

Window and door system  
with thermal break

**ALT  
W72**



Window and door system  
without thermal break

**ALT C48**



Balcony glazing  
system

**ALT  
100**

**ALT 115**

All glass partition  
system

ARCHITECTURAL  
ALUMINUM SYSTEMS



# CONTENTS



AluminTechno LLC. Company Profile	2
Manufacturing facilities	4
Architectural aluminum systems	10

## FACADE SYSTEMS

ALT F50 Curtain wall system	15
ALT SKL50 Skylight system	31
ALT EF65 Unitized curtain wall system	42
ALT150 Ventilated cladding facade system	51
ALT100 Balcony glazing system	58

## WINDOW AND DOOR SYSTEMS

ALT C48 Window and door system without thermal break	63
ALT C43 Window and door system without thermal break	69
ALT W62 Window and door system with thermal break	75
ALT W72 Window and door system with thermal break	81
ALT GS106 Lift and slide system	87

## INTERIOR SYSTEMS

ALT110 Office partition system	92
ALT111 Interior partition system	96
ALT115 All glass partition system	100
ALT118 Light partition system	102

## ALUTECH NEW SOLUTIONS AND LATEST DEVELOPMENTS

ALT SP50 Sun protection system	106
W50 Economy type window and door system with thermal break	108
ALT W72 FR Fire resistance system	110
ALT FR76 Fire resistant doors	112
ALT150H Cladding system with fastening to floor slabs	113
ALT F50WG Conservatory and W72 FD Folding door system	114
ALT F50 New integrated vents	115
ALT F50 Fire resistant curtain wall system	116
ALT W62OS, ALT W72OS Outside Opening Windows	117
Reinforced hinges for ALT 111 Interior partition system	118
Top hung door sliding inside ALT111 partition	119
Extensible door case — ALT111 Interior partition system	120
Interior door with hidden hinge — ALT 111 system	121

## PROFESSIONAL SOFTWARE

AluPro	124
--------	-----

## SPECIAL OFFER

ALT SF400 and SF450 storefront systems	129
--	-----

# AluminTechno LLC. Company Profile





AluminTechno LLC is an aluminum extrusions manufacturing enterprise with powder coating and anodizing lines and is a part of ALUTECH Group of Companies.

Our high-performance modern enterprise is equipped with machinery produced by the leading manufacturers from the USA, Germany and Italy. Production process and manufacturing equipment have no analogs within Europe countries. The complete production cycle is being performed at AluminTechno plants: from primary aluminum foundry casting works to production of aluminum profiles and their further coating. The main manufacturing components are modern foundry complexes, high-performance press lines, advanced coating and anodizing manufacturing shops.

Currently AluminTechno LLC produces a wide range of aluminum extrusions (more than 1,000 different configurations) used in construction, motor production, furniture and consumer goods, automotive industries, electric-power industry. Enterprise's annual output is 45,000 tons.

AluminTechno LLC has certified its quality control management system in accordance with the requirements of International Standard ISO 9001:2009 in TÜV CERT system.

Most of top products have successfully passed AAMA and Miami Dade tests.

Finish quality of aluminum extrusion produced by AluminTechno LLC is proved by three international certificates: QUALICOAT, SEASIDE and QUALANOD. AluminTechno LLC is the only aluminum architectural system manufacturer on the territory of Eastern Europe holding all three certificates.



# Manufacturing facilities



## Foundry complex

The first manufacturing process stage is a modern foundry complex which consists of gas melting furnace, casting device for aluminum billets casting and homogenizing furnace.

Foundry complex equipment includes advanced modification, finishing, filtration and melt casting systems. Quality of the aluminum billets provides high-stability of mechanical characteristics of aluminum extrusions and high quality factor of their surface.

AluminTechno LLC produces aluminum extrusions in conformity with DIN 17615, EN 755-1, EN 755-2, EN 12020 standards requirements therefore providing high quality of the final products.

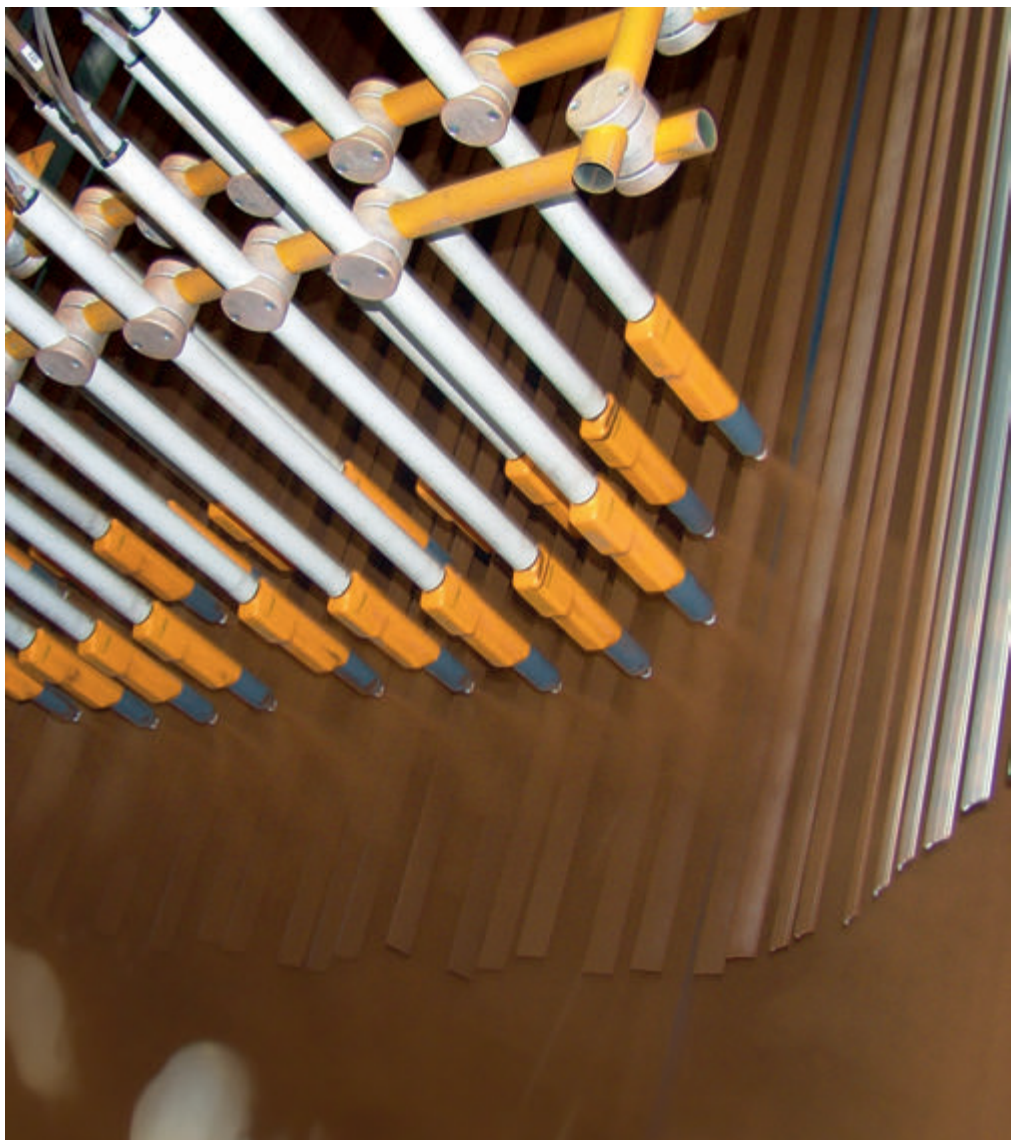


### Press lines

Six modern high-performance extrusion lines are installed in the manufacturing shops providing production of aluminum profile in accordance with the customer preferences. Two lines have 5" die diameter, three lines have 7" and one 9".

All the press lines are of modern configuration, equipped with units and component parts manufactured by global leaders such as Rexroth, Siemens, Kromshroder, and Marathon.





### Vertical powder coating line

AluminTechno LLC offers its customers powder coating of any color (according to RAL color chart) and guarantees coating surface thickness of 60-80 microns along the whole length of an extruded profile.

Polymeric coating is conducted in two fully automatic Trevisan (Italy) coating lines. Advanced coating technology provides high quality surface, meeting the requirements of the European standard Qualicoat.





### **Aluminum anodizing complex**

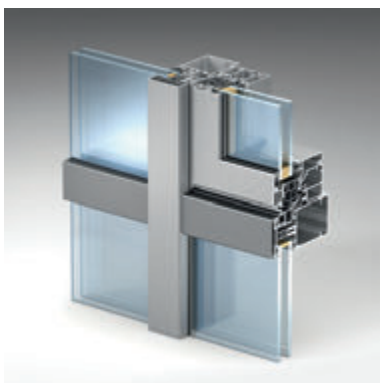
Two biggest anodizing complexes in Eastern Europe proudly operate at AluminTechno enterprise. The installed equipment by CISART (Italy) includes all the advanced technical solutions and provides full automation of anodizing process.

Anodizing, electrochemical and interference coloring lines along with bead-blasting and brushing facilities allow to treat profiles up to 23' long, getting a wide range of colors.

# Architectural aluminum systems

Aluminum extrusions serve as frames for various structures ranging from small trade outlets to multi-storey buildings. Aluminum is a material of high environmental stability and during the maintenance period does not require any maintenance or repair.

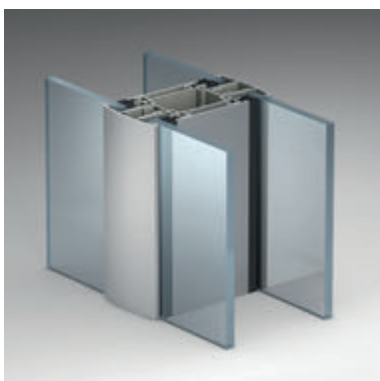
Currently there are several trends in the field of construction, where aluminum systems is the most effective solution. Those are facade (curtain wall systems), entrance doors, interior partitions, all-glass look facades (invisible from the outside framing hidden by glass), skylights, translucent rooftops, terraces and a great number of other facade constructions which make an integral part of modern architecture.



**Curtain walls and skylights**

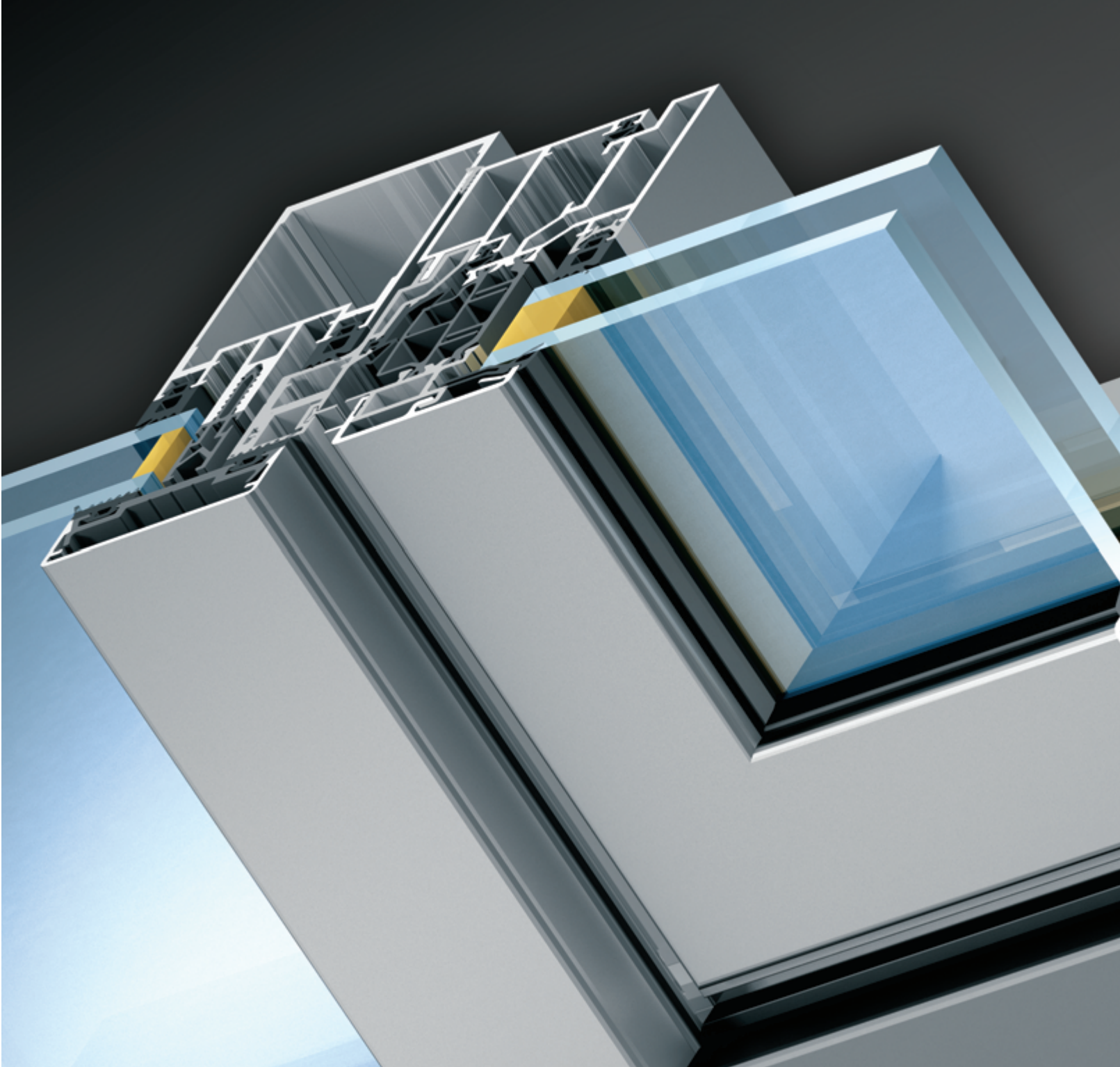


**Window and door systems**

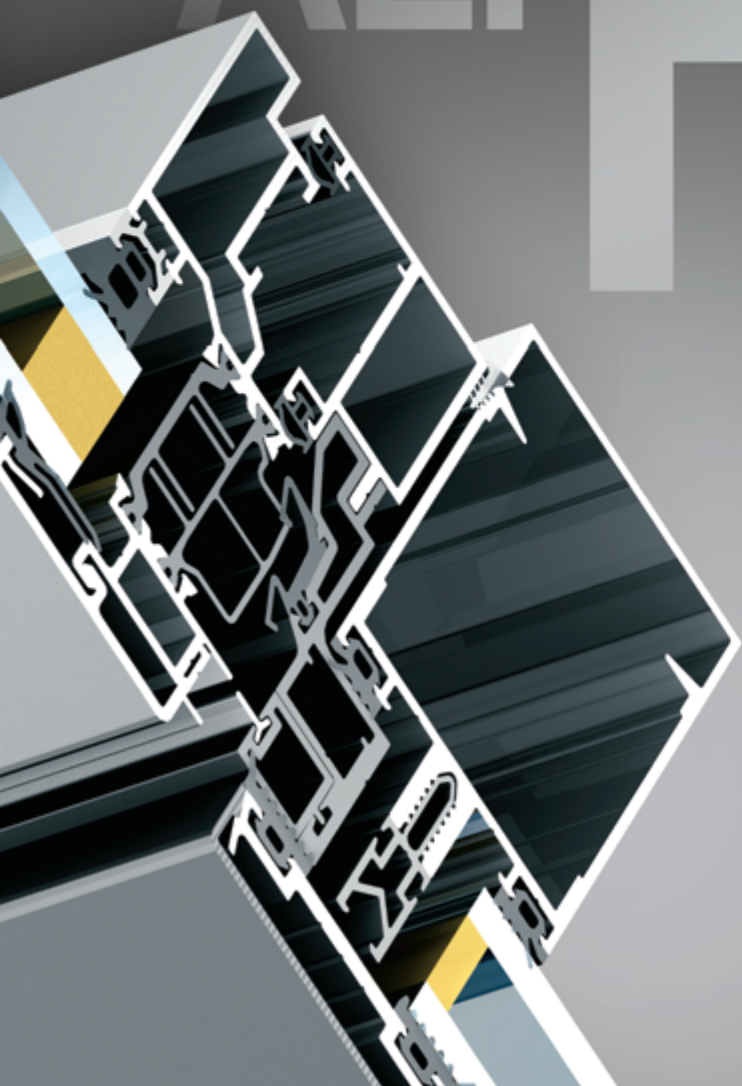


**Interior systems**





# ALT F50



Curtain wall system ALT F50 has been developed for fabrication of envelope translucent constructions of various complexity: curtain walls, inclined translucent surfaces, skylights, sun rooms.

A huge number of technical solutions have been contemplated while designing the system.

Various door and window types can be integrated in the system.

# ALTF50

Curtain wall  
system



# ALT F50 Curtain wall system



## Product information

Internal visible width	1 <sup>15</sup> / <sub>16</sub> " (50 mm)
External visible width	1 <sup>15</sup> / <sub>16</sub> " (50 mm)
Mullion depth	1/2" to 10 1/2" (12-270 mm)
Glazing thickness	from 5/32 up to 2 3/16" (4-56 mm)
Max infill weight	1100 lb (500 kg)
Glass fixing method	pressure plates and beauty caps
Types of opening elements	All ALT window and door systems, integrated facade windows and smoke removal hatches
Thermal conductivity	Uf = 0,6 – 1,8 W/m²K acc. to EN ISO 10077-2:2008

## System performance with 1" glass unit (AAMA tested acc. to ASTM E283-04, ASTM E330-14, ASTM E331, ASTM E541)

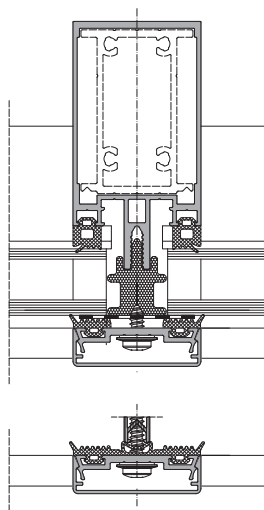
Sound transmission	STC 33, OITC 27 (pressure captured)
Air infiltration (6,24 psf)	0,15 L/s/m²
Water penetration resistance	12,0 psf
Design pressure	70,0 psf
Uniform load structural test	105,0 psf

## System components and color options

- **Aluminum extrusions**
  - EN AW 6063 T6 AlMgSi F20
- **Gaskets**
  - EPDM DIN 7863
- **Insulating moldings**
  - PVC-U-HI long-lasting, temperature resistant, plasticized material with low thermal conductivity
- **Mounts and brackets**
  - Aluminum, stainless steel and other corrosion resistant materials
- **Coating types**
  - Qualicoat grade powder coating, over 200 RAL colors, special customized colors. Qualanod grade anodizing, 9 colors

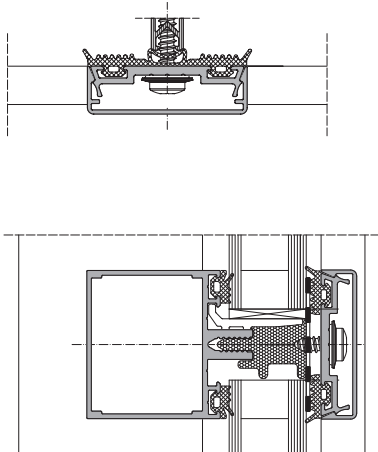
# ALT F50 Traditional curtain wall system

Vertical mullion section



ALT F50

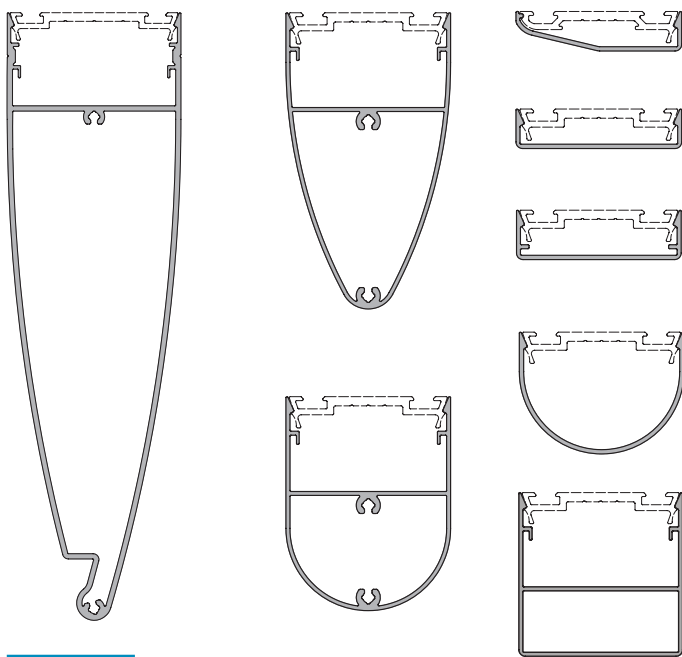
Horizontal mullion section



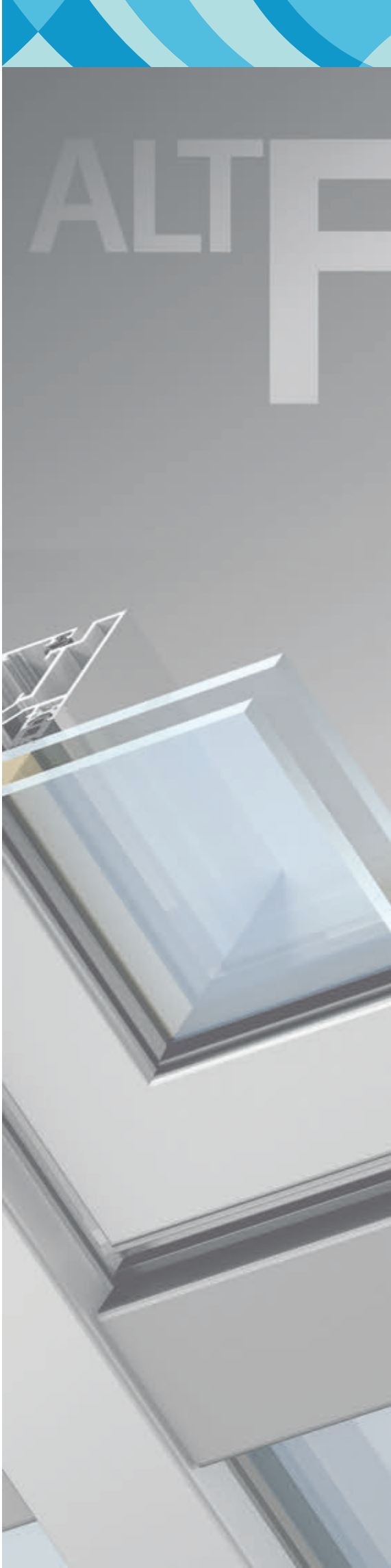
ALT F50

## Various beauty caps (1/2" to 7 7/8" [12-200 mm]) available

Various types of beauty caps allow flexible facade design in numerous options from soft design with smooth junctions to challenging high-tech style with sharp lines and straight angles.



ALT F50

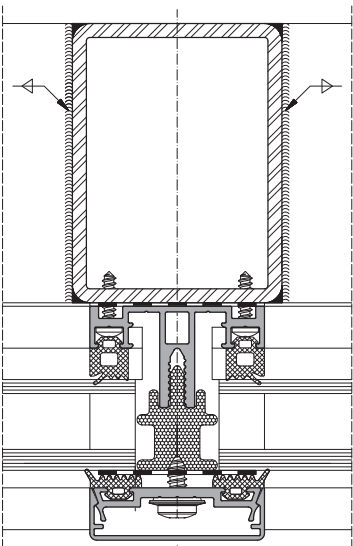


# F50

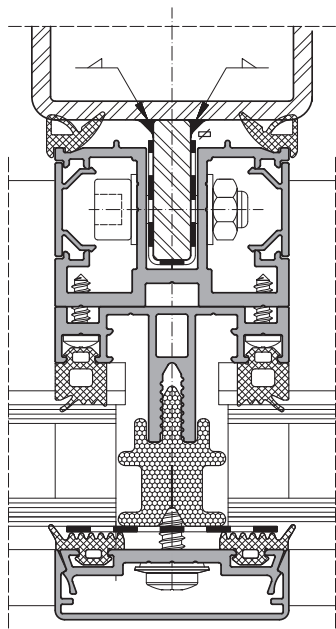
## Frame mounted curtain wall

Several solutions have been developed for the system for making a load-bearing structure in the form of steel or wood frame. In this case, it is recommended to use cost effective narrow mullion and transom extrusions.

### Steel Frame

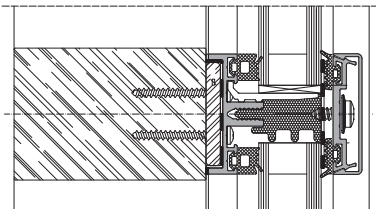


ALT F50

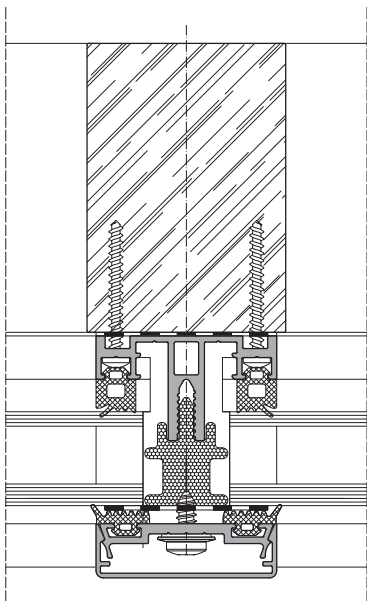


ALT F50

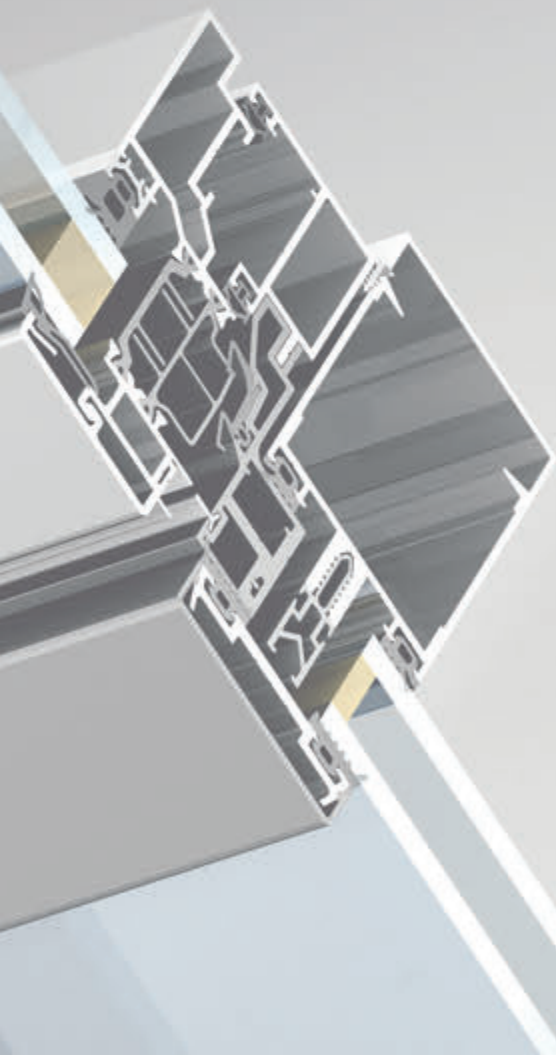
### Wood Frame



ALT F50



ALT F50

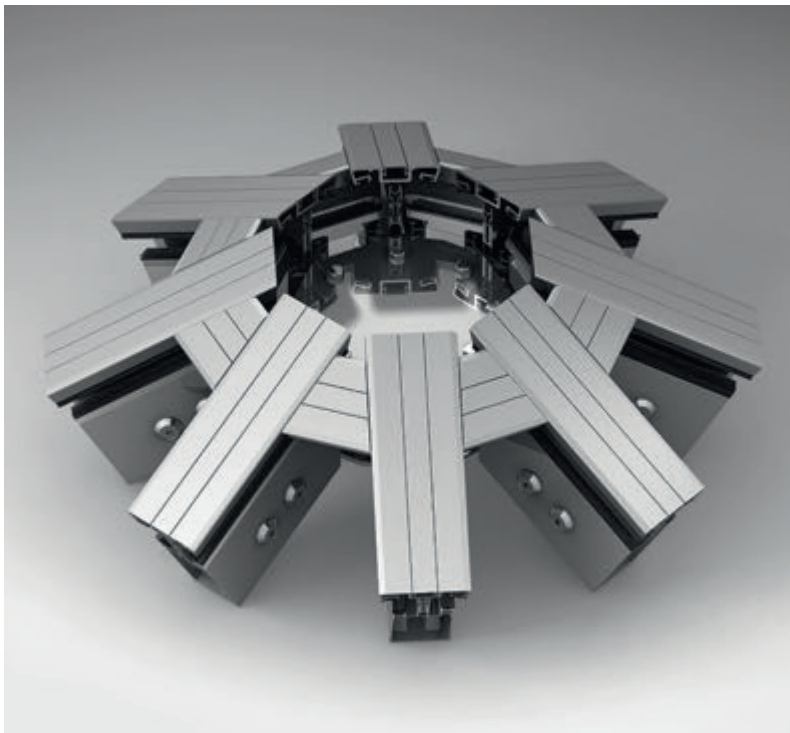


# Sophisticated architectural design

## Pyramidal skylight



## Fabrication of pyramidal top



A unique design of various blocks and locks (patented solutions) allows to design, fabricate and install different transitions and adjoin facade constructions to existing structures:

- Pyramids
- Curved surfaces (vertically-inclined mullions). Switch from vertical to inclined part of the facade
- Rotation of vertical mullions
- Tilted and rotated surfaces

## Mullion tilt and rotation



- Connection of three and more mullions at one point

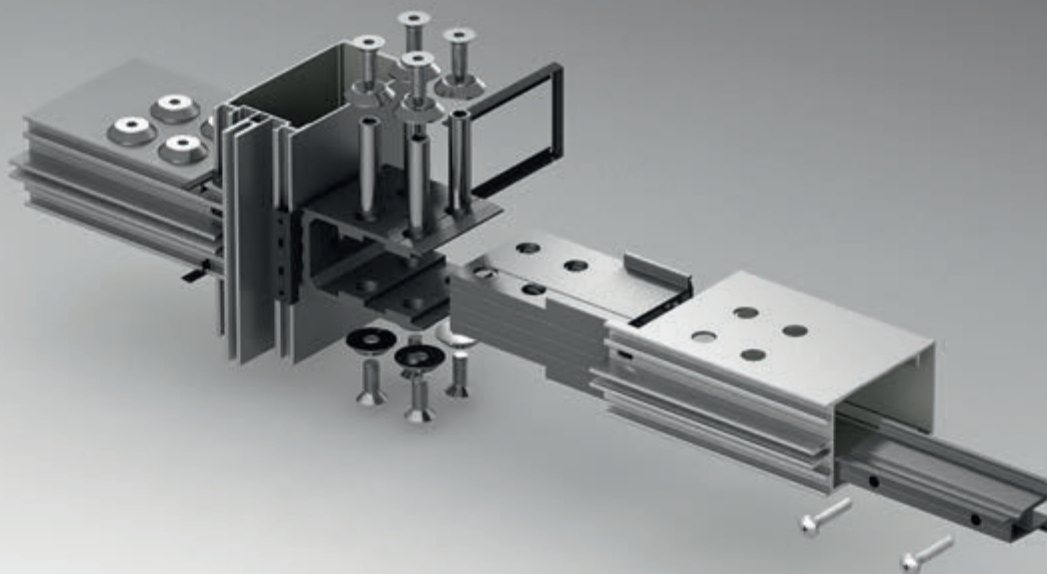


- Vertically inclined surfaces.
- Switch from vertical to inclined part of the facade
- Allows to rotate vertical mullions
- Tilted and rotated surfaces

# Sophisticated architectural design

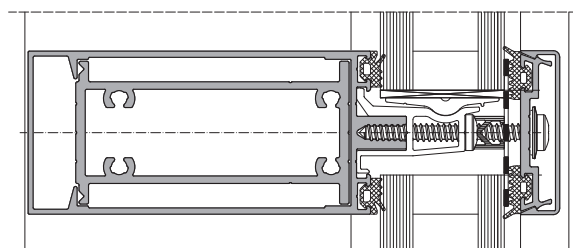
Swivel brackets and mounts, continuous mullion stiffeners and heavy duty blocks make heavy glass fillings installation possible.

## Ultra heavy fillings installation

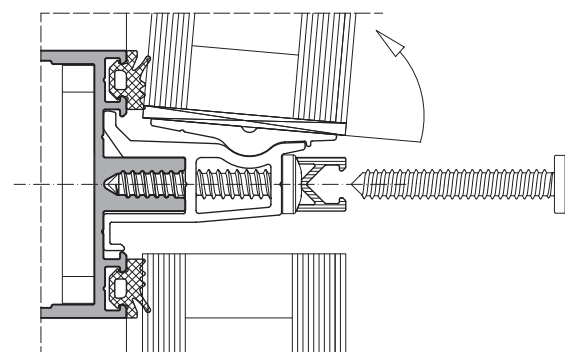


Works with:  
 Distance between mullions — 11' 6" (3,5 m)  
 IGU weight — up to 1100 lb (500 kg)

## Section of a horizontal mullion with a heavy IGU



ALT F50

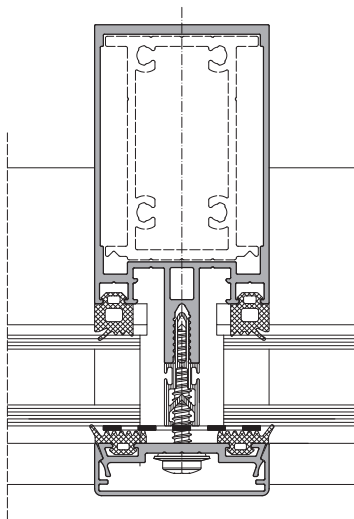


ALT F50

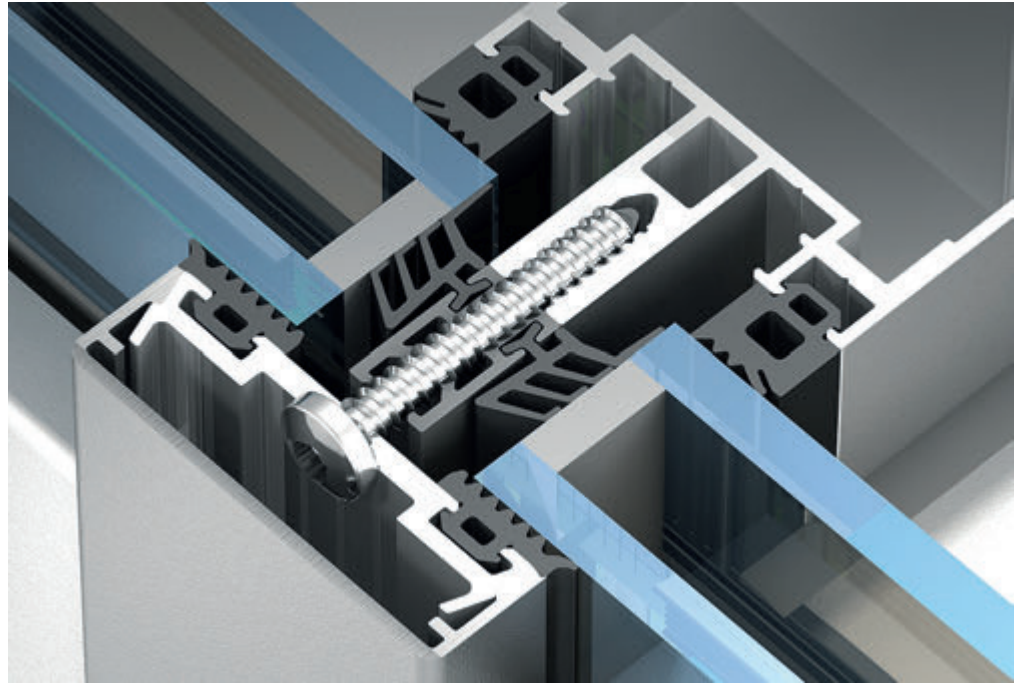
# Impressive thermal performance

Excellent thermal performance thanks to thermal brake, multiple gaskets and foamed materials combination (patented solution).

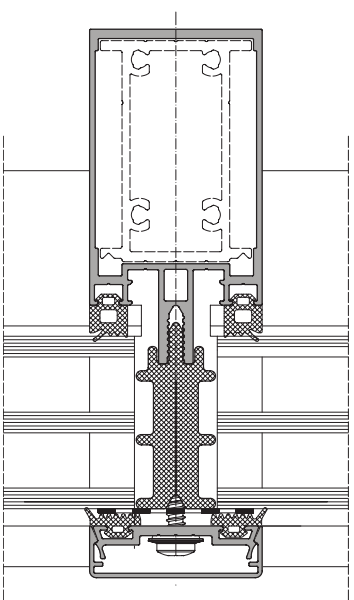
## Vertical mullion section



ALT F50

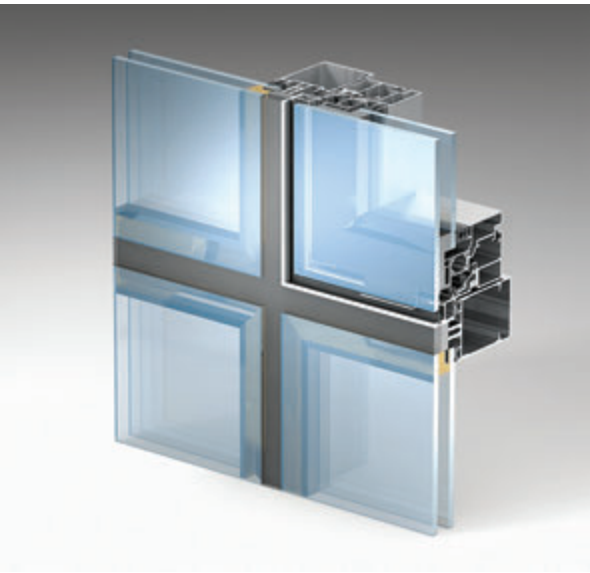


## Vertical mullion section with 2" IGU



ALT F50

# ALT F50 SG Structural glazed system

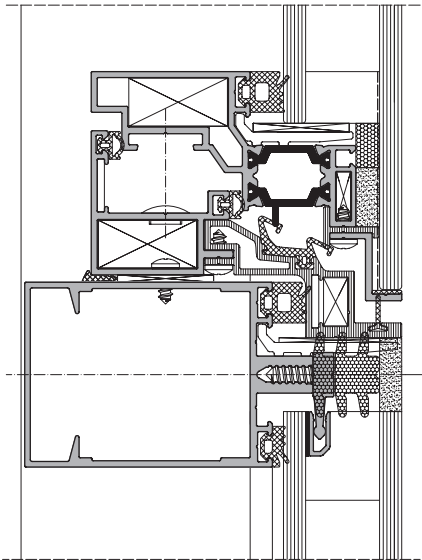


This system allows fabrication of all-glass look facades of any configuration without aluminum profiles on the outside surface. Insulated glass is fixed to mullions with hidden clamps.

### Product information

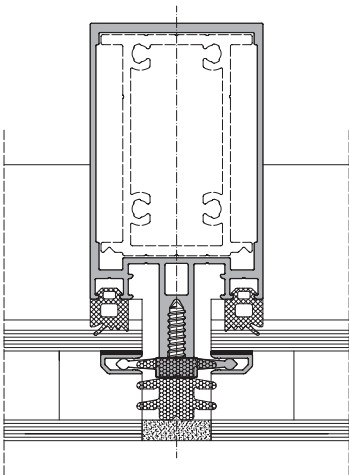
Internal visible width	1 15/16" (50 mm)
External visible width	25/32" (20 mm)
Glazing thickness	1/4" to 2 3/16" (6-56 mm)
Glass fixing method	hidden clamps
Types of opening elements	integrated awning and parallel opening windows

Window integrated in structurally glazed curtain wall



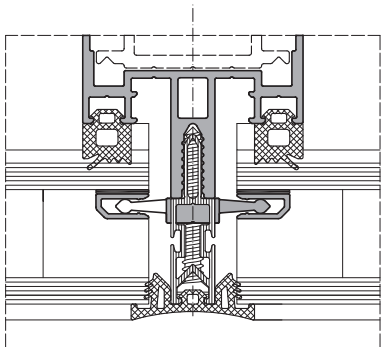
ALT F50 SG

Joint is filled with structural sealant



ALT F50 SG

Joint is filled with gasket



ALT F50 SG

# Semi-structural glazing system ALT F50

## SSG Imitation of structural glazing

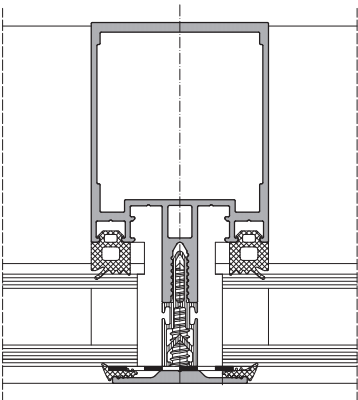
The main difference of this solution is that instead of 1 15/16" pressure plates and beauty caps narrow and almost invisible moldings are used. Plain, glass adjoining profiles create an illusion of structural glazing.

### Product information

Internal visible width	1 15/16" (50 mm)
External visible width	1 1/2" (38 mm)
Glazing thickness	1 1/8" to 2" (28-50 mm)
Glass fixing method	pressure plate and clamp bar profile
Types of opening elements	integrated awning and parallel opening windows

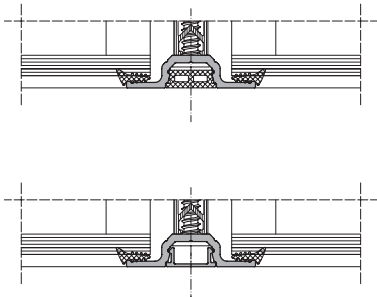


**Pressure plate with visible screw**



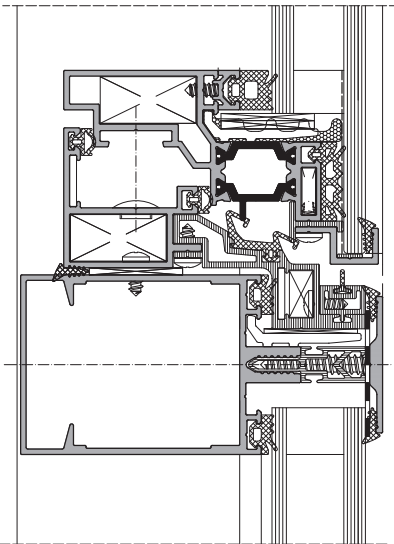
ALT F50 SSG

**Pressure plate with cover cap**



ALT F50 SSG

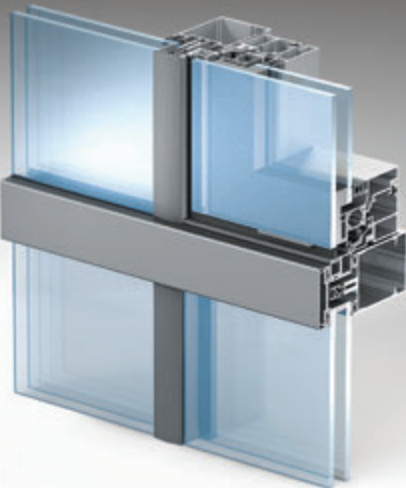
**Window integrated in semi-structural curtain wall**



ALT F50 SSG

# Semi-structural glazing ALT F50 HL

## «Horizontal line»

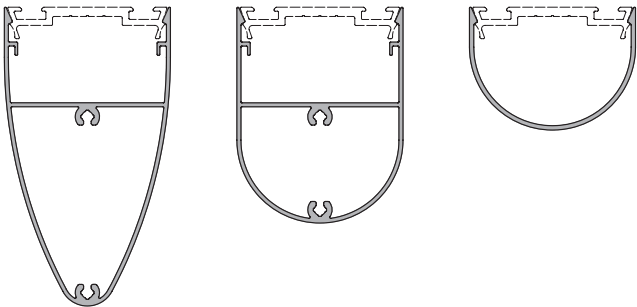


In this facade modification, a vertical or a horizontal line is outlined with the help of various massive clamping bars (oval, hemispheric or rectangular), therefore adding some horizontal or vertical volume. Along other lines the clamping bars are replaced by seam sealing or the space between the IGUs is filled up by silicon seam sealant.

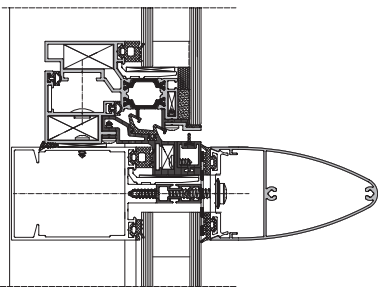
### Product information

Internal visible width	1 15/16" (50 mm)
External visible width (horizontal)	1 1/2" to 1 15/16" (38-50 mm)
External visible width (vertical)	1 1/2" (38 mm)
Glazing thickness	7/8" - 1 15/16" (22-50 mm)
Glass fixing method	pressure plate and clamp bar profile
Types of opening elements	integrated awning and parallel opening windows

### Different options for beauty caps

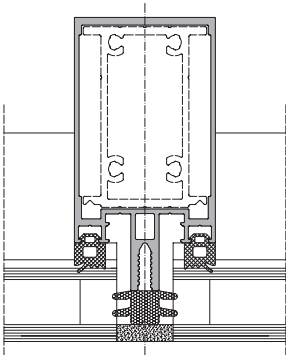


Window integrated in «horizontal line» facade



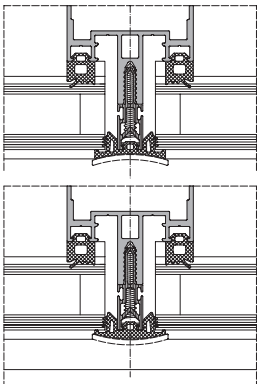
ALT F50 HL

Joint is filled with structural sealant



ALT F50 HL

Joint is filled with gasket



ALT F50 HL

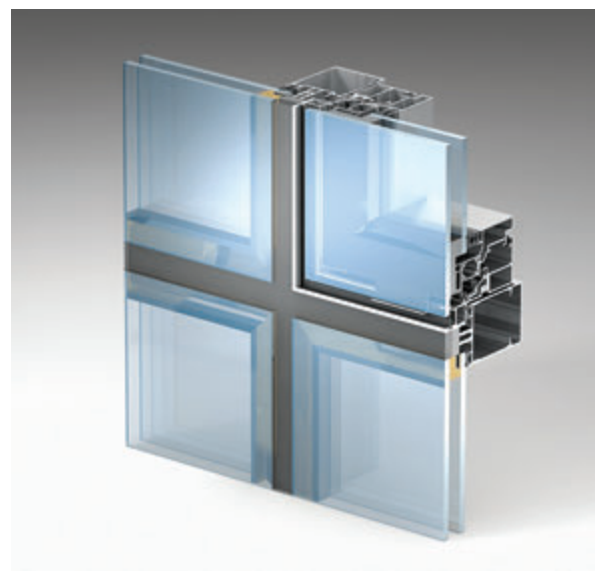
# Integrated windows

## «Hidden sash» type ALT F50

This F50 system solution provides possibility to manufacture integrated windows with an outside opening. Due to similarity of appearance of the window and the blind parts of the facade this construction is called «Hidden sash». The sash can be furnished with fittings providing awning or parallel-set-aside opening types. Manual mechanism or chain electric drive can be used as an opening element.

### Technical characteristic

Internal visible width	$2 \frac{3}{16}"$ (55 mm)
External visible width	$\frac{3}{8}"$ (10 mm)
Glazing thickness	$2 \frac{33}{64}$ (4 to 8 mm, from 22 to 38 mm)
	$\frac{5}{32}"$ to $\frac{5}{16}"$ , $\frac{7}{8}"$ to $1 \frac{1}{2}"$ (4-8 mm, 22-38 mm)
Glass fixing method	cap moldings and structural sealant
Maximum dimensions	9'10"×6'7" (3×2 m)
Types of hardware	awning or parallel-set-aside

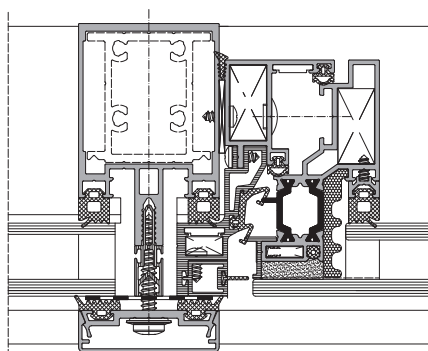


Thanks to a beneficial materials combination and four lines of gaskets impressive thermal and structural performance was achieved.

U-Factor is 0.33 which is better than competitive products thermal performance.



### Thermally broken curtain wall and window

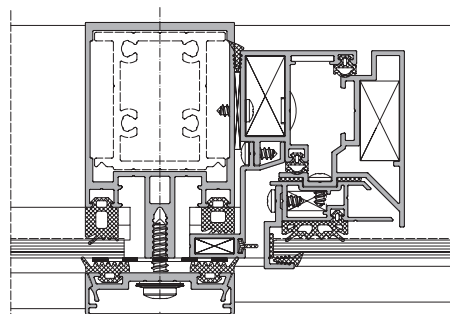


ALT F50

#### Advantages

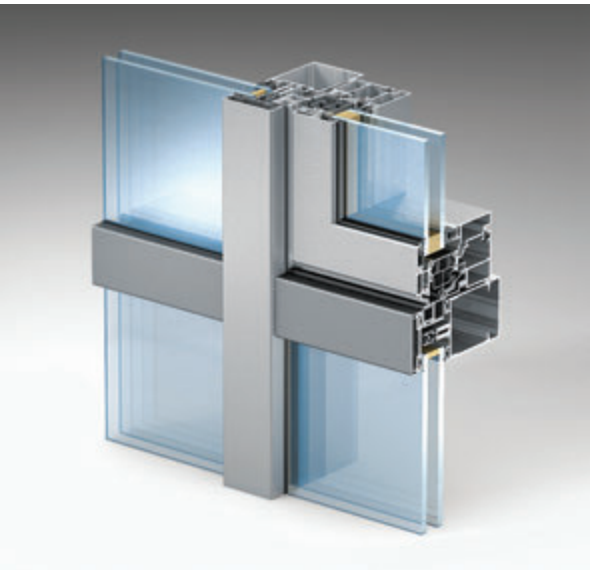
- No visible aluminum components on the outside surface
- Surfaces of IGU and facade glass are aligned
- Compatible with any types of facades
- Impressive insulation properties
- Windows with transom are available

### Non-thermally broken curtain wall and window



ALT F50

# Integrated window with visible sash ALT F50

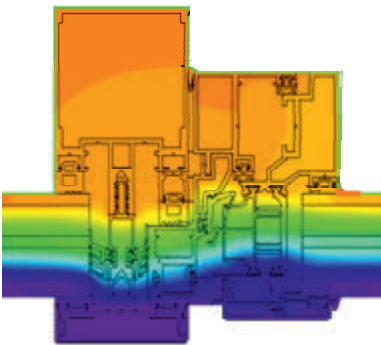


This ALT F50 system integrated window solution assumes installation of a rectangular IGU which is followed by 1 5/8" visible aluminum line.

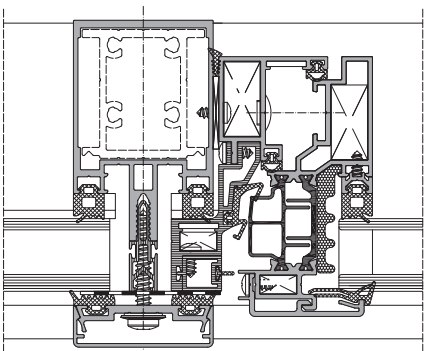
This option preserves all technological advantages of "invisible sash".

### Product information

Internal Visible Width	2 3/16" (55 mm)
External Visible Width	1 5/8" (45 mm)
Glazing thickness	7/8" to 1 1/2" (22-38 mm)
Glass fixing method	snap-in molding
Maximum dimensions	9'10"×6'7" (3×2 m)
Types of hardware	awning or parallel-set-aside



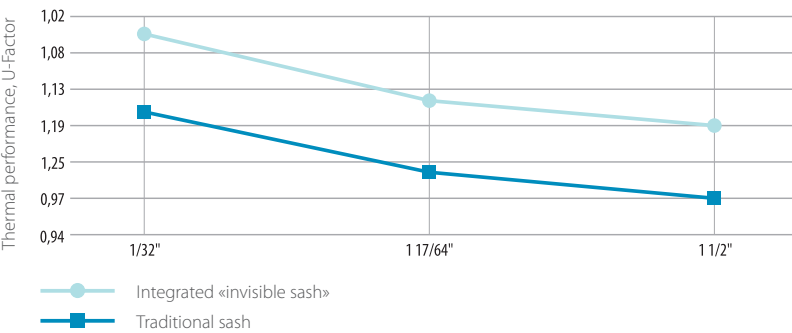
1 3/8" (34 mm) polyamide thermal breaks help to keep the thermal conductivity of the frame-sash section at  $U_f = 1,9-1,7 \text{ W/m}^2\text{K}$  which is much better than the indexes of European equivalents within facade windows segment.



ALT F50

### Thermal performance of a typical curtain wall junction with various types of glazing

U-Factor depending on glazing thickness



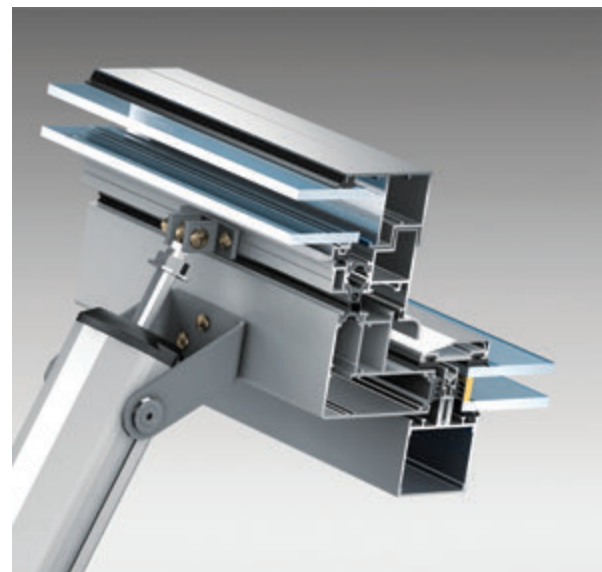
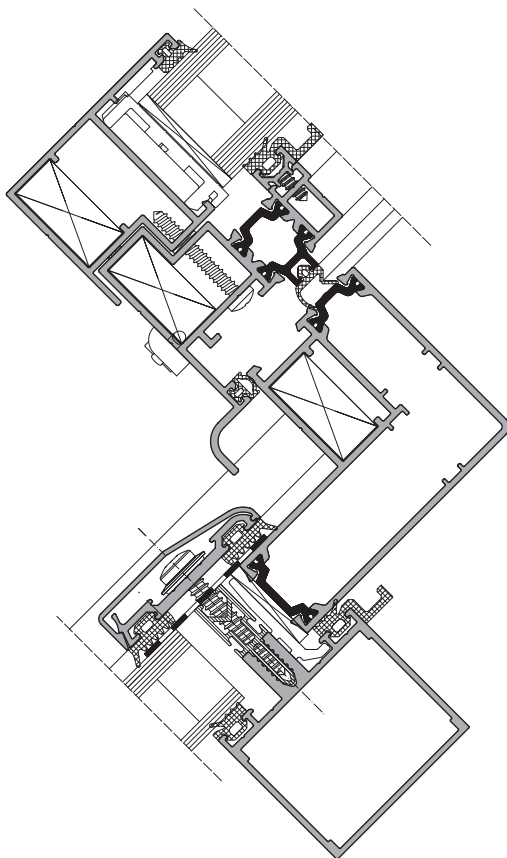
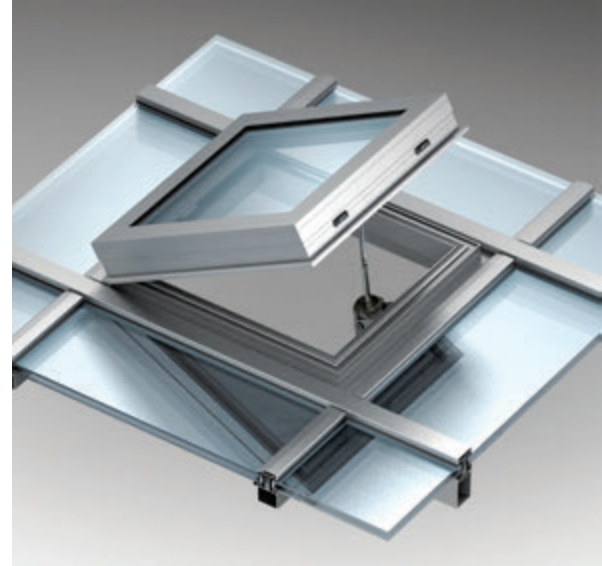
# ALT F50 Smoke removal hatch

These windows are installed onto inclined facades and used to equalize pressure inside and outside of buildings, and to provide ventilation and smoke removal.

The solution includes different desight types of smoke removal hatch — visible over the curtain wall line and invisible, creating one line with curtain ALT SKL50 wall.

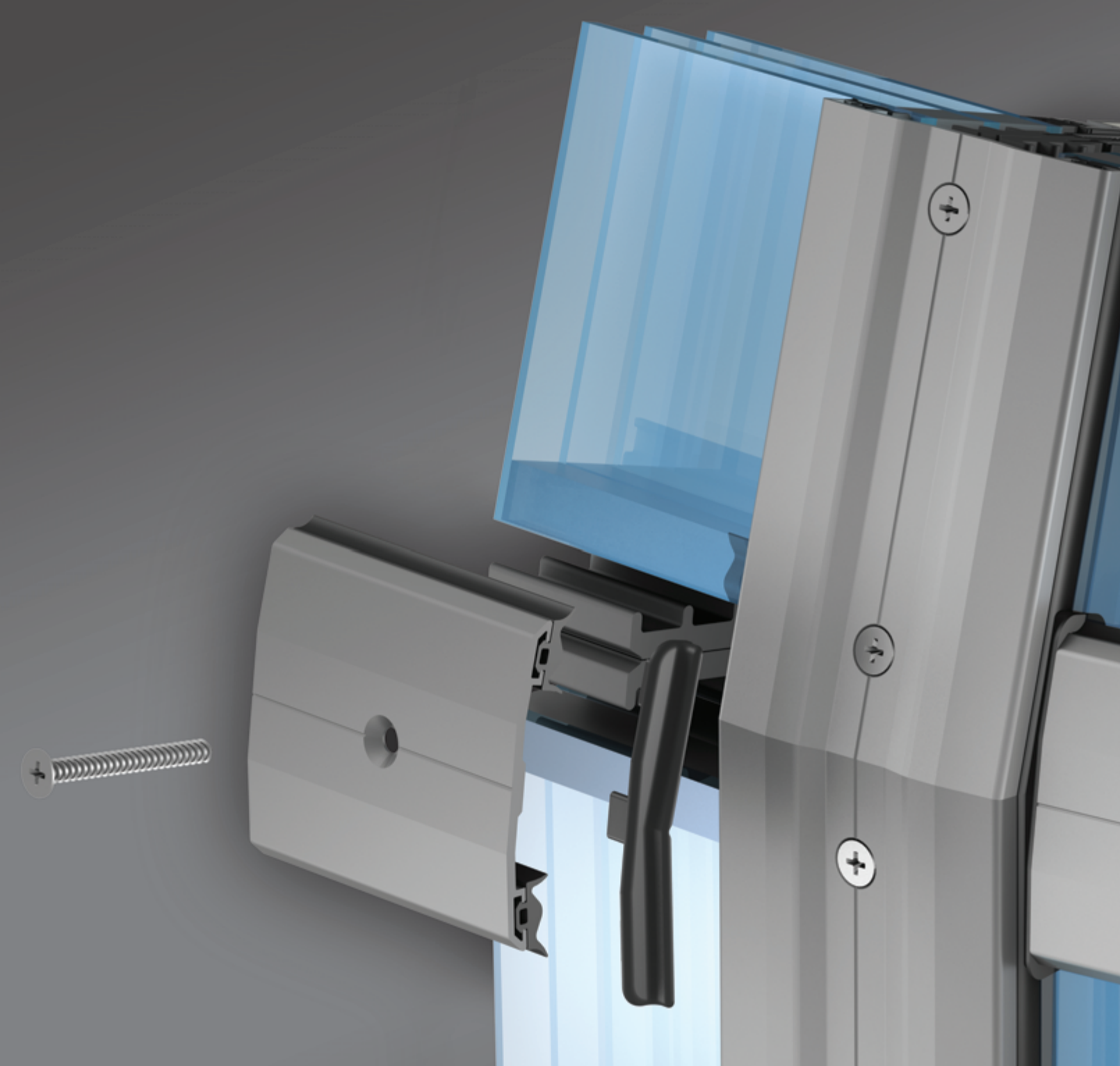
## Product information

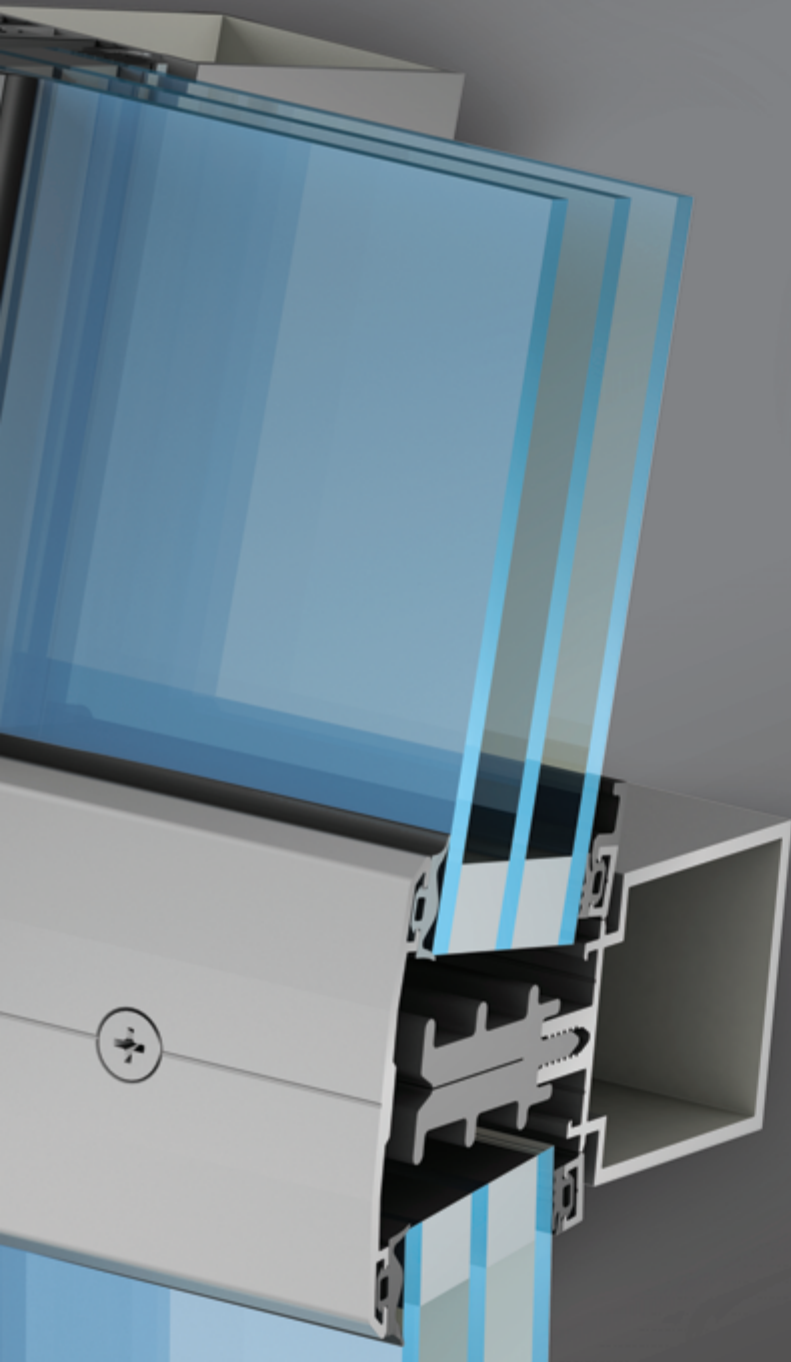
Internal Visible Width	3" (74 mm)
External Visible Width	3" (74 mm)
Hatch height above the glazing surface	4 <sup>3</sup> / <sub>8</sub> " (110 mm)
Infill unit thickness	from <sup>7</sup> / <sub>8</sub> " to 1 <sup>1</sup> / <sub>2</sub> " (22 to 38 mm)
Glass fixing method	snap-in molding
Types of hardware	awning or parallel-set-aside



It is recommended to use an electric power drive for the hatch opening and closing. Due to extended surface of the frame profile, the rod actuators, rack rods and chain drives produced by well-known European manufacturers can be installed into the hatch.

ALT F50





Skylight  
system

# ALT SKL 50

ALT SKL50 skylight system is designed to create glazed structures of different architecture: pentroofs and span roofs, domes, pyramids, arches of various shapes.

Translucent roofs, skylights allow to create a unique, striking and non-typical look of the building at the same time providing protection from unfavourable weather conditions.

Designers and architects have the possibility to choose the proper bearing member depending on building conditions and loading forces.

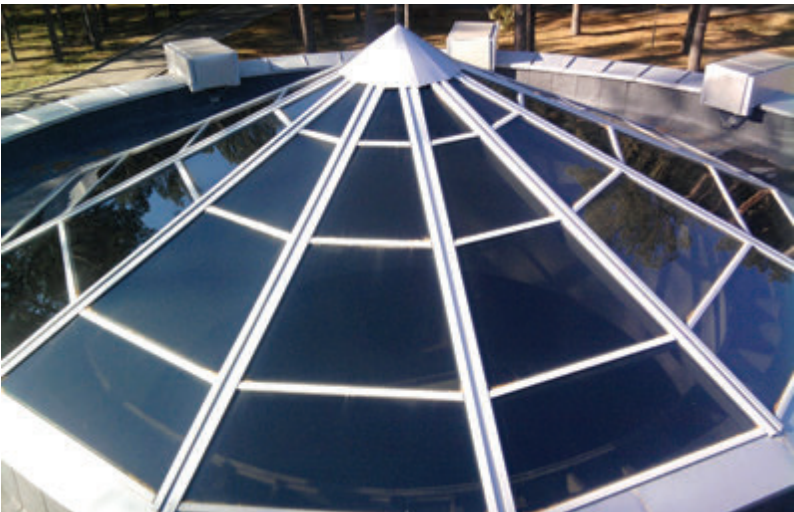


ALT SKL50  
Skylight system



# ALT SKL50

## Skylight system



### Product information

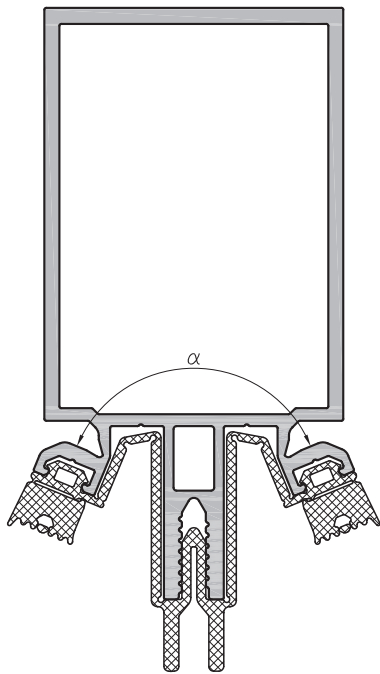
Internal visible width	1 <sup>15</sup> / <sub>16</sub> " (50 mm)
External visible width	1 <sup>15</sup> / <sub>16</sub> " (50 mm)
Mullion and transom width	<sup>9</sup> / <sub>16</sub> " - 7 <sup>15</sup> / <sub>16</sub> " (14,5-202 mm)
Glazing thickness	1 <sup>3</sup> / <sub>16</sub> " - 2 <sup>5</sup> / <sub>16</sub> " (34-56 mm) (from <sup>1</sup> / <sub>4</sub> " (6 mm) with spacing insertion application)
Glazing unit fixing	pressure plates
Types of opening elements	smoke removal hatches

### System components and color options

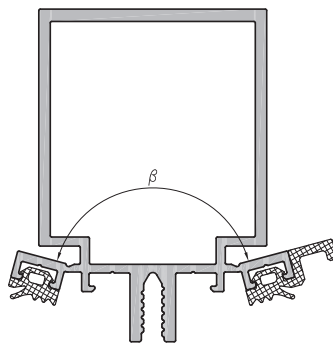
- **Aluminium extrusions**  
EN AW 6063 T6 AlMgSi F20
- **Gaskets**  
EPDM DIN 7863
- **Insulating moldings**  
PVC-U-HI long-lasting with low thermal conductivity
- **Mounts and brackets**  
Aluminum, stainless steel and other corrosion resistant materials
- **Coating types**  
Qualicoat grade powder coating, over 200 RAL colors. Qualanod grade anodizing, 9 colors

# ALT SKL50 skylight system distinctive features and advantages

- The turn of the skylight on mullions and transoms is made through profile flange bending. There is no need to install additional corner adapters.



Turn on a mullion

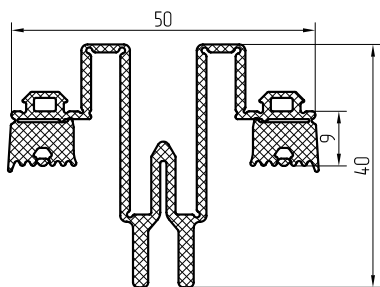


Turn on a transom

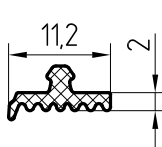


Bending equipment

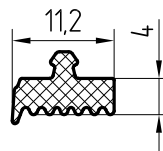
- The special FRK117 gasket application allows to achieve permanent water removal.



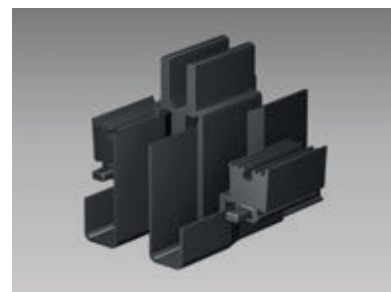
FRK117



FRK118

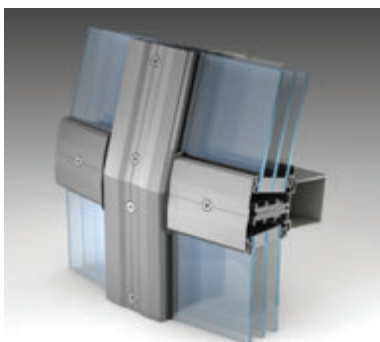
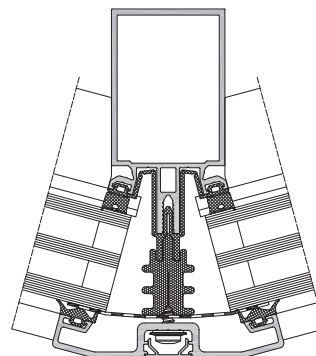


FRK119

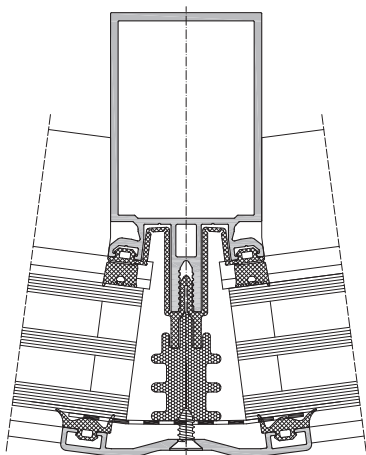


Connection gasket

- Possibility to use new countersunk fastening pressure plates as well as clamp bars from ALT F50 system

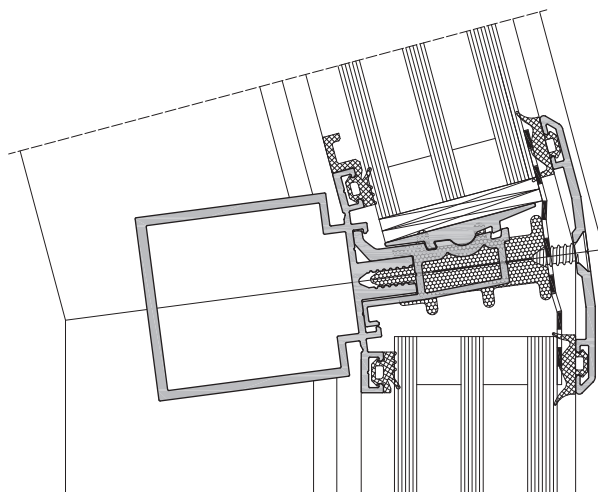
Countersunk  
fastening  
pressure platesClamp bars  
from ALT  
F50 system

- The advantages of foamed thermal break allows to reach the U value up to 1.0 W/m<sup>2</sup>K



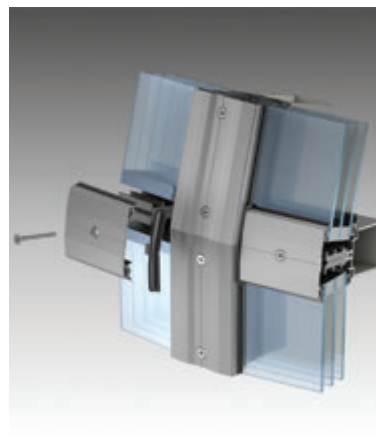
GU thickness from 7/8" to 2 1/2" (18 to 64 mm).  
Section with foamed thermal break

- "Swinging" supports for glazing reduce the number of additional operations for IGU leveling

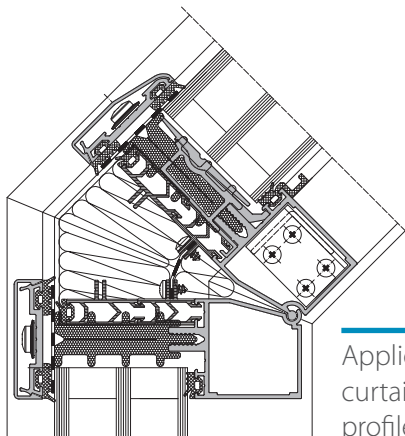


Section with swinging support application

- Full range of accessories

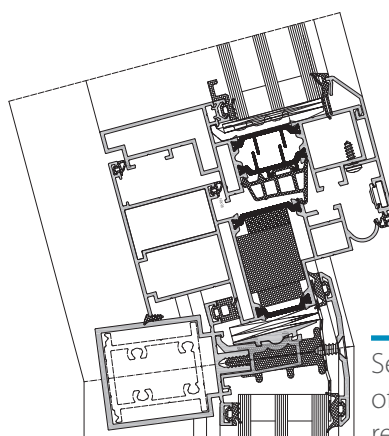


- Application of ALT F50 curtain wall system profiles and accessories

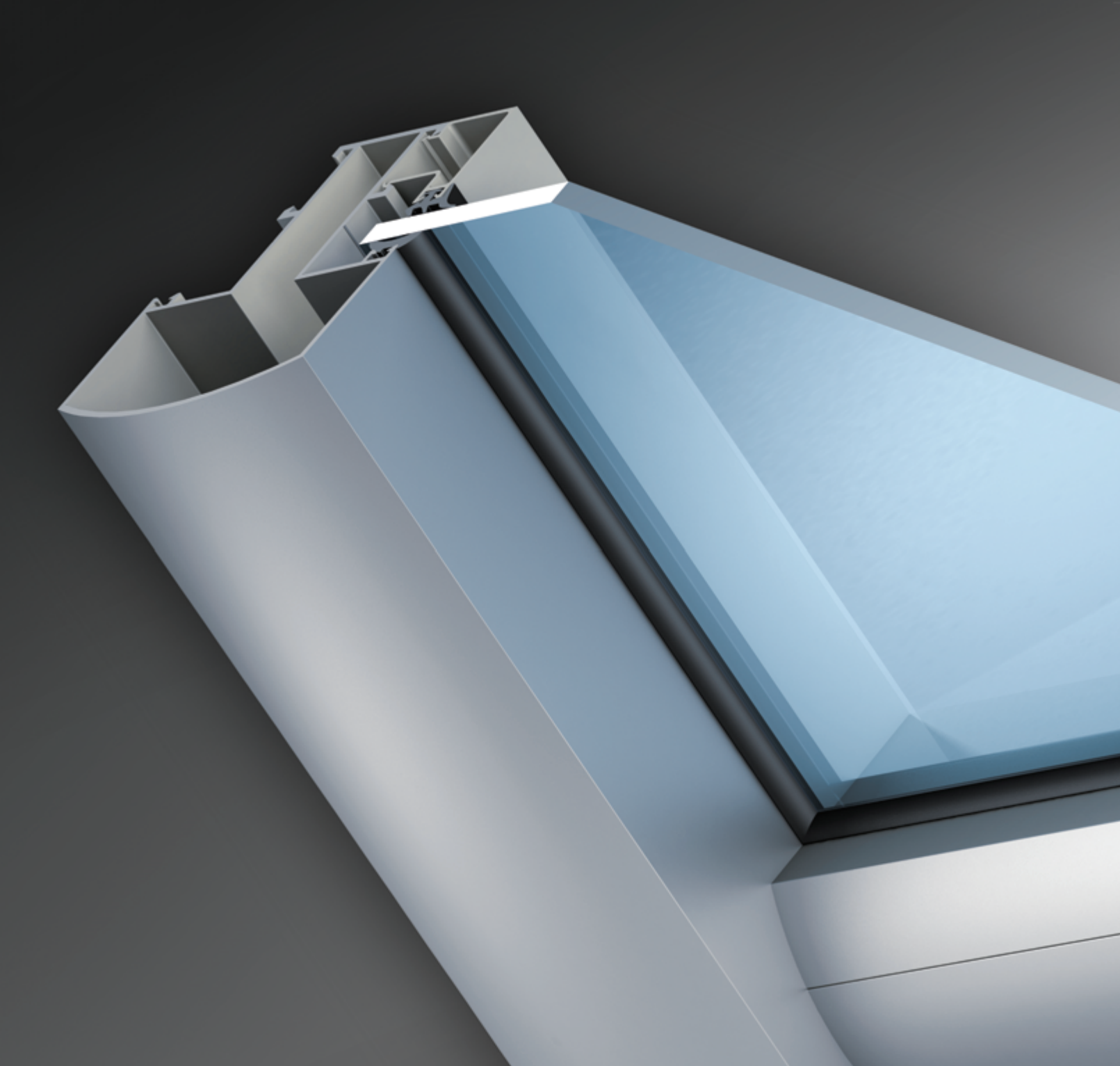


Application of ALT F50 curtain wall system profiles and accessories

- Possibility of smoke removal sashes integration from ALT F50 curtain wall system

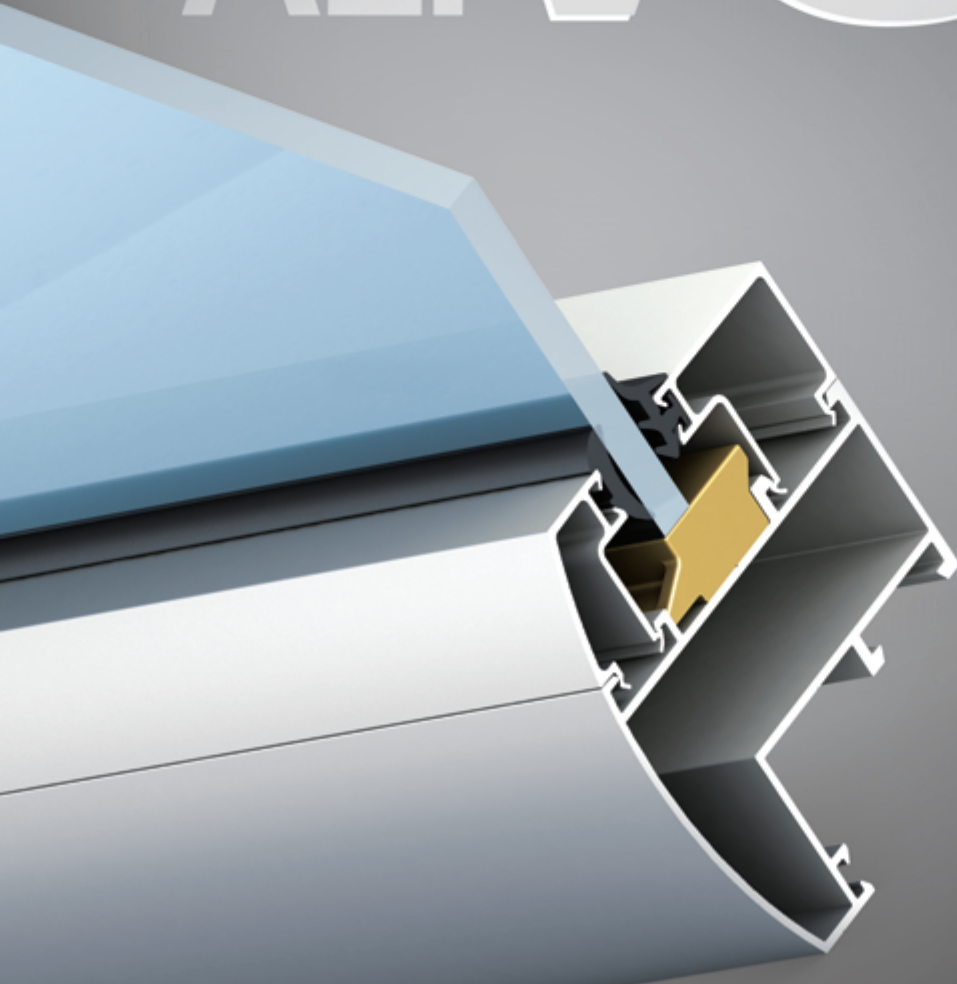


Section of smoke removal sash



# ALTVC65

Glazing system  
without  
thermal break  
for continuous  
glazing of  
balconies and  
terraces



Non-thermally broken ALTVC65 system for glazing of balconies and terraces has been designed for envelope glazing of multi-storey buildings at areas where energy saving is not an issue: balconies, terraces, stair cases. Installation of frame units and infill elements can be done from interior making work cheaper and easier. The system consists of non-thermally broken aluminum profiles with visible width is  $2 \frac{5}{8}$ " (65 mm).

It combines features of captured curtain wall system and window wall system.

The load-bearing structure is made from vertical and horizontal mullions and the infill unit is installed into the frame and fixed with the snap-in moldings from interior.



# ALTV C65

Balcony and terrace glazing system



# Balcony and terrace glazing system ALTVC65



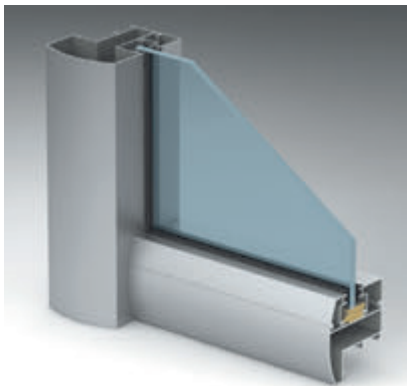
## Product information

Internal visible width	2 <sup>5</sup> / <sub>8</sub> " (65 mm)
External visible width	2 <sup>5</sup> / <sub>8</sub> " (65 mm)
Back member width	3 <sup>1</sup> / <sub>8</sub> " to 6 <sup>3</sup> / <sub>8</sub> " (80-160 mm)
Glazing thickness	<sup>3</sup> / <sub>16</sub> " to 1" (4-26 mm) for fixed parts and <sup>1</sup> / <sub>4</sub> " (4-6 mm) for sliding sashes
Glass fixing method	snap in moldings
Types of opening elements	hinges and sliding sashes ALT100 series

## System components and color options

- **Aluminum extrusions**  
EN AW 6063 T6 AlMgSi F20
- **Gaskets**  
EPDM DIN 7863
- **Fixing elements**  
Aluminum, stainless steel and other corrosion resistant materials
- **Coating**  
Qualicoat grade powder coating, over 200 RAL colors. Qualanod grade anodizing, 9 colors

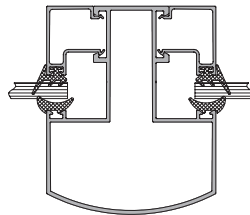
# ALT VC65 system main features



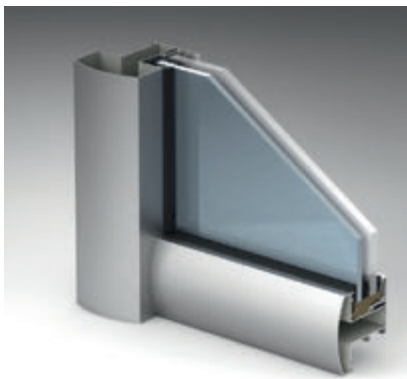
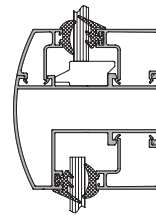
## Possibility of broken glass replacement without interior finishing damaging

due to the glazing beads outside installation

### ■ Mullion section



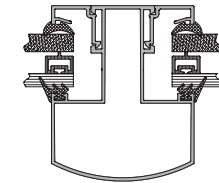
### ■ Transom section



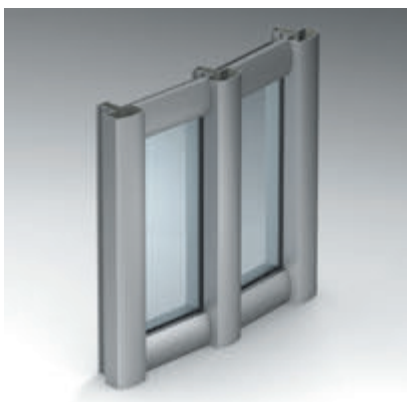
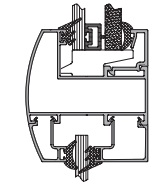
## Installation of two lines of varied types of infill units materials

Glass with  $\frac{5}{32}$ "- $\frac{1}{4}$ " (4-6 mm) thickness can be used as outside infill. Magnesite panel or other plate material with  $\frac{5}{16}$ "- $\frac{1}{4}$ " (8-12 mm) thickness can be used inside.

### ■ Mullion section

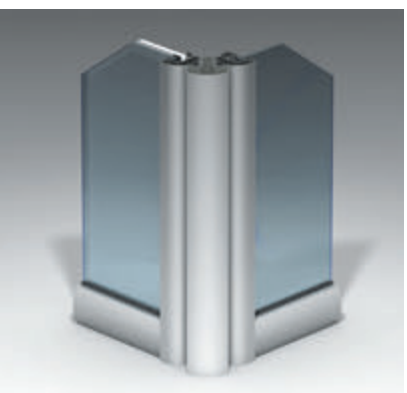
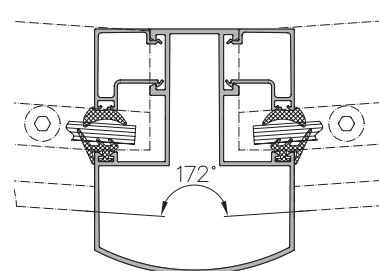
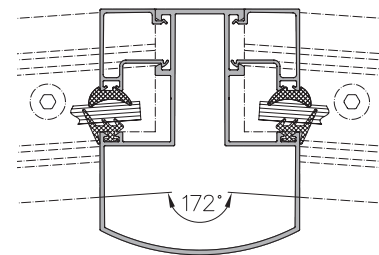


### ■ Transom section



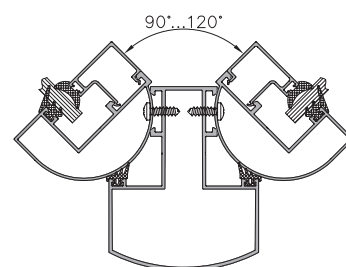
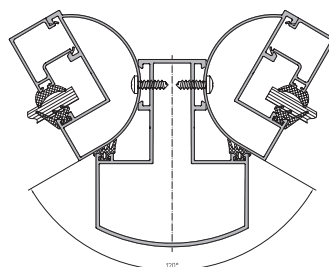
## Assembling of circular facades

Rotation to 4 degree without additional profiles.



## Variety of solutions for angular turns

Rotation profiles allow to realize turning for -30 to +45 degree on one side.

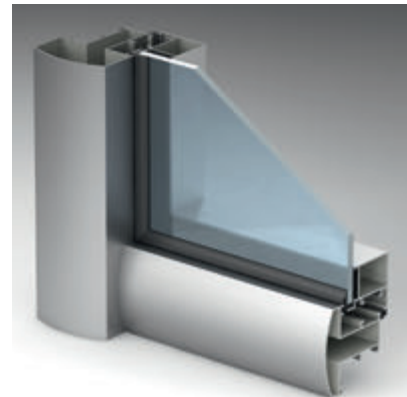
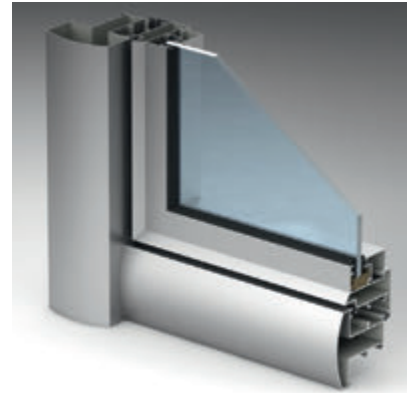
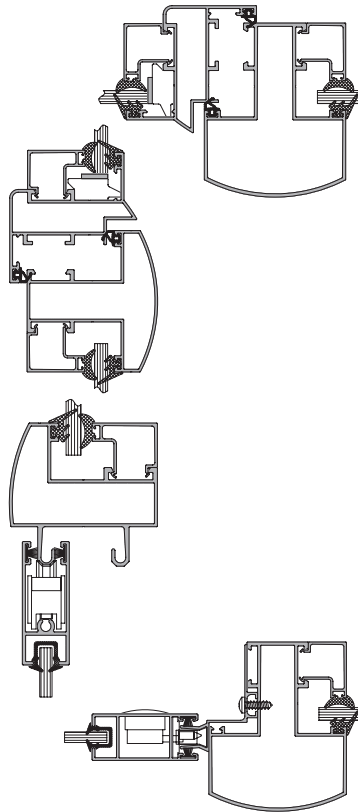


## Various types of built-in elements

The sash of 1  $\frac{1}{5}$ " (31 mm) visible width is used to realize casement windows. The glazing width may vary from  $\frac{3}{20}$ " to 1  $\frac{1}{20}$ " (4-26 mm). Hidden sash with  $\frac{1}{4}$ " (6 mm) single glass can be used if necessary.

ALT 100 system profiles and components are used in the assembly of sliding windows.

Special mullion profiles have been developed for sliding elements installation and allow realizing up to 13 ft (4 m) width openings as well as additional profiles for mullions.



## Hidden fastening elements

Different ways of steel brackets use are proposed to create assembly attachment points to the floor slab. Every way has its own peculiarities.

- 0750 – to create a  $\frac{2}{5}$ " - 4  $\frac{3}{4}$ " (10-120 mm) distance from floor slab
- 0760 – to create a 4  $\frac{3}{4}$ " - 10" (120 - 250 mm) distance from floor slab
- 0790 – to realize a 90° turn

■ AYPC.VC65.0760



■ AYPC.VC65.0750



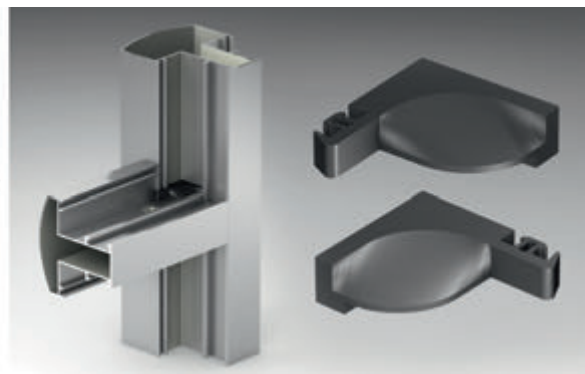
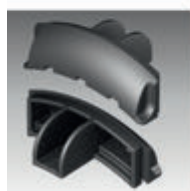
■ AYPC.VC65.0790

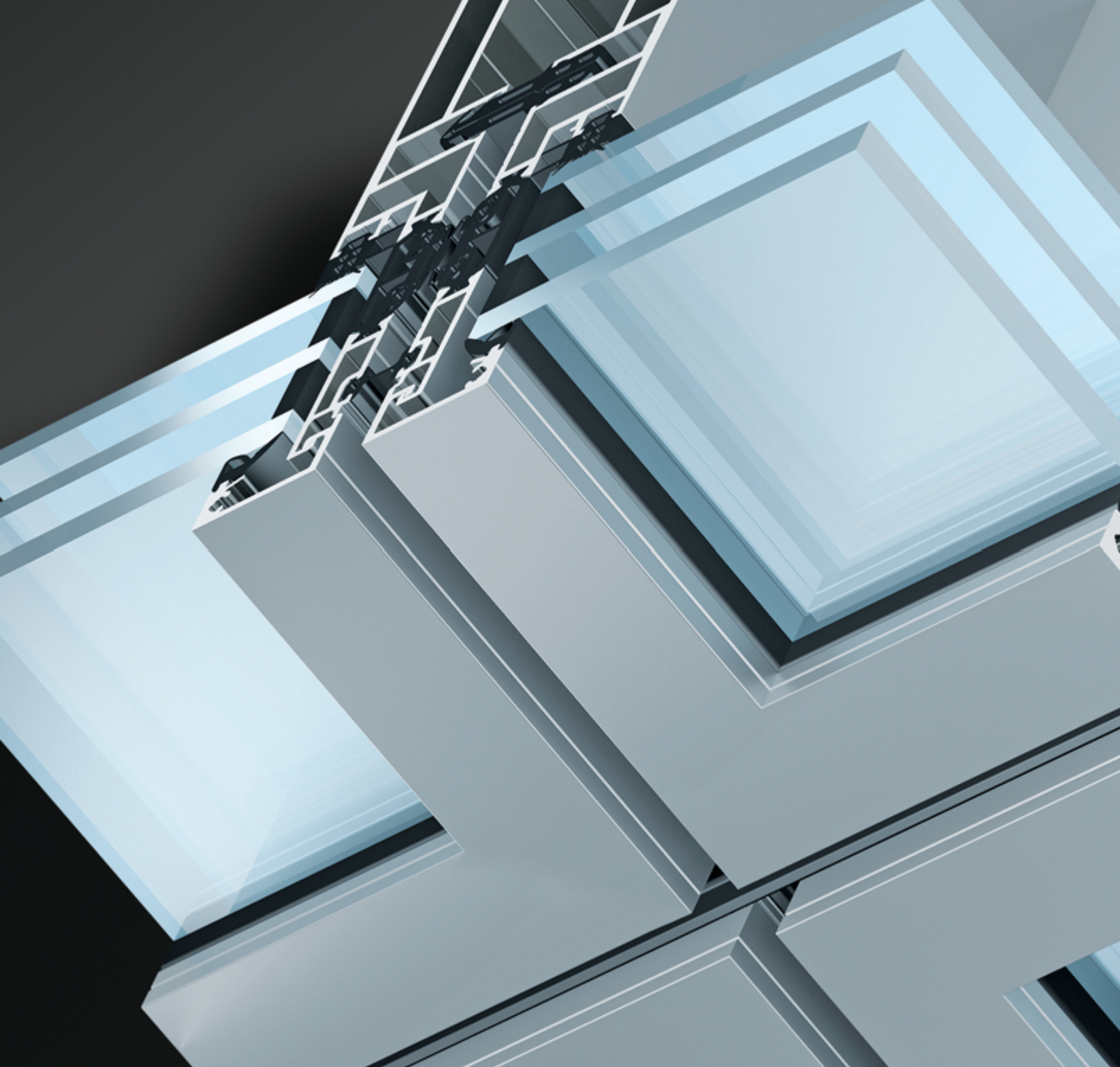


## ALT VC65 system supplementary components

A wide range of additional components is presented by various plugs and a collar.

The collar seals mullion's thermal gaps, the plugs seal the mullion-transom connection and decorate the junction of mullions with various sections.







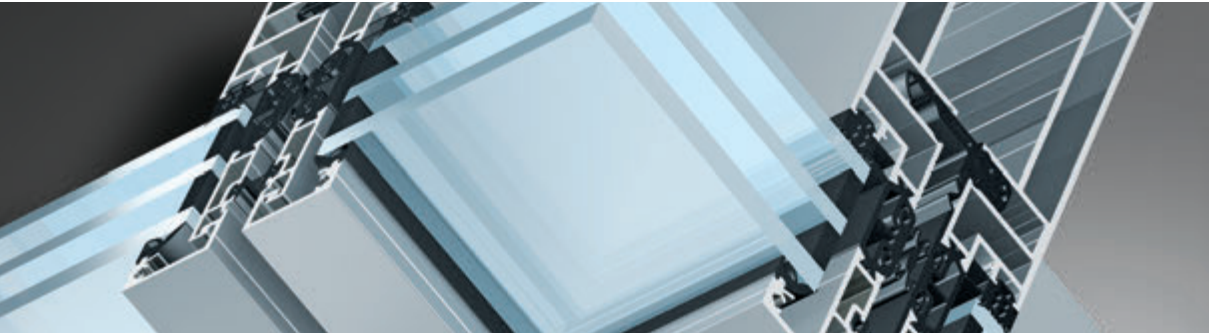
## Unitized curtain wall system

# ALT EF65

Facade system ALT EF65 is designed for envelope glazing with prefabricated units. This method of installation eliminates necessity of scaffolds and makes the process of facade installation much easier especially when it comes to high-rise buildings.

The main components of this system are mullions which are assembled into modules. The glazing in such constructions is held by snap-in moldings and wedging blocks. A set of gaskets is used for adjustment and sealing gaps between units.

# ALT EF65 Unitized curtain wall system



## Product information

Internal visible width	2 9/16" (65mm)
External visible width	2 9/16" (65mm)
Frame and transom chamber depth	4 15/16" (125 mm) and 5 29/32" (150 mm) (up to 7 7/8" (200 mm) if neccessary)
Possible infill units' thickness	2 13/64" (56 mm)
Maximum infill units weight	662 lbs (300 kg)
Glass fastening type	glass bead profiles
Types of opening elements	all ALT window-door systems, facade integrated ALT F50 windows
Thermal conductivity of frame junction	Group 2,3 Uf=2,25 W/m²K according to EN, ISO 10077-2:2003
Thermal conductivity of transom junction	Group 1.0, Uf =1,55 W/m²•K according to EN ISO 10077-2:2003

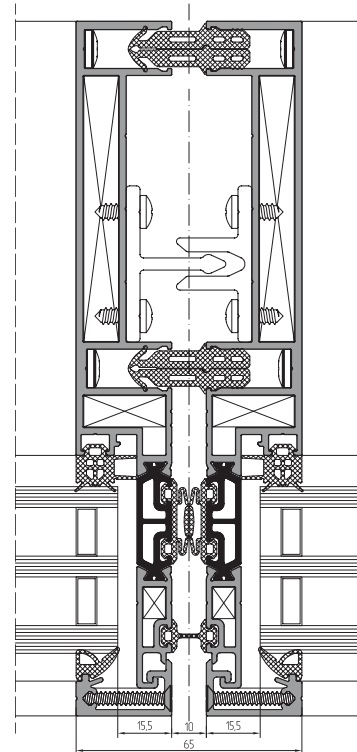
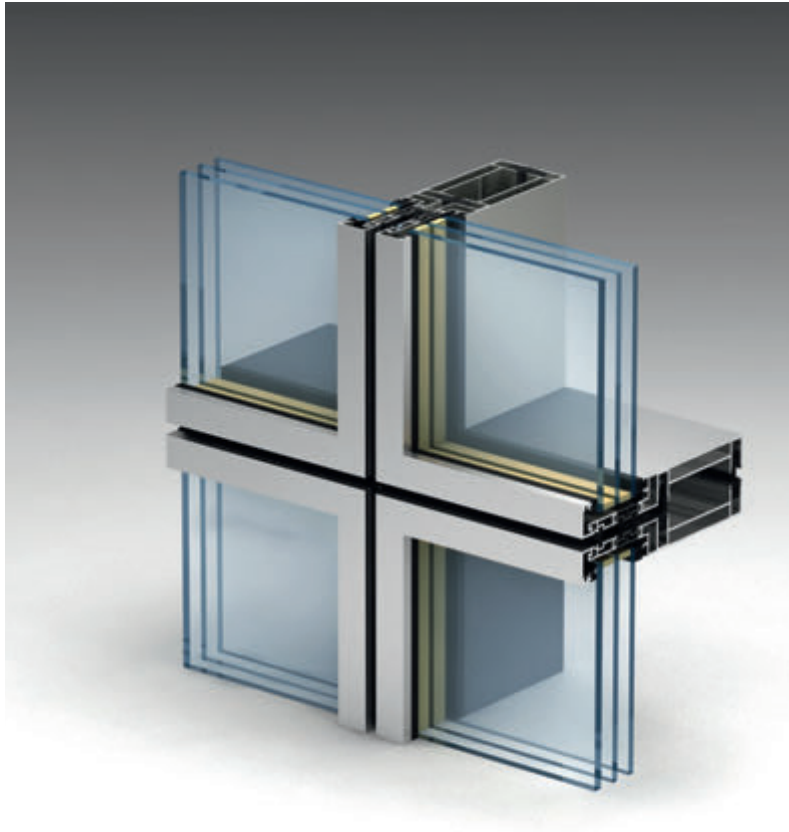
## Technical details

- **Aluminum profiles**  
AlMg0,7Si6063 alloy, T6 temper
- **Gaskets**  
Synthetic rubber EPDM according to DIN 7863 norms
- **Insulating profiles**  
Are produced with the help of extrusion method from polyamide containing 25 percent of fiberglass
- **Fastening elements**  
Are produced from aluminum, stainless steel, and other corrosion-resistant materials
- **Coating types**  
Powder coating of any color and anodizing meet Qualicoat and Qualanod requirements.

## Unitized curtain wall advantages

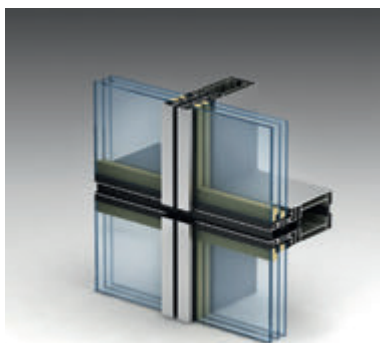
- Elements standardization during designing stage, high quality of assembly operations, close control during manufacturing process, final quality inspection;
- Building area assembling with fewer working operations leads to human factor effect (defects occurring) reducing.
- Construction time almost doesn't depend on weather conditions, as all the units are assembled in manufacturing workshop.
- Assembling is performed floor-by-floor, finishing works could be started earlier with a closed building facade.
- Possibility of assembling at low temperatures without any significant changes in technical process.
- Possibility of faster occupation of the building, it's putting into operation and investment recovery.
- Possibility to adopt system for each project design and requirements.

# Design variants of unitized curtain wall ALT EF65



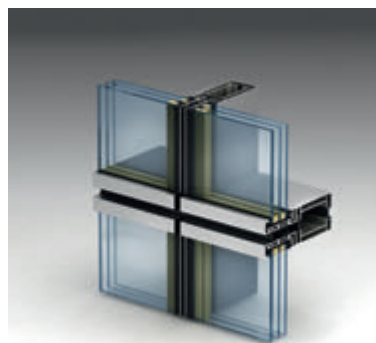
## Traditional facade

visible infill units fastening with the help of glass bead profiles/



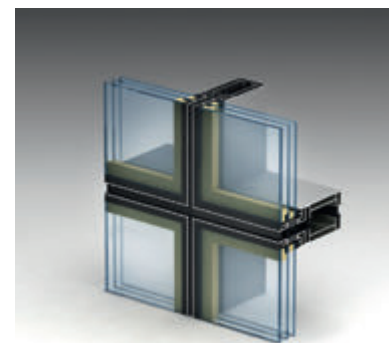
## Semi-structural glazing "vertical line"

with a vertical profile line on a facade



## Semi-structural glazing "horizontal line"

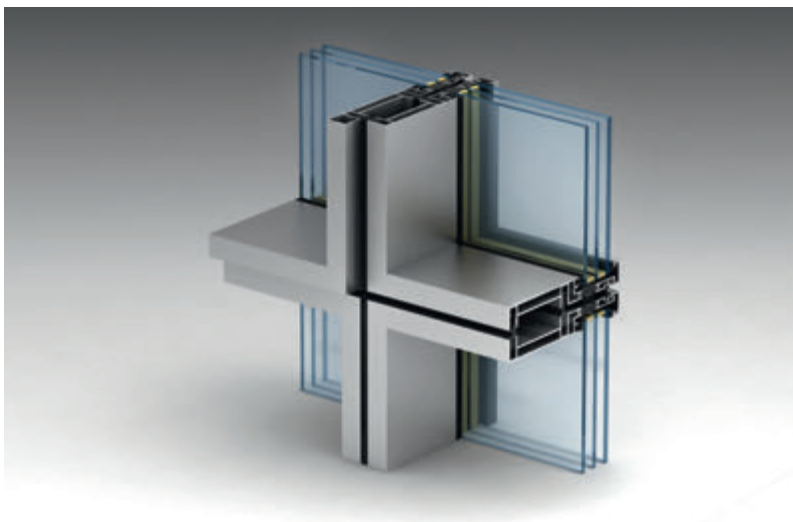
with a horizontal profile line on a facade



## Structural glazing

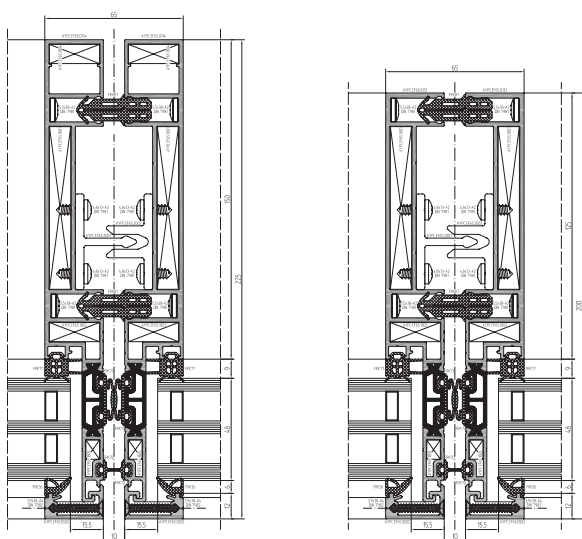
all-glass facade without any aluminum profiles outside

# ALT EF65 system features: diversity



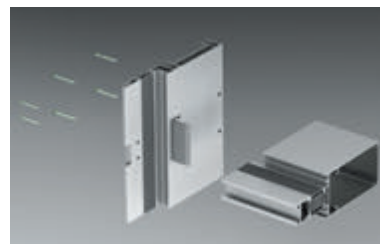
## Frames of different sizes junction

Possibility of different frame sizes junction allows to optimize the choice of materials in central wing of the building and to choose a matching profile in loaded (corner) facade areas.



## Several types of transom bars junction

There are two possible types of transom bars junction: screw junction through a threaded slot and junction with the help of embedded detail. Screw and pin attachments of front, middle and back parts of a transom bar are available in the system in order to guarantee additional security of T-connection.



## Several standard sizes of profiles with air chambers

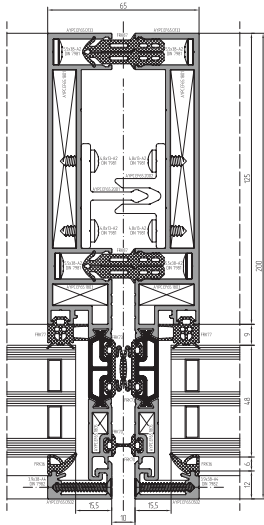
Several possible standard sizes of chamber profiles, frame chamber depths are  $4 \frac{15}{16}$ " (125 mm) and  $5 \frac{29}{32}$ " (150 mm). The same amount of embedded details and frame assembly kits for frames with different depths is used in the system.



## Multi-chamber frame profiles

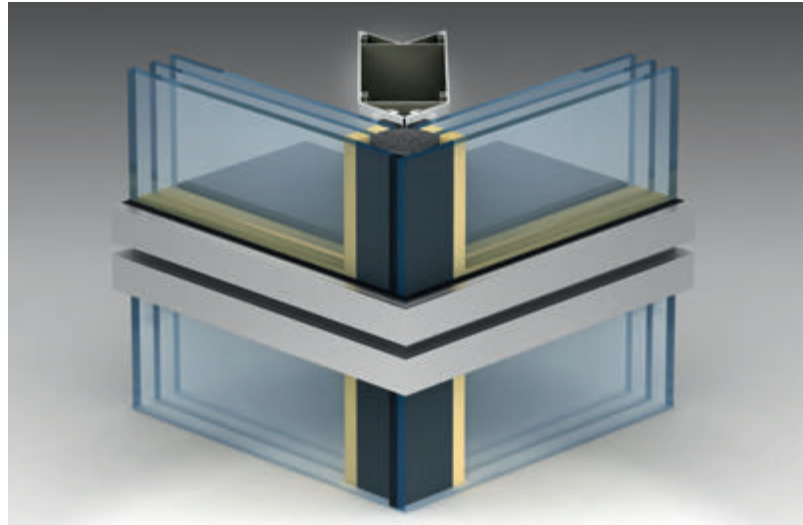
Multi-chamber frame profiles used together with angles assembled with the help of three embedded details give additional degree of rigidity and durability to the element.

# ALT EF65 system features: reliability and esthetics



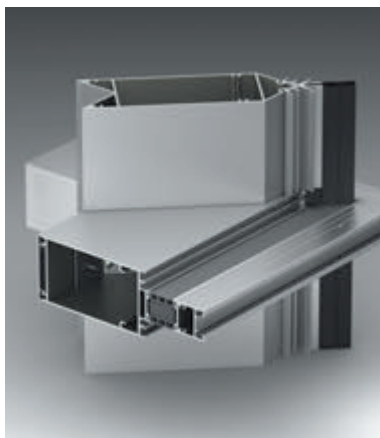
## Narrow visible width

Narrow visible width –  $2 \frac{9}{16}$ " (65 mm) of profile line along the whole facade. It is a minimal possible size for existing unitized curtain walls.



## Several possible variants of angle module realization

Several variants of angle modules are realized in the system, starting from vertical use of clamp bars to a structural variant without exterior profiles.



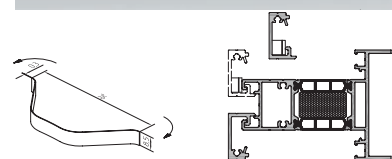
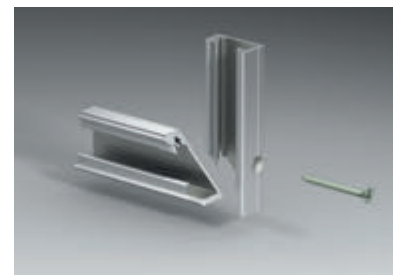
## Horizontal profiles chambers completeness

Horizontal profiles chambers completeness in angle modules provides additional level of facade impermeability.



## Additional connection element

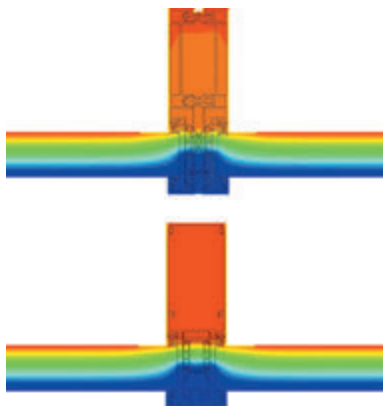
Using of additional connection element in corner and two-sectional modules allows to provide equal windload distribution on vertical profiles.



## Two ways of glass beads fixation

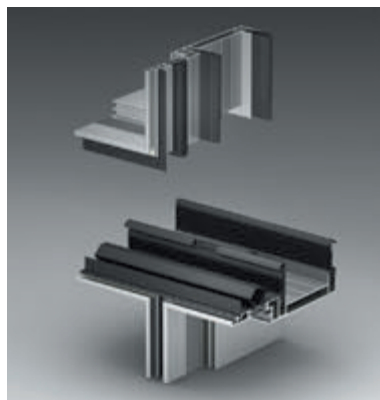
Using of end self-tapping screws and safety elements allows to prevent glass beads clicking off and infill units falling off.

# ALT EF65 system features: power-efficiency and functionality



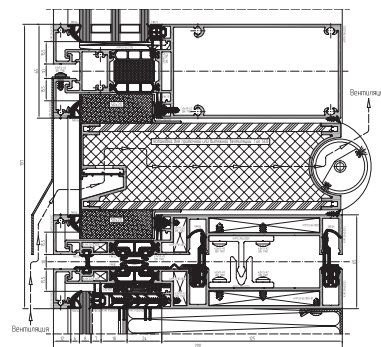
## High thermal performance

The frame-to-frame junction thermal transmittance on  $U_f = 2,25 \text{ W/(m}^2\text{K)}$  level and transom junction is  $U_f = 1,55 \text{ W/(m}^2\text{K)}$ .



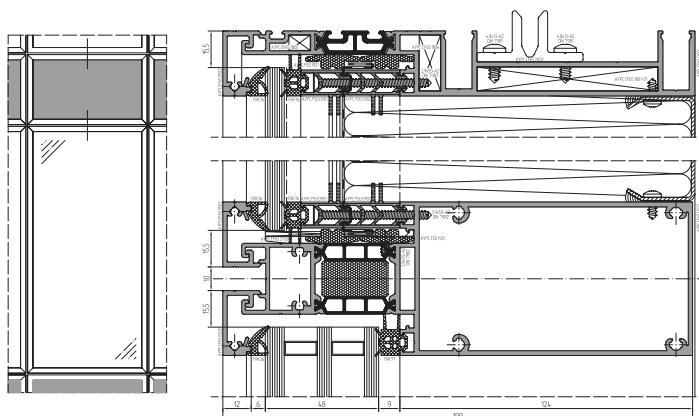
## High impermeability level of the construction

is achieved through the use of three levels of gaskets and overlapping gaskets principle.

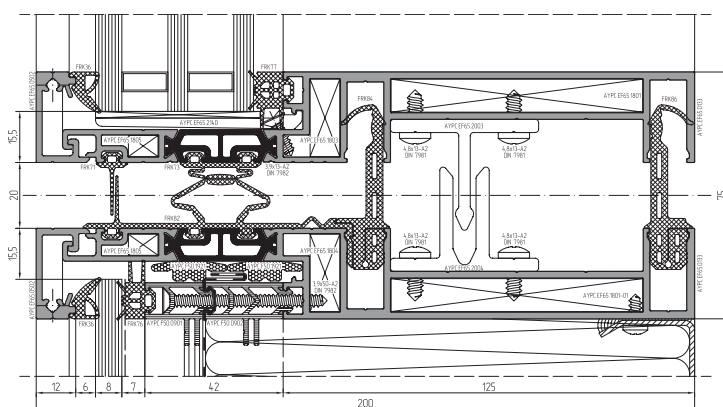


## Ventilation equipment installation

Possibility of installation of ventilation equipment both into transom chamber and into nontransparent part of the construction.



## Possibility of integration of both cold and warm zones in one unit

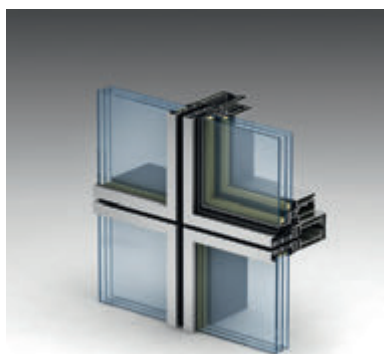


## Horizontal gaskets and junction profiles kit

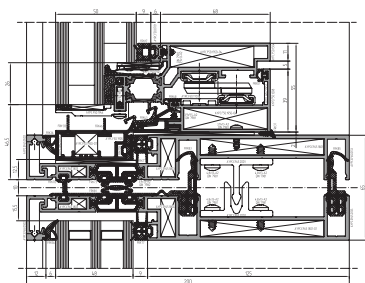
Allow to detect different flooring deformation effectively, maximum allowed span deflection is  $\pm \frac{25}{64}''$  (10 mm).

# Types of integrated vents for ALT EF65 unitized curtain wall system

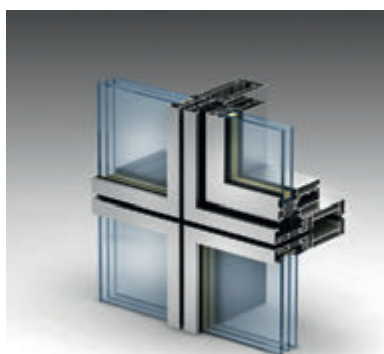
Integrated outward opening ALT F50 windows are used as opening elements of the units in ALT EF65 system. In case of low-rise buildings glazing with the help of unitized curtain wall it is possible to use ALT W72 windows with inward and outward opening.



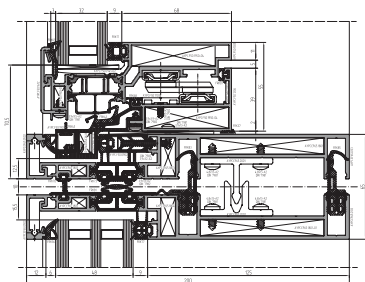
## Integrated window with hidden sash



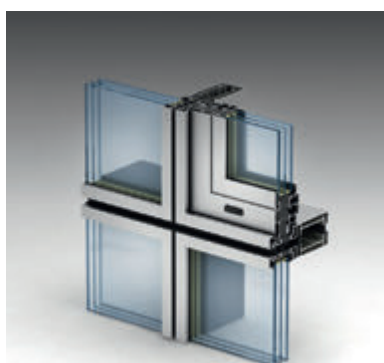
There are no visible differences between the sash and the fixed part of the facade. That's why this sash can be used in any type of facades.



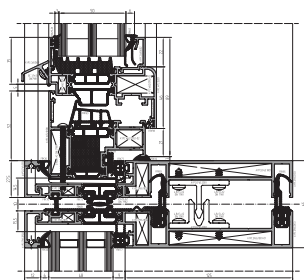
## Integrated window with visible IGU fastening



Standard glazing is used in this window. It is fixed by a clamp bar with 1  $\frac{9}{16}$ " (40 mm) visible width. It is advised to use this variant in facades with infill units fastened by glass beads.



## ALT W62 and ALT W72 windows with different types of opening

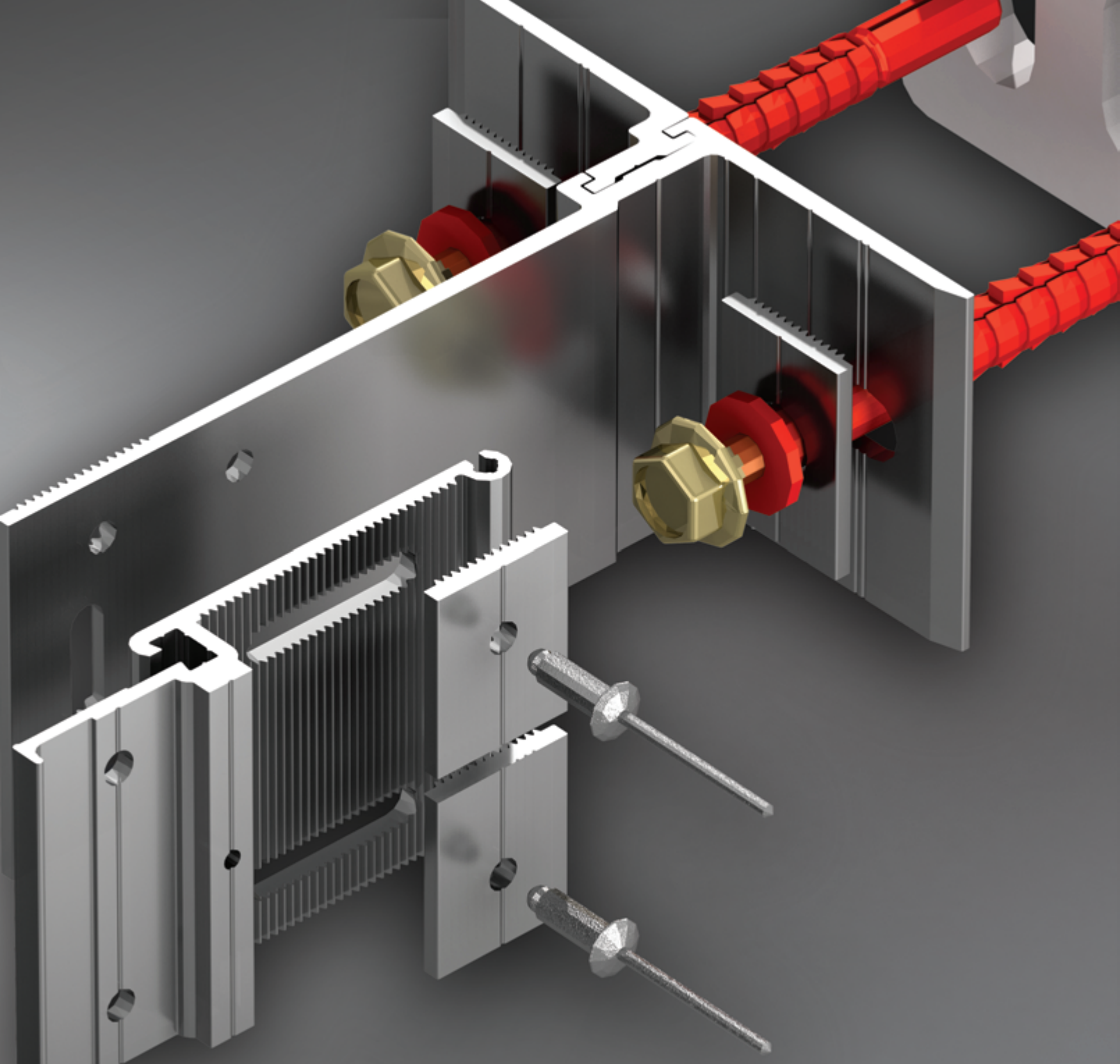


These systems are used for inward and outward opening and in case it is needed to visually emphasize opening elements against the whole facade.

# ALT 150

Ventilated cladding  
facade system





Ventilated cladding facade system is a modern solution which improves energy efficiency of a building and decreases costs of its maintenance, improves its image and makes it more attractive for clients and tenants creating more comfortable conditions for work and leisure.

Thanks to a wide range of finish materials available for ventilated facades a building can have a unique design and become a signature of a city. There is no alternative to ventilated facade system.



# ALT 150

Ventilated cladding  
facade system



# ALT150 Ventilated cladding facade system



## Product information

Max. height	500 ft
Seismic stability	up to 10 on Richter scale
Insulation thickness	up to 10" (250 mm)
Minimum life period	30 years (50 years with anodizing)
Fire safety class	not flammable
Framing weight	up to 3 ½ lbs per 10 sq. ft.

## System components and coating

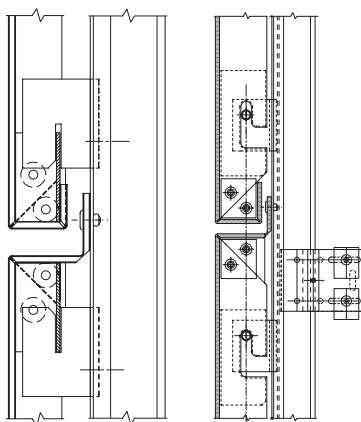
- **Aluminum profiles**
  - EN AW 6063 T6
- **Fixing elements**
  - Aluminum, stainless steel and other corrosion resistant materials
- **Coating types**
  - Qualanod grade anodizing

# Ventilated cladding facade system ALT150



## ALT150 with cassettes made from aluminum composite panels

Traditional aluminum composite cassettes bring modern appearance to any building.



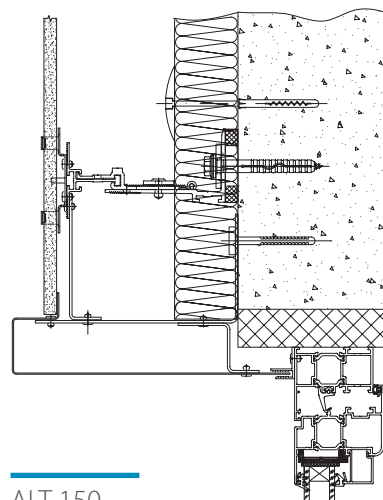
ALT 150





### ALT150 with stone panels

Fixing stone panels with visible clips is the easiest and the most inexpensive option which provides nevertheless all advantages of ventilated facade system.



ALT 150

# Ventilated cladding facade system ALT150

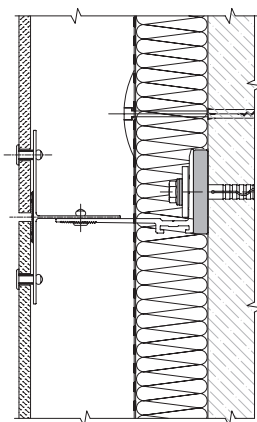


## ALT150 with fiber reinforced concrete panels

Fiber reinforced concrete panels is one of the first materials used for facade decoration, but it is still up to date.

Features:

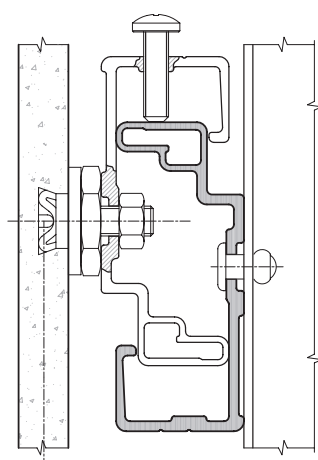
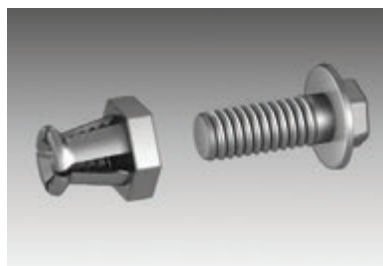
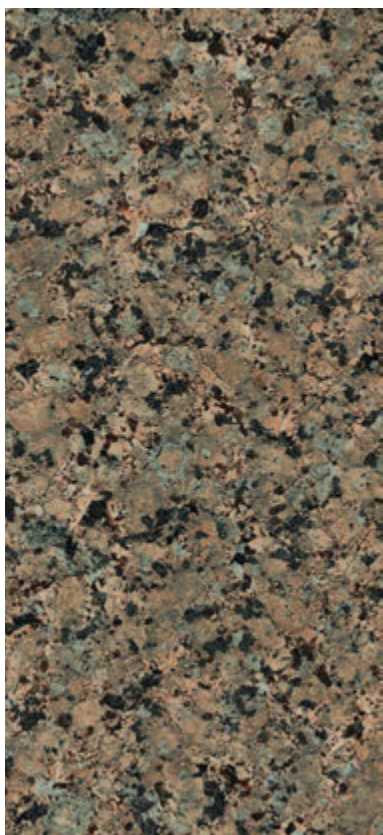
- Wide range of colors
- Safe mounting
- Quick and easy installation



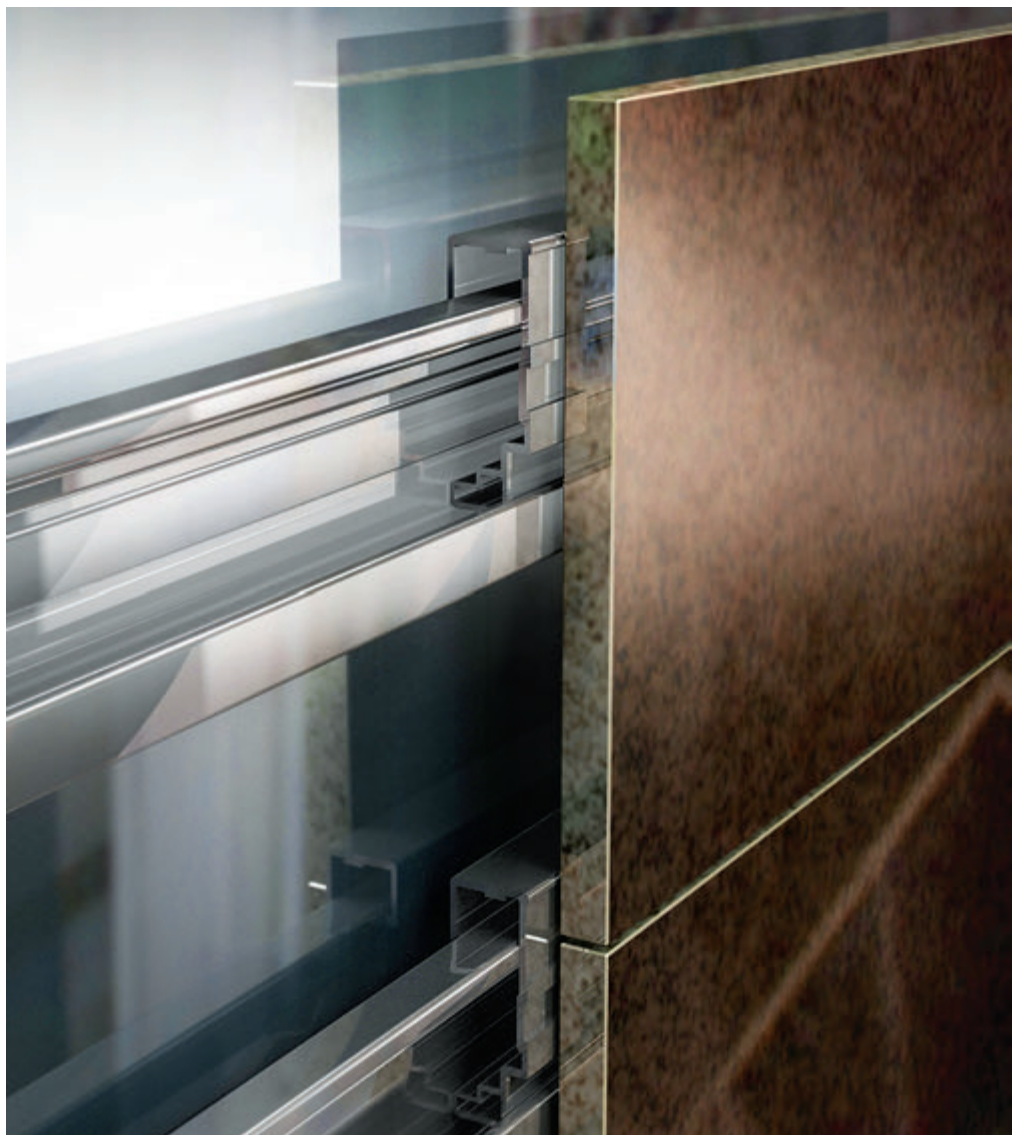
ALT 150

# ALT 150

Ventilated cladding  
facade system



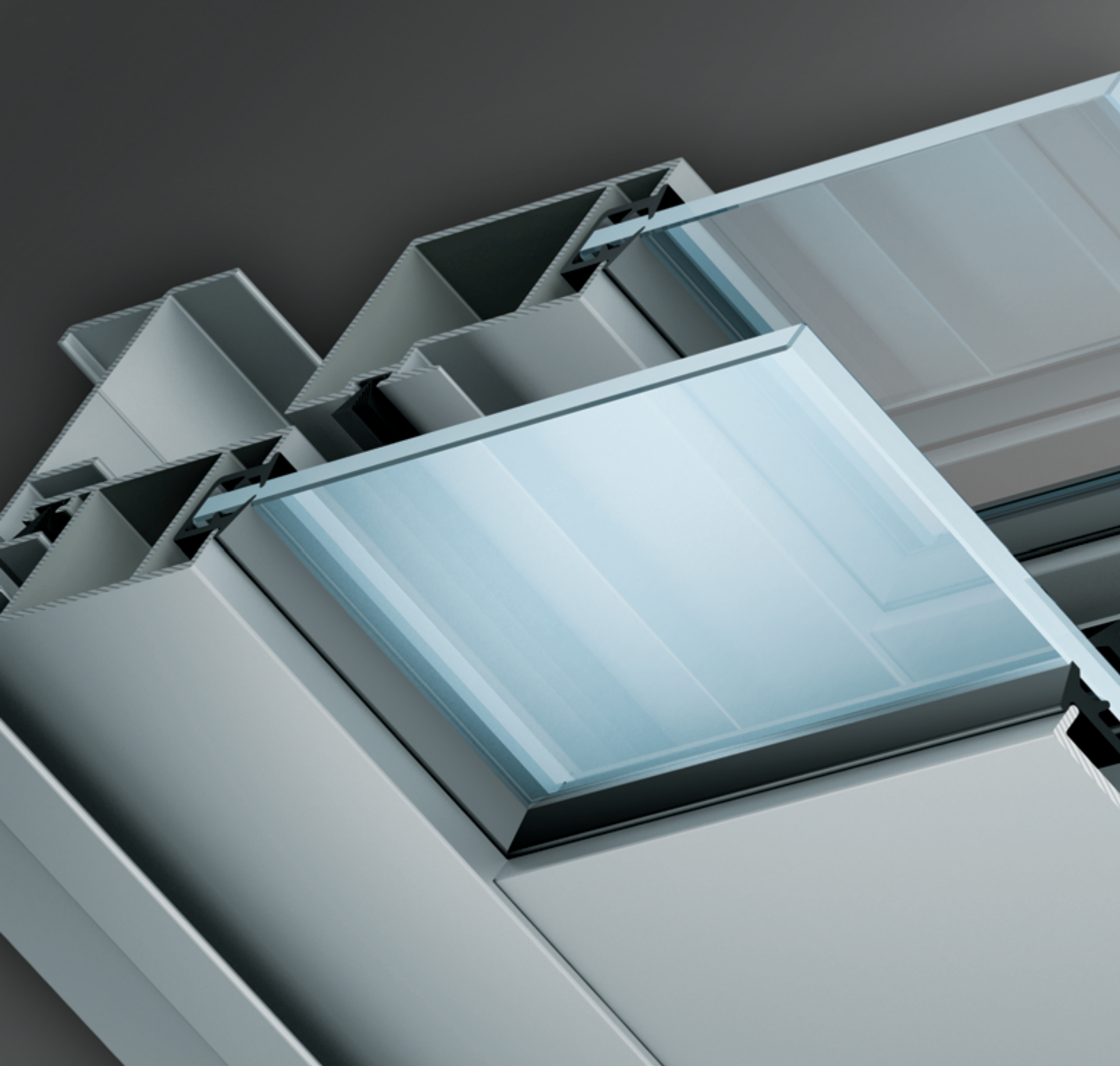
ALT 150



### **ALT150 with hidden hardware**

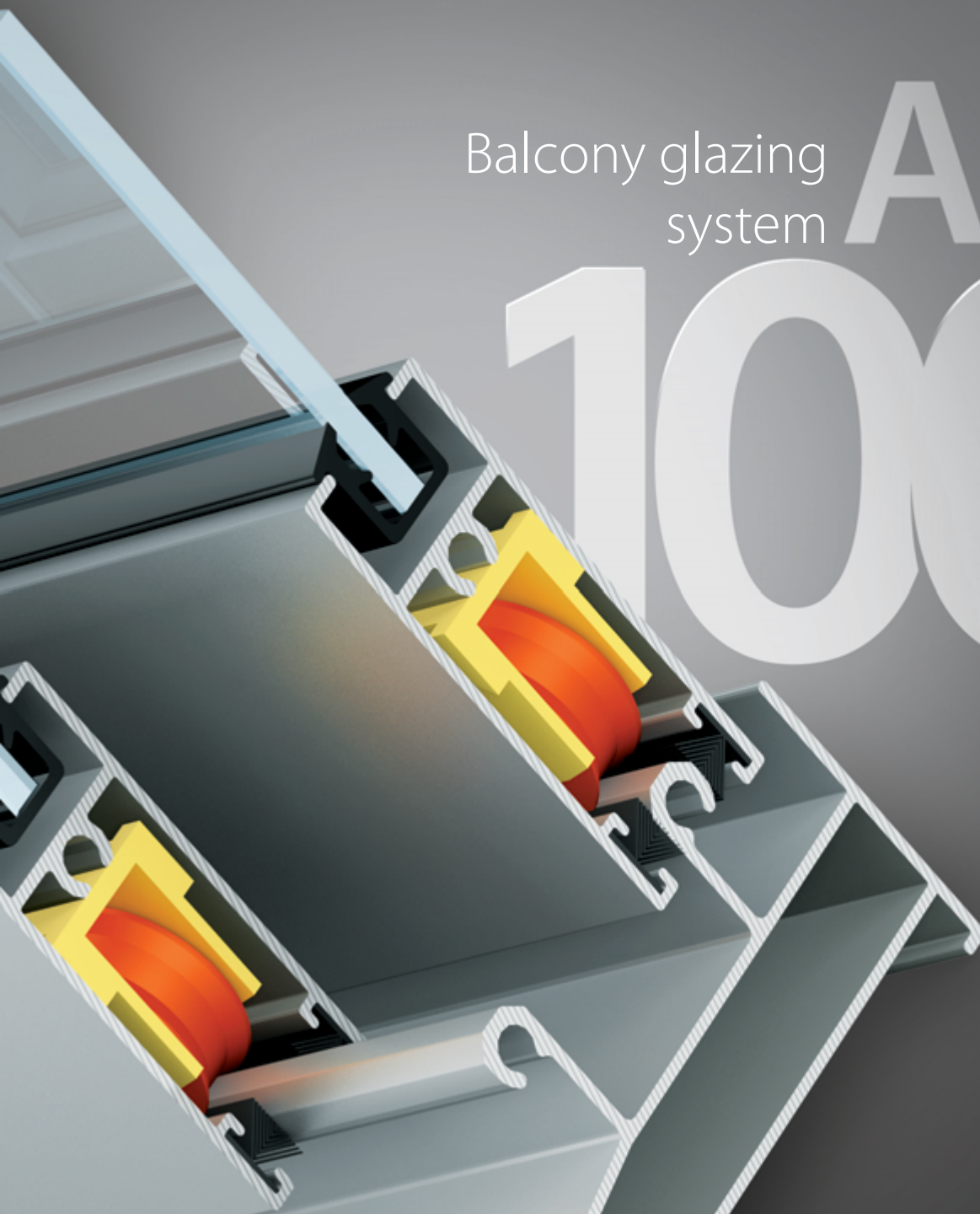
It is the most dependable and highest quality method of facade decoration. It is commonly used for signature design and underlines individuality of a building.

Hidden hardware allows to design ideal architectural solutions.



## Balcony glazing system

# ALT 100



ALT100 system is designed for balcony glazing and protecting balconies and terraces from wind and rain, noise and dust. It improves acoustical conditions and contributes to comfort and coziness.

The system includes moldings for fabrication of sliding, swing and fixed glazing. All the profiles can be combined with and adjusted to each other using corner adapters and connectors. Insect screens are available for installation together with ALT 100 system.

The system is easy to assemble and does not require expensive equipment for fabrication.

# ALT100 Balcony glazing system



## Product information

Visible width	Sliding sash	2" (50 mm)
	Casement window	2 5/16" (58,4 mm)
Mounting depth	Fixed part	1 5/8" (40 mm)
	Two-track frame	2 3/8" (60 mm)
	Three-track frame	3 9/16" (90 mm)
	Casement and fixed	1 5/8" or 2 3/8" (40 or 60 mm)

## System components and color options

- **Aluminum extrusions**  
EN AW 6063 T6 AlMgSi F20
- **Gaskets**  
EPDM DIN 7863
- **Joints**  
Corner connectors made of aluminum alloy, steel self-drilling screws, plastic plates
- **Coating**  
Qualicoat grade powder coating, over 200 RAL colors. Qualanod grade anodizing, 9 colors

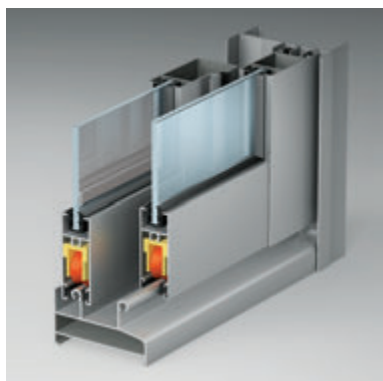
Balcony  
Glazing  
System

ALT  
100

# ALT100 System overview

## Features

- ALT100 series offers moldings for manufacturing of sliding, casement and fixed windows
- Allows to make connection of a sliding part to a fixed or casement one from both sides, and to a fixed part from the top and the bottom
- Corner adapter moldings make it possible to find the best solution for any project



### Sliding sash

Features:

- reasonable use of balcony space;
- possibility to glaze a narrow balcony with wide panels;
- comfort and safe balcony maintenance



### Casement

Features:

- glazing options from  $\frac{5}{32}$ " up to  $\frac{23}{32}$ " (4-18 mm);
- horizontal dividers for windows are available
- reinforced moldings for doors



### Fixed part

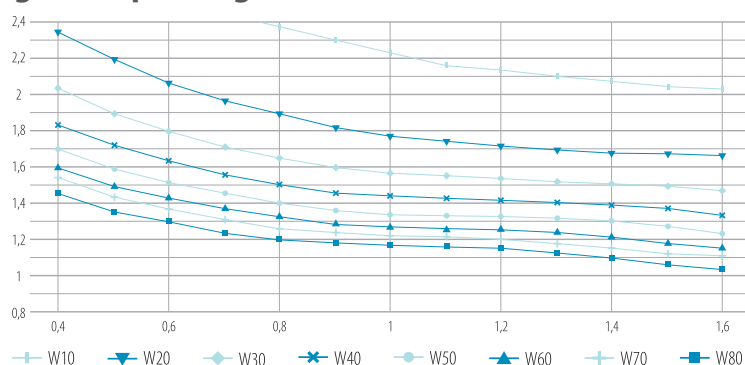
Features:

- glazing options from  $\frac{5}{32}$ " up to  $\frac{23}{32}$ " (4-18 mm);
- horizontal dividers for windows are available;
- narrow frame width (up to  $1\frac{5}{8}$ " [40 mm]);
- easy to assemble

## Options

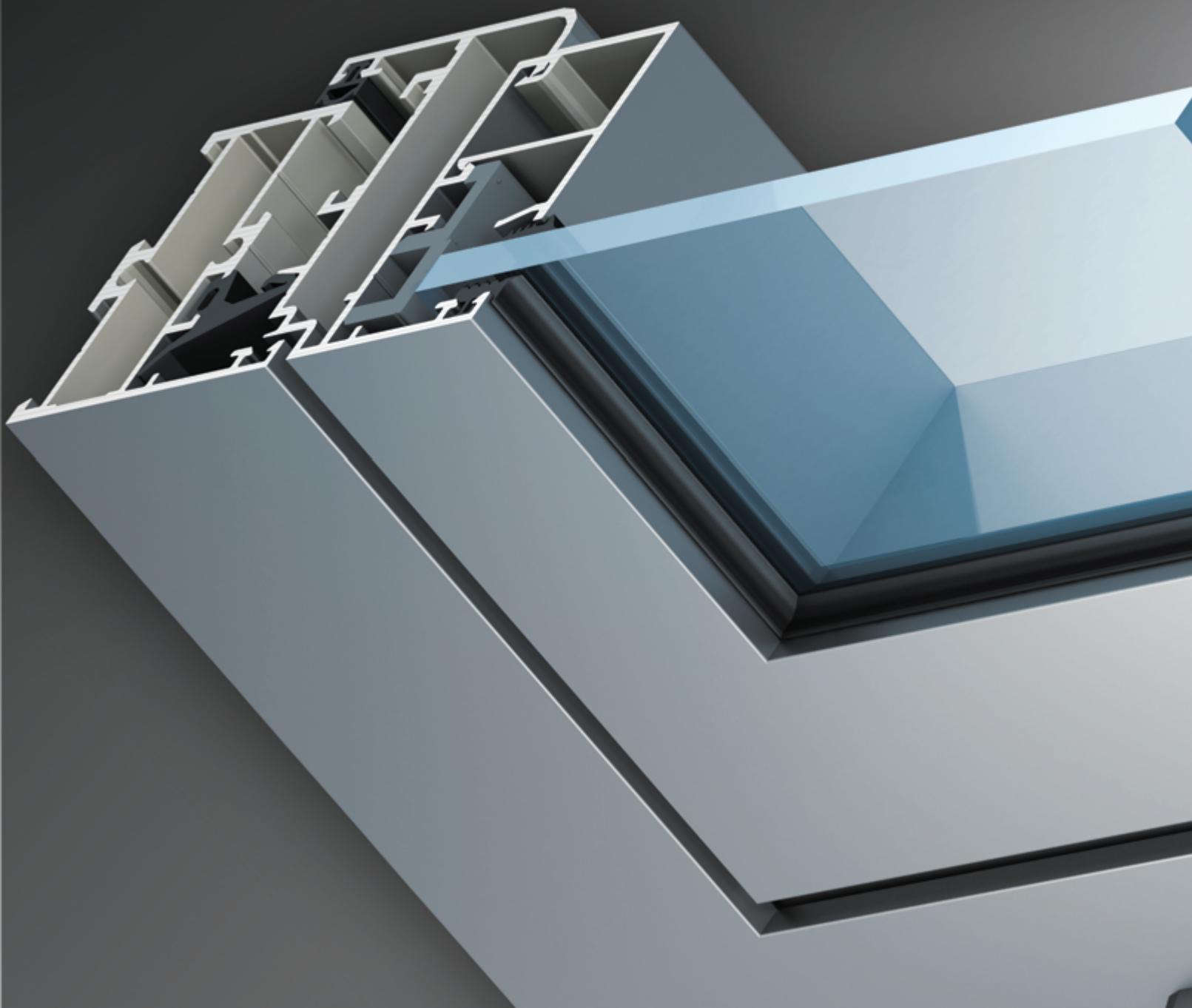
- wide ( $2\frac{3}{8}$ " [60 mm]) and narrow ( $1\frac{5}{8}$ " [40 mm]) frame
- $1\frac{1}{2}$ " (38 mm) cost effective type of extrusion for sliding panels is available
- availability of two ( $2\frac{3}{8}$ " [60 mm] wide) and three ( $3\frac{9}{16}$ " [90 mm] wide) tracks frame extrusions
- three standard colors: RAL9016 (white), RAL9017 (brown), A00-D6 (silver)

## Sash parameters selection diagram depending on Wh



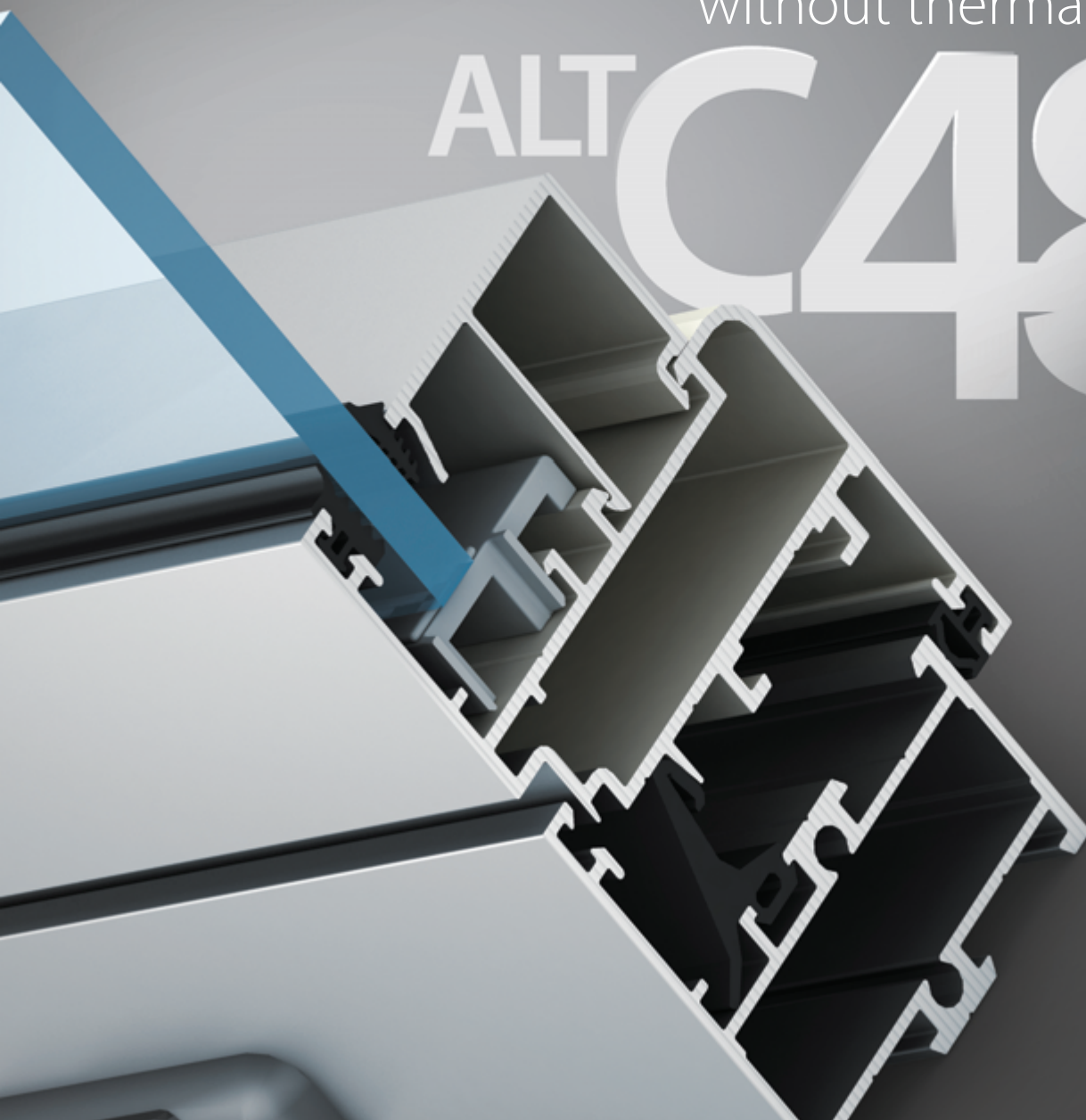
## Advantages

- Dovetail shape of sash allows easy adjustments and provides quick installation of the striker under the lock catch without milling
- Offers installation of horizontal dividers for sliding sash
- Low low threshold available



Window and door system  
without thermal break

# ALT C48



ALT C48 system is suitable for manufacturing of interior and exterior translucent units: doors, windows, entrances, partitions and lobbies.

1  $\frac{7}{8}$ " (48 mm) frame depth is ideal for installation «euro groove» compatible hardware which gives a wide choice of operation types. Additional moldings are available to upgrade an entrance unit to automatic sliding or swing door in both single and double options. Can be combined with compact door hinges. Glazing options up to 1  $\frac{3}{16}$ " (30 mm).



Window and door system  
without thermal break

ALC48

IT INW



# ALT C48 Window and door system without thermal break



## Product information

Minimum visible frame width	1 7/8" (48 mm)
Minimum visible sash width	2 5/8" (66,5 mm)
Frame depth	1 7/8" (48 mm)
Glazing thickness	up to 1 3/16" (30 mm)
Glass fixing option	glass bead profiles
Sound transmission reduction	up to 33dBA

## System components and coating options

- **Aluminum moldings**  
EN AW 6063 T6 AlMgSi F20
- **Gaskets**  
EPDM DIN 7863
- **Window hardware**  
Euro groove type 1
- **Fixing elements**  
Aluminum, stainless steel and other corrosion resistant materials
- **Coating types**  
Qualicoat grade powder coating, over 200 RAL colors. Qualanod grade anodizing, 9 colors

# ALT C48 Features

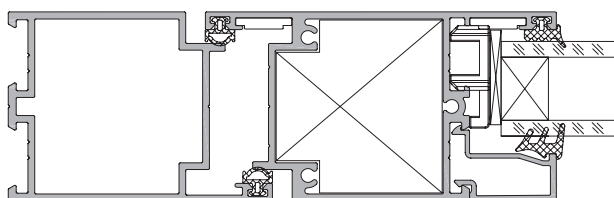
## ALT C48 Window and door system without thermal break allows

- manufacturing of various fenestration units;
- implement contemporary design for entrance groups, portals, shop windows and partitions.

Profile series are of high functionality and have a good performance when it comes to machining and assembly.



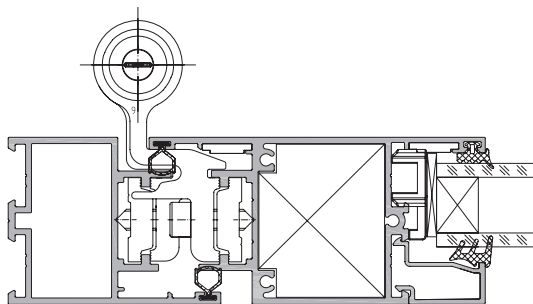
### Single and double doors with face-mounted hinges



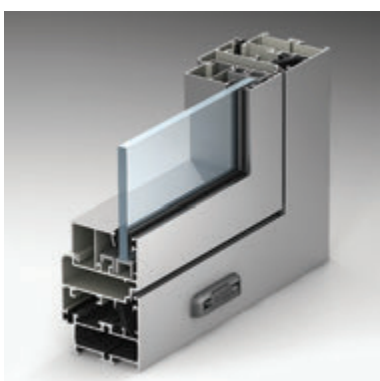
ALT C48



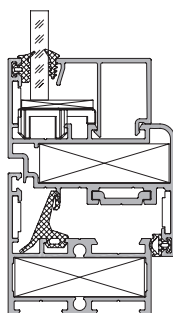
### Single and double doors with compact hinges



ALT C48



### Hopper, tilt and turn, casement windows

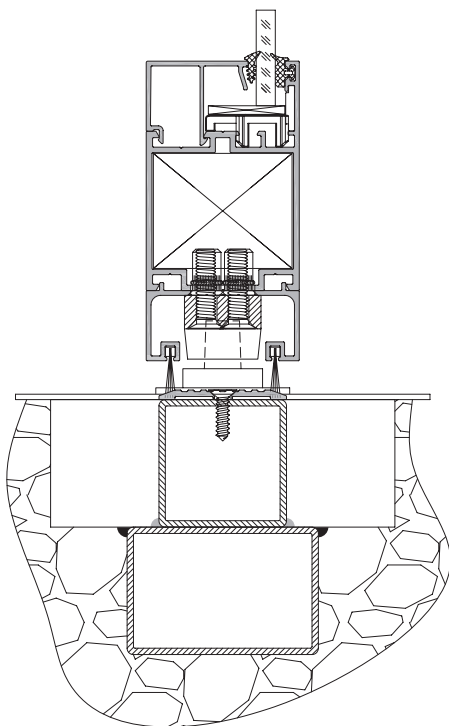
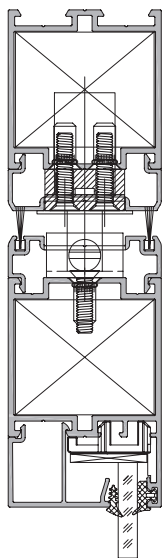


ALT C48

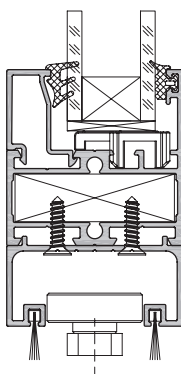
# ALT C48 Features

Swing in and out single and double doors with closers

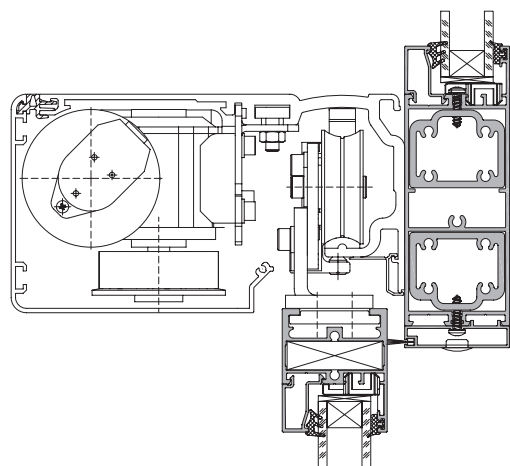
Sliding single and double automatic doors



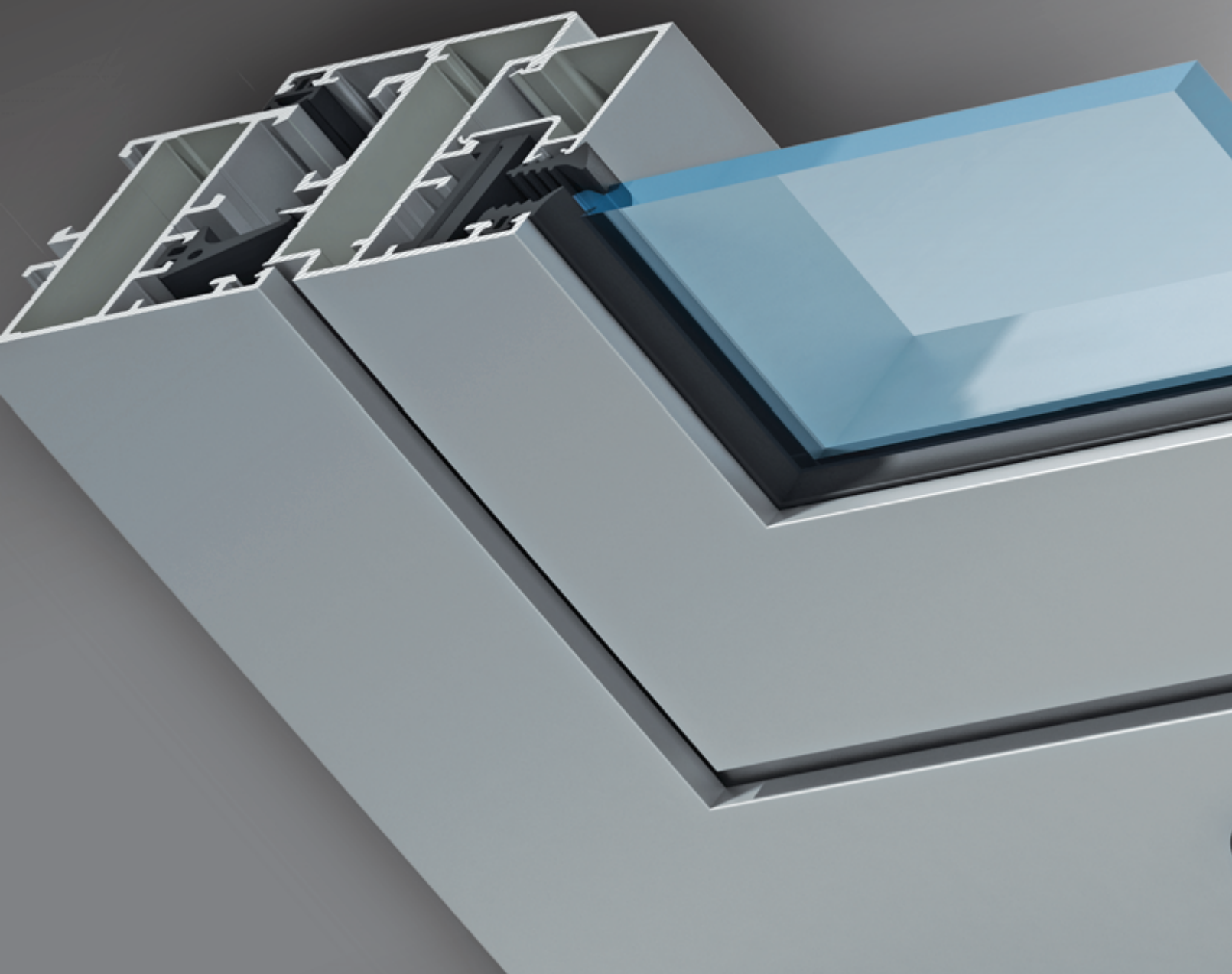
ALT C48



ALT C48

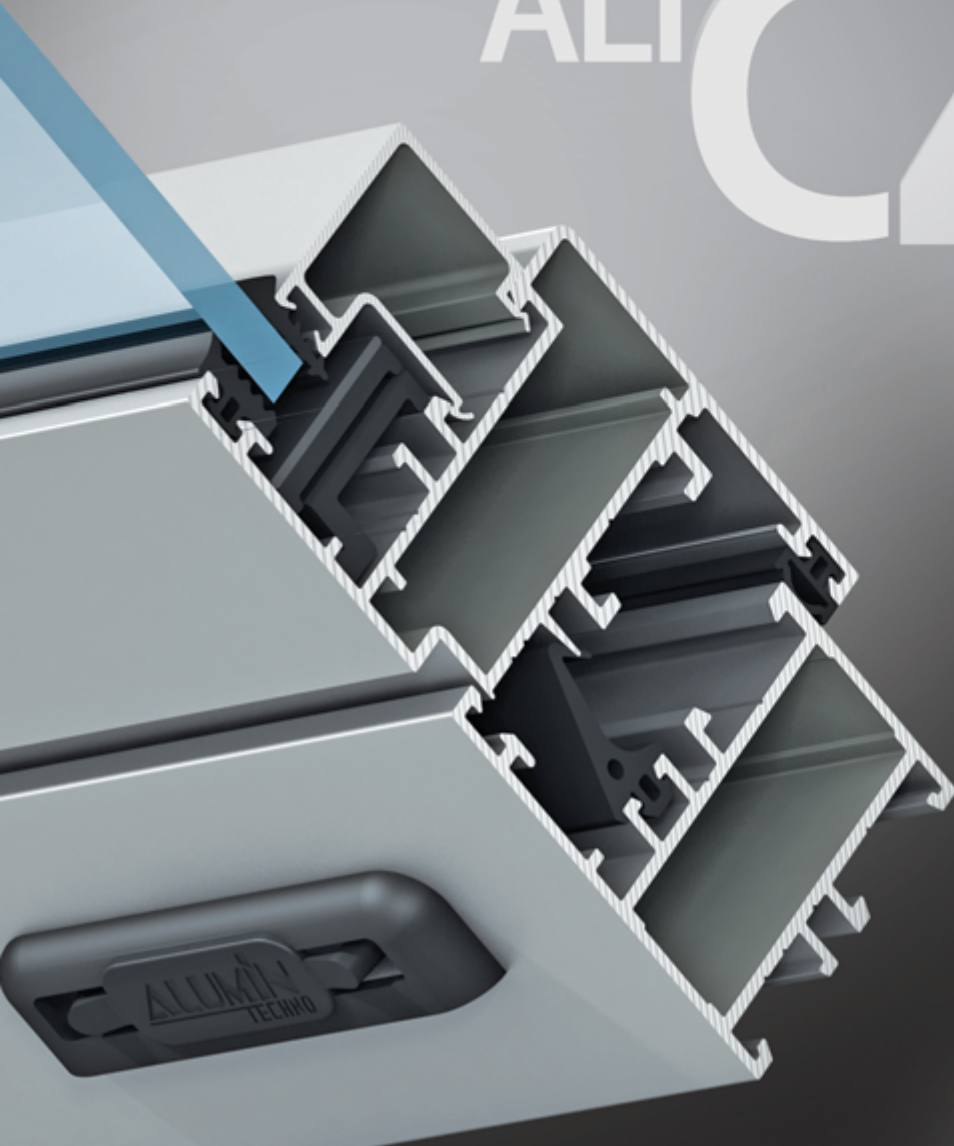


ALT C48



Window and door system  
without thermal break

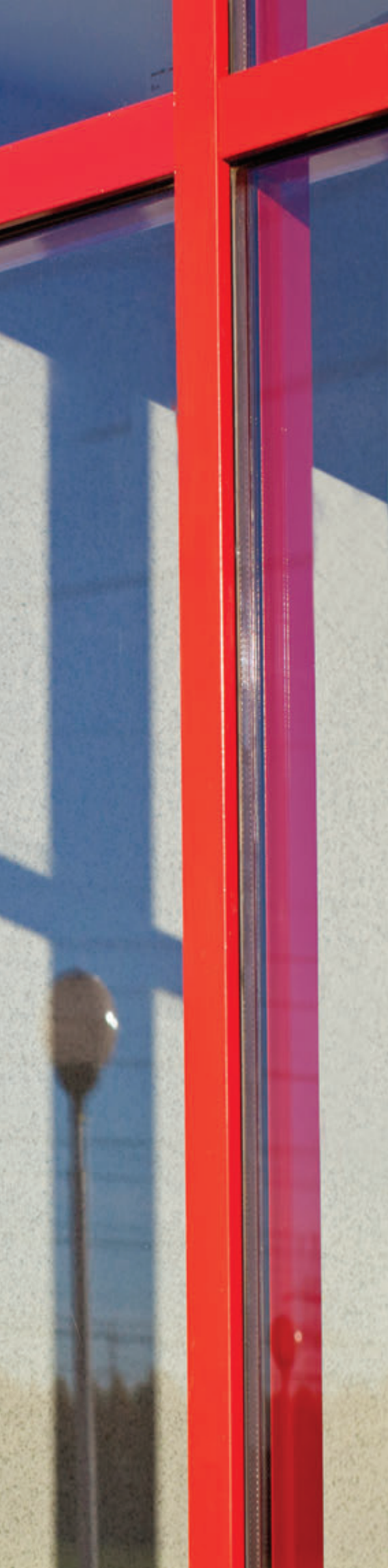
# ALT C43



ALT C43 system is designed for fabrication of interior and exterior windows, doors, translucent units and privacy partitions for projects with no requirements for thermal performance:

- doors with face-mounted hinges;
- different types of windows with Euro groove;
- translucent units and privacy partitions.





# ALT C43 Window and door system without thermal break



## Product information

Minimum visible frame width	1 3/4" (45 mm)
Minimum visible sash width	2 1/2" (63,5 mm)
Frame depth	1 5/8" (43 mm)
Glazing thickness	up to 1" (24 mm)
Glass fixing option	glass bead profiles
Sound transmission reduction	up to 33 dBA

## System components and coating options

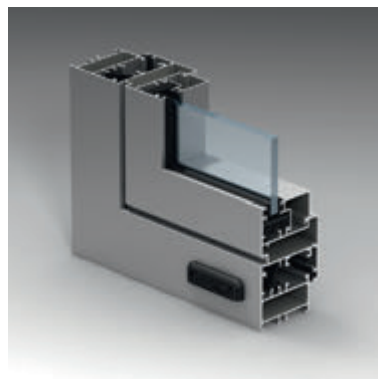
- **Aluminum moldings**  
EN AW 6063 T6 AlMgSi F20
- **Gaskets**  
EPDM DIN 7863
- **Window hardware**  
Euro groove type 1
- **Fixing elements**  
Aluminum, stainless steel and other corrosion resistant materials
- **Coating types**  
Qualicoat grade powder coating, over 200 RAL colors. Qualanod grade anodizing, 9 colors

# ALT C43 Optional features

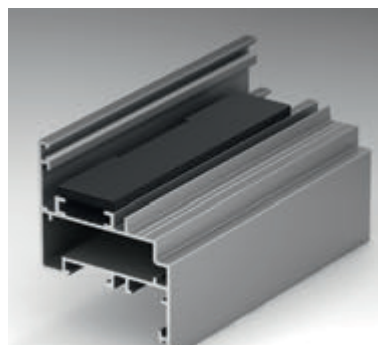


## Available fenestration types

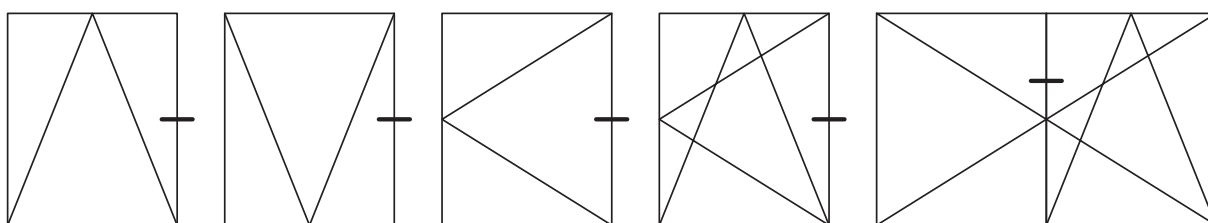
- fixed
- single
- double
- double with transom
- window wall



Great water and air proofing



Continuous glazing support



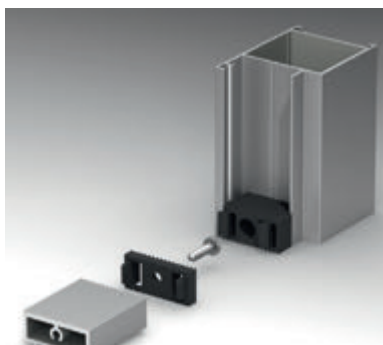
The system is designed for various door and window types including french doors. Euro groove allows installation of popular hardware

# ALT C43 Optional features



## Doors

- single;
- double;
- swing in and out;
- with and without threshold



Two options of threshold installation



Prevention of air infiltration through sash



## Translucent fenestration units and partitions

- translucent fenestration units with reinforced mullions for installation in openings;
- translucent glazing of balconies with sliding and casement sashes;
- partitions and entrances with integrated doors.

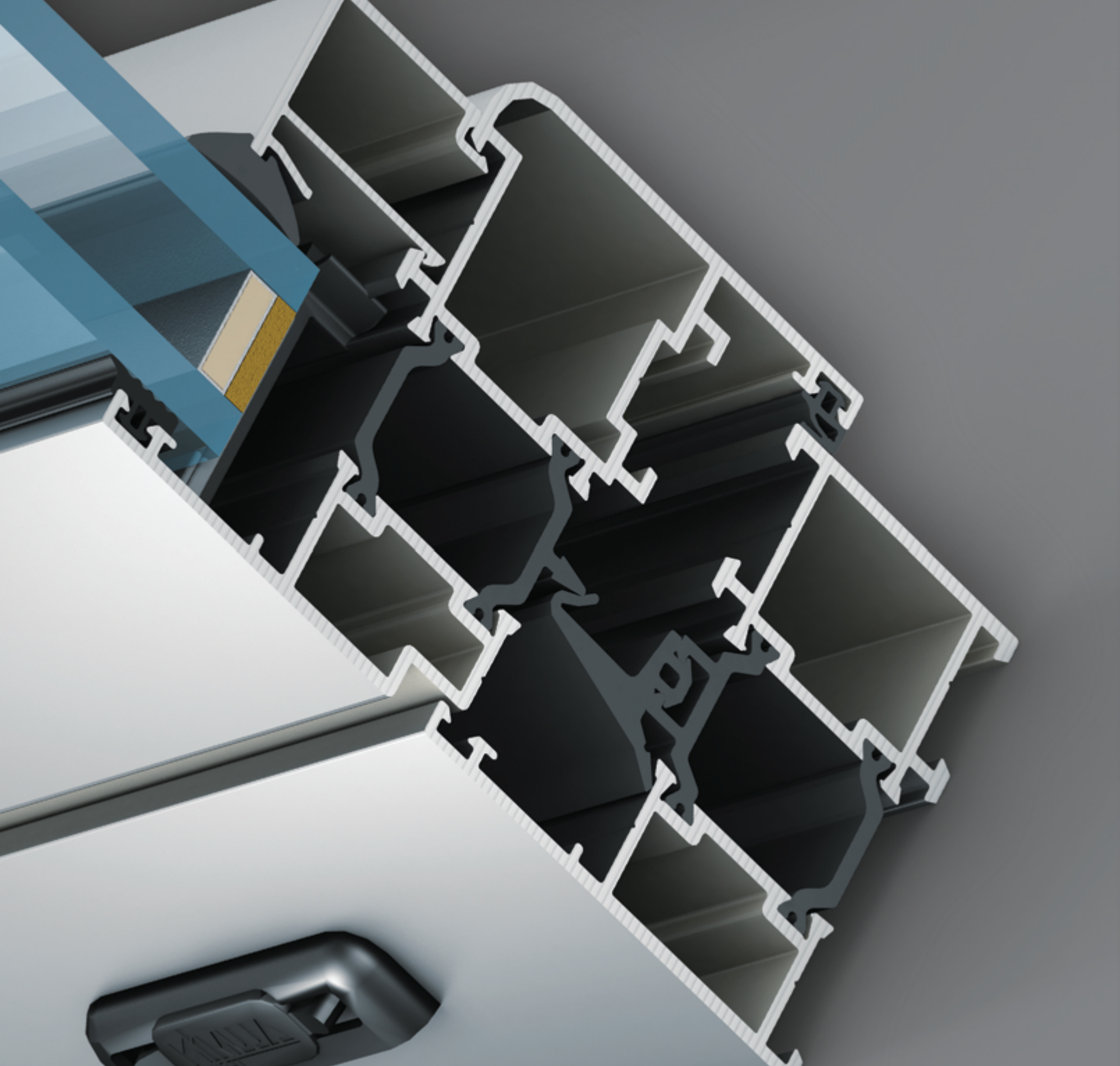


A 3D architectural rendering of a window system. The image shows multiple layers of glass panes held together by a dark, complex frame structure, illustrating a thermal break design. The perspective is from a low angle, looking up at the window assembly. The background is a dark, solid color.

ALT

Window and door system  
with thermal break

W62



ALT W62 is a multifunctional system for manufacturing windows and doors for commercial and residential buildings; translucent fenestration with numerous doors and windows at projects where facade system is inapplicable; doors and windows where other materials are inapplicable due to design or architectural requirements; different types of frame constructions with tough requirements for thermal and acoustical performance.

Depth of ALT W62 series is  $2\frac{3}{8}$ " (62 mm) with 1" (24 mm) wide thermal break. Installation of glazing up to  $1\frac{5}{8}$ " (40 mm) allows to achieve great thermal and acoustic performance.



# ALT W62

Window and door system  
with thermal break



# ALT W62 Window and door system with thermal break



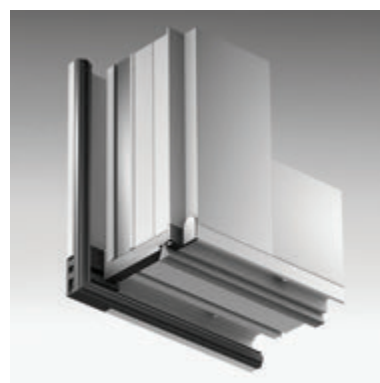
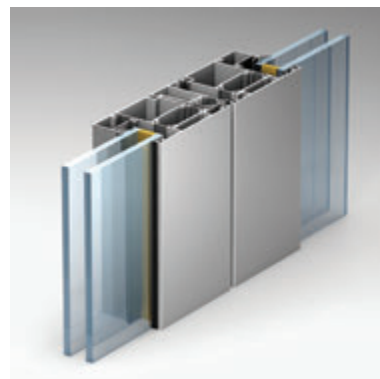
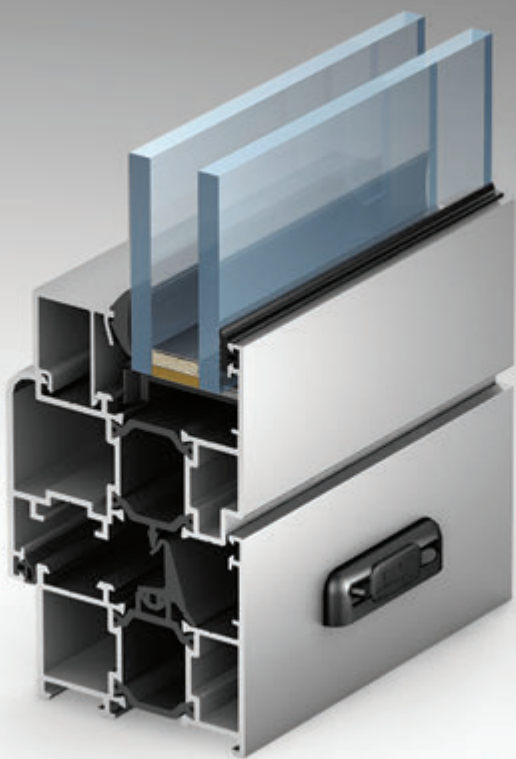
## Performance (tested according to AAMA standards) — class AW-PG40

Sound transmission of 1" IG	STC 34, OITC 29
Thermal insulation	Uf = 2,2 – 2,4 W/m²K
Wind load	Class A
Forced entry resistance	ASTM F588-07 - grade 10 pass
Water penetration resistance	12,0 psf
Air infiltration	0,1 L/s/m² — prior to cycling 0,2 L/s/m² — after cycling

## System components and coating options

- **Aluminum moldings**  
EN AW 6063 condition of the material T6 AlMgSi F20
- **Gaskets**  
Synthetic caoutchouc EPDM according to DIN 7863 standards
- **Window hardware**  
Euro groove type 1
- **Fixing elements**  
Aluminum, stainless steel and other materials resistant to corrosion
- **Coating types**  
Qualicoat grade powder coating, over 200 RAL colors. Qualanod grade anodizing, 9 colors

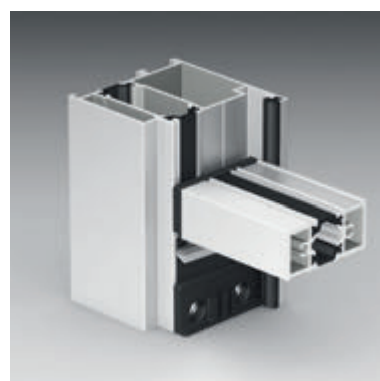
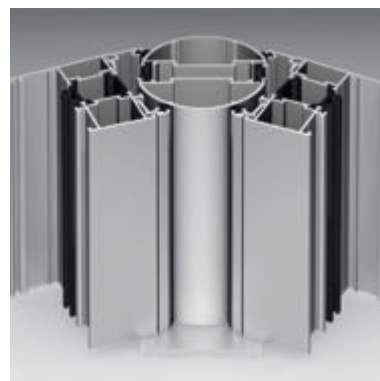
## Different assembly solutions for ALT W62 system



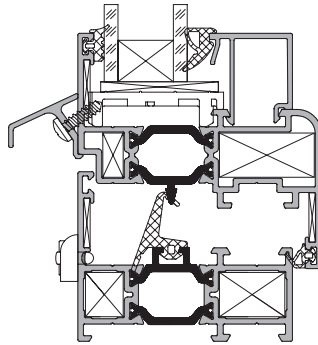
The system consists of aluminum profiles connected together with composite profiles. Series of advanced engineering solutions ensure great structural performance of the product and stability of structures it is used for.



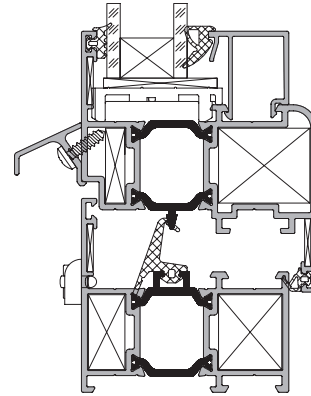
Great thermal performance makes this product suitable for most projects.



**Visible profile width may vary from  
1  $\frac{7}{8}$ " (49 mm) to 4  $\frac{5}{8}$ " (118 mm)**



ALT W62

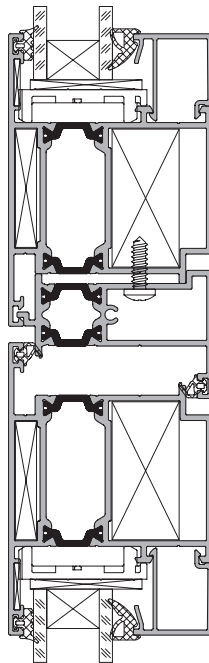


ALT W62

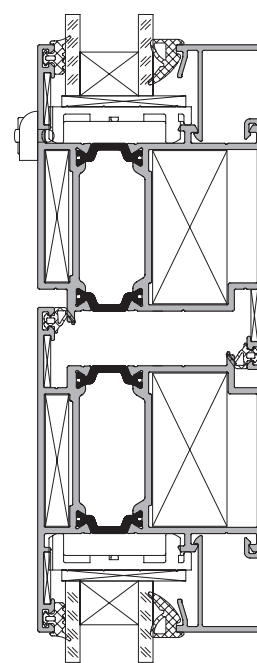
Both swing out and swing in doors are available as a separate entrance unit or for further integration in curtain wall.

**Durable, reliable and maintenance-free products:**

- Progressive technology combines polyamide and aluminum profiles without impairing geometrical shape of final products;
- Proved and dependable corner locks and T joints are designed to bear large and heavy infill units and work with various types of openings;
- Long life sealing materials provide high bonding strength in any weather conditions.

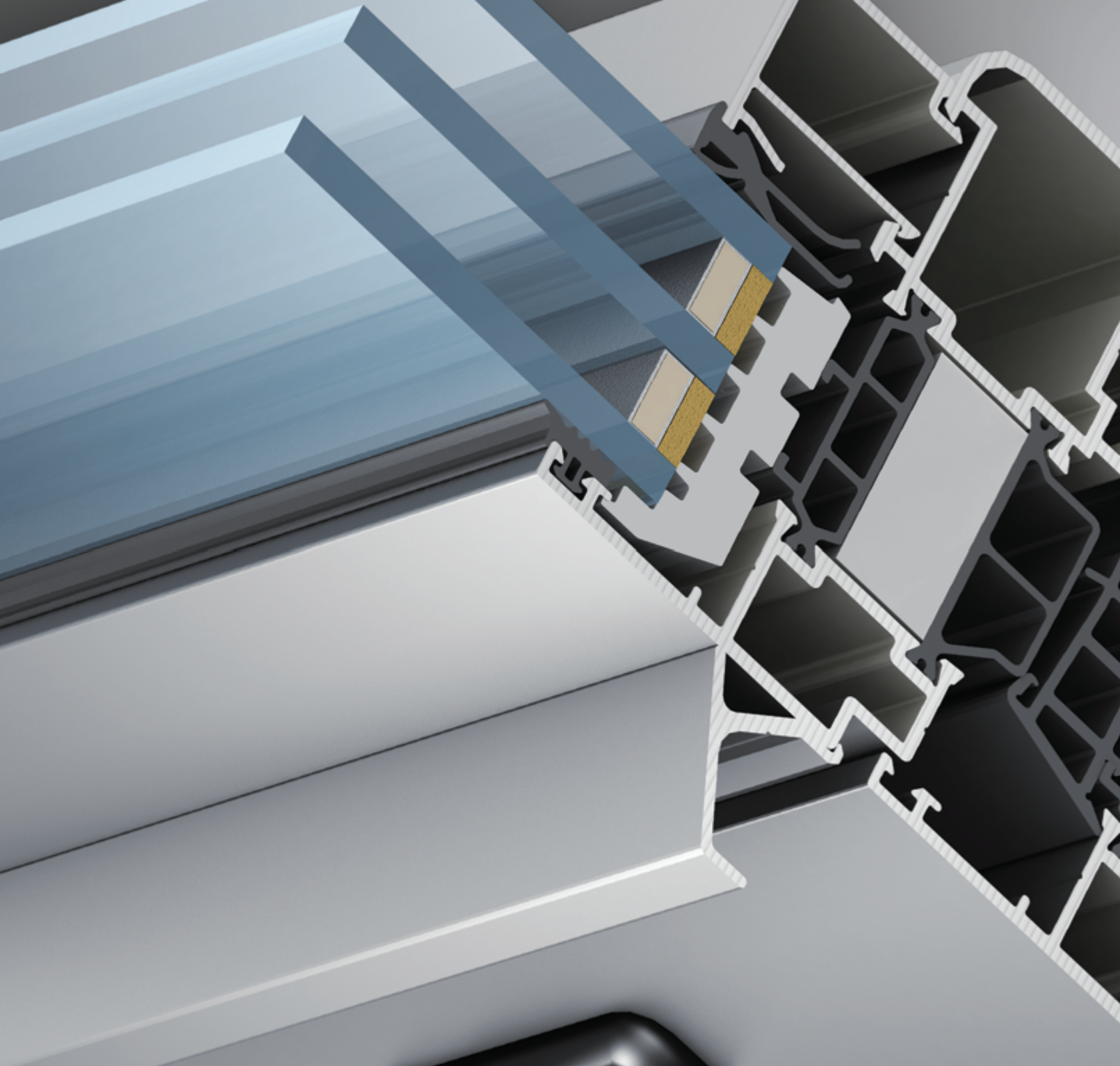


ALT W62



ALT W62

**ALT** Window and door system  
with thermal break  
**W62**





# ALT W72

Window and door system  
with thermal break

**ALT W72 is a multifunctional system  
designed for manufacturing of:**

- windows, entrance doors and different combined units for modern green buildings;
- different types of frame structures with strict requirements to thermal insulation and acoustic proofing.

The series has 2  $\frac{7}{8}$ " (72 mm) frame depth and multi sectional thermal break 1  $\frac{3}{8}$ " (34 mm) wide. Thermal performance and sound proofing were improved thanks to additional foam-based components.

Up to 2" (50 mm) glazing option is available to achieve the highest thermal and acoustic performance.

# ALT W72

window and door system  
with thermal break





# ALT W72 Window and door system with thermal break



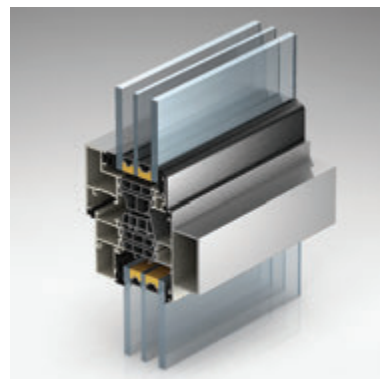
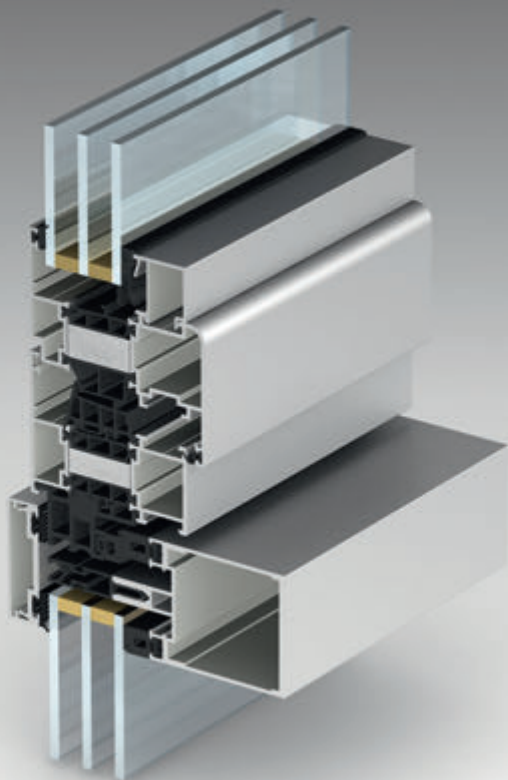
## Performance (tested acc. to EN 14351-1:2006+A1:2010) of a window with 1 5/8" triple GU

Acoustic proofing	35 (-2;-5) dB
Thermal transmittance	Uw = 1,05 W/m²K
Resistance to wind load	Class CE2400
Light transmittance	67,7%
Watertightness	Class E1050
Air permeability	Class 4

## System components and coating options

- **Aluminum moldings**
  - EN AW 6063 condition of the material T6 AlMgSi F20
- **Gaskets**
  - Synthetic caoutchouc EPDM according to DIN 7863 standards
- **Window fittings**
  - Euro groove type 1
- **Fixing elements**
  - Aluminum, stainless steel and other materials resistant to corrosion
- **Coating types**
  - Qualicoat grade powder coating, over 200 RAL colors. Qualanod grade anodizing, 9 colors

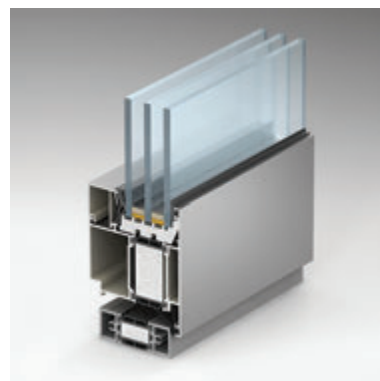
# Different assembly solutions for ALT W72 system



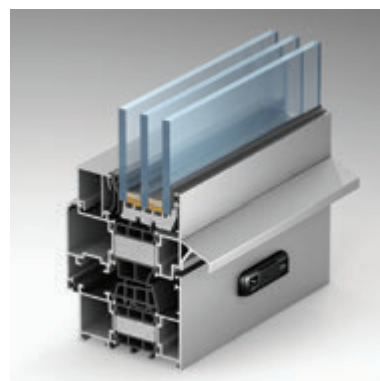
Different combinations of moldings, fittings and hardware make it possible to manufacture simple functional units as well as fully automated entrances and units with hidden hardware.

The system extrusions can be produced with different colors from inside and outside which gives a lot of free space for architectural and designer ideas.

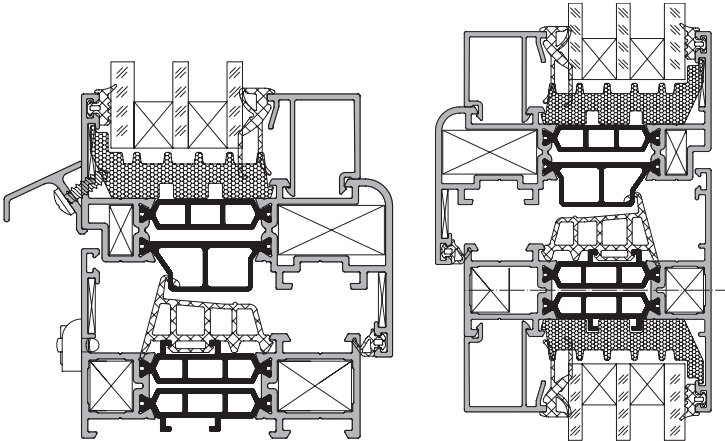
ALT W72 system is not only design improvement but truly brings fenestration solutions to a new level.



High thermal performance makes this product a must in green buildings.



**Visible profile width may range from  
1  $\frac{7}{8}$ " (49 mm) to 4  $\frac{5}{8}$ " (118 mm)**



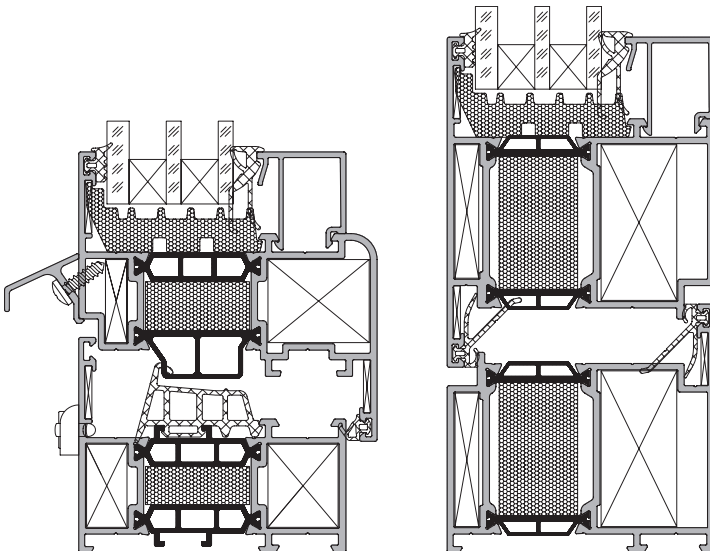
ALT W72

ALT W72

**Outstanding design of system components  
saves up to 15% of labor:**

- milling process is eliminated;
- no need for equipment adjustment;
- reasonable variety of component and accessories

**Impressive thermal performance deriving  
from know-how engineering solutions**

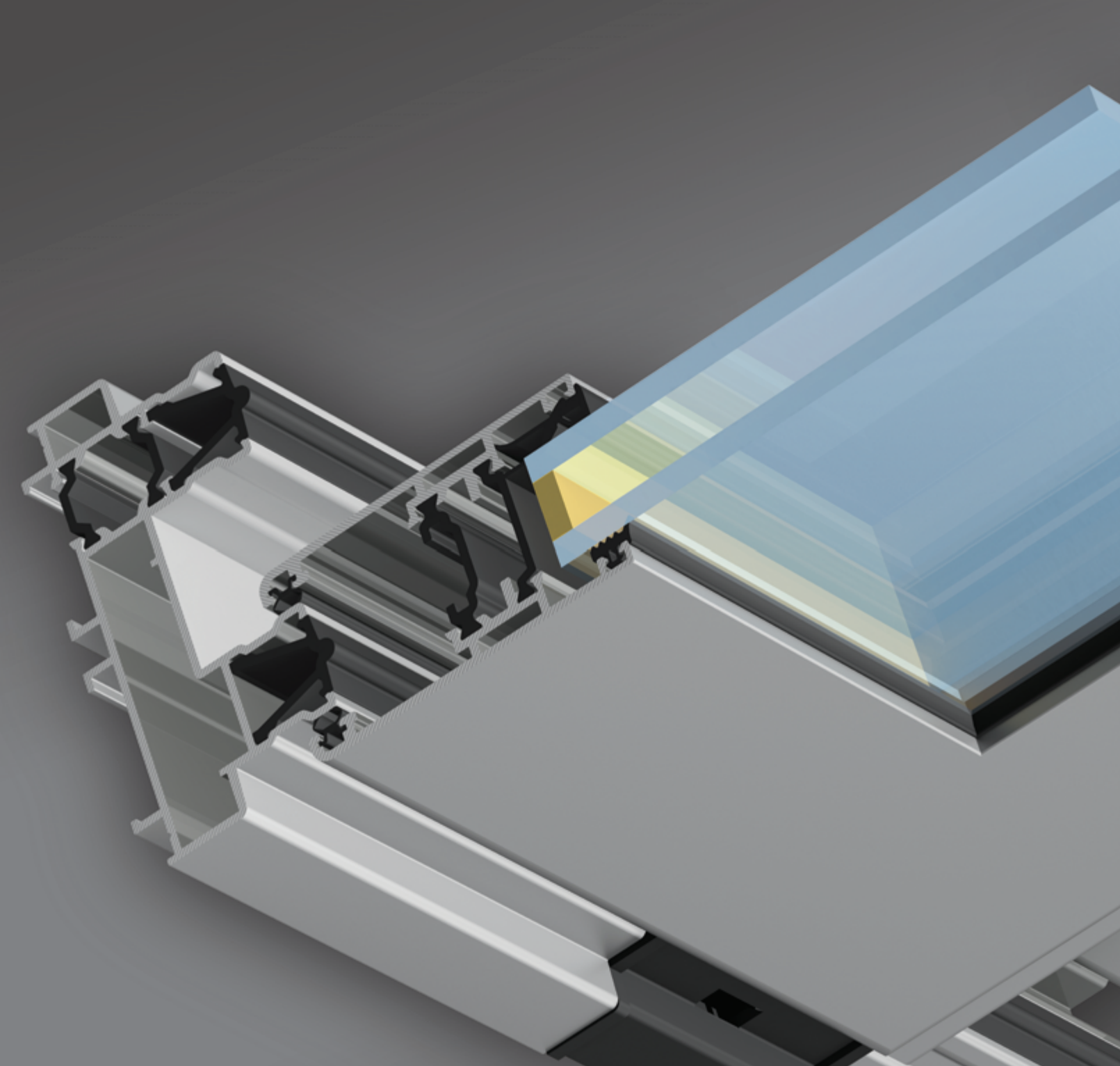


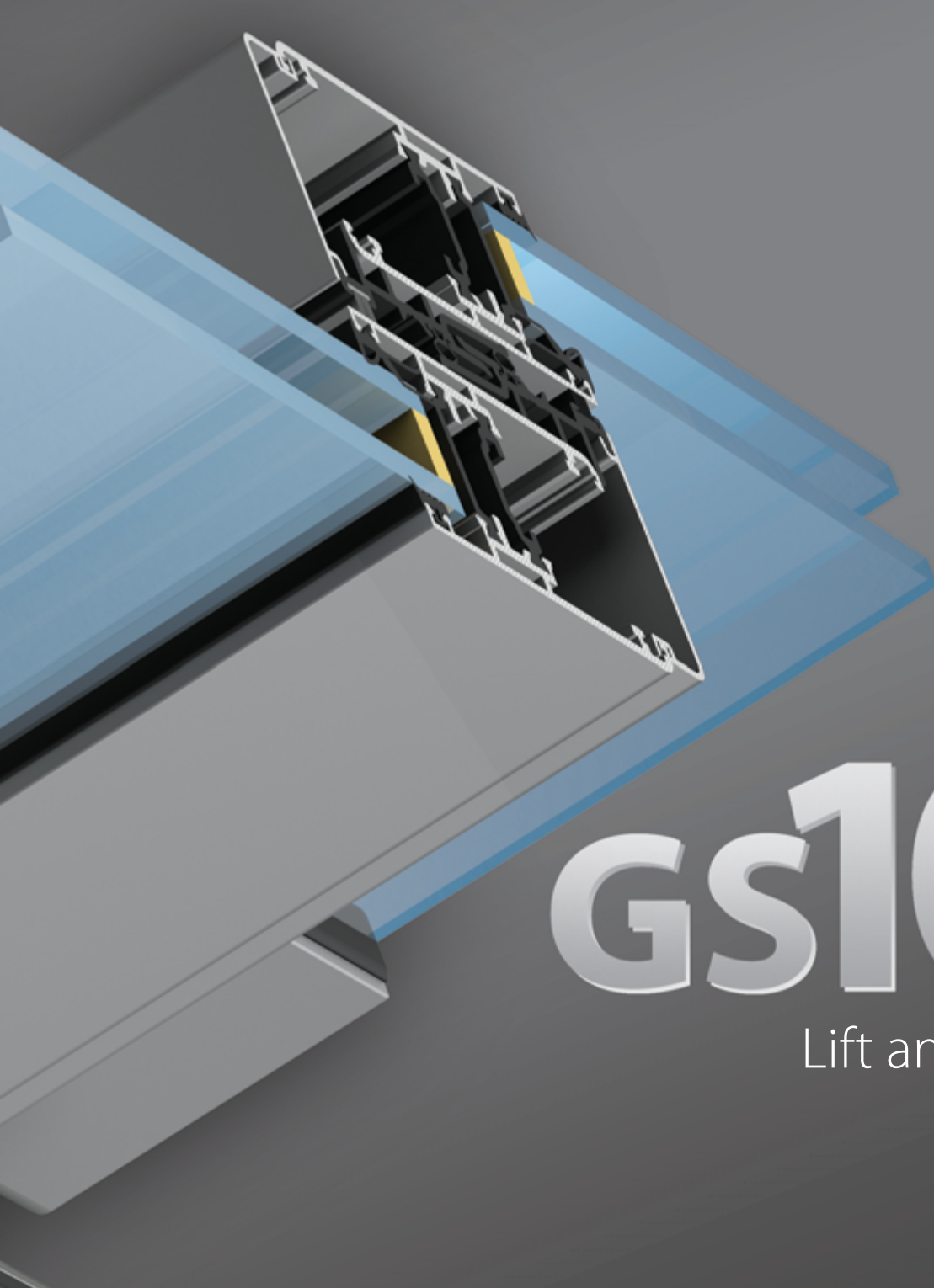
ALT W72

ALT W72

**ALT  
W72**

Window and door system  
with thermal break





# ALT GS106

## Lift and slide system

ALT GS106 is intended for sliding windows and doors with thermal break, creating two, three and even six sashes with combination of fixed and sliding part. The system provides architectures and designers with broad options of huge openings design.

Lift and slide doors with thermal break permit to replace fully walls, to have high rate of security, to rise up room illumination and to keep efficiently living space.

T-REX technology of window and doors manufacturing allows ALT GS106 to resist any poor weather conditions. ALT GS106 has the highest thermal characteristics, the most appropriate impermeability data and possible water drain.

## ALT GS106 Lift and slide system



# ALT GS106 Lift and slide system

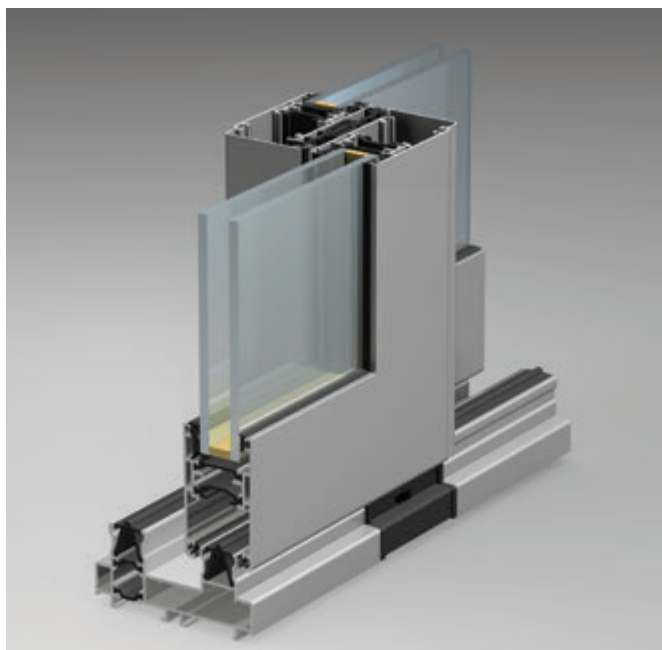


## Performance

Acoustic proofing	up to 40 dB
Thermal insulation	$U_f = 1,6 \text{ W/m}^2\text{K}$
Water penetration	more than 900 MPa
Safety (Antitamper mechanism)	BS EN 1627: 2011
Hardware is considered to weight	up to 200 kg

## Product information

Mounting width	$4 \frac{3}{16}''$ (106 mm)
Visible width	$4 \frac{3}{4}''$ (120 mm)
Max infill unit thickness	$1 \frac{3}{16}''$ (30 mm)
Max sash weight	200 kg
Fixation methods:	1) with glass bead 2) slotting into sash groove

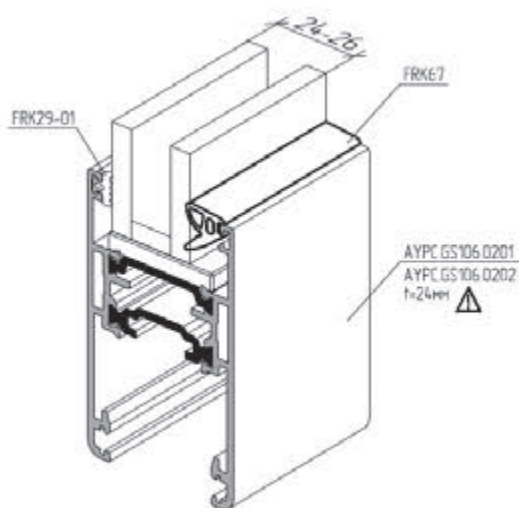


## System advantages and peculiarities

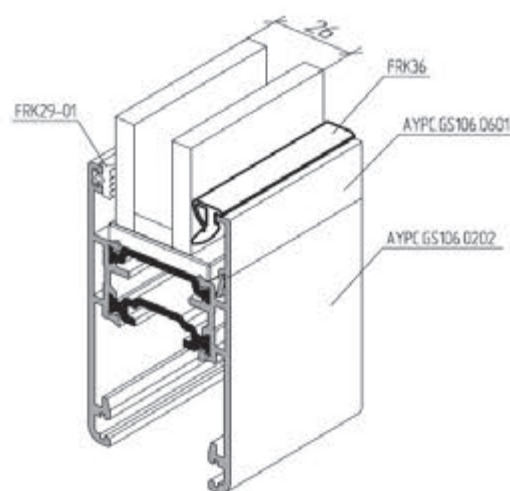
**Modern technologies and practical experience of our specialists permitted to create a new system of high technology level.**

ALT GS106 is used in hotels, restaurants as well as private houses and cottages. This system is applied with continuous glazing of balconies, loggias and attic floors.

- 2 types of sash permits to assemble an elegant door without excess lines or a classic door with simple mounting technology

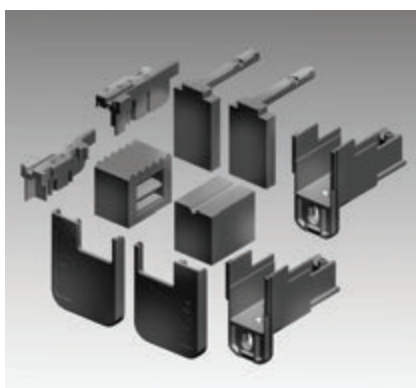
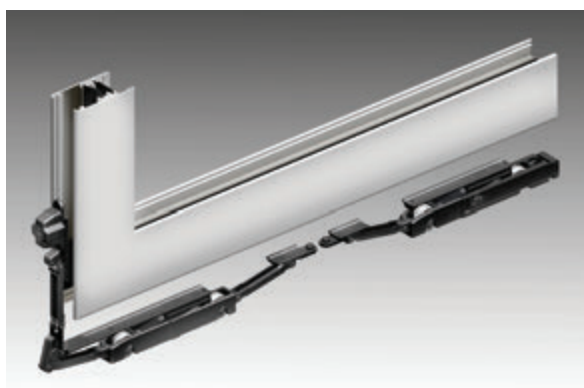


Without glass bead

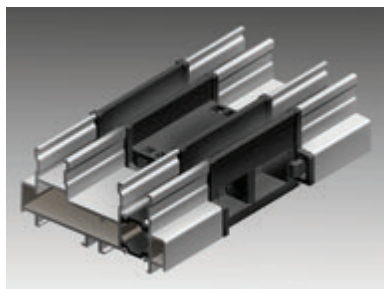


With glass bead

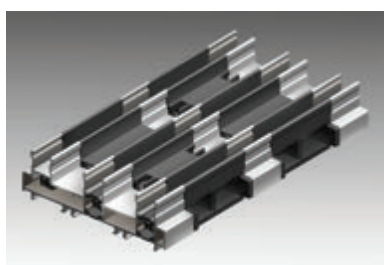
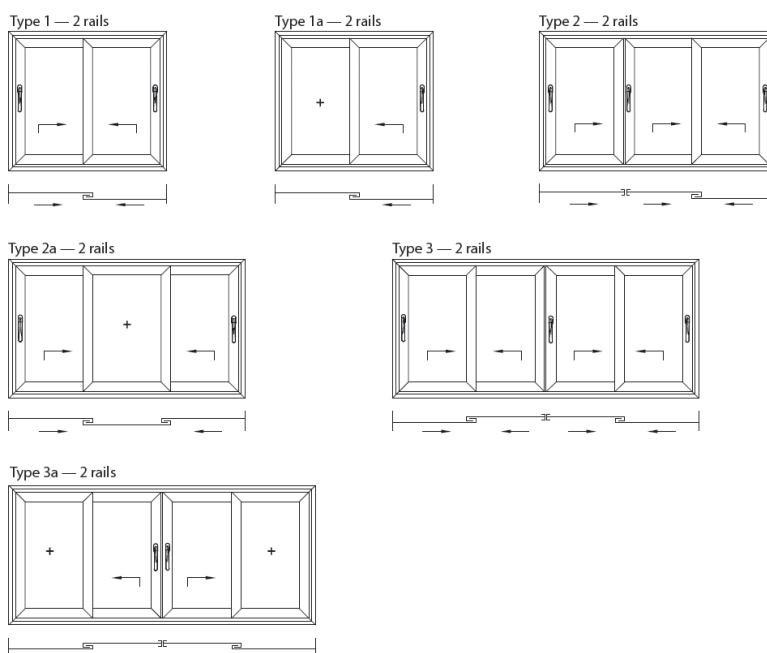
- ALT GS106 system is supplied with the full kit of GIESSE hardware



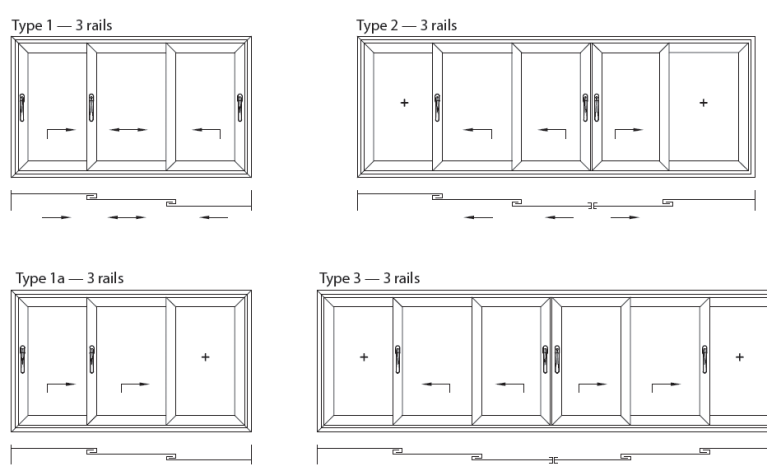
## ■ Various door types according to function and configuration



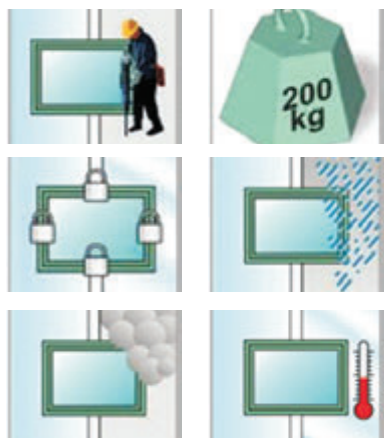
Door types with two-rail frame



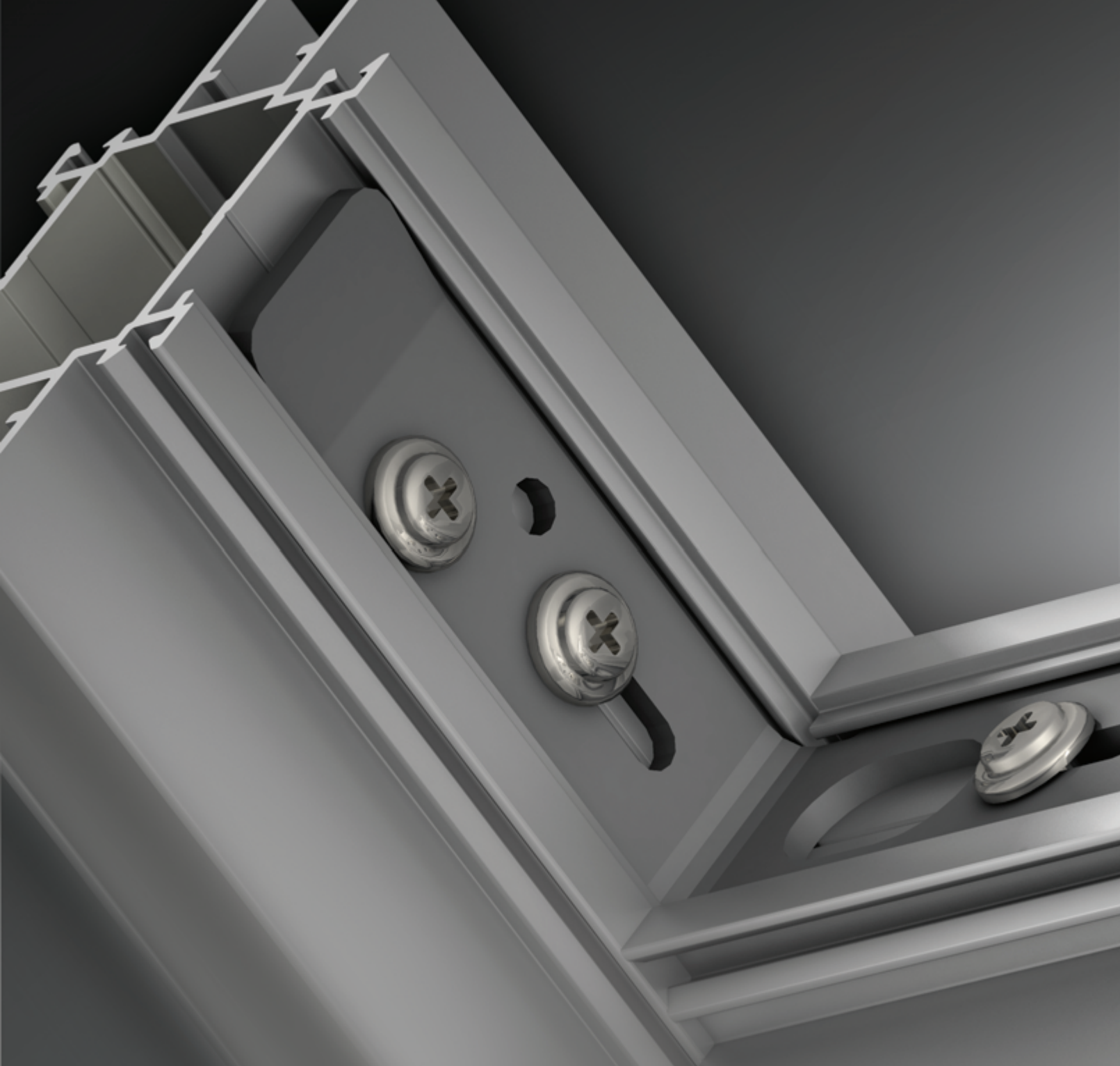
Door types with three-rail frame



## Key features of ALT GS106 sliders



- durability
- long-term service;
- high resistance to corrosion, deformation and other harmful effect to environment;
- tolerance to acid, oils, gas, ultraviolet emission;
- ecological safety;
- fire resistance;
- performance of all RAL colors as well as all color combinations.



Office partition  
system

ALT

110



ALT110 - is an office partition system, designed to organize working space and create various functional facilities providing comfortable working conditions.

The system allows to create fancy interiors in halls, meeting rooms, private offices and to divide shopping malls to separate shopping spaces. ALT110 has been developed for different architectural solutions.

# ALT110 Office partition system



## System components and coating options

- **Aluminum profiles**  
EN AW 6063 condition of the material T6 AlMgSi F20
- **Gaskets**  
Synthetic caoutchouc EPDM according to DIN 7863 standards
- **Connections**  
Corner connectors made of steel and aluminum alloy, self-drilling screws, plastic plates
- **Hardware**  
By European manufacturers Giesse, Fapim, Master, Monticelli, Stublina
- **Coating types**  
Qualicoat grade powder coating, over 200 RAL colors.  
Qualanod grade anodizing, 9 colors

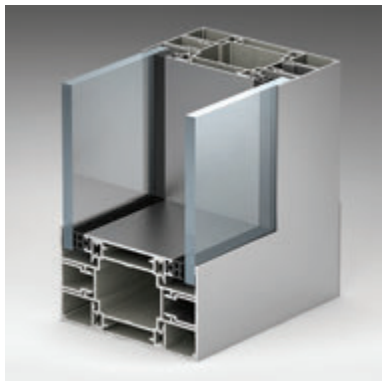
Office partition  
system  
**ALT110**

# ALT110 Office partition system overview



## Features

- Partition is assembled with steel corners using self-drilling screws, without preliminary drilling
- There is a possibility to install single and double translucent and privacy glazing as well as gypsum board, flake board, medium density fiber board (MDF), vinyl covered gypsum board and other materials from  $\frac{5}{32}$ " up to  $\frac{5}{8}$ " (4-16 mm) thick
- Sun blinds installation of various types from  $\frac{5}{8}$ " up to 1" (16-26 mm) thick is possible
- Turn profiles allow to design angles of the construction 90-270°
- Installation of single and double doors with single and double glazing is possible
- The system provides acoustic proof level up to 40dB

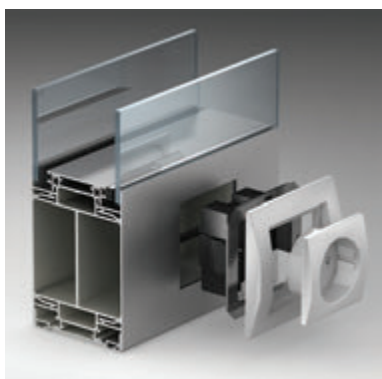
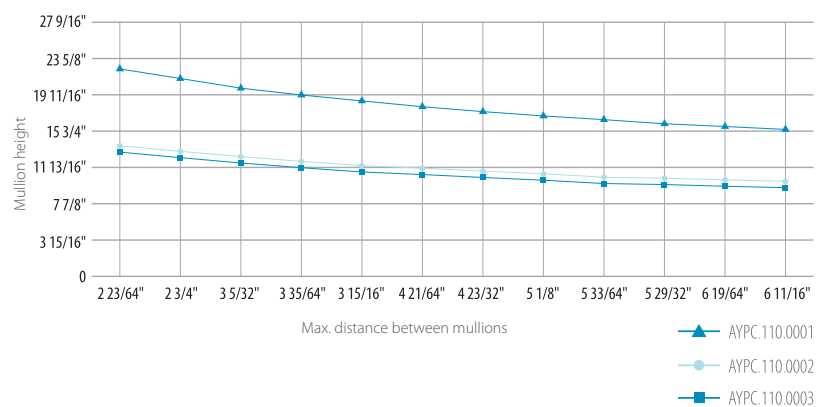


## Options

- The profile system can have a straight and a rounded variants of the clamps
- Cost-efficient mullion — visible width  $1\frac{3}{16}$ " (30 mm) (height of the partition — 8' 10" (2,7 m), mullions spaced 3' 11" (1,2 m) apart
- Main mullion — visible width  $1\frac{5}{8}$ " (40 mm) (height of the partition — 9' 4" (2,85 m), mullions spaced 3' 11" (1,2 m) apart)
- Reinforced mullion — visible width  $1\frac{5}{8}$ " (40 mm) (height of the partition — 14' 9" (4,5 m), mullions spaced 3' 11" (1,2 m) apart)
- 4 standard colors: RAL9006 (grey metallic), RAL9016 (white), RAL8017 (brown), A00-D6 (silver)

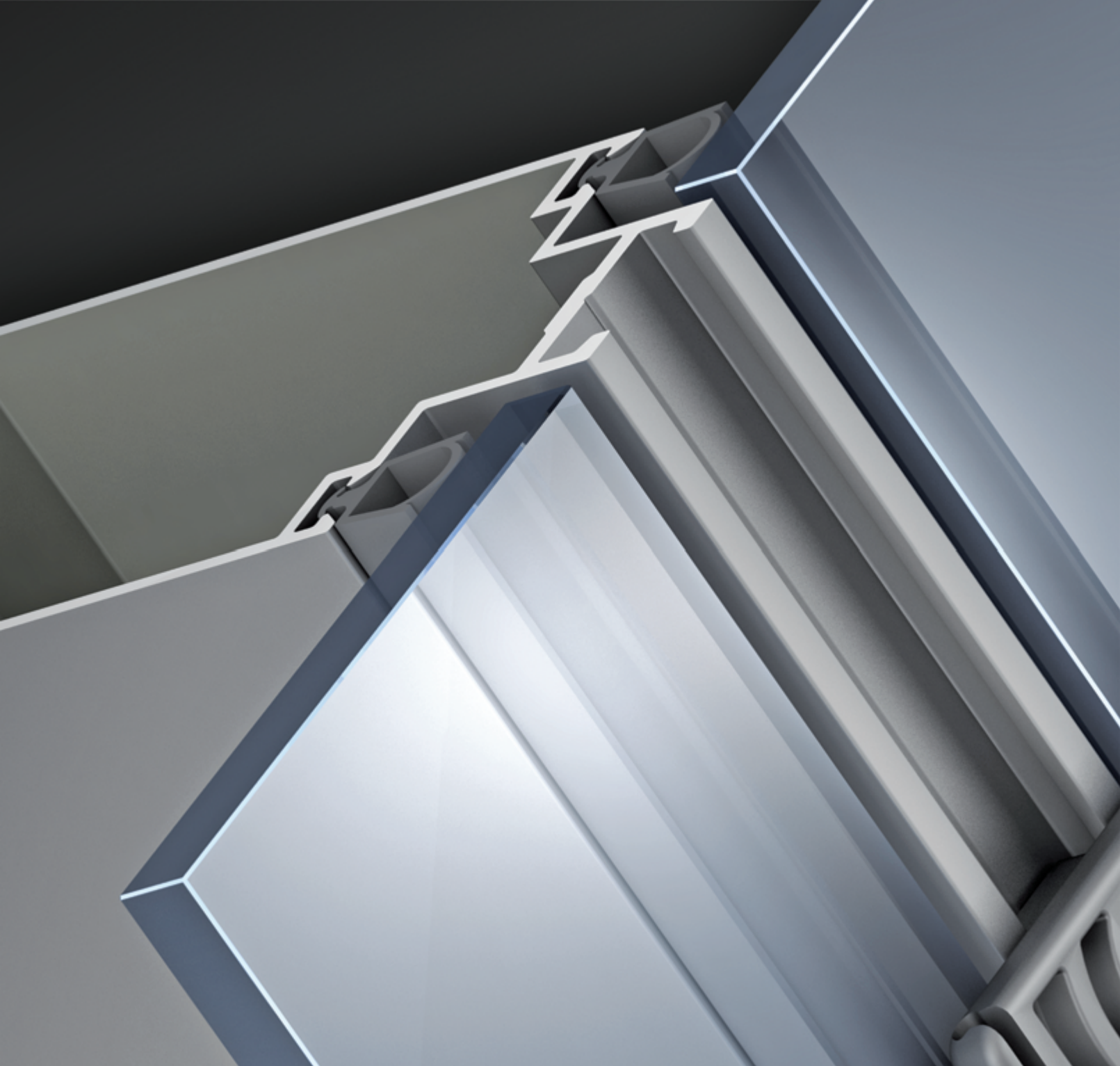


## Calculation chart for max. height



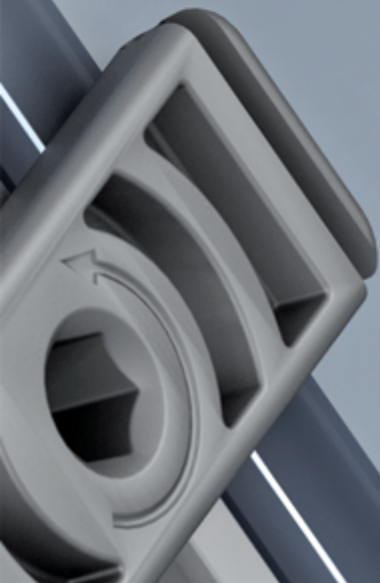
## Advantages

- Power supply, telephone and computer network cable inlay system
- It is possible to adjust mullions to the ceiling and the floor with inserts
- Leveling corner inserts for frames and door leaves
- End caps bring a fulfilled design to any project



# Interior partition system

# ALT 111



Interior partition system ALT111 is a perfect solution for arrangement of working space and it opens ample opportunities for interior design in premises of any purpose.

ALT111 system can be installed in shopping centers, banks, public facilities, industrial and administrative premises, fitness centers, educational and scientific institutions.

ALT111 partition system helps to create an inimitable style of a company and provides cozy and favorable working environment.

# ALT111 Interior partition system



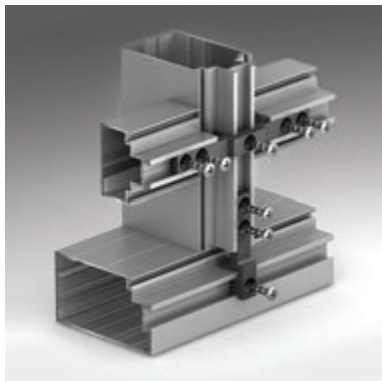
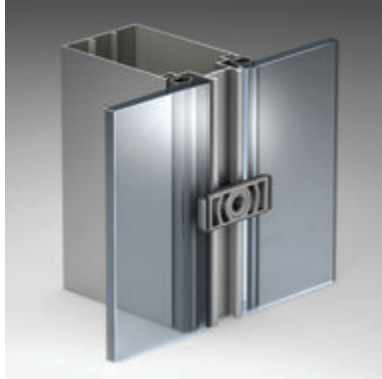
## System components and coating options

- **Aluminum moldings**  
EN AW 6063 condition of the material T6 AlMgSi F20
- **Gaskets**  
Made of thermoplastic elastomer, TPE
- **Connections**  
Corner connectors made of steel and aluminum alloy, self-drilling screws, plastic plates
- **Hardware**  
By European manufacturers Oxidal, Fapim, Master, Casma
- **Coating types**  
Qualicoat grade powder coating, over 200 RAL colors. Qualanod grade anodizing, 9 colors

Interior partition system

ALT  
111

# ALT111 Interior partition system overview



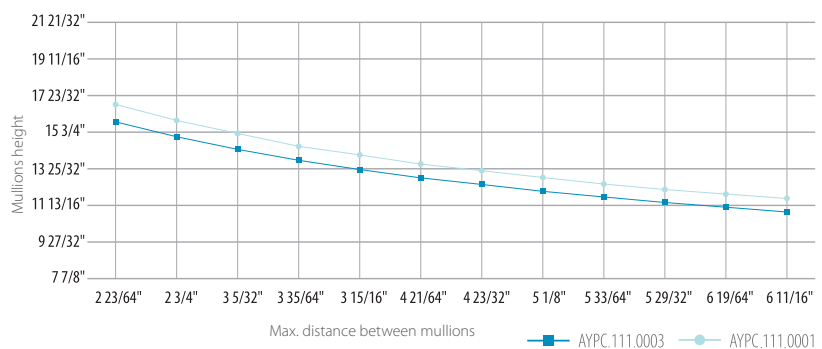
## Product information

- The infill unit is fixed with a plastic clamp providing a handy mounting and dismantling of the partitions. This innovative solution is protected by patent.
- Vertical to horizontal mullion connection is made with detachable brackets and self-drilling screws that completely eliminates mounting sequence
- Can be combined with gypsum board partitions
- Allows to install single and double translucent and privacy glazing as well as gypsum board, flake board, medium density fiber board (MDF), vinyl covered gypsum board and other materials from  $\frac{5}{32}$ " up to  $\frac{1}{2}$ " (4-12,5 mm) thick.
- Sun blinds installation of various types with from  $\frac{5}{8}$ " up to 1" (16-26 mm) thick is possible
- Pivoting profiles enable realization of turn angles of the partition in the range of 90-270°
- Installation of single and double doors with single and double glazing is possible
- The system provides acoustic proof level up to 40dB

## Options

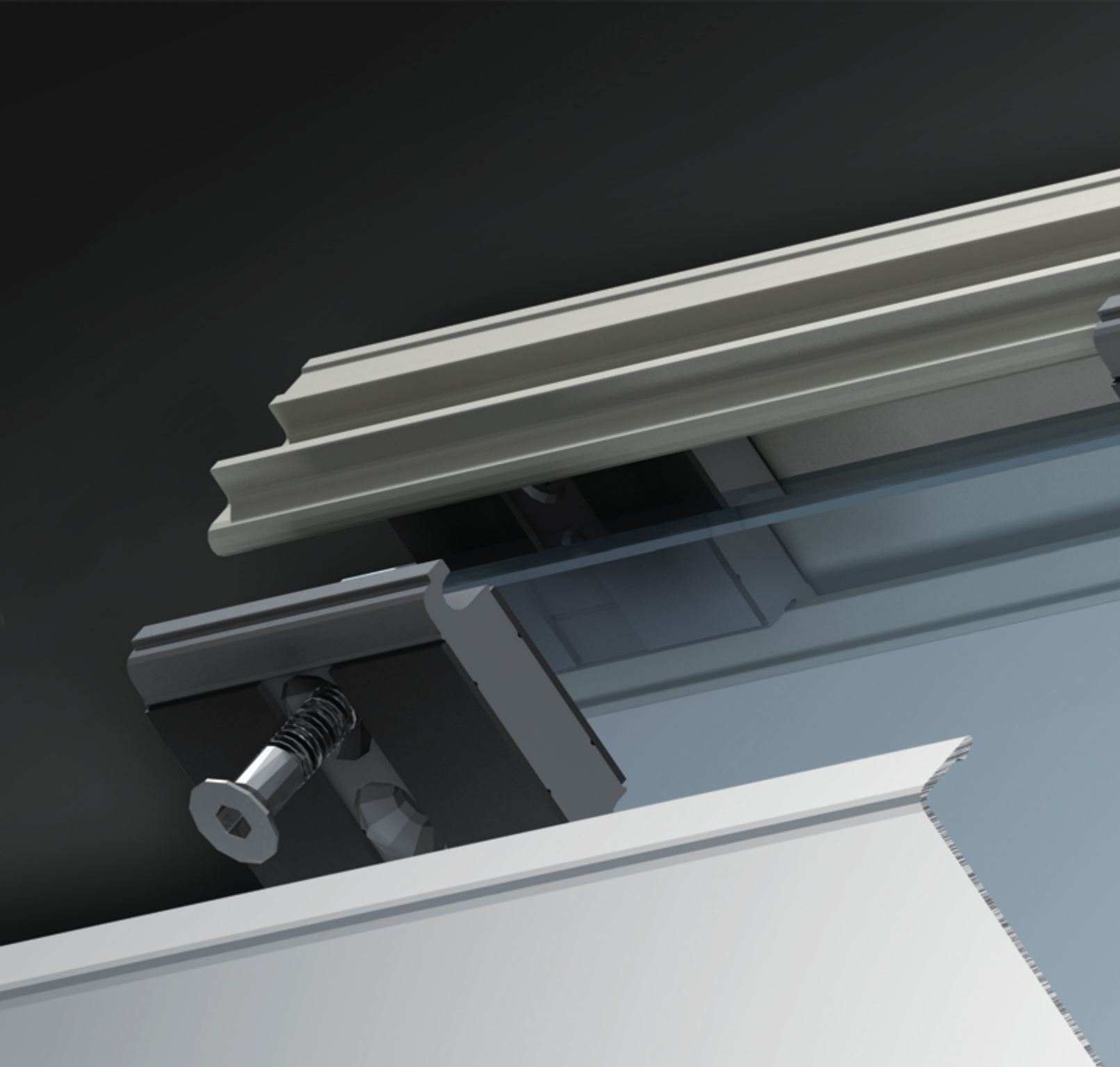
- Mullion visible width  $1 \frac{1}{8}$ " (max. partition height – 11' 6" (3,5 m), mullions spaced 3' 11" (1,2 m) apart)
- Intermediate horizontal mullions available
- Two types of plastic clamps - symmetric and asymmetric
- 4 standard colors: RAL9006 (gray metallic), RAL9016 (white), RAL8017 (brown), A00-E6 (silver)

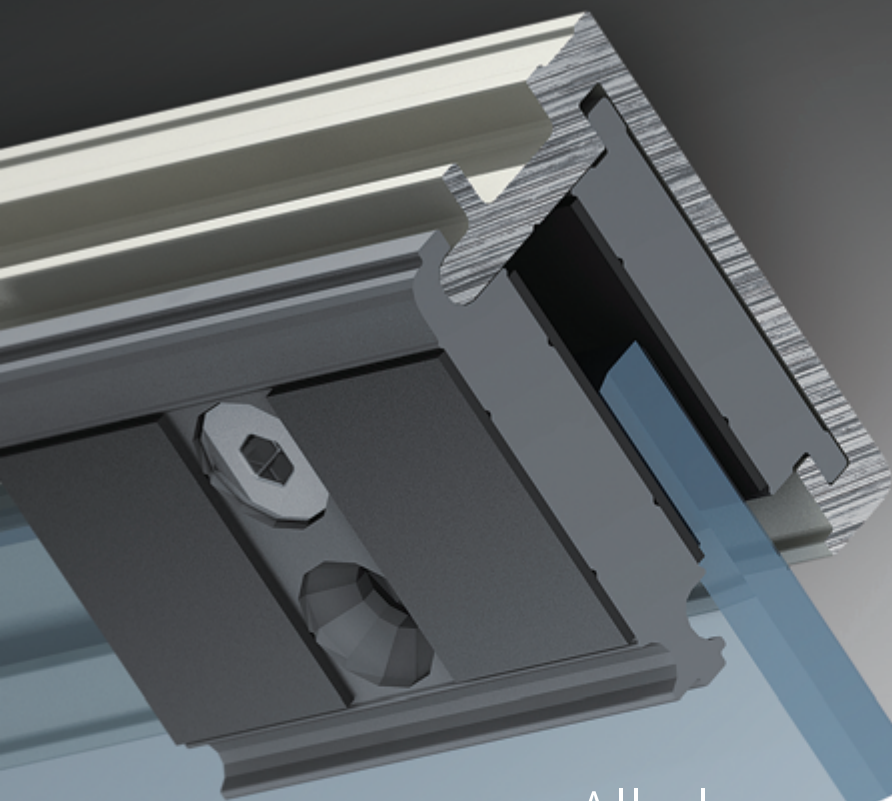
## Calculation chart for max. height



## Advantages

- Possibility of installation of glass and wood doors
- Simple and convenient way of aluminum doors assembly with double glazing
- Possibility of installation and dismantling of each glass unit separately
- Adjustable mounting elements for mullion fastening to floor and ceiling
- Availability of leveling corners for frames and door leaves
- Milling is required only for door locks installation





All glass  
partition  
system

# ALT115

The ALT115 is the system of special clamping profiles and brackets for tempered glass fixation to floor and ceiling. Currently, all glass look partitions is one of the latest trends in the office interior design. These partitions look stylish and light and help to bring daylight illumination, and visibly widen the space.

The ALT115 all glass look partitions is a universal system of glass fixation and considerably differs from analog systems at the market. Unique assembly solutions of ALT115 system are patented.

# ALT115 All glass partition system



## System components and coating options

### ■ Aluminum moldings

- EN AW 6063 condition of the material T6 AlMgSi F20

### ■ Connections

- Corner connectors made of steel and aluminum alloy, self-drilling screws, plastic plates

### ■ Hardware

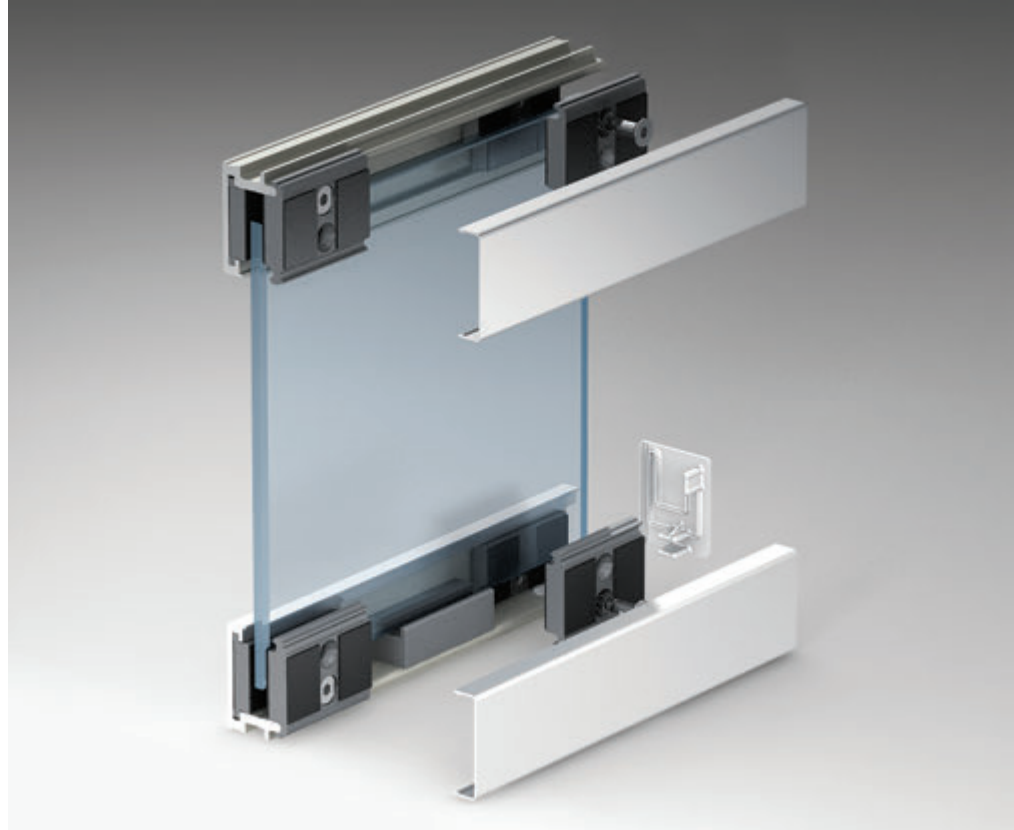
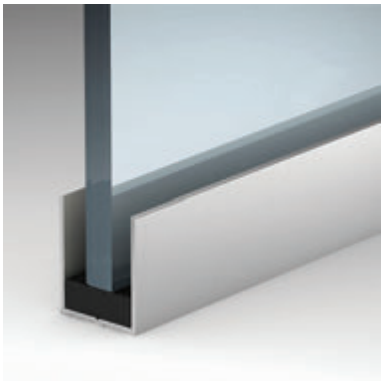
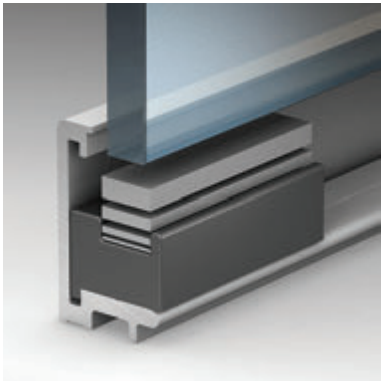
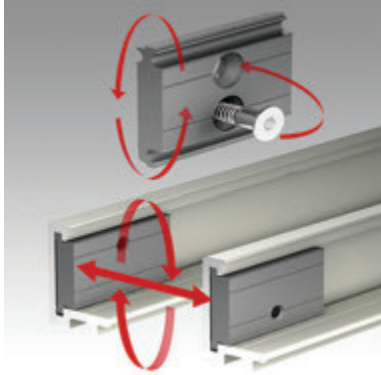
- By European manufacturers Dorma, Oxidal, Casma, GCC, GMT

### ■ Coating types

- Qualicoat grade powder coating, over 200 RAL colors. Qualanod grade anodizing, 9 colors

ALT115  
All glass partition system

# ALT115 All glass partition system overview



## Product information

- Free inserts positioning in grooves of rails allows to clamp glass in any point
- «Insert-rail» joint gives an opportunity to use minimum of «insert-clip» kits for glass fixation
- Inserts and clips are clamped to the glass along the whole surface of paronite interlayer providing lifting capacity of «insert-clip» kit of 80 lbs (40 kg)
- Symmetrically placed locking elements of the cover cap against the longitudinal axis ensure maximum mounting convenience

## Options

- 9 colors of anodizing (silver, various tints of bronze, gold, cognac and champagne) and three types of surface finish (natural anodizing, bead blasting treatment, brushing) of moldings allow to choose from 27 varieties of ALT 115 system coatings
- Basic and safe (through holes) options of glass fixation

## Advantages

- Inversive clips allow installation of  $\frac{5}{16}$ ",  $\frac{3}{8}$ ",  $\frac{1}{2}$ " (8, 10, 12 mm) glass depending on their position on the rail
- Inversive clips allow basic or safe (through holes) options of glass installation
- Protective filming of visible parts of moldings
- Availability of end caps and glass shims

# ALT118 Light partition system



ALT 118 system has been designed for fabrication of light weight partitions used for arrangement of changing rooms and restrooms in offices, shopping centers, educational institutions and other public facilities. It saves space considerably and is easy to assemble

The main system concept is functionality and contemporary design

The system includes five types of moldings for module cabins fabrication with hinged doors or without doors. Doors are made of the same filling material as the partition itself.

## System components and coating options

- **Aluminum extrusions**  
Made of alloy AlMg0,7Si 6063
- **Connections**  
Corner connectors made of steel and aluminum alloy, self-drilling screws, plastic plates
- **Hardware**  
By various manufacturers
- **Coating**  
Qualicoat grade powder coating, over 200 RAL colors. Qualanod grade anodizing, 9 colors

# ALT118 Light partition system



## Product information

- Visible width of the cap molding –  $\frac{3}{8}$ " (9,5 mm), that visually makes the partition lightweight and at the same time hides possible chips that appear on the filling during the fabrication process
- The cap molding is attached to the edge of the filling which assures that minimum fixing elements are visible
- A unique design of the top molding allows to hide fixing elements
- The corner moldings allow to make aesthetically looking returns
- Designed to accommodate cost a effective  $\frac{5}{8}$ " (16 mm) thick infill unit

## Optional features

- Plastic and metal hardware is available

## Advantages

- Stability and reliability of this system is maintained by reinforced top molding and possibility to fix the bottom of partition to the floor. As a result the system performance is pretty much the same as one of 1" thick partitions
- Appropriate height of the cap molding allows installation of different hardware – plastic and steel
- Cost effectiveness of the system is determined by optimization of its assembly solutions

# ALUTECH new solutions and latest developments





Every year AluminTechno is launching a number of brand new innovative solutions in order to improve systems performances, usability and design.

Today we are proud to present the ALT SF400 storefronts specially designed for US customers – a modern design system with perfect quality anodized profiles: very simple for installation, reliable and cost-effective at the same time. ALUTECH offers a new economy system with thermal break – ALT W50, fire-prevention systems for windows, doors and partitions – ALT FR76 and ALT W72 FR, as well as the system for conservatories ALT F50WG and bi-folding panoramic doors ALT W72 FD.

We have also completed our existing systems by a few solutions – it concerns the ALT 150 cladding system, curtain walls and balcony glazing systems, new outside opening vents within the ALT W62 and W72 systems, improvements for ALT 110 and ALT 111 interior partition walls.

Alutech is permanently designing new solutions and improving existing systems to offer the marketable and high quality products to the clients.

# ALT SP50 Sun protection system

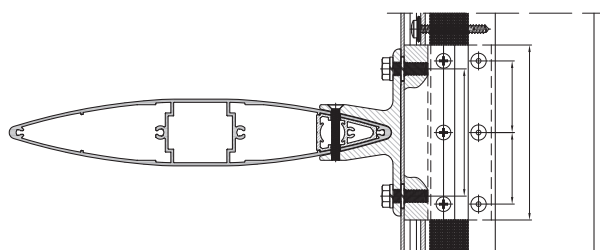
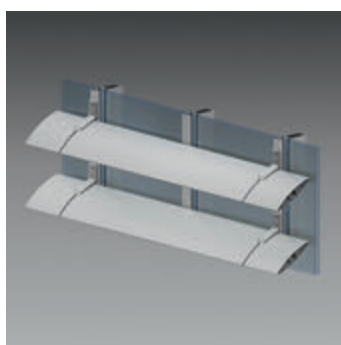
Exterior sun protection system is the most efficient passive cooling method of indoor building space.



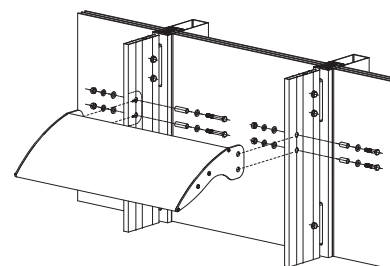
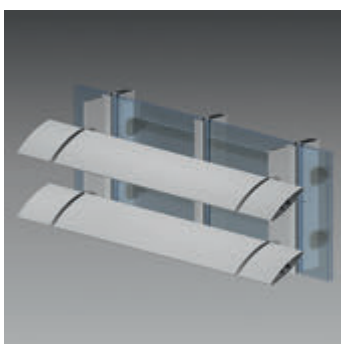
ALT SP50 is intended for designing exterior sun protection constructions or outside decorative elements, creating particular buildings shapes.

## System engineering peculiarities

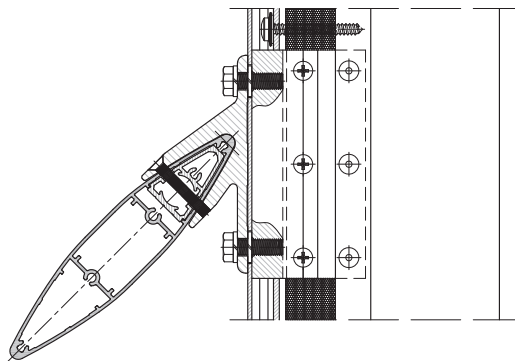
### Two types of louvers fixation



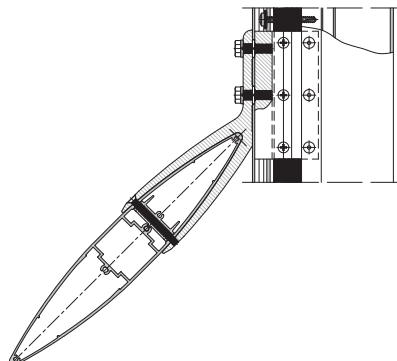
Clasping bracket



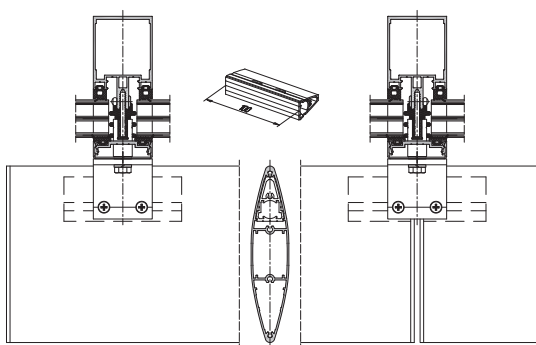
Fixation on the guide profile



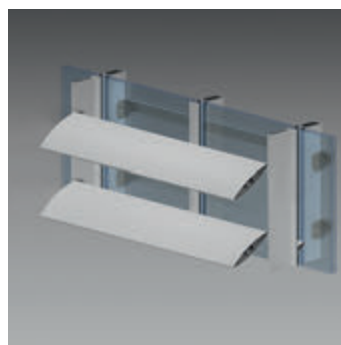
Safe fastening of sun protection bars. Reinforcing elements help to achieve additional rigidity at the place of junction with bracket.



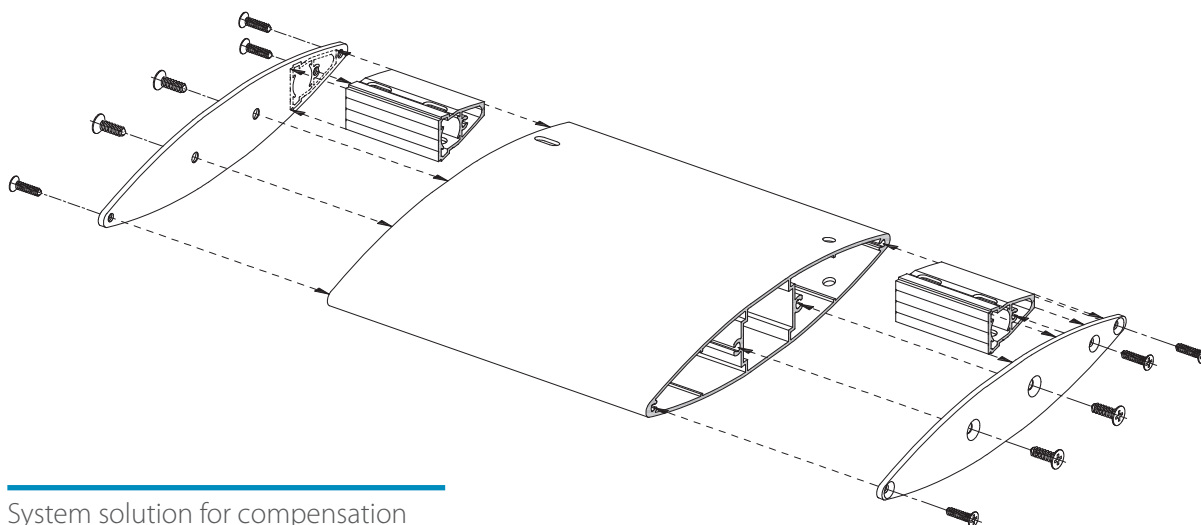
Without louver deformation within positive and negative wind pressure.



During in-line bar assemblage louver drops are excluded.



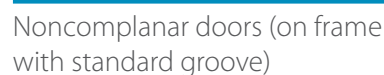
Unit-type assemblage of system within fastening on the guide profile.

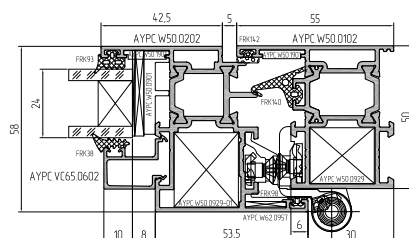
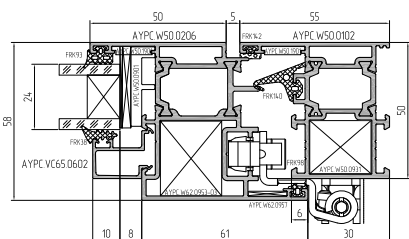
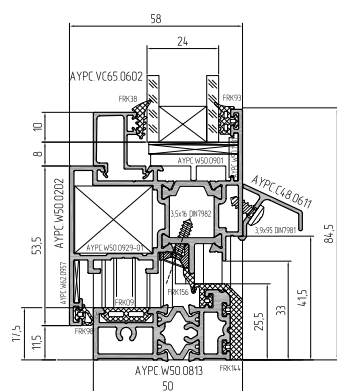
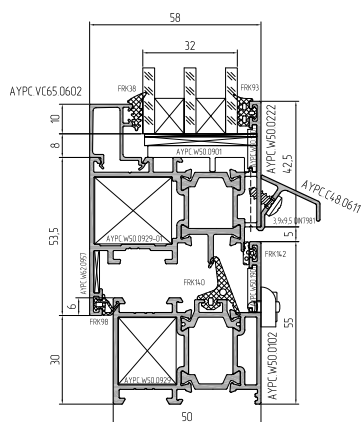
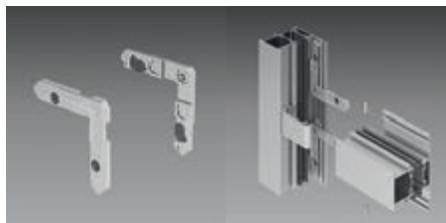
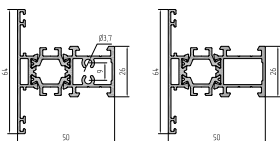


System solution for compensation of line thermal expansion.

## Main characteristics

## ALT W50 system basic variants





## Assemblage peculiarities

- Additional fastening within self-tapping screws
- Use of finished cast assembling corners and T-connection elements for efficient assemblage of T- and L-form junctions (thransom-bar, transom, basement profile)
- Installation of glass, glass units or sandwich panels of from 1/2" up to 1 1/2" (12-38 mm) thickness
- Without additional shaping of bottom junction profiles
- All profiles are cut on the angle of 90°. Profiles butt ends are covered with plugs. Such solution protects doors from wind blowout and slanting rain.
- A new type of window casement has been brought in the system. It permits to install glass beads flush with interior profile surface. Special glazing table is to be applied for this casement type.

## New system solution — balcony door with low threshold

- Safe threshold fastening
- Easy installation
- Available powder coating of threshold
- Comfortable usage
- Threshold height is around 1" (25 mm)

## New economy-type system permits to use aluminium and PVC-hardware owing to applied solution with PVC- and standard groove

Window casement and special corner insert have been brought in this system for producing windows with adjusted PVC-hardware of different leading manufactures.

# ALT W72 FR Fire resistant system



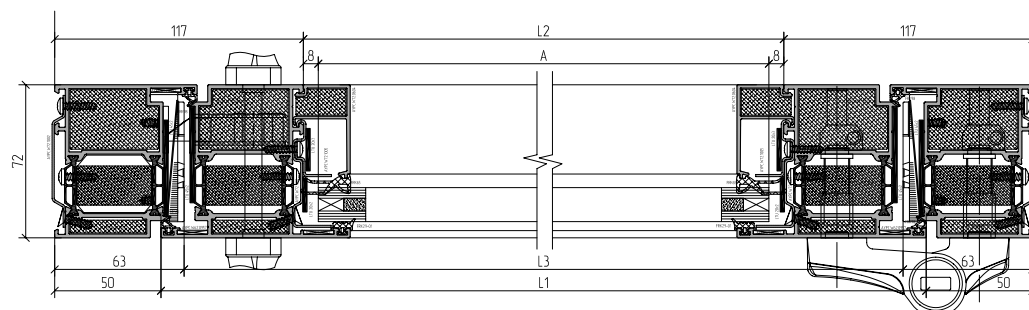
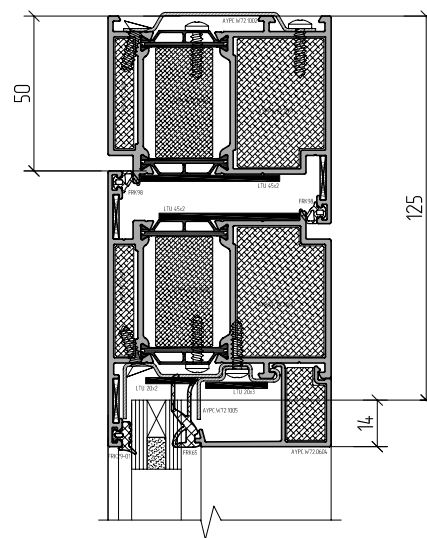
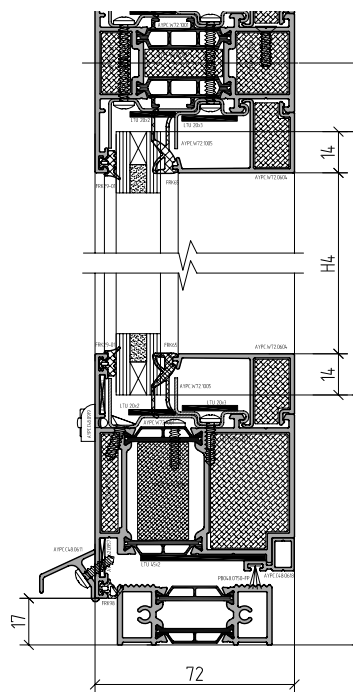
The system is intended for manufacturing exterior and interior door, window and fixed constructions, and also their combinations at various types of buildings and rooms that have fire protection requirements.

The main distinguishing feature of fire resistance construction is period during which a construction keeps the following characteristics:

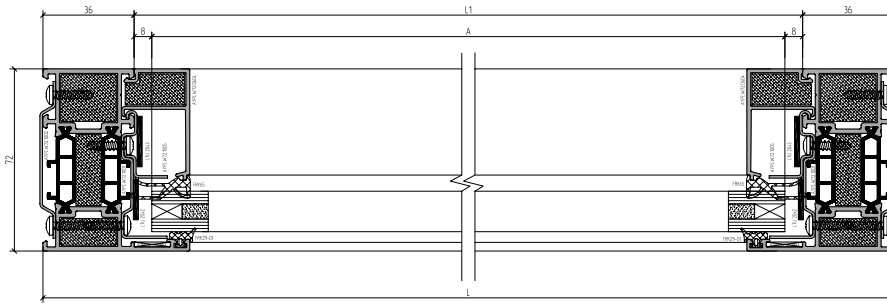
- (E) solidity;
- (I) thermal insulating capacity;
- (W) set value of thermal emission.

## Various solutions of ALT W72FR System

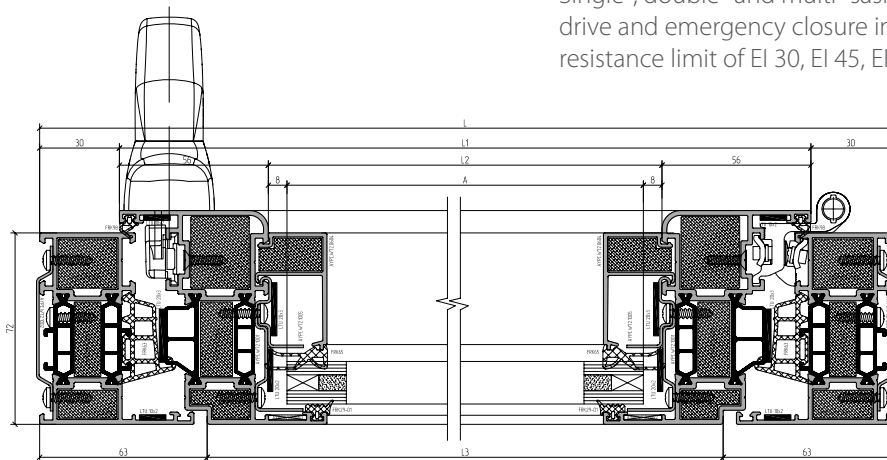
- Single and double classic complanar doors for outside and inside opening with fire resistance limit of EI 30, EI 45, EI 60.



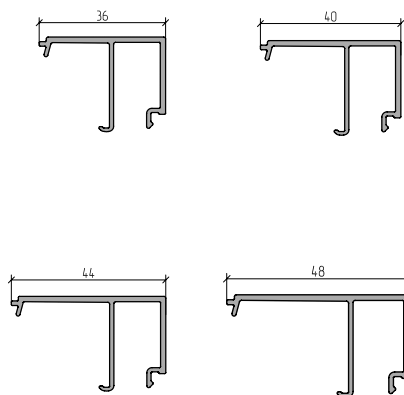
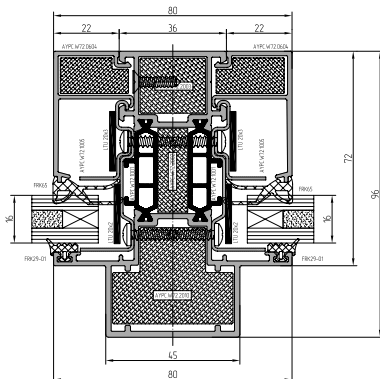
- All types of partitions constructions with fire resistance limit EI 45.



- Single-, double- and multi- sash window with automatic drive and emergency closure in case of fire accident with fire resistance limit of EI 30, EI 45, EI 60.



- Fire resistant constructions with reinforcing profiles



### Advantages of ALT W72 FR system

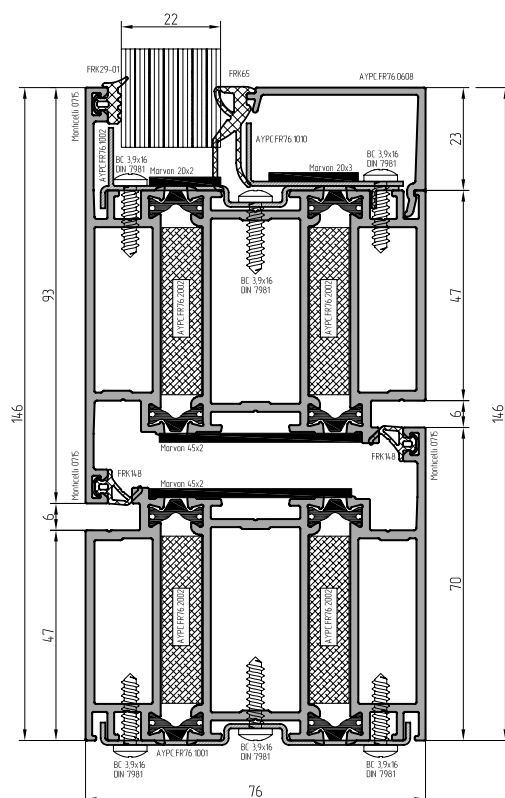
- ALT W72 standard profiles facilitate our partners work owing to streaming management of stock remains, exclude expenditures for riggers' training courses and preparation. This system also permits to avoid additional costs for purchase and adjustment of new equipment for profiles processing.
- The system includes original glass bead kit that helps to install infill unit up to 1 1/16" (26 mm) thickness without shaping for steel fixators (Here it can be also used standard glass beads of C48).
- System includes universal steel reinforcing elements, applied in all types of system profiles and junctions. These elements are fixed easily and do not need additional profile processing.

# ALT FR76 Fire resistant doors

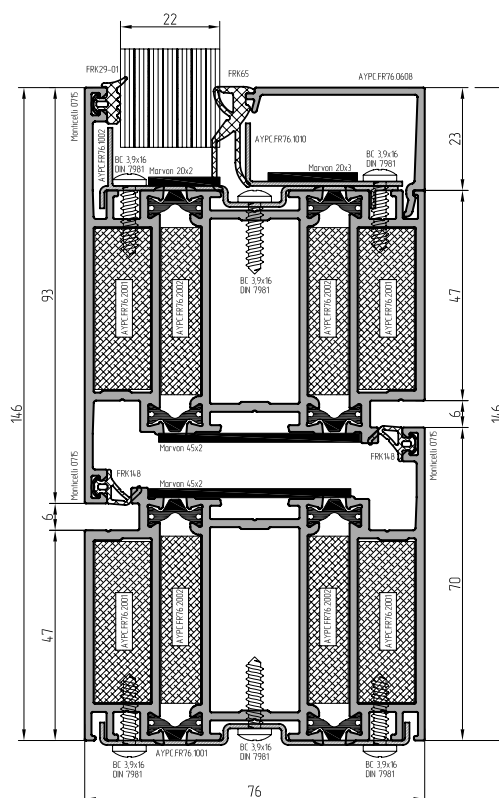


- Standard visible width of frame
- Compatibility with accessories of other ALUTECH systems
- Separate central chamber for hardware installation
- Same figures of fire resistant protection from both sides of door at tests
- Same figures of fire resistant protection from both sides of door at tests
- Use of ALUTECH roller hinges
- Use of FR76 glass beads without shaping for steel elements
- Installation of automatic threshold

## Various types of ALT FR76 junctions in accordance with required fire-resistance rating



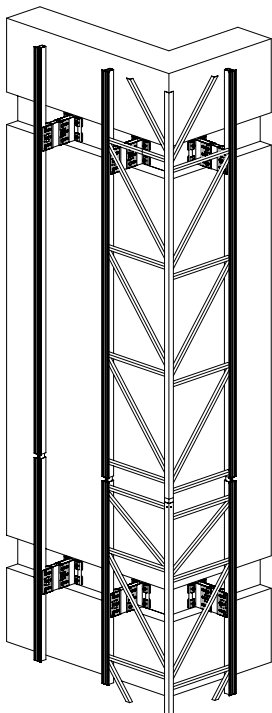
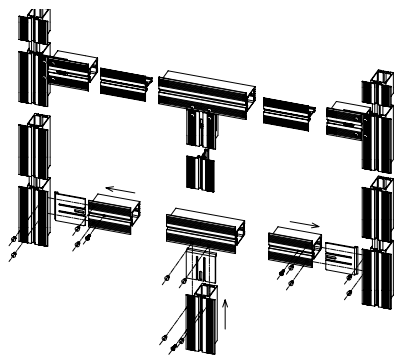
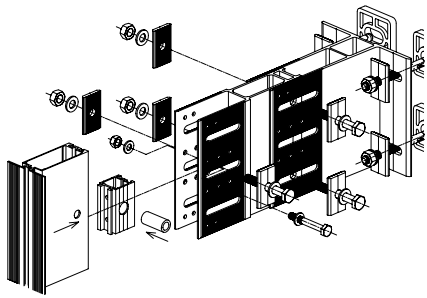
EIW30



EIW60

\* Presented types of junctions in accordance with fire-resistance rating serve as guidelines

# ALT150H Cladding system with fastening to floor slabs



System is intended for cladding of facade blocks fastened to reinforced concrete slabs what is the one safe foundation.

## Various facing materials

- Porcelain stoneware
- Natural stone
- Cassettes
- Ceramic plate
- HPL-panels

## Technical data

- Reinforced guide rails with additional armouring
- New brackets and extenders with the highest possible offset of guide rail front face up to 19 1/8" (486 mm)
- Proper solutions for compensating floor slabs deformation and thermal expansion
- New solution for partition window blocks using horizontal throw-over bars
- Different proper mounting schemes permit to reduce essentially material expenditures

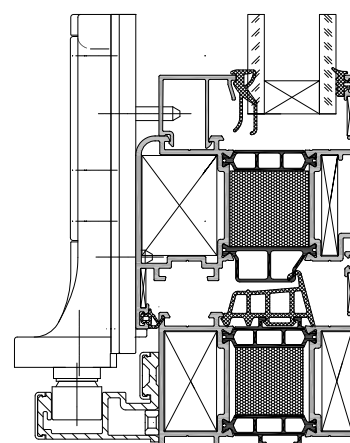
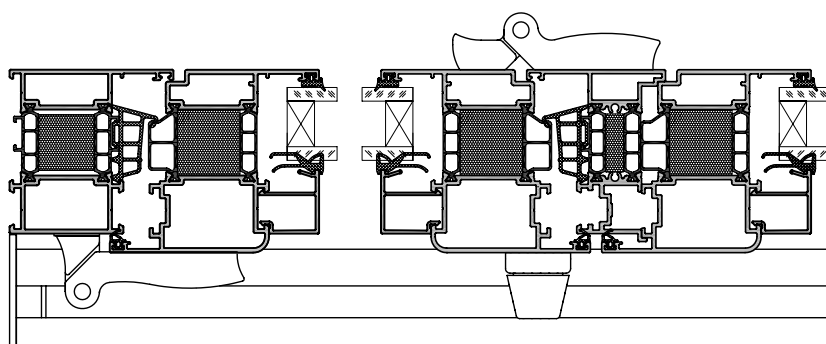
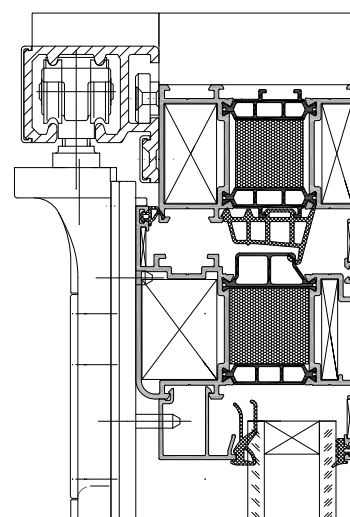
# ALT F50WG Conservatory and W72 FD Folding door system



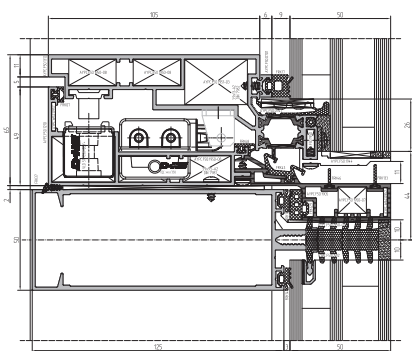
ALT F50WG Conservatory helps architects, designers and project managers to bring their ideas and construction solutions into life. This system permits to create different type of conservatories with various integrated constructions and opening options.

New profiles permit to hide metal framework, to integrate overall panoramic doors and to make proper moisture drain.

ALT W72FD Folding door system allows creating not only multifunctional glazing of translucent door openings but also provides to attractive view and comfortable usage.



## Architectural aluminum systems | 115



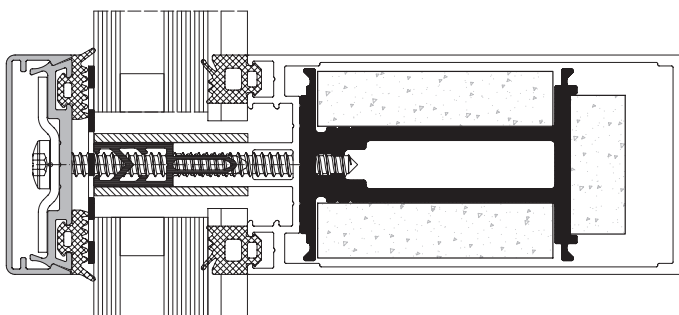
New vent is developed with various types of opening (top-hang and parallel) and provided for glass units up to 2 7/16" (62 mm) thick. The outside part of sash profile is anodized in due to improve gasket adhesive characteristics. Such fixing technology of glass unit permits to shorten production time and reduce finished products costs.

This solution is intended for designing windows, dimensions which don't fit standard hardware kit. It is available to apply top-hang and top-venting types of opening. New profiles and special lever hardware permit to create windows of 3' 10" (3 m) height and of 440 lb (200 kg) weight. With such huge dimension it is recommended to use automatic opening system. This system is developed with totally hidden drive layout and hardware locking on the casement perimeter.

# ALT F50 Fire resistant curtain wall system

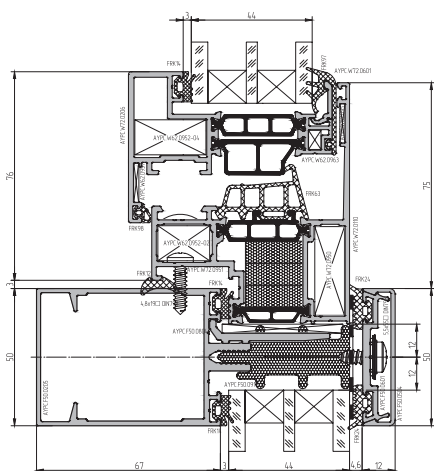
ALT F50 corresponds to requirements E15, E30, E60 for exterior constructions and EIW15, EIW45 for interior constructions.

Required fire resistance of doors and wall partitions is provided with help of additional accessories: special reinforced profiles, fire-proof inserts, steel and other elements.

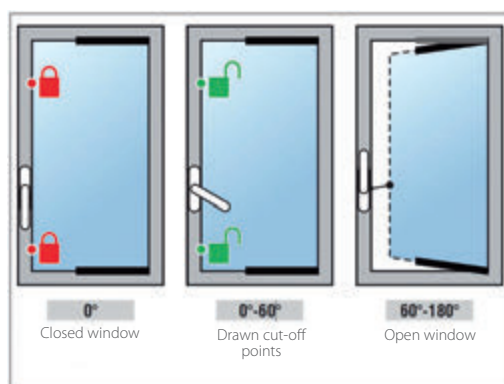


Technical drawing of a window frame cross-section. The drawing shows a multi-pane window assembly with various seals and structural components. Dimensions are indicated as follows:

- Top Width:** 62
- Left Height (Total):** 102.5
- Left Height (Segment 1):** 73
- Left Height (Segment 2):** 7.5
- Left Height (Segment 3):** 22
- Right Height (Total):** 102.5
- Right Height (Segment 1):** 22
- Right Height (Segment 2):** 13
- Right Height (Segment 3):** 8
- Right Height (Segment 4):** 59.5
- Bottom Width:** 62



With sash weight up to 99-132 lb (45-60 kg), it is possible to use exterior hinges instead of compass arm, that can reduce the material cost.



## Architectural aluminum systems | 117

# Reinforced hinges for ALT 111

## Interior partition system



Reinforced door hinges were developed together with the leading European hardware manufacturers. These products are noble for its high security, technological effectiveness and modern design.

### Reinforced hinge for aluminium profile doors

#### Engineering aspects

- Hinge is fixed with help of insert element that permits to adjust height
- After finishing adjustment a hinge is fastened with self-tapping screws
- Hinge has horizontal micrometric adjustment at the limit  $\pm \frac{1}{16}$ " (1,8 mm)
- Rabbet adjustment is made at the limit of  $\pm \frac{1}{64}$ " (0,5 mm)



### Reinforced hinge for full-glass doors

#### Engineering aspects

- Hinge is fixed on a frame profile with help of insert element that permits to adjust height
- After finishing adjustment the hinge is fastened with assembling screw
- Hinge permits to make horizontal adjustment of glass block
- Hinge is installed on a glass leaf of  $\frac{5}{16}$ " and  $\frac{3}{8}$ " (8 and 10 mm) thick

#### Maximum load

- Two hinges — up to 176 lb (80 kg)
- Three hinges — up to 220 lb (100 kg)

Butt end plugs of presented hinges have the company logo "ALUTECH"



### Protective film 15×45-3M

For ALT 111 interior system ALUTECH has developed special solution — 15×45-3M protective film which protects reliably polymeric or anodized frame profile surface while a lock catch touches frame profile.

Durable and elastic protective film 15×45-3M is made from polyurethan with transparent acrylic glue. It preserves transparency during application period, maintaining aesthetic view of the office partition.

Film doesn't curve and come unglued during application period (approved by tests).

# Top hung door sliding inside ALT111 partition



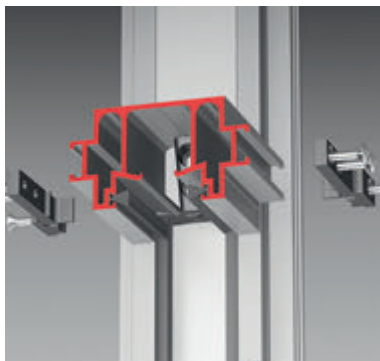
ALT 111 interior partition system offers sliding doors with top-hung mechanism coming inside the aluminium partition with double translucent or blind infill unit.

Mullions and transoms of sliding door opening have the same visible width as ALT111 profiles, functional groove for installation of brackets and elements, fixing infill unit.



## Engineering aspects

- Sliding system has top-hung mechanism, doesn't have a threshold
- Top guide rail profile is a transom in the same time
- Door leaf comes inside the aluminium partition
- Sliding leaf opening is made with help of combined mullions
- Combined mullions have been equipped with special plastic plug, which simplifies mounting process
- Reinforced profile permits to increase essentially the range of door leaf dimensions
- Floating heel (with help of jet nut elements) in the place of fastening to the top slab provides for vertical moving and permits to compensate thermal expansions of aluminium mullion and also to avoid caving in the top slab
- Double contour of felt gasket along the perimeter of door opening protects interior part of partition from possible dirtying and increase soundproof features of door block
- This innovative solution is provided with elements (if necessary), improving bearing capability of a guide rail
- Before infill unit installation, if necessary, finished adjustment of rollers can be made on assembled framework of door block



Previous solution provided for producing and assembling only single sliding leaf. New solution has special locking mechanism that permits to produce double leaf sliding doors.

AYPC.111.1010 locking mechanism will be available on stock soon. Order list will include necessary list of accessories for assemblage of double leaf sliding doors (see picture on the left).

# Extensible door case — ALT111 Interior partition system



Extensible door case is installed into door opening in the premises of different building type. This development is a modern decorative element of any interior.

Aluminium extensible door case is an excellent alternative for wood case because of durability, modern and stylish view of aluminium profiles.

System range of casing profiles includes AYPC.111.0118 profile of straight form and AYPC.111.0114 profile of chamfered form that permits to satisfy even the most exacting customer needs.

Extensible door-case can be applied for all openings of partition thickness from  $2\frac{15}{16}$ " to  $10\frac{5}{8}$ " (75 – 270 mm)

---

## Engineering aspects

- Frame profiles of door case are assembled with help of clamping corners.
- Casing profiles are cut at 45°.
- Hinges are fixed in the hardware groove of frame profile with help of insert element. It makes mounting process more efficient and permits to adjust height of door leaf.
- Laminated particle board of  $\frac{3}{4}$ " (18 mm) thickness is used as a finishing element. (It is used with a partition of  $5\frac{5}{16}$ " (135 mm) thickness)
- Removable casing profile is installed after wall finishing.
- Hardware groove is closed with decorative cap AYPC.111.0605

---

## Advantages

- Installation of lock strike plate doesn't need shaping
- Invisible fastening
- Door leveling is made with help of special adjustable distance bush that makes mounting process more efficient
- There is no need for door leveling in advance
- Durable extensible door case made of aluminum doesn't require additional serving
- Hardware groove is closed with decorative cap AYPC.111.0605

# Interior door with hidden hinge — ALT 111 system

Interior door is represented by a door leaf with single infill unit made of safe tempered 6 mm thick glass. Along the perimeter a leaf is framed with aluminium profile  $\frac{3}{4}" \times 1 \frac{9}{16}"$  (20×40 mm) that creates graceful and finished view of the construction.

New interior door is equipped with hidden vent what is intended for opening/closing of door with bearing aluminium contour.



Distinguishing feature of new hinge is its corps. As opposed to the present types of similar hidden hinges, a corps of the developed hinge contains not only rotating mechanism but also is an element, connecting aluminium profiles creating a frame for infill unit installation.

Thereby hinge mounting doesn't require additional shaping in the contrast with similar developments. Opposite frame corners are assembled with help of clamping corners that makes door leaf finished and aesthetically beautiful.







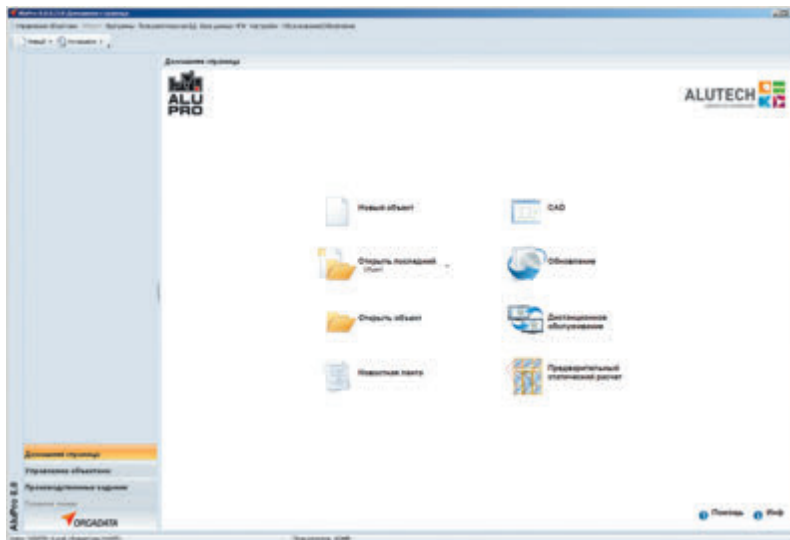
# PROFESSIONAL SOFTWARE **ALU** **PRO**

Professional software for structural design of ALUTECH group of companies architectural and interior systems.

ALU PRO is a professional but easy-maintainable program. Its operation system and layout are fully adjusted to aluminum profile systems structural calculations.

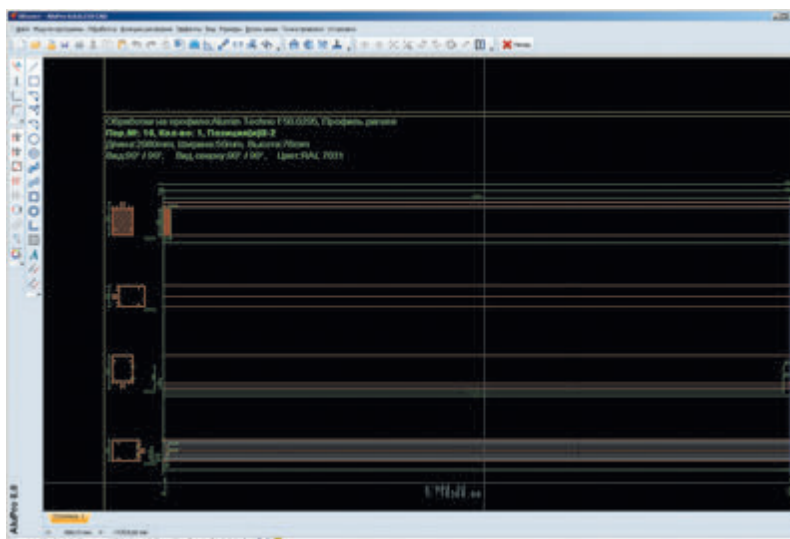
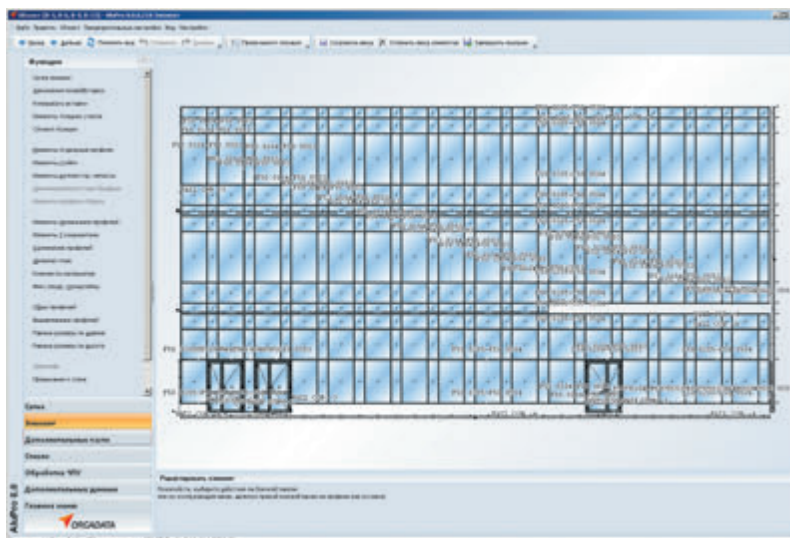
Originated by ORGADATA Company (Germany).



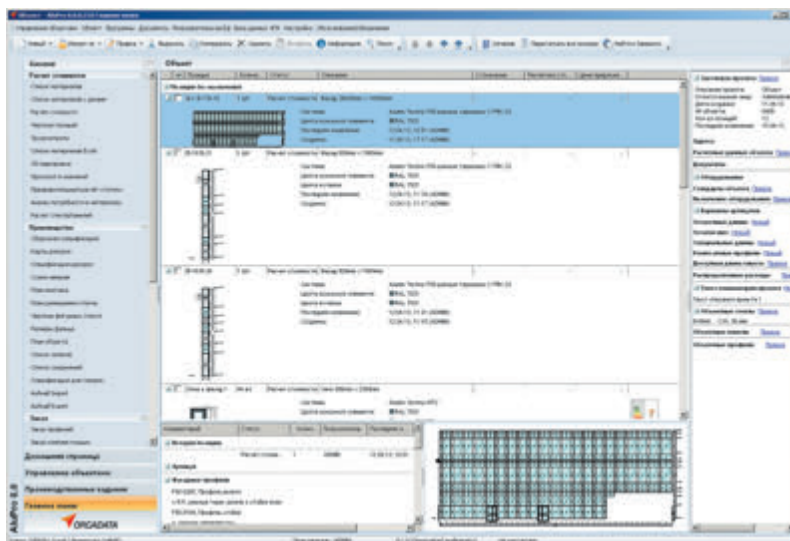


## Versatility

- Elements' input
  - Structural section
  - Calculations
  - Reports
  - 2D CAD module
- Statics calculations
  - Profiles' optimization, saw manipulation
  - Profiles' treatment schemes
  - Programmed numerical control administration

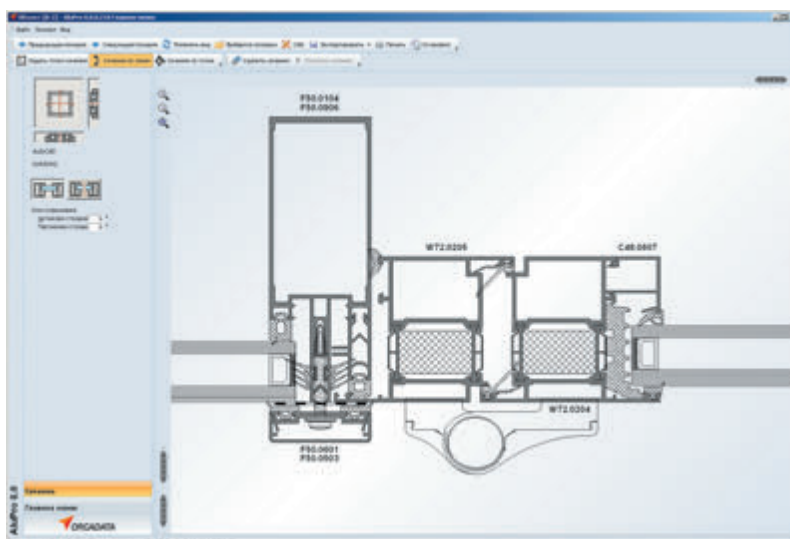


- 3D module
- Wide range of customized settings
- Possibility of displaying of the documents in different formats
- Networking possibilities



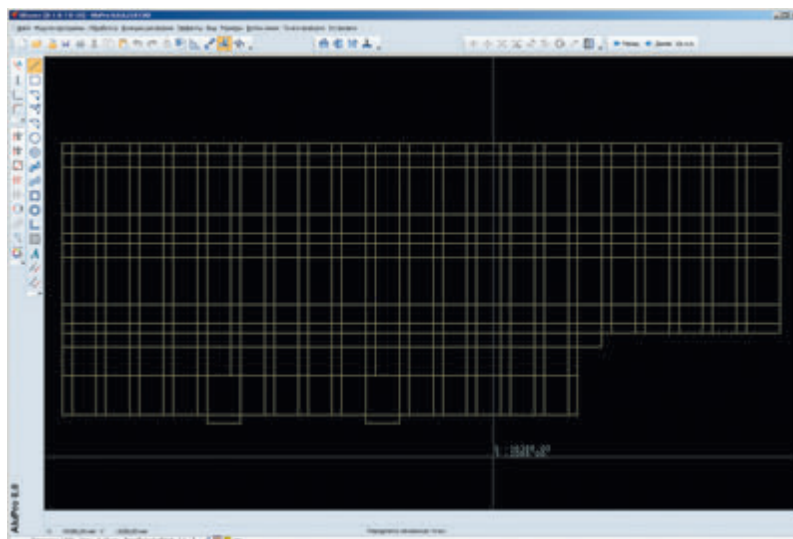
## Elements' input

AluPRO program's ease of use allows users to work in the system faster. Element's input embraces windows, doors and facade configurations. User determine properties of each element step by step. Our software leads you through the whole process of construction so that you won't forget a detail.



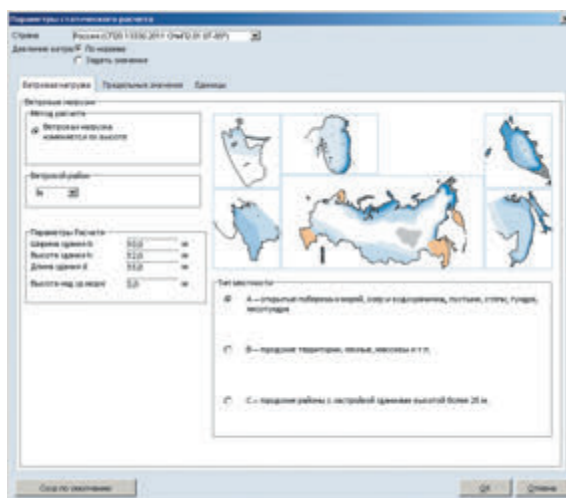
## Sections' generating

You can create sections for all the constructions created in AluPRO program. It's a realistic display of all the designed positions. All the joints, swings, IGUs will be displayed very accurately.



## CAD Module

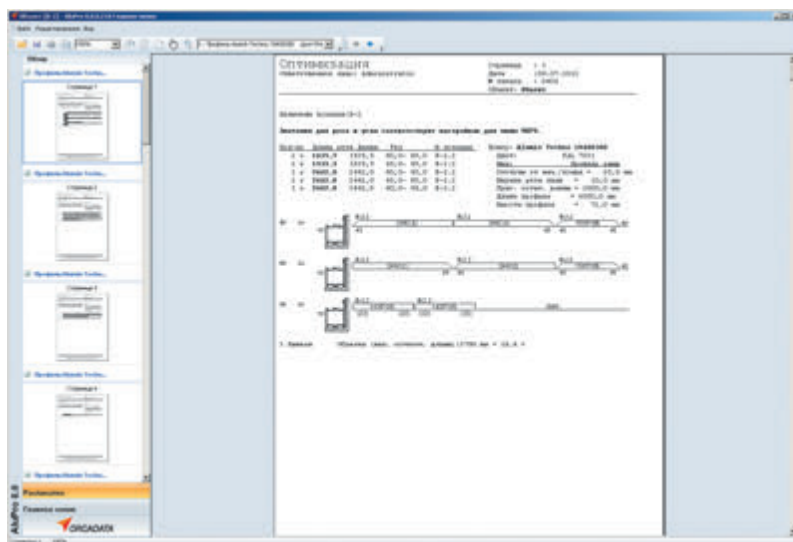
AluPro has an integrated CAD module. It allows both to create new constructions and import DWG and DXF existing ones. It is easy-operated and functional. It is possible to export the files in DWG, DXF, BMP, JPEG, EMF, PS and ZIP formats.



## Static performance

AluPRO database has integrated statics norms for many countries. Statics norms for your own region can be set manually.

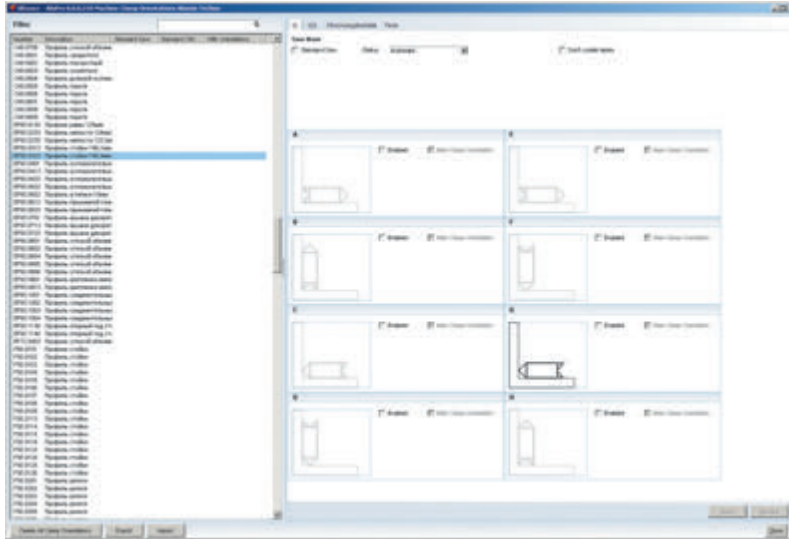
- Profiles' statics: torque requirement (Ix) for every mullion and transom is defined with the help of this module. Mounting devices and horizontal thrust (wind) are taken into account.
- Glass statics: statics calculation of glass and IGU is performed according to TRLV.



## Profiles' optimization

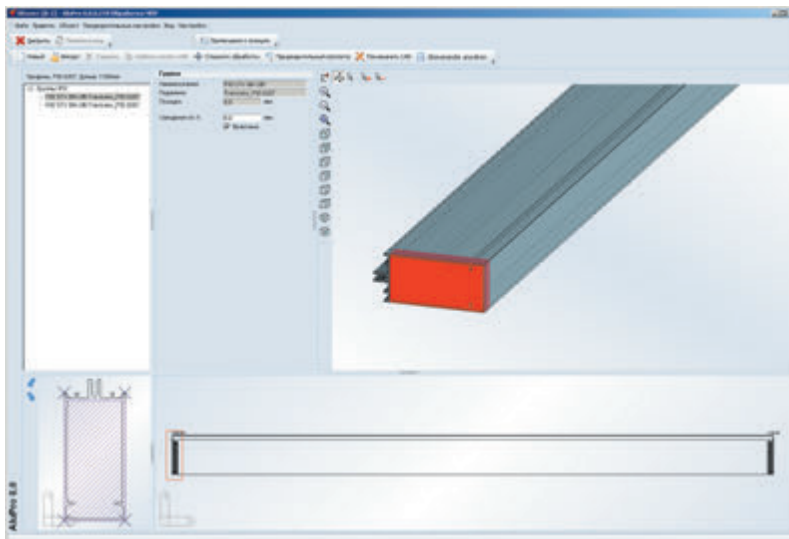
All the profiles included into the order are divided in such a way that very little chipping is left after sawcut.

Graphic displays profile's position on a saw and a sequence of cut lengths. Chipping from the warehouse can also be used. Each profile has its own bar code, which can be printed on a label (for identification in machining center).



## Saw manipulation

AluPRO program has drivers for one- and two-sided saws with the possibility of taking into account the results of sawcut optimization. Profiles cutting information can be transmitted to the equipment with the help of any storage device or through the network. Data controlling the saw contains the information about length, corners and bar codes. This helps with further identification of cut details in processing center.



## Programmed numerical control module

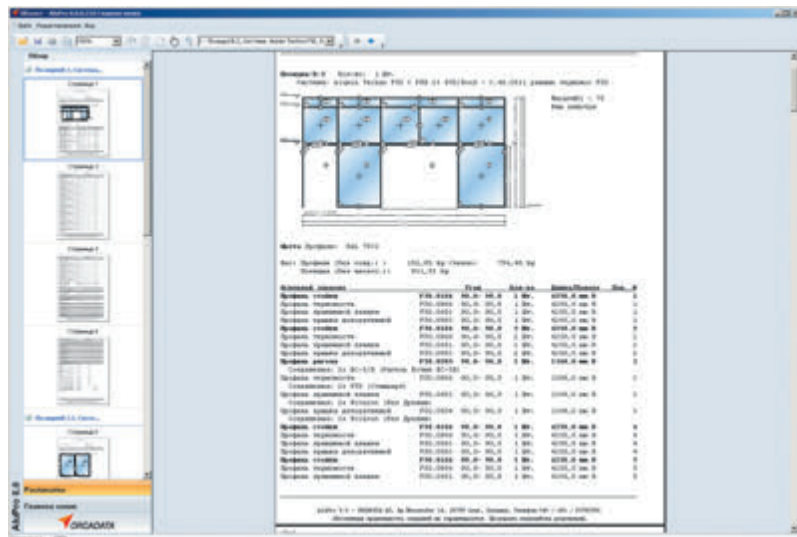
The module allows to generate the files for processing centers, which make all the profiles' treatment (shaping, drilling).

Equipment with programmed numerical control allows to minimize timing and increase productivity. All of it leads to ready products costs reduction. AluPRO can administrate all the processing centers.

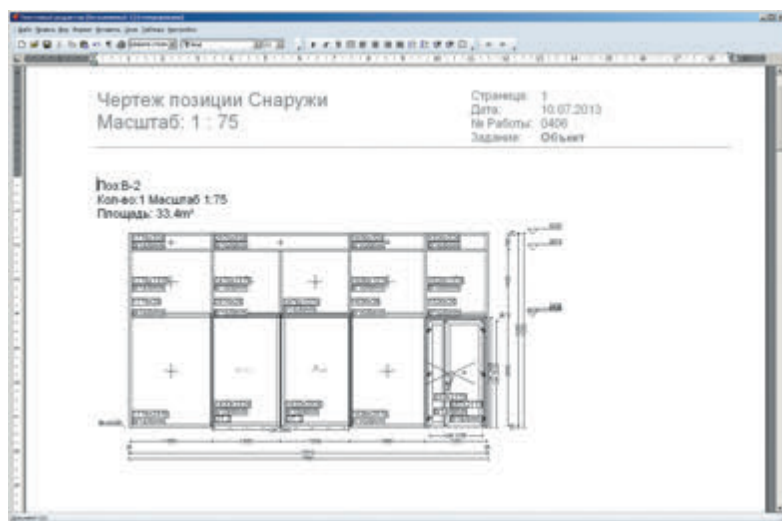


## Report

- Calculations
- Material Specification for production
- Cutting chart
- Glass specification
- Installation Scheme

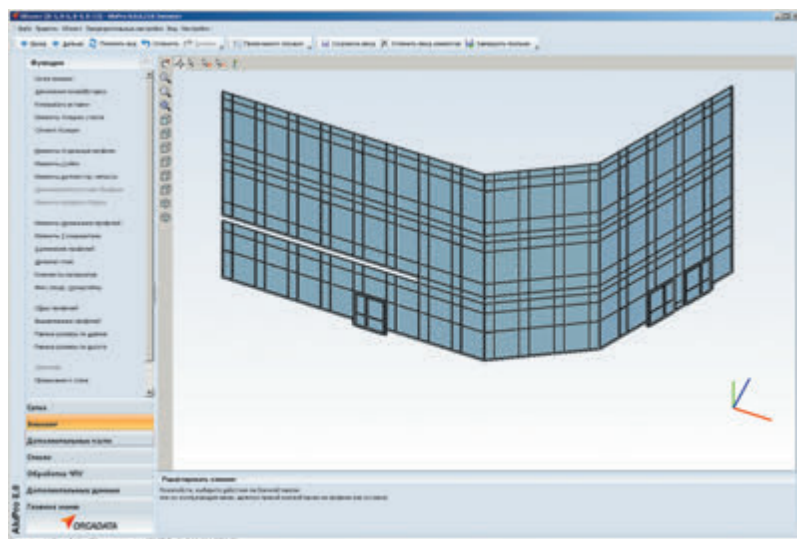


- Commercial offer
- Invoice
- Order blank



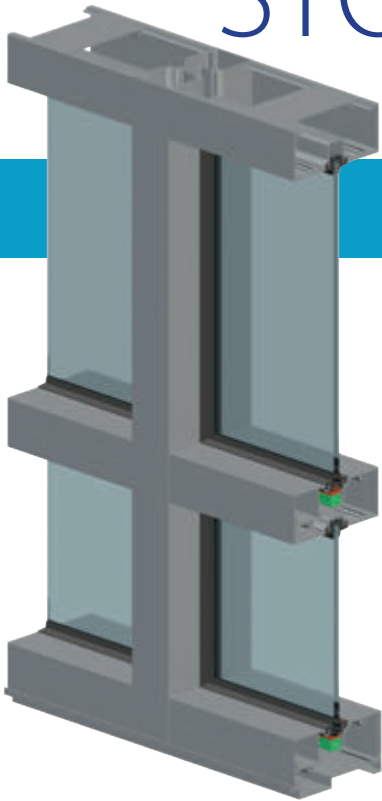
## 3D connections for design engineering software

Software Module allows to design space structures. This became possible due to special 3D software module. The software allows importing construction including all designed connections, profiles and other materials. 3D connection is possible with AutoCAD application Athena design by company CAD-Plan GmbH.



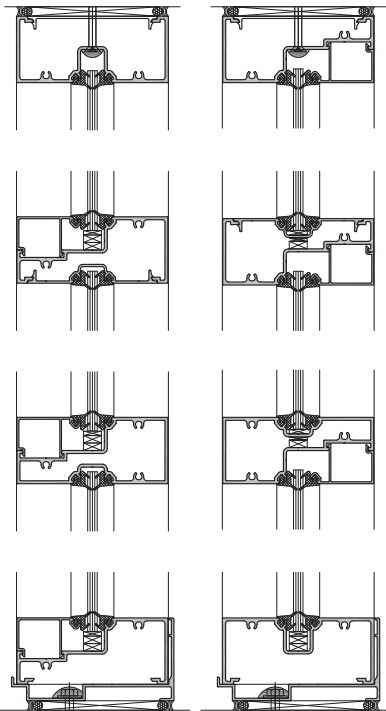
# SPECIAL OFFER

## CENTER GLAZED STOREFRONT SYSTEM



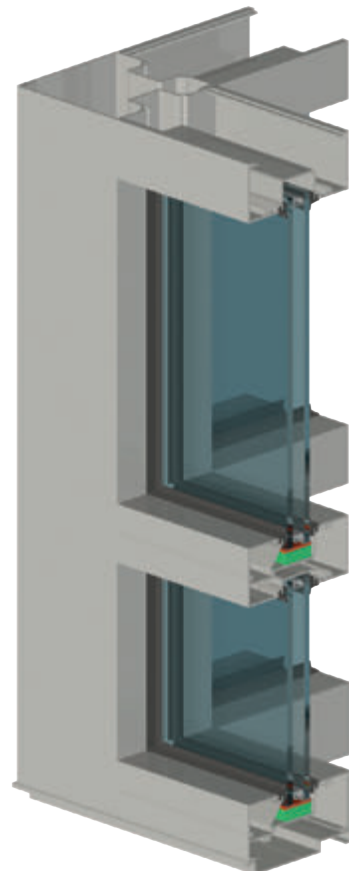
### SF400 & SF450 series

- **SF400** — 1-3/4" × 4" (44.5 × 101.6 mm)
- **F450** — 2" × 4-1/2" (50.8 × 114.3 mm)
- **Standard types of glazing infills for SF400 series:** 1/4" (6 mm) or 3/8" (10 mm)
- **Standard types of glazing infills for SF450 series:** 1" (25 mm)



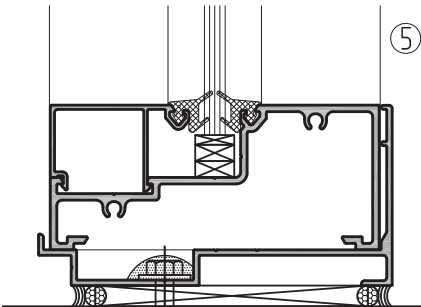
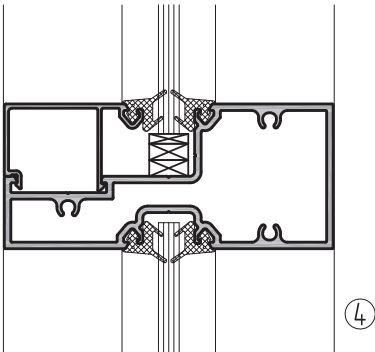
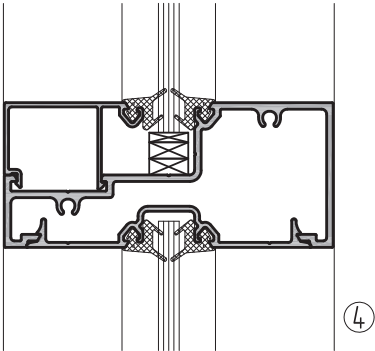
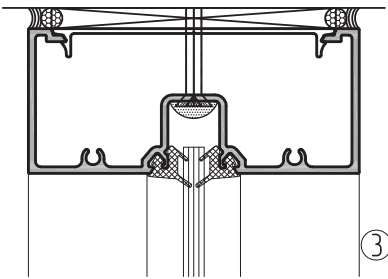
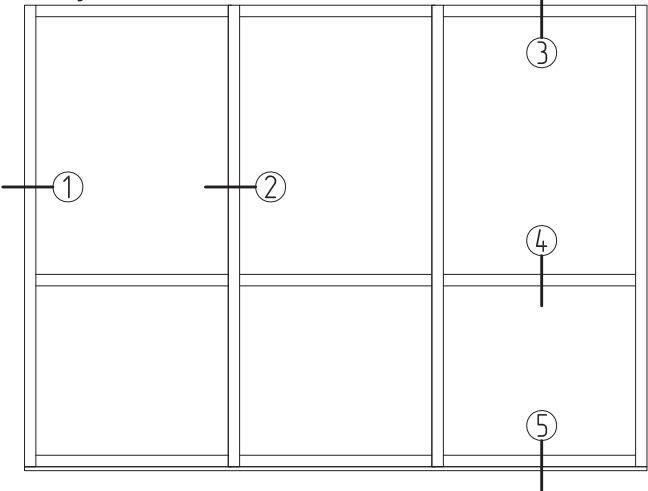
- Air Infiltration shall not exceed .06 cfm at 6.25 PSF
- No water penetration at test pressure of 8 PSF
- Allowable stress for windload 12.9 PSI
- Allowable stress for windload 26.6 PSI (steel reinforced)

- Interior or exterior glazed
- Full range of accessory components
- Available in painted finishes or anodized
- Injection molded water deflectors and end dams
- Steel reinforcement
- 90° corner mullion



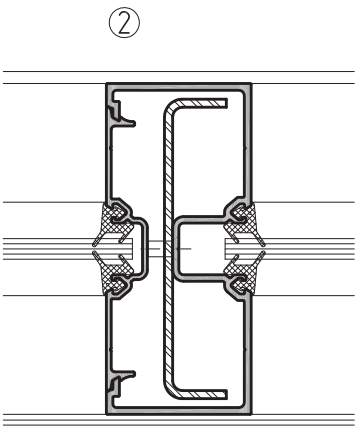
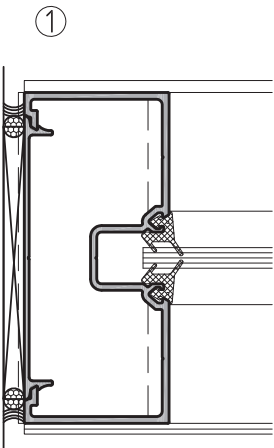
# CENTER GLAZED STOREFRONT SYSTEM DETAILS

Key elevation



Series SF400 details shown

Series SF450 are similar







ALUMINTECHNO LLC.  
12 Selitskogo Street, Minsk,  
220075 Republic of Belarus  
phone: +375 (17) 345 81 43, 45  
fax: +375 (17) 345 81 48  
[www.alutech-group.com](http://www.alutech-group.com)