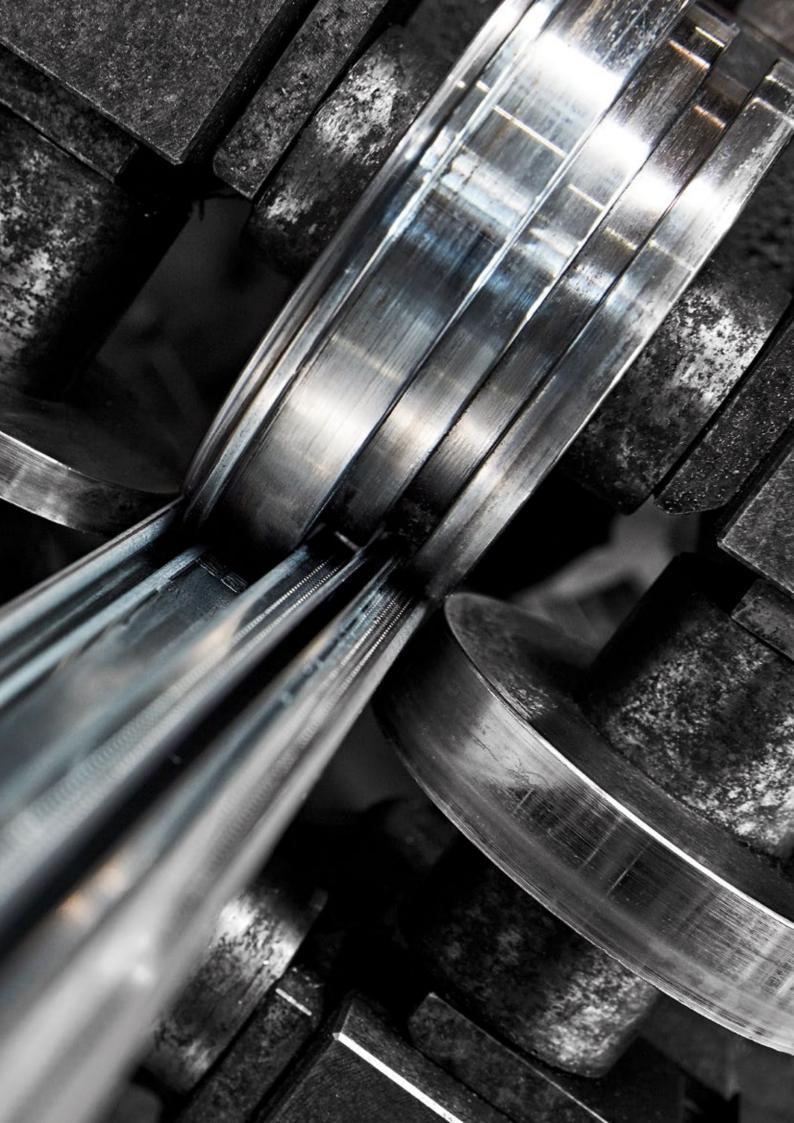
# integrated doors and windows

the company
consists of
several different
autonomous
departments,
all perfectly
integrated in the
production process
of Secco Sistemi

The various departments of the company are independent regarding production of the single elements of which the door and window systems are made of, and constitute an integral part of the production process of Secco Sistemi. Each department is an expression of the highest quality, reflected both in the craftsman's eye for detail applied to the product and in the industrial technology necessary for integrating it into the Secco systems. A closer look at the areas dedicated to the various manufacturing processes reveals the department of profiling for the production of the 'shells' and the tubular profiles, to then pass to the department for the realization of thermal break which couples the shells of the profiles: then follows the automatized department for the burnishing of the metals; another department deals with the construction of special parts while one division has been specifically created for the realization of special automatizations and in another that is dedicated to accessories the handles, hinges and locks are assembled. Lastly, Secco Lab constitutes the strategic instrument which, right from the beginning through to the end of the process, inspects and certifies the Secco Sistemi quality of the parts and of the finished product.









# choosing steel

when the project favours natural materials, in the wide range of solutions, surfaces and manufacturing processes offered by Secco Sistemi, steel is the choice

Many elements must be taken into consideration by the designer in the choice of material: coherence with the project as a whole and with the type of intervention to be realized, whether a new construction or renovation, the suitability of the material to the structural system and its function, place and collocation in a particular context. Choosing natural and precious materials such as galvanised steel, stainless steel, corten steel or brass, in the wide range of finishes and manufacturing proposed by Secco Sistemi, leads to finding efficient and elegant solutions for all requirements in terms of aesthetics and performance: from outsize dimensions to transparency, from the innovative original detail of design to the plastic, material or chromatic effect desired, from the collocation of the construction in delicate historical contexts to the question of resistance to adverse weather conditions in hostile climates. Drawing on an abundance of in-depth knowledge of the properties of the materials and their manufacturing, Secco Sistemi offers collaboration with the designer right from the preliminary phases, and with specialist partners in the design phase, providing support to both through specific consulting, with a view to optimising the use of the material chosen. An economical parameter can be compared to a scale of increasing values, from painted steel to corten steel, stainless steel and to burnished brass.



## galvanised steel

- galvanised steel
- painted galvanised steel

the important features of galvanised steel are the elasticity modulus or E-modulus, which is three times superior, and the thermal conductivity - four times inferior - compared to aluminium alloys

The use of steel doors and windows originates in old artisan traditions though it developed more significantly in the second half of the nineteenth century, on the wave of the industrial revolution. The Bauhaus movement of the nineteen-twenties and thirties definitively consecrated steel as an indispensable component for architecture: subsequently, in the second half of the nineteen-fifties, the development of cold-working contributed to the evolution of open and tubular profiles.

The steel used by Secco Sistemi to produce its profiles is the alloy FePO2, with GZ200 hot-dip galvanizing of the steel in molten zinc (equal to 200 g/mq on both faces) to protect both the internal and external surfaces of the profile from oxidization.

The subsequent skin-passing of the zinc layer determines an ideal finish, thus guaranteeing better adherence of the powder coating, carried out with polyester powders baked at 180°C and available in a range of different colours in polished, semi-polished and sandblasted versions.



#### painted galvanised steel

Profiles obtained from strips of hot-rolled, galvanised steel sheet metal, skinpassed with Sendzimir finish system.



## stainless steel

- stainless steel satin finish
- stainless steel scotch brite
- stainless steel gloss
- burnished stainless steel

stainless steel features a thermal conductivity ten times superior to that of aluminium and is highly resistant to corrosion

The first appearance of stainless steel, which has the

do not rust when exposed to the atmosphere, are

property of protecting the material surface from corrosion, dates back to the beginning of the twentieth century.

These alloys based on iron, carbon, nickel and molybdenum,

extremely long-lasting and resistant to corrosion and need

only minimum maintenance while they can be recycled

of stainless steel moreover make it possible to produce

a range of products that are ideal to use in environments

up to 90%. The physical-mechanical characteristics

The alloys designed over the last decades provide

presenting characteristics of aggressivity. For the production of its own profiles, Secco Sistemi uses two types of stainless steel in particular: AISI 304, used more

frequently, with satin finish, and AISI 316L - suitable

for marine environments, with gloss, burnished or

considerably reduced section profiles.



Profiles obtained from stainless steel sheet metal cold-rolled and industrially pre-treated to quarantee maximum quality and uniformity.



### scotch brite stainless steel

Profiles obtained from stainless steel sheet metal cold-rolled and industrially pre-treated to guarantee maximum quality and uniformity.



scotch-brite finishes.

### burnished stainless steel

Profiles obtained from stainless steel sheet metal cold-rolled and industrially pre-treated to guarantee maximum quality and uniformity.



Profiles obtained from stainless steel sheet metal cold-rolled and industrially pre-treated to guarantee maximum quality and uniformity.





## corten steel

Secco Sistemi has developed a process of oxidization of corten that allows to achieve the desired finish and chromatic effect

the resistance of corten to corrosion is from 6 to 8 times superior compared to traditional steels while its resistance to tensile stress is double

Corten steel appeared in the middle of the nineteenthirties and was used prevalently in the field of heavy carpentry or in the realization of sculptures. More recently it has become more appreciated in the field of architecture for its material and chromatic characteristics as well as its structural resistance. Technological innovation and the capacity to interpret the latest trends in modern-day architecture led Secco Sistemi to be the first to introduce corten steel in the manufacturing of windows and doors: the elegant, high-performance profiles of the 12 product lines, complete with accessories, are realized also in corten with the finish and chromatic effect desired by the customer. Special alloys with copper, chromium and phosphorus, these corten steels have the property of self-protection with a patina on the surface which prevents corrosion from spreading. The natural process of oxidisation can be accelerated by means of specific oxidising baths: this results in a material with a rough, porous surface and warm tones, re-evoking past eras



#### oxidised corten steel

Profiles obtained from strips of corten steel, a high-resistance and self-passivating metal, so as to form a uniform layer of oxide if exposed to air which covers the sheet metal and protects it from corrosion from atmospheric agents.



#### waxed oxidised corten steel

Profiles obtained from strips of corten steel, a high-resistance and self-passivating metal, so as to form a uniform layer of oxide if exposed to air which covers the sheet metal and protects it from corrosion from atmospheric agents.



## brass

- satin-finished brass
- burnished brass
- polished brass

the alloy OT67 (copper 67%; zinc 33%) features high resistance to corrosion, strength and hardness, it can be 100% re-used

The alloy of copper and zinc, known already in the first century, can be dated in its current version back to the end of the seventeenth century. Colour and shininess, hardness and resistance to corrosion make this metal alloy a precious and original element for architecture, of both the past and the present. Surfaces in shiny or burnished brass are an expression of luxury, tradition and care for detail. When brass comes into contact with the air, it takes on the rich warmth and reflections of old bronze, though maintaining its physical properties unaltered. The natural process of oxidisation determines a condition of self-protection which makes the finished product ideal for use in difficult environmental conditions such as those in marine areas.

Secco Sistemi utilises the alloy OT67, in which the high percentage of copper (67%) guarantees high resistance to corrosion while the percentage of zinc (33%) enhances the mechanical properties such as hardness and ultimate tensile strength. An excellent product in terms of sustainability – brass can be 100% re-used.



#### burnished brass

Profiles obtained from strips of sheet metal of copper alloy OT67 cold-rolled and hardened to its raw state.



#### satin-finished brass

Profiles obtained from Copper Alloy 0T67 cold-rolled and hardened to its raw state.

# choosing together

choosing together
the best solution
in the wide range
of systems and
profiles, materials
and finishes,
types of opening,
accessories: all this
with the high-level
performance
guaranteed
by Secco Sistemi

Secco Sistemi's repertoire is extensive and varied, with over 340 different profiles, the complete range of all the elements of the 16 product lines in the 4 different materials proposed, the 8 finishes and all the different types of opening as well – sliding mechanism, tilt & turn mechanism, pivoting mechanism or hinged, and a wide selection of accessories.

The precise descriptions of the profiles and systems available, together with the images of the projects that have been completed, can all be perused in the following pages in chapters specifically dedicated to the various products – the possibilities of different combinations are endless. For each new project, in fact, together with the collaboration of professional figures and clients themselves, Secco Sistemi has the expertise to identify precise, high-performing tailor-made solutions right from the preliminary phases and to propose them following the course of the project from end to end, assisting the doors and windows experts in carrying out the work, from production to setting up or installation on site.



## index of products

thermal break windows and doors

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	Thermal break steel window for glass of thicknesses up to 50 mm, profiles of 27 mm, central section 62 mm with tilt & turn mechanism  p.30 p.264	The elegance of the OS2 system, with its minute profiles and high-quality materials, in the lift and slide door version  p.60 p.268	Thermal break steel window for glazing of thicknesses up to 40 mm, profiles of 27 mm and central section 62 mm	The highest quality in a system reduced to the essentials; OS2 40 is the iron window made with Secco Sistemi tubular profiles  p.88 p.276
material				
galvanised steel	•	•	•	(pickled steel)
stainless steel	•	•	•	
corten steel	•	•	•	
brass	•	•	•	
type				
windows and doors	•		•	•
façade				
lift-and-slide		•		
particular feature				
thermal break	•	•	•	
tubular				•
safety	•		•	
fire-proof				

BV 75	ØG	EBE 85	EBE 85 AS	EBE 75
The bevelled shape of the minimal metal profiles of the window and door frame are reminiscent of the old wooden windows	The OG® magnetic levitation sliding lift floats in the air and, freed from its weight, flows effortlessly	EBE thermal break system, depth 85 mm for glass thicknesses of up to 68 mm, rebated on the interior and flush- mounted on the exterior between sash and frame	EBE thermal break system for lift-and-slide mechanisms of large dimensions, characterized by high performance in terms of insulation and sealing, flush with flooring	EBE thermal break system, depth 75 mm for glass thickness of up to 48 mm, flush-mounted on the exterior and on the interior between sash and frame
<b>p.96</b> p.280	<b>p.110</b> p.284	<b>p.116</b> p.288	<b>p.126</b> p.290	<b>p.134</b> p.294
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[	EBE 65	EBE AF	ST 65	ML 65	SA 15
	EBE thermal break system, depth 65 mm for glass thickness of up to 48 mm, rebated on the interior and flushmounted on the exterior between sash and frame	EBE thermal break fire-proof E130 system for doors and windows, can be combined with other products in the EBE category	ST thermal break system, depth 65 mm, in the version with symmetrical internal and external convex moulding of the profile	ML thermal break system, depth 65 mm in version with internal panelling in solid wood	System of tubular profiles with thickness of sheet metal of up to 1.5 mm, depth 55 mm, for glass thickness of up to 40 mm, internally and externally flush-mounted between sash and frame
	<b>p.144</b> p.296	<b>p.154</b> p.298	<b>p.162</b> p.300	<b>p.172</b> p.302	<b>p.178</b> p.304
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### façades and panelling

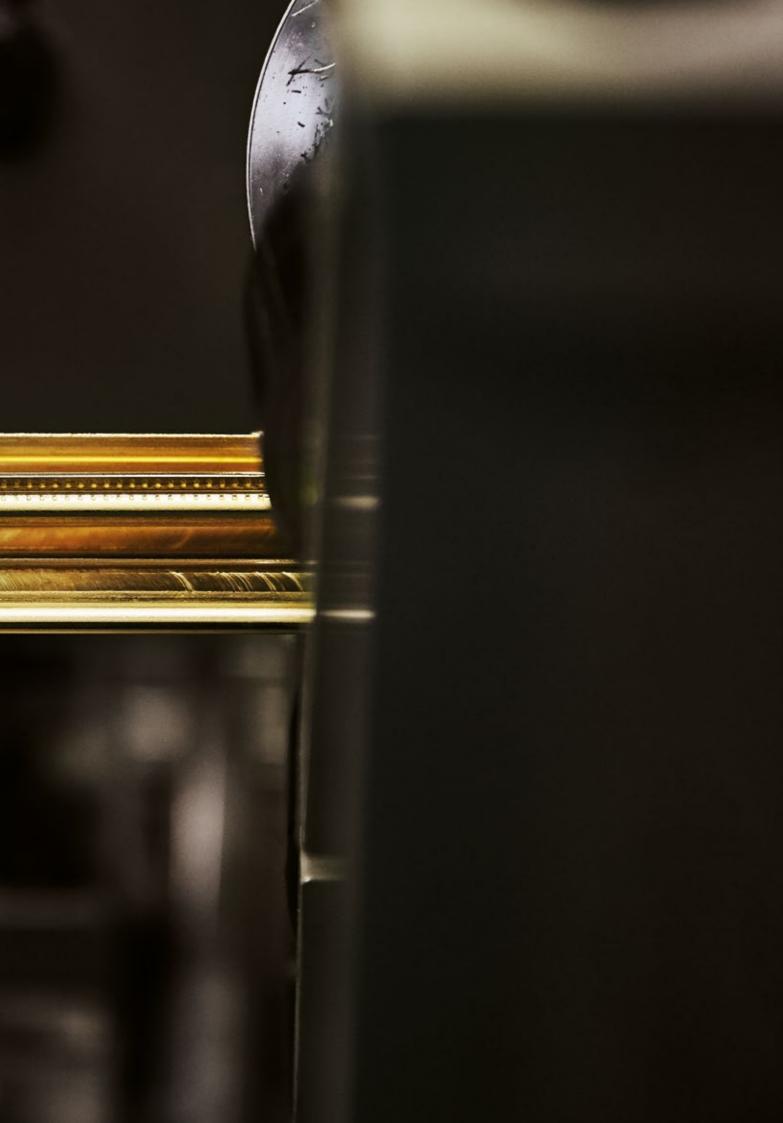
SA 20	SA AF	4F1	4F2	4F AF
				The state of the s
System of tubular profiles with thickness of sheet metal of 2 mm, depth 60 mm, for glass thickness of up to 48 mm, internally and externally flushmounted between sash and frame	System of tubular profiles for EW 30-60-90 fire- proof doors and windows which may be combined with other products in the SA category	Self-supporting thermal break curtain wall with muntins and transoms, and external cover, available in 4 materials	Thermal break curtain wall that can be applied to loadbearing substructure, with external cover, available in 4 materials	Self-supporting curtain wall with muntins and transoms, fire-proof El 30-60-90 with external cover, available in 4 materials
<b>p.188</b> p.306	<b>p.198</b> p.308	<b>p.206</b> p.310	<b>p.218</b> p.312	<b>p.226</b> p.314
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# OS2 75

## areas of application

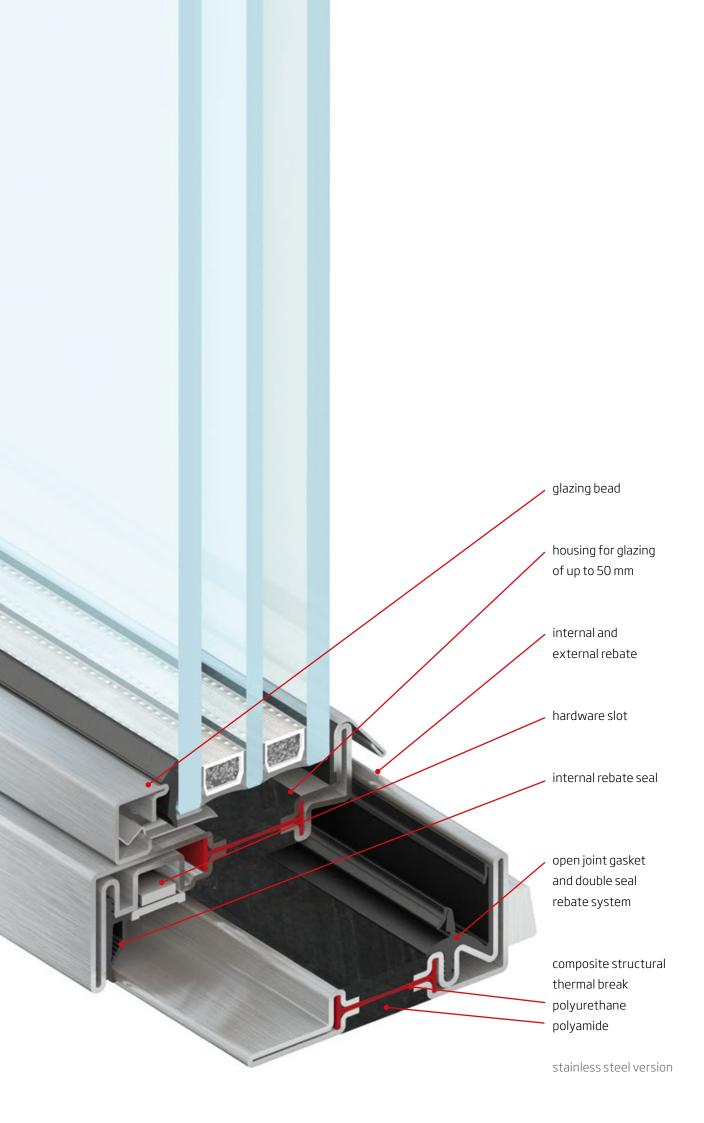
- doors
- windows

windows/doors
with minimum sections
and high performance,
with endless variations
in the profiles and
types of openings



**OS2 75** is part of the group of OS2 systems studied, conceived and designed by Secco Sistemi to replace the doors and windows used from the nineteenth century up to the middle of the last century. This thermal break steel window comes in an array of more than 40 profiles, with visible sections reduced to the minimum: from just 27 mm to 62 mm and 77 mm depth. The endless variations of **OS2 75** correspond to the needs of an architectural project which designs the window in every single detail, calibrating the borders with care to vary harmoniously the play of light and shadow on the façades, both interior and exterior. **OS2 75** offers the possibility to design different types of opening that can be freely composed in endless combinations in the glass curtain walls: the tilt & turn sash comes in dimensions of up to 130 x 290 cm with glazing panels of up to 50 mm, with concealed hinges and break-in-resistant closing mechanisms. Pivoting and hinged fixtures increase interior space with sashes of up to 100 x 290 cm, with reduced dimensions and thin, congruent section profiles. The sliding hinges, bottom and top rails are concealed when the doors are shut. The performance of the **OS2 75** thermal break system has been tested by the best European certifying laboratories in compliance with the current specific standard EN 14351-1 regulations.





# OS2 75 design of the variations

a wide range of more than 40 profiles to realize the fixture designed in every single detail



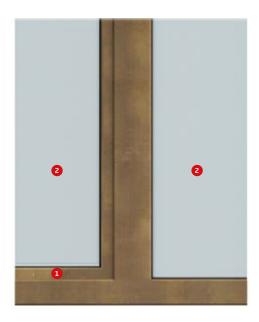
The small profiles of the system are meticulously designed so that in the outline every line and fold is essential for reaching the very high levels of performance of thermal and sound insulation. There are more than 40 profiles to choose from among which to find solutions for any formal or functional project requirement and thus to create in every detail the fixture desired.

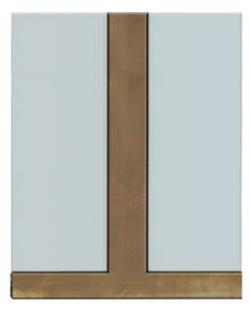
For glass curtain walls or three-dimensional façades, light screens or doors and windows, the choices offered by the **OS2 75** system are many and varied: the profiles can house flush-mounted and non-flush-mounted glass panels, enhance the borders of the monocoloured area of the windows that make up the front, or render them imperceptible to the eye, put together sashes with fixed panes or which can be opened correspondingly in the design of the façade. To better distinguish the various choices available, we have created two subsystems: OS2 75.1 and OS2 75.2.

In the case of OS2 75.1 the glass panels are not flush-mounted and the profile of the frame goes to underline the perimeter of the sash. With OS2 75.2, on the other hand, the glass panels are flush-mounted and the profile sections can be continuous, both with regard to the fixed struts and in the perimeter of the sashes.

# **0S275.1**









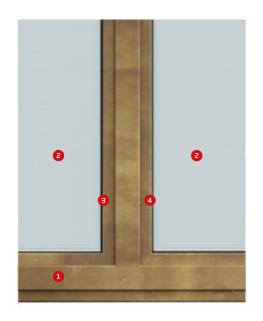
façades and panelling

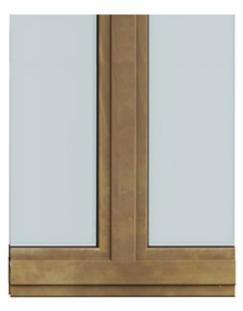
sashes can be easily distinguished in the front view

glass panels not flush-mounted between sashes and fixed panes

OS275.2







possibility of sections always the same between sashes and fixed panes  $\,$ 

- flush-mounted glazing between sashes and fixed panes
- sash
- fixed pane



62/62 mm

33

# OS2 75 design of the variations

with its multiple variations OS2 75 further enhances the architectural project that aims to design the fixture in every single detail, with the minimum sections and high-performing characteristics of the OS2 system



- 2
- Double-sash windows with the same design for profiles which trace the external perimeter and the central section.
- In the glazing panel the profiles of fixed and openable sashes have the same design.









- 3. The central section of the two-leaved door has a reduced section while the profiles framing it are pronounced.
- 4. The fixed glazing is divided into two parts by a horizontal profile of the same design as the perimetral border.

- 5. The glazing is measured by slender profiles with the two-leaved opening evident at the centre.
- 6. The glazing is characterised by the seamless pattern and undifferentiated profiles, making the two-leaved doors much less conspicuous.

# OS2 75

# OS275 window corner



OS2 75 window corner, external view, in burnished stainless steel with triangular glazing bead and concealed hinge.



OS2 75 window corner, internal view, in burnished stainless steel with triangular glazing bead and concealed hinge.

# OS2 75 window

# inward-opening tilt & turn mechanism

### system and performance



OS2 inward opening window is an integrated system with accessories, seals and thermal break profiles 77 mm deep allowing for a wide range of windows, rectangular, shaped or curved. They can be equipped with double glazing up to 50 mm thick. The system allows for the possibility to have a tilt & turn opening mechanism.

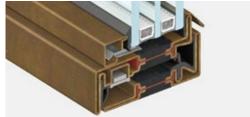


The sealing of the door and window frames is guaranteed by a weep system with central sealing gasket and internal rebate seal. The performance of OS2 thermally insulated system has been tested by the best European certifying labs under the reference standards EN 14351-1.

wind resistance - test pressure	4
wind resistance - frame bending	С
water tightness	8A
acoustic performance (with Rw per IGU 42dB)	46 dB
thermal transmittance (with Ug glass 0,7 W/m²K)	1,04 W/m²K
air permeability	4
break-in resistance	PAS24

maximum achievable performance

### size and variations



lower section | frame section 47 mm



lateral section | frame section 47 mm



central section | frame section 62 mm



glazing bar | frame section 36 mm

OS2 is a rebated system with 47 mm face lateral sections and 62 mm central section. For frames with multiple lights a 36mm thermal break profile is used.

### materials



# handles

# hinges

### main type



galvanised steel



rectangular



truncated vitruvio handle h.116 | d.12 mm



weld-on hinge h.60/80/116 mm d.10/13/16 mm





stainless steel



grooved



square vitruvio handle h.116 | l.12 mm



two-wing hinge h.81 | d.12 mm



31 | *d.*12 mm



corten steel



triangular



rounded vitruvio handle h.116 | d.15 mm



three-wing hinge h.90 | d.15 mm



1



brass



thin (not available for tilt & turn mechanism)

Rectangular, grooved, triangular and thin, the wide range of glazing beads allows for a variety of different designs for

the internal window light, the wide choice available visually recalls the traditional "iron window"

profiles.



truncated L-shaped vitruvio handle h.116 | d.12 mm





concealed



square L-shaped vitruvio handle h.116 | *l.*12 mm

Two and three-wing hinges are adjustable and are supplied in galvanised steel, stainless steel, burnished stainless steel and corten steel. weld-on hinges are in galvanised steel. The following models are adjustable: h.80|d.13mm and h.116|d.16mm.

Custom solutions are available in co-operation with Secco Sistemi technical office.

OS2 Is available in galvanised steel - in a wide range of colours and surface finishes - in AISI 316L polished or Scotch-Brite stainless steel, corten steel and in brass (OT67 copper alloy).

# OS2 75 door inward-opening

### system and performance



OS2 inward opening door is an integrated system with accessories, seals and thermal break profiles 77 mm deep allowing for a wide range of doors, rectangular, shaped or curved.

They can be equipped with double glazing up to 50 mm thick. The sealing of the door frames is guaranteed by a weep system with central sealing gasket, a three-side internal rebate seal and an automatic retractable seal under the socle or bottom rail.



Each solution is equipped with a related set of accessories integrated in the system. The performance of OS2 thermally insulated system has been tested by the best European certifying labs under the reference standards EN 14351-1.

wind resistance - test pressure	1
wind resistance - frame bending	С
water tightness	1A
thermal transmittance (with Ug glass 0,7 W/m²K)	1,02 W/m²K
air permeability	3

maximum achievable performance

### size and variations



lateral section | frame section 47 mm



central section | frame section 62 mm



bottom rail | frame section 47 mm



glazing bar | frame section 36 mm  $\,$ 

OS2 is an internally and externally rebated system with 47 mm face lateral sections and 62 mm central section. For frames with multiple lights a 36mm thermal break profile is used.

#### materials glazing bead



# handles

# hinges

# main type



galvanised steel



rectangular



truncated vitruvio handle h.116 | d.15 mm

square vitruvio handle h.116 | l.15 mm



weld-on hinge h.60/80/116 mm d.10 /13/16 mm



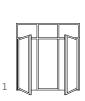




two-wing hinge h.81 | d.12 mm











stainless steel

corten steel



grooved





triangular



three-wing hinge h.90 | d.15 mm





brass





the internal window light, the wide choice available visually recalls the traditional "iron window"

profiles.

The handles come in paintable raw brass, burnished brass, polished chrome brass and polished brass; the square version is also available in corten steel.

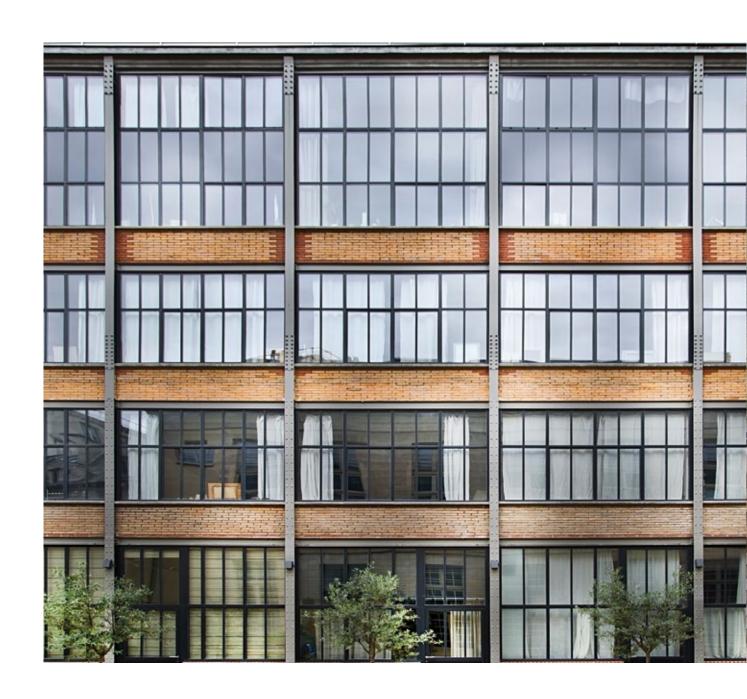
Three-wing hinges are adjustable and are supplied in galvanised steel, stainless steel, burnished stainless steel and corten steel. Weld-on hinges are in galvanised steel: the following models are adjustable: h.80 | d.13mm and *h.*116 | *d.*16mm.

Custom solutions are available in co-operation with Secco Sistemi technical office.

OS2 Is available in galvanised steel – in a wide range of colours and surface finishes in AISI 316L polished or Scotch-Brite stainless steel, corten steel and in brass (OT67 copper alloy).

# **OS275**

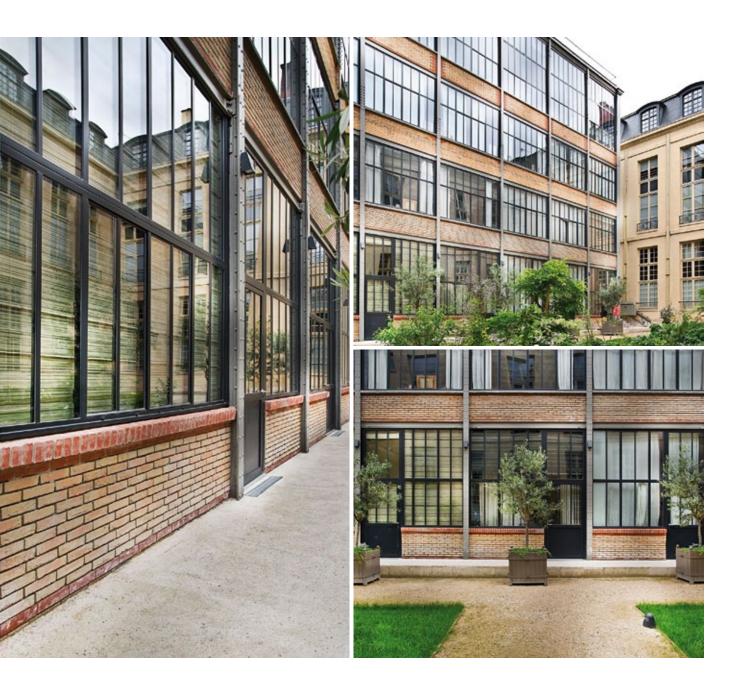
## Hôtel Voisyn | Paris



In Paris, a short distance away from Place de Vosges, the Hotel Voisyn is one of the grand "hotels particuliers" or townhouses of the old district of Marais. It was built on the structural plan of the great palaces in the era of Louis XIV and spreads between the court, at the entrance from Rue Turenne,

and the garden at the back. Renovated in the XVIIIth century, it has maintained up to today the refined elegance that distinguished the Parisian architecture of the eighteenth century. At the end of the nineteenth century, a new factory building was erected in the grounds of the 'hotel'

furnishing an interesting example of industrial architecture of this period. The luxury of this "jewel of Marais", solid and imposing, blends harmoniously with the slender structures in cast iron and the transparent walls typical of the nineteenth-century industrial archeology of iron and glass.



The important renovation of the Hotel Voisyn has enhanced the character of the different parts of the construction to design a refined residential building, with fifty units of different types and dimensions: elegant apartments and sophisticated lofts at double heights with mezzanines or

intermediate floors and large glazing panels overlooking the garden. An important theme is that of the doors and windows for this façade; they must guarantee the quality, duration and aesthetical elegance of the finishes, combined with the aspect of comfort that characterises the luxury of these apartments

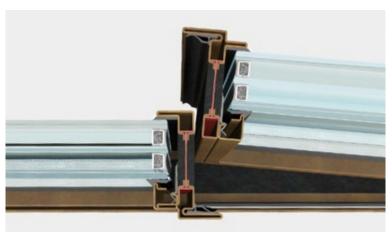
and lofts while at the same time respecting the historical nature of the building in the dimensions and shapes of the profiles, maintaining the original design of the steel window. Naturally the choice had to be Secco Sistemi's 0S2 75.1 profile in painted galvanised steel.

# OS2 75 window outward-opening

## system and performance



OS2 outward opening window is an integrated system with accessories, seals and thermal break profiles 77 mm deep allowing for a wide range of windows, rectangular, shaped or curved. They can be equipped with double glazing up to 50 mm thick. Each solution is equipped with a related set of accessories integrated in the system.

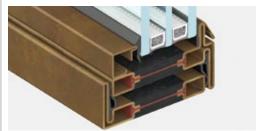


The sealing of the door and window frames is guaranteed by a double rebate seal system. The performance of OS2 thermally insulated system has been tested by the best European certifying labs under the reference standard EN 14351-1.

wind resistance - test pressure	4
wind resistance - frame bending	С
water tightness	8A
thermal transmittance (with Ug glass 0,7 W/m²K)	1,04 W/m²K
air permeability	4
break-in resistance	PAS24

maximum achievable performance

### size and variations



lower section | frame section 47 mm



lateral section | frame section 47 mm



central section | frame section 62 mm



glazing bar | frame section 36 mm  $\,$ 

OS2 is an internally and externally rebated system with 46 mm face lateral sections and 47/62 mm central section. For sashes with multiple lights a 36mm thermal break profile is used.

#### materials glazing bead



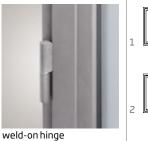
rectangular

truncated vitruvio handle h.116 | d.12 mm

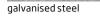
handles

h.60/80/116 mm d.10 /13/16 mm

hinges









grooved



h.116 | l.12 mm

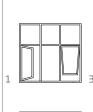












main type

corten steel



thin

three-wing hinge h.90 | d.15 mm

brass

OS2 Is available in galvanised steel - in a wide range of colours and surface finishes in AISI 316L polished or Scotch-Brite stainless steel, corten steel and in brass (OT67 copper alloy).





handle for second sash h.50 mm

Two and three-wing hinges are adjustable and are supplied in galvanised steel, stainless steel, burnished stainless steel and corten steel. weld-on hinges are in galvanised steel. The following models are adjustable: h.80|d.13mm and h.116|d.16mm.

Custom solutions are available in co-operation with Secco Sistemi technical office.

# OS2 75 door outward-opening

### system and performance



OS2 outward opening door is an integrated system with accessories, seals and thermal break profiles 77 mm deep allowing for a wide range of windows, rectangular, shaped or curved. They can be equipped with double glazing up to 50 mm thick. The sealing of the door and window frames is guaranteed by a double rebate seal system and an automatic retractable seal under the socle or bottom rail.



Each solution is equipped with a related set of accessories integrated in the system. The performance of OS2 thermally insulated system has been tested by the best European certifying labs under the reference standard EN 14351-1.

wind resistance - test pressure	1
wind resistance - frame bending	С
water tightness	1A
thermal transmittance (with Ug glass 0,7 W/m²K)	1,02 W/m²K
air permeability	3

maximum achievable performance

### size and variations



lateral section | frame section 47 mm



central section | frame section 62 mm



bottom rail | frame section 42 mm



glazing bar | frame section 36 mm  $\,$ 

OS2 is a rebated system with 47 mm face lateral sections and 62 mm central section. For sashes with multiple lights a 36mm thermal break profile is used.

# handles materials glazing bead hinges main type galvanised steel rectangular truncated vitruvio handle weld-on hinge h.116 | d.15 mm h.60/80/116 mm d.10 /13/16 mm square vitruvio handle h.116 | l.15 mm two-wing hinge h.81 | d.12 mm stainless steel grooved three-wing hinge h.90 | d.15 mm corten steel triangular



brass

OS2 Is available in galvanised steel - in a wide range of colours and surface finishes - in AISI 316L polished or Scotch-Brite stainless steel, corten steel and in brass (OT67 copper alloy).

thin Rectangular, grooved, triangular and thin, the wide range of glazing beads allows for a variety of different designs for the internal window light. the wide choice available visually recalls the traditional "iron window"

profiles.

Handles come in paintable raw brass, burnished brass, polished chrome brass and polished brass: the square version is available also in corten steel.

Two and three-wing hinges are adjustable and are supplied in galvanised steel, stainless steel, burnished stainless steel and corten steel. Weld-on hinges are in galvanised steel.
The following models are adjustable: h.80|d.13mm and h.116|d.16mm.

Custom solutions are available in co-operation with Secco Sistemi technical office.

# OS2 75

# Fondaco dei Tedeschi | Venice



An urban landmark on the Canal Grande in Venice, the imposing structure of the Fondaco dei Tedeschi, after decades of total abandon, was restored to the city completely renovated by the masterly project of Rem Koolhaas. The original purpose of this building as a large

warehouse as well as housing mercantile activity has been revived today, the brilliant vitality of which illuminates the great façades with lights of windows shining night and day, enhanced by the very fine Secco Sistemi OS2 profiles in natural brass.

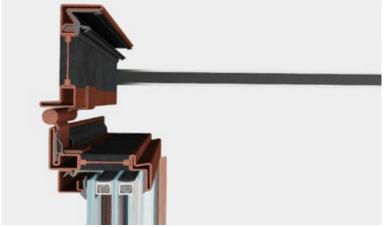






# OS2 75 hinged

## system and performance



OS2 75 folding sashes of large dimensions up to 1000 x 2900 mm with slim profiles and seamless frame interiors. A new thermal break solution to interpret the transition from the interiors to the exteriors: the opened sashes offer reduced volumes thus increasing the interior spaces. Hinges, upper and lower tracks are concealed when the door is in the closed position.

### size and variations



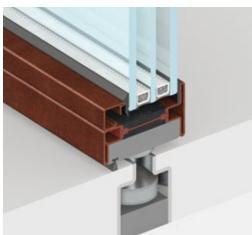
side section | 62 mm visible section



upper section | 62 mm visible section



Each solution is equipped with a related set of accessories integrated in the system. The performance of OS2 thermally insulated system has been tested by the best European certifying labs under the reference standards EN 14351-1.



lower section | 62 mm visible section

wind resistance - test pressure	3
wind resistance - frame bending	С
water tightness	5A
thermal transmittance (with Ug glass 0,7 W/m²K)	1,20 W/m²K
air permeability	4

maximum achievable performance

OS2 is an internally and externally rebated system with 47 mm face lateral sections and 62 mm central section. For sashes with multiple lights a 36mm thermal break profile is used.

#### materials glazing bead



rectangular



handles

truncated vitruvio handle h.116 | d.12 mm



h.60/80/116 mm d.10 /13/16 mm

hinges



main type

weld-on hinge



three-wing hinge h.90 | d.15 mm



stainless steel

corten steel

galvanised steel





h.116 | l.12 mm

rounded vitruvio handle h.116 | d.15 mm



triangular

thin



oval vitruvio handle h.80 | l.30 mm



OS2 Is available in galvanised steel - in a wide range of colours and surface finishes - in AISI 316L polished or Scotch-Brite stainless steel, corten steel and in brass (OT67 copper alloy).

Rectangular, grooved, triangular and thin, the wide range of glazing beads allows for a variety of different designs for the internal window light. the wide choice available visually recalls the traditional "iron window" profiles.

The handles come in paintable raw brass, burnished brass, polished chrome brass and polished brass; the square version is available also in corten steel.

Two and three-wing hinges are adjustable and are supplied in galvanised steel, stainless steel, burnished stainless steel and corten steel. Weld-on hinges are in galvanised steel. The following models are adjustable: *h.*80|*d.*13mm and h.116|d.16mm.

Custom solutions are available in co-operation with Secco Sistemi technical office.

# OS2 75

# Fondaco dei Tedeschi | Venice

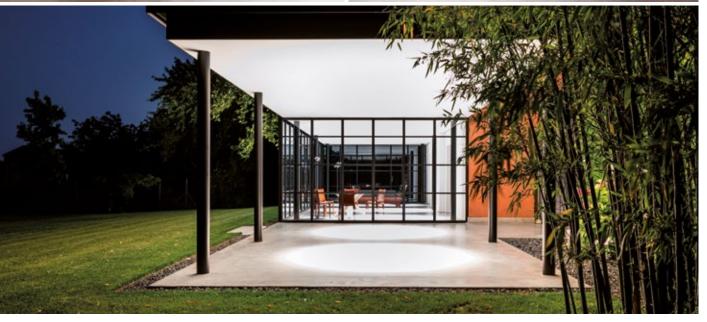


An urban landmark on the Canal Grande in Venice, the imposing structure of the Fondaco dei Tedeschi, after decades of total abandon, was restored to the city completely renovated by the masterly project of Rem Koolhaas. The original purpose of this building as a large warehouse as well as

housing mercantile activity has been revived today, the brilliant vitality of which illuminates the great façades with lights of windows shining night and day, enhanced by the very fine Secco Sistemi OS2 profiles in natural brass.

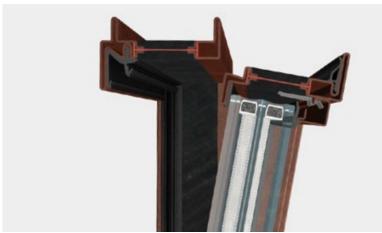






# OS2 75 horizontal pivot door

### system and performance



OS2 outward opening door is an integrated system with accessories, seals and thermal break profiles 77 mm deep allowing for a wide range of doors, rectangular, shaped or curved. They can be equipped with double glazing up to 50 mm thick. The sealing of the frames is guaranteed by a double rebate seal system under the bottom rail.



Each solution is equipped with a related set of accessories integrated in the system. The performance of OS2 thermally insulated system has been tested by the best European certifying labs under the reference standards EN 14351-1.

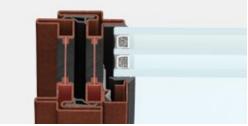
wind resistance - test pressure	5
wind resistance - frame bending	С
water tightness	7A
thermal transmittance (with Ug glass 0,6 W/m²K)	1,48 W/m²K
air permeability	4

maximum achievable performance

### size and variations



upper side section | 62 mm visible section



lower side section | 62 mm visible section



lower section | 62 mm visible section



glazing bar | 36 mm visible section

OS2 is a rebated system with 62 mm visible sections. For sashes with multiple lights a 36 mm thermal break profile is used.

# materials

# glazing bead

# handles

# hinges

## main type



galvanised steel



rectangular



truncated vitruvio handle h.116 | d.12 mm



pivot h.80



stainless steel



grooved



square vitruvio handle h.116 | l.12 mm





corten steel



triangular



rounded vitruvio handle h.116 | d.15 mm



OS2 is available in galvanised steel - in a wide range of colours and surface finishes - in AISI

316L polished or Scotch-

Brite stainless steel, corten steel and in brass (OT67 copper alloy).

brass





oval vitruvio handle h.80 | I.30 mm



profiles.

Handles come in paintable raw brass, burnished brass, polished chrome brass and polished brass: the square version is available also in corten steel.

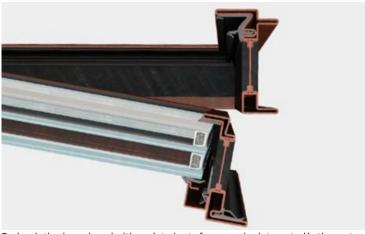
Custom solutions are available in co-operation with Secco Sistemi technical office.

# OS2 75 vertical pivot door

## system and performance



OS2 outward opening door is an integrated system with accessories, seals and thermal break profiles 77 mm deep allowing for a wide range of doors, rectangular, shaped or curved. They can be equipped with double glazing up to 50 mm thick. The sealing of the frames is guaranteed by a double rebate seal system under the bottom rail.

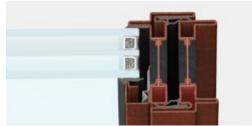


Each solution is equipped with a related set of accessories integrated in the system. The performance of OS2 thermally insulated system has been tested by the best European certifying labs under the reference standards EN 14351-1.

wind resistance - test pressure	4
wind resistance - frame bending	С
water tightness	6A
thermal transmittance (with Ug glass 0,6 W/m²K)	1,48 W/m²K
air permeability	4

maximum achievable performance

### size and variations



upper side section | 62 mm visible section



lower side section | 62 mm visible section



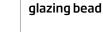
 $lower \, section \, | \, 62 \, mm \, visible \, section$ 



glazing bar | 36 mm visible section

OS2 is a rebated system with 62 mm visible sections. For sashes with multiple lights a 36 mm thermal break profile is used.

# materials



# handles

# hinges

# main type



galvanised steel



rectangular



truncated vitruvio handle h.116 | d.12 mm



pivot 1.80



stainless steel

corten steel





square vitruvio handle h.116 | l.12 mm





triangular



rounded vitruvio handle h.116 | d.15 mm



brass



thin



oval vitruvio handle h.80 | I.30 mm

OS2 Is available in galvanised steel - in a wide range of colours and surface finishes - in AISI 316L polished or Scotch-Brite stainless steel, corten steel and in brass (OT67 copper alloy).

Rectangular, grooved, triangular and thin, the wide range of glazing beads allows for a variety of different designs for the internal window light. the wide choice available visually recalls the traditional "iron window" profiles. profiles.

Handles come in paintable raw brass, burnished brass, polished chrome brass and polished brass: the square version is available also in corten steel.

Custom solutions are available in co-operation with Secco Sistemi technical office.

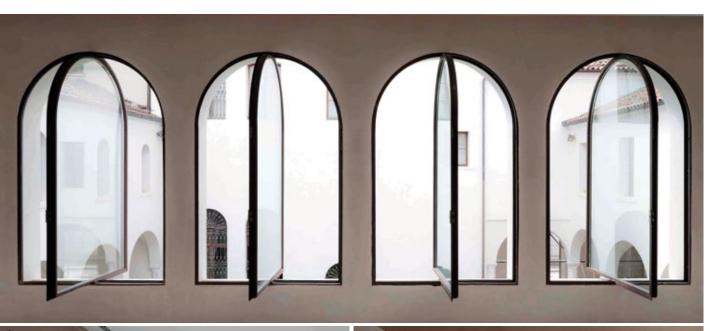
# OS2 75

# Museo Bailo | Treviso (IT)



An international competition was arranged for the project engineering and European financing for the regeneration and restyling of this well-loved building. The stylish, elegant details of the OS2 profiles distinguish the outlines of the doors and windows in the new façade and in the renovated cloister.

The fluid and continuous itinerary through the exhibition plays on the continuity and the dialogue between the exhibition rooms and the cloister through the great internal glass walls tracing the outlines of the doors and windows has a decisive role in the design of these façades:







the fixtures are visible so as to have one single line of metal flush between the interior and the exterior. In the external front view the visible profiles are of just 62 mm. With rectangular or arch-shaped lights, pivot or swing opening or fixed glass panels, Secco Sistemi thermal break OS2 profiles interpret the design of the

openings, transforming the thin lines into impeccable, elegant casements, essential and at the same time efficient, safe and high-performing. The brightness of the corten steel combines with the white surfaces of the exterior and is integrated perfectly in the symphony of soft pastel hues of the interior.

# OS2 75 AS

areas of application

lift and slide

the elegance of the OS2 system, with its minute profiles and high-quality materials, in the lift and slide door version

The OS2 75 AS thermal break system makes it possible to create doors with a lift and slide opening system, integrating seamlessly with **0S2 75** and **65** frames. The system, versatile and flexible, maintains the excellent performance of the **OS2** range and lends itself to the interpretation and implementation of the most innovative projects of contemporary architecture, enhancing both the facades and interior spaces, integrating elegantly into the window and door frames. The visible sections, constant throughout the entire perimeter of the frame, are only 47 mm. The system is dedicated to a complete series of special minute profiles, including the elegant threshold flush with the floor, made of precious Secco materials that correspond to the characteristics of the **OS2** family. The performance of the **OS2** 75 AS thermal break system has been tested by the best European certification laboratories according to EN 14351-1 reference standards.



**WIND** RESISTANCE





**WATER** TIGHTNESS

5A



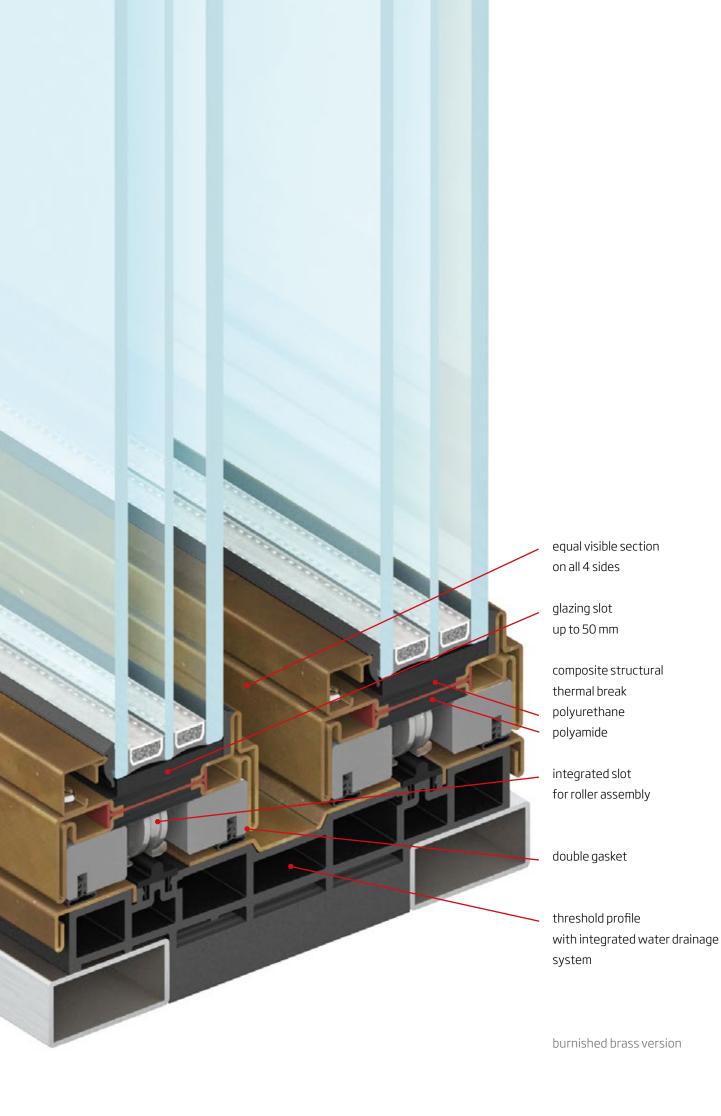
THERMAL TRANSMITTANCE up to 1.0 W/m2K



**AIR** PERMEABILITY

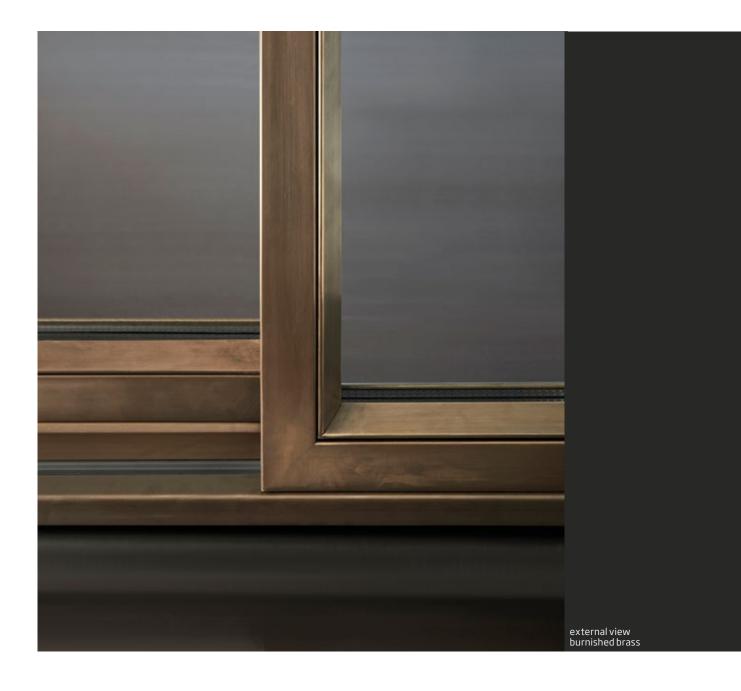
4



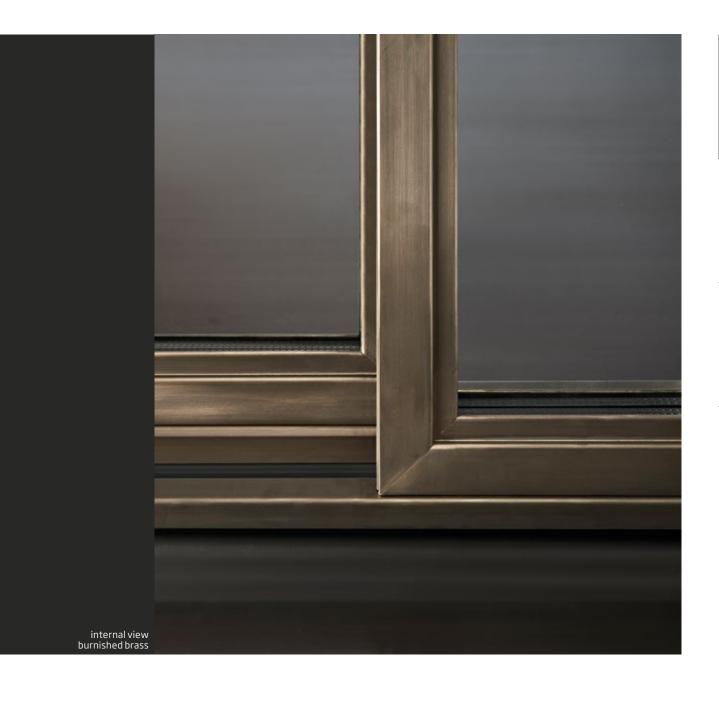


# OS2 75 AS

# OS275 AS lift-and-slide central section

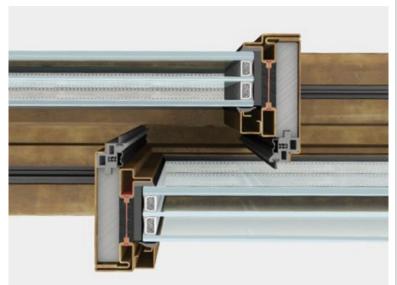


OS2 75 AS lift-andslide central section external view in burnished brass and internal view in stainless steel with welded corner on the interior.



# **OS275AS**

## system and performance



OS2 75 AS is an integrated system with accessories, seals and thermal break profiles 85 mm deep. This makes it possible to realise lift and slide door and window frames with one to four wings of big dimensions and weight (up to 600 kgs.). They can be equipped with triple glazing up to 60 mm thick.

The sealing of the lift and slide frame is guaranteed by a four-side double seal system. Each solution is equipped with a related set of concealing accessories integrated in the system. The performance of OS2 75 AS thermally insulated sliding system has been tested by the best European certifying labs under the reference standard EN 14351-1.

### size and variations



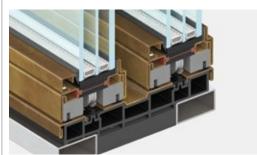
reduced central section | frame section 69mm



standard central section | frame section 94mm



floor rail with threshold | h 8 mm



floor rail with integrated threshold | h 20mm

wind resistance - test pressure	3
wind resistance - frame bending	С
water tightness	5A
thermal transmittance (with Ug glass 0,6 W/m²K)	1,0 W/m²K
air permeability	4

#### materials glazing bead



rectangular

handles

stainless steel handle for lift and slide doors h.280 | d.20 mm

accessories







main type



galvanised steel



stainless steel





corten steel



thin



brass

OS2 75 AS is available in galvanised steel - in a wide range of colours and surface finishes - in AISI 304 brushed stainless steel, in AISI 316L polished or Scotch-Brite stainless steel, corten steel and in brass (OT67 copper alloy).

Rectangular, gothic, thin (L shaped): the wide range of glazing beads allows for different internal frame looks according to architectural needs.

Brass handle available in paintable untreated, burnished, polished or polished chrome finishing.

The integrated automated system for sliding doors can be fitted with door-sashes up to 600 kgs heavy.

Single or two-sash lift and slide doors can be created with or without lateral fixed panel sections.

Custom solutions are available in co-operation with Secco Sistemi technical office.

sash size limitations w.2208 | h.3400 weight limitations 600 kg.

# **OS275AS**

# One Kensington Gardens | London



The re-organising of an important street block directly overlooking Royal Park with a view of Kensington Palace led to the construction of new buildings and thus a new look to this area of town, to realize 97 spacious luxury apartments. In an excellent position in London, these apartments are equipped with the most sophisticated up-to-date features, including private

25-metre swimming-pool, fitness centre and spa, live-in concierge 24/7. An important façade has been designed for the main elevation of the terrace overlooking the park: starting from the imposing base in Portland stone, thin, horizontal lines alternate with large glazing panels protected by deep terraces that are supported by refined and sturdy balustrades in bronze.







The glazing panels slide and are oversize in dimensions: for the whole length of the terraces the height exceeds 3.80 metres. They are not rectilinear but are instead characterised by misalignments and rotations without losing the effect of continuity and transparency of the visual perspective. With Secco Lab Secco Sistemi has studied, tested and produced an ad hoc profile that is

certified, as required by the project, with the excellent technical specifications of sound insulation, water-tightness and windproofing. EBE 85 AS in burnished brass has been designed to meet all these criteria: innovation, quality and performing efficiency, in line with the high prestige of the apartments of this building in the centre of London.

areas of application

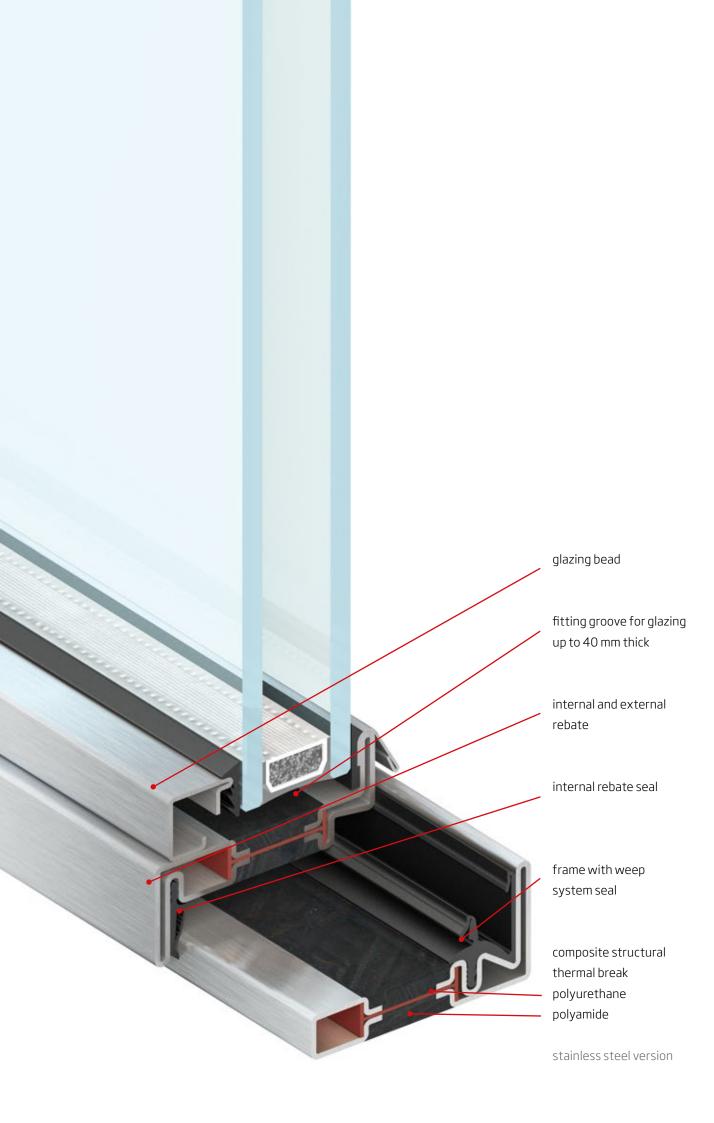
- doors
- windows

the thermal break steel window: slim, high-performing profiles of just 27 mm, multiple combinations available, insulating glazing of up to 40 mm



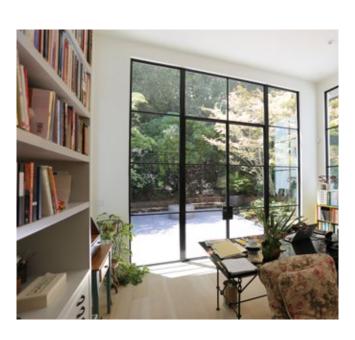
**OS2 65** is part of the group of OS2 profiles, studied, conceived and created by Secco Sistemi to replace the doors and windows used from the nineteenth century up to the middle of the last century. Utilised also in contemporary architecture to satisfy the need for transparency and purity of lines, the slim profiles of the OS2 system lighten the walls of their weight and allow total freedom in the design of the fixture. **0S2 65** is the thermal break steel window which comes in an array of more than 40 profiles, with visible sections reduced to the minimum: from just 27 mm to 47 mm for the lateral section, 62 mm for the central section and 65 mm depth. This steel window can house glazing panels for insulation of up to 40 mm thickness. With the many possible variations of the system **OS2 65**, moreover, the profiles can have glass panels which are flush-mounted or inset within the frame, which underline the borders of the sashes and blend into the unicoloured area of the fixed panes or be composed freely with the same design for fixed and openable sashes. The performance of the OS2 thermal break system has been tested by the best European certifying laboratories in compliance with the current specific standard EN 14351-1 regulations.





### OS2 65 design of the variations

over 40 slim, strong profiles to choose from to find solutions for all project requirements

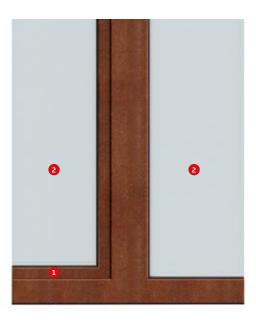


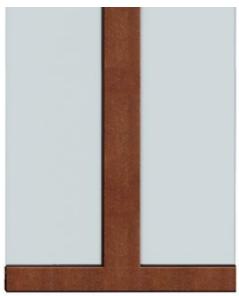
**OS2 65** is a flexible and versatile system for creating infinite variations of the fixture and for designing in detail the exact window or door required, with the minimum sections and high-quality performance of the OS2 group of profiles. In the glass curtain walls, with the OS2 system fixed and openable elements can be composed together in various ways: by clearly defining the profile of the sashes in the façade with respect to the fixed mullions or struts, or by unifying the design of the casement using profiles with the same sections exposed everywhere. To better distinguish the various choices available, we have created two subsystems: OS2 65.1 and OS2 65.2

In the case of OS2 65.1 the panels are not flush-mounted and the profile of the frame goes to underline the perimeter of the sash. With OS2 65.2, on the other hand, the glass panels are flush-mounted and the profile sections can be congruent, both with regard to the fixed struts and in the perimeter of the sashes.

#### **0S265.1**









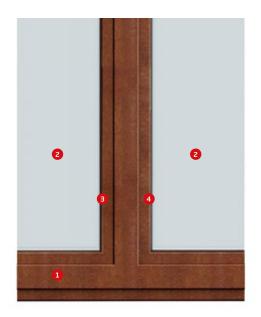
27/62 mm

façades and panelling

- sashes are well-defined in the front view
- non-coplanar glazing between sash and fixed pane

OS2 65.2







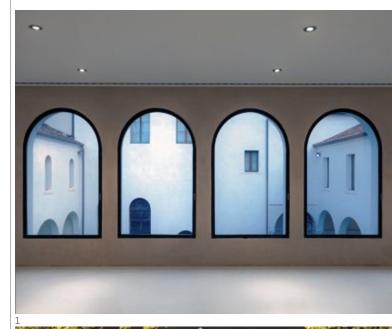
- possibility of sections always the same between sashes and fixed panes  $\,$
- flush-mounted glazing between sashes and fixed panes
- sash
- fixed pane



71

### OS2 65 design of the variations

OS2 65 with its multiple variations enhances the value of the architectural project which designs the window in every single detail, with the minimum sections and characteristic elevated performance of the OS2 system





- 2
- Pivot opening for large arch-shaped windows with single thin continuous profile framing the glazing. With the concealed hinges the outline of the casement is continuous and seamless all around the perimeter.
- The casement represents the constant expression of the wall while the profile traces the perimeter of the sash along each side, including the one flush with the flooring.





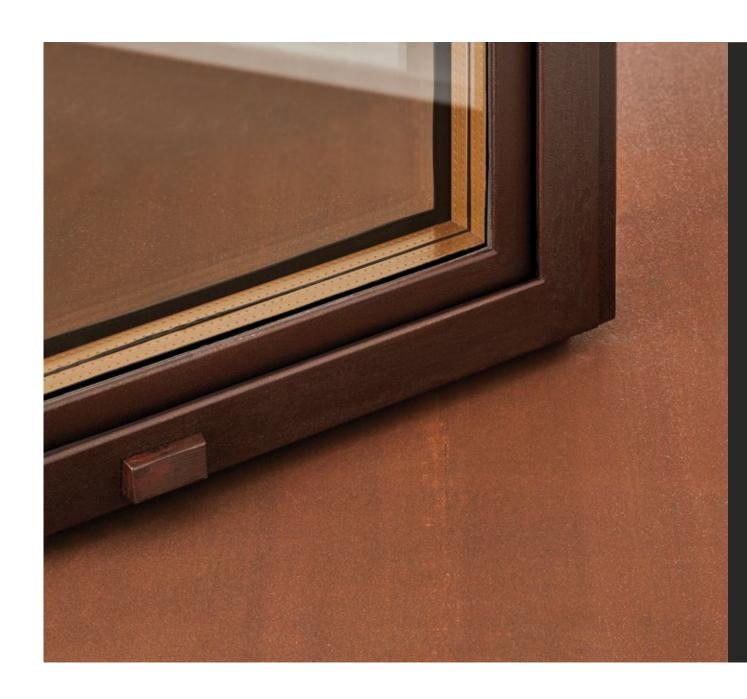




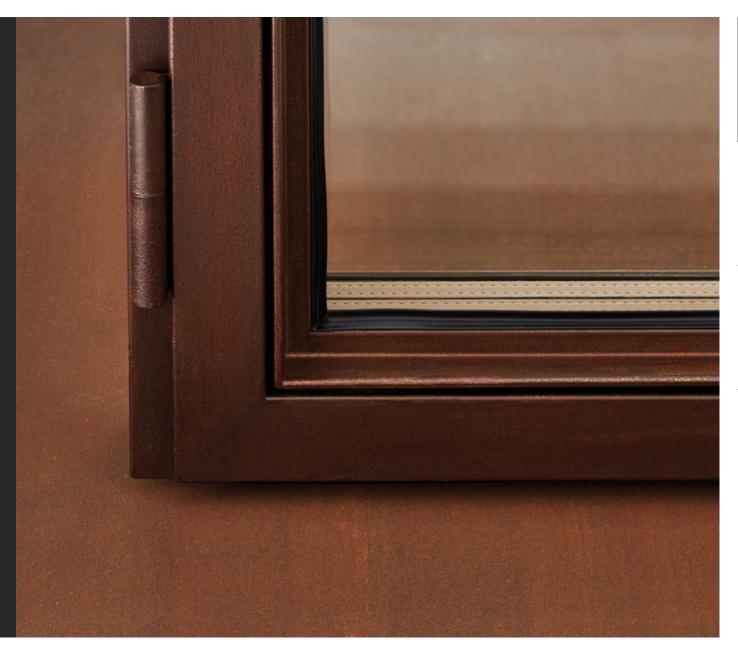
- 3. In the double-sash windows the thin profiles tracing the perimeter of the casement have the same design as the central section in the front view.
- 4. Perimetral profiles in the front view have the same dimensions and design as those which divide the glazing into 4 parts.

- 5. In the front view of the casement, the perimeters of the fixed and openable sashes have the same design.
- 6. The congruent section profile designing the perimeter of the glazing panel makes the two-leaved door inconspicuous.

#### OS2 65 window corner



External view of OS2 65 window corner in corten steel with thin glazing bead.



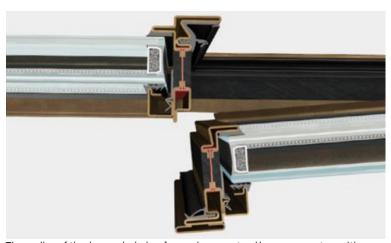
Internal view of OS2 65 window corner in corten steel with thin glazing bead.

## OS2 65 window inward-opening

#### system and performance



OS2 inward opening window is an integrated system with accessories, seals and thermal break profiles 65 mm deep allowing for a wide range of windows, rectangular, shaped or curved. They can be equipped with double glazing up to 40 mm thick. Each solution is equipped with a related set of accessories integrated in the system.



The sealing of the door and window frames is guaranteed by a weep system with central sealing gasket and internal rebate seal. The performance of OS2 thermally insulated system has been tested by the best European certifying labs under the reference standards EN 14351-1.

wind resistance - test pressure	4
wind resistance - frame bending	С
water tightness	8A
acoustic performance (with Rw per IGU 42dB)	43 (-1;-4) dB
thermal transmittance (with Ug glass 1.0 W/m²K)	1,38 W/m²K
air permeability	4
break-in resistance	PAS24

maximum achievable performance

#### size and variations



lower section | frame section 47 mm



lateral section | frame section 47 mm



central section | frame section 62 mm



glazing bar | frame section 36 mm

OS2 is a rebated system with 47 mm face lateral sections and 62 mm central section. For frames with multiple lights a 36mm thermal break profile is used.

#### materials glazing bead



#### handles

#### hinges

#### main type



galvanised steel



rectangular



truncated vitruvio handle h.116 | d.12 mm



weld-on hinge h.60/80/116 mm d.10 /13/16 mm











corten steel



triangular

grooved



square vitruvio handle

h.116 | l.12 mm

rounded vitruvio handle h.116 | d.15 mm



three-wing hinge h.90 | d.15 mm







brass

OS2 Is available in galvanised steel - in a wide range of colours and surface finishes - in AISI 316L polished or Scotch-Brite stainless steel, corten steel and in brass (OT67 copper alloy).



thin

Rectangular, grooved, triangular and thin: the wide range of glazing beads allows for a variety of different designs for the internal window light. The wide choice available visually recalls the traditional "iron window" profiles. profiles.



oval vitruvio handle h.116 | d.15 mm

The handles come in paintable raw brass, either burnished, polished chrome or polished brass; the square version comes also in corten steel.

Two and three-wing hinges are adjustable and are supplied in galvanised steel, stainless steel, burnished stainless steel and corten steel. weld-on hinges are in galvanised steel. The following models are adjustable: h.80|d.13mm and h.116| d. 16mm.

Custom solutions are available in co-operation with Secco Sistemi technical office.

## OS2 65 door inward-opening

#### system and performance



OS2 inward opening door is an integrated system with accessories, seals and thermal break profiles 65 mm deep allowing for a wide range of windows, rectangular, shaped or curved.

They can be equipped with double glazing up to 40 mm thick. The sealing of the door and window frames is guaranteed by a weep system with central sealing gasket, a three-side internal rebate seal and an automatic retractable seal.



Each solution is equipped with a related set of accessories integrated in the system. The performance of OS2 thermally insulated system has been tested by the best European certifying labs under the reference standards EN 14351-1.

wind resistance - test pressure	1
wind resistance - frame bending	С
water tightness	1A
thermal transmittance (with Ug glass 1.0 W/m²K)	1,35 W/m²K
air permeability	3

maximum achievable performance

#### size and variations



lateral section | frame section 47 mm



central section | frame section 62 mm



bottom rail | frame section 47 mm



glazing bar | frame section 36 mm  $\,$ 

OS2 is a rebated system with 47 mm face lateral sections and 62 mm central section. For frames with multiple lights a 36mm thermal break profile is used.

#### materials glazing bead



#### handles

#### hinges

#### main type



galvanised steel



rectangular



truncated vitruvio handle h.116 | d.15 mm



weld-on hinge h.60/80/116 mm  $d.10/13/16\,\mathrm{mm}$ 





stainless steel



grooved



square vitruvio handle h.116 | l.15 mm



two-wing hinge h.81 | d.12 mm





corten steel



triangular



three-wing hinge h.90 | d.15 mm







OS2 Is available in galvanised steel – in a wide range of colours and surface finishes in AISI

316L polished or Scotch-

Brite stainless steel, corten steel and in brass (OT67 copper alloy).

brass



thin



Rectangular, grooved, triangular and thin, the wide range of glazing beads allows for a variety of different designs for the internal window light. The wide choice available visually recalls the traditional "iron window" profiles.

Handles come in paintable raw brass, burnished brass, polished chrome brass and polished brass; the square version is available also in corten steel.

Three-wing hinges are adjustable and are supplied in galvanised steel, stainless steel, burnished stainless steel and corten steel. Weld-on hinges are in galvanised steel: the following models are adjustable:  $h.80 \mid d.13$ mm and  $h.116 \mid d.16$ mm.

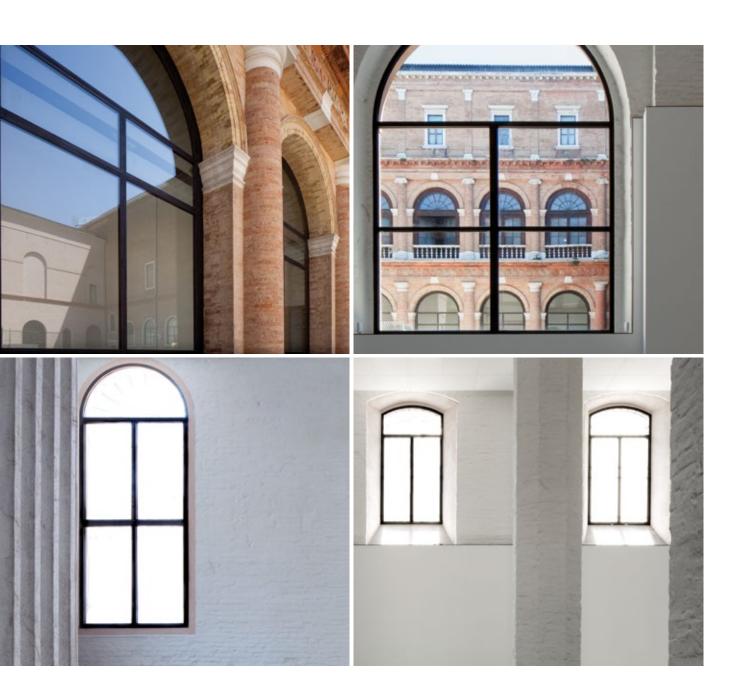
Custom solutions are available in co-operation with Secco Sistemi technical office.

#### Gallerie Dell'Accademia | Venice



The monumental complex of the Gallerie Dell'Accademia stands in the site once occupied by the big complex formed by the church of Santa Maria della Carità, the nunnery of Canonici Lateranensi and the Scuola Grande di Santa Maria Della Carità.

From the 16<sup>th</sup> century until the second half of the 1940s, several architects worked on the complex of the Gallerie: from Palladio, Gianantonio, Selva, to Carlo Scarpa who was in charge of an important, although partial, renovation.



The renovation aimed at expanding the space for exhibitions in the vast and articulated museum and it required a delicate yet significant intervention by the designer under the strict and competent supervision of the Sopraintendenza ai Beni Architettonici (Superintendence for Architectural Heritage). The requirements for door and window frames were very precise: minimal visual impact, high thermal and acoustic performance,

low maintenance and, lastly, the use of a material that would fit in with the architectural context. For this reason, OS2 door and window frames in burnished brass were used. These not only fully meet the initial restoration requirements but also have a high resistance to corrosion, which is a vital requirement in a difficult and aggressive marine environment such as the one in Venice.

## OS2 65 window outward-opening

#### system and performance



OS2 outward opening window is an integrated system with accessories, seals and thermal break profiles 65 mm deep allowing for a wide range of windows, rectangular, shaped or curved. They can be equipped with double glazing up to 32 mm thick. Each solution is equipped with a related set of accessories integrated in the system.



The sealing of the door and window frames is guaranteed by a double rebate seal system. The performance of OS2 thermally insulated system has been tested by the best European certifying labs under the reference standards EN 14351-1.

wind resistance - test pressure	4
wind resistance - frame bending	С
water tightness	8A
thermal transmittance (with Ug glass 1.0 W/m²K)	1,38 W/m²K
air permeability	3
break-in resistance	PAS24

maximum achievable performance

#### size and variations



lower section | frame section 47 mm



lateral section | frame section 47 mm



central section | frame section 62 mm



glazing bar | frame section 36 mm

OS2 is a rebated system with 46 mm face lateral sections and 47/62 mm central section. For sashes with multiple lights a 36mm thermal break profile is used.

#### materials glazing bead



#### vitruvio handles

#### hinges

#### main type



galvanised steel



rectangular



truncated vitruvio handle h.116 | d.12 mm



weld-on hinge h.60/80/116 mm d.10 /13/16 mm







two-wing hinge h.81 | d.12 mm

















Custom solutions are available in co-operation with Secco Sistemi technical office.



stainless steel

corten steel





triangular



square vitruvio handle

h.116 | l.12 mm

oval vitruvio handle h.80 | l.30 mm



handle for second sash h.50 mm







Rectangular, grooved, triangular and thin, the wide range of glazing beads allows for a variety of different designs for the internal window light. the wide choice available visually recalls the traditional "iron window"

profiles.

pivot system h.80 Two and three-wing hinges

are adjustable and are supplied in galvanised steel, stainless steel, burnished stainless steel and corten steel. weld-on hinges are in galvanised steel. The following models are adjustable: h.80|d.13mm and h.116|d.16mm.

brass



## OS2 65 door outward-opening

#### system and performance



OS2 outward opening door is an integrated system with accessories, seals and thermal break profiles 65 mm deep allowing for a wide range of windows, rectangular, shaped or curved. They can be equipped with double glazing up to 32 mm thick. The sealing of the door and window frames is guaranteed by a double rebate seal system and an automatic retractable seal under the socle or bottom rail.



Each solution is equipped with a related set of accessories integrated in the system. The performance of OS2 thermally insulated system has been tested by the best European certifying labs under the reference standard EN 14351-1.

wind resistance - test pressure	1
wind resistance - frame bending	С
water tightness	1A
thermal transmittance (with Ug glass 1.0 W/m²K)	1,35 W/m²K
air permeability	3

maximum achievable performance

#### size and variations



lateral section | frame section 47 mm



central section | frame section 62 mm



bottom rail | frame section 54 mm



glazing bar | frame section 36 mm

OS2 is an internally and externally rebated system with 47 mm face lateral sections and 62 mm central section. For sashes with multiple lights a 36mm thermal break profile is used.

## handles materials glazing bead hinges main type galvanised steel rectangular truncated vitruvio handle weld-on hinge h.116 | d.15 mm h.60/80/116 mm d.10 /13/16 mm square vitruvio handle h.116 | l.15 mm stainless steel grooved two-wing hinge h.81 | d.12 mm three-wing hinge h.90 | d.15 mm corten steel triangular

brass

OS2 Is available in galvanised steel - in a wide range of colours and surface finishes - in AISI 316L polished or Scotch-Brite stainless steel, corten steel and in brass (OT67 copper alloy).



thin

Rectangular, grooved, triangular and thin, the wide range of glazing beads allows for a variety of different designs for the internal window light. the wide choice available visually recalls the traditional "iron window" profiles.

The handles come in paintable raw brass, either burnished, polished chrome brass or polished brass; the square version also comes in corten steel.

Two and three-wing hinges are adjustable and are supplied in galvanised steel, stainless steel, burnished stainless steel and corten steel. Weld-on hinges are in galvanised steel. The following models are adjustable: h.80|d.13mm and h.116|d.16mm.

Custom solutions are available in co-operation with Secco Sistemi technical office.

#### Villa in Napa Valley, California



Designing luxurious interiors while maintaining the simple and reassuring character of a large ranch - ostentation and reserve go hand in hand. The spacious living area consists of open spaces and closed-off areas, covered galleries and transparence, with the OS2 steel windows designing all the glass walls.





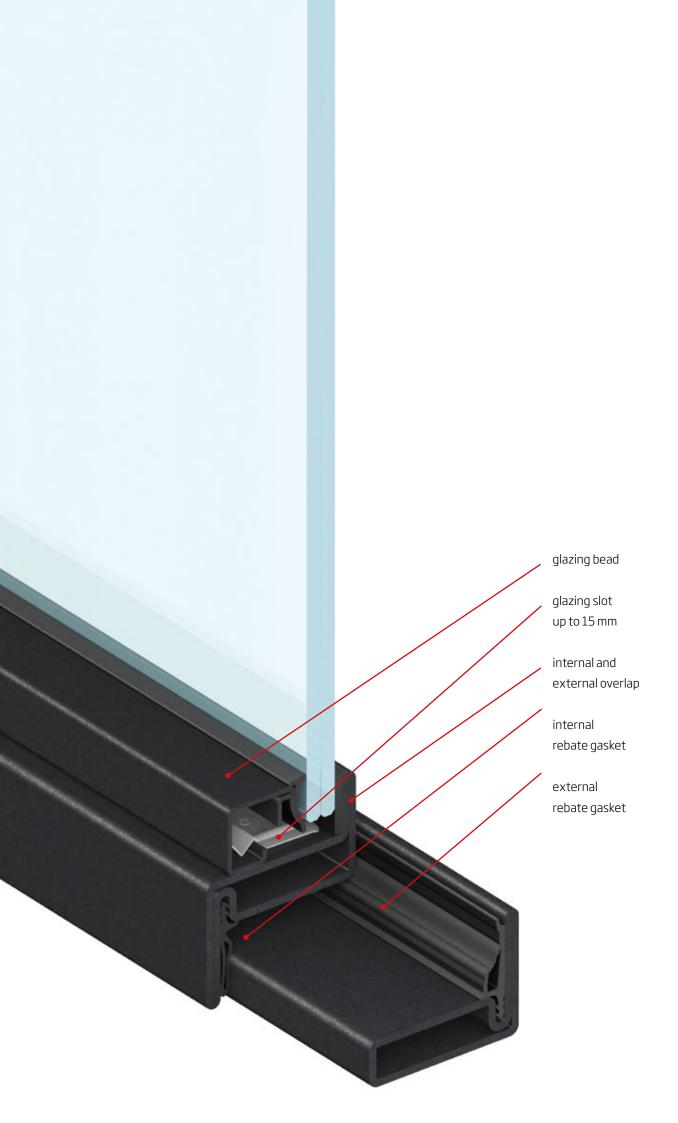


areas of application

doors

the highest quality in a system reduced to the essentials; OS2 40 is the iron window made with Secco Sistemi tubular profiles Created for interior design projects, **0S240** is the ideal system for interior partitions: its minimalist profiles form window frames and slim-line doors; the exposed sections are reminiscent of the simple elements of the iron window and, at the same time, present contemporary technological and qualitative solutions, allowing great freedom in the effect of the window frame. The wide range of glazing beads, applied with an elegant hidden screw design, allows you to customize the frame in the best way, giving it a look which balances tradition and contemporaneity. **0S2 40** reproduces the same look as the **OS2** windows and doors, creating a sense of continuity between the interior and exterior of the building, the visible sections range from 12 to 47 mm while the depth is reduced to 42 mm, for glazing up to 27 mm.





#### OS2 40 window corner



OS2 40 window corner, external view in painted steel with rectangular glazing bead.



OS2 40 window corner, internal view in painted steel with rectangular glazing bead.

### OS2 40 door

#### system and performance



OS2 40 is an integrated system with accessories, seals and profiles 42 mm deep allowing for a wide range of windows, rectangular, shaped or curved. They can be equipped with glazing up to 27 mm thick.



Each solution is equipped with a set of accessories integrated in the system.

#### size and variations



lateral section | frame section 47 mm



central section | frame section 62 mm



bottom rail | frame section 47 mm



glazing bar | frame section 33,5 mm  $\,$ 

OS2 40 is a rebated system with 47 mm face lateral sections and 62 mm central section. For frames with multiple lights a 33,5 mm profile is used.

#### materials glazing bead

#### handles

#### hinges

#### main type



painted pickled steel



rectangular



truncated vitruvio handle h.116 | d.15 mm



weld-on hinge h.60/80/116 mm d.10 /13/16 mm





triangular



square vitruvio handle h.116 | l.15 mm



two-wing hinge h.81 | d.12 mm









three-wing hinge h.90 | d.15 mm

OS2 Is available in galvanised steel – in a wide range of colours and surface finishes in AISI 316L polished or Scotch-Brite stainless steel, corten steel and in brass (OT67 copper alloy).

Rectangular, grooved, triangular and thin, the wide range of glazing beads allows for a variety of different designs for the internal window light. The wide choice available visually recalls the traditional "iron window" profiles.

Handles come in paintable raw brass, burnished brass, polished chrome brass and polished brass: the square version is available also in corten steel.

Three-wing hinges are adjustable and are supplied in galvanised steel, stainless steel, burnished stainless steel and corten steel. Weld-on hinges are in galvanised steel: the following models are adjustable:  $h.80 \mid d.13$ mm and  $h.116 \mid d.16$ mm.

Custom solutions are available in co-operation with Secco Sistemi technical office.

#### Trez s.p.a | Pontedera



Designed for interior design, the light but robust tubular profiles of OS2 40 reproduce the same image as the other profiles of the OS2 family, creating an effect of continuity between the interiors and the exteriors of the building.







# BV 75

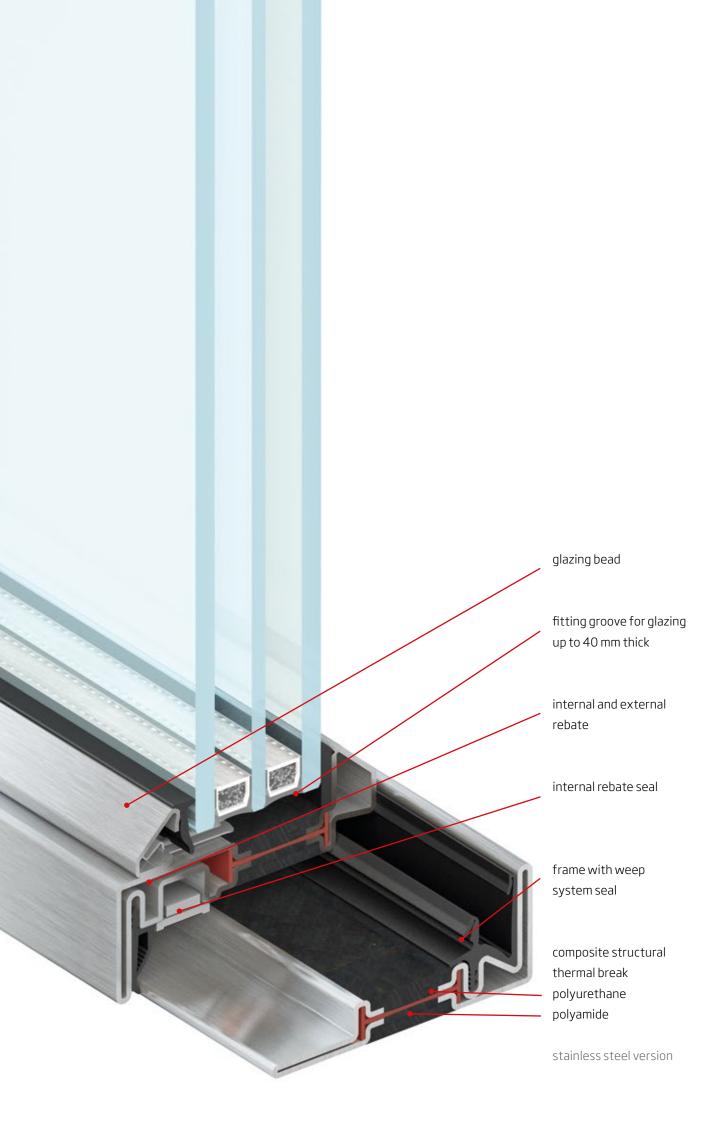
#### areas of application

- doors
- windows

the bevelled shape of the minimal metal profiles of the window and door frame are reminiscent of the old wooden windows

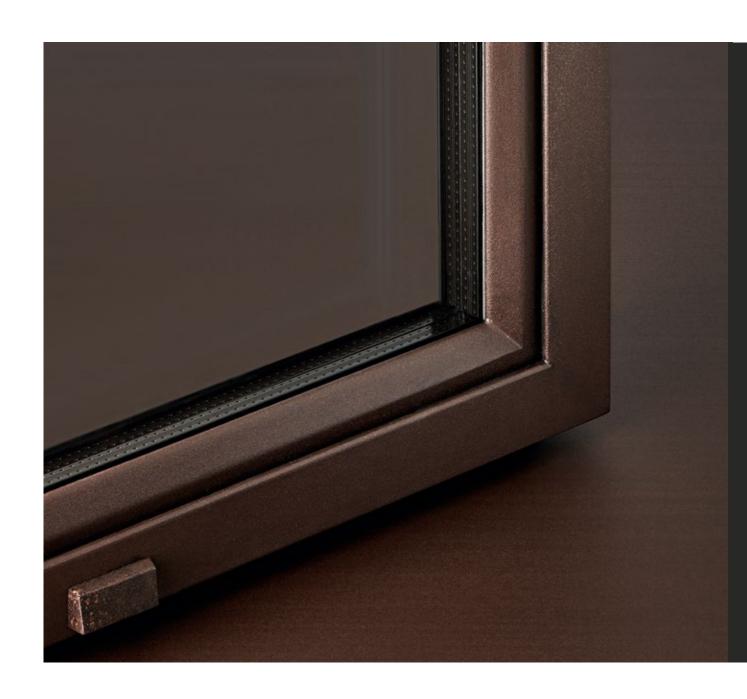


**BV 75** has been designed to create thermal break metal doors and windows that resemble the typical shape of antique wooden frames with its profiles. The external profile of the sash and the internal profile of the glazing bead have the same bevelled angle, creating perfect symmetry between the inside and outside and positioning the glass on axis with respect to the section of the window. The slim profiles of the BV 75 system, with minimal visible sections, dematerialise the walls and allow great freedom in the design of the window and door frame: from just 27 mm to 47 mm for the side node, 62 mm for the central node and a depth of 77 mm. Door and frame are overlapping both inside and outside. Sealing of the windows and doors is guaranteed by a double seal system for outward opening and an open joint system with three levels of sealing for inward opening. The high thermal and acoustic insulation performance of the **BV 75** thermal break system has been tested by the best European certification laboratories according to EN 14351-1 reference standards.



## BV 75

#### BV 75 window corner



External view of BV 75 window corner in corten steel with BV glazing bead.



Internal view of BV 75 window corner in corten steel with BV glazing bead.

# BV 75 window inward-opening

#### system and performance



BV inward opening window is an integrated system with accessories, seals and thermal break profiles 77 mm deep allowing for a wide range of windows, rectangular, shaped or curved. They can be equipped with double glazing up to 40 mm thick. Each solution is equipped with a related set of accessories integrated in the system.



The sealing of the door and window frames is guaranteed by a weep system with central sealing gasket and internal rebate seal. The performance of BV thermally insulated system has been tested by the best European certifying labs under the reference standards EN 14351-1.

wind resistance - test pressure	4
wind resistance - frame bending	С
water tightness	8A
thermal transmittance (with Ug glass 1.0 W/m²K)	1,38 W/m²K
air permeability	4

maximum achievable performance

#### size and variations



lower section | frame section 47 mm



lateral section | frame section 47 mm



central section | frame section 62 mm

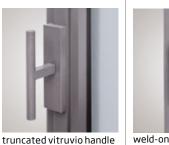
BV is a rebated system with 47 mm face lateral sections and 62 mm central section.

#### materials glazing bead



h.116 | d.12 mm

handles





hinges

weld-on hinge h.60/80/116 mm d.10 /13/16 mm



two-wing hinge h.81 | d.12 mm

three-wing hinge h.90 | d.15 mm

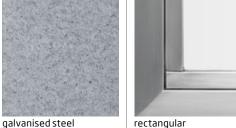


main type









rectangular

beveled

thin



square vitruvio handle h.116 | l.12 mm



rounded vitruvio handle h.116 | d.15 mm





oval vitruvio handle h.116 | d.15 mm



The handles come in paintable raw brass,



either burnished, polished chrome or polished brass; the square version comes also in corten steel.

Custom solutions are available in co-operation with Secco Sistemi technical office.



stainless steel

corten steel

brass

BV Is available in galvanised steel - in a wide range of colours and surface finishes - in AISI 316L polished or Scotch-Brite stainless steel, corten steel and in brass (OT67 copper alloy).

Rectangular, grooved, triangular and thin: the wide range of glazing beads allows for a variety of different designs for the internal window light. The wide choice available visually recalls the traditional "iron window" profiles. profiles.

Two and three-wing hinges are adjustable and are supplied in galvanised steel, stainless steel, burnished stainless steel and corten steel. weld-on hinges are in galvanised steel. The following models are adjustable: h.80|d.13mm and h.116|

d. 16mm.

101

# BV 75 door inward-opening

#### system and performance



BV inward opening door is an integrated system with accessories, seals and thermal break profiles 65 mm deep allowing for a wide range of windows, rectangular, shaped or curved.

They can be equipped with double glazing up to 40 mm thick. The sealing of the door and window frames is guaranteed by a weep system with central sealing gasket, a three-side internal rebate seal and an automatic retractable seal.



Each solution is equipped with a related set of accessories integrated in the system. The performance of BV thermally insulated system has been tested by the best European certifying labs under the reference standards EN 14351-1.

wind resistance - test pressure	1
wind resistance - frame bending	С
water tightness	1A
thermal transmittance (with Ug glass 1.0 W/m²K)	1,35 W/m²K
air permeability	4

maximum achievable performance

#### size and variations



lateral section | frame section 47 mm



central section | frame section 62 mm



bottom rail | frame section 47 mm

BV is a rebated system with 47 mm face lateral sections and 62 mm central section.



rectangular



handles

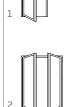
truncated vitruvio handle h.116 | d.15 mm

square vitruvio handle h.116 | l.15 mm



hinges

weld-on hinge h.60/80/116 mm d.10 /13/16 mm



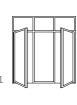
main type















corten steel

stainless steel

galvanised steel



grooved



brass





Rectangular, grooved, triangular and thin, the wide range of glazing beads allows for a variety of different designs for the internal window light. The wide choice available visually recalls the traditional "iron window" profiles.

Handles come in paintable raw brass, burnished brass, polished chrome brass and polished brass; the square version is available also in corten steel.

Three-wing hinges are adjustable and are supplied in galvanised steel, stainless steel, burnished stainless steel and corten steel. Weld-on hinges are in galvanised steel: the following models are adjustable: h.80 | d.13mm and *h.*116 | *d.*16mm.

Custom solutions are available in co-operation with Secco Sistemi technical office.

BV Is available in galvanised steel - in a wide range of colours and surface finishes in AISI 316L polished or Scotch-Brite stainless steel, corten steel and in brass (OT67 copper alloy).

## BV 75 window outward-opening

## system and performance



BV outward opening window is an integrated system with accessories, seals and thermal break profiles 77 mm deep allowing for a wide range of windows, rectangular, shaped or curved. They can be equipped with double glazing up to 32 mm thick. Each solution is equipped with a related set of accessories integrated in the system.

The sealing of the door and window frames is guaranteed by a double rebate seal system. The performance of BV thermally insulated system has been tested by the best European certifying labs under the reference standards EN 14351-1.

wind resistance - test pressure	4
wind resistance - frame bending	С
water tightness	8A
thermal transmittance (with Ug glass 1.0 W/m²K)	1,38 W/m²K
air permeability	3

maximum achievable performance

### size and variations



lower section | frame section 47 mm



lateral section | frame section 47 mm



central section | frame section 62 mm

BV is a rebated system with 46 mm face lateral sections and 47/62 mm central section.



vitruvio handles

h.60/80/116 mm

hinges





galvanised steel



rectangular

truncated vitruvio handle h.116 | d.12 mm





main type





square vitruvio handle h.116 | l.12 mm



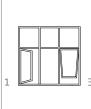












corten steel



oval vitruvio handle h.80 | l.30 mm



three-wing hinge h.90 | d.15 mm



handle for second sash h.50 mm



pivot system h.80

brass

BV Is available in galvanised steel - in a wide range of colours and surface finishes in AISI Rectangular, grooved, triangular and thin, the wide range of glazing beads allows for a variety of different designs for 316L polished or Scotchthe internal window light, the wide choice available visually recalls the traditional "iron window" Brite stainless steel, corten steel and in brass (OT67 copper alloy). profiles.

The handles come in paintable raw brass, either burnished, polished chrome brass or polished brass; the square version also comes in corten steel.

Two and three-wing hinges are adjustable and are supplied in galvanised steel, stainless steel, burnished stainless steel and corten steel. weld-on hinges are in galvanised steel. The following models are adjustable: h.80|d.13mm and h.116|d.16mm.

Custom solutions are available in co-operation with Secco Sistemi technical office.

## BV 75 door outward-opening

### system and performance



BV outward opening door is an integrated system with accessories, seals and thermal break profiles 77 mm deep allowing for a wide range of windows, rectangular, shaped or curved. They can be equipped with double glazing up to 32 mm thick. The sealing of the door and window frames is guaranteed by a double rebate seal system and an automatic retractable seal under the socle or bottom rail.



Each solution is equipped with a related set of accessories integrated in the system. The performance of BV thermally insulated system has been tested by the best European certifying labs under the reference standard EN 14351-1.

wind resistance - test pressure	1
wind resistance - frame bending	С
water tightness	1A
thermal transmittance (with Ug glass 1.0 W/m²K)	1,35 W/m²K
air permeability	3

maximum achievable performance

### size and variations



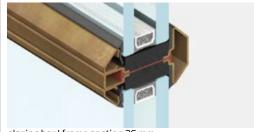
lateral section | frame section 47 mm



central section | frame section 62 mm



bottom rail | frame section 54 mm



glazing bar | frame section 36 mm  $\,$ 

BV is an internally and externally rebated system with 47 mm face lateral sections and 62 mm central section. For sashes with multiple lights a 36mm thermal break profile is used.





handles



hinges





main type



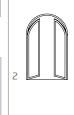
galvanised steel







d.10 /13/16 mm







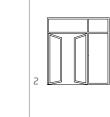












BV Is available in galvanised steel - in a wide range of colours and surface finishes - in AISI 316L polished or Scotch-Brite stainless steel, corten steel and in brass (OT67 copper alloy).

Rectangular, grooved, triangular and thin, the wide range of glazing beads allows for a variety of different designs for the internal window light. the wide choice available visually recalls the traditional "iron window" profiles.

The handles come in paintable raw brass, either burnished, polished chrome brass or polished brass; the square version also comes in corten steel.

Two and three-wing hinges are adjustable and are supplied in galvanised steel, stainless steel, burnished stainless steel and corten steel. Weld-on hinges are in galvanised steel. The following models are adjustable: *h.*80|*d.*13mm and h.116|d.16mm.

Custom solutions are available in co-operation with Secco Sistemi technical office.

## **BV** 75

## Villa Casole d'Elsa | Siena



The cottage is set in the beautiful setting of the Tuscan countryside, a few kilometres from Siena, and is part of a large project dedicated to the redevelopment of rural buildings. The original size of the windows and doors and the closure

of the wide arches of the porticoes using BV 75 doors, windows and shutters were maintained for the construction of new rooms. The BV 75 system has been used because of its profiles which are shaped like the original wooden windows







and doors, creating continuity between the wooden and steel frames on the façade of the building.



areas of application

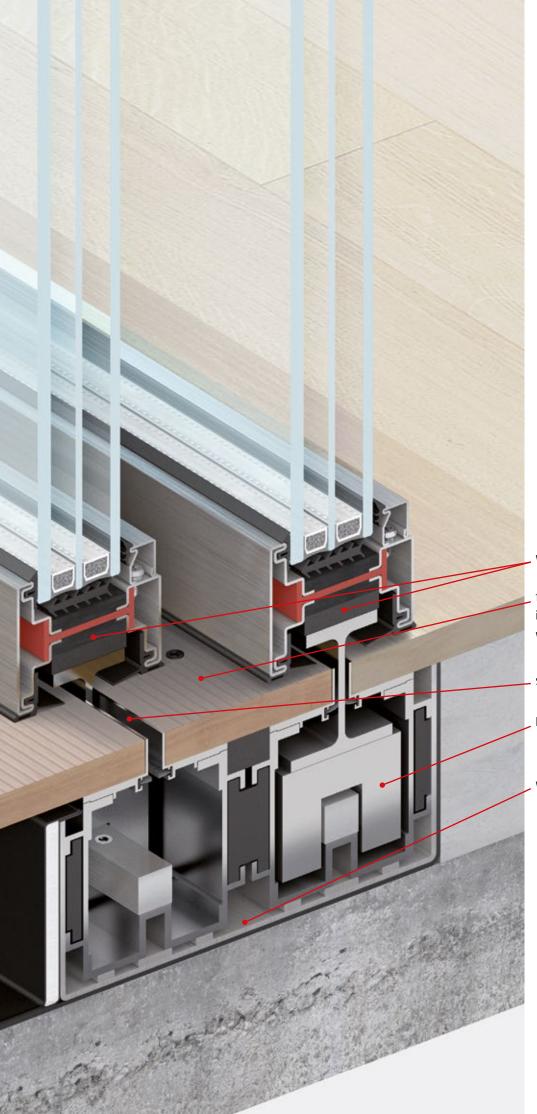
doors

the ØG® magnetic levitation sliding lift floats in the air and, freed from its weight, flows effortlessly



ØG® [zerø gravity] is the lift and slide option which adopts the principle of passive magnetic levitation for the movement of doors. The frame, lifted up by powerful Ironlev® magnets slides, floating over a small track, without noise, without friction and without the need for electricity. With its technology, **ØG**® allows your to manually open and close large sliding doors with weights of up to 1000 Kg. The system consists of a floor mounted levitation unit that contains the sliding rail, the magnetic skids and the beam connecting to the door and is accessible for maintenance through movable roof profiles that can have, in their visible surface, the same finishes as the floors, for perfect continuity between the interior and exterior of the building. Only an 8.5 mm gap, closed by brushes, remains visible in the floor as the door slides open, without any protrusion and, therefore, no chance of tripping. In the upper part of the **ØG**® sash, mechanisms are provided in order to counteract the lifting thrust of the magnets and lower the panel, ensuring tightness and closure. The system does not require electricity, it works manually even with significant weights, over 1000 kg.





windows/shutters

floor; continuity between inside and outside and without tripping

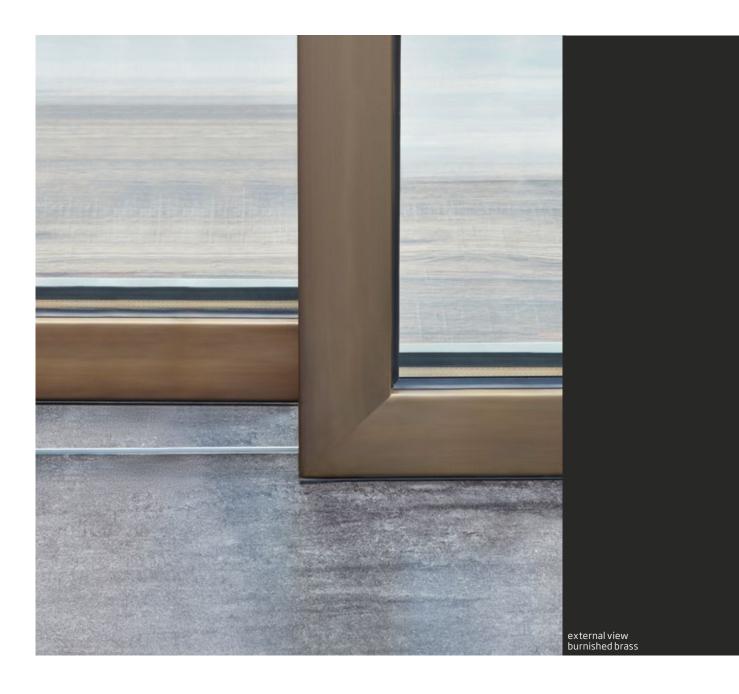
sliding loop-hole

Ironlev® magnetic levitation skid

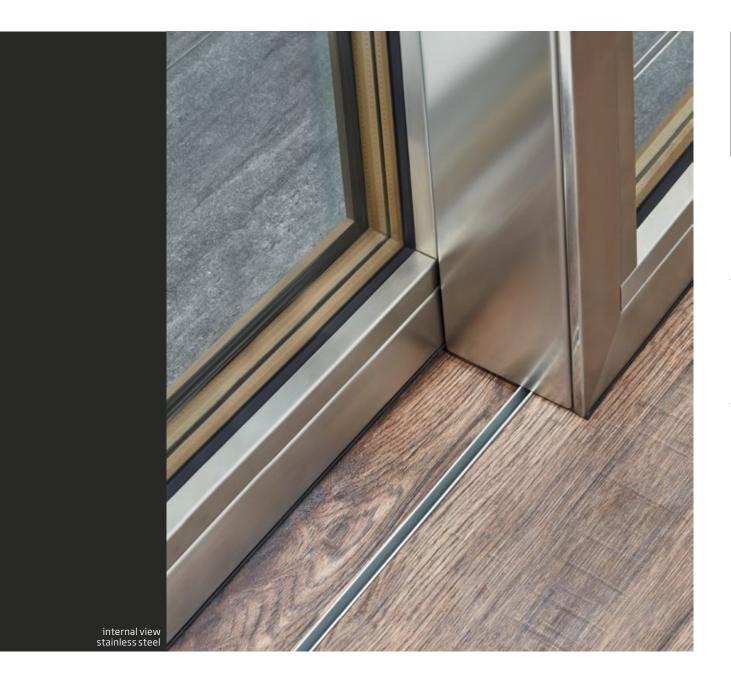
work group

## ØG [zerø gravity]

## ØG® [zero gravity] lift-and-slide central section

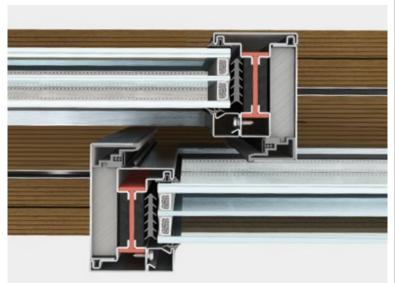


ØG® lift-andslide central section external view in burnished brass and internal view in stainless steel with welded corner on the interior.



## $\emptyset G$ [zerø gravity]

## system and performance



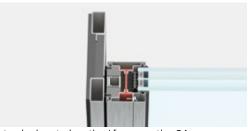
ØG® is an integrated system with accessories, seals and thermal break profiles 85 mm deep. This makes it possible to realise lift and slide door and window frames with one to four wings of big dimensions and weight (up to 1000 kgs.). They can be equipped with triple glazing up to 60 mm thick.

The sealing of the lift and slide frame is guaranteed by a four-side double seal system. Each solution is equipped with a related set of concealing accessories integrated in the system. The performance of ØG® thermally insulated sliding system has been tested by the best European certifying labs under the reference standard EN 14351-1.

## size and variations



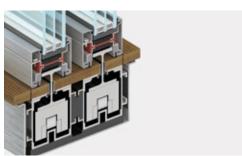
reduced central section | frame section 69mm



standard central section | frame section 94mm



floor rail with threshold | h 115-140 mm



floor rail with integrated threshold | h 206-231 mm

ØG® is available with 69 or 94 mm frame sections.

wind resistance - test pressure	3
wind resistance - frame bending	С
water tightness	8A
thermal transmittance (with Ug glass 0,6 W/m²K)	1,0 W/m²K
air permeability	4



handles

stainless steel handle for lift and slide doors h.280 | d.20 mm



accessories







brass handle for lift and slide doors h.250 | w.25 mm



rectangular

gothic





main type



corten steel

galvanised steel

stainless steel



thin



brass

ØG® is available in galvanised steel - in a wide range of colours and surface finishes - in AISI 304 brushed stainless steel, in AISI 316L polished or Scotch-Brite stainless steel, corten steel and in brass (OT67 copper alloy).

Rectangular, gothic, thin (L shaped): the wide range of glazing beads allows for different internal frame looks according to architectural needs.

Brass handle available in paintable untreated, burnished, polished or polished chrome finishing. The system allows for different handles to be fitted.

The integrated automated system for sliding doors.

Single or two-sash lift and slide doors can be created with or without lateral fixed panel sections.

Custom solutions are available in co-operation with Secco Sistemi technical office.

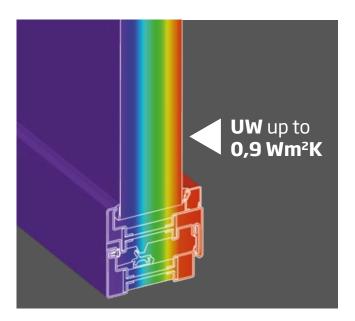
sash size limitations w.2208 | h.3400 weight limitations 600 kg.

## EBE 85

areas of application

- doors
- windows

EBE thermal break system, depth 85 mm for glass panels of up to 66 mm, rebated in the interior and flush on the exterior between sash and frame



All the systems belonging to the EBE group are flexible and complete, with slim and strong thermal break profiles. These **EBE 85** thermal break profiles have a depth of 85 mm and can house glazing panels of up to 66 mm. Sash and frame are rebated in the interior and flush-mounted externally. With its innovative, flexible, all-round system with high-performing characteristics of insulation and sealing, **EBE 85** represents Secco Sistemi's answer to the most demanding requirements in terms of performance. With the innovative technology of thermal break in polyamide and polyurethane, EBE creates strong and high-performing structural profiles with reduced sections.

The sealing of the casings is guaranteed by a double sealing system for doors and by an open joint gasket system that comprises a 3-level sealing gasket for windows. Moreover, thanks to the wide choice of types of opening and to the complete range of accessories, the EBE profiles propose countless possible variations for the casing design.

The performance of the EBE thermal break system has been tested by the best European certifying laboratories in compliance with the current specific standard EN 14351-1 regulations.





## EBE 85

## EBE 85 window corner



EBE 85 window corner external view in burnished brass and internal view in stainless steel scotch brite with welded corners and thin glazing bead.



## EBE 85 window

## system and performance



EBE 85 window is an integrated system with accessories, seals and thermal break profiles 85 or 93,5 mm deep allowing for a wide range of windows, rectangular, shaped or curved. They can be equipped with insulating glass up to 66 mm thick. Each solution is equipped with a related set of accessories (also concealed) integrated in the system.



The sealing of the window frames is guaranteed by a three-level sealing weep system. The performance of EBE 85 thermally insulated system has been tested by the best European certifying labs under the reference standard EN 14351-1.

wind resistance - test pressure	5
wind resistance - frame bending	С
water tightness	9A
acoustic performance (with Rw per IGU 45 dB)	47 (-2;-5) dB
thermal transmittance (with Ug glass 0,6 W/m²K)	0,99 W/m²K
air permeability	4
break-in resistance	(RC)3

maximum achievable performance

### size and variations



bottom/lateral section | frame section 85 mm



bottom section with threshold | Frame section 77 mm



 $central\,section\,|\,frame\,section\,145\,mm$ 

EBE 85 window is rebated on the interior and flush on the exterior with 85 mm frame sections.



## handles

## hinges

## main type



galvanised steel



rectangular



truncated vitruvio TT handle h.116 | d.15 mm



tilt and turn standard h.85 | d.15 mm



















Custom solutions are available in co-operation with Secco Sistemi technical office.



stainless steel

corten steel





square vitruvio TT handle h.116 | l.15 mm

inox 5056 TT h.135 | d.20 mm



h.85 | d.15 mm

tilt and turn concealed

tilt and turn stainless steel



butt h.160 | d.15 mm



brass

EBE 85 is available in galvanised steel - in a Rectangular, gothic, thin (L shaped): the wide range wide range of colours and surface finishes – in AISI of glazing beads allows for different internal 304 brushed stainless steel, in AISI 316L polished or Scotch-Brite stainless frame looks according to architectural needs. steel, corten steel and in brass (OT67 copper alloy).

thin

The vitruvio handles come in paintable raw brass, burnished brass, polished chrome brass and polished brass. The square version is available also in corten steel. This system is compatible with many other types of handle on the market - spindle 7.

Standard three-wing hinges are adjustable and supplied in galvanised steel with coloured plastic cover. Stainless steel hinges are available in polished, Scotch-Brite or burnished finishing.

## EBE 85 door

### system and performance



EBE 85 door is an integrated system with accessories, seals and thermal break profiles 85 mm deep allowing for a wide range of windows, rectangular, shaped or curved. They can be equipped with triple glazing up to 60 mm thick.



The sealing of the door frames is guaranteed by a three-side rebate double seal and an automatic retractable seal. Each solution is equipped with a related set of accessories (also concealed) integrated in the system.

The performance of EBE 85 thermally insulated system has been tested by the best European certifying labs under the reference standard EN 14351-1.

wind resistance - test pressure	3
wind resistance - frame bending	С
water tightness	4A
acoustic performance (with Rw per IGU 42 dB)	42 (-1;-3) dB
thermal transmittance (with Ug glass 0,6 W/m²K)	1,12 W/m²K
air permeability	4
break-in resistance	(RC)3

maximum achievable performance

#### size and variations



reduced lateral section | frame section 109 mm solution for butt and weld-on hinges



lateral section | frame section 134 mm solution for three-wing and concealed hinges



central section | frame section 156 mm





normal and reduced bottom rail frame section 69 and 94 mm

EBE 85 is an interior and exterior flush door. The solution with butt or weld-on hinge has a 109 mm lateral frame section. By using three-wing or concealed hinges, the lateral face section becomes 134 mm.



handles



## main type



galvanised steel



rectangular



truncated vitruvio handle h.116 | d.15 mm



weld-on h.145 | d.20 mm





stainless steel



grooved



square vitruvio handle h.116 | l.15 mm



three-wing butt hinge h.160 | d.22,5 mm





corten steel



thin



inox 5002 h.150 | d.20 mm



concealed





brass

EBE 85 is available in galvanised steel - in a wide range of colours and surface finishes – in AISI 304 brushed stainless steel, in AISI 316L polished or Scotch-Brite stainless steel, corten steel and in brass (OT67 copper alloy).

Rectangular, gothic, thin (L shaped): the wide range of glazing beads allows for different internal frame looks according to architectural needs.

The vitruvio handles come in paintable raw brass, burnished brass, polished chrome brass and polished brass. The square version is available also in corten steel. This system is compatible with many other types of handle on the market - spindle 7.

Weld-on hinges are in galvanised and stainless steel. Three-wing hinges are adjustable and are supplied in galvanised steel, stainless steel, burnished stainless steel. A three-wing hinge is provided also in corten steel.

All models can be made to open inwards or outwards.

Custom solutions are available in co-operation with Secco Sistemi technical office.

## **EBE 85**

## Antinori Wine Cellar | Florence



Halfway between
Florence and Siena, in the
midst of the charming
surroundings of the Classic
Chianti area, Cantina
Antinori is as much a
successful experiment as
one abounding in images
of an industrial plant
that is deeply attached
to its environment
and its rural traditions.
This close symbiosi
is expressed through
an almost completely
underground operation

that re-shapes the slope of the hill, resulting in a stretch of vineyard that extends for almost 45.000 square metres. This vineyard covering is marked by two horizontal cuts that frame the landscape and through openings channel the light down towards the heart of the winecellar where the wine ages in the darkness of the terracotta vaults in natural and optimum thermalhygrometric conditions.







Several circular openings give onto a series of inner courtyards. Transparency and wide-ranging experience and knowledge are guaranteed also to the visitor who walking up from the parking place discovers the areas dedicated to production, exposition and services: from the oil-press to the area reserved for fine dessert wine, the

restaurant, and on up to the level which hosts the auditorium, the museum, the library and the tasting rooms.

Mindful of the engineering challenges while still with extreme attention to the environment, the spaces and the large glazed doors which give shape to the transparent surfaces are all realized with the EBE 85 system in corten steel.

## EBE 85 AS

areas of application

lift and slide

excellent performance of EBE 85 AS in the version of sliding doors, also of large dimensions, with sill flush-mounted with the flooring EBE 85 has evolved with the AS system, which creates large, sliding glass curtain walls in which the sashes of great dimensions and weight can alternate with the fixed glass panels: functionality and aesthetic elegance combine in this casing which becomes an avant-garde technical element as well as a sophisticated component making up part of the façade and the interior furnishings. In fact this versatile and flexible system maintains the excellent high-performing characteristics of the EBE 85 system and lends itself to the interpreting and creation of the most innovative projects in contemporary architecture. The profile combines thermal insulation

and high values in permeability to air, in water-tightness, in resistance to wind load and in sound insulation.

**EBE 85 AS** can have exposed sections of just 69 mm, continuous for the whole perimeter of the casing, and can be motorpowered for up to three sliding components. The performance of the EBE thermal break system has been tested by the best European certifying laboratories in compliance with the current specific standard EN 14351-1 regulations.



WIND RESISTANCE



**WATER** TIGHTNESS



ACOUSTIC PERFORMANCE 43 dB

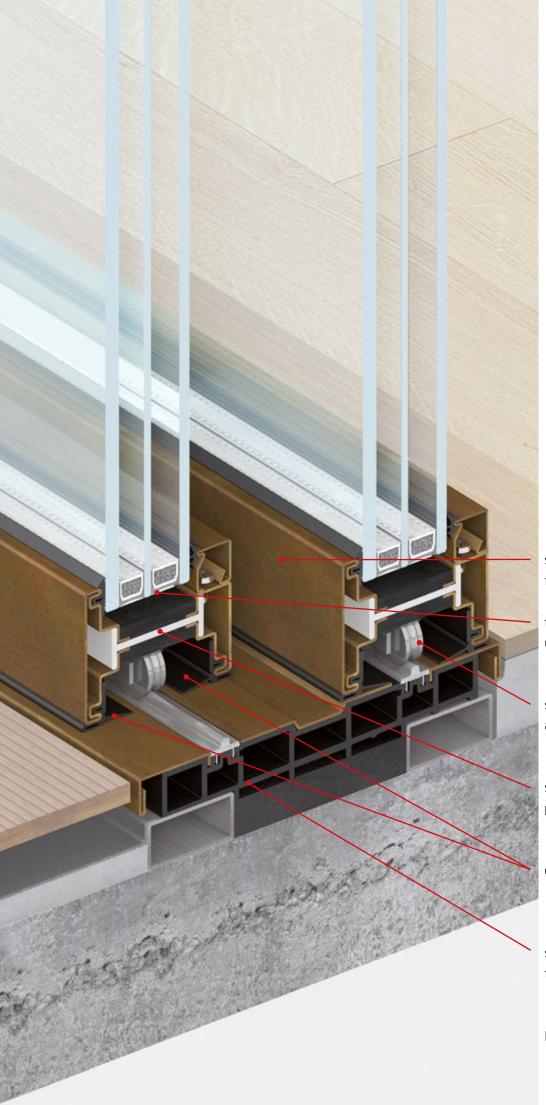


THERMAL TRANSMITTANCE up to 1.12 W/m2K



BREAK-IN RESISTANCE (RC)2





same visible lines on four sides

fitting groove for glazing up to 60 mm thick

special groove for the allocation of wheels

structural thermal break in polyamide and polyurethane

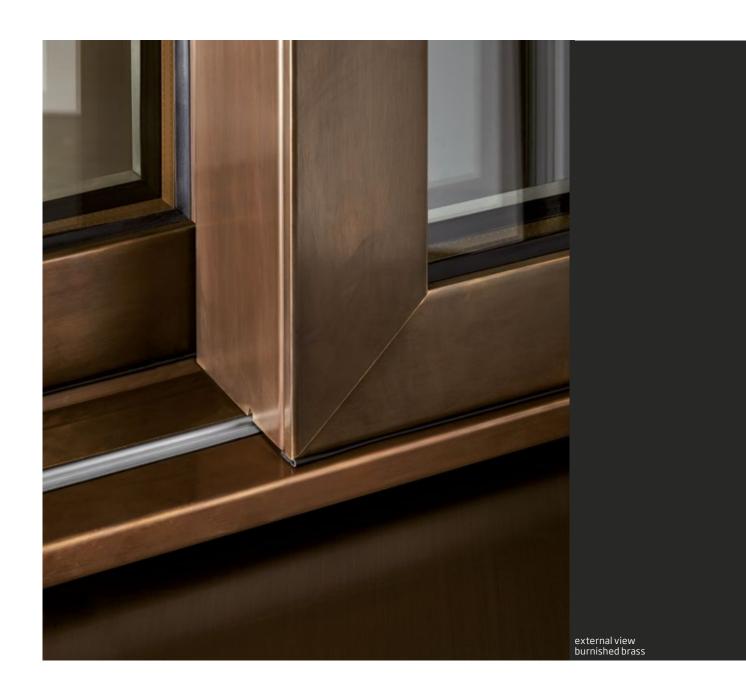
double weather gasket

special shaped threshold for water run-off

burnished brass version

## EBE 85 AS

## EBE 85 AS lift-and-slide central section

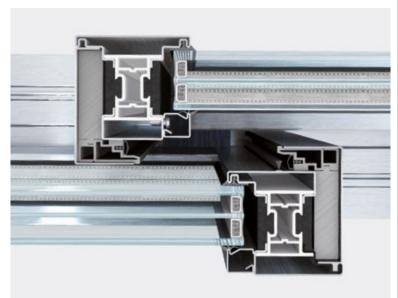


EBE 85 AS lift-andslide central section external view in burnished brass and internal view in stainless steel with welded corner on the interior.



## EBE 85 AS

## system and performance



EBE 85 AS is an integrated system with accessories, seals and thermal break profiles 85 mm deep. This makes it possible to realise lift and slide door and window frames with one to four wings of big dimensions and weight (up to 600 kgs.). They can be equipped with triple glazing up to 60 mm thick.

The sealing of the lift and slide frame is guaranteed by a four-side double seal system. Each solution is equipped with a related set of concealing accessories integrated in the system. The performance of EBE 85 AS thermally insulated sliding system has been tested by the best European certifying labs under the reference standard EN 14351-1.

#### size and variations



reduced central section | frame section 69mm



standard central section | frame section 94mm



floor rail with threshold | h 8 mm

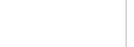


floor rail with integrated threshold | h 20mm

EBE 85 AS is available with 69 or 94 mm frame There are two solutions available for the threshold: with floor guide track or with guide track integrated in the frame with a drainage system.

wind resistance - test pressure	3
wind resistance - frame bending	С
water tightness	88
acoustic performance (with Rw per IGU 52 dB)	43 (-1;-4) dB
thermal transmittance (with Ug glass 0,6 W/m²K)	1,12 W/m²K
air permeability	4
break-in resistance	(RC)2

maximum achievable performance



### handles



## main type



galvanised steel





stainless steel handle for lift and slide doors h.280 | d.20 mm





concealed integrated motorisation









brass handle for lift and slide doors h.250 | w.25 mm



corten steel



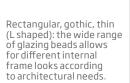
thin



EBE 85 AS is available in galvanised steel - in a wide range of colours and surface finishes - in AISI 304 brushed stainless steel, in AISI 316L polished or Scotch-Brite stainless

steel, corten steel and in brass (OT67 copper alloy).

brass



Brass handle available in paintable untreated, burnished, polished or polished chrome finishing. The system allows for different handles to be fitted.

The integrated automated system for sliding doors can be fitted with door-sashes up to 600 kgs heavy.

Single or two-sash lift and slide doors can be created with or without lateral fixed panel sections.

Custom solutions are available in co-operation with Secco Sistemi technical office.

sash size limitations w.2208 | h.3400 weight limitations 600 kg.

## EBE 85 AS

## One Kensington Gardens | London



The re-organising of an important street block directly overlooking Royal Park with a view of Kensington Palace led to the construction of new buildings and thus a new look to this area of town, to realize 97 spacious luxury apartments. In an excellent position in London, these apartments are equipped with the most sophisticated up-to-date features, including private

25-metre swimming-pool, fitness centre and spa, live-in concierge 24/7. An important façade has been designed for the main elevation of the terrace overlooking the park: starting from the imposing base in Portland stone, thin, horizontal lines alternate with large glazing panels protected by deep terraces that are supported by refined and sturdy balustrades in bronze.



The glazing panels slide and are oversize in dimensions: for the whole length of the terraces the height exceeds 3.80 metres. They are not rectilinear but are instead characterised by misalignments and rotations without losing the effect of continuity and transparency of the visual perspective. With Secco Lab Secco Sistemi has studied, tested and produced an ad hoc profile that is

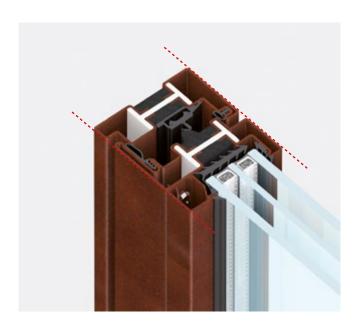
certified, as required by the project, with the excellent technical specifications of sound insulation, water-tightness and windproofing. EBE 85 AS in burnished brass has been designed to meet all these criteria: innovation, quality and performing efficiency, in line with the high prestige of the apartments of this building in the centre of London.

## EBE 75

areas of application

- doors
- windows

EBE thermal break system, depth 75 mm for glass panels of up to 46 mm, with sash and frame flush-mounted both internally and externally

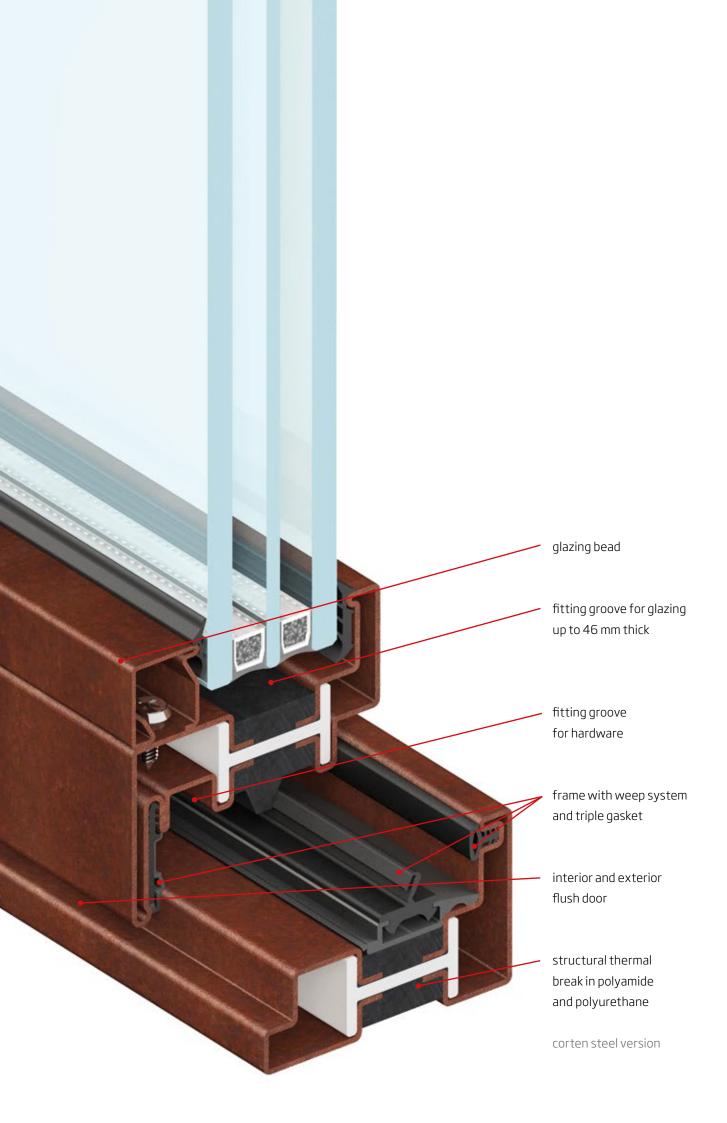


All systems on the EBE group are flexible and complete, with thin, strong thermal break profiles. The **EBE 75** thermal break profiles have a depth of 75 mm and can house insulation glazing panels of up to 46 mm. Sash and frame are flush-mounted both internally and externally.

**EBE 75** belongs to the group of EBE profiles and represents Secco Sistemi's answer to the most demanding requirements in terms of performance. With the innovative technology of thermal break in polyamide and polyurethane EBE is able to realize strong and high-performing structural profiles with reduced sections.

The sealing of the casings is guaranteed by a double sealing system for the doors and by an open joint gasket system that comprises a 3-level sealing gasket for windows. Moreover, thanks to the wide choice of types of opening and to the complete range of accessories, the EBE profiles propose countless possible variations for the casing design.

The performance of the EBE thermal break system has been tested by the best European certifying laboratories in compliance with the current specific standard EN 14351-1 regulations.

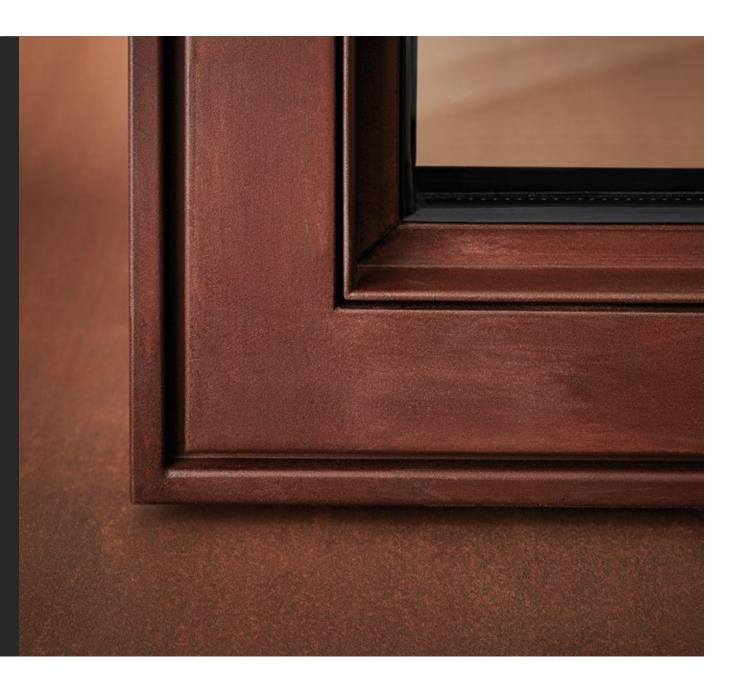


## EBE 75

## EBE 75 window corner



EBE 75 window corner external view in corten steel with thin glazing bead and concealed hinges.



EBE 75 window corner internal view in corten steel with thin glazing bead and concealed hinges.

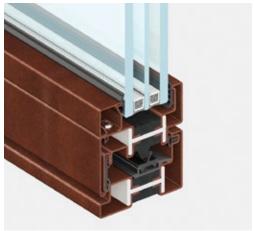
## EBE 75 window

## system and performance



EBE 75 window is a system integrated with accessories, gaskets and thermal break profiles of depth 75 mm, allowing for the realization of windows in a wide range of possible variations: square, rectangular, curved or shaped, and to install insulating glazing of up to 48 mm thickness. Each typology has its specific accessories (also concealed or fully integrated) that come with the system.

### size and variations



 $lower / lateral \, section \, | \, frame \, section \, 85mm$ 



The sealing of the window frames is guaranteed by a three-level sealing weep system. The performance of EBE 75 thermally insulated system has been tested by the best European certifying labs under the reference standard EN 14351-1.



 $double\text{-}sash\,window\,central\,section\,|\,frame\,section\,110\,mm$ 

wind resistance - test pressure	5
wind resistance - frame bending	С
water tightness	9A
acoustic performance (with Rw per IGU 45 dB)	47 dB
thermal transmittance (with Ug glass 0,7 W/m²K)	1,27 W/m²K
air permeability	4
break-in resistance	(RC)3

EBE 75 window is rebated on the interior and flush on the exterior.

## materials glazing bead





handles



hinges















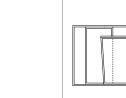
main type



stainless steel

galvanised steel





EBE 75 Is available in galvanised steel - in a wide range of colours and surface finishes – in AISI 304 brushed stainless steel, in AISI 316L polished or Scotch-Brite stainless steel, corten steel and in brass (OT67 copper alloy).

Rectangular, gothic, thin (L shaped): the wide range of glazing beads allows for different internal frame looks according to architectural needs.

TT vitruvio handles come in paintable raw brass, burnished brass, polished chrome brass and polished brass. The square version is available also in corten steel and the system is compatible with many other types of handle on the market, spindle no. 7.

Standard three-wing hinges are adjustable and supplied in galvanised steel with coloured plastic cover. Stainless steel hinges are available in polished, Scotch-Brite or burnished finishing.

Custom solutions are available in co-operation with Secco Sistemi technical office.

## EBE 75 door

#### system and performance



EBE 75 door is an integrated system with accessories, seals and thermal break profiles 73,5 mm deep allowing for a wide range of windows, rectangular, shaped or curved. They can be equipped with triple glazing up to 48 mm thick.

The sealing of the door frames is guaranteed by a three-side rebate double seal system and an automatic retractable seal. Each solution is equipped with a related set of accessories (also concealed) integrated in the system. The performance of EBE 75 thermally insulated system has been tested by the best European certifying labs under the reference standard EN 14351-1.

wind resistance - test pressure	4
wind resistance - frame bending	С
water tightness	2A
acoustic performance (with Rw per IGU 42 dB)	42 dB
thermal transmittance (with Ug glass 0,7 W/m²K)	1,22 W/m²K
air permeability	3
break-in resistance	(RC)3

#### size and variations



reduced lateral section | frame section 109mm solution for butt and weld-on hinges



central section | frame section 131 mm



reduced bottom rail

EBE 75 is an interior and exterior flush door. The solution with butt or weld-on hinge has a 109mm lateral frame section. By using three-wing or concealed hinges, the lateral face section becomes 134 mm.

### glazing bead



#### hinges

#### main type



galvanised steel

materials



rectangular



truncated vitruvio handle h.116 | d.15 mm



weld-on h.145 | d.20 mm





stainless steel



grooved



square vitruvio handle h.116 | l.15 mm



three-wing butt hinge h.160 | d.22,5 mm





corten steel



thin



inox 5002 h.150 | d.20 mm



concealed





brass

EBE 75 Is available in galvanised steel - in a wide range of colours and surface finishes – in AISI 304 brushed stainless steel, in AISI 316L polished or Scotch-Brite stainless steel, corten steel and in brass (OT67 copper alloy).

Rectangular, gothic, thin (L shaped): the wide range of glazing beads allows for different internal frame look according to architectural needs.

Vitruvio handles come in paintable raw brass, burnished brass, polished chrome brass and polished brass. The square version is available also in corten steel and the system is compatible with many other types of handle on the market - spindle no. 7.

Weld-on hinges are in galvanised and stainless steel. Three-wing hinges are adjustable and are supplied in galvanised steel, stainless steel, burnished stainless steel. A three-wing hinge is provided also in corten steel.

All models can be made to open inwards or outwards.

Custom solutions are available in co-operation with Secco Sistemi technical office.

## **EBE 75**

#### NT Mottisfont Visitors Facilities | Hampshire (UK)



The site of an old abbey that dates back to the Middle Ages, converted into a residential building in the 1930's, Mottisfont Abbey is a sumptuous historical residence in the region of Hampshire in England with a large park on the banks of the river, a greenhouse and a magnificent rose

garden. A place for rest and enjoyment, which during the last century welcomed artists, writers and architects as guests, today this construction is part of the National Trust and is open to the public all year round, hosting many exhibitions dedicated to contemporary art. The new centre for welcoming

vistors at the entrance of the park is developed in three volumes which house the ticket office, the shop and the café, arranged around a central courtyard. The natural materials and the new pavilions recall the traditional rural structures of the English countryside.







The structure of the buildings is in wood, visible both internally and externally; the large panels of glazing are modulated with the presence of partition walls which orient the views overlooking the pathways in the park leading up to the villa. The spaces are transparent and at the

same time protected by sunscreens in wood and light perforated screens in corten steel. The renovation, which won the RIBA SOUTH AWARD in 2016, was carried out with the utmost respect for the environment, and with particular attention and sensitivity towards the history of the place, its

traditions, the natural materials and lastly energy consumption. The product chosen for the doors and windows was EBE 75 in corten steel, with its impeccable and highperforming profiles which outline the simple design of the extensive walls of glazing panels.

# EBE 65

areas of application

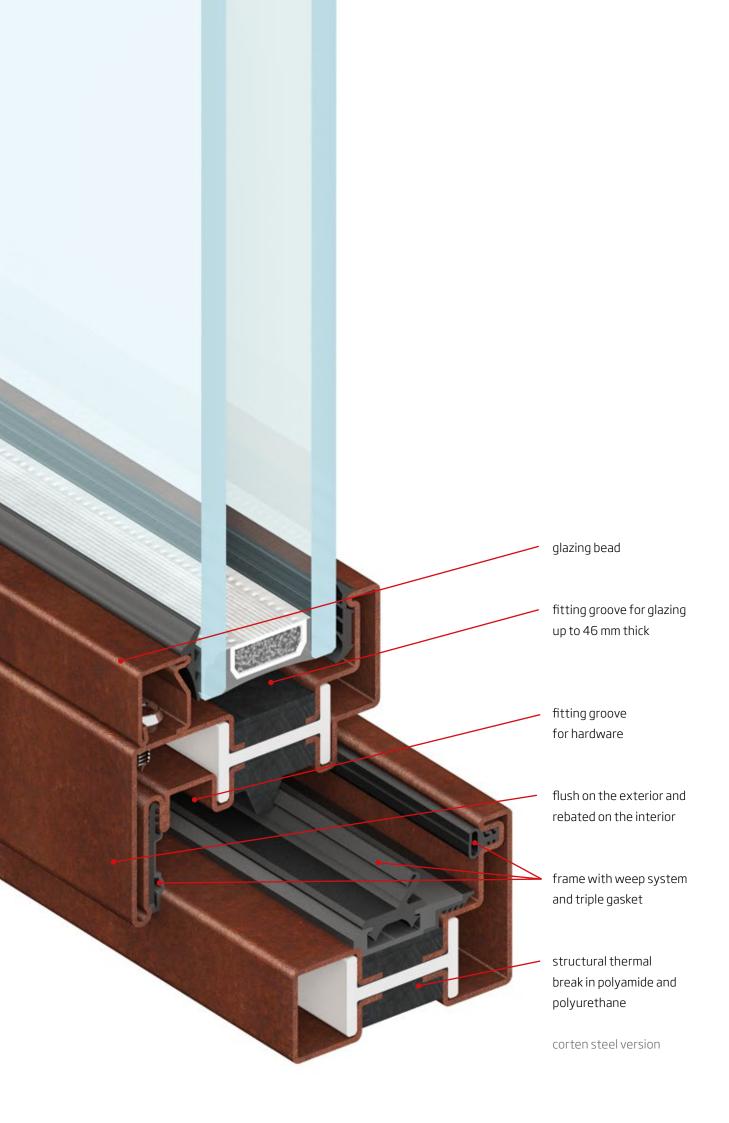
- doors
- windows

EBE thermal break system, depth 65 mm for glass panels of up to 46 mm, rebated in the interior and flush on the exterior between sash and frame



In the EBE group all the systems are flexible and complete, with slim, strong thermal break profiles. The thermal break profiles of the **EBE 65** system have a depth of 65 mm and can house insulation glazing of up to 46 mm. sash and frame are rebated in the interior and flush-mounted externally. **EBE 65** belongs to the group of EBE profiles and represents Secco Sistemi's answer to

the highest performance requirements. With the innovative technology of the thermal break in polyamide and polyurethane, EBE realizes strong and high-performing structural profiles with reduced sections. The sealing of the casings is guaranteed by a double sealing system for the doors and by an open joint gasket system that comprises a 3-level sealing gasket for windows. Moreover, thanks to the wide choice of types of opening and to the complete range of accessories, the EBE profiles propose countless possible variations for the casing design. The performance of the EBE thermal break system has been tested by the best European certifying laboratories in compliance with the current specific standard EN 14351-1 regulations.



## EBE 65

#### EBE 65 window corner



EBE 65 window corner, external view in galvanised painted steel with rectangular glazing bead.



EBE 65 window corner, internal view in galvanised painted steel with rectangular glazing bead.

## EBE 65 window

#### system and performance



EBE 65 window is an integrated system with accessories, seals and thermal break profiles 65 or 73,5mm deep allowing for a wide range of windows, rectangular, shaped or curved. They can be equipped with insulating glass up to 46 mm thick. Each solution is equipped with a related set of accessories (also concealed) integrated in the system.



The sealing of the window frames is guaranteed by a three-level sealing weep system. The performance of EBE 65 thermally insulated system has been tested by the best European certifying labs under the reference standards EN 14351-1.

wind resistance - test pressure	5
wind resistance - frame bending	С
water tightness	9A
acoustic performance (with Rw per IGU 45 dB)	47 (-2;-5) dB
thermal transmittance (with Ug glass 1.0 W/m²K)	1,47 W/m²K
air permeability	4
break-in resistance	(RC)3

maximum achievable performance

#### size and variations



lower/lateral section | frame section 85mm



double-sash window central section | frame section 145mm

EBE 65 window is rebated on the interior and flush on the exterior.

#### materials glazing bead



truncated vitruvio

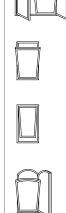
TT handle

handles





hinges



main type



h.85 | d.15 mm









galvanised steel

stainless steel

corten steel



grooved

thin

rectangular





stainless steel 5056 TT handle h.135 | d.20 mm



brass

EBE 65 Is available in galvanised steel - in a wide range of colours and surface finishes – in AISI 304 brushed stainless steel, in AISI 316L polished or Scotch-Brite stainless steel, corten steel and in brass (OT67 copper alloy).

Rectangular, gothic, thin (L shaped): the wide range of glazing beads allows for different internal frame looks according to architectural needs.

The TT Vitruvio handles come in paintable raw brass, burnished brass, polished chrome brass and polished brass. The square version is also available in corten steel. The system is compatible with many other handle types on the market, spindle no. 7.

Standard three-wing hinges are adjustable and supplied in galvanised steel and coloured plastic cover. Stainless steel hinges are available in polished, Scotch-Brite or burnished finishing.

## EBE 65 door

#### system and performance



EBE 65 door is an integrated system with accessories, seals and thermal break profiles 65 mm deep allowing for a wide range of windows, rectangular, shaped or curved. They can be equipped with triple glazing up to 40 mm thick.

The sealing of the door frames is guaranteed by a three-side rebate double seal system and an automatic retractable seal. Each solution is equipped with a related set of accessories (also concealed) integrated in the system.

The performance of EBE 65 thermally insulated system has been tested by the best European certifying labs under the reference standard EN 14351-1.

wind resistance - test pressure	4
wind resistance - frame bending	С
water tightness	2A
acoustic performance (with Rw per IGU 42 dB)	42 (-1;-3) dB
thermal transmittance (with Ug glass 1.0 W/m²K)	1,55 W/m²K
air permeability	3
break-in resistance	(RC)3

maximum achievable performance

#### size and variations



reduced lateral section | frame section 109mm solution for butt and weld-on hinges



lateral section | frame section 134mm solution for three-wing and concealed hinges



central section | frame section 156 mm





normal and reduced bottom rail | frame section 69 and 94mm

EBE 65 is an interior and exterior flush door. The solution with butt or weld-on hinge has a 109 mm lateral frame section. By using three-wing or concealed hinges, the lateral face section becomes 134 mm.

## handles materials glazing bead hinges main type galvanised steel rectangular truncated vitruvio handle weld-on h.145 | d.20 mm h.116 | d.15 mm square vitruvio handle h.116 | l.15 mm three-wing butt hinge h.160 | d.22,5 mm stainless steel grooved



corten steel

EBE 65 Is available in galvanised steel – in a wide range of colours and surface finishes – in AISI 304 brushed stainless steel, in AISI 316L polished or Scotch-Brite stainless steel, corten steel and in brass (0T67 copper alloy).



thin

Rectangular, gothic, thin (L shaped): the wide range of glazing beads allows for different internal frame looks according to architectural needs.

The vitruvio handles come in paintable raw brass, burnished brass, polished chrome brass and polished brass. The square version is also available in corten steel. The system is compatible with many other handle types on the market.

inox 5002 h.150 | d.20 mm

Weld-on hinges are in galvanised and stainless steel. Three-wing hinges are adjustable and are supplied in galvanised steel, stainless steel, burnished stainless steel. A three-wing hinge is provided also in corten steel.

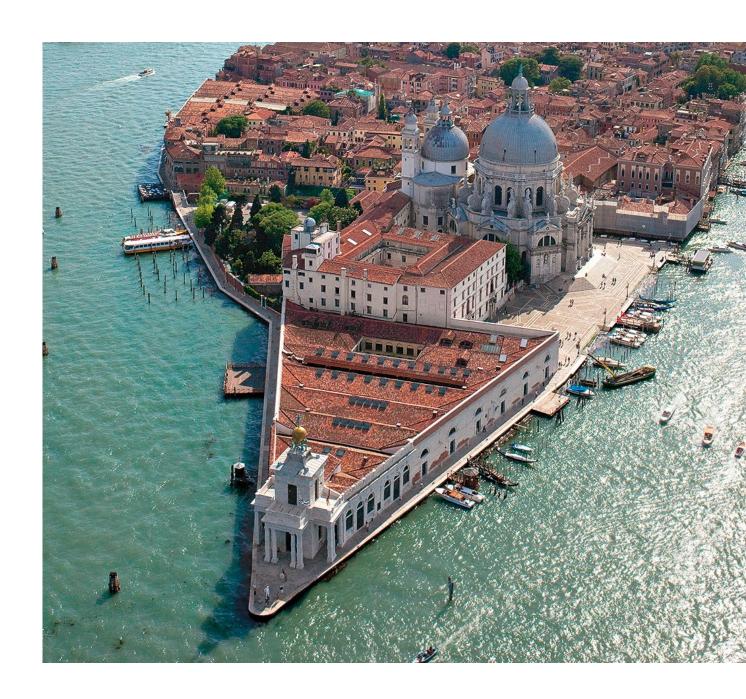
concealed

All models can be made to open inward or outward.

Custom solutions are available in co-operation with Secco Sistemi technical office.

## **EBE 65**

#### Centre for Contemporary Art in Punta della Dogana | Venice



At the time of the Republic of Venice, Punta della Dogana (the customs building) was used as a salt storage area. Later, the use of the warehouse was extended to a completely different set of commercial activities. In the 17th century, thanks to its strategic location, it was turned into the mercantile customs house. The building, designed by Architect Benoni, has a triangular shape and it

is decorated with a tower on the top of which there is a bronze sphere held by two statues of Atlas: it represents the world on which sits a statue of Fortune acting as a wind vane and, symbolically, representing the fickleness of luck itself. In 2009, extensive restoration works turned the old customs building into an important centre for contemporary art ordered by Pinault Foundation.



The designer kept the existing layout of the building and removed only the late restructuring, designing instead a more simple and rational structure. The beautiful external walls, made of stone, were carefully conserved and only the wooden window frames were replaced with EBE 65 window frames in painted galvanised steel with thermal break. These are

the perfect solution for the big glass doors on the ground floor and the arch-shaped ones on the upper floor. Some of these doors are fixed, some can be opened. The use of EBE 65 door and window frames make the space brighter and guarantee a perfect acoustic and thermal insulation, all these being vital features for a building that is visited daily by large crowds of people.

#### areas of application

- doors
- fixed partitions and glazed doors
- complex glazing

EBE fire-resistant system El 30-60: flame and smoke resistant, control of temperature of side not exposed to fire Subdivision of the work areas to protect personnel from the danger of fire and fumes caused by fire - with the restraints and rules imposed by fire-resistant technology - presents the designer with the issue of integrating fire-resistant doors and windows in a coherent manner with the other fixtures in the building.

The **EBE AF** system provides a range of doors and glazed partitions that are highly specified for this purpose, produced in the same materials (galvanised steel, stainless steel and corten) with the same shapes and thicknesses and the same accessories as all the Secco Sistemi products, all the elements blending together harmoniously without any incongruencies.

Thanks to the accurate research that has gone into the specific materials and internal components, including the accessories and seals, the AF system is able to offer doors and windows which correspond to the various fire-resistance classes: EI 30-60 fixtures which use the technology of the thermally insulated profiles of the EBE system.

The performance of the EBE AF EI 30-60 system has been tested by the best European certifying laboratories in compliance with the current specific standard EN 1634-1 regulations.



#### **SEALING**

capability of the door frame to contain fire, fumes and flammable gases.



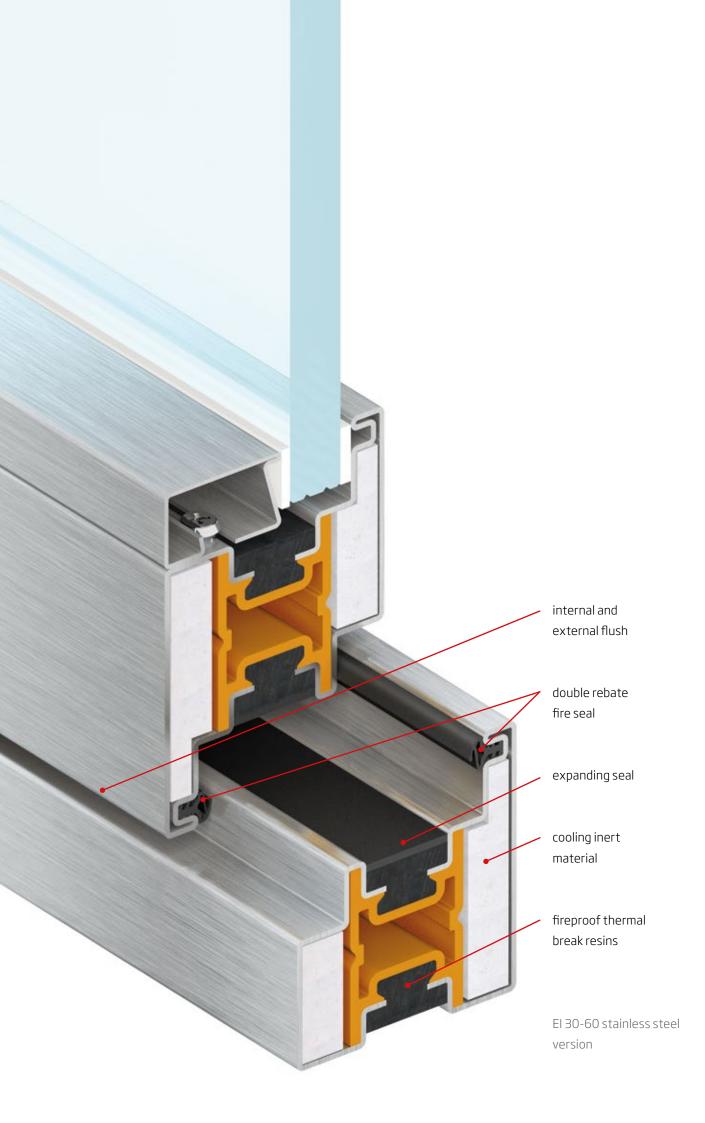
#### IRRADIATION

capability of the door frame to contain the irradiation to one metre on the non-exposed side.



#### INSULATION

capability of the door frame to contain the temperature on the non-exposed side.



#### EBE AF window corner



EBE AF window corner, external view, in polished stainless steel with welded corners and rectangular glazing bead.



EBE AF window corner, internal view, in polished stainless steel with welded corners and rectangular glazing bead.

#### system and performance



EBE AF is an integrated system with accessories, seals and thermal break profiles 65 mm deep that allows for a wide range of fireproof doors and glazed partitions. They can be equipped with single or double glazing up to 40 mm thick. Each solution is equipped with a related set of certified accessories integrated in the system. The ability of not letting fire or hot fumes through (fire resistance E) is guaranteed by the particular structure of the profile and by a rebate double seal system.



The ability to contain the temperature level on the side not exposed to the fire (insulation I) is guaranteed by the thermal break made of special fire resistant resins. The performance of EBE AF system has been tested by the best European certifying labs under the reference standards EN 1634-1.



#### size and variations



lateral section | frame section 134mm



central section | frame section 156 mm



bottom rail | frame section 94mm

EBE AF is an interior and exterior flush door. The lateral and central sections have the same frame size of the EBE 65 system, 134 mm lateral frame sections.

#### glazing bead materials



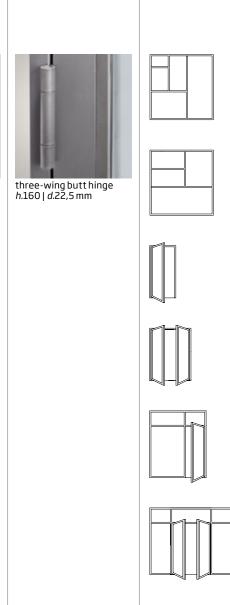
rectangular



hinges

handles

inox 1502 h.135 | d.20 mm



main type

corten steel

galvanised steel

stainless steel



brass

EBE AF is available in galvanised steel - in a wide range of colours and surface finishes - in AlSI 304 brushed stainless steel, in AlSI 316L polished or Scotch-Brite stainless steel and corten steel.

The rectangular glazing bead is available in various sizes for different glazing thicknesses. It allows for high resistance required to meet the fireproof performance without the application of visible screws.

Three-wing butt hinges are adjustable and are supplied in galvanised steel, stainless steel, burnished stainless steel and corten steel. All models can be made to open inwards or outwards.

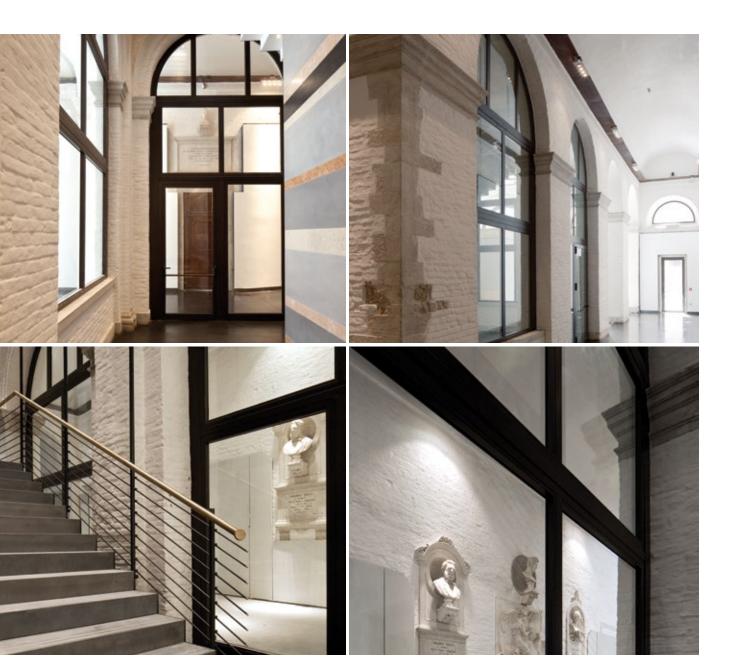
Custom solutions are available in co-operation with Secco Sistemi technical office.

#### Gallerie Dell'Accademia | Venice



The monumental complex of the Gallerie Dell'Accademia stands on the site where there once was, until the beginning of the 19th century, the large complex formed by the church of Santa Maria della Carità, the nunnery of the Canonici Lateranensi and Scuola Grande di Santa Maria Della Carità. From the 16th century until the second half of the 1940s, several

architects worked on the complex of the Gallerie: from Palladio, Gianantonio, Selva, to Carlo Scarpa who was in charge of an important although partial intervention of renovation. The restoration aimed at expanding the space for exhibitions in the articulated and elaborate museum and required a delicate yet highly functional operation.



All the space previously occupied by the Accademia was cleared in order to increase the area available to the museum.
To do so, it was necessary to connect the first floor to the ground floor of the 18th century building with a new set of stairs and to separate the two areas with a firebreak barrier.
The door and window

frames have been realised with AF EW 30 system, according to the new government requirements and the new fire safety concept based on the "fire engineering" notion. These large, brown, arched-shaped door and window frames in galvanised steel match, architecturally and aesthetically, all the others used in the building and are realised with OS2 system in burnished brass.

# ST 65

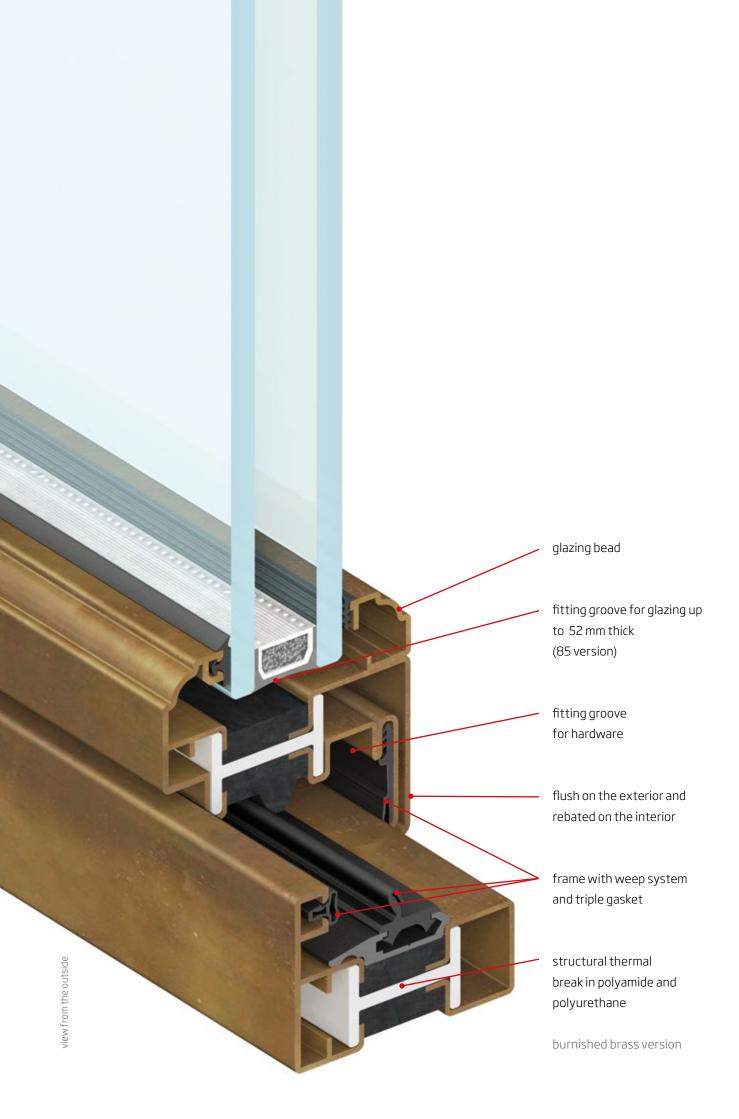
areas of application

- doors
- windows

ST 65 with symmetrical convex moulding inside and outside the profile



ST 65 was created as a variation of the systems EBE 65, while still maintaining the elements of technological innovation and high performance. It is characterised by the symmetrical moulding of the profile on the outside of the sash and in the glazing bead. Several different techniques are integrated in the EBE system, such as the profiling and the extrusion of the brass with the innovative thermal break system. The product combines the capacity to dominate the technology that is typical in the field of industry with the versatile and creative approach of the craftsman's expertise. Conceived in the versions 65 mm to quarantee maximum flexibility, **ST 65** comes in brass OT67, the noblest material of the Secco Sistemi range which once burnished, acquires warm tones with the reflections of bronze. With **ST 65** it is possible to create doors with inward and outward openings, and casement windows with inward opening. The performance of the EBE thermal break system has been tested by the best European certifying laboratories in compliance with the current specific standard EN 14351-1 regulations.

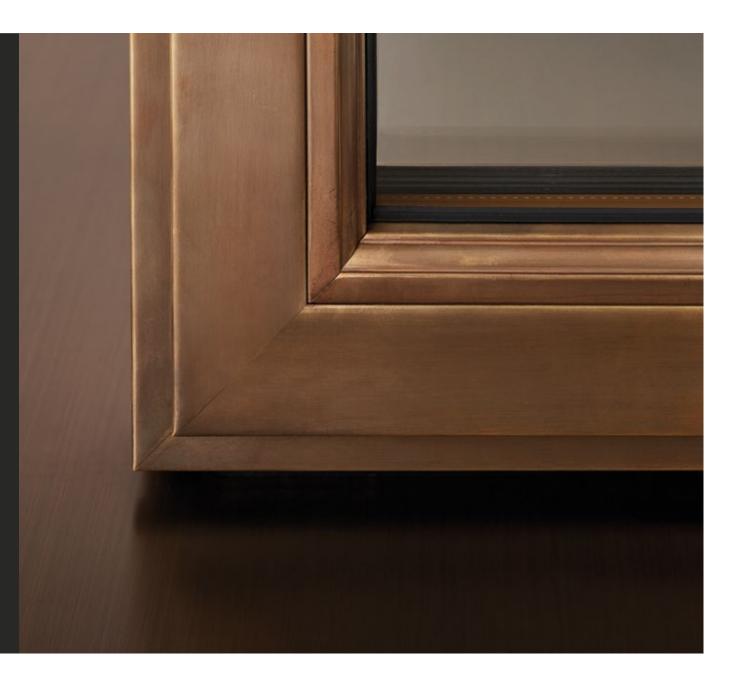


## ST 65

#### ST 65 window corner



ST 65 window corner external view in burnished brass with gothic glazing bead.



ST 65 window corner internal view in burnished brass with gothic glazing bead.

## ST 65 window

#### system and performance



ST 65 Window is an integrated system comprising accessories, gaskets and thermal-break profiles available in two versions, 65, 75 and 85. ST 65 allows for a wide range of windows in different shapes (rectangular, curved or custom-made) and they can be fitted with double-glazing of up to 52 mm thickness. Every solution comes with dedicated accessories (also concealed) integrated with the system.



The sealing is guaranteed by a three-level weep sealing system. The performance of the ST 65 thermal-break system has been tested by the best European Certifying Laboratories in line with the EN 14351-1 regulations.

wind resistance - test pressure	5
wind resistance - frame bending	С
water tightness	9A
thermal transmittance (with Ug glass 1,0 W/m²K)	1,60 W/m²K
air permeability	4

maximum achievable performance

#### size and variations



lateral section | frame section 85mm



central section | frame section 145mm



Glazing bar | frame section 31mm

ST 65 Window comes as internal rebate The lateral frame section is 85 mm wide.

### glazing bead

#### handles

#### hinges

#### main type



brass

materials



grooved



truncated vitruvio TT handle h.116 | d.15 mm







square vitruvio TT handle h.116 | l.15 mm

inox 5056 TT h.135 | d.20 mm



TT stainless steel h.85 | d.15 mm



TT concealed





ST 65 is available in brass.

The gothic glazing bead is perfectly symmetrical with the ST 65 profile keeping the same decorative pattern both on the inside and the outside of the window.

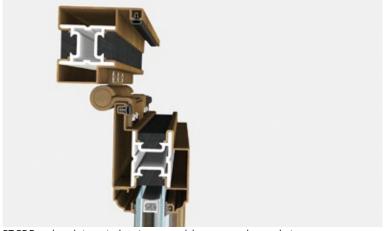
The vitruvio TT handles are available in burnished brass, chrome polished brass, chrome poished brass. The system allows for different handles to be fitted, spindle 7.

Standard three-wing Standard three-wing hinges are adjustable and supplied in galvanised steel with coloured plastic cover.
Stainless steel hinges are available in polished, Scotch-Brite or burnished finishing.

Custom solutions are available in co-operation with Secco Sistemi technical office.

## ST 65 door

#### system and performance



ST 65 Door is an integrated system comprising accessories, gaskets and thermal-break profiles available in two versions, 65, 75 and 85. ST 65 allows for a wide range of doors in different shapes (rectangular, curved or custom-made) and they can be fitted with double-glazing of up to 45 mm thickness.

The sealing is guaranteed by a double internal weather-strip on three sides and by an automatic retractable seal under the bottom rail.

All solutions come with specific accessories (also concealed) integrated with the system. The performance of the ST 65 thermal-break system has been tested by the best European Certifying Laboratories in line with the EN 14351-1 regulations.

wind resistance - test pressure	5
wind resistance - frame bending	С
water tightness	2A
thermal transmittance (with Ug glass 1,0 W/m²K)	1,70 W/m²K
air permeability	3

maximum achievable performance

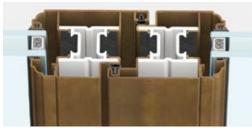
#### size and variations



reduced lateral section | frame section 107 mm



lateral section | frame section 132 mm



central section | frame section 152 mm





normal and reduced bottom rail frame section 67 and 92 mm

ST 65 doors are flush doors. The reduced profile version comes with a 107 mm frame available only for inward opening.

### glazing bead

#### handles

#### hinges

#### main type



brass

ST 65 is available

in brass.

materials



grooved



truncated vitruvio handle h.116 | d.15 mm



three-wing butt hinge h.160 | d.22,5 mm

















square vitruvio handle h.116 | l.15 mm



inox 5002 h.150 | d.20 mm

The gothic glazing bead is perfectly symmetrical with the ST 65 profile keeping the same

decorative pattern both on the inside and the outside of the window.

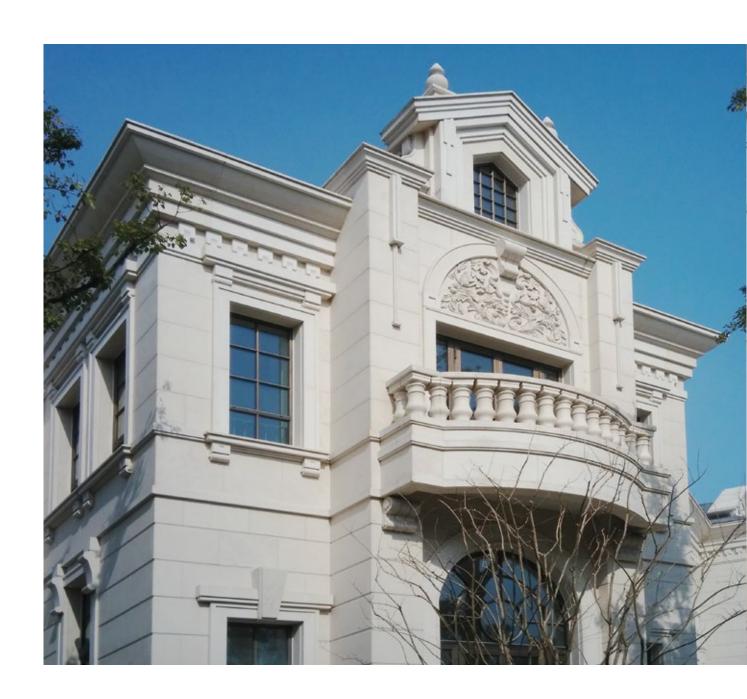
The vitruvio handles are available in burnished brass, chrome polished brass, chrome poished brass. The system allows for different handles to be fitted, spindle 7. Three-wing hinges are adjustable and supplied in stainless steel scotch brite, satin and polished

All models can be made to open inwards or outwards.

Custom solutions are available in co-operation with Secco Sistemi technical office.

## ST 65

#### villa in Shanghai | China



An imaginative example of architectonic and decorative motifs that have been re-designed and put together for a sumptuous villa in Shanghai. All the doors and windows of various shapes and dimensions are in ST 65, in burnished brass, thus interpreting with extreme versatility the concepts of decor and luxury.



# ML 65

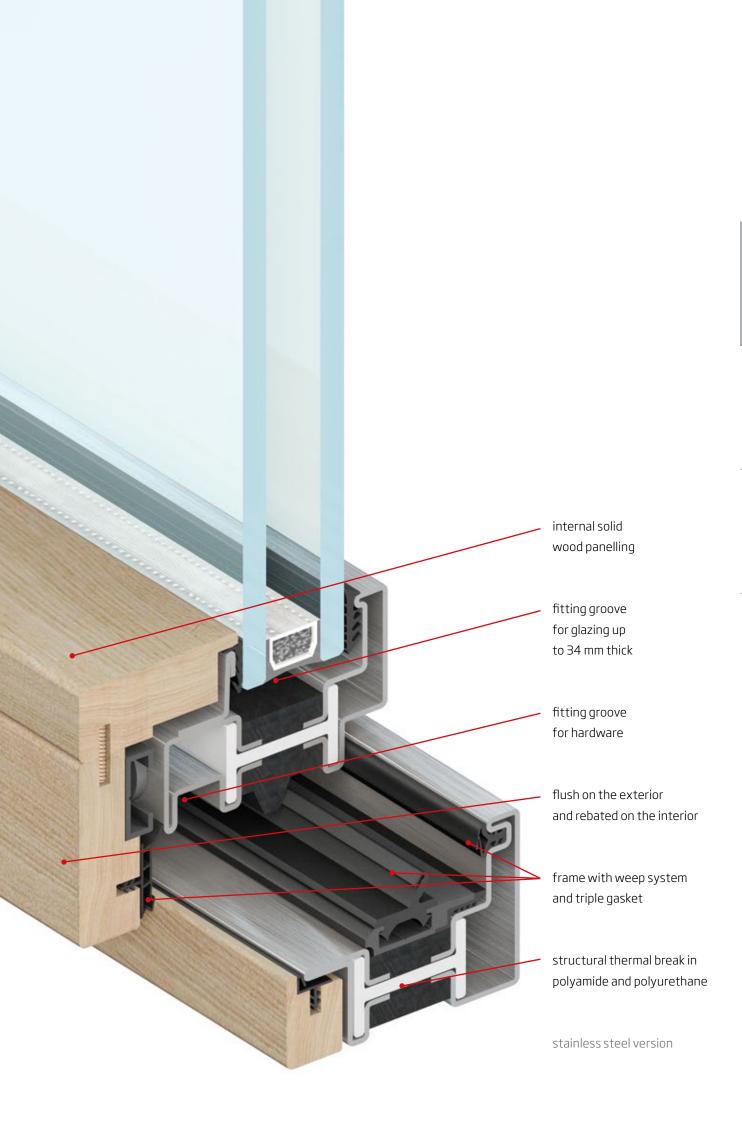
areas of application

- glass door
- windows

the EBE profile in metal-wood; ML 65 system, depth 65 mm, in the variation with interior finishing in solid wood



The ML 65 system has been studied and created to provide solutions contemporaneously to different demands of the project. The ML 65 fixture is finished on the interior in solid wood butt-jointed at 90° while maintaining the profile in metal on the exterior, thus reducing significantly the necessity for maintenance. Thanks to the structural rigidity of the thermal break steel profiles, windows of large dimensions can be created with sections that are inferior to those of wood. Moreover, the depth of the metal profile allows installation of insulating glazing panels of considerable thickness with high-performing characteristics in terms of thermal insulation, sound-proofing and safety. ML 65 doors and windows come in the following variations: steel-wood, stainless steel-wood, corten steel-wood and brass-wood, with various finishes available, able to be integrated in a wide range of different architectonic contexts. The performance of the EBE thermal break system has been tested by the best European certifying laboratories in compliance with the current specific standard EN 14351-1 regulations.

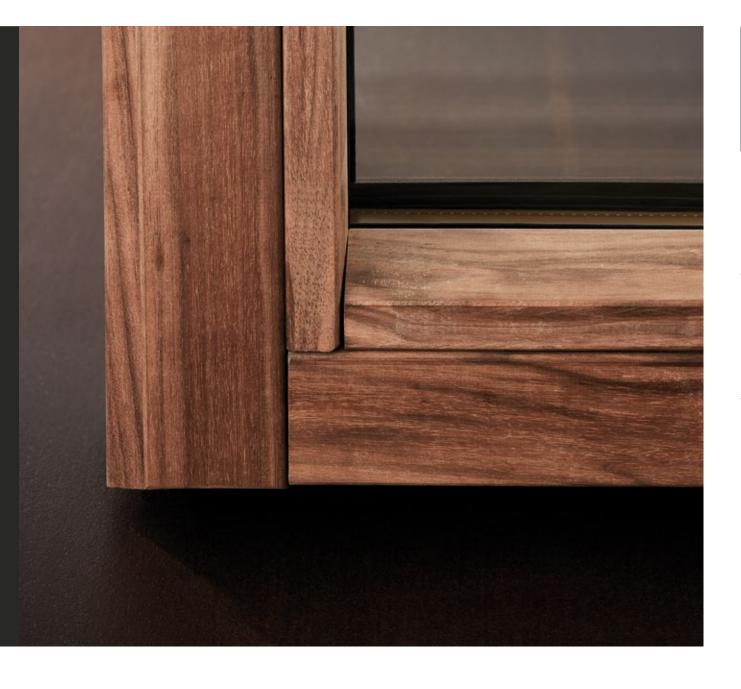


## ML 65

#### ML 65 window corner



ML 65 window corner in non-waxed corten steel in the external part and solid natural chestnut wood for the internal part.



### ML 65

#### system and performance



ML 65 is an integrated system with accessories, seals and thermal break profiles 91 mm deep allowing for a wide range of windows, rectangular, shaped or curved. They can be equipped with insulating glass up to 34 mm thick. The sealing of the window frames is guaranteed by a three-level sealing weep system. It is possible to replace the internal wooden profile face without removing the window.



Each solution is equipped with a related set of accessories (also concealed) integrated in the system. The performance of the ML 65 system has been tested by the best European certifying labs under the reference standard EN 14351-1.

wind resistance - test pressure	5
wind resistance - frame bending	С
water tightness	9A
acoustic performance (with Rw per IGU 42 dB)	47 (-2;-5) dB
thermal transmittance (with Ug glass 1,0 W/m²K)	1,60 W/m²K
air permeability	4

maximum achievable performance

#### size and variations



lower section | frame section 85 mm



lateral section | frame section 85mm



central section | frame section 145mm

ML 65 window is rebated on the interior and flush on the exterior. The standard solution has a 85 mm lateral frame section.

#### materials glazing bead



handles



#### main type



galvanised steel



rectangular



truncated vitruvio TT handle *h.*116 | *d.*15 mm



TT standard h.85 | d.15 mm









stainless steel



corten steel



square vitruvio TT handle h.116 | l.15 mm

inox 5056 TT h.135 | d.20 mm



TT stainless steel h.85 | d.15 mm

TT concealed



brass

ML 65 is available in the following:

- in wood and galvanised steel, in a wide range of colours and surface finishes.
- in wood and AISI 304
- brushed stainless steel
   in wood and AISI 316
  polished or Scotch-Brite stainless steel.
- in wood and corten steel
   In wood and brass (OT67 copper alloy).

The internal cover can be made with different type of wood, styles and finishes according to the furnishing requirements.

The glazing bead is in wood and is available in different shapes and material according to the architectural needs.

The TT vitruvio handles come in paintable raw brass, burnished brass, polished chrome brass and polished brass. The square version is available also in corten steel. This system is compatible with many other types of handle on the market - spindle 7.

Standard three-wing hinges are adjustable and supplied in galvanised steel coloured plastic cover. Stainless steel hinges are available in polished, Scotch-Brite or burnished finishing.

Custom solutions are available in co-operation with Secco Sistemi technical office.

areas of application

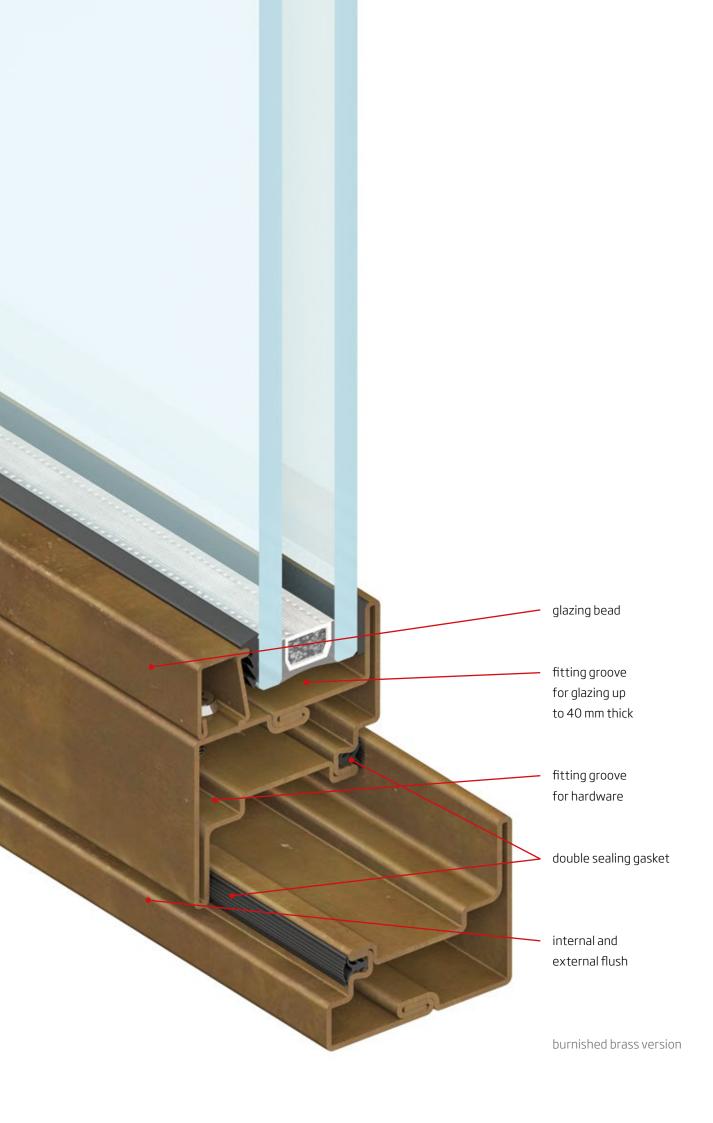
- doors
- windows

SA system with tubular profiles for windows and doors: depth of 55 mm, insulating glass panels, flush on the interior and exterior between sash and frame



With the **SA 15** systems, the profiles can be particularly slim for the special configuration of the frames which are robust with excellent resistance against atmospheric agents and excellent performance in terms of safety. Even though it is not a thermal break system, SA still guarantees good insulation thanks to the possibility of installing glass panels with low transmittance values and to the limited metal surface resulting in lower heat dispersion.

SA doors and windows are available in four materials - painted galvanised steel, stainless steel 304 and 316, corten steel and brass and in two different versions - rebated and flush-mounted. They may be used in a variety of different contexts: in renovation work, to reproduce the intersecting of the thin mullions and transoms of the doors and windows used in the last centuries, as well as in the ample glass spaces found in contemporary architecture which require high-level technological performance. The performance of the SA system has been tested by the best European certifying laboratories in compliance with the current specific standard EN 14351-1 regulations.



#### SA 15 window corner



SA 15 window corner, external view, in satinfinished brass with triangular glazing bead.



SA 15 window corner, internal view, in satinfinished brass with triangular glazing bead.

## SA 15 window

#### system and performance



SA 15 window system is an integrated system with accessories, seals and thermally non-insulated profiles 55 and/or 63,5 mm deep allowing for a wide range of windows, rectangular, shaped or curved.

They can be equipped with insulating glass up to 35 mm thick. The system has two versions: one is the flush, water-tight version with double sealing system; the other is the standard control of the system with a two local colling and the standard colling system.

is the rebated, weep system version with a two-level sealing gasket.



Each solution is equipped with a related set of accessories (also concealed) integrated in the system. The performance of SA 15 has been tested by the best European certifying labs under the reference standard EN 14351-1.

	flush¹	rebated <sup>2</sup>
wind resistance - test pressure	5	5
wind resistance - frame bending	С	С
water tightness	E750	E1350
acoustic performance (with Rw per IGU 40 dB)	40 (-2;-5) dB	-
acoustic performance (with Rw per IGU 42 dB)	-	44 (-1;-5) dB
thermal transmittance (with Ug glass 1,0 W/m²K)	2,12 W/m²K	1,93 W/m²Kù
air permeability	4	4

maximum achievable performance

#### size and variations



lower/lateral section | flush | frame section 81 mm



central section | flush | frame section 101 mm



lower/lateral section | rebated | frame section 85 mm



 $central\,section\,|\,rebated\,|\,frame\,section\,145\,mm$ 

SA 15 the window is available in two versions: one rebated on the interior and flush on the exterior with 85 mm frame section (only in the galvanised steel version); the other flush on the interior and exterior with 81 mm frame sections.

# handles materials glazing bead hinges main type TT flush h.85 | d.14 mm rectangular truncated vitruvio TT handle galvanised steel h.116 | d.15 mm grooved square vitruvio TT handle h. 116 | l.15 mm stainless steel TT rebated h.85 | d.15 mm two-wing for flush -mounting *h.* 126 | *d.*13 mm corten steel thin inox 5056 TT h.135 | d.20 mm



brass

SA 15 is available in galvanised steel - in a wide range of colours and surface finishes - in AISI 304 brushed stainless steel, in AISI 316L polished or Scotch-Brite stainless steel, corten steel and in brass (OT67 copper alloy).

Rectangular, gothic, thin (L shaped): the wide range of glazing beads allows for different internal frame looks according to architectural needs.

The TT vitruvio handles come in paintable raw brass, burnished brass, polished chrome brass and polished brass. The square version is available also in corten steel. This system is compatible with many other types of handle on the market spindle 7.

Tilt and turn rebated hinges are adjustable and supplied in galvanised steel with coloured plastic cover. Tilt and turn hinges and two or three-wing hinges are supplied in polished, scotch brite or burnished steel.

three-wing for flush h. 82 | d.14 mm



Custom solutions are available in co-operation with Secco Sistemi technical office.

### SA 15 door

#### system and performance



SA 15 door system is an integrated system with accessories, seals and thermally non-insulated profiles 55 mm wide allowing for a wide range of windows, rectangular, shaped or curved.

They can be equipped with triple glazing up to 35 mm thick. The sealing of the door and window frames is guaranteed by a three-side rebate double seal and an automatic retractable seal.



Each solution is equipped with a related set of accessories (also concealed) integrated in the system. The performance of SA 15 has been tested by the best European certifying labs under the reference standard EN 14351-1.

wind resistance - test pressure	3
wind resistance - frame bending	С
water tightness	1A
acoustic performance (with Rw per IGU 40 dB)	41 (-1;-4) dB
thermal transmittance (with Ug glass 1,0 W/m²K)	1,85 W/m²K
air permeability	3

maximum achievable performance

#### size and variations



reduced lateral section | frame section 106 mm



lateral section | frame section 131mm



central section | frame section 151 mm



reduced bottom rail frame section 90 mm



bottom rail frame section 140 mm

SA 15 is an interior and exterior flush door. The solution with butt or weld-on hinge has a 106 mm lateral frame section. By using three-wing or concealed hinges, the lateral face section becomes 131 mm.

# materials glazing bead handles hinges main type weld-on 5001 h.145 | d.20 mm rectangular galvanised steel truncated vitruvio handle h.116 | d.15 mm square vitruvio handle h.116 | l.15 mm grooved stainless steel three-wing for flushmounting h.130 | d.20 mm inox 5002 h.150 | d.20 mm corten steel thin concealed

SA 15 is available in galvanised steel – in a wide range of colours and surface finishes – in AISI 304 brushed stainless steel, in AISI 316L polished or Scotch-Brite stainless steel, corten steel and in brass (OT67 copper alloy).

brass

Rectangular, gothic, thin (L shaped): the wide range of glazing beads allows for different internal frame looks according to architectural needs.

The vitruvio handles come in paintable raw brass, burnished brass, polished chrome brass and polished brass. The square version is available also in corten steel. This system is compatible with many other types of handle on the market.

Weld-on hinges are in galvanised and stainless steel. Three-wing hinges are adjustable and are supplied in galvanised steel, stainless steel, burnished stainless steel. All models can be made to open inwards or outwards.

Custom solutions are available in co-operation with Secco Sistemi technical office.

#### Molino Stucky Hilton Hotel | Giudecca, Venice



The majestic shape of Molino Stucky, designed in 1884 by Architect Ernst Wullekopf in Hanseatic neogothic style, has defined the Venetian skyline, and in particular the Giudecca Canal, for more than 120 years. It was active for almost 70 years and it used cutting edge technology in the milling industry for steam-powered cylinder grinding. When the activity ceased, in the 1950s, the big complex remained an empty

monument that became more and more dilapidated until it was purchased by an important real estate group and turned into a luxury hotel. It quickly became a 5-star hotel with 380 rooms, 84 apartments, 46 suites, 5 restaurants, a health&fitness area and a congress centre for 2,000 people. The complex restoration work represents one of the largest conversions of an industrial structure in the world.









The restoration concerned 1950s doors and windows, which were kept in their original shape. These were realised with SA15 profiles in burnished brass to which an external grid was then applied so that the architectural impression remained unchanged. The system versatility has allowed low visual impact, while still meeting the

regulation, functional and performance requirements.
Moreover, it made it possible to maintain the original opening shapes: rectangular, segmental arch, pointed arch and round arch. The use of burnished brass has solved many of deterioration and oxidisation problems due to the marine location of the building.

areas of application

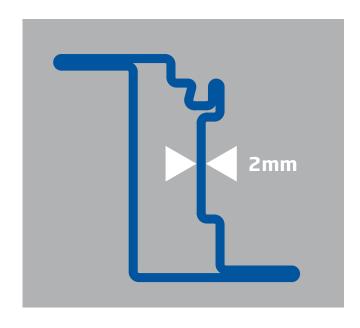
- doors
- windows

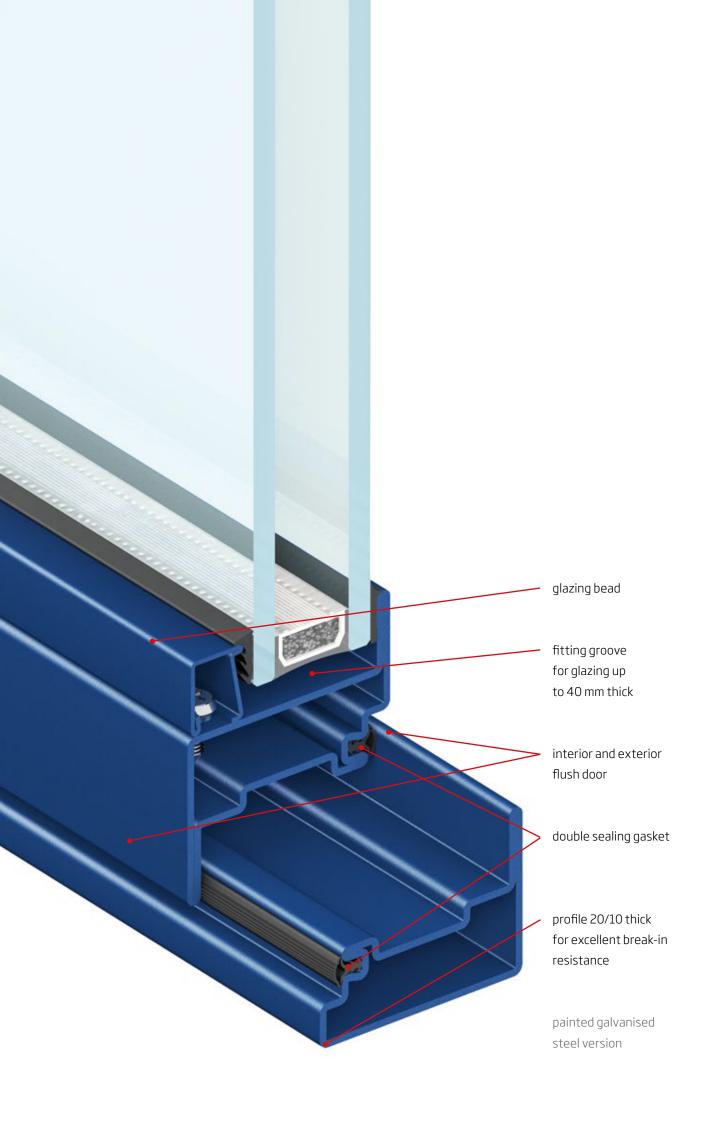
SA 20 tubular profiles for oversize, flush-mounted insulating glazing

**SA 20** is ideal for buildings requiring particularly strong and safe doors and windows, also for very large surface areas. The 2mm thickness of the sheet metal of galvanised steel guarantees solidity and resistance to break-in, thanks also to the assembly with welding which enables the construction of highly resistant monolithic doors and windows.

The thickness and structure of the profiles with European Groove permit application of all certified accessories for any type of opening (inwards and outwards).

The performance of the **SA 20** system has been tested by the best European certifying laboratories in compliance with the current specific standard EN 14351-1 regulations.





#### SA 20 window corner



SA 20 window corner, external view, in painted galvanised steel, sandblasted dark grey colour, with rectangular glazing bead.



SA 20 window corner, internal view, in painted galvanised steel, sandblasted dark grey colour, with rectangular glazing bead.

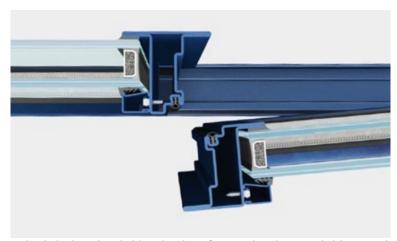
## SA 20 window

#### system and performance



SA 20 window system is an integrated system with accessories, seals and thermally non-insulated profiles 60 or 68,5 mm deep allowing for a wide range of windows, rectangular, shaped or curved. They can be equipped with insulating glass up to 40 mm thick.

The system has two versions: one is the flush, water-tight version with double sealing system; the other is the rebated, weep system version with a two-level sealing gasket.



Each solution is equipped with a related set of accessories (also concealed) integrated in the system. The performance of SA 20 has been tested by the best European certifying labs under the reference standard EN 14351-1.

	flush <sup>1</sup>	rebated²
wind resistance - test pressure	5	5
wind resistance - frame bending	С	С
watertightness	E750	E1350
acoustic performance (with Rw per IGU 40 dB)	40 (-2;-5) dB	-
acoustic performance (with Rw per IGU 42 dB)	-	44 (-1;-5) dB
thermal transmittance (with Ug glass 1,0 W/m²K)	2,17 W/m <sup>2</sup> K	2,16 W/m²K
airpermeability	4	4

maximum achievable performance

#### size and variations



lower/lateral section | flush | frame section 81 mm



central section | flush | frame section 101 mm

SA 20 window is available in two versions: one rebated on the interior and flush on the exterior with 85 mm frame section; the other flush on the interior and exterior with 81 mm frame sections.

# handles materials glazing bead hinges main type TT flush h.85 | d.14 mm galvanised steel truncated vitruvio rectangular TT handle h.116 | d.15 mm square vitruvio TT handle grooved TT rebated h.116 | l.15 mm h.85 | d.15 mm inox 5056 TT h.135 | d.20 mm two-wing for flush -mounting *h*.126 | *d*.13 mm thin

SA 20 is available in galvanised steel - in a wide range of colours and surface finishes.

Rectangular, gothic, thin (L shaped): the wide range of glazing beads allows for different internal frame looks according to architectural needs.

The TT vitruvio handles come in paintable raw brass, burnished brass, polished chrome brass and polished brass. The square version is available also in corten steel. This system is compatible with many other types of handle on the market - spindle 7.

Tilt and turn rebated hinges are adjustable and supplied in galvanised steel with coloured plastic cover. Tilt and turn hinges and two or three-wing hinges are supplied in polished, scotch brite or burnished steel.

three-wing flush h.82 | d.14 mm

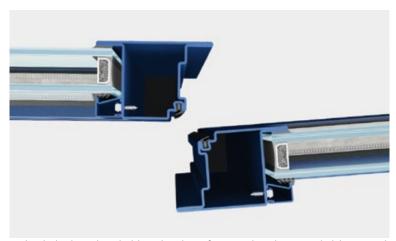
Custom solutions are available in co-operation with Secco Sistemi technical office.

### SA 20 door

#### system and performance



SA 20 door system is an integrated system with accessories, seals and thermally non-insulated profiles 60 mm deep allowing for a wide range of windows, rectangular, shaped or curved. They can be equipped with triple glazing up to 40 mm thick. The sealing of the door frames is guaranteed by a three-side rebate double seal and by an automatic retractable seal.



Each solution is equipped with a related set of accessories (also concealed) integrated in the system. The performance of the SA 20 system has been tested by the best European certifying labs under the reference standard EN 14351-1.

wind resistance - test pressure	3
wind resistance - frame bending	С
water tightness	1A
acoustic performance (with Rw per IGU 40 dB)	41 (-1;-4) dB
thermal transmittance (with Ug glass 1,0 W/m²K)	2,19 W/m²K
air permeability	3

maximum achievable performance

#### size and variations



reduced lateral section | frame section 106 mm



lateral section | frame section 131mm



 $central\,section\,|\,frame\,section\,151\,mm$ 



reduced bottom rail frame section 90 mm



bottom rail frame section 140 mm

SA 20 is an interior and exterior flush door. The solution with butt or weld-on hinge has a 106 mm lateral frame section. By using three-wing or concealed hinges, the lateral face section becomes 131 mm.

#### materials glazing bead

#### handles

#### hinges

#### main type



galvanised steel



rectangular



truncated vitruvio handle h.116 | d.15 mm



weld-on 5001 h.145 | d.20 mm







three-wing flush h.130 | d.120 mm





concealed







grooved



thin



square vitruvio handle h.116 | l.15 mm

inox 5002 h.150 | d.20 mm

SA 20 is available in galvanised steel - in a wide range of colours and surface finishes.

Rectangular, gothic, thin (L shaped): the wide range of glazing beads allows for different internal frame looks according to architectural needs.

The vitruvio handles come in paintable raw brass, burnished brass, polished chrome brass and polished brass. The square version is available also in corten steel. This system is compatible with many other types of handle on the market - spindle 7.

Weld-on hinges are in galvanised and stainless steel. Three-wing hinges are adjustable and are supplied in galvanised steel, stainless steel, burnished stainless steel.

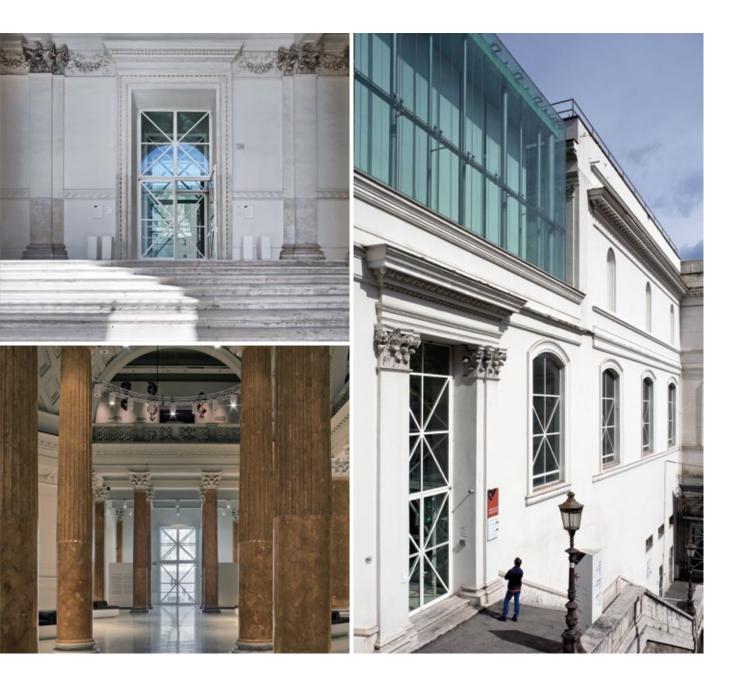
All models can be made to open inwards or outwards.

Custom solutions are available in co-operation with Secco Sistemi technical office.

#### Palazzo delle Esposizioni | Rome



The monumental neo-classical building required the replacement of the fixtures: SA 20 in galvanised steel ensures the safety of the artworks and visitors, without interfering in the architecture of the building.



# SAAF

#### areas of application

- doors
- fixed partitions and glazed doors
- complex glazing

system of tubular profiles for fire-proof doors and windows EW 30-60-90 that can be assimilated with the other fixtures of the SA group

Subdivision of the work areas to protect personnel from the danger of fire and fumes caused by fire – with the restraints and rules imposed by fire-resistant technology – presents the designer with the issue of integrating fire-proof doors and windows in a coherent manner with the other fixtures in the building.

The **SA AF** system provides a range of doors and glazing partitions - for interior or exterior use - with the same materials (galvanised steel, stainless steel and corten), the same shapes and thicknesses, the same accessories as the Secco Sistemi products, all the elements blending together harmoniously without any incongruencies. As a result of careful research into specific materials and internal components, including the accessories and seals, the **SA AF** system provides fixtures that satisfy the requirements of the different classes of fire-resistance EW 30-60-90.



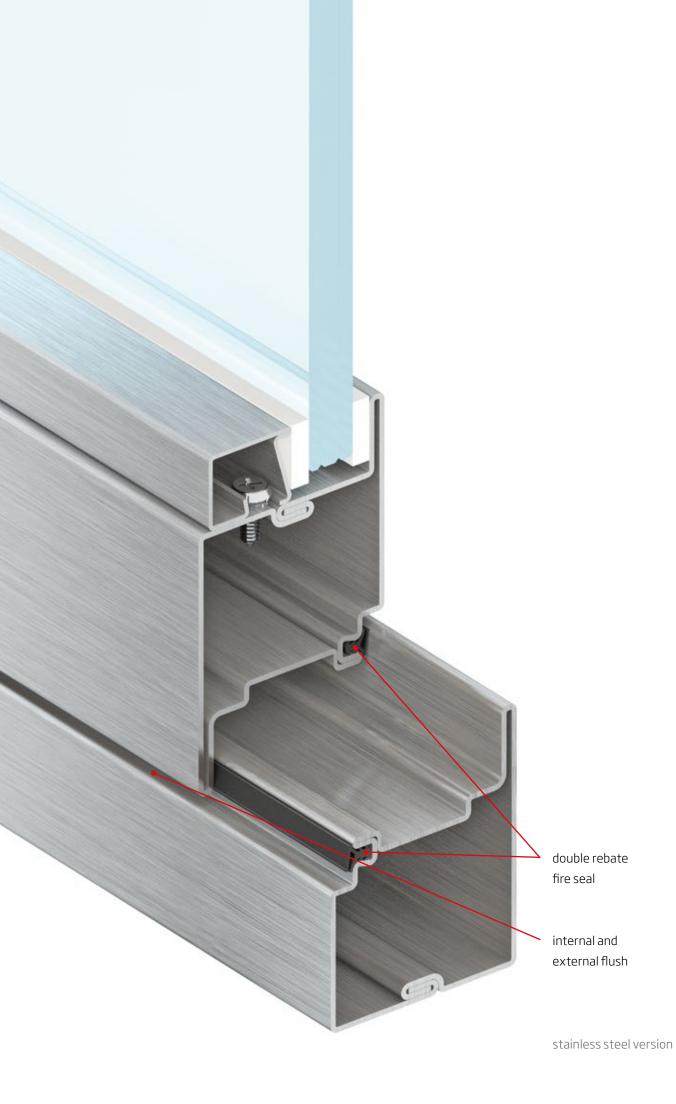
#### SEALING

capability of the door frame to contain fire, fumes and flammable gases.



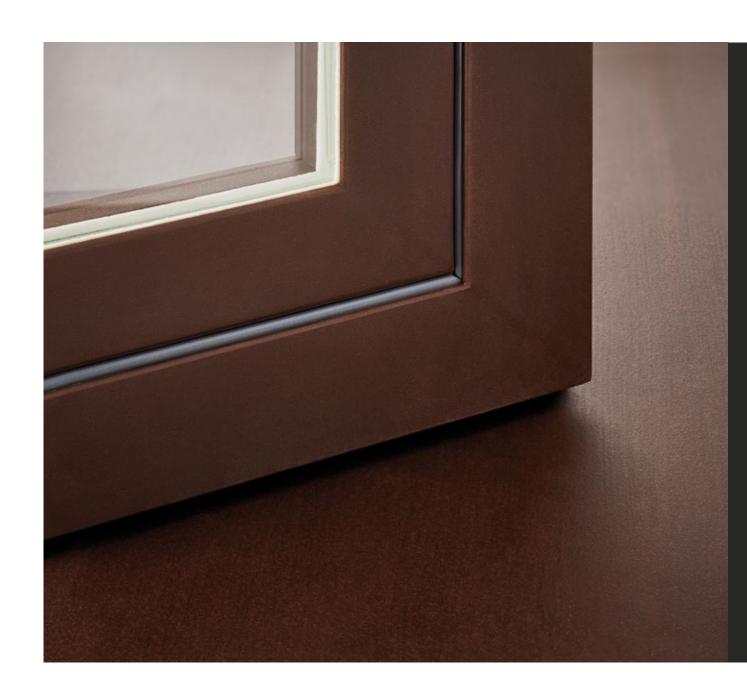
#### IRRADIATION

capability of the door frame to contain the irradiation to one metre on the non-exposed side.



## SA AF

#### SA AF window corner



SA AF window corner, external view, in corten steel with rectangular glazing bead.



SA AF window corner, internal view, in corten steel with rectangular glazing bead.

### SA AF

#### system and performance



SA AF is an integrated system with accessories, seals and thermally non-insulated profiles 55 mm deep allowing for a wide range of fireproof doors and glazed partitions. They can be equipped with single or double glazing up to 35 mm thick. Each solution is equipped with a related set of certified accessories integrated in the system.

The ability of not letting fire or hot fumes through (fire resistance E) is guaranteed by the particular structure of the profile and by a rebate double seal system. The ability to keep the irradiation from the side not exposed to the fire (irradiation W) is guaranteed by special glass provided.

The performance of SA AF system has been tested by the best European certifying labs under the reference standards EN 1634-1.

fire performance	Ew 30 Ew 60 Ew 90
mechanical strength: durability	200.000 cycle

maximum achievable performance

#### size and variations



lateral section | frame section 131 mm



central section | frame section 151 mm



bottom rail | frame section 140 mm

SA AF is an interior and exterior flush door. The lateral and central sections have the same frame size of the SA 15 system, 131 mm lateral frame sections.

#### materials glazing bead

galvanised steel

stainless steel

corten steel



rectangular



handles



inox 1502 h.135 | d.20 mm





inox 6006 three-wing h.130 | d.20 mm



weld-on 5001 h.145 | d.20 mm



main type













The rectangular glazing bead is available in various sizes for different glazing thicknesses. It allows for high resistance required to meet the fireproof performance without the application of visible screws.

Weld-on hinges are in galvanised and stainless steel.
Three-wing butt hinges are adjustable and are supplied in galvanised steel, stainless steel and burnished stainless steel.

All models can be made to open inwards or outwards.

Custom solutions are available in co-operation with Secco Sistemi technical office.

## SA AF

#### fire-resistance test



The ability of a door or a window frame to resist to the high stress induced by fire is tested in specific labs equipped with special furnaces and tools following strict European procedures. The test is performed on a real-size specimen in which all components – profiles, glass, seals, locks, door closers – are tested in real conditions of use after being

subjected to a number of opening and closing cycles. Furthermore, the supporting structures are the same on which the door and window frames will be mounted (plasterboard, wall, concrete, etc.). The burners in the lab can quickly raise the temperature to nearly 1000°C and keep it at this level for the whole duration of the test.



Sensors are applied on the specimen, which can test the compliance of the unit with the grading specifications. During the test not only the temperature on the "cold" side of the specimen is measured and evaluated but also possible deformities and the nature of the

fumes coming from the heating of the various components. The test is considered successful if, after the time specified by the specific grade, the door remains intact, there is no fire on the outside, there are no gaps in the frame and the fumes are not flammable.

# 4F 1

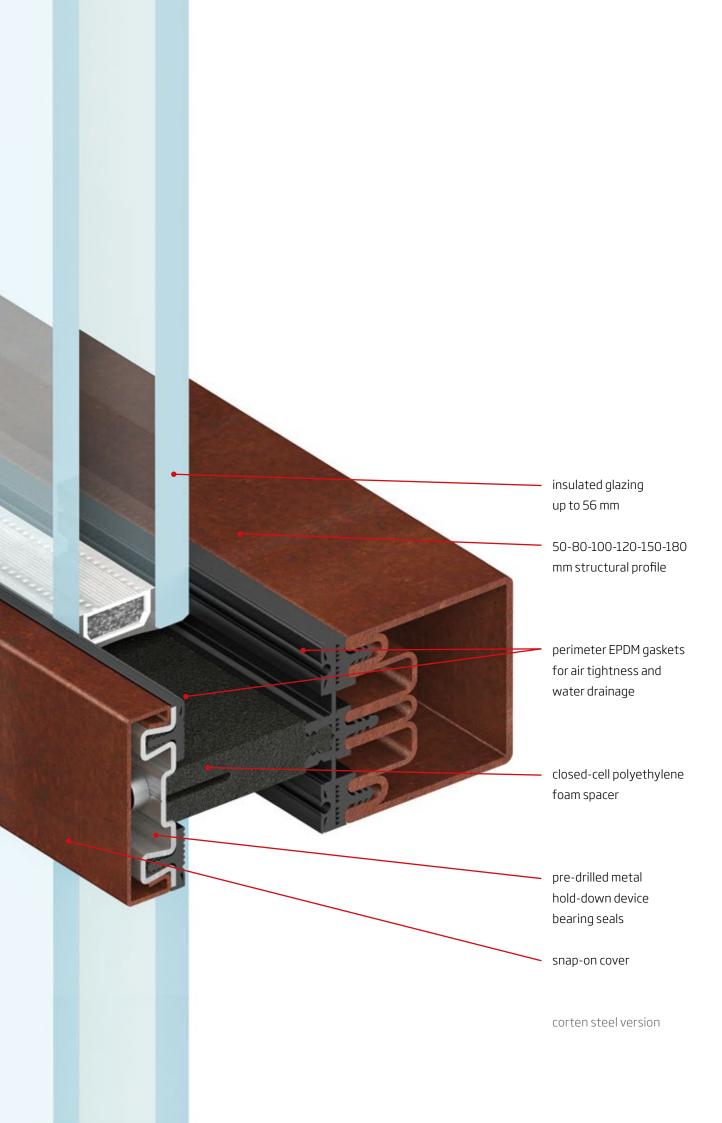
#### area of application

curtain walls with mullions and transoms

thermal break self-supporting curtain wall with mullions and transoms – 50 mm sections – with external cover, available in 4 materials The continuous, transparent curtain walls of modern-day architecture with their vast monochrome areas of glass panelling which make up the building façade require greater inertia in the wall structure and consequently increase the sections: the thermally broken system **4F1** proposes the solution with structural mullions in steel, stainless steel or corten of reduced sections (50 mm) and elevated inertia to quarantee the static values required, while at the same time maintaining the effect of lightness and transparency with the uninterrupted surface of the curtain wall. With 4F1 the frame is available in numerous possible variations, on the basis of the project design, including windows and doors where needed, while guaranteeing the highest level of performance.

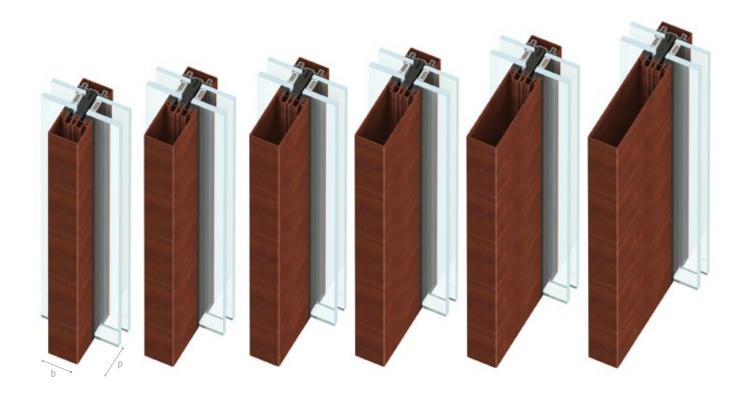
The performance of the **4F 1** system has been tested by the best European certifying laboratories in compliance with the current specific standard EN 13830 regulations.

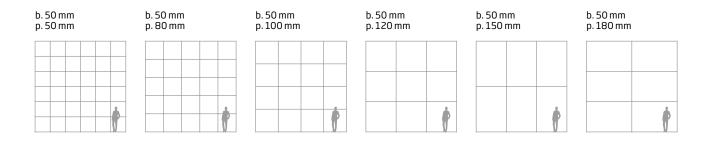




# 4F 1 façade system

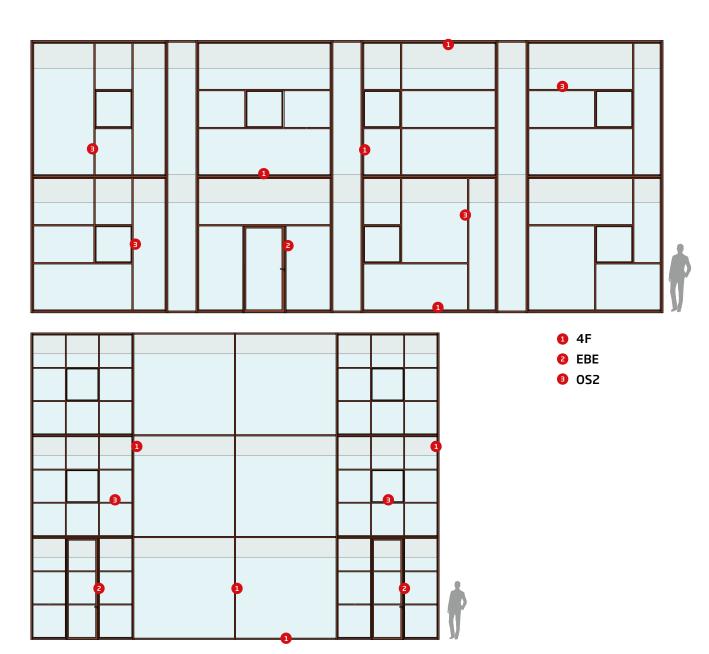
#### standard profiles and large dimensions





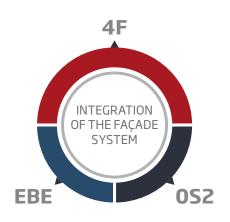
The façade system consists of 6 mullion/ transom profiles with a reduced size of only 50 mm. Available in three materials (galvanised steel, stainless steel and Corten steel) they have different lengths, up to 8 m and depths, from 50 mm to 180 mm.

By increasing the depth of the profile, it is possible to increase the dimensions of opaque and glass panels up to approximately 7 sqm, thus giving the designer the possibility to choose the profile that best matches their project needs.



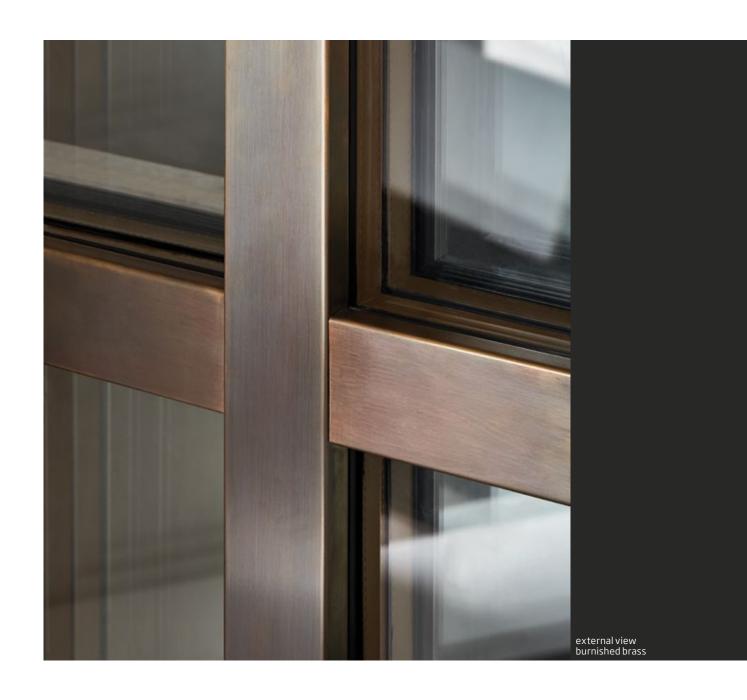
Thanks to Secco Sistemi curtain wall, the designer has maximum freedom in the design of the façade of the building.

The versatility of 4F indeed allows for the adoption of different materials, the combination of different profiles, the installation of several types of panels, as well as the perfect integration with all the door and window frames that can be identified within the wide EBE and OS2 range offered by Secco Sistemi.

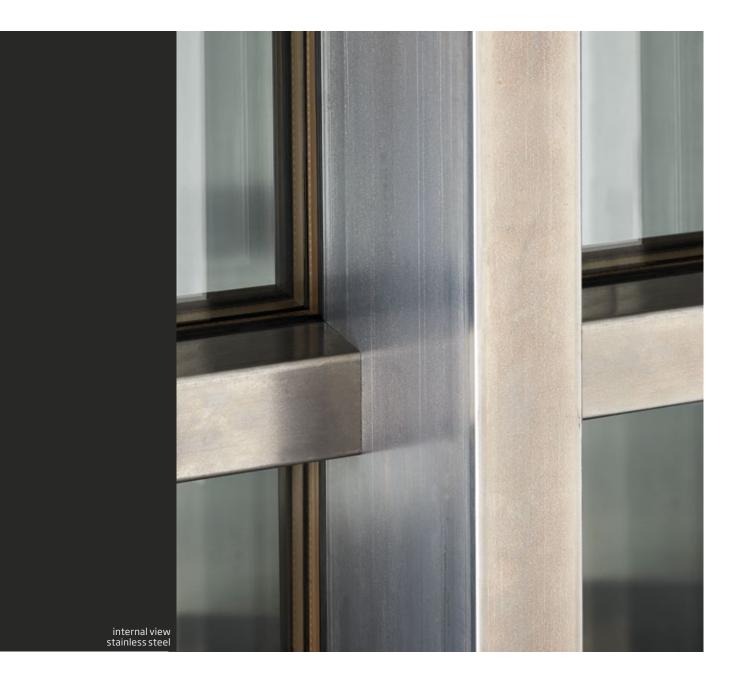


## 4F 1

#### 4F1 façade section



4F1 façade section, external view, with covers in burnished brass and internal view in scotch brite stainless steel.



#### system and performance



4F 1 is a system designed for thermal break curtain walls, and for mullions and transoms with structural sections from 50 mm to 180 mm deep and 50 mm wide. The high elasticity of metal guarantees a solid yet light and slender structure. Air and water tightness are ensured by a system of EPDM gaskets equipped with drain devices for potential seepage.

The glass, of up to 56 mm, is fitted frontally and placed on specific supports secured to the structural profiles, and fixed to mullions and transoms by a hold-down device hearing seals pre-drilled for screw application.

to the structural profiles, and fixed to find informations and transforms by a floid-down device bearing seals pre-drilled for screw application.

The performance levels of the 4F1 system have been tested by the best European certifying labs in compliance with the reference standards EN 13830.

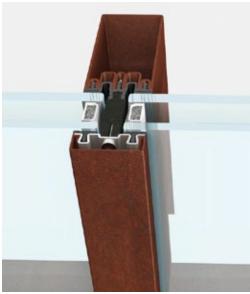
The 4F1 mullion/transom can be 50, 80, 100, 120, 150, 180 mm thick.

The size of internal profiles and external covers is 50 mm; the depth of the cover is 16 mm for the mullions and 13 mm for the transoms.

wind resistance - allowed load	$\pm$ 2,0 kN/m <sup>2</sup>
wind resistance - increased load	± 3,0 kN/m²
impactresistance	I5 / E5
water tightness - static	RE 1500
water tightness - dynamic	250 Pa/750 Pa
thermal transmittance (with Ug glass 0,6 W/m²K)	up to 0,80 W/m²K
air permeability	AE

under reference standard EN 13830

#### size and variations



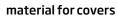
transom/mullion 100mm deep | 50 mm face section



 $transom/mullion\,50\,mm\,deep\,|\,50\,mm\,face\,section$ 

The 4F1 transom/mullion can be 50 mm or 100 mm thick. The size of the internal profiles and external covers is 50 mm; the depth of the cover is 16 mm for the mullions and 13 mm for the transoms.

#### material for transoms and mullions



#### application options

#### main type



galvanised steel



galvanised steel



transom 100 mm | mullion 50 mm



stainless steel



corten steel

brass



transom 100 mm | mullion 100 mm



corten steel

4F1 covers are available in galvanised steel - in a wide range of colours and surface finishes - in AISI 304 brushed stainless steel, in AISI 316L polished or Scotch-Brite stainless steel, corten steel and in brass (0T67 copper alloy).

4F1 is equipped with concealed bottom plates in stainless steel to head join mullions to transoms in all the different combinations.

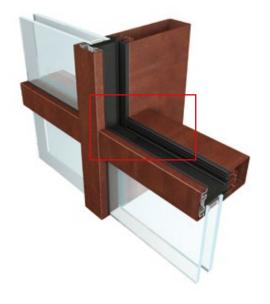


Custom solutions are available in co-operation with Secco Sistemi technical office.

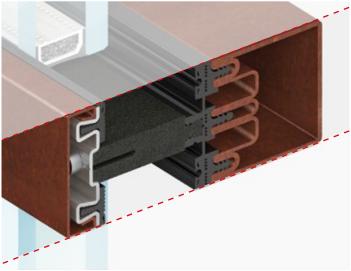
4F 1 allows for the integration of all EBE 65, EBE 85 and OS2 systems.

4F1 structural profiles are available in galvanised steel - in a wide range of colours and surface finishes - in brushed AISI 304 steel, in polished or Scotch Brite AISI316L stainless steel and corten steel.

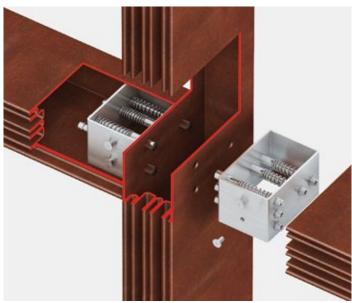
#### façade



#### detail



gasket



bottom plate

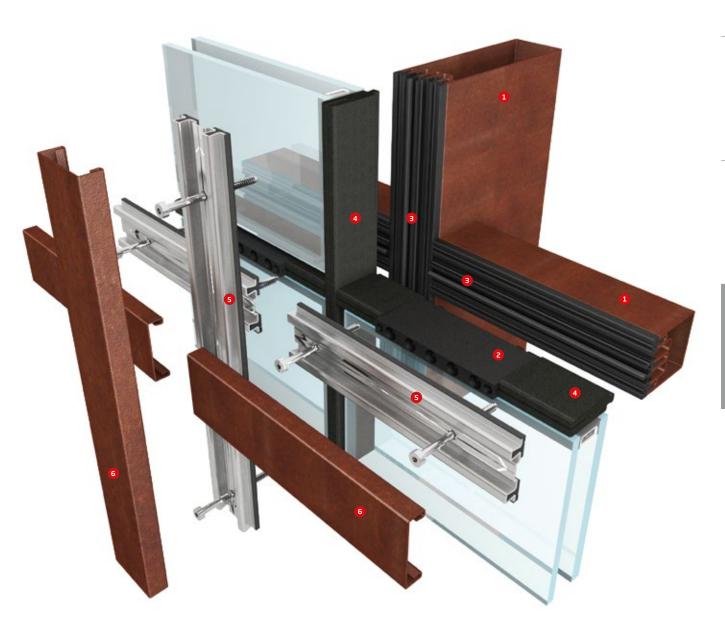
Designed and developed with the utmost care for detail, Secco Sistemi curtain walls combine the search for clean lines with the development of new technological solutions, ensuring the perfect match between accurate design and living comfort.

Minimising the visual impact of individual components on the façade, all internal and external perimeter gaskets have been designed to ensure superior environmental performance and easy installation, as well as to offer the most suitable solutions for contemporary architecture. Their perfect alignment with the size of the profiles

makes the gasket virtually "invisible", only leaving in sight the steel of the load-bearing structures and the glass of large window panels. The connection between the load-bearing profiles, primary structural node of the system, is also "hidden" from view thanks to the integration of a technical component that fits inside the transom and is clipped onto the mullion.

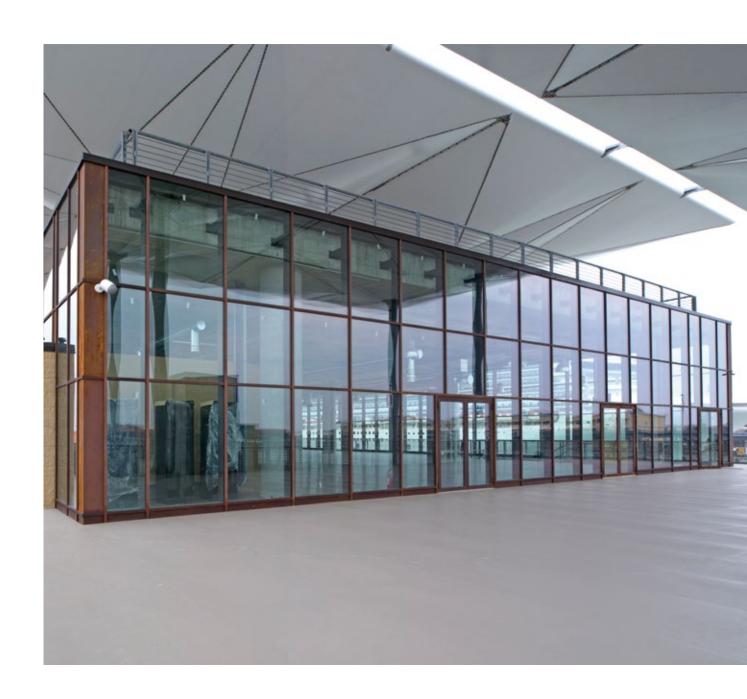
This results in a façade that keeps the material of profiles, mullions and transoms, seamless and completely free of interposed elements. Moreover, this component, through a system of spring-loaded pins, makes it possible to remove the coupling device without damaging any elements of the structure.

#### disassembled façade



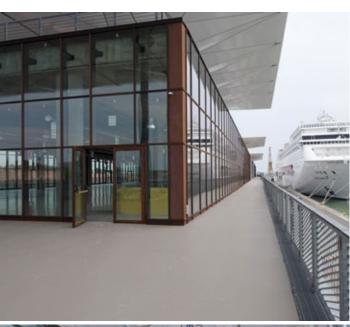
- 1 mullion/transom profiles in 5 finishes
- variable support for glazing of up to 56 mm
- 3 sealing and water draining gasket system
- 4 extruded polyethylene foam for greater technical performance
- 5 pre-drilled hold-down device for easy installation
- 6 cover profile in 7 finishes

#### Cruise terminal | Venice



With the new terminal
"Isonzo 2" Venice now
features a primary
cruise hub and has become
the point of departure
of some of the most
charming itineraries
along the Mediterranean
routes, such as Italy,
Croatia, Greece and
Turkey. The need
to minimise environmental
impact and ensure the
safe and well organised
disembarkation of

passengers was at the core of the main project guidelines. The building has therefore been designed according to criteria of maximum space rationalisation, distributing the over 14.000 sqm on two different levels with a roof terrace, in order to ensure perceptual continuity and the fluidity between interior and exterior, Secco







Sistemi chose the 4F1 curtain wall with Corten steel mullions and transoms, that integrates EBE thermal break door and window frames used for entrances and emergency exits. The use of properly treated Corten steel provides interesting colour variations, creating a highly natural effect that is crucial to ensure the smooth integration of the building in the fragile lagoon environment.

area of application

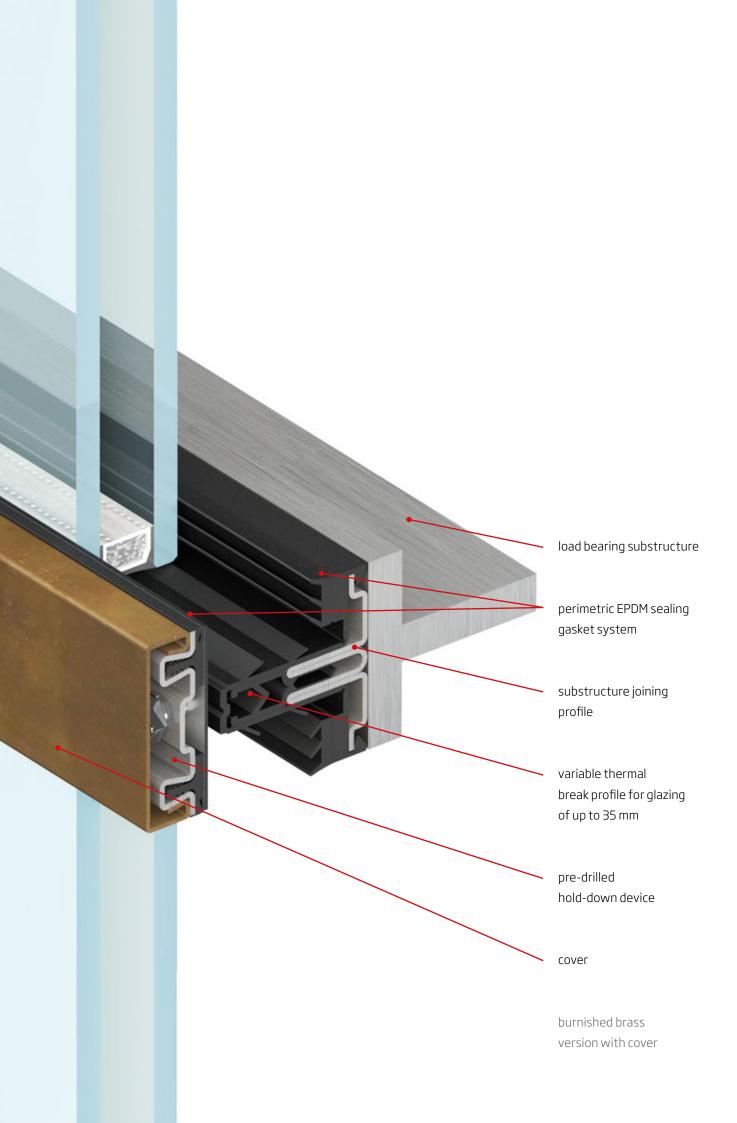
 curtain wall with load bearing sub-structure in different materials

thermal break curtain wall that can be used with loadbearing substructures, with external cover, available in four materials

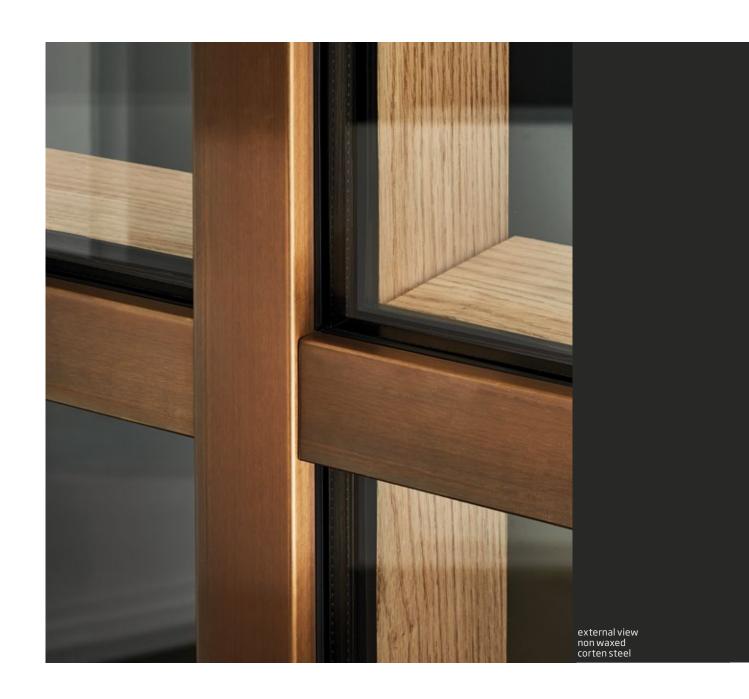


With **4F2** - a curtain wall system for glass façades of large dimensions - different materials such as steel, stainless steel, corten, brass and wood can be used and combined internally and externally. By using mullions and transoms of great inertia and reduced sections, vast luminous façades can be built with extensive glass panelling, allowing the designer maximum freedom in the project for the fronts and their structure. With a complete range of profiles and seals, 4F2 offers tailor-made solutions for high-performance glass panels of any type and thickness. The external covers in steel, stainless steel, corten and burnished brass of reduced dimensions (50 mm) enhance the front in terms of elegance and lightness while complementing the glass and giving room to the real protagonist, light itself. The performance of the **4F 2** system has been tested by the best European certifying

laboratories in compliance with the current specific standard EN 1383 regulations.



#### 4F 2 façade section



4F 2 façade section, external view, with cover in non waxed corten steel and internal view with beam in chestnut.



#### system and performance

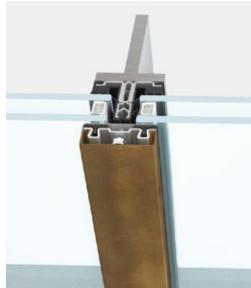


4F 2 is a system designed for thermal break add-on curtain walls, which can be secured with appropriate profiles and gaskets to each girder whether welded (the classic IPE, HEA in steel or stainless steel) or wooden, thus guaranteeing the same high performance. Water tightness is ensured by a system of EPDM gaskets and profiles equipped with drain devices for potential seepage. The high elasticity, typical of metal, guarantees a solid yet light and slender structure. The system is able to support glazing of up to 50 mm thickness, fitted frontally and fixed to the transoms and mullions by a hold-down device bearing gaskets. The performance of 4F 2 system has been tested by the best European certifying labs under the reference standards EN 13830.

# wind resistance - allowed load ± 2,0 kN/m² wind resistance - increased load ± 3,0 kN/m² impact resistance I5 / E5 water tightness - static RE900 water tightness - dynamic 250 Pa/750 Pa air permeability AE

under reference standard EN 13830

#### size and variations



application to mullion | 50 mm face section



application to transom | 50 mm face section

The size of the internal profiles and external covers is 50 mm, the depth of the cover is 16 mm for the mullions and 13 mm for the transoms.

#### material for covers

#### application options



galvanised steel



stainless steel



corten steel



brass

4F 2 covers are available in galvanised steel - in a wide range of colours and surface finishes - in AISI 304 brushed stainless steel, in AISI 316L polished or Scotch-Brite stainless steel, corten steel and in brass (OT67 copper alloy).



IPE welded beam

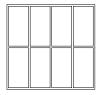


wooden girder

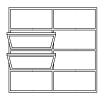
customised welded girder

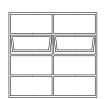


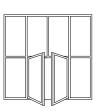
#### main type









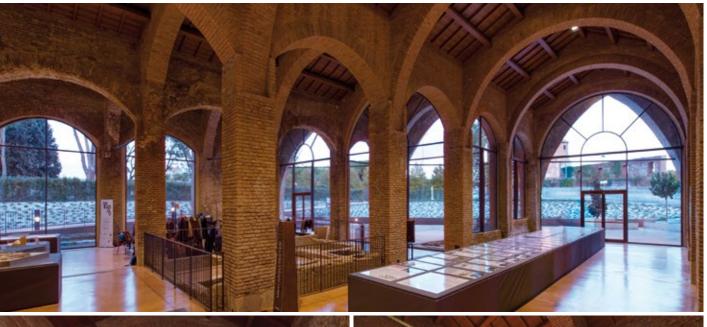


Custom solutions are available in co-operation with Secco Sistemi technical office.

#### The Arsenals of Pisa | Pisa (IT)



The structures of the fourteenth-century arches have been enhanced here with the 'dematerializing' of the non loadbearing external walls, replaced with large glazing panels in this philological work of renovation of the arsenals of Pisa. The role given to the curtain walls and casings and frames is delicate but essential - Secco Sistemi 4F 2 and SA 15.







## 4F AF

area of application

 curtain wall with load bearing sub-structure in different materials

self-supporting curtain wall with mullions and transoms, fire-resistance EI 30-60-90, with external cover, available in three materials

The aesthetical and functional qualities of the products remain unaltered in the design of Secco Sistemi fire-proof façades. Whether designed as an interior partition or as an external cover, the **4F AF** system unfailingly reproduces the project design, both in terms of the materials and in the construction details. The excellent physicalmechanical characteristics make the system fire-resistant even when using profiles with considerably reduced sections and depths. All elements and components have been specifically designed to respond to the structural resistance requirements at internal temperatures of 1000°C: maintaining of external surface temperatures below 180°C, absence of flammable hot fumes, unaltered preserving of performance for a duration of up to 90 minutes with glazing panels of outsize dimensions and weight.



#### SEALING

capability of the door frame to contain fire, fumes and flammable gases.



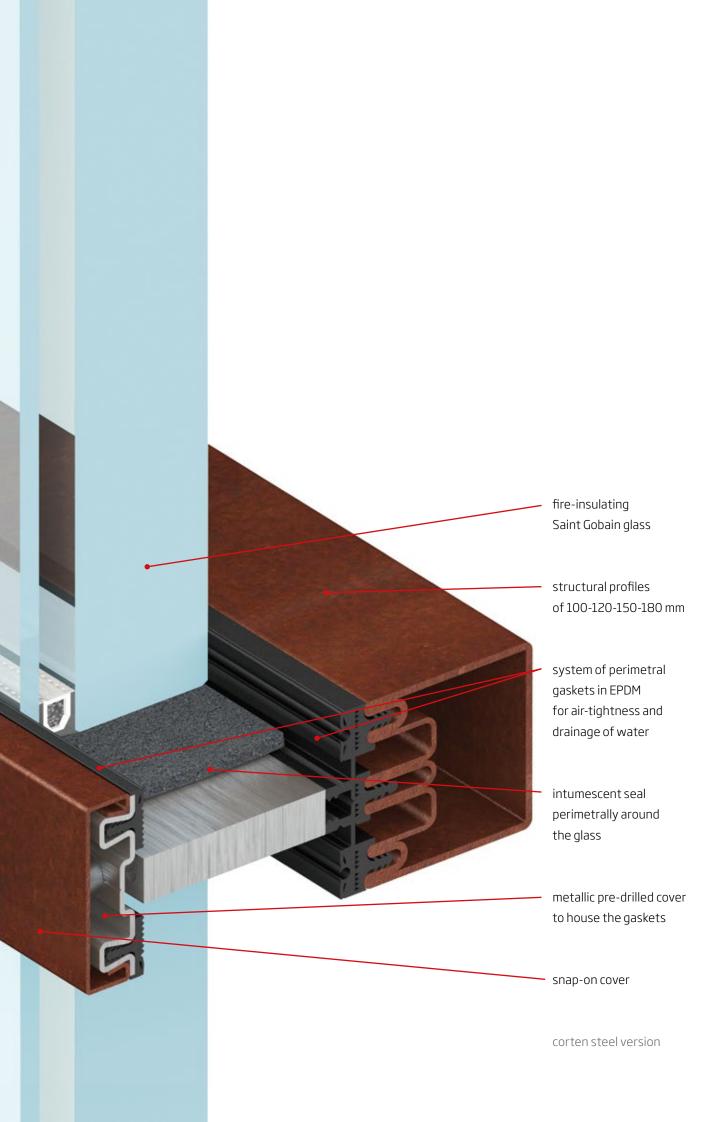
#### **IRRADIATION**

capability of the door frame to contain the irradiation to one metre on the non-exposed side.



#### INSULATION

capability of the door frame to contain the temperature on the non-exposed side.



## 4F AF

#### 4F AF façade section

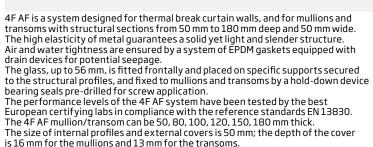


4F AF façade section, external view, with cover in polished stainless steel and internal view with painted galvanised steel, sandblasted dark grey colour.



### 4F AF

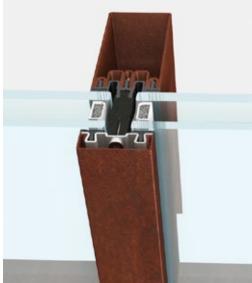




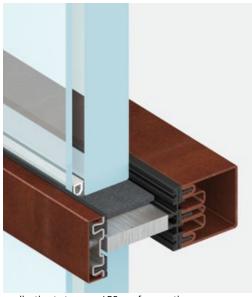
is 16 mm for the mullions and 13 mm for the transoms.

wind resistance - allowed load	± 2,0 kN/m²
wind resistance - increased load	$\pm$ 3,0 kN/m <sup>2</sup>
impact resistance	I5/E5
water tightness - static	RE 1500
water tightness - dynamic	250 Pa/750 Pa
fire performance	El30-60-90 EW30-60
air permeability	AE

under reference standard EN 13830



application to mullion | 50 mm face section



application to transom | 50 mm face section

The 4F AF transom/ mullion can be 50 mm or 100 mm thick. The size of the internal profiles and external covers is 50 mm; the depth of the cover is 16 mm for the mullions and 13 mm for the transoms.

#### material for transom and mullions

#### material for covers

#### application options

#### main type



galvanised steel



galvanised steel





transom 100 mm | mullion 50 mm



corten steel

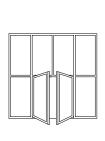


corten steel

stainless steel



 $transom\,100\,mm\,|\,mullion\,100\,mm$ 



4F AF structural profiles are available in galvanised steel - in a wide range of colours and surface finishes - in brushed AISI 304 steel, in polished or Scotch Brite AISI316L stainless steel and corten steel.

4F AF covers are available in galvanised steel - in a wide range of colours and surface finishes - in AISI 304 brushed stainless steel, in AISI 316L polished or Scotch-Brite stainless steel, corten steel and in brass (OT67 copper alloy).

4F AF is equipped with concealed bottom plates in stainless steel to head join mullions to transoms in all the different combinations.

Custom solutions are available in co-operation with Secco Sistemi technical office.

4F AF profiles can be integrated with EBE AF and SA AF.







## accessories

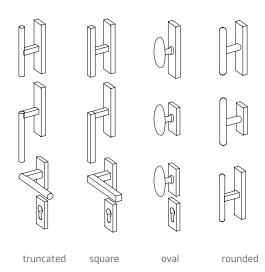
the accessories studied and produced to complete the Secco systems become an integrated part of the door/window, making it unique

Secco systems are unique for their innovative design with care for every single detail, for the quality of the materials and of the manufacturing processes. They come with a complete range of accessories, in consistency with the general approach of the firm towards the product. Design, quality and duration of the accessories are all in fact fundamental for quaranteeing the utmost efficiency as well as the aesthetic aspect of the fixture. From the slim, elegant handles for the profiles of the OS2 system to the impeccable lines and proportions of the visible hinges or various options of glazing bead, the accessories, produced in all four materials galvanised steel, stainless steel, corten steel and brass - from simply complementary elements of the Secco systems, they actually become an integral part of the finished fixture, thus contributing to rendering it a unique product.

#### systems

- windows
- doors

in harmony with the essential lines of the door/window, in the same select materials and finishes These elegant and discreet complementary elements with slim outlines and linear profiles correspond to the precise demands determined by the characteristics of uniqueness of the fixture: to become integral with the end product, the handles must in fact have suitable dimensions and be produced in the same materials - galvanised steel, stainless steel, corten steel and brass. The available models, while maintaining their original, essential and sophisticated design and ergonomic shape, can be adapted to the section of the profile and be of smaller dimensions if necessary, adjusting also to the OS2 profiles. They may also vary for the type of handle grip which can be T-shaped or L-shaped, and the plate may be smaller or larger according to need.







#### application options

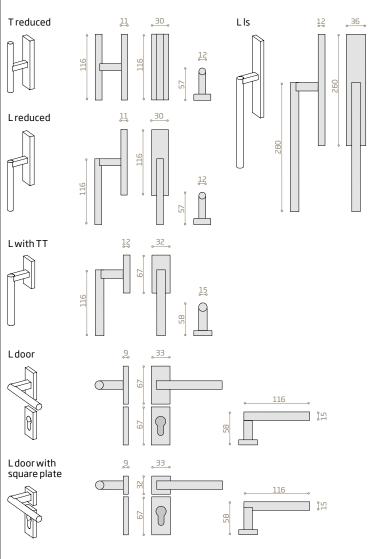
- windows doors

#### systems

OS2, BV, EBE, ST, SA



#### configurations and dimensions



#### materials and finishes





#### application options

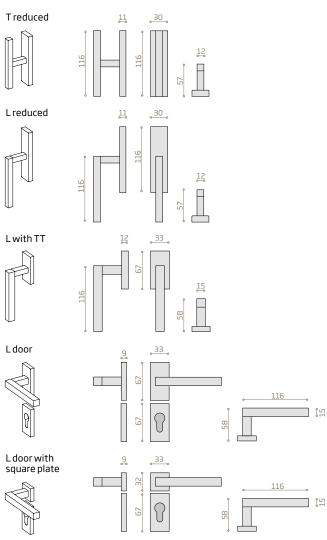
• windows • doors

#### systems

OS2, BV, EBE, ST, SA



#### configurations and dimensions



#### materials and finishes





#### application options

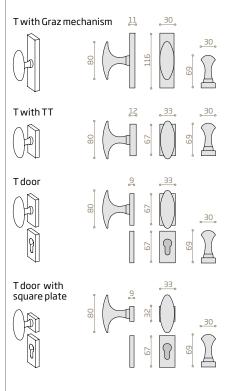
- windows doors

#### systems

OS2, BV, EBE, ST, SA



#### configurations and dimensions



#### materials and finishes





#### application options

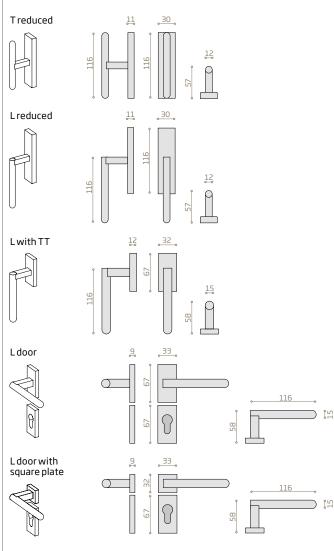
• windows • doors

#### systems

OS2, BV, EBE, ST, SA



#### configurations and dimensions



#### materials and finishes



## raffaello



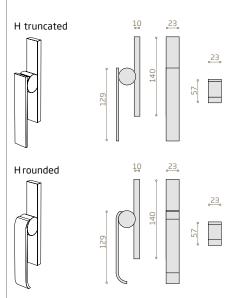
#### application options

- windows doors

#### systems

OS2, BV, EBE, ST, SA



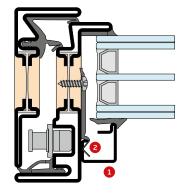




#### systems

- windows
- doors
- fixed glazing panels

a wide range of choice in detail also among the possible versions of glazing bead These small profiles positioned in front of the glass pane to hold it in place are also an element of design as an integral part of the whole Secco Systems fixture, and they are produced in the same materials and finishes. The outline, dimensions and visibility with respect to the section of the profile can vary, they change the perception of the space occupied by the fixture and there are numerous combinations to choose from: from the simple box-shaped profile that fills the housing chamber in alignment with the frame to the elegant moulding that refines the glass pane within the frame, or again the thinnest profile which, following the line of the mullion, bends against the pane, freeing the interface between frame and glass. The anchoring of the various types of glazing bead to the sash is always concealed while in order to achieve continuity of the lines of the front view, the profiles may be welded to each other at the corners.



- 1. glazing bead
- 2. clips for anchoring of the glazing bead



thin

# gothic









# materials









# materials







# systems

OS2 65, OS2 75 (excluding A/R), EBE 65, EBE 75, EBE 85, EBE 85 AS, SA 15, SA 20

# systems

EBE 65, EBE 75, EBE 85, EBE 85 AS, EBE Style, SA 15, SA 20

# triangular

# rectangular









# materials

# materials

















systems

OS265, OS275

# systems

OS2 65, OS2 75, EBE 65, EBE 75, EBE 85, EBE 85 AS, EBE AF, SA 15, SA 20, SA AF

spindle

# gothic glazing bead









# materials









# materials









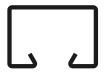
# systems

OS265, OS275

# systems

EBE 65, EBE 75, EBE 85, EBE 85 AS, EBE Style, SA 15, SA 20

# squared glazing bead





# materials









systems

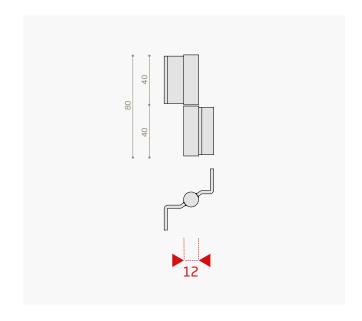
EBE 65, EBE 75, EBE 85, EBE 85 AS, SA 15, SA 20

# hinges

#### systems

- doors
- windows

visible or concealed, the hinges are integrated into the Secco systems and produced in all 4 materials This is the fundamental device mediating action between frame and sash and making movement possible: in the past, this element was exhibited and decorated while nowadays it is often left invisible inside the fixture. To confer an aesthetic value to the hinge, to be included in the design of the fixture with the slim, high-performing profiles of its systems, Secco systems proposes this technological device both in the concealed and the visible version. There are different options to choose from: weld-on hinges, two-winged or three-winged, with the mechanical components housed in the single small cylindrical element, slim and essential, in the same material and finish as the fixture - galvanised steel, stainless steel, corten steel and brass - with certified characteristics of long lastingness.

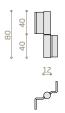




# hinges

# two-winged for OS2





### materials and finishes



# application options

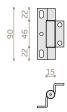
- windows doors

# systems

OS265, OS275

# three-winged for OS2





# materials and finishes



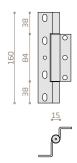
# application options

- windows doors
- systems

OS265, OS275

# three-winged for EBE windows





# materials and finishes







stainless steel B

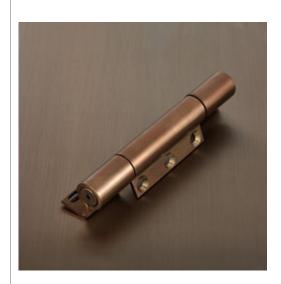
# application options

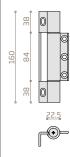
• windows

# systems

EBE 65, EBE 75, EBE 85

# three-winged for EBE doors





### materials and finishes



stainless steel B corten steel

# application options

• doors

# systems

EBE 65, EBE 75, EBE 85, EBE Style, EBE ML

# hinges

### sash with TT mechanism for EBE





### materials and finishes



# application options

• windows

# systems

EBE 65, EBE 85, EBE Style, EBE ML

# three-winged for SA





# materials and finishes



# application options

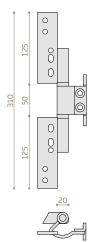
• windows • doors

# systems

SA 15, SA20

### concealed





# materials and finishes



galvanised steel

# application options

• doors

# systems

EBE 65, EBE 75, EBE 85, EBE ML, EBE Style, SA 15, SA 20

### weld-on





# materials and finishes



galvanised steel

# application options

- windows doors

# systems

OS2 65, OS2 75, EBE 65, EBE 75, EBE 85, SA 15, SA 20







# accessories

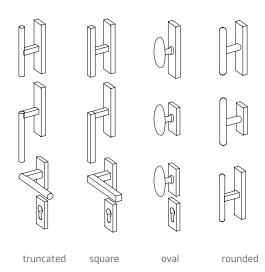
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#### systems

- windows
- doors

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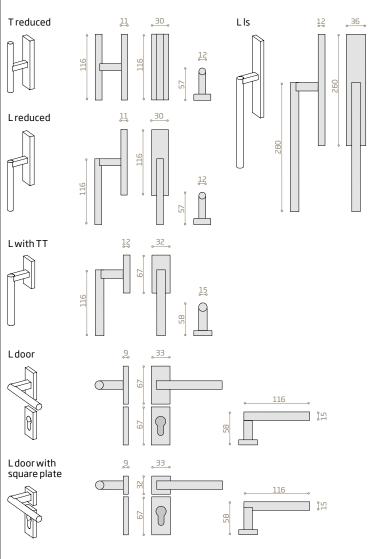
# application options

- windows doors

# systems

OS2, BV, EBE, ST, SA









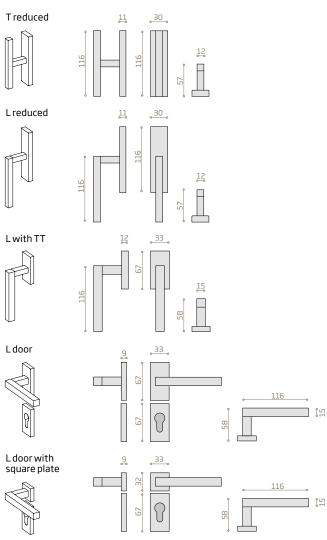
# application options

• windows • doors

# systems

OS2, BV, EBE, ST, SA









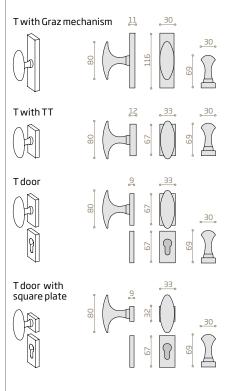
# application options

- windows doors

### systems

OS2, BV, EBE, ST, SA









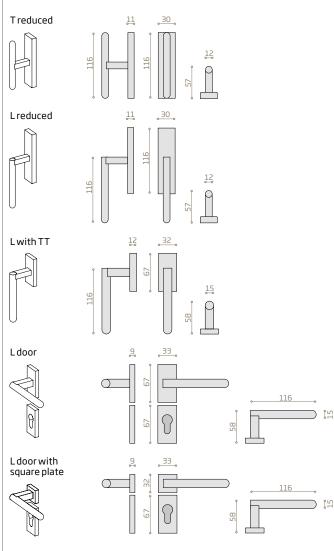
# application options

• windows • doors

### systems

OS2, BV, EBE, ST, SA







# raffaello



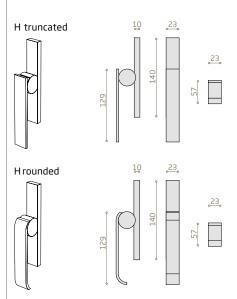
# application options

- windows doors

# systems

OS2, BV, EBE, ST, SA



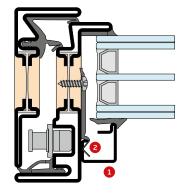




#### systems

- windows
- doors
- fixed glazing panels

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- 1. glazing bead
- 2. clips for anchoring of the glazing bead



thin

# gothic









# materials









# materials







# systems

OS2 65, OS2 75 (excluding A/R), EBE 65, EBE 75, EBE 85, EBE 85 AS, SA 15, SA 20

# systems

EBE 65, EBE 75, EBE 85, EBE 85 AS, EBE Style, SA 15, SA 20

# triangular

# rectangular









# materials









brass

# materials









# systems

OS265, OS275

# systems

OS2 65, OS2 75, EBE 65, EBE 75, EBE 85, EBE 85 AS, EBE AF, SA 15, SA 20, SA AF

spindle

# gothic glazing bead









# materials









# materials









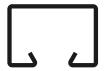
# systems

OS265, OS275

# systems

EBE 65, EBE 75, EBE 85, EBE 85 AS, EBE Style, SA 15, SA 20

# squared glazing bead





# materials









systems

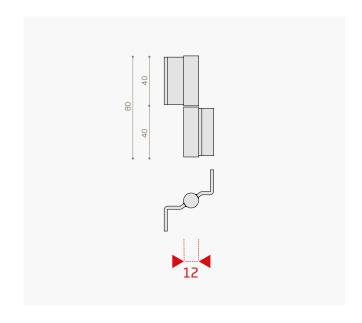
EBE 65, EBE 75, EBE 85, EBE 85 AS, SA 15, SA 20

# hinges

#### systems

- doors
- windows

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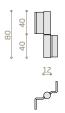




# hinges

### two-winged for OS2





### materials and finishes



### application options

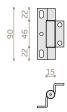
- windows doors

### systems

OS265, OS275

### three-winged for OS2





### materials and finishes



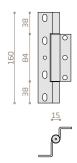
### application options

- windows doors
- systems

OS265, OS275

### three-winged for EBE windows





### materials and finishes







stainless steel B

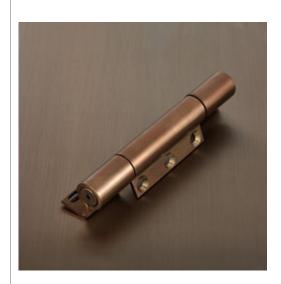
### application options

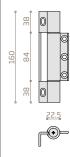
• windows

### systems

EBE 65, EBE 75, EBE 85

### three-winged for EBE doors





### materials and finishes



stainless steel B corten steel

### application options

• doors

### systems

EBE 65, EBE 75, EBE 85, EBE Style, EBE ML

# hinges

### sash with TT mechanism for EBE





### materials and finishes



### application options

• windows

### systems

EBE 65, EBE 85, EBE Style, EBE ML

### three-winged for SA





### materials and finishes



### application options

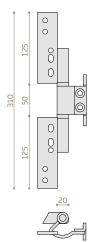
• windows • doors

### systems

SA 15, SA20

### concealed





### materials and finishes



galvanised steel

### application options

• doors

### systems

EBE 65, EBE 75, EBE 85, EBE ML, EBE Style, SA 15, SA 20

### weld-on





### materials and finishes



galvanised steel

### application options

- windows doors

### systems

OS2 65, OS2 75, EBE 65, EBE 75, EBE 85, SA 15, SA 20







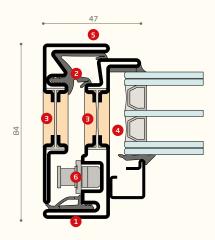
# designing together

technical designs in minute detail of the main sections of Secco systems to design the façade as a whole and the fixture

The sections and the dimensions of the profiles in the main sections of Secco's systems - with all the possible variations to choose from - rebated or flush-mounted, both for exterior and interior, fixed and extendible, with joints and gaskets - all these are represented in the following pages by technical drawings, complete with linear and angular dimensions for designing the façade in its whole and the fixture in every single detail, in particular to create customized solutions and special projects. Assistance available also for installation, including setting up of the construction site; the drawings constitute a valid instrument for the technical-executive development of the project and for a preliminary assessment of costs.

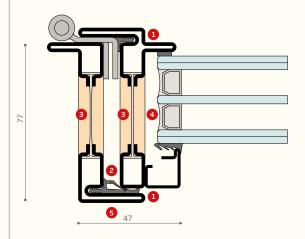
### **OS275**

### inward-opening section with TT mechanism



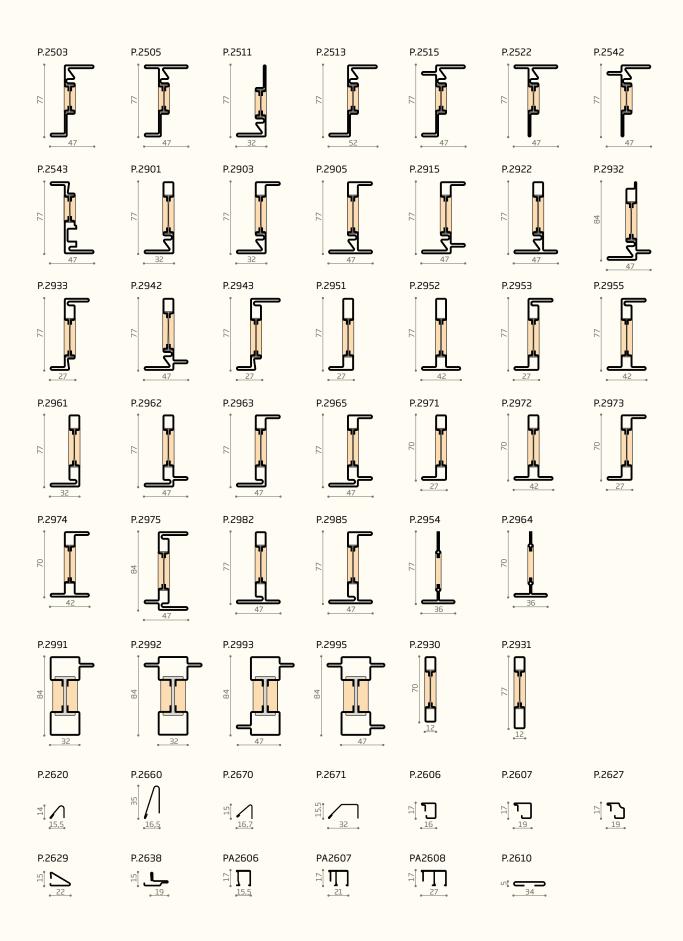
- $1. \ internal \, and \, external \, rebate$
- ${\it 2. weep \, system \, and \, double \, gasket}$
- 3. structural thermal break in polyamide and polyure than e
- 4. fitting groove for glazing up to 50 mm thick
- 5. section with reduced size
- 6. hardware groove

### outward-opening section



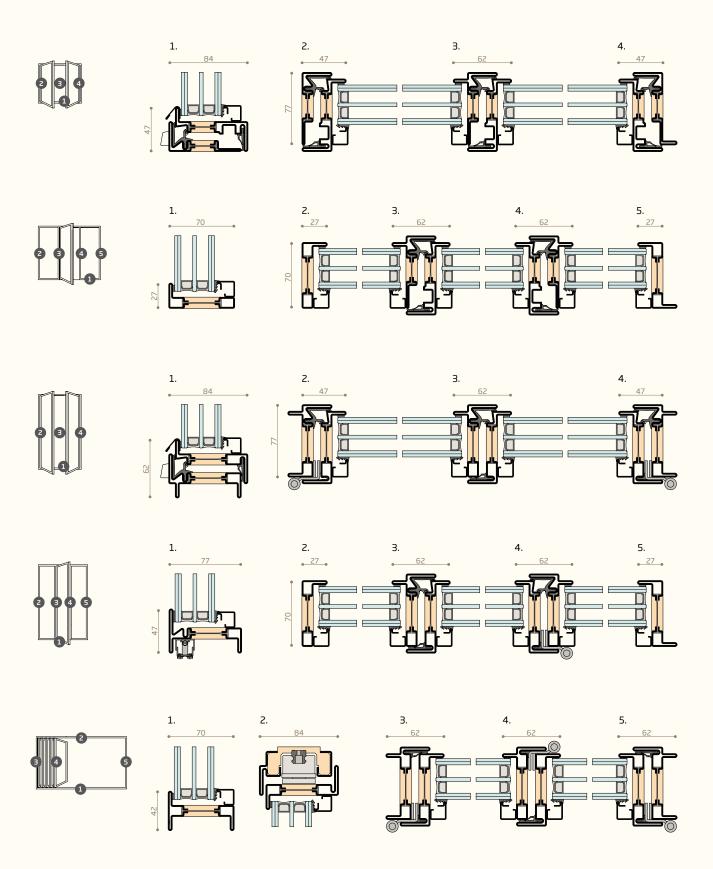
- $1.\,\,internal\,and\,external\,rebate$
- 2. double seal rebate
- 3. structural thermal break in polyamide and polyurethane
- 4. fitting groove for glazing up to 49 mm thick
- 5. section with reduced size

### profiles

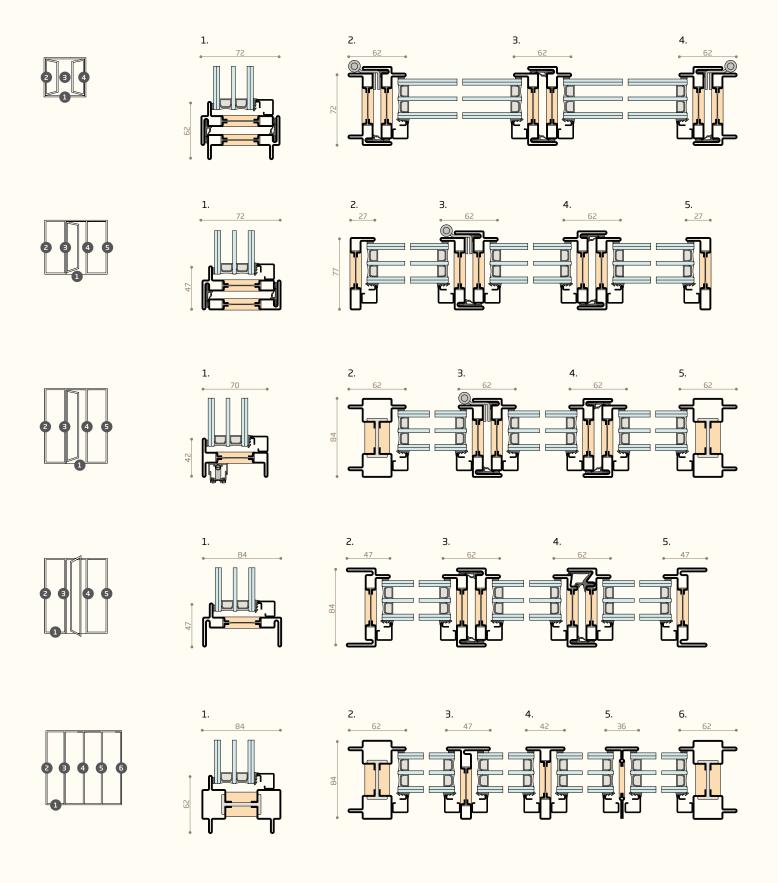


# OS2 75

### inward-opening sections

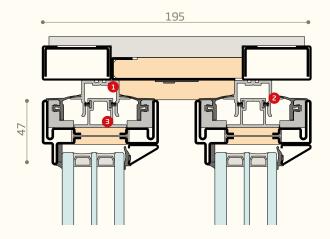


### outward-opening sections and fixed panes

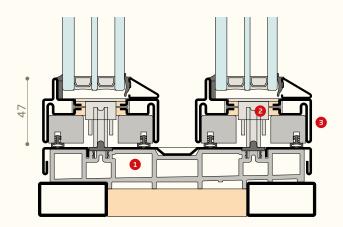


### OS275AS

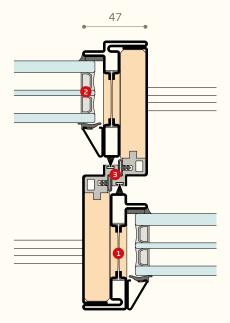
### main sections



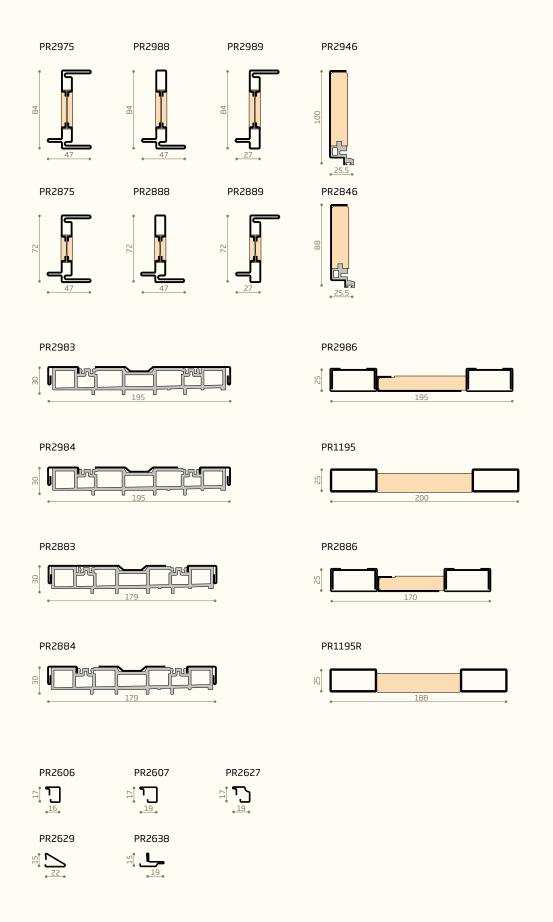
- 1. thermal break polyamide truck
- 2. double sealing gasket
- 3. continuous alignment groove



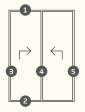
- ${\bf 1.}\ profile\ with\ threshold\ profile\ for\ water\ run-off$
- 2. reduced wheel (carriage) assembly
- 3. reduced profile same as the visible dimensions on the four sides  $% \left( 1\right) =\left( 1\right) \left( 1\right)$

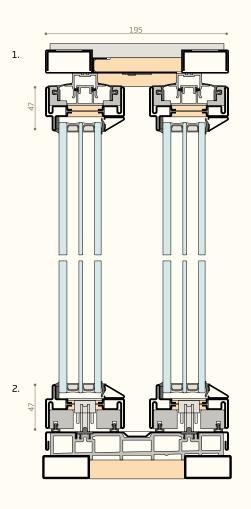


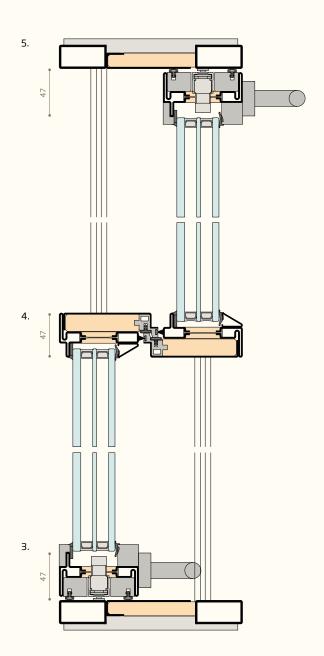
- 1. structural thermal break in polyamide and polyurethane
- 2. fitting groove for glazing up to  $\,50\,mm$  thick
- 3. Two levels of gasket and one brush

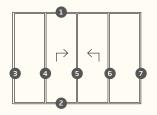


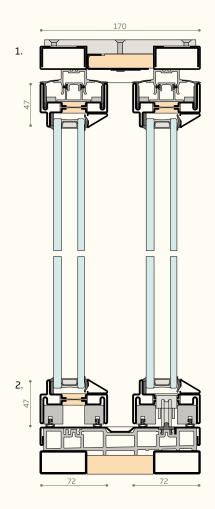
# OS275AS

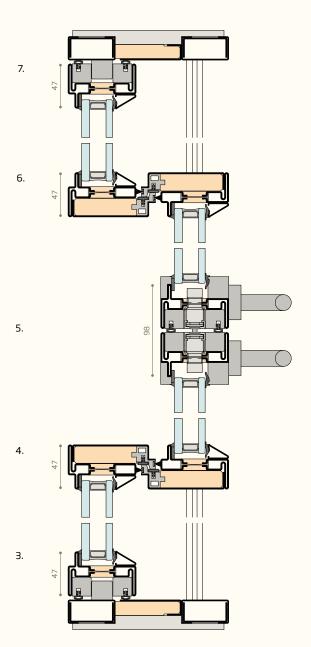






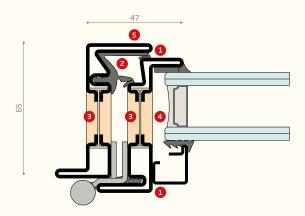






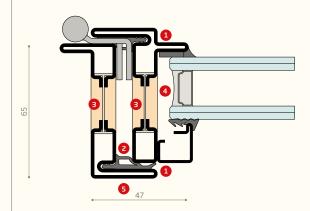
### OS2 65

### inward-opening section



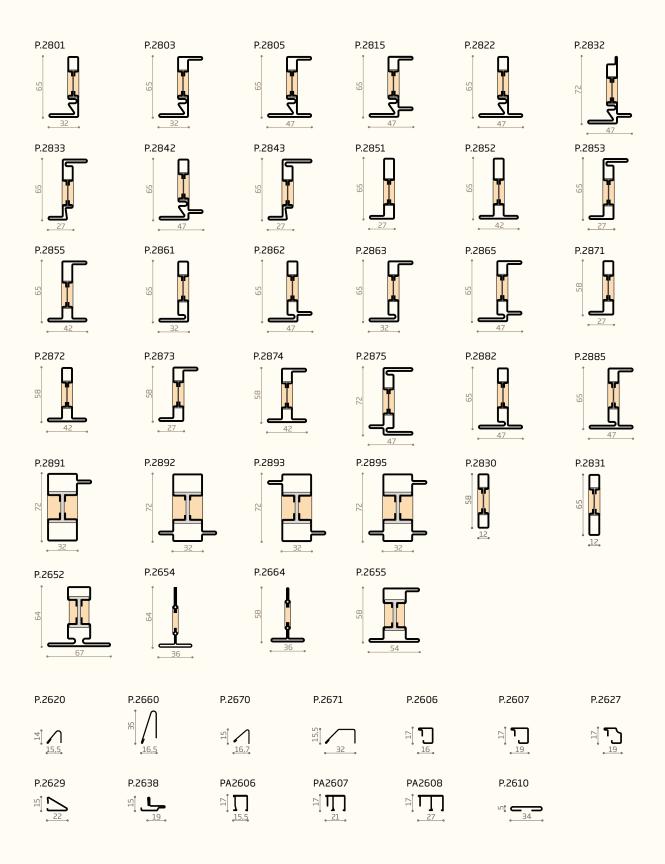
- 1. internal and external rebate
- 2. frame with weep system and double gasket
- 3. structural thermal break in polyamide and polyure than e
- 4. fitting groove for glazing up to 38 mm thick
- 5. section with reduced size

### inward-opening section



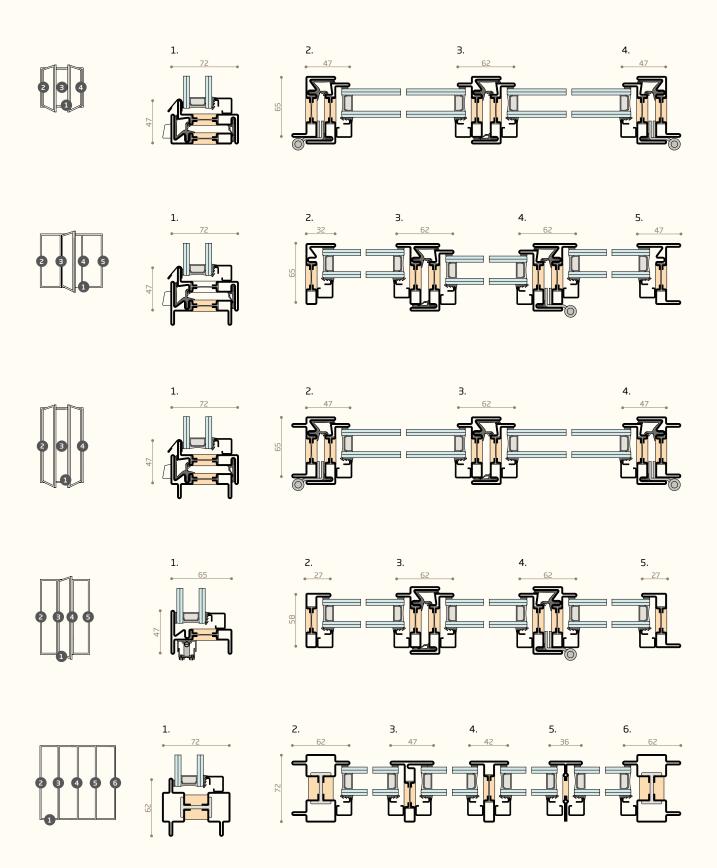
- 1. internal and external rebate
- 2. double rebate seal
- ${\it 3. structural thermal break in polyamide and polyure thane}\\$
- 4. fitting groove for glazing up to 37 mm thick
- 5. section with reduced size

### profiles

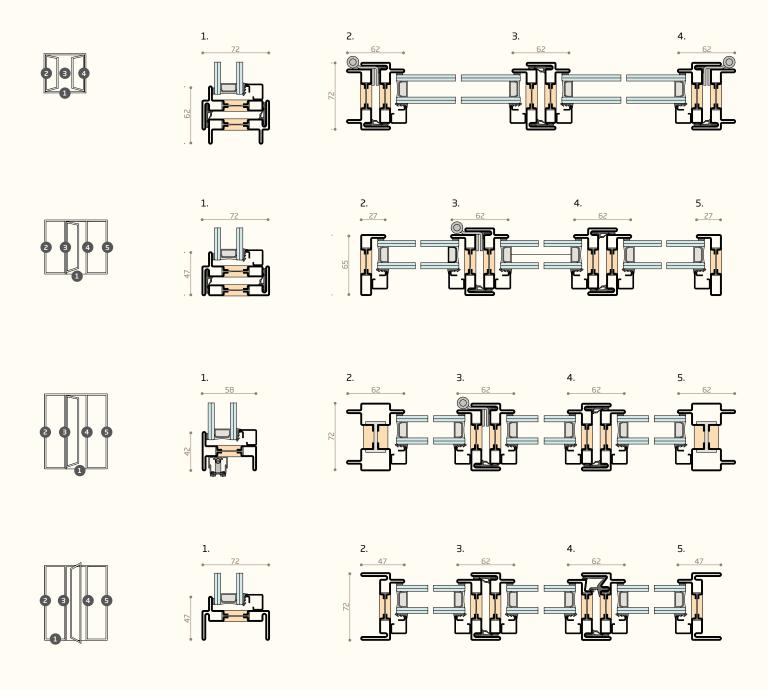


# OS2 65

### inward-opening and fixed pane sections

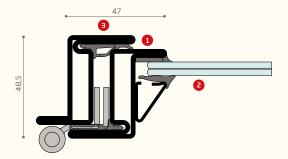


### outward-opening sections



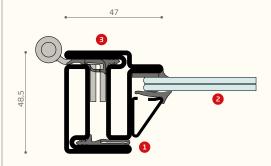
### **OS240**

### inward-opening section



- 1. internal and external rebate
- 2. fitting groove for glazing up to 15 mm thick
- 3. section with reduced size

### inward-opening section



- 1. internal and external rebate
- 2. fitting groove for glazing up to 15 mm thick
- 3. section with reduced size

### profiles

PR.2424



PR.2425



PR.2430

PR.2431

PR.2451

PR.2454

PR.2455

PR.2461



PR.2462



PR.2463

PR.2464

PR.2471

PR.2474



### glazing beads

PR.2415

PR.2416

PR.2429

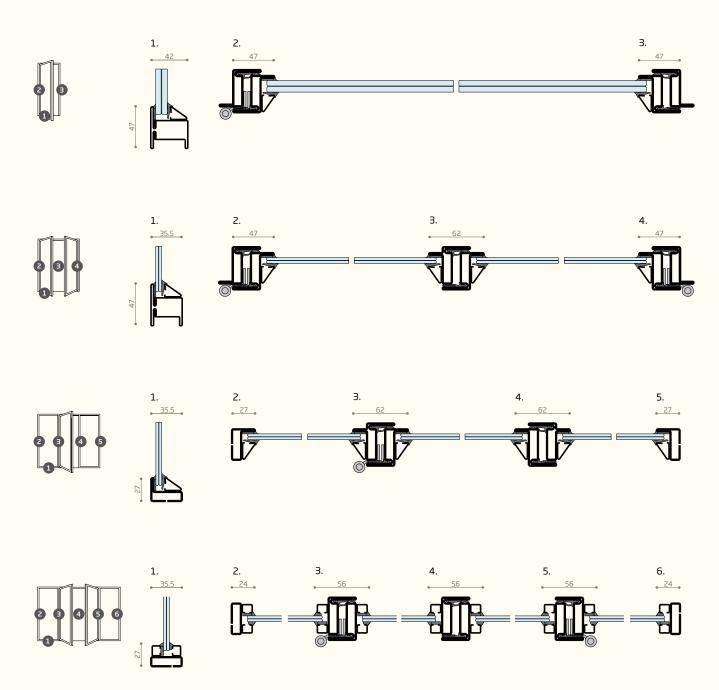
PR.2606

PR.2607

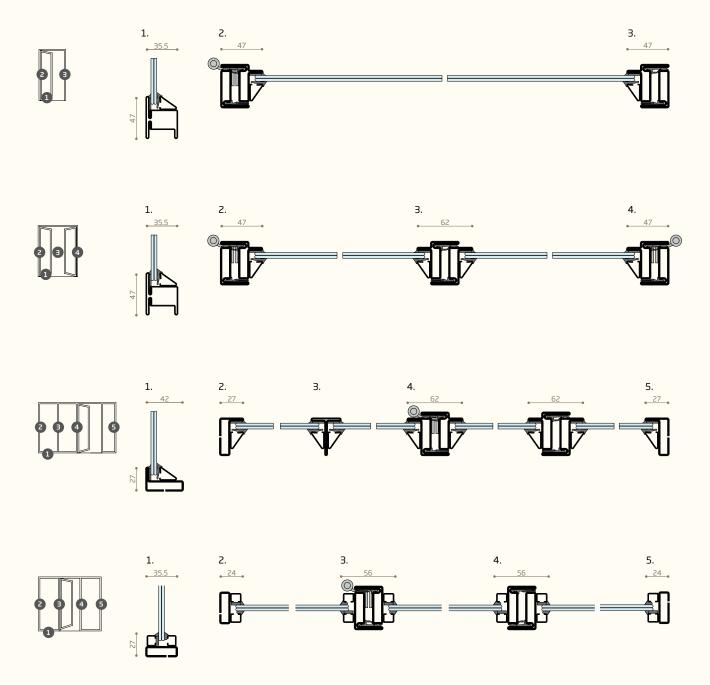


# OS2 40

### inward-opening and fixed pane sections

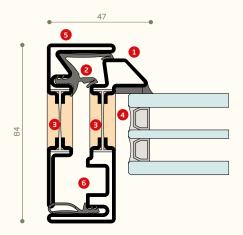


### outward-opening sections



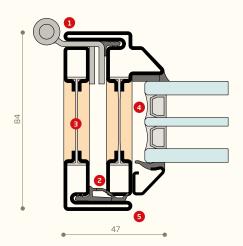
### **BV** 75

### inward-opening section with TT mechanism



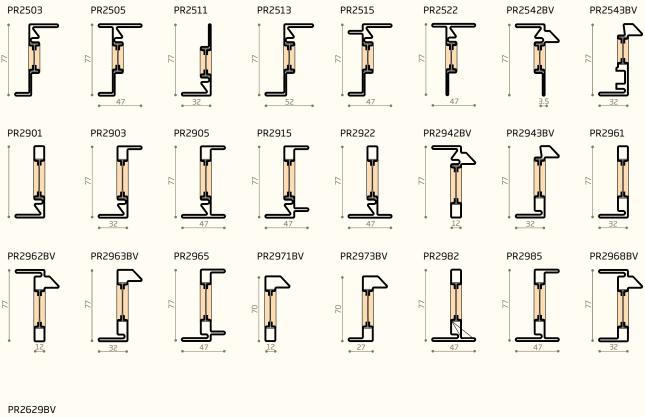
- $1. \ internal \, and \, external \, rebate$
- ${\it 2. weep \, system \, and \, double \, gasket}$
- 3. structural thermal break in polyamide and polyure than e
- 4. fitting groove for glazing up to 40 mm thick
- 5. section with reduced size
- 6. hardware groove

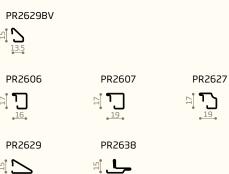
### outward-opening section



- 1. internal and external rebate
- 2. double seal rebate
- 3. structural thermal break in polyamide and polyure than e
- 4. fitting groove for glazing up to 40 mm thick
- 5. section with reduced size

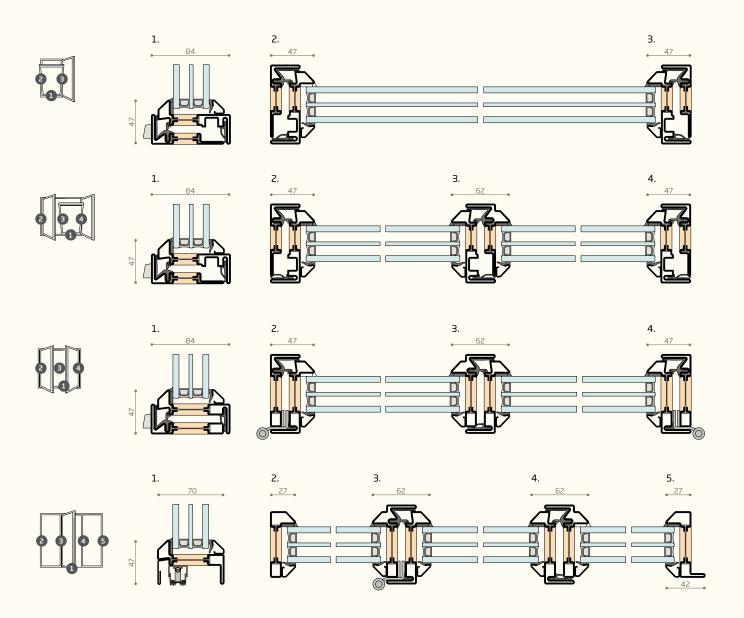
### profiles



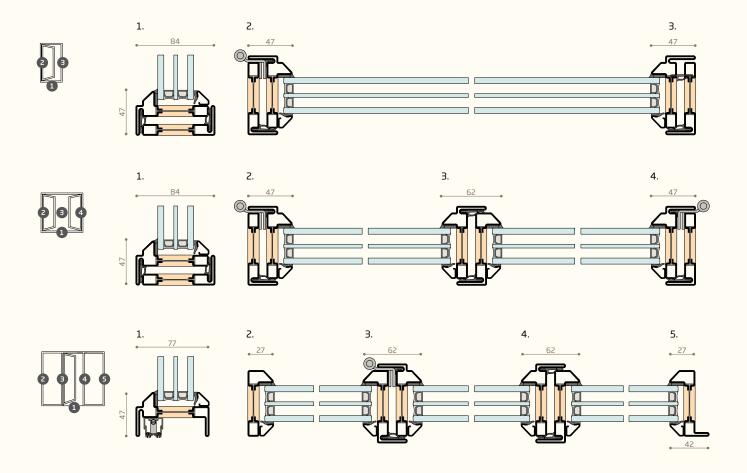


# BV 75

### inward-opening sections

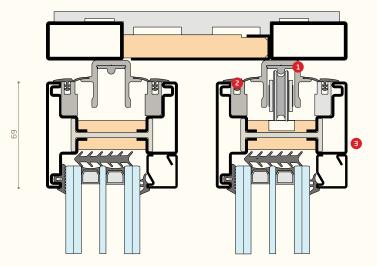


### outward-opening sections and fixed panes

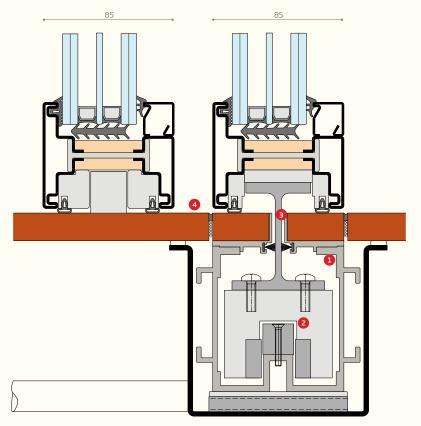




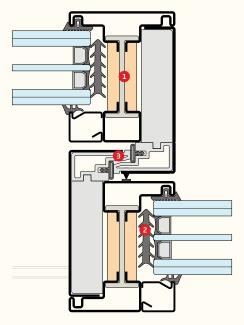
### main sections



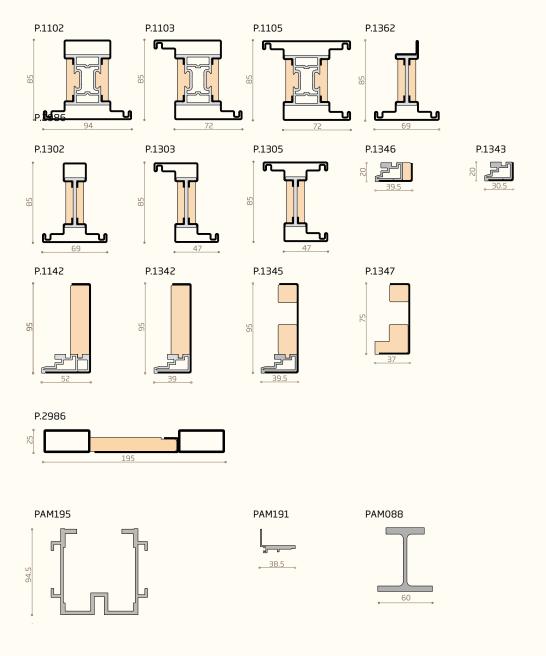
- 1. thermal break polyamide truck
- 2. double sealing gasket
- 3. continuous alignment groove



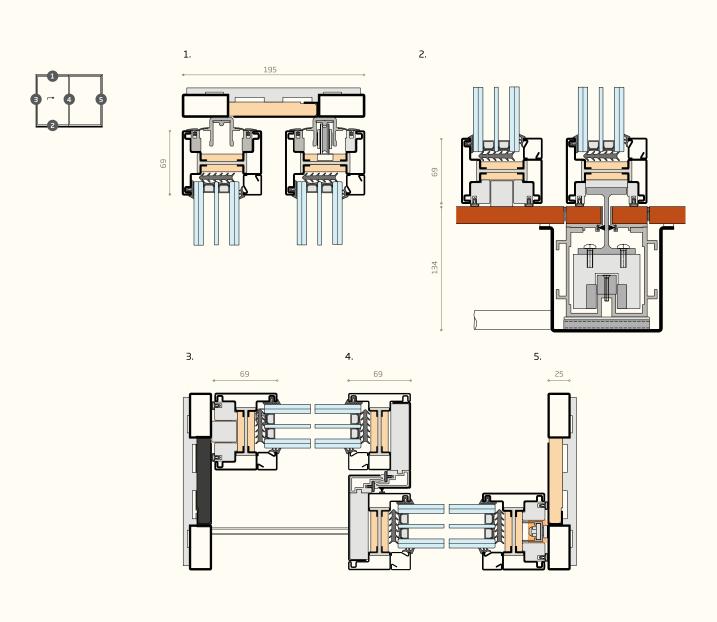
- 1. work group
- 2. Ironlev® magnetic levitation skid
- 3. sliding loop-hole
- 4. floor; continuity between inside and outside and without tripping



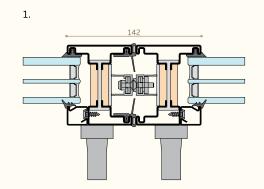
- 1. structural thermal break in polyamide and polyurethane
- 2. fitting groove for glazing up to  $\,60\,mm\,thick$
- 3. Two levels of gasket and one brush

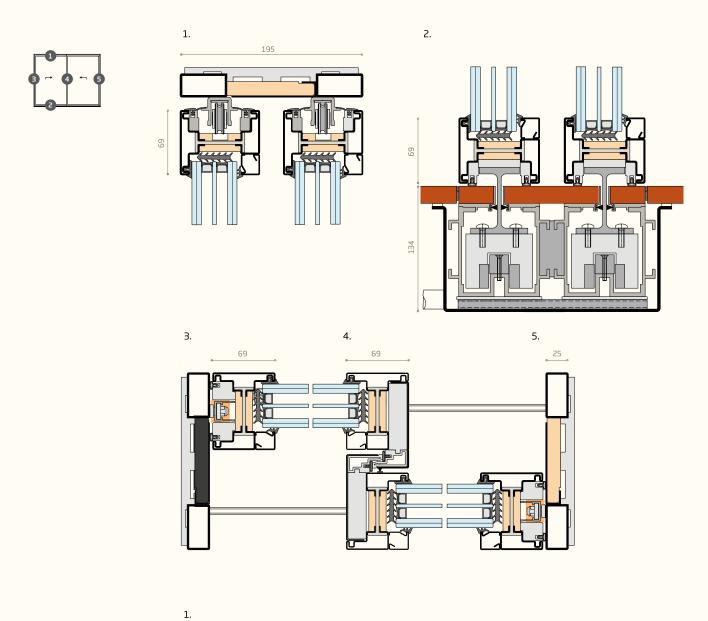


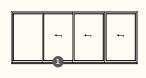
# ØG

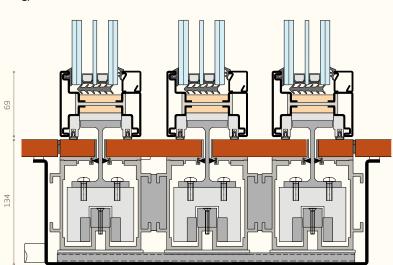






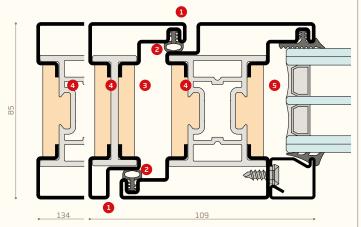






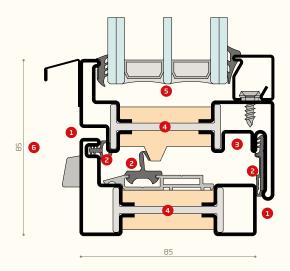
### **EBE 85**

### door section



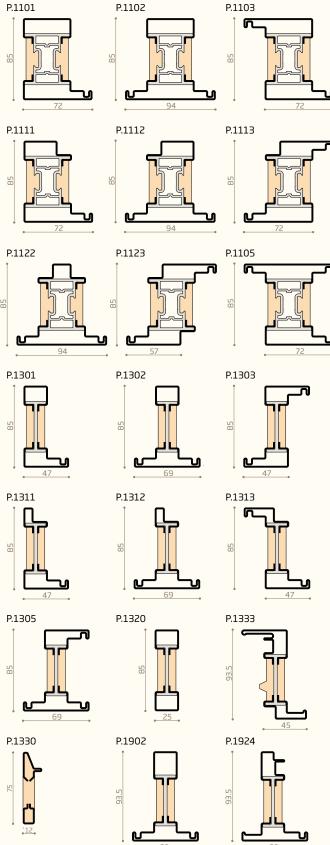
- 1. internal and external flush
- 2. double rebate seal
- 3. Euro-groove for accessories
- 4. structural thermal break in polyamide and polyurethane
- 5. fitting groove for glazing up to  $60\,\mbox{mm}$  thick

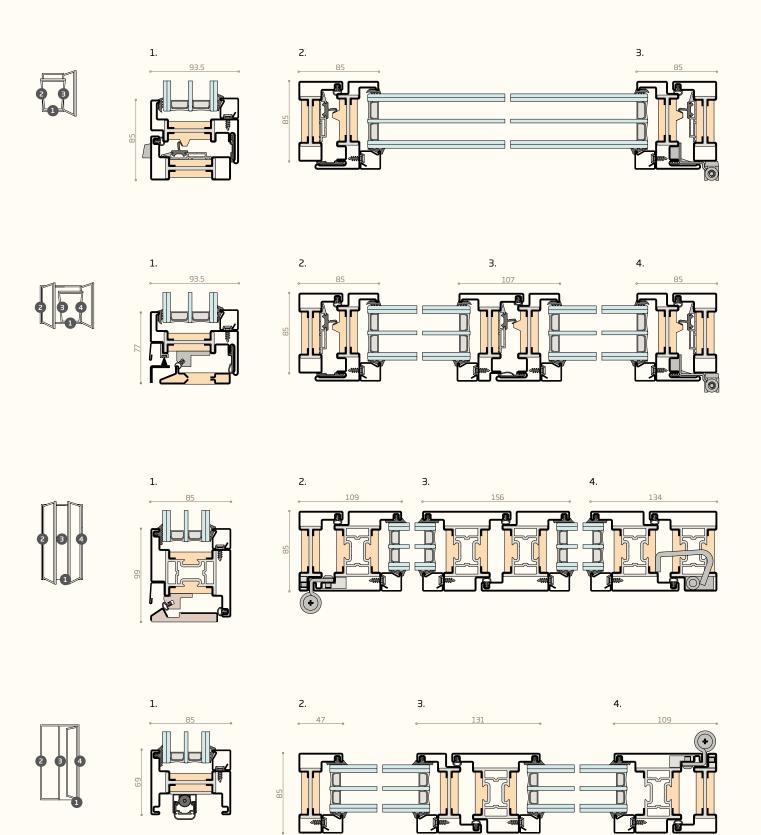
### window section



- 1. flush on the exterior and rebated on the interior
- 2. frame with weep system and triple gasket
- 3. wooden/pvc fitting groove for hardware slot
- ${\bf 4.\ structural\ thermal\ break\ in\ polyamide\ and\ polyure\ thane}$
- 5. fitting groove for glazing up to  $66\,\mathrm{mm}$
- 6. section with reduced size

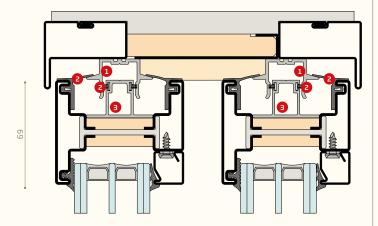
### profiles



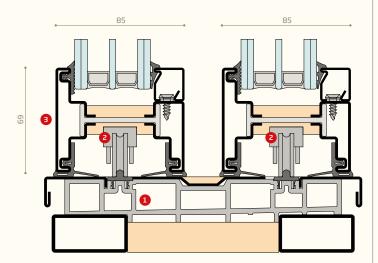


### EBE 85 AS

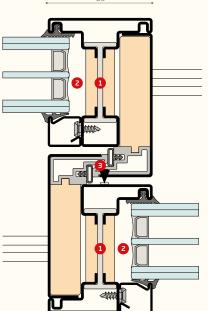
### main sections



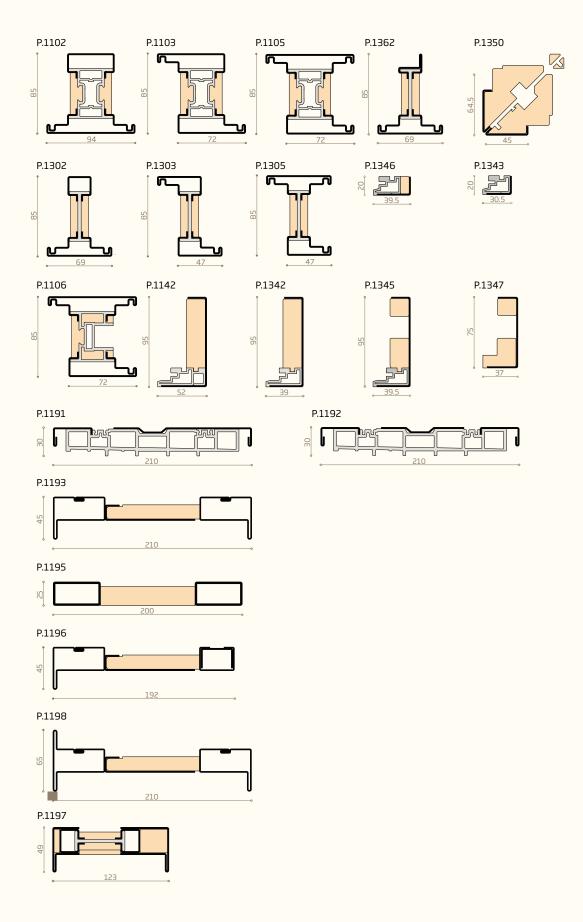
- 1. thermal break polyamide truck
- 2. double sealing gasket
- 3. continuous alignment groove



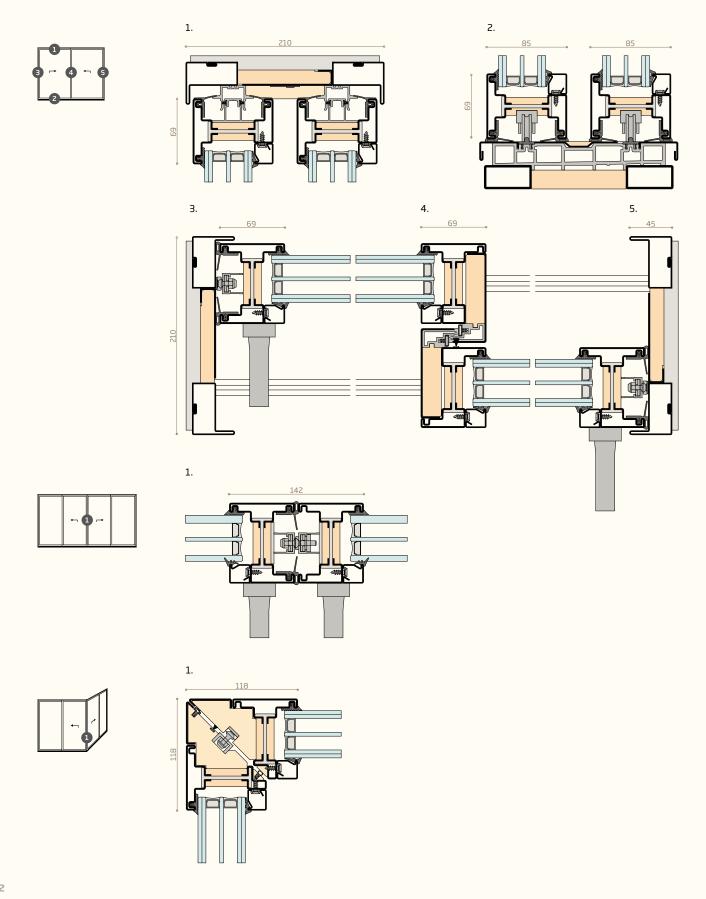
- ${\bf 1.}\ profile\ with\ threshold\ profile\ for\ water\ run-off$
- 2. reduced wheel (carriage) assembly
- 3. reduced profile same as the visible dimensions on the four sides

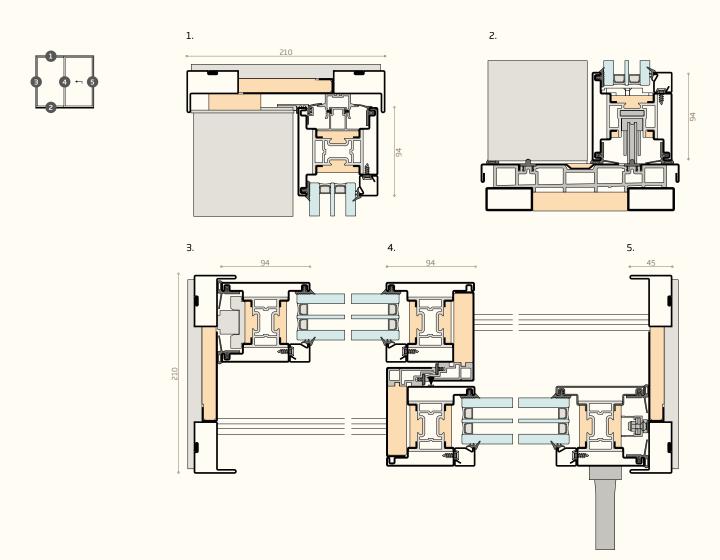


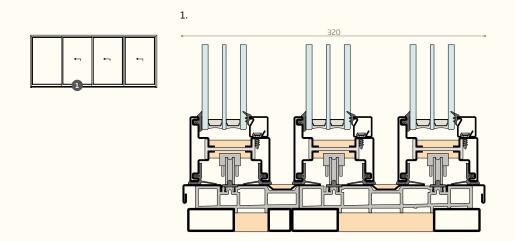
- 1. structural thermal break in polyamide and polyurethane
- 2. fitting groove for glazing up to 60 mm thick
- 3. Two levels of gasket and one brush



# EBE 85 AS

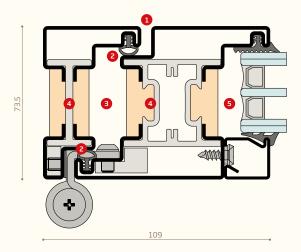






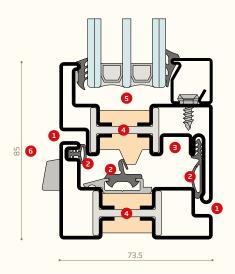
### **EBE 75**

#### door section

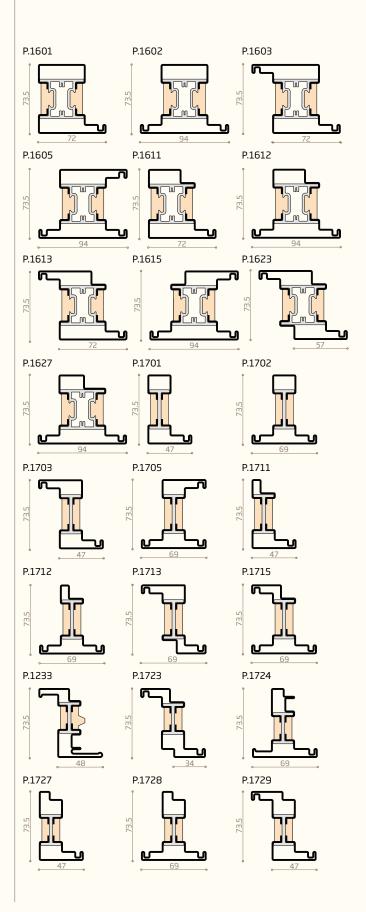


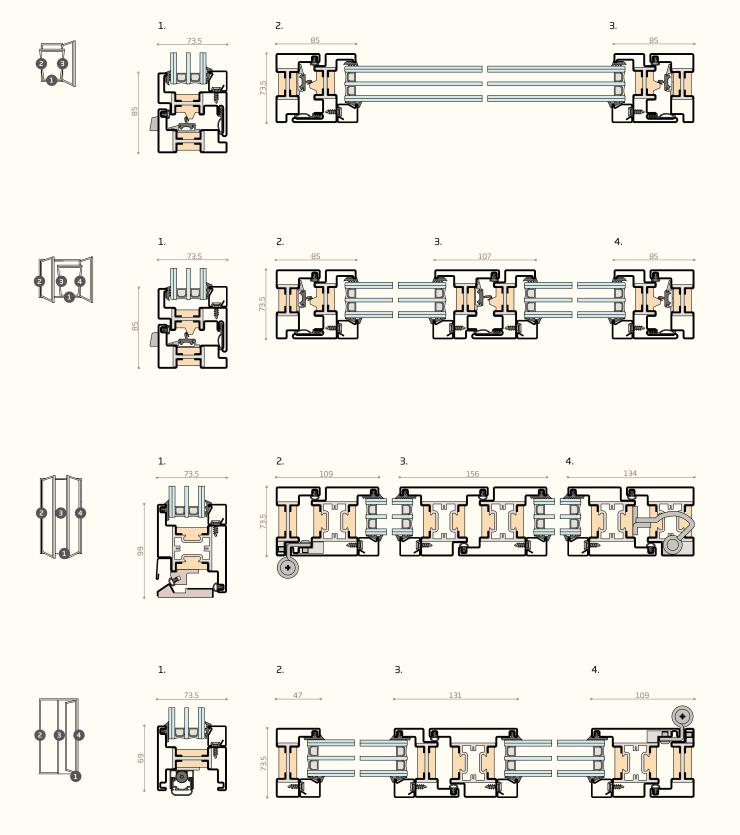
- 1. internal and external flush
- 2. double rebate seal
- 3. Euro-groove for accessories
- ${\bf 4.}\ structural\ thermal\ break\ in\ polyamide\ and\ polyure thane$
- 5. fitting groove for glazing up to 48 mm thick

#### window section



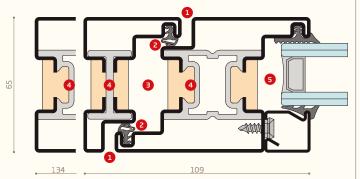
- 1. internal and external flush
- 2. frame with weep system and triple gasket
- 3. wooden/pvc fitting groove for hardware slot
- 4. structural thermal break in polyamide and polyurethane
- 5. fitting groove for glazing up to 46 mm thick
- 6. section with reduced size





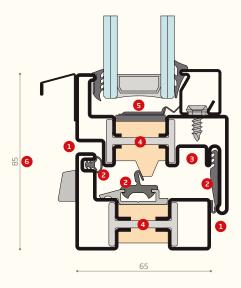
### **EBE 65**

#### door section

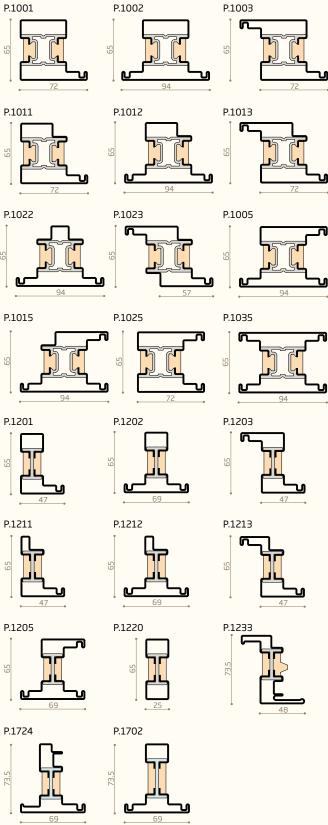


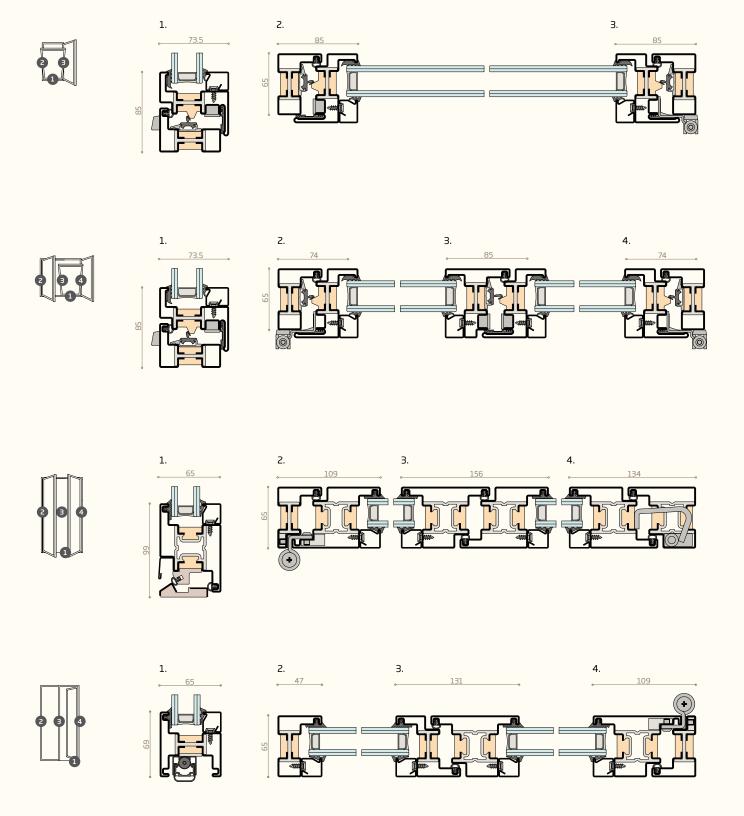
- 1. internal and external flush
- 2. double rebate seal
- 3. Euro-groove for accessories
- ${\bf 4.}\ structural\ thermal\ break\ in\ polyamide\ and\ polyure thane$
- 5. fitting groove for glazing up to 40 mm thick

#### window section



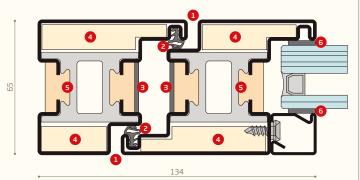
- 1. flush on the exterior and rebated on the interior
- 2. frame with weep system and triple gasket
- 3. wood/pvc fitting groove for hardware
- 4. structural thermal break in polyamide and polyure thane
- 5. fitting groove for glazing up to 46 mm thick
- 6. section with reduced size



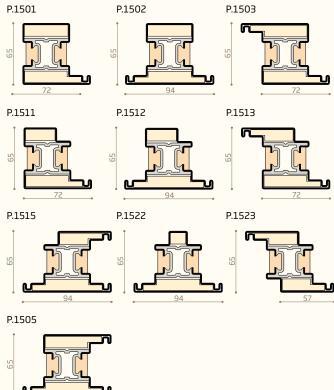


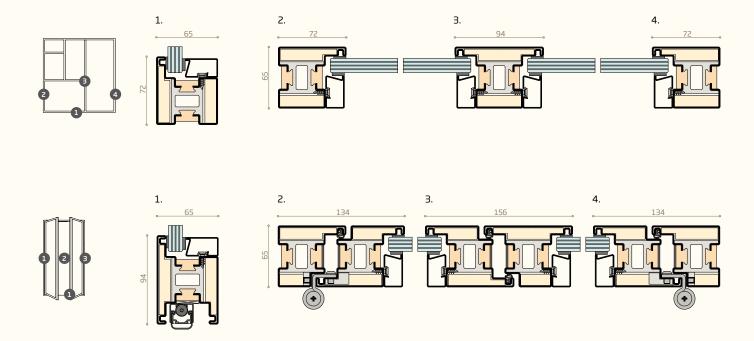
# EBE AF

#### door section



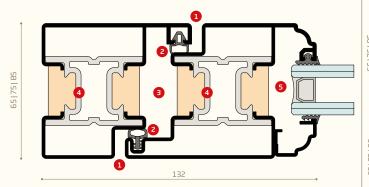
- 1. internal and external flush
- 2. double rebate fire seal
- 3. expanding seal
- 4. cooling inert material
- 5. fireproof thermal break resins
- 6. special glazing gasket





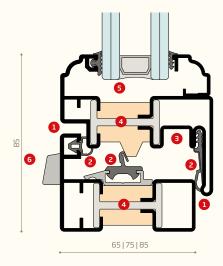
### ST 65

#### door section



- 1. internal and external flush
- 2. double rebate seal
- 3. Euro-groove for accessories
- 4. structural thermal break in polyamide and polyurethane
- 5. fitting groove for glazing up to 24 mm thick

#### window section

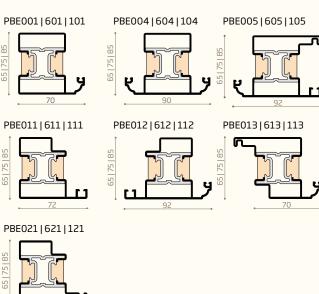


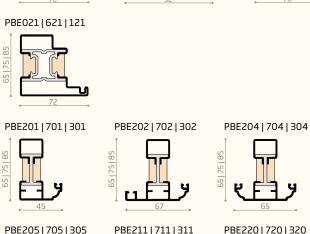
- 1. flush on the exterior and rebated on the interior
- 2. frame with weep system and triple gasket
- 3. wood/pvc fitting groove for hardware
- ${\bf 4.}\ structural\ thermal\ break\ in\ polyamide\ and\ polyure\ thane$
- 5. fitting groove for glazing up to 31 mm
- 6. section with reduced size

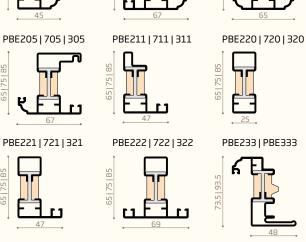
#### profiles

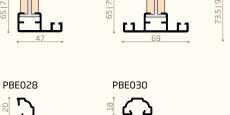
65|75|85

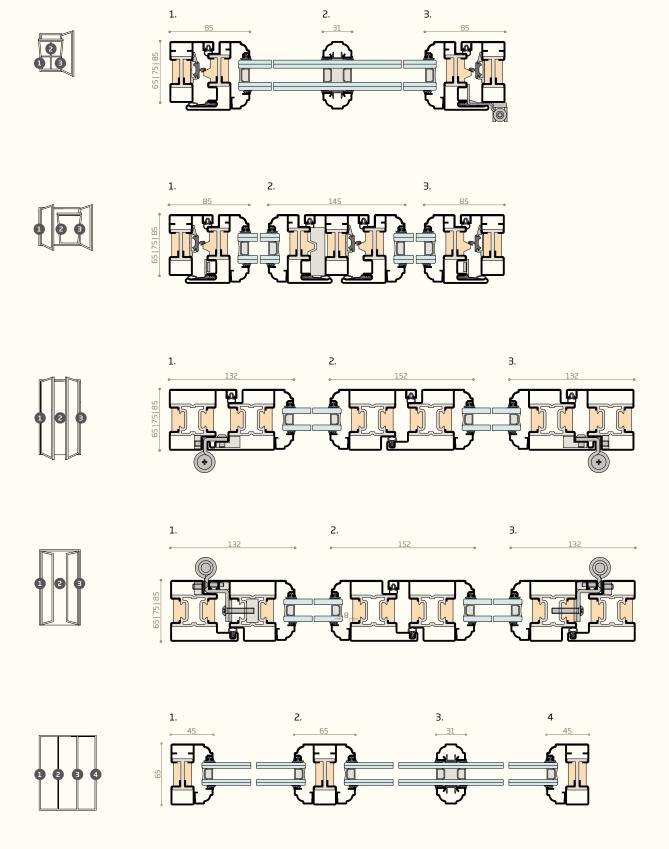
65 | 75 | 85





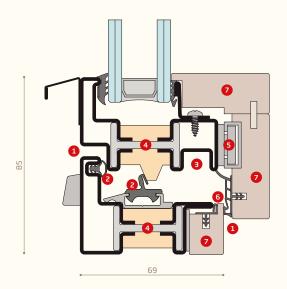




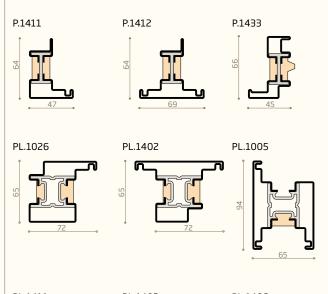


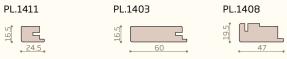
### ML 65

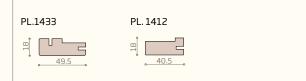
#### window section

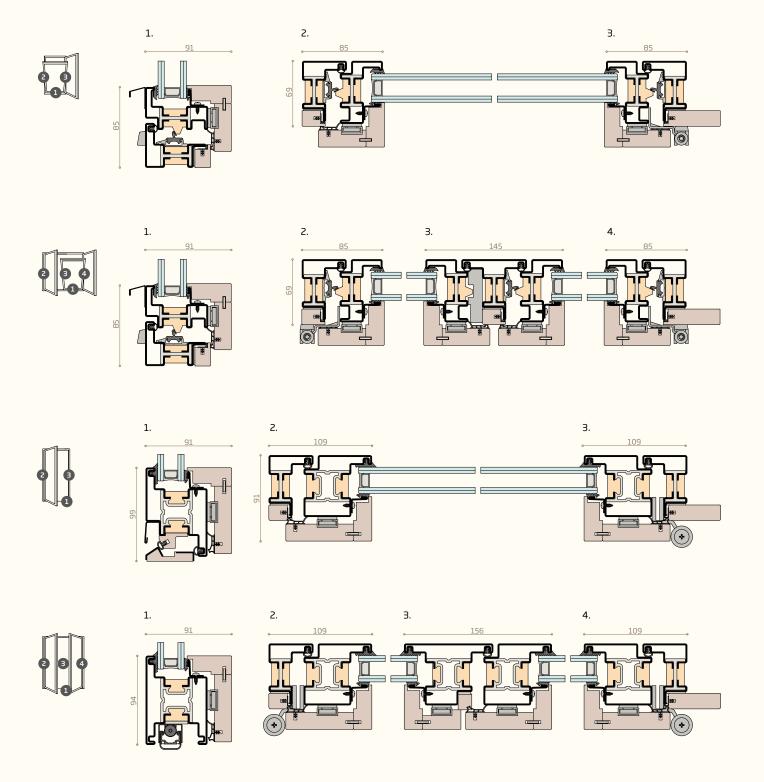


- 1. flush on the exterior and rebated on the interior
- 2. frame with weep system and triple gasket
- 3. housing for anti break-in hardware on steel profile
- ${\bf 4.}\ structural\ thermal\ break\ in\ polyamide\ and\ polyure\ thane$
- 5. point fixed curtain walls in plastic material
- $6.\ finishing\ and\ levelling\ seals$
- 7. internal frames in solid wood



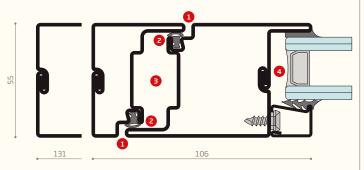






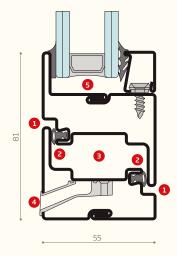
### SA 15

#### door section



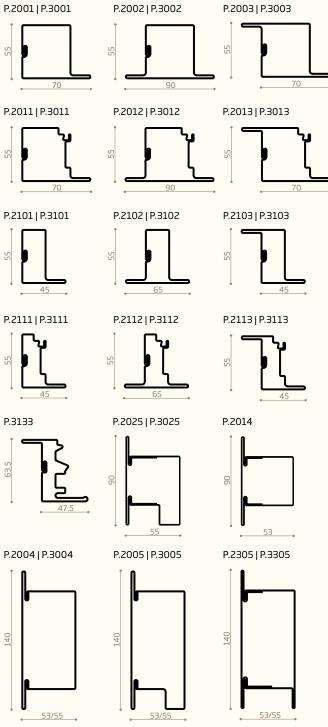
- 1. internal and external flush
- 2. double rebate seal
- 3. Euro-groove 25x21 for certified hardware
- 4. fitting groove for glazing up to 35 mm thick

#### window section

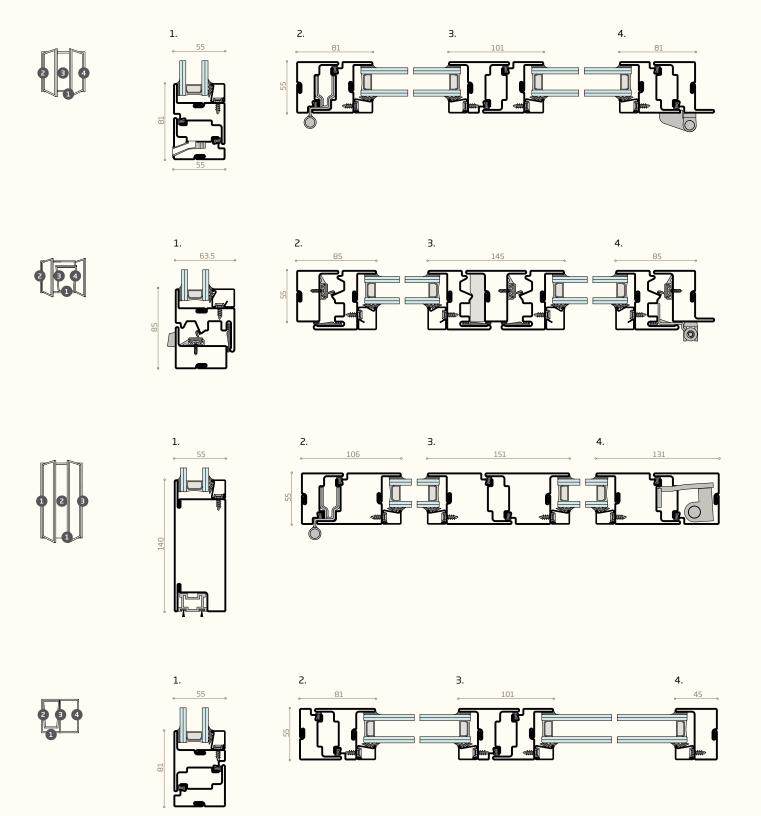


- 1. internal and external flush
- 2. double rebate seal
- 3. Euro-groove 25x21 for certified hardware
- ${\bf 4.\ integrated\ accessory\ for\ water\ drainage}$
- 5. fitting groove for glazing up to 35 mm thick

#### profiles

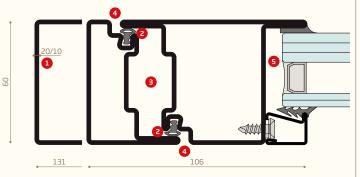


sistemacciaio P.2--- profiles are provided in stainless steel and brass 12/10 thick sistemacciaio P.3--- profiles are provided in galvanised steel and corten steel 15/10 thick



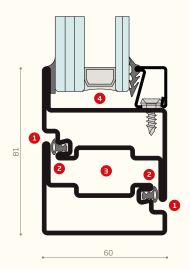
### **SA 20**

#### door section

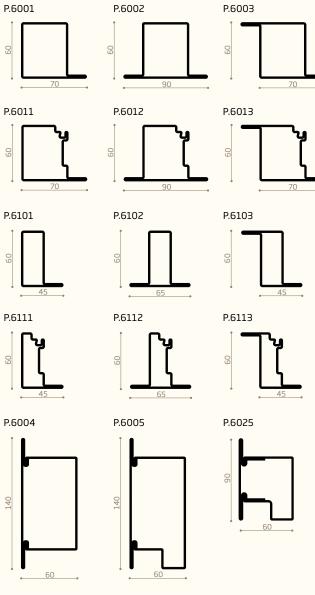


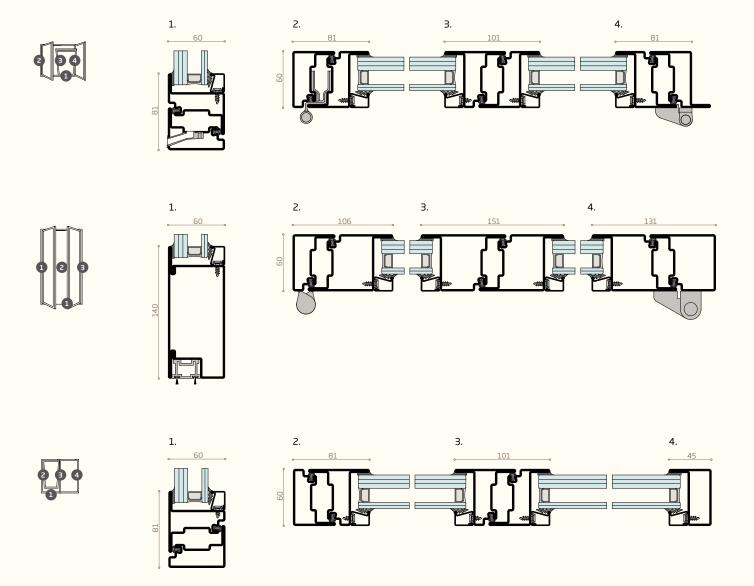
- 1. 20/10 profile thickness
- 2. double rebate seal
- 3. Euro-groove 25x21 for certified hardware
- 4. internal and external flush
- 5. fitting groove for safety glazing up to 35 mm thick

#### window section



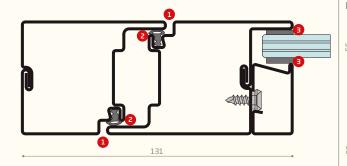
- 1. internal and external flush
- 2. double rebate seal
- 3. Euro-groove 25x21 for certified hardware
- 4. fitting groove for glazing up to 35 mm thick





### SA AF

#### main sections



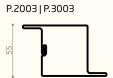
- 1. internal and external flush
- 2. double rebate fire seal
- 3. special glazing gasket

#### profiles

### P.2001 | P.3001



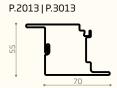
# P.2002 | P.3002



P.2011 | P.3011



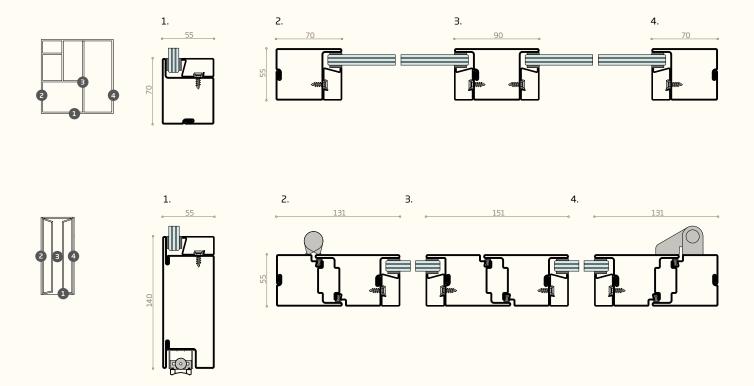




#### P.2005 | P.3005

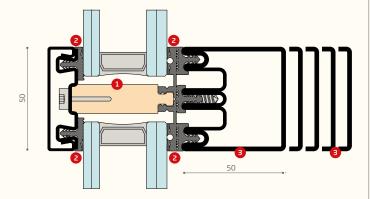


AF P.2 --- profiles are provided in stainless steel 12/10 thick
AF P.3 --- profiles are provided in stainless steel and corten steel 15/10 thick



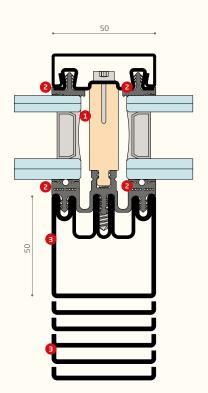
### 4F1

#### main sections



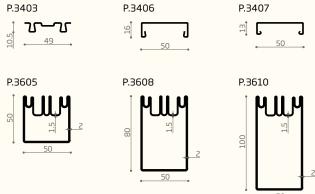
#### transom

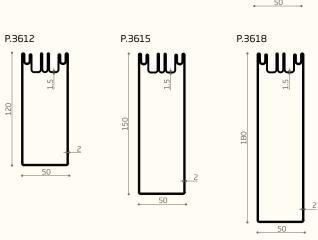
- $1.\ variable\ thermal\ break\ profile\ for\ 25\text{-}56\ mm\ glazing$
- 2. transom water sealing gaskets
- 3. 50-180 mm structural profile

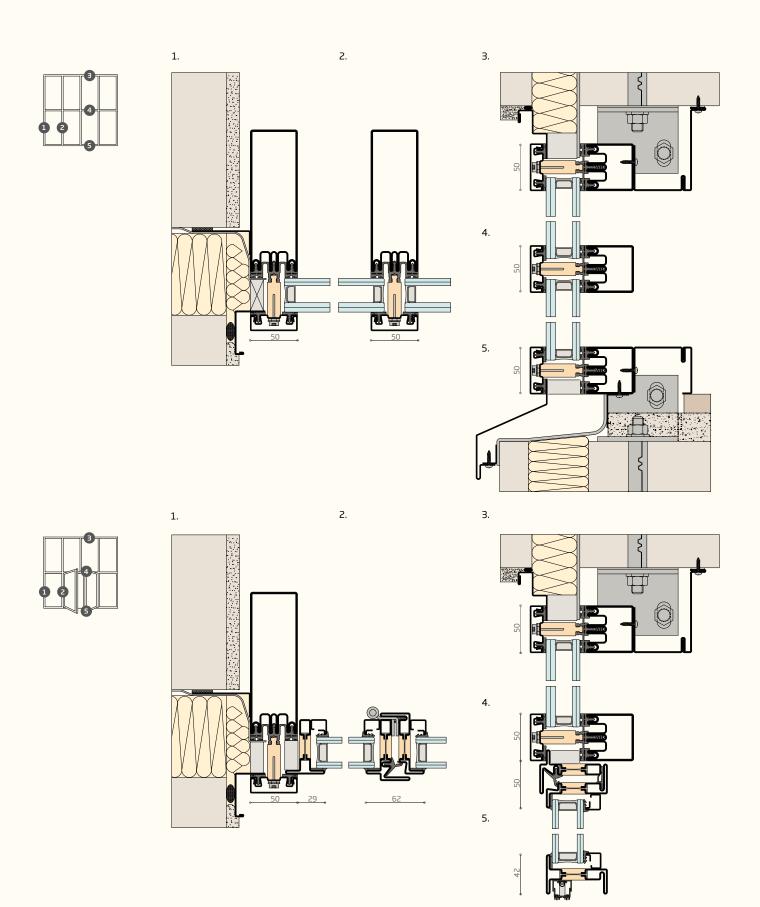


#### mullion

- $1.\ variable\ thermal\ break\ profile\ for\ 25\text{-}56\ mm\ glazing$
- 2. mullion sealing gaskets for water draining
- 3. 50-180 mm structural profile

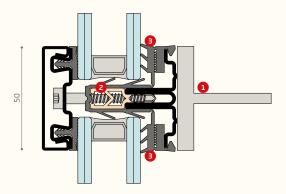






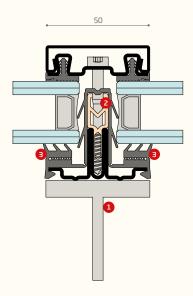
### 4F 2

#### main sections



#### transom

- $1. \ support \, profile \, for \, screws \, or \, welding$
- 2. variable thermal break profile for glazing up to 35 mm
- ${\it 3. transom\,water\,sealing\,gaskets}\\$



#### mullion

- $1. \ support \, profile \, for \, screws \, or \, welding \,$
- 2. variable thermal break profile for glazing up to 35 mm
- 3. mullion sealing gaskets for water draining



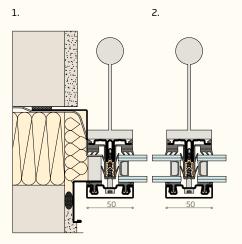


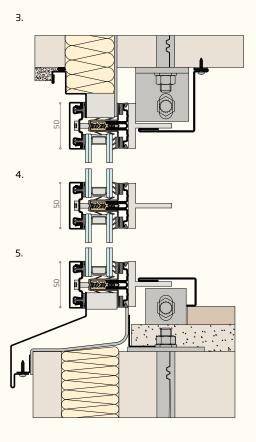






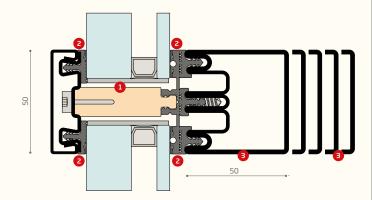






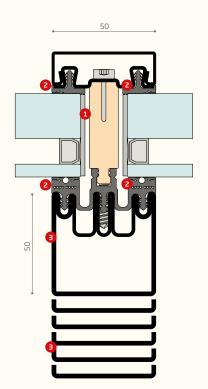
### 4F AF

#### main sections



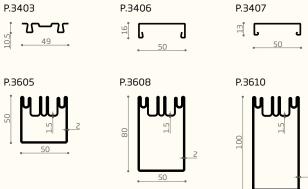
#### transom

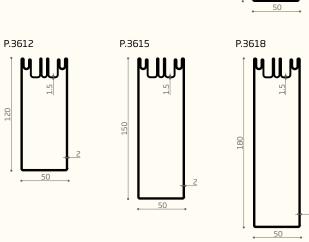
- 1. support profile for screws or welding
- 2. variable thermal break profile for glazing up to 35 mm
- 3. transom water sealing gaskets

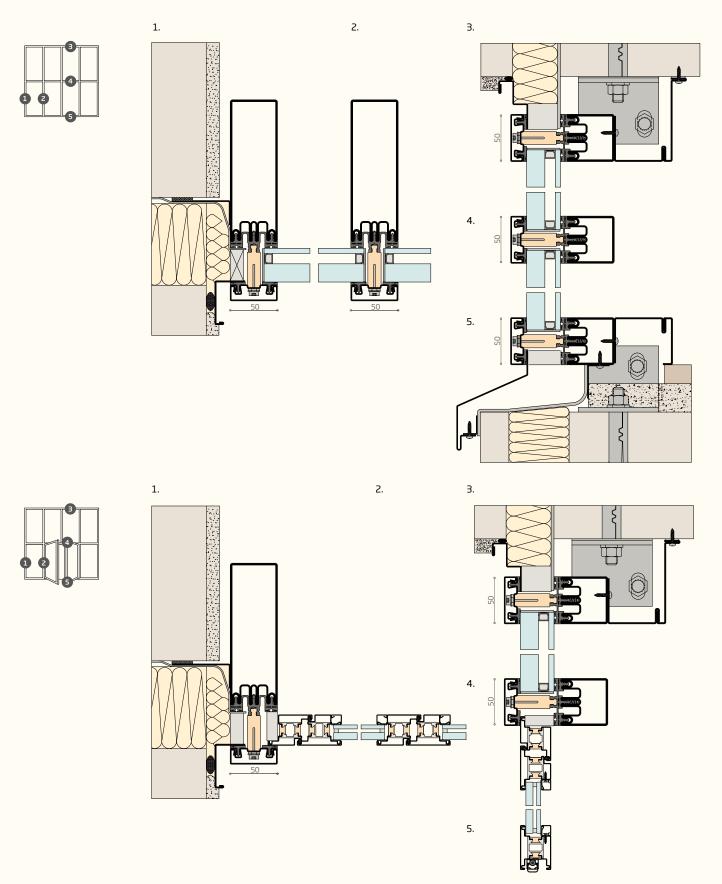


#### mullion

- $1. \ support \, profile \, for \, screws \, or \, welding \,$
- 2. variable thermal break profile for glazing up to 35 mm
- 3. mullion sealing gaskets for water draining







### subframe for wall mounting

#### system and performance



**subframe** is a system with profiles and accessories for the construction of sub-frames to be mounted on load-bearing walls. It is available in two versions: galvanised steel and galvanised steel with thermal break, and it comes in different sizes.

The steel profiles, closed mechanically thanks to overlap technology, are provided with integrated anchor bolts and pitch holes for perfect anchoring to the wall. They are also provided with a double-thickness metal plate in the area where the doors and windows will be secured. The system is equipped with accessories for quick assembly of the frame. The version with thermal break consists of a profile made of two elements, steel and a plastic compound, which have been joined by a bi-component glue. This process has made the profile extremely

 $1.\ profile\ made\ of\ insulating\ plastic\ material$ 

solid and resistant to torsional stiffness.

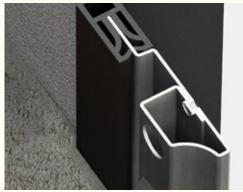
- 2. profile in galvanised steel
- 3. overlap mechanical closing technology
- 4. extractable metal anchor bolts
- 5. holes for mortar application
- 6. smaller sections in contact with the plaster

#### torsional stiffness and securing



double-thickness plate for added support
The area of the sub-frame where doors and windows
will be secured is provided with a double-thickness
metal plate. This guarantees perfect and stable support
even with heavier doors and windows.

#### thermal insulation



The perfect joining of steel and plastic material, thanks to a special bi-component glue, provides the **subframe** with extremely high stiffness values.

### accessories



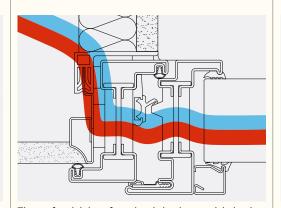
rectangular assembling brackets



profiles closed with overlap technology
Free from welding, which would reduce its performance
against corrosion, the sub-frame is able to reach
high torsional stiffness values thanks to the overlap
mechanical closing technology. This technology
provides joining by compenetration of the surfaces.



**extractable integrated anchor bolts**The anchor bolts, together with pitch holes, make it possible for the mortar to perfectly fix the **subframe** to the walls. Moreover, the smaller area of the **subframe** in contact with the plaster reduces the risk of cracking in the future.



The perfect joining of steel and plastic material, thanks to a special bi-component glue, provides **subframe** with extremely high stiffness values. the **subframe**'s special TT shape acts as a natural extension of the walls' insulation and redirects the heat flow outwards. This has two important results: a reduced thermal flow, which increases the insulating performance; an increase in the internal temperature of the profiles, which reduces the risks of condensation and mould formation even in those situations with high internal humidity.



corner braces

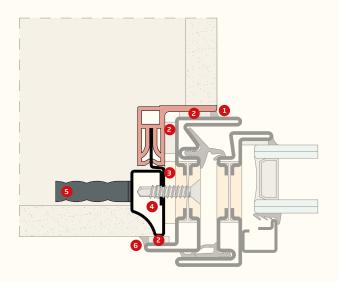


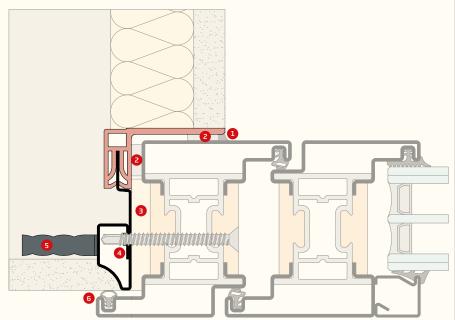
mounting spacers

The system is provided with accessories that make assembling the profiles quick and easy.

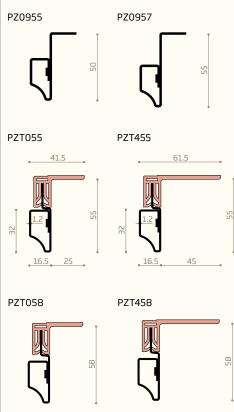
# subframe for wall mounting

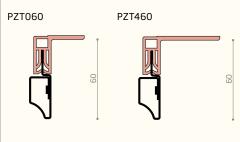
#### base and thermal break version

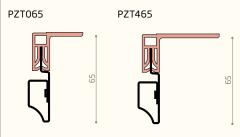


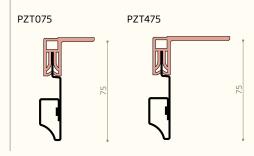


- 1. neutral silicone
- 2. pre-compressed self-adhesive tape
- 3. thermal and acoustic polyure than e foam
- 4. double-thickness steel profile mounting
- $5.\ wall\,anchor\,bolt$
- 6. EPDM or paintable seal in acrylic



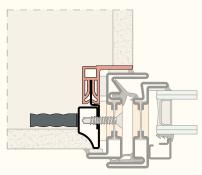




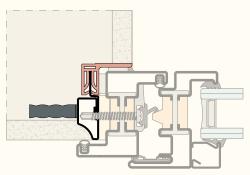


#### main sections

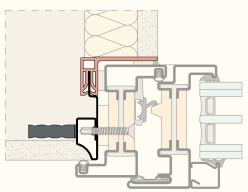
PZT060 with 0S2



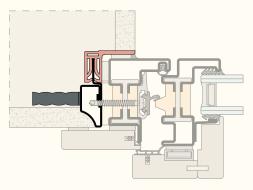
PZT055 with EBE 65



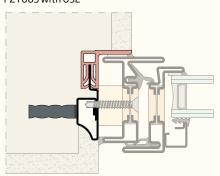
PZT475 with EBE 85



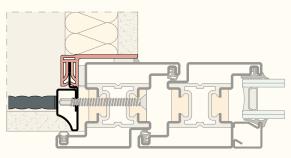
PZT055 withEBE ML



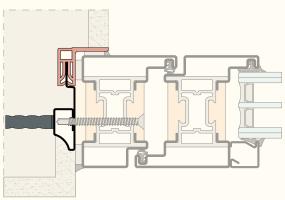
PZT065 with 0S2



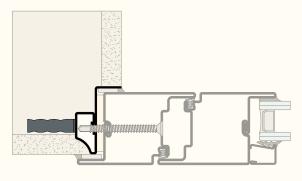
PZT455 with EBE 65



PZT075 with EBE 85



PZ0955 with SA 15



### material properties

#### galvanized steel

<b>ALLOY</b> UNI 10142:90	Fe P02 GZ200	Fe E 250 GZ275 MA-C
Symbol Code	DX 51D	S 250 GD+Z
Numerical Code	1.0226	1.0242

CHEMICAL COMPOSITION	(% of the mass)
Fe	99,5
Si	0,27
Mn	0,37
P max.	0,014
S	0,009
Cr	0,071
Cu	0,25
Мо	0,016
Ni	0,012
Others	0,05

#### PHYSICAL FEATURES

Specific weight (kg / dm³)	7,87
Thermal conductivity at 20° λ (W / m K)	60
Coefficient of thermal expansion c (mm / m °C)	0,0123
Module of elasticity E (N / mm²)	210.000
Electric conductivity $\Omega$ ( $\Omega$ / mm / m)	0,0934

#### **MECHANICAL FEATURES**

V'-14 D- (N. (2 )	220, 200
Yield Re (N / mm²)	220 - 300
Tensile strength Rm (N / mm²)	500
Elongation at break A <sub>80 mm</sub> % min	22
Vickers Scale	200 - 250

#### REFERENCE STANDARDS

UNI EN 10326:2004 Continuously hot-dip coated strip and sheet of structural steels - Technical delivery conditions
UNI EN 10327: 2004 Continuously hot-dip coated strip and sheet of low carbon steels for cold forming - Technical delivery conditions

#### stainless steel

ALLOY

	18-10	17-12-2
AISI acronym	304	316L
DIN acronym	1.4301	1.4404
CHEMICAL COMPOSITION*	(% of the ma	ss)
С	≤0,07	≤0,030
Si	≤1,00	≤1,00
Mn	≤2,00	≤2,00
P max.	0,045	0,045
S	≤0,030	≤0,030
N	≤0,11	≤0,11
Cr	17,5 - 19,5	16,5 - 18,5
Мо	-	2 - 2,50
Ni	8,0 - 10,5	10 - 13
Others	-	-

X5CrNi

X2CrNiMo

#### PHYSICAL FEATURES\*

Specific weight ( kg / dm³)	7,91	8,00
Thermal conductivity at 20°C λ (W / m K)	17	17
Coefficient of thermal expansion (mm/m°C)	0,0103	0,0103
Module of elasticity E (N / mm²)	196.000	196.000
Electric conductivity $\Omega$ ( $\Omega$ / mm / m)	0,714	0,714
Melting point (°C)	1400 - 1420	1400 - 1420

#### **MECHANICAL FEATURES\*** (for cold-rolled strip)

Tensile strength Rm (N / mm²)		540 - 750	530 - 680
Proportionality limit	0,2 % Rp <sub>0,2</sub>	230	240
stress	1,0 % Rp <sub>1,0</sub>	260	270
Elongation at break A <sub>80 mm</sub> % min		45	40
Brinnel Scale HB (kg / m	nm²)	<165	<170

\*UNI 10088-2:1997

#### REFERENCE STANDARDS

EN 10088 - 1 Stainless steel - List of stainless steels EN 10088 - 2 Stainless steel - Material standard for stainless steel sheet,

plate and strip for general purposes EN 10088 - 2 Stainless steel - Material standard for stainless steel semifinished products, bars, rods and sections for general purposes EN 114 - Determination of the resistance to the corrosion for austenitic stainless steel

#### corten steel

ALLOY	(Corten A)
EN 10027 - 1 ECISS IC10	S355JOWP
CHEMICAL COMPOSITION	(% of the mass)
C max	0,12
Si max	0,75
Mn max	1,0
P	0,06 - 0,15
S max	0,04
Ni max	0,65
Cr	0,30 - 1,25
Cu	0,25 - 0,55

#### PHYSICAL FEATURES

Specific weight ( kg / dm³)	7,87
Thermal conductivity at 20°C λ (W / m K)	60
Coefficient of thermal expansion c (mm / m °C)	0,0108
Module of elasticity E (N / mm²)	210.000
Electric conductivity $\Omega$ ( $\Omega$ / mm / m)	0,0934

#### MECHANICAL FEATURES

Yield Re (N / mm²)		355
Tensile strength Rm (N / mm²)		510 - 680
Elongation at break A <sub>80 mm</sub> % min	< 1,5 ≤ 2	14 - 16
80 mm 70 111111	< 2 ≤ 2,5	15 - 17
	< 2,5 ≤ 3	16 - 18

#### REFERENCE STANDARDS

UNI EN 10131 Cold rolled uncoated and zinc or zinc- nichel electrolytically coated low carbon and high yield strength steel flat products for cold forming - Tolerances on dimensions and shape

#### brass (OT67 copper alloy)

ALLOY	Cold rolled laminate 10 H10
Alloy code	CW 506L
Designation	R350/H095
CHEMICAL COMPOSITION*	(% of the mass)
Cu	66 - 68
Pb max	0,20
Fe max	0,15
Al max	0,05
Sn max	0,20
Simax	0,15
Mn max	0,10
Ni max	0,30
impurità	0,40
Zn	resto

PHYSICAL FEATURES*	Cold rolled laminate 10 H10
Specific weight ( kg / dm³)	8,50
Specific heat capacity at 20°C (ca	ıl/g) 0,09
Thermal conductivity at 20°C [cal / (s cm °C)]	0,278
Linear thermal expansion coeffic 25 to 300°C (1 / °C)	ient - 20,2 x 10 <sup>-5</sup>
Electrical resistivity an 20 °C (μΩ	cm) 6,63
Module of elasticity E (N / mm²)	110.000
Melting point (°C)	905 - 940
Structure	Alfa

MECHANICAL FEATURES*	Cold rolled laminate 10 H10
Ultimate tensile strength R (N / mm²)	350 - 430
Yield strength S <sub>(0,2)</sub> (N / mm²)	200 - 360
Elongation A <sub>5</sub> (min %)	23
Brinnel Scale HB	95 - 125

\*UNI 4894:1962

#### REFERENCE STANDARDS

UNI EN 1652: Copper and copper alloys - Plate, sheet, strip and circles for general purposes

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