



INDUSTRIAL SECTIONAL DOORS



INDISPUTABLE ADVANTAGES

ALUTECH industrial doors have several indisputable advantages: convenience and ease of use, reliability, safety, good opening sealing, and excellent thermal insulation.

A wide range of accessories, types and colours of panels will help you to choose the doors for any industrial facility.

Industrial doors can be installed in dense traffic areas, in areas with high humidity, in large sized openings. ALUTECH doors have a reinforced structure and are made of materials with high anti-corrosion properties that provide safe and reliable operation throughout their life cycle.



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6 ARGUMENTS IN FAVOUR OF ALUTECH DOORS



DURABILITY
AND RELIABILITY



The design of ALUTECH industrial doors has been thought out to the last detail. All door elements are designed for intensive use and openings of large sizes.

The steel sandwich panel, filled with high density polyurethane, provides the door leaf with rigidity and high resistance to shock and wind loads.

ALUTECH doors in the ProPlus Series withstand a **700 Pa** wind load, which corresponds to a wind speed of **120 km/h**.



TESTED
DURABILITY



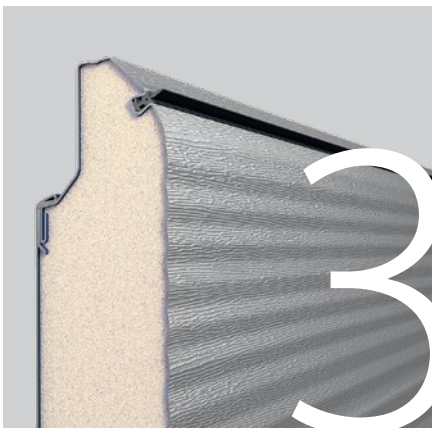
The doors in the ProPlus Series utilise components with high anti-corrosion properties prolonging the life of the doors:

- roller brackets and intermediate hinges made of stainless steel;
- painted side caps and torsion springs;
- sandwich panels with a polyurethane coating modified with polyamide particles (PUR-PA).

Tests have confirmed that the door leaf can withstand 15 years of service in coastal areas without corrosion.



ENERGY
EFFICIENCY



Thanks to their high insulation qualities ALUTECH doors provide a comfortable temperature in buildings used for logistic operations and the storage of goods. The thermal transmittance coefficient for ALUTECH doors is:

- ProTrend Series (panel is 40 mm)— $1.15 \text{ W}/(\text{m}^2 \text{ K})^*$;
- ProPlus Series (panel is 45 mm)— $1.01 \text{ W}/(\text{m}^2 \text{ K})^*$.

Thermal insulation $U=1.0 \text{ W}/(\text{m}^2 \text{ K})$ is comparable with a brick wall of 60 cm thickness.

* comparison is made for doors of 5,000 mmx5,000 mm in size on the basis of tests conducted at the Rosenheim Institute.



ENSURED SAFETY



The ALUTECH Group of Companies ensures safe operation of their industrial doors. The design of their sectional doors provides protection against:

- finger trapping;
- hooking and cutting;
- uncontrollable movement (descent) of the door leaf;
- the door leaf falling in the case of spring or cable breakage.

The doors comply with European safety standards EN 12604, EN 12453, EN 12424, EN 12425, EN 12426.

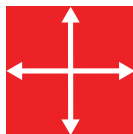


AN IDEAL SOLUTION FOR ANY FACILITY



Such a wide range of industrial doors, allows you to choose the best solution for any facility taking into account all customer requirements:

- thanks to the high thermal insulation of doors made from sandwich panels they are operated successfully in Finland, Norway, Denmark, Sweden and other countries of the Far North.
- elegant aluminium doors take into account all the trends in the modern architecture of industrial buildings.

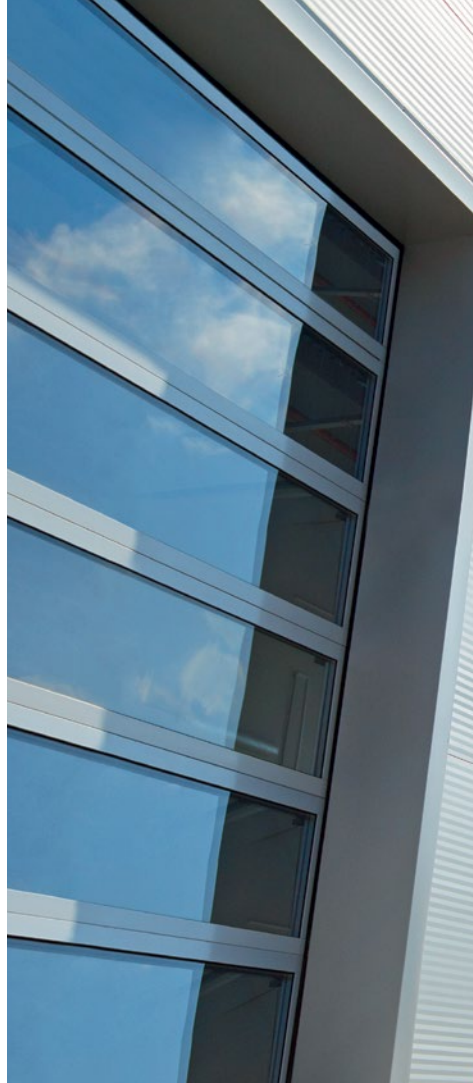


BROAD RANGE OF MOUNTING OPTIONS



10 types of mounting allow you to install industrial doors in buildings with different types of opening construction: with a low headroom, high ceilings or a sloped roof. Various types of door leaf balancing and reinforced door construction allow you to install doors in openings of large sizes—up to **8,000 mm×7,000 mm**. All the doors are made individually for a specific opening size in increments in height and width of **5 mm**.

WIDE RANGE OF INDUSTRIAL DOORS



ALUTECH offers a wide range of industrial doors in the ProPlus and ProTrend Series made from sandwich panels and panoramic doors from the AluPro, AluTherm and AluTrend Series.

Highly insulated, robust doors made from sandwich panels provide optimum thermal insulation and reliable operation for many years. Elegant panoramic doors made of aluminium and acrylic glazed inserts help bring to life modern architectural solutions.

ProTrend

Safe and practical doors made from sandwich panels of 40 mm thickness and fittings made of galvanised steel. ProTrend doors are doors at attractive prices which are specially designed for intensive use in industrial facilities. The doors ensure safe operation: balancing systems are included in a standard set at no extra cost. Springs with a resource life of 25,000 open/close cycles and robust construction designed for long-term operation. ProTrend Series doors are a guarantee of safety and reasonable economy. Panoramic doors from the AluTrend Series are made from aluminium sections of 40 mm thickness helping to create original facade compositions and save on budget.

Characteristics:

- the thickness of a sandwich panel is 40 mm;
- the thermal transmittance coefficient is 1.15 W/(m²K);
- roller brackets and intermediate hinges are made from galvanised steel;
- compliance with European safety standards;
- the resource life of springs is 25,000 open/close cycles;
- the maximum size is 7,000 mm×6,000 mm.

comparable with a brick wall of 57 cm thickness

ProPlus

Highly insulated, robust and reliable doors made from sandwich panels of 45 mm thickness ensure excellent thermal insulation of the building. ProPlus Series doors are successfully operated in countries with cold climate: Finland, Norway, Denmark, Sweden and others.

Intermediate hinges and rolling brackets made from stainless steel are highly resistant to corrosion, which makes it possible to install and operate these doors in areas of high humidity—in car washes, in coastal and polluted industrial areas. ProPlus signifies high quality and functionality.

There are 2 series of panoramic doors: classical AluPro and AluTherm with improved thermal insulation.

Characteristics:

- the thickness of a sandwich panel is 45 mm;
- the thermal transmittance coefficient is 1.01 W/(m²K);
- roller brackets and intermediate hinges are made from galvanised steel;
- compliance with European safety standards;
- the resource life of springs is 25,000 open/close cycles;
- the maximum size is 8,000 mm×7,000 mm

comparable with a brick wall of 60 cm thickness



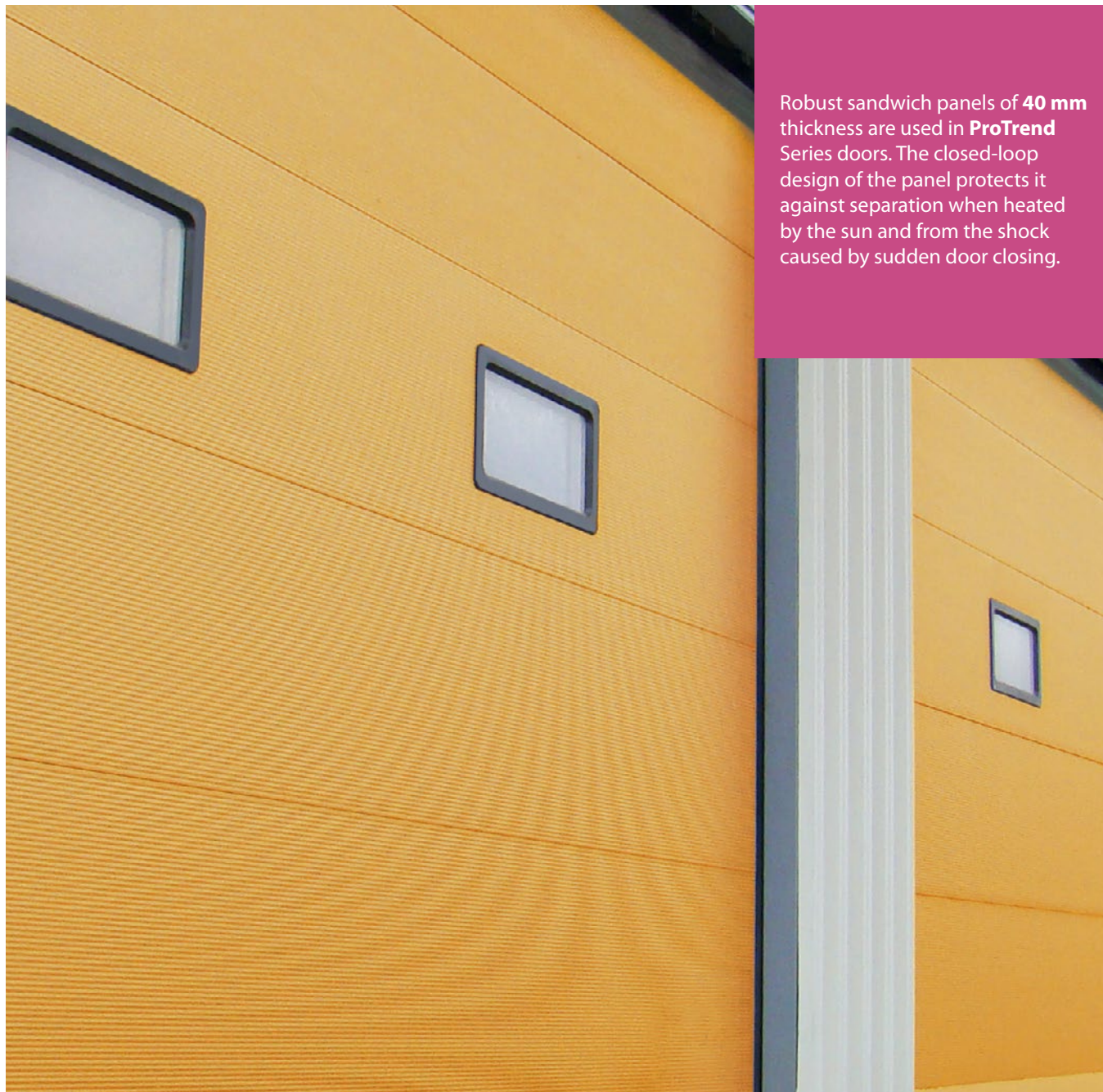


SAFE AND PRACTICAL
DOORS
ProTrend



ProTrend

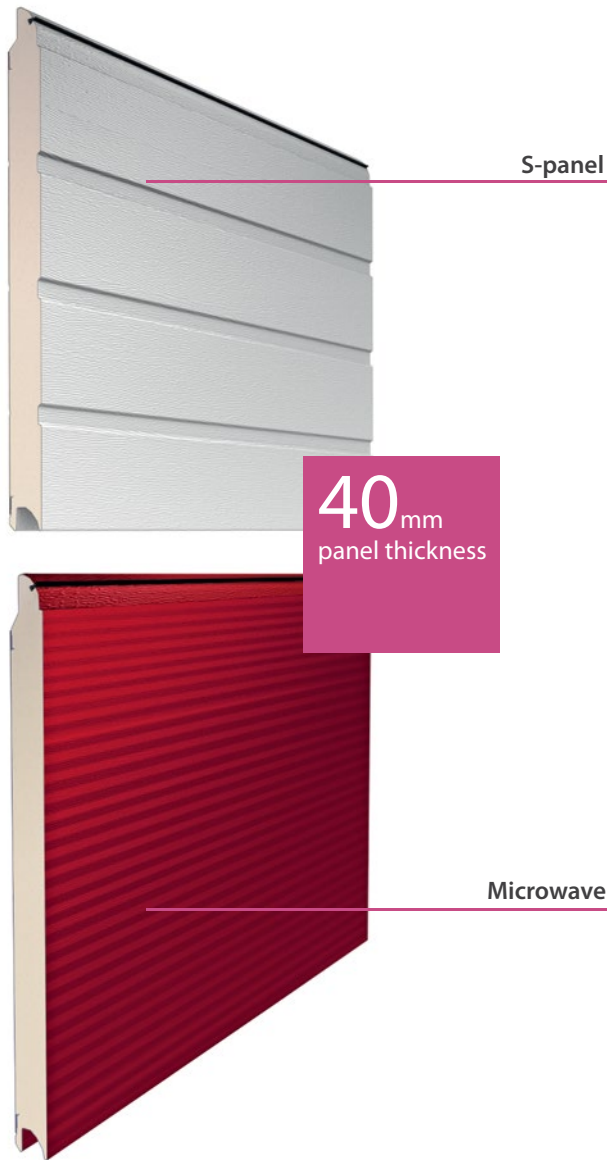
REASONABLE ECONOMY AND RELIABILITY



Robust sandwich panels of **40 mm** thickness are used in **ProTrend** Series doors. The closed-loop design of the panel protects it against separation when heated by the sun and from the shock caused by sudden door closing.

The doors are equipped with protection mechanisms to prevent the door leaf from falling in the case of a spring or cable breakage at no extra cost.

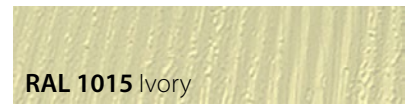
Types of panels
for **ProTrend** Series doors



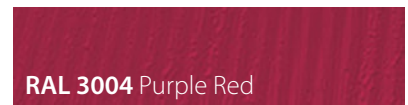
10 standard colours
At no extra cost



RAL 9016 White



RAL 1015 Ivory



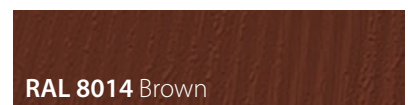
RAL 3004 Purple Red



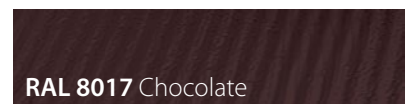
RAL 5010 Blue



RAL 6005 Green Moss



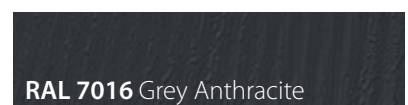
RAL 8014 Brown



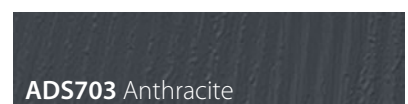
RAL 8017 Chocolate



RAL 9006 Silver Metallic

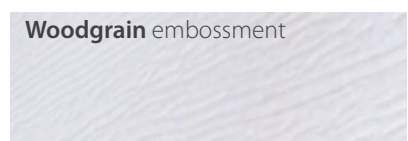


RAL 7016 Grey Anthracite



ADS703 Anthracite

Colours are close to RAL scale.
Upon request, the doors can be painted both inside and outside in a different RAL colour.



Woodgrain embossment

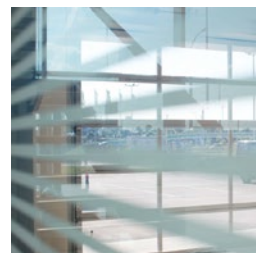
Torsion springs with a resource life of **25,000 open/close cycles** are used for door leaf balancing and are included in the basic set. Upon request it is possible to increase the resource life of springs up to **100,000 open/close cycles**.

The maximum size of these doors is:
width—7,000 mm, height—6,000 mm.





PRACTICAL
PANORAMIC DOORS
AluTrend



AluTrend

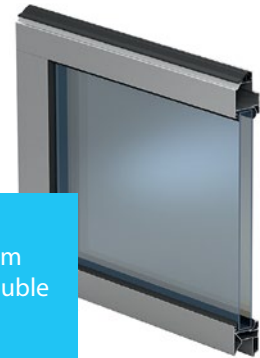
ORIGINAL AND INDIVIDUAL DESIGNS



New glazing structure ensures:

- improved sealing;
- deformation resistance;
- excellent thermal insulation properties.

Infill options for **AluTrend** Series doors



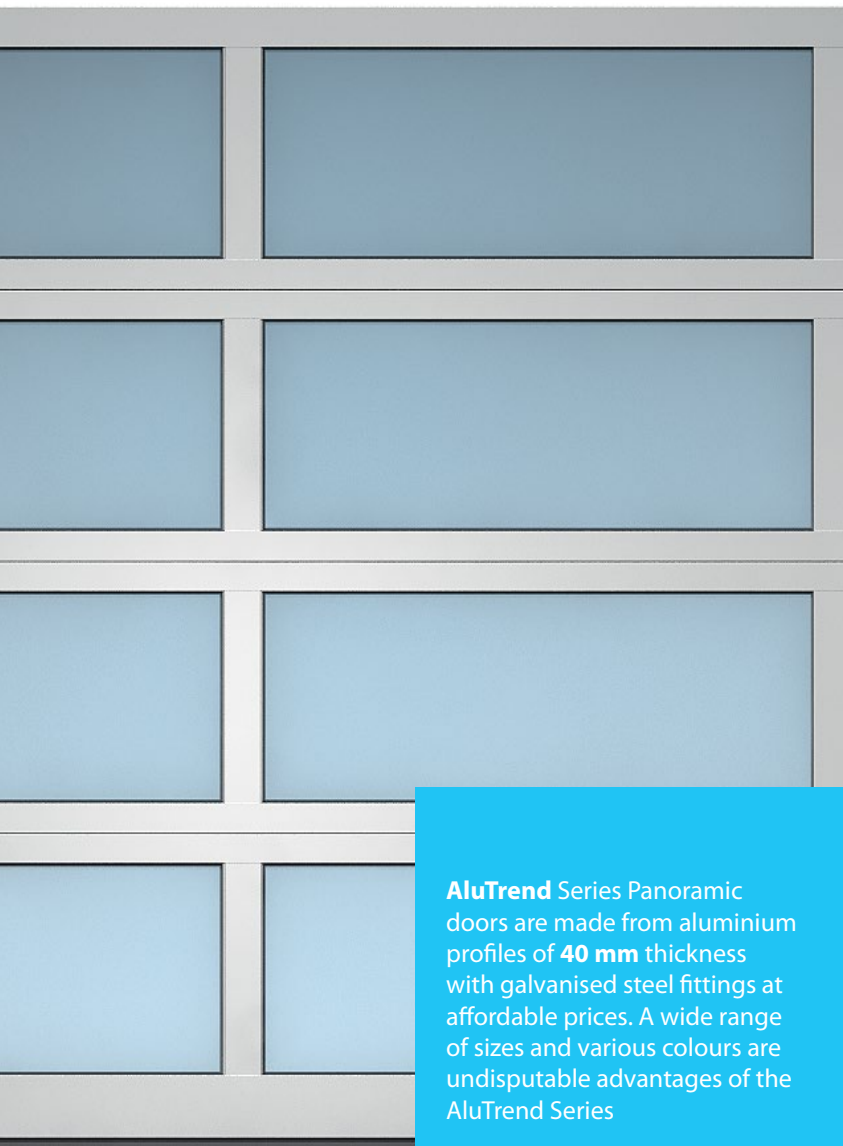
26mm
acrylic double
glazing

Modern impact-resistance material with max. translucency is used .



26mm
aluminium
composite
infill material

These panels are made from two sheets of aluminium with stucco embossment and filled with polyurethane foam insulation.



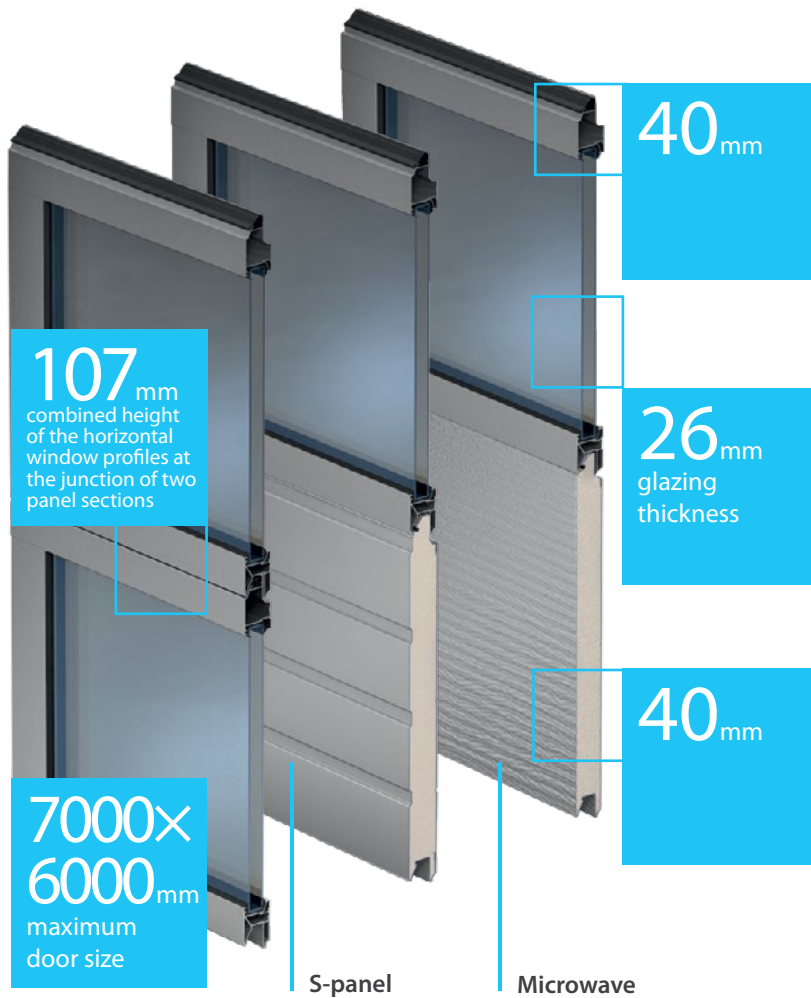
AluTrend Series Panoramic doors are made from aluminium profiles of **40 mm** thickness with galvanised steel fittings at affordable prices. A wide range of sizes and various colours are undisputable advantages of the AluTrend Series



In order to protect glazing from scratches SAN-plastic with antiabrasive coating is used.

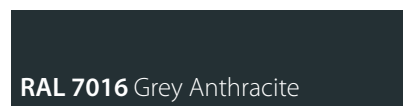
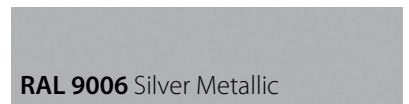
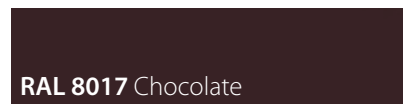
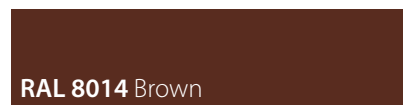
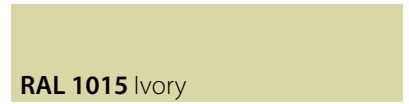
Maximal translucency of glazing is kept for a long time even after frequently cleanings.

Panoramic sections mix perfectly with sandwich panels of 40 mm thickness, creating a combined door leaf with a harmonious appearance.

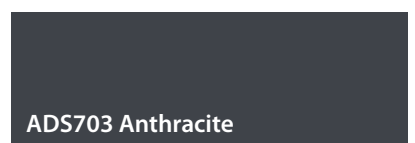


9 standard colours

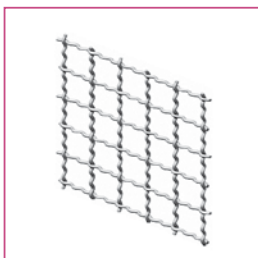
At no extra cost



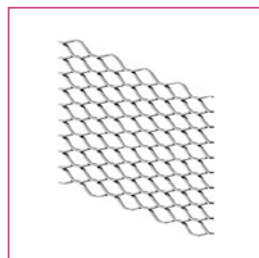
Colours are close to RAL scale.
Upon request, the doors can be painted both inside and outside in a different RAL colour or in the ADS703 colour.



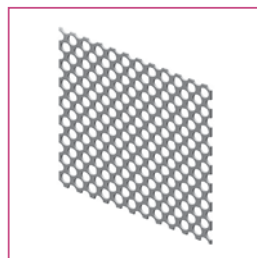
Special grid that could be mounted instead of glazing helps to enlarge the usage of panoramic doors. Perfect solution for car-parks.



Steel grid 40×40 mm.
Cross section of ventilation openings is 83%.



Steel drawn grid.
Cross section of ventilation openings is 58%.



Perforated aluminium sheet (perforation 8–12 mm).
Cross section of ventilation openings is 40%.





ProPlus
ROBUST
SECTIONAL DOORS



ProPlus

EFFECTIVE HEAT INSULATION AND DURABILITY

These **ProPlus** Series doors are made from sandwich panels of **45 mm** thickness, which provide the high thermal and mechanical properties of the doors.



The robust and highly insulated sandwich panel allows you to install the doors from the ProPlus Series in areas with stringent requirements for thermal insulation and in areas with high wind loads, as well as to produce doors of large sizes—**up to 8,000 mm×7,000 mm**.

Types of panels
for **ProPlus** Series doors



Door leaf balancing is carried out by means of a one-shaft or two-shaft system depending on the size of the doors.

The resource life of springs is **25,000 open/close cycles** and it is possible to increase the resource life of the springs **up to 100,000 cycles**.

The maximum size of these doors is:
width—8,000 mm, height—7,000 mm.

10 standard colours
At no extra cost

RAL 9016 White

RAL 1015 Ivory

RAL 3004 Purple Red

RAL 5010 Blue

RAL 6005 Green Moss

RAL 8014 Brown

RAL 8017 Chocolate

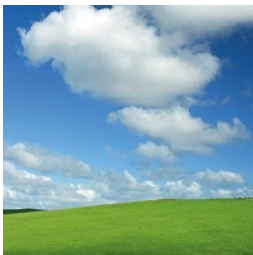
RAL 9006 Silver Metallic

RAL 7016 Grey Anthracite

ADS703 Anthracite

Colours are close to RAL scale.
On request, the doors can be painted both inside and outside in a different RAL colour.

Embossment **Woodgrain**



FUNCTIONAL
PANORAMIC DOORS
AluPro



AluPro

PRACTICABILITY AND UNIQUE STYLE



New glazing structure ensures:

- improved sealing;
- deformation resistance;
- excellent thermal insulation properties;
- scratch protection.



AluPro Series Panoramic doors are robust, reliable and functional aluminium doors with a wide choice of glazing and optional accessories.

Infill options for **AluPro** Series doors

26 mm double glazing



Modern impact-resistance material with max. **translucency** is used.

3 mm single glazing



Modern impact-resistance material with max. translucency is used.

26 mm aluminium composite infill material



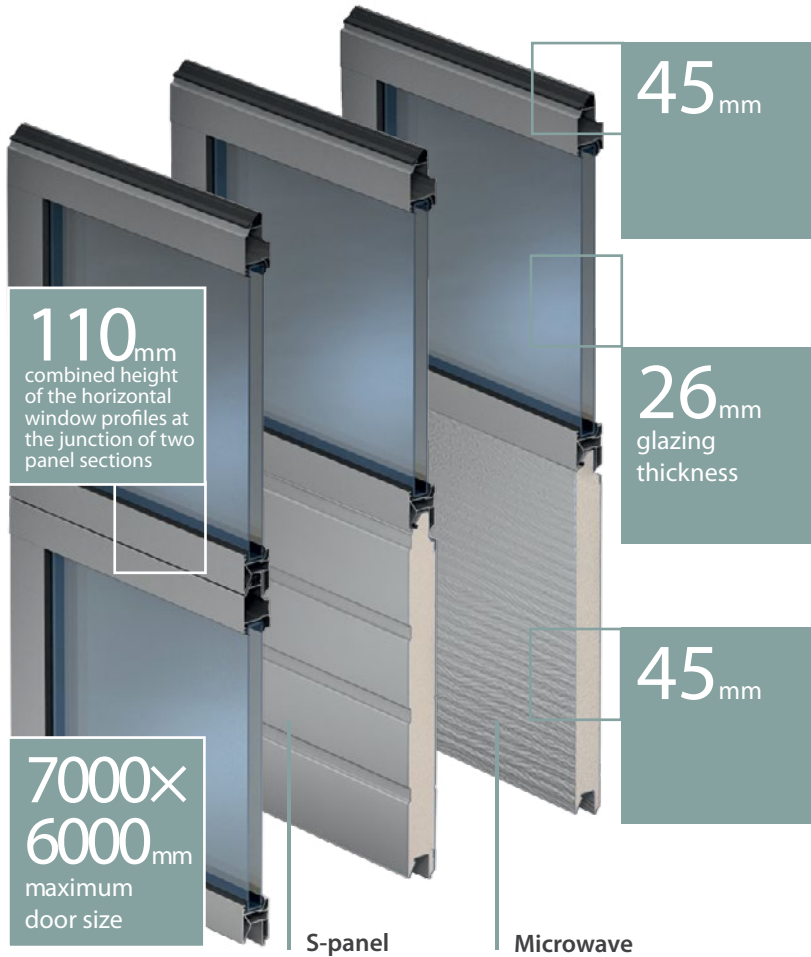
The panel is made from two sheets of aluminium with stucco embossment and is filled with polyurethane foam.

3 mm aluminium composite glazing

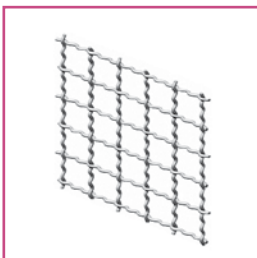


The panel is made from two sheets of aluminium without embossment and filled with polyethylene under high pressure.

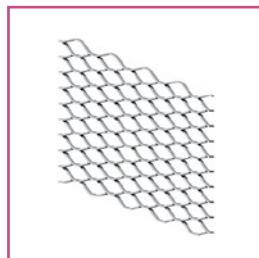
The design of the heads of these panels match the construction of sandwich panels, allowing panoramic panels to be combined with Microwave and S-panel sandwich panels.



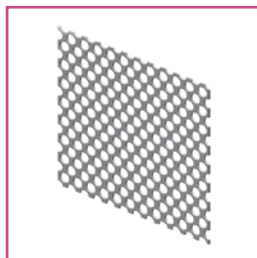
Special grid that could be mounted instead of glazing helps to enlarge the usage of panoramic doors. Perfect solution for car-parks.



Steel grid 40×40 mm.
Cross section of ventilation openings is 83%.



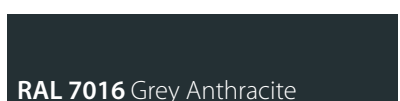
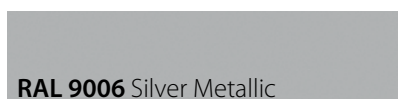
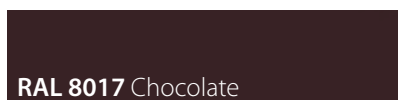
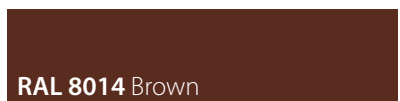
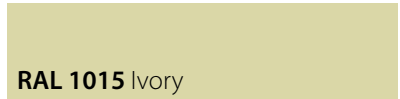
Steel drawn grid.
Cross section of ventilation openings is 58%.



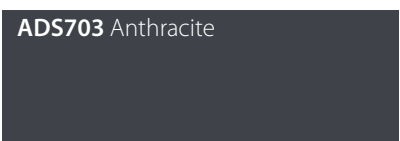
Perforated aluminium sheet (perforation 8–12 mm).
Cross section of ventilation openings is 40%.

10 standard colours

At no extra cost



Colours are close to RAL scale.
Upon request, the doors can be painted both inside and outside in a different RAL colour or ADS703 colour.







INSULATED
PANORAMIC DOORS
AluTherm



AluTherm

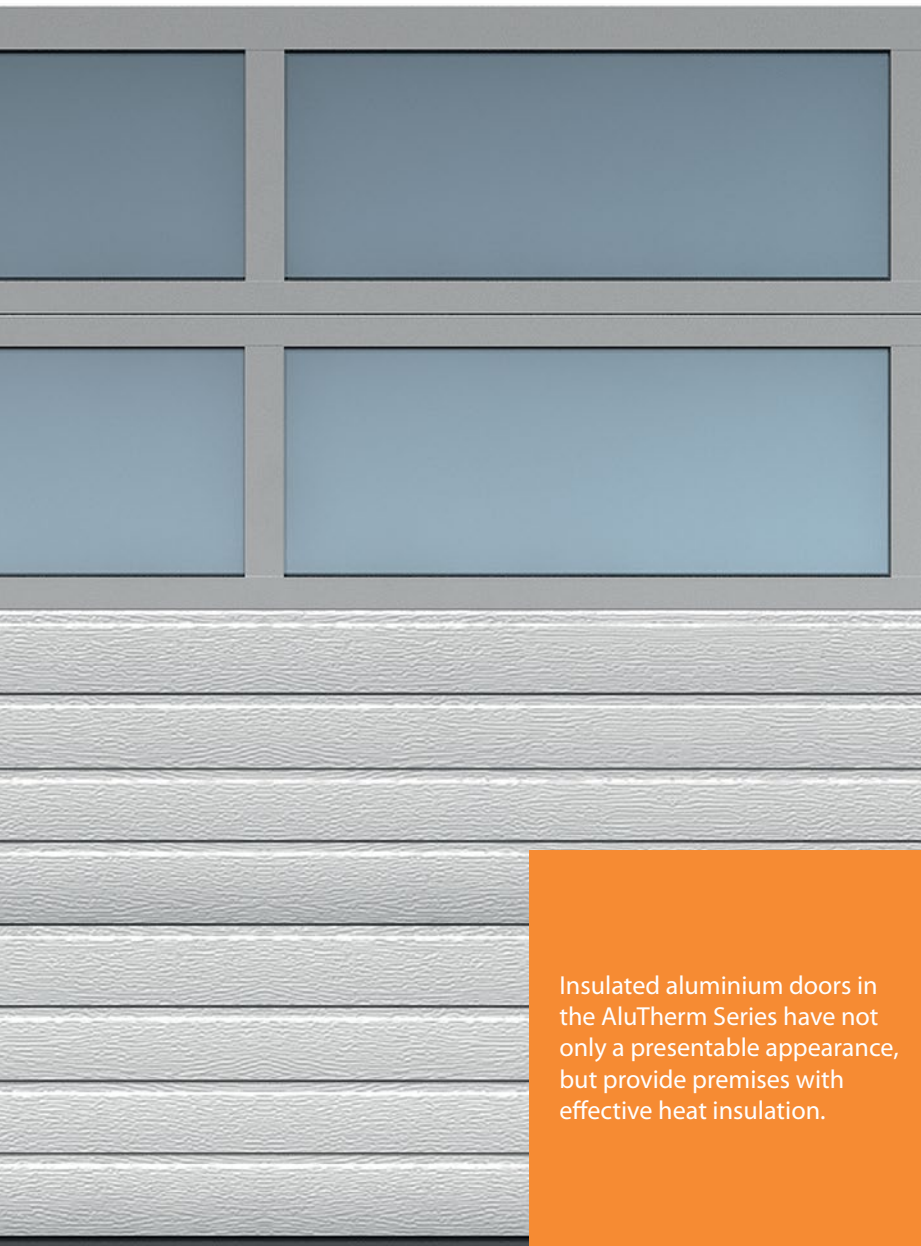
ATTRACTIVE APPEARANCE AND EFFICIENT THERMAL INSULATION



New glazing structure ensures:

- improved sealing;
- deformation resistance;
- excellent thermal insulation properties;
- scratch protection.

Infill options for **AluTherm** Series doors



Insulated aluminium doors in the AluTherm Series have not only a presentable appearance, but provide premises with effective heat insulation.



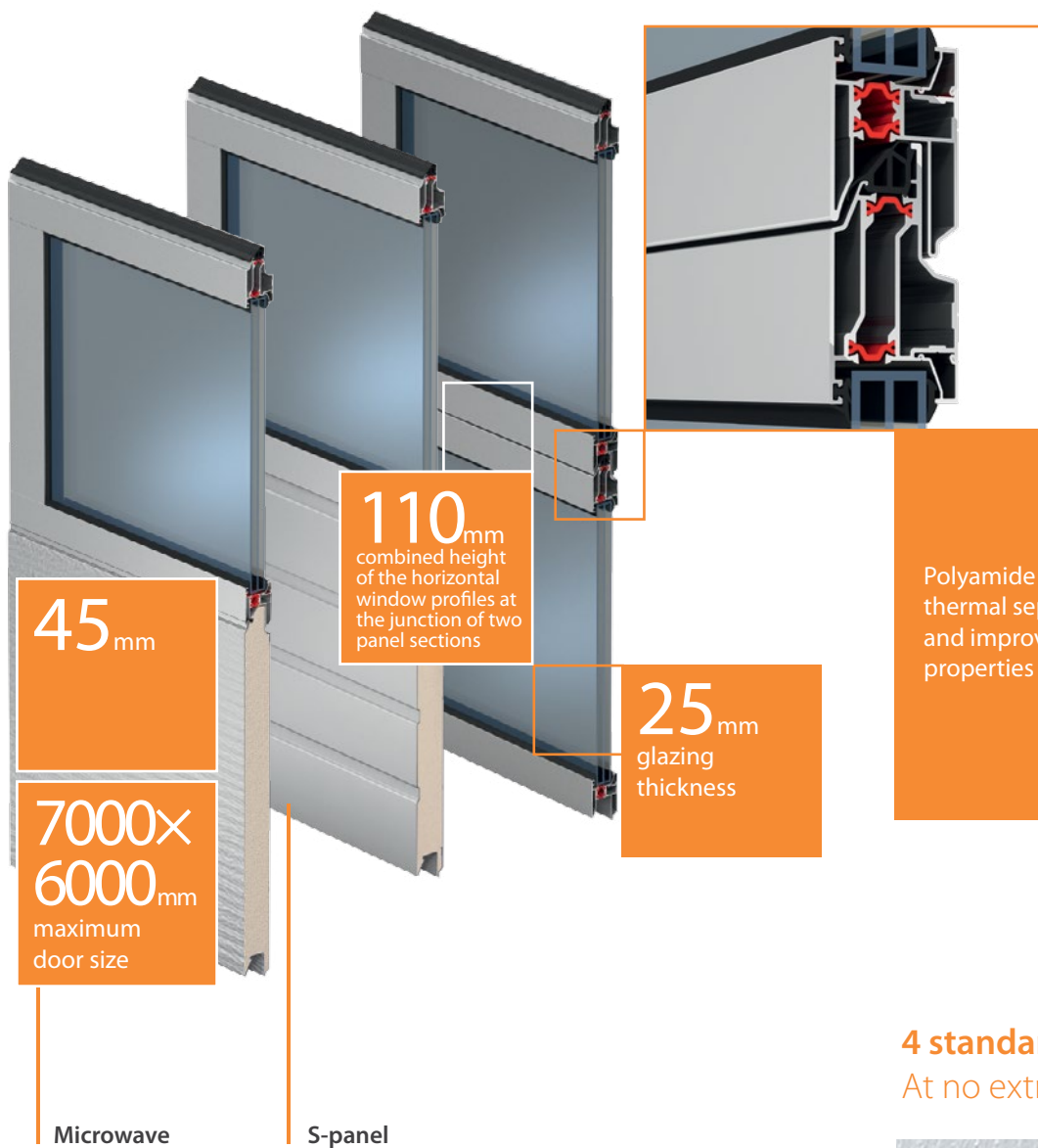
Modern impact-resistance material with max. translucency is used.



Modern impact-resistance material with max. translucency is used.

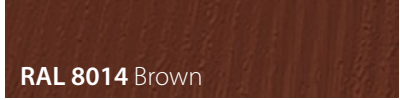


The panel is made from two sheets of aluminium with stucco embossment and is filled with polyurethane foam.



Polyamide inserts provide thermal separation of profiles and improve the insulating properties of panoramic doors.

4 standard colours
At no extra cost



Colours are close to RAL scale.

AluTherm Series doors can be either be made completely of panoramic panels or be combined with Microwave and S-panel sandwich panels.

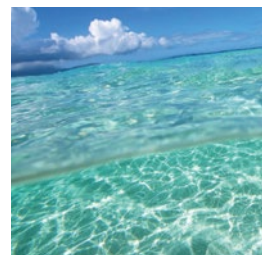
The use of thermal bridges in aluminium profiles improves the insulating properties of the doors up to **40%** and, therefore, makes it possible to save on space heating.





GLAZING

PANORAMIC
DOORS



NATURAL LIGHT AND AN EXCELLENT VIEW



Panoramic doors with a large glazed area are a modern combination of organic glass and metal, simplicity and narrow form, combined with the functionality of sectional doors.

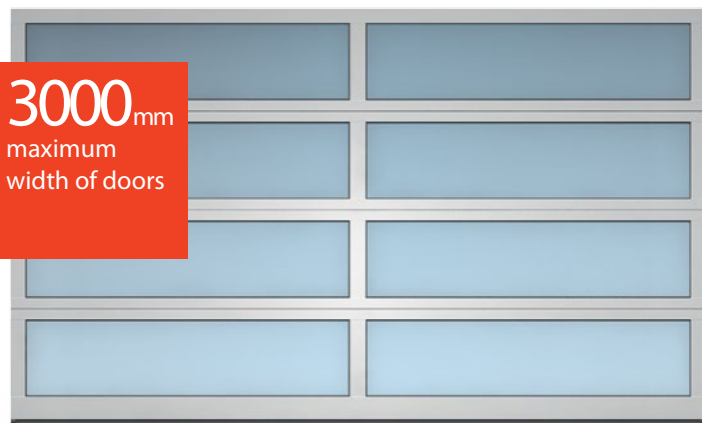
Panoramic doors with full glazing are as transparent as possible, filling the premises with natural light. Such doors are ideal for shops and car showrooms, which allow the beneficial display of products.



3000 mm
maximum
width of doors

AluPro AluTherm AluTrend

Doors up to 3,000 mm are made without impost.



3000 mm
maximum
width of doors

Doors up to 5,000 mm are made with one impost.

ProTrend

AFFORDABLE, SAFE AND RELIABLE

The use of advanced technology and years of experience in production have allowed us to create doors with a number of undisputable advantages. Carefully thought out design and high quality components provide attractive design, reliable and safe operation of ProTrend Series doors for many years.



Angle bars have concealed mounting: they are mounted behind the opening and not in contact with the outside conditions, so do not transmit cold into the premises. Due to the absence of freezing elements ProTrend Series doors have high thermal insulation.



Adjustable roller brackets allow the installer to achieve close proximity of the door leaf to the opening, eliminating draughts and providing additional thermal insulation of the premises and/or building.



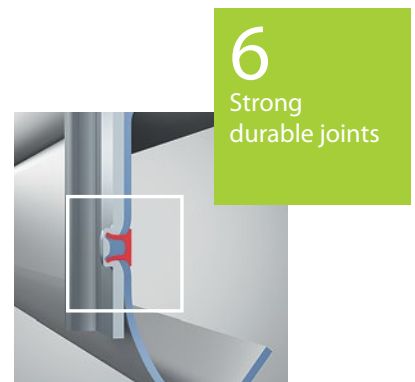
The resource life of springs is designed for 25,000 open/close cycles, which corresponds to 17 years of daily opening and closing 4 times. Springs with 100,000 open/close cycles can be installed in cases of extensive door use.



The standard set of components for industrial doors includes a device that blocks the door leaf in the event of a spring breaking preventing it from falling. The use of special brackets prevents lowering or falling the door leaf in the event of a cable breaking.



The adjustable connecting coupler allows turning the parts of the shaft relative to each other ensuring uniform tension of the cables, which is very convenient installation feature.



Robust and durable rivset joints are used on the track system. These joints do not damage the anti-corrosion galvanised coating of the tracks. The absence of protrusions provides smooth running of the rollers.

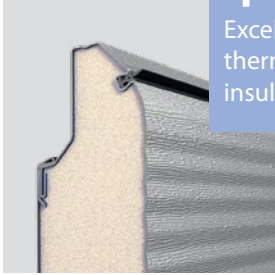
ProPlus

HIGHLY INSULATED, ROBUST AND DURABLE DOORS

Doors in the ProPlus Series are the ideal solution for energy-efficient buildings or premises with high humidity. With all the advantages of the ProTrend Series, the doors in the ProPlus Series extend the capabilities of their use due to improved heat insulation, high strength and high corrosion resistance.

1

Excellent thermal insulation



The 45 mm thick panel is a pledge of excellent thermal insulation. The thermal transmittance coefficient of the ProPlus Series doors is $0.94 \text{ W}/(\text{m}^2\text{K})$, which is comparable to the insulation qualities of a brick wall of 65 cm thickness. These doors retain heat and are ideal for use in premises with stringent requirements for temperature.

2

Reliable sealing



Sealing inserts made of an elastic and frost-resistant material—EPDM—are used around the perimeter of the doors for opening sealing. The bottom multi-chamber seal prevents the penetration of rain, snow and dust into the premises. The stoppers protect the bottom seal from excessive compression and protect optical sensors from damage.

3

Corrosion resistance



Roller brackets and intermediate hinges are made of stainless steel and have high anti-corrosion properties. Due to the multi-layer panel coating and painted side caps the ALUTECH door leaf withstands 750 hours of "salt fog", which corresponds to 15 years of use in coastal areas and polluted industrial areas.

4

Reliable panel connection



Intermediate hinges of a special form, "folded sheet" have high strength characteristics providing a reliable connection of the door sections. Tests have shown that the intermediate hinges can withstand a tensile load equal to 7,000 N or 715 kg. The possibility of hinges sagging and warping has been eradicated.

5

High wind resistance



The large thickness of sandwich panels—is the basis of the strength and stability of the doors to shock and wind loads. Wind resistance is rated as Class 4 under EN 12424—meaning the doors can withstand wind speeds of 120 km/h, which is validated by tests conducted at the Rosenheim Institute.

6

Trouble-free operation



When the width of the opening is more than 5 metres, the doors are equipped with duplex roller brackets and special profiles providing the door leaf with extra rigidity. This upgraded equipment is supplied at no extra cost and it enables reliable operation of maximum weight doors for many years in heavy operational conditions.



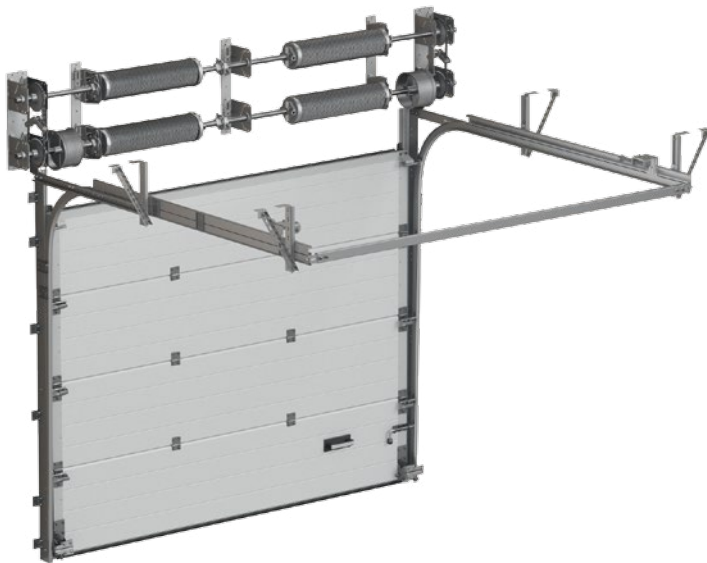
TWO-SHAFT DOOR BALANCING SYSTEM



IMPRESSIVE SOLUTIONS FOR OUTSTANDING PROJECTS



ROBUST AND RELIABLE CONSTRUCTION FOR LARGE DOORS



The two-shaft door leaf balancing system allows the manufacture of large industrial doors. These doors can be specified for installation on projects such as private aircraft hangars or rail maintenance depot entrances.

These large doors are equipped with wide side caps and duplex roller brackets, which ensure proper operation under extreme loads.

Special reinforcement profiles provide the door leaf with extra rigidity preventing deformation of the sandwich panels during large fluctuations in temperature and humidity, and high wind loads.



from 25 000
to 100 000
open/close cycles

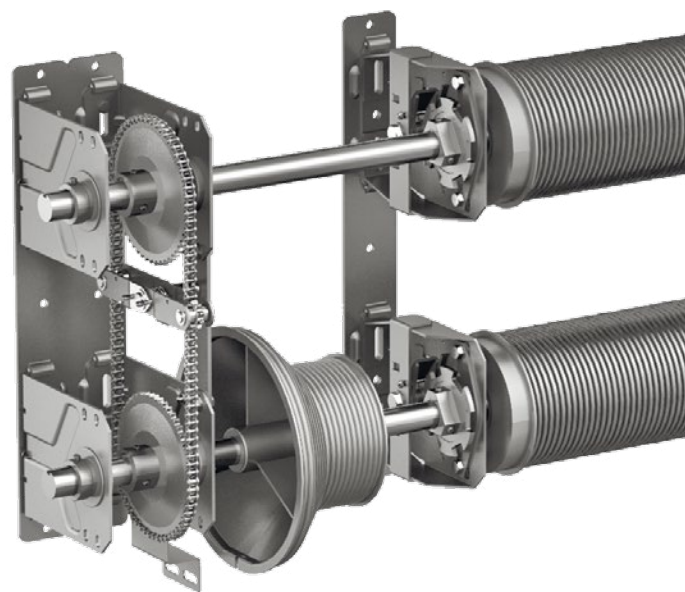
GUARANTEED SAFETY AND HIGH OPERATIONAL RESOURCE LIFE

The minimum resource life of springs is 25,000 open/close cycles. The resource life of springs can be increased up to 100,000 open/close cycles. The spring material is painted steel. A reinforced ratchet coupler is installed on each torsion spring which is designed to block the door leaf in the event of a spring breaking.

Automated doors are equipped with spring break and cable tension sensors at no extra cost. In the case of a spring or cable breaking the doors movement is stopped.

TWO-SHAFT DOOR LEAF BALANCING SYSTEM

A chain fitted with a tensioner is used between the two torsion shafts to transmit rotational moment. The chain system has a gear ratio of 1:1 and provides synchronous rotation of the two shafts. This ensures accurate operation of the torsion mechanisms and excellent door leaf balancing.





WICKET DOOR

CONVENIENT
AND PRACTICAL SOLUTION



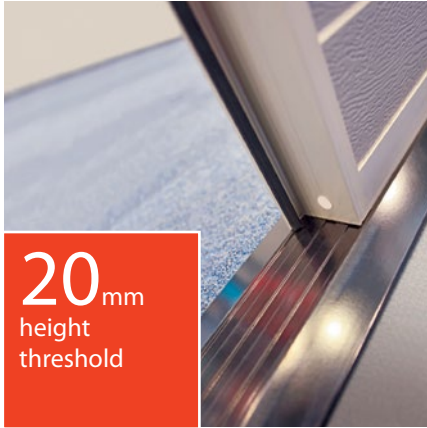
FUNCTIONALITY AND MAXIMUM COMFORT



A wicket door allows you to enter and exit the premises without opening the doors. This solution provides ease of use, saves energy and reduces wear and tear of the doors.

The comfort comes in the detail; therefore the design of the wicket is thought out to the last detail. Plastic catches eliminate leaf sagging, the canopy protects from moisture into the premises/building, and the metal handle will operate for many years.

The linear door closer makes the operation of the doors more comfortable, and plastic caps protect from gaps between the profiles and finger trapping.



TYPES OF WICKET DOORS

Wicket has a flat threshold of 20 mm

The flat form of the threshold allows easy transporting of goods and equipment through the wicket. The threshold is made of extruded aluminium profile, colour RAL 9005 (black). This type of wicket can be installed into doors in the ProPlus, ProTrend and AluPro Series with a combined door leaf type of up to 5,000 mm in width.



Wickets that have a low threshold of 100 mm

can be installed into doors in the ProPlus, ProTrend and AluPro Series with a combined door leaf type up to 4,500 mm in width. Wickets with flat or low thresholds comply with fire safety requirements and can serve as an emergency exit from the premises.



Wickets fitted with the standard threshold of 145 mm

can be installed into doors in the ProPlus, ProTrend and AluPro Series with a combined door leaf type for doors over 4,500 mm wide. Wickets with the standard threshold have a reinforced structure and are installed in large industrial doors.



Wickets fitted with the standard threshold of 149 mm

can be installed into panoramic doors in the AluPro Series (except combined infill). The threshold of 149 mm provides durability and reliability of the construction in panoramic doors with a wicket door.

COLOUR OF WICKET FRAMING

The colour of the wicket handle corresponds to the wicket framing.



Grey and brown
(powder coating, colour similar to RAL 8019)



Silver Metallic
(anodised coating, colour A00-D6)



It is possible to paint the wicket framing in other colours according to RAL scale.

SIDE DOOR

FUNCTIONALITY AND HARMONY OF STYLE

Side doors and sectional doors are made in the same style and fit harmoniously into the facade of the building, perfectly complementing each other.



The box frame of the side door are made of extruded aluminium profiles.

Side doors have a wide variety of build options: right-hand opening or left-hand opening; opening inwards or opening outwards.

The options of surface and integral (built-in) installation allow you to fit a side door in any opening to suit the wishes of your customer.

EPDM sealing inserts are used around the perimeter of the doors to ensure a reliable seal of the entrance opening.

OPTIONS

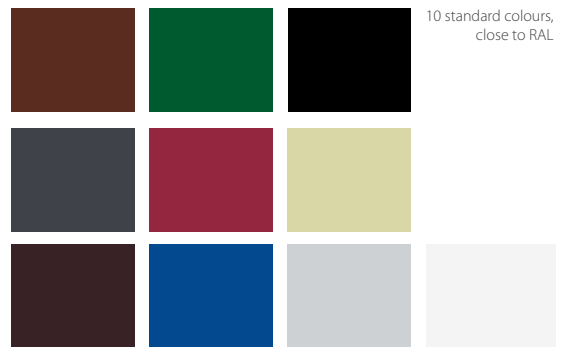
Standard colours of side door profiles:

- Silver (close to **RAL 9006**)
- White (close to **RAL 9016**)
- Grey-Brown (close to **RAL 8019**)

It is possible to paint side door framing in other colours according to the RAL scale



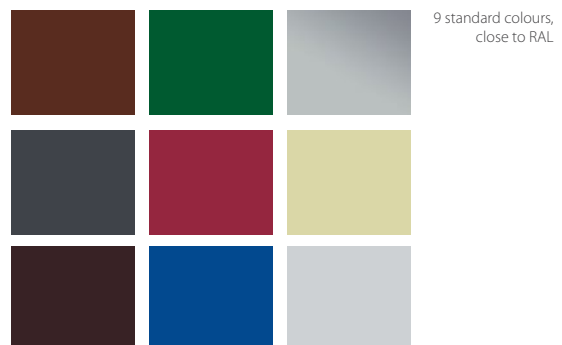
Microwave



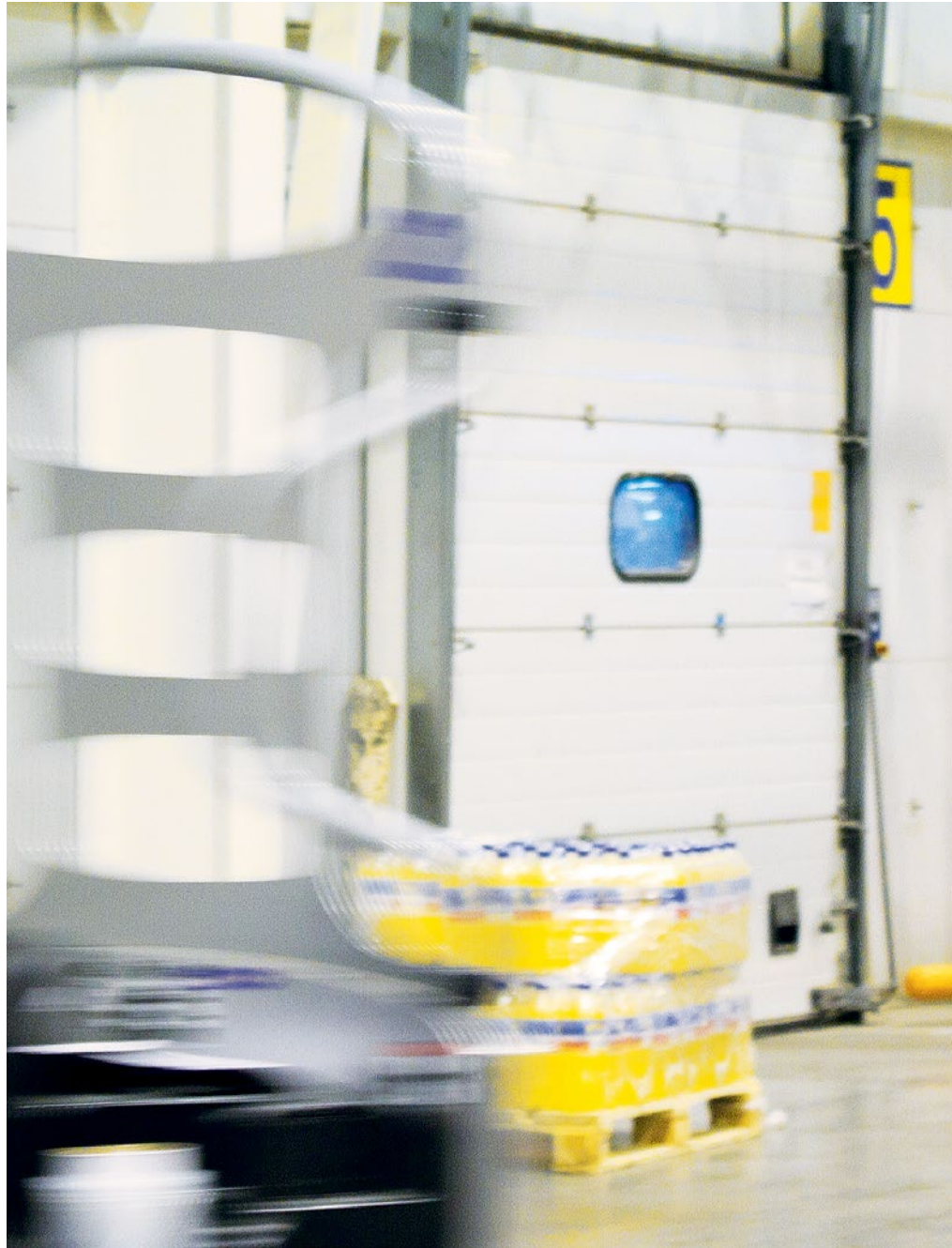
S-panel



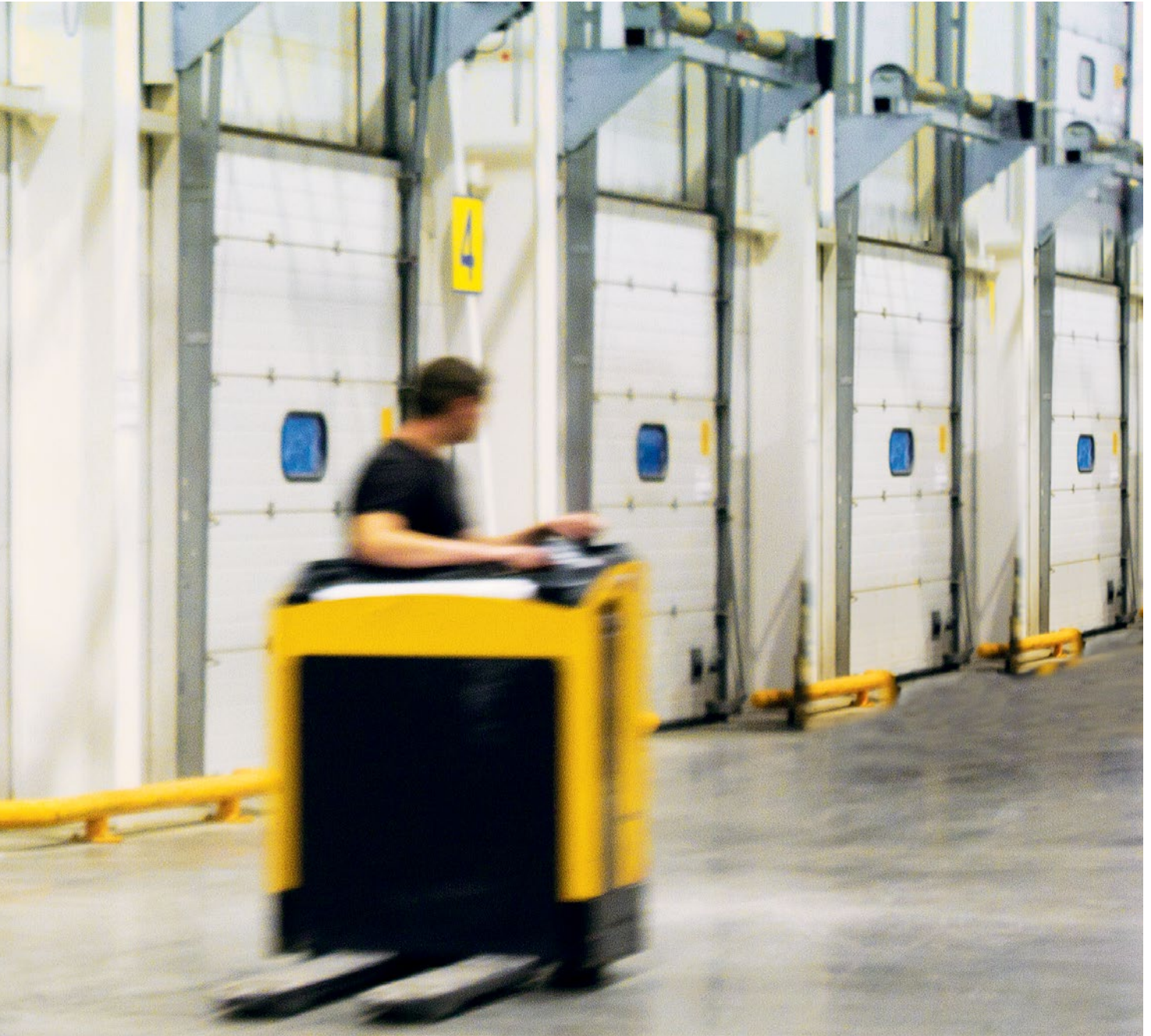
AluPro



AluTrend



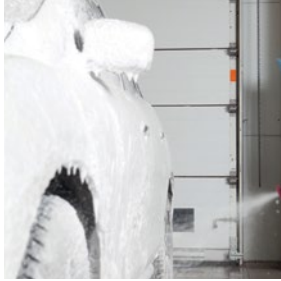
OPTIONS FOR INDUSTRIAL DOORS



WIDE RANGE OF ACCESSORIES

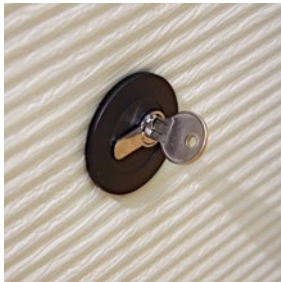


A wide range of accessories is available for your ALUTECH door, options allow you to add individual touches to the doors according to your wishes, provide additional comfort and protection of the property, as well as extend the life of the doors in harsh environments.



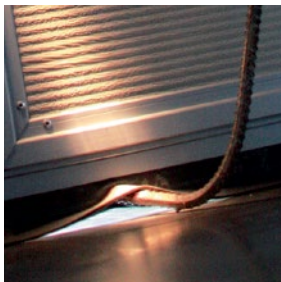
SET OF FITTINGS FOR PREMISES OR BUILDINGS WITH HIGH HUMIDITY

For doors, which are operated in areas with high humidity, such as car washes, a special anti-corrosion set of fittings is offered: a protective coating on tracks in addition to cables, roller spindles and other metal parts being made from stainless steel.



KEY LOCK

Key locks are offered for use on buildings without an additional entrance. It allows you to open and close the doors from both the inside and outside.



PROTECTION AGAINST UNAUTHORISED ACCESS

The anti-jacking device is provided for additional safety and protection against break-in or burglary—the device offers protection against door jacking.

In the case of unauthorised lifting of the doors, the protection device blocks securely the door leaf and prevents access to the building.



WINDOWS

Natural lighting through windows is an additional advantage. Various versions of windows will save on lighting in production facilities and workshops, whilst fitting harmoniously into the architecture of any building.





AUTOMATED DOORS
COMFORT
AND SAFETY



SMART DOORS



to **45** m²
the maximum
size of doors
for automation

Automated doors are easily controlled using a keypad or by radio remote control. Safety and alert accessories—warning lights, traffic lights, photocells, optosensors etc.—all contribute towards safe operation of the doors.

Powerful electric drives offer the ability to automate industrial doors of large sizes providing a high-intensity operation. They are mounted directly on the torsion shaft.



CONVENIENT
OPERATION



SAFETY



RELIABILITY



FUNCTIONALITY



ADJUSTMENT
TO AGGRESSIVE
OPERATING CONDITIONS

For automation of ALUTECH industrial doors we offer Marantec automatic equipment which can meet all customer needs in different price segments.

MARANTEC—high-quality and time-tested German automatic equipment. Powerful and reliable motors STA Series: with simple and economical integrated built-in control unit AS210 or functional CS300 external control unit. For special requirements, we offer STA-FU motors with frequency converter, providing a smooth start and stop, high rate of usage.

STA-sets with built-in control unit AS210:

- suitable for damp premises (IP65).
- Equipped with a manual mechanical release and chain for emergency lifting.



STA-motors with external control unit CS300:

- suitable for damp premises (IP65).
- Equipped with a chain for emergency lifting.
- Ample functionality.



STA-FU-sets with built-in frequency converter and external control unit CS310:

- provide a soft start and stop, allow to adjust the speed of movement of the door leaf.
- Ensure high rate of usage.
- Suitable for damp premises (IP65).
- Equipped with a chain for emergency lifting.



PERFECT DESIGN OF SANDWICH PANELS



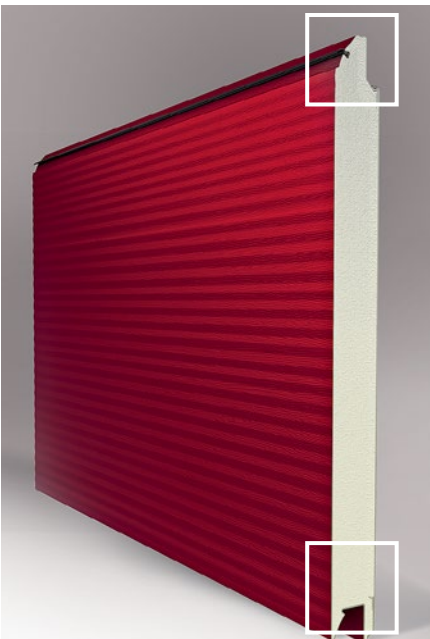
GUARANTEED SAFETY

The design of the ALUTECH panel protects against finger trapping, which is a requirement of European safety standards (EN 2604).



RIGID MOUNTING

Fastening screws areas are located at the junction of the outer and inner sheets (four layers of metal). This makes fitting of components such as hinges stronger. The reliable connection of steel sheets eliminates panel separation in the event of sudden lowering of the doors.



CLOSED CONTOUR OF PANELS

The face and inner steel sheets of sandwich panels are interconnected at the top and bottom. This eliminates the separation of panels when they are heated in the sun, which is particularly important for the southern regions, as well as for doors of dark colours.



THE BASIS OF RELIABLE AND SAFE OPERATION OF INDUSTRIAL DOORS



1

PROTECTION AGAINST SWELLING

An adhesive lacquer of **12 microns** thickness provides excellent adhesion of the steel sheets to the foam filling, protecting it from swelling during heating of the panels in the sun.

2

CORROSION RESISTANCE

A polyurethane coating of **20–25 microns** thickness and primer layer of **5–7 microns** are the basis of the high anti-corrosion properties of the panel. Zinc coating of the steel sheets of **16 microns** thickness is an additional protection against rust.

3

DURABLE COATING

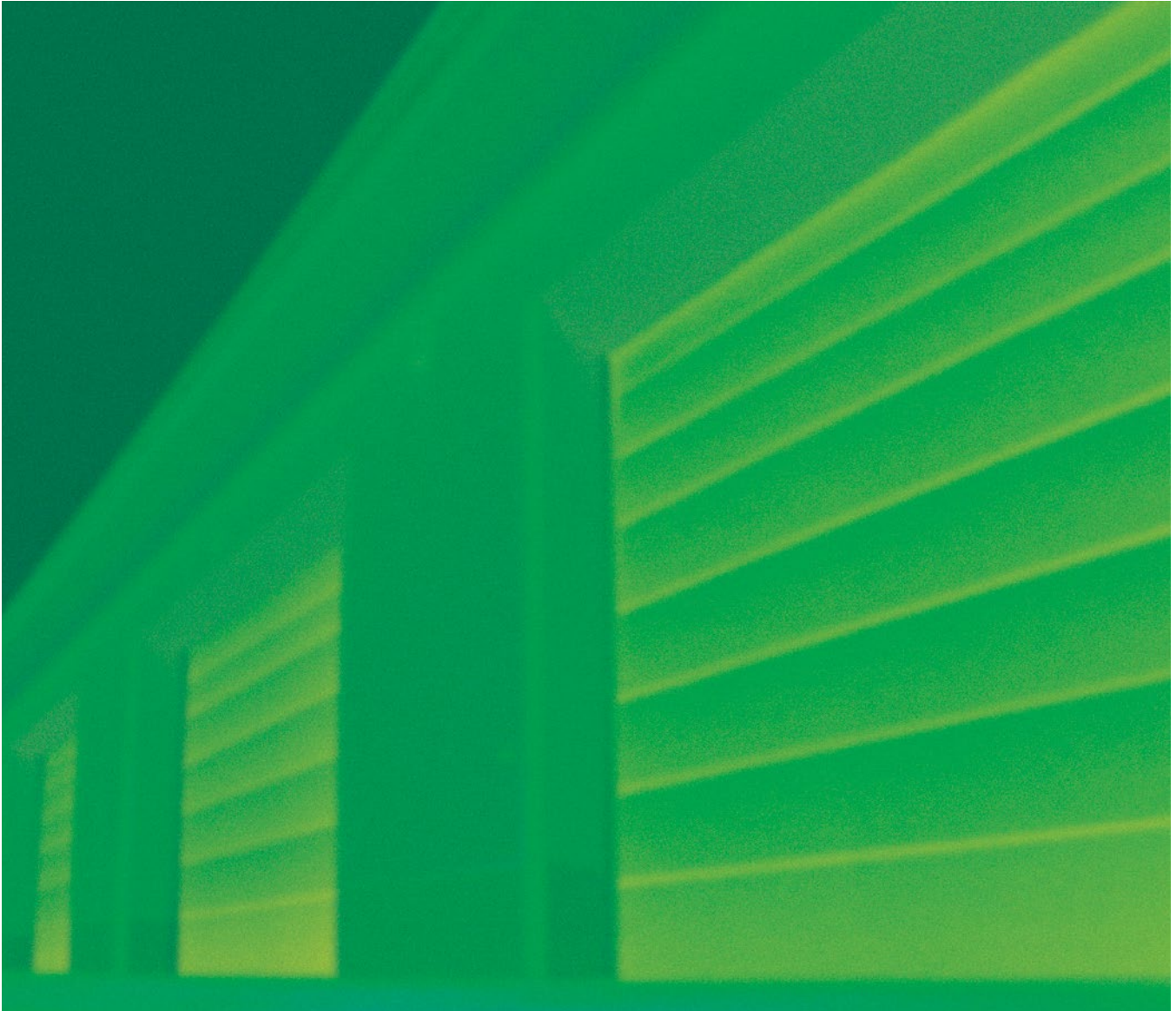
The polyurethane coating applied to the face side of the panel is modified **with particles of polyamide** (PUR-PA) which:

- is highly resistant to scratches, cuts and mechanical abrasion;
- tolerates well fluctuations in temperature and humidity;
- has high solidity and elasticity properties;
- has excellent anti-corrosion properties;
- is resistant to detergents and chemicals.

40_{mm}

45_{mm}

EXCELLENT HEAT INSULATION TO SAVING MONEY AND COMFORT



Effective thermal insulation of ALUTECH sectional doors saves energy and provides a comfortable room temperature.

The high thermal insulation properties of ALUTECH industrial doors are made possible by design features that ensure maximum energy efficiency.

Type of industrial doors	The thermal transmittance coefficient, W/m ² K
ProPlus	1.01
ProTrend	1.15
AluTherm with triple glazing	2.82
AluPro with double glazing	4.52

* comparison is made for doors of 5,000x5,000 mm in size on the basis of tests conducted at the Rosenheim Institute.

1 The thickness of the panel determines the thermal transmittance value of the sectional door. The thicker the panel is the lower the thermal resistance transmittance.

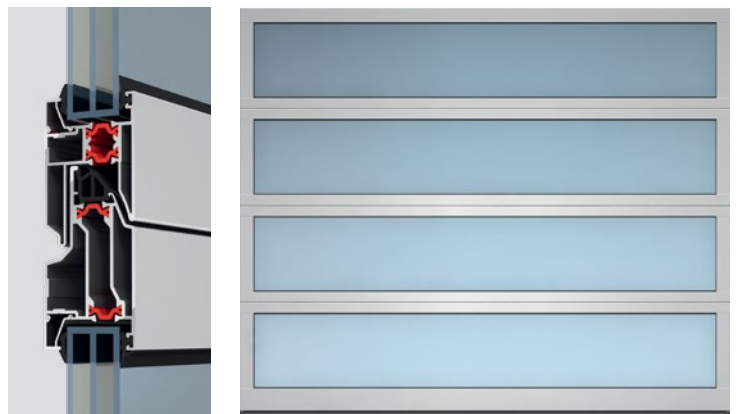
2 The space between the steel sheets is filled with **polyurethane foam**, which has high thermal insulation properties.

3 The panels are equipped with **EPDM sealing inserts** that preserve their high mechanical strength and elasticity at low temperatures. The seals have high wear resistance, are non-hygroscopic, and they are resistant to rain and aggressive environments.

4 Two-wing flexible EPDM sealing inserts are used to seal the top and sides of the opening. **Two wing seals** provide additional protection against heat loss. The bottom seal on the door, due to its shape, hides any minor unevenness in the floor and seals securely the bottom part of the opening.



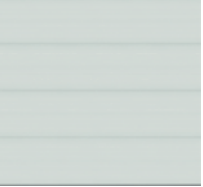
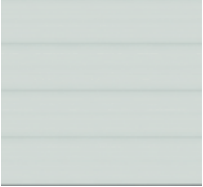



5 Thermal separation of the profiles used in doors from the AluTherm Series, improves insulation of panoramic doors **by 40%** providing a comfortable temperature in the premises whilst preserving the architectural style of the building. The use of double or triple glazing further improves the thermal insulation of aluminium doors.



TECHNICAL CHARACTERISTICS

The maximum size of these doors is:	Width, mm	
	Height, mm	
Sandwich panel	Thickness, mm	
	Type	Steel sandwich panel
		Aluminium panel with tripple glazing 25 mm
		Aluminium panel with double glazing 26 mm
		Aluminium panel with double glazing 22 mm
		Aluminium panel with single glazing 3 mm
		Aluminium panel with composite infill material 26 mm
		Aluminium panel with composite infill material 22 mm
		Aluminium panel with composite infill material 3 mm
		Aluminium panel with galvanised steel grid 40x40 mm. Cross section of ventilation openings is 83%.
		Aluminium panel with galvanised steel drawn grid. Cross section of ventilation openings is 58%.
		Aluminium panel with aluminium perforated sheet (perforation 8–12 mm). Cross section of ventilation openings is 40%.
	Pattern	
Door balancing system	Security systems (standard door set)	
Wicket	With a flat threshold of 20 mm, maximum size, mm	
	With a low threshold of 100 mm, maximum size, mm	
	With a standard threshold of 145 mm, maximum size, mm	
	With a standard threshold of 149 mm, maximum size	
Device for locking the doors	Locking bar (standard door set)	
	Key lock	
	Anti-jacking protection system*	
Security systems (standard door set)	Protection against door leaf falling in the case of a spring breaking	
	Protection against door leaf falling in the case of a cable breaking	
	Protection against finger trapping	
	Protection against cutting and hooking	

* for doors with a shaft operator.

					
	ProPlus	ProTrend	AluTrend	AluPro	AluTherm
8,000	7,000	7,000	7,000	7,000	
7,000	6,000	6,000	6,000	6,000	
45	40	40	45	45	
+	+	+	+	+	
+	—	—	—	+	
+	+	+	+	+	
—	—	—	—	—	
+	—	—	+	—	
+	+	+	+	+	
—	—	—	—	—	
+	—	—	+	—	
—	—	+	+	—	
—	—	+	+	—	
—	—	+	+	—	
Microwave, S-panel	Microwave, S-panel	Microwave, S-panel	Microwave, S-panel	Microwave, S-panel	
+	+	+	+	+	
+	+	—	+	+	
+, 5,000×7,000	+, 5,000×6,000	—	+, 5,000×6,000	—	
+, 4,500×7,000	+, 4,500×6,000	—	+, 4,500×6,000	—	
+, 7,000×7,000	+, 7,000×6,000	—	+, 7,000×6,000	—	
—	—	—	+, 7,000×6,000	—	
+	+	+	+	+	
+	+	+*	+*	+*	
+	+	+	+	+	
+	+	+	+	+	
+	+	+	+	+	
+	+	+	+	+	
+	+	+	+	+	

* for doors with a combined door leaf with a bottom sandwich panel.

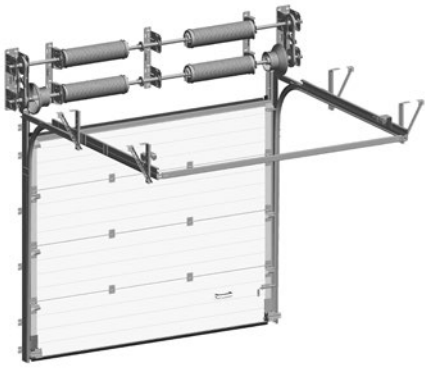


TYPES OF MOUNTING AND THE MINIMUM HEADROOM HEIGHT REQUIRED

One-shaft system

	<p>Low</p> <p>H = 230 mm without wicket H = 250 mm with wicket</p>		<p>Vertical with bottom shaft positioning</p> <p>$H = RM + 340 \text{ mm}$</p>
	<p>Standard</p> <p>H = 410 mm</p>		<p>Inclined</p> <p>H = 490 mm</p>
	<p>High with top shaft positioning</p> <p>H = 900 mm</p>		<p>Inclined high with top shaft positioning</p> <p>H = 900 mm</p>
	<p>High with bottom shaft positioning</p> <p>H = 1,795 mm</p>		<p>Inclined high with bottom shaft positioning</p> <p>H = 1,795 mm</p>
	<p>Vertical with top shaft positioning</p> <p>$H = RM + 340 \text{ mm}$</p>		<p>Inclined low</p> <p>H = 275 mm</p>

H—minimum headroom size, mm.
RM—height of the opening.



Two-shaft system

	<p>Standard</p> <p>$H = 840 \text{ mm}$</p>		<p>Inclined</p> <p>$H = 920 \text{ mm}$</p>
	<p>High with top shaft positioning</p> <p>$H = 1,275 \text{ mm}$</p>		<p>Inclined high with top shaft positioning</p> <p>$H = 720 \text{ mm}$</p>
	<p>High with bottom shaft positioning</p> <p>$H = 2,100 \text{ mm}$</p>		<p>Inclined high with bottom shaft positioning</p> <p>$H = 2,100 \text{ mm}$</p>
	<p>Vertical with top shaft positioning</p> <p>$H = RM + 590 \text{ mm}$</p>	<p>S— required size of the side room space</p> <p>for doors with manual control $S = 110 \text{ mm}$</p> <p>for doors with a chain reducing gear $S_{\min} = 240 \text{ mm}$ $S_{\max} = 360 \text{ mm}$</p> <p>for automatic doors $S_{\min} = 310 \text{ mm}$ $S_{\max} = 440 \text{ mm}$</p>	
	<p>Vertical with bottom shaft positioning</p> <p>$H = RM + 340 \text{ mm}$</p>		

H—minimum headroom size, mm.
 RM—height of the opening.



Alutech Door Systems



AluminTechno



Alutech Incorporated

The ALUTECH Group of Companies is one of the leaders in the production of roller shutter systems and sectional doors systems in Western and Eastern Europe, and a leading manufacturer of aluminium profile systems in the CIS countries. ALUTECH group includes five manufacturing plants, among them there are 3 factories for the production of sectional doors in Belarus, Russia and Ukraine.

All the enterprises of the Company are equipped with high-technology equipment, such as a modern high-performance line for the production of sandwich panels for sectional doors, roll-forming lines, a facility for painting and cutting aluminium strip, high-tech production lines for aluminium extruded profiles, automated complexes for die casting aluminium parts, modern powder coating lines and the largest facility in the CIS for the anodising of aluminium profiles.

Due to having their own production units within the Company, the specialists in the ALUTECH Group are able to control the quality of the products at all stages of the industrial process: from purchase of raw materials through to creating the finished products and their packing. The quality management system used throughout the Group is certified in compliance with the requirements of ISO 9001 within the TÜV CERT system.

The ALUTECH Group of Companies is actively expanding its markets. Nowadays, ALUTECH sectional doors are in demand in the 65 countries around the world: CIS countries and the Baltic, as well as in Germany, France, Austria, Holland, Czech Republic and other countries in Western and Eastern Europe. Products manufactured by the ALUTECH Group of Companies are installed on thousands of enterprises. ALUTECH sectional doors perfectly combine comfort, safety, aesthetic quality and style worthy of you and your house.

