

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.



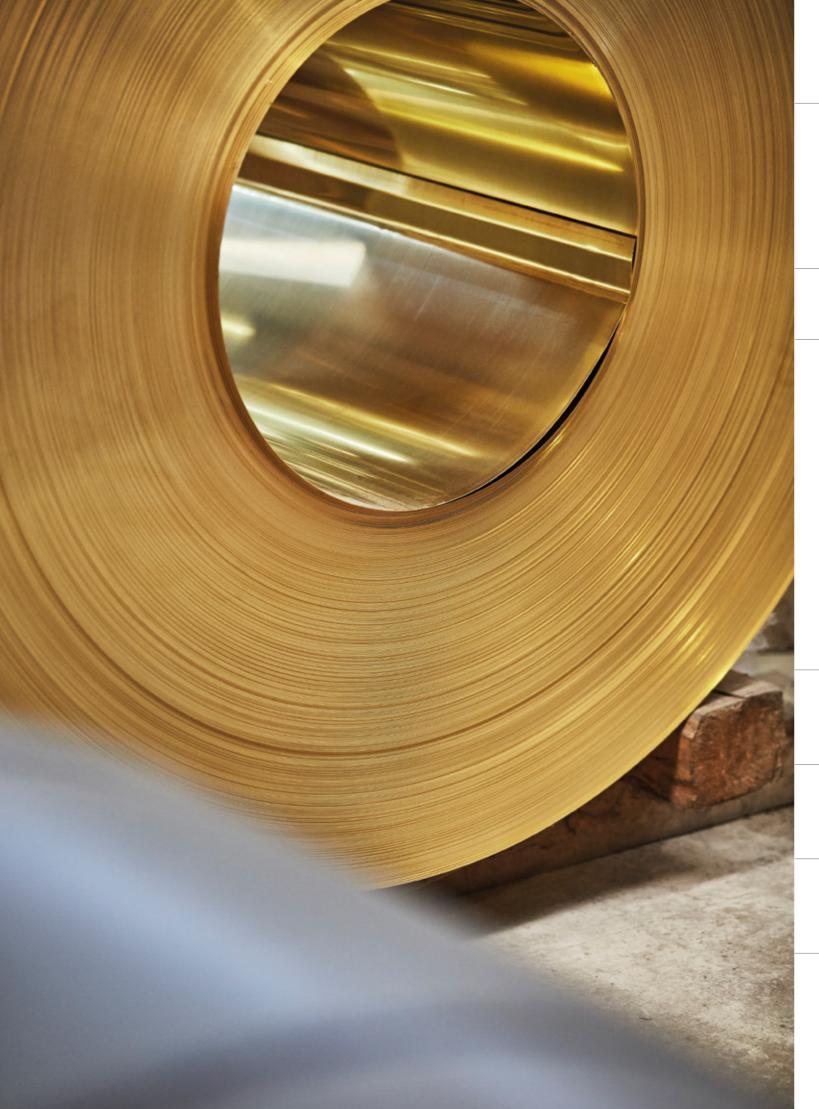




Tadao Ando, Archea, Arup, Omrania, P&T Group, Stanton Williams, Winkinson Eyre, David Chipperfield, Antonio Citterio, Foster + Partners, Massimiliano Fuksas, Zaha Hadid, Herzog & de Meuron, Rem Koolhaas, Giovanni Michelucci, Pier Luigi Nervi, Jean Nouvel, Renzo Piano, Giò Ponti, Carlo Scarpa, Tobia Scarpa,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

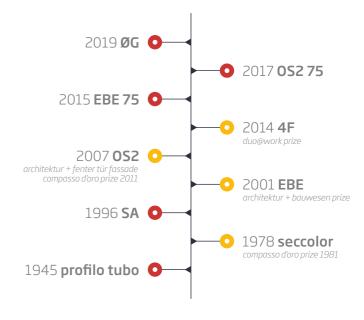
Today Secco Sistemi, thanks also to Secco Lab, applies its engineering technology to all the components of the system, from the tubular profile to the thermal break, including also the accessories, special items, mechanisms for automatization and any special working of the metals.

## 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

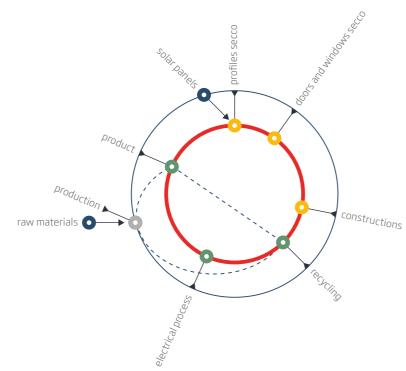
natural, solid and precious, long-lasting. These are the four materials used by Secco Sistemi: galvanised steel, stainless steel, corten steel and brass

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.

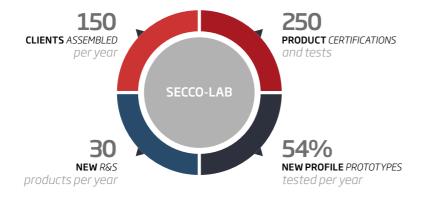
Research at Secco Sistemi aims at constant improvement of the production processes and the supplying of services, and is systematic through the activity of Secco Lab, regarding both the testing of new systems and the further enhancement or evolution of those already on the market, to reduce production 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.

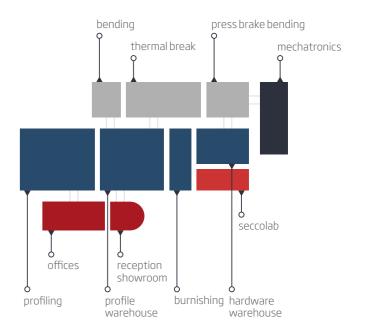
the company
consists of
several different
autonomous
departments,
all perfectly
integrated in the
production process
of Secco Sistemi

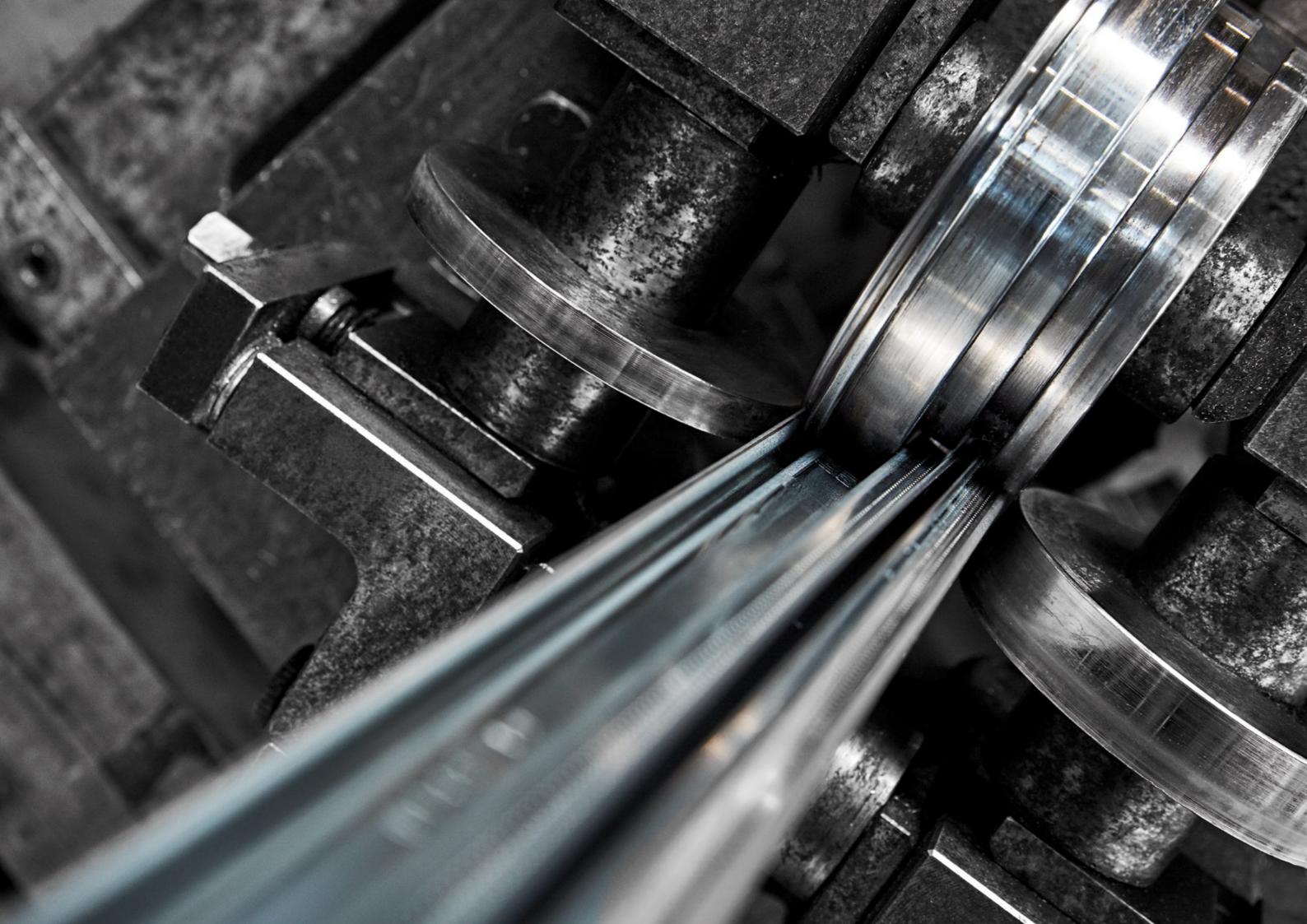
# integrated doors and windows

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.

The various departments of the company are independent









## 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

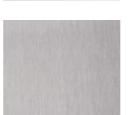
The first appearance of stainless steel, which has the property of protecting the material surface from corrosion, dates back to the beginning of the twentieth century.

These alloys based on iron, carbon, nickel and molybdenum, do not rust when exposed to the atmosphere, are extremely long-lasting and resistant to corrosion and need only minimum maintenance while they can be recycled up to 90%. The physical-mechanical characteristics of stainless steel moreover make it possible to produce considerably reduced section profiles.

The alloys designed over the last decades provide a range of products that are ideal to use in environments 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 scotch-brite finishes.



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



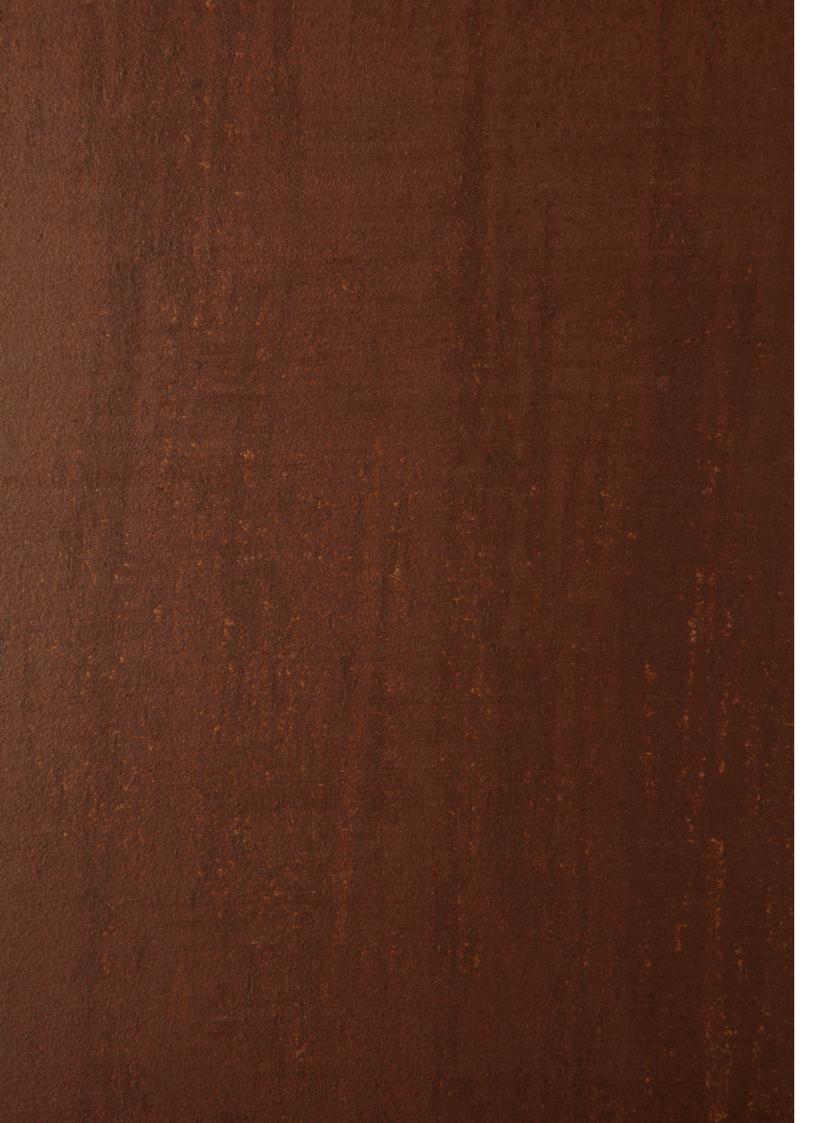
## satin-finished stainless steel

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



#### burnished stainless steel

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



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 0T67 cold-rolled and hardened to its raw state.



#### satin-finished brass

Profiles obtained from Copper Alloy OT67 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.

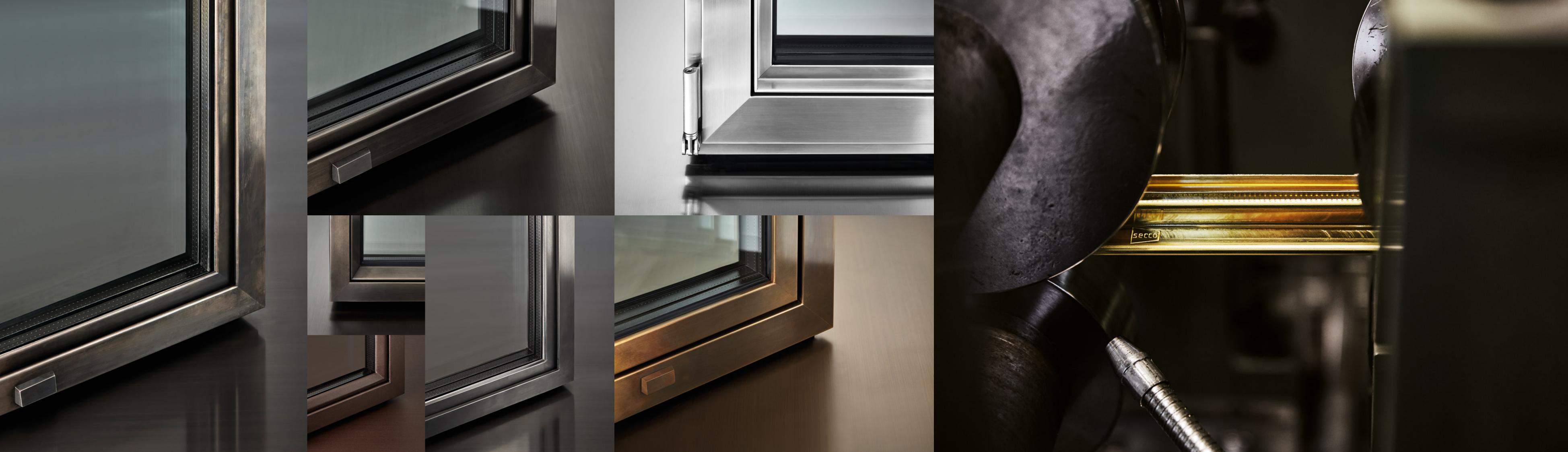


## index of products

thermal break windows and doors

	Thermal break steel	The elegance of the OS2	Thermal break steel	The highest quality in a	The bevelled shape of the	The OG® magnetic	EBE thermal break	EBE thermal break	EBE thermal break	EBE thermal break	EBE thermal break	ST thermal break system,	ML thermal break system,	System of tubular profiles	System of tubular profile	es System of tubular profile	es Self-supporting thermal	Thermal break curtain	Self-supporting curtain
w th pr	window for glass of thicknesses up to 50 mm,	system, with its minute profiles and high-quality materials, in the lift and	window for glazing of	system reduced to the	minimal metal profiles	levitation sliding lift floats in the air and, freed from its weight, flows	system, depth 85 mm	system for lift-and-slide mechanisms of large dimensions, characterized by high performance in terms of insulation and sealing, flush with flooring	system, depth 75 mm for glass thickness of up	system, depth 65 mm for glass thickness of up to 48 mm, rebated on the interior and flush- mounted on the exterior between sash and frame	fire-proof E130 system for doors and windows, can be combined with other products in the EBE category	depth 65 mm, in the	depth 65 mm in version with internal panelling in solid wood	with thickness of sheet	with thickness of sheet metal of 2 mm, depth 60 mm, for glass thickness of up to 48 mm, internall and externally flush- mounted between sash and frame	for EW 30-60-90 fire- proof doors and window which may be combined y with other products in the SA category	break curtain wall with muntins and transoms,	wall that can be applied	I to wall with muntins and ure, transoms, fire-proof EI 30-60-90 with
	<b>p.30</b> p.264	<b>p.60</b> p.268	<b>p.68</b> p.272	<b>p.88</b> p.276	<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	<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	<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
naterial																			
alvanised steel	•		•	(pickled steel)	•	•	•	•	•	•	•		•	•	•	•	•	•	•
ainless steel		•	•		•	•	•		•	•	•		•	•		•	•	•	•
orten steel	•	•	•		•	•	•	•	•	•	•		•	•		•	•	•	•
rass		•	•		•	•	•	•	•	•		•	•	•				•	
/pe		_																	
indows and doors	•		•	•	•		•		•	•	•	•		•	•	•			
oçade																	•	•	•
t-and-slide		•				•		•											
articular feature																			
nermal break	•	•	•		•		•	•	•	•	•	•	•				•	•	•
ıbular				•			•	•	•	•				•	•	•			
afety	•								•	•									
re-proof											•					•			•

tubular profile windows and doors façades and panelling



# OS2 75

areas of application

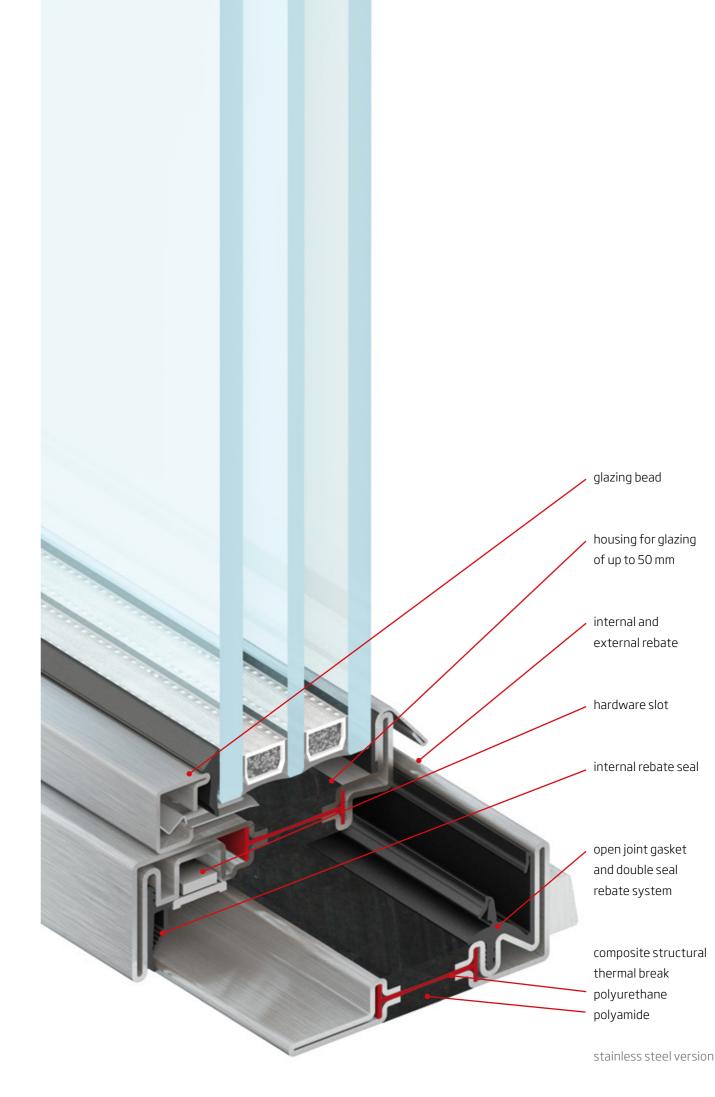
- doors
- windows

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. **0S2 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.





## **OS275** design of the variations

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



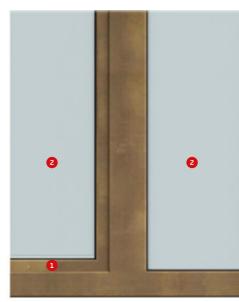
The small profiles of the system are meticulously designed so that in the outline every line and fold is essential for reaching the very high levels of performance of thermal and sound insulation. There are more than 40 profiles to choose from among which to find solutions for any formal or functional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

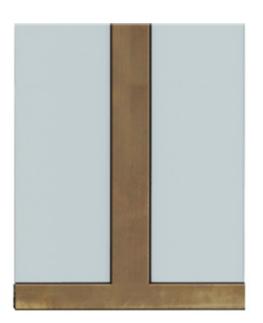
For glass curtain walls or three-dimensional façades, light screens or doors and windows, the choices offered by the **OS2 75** system are many and varied: the profiles can house flush-mounted and non-flush-mounted glass panels, enhance the borders of the monocoloured area of the windows that make up 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.

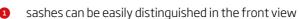
In the case of OS2 75.1 the glass panels are not flush-mounted and the profile of the frame goes to underline the perimeter of the sash. With OS2 75.2, on the other hand, the glass panels are flush-mounted and the profile sections can be continuous, both with regard to the fixed struts and in the perimeter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

## OS2 75.1







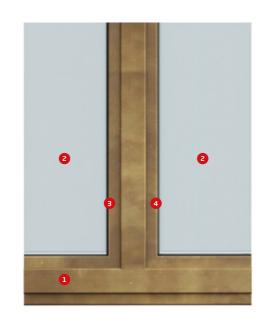


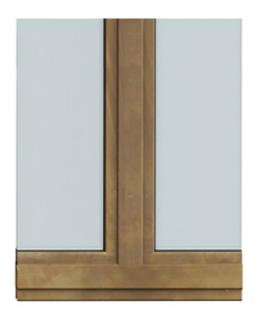
glass panels not flush-mounted between sashes and fixed panes



OS275.2





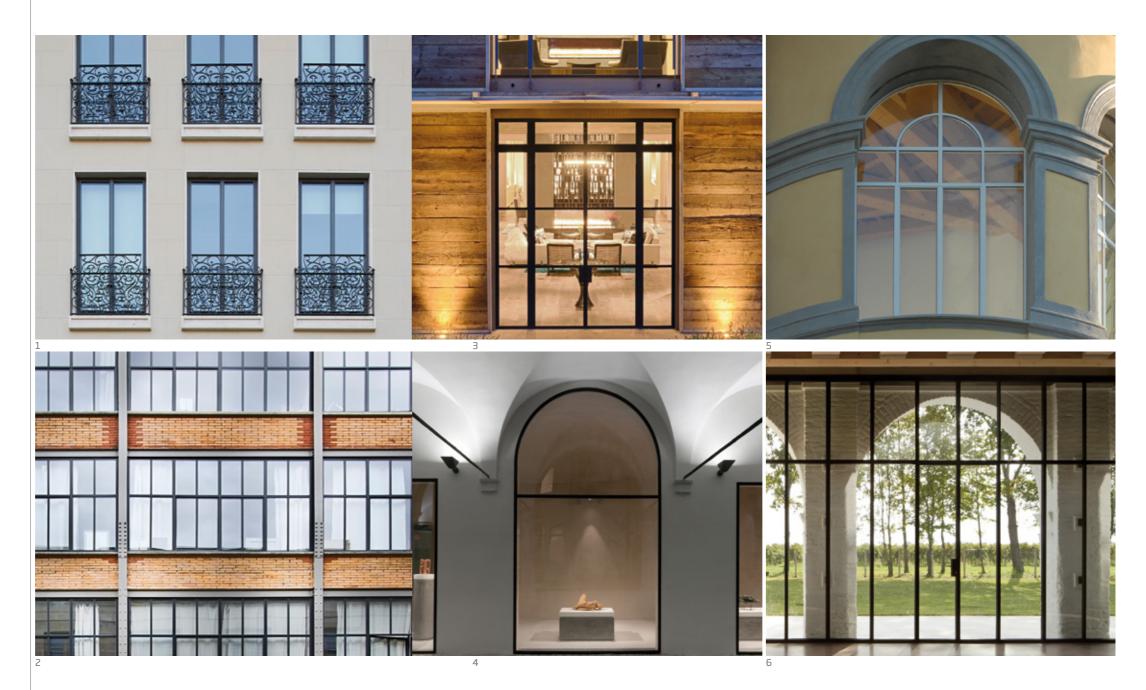


- possibility of sections always the same between sashes and fixed panes
- flush-mounted glazing between sashes and fixed panes
- sash
- fixed pane



## 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



- 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.

36

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

thermal break windows and do

ubular profile vindows and doors

tubula

façades and panelling

main type

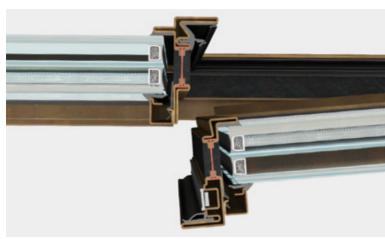
## OS2 75 window

## 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

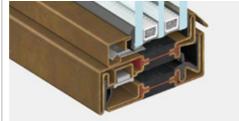


The sealing of the door and window frames is guaranteed by a weep system with central sealing gasket and internal rebate seal. The performance of OS2 thermally insulated system has been tested by the best European certifying labs under the reference standards EN 14351-1.

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



galvanised steel



stainless steel



corten steel



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).

glazing bead



rectangular







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.

vitruvio handle h.116 | l.12 mm



hinges

truncated vitruvio handle h.116 | d.12 mm

handles





rounded vitruvio handle h.116 | d.15 mm



truncated L-shaped vitruvio handle



are adjustable and are supplied in galvanised steel, stainless steel, burnished stainless steel and corten steel. weld-on



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



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



h.90 | d.15 mm





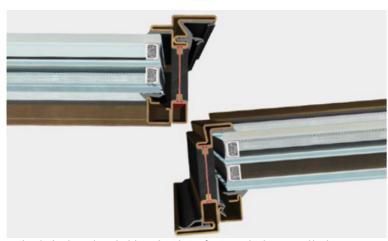
## OS2 75 door inward-opening

## 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

rectangular

handles

truncated vitruvio handle h.116 | d.15 mm

h.116 | *l.*15 mm

galvanised steel



stainless steel



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).

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 is also available in

brass; the square version 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.

hinges main type



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



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

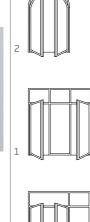








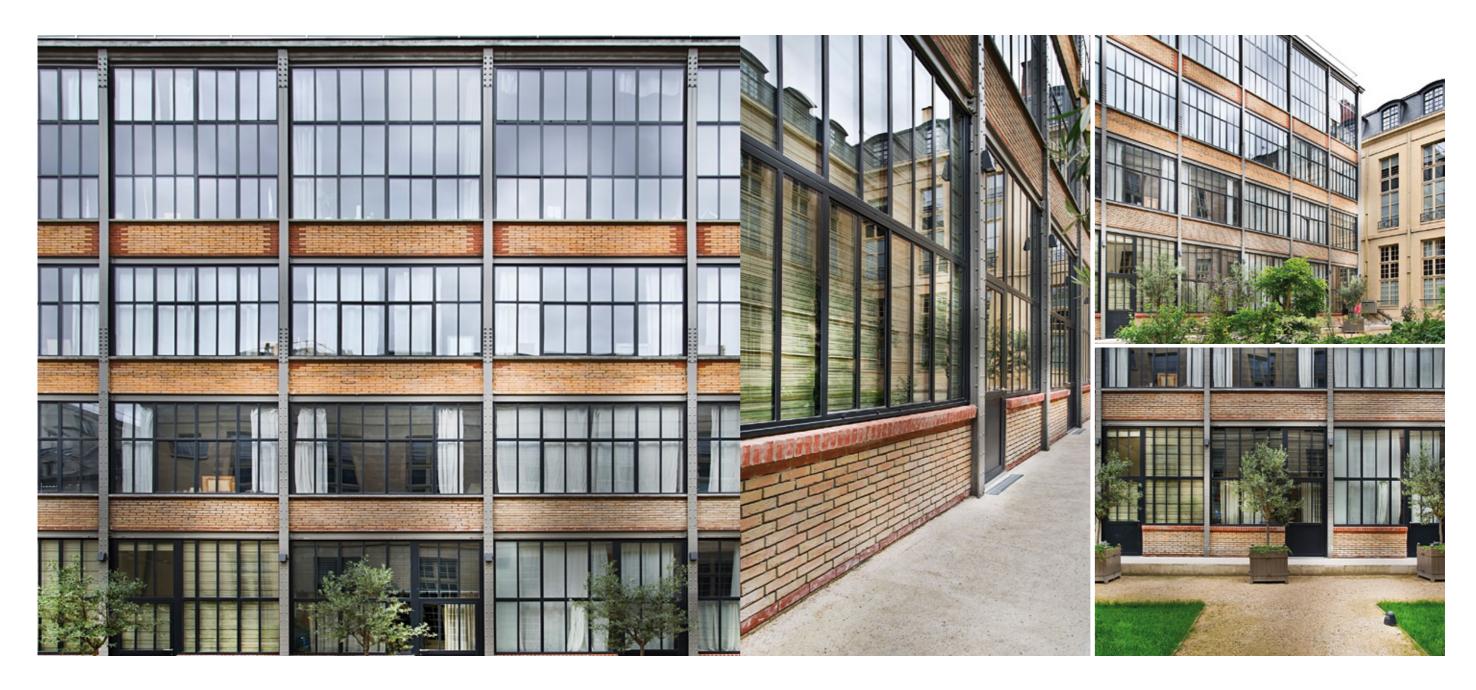
three-wing hinge h.90 | d.15 mm



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

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## 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 OSZ 75.1 profile in painted galvanised steel.

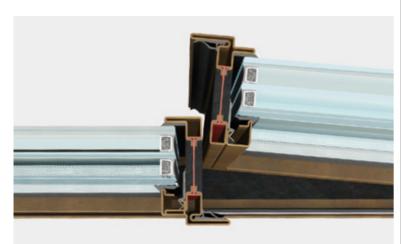
45

## 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



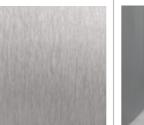
glazing bar | frame section 36 mm

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



galvanised steel



stainless steel



corten steel



brass

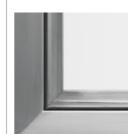
OS2 Is available in galvanised steel - in a wide range of colours and surface finishes in AISI 316L polished or Scotch-Brite stainless steel, corten steel and in brass (OT67 copper alloy).

grooved

glazing bead

rectangular

triangular



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



truncated vitruvio handle h.116 | d.12 mm





oval vitruvio handle h.80 | l.30 mm



handle for second sash h.50 mm



main type

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

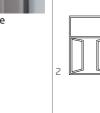
hinges



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



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



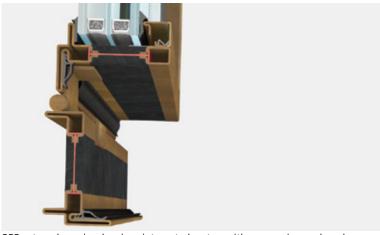
Sistemi technical office.

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

## 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
airpermeability	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.

## materials



glazing bead

rectangular

triangular

galvanised steel



stainless steel



corten steel



brass



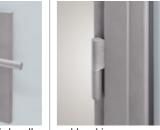
Rectangular, grooved, triangular and thin, the wide range of glazing beads allows for a variety of different designs for the internal window light. the wide choice available visually recalls the traditional "iron window"

profiles.

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

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.

hinges main type



truncated vitruvio handle



h.116 | d.15 mm

handles

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



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



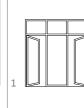
two-wing hinge h.81 | d.12 mm





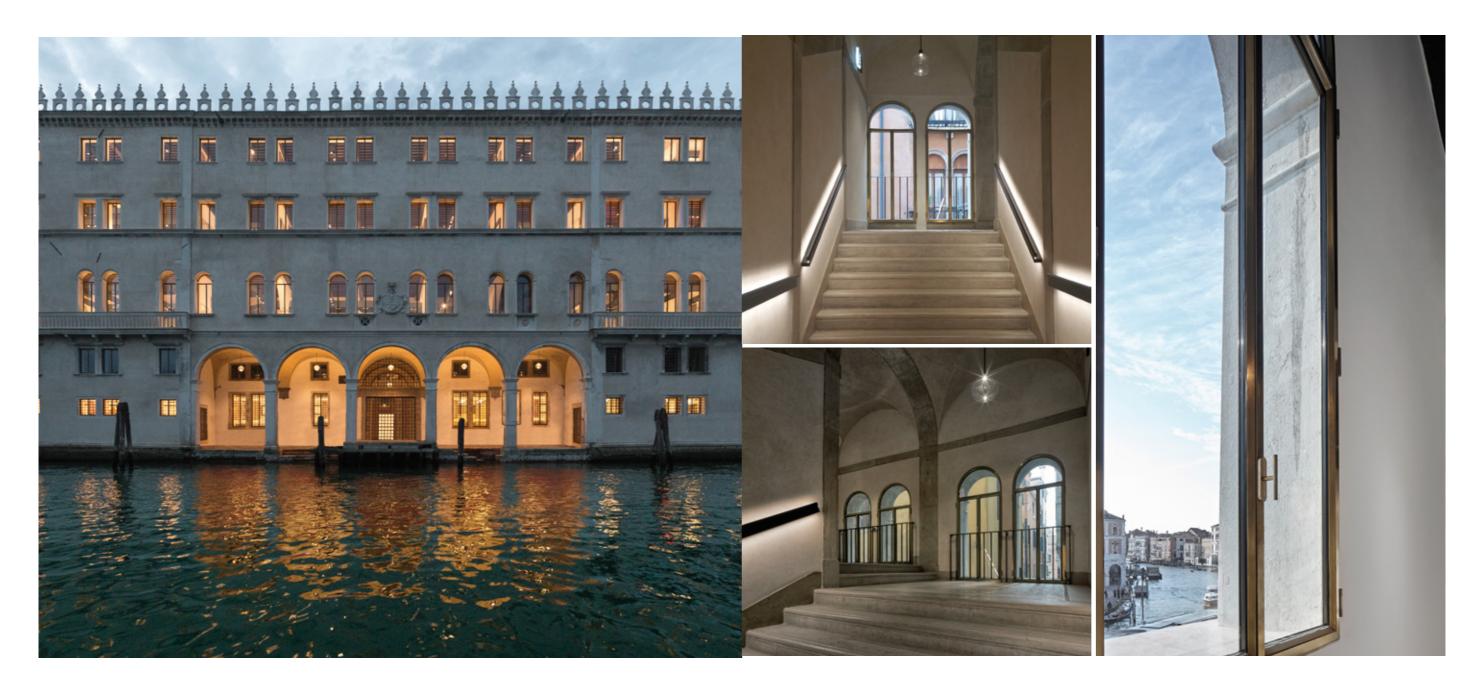


three-wing hinge h.90 | d.15 mm



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

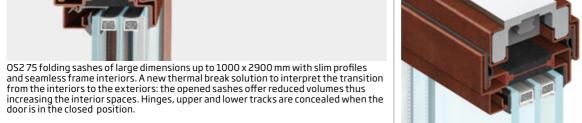
## Fondaco dei Tedeschi | Venice



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.

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

## hinges

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

## main type





galvanised steel



stainless steel

corten steel

brass

OS2 Is available in galvanised steel - in a

wide range of colours and surface finishes - in AISI

316L polished or Scotch-

corten steel and in brass (OT67 copper alloy).

Brite stainless steel,



triangular



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.



square vitruvio handle h.116 | l.12 mm



rounded vitruvio handle h.116 | d.15 mm



oval vitruvio handle h.80 | l.30 mm

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. façades

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## 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

## 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



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

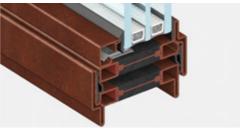
## size and variations



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



galvanised steel



stainless steel



corten steel



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).

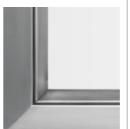
glazing bead



rectangular



grooved



triangular



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"

handles



truncated vitruvio handle h.116 | d.12 mm



square vitruvio handle h.116 | l.12 mm



rounded vitruvio handle h.116 | d.15 mm



raw brass, burnished brass, polished chrome brass and polished brass: the square version is available also in

## main type





hinges



oval vitruvio handle h.80 | l.30 mm

Handles come in paintable corten steel.

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

## 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 bettem roi!



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.

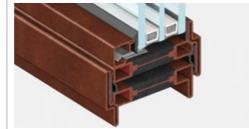
wind resistance - test pressure	4
wind resistance - frame bending	С
water tightness	6A
thermal transmittance (with Ug glass 0,6 W/m²K)	1,48 W/m²K
air permeability	4

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



galvanised steel



stainless steel



corten steel



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).

glazing bead

rectangular

grooved

triangular

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"



handles

truncated vitruvio handle h.116 | d.12 mm



square vitruvio handle h.116 | l.12 mm



rounded vitruvio handle h.116 | d.15 mm



oval vitruvio handle h.80 | l.30 mm

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

hinges

## main type

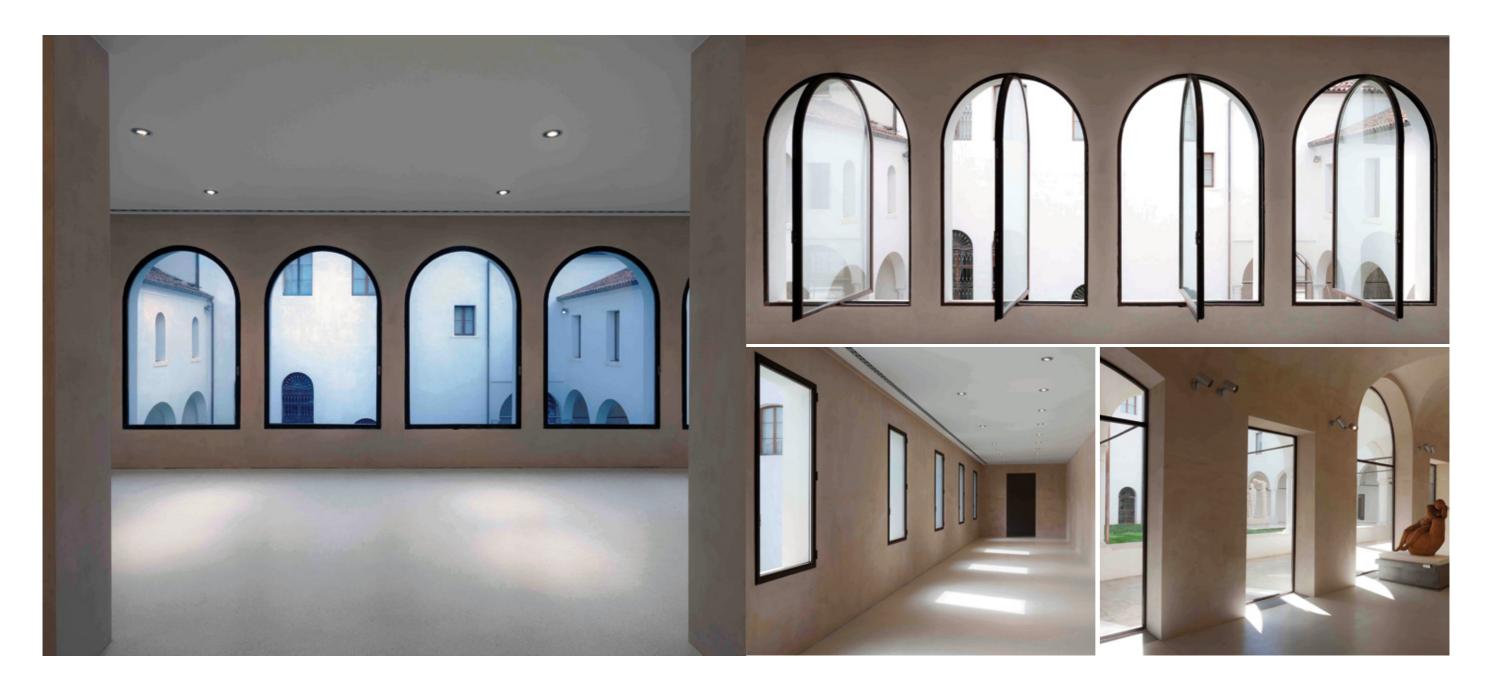




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Custom solutions are available in co-operation with Secco Sistemi technical office.

## 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

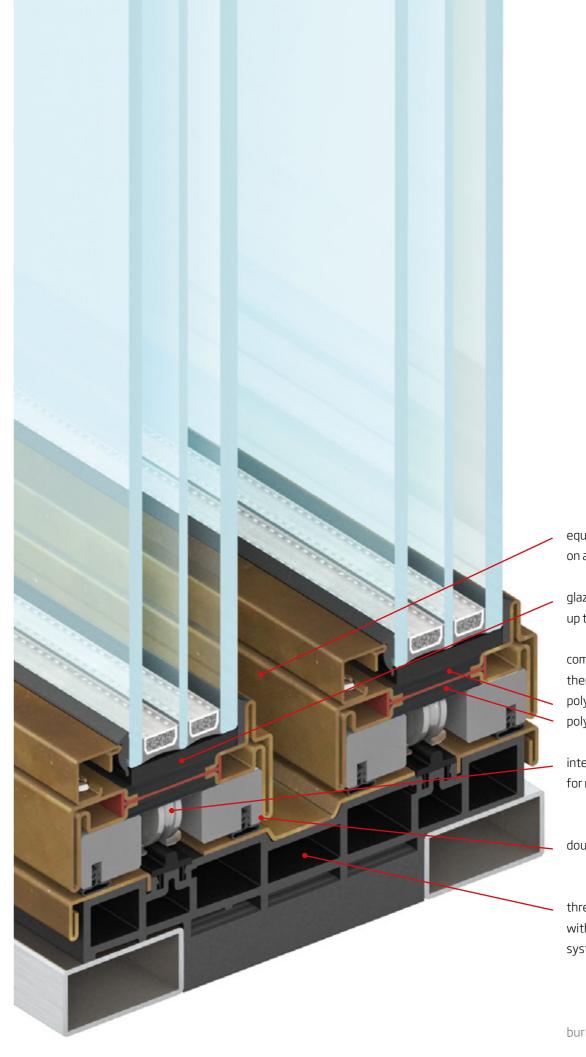
the elegance of the OS2 system, with its minute profiles and high-quality materials, in the lift and slide door version

The **OS2 75 AS** thermal break system makes it possible to create doors with a lift and slide opening system, integrating seamlessly with **0S275** 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.









equal visible section on all 4 sides

glazing slot up to 50 mm

composite structural thermal break polyurethane polyamide

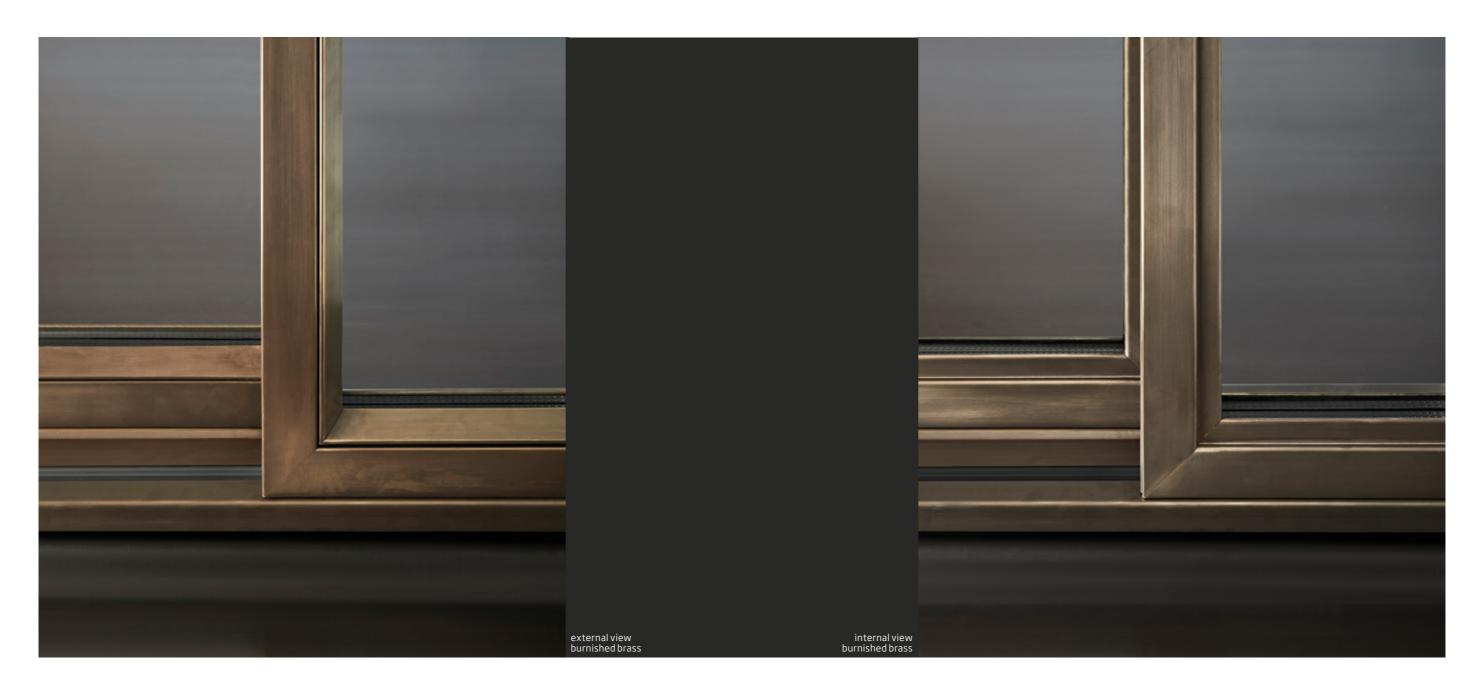
integrated slot for roller assembly

double gasket

threshold profile with integrated water drainage system

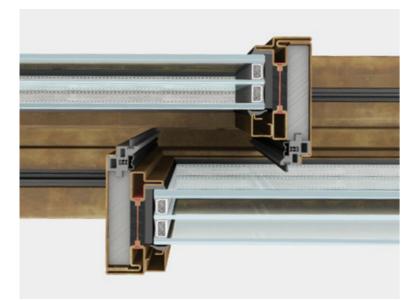
burnished brass version

## OS2 75 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.

## 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



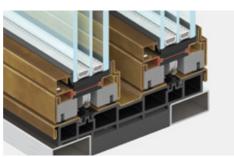
reduced central section | frame section 69mm



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
maximum achievable performance	



galvanised steel

stainless steel



grooved



corten steel



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.

materials



glazing bead



handles

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

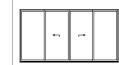


concealed integrated

accessories



main type





## 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.

# OS2 65

areas of application

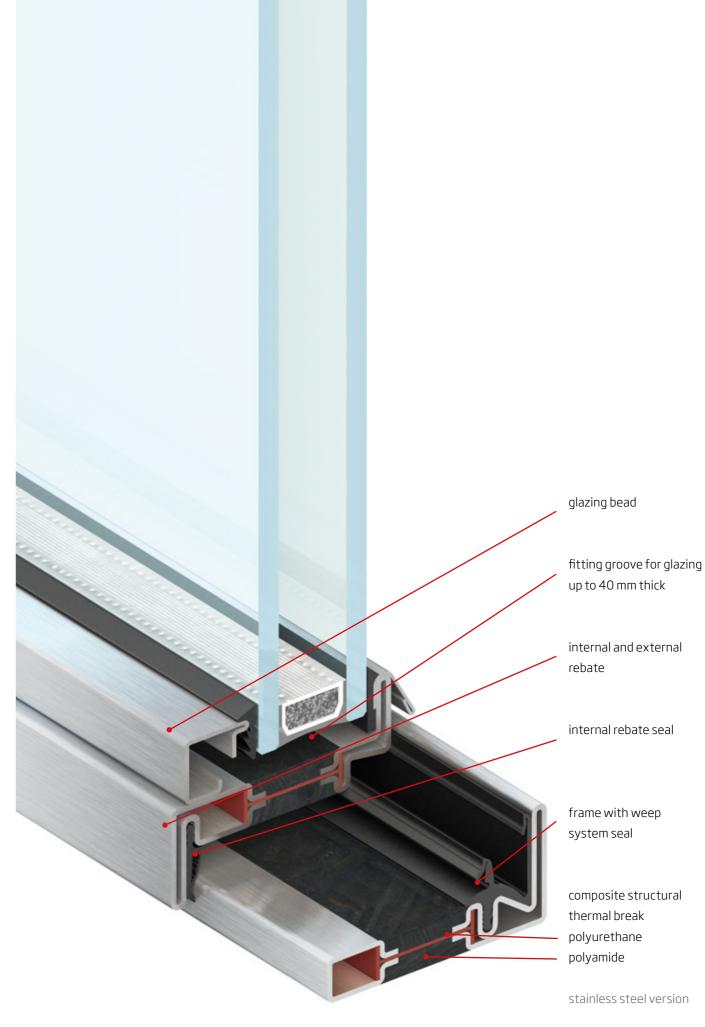
- doors
- windows

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



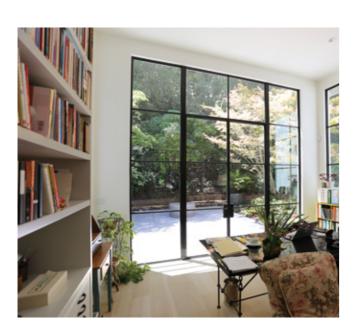
**OS2 65** is part of the group of OS2 profiles, studied, conceived and created by Secco Sistemi to replace the doors and windows used from the nineteenth century up to the middle of the last century. Utilised also in contemporary architecture to satisfy the need for transparency and purity of lines, 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



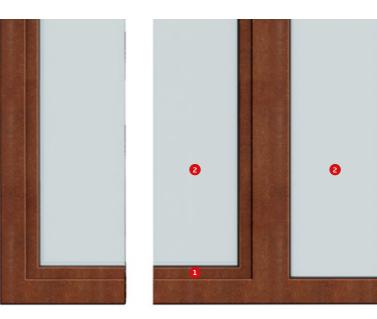
**0S2 65** is a flexible and versatile system for creating infinite variations of the fixture and for designing in detail the exact window or door required, with the minimum sections and high-quality performance of the OS2 group of profiles.

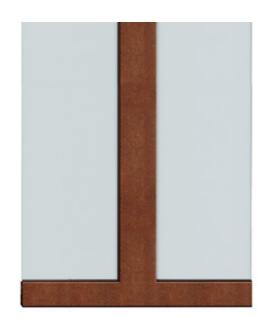
In the glass curtain walls, with the OS2 system fixed and openable elements can be composed together in various ways: by clearly defining the profile of the sashes in the façade with respect to the fixed mullions or struts, or by unifying the design of the casement using profiles with the same sections exposed everywhere.

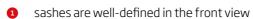
To better distinguish the various choices available, we have created two subsystems: OS2 65.1 and OS2 65.2

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.

## OS2 65.1





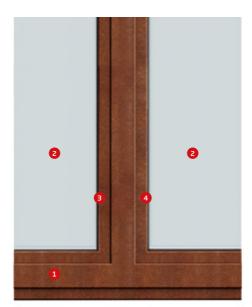


non-coplanar glazing between sash and fixed pane



OS2 65.2





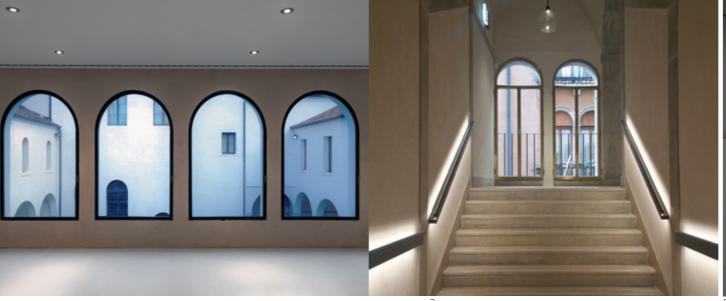


- possibility of sections always the same between sashes and fixed panes
- flush-mounted glazing between sashes and fixed panes
- sash
- fixed pane

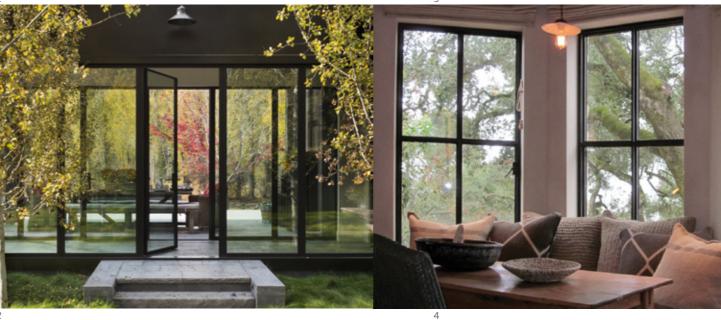


## OS2 65 design of the variations

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









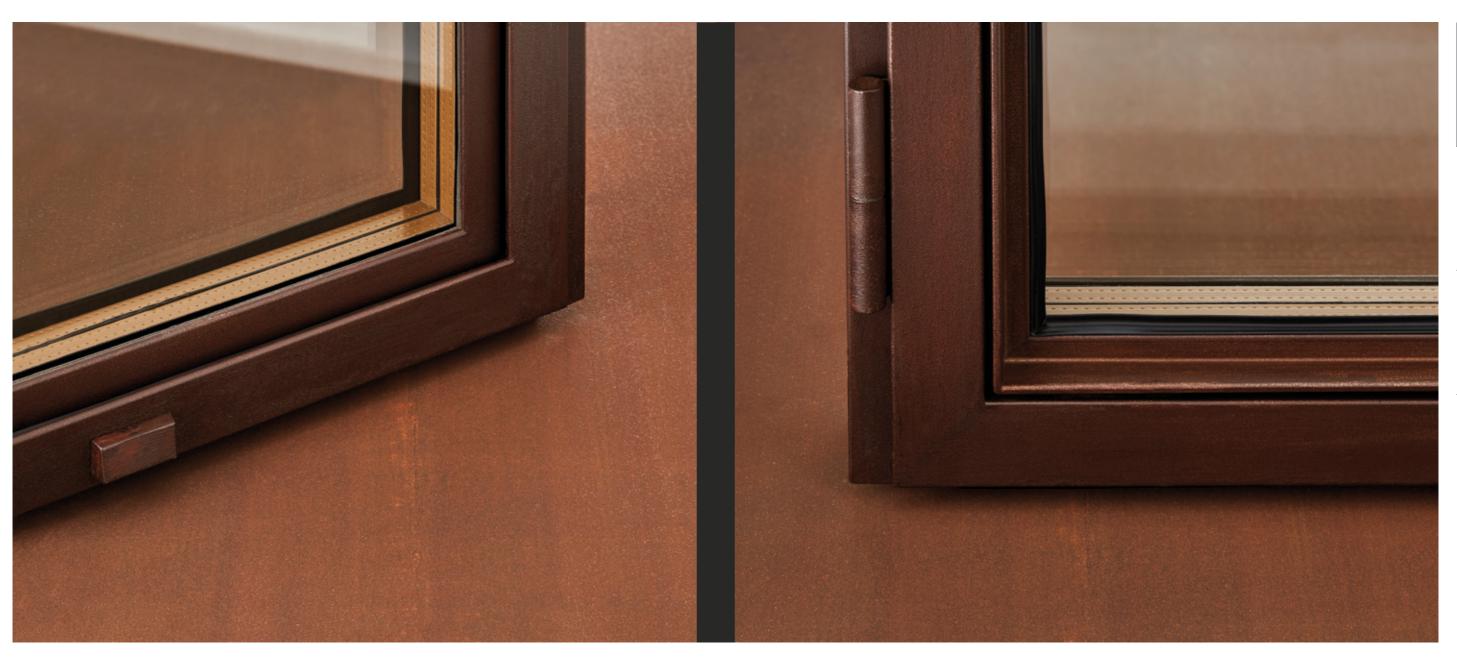
- Pivot opening for large arch-shaped windows with single thin continuous profile framing the glazing. With the concealed hinges the outline of the casement is continuous and seamless all around the perimeter.
- The casement represents the constant expression of the wall while the profile traces the 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

#### 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. hermal break

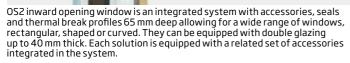
tubular profile windows and doors

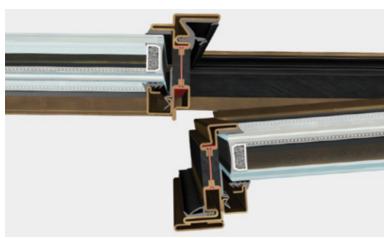
façades and panelling

## OS2 65 window inward-opening

#### system and performance







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
airpermeability	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

galvanised steel

corten steel

brass

OS2 Is available in galvanised steel - in a

wide range of colours and surface finishes - in AISI

316L polished or Scotch-

corten steel and in brass

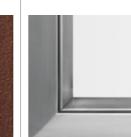
Brite stainless steel,

(OT67 copper alloy).



rectangular

stainless steel grooved



triangular



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



truncated vitruvio handle h.116 | d.12 mm



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.

hinges













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

weld-on hinge h.60/80/116 mm

d.10/13/16 mm



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

Two and three-wing hinges are adjustable and are supplied in galvanised

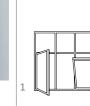
steel, stainless steel,

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.

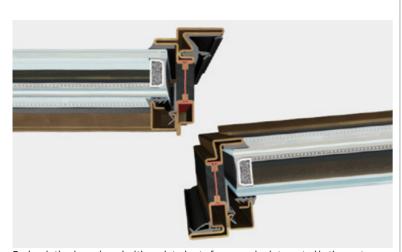
## OS2 65 door inward-opening

#### 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/m <sup>2</sup> K
airpermeability	3

maximum achievable performance

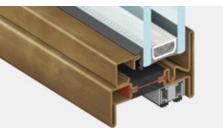
#### size and variations



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

rectangular

grooved

triangular

galvanised steel



stainless steel



corten steel



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).

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.

and corten steel. Weld-on hinges are in galvanised steel: the following models are adjustable: h.80 | d.13mm

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

and h.116 | d.16mm.

hinges main type



weld-on hinge h.60/80/116 mm



truncated vitruvio handle h.116 | d.15 mm

handles

square vitruvio handle h.116 | l.15 mm



d.10/13/16 mm



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



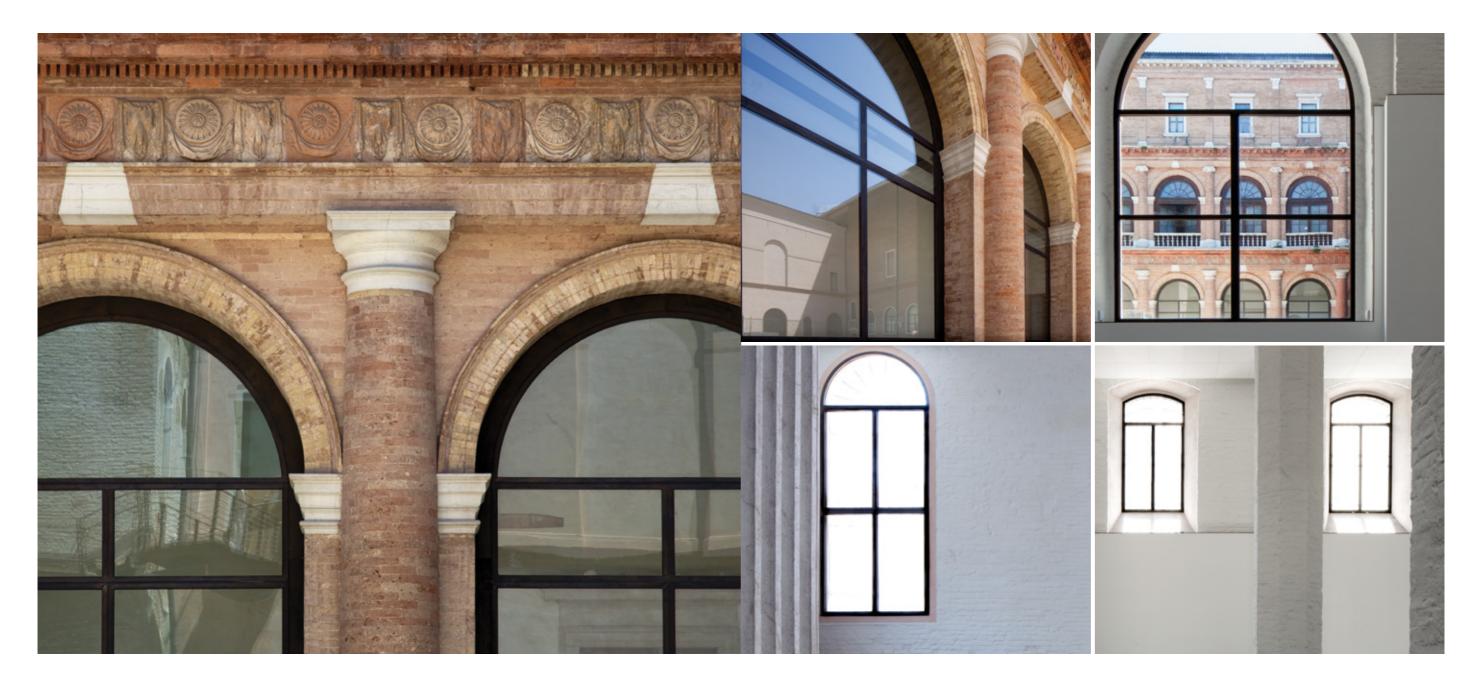
three-wing hinge h.90 | d.15 mm





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 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, 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 door and window frames in burnished brass were used. These not only fully meet the initial restoration 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 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.

4
С
8A
1,38 W/m²K
3
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



galvanised steel



stainless steel grooved



corten steel



brass

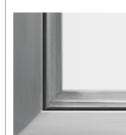
OS2 Is available in galvanised steel - in a wide range of colours and surface finishes in AISI 316L polished or Scotch-Brite stainless steel, corten steel and in brass (OT67 copper alloy).

rectangular

glazing bead



triangular



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.

vitruvio handles



truncated vitruvio handle h.116 | d.12 mm





oval vitruvio handle h.80 | l.30 mm



handle for second sash h.50 mm

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

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

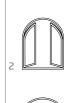


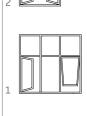
pivot system h.80

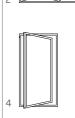
Two and three-wing hinges are adjustable and are supplied in galvanised steel, stainless steel, burnished stainless steel and corten steel. weld-on hinges are in galvanised steel. The following models are adjustable: h.80|d.13mm and h.116|d.16mm.

main type





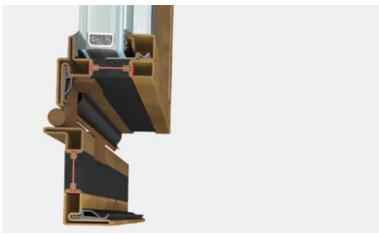




Custom solutions are available in co-operation with Secco Sistemi technical office.

## 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

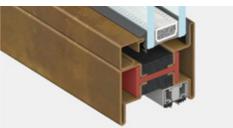
#### size and variations



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.

#### materials



galvanised steel

stainless steel



rectangular

glazing bead

handles

truncated vitruvio handle

square vitruvio handle h.116 | l.15 mm

h.116 | d.15 mm

grooved



triangular



brass

corten steel

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, either burnished, polished chrome brass or polished brass; the square version

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.

main type



weld-on hinge h.60/80/116 mm

hinges



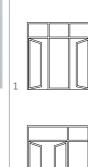


three-wing hinge h.90 | d.15 mm



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





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



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 OSZ steel windows designing all the glass walls.

# OS2 40

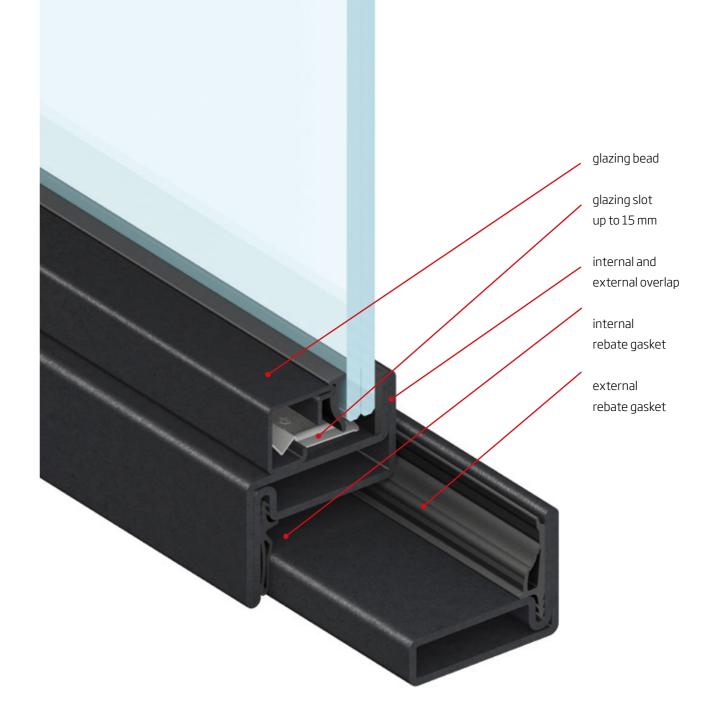
areas of application

• 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. **OS2 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 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

painted

pickled steel

### glazing bead

rectangular

triangular

#### handles

#### hinges

#### main type



weld-on hinge h.60/80/116 mm h.116 | d.15 mm d.10 /13/16 mm



truncated vitruvio handle

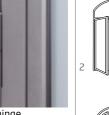
square vitruvio handle h.116 | l.15 mm



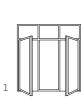
two-wing hinge h.81 | d.12 mm



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 | d.13mm and h.116 | d.16mm.

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

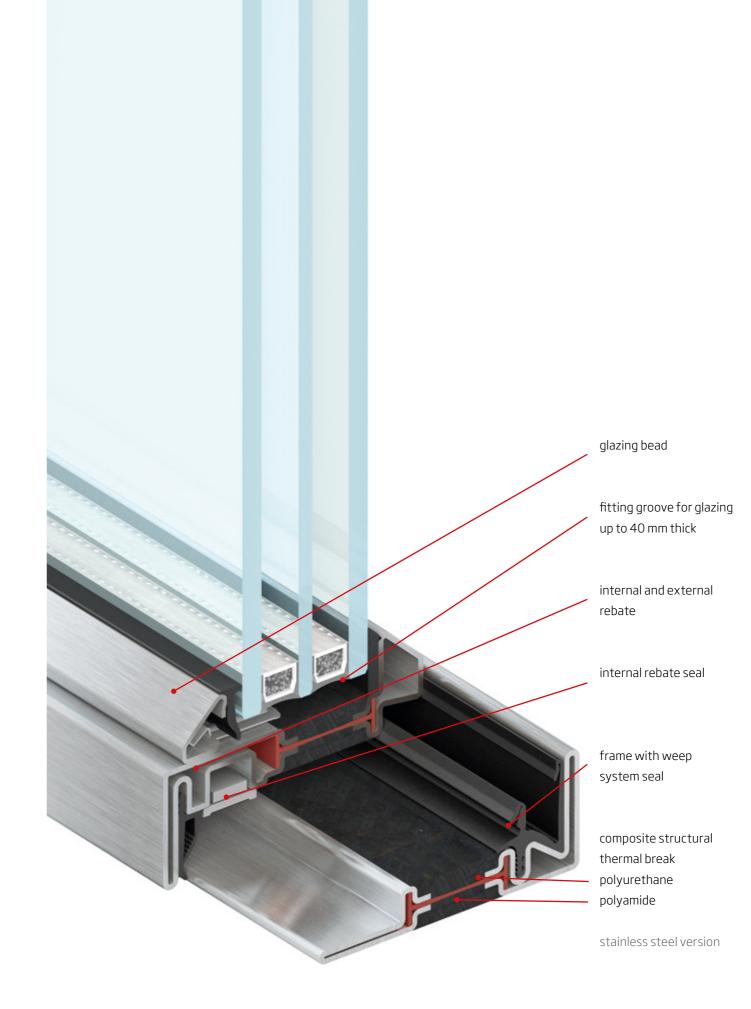
areas of application

- doors
- windows

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

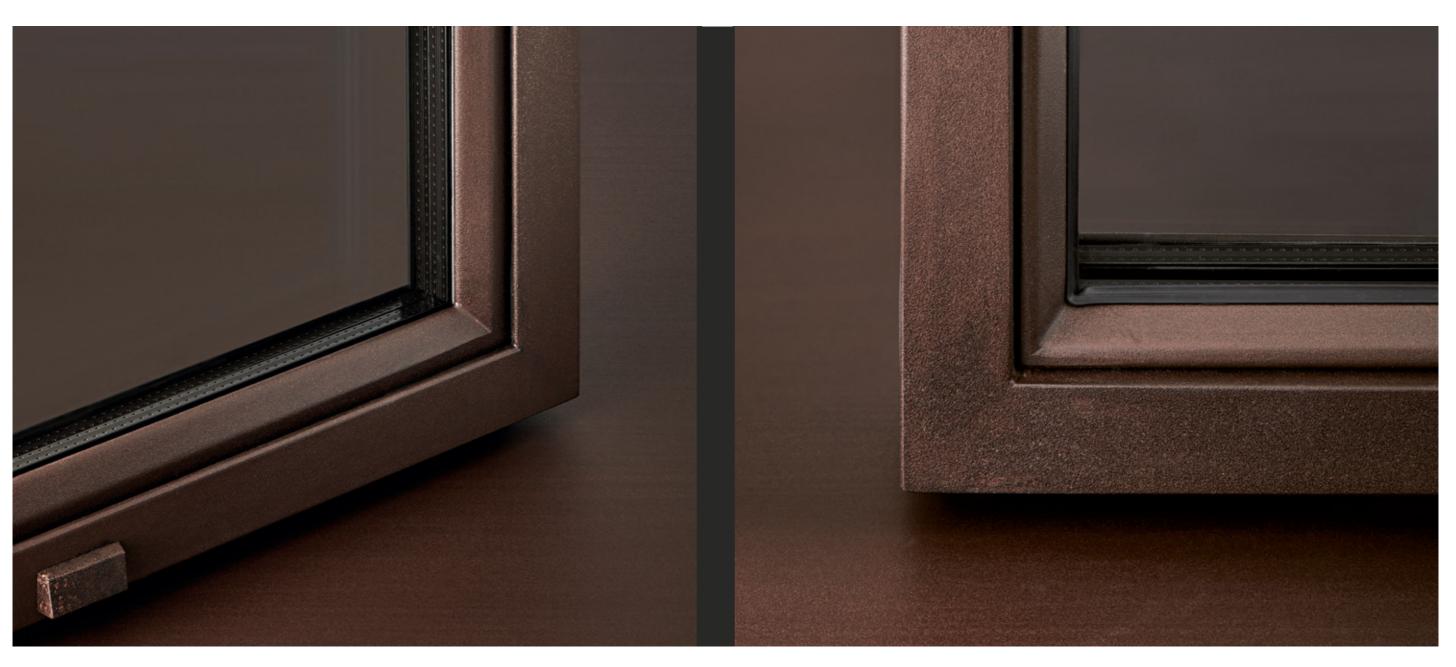


**BV 75** has been designed to create thermal break metal doors and windows that resemble the typical shape of antique wooden frames with its profiles. The external profile of the sash and the internal profile of the glazing bead have the same bevelled angle, creating perfect symmetry between the inside 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.

98

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

thermal break windows and do

ubular profile

façades and panelling

## 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

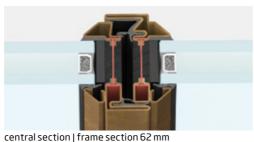
#### size and variations



lower section | frame section 47 mm



lateral section | frame section 47 mm



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

#### materials



galvanised steel



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).

glazing bead



rectangular



grooved





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.

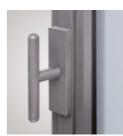
handles



truncated vitruvio handle h.116 | d.12 mm



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.

hinges

weld-on hinge h.60/80/116 mm

d.10/13/16 mm



main type











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



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

Two and three-wing hinges are adjustable and are supplied in galvanised

steel, stainless steel,

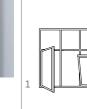
burnished stainless steel

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.

## 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
airnermeahility	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 later
sections and 62 mm
central section.

#### materials



glazing bead

rectangular

galvanised steel



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.

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

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

main type



weld-on hinge h.60/80/116 mm

hinges



truncated vitruvio handle

handles

square vitruvio handle h.116 | l.15 mm



d.10/13/16 mm



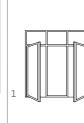
two-wing hinge h.81 | d.12 mm



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







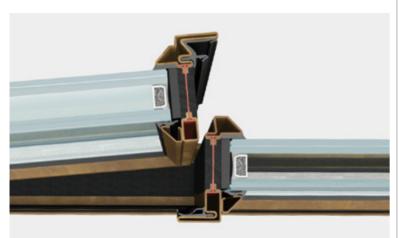
Custom solutions are available in co-operation with Secco Sistemi technical office.

## 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.

#### materials



galvanised steel

stainless steel

corten steel

brass

BV Is available in galvanised steel - in a

316L polished or Scotch-

corten steel and in brass (OT67 copper alloy).

Brite stainless steel,



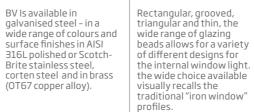
rectangular

glazing bead

grooved







vitruvio handles



truncated vitruvio handle h.116 | d.12 mm





oval vitruvio handle h.80 | l.30 mm



handle for second sash h.50 mm

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

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



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.

main type















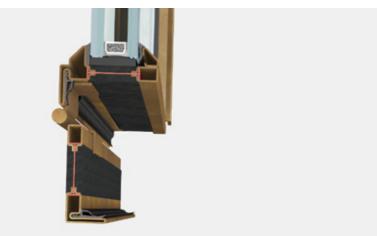


Custom solutions are available in co-operation with Secco Sistemi technical office.

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## 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

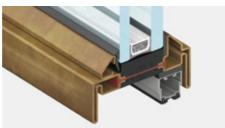
#### size and variations



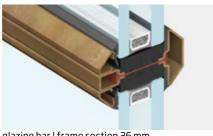
lateral section | frame section 47 mm



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.

### materials



galvanised steel

stainless steel

corten steel



rectangular

glazing bead

handles

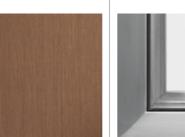
truncated vitruvio handle

square vitruvio handle h.116 | l.15 mm

h.116 | d.15 mm

grooved





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.

The handles come in paintable raw brass, either burnished, polished chrome brass or polished brass; the square version

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.

main type



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

hinges







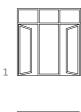
weld-on hinge



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



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



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

#### 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

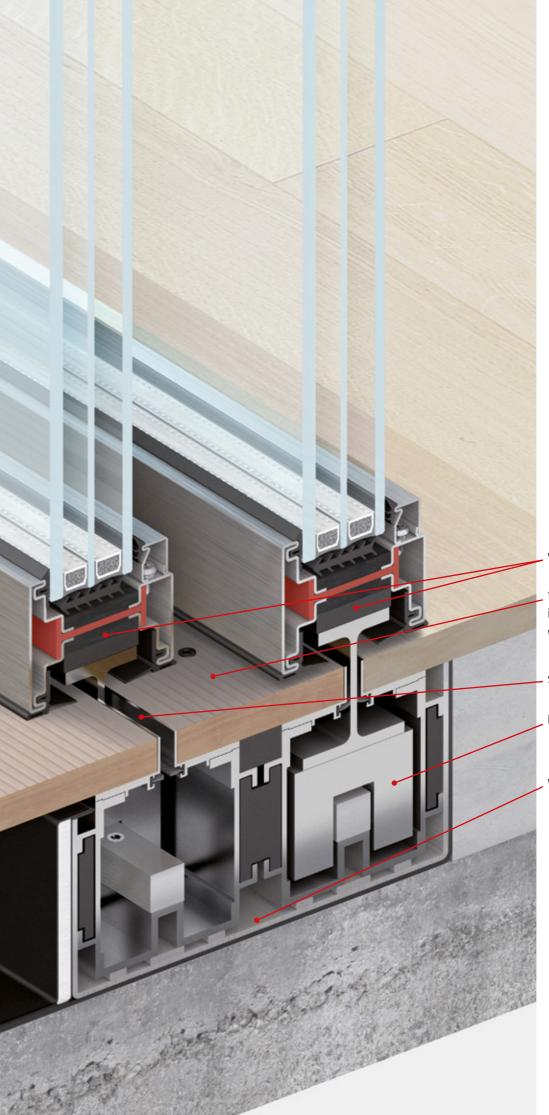
doors

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.





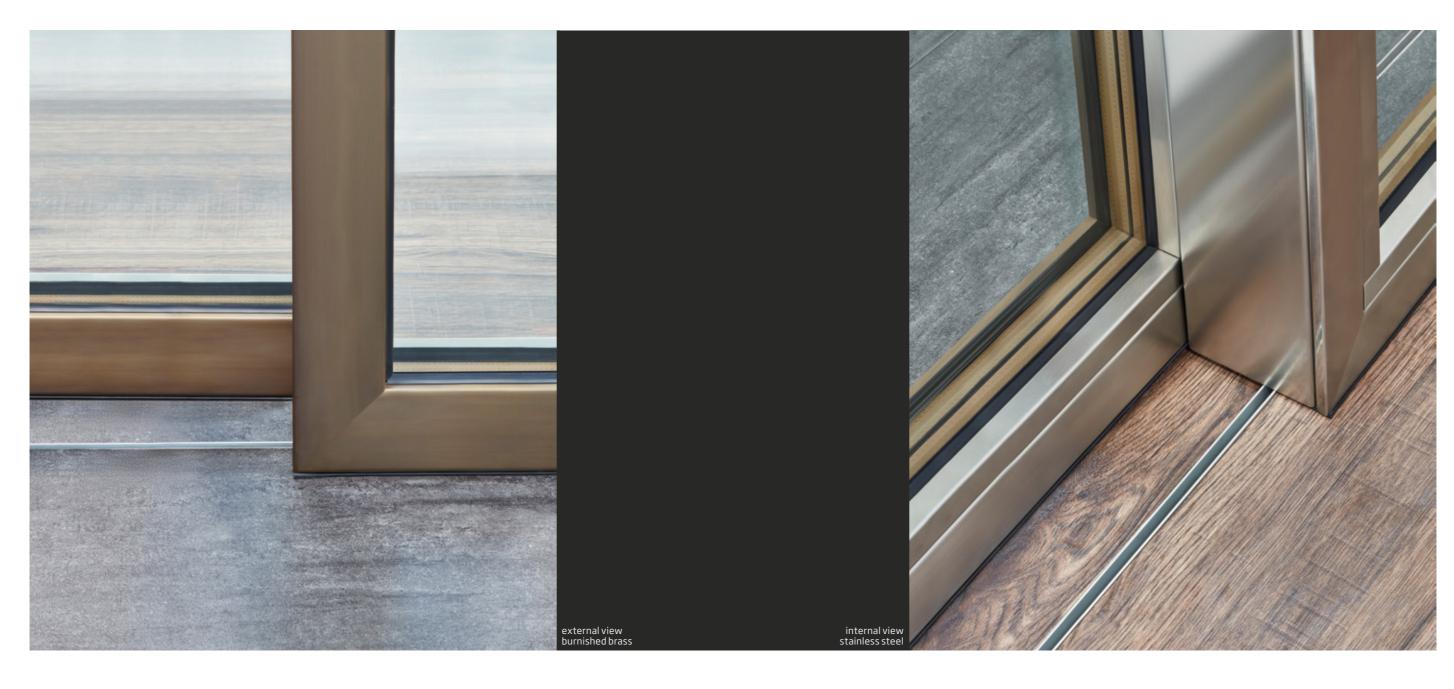
windows/shutters

floor; continuity between inside and outside and without tripping

sliding loop-hole

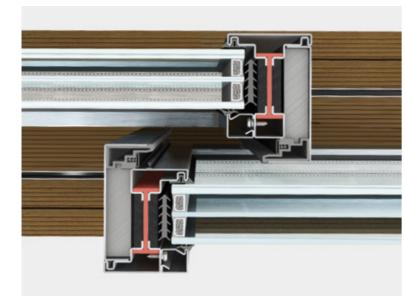
Ironlev® magnetic levitation skid

work group



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

#### system and performance

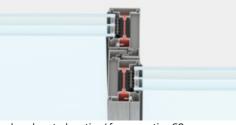


 $\emptyset G^{\otimes}$  is an integrated system with accessories, seals and thermal break profiles 85 mm deep. This makes it possible to realise lift and slide door and window frames with one to four wings of big dimensions and weight (up to 1000 kgs.). They can be equipped

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

#### size and variations



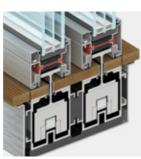
reduced central section | frame section 69mm



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.



materials

galvanised steel

stainless steel



rectangular

glazing bead

handles

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

brass handle for lift and slide doors

h.250 | w.25 mm

gothic





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 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 nanel sections

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

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

wind resistance - frame bending C water tightness thermal transmittance (with Ug glass 0,6 W/m²K) 1,0 W/m<sup>2</sup>K air permeability

maximum achievable performance

wind resistance - test pressure

114 115

main type

accessories

concealed integrated

# EBE 85

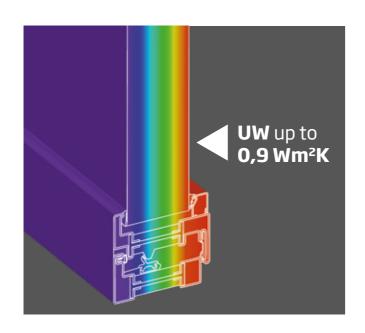
areas of application

doors

116

• 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

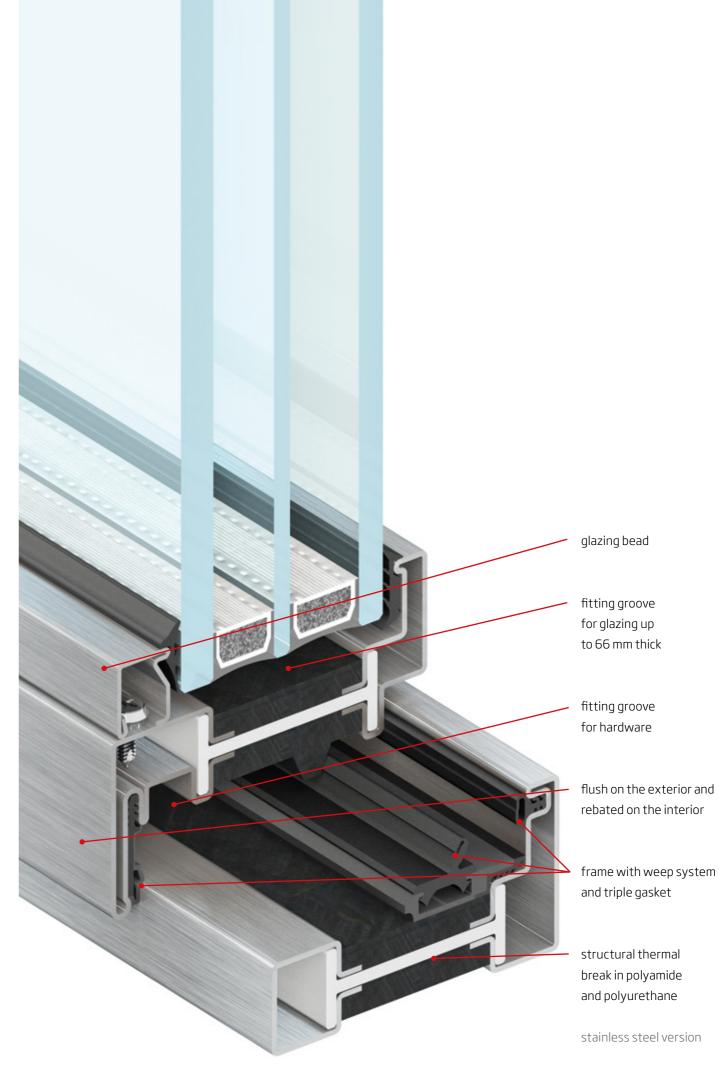


All the systems belonging to the EBE group are flexible and complete, with slim and strong thermal break profiles. These EBE 85 thermal break profiles have a depth of 85 mm and can house glazing panels of up to 66 mm. Sash and frame are rebated in the interior and flush-mounted externally. With its innovative, 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.

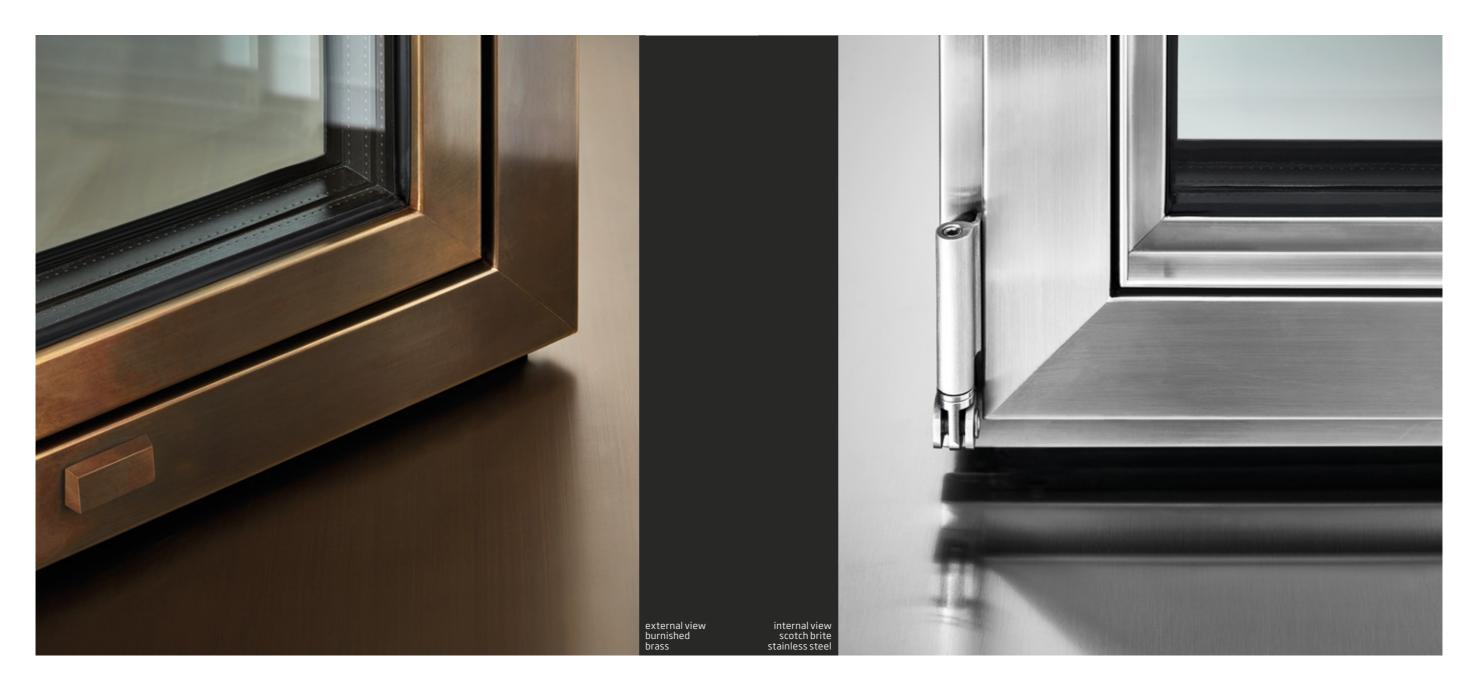
The performance of the EBE thermal break system has been tested by the best European certifying laboratories in compliance with the current specific standard EN 14351-1 regulations.





## 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.

le I doors

tubular profile windows and doo

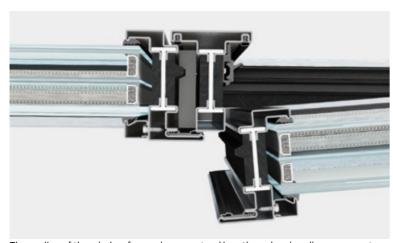
façades and panelling

## 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

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.

#### materials



glazing bead

rectangular

grooved

galvanised steel



stainless steel



corten steel



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 - spindle 7.

tilt and turn standard

hinges

h.85 | d.15 mm



handles

truncated vitruvio

TT handle

square vitruvio TT handle h.116 | h.15 mm tilt and turn stainless steel h.85 | d.15 mm



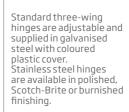
inox 5056 TT h.135 | d.20 mm



tilt and turn concealed



butt h.160 | d.15 mm



main type



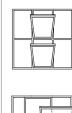














Custom solutions are available in co-operation with Secco Sistemi technical office.

\_\_\_

maximum achievable performance

#### 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
airpermeability	4
break-in resistance	(RC)3

maximum achievable performance

#### size and variations



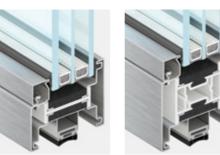
reduced lateral section | frame section 109 mm



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.

#### materials



galvanised steel

stainless steel

corten steel



glazing bead

handles

truncated vitruvio handle

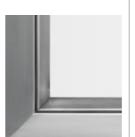
square vitruvio handle

h.116 | *l.*15 mm

inox 5002 h.150 | d.20 mm

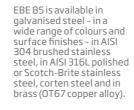
h.116 | d.15 mm

grooved





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 - spindle 7.

steel.

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

main type

hinges

weld-on h.145 | d.20 mm

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

concealed

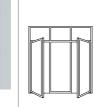
















All models can be made to open inwards or outwards.

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

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#### 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 symbiosis 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

WIND RESISTANCE







THERMAL TRANSMITTANCE up to 1.12 W/m2K



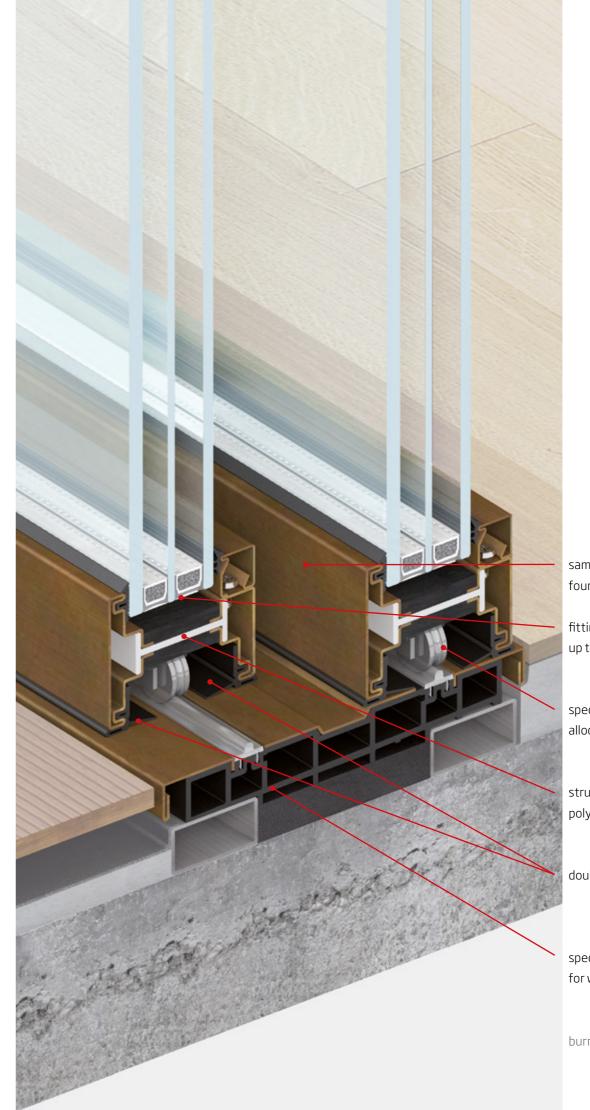
BREAK-IN RESISTANCE (RC)2

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 motor-powered 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.





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 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. the wir

tubular profile windows and doors

façades and panelling 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



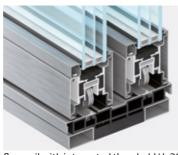
reduced central section | frame section 69mm



standard central section | frame section 94mm



floor rail with threshold | h 8 mm



floor rail with integrated threshold | h 20mm

wind resistance - test pressure	3
wind resistance - frame bending	С
water tightness	8A
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
airpermeability	4
break-in resistance	(RC)2

maximum achievable performance

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.

#### materials

## glazing bead

rectangular

gothic

#### handles

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

brass handle for lift and slide doors

h.250 | w.25 mm

#### accessories

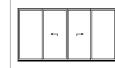
concealed integrated

#### main type















galvanised steel



stainless steel



corten steel



brass

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).

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 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.

#### 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 fitness cer live-in con live-in con live-in con wan in elevation main elevation in park: start terrace ov park: stone, thir 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

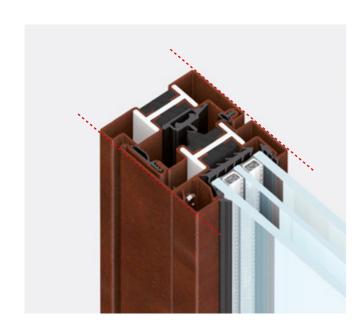
certified, as required by the project, with the excellent technical specifications of sound insulation, water-tightness and windproofing. EBE 85 AS in burnished brass has been designed to meet all these criteria: innovation, quality and performing efficiency, in line with the high prestige of the apartments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

# EBE 75

areas of application

- doors
- windows

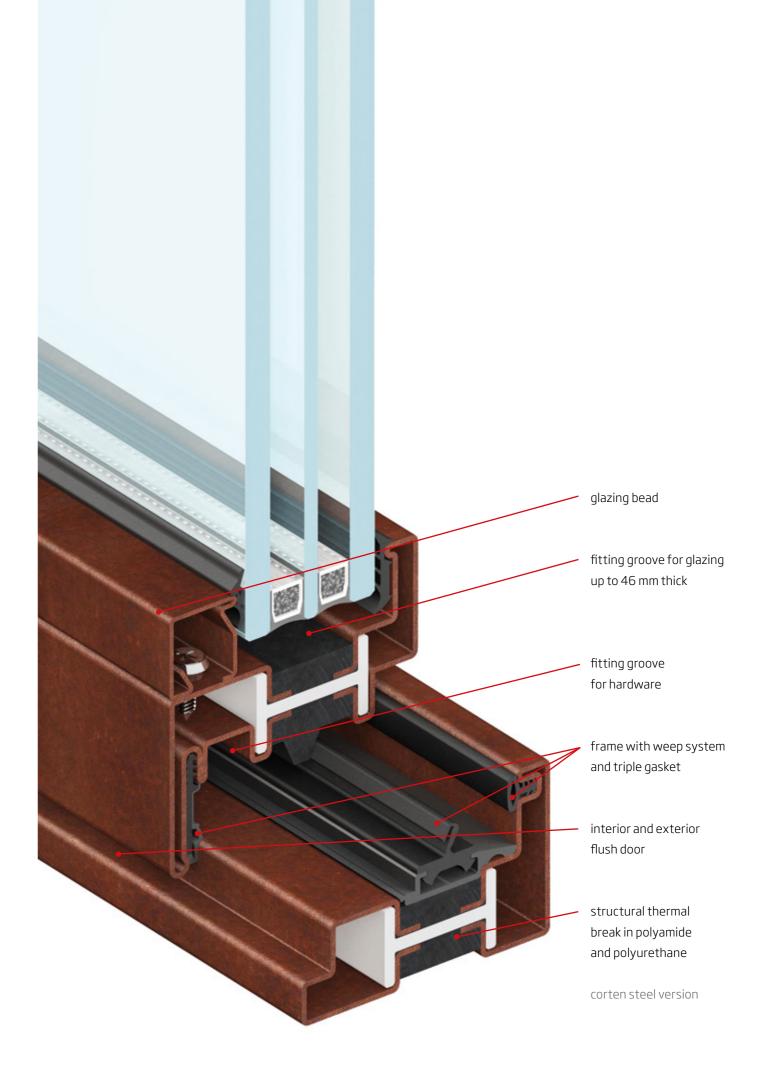
EBE thermal break system, depth 75 mm for glass panels of up to 46 mm, with sash and frame flush-mounted both internally and externally



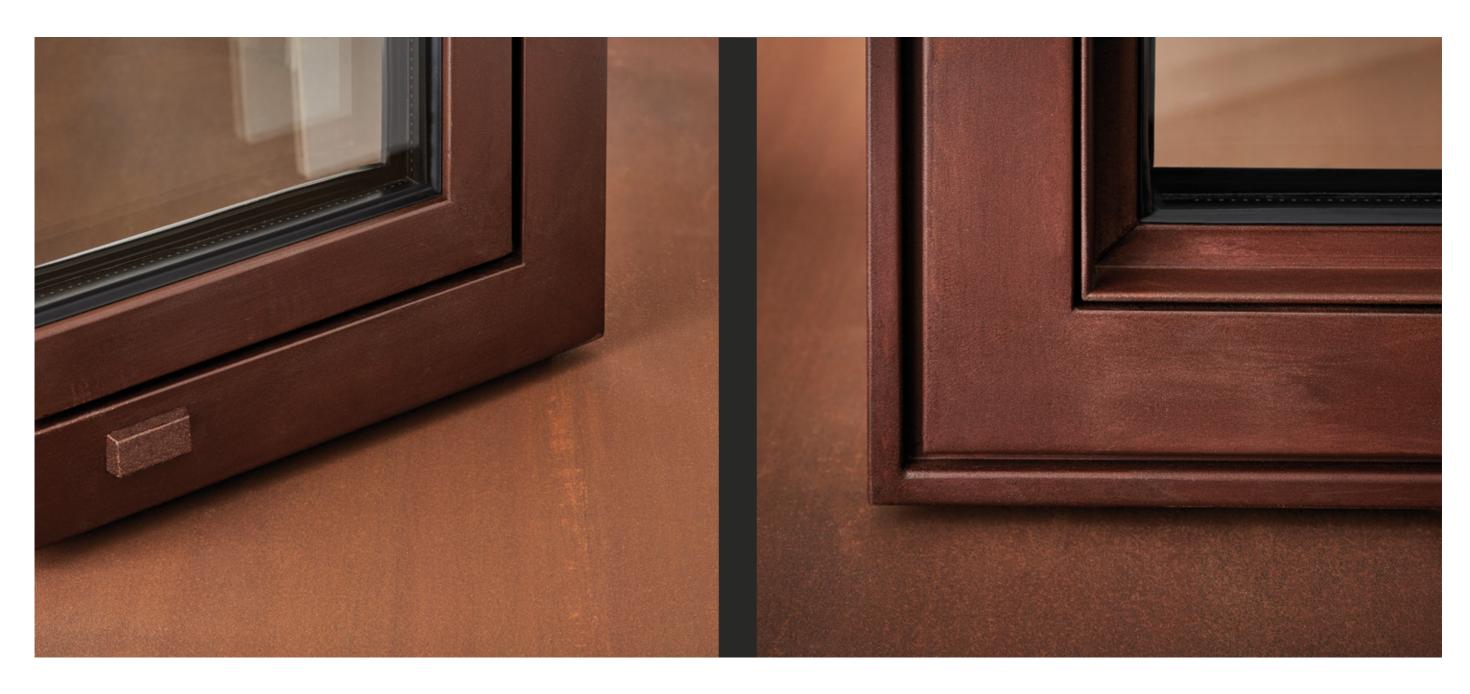
All systems on the EBE group are flexible and complete, with thin, strong thermal break profiles. The **EBE 75** thermal break profiles have a depth of 75 mm and can house insulation glazing panels of up to 46 mm. Sash and frame are flush-mounted both internally and externally.

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 window corner

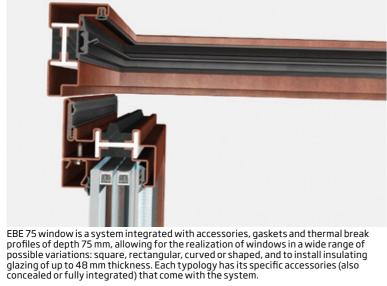


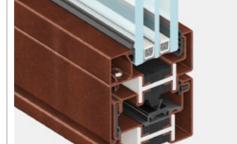
EBE 75 window corner external view in corten steel with thin glazing bead and concealed hinges.

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

## EBE 75 window

#### system and performance



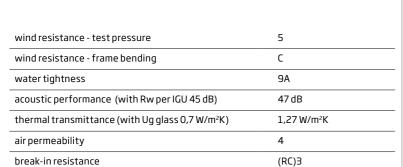


size and variations

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.





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

#### materials



glazing bead

rectangular

grooved

handles

truncated vitruvio

square vitruvio TT handle

h.116 | l.15 mm

inox 5056 TT *h.*135 | *d.*20 mm

TT handle h.116 | d.15 mm

galvanised steel



stainless steel



corten steel



brass



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.

main type hinges



















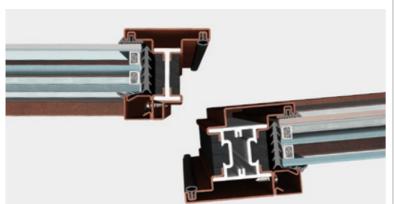






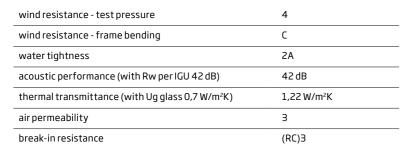
Custom solutions are available in co-operation with Secco Sistemi

maximum achievable performance



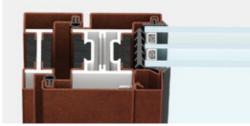
The sealing of the door frames is guaranteed by a three-side rebate double seal system and an automatic retractable seal. Each solution is equipped with a related set of accessories (also concealed) integrated in the system.

The performance of EBE 75 thermally insulated system has been tested by the best European certifying labs under the reference standard EN 14351-1.



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.

#### size and variations



reduced lateral section | frame section 109mm



central section | frame section 131 mm



reduced bottom rail

materials

galvanised steel

stainless steel

corten steel

### glazing bead

rectangular

grooved

#### handles

truncated vitruvio handle h.116 | d.15 mm

square vitruvio handle

*h*.116 | *l*.15 mm

inox 5002 h.150 | d.20 mm

#### hinges

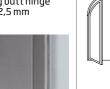
weld-on h.145 | d.20 mm

#### main type





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

maximum achievable performance

#### 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 high-performing profiles which outline the simple design of the extensive walls of glazing panels.

# EBE 65

areas of application

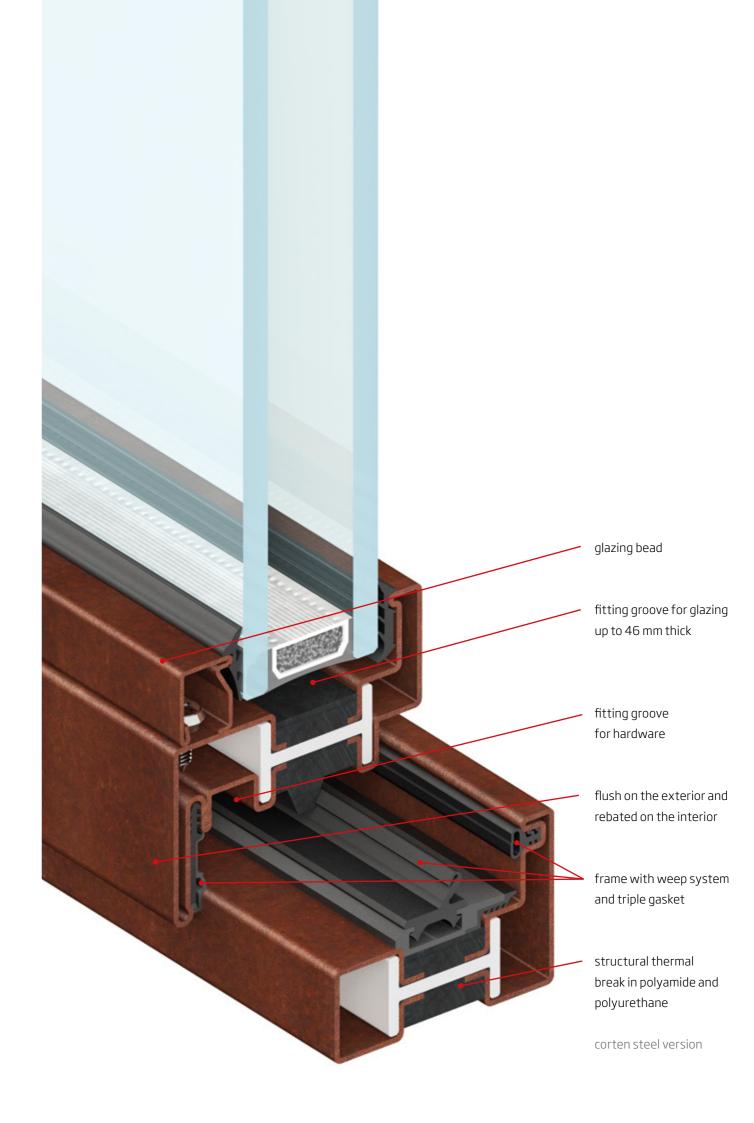
- doors
- windows

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 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.

thermal bre windows a

tubular profile windows and doors

façades and panelling

## 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



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

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

#### size and variations



lower / lateral section | frame section 85mm



double-sash window central section | frame section 145mm

#### materials

## glazing bead

#### handles

#### hinges

#### main type



galvanised steel

stainless steel

corten steel

brass



rectangular

grooved



truncated vitruvio h.116 | d.15 mm

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

stainless steel 5056 TT handle

h.135 | d.20 mm





h.85 | d.15 mm



TT stainless steel h.85 | d.15 mm





TT concealed









Custom solutions are available in co-operation with Secco Sistemi

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.

maximum achievable performance



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



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

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, becomes 134 mm.

#### materials

galvanised steel

stainless steel

corten steel

brass

## glazing bead

rectangular

grooved

### handles

truncated vitruvio handle h.116 | d.15 mm

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

#### hinges

#### main type



weld-on h.145 | d.20 mm





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



inox 5002 h.150 | d.20 mm 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 is an interior and the lateral face section

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 vitruvio handles come in paintable raw brass, burnished brass,

Weld-on hinges are in galvanised and stainless steel. Three-wing hinges polished chrome brass and are adjustable and are polished brass. The square version is also available in supplied in galvanised steel, stainless steel, corten steel. The system burnished stainless steel. is compatible with many A three-wing hinge is provided also in corten steel. other handle types on the market.

#### 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 archshaped 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.

# EBE AF

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**

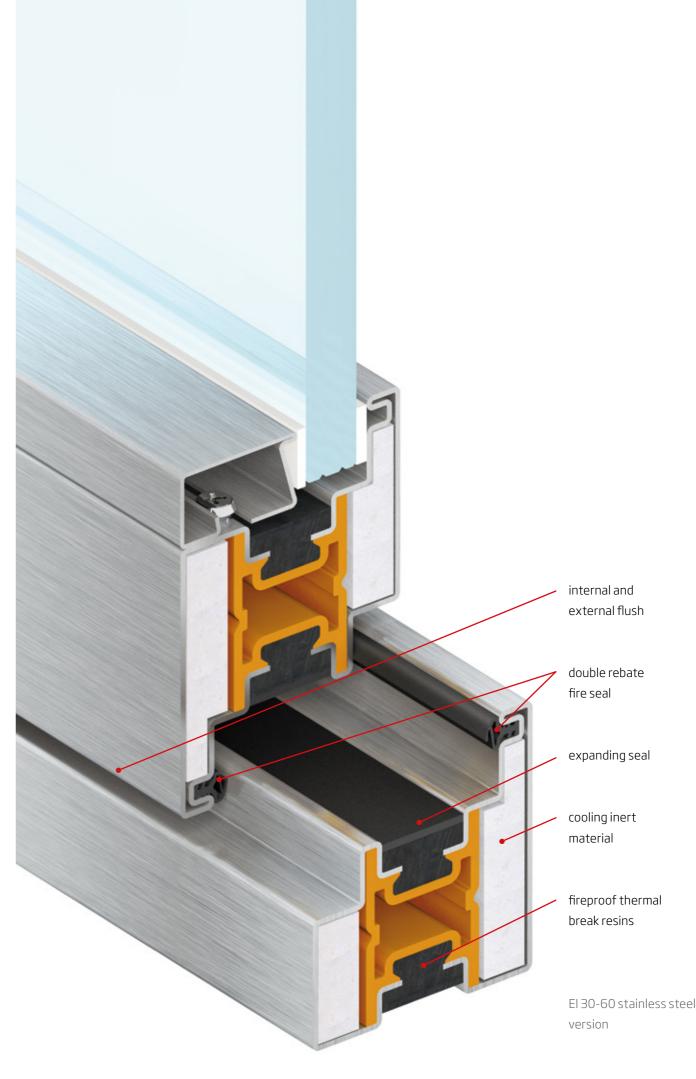
capability of the door frame to contain the irradiation to one metre on the non-exposed side.



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#### **INSULATION**

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

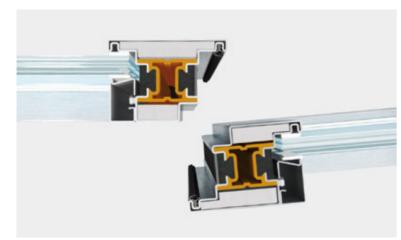


### EBE AF window corner



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.



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.



and exterior flush door. The lateral and central

size and variations



lateral section | frame section 134mm



central section | frame section 156 mm



bottom rail | frame section 94mm

EBE AF is an interior sections have the same frame size of the EBE 65 system, 134 mm lateral frame sections.

under reference standards EN 1364-1 and EN 1364-3

materials

galvanised steel

stainless steel

corten steel

glazing bead

rectangular

handles

inox 1502 h.135 | d.20 mm



hinges

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



main type









brass

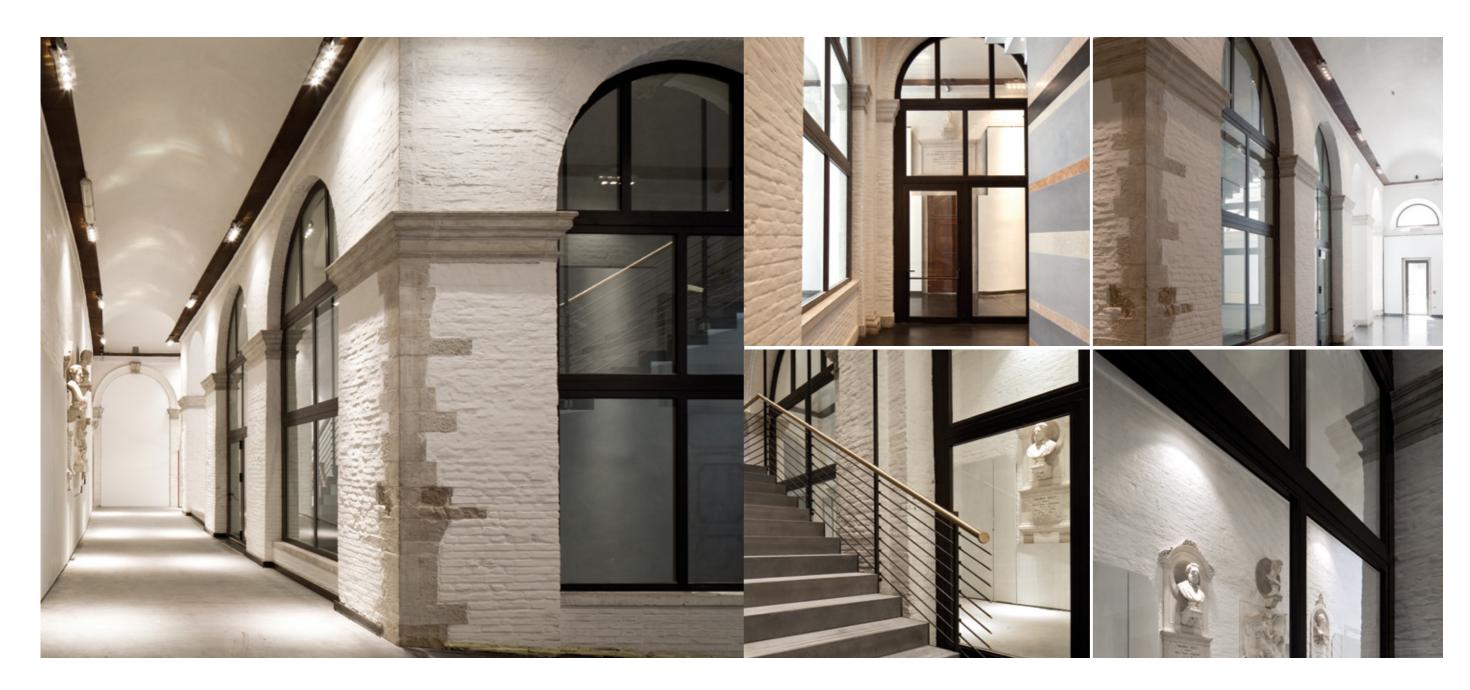
EBE AF is available in galvanised steel - in a wide range of colours and surface finishes - in AISI 304 brushed stainless steel, in AISI 316L polished or Scotch-Brite stainless steel and corten steel.

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.



The monumental complex of the Gallerie Dell'Accademia stands on the site where there once was, until the beginning of the 19<sup>th</sup> 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 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 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

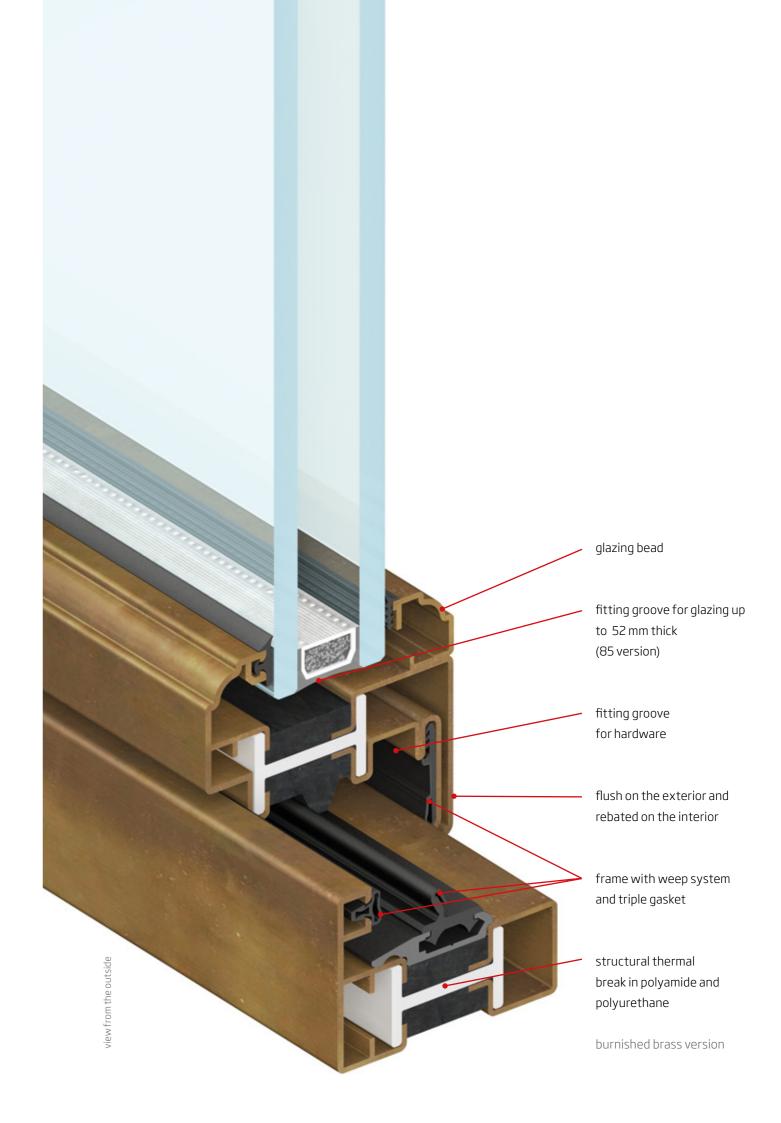
areas of application

- doors
- windows

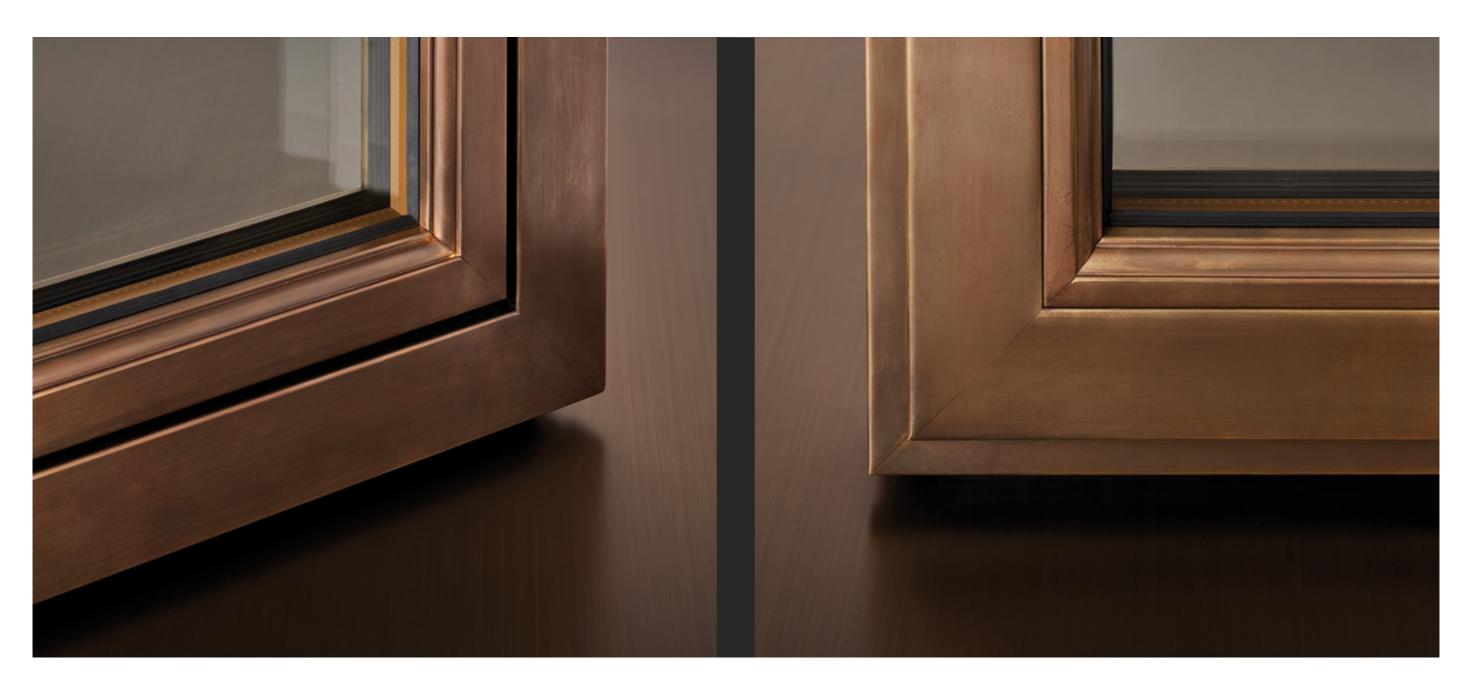
ST 65 with symmetrical convex moulding inside and outside the profile

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 guarantee 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 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
airnermeability	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
and flush.
The lateral frame section
is 85 mm wide.

## materials

brass





handles

hinges

main type



grooved





TT standard h.85 | d.15 mm



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





h.85 | d.15 mm



TT concealed





ST 65 is available

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.

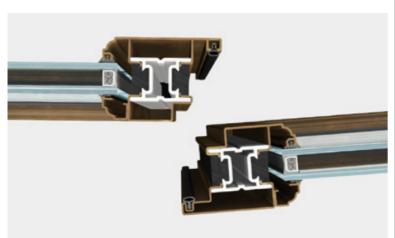
The vitruvio TT handles are available in burnished brass, chrome polished brass and polished brass. The system allows for different handles to be fitted, spindle 7.

inox 5056 TT *h.*135 | *d.*20 mm

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 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



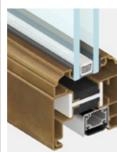
reduced lateral section | frame section 107 mm



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.

#### materials

brass

### glazing bead

grooved

#### handles

#### hinges

#### main type



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



truncated vitruvio handle h.116 | d.15 mm

square vitruvio handle h.116 | l.15 mm



inox 5002 h.150 | d.20 mm



concealed







All models can be made to open inwards or outwards.

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

ST 65 is available

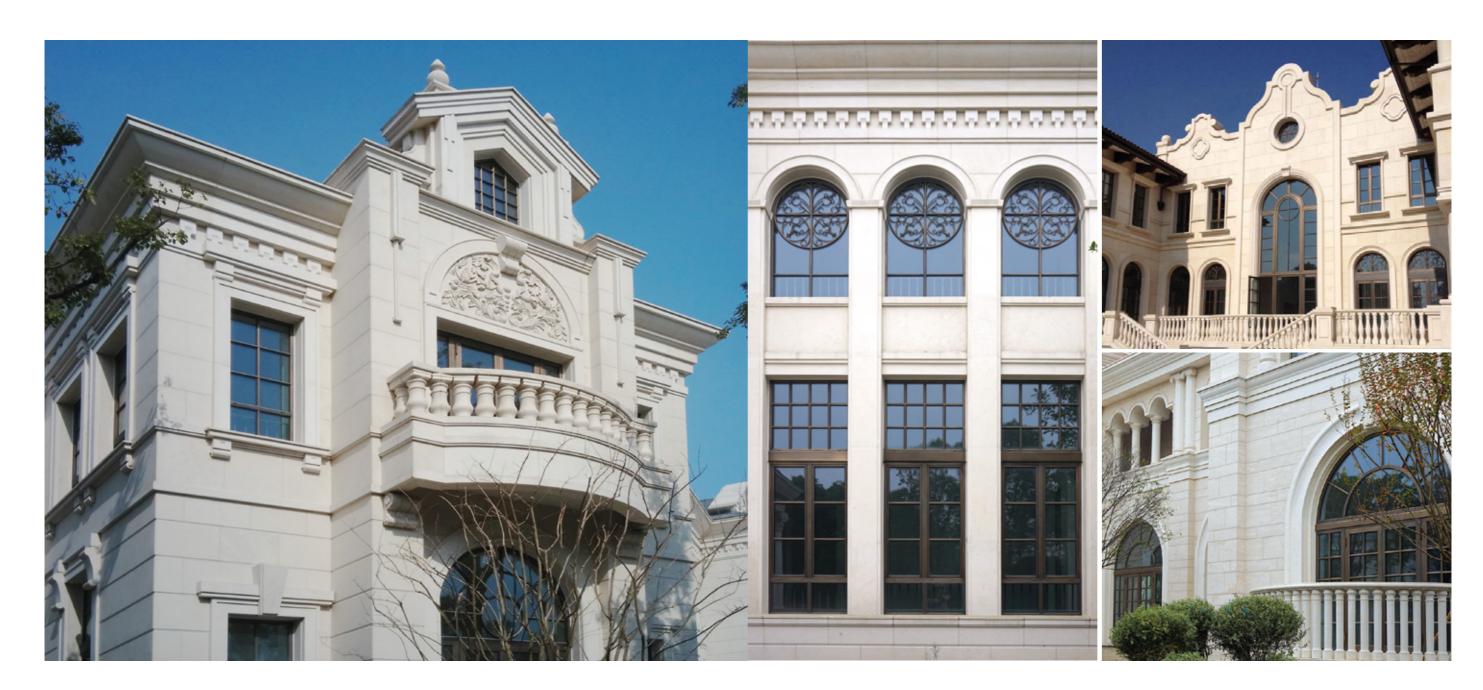
The gothic glazing bead is perfectly symmetrical with the ST 65 profile keeping the same decorative pattern both on the inside and the outside of the window.

The vitruvio handles are available in burnished brass, chrome polished brass and polished 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

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### 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

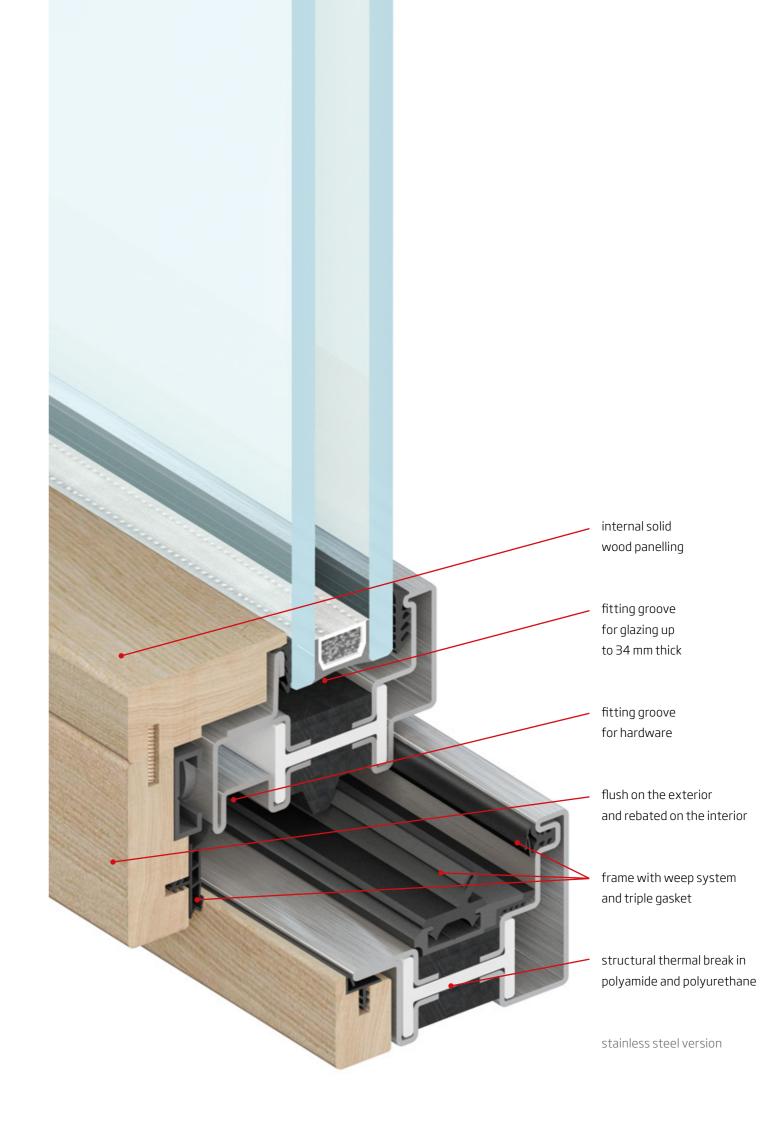
areas of application

- glass door
- windows

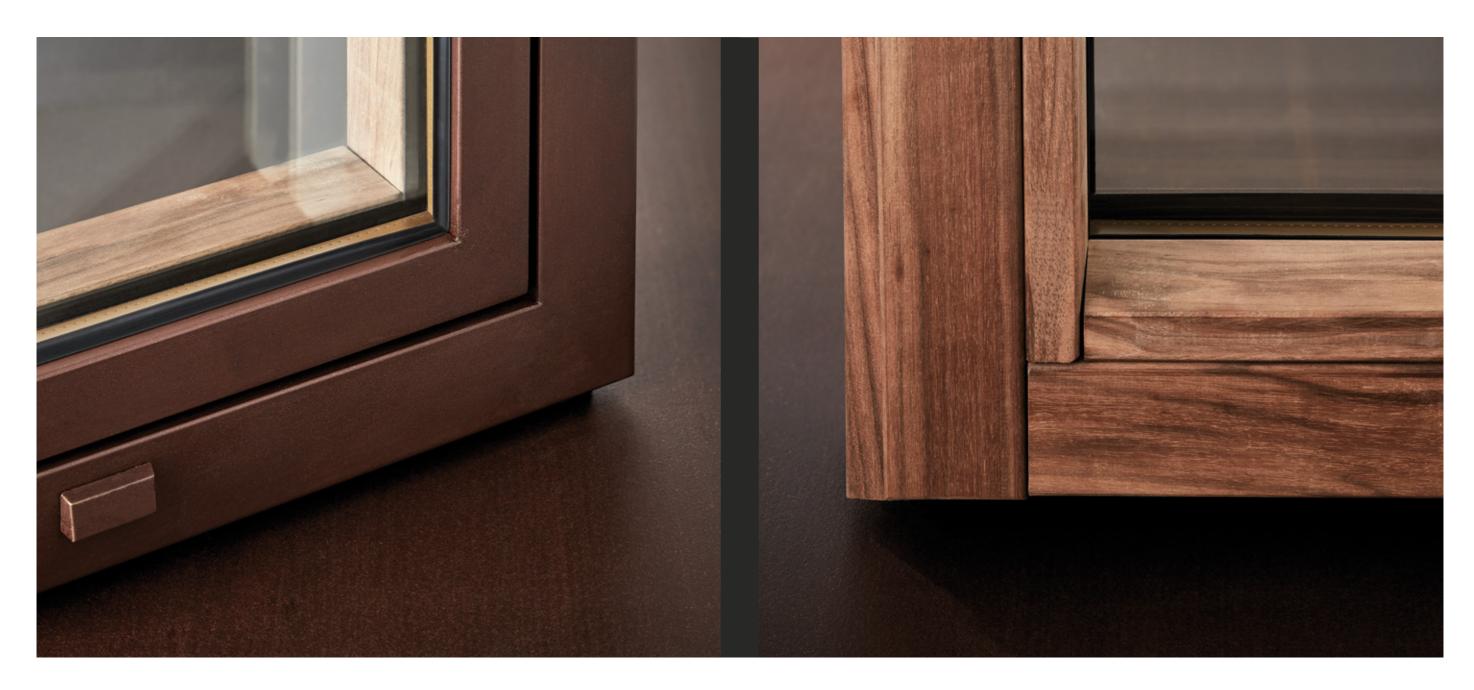
the EBE profile in metal-wood; ML 65 system, depth 65 mm, in the variation with interior finishing in solid wood



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 window corner



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



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
airpermeability	4

maximum achievable performance

#### size and variations



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



galvanised steel



stainless steel



corten steel



brass



- 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 requirements.

### handles

glazing bead

rectangular

The glazing bead is in

wood and is available

in different shapes and

material according to the architectural needs.



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



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



inox 5056 TT h.135 | d.20 mm

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.



hinges

main type



h.85 | d.15 mm



TT concealed



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.

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according to the furnishing 176

# SA 15

areas of application

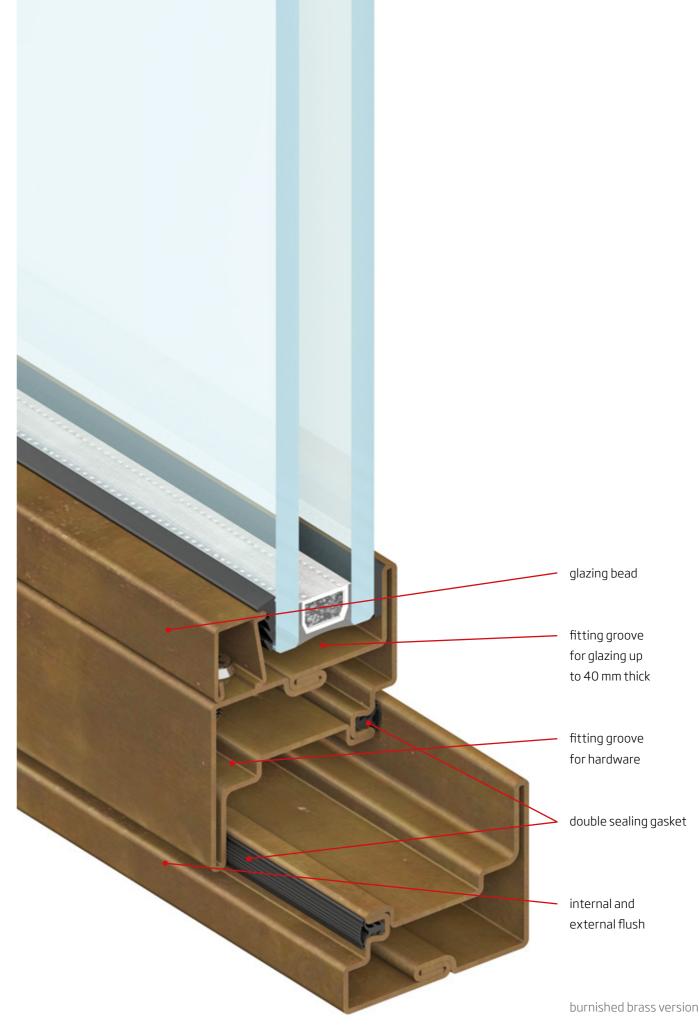
- doors
- windows

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

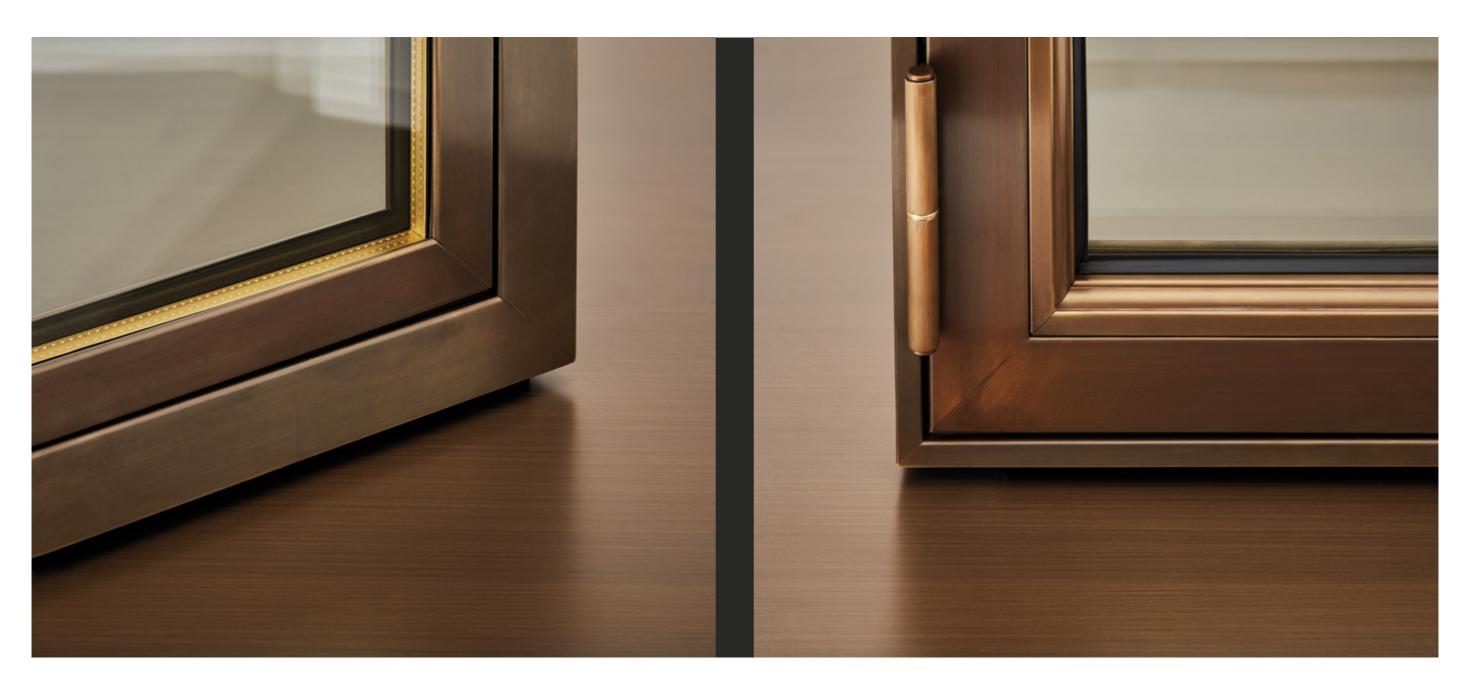


With the **SA 15** systems, the profiles can be particularly slim for the special configuration of the frames which are robust with excellent resistance against atmospheric agents and excellent performance in terms of safety. Even though it is not a thermal break system, SA still guarantees good insulation 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 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 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.

	flush <sup>1</sup>	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



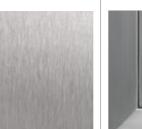
central section | rebated | frame section 145 mm

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.

#### materials



galvanised steel



glazing bead

rectangular

grooved

handles

truncated vitruvio TT handle

stainless steel



corten steel



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.

hinges



TT flush h.85 | d.14 mm



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



inox 5056 TT h.135 | d.20 mm



two-wing for flush -mounting h. 126 | d.13 mm





main type





TTrebated h.85 | d.15 mm





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 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
airpermeability	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  $90\,\text{mm}$ 



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.





galvanised steel

stainless steel

corten steel



grooved





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

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





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

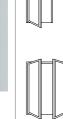
handles



square vitruvio handle h.116 | l.15 mm

inox 5002 h.150 | d.20 mm





main type

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

hinges



three-wing for flushmounting h.130 | d.20 mm

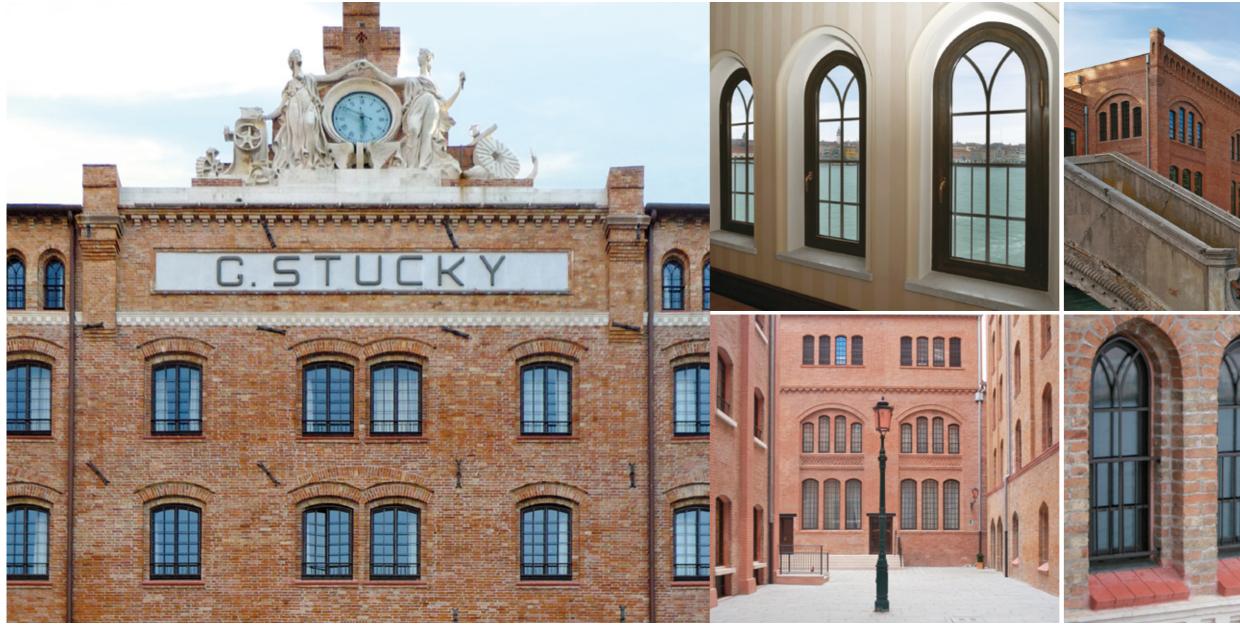


concealed





or outwards.





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

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 ceased, in the 1950s, the big conversions of an industrial complex remained an empty structure in the world.

The restoration concerned 1950s doors and windows, which were kept in their original shape.
These were realised with SA 15 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.

# SA 20

areas of application

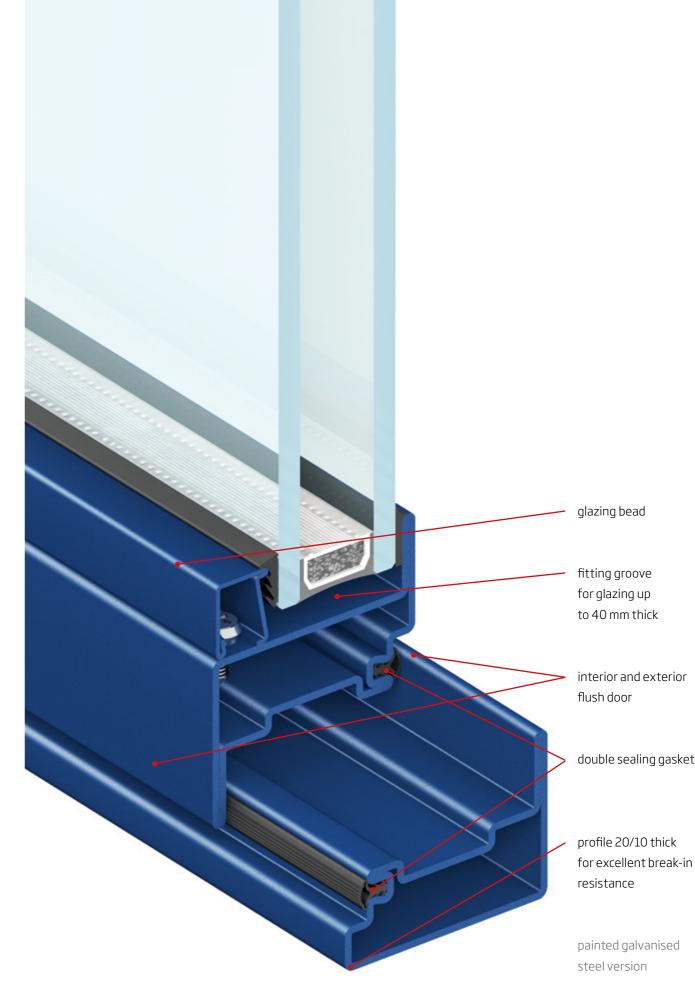
- doors
- windows

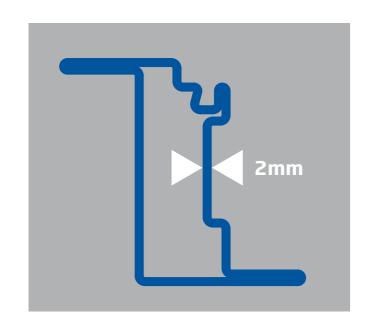
SA 20 tubular profiles for oversize, flush-mounted insulating glazing

**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.

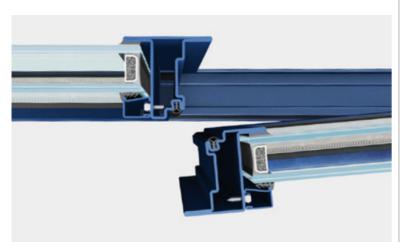
## SA 20 window

#### 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/m²K	2,16 W/m <sup>2</sup> K
airpermeability	4	4

maximum achievable performance

#### size and variations



lower/lateral section | flush | frame section 81 mm



central section | flush | frame section 101 mm



#### materials



galvanised steel

SA 20 is available in

galvanised steel - in a

wide range of colours

and surface finishes.



glazing bead

rectangular



grooved



Rectangular, gothic, thin (L shaped): the wide range

of glazing beads allows

for different internal

frame looks according to architectural needs.



square vitruvio TT handle

h.116 | l.15 mm

inox 5056 TT h.135 | d.20 mm

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

on the market - spindle 7.

other types of handle



two-wing for flush -mounting





Custom solutions are technical office.





TT flush h.85 | d.14 mm



TTrebated h.85 | d.15 mm



h.126 | d.13 mm



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

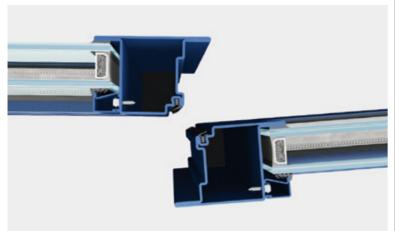
or burnished steel.



main type

available in co-operation

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  $90\,\text{mm}$ 



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



galvanised steel



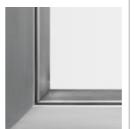
glazing bead

rectangular



handles

grooved





h.116 | l.15 mm

inox 5002 h.150 | d.20 mm



hinges

truncated vitruvio handle h.116 | d.15 mm h.145 | d.20 mm



three-wing flush h.130 | d.120 mm square vitruvio handle





concealed



main type

All models can be made to open inwards or outwards.



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

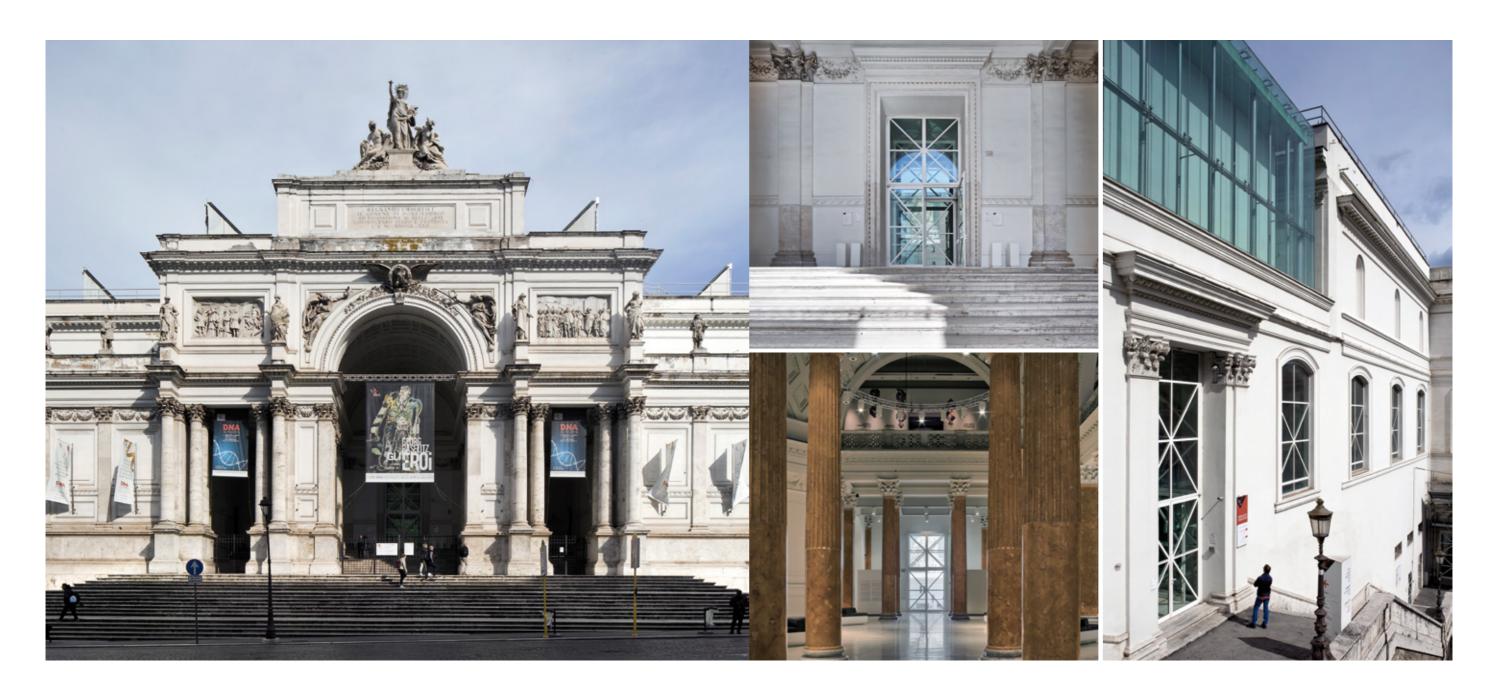
Rectangular, gothic, thin (L shaped): the wide range of glazing beads allows for different internal frame looks according to architectural needs.

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.

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

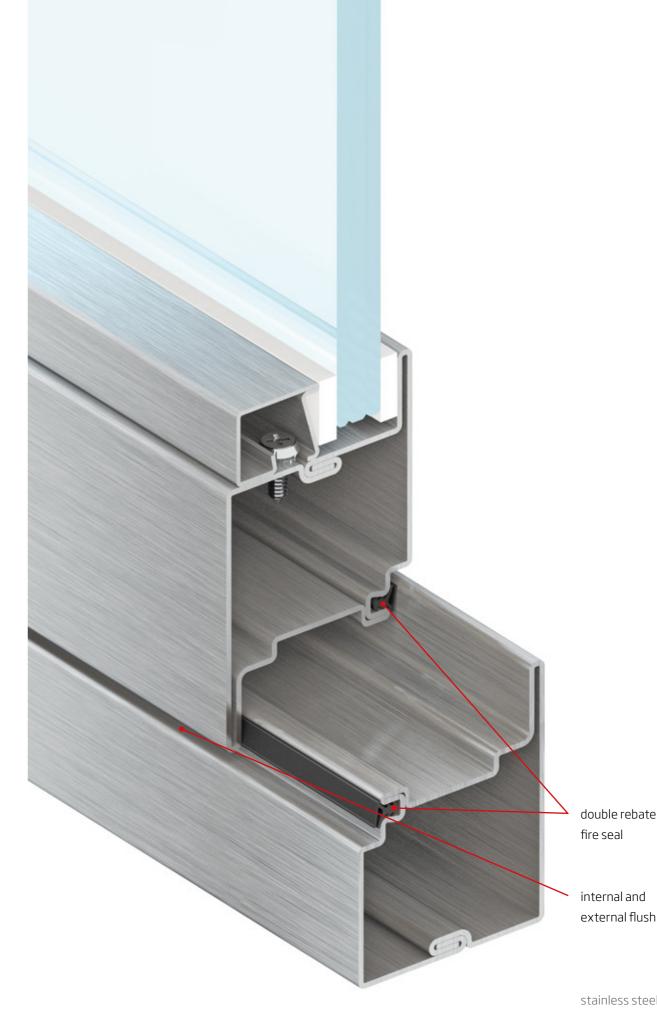
areas of application

- 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.



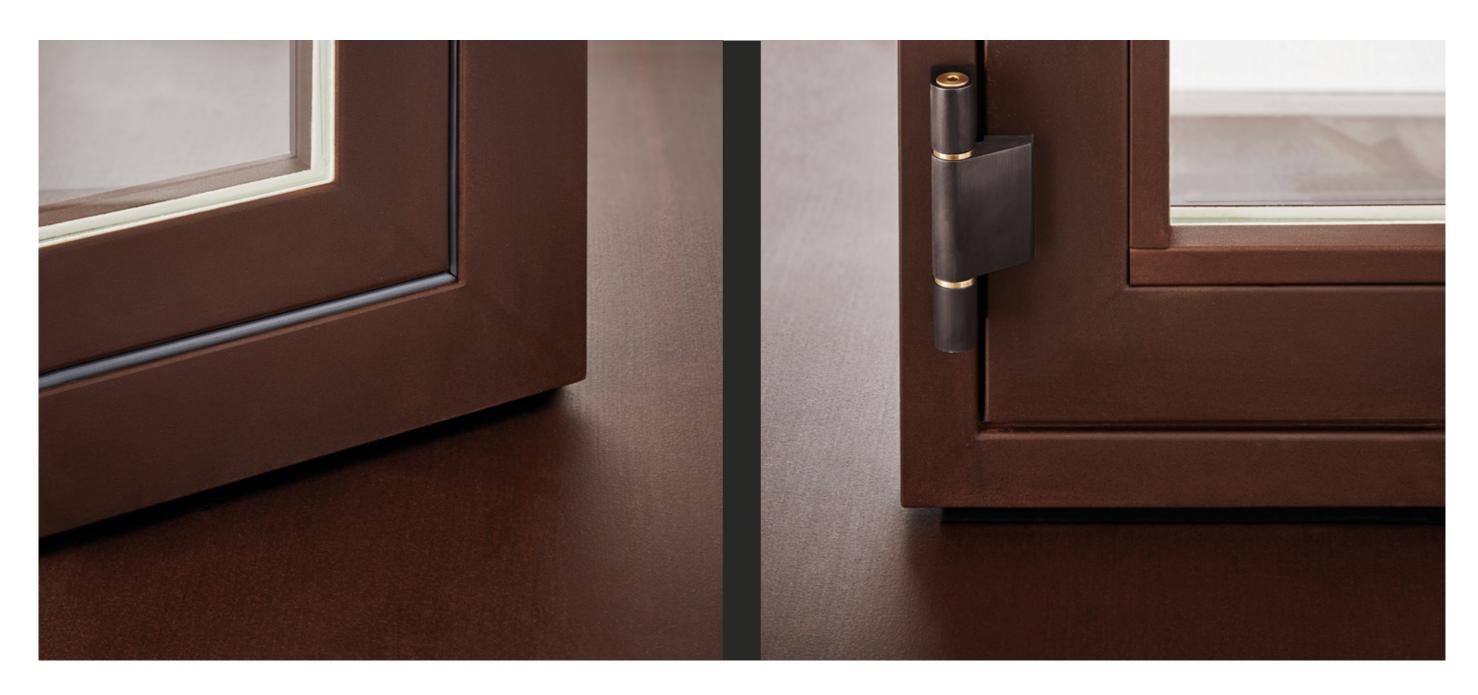
capability of the door frame to contain fire, fumes and flammable gases.



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

stainless steel version

### 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.

#### 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



galvanised steel



stainless steel



SA AF 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 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.

handles

glazing bead

rectangular



inox 1502 h.135 | d.20 mm



hinges

inox 6006 three-wing



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



main type







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  $technical\,of fice.$ 

#### 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

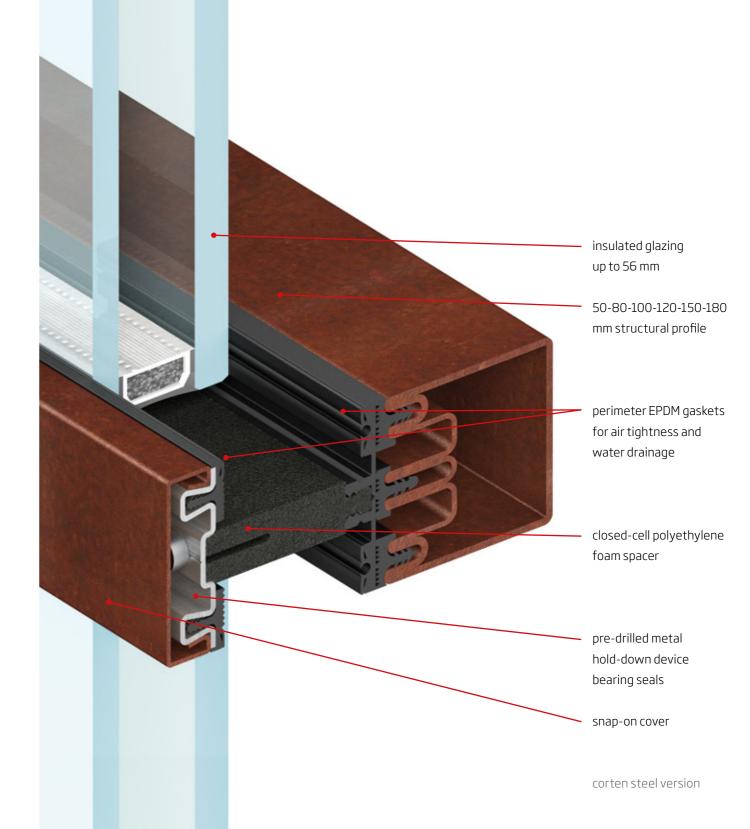
area of application

• 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 **4F 1** proposes the solution with structural mullions in steel, stainless steel or corten of reduced sections (50 mm) and elevated inertia to guarantee 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.

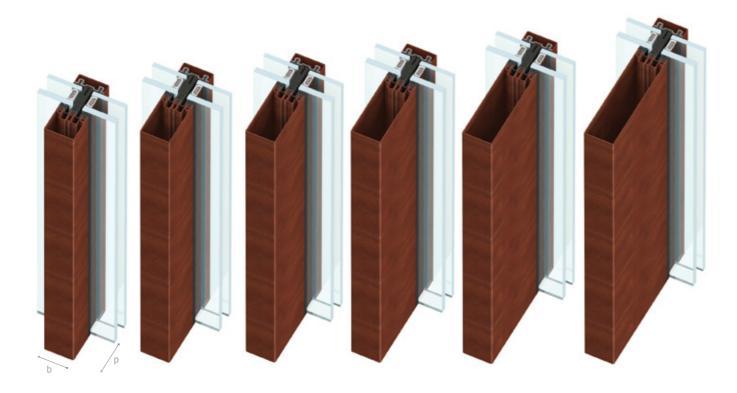
The performance of the **4F 1** system has been tested by the best European certifying laboratories in compliance with the current specific standard EN 13830 regulations.





## 4F1 façade system

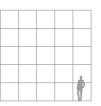
#### standard profiles and large dimensions



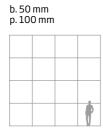




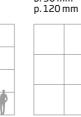
# p. 80 mm



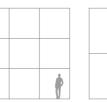
## b. 50 mm

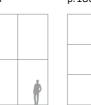


## b. 50 mm

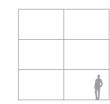


## b. 50 mm p. 150 mm





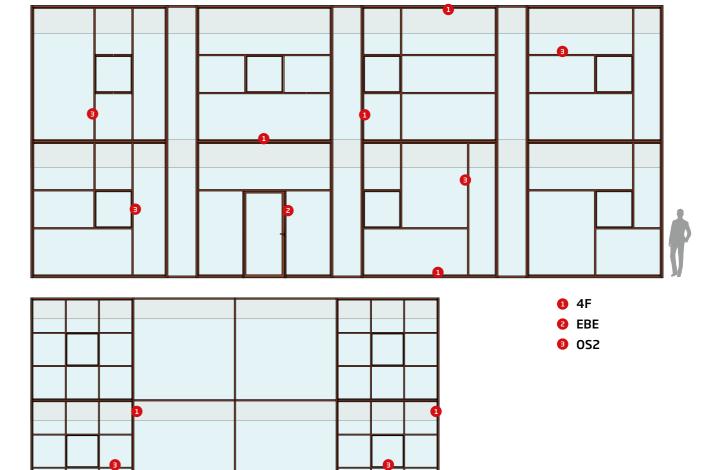
## b. 50 mm p. 180 mm



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.

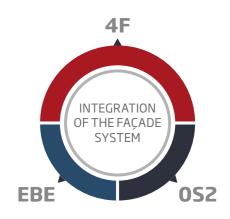
By increasing the depth of the profile, it is possible to increase the dimensions of opaque and glass panels up to approximately 7 sqm, thus giving the designer the possibility to choose the profile that best matches their project needs.

#### integration

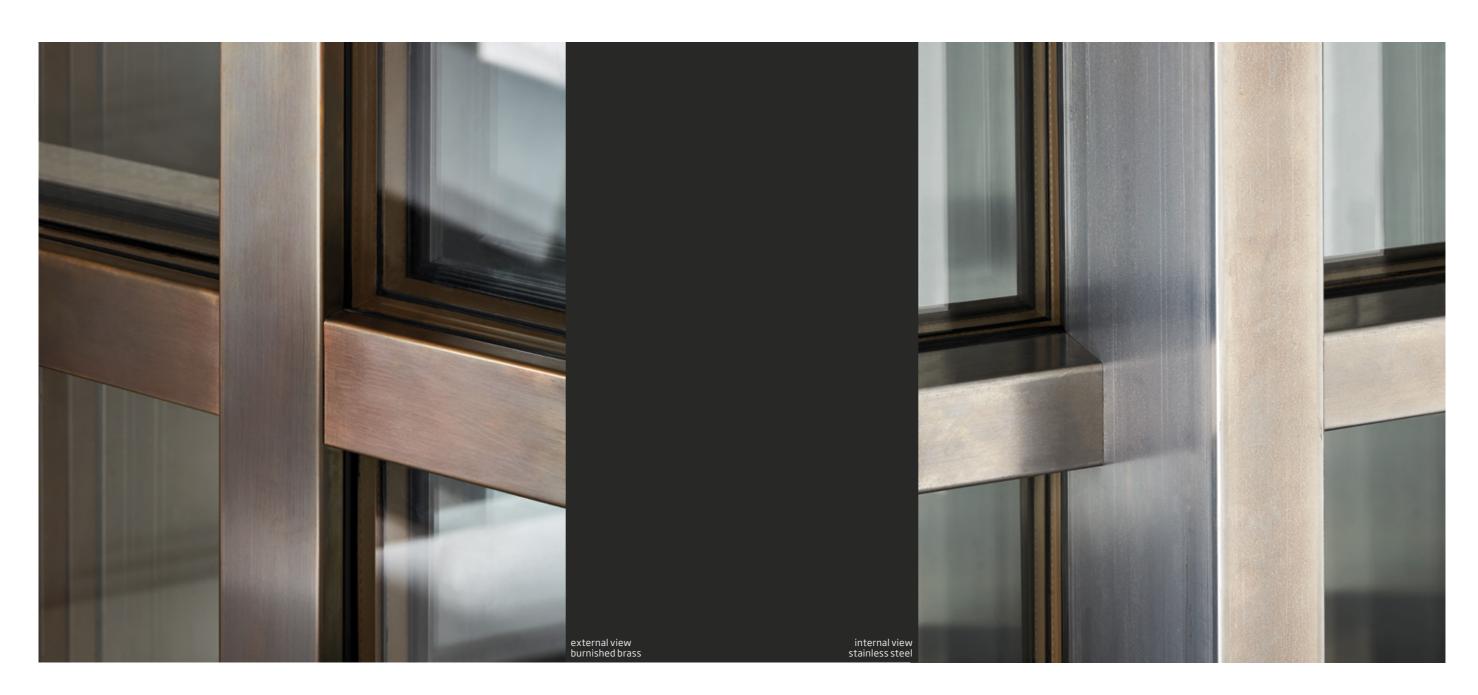


Thanks to Secco Sistemi curtain wall, the designer has maximum freedom in the design of the façade of the building.

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.



### 4F1 façade section



4F 1 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

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.

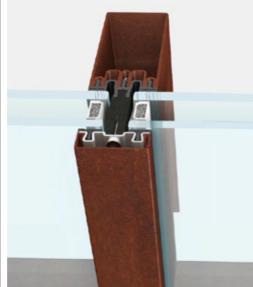
The 4F1 mullion/transom can be 50, 80, 100, 120, 150, 180 mm thick.

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.

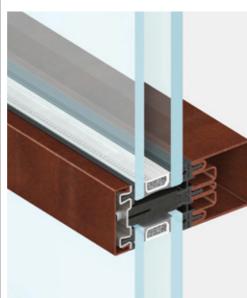
wind resistance - allowed load	$\pm$ 2,0 kN/m <sup>2</sup>
wind resistance - increased load	± 3,0 kN/m²
impactresistance	I5/E5
water tightness - static	RE1500
water tightness - dynamic	250 Pa/750 Pa
thermal transmittance (with Ug glass 0,6 W/m²K)	up to 0,80 W/m²K
air permeability	AE

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



galvanised steel



stainless steel



corten steel



corten steel

brass

4F 1 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.

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 (OT67 copper alloy).

#### application options



material for covers

galvanised steel



transom 100 mm | mullion 50 mm



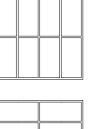
stainless steel



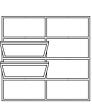
transom 100 mm | mullion 100 mm

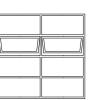
4F1 is equipped with concealed bottom plates in stainless steel to head join mullions to transoms in all the different combinations.

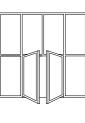
### main type

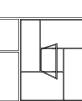






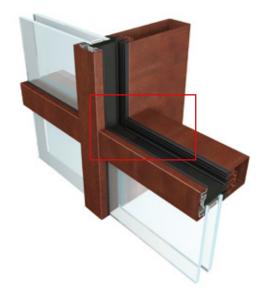




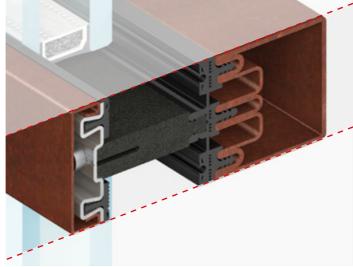




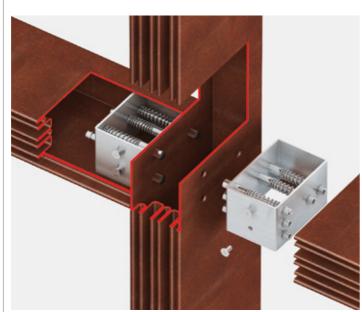
4F 1 allows for the integration of all EBE 65, EBE 85 and 0S2 systems.



#### detail



gasket



of large window panels.

of the system, is also

to the integration of a technical component

transom and is clipped onto the mullion.

that fits inside the

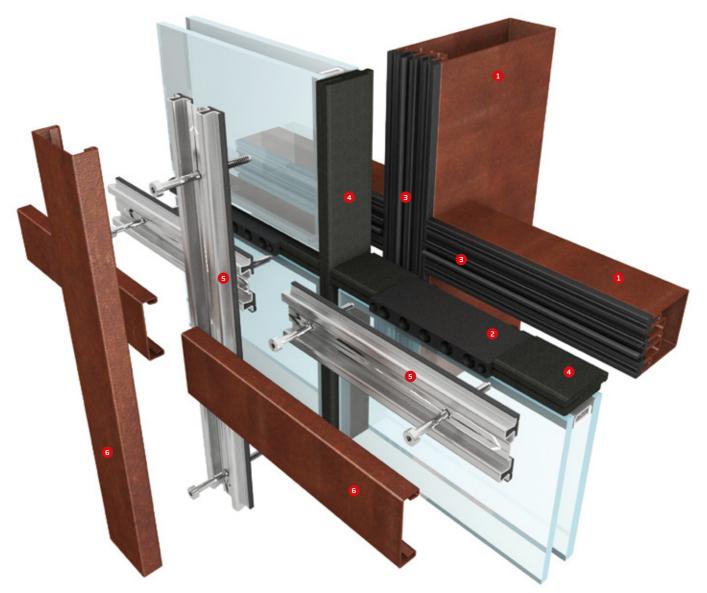
bottom plate

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

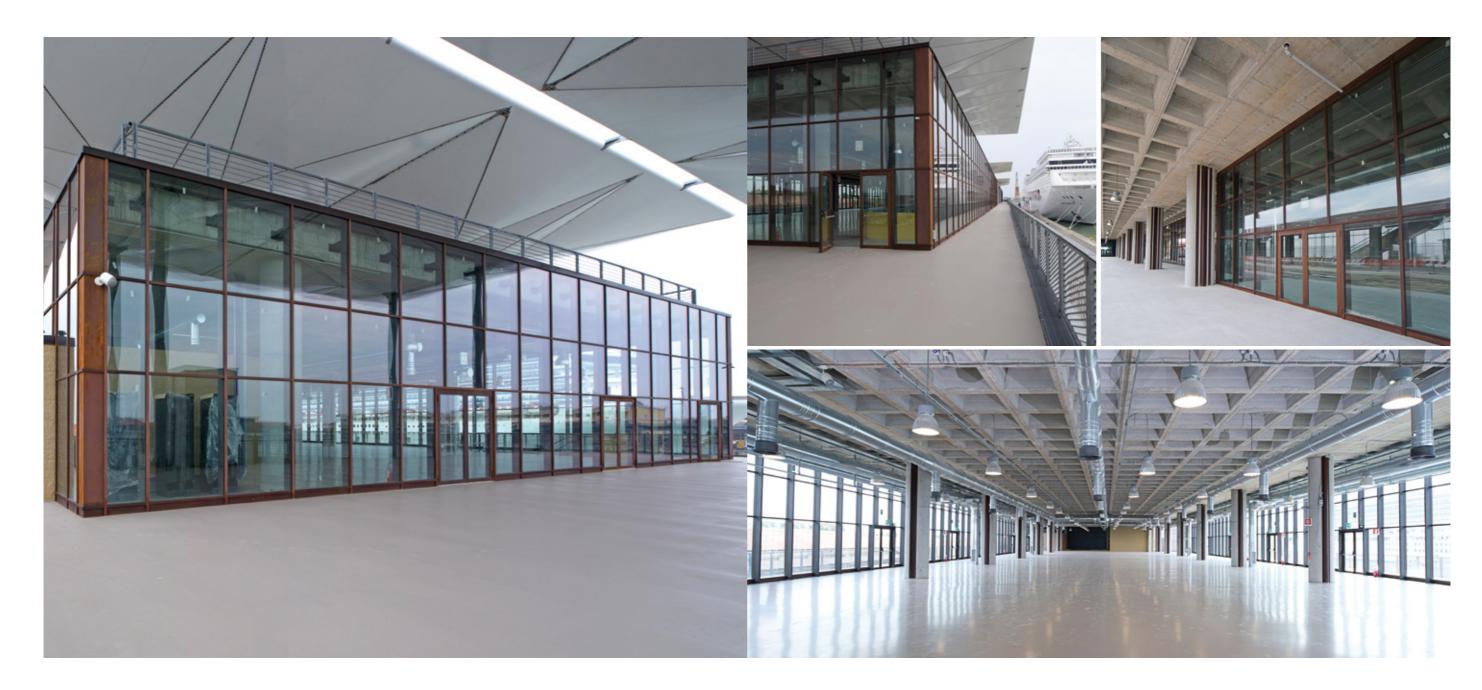
makes the gasket virtually "invisible", only leaving in sight the steel of the load-bearing This results in a façade that keeps the material of profiles, mullions and transoms, seamless transoms, seamless and completely free of interposed elements. Moreover, this component, through a system of spring-loaded pins, makes it possible structures and the glass The connection between the load-bearing profiles, primary structural node to remove the coupling device without damaging any elements of the "hidden" from view thanks structure.

#### disassembled façade



- mullion/transom profiles in 5 finishes
- variable support for glazing of up to 56 mm
- sealing and water draining gasket system
- extruded polyethylene foam for greater technical performance
- 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.

# 4F 2

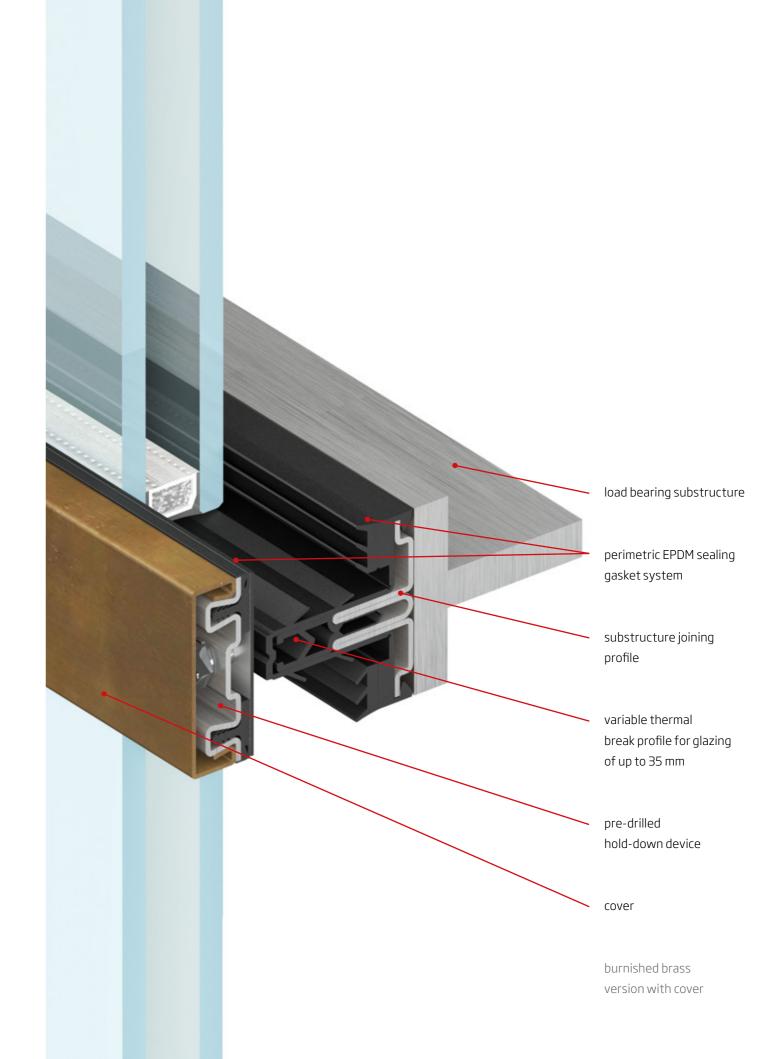
area of application

 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, 4F 2 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.

main type

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	$\pm$ 2,0 kN/m <sup>2</sup>
wind resistance - increased load	± 3,0 kN/m²
impactresistance	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  $|\,50\,\text{mm}\,\text{face}\,\text{section}\,$ 

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



galvanised steel



stainless steel

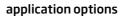


corten steel



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).





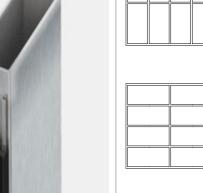
IPE welded beam

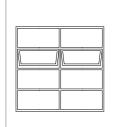




customised welded girder





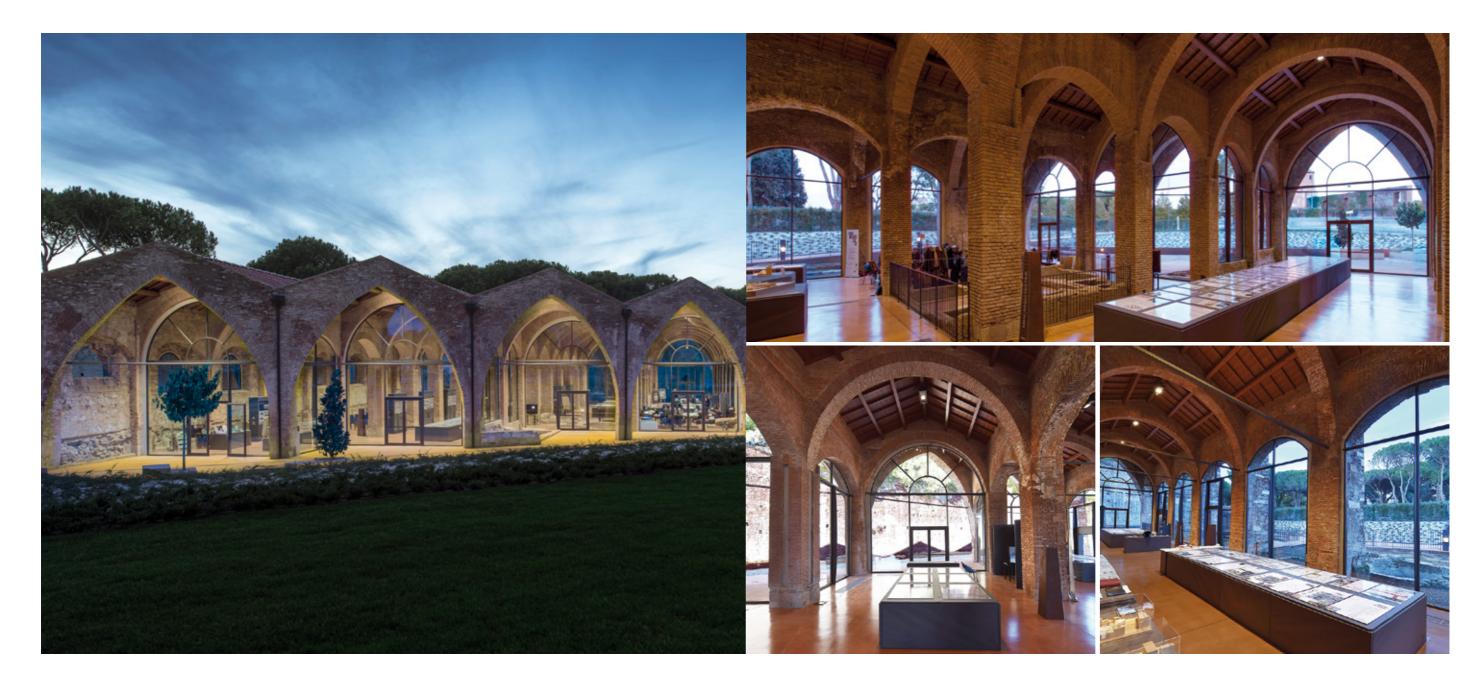




Custom solutions are available in co-operation with Secco Sistemi technical office.

4F 2 can be fixed to any welded or customised girder.

# 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 El 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.



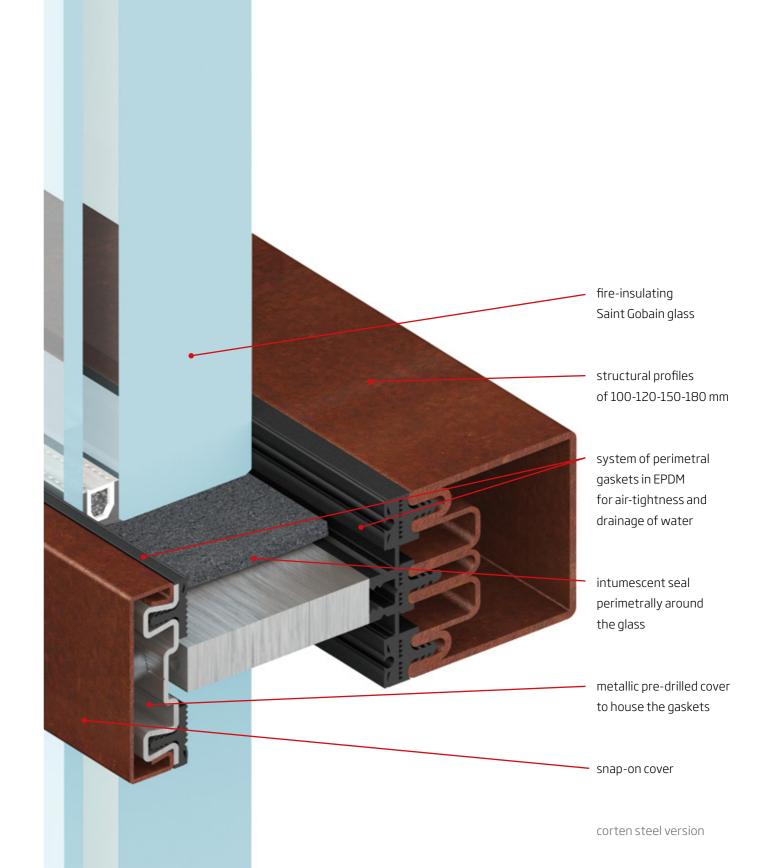
#### IRRADIATION

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 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.

# and mullions

# material for transom | material for covers

# application options

# main type



galvanised steel

stainless steel

corten steel



galvanised steel



transom 100 mm | mullion 50 mm





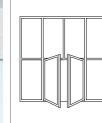


corten steel

stainless steel



transom 100 mm | mullion 100 mm



4F AF is equipped with

concealed bottom plates in stainless steel to head

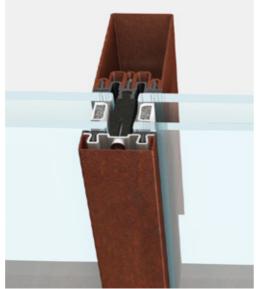
join mullions to transoms

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.



application to mullion | 50 mm face section



application to transom  $\mid$  50 mm face section

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
fire performance	El30-60-90 EW30-60
airpermeability	AE

4F AF 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, 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

bearing seals pre-drilled for screw application.

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

The 4F AF 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.

under reference standard EN 13830

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.

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).





# accessories

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

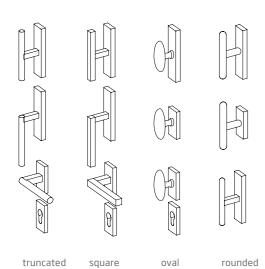
Secco systems are unique for their innovative design with care for every single detail, for the quality of the materials and of the manufacturing processes. They come with a complete range of accessories, in consistency with the general approach of the firm towards the product. Design, quality and duration of the accessories are all in fact fundamental for guaranteeing 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.

# handles

#### 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.

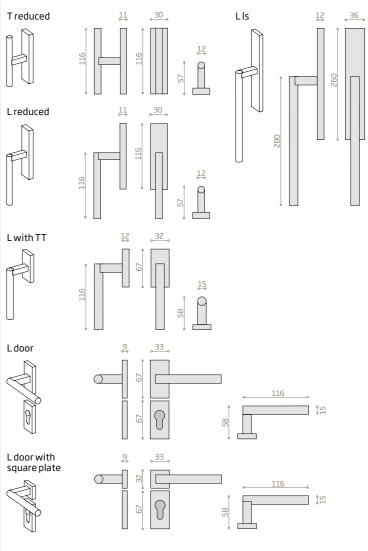




# handles truncated **vitruvio** application options • windows • doors systems OS2, BV, EBE, ST, SA



# configurations and dimensions

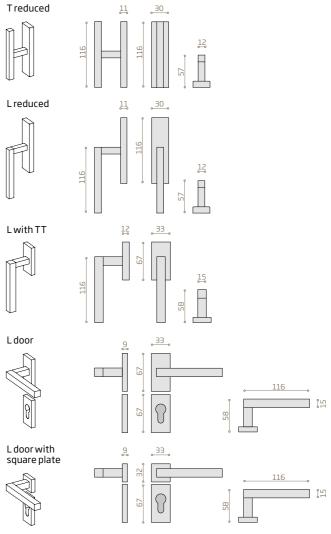






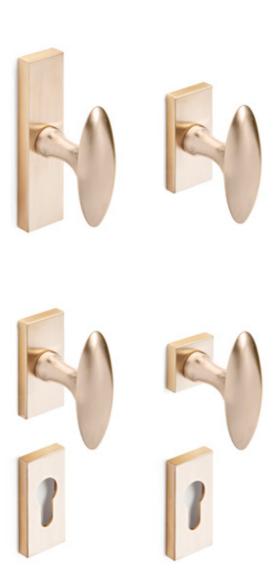


# configurations and dimensions

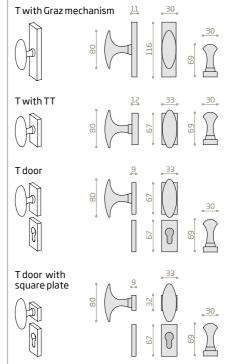




# handles oval **vitruvio** application options • windows • doors systems OS2, BV, EBE, ST, SA



# configurations and dimensions





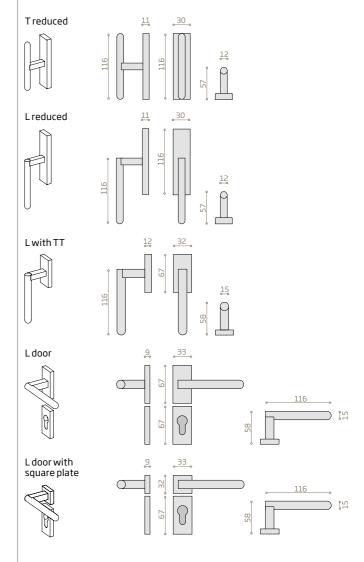


burnished brass satin-finish brass





# configurations and dimensions



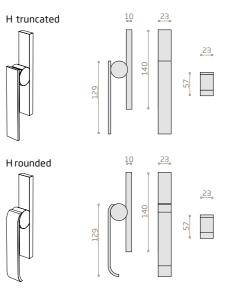


burnished brass satin-finish brass





# configurations and dimensions



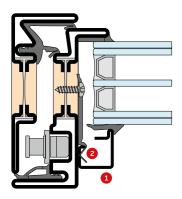


# glazing beads

#### 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



# glazing beads

thin

gothic

triangular

rectangular

















materials













galvanised steel stainless steel corten steel

materials







# systems

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

# systems

materials

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

# systems

materials

OS2 65, OS2 75

# systems

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

# glazing beads

spindle



# squared glazing bead













materials

systems

OS2 65, OS2 75













systems

materials

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

materials









systems

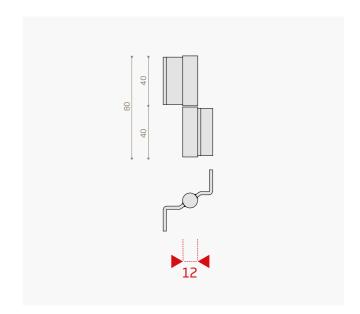
EBE 65, EBE 75, EBE 85, EBE 85 AS, SA 15, SA 20

# 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

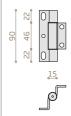
- windows doors

# systems

OS2 65, OS2 75

# three-winged for OS2





# materials and finishes



# application options

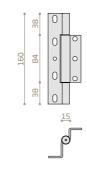
- windows doors

# systems

OS2 65, OS2 75

# three-winged for EBE windows





# materials and finishes



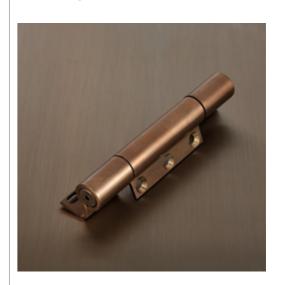
# application options

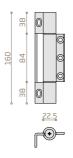
• windows

# systems

EBE 65, EBE 75, EBE 85

# three-winged for EBE doors





# materials and finishes



# application options

• doors

# systems

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

# hinges

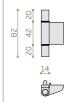
### sash with TT mechanism for EBE





# three-winged for SA





# materials and finishes



# application options

• windows

# systems

EBE 65, EBE 85, EBE Style, EBE ML

# materials and finishes



# application options

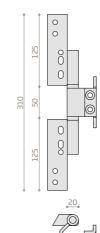
- windows doors

# systems

SA 15, SA20

### concealed





# materials and finishes



application options

• doors

# systems

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

### weld-on





# materials and finishes



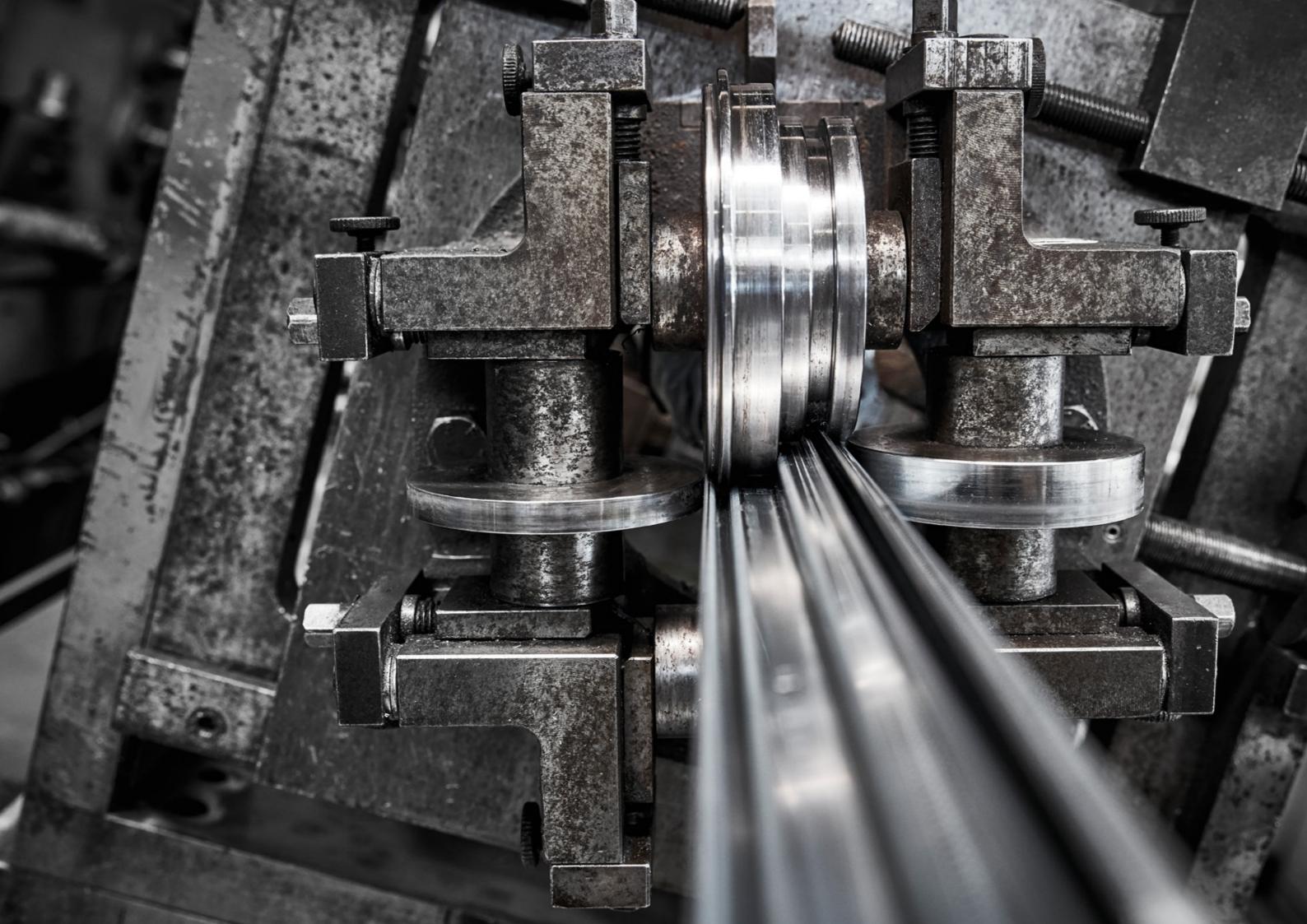
galvanised steel

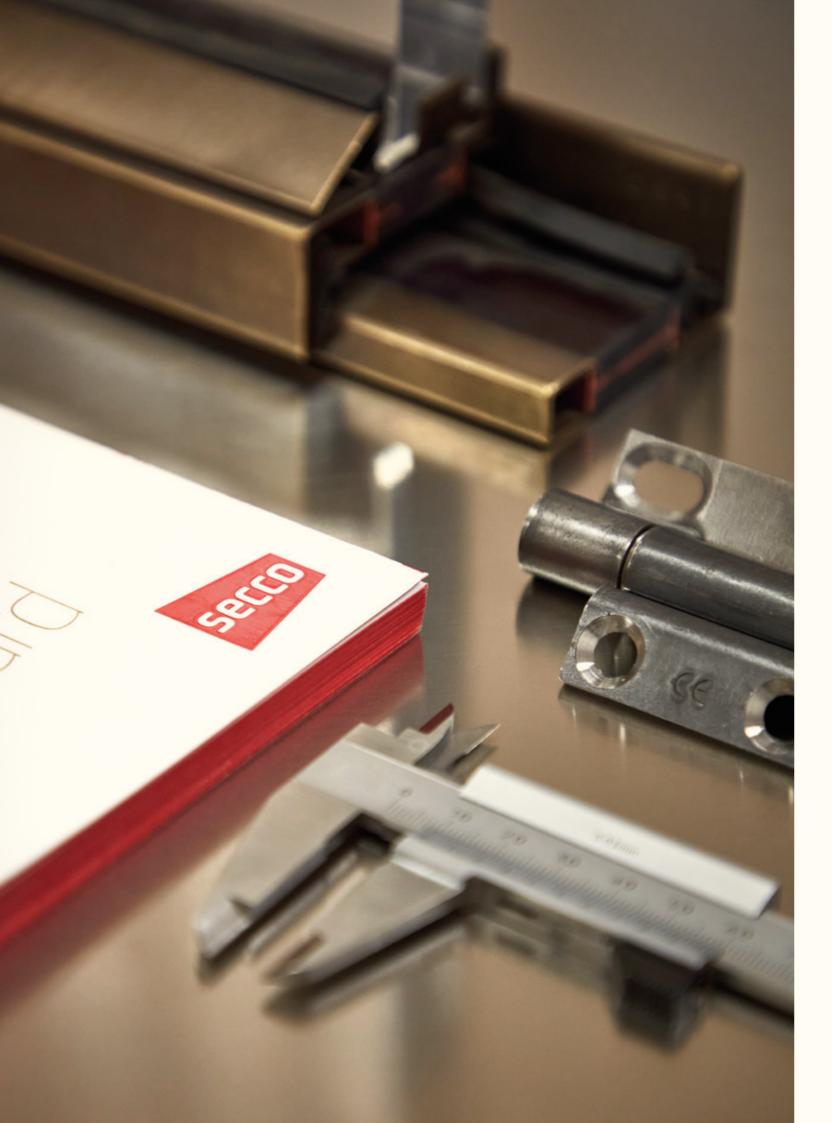
# application options

- windows doors

# systems

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



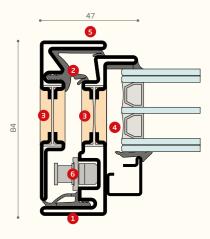


# designing together

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

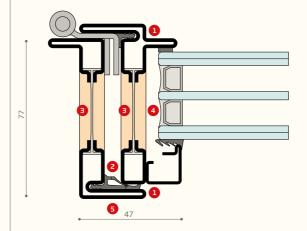
The sections and the dimensions of the profiles in the main sections of Secco's systems - with all the possible variations to choose from - rebated or flush-mounted, both for exterior and interior, fixed and extendible, with joints and gaskets - all these are represented in the following pages by technical 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.

# inward-opening section with TT mechanism



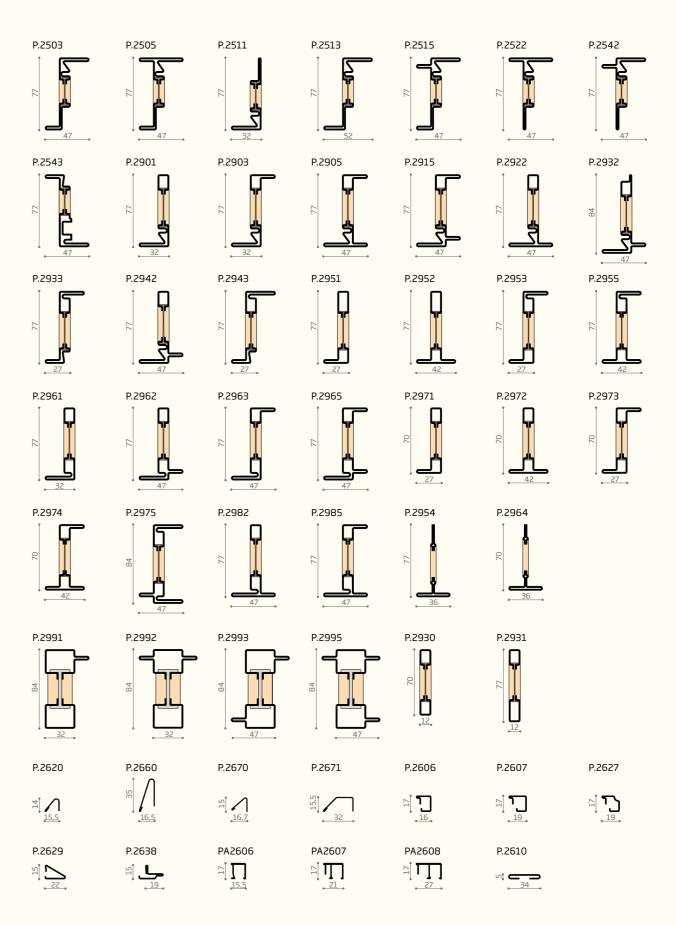
- 1. internal and external rebate
- 2. weep system and double gasket
- 3. structural thermal break in polyamide and polyurethane
- 4. fitting groove for glazing up to 50 mm thick
- 5. section with reduced size
- 6. hardware groove

# 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

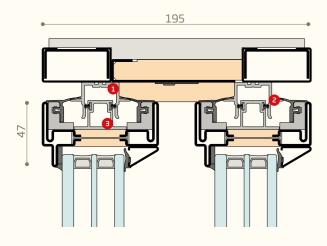
inward-opening sections

# 2 3 4

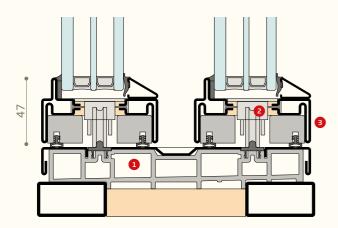
outward-opening sections and fixed panes

# OS275 AS

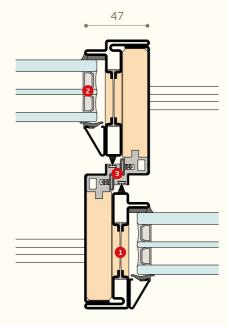
# main sections



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

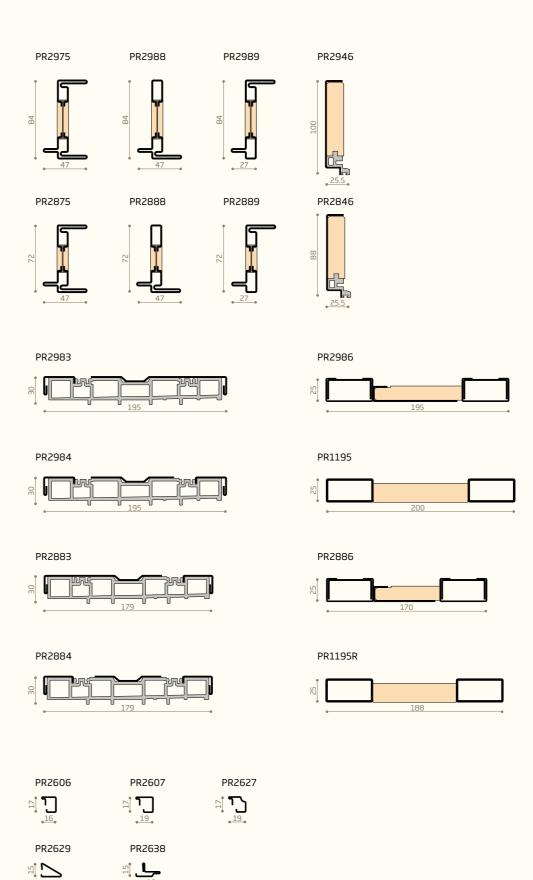


- 1. profile with threshold profile for water run-off
- 2. reduced wheel (carriage) assembly
- 3. reduced profile same as the visible dimensions on the four sides  $\,$

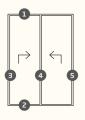


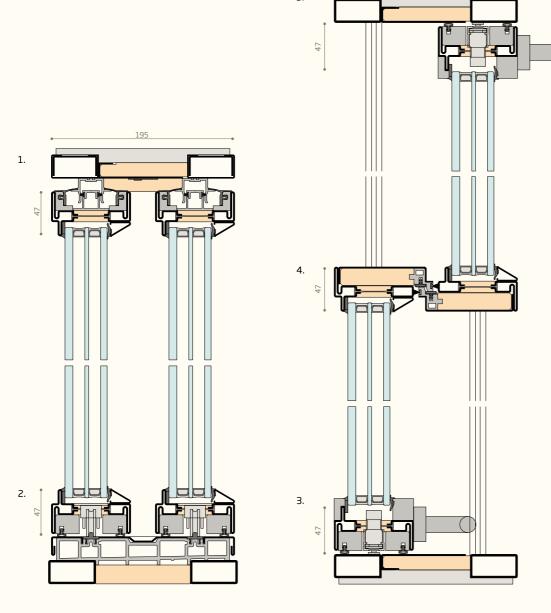
- 1. structural thermal break in polyamide and polyurethane
- 2. fitting groove for glazing up to  $\,50\,\text{mm}$  thick
- 3. Two levels of gasket and one brush

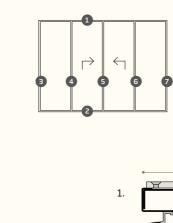
# sections

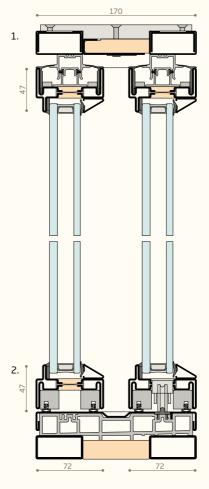


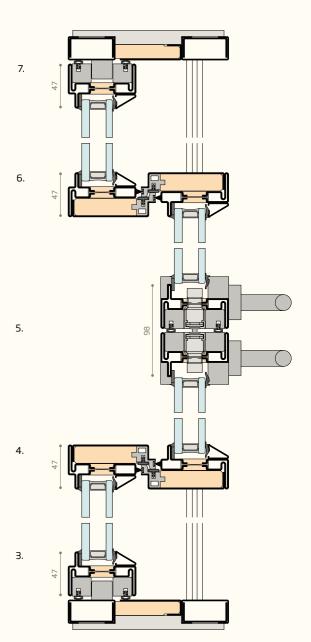
sections





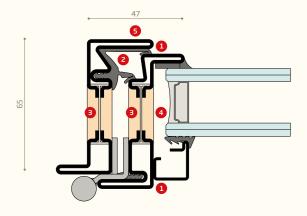






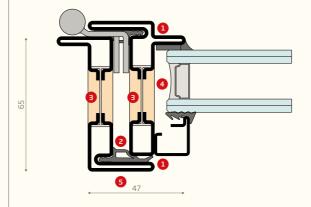
# OS2 65

# inward-opening section



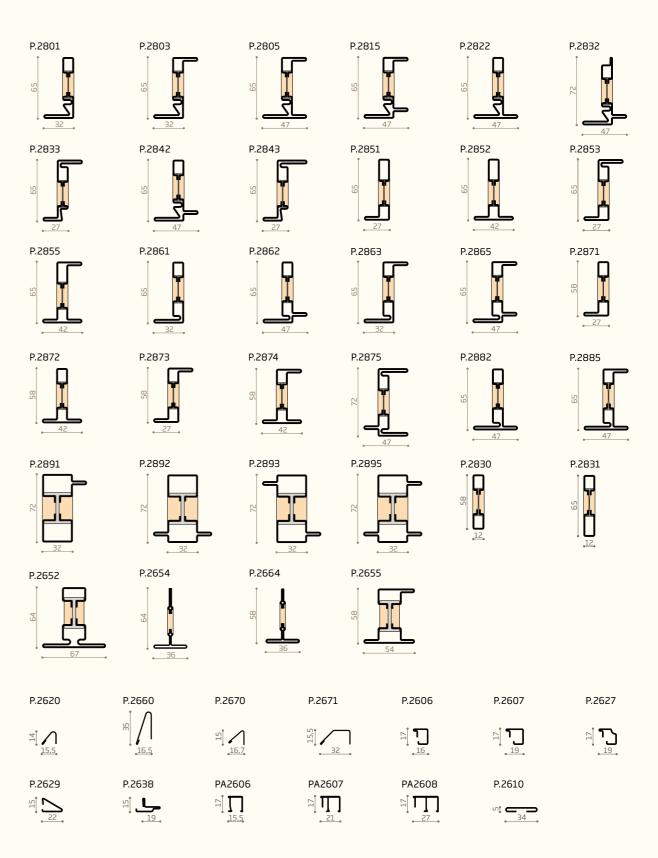
- 1. internal and external rebate
- 2. frame with weep system and double gasket
- 3. structural thermal break in polyamide and polyurethane
- 4. fitting groove for glazing up to 38 mm thick
- 5. section with reduced size

# inward-opening section



- 1. internal and external rebate
- 2. double rebate seal
- 3. structural thermal break in polyamide and polyurethane
- 4. fitting groove for glazing up to 37 mm thick
- 5. section with reduced size

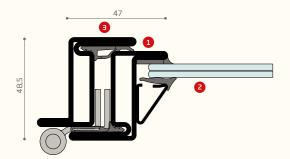
# profiles



# OS2 65

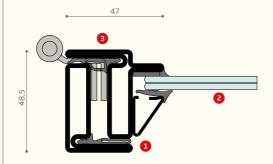
# inward-opening and fixed pane sections outward-opening sections 2 3 4

# inward-opening section



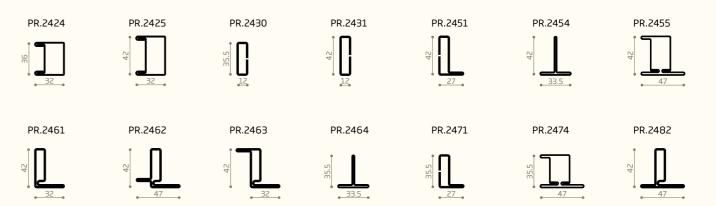
- 1. internal and external rebate
- 2. fitting groove for glazing up to 15 mm thick
- 3. section with reduced size

# inward-opening section



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

# profiles

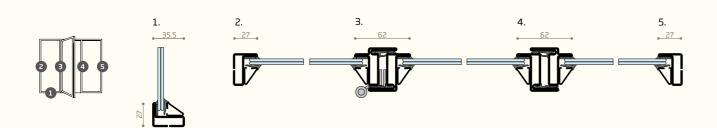


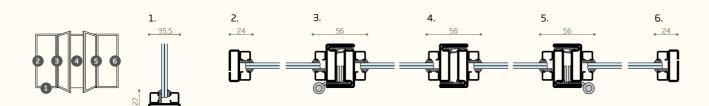
# glazing beads

PR.2415	PR.2416	PR.2429	PR.2606	PR.2607
ST 4.5	ZT 10.	ST 19	□ <b>1</b>	19

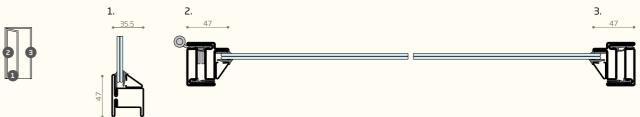
# inward-opening and fixed pane sections

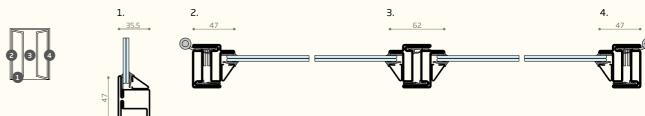
# 1. 2. 47 1. 35.5 2. 47 2. 47 3. 62 4. 47

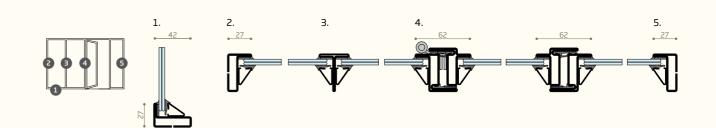


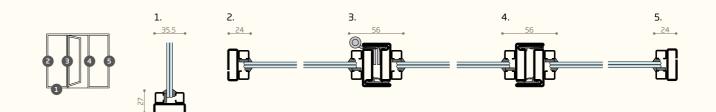


# outward-opening sections

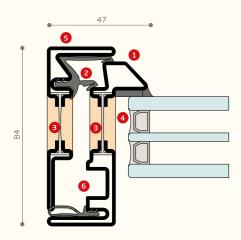






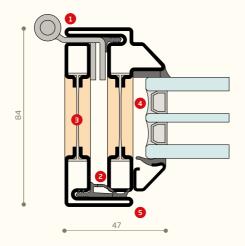


# inward-opening section with TT mechanism



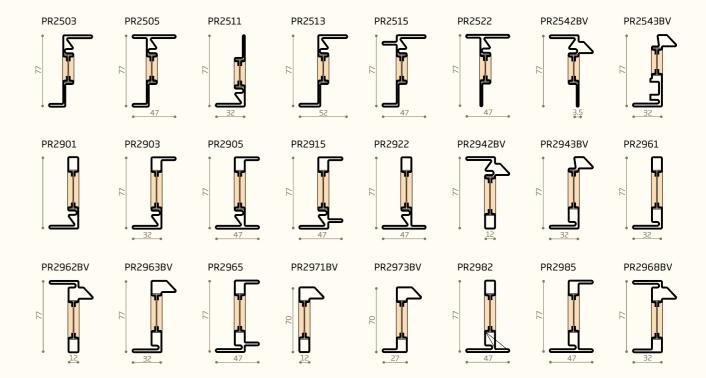
- 1. internal and external rebate
- 2. weep system and double gasket
- 3. structural thermal break in polyamide and polyurethane
- 4. fitting groove for glazing up to 40 mm thick
- 5. section with reduced size
- 6. hardware groove

# outward-opening section

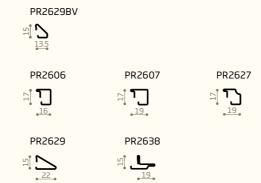


- 1. internal and external rebate
- 2. double seal rebate
- 3. structural thermal break in polyamide and polyurethane
- 4. fitting groove for glazing up to 40 mm thick
- 5. section with reduced size

# profiles



281

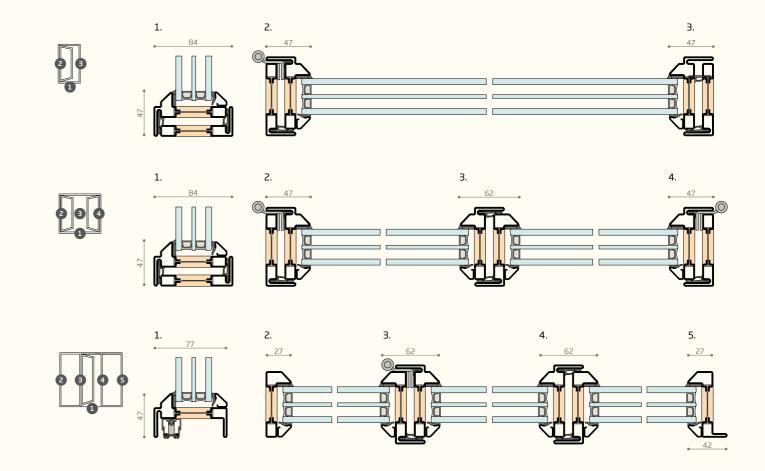


# BV 75

# inward-opening sections

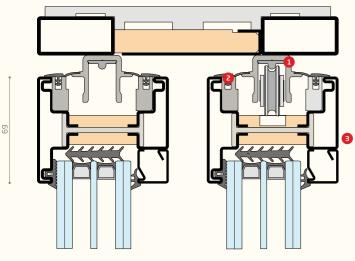
# 2 3 2 3 4 2 3 4 2. - 27 <u>27</u>

# outward-opening sections and fixed panes

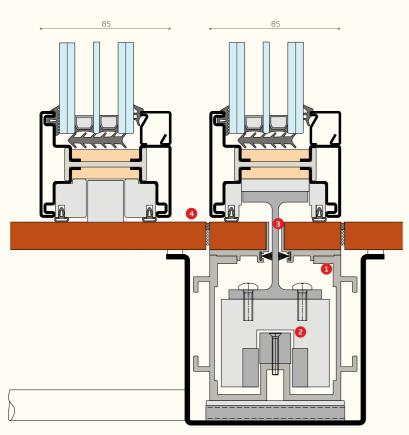


# ØG

# main sections



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

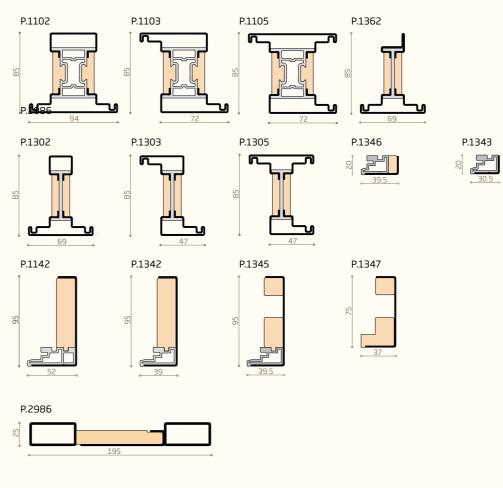


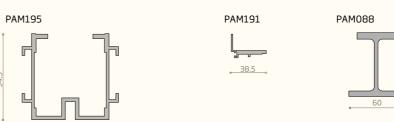
- 1. work group
- 2. Ironlev® magnetic levitation skid
- 3. sliding loop-hole
- 4. floor; continuity between inside and outside and without tripping

# 69

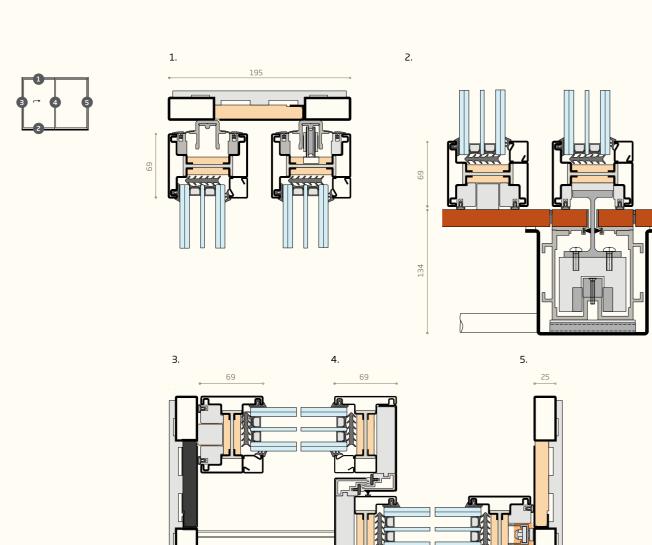
- 1. structural thermal break in polyamide and polyurethane
- 2. fitting groove for glazing up to  $\,60\,\text{mm}$  thick
- 3. Two levels of gasket and one brush

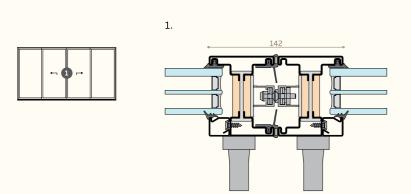
# sections



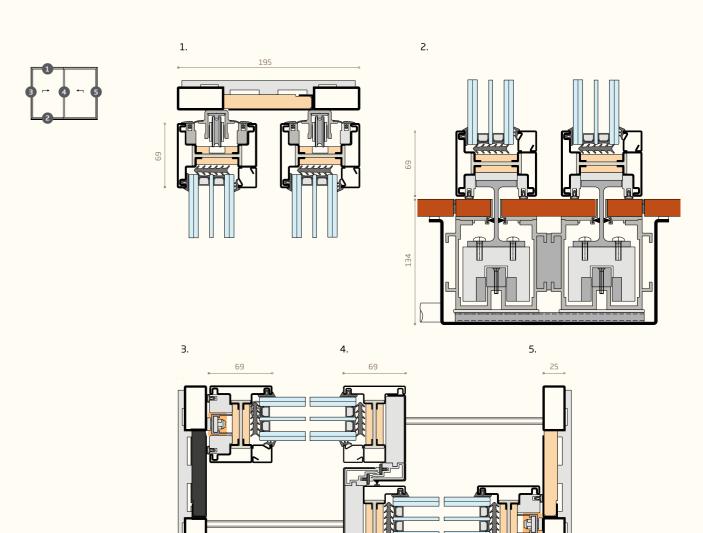


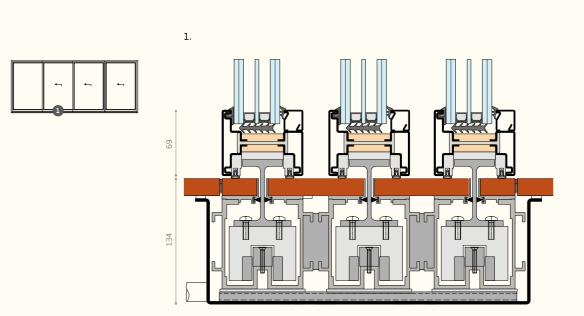
sections





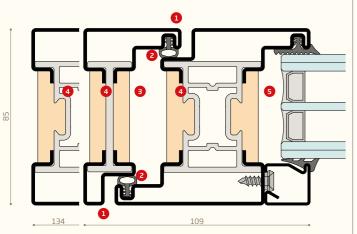
sections





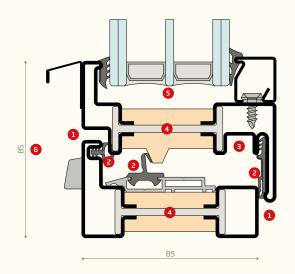
## EBE 85

### doorsection



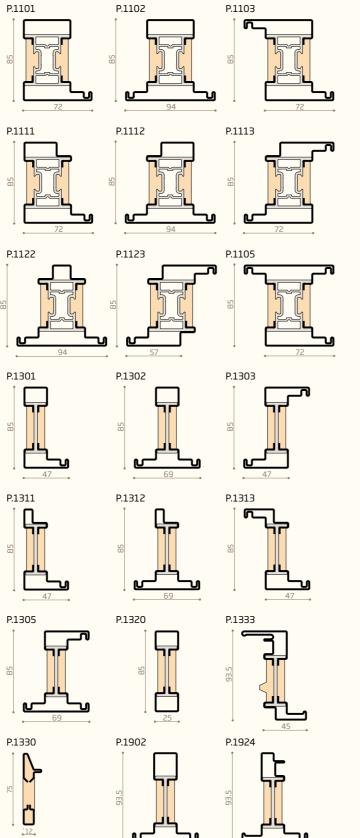
- 1. internal and external flush
- 2. double rebate seal
- 3. Euro-groove for accessories
- 4. structural thermal break in polyamide and polyurethane
- 5. fitting groove for glazing up to 60 mm thick

### window section

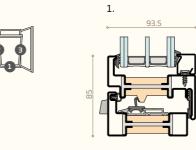


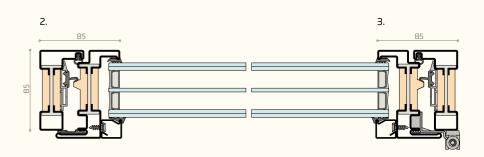
- 1. flush on the exterior and rebated on the interior
- 2. frame with weep system and triple gasket
- 3. wooden/pvc fitting groove for hardware slot
- ${\bf 4.\ structural\ thermal\ break\ in\ polyamide\ and\ polyurethane}$
- 5. fitting groove for glazing up to 66 mm
- $6.\ section\,with\,reduced\,size$

### profiles

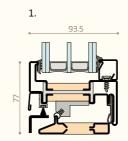


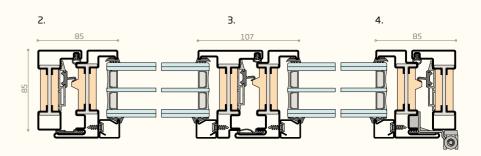
### sections



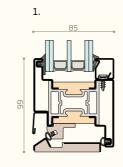


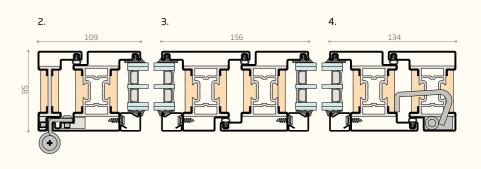




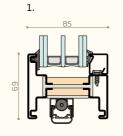


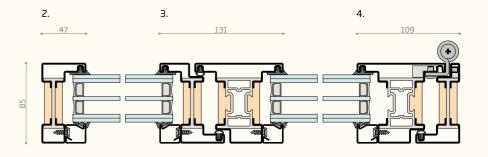






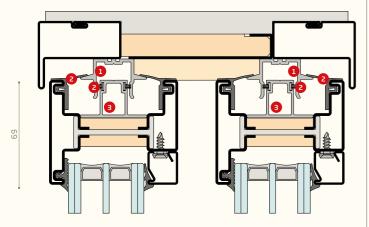




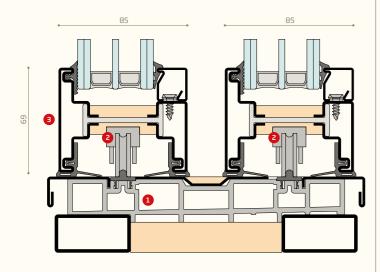


## EBE 85 AS

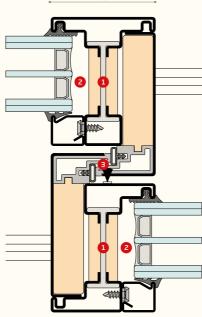
### main sections



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

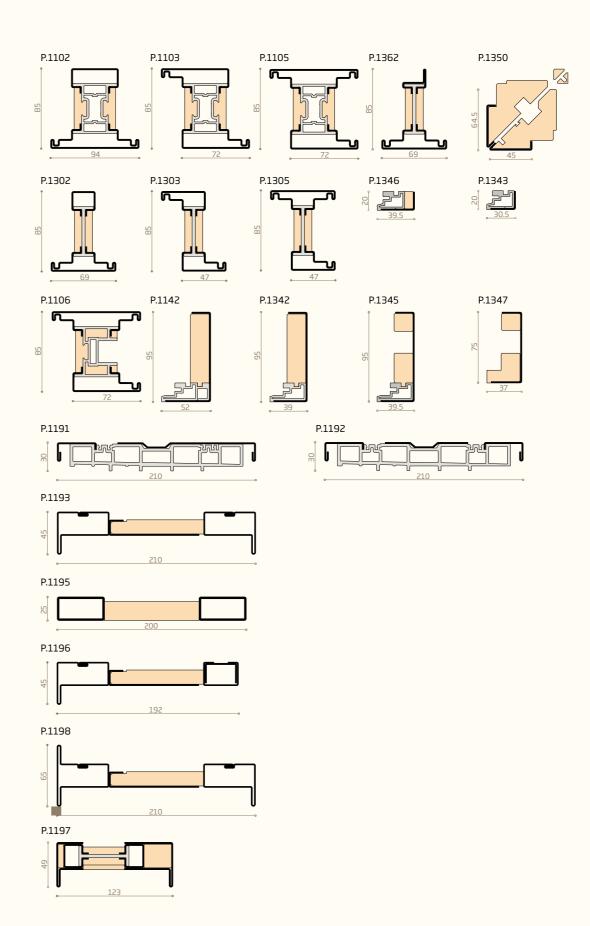


- 1. profile with threshold profile for water run-off
- 2. reduced wheel (carriage) assembly
- 3. reduced profile same as the visible dimensions on the four sides



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

### sections

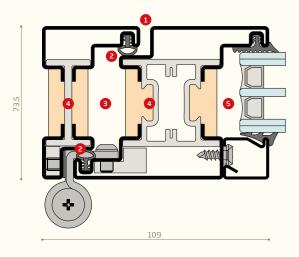


## EBE 85 AS

sections sections 2. 1.

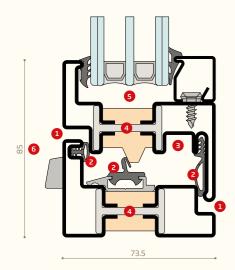
## EBE 75

### doorsection



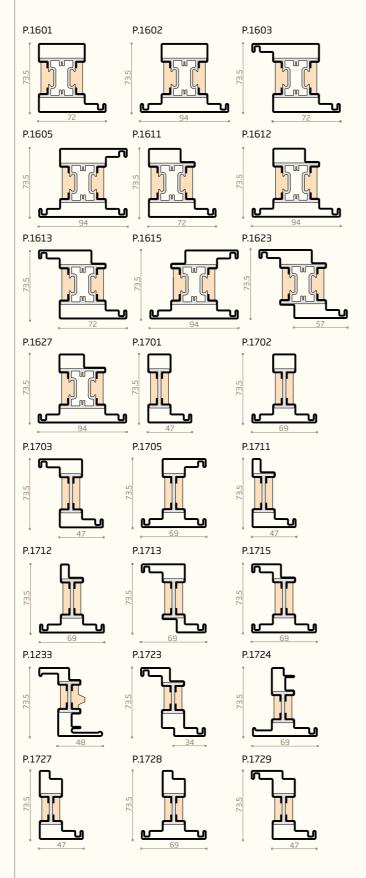
- 1. internal and external flush
- 2. double rebate seal
- 3. Euro-groove for accessories
- 4. structural thermal break in polyamide and polyurethane
- 5. fitting groove for glazing up to 48 mm thick

### window section

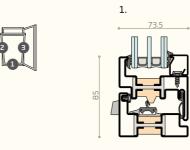


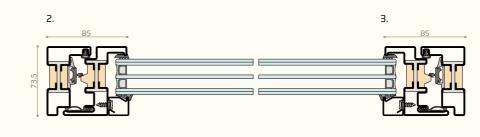
- 1. internal and external flush
- 2. frame with weep system and triple gasket
- 3. wooden/pvc fitting groove for hardware slot
- 4. structural thermal break in polyamide and polyurethane
- 5. fitting groove for glazing up to 46 mm thick
- 6. section with reduced size

### profiles

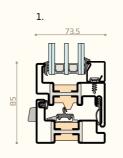


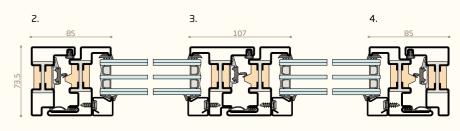
### sections



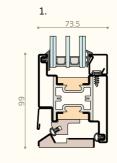


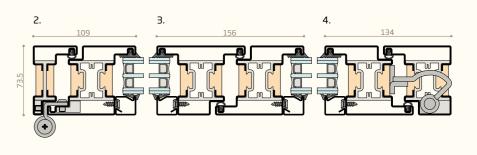




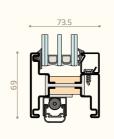


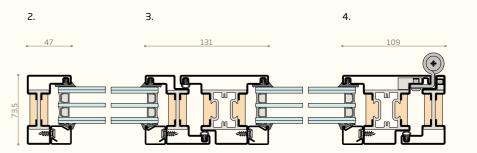








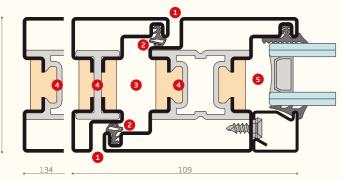




295

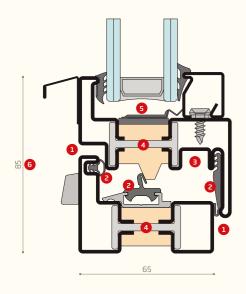
## EBE 65

### doorsection



- 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 40 mm thick

### window section



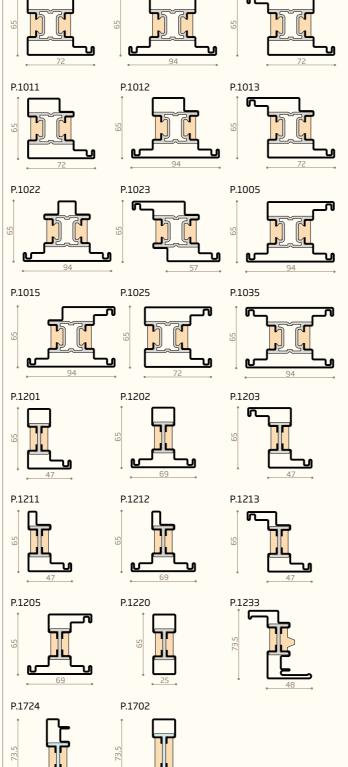
- 1. flush on the exterior and rebated on the interior
- 2. frame with weep system and triple gasket
- 3. wood/pvc fitting groove for hardware
- 4. structural thermal break in polyamide and polyurethane
- 5. fitting groove for glazing up to 46 mm thick
- 6. section with reduced size

### profiles

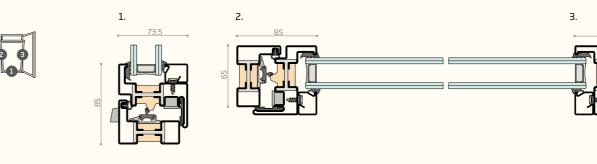
P.1003

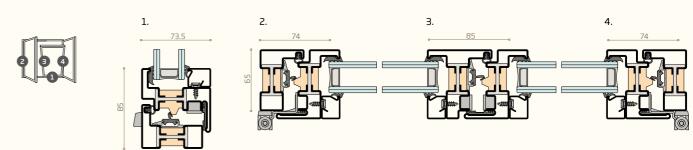
P.1002

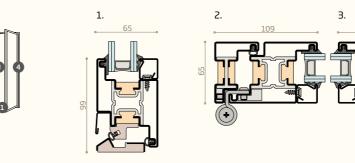
P.1001

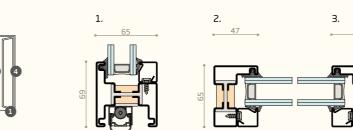


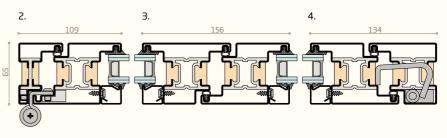
### sections

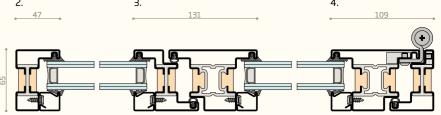








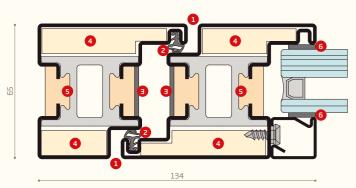




297

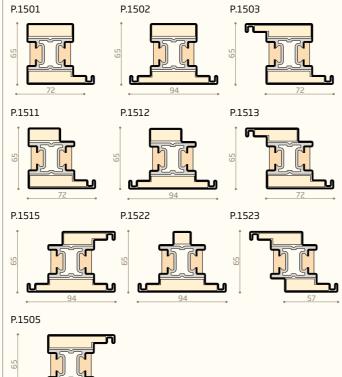
## EBE AF

### doorsection

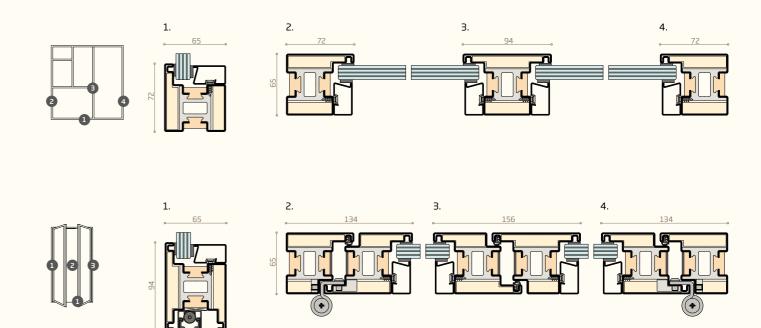


- 1. internal and external flush
- 2. double rebate fire seal
- 3. expanding seal
- 4. cooling inert material
- 5. fireproof thermal break resins
- 6. special glazing gasket

### profiles

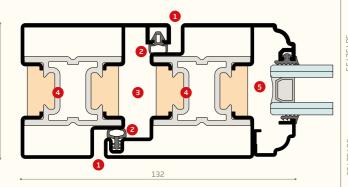


### sections



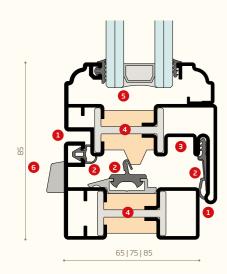
## ST 65

### doorsection



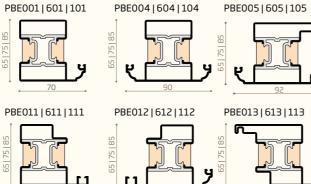
- 1. internal and external flush
- 2. double rebate seal
- 3. Euro-groove for accessories
- 4. structural thermal break in polyamide and polyurethane
- 5. fitting groove for glazing up to 24 mm thick

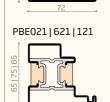
### window section

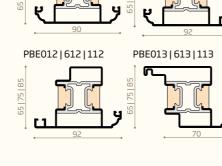


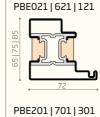
- 1. flush on the exterior and rebated on the interior
- 2. frame with weep system and triple gasket
- 3. wood/pvc fitting groove for hardware
- 4. structural thermal break in polyamide and polyurethane
- 5. fitting groove for glazing up to 31 mm
- 6. section with reduced size

### profiles



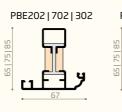


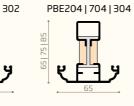


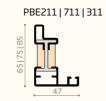


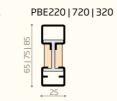
PBE205|705|305

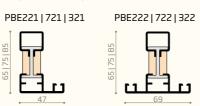
PBE028

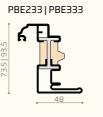








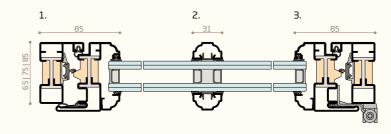




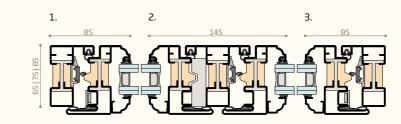


### sections

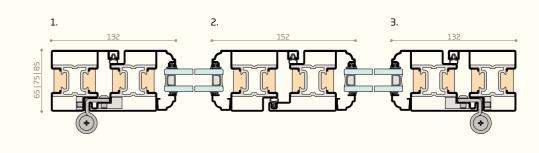




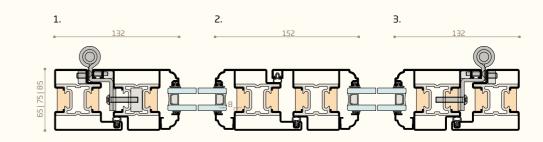




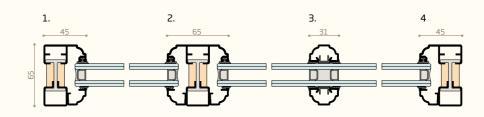






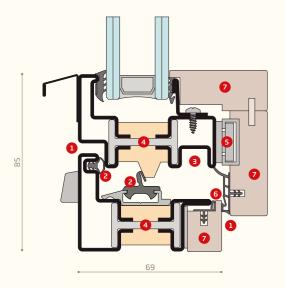






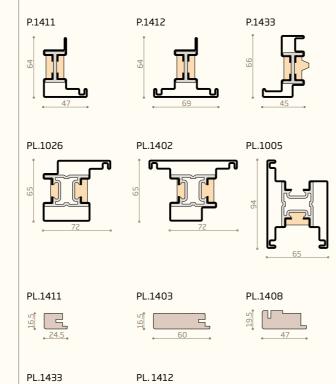
## ML 65

### window section

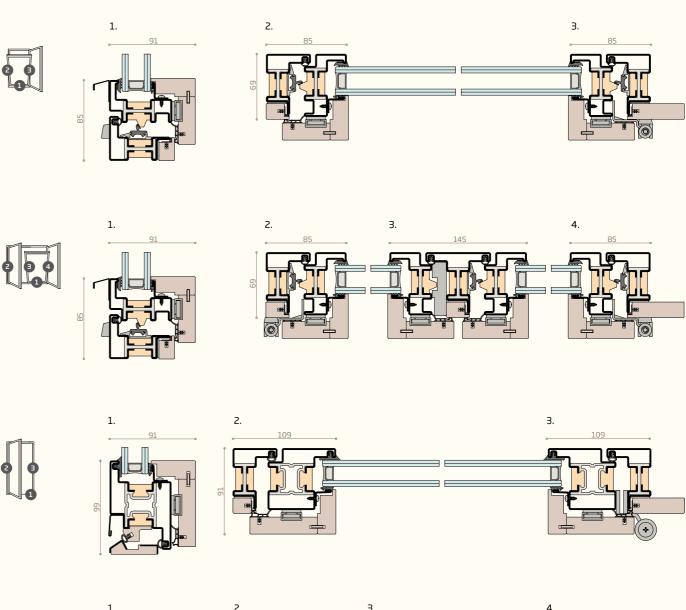


- 1. flush on the exterior and rebated on the interior
- 2. frame with weep system and triple gasket
- 3. housing for anti break-in hardware on steel profile
- ${\bf 4.}\ structural\ thermal\ break\ in\ polyamide\ and\ polyure thane$
- 5. point fixed curtain walls in plastic material
- 6. finishing and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

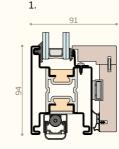
### profiles

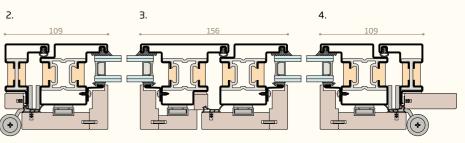


### sections



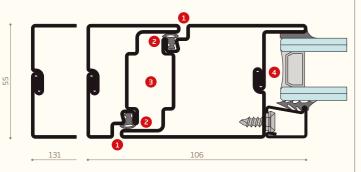






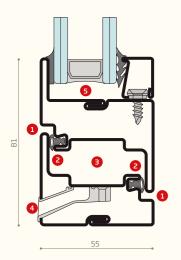
## SA 15

### doorsection



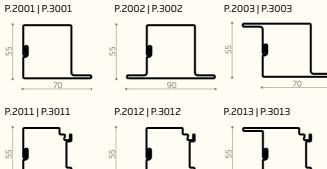
- 1. internal and external flush
- 2. double rebate seal
- 3. Euro-groove 25x21 for certified hardware
- 4. fitting groove for glazing up to 35 mm thick

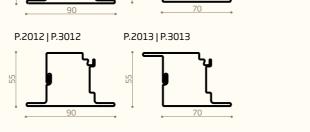
### window section

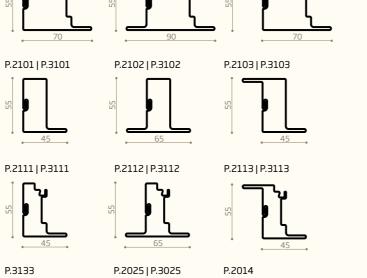


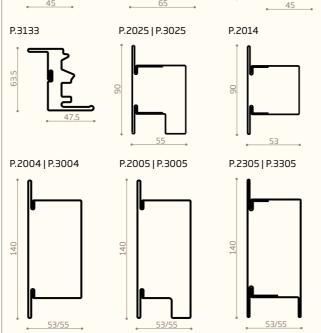
- 1. internal and external flush
- 2. double rebate seal
- 3. Euro-groove 25x21 for certified hardware
- 4. integrated accessory for water drainage
- 5. fitting groove for glazing up to 35 mm thick

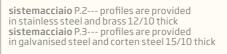
### profiles sections

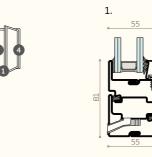


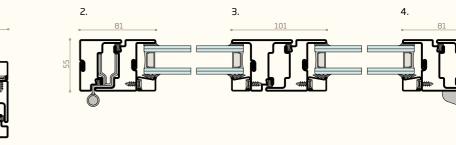


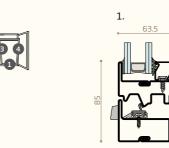


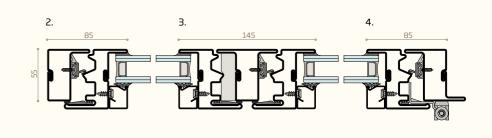


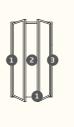




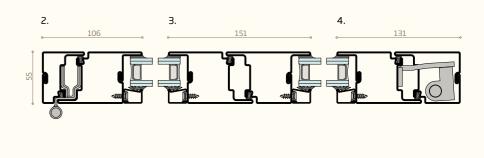




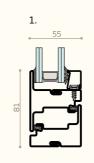


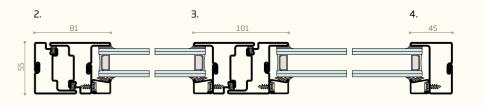








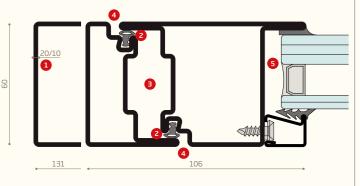




305

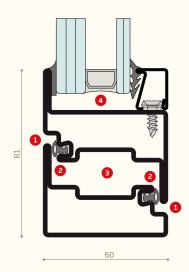
## SA 20

### doorsection



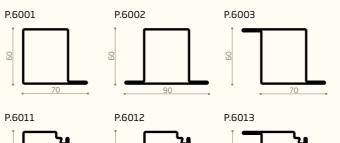
- 1. 20/10 profile thickness
- 2. double rebate seal
- 3. Euro-groove 25x21 for certified hardware
- 4. internal and external flush
- 5. fitting groove for safety glazing up to 35 mm thick

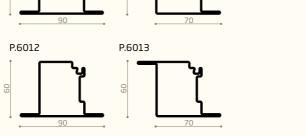
### window section

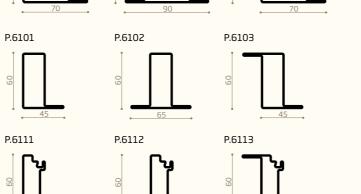


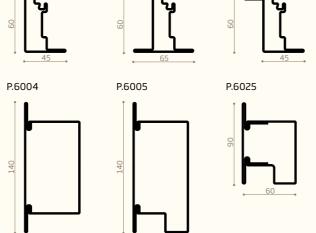
- 1. internal and external flush
- 2. double rebate seal
- 3. Euro-groove 25x21 for certified hardware
- 4. fitting groove for glazing up to 35 mm thick

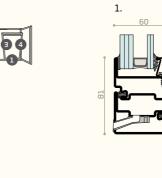
## profiles



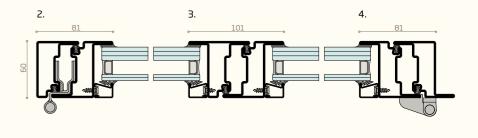


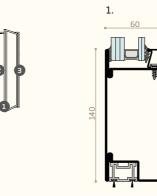


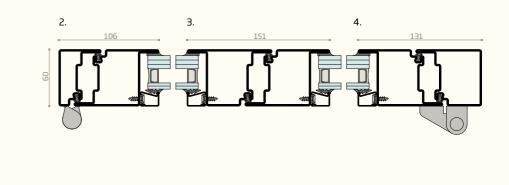




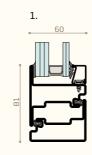
sections

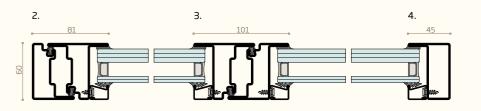












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## SA AF

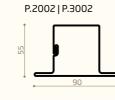
### main sections

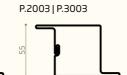
131

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

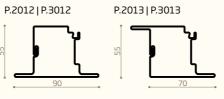
### profiles

# P.2001 | P.3001

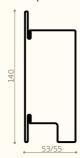




## P.2011 | P.3011

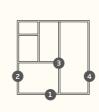


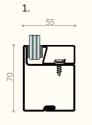
P.2005 | P.3005

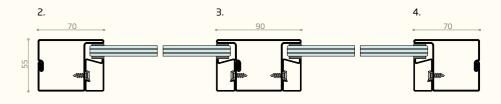




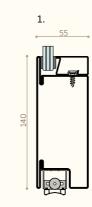
### sections

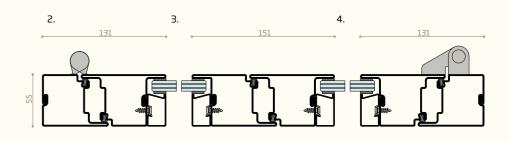








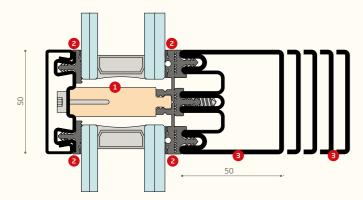




309

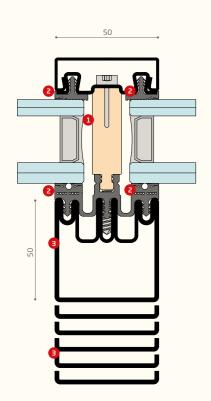
## 4F1

### main sections



### transom

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



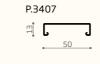
### mullion

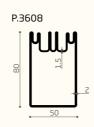
- 1. variable thermal break profile for 25-56 mm glazing
- 2. mullion sealing gaskets for water draining
- 3. 50-180 mm structural profile

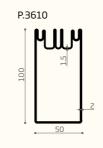
### profiles

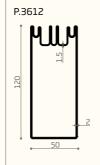
# P.3605

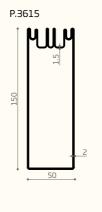


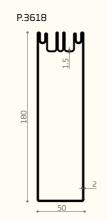




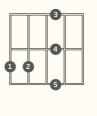


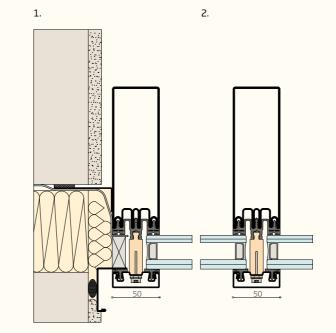


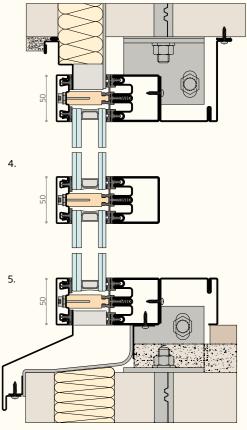




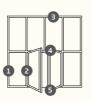
### sections

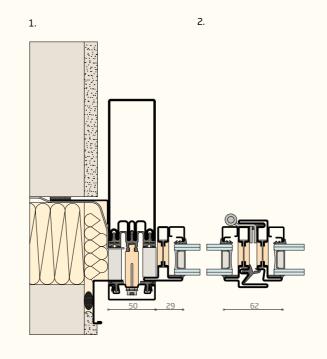


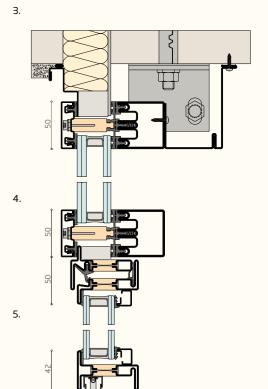




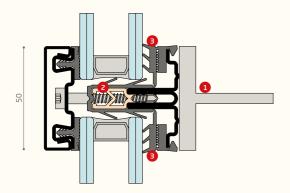
3.





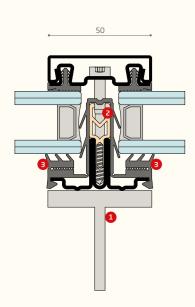


### main sections



### 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

profiles

P.3503

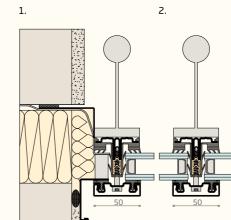
P.3407

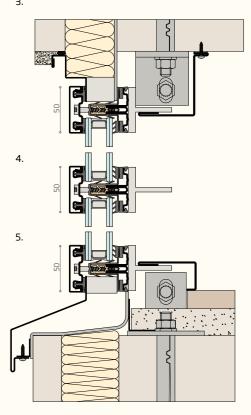
P.3403 ু ∿~∿ P.3406

GU0304 

sections

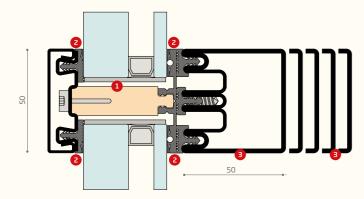






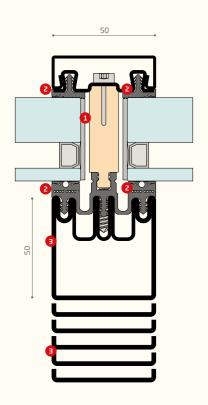
## 4F AF

### 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



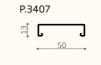
### mullion

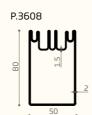
- 1. support profile for screws or welding
- 2. variable thermal break profile for glazing up to 35 mm
- 3. mullion sealing gaskets for water draining

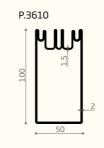
### profiles

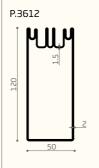
## P.3403 1 1 49 P.3605

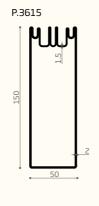


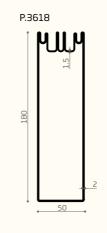




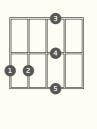


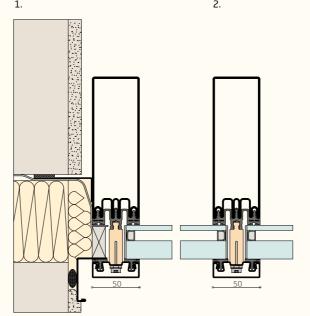


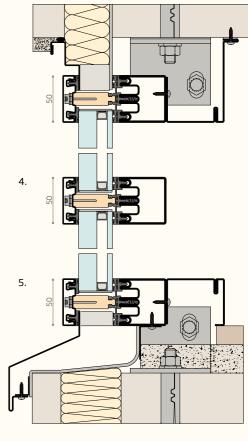


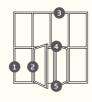


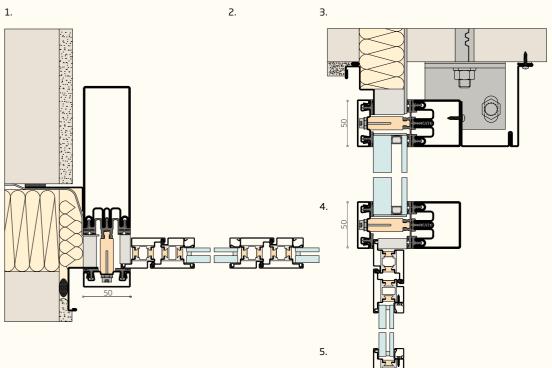
### sections

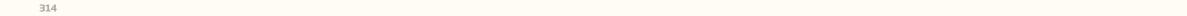












## subframe for wall mounting

### system and performance



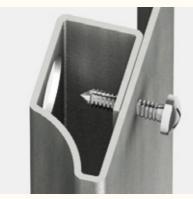


**subframe** is a system with profiles and accessories for the construction of sub-frames to be mounted on load-bearing walls. It is available in two versions: galvanised steel and galvanised steel with thermal break, and it comes in different sizes.

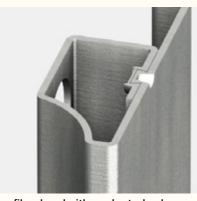
The steel profiles, closed mechanically thanks to overlap technology, are provided with integrated anchor bolts and pitch holes for perfect anchoring to the wall. They are also provided with a double-thickness metal plate in the area where the doors and windows will be secured. The system is equipped 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 solid and resistant to torsional stiffness.

- 1. profile made of insulating plastic material 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

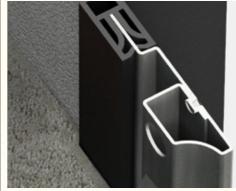


**profiles closed with overlap technology**Free from welding, which would reduce its performance against corrosion, the sub-frame is able to reach high torsional stiffness values thanks to the overlap mechanical closing technology. This technology provides joining by compenetration of the surfaces.



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.

### 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.



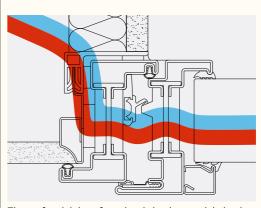
accessories

rectangular assembling brackets





extractable integrated anchor bolts



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.



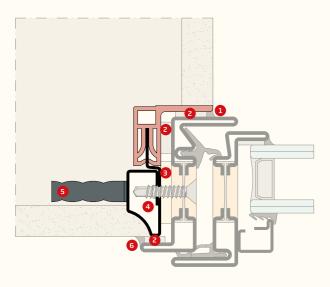
corner braces

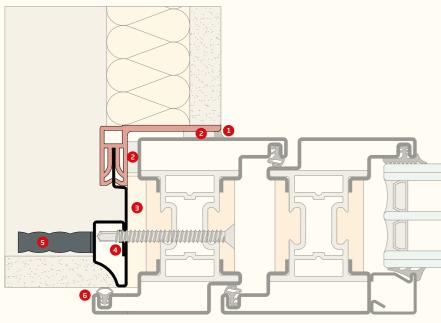


The system is provided with accessories that make assembling the profiles quick and easy.

## subframe for wall mounting

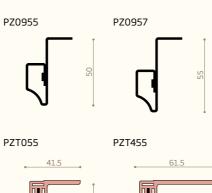
### base and thermal break version

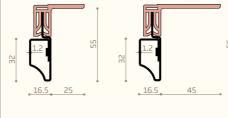


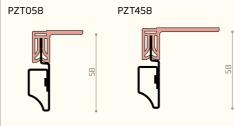


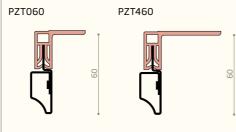
- 1. neutral silicone
- 2. pre-compressed self-adhesive tape
- 3. thermal and acoustic polyurethane foam
- 4. double-thickness steel profile mounting
- 5. wall anchor bolt
- 6. EPDM or paintable seal in acrylic

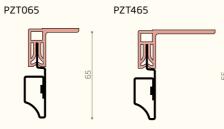
### profiles

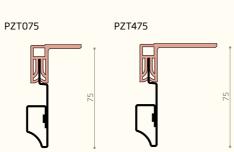




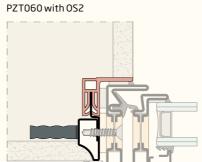




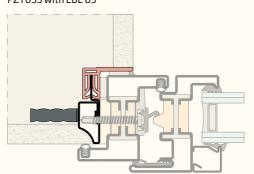


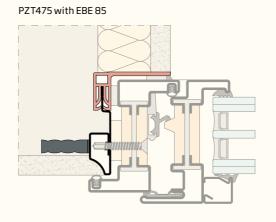


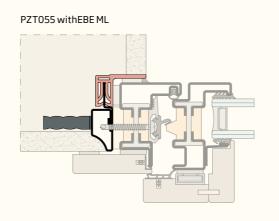
### main sections



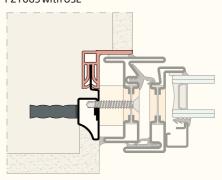




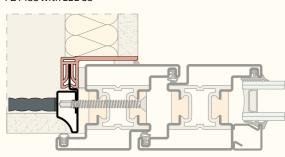




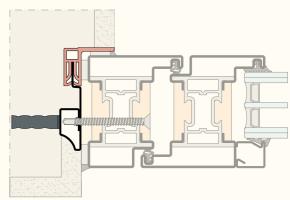
### PZT065 with 0S2



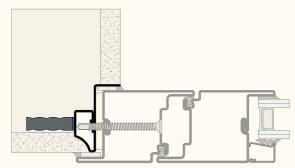
### PZT455 with EBE 65



### PZT075 with EBE 85



### PZ0955 with SA 15



319

## 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/mK)	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

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	X5CrNi 18-10	X2CrNiMo 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
Mo	-	2 - 2,50
Ni	8,0 - 10,5	10 - 13
Others	-	-

### PHYSICAL FEATURES\*

Specific weight ( kg / dm³)	7,91	8,00
Thermal conductivity at 20°C \(\lambda\) (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 stress	0,2 % Rp <sub>0,2</sub>	230	240
20,622	1,0 % Rp <sub>1,0</sub>	260	270
Elongation at break A 80 mm % min		45	40
Brinnel Scale HB (kg / mm²)		<165	<170

\*UNI10088-2:1997

stainless steel

### 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	S355J0WP	
CHEMICAL COMPOSITION	(% of the mass)	
Cmax	0,12	

CHEMICAL COMPOSITION	(% of the mass)
Cmax	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 Ω (Ω / 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	
	< 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

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
Si max	0,15
Mn max	0,10
Ni max	0,30
impurità	0,40
-	

Cold rolled laminate 10 H10

PHYSICAL FEATURES*	Cold rolled laminate 10 H10
Specific weight ( kg / dm³)	8,50
Specific heat capacity at 20°C (ca	I/g) 0,09
Thermal conductivity at 20°C [cal / (s cm °C)]	0,278
Linear thermal expansion coeffici 25 to 300°C (1/°C)	ent - 20,2 x 10 <sup>-6</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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