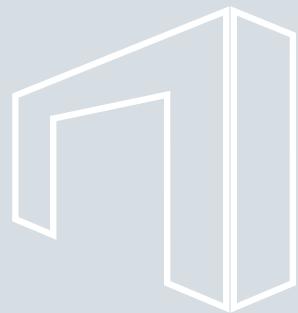


www.isodoor.com.tr





iSODOOR®

**“EVERY BUILDING DESERVES A
QUALITY DOOR”**





Isodoor founded in 1992 in Nederland and established manufacturing facility in Turkey in 2007. Since then we offer Innovative Design, Functionality, Quality and Durability with in-house production of complete range of sectional door processes.

With modern technology, a strong team and innovative studies, we have achieved a strong position in the international market and carried out many projects.

In 2019, we continued our investments by establishing our Marmara Branch in Istanbul with the aim of serving a wider customer.

Isodoor specializes in manufacturing full range of Industrial, commercial and residential sectional doors. Our sectional door systems are designed and engineered for complete satisfaction of professional dealers and installers.

We also have strategic alliances with top door automation manufacturers, allowing us to offer a complete range of industrial and garage door automation.

As a leader and well-known brand in local sectional door market, Isodoor expands its sales network in EMEA region. Our presence in the EMEA region makes us a strong, future oriented partner for sectional door projects.

As Isodoor, we are here for you with the first days of excitement and experience.

Mission

We are committed to manufacture the safest and cost-effective door solutions without compromising from the quality. We make buildings more secure and environmental. We will keep our position as a leading door manufacturer, with the help of talented team members.

Vision

With the inspiration we get from our customers we will keep offering quality doors, by implementing new technologies and best available Service.

Our Values

- Customer Focus • Business Ethics • Respect to the Environment and Society
- Resource Management and Productivity
- Teamwork • Creativity • Perfection

WHY SHOULD YOU CHOOSE ISODOOR?

We tried to collect the reasons we believe to be important for you to choose us under the following headings.

We are honored to see you among our customers.



International Quality

Isodoor branded sectional doors and sandwich panels and door hardware parts have been tested by the international test center RiSE-SP.



Wide Dealer Network

Turkey's 81 provinces and 35 countries worldwide, we work with our partners to deliver the same quality service to our valued customers.



Advanced Manufacturing Facility

Our company, which manufactures at European standards, has advanced automation systems in an open area of 14.000 m² and closed area of 6.500 m²



Experience

With 30 years of industry experience, we maintain a quality service concept in order to provide the most suitable solution for your needs.



Solution Oriented Innovation

Our R & D unit produces sandwich panels in different models and colors and works with the understanding of harmony is important for your buildings, Isodoor necessary for harmony.



5 Years Warranty

Our sandwich panel products used in sectional doors are covered by a 5-Year Warranty against paint corrosion and deformation.



Spare Part

10-year spare parts availability guarantee for products supplied by our company. In this way, you can use your doors with peace of mind for years.



Fast Production

By equipping our production facilities with advanced automation systems, we are able to make fast production and timely delivery.



index

INDUSTRIAL DOORS	08
WINDOW TYPES	20
SERVICE DOOR	26
LIFTING TYPES	30
FULL-VIEW SECTIONAL DOORS	38
MIRRORED INDUSTRIAL DOORS	46
ALU-FRAMED PANEL TYPES	48
INDUSTRIAL DOOR AUTOMATIONS	52
HIGH SPEED ROLL UP PVC DOOR	58
HIGH SPEED FOLDING PVC DOOR	62
DOCK SHELTER SYSTEMS	66
DOCK LEVELER SYSTEMS	70
GARAGE DOOR AUTOMATIONS	74
PANELS	88
SPRINGS	96
INDUSTRIAL DOOR COMPONENTS	98
GARAGE DOOR COMPONENTS	99
TECHNICAL INFORMATION	100
CERTIFICATES	102





Industrial Doors

Industrial Doors

Sectional Industrial Doors are robust and long-lasting doors, providing security and functionality for all logistical, industrial and warehouse Requirements.

Industrial Sectional Door panels are 40 mm thick sandwich panels and designed for Acoustic and Thermal insulation; made of high density (48-50kg/m³) polyurethane, fully encapsulated with roll-formed galvanized and 2-layer coated steel.



Thanks to its design, sectional industrial doors are perfect solution for the best insulation and security. Sectional doors can be adapted easily to any type of space and should be designed and installed according to the facilities architectural structure considering the gap between the ceiling and the top of the door as standard lift, low lift, high lift and vertical lift track applications.

Sectional industrial door systems provide smooth and safe loading and unloading in enterprises with level adjustable ramps and truck bed compactor PVC bellows. Sectional industrial door systems slide open parallel to the ceiling, saving space and the door opening can be used clearly.

Industrial door systems can be produced for factories, warehouses or buildings in accordance with the passing gap and height. The sectional industrial door works by sliding in the side rails by using the space between the ceiling height and the upper door level.



Industrial Doors



Industrial Doors



Sectional doors are manufactured as a standard with white panels (inside and outside RAL 9002) and other color options are available in accordance with the exterior surface of the buildings.

In addition, it can be used with different lifting types depending on the details in the area to be applied. Sectional doors, which play an active role in vehicle and pedestrian traffic, can be applied as standard button, manual chain hoist or remote control. Sectional industrial door system works with a motor system with the side grip directly from the shaft or with a chain system with a chain hoist that operates in the same way.

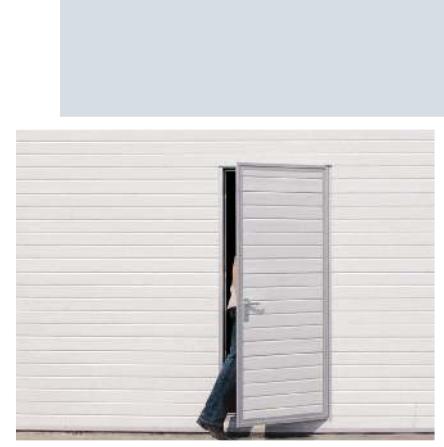
Sectional industrial doors can be operated by installing a 380 V-AC / 50 Hz electric motor and / or manually with a torsion spring system that balances the door weight; due to spring system door weight does not affect the manual operation. The springs are manufactured as a standard 15.000 cycles; besides, as an option spring cycle can be increased.





Our industrial doors consist of steel sandwich panels. Sandwich panels are obtained by injecting high pressure polyurethane between galvanized sheet metal plates. Excellent heat insulation is provided by high pressure polyurethane. The wind resistance of our panels is Class 3. The sheet plates on the front and back surfaces of the sectional industrial door panels are firmly connected to each other in four layers.

Windows made of double-walled acrylic glass can be opened in desired rows for lighting purposes on the door panels.

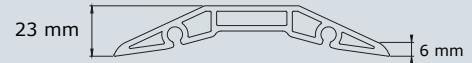


Sectional Industrial Door is provided with EPDM seals between the panels, top, sides and bottom part of the door. Seals prevents the passage of air dust and water and provides high level of insulation.





Sectional door can be divided into a part of the door with fixed panels in to regulate pedestrian traffic in doors with a large width. Pass door can be placed inside these fixed panels. In cases where the width is not too much, the pass door can be opened on the moving panels of the door. In this alternative, the industrial door and pass door are opened and closed as a whole. When the pass door is open, the motor will not be activated and it will prevent your door from getting stuck.



LOW STEP PROFILE



Wheeled vehicles can easily pass over the low threshold pass door. It is 6 mm at the bottom and 23 mm at the top. Thanks to the hidden hinges, the pass door works more easily and does not spoil the overall door appearance.



HIDDEN HINGES

USE
SAFELY
THE
FOUR
SEASONS





Sectional industrial doors can be easily opened manually or by installing a 380 V-AC / 50 Hz electric motor and / or with a torsion spring system that balances the door weight. Door weight does not affect the user. The springs are manufactured as a standard with resistance to 15,000 movements. It can be optionally installed for longer life springs.

Sectional industrial door panels are pulled by winding steel ropes into drums that vary

according to the size and lifting type of the door. If the ropes are broken or the springs are broken or damaged in any way, the door is prevented from falling with the rope break safety system and the spring break safety system. In case of power failure, industrial door motor systems are opened manually by unloading the motor shaft or with the help of a chain. It does not require lubrication for lifetime. Meanwhile, even if there is electricity, manual control has priority in terms of user safety.

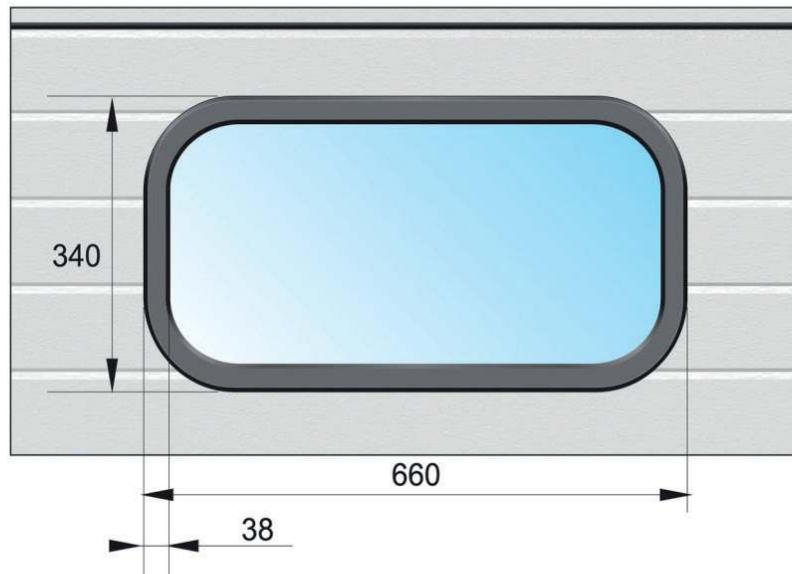
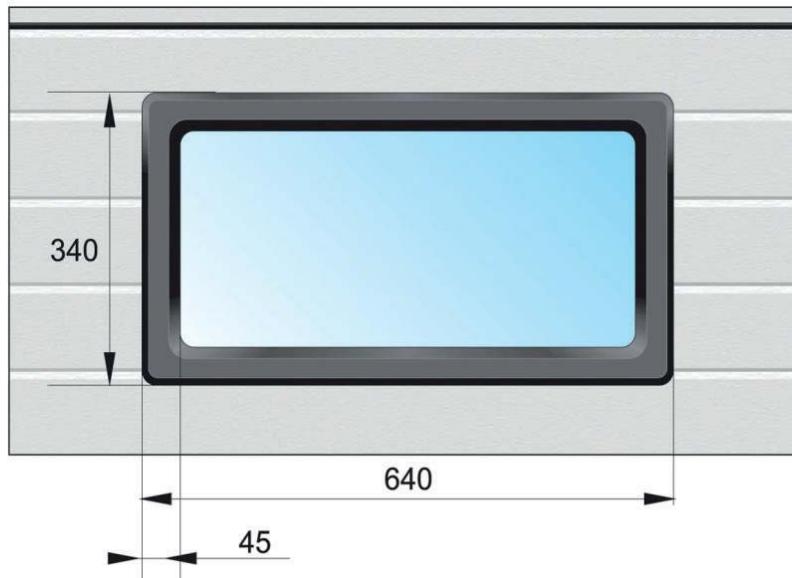
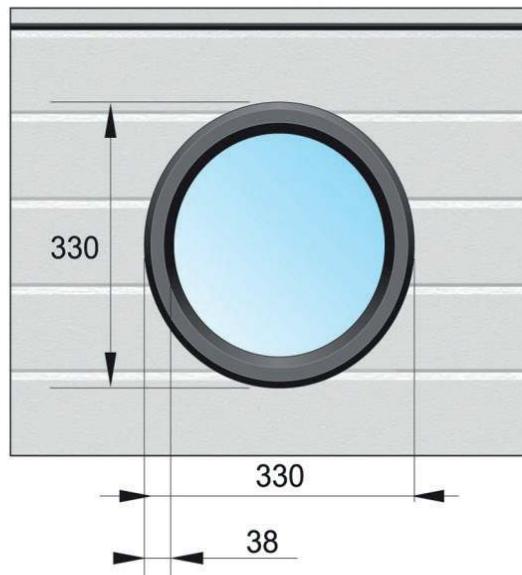




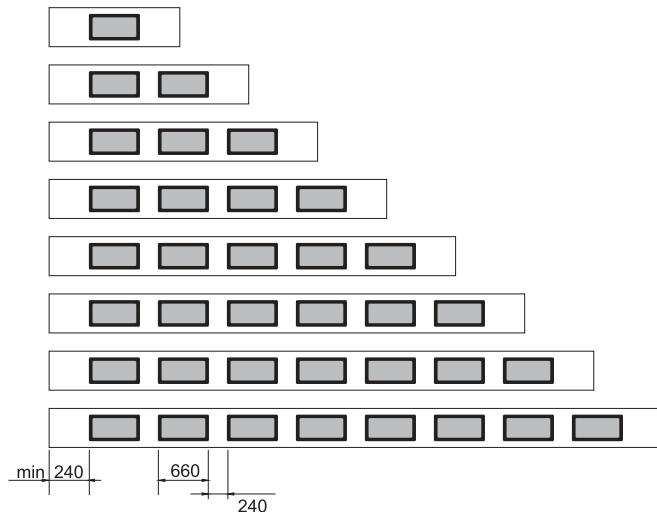
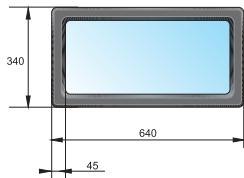


Windows

Types of Windows

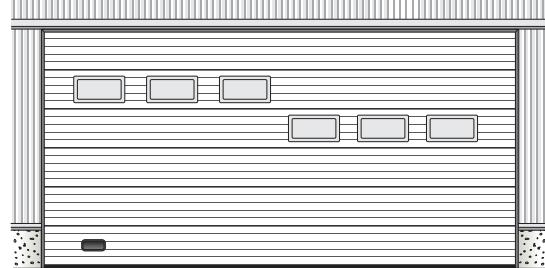
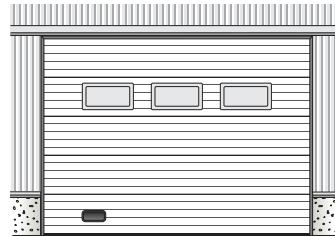
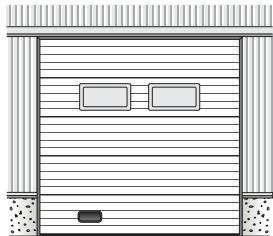
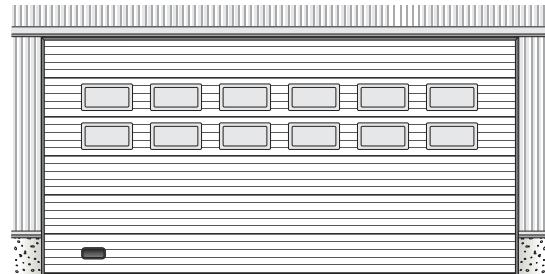
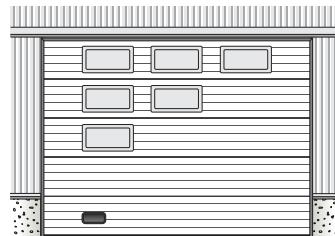
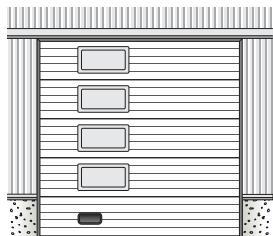
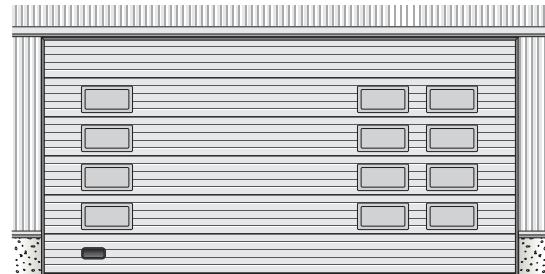
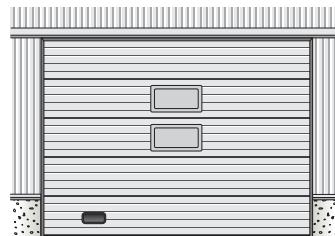
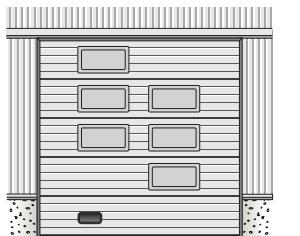


Windows Rectangular

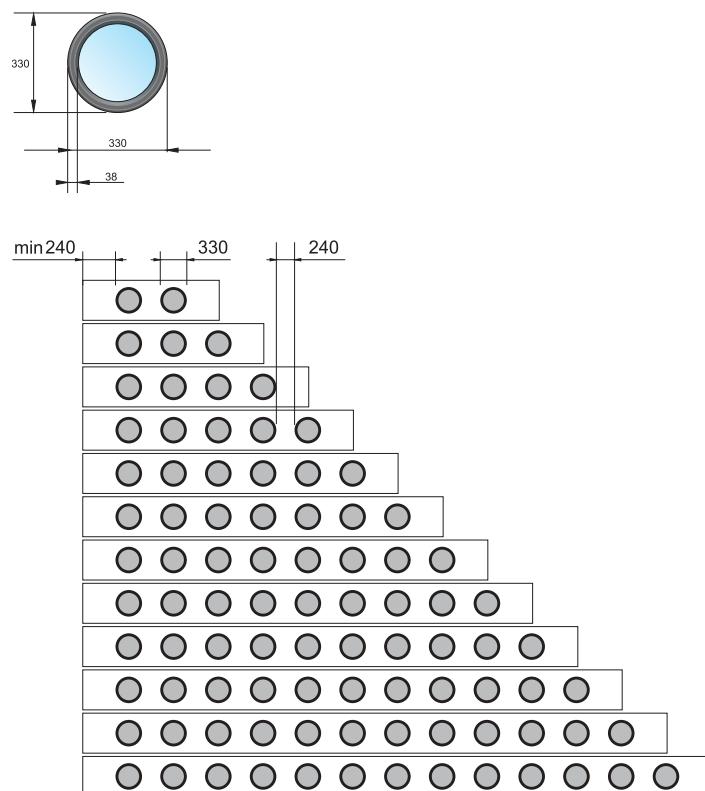


Windows quantity in panel	Door width
1	1140 - 2040
2	2050 - 2940
3	2950 - 3840
4	3850 - 4740
5	4750 - 5640
6	5650 - 6540
7	6550 - 7440
8	7450 - 8000

Rectangular window spacing samples

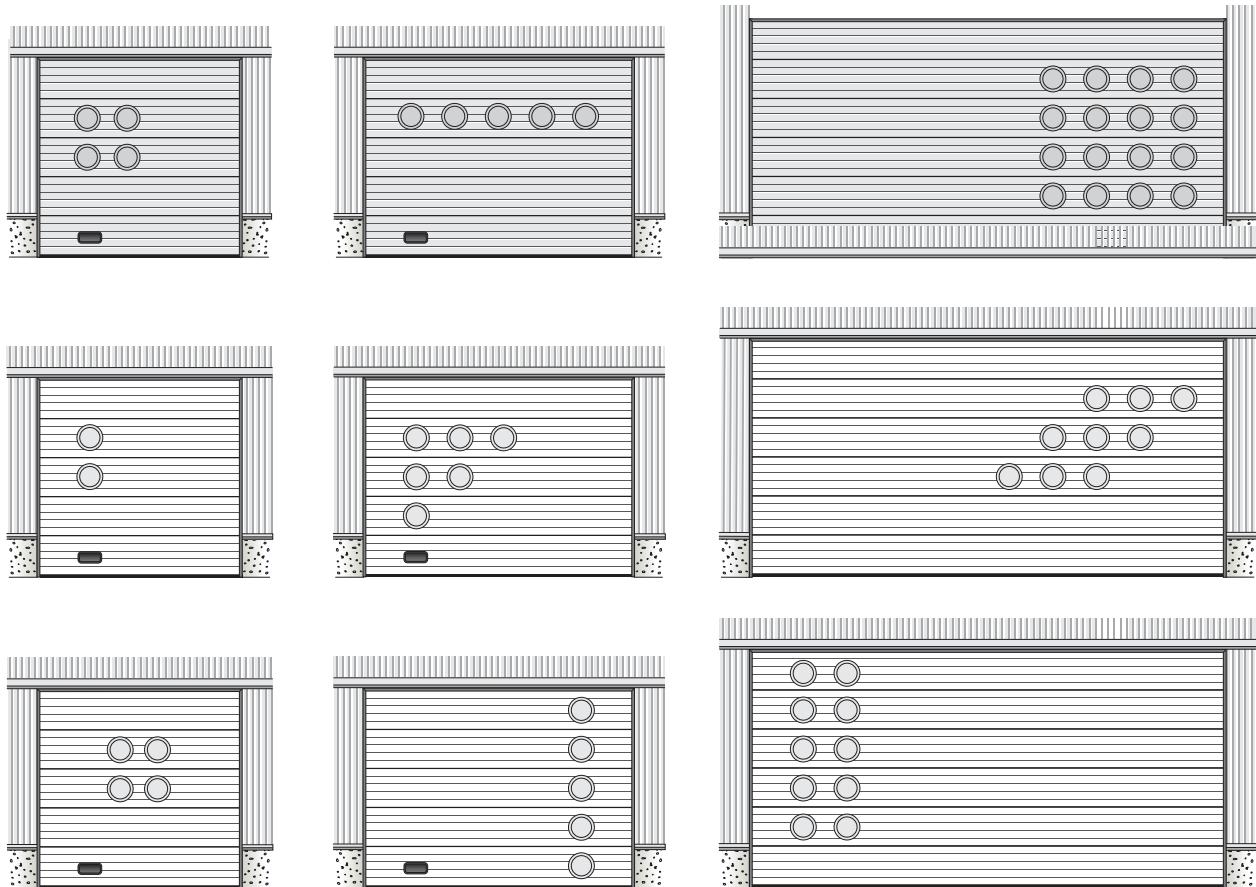


Windows Round



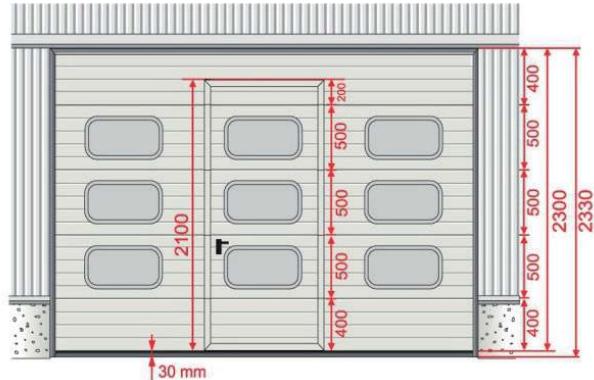
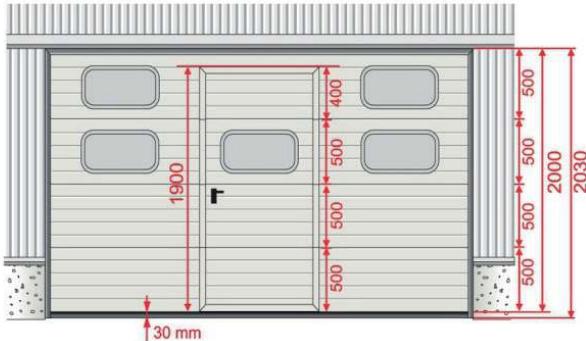
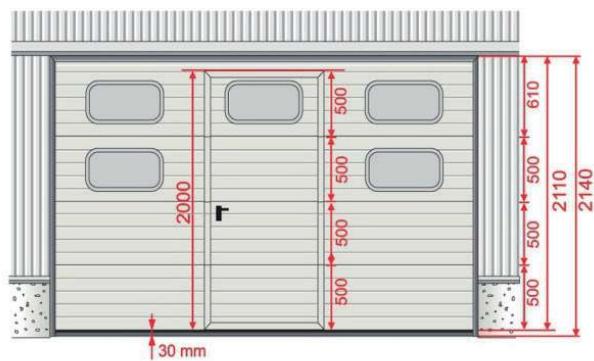
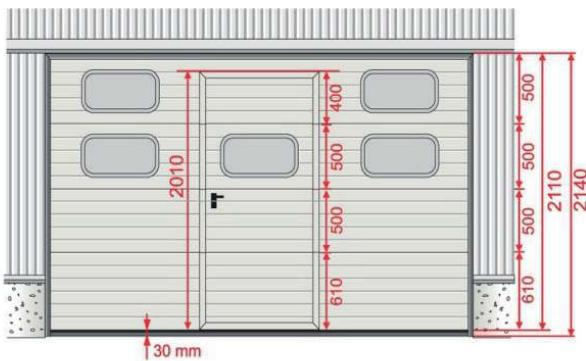
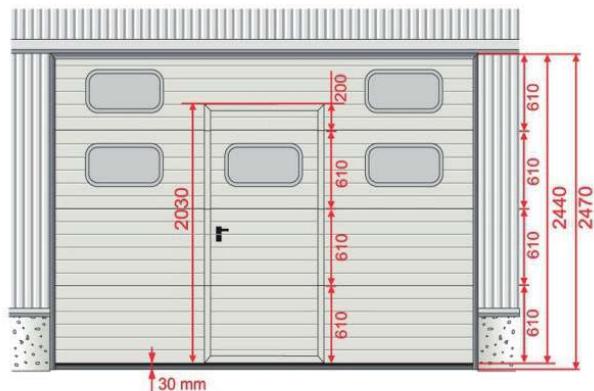
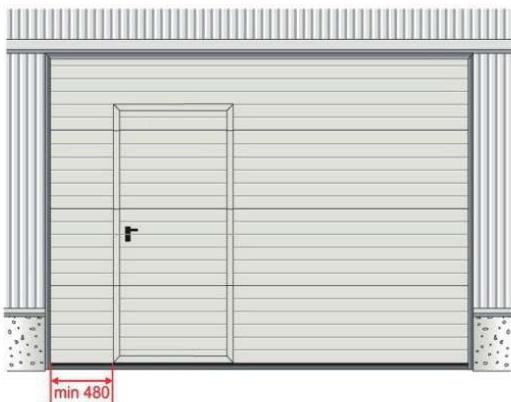
Windows quantity in panel	Door width
2	1380 - 1940
3	1950 - 2510
4	2520 - 3080
5	3090 - 3650
6	3660 - 4220
7	4230 - 4790
8	4800 - 5360
9	5370 - 5930
10	5940 - 6500
11	6510 - 7070
12	7080 - 7640
13	7650 - 8000

Round window spacing samples

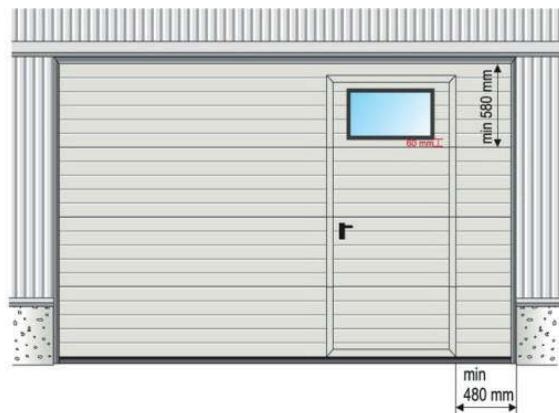
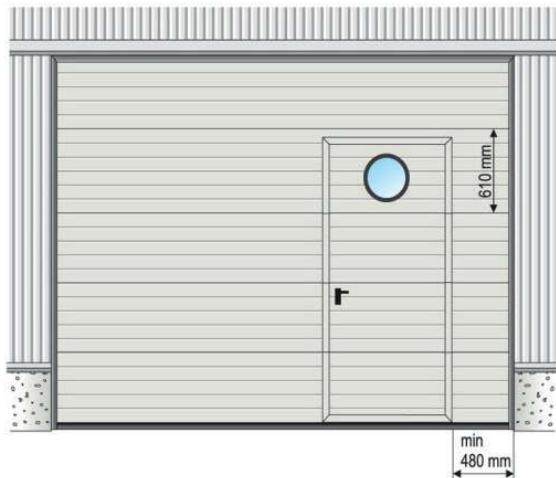
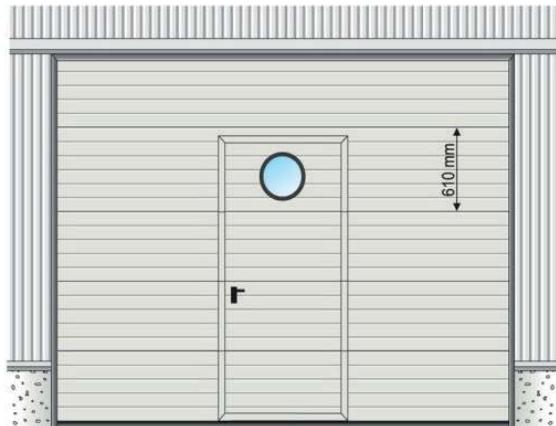


Windows Location

on panels and doors according to panel width & quantity



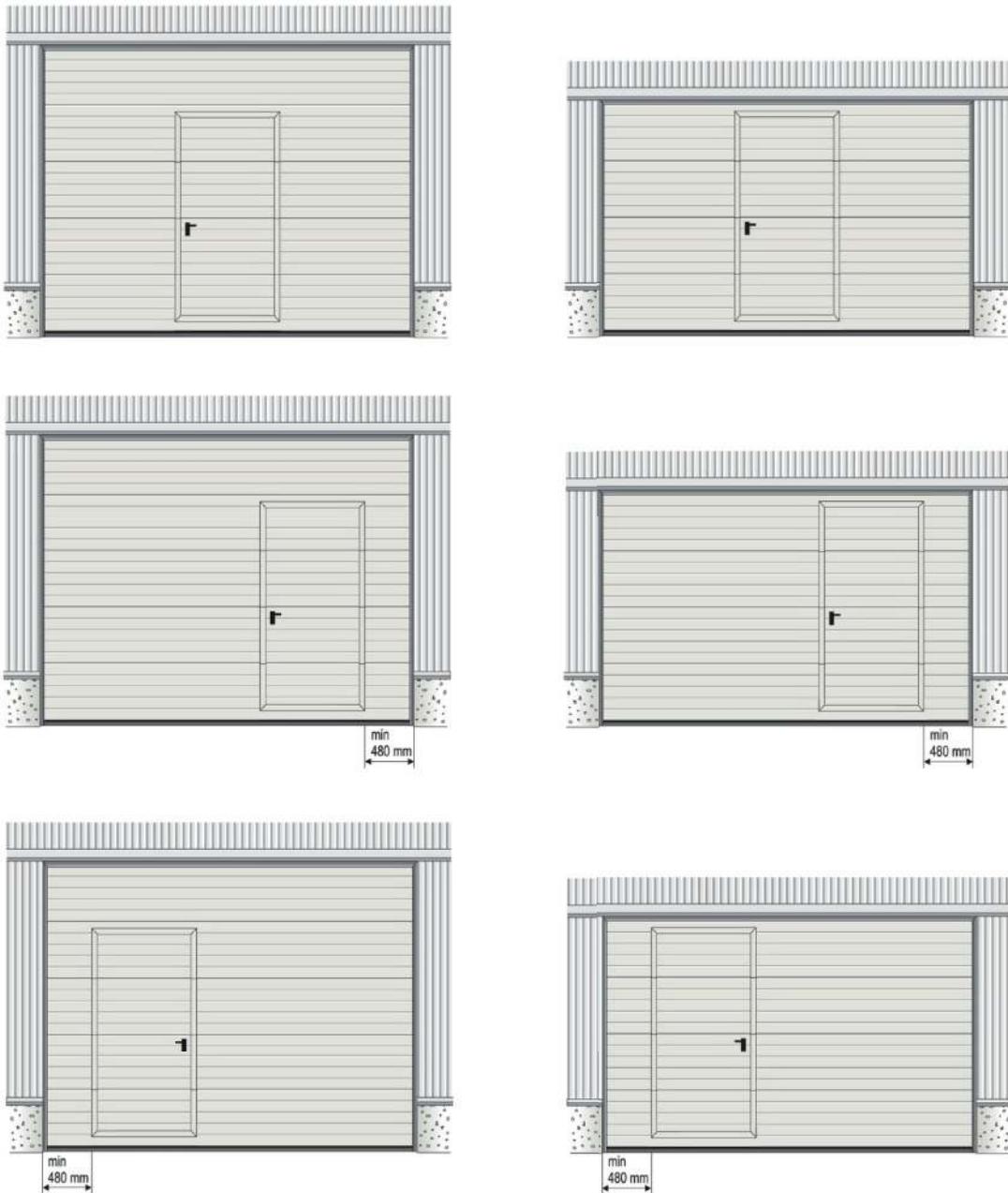
Windows Location on pass doors



ISO
DOOR
ISO
DOOR



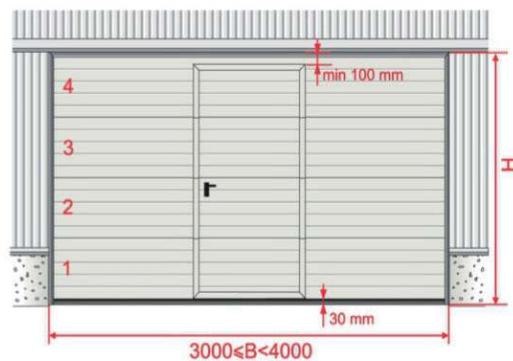
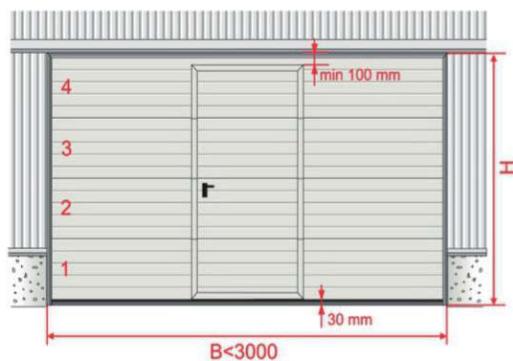
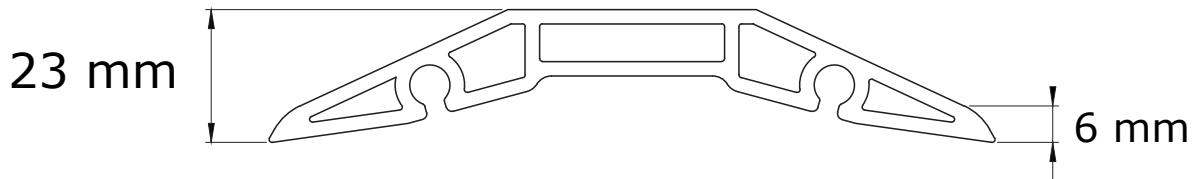
Pass Doors



Pass Doors in Critical Dimensions



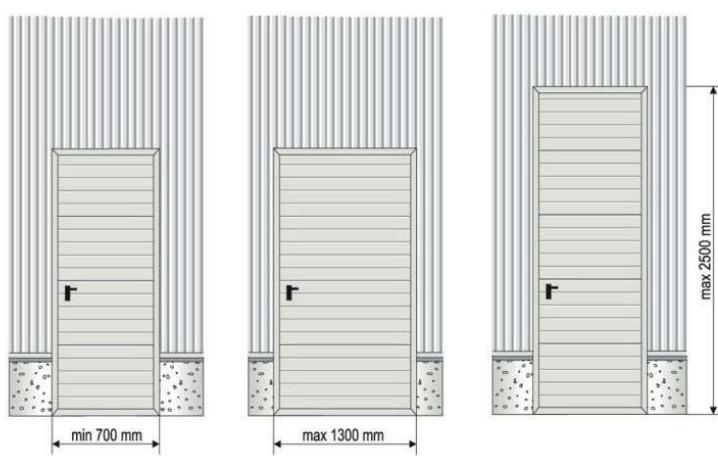
Low Step



Side Door Models



Side Doors in Critical Dimensions



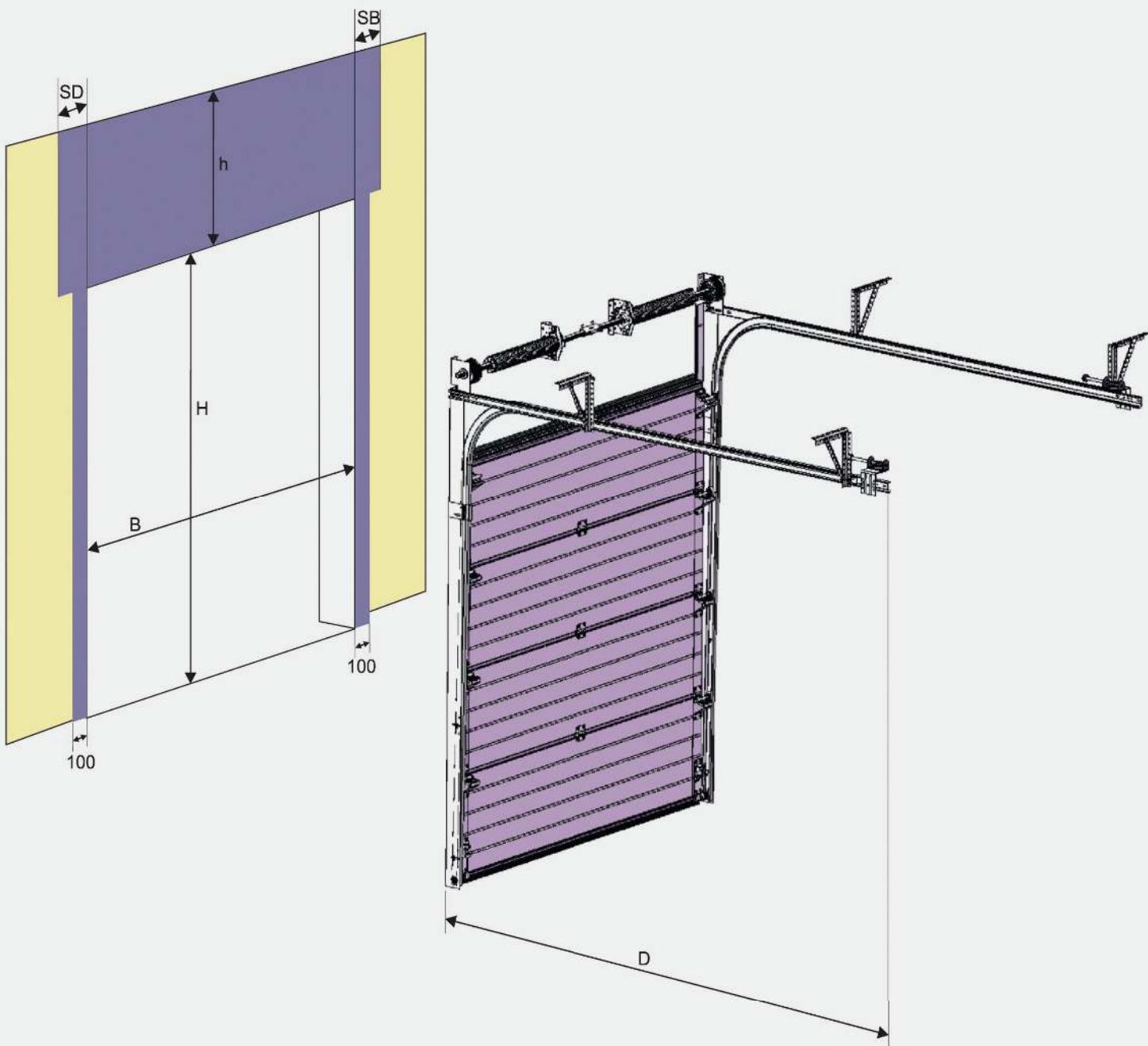
Track and Lifting Types

STANDARD LIFT

Required sideroom	SB	SD
Manual operation	110	110
Direct drive	110	210
Chain drive	110	165

Required headroom	h	d	Açılış
$H \leq 3000$	370	$H+510$	H
$3000 < H \leq 5030$	430	$H+510$	H
$5030 < H \leq 6000$	505	$H+510$	H
$H > 6000$ on request			

Number of required suspensions			
Up to depth of 3500 mm			2 suspensions per side
Up to depth of 4500 mm			3 suspensions per side
Up to depth of 5500 mm			4 suspensions per side
Above depth of 5500 mm			5 suspensions per side



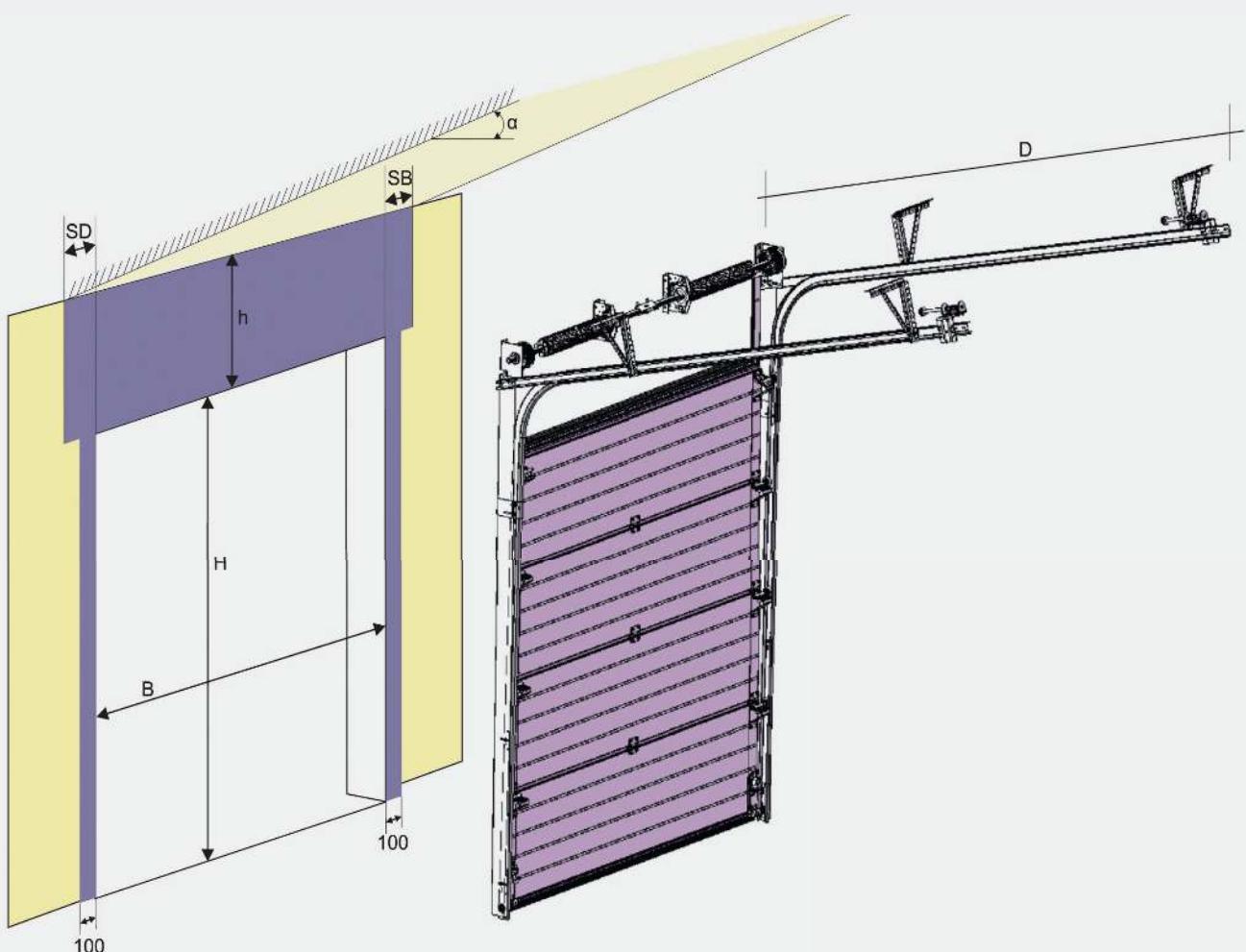
Track and Lifting Types

Required sideroom	SB	SD
Manual operation	110	110
Direct drive	110	210
Chain drive	110	165

Required headroom	$\alpha \leq 25^\circ$	$25^\circ < \alpha \leq 35^\circ$	$35^\circ < \alpha \leq 45^\circ$	D
$H \leq 2500$	340	340	340	$H+510$
$2500 < H \leq 5000$	420	420	420	$H+510$
$5000 < H \leq 6000$	470	470	485	$H+510$
$H > 6000$	on request			

STANDARD LIFT FOLLOW ROOF

Number of required suspensions	
Up to depth of 3500 mm	2 suspensions per side
Up to depth of 4500 mm	3 suspensions per side
Up to depth of 5500 mm	4 suspensions per side
Above depth of 5500 mm	5 suspensions per side



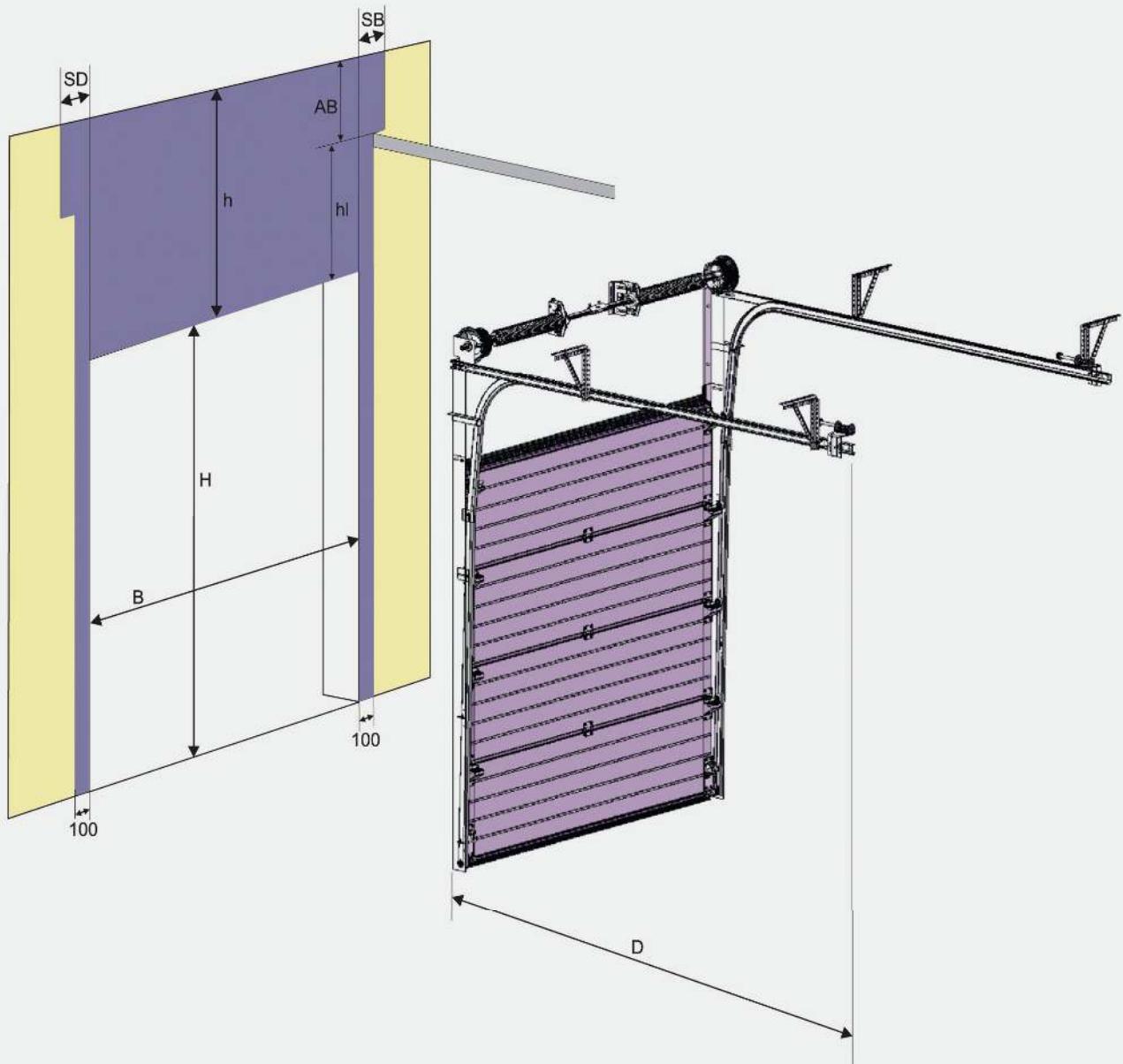
Track and Lifting Types



Required sideroom	SB	SD
Manual operation	110	110
Direct drive	110	210
Chain drive	110	165

Required headroom	$h = \text{min } 700, \text{ maks}=4200$	
Opening	H	
Installation depth	$D=H - hl + 1010$	
$H \leq 4500$	$hl \leq 1370$	$AB=200$
$H \leq 6000$	$hl \leq 4200$	$AB=300$
$H > 6000 \text{ on request}$		

Number of required suspensions		
Up to depth of 3500 mm	2 suspensions per side	
Up to depth of 4500 mm	3 suspensions per side	
Up to depth of 5500 mm	4 suspensions per side	
Above depth of 5500 mm	5 suspensions per side	



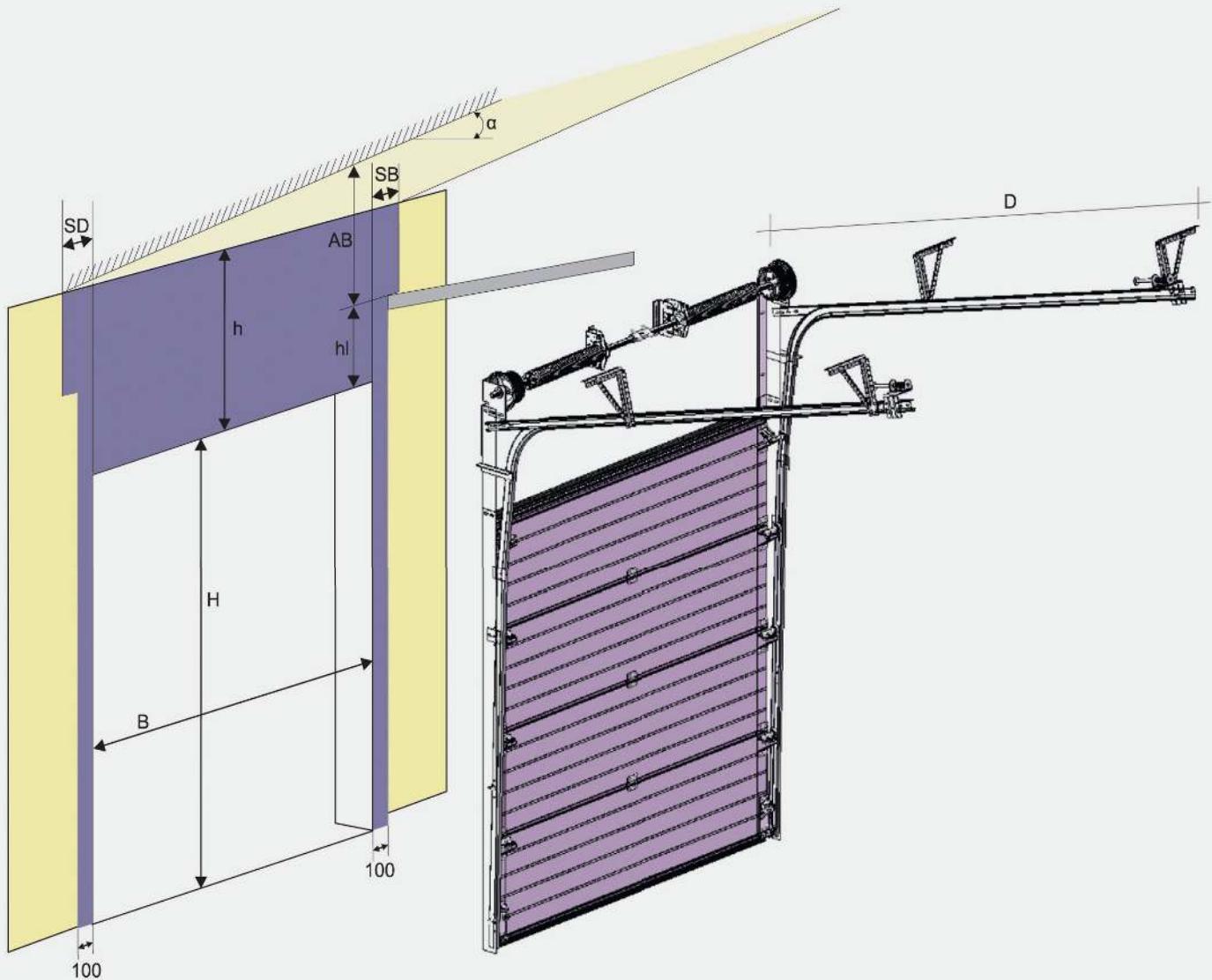
Track and Lifting Types

Required sideroom	SB	SD
Manual operation	110	110
Direct dive	110	210
Chain drive	110	165

Required headroom	$h = \min 700, \text{ maks}=4200$
Opening	H
Installation depth	$D = H - h_l + 1010$
$H \leq 4500$	$h_l \leq 1370$
$H \leq 6000$	$h_l \leq 4200$
$H > 6000$ on request	
$\text{maks. } \alpha = 45^\circ$	

HIGH LIFT FOLLOW ROOF

Number of required suspensions	
Up to depth of 3500 mm	2 suspensions per side
Up to depth of 4500 mm	3 suspensions per side
Up to depth of 5500 mm	4 suspensions per side
Above depth of 5500 mm	5 suspensions per side



Track and Lifting Types

HIGH LIFT MIDDLE SPRING

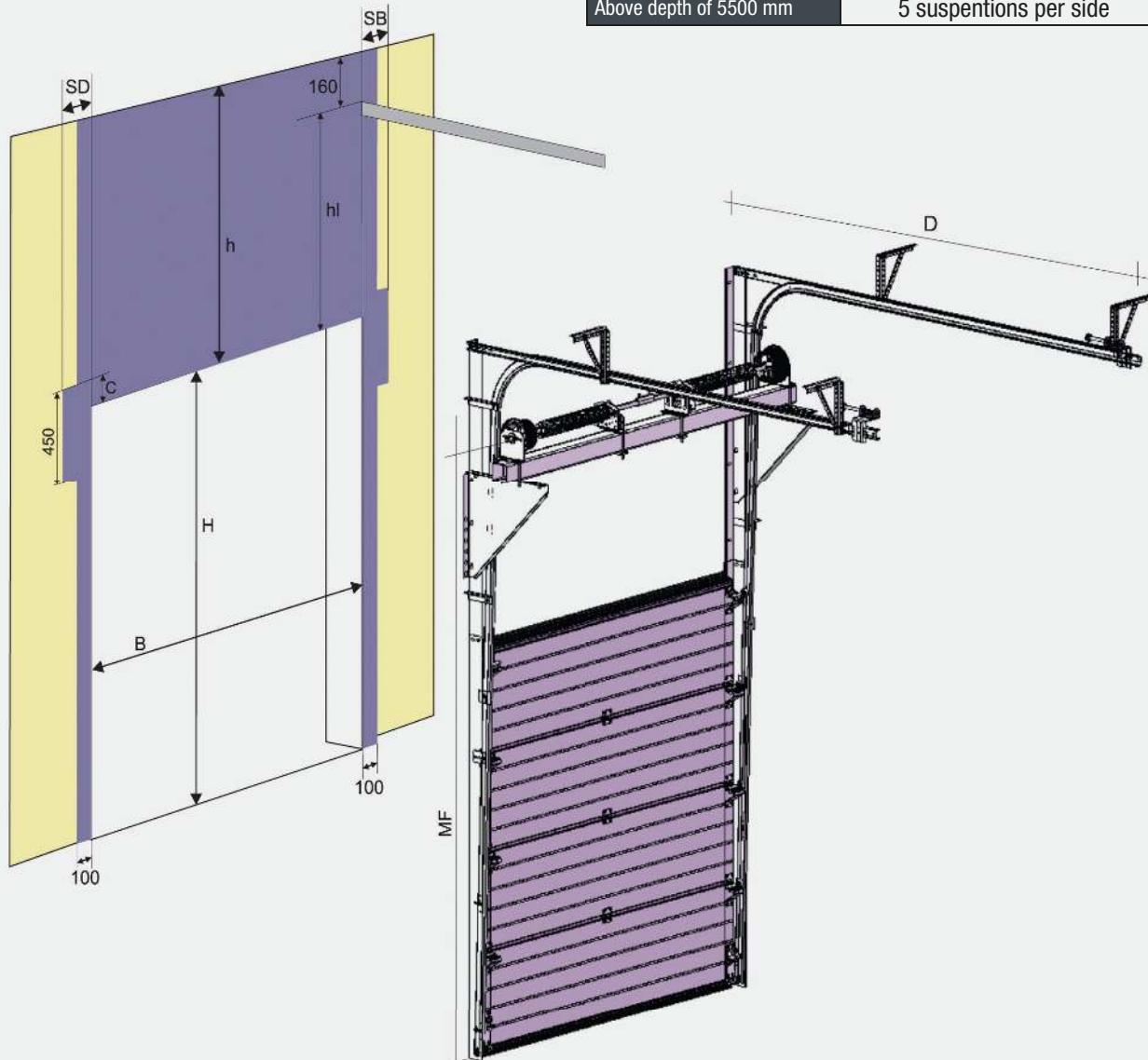
Required sideroom	SB	SD
Manual operation	110	110
Direct dive	110	210
Chain drive	110	165

Required headroom	$h = \text{min } 700, \text{ maks}=4200$
Opening	H
Installation depth	$D = H - h_l + 1010$

	C	MF
$B \leq 3500, \text{max weight } 200 \text{ kg}$	50	$H + (241 \div 282)$
$H \leq 6000$	$(748 \div 789)$	$H + 1000$
$B \leq 3500$		

It's not recommended to use cable failure safety device.

Number of required suspensions	
Up to depth of 3500 mm	2 suspensions per side
Up to depth of 4500 mm	3 suspensions per side
Up to depth of 5500 mm	4 suspensions per side
Above depth of 5500 mm	5 suspensions per side



Track and Lifting Types

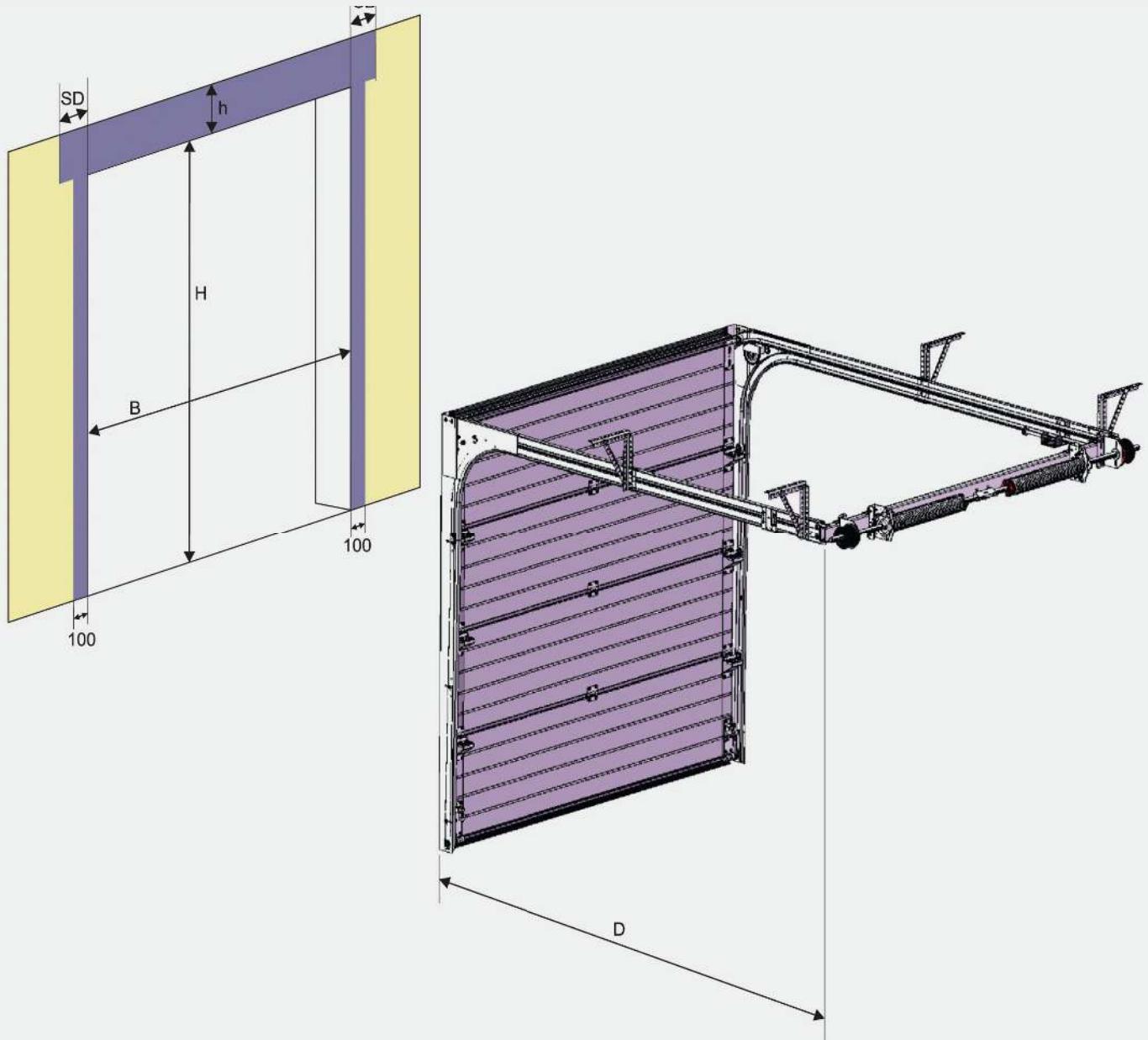
Required sideroom	SB	SD
Manual operation	110	110
Direct drive	110	210
Chain drive	110	165

Required headroom	h	d	Açılış
Manual operation	120	H+700	H-170
Drive operation	150	H+700	H-170

It's not recommended to use cable failure safety device.

LOW HEADROOM REAR SPRING

Number of required suspensions	
Up to depth of 3500 mm	2 suspensions per side
Up to depth of 4500 mm	3 suspensions per side
Up to depth of 5500 mm	4 suspensions per side
Above depth of 5500 mm	5 suspensions per side



Track and Lifting Types

VERTICAL LIFT MIDDLE SPRING

VL with lower torsion spring shaft

Required sideroom	SB	SD
Manual operation	110	110
Direct dive	110	210
Chain drive	110	165

Required headroom	$h = H + 320$
Opening	H
Installation depth	$D=300$

It's not recommended to use cable failure safety device.

Number of required suspensions	
Up to depth of 3500 mm	2 suspensions per side
Up to depth of 4500 mm	3 suspensions per side
Up to depth of 5500 mm	4 suspensions per side
Above depth of 5500 mm	5 suspensions per side



Track and Lifting Types

Required sideroom	SB	SD
Manual operation	110	110
Direct drive	110	210
Chain drive	110	165

Required headroom	$h=H+320$
Opening	H
Installation depth	D=400, $H \leq 3300$ D=450, $3300 < H \leq 6000$, maks ağırlık 500 kg D=550, $H \leq 6000$, maks ağırlık 750 kg $H > 6000$ on request

VERTICAL LIFT





Full-View Sectional Doors

Full-View Sectional Doors



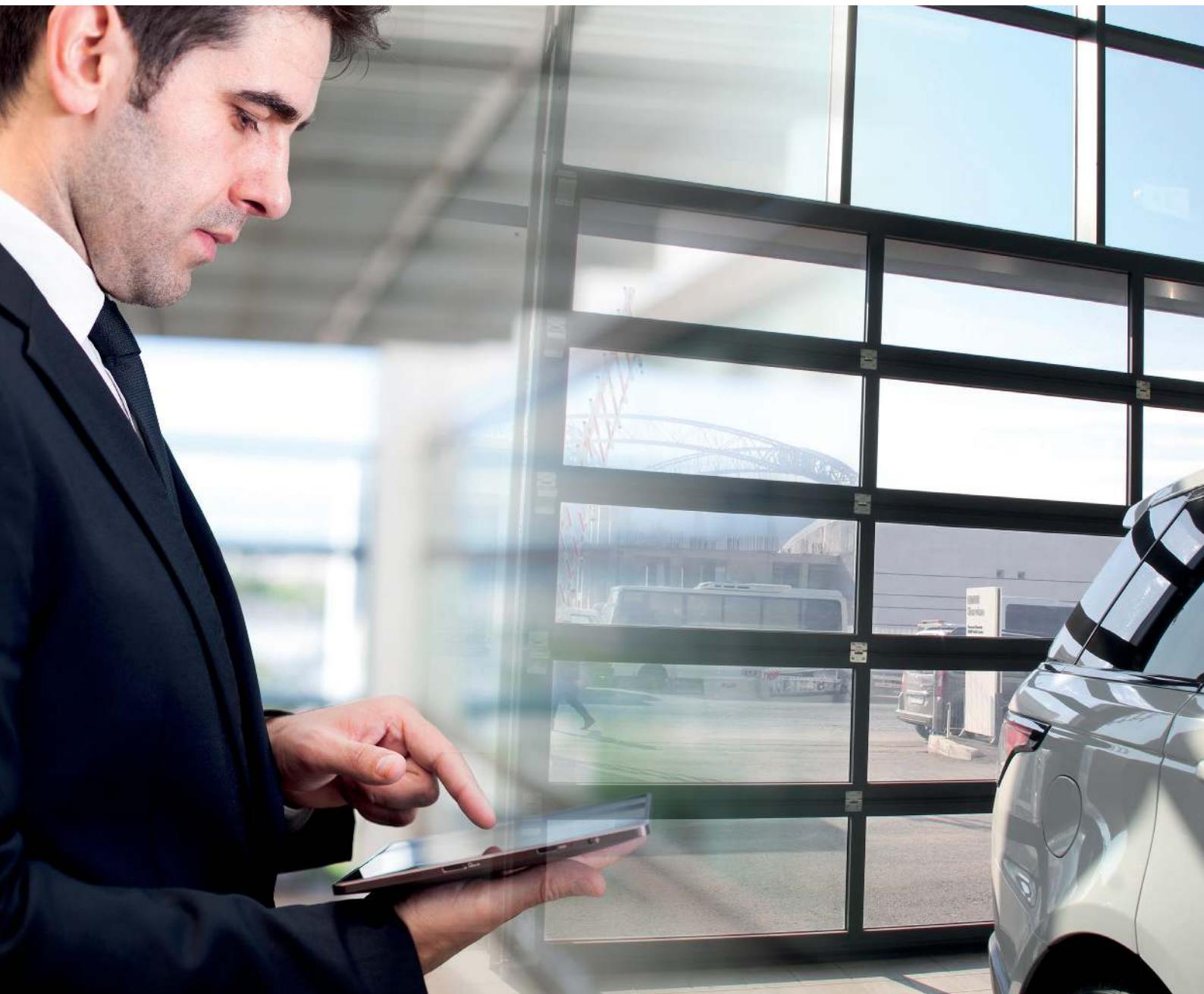
The full-view door is one of the most preferred models among the sectional door models and it is the door type that brings your buildings therefore by providing high visuality. It is used as normal lifting, high lifting or vertical lifting according to the beam section of the area to be applied.

Profile thicknesses of full-view doors vary according to the parts used and are specially designed to match each other, generally, 3 mm plexiglass glasses are used in full-view doors, and double-glass model with double glazing can be used according to the need. Tempered or laminated glass options can also be applied in different structures in order for our doors to achieve maximum harmony.

Panels forming full-view sectional doors are produced from 500 mm – 610 mm aluminum finger-protected aluminum profiles. The standard color of full-view sectional door profiles is natural anodized. However, it can also be painted in the desired RAL colors depending on the exterior color or optional. Full-view sectional doors can also be applied with standard control unit and remote control.

Full-view sectional doors, with the opto laser system feature, allow the door to be opened back in case any object touches it.

Full-view sectional doors are durable and long-lasting doors that are produced to provide the fastest and safest way for today's modern businesses, especially automotive sales offices and factory entrances and exits.



FULL-VIEW SECTIONAL **Full-View Sectional Doors**

Full-View Sectional Doors



Sectional industrial door panels are connected to each other with hinges made of galvanized steel. The wheel sets that provide the movement of the door on the rails are made of noise-canceling polyamide to ensure quiet operation. Sectional full view door panels are pulled by winding steel ropes into drums that vary according to the size and lifting type of the door. If the ropes are broken or the springs are broken or damaged in any way, the door is prevented from falling with the rope break safety system and the spring break safety system.

NAL

Full-View Sectional Doors



Full-View Sectional Doors



We produce functional safety types and long-life door systems and we continue to develop them continuously. With our R&D and production team, each of them are specialized in their fields, we work with the aim of perfect quality in order to offer the most accurate solution to your modern buildings.





Thanks to the torsion spring system, the full-view sectional door can be operated manually, regardless of its weight in case of any power off or engine failure by the manual chain system attached to the motor.

Full-View Sectional Doors



Besides standard control unit, doors can also be operated with remote controls.

Full-view door also come with standard bottom safety edge either opto-laser or wireless Pneumatic, according to safety standards, protecting the passage from door operation.

Different lifting type is also applied to the full-view doors as in standard panel sectional doors. As a result efficient door operation is provided in a safe way.

Mirrored Industrial Doors



DOOR CONTROL OPTIONS

- RADAR
- CONTROL BUTTON
- PULL CORD SWITCH
- REMOTE CONTROL
- MAGNETIC LOOP
- SAFETY PHOTOCELL

Mirrored Industrial Doors

Ultra modern mirrored industrial doors are eye-catching door solutions suitable for modern architecture for prestigious buildings. Safety is provided by permanent surface protection with reflective and tempered glasses. Mirrored doors can also be applied as a garage door model according to need. Surface mounted glass panels offer an impressive mix of reflectivity and transmittance. Frame profiles can be anthracite gray, black or anodized in accordance with the glass coating.



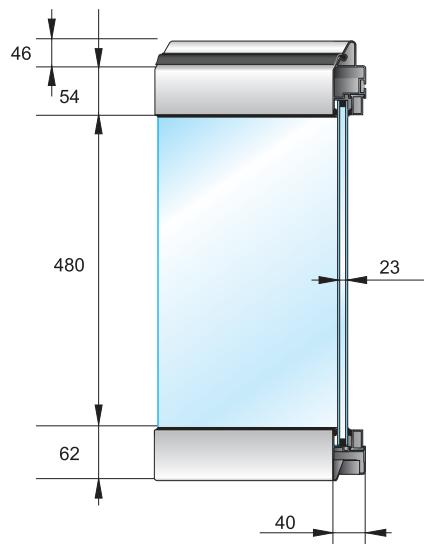
USAGE AREAS;

- VEHICLE MAINTENANCE SERVICE DOOR
- CAR GALLERY DOOR
- SHOWROOM STORE DOOR

ALU-framed PANEL TYPES

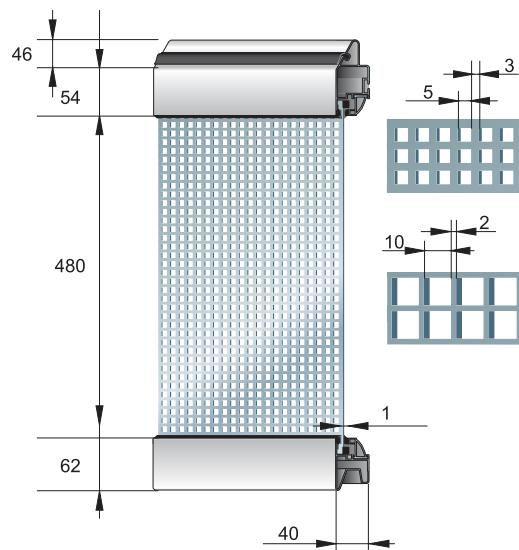
Full View

Double insulated acrylic glazing
Anti-scratch acrylic glazing (outside/inside)

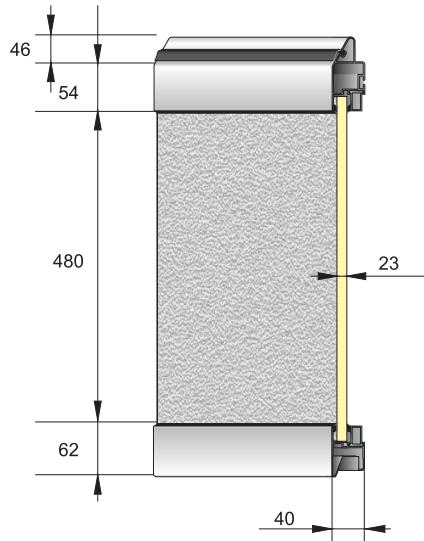


TLT

Perforated, galvanized and coated steel sheet filling

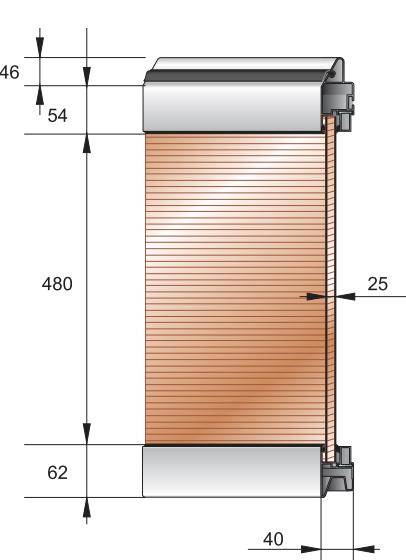


Sandwich filling / stucco



Polycarbonate filling

Polycarbonate continuous glazing in 3 colours



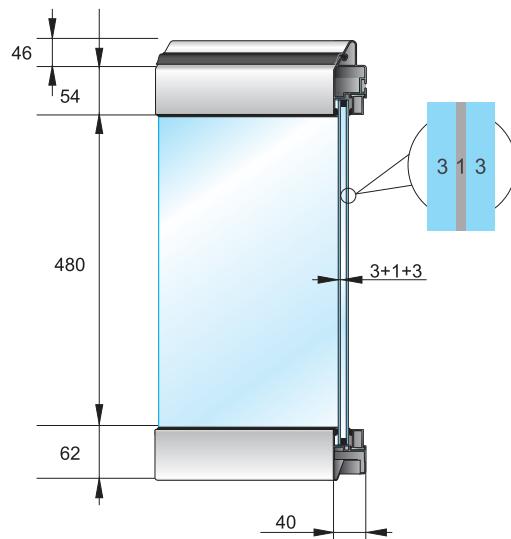
transparent

green

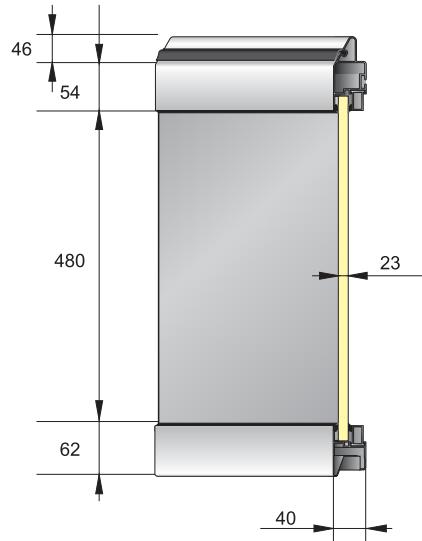
brown

Natural Safety glass

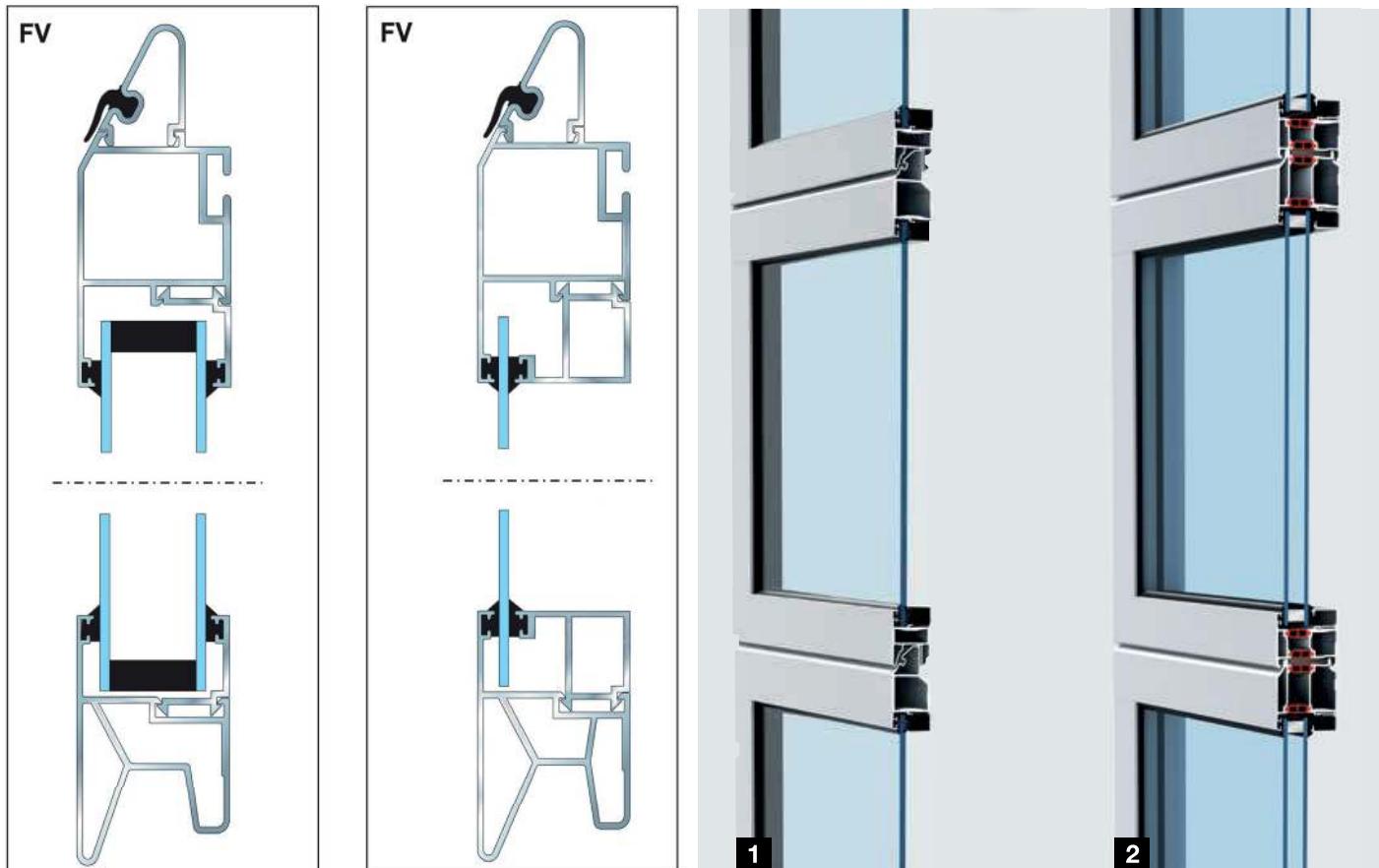
Natural safety glass clear single*
Natural safety glass clear double*



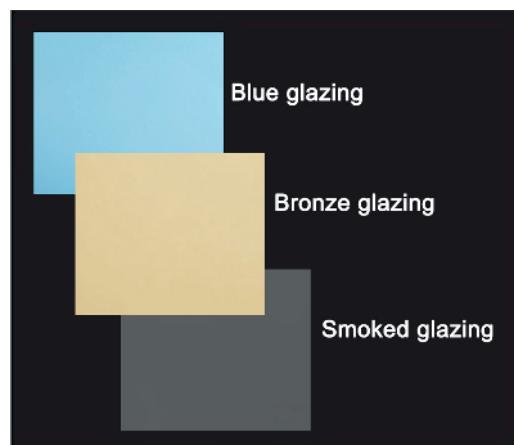
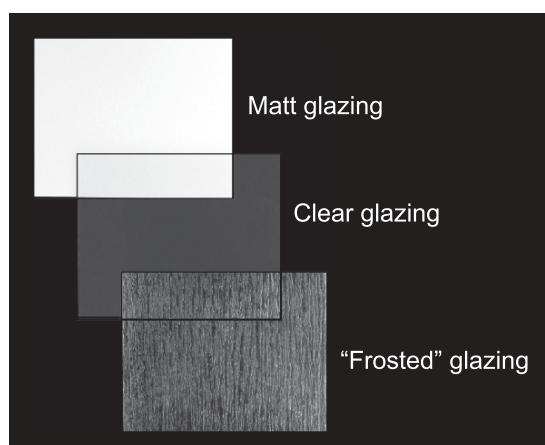
Sandwich filling / smooth



ALU-framed PANEL TYPES



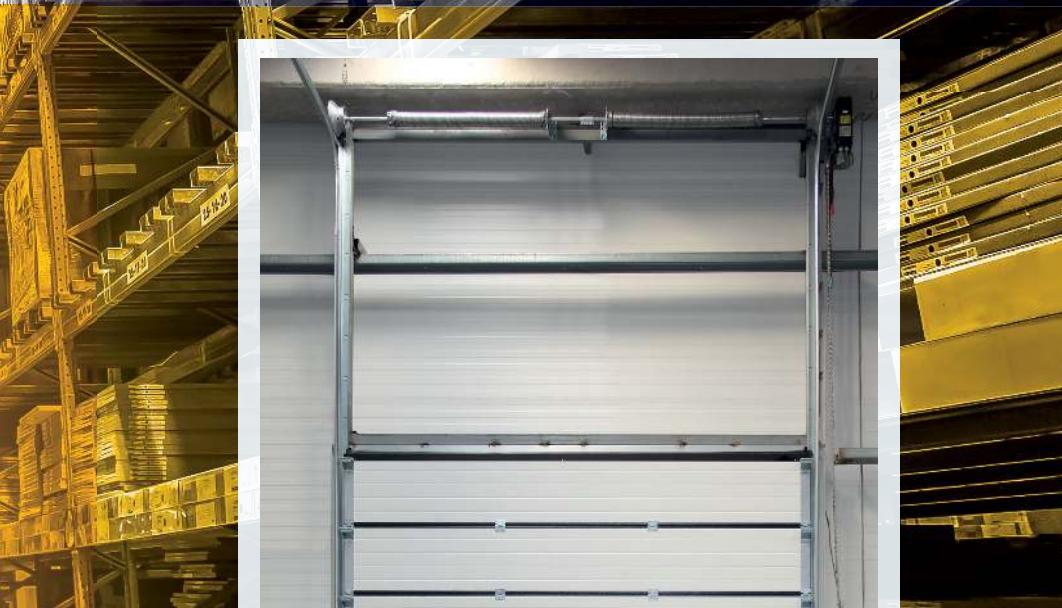
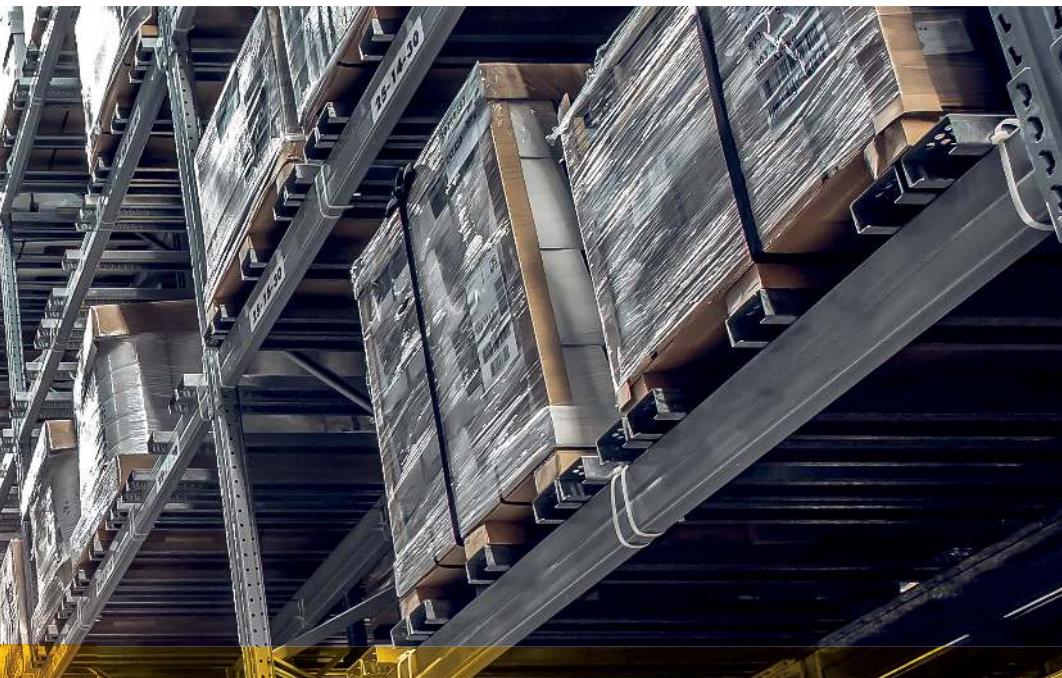
Our sectional industrial and garage door models provide a high level of security. With its solid panel structure, your structures and products are safe. Many different security systems used on sectional doors can also protect you against major damage in case of malfunctions.





Our sectional industrial and garage door models provide a high level of security. With its strong panel structure, your structures and products are safe. Many different security systems used on sectional doors can also protect you against major damage in case of malfunctions.

**First of all
security...**



Industrial Door Automations

EM SERIES

AUTOMATION SYSTEMS



TECNICAL DETAILS	EM 324	EM 524	EM 524 HD
Driving torque	100	120	140
Driving motor speed (rpm)	24	24	20
Motor output (kw)	0,37	0,50	0,55
Operating voltage (v)	400/3	400/3	400/3
Mains frequency (Hz)	50/60 Hz	50/60 Hz	50/60 Hz
Control voltage (V)	24v	24v	24v
Motor current rating (A)	1,5	2,1	2,1
Working intensity ED	60%	80%	80%
Protection grade	IP54	IP54	IP54
Temperature range (oC)	-20 +60	-20 +60	-20 +60
Continuous sound pressure level (dB (A))	<70 dB	<70 dB	<70 dB
Quantity Weight (kg)	14	16	16
Switch	Elektronic Limit Switch	Elektronic Limit Switch	Elektronic Limit Switch
Ø Sleeve shaft (mm)	25,4	25,4	25,4
Maximum Door Weight m2	30	40	45
Control Unit	EP 400	EP 400	EP 400

Industrial Door Automations

EM/FU SERIES

AUTOMATION SYSTEMS



TECNICAL DETAILS	EM 324 FU	EM 524 FU
Driving torque	80	100
Driving motor speed (rpm)	45	30
Motor output (kw)	0,37	0,55
Operating voltage (v)	400/3	400/3
Mains frequency (Hz)	50/60 Hz	50/60 Hz
Control voltage (V)	24v	24v
Motor current rating (A)	1,5	2,1
Working intensity ED	60%	80%
Protection grade	IP54	IP54
Temperature range (oC)	-20 +60	-20 +60
Continuous sound pressure level (dB (A))	<70 dB	<70 dB
Quantity Weight (kg)	14	16
Switch	Elektronic Limit Switch	Elektronic Limit Switch
Ø Sleeve shaft (mm)	25,4	25,4
Maximum Door Weight m2	25	30
Control Unit	EP 600 FU	EP 600 FU

Industrial Door Automations

STA & STAC SERIES

AUTOMATION
SYSTEMS



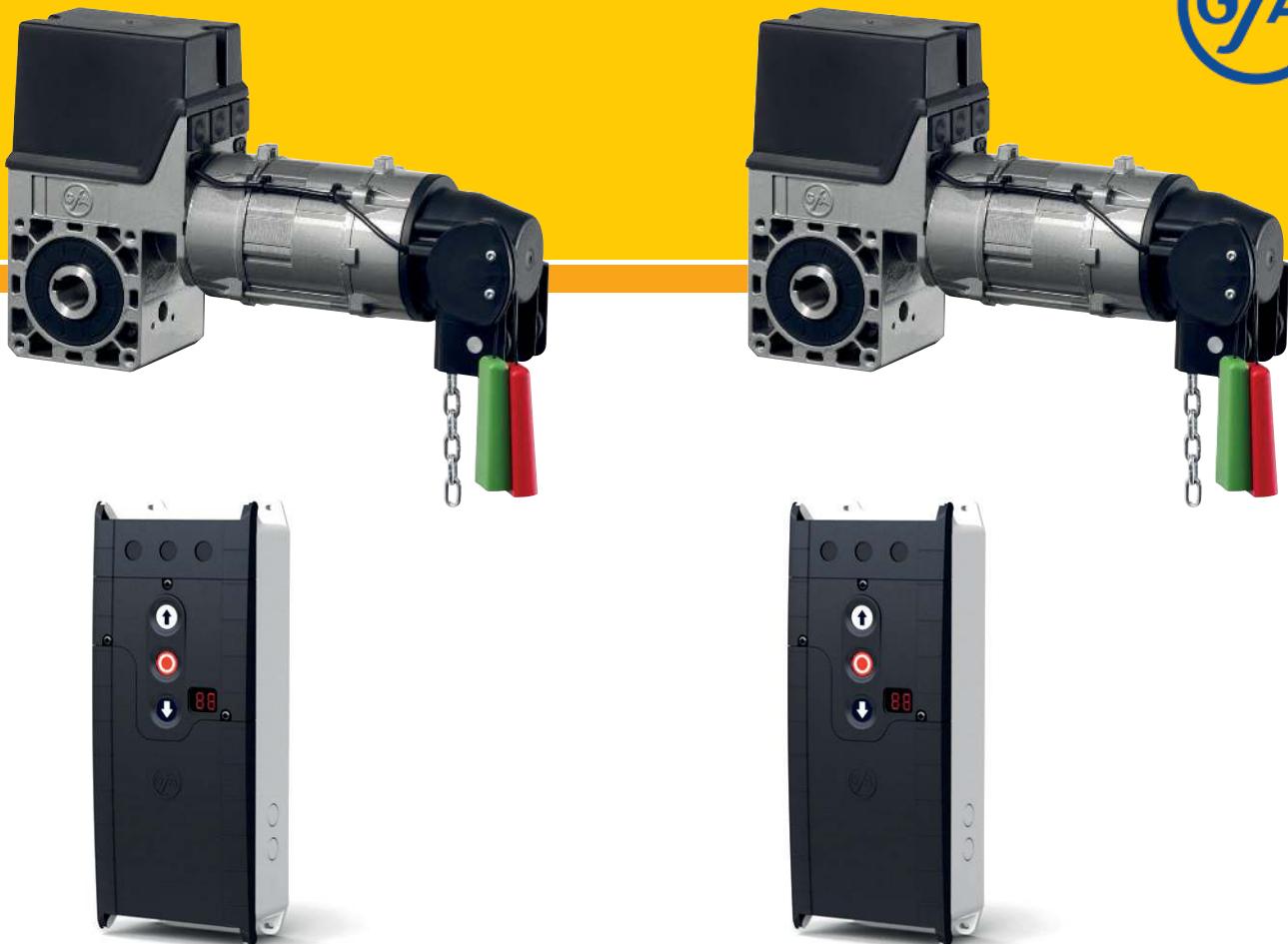
mfzovitor
drive technology



TECNICAL DETAILS	STA/STAC 1-10-24	STA/STAC 1-12-19	STA 1-8-45
Driving torque	100	120	100
Static holding torque	600	600	600
Driving motor speed (rpm)	24	19	45
Motor output (kw)	0,37	0,55	0,55
Operating voltage (v)	230 / 400 / 3~	230 / 400 / 3~	230 / 400 / 3~
Mains frequency (Hz)	50	50	50
Control voltage (v)	24	24	24
Motor current rating (A)	3,5/2,0	4,1/2,4	3,0/1,7
Protection grade (IP)	54	54	54
Temperature range (oC)	-20 / +60	-20 / +60	-20 / +60
Continuous sound pressure level (dB (A))	< 70	< 70	< 70
Switch	Elektronic Limit Switch	Elektronic Limit Switch	Elektronic Limit Switch
Ø Sleeve shaft (mm)	25,4	25,4	25,4
Quantity Weight (kg)	15	15	18
Maximum Door Weight m2	30	45	30

Industrial Door Automations

SE 9.24 & SE 14.21 SERIES
AUTOMATION
SYSTEMS



TECNICAL DETAILS	SE 9.24	SE 14.21
Driving torque	90	140
Static holding torque	450	600
Driving motor speed (rpm)	24	21
Motor output (kw)	0,37	0,45
Operating voltage (v)	230/400 / 3~	230/400 / 3~
Mains frequency (Hz)	50	50
Control voltage (v)	24	24
Motor current rating (A)	2,1 / 1,2	3,3 / 1,9
Protection grade (IP)	65	65
Temperature range (oC)	-20 / +60	-20 / +60
Continuous sound pressure level (dB (A))	< 70	< 70
Switch	Elektronic Limit Switch	Elektronic Limit Switch
Ø Sleeve shaft (mm)	25,4	25,4
Quantity Weight (kg)	13	14
Maximum Door Weight m2	30	45

Industrial Door Automations

SD SERIES
AUTOMATION
SYSTEMS



Nice



TECHNICAL DETAILS	SD-100 24	SD-140 20
Driving torque	100	140
Static holding torque	230	440
Driving motor speed (rpm)	24	20
Motor output (kw)	0,37	0,55
Operating voltage (v)	400 / 3~	400 / 3~
Mains frequency	50	50
Control voltage (v)	24	24
Motor current rating (A)	1,9	1,8
Protection grade (IP)	54	54
Temperature range (oC)	-5 / +40	-5 / +40
Continuous sound pressure level (dB (A))	< 70	< 70
Switch	Elektronic Limit Switch	Elektronic Limit Switch
Ø Sleeve shaft (mm)	25,4	25,4 /31,75
Quantity Weight (kg)	11	12
Maximum Door Weight m2	30	45

Industrial Door Automations

ARGO SERIES
AUTOMATION
SYSTEMS



TECNICAL DETAILS	ARGO BT A20	ARGO BT A35
Driving torque	55	80
Driving motor speed (rpm)	30	18
Motor output (kw)	0,24	0,24
Operating voltage (v)	220/230	220/230
Mains frequency	50	50
Operating voltage (v)	24	24
Saat Başına Maks. Çalıştırma*	20	15
Protection grade (IP)	20	20
Temperature range (oC)	-15 / +55	-15 / +55
Continuous sound pressure level (dB (A))	<70 dB	<70 dB
Switch	Elektronic Limit Switch	Elektronic Limit Switch
Ø Sleeve shaft (mm)	25,4	25,4
Quantity Weight (kg)	10	10
Maximum Door Weight m2	20	30

High Speed Roll up PVC Doors



**High-speed
PVC doors are a
cost-effective
solution for interiors.**





Roll up Type

High Speed PVC doors are one of the best solutions of high-efficiency and low-energy consumption in modern architectures and factories. They are preferred where there is a high inflow and outflow since they are extremely fast systems.





High Speed Roll Up PVC Door Technical Specifications

PVC Awning	0,8 mm 900gr/m2 Panama 1100 dtex MEHLER (MADE IN GERMANY)
Side rails and mechanism	2 mm galvanized steel
Mechanism's inside parts	3 mm - 5 mm Special design laser cutting galvanised steel
Cord and Seal	Special desing EPDM
Support Bar	12 mm solid shaft
Wind resistance	Max : 40km/m2
Engine	380 VAC changing engine according to door size(0,75 kW- 5,5kW)
Reducer	63-75 - 80 cast aluminum body (YILMAZ REDUCTOR)
Brake	200 VDC electromagnetic brake
Switch	Chain transferred cycle limit switch (RAVIOLI - ITALY)
Safety	Safe photocell(S) current renovation(S) pneumatic bottom bar(0) size photocell(0)
Flasher/Alarm	Optional
Control Unit	380 VAC current limiting , phase control system compatible with access control system
Cabin	Plastic (S) stainless (0)
Protection class	IP65
Operation functions	On-stop-off and emergency buttons
Adjustable fuctions	Automatic shutdown time and Manuel operation
Door operation speed	0,7m/sn(S), can be increased with driver
Window	Eye level one row 45 cm , can be increased
Color options	Grey, White, blue, black, yellow , orange, red, green

OPTIONAL PRODUCTS



Folding Fast PVC



High-speed PVC doors
are the cost-effective
solution for the
interior.



Folding Type

Working indoors or outdoors of your facility in harsh and variable weather conditions, opening and closing hundreds of times in heavy traffic, reducing time wastage, minimizing air currents, They are high-speed folding doors that are used to minimize visual and noise pollution and are compatible with the environment.





Folding Type High Speed PVC Door

Technicial Specifications

PVC Awning	0,8mm 900gr/m ² Panama 1100 dtex MEHLER, (MADE IN GERMANY)
Side rails and mechanism	2mm galvanized steel (until 6000mm)
Mechanism's inside parts	3 mm - 5 mm Special design laser cutting galvanised steel
Cord and Seal	Special desing EPDM
Support Bar	21-27mm galvanized pipe
Wind resistance	125 km/m ²
Engine	380 VAC changing engine according to door size(0,75 kW- 5,5kW)
Reducer	63-70 cast aluminum body (YILMAZ REDUCTOR)
Brake	200 VDC electromagnetic brake
Switch	Connecting chain switch (RAVIOLI - ITALY)
Safety	Safe photocell(S) current renovation(S) pneumatic bottom bar(0) size photocell(0))
Flasher/Alarm	Optional
Control Unit	380 VAC current limiting , phase control system, compatible with access control system
Cabin	Plastic (S) stainless (0)
Protection class	IP65
Operation functions	On-stop-off and emergency buttons
Adjustable fuctions	Automatic shutdown time and Manuel operation
Door operation speed	0,7m/sn(S), can be increased
Window	Eye level one row 45 cm , can be increased
Color options	Grey, White, blue, black, yellow , orange, red, green

OPTIONAL PRODUCTS





Dock Shelter Systems

Mechanical Dock Shelter



Dock Shelter, which is an indispensable part of Docking Systems, is mainly used in situations where an optimal sealing is required, and if there are large differences between vehicle size and loading point. Furthermore, protects your load from external factors such as hot, cold, dust and rain, and prevents energy loss with its contribution to the insulation of loading areas.

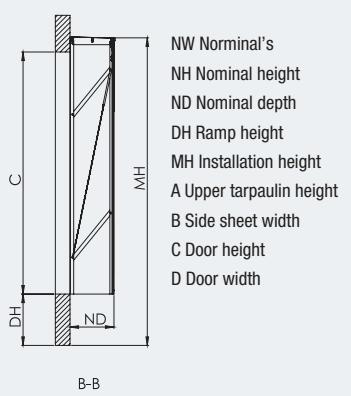
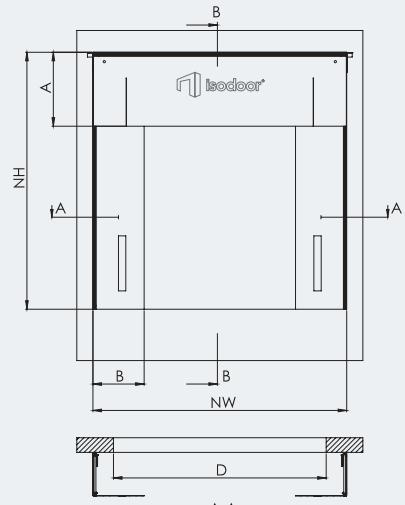
Loading systems, which include many product types such as mechanical shelter and inflatable shelter, provide low cost, maintenance costs and efficiency in all logistics and shipment processes of your business.



The Shelter minimizes the space between the truck and the building, thus aiming to prevent accidents and damages. At the same time, it plays an important role in pest control and protection from weather conditions.

In this sense, it reduces energy consumption and remedy timing problems. It also prevents unauthorized entry and exit.

All these advantages show that shelters are an economic investment that can return in a very short time. It is also a very economical and long-lasting product.





isodoor®

Inflatable Dock Shelter





The inflatable dock shelter is the most efficient and durable sealant for a loading / unloading platform. Due to the accordion design of the cushion, an optimal seal is created. Therefore, the dock shelter is specifically used in situations, where there are large differences between the internal and external temperatures. For instance, in air-conditioned or refrigerated storage areas.

The correct layout of a loading and unloading platform depends on a variety of factors. Therefore, the Inflatable dock shelter can be modified to meet each client specific situation.



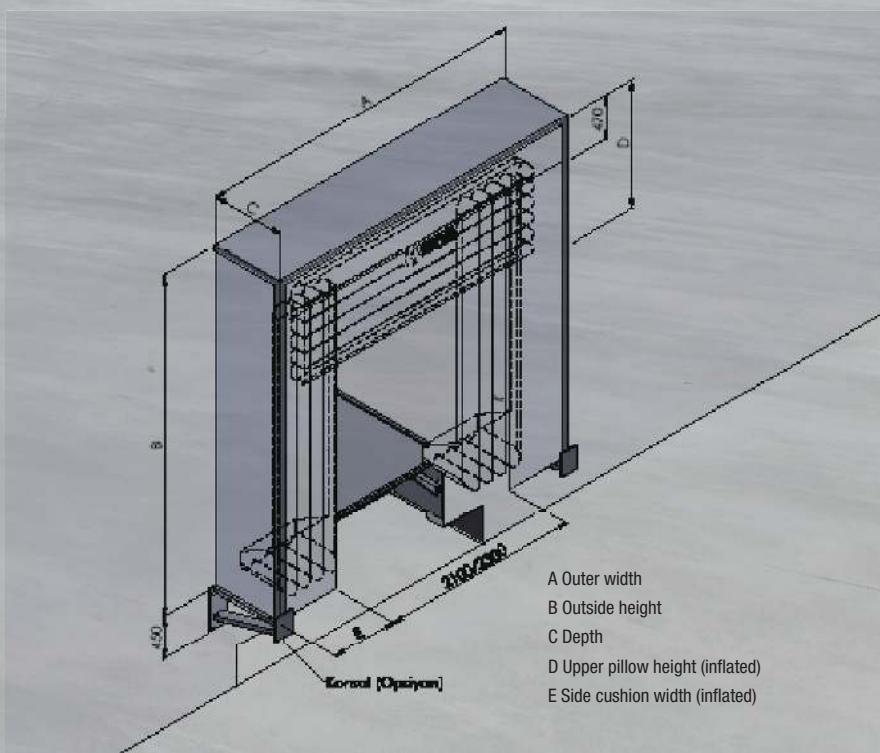
Shelter Operation:

The blower motor is easily operated by means of a single push button on the control box. As soon as a vehicle is docked within the dock shelter, the blower motor can be activated and within 10 seconds the area between the door opening and the vehicle is sealed.

The blower motor maintains the pressure in the cushions during the loading and unloading operation. The speed of the blower motor is adapted to the amount of air required.

The system with counterweights ensures that the top cushion continuously adapts to the varying height of the vehicle to prevent the top cushion from getting damaged and maintain its seal.

After the loading / unloading operation, the blower motor is deactivated by means of the push button, after which the cushions are retracted by the retraction system with counterweights, in approximately 25 seconds. The vehicle can leave the loading / unloading dock as soon as this action has been completed.





Dock Levelers are used for fast loading and unloading. They provide smooth loading by means of moving platform whereas there is a difference in height between the vehicle and loading platform, by means of up and down adjustment of leveler platform. Dock levelers are indispensable solutions for the loading areas.

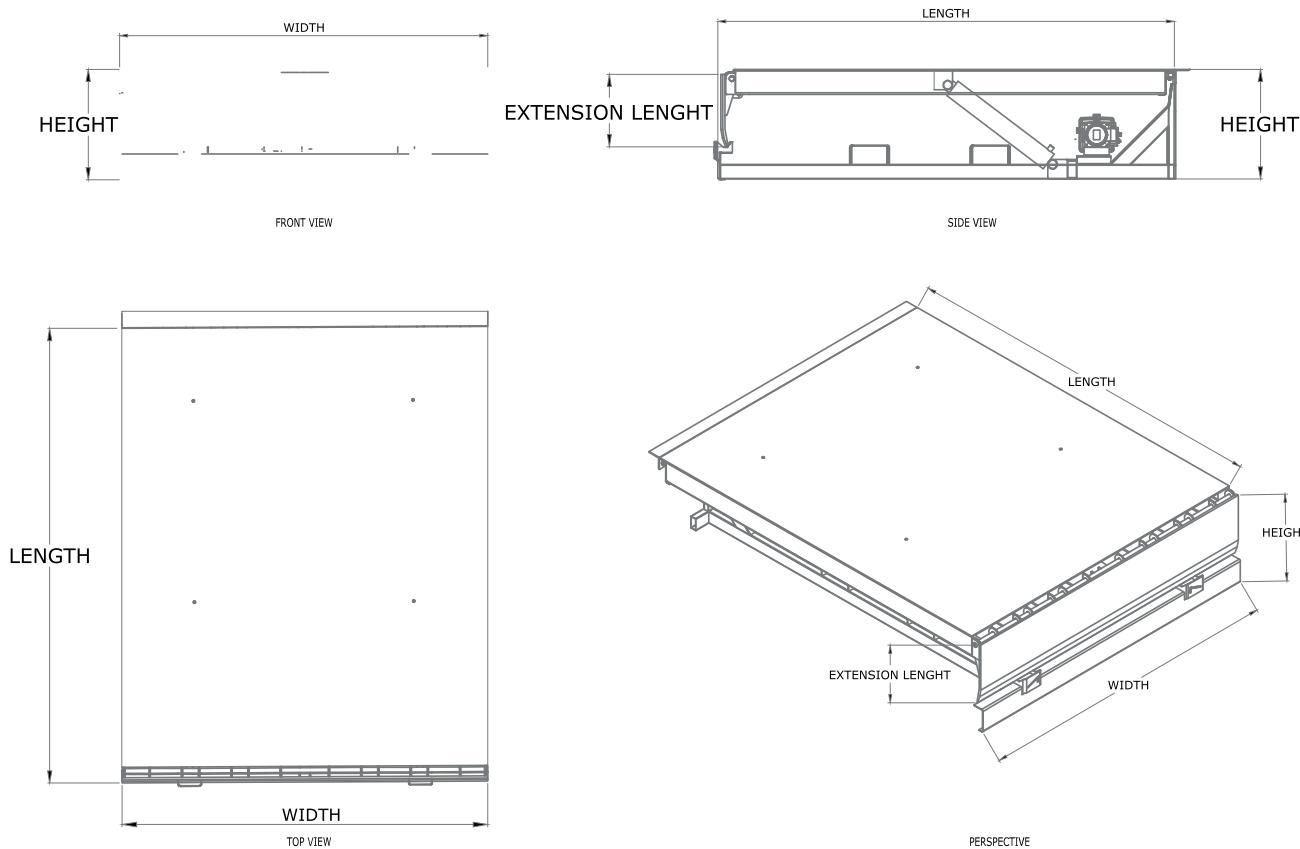
Loading Systems

Hydraulic loading systems
– Hinged dock leveler
– Telescopic dock leveler



Loading Systems

HINGED DOCK LEVELER



Features :

- Very robust and reliable
- Self-supporting base frame
- 1 main cylinder (2 cylinder is optional)
- Side protective safety sheets.
- Conforms the EN 1398 Standard

Advantages

- Improves productivity by shortening the loading time.
- It adapts to any vehicle during loading and unloading thanks to its high range of motion.
- Easy use with its hydraulic and electrical compliance.
- It prevents the forklift from sliding thanks to its teardrop pattern cast from which it was manufactured.
- It automatically adjusts its level according to the vehicle height due to its structure.
- It provides a safe operation thanks to be able to be stopped at the desired position.

Standard Equipment

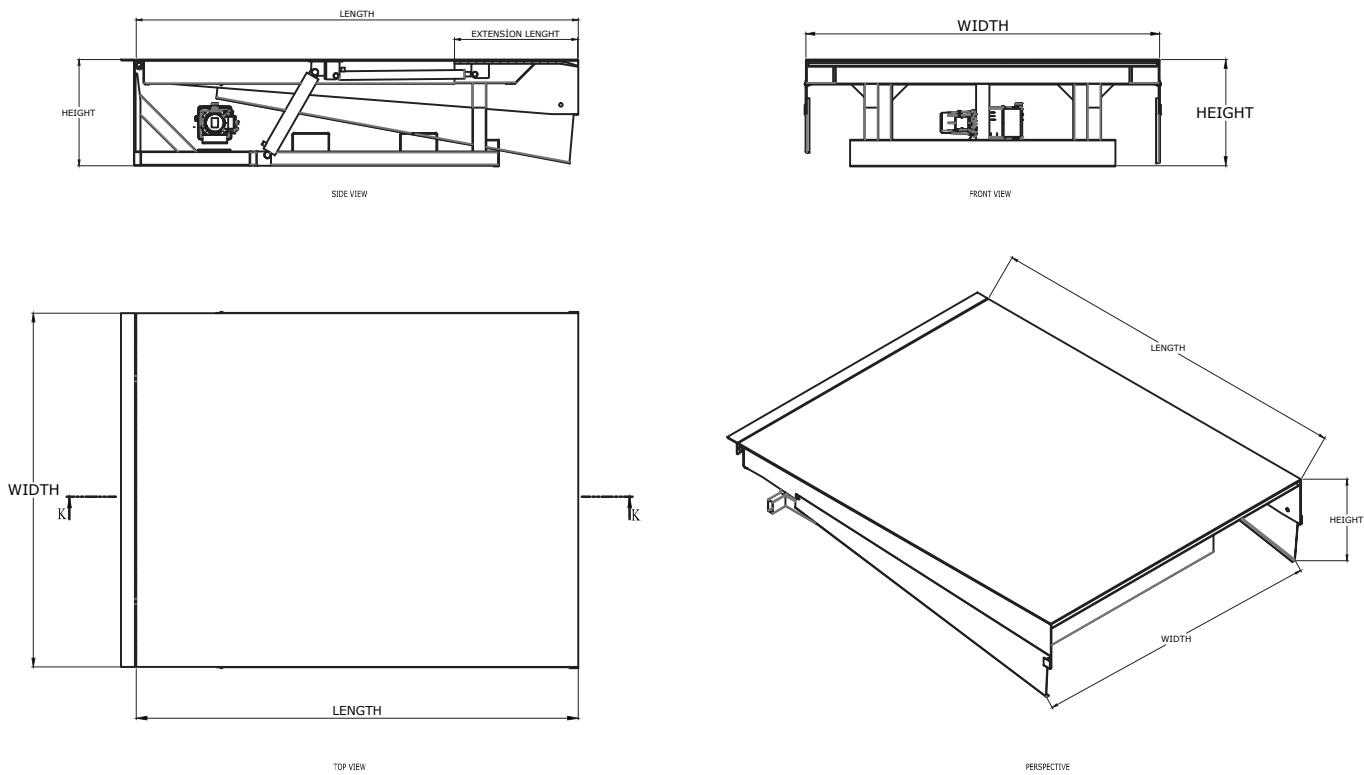
- Black and yellow safety tape indicating that it operates.
- 100x100x300 mm 2 pieces rubber bump chock
- Side protective sheets for preventing the foot compression.
- 12 / 13mm teardrop pattern latch with high-strength resistance at the length of 400mm
- Hose burst valve which locks the system in case of hose blast and a sudden movement.
- Relief valve that prevents the strain of the engine at maximum lift.
- Safety stand used during maintenance.

WIDTH (mm)	HEIGHT (mm)	CAPACITY (tons)	MAX. LIFTING (mm)	MIN. LOWERING (mm)
2000	1000	6	300	-300
1750	2500	6	650	-300
2000	2500	6	650	-300
2000	3000	6	650	-300
1750	2500	8	650	-300
2000	2500	8	650	-300
2000	3000	8	650	-300
1750	2500	10	650	-300
2000	2500	10	650	-300
2000	3000	10	650	-300



TELESCOPIC DOCK LEVELER

Loading Systems



Explanation :

The telescopic ramps are the ramps which occupy no space due to being embedded into the concrete, very handy with its hydraulic equipment and the harmony of its design and they have longer lips especially for cases where the lips of the hinged ramps are insufficient in loading containers.

Advantages

- The hydraulic lip with a thickness of 12/13mm, lip is being manufactured from 600mm up to 1000mm, provides a complete solution for the loading of the containers.
- Improves work productivity by shortening the loading time.
- Adapts to every vehicle during loading and unloading with its high range of motion.
- It provides easy use with hydraulic and electrical compliance.
- It prevents the forklift from sliding thanks to its teardrop pattern cast from which it was manufactured.
- It automatically adjusts its level according to the vehicle height due to its structure.
- It provides a safe operation thanks to be able to be stopped at the desired position.

Standard Equipment

- Black and yellow safety tape indicating that it operates.
- 100x100x300 mm 2 pieces rubber bump chock
- Side protective sheets for preventing the foot compression.
- 12 / 13mm teardrop pattern lip with high-strength resistance at the length of 600mm
- Anti-durumlarda sistemi kilitleyen hortum patlama valfi
- Relief valve that prevents the strain of the engine at maximum lift.

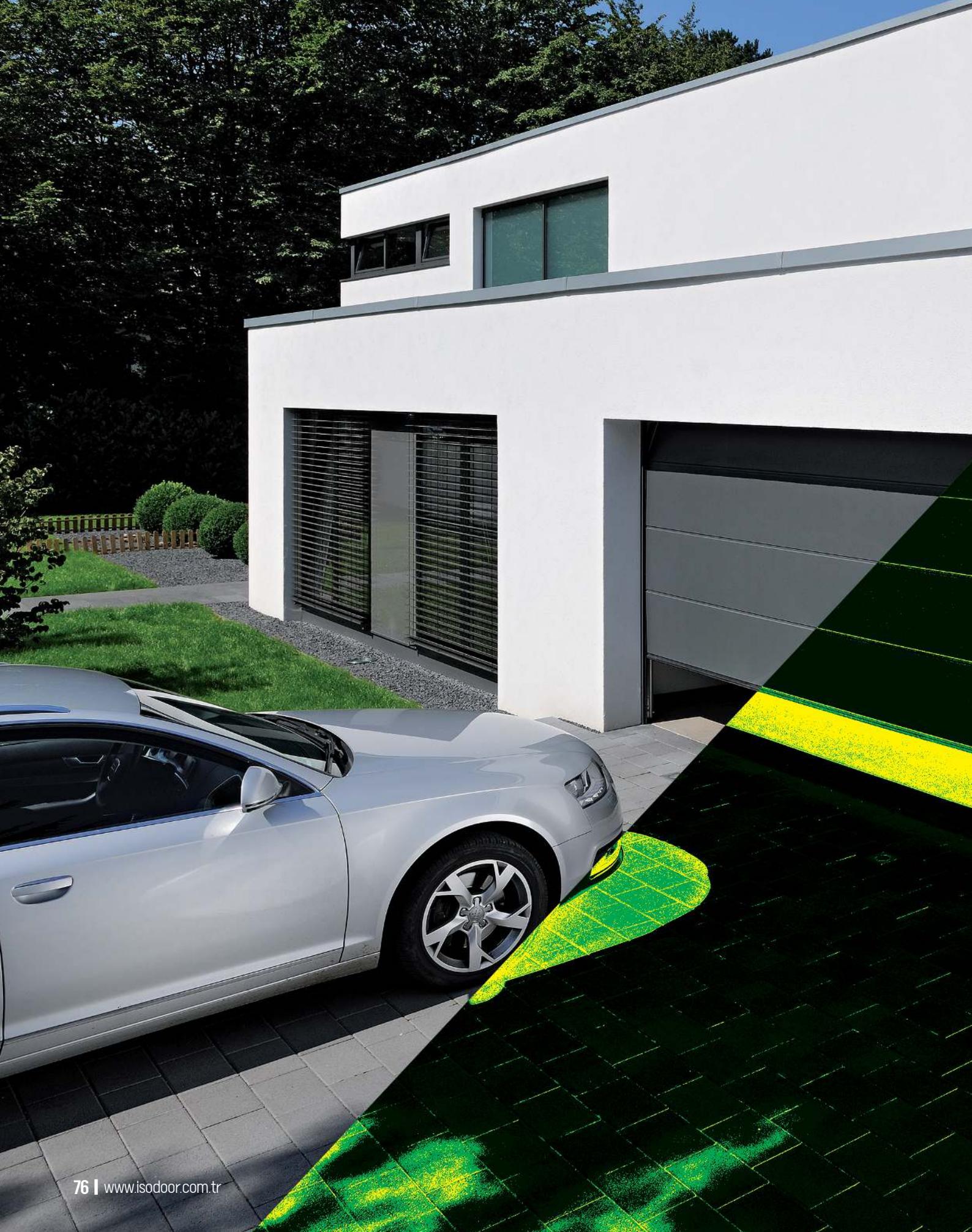
WIDTH (mm)	HEIGHT (mm)	CAPACITY (tons)	LIP LENGTH (mm)	MAX. LIFTING (mm)	MIN. LOWERING (mm)
1750	2500	6	600	650	-300
1750	2500	6	1000	650	-300
2000	2500	6	600	650	-300
2000	2500	6	1000	650	-300
2000	3000	6	600	650	-300
2000	3000	6	1000	650	-300
1750	2500	10	600	650	-300
1750	2500	10	1000	650	-300
2000	2500	10	600	650	-300
2000	2500	10	1000	650	-300
2000	3000	10	600	650	-300
2000	3000	10	1000	650	-300







Thermal Transmission of Doors



THERMAL TRANSMISSION OF DOORS 1,4 W / (m²K)

ISODOOR sectional doors provide excellent thermal insulation, with its panel thickness and door structure.



Garage door is ideal design providing high level of insulation and safety for residential, office and private villa garages.





While modern garage doors protect from all kinds of natural conditions, they also provide security against thieves. Sectional garage doors are one of the most preferred systems in closed garages of buildings and sites as well as in detached buildings. The panels of decorative garage doors consist of decorative cassette panels with finger-squeeze protection and can be lined and / or double-walled decorative windows can be applied on the panels optionally.

In sectional garage doors, the windows provide light entry to the garage and give the door a stylish appearance. By using the distance between the ceiling height and the door transition height in the most appropriate way, the rollers connected to the panels slide in the rail. Garage door works with 22 cm turning distances according to the height measurement detail. In case of need, it can work with a 15 cm rotation distance, including automation, by using side tension spring system instead of torsion springs.



New generation garage doors are manufactured in accordance with the dimensions with sandwich panels and accessories with International quality certificates, produced by us. Garage door consists of steel sandwich panels. Sandwich panels are obtained by injecting high pressure polyurethane between galvanized steel sheets.

Excellent sound and heat insulation is provided by high pressure polyurethane. The wind resistance of the panels is Class 5 test degree.





The plates on the front and back surfaces of the sectional garage door panels are interlocked with each other in 4 layers, so there are no problems such as material separation between the interior and exterior surfaces. Our all sandwich panels have a special finger compression protection system, this feature prevents any fingers from getting caught between the panels. Residential garage door is embedded in the distance between the transition height and the ceiling height. (Lifting is about a quarter circle used for turning while opening the door and pulling it parallel to the ceiling.)

Modern garage doors can be easily opened manually with a 24 V-DC / 50 Hz electric motor and a double torsion spring (wind-up) system that balances the door weight. Door weight does not force the user and automation because of the springs. EPDM gaskets between the decorative garage door panels, on the door, on the sides and bottom rows prevent dust, air and rainwater from entering. Hollow EPDM gasket located under the garage door ensures that the door fits smoothly on the ground.





To increase the wind resistance of the sectional decorative garage door, the panels are reinforced with steel plates from the inside. In addition, it is reinforced with a 4-layer sheet metal structure to prevent deformation in the places where the hinges and door handles are located. The wheel sets that provide the movement of the door on the rails are made of noise-canceling polyamide to ensure quiet operation.

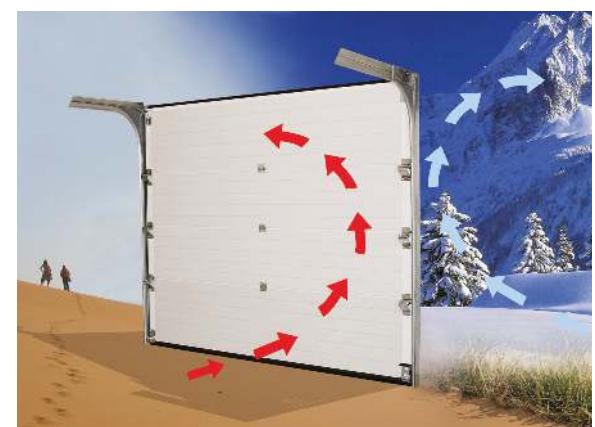


Optionally, automatic closing can be provided and a safety photocell can be connected. Belt systems are generally used as engine rails, residential garage door panels can be fitted with semicircular and rectangular sectioned double-walled decorative windows for lighting.



Traction motor systems with European brand, Italian and German technology CE and ISO 9001 standards are used in garage doors. It works very quietly. Any number of remote controls can be coded. An additional button can be connected, a bulb is connected to the output on the engine for lighting.

Motor limit settings can be made easily with electronic switches. In case of power outages, the door can be opened easily by taking the motor to the manual. If there is no other entrance to the garage, the manual take-up lever must be kept outside with a key.





TECHNICAL SPECIFICATIONS		ISO GM-600
Operating Voltage	220-240v	
Engine Power	600 N	
Maximum Door Removal Area	10 m ²	
Maximum Lifting Door Weight (kg)	100	
Opening Speed	9/6 m/dk.	
Maximum Drawn Current (A)	0,7 A	
Radio Frequency	433.92 MHZ	
Remote Memory	50	
Operating Temperature	-40 °C / + 50°C	
Protection Factor	IP 20	



TECHNICAL SPECIFICATIONS		ISO GM-1200
Operating Voltage	220-240v	
Engine Power	1200 N	
Maximum Door Removal Area	16 m ²	
Maximum Lifting Door Weight (kg)	165	
Opening Speed	9/6 m/dk.	
Maximum Drawn Current (A)	0,7 A	
Radio Frequency	433.92 MHZ	
Remote Memory	50	
Operating Temperature	-40 °C / + 50°C	
Protection Factor	IP 20	



TECHNICAL SPECIFICATIONS	BOTTICELLI SMART A850
Operating Voltage	220 /230 v
Engine Power	850 N
Maximum Door Removal Area	13 m2
Maximum Lifting Door Weight (kg)	135
Opening Speed	12.6 m/dk.
Maximum Drawn Current (A)	0,7 A
Radio Frequency	433.92 MHZ
Remote Memory	63
Operating Temperature	-20 oC / + 60oC
Protection Factor	IP 20



TECHNICAL SPECIFICATIONS	BFT BOTTICELLI SMART BT A1250
Operating Voltage	220 /230 v
Engine Power	1200 N
Maximum Door Removal Area	16 m ²
Maximum Lifting Door Weight (kg)	165
Opening Speed	11,4 m/dk.
Maximum Drawn Current (A)	0,7 A
Radio Frequency	433.92 MHZ
Remote Memory	50
Operating Temperature	-20 °C / + 60°C
Protection Factor	IP 20



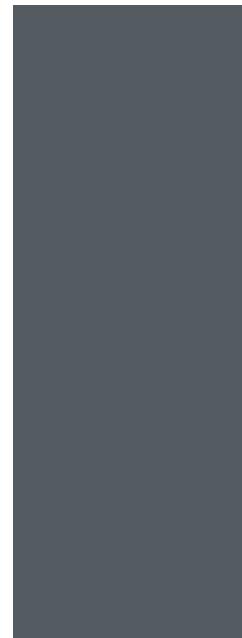


TECHNICAL SPECIFICATIONS	JM.3 ESA
Operating Voltage	230 v
Engine Power	600 N
Maximum Door Removal Area	11 m ²
Maximum Lifting Door Weight (kg)	115
Opening Speed	8,9 m/dk.
Maximum Drawn Current (A)	0,7 A
Radio Frequency	433.92 Mhz
Remote Memory	64
Operating Temperature	-20 °C / + 50°C
Protection Factor	IP 40



TECHNICAL SPECIFICATIONS	JM.4 ESA
Operating Voltage	230 v
Engine Power	1200 N
Maximum Door Removal Area	20 m ²
Maximum Lifting Door Weight (kg)	200
Opening Speed	8,9 m/dk.
Maximum Drawn Current (A)	1,5 A
Radio Frequency	433.92 Mhz
Remote Memory	64
Operating Temperature	-20 °C / + 50°C
Protection Factor	IP 40

TECHNICAL SPECIFICATIONS		SPIN 22
Operating Voltage	230 v	
Engine Power	650 N	
Maximum Door Removal Area	10,5 m ²	
Maximum Lifting Door Weight (kg)	110	
Opening Speed	12 m/dk.	
Maximum Drawn Current (A)	0,8 A	
Radio Frequency	433.92 Mhz	
Remote Memory	1024	
Operating Temperature	-20 °C / + 55°C	
Protection Factor	IP 40	



TECHNICAL SPECIFICATIONS		SNA 6041
Operating Voltage	230 v	
Engine Power	1000 N	
Maximum Door Removal Area	17,5 m ²	
Maximum Lifting Door Weight (kg)	110	
Opening Speed	12 m/dk.	
Maximum Drawn Current (A)	1 A	
Radio Frequency	433.92 Mhz	
Remote Memory	1024	
Operating Temperature	-20 °C / + 55°C	
Protection Factor	IP 40	







Panels

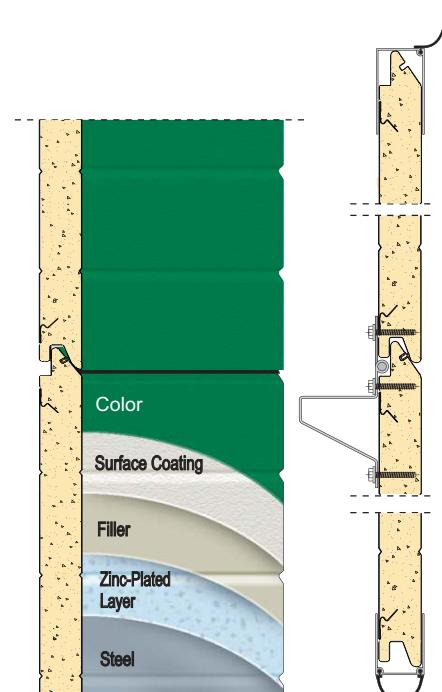
PANEL TYPES

Panel Type	S (mm)	K		Panel Weight		Tolerances			U Value	
		Kcal/m ² hK	Watt/m ² K	Kcal/mK	Kg/m	Kg/m ²	Thickness	Width		
R-500	40	0,44	0,54	0,20	5,5	11	+/- 2	+/- 1	+/- 5	1,4
R-610					6,7	11				

Section Type	U Value (W/mK)	Wind Class	Water Penetration Class
Sandwich	~1,4	5	3
Sandwich With Windows	~1,7	3	3
Sandwich With Pass Door	~1,8	2	3
FV	4,3	4	3
FV	4,3	2	3
FV	3,4	4	3

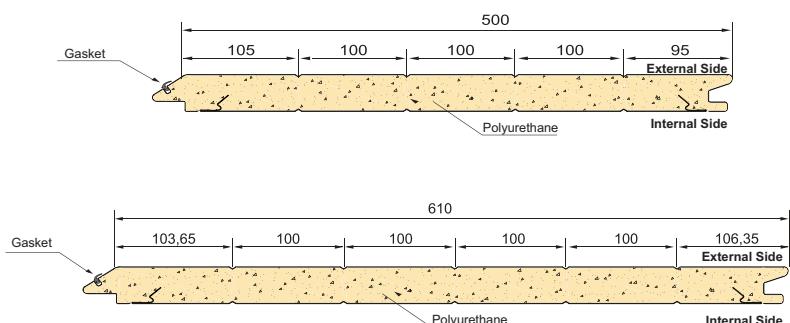


Wood Grain Design



Standard Models - Stucco Design

RIBBED PANEL

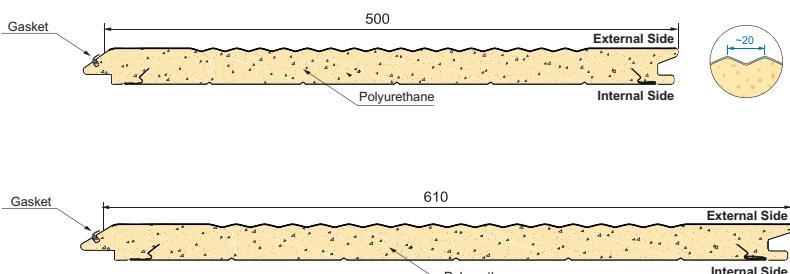
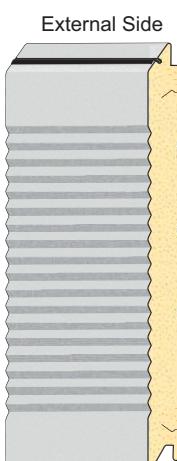


Ribbed Internal Side RAL 9002



Standard Colour : RAL3000; RAL5010; RAL7016; RAL9002; RAL9006; RAL9007; RAL9016.

MICRORIB PANEL

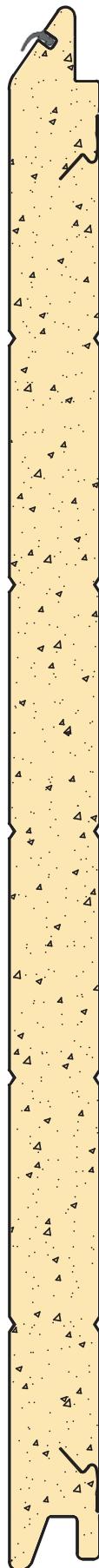


Ribbed Internal Side RAL 9002



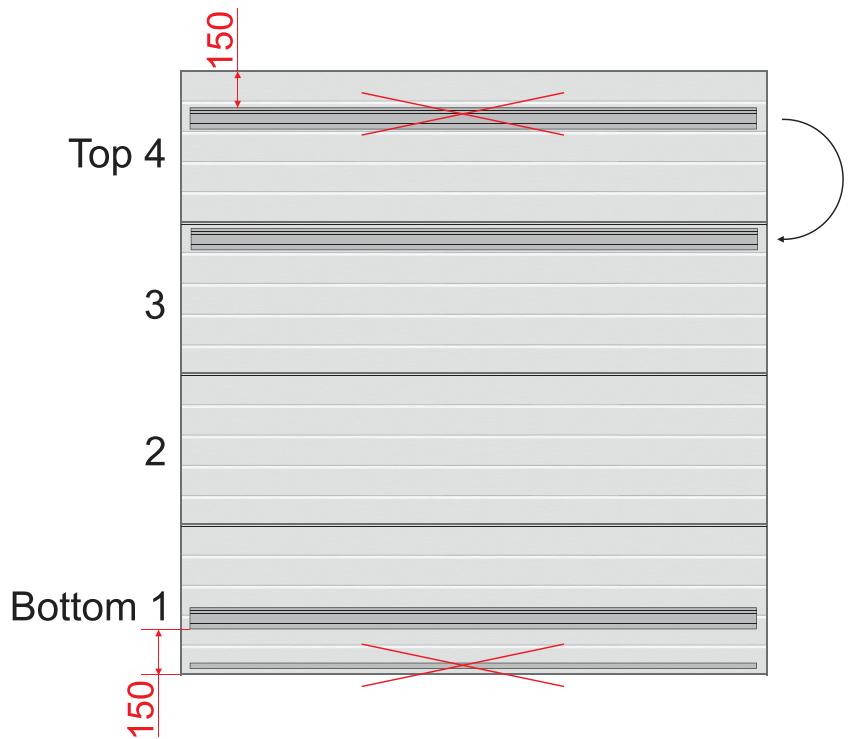
Standard Colour : RAL3000; RAL5010; RAL7016; RAL9002; RAL9006; RAL9007; RAL9016.

Reinforcement Profiles



Door width	Profile	Quantity	Note
< 4500	-	-	-
4501 - 5010	Bottom	1	Sample no.1
5011 - 6000	Bottom + Omega	on every second door panel	Sample no.2 and no.3
6001 - 8000	Omega	on each door panel	Sample no.4
8001 - 9000	Triangular	on every second door panel	Sample no.2 and no.3
> 9001	Triangular	on each door panel	Sample no.4

⚠ Dark colour doors exposed to the sunlight can require additional profiles !!!



It is mounted on the penultimate section when it is impossible to fit the reinforcement profile on the upper section.

The omega or triangular profile in the bottom section is only used by straightening.

PANEL MODELS AND COLORS



RED MICRO RIBBED (RAL 3000)



BLUE MICRO RIBBED (RAL 5010)



WHITE RIBBED (RAL 9002)



WHITE MICRO RIBBED (RAL 9002)



ANTHRACITE GREY MICRO RIBBED (RAL 7016)



GREY MICRO RIBBED (RAL 9006)



ANTHRACITE GREY WRINKLE (RAL 7016)



GREY WRINKLE (RAL 9007)



WHITE WRINKLE (RAL 9006)

PANEL MODELS AND COLORS

ANTHRACITE GREY WRINKLE
(RAL 7016)



WHITE WRINKLE (RAL 9016)



WHITE WRINKLE (RAL 9016)



WOODEN DESIGN - RIBBED



WOODEN DESIGN - CASSETTE



WHITE CASSETTE (RAL 9002)



PANEL'S BEND



SIDE COVERS



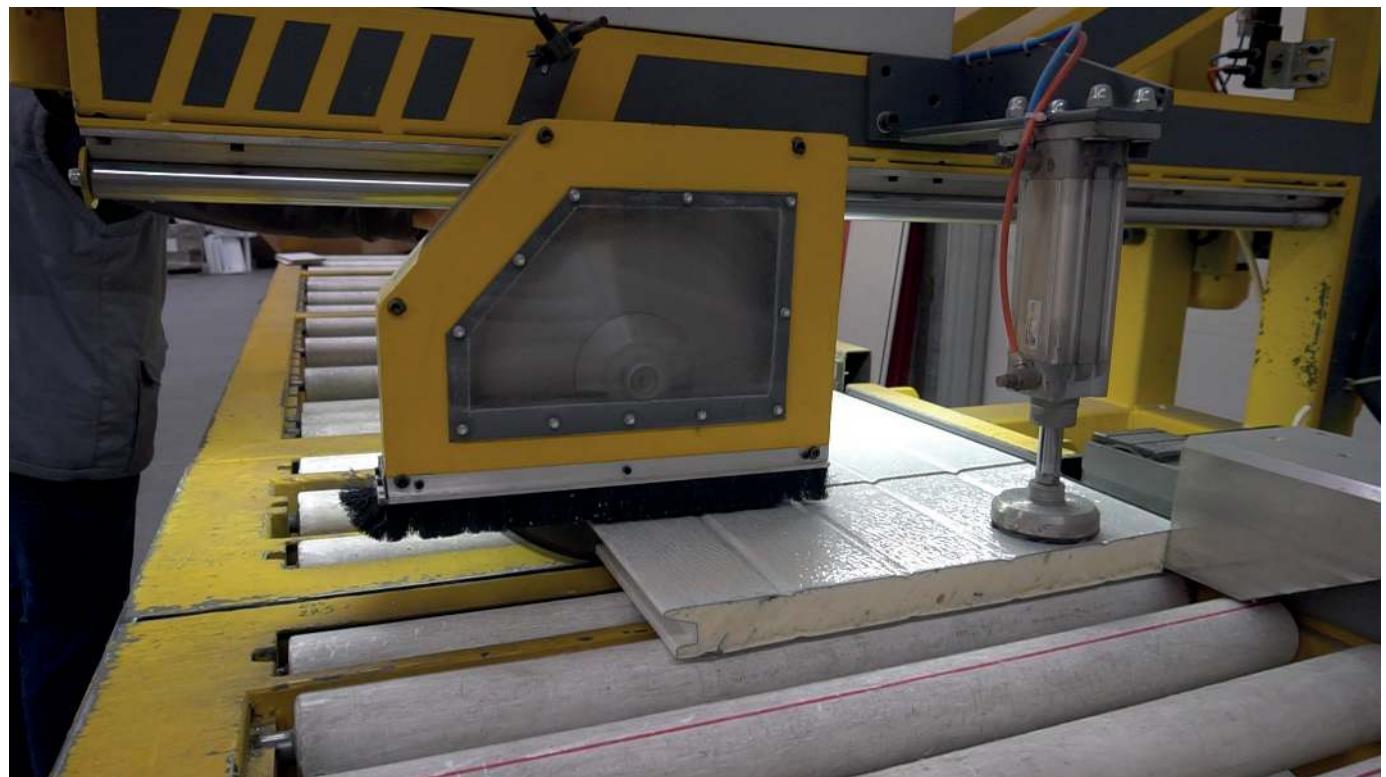
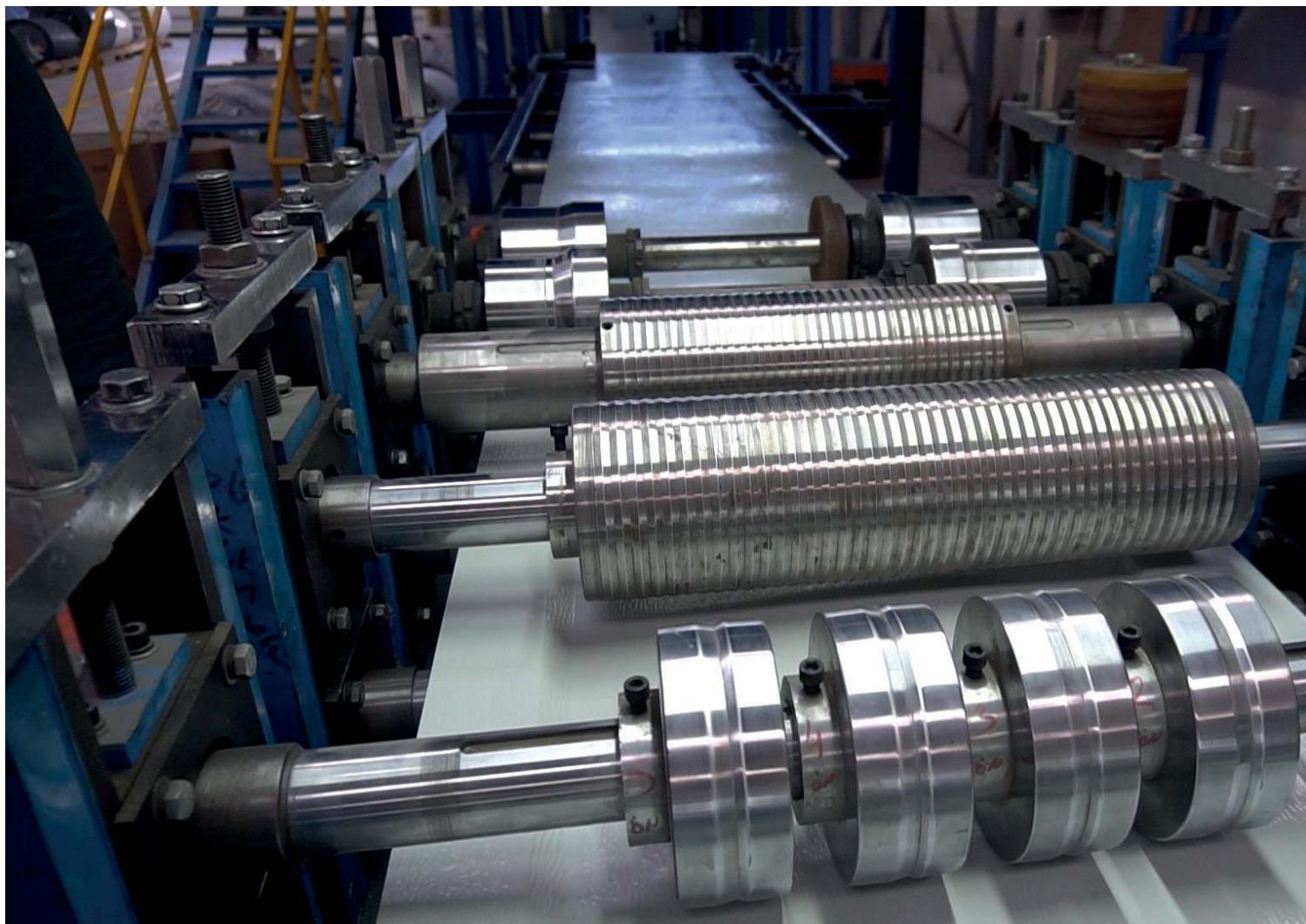
BOTTOM SECTION



PANEL AND HINGES



TOP SECTION



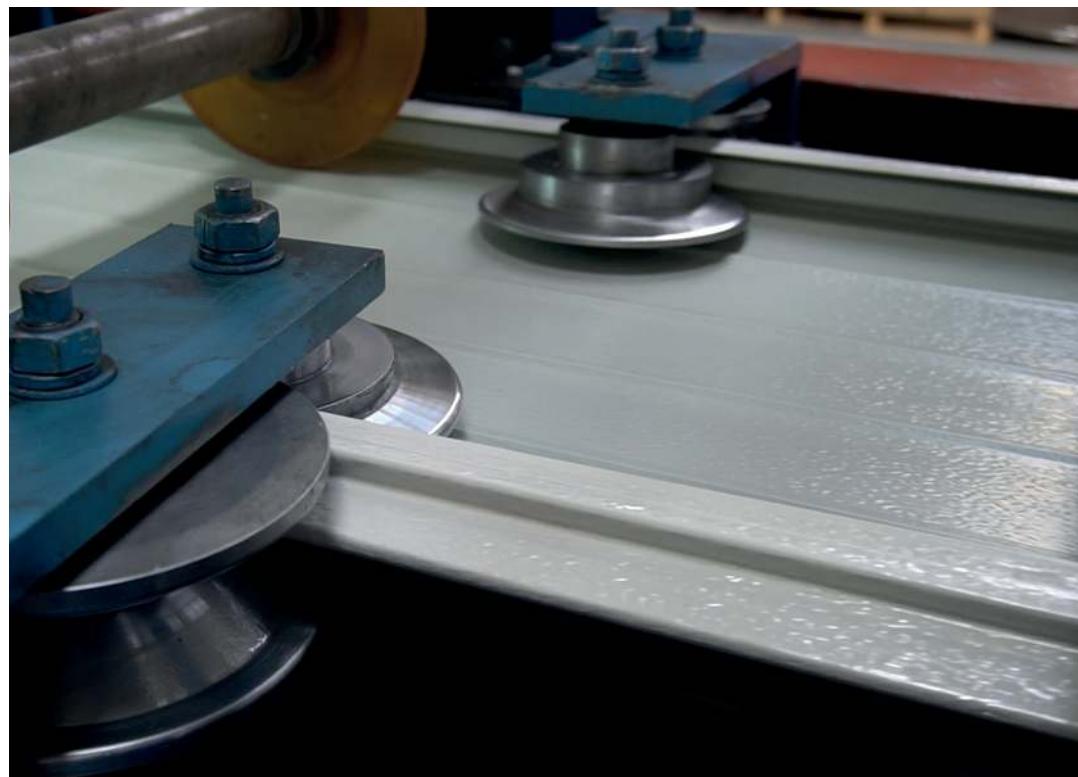
Panel Production



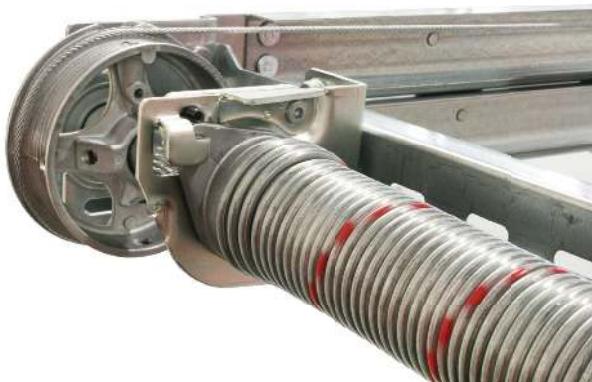
**Isodoor finger safe panels
are compatible with Modern
architecture...**

Isodoor sectional door panels provide good sound and thermal insulation as an outer door for industrial buildings and warehouses. All Insulated Door Panels conform to the Building Regulations requirements for Sectional Doors.

Isodoor panels are finger safe panels: the nose and the female part of the panel are profiled in the external sheet and the interior sheet covers the external sheet.

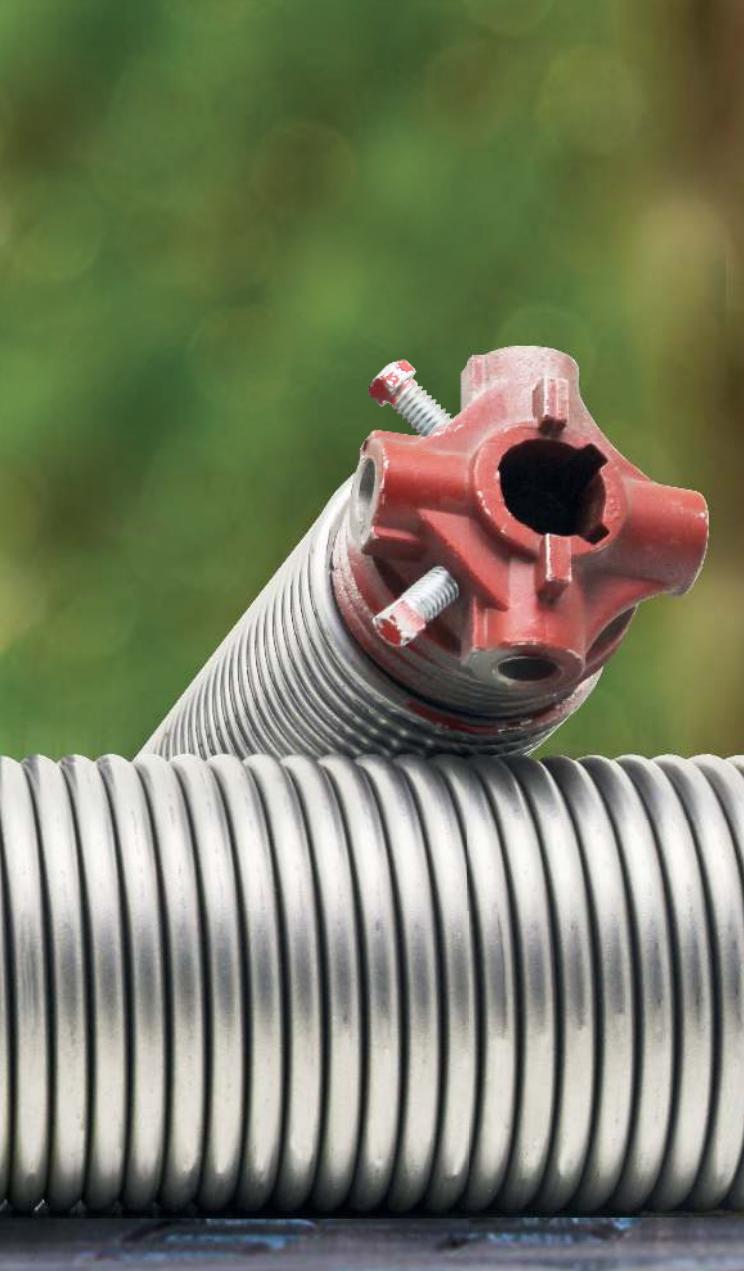


SPRINGS



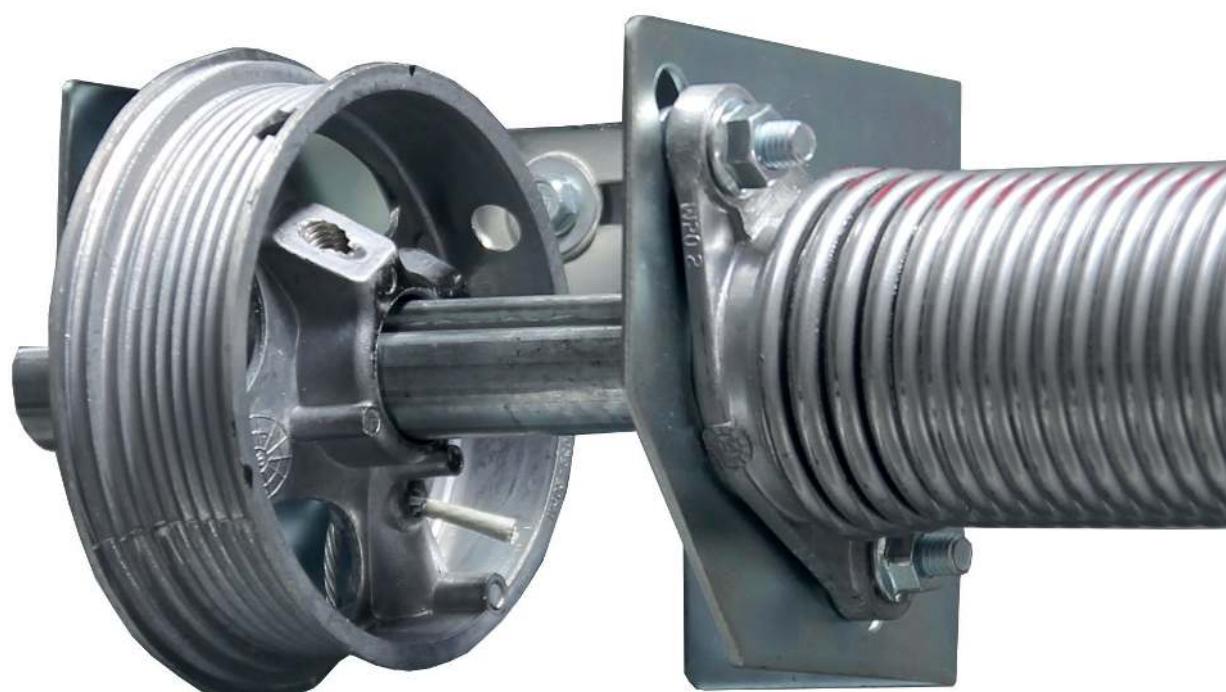
The springs take the weight of the door.

Thanks to the winding spring system, the weight of the door is transferred to the spring and it helps you to open and close the door manually in case of power failure or malfunction.

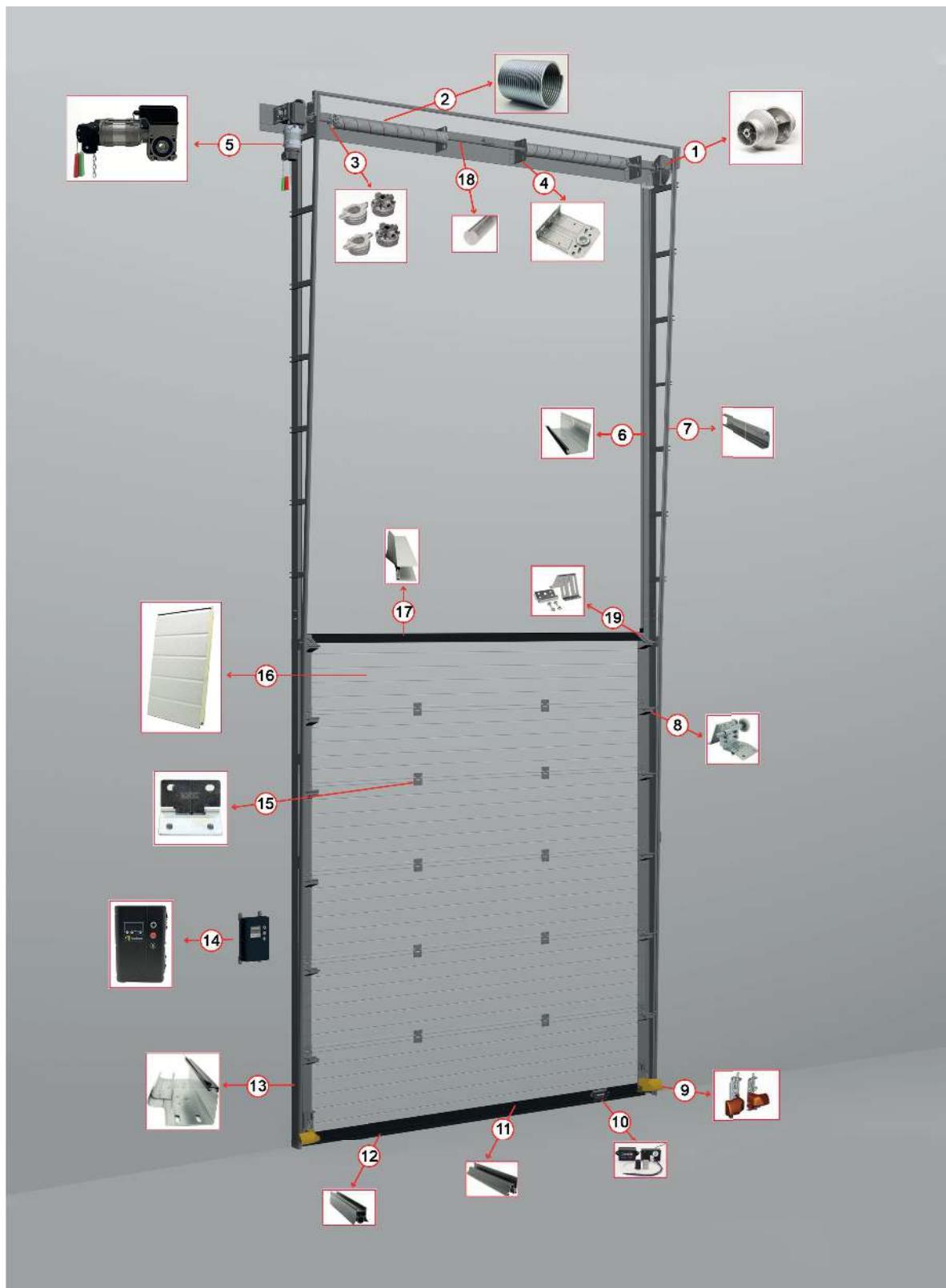


The heart of the sectional door; torsion springs

Torsion spring is used to balance the weight of the sectional door. These springs are installed towards the bending direction of the spring, creating a force. This force is connected to the underside of the door by means of ropes and the weight of the door is transferred to the springs. For this reason, the load on the door opener is reduced to around 20-40 kg.

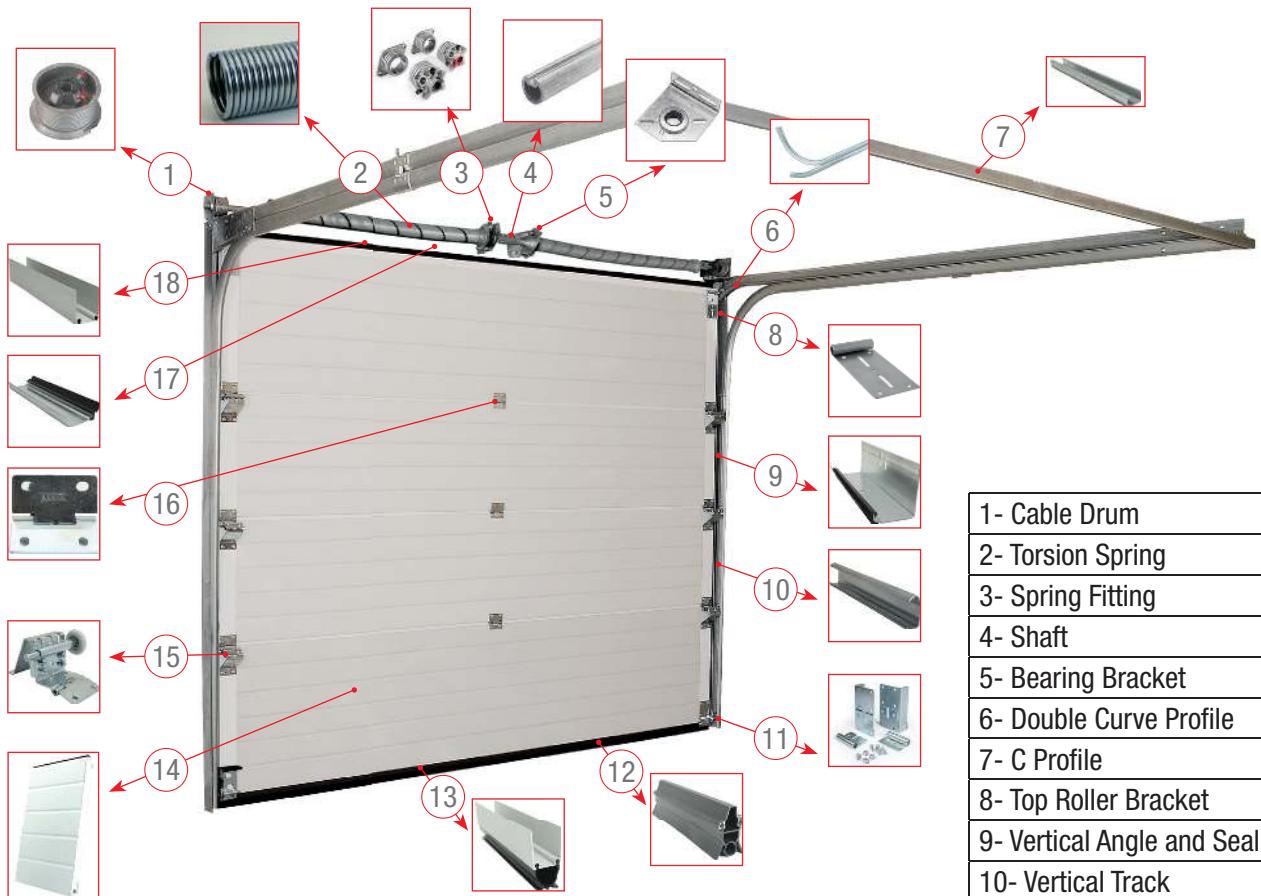


Industrial Door Hardware



1- Cable Drum	8- Side Hinge and Roller	15- Middle Hinge
2- Spring	9- Cable Break Device	16- Panel
3- Spring Fitting	10- Bottom Sefety System	17- Top Profile and Seal
4- Bearing Bracket	11- Bottom Seal Profile	18- Shaft
5- Motor	12- Bottom Seal	19- Top Roller Bracket
6- Vertical Angle and Seal	13- Vertical Angle, Track, Seal	
7- Vertical Track	14- Control Board	

Torsion Spring Garage Door Hardware



Tension Spring Garage Door Hardware



1- Cable Drum
2- Torsion Spring
3- Spring Fitting
4- Shaft
5- Bearing Bracket
6- Double Curve Profile
7- C Profile
8- Top Roller Bracket
9- Vertical Angle and Seal
10- Vertical Track
11- Bottom Roller Bracket
12- Bottom Profile and Seal
13- Bottom Profile and Seal
14- Panel
15- Side Hinge and Roller
16- Middle Hinge
17- Top Profile and Seal
18- Top Panel Profile
19- Hinge With Fixed Model
20- Double Roller
21- Tension Spring

- Isodoor had its doors tested in accordance with ISO EN 13241-1 standards in RISE-SP, Europe's leading test center, in 2014-2019 and successfully concluded.
- In addition, our company is the only institution in the sector that has the Domestic Goods Certificate.
- **Door panels are 40 mm thick. (0.5 mm galvanized steel + polyurethane + 0.5 mm. Galvanized steel)**
- Integral sealing with the panel that provides sealing between two panels when placed on top of each other. Gasket is available.
- **The inner and outer sheets of our panels are clamped in such a way that they cannot be separated from each other.**
- In the sections where the hinges will be screwed on the panels, the lower and upper sheets come together and form a total thickness of 2 mm, and has a structure that cannot be separated.
- **There is a special polyurethane filler injected at high pressure between the outer surface steel plates of our door panels, which preserves the ambient temperature.**
- The special polyurethane filling of our panels does not contain CFC (Chlorofluorocarbon) and has the feature of protection against mold, insects and bacteria.
- **The heat transmission coefficient of the panels is 0.50 W/m² °C.**
- Polyurethane foam, which is the panel filling material, has a density of 50 kg/m³.
- **The thermal conductivity of polyurethane foam is 0.017 Kcall/(m.K) at an average temperature of 9.97 °C.**
- Wind resistance is En 12424, Industrial door is class 3 - Garage door is class 5.
- **Water tightness value is EN 12425 Industrial door class 3 – Garage door class 3.**
- Air permeability value is EN 12426, Industrial door class 2 - Garage door class 3.
- **Our panels have finger pinch safety.**
- The weight of our panels is 11 kg/m².
- **For the connection of hinges and components on the panels, the inner and outer sheet bends are adjacent to each other at the connection point of the hinge screws in polyurethane filling.**
- When the door size is 6 meters or more, reinforcement sheets, double side hinges and long spindle wheels are used in panel joints to increase resistance against impacts and wind loads in panel joints.

- The torsion springs that balance the weight of the door must comply with DIN17223, are galvanized or painted. Spring usage alternatives with a standard life of 15 000 cycles, and a life of 100 000 cycles can be used if desired.
- The steels of the torsion springs used in the doors have been specially sandblasted and painted to extend their life.
- The steel ropes that ensure the healthy operation of the door are 6x19 = 114 wire wounds around the polypropylene core and are resistant to 1960 N/m m² tension.
- The shafts on which the torsion springs of the door are attached are galvanized.
- **Horizontal rails have rear connection C profile.**
- There is a rope break safety system that prevents the door from falling down, as a standard for the industrial system, in case the steel ropes break, and it is kept with a cover for safety.
- The rails and brackets of the door are made of 2 mm galvanized sheet, depending on the type of lifting (standard, low, high, vertical) application is made.
- There is a special lifting to prevent the rail profiles of the door from coming out of the wheels.
- **Rails and Angle profiles must be combined with air clamping without heat treatment and have a structure that cannot be separated easily.**
- The wheels that move in rails on the door sides are made of noise-preventing polyamide.
- **As a standard, there is an opto laser safety system application inside the rubber gasket under the door, which makes a soft touch and allows it to return upwards in case the door encounters an obstacle during its downward movement.**
- There is a special joint section that provides sealing between the door panels and a rubber gasket throughout the panel integrated with the panels.
- **There is a double lip rubber outer sealing gasket between the door panels and the top and side walls, which maintains its flexibility down to -30° C.**
- Between the door panels and the floor, there is a special hollow rubber gasket, which provides sealing, ensures that the door is fully seated on the floor, and is inserted into the profile on the bottom panel of the door.

CERTIFICATIONS



CERTIFICATIONS

RISE

REPORT
Issued by an Accredited Testing Laboratory

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Date 2019-04-30 Reference 9P02246-1 Page 1 (3)

SP
Testing

BILKA otomatik kapı sistemleri
Mimarşan OSB 9, Cadde no:1
TR-38520 MELİKGАЗI/KAYSERİ
Turkiet

Determination of air permeability, resistance to water penetration and resistance to wind load according to EN 13241:2003+A2:2016
(1 appendix)

Test object
Client: BILKA otomatik kapı sistemleri - ISODOOR
Product name: Industrial Door, ISO-E
Type of door: Overhead, sectional door
Daylight size: Width 4000 mm, Height 3380 mm
The door was supplied and installed by the client in the opening of an airtight chamber, with its exterior facing inwards towards the chamber, see description and figures in appendix 1.

Summary of classification
Air permeability according to EN 12426:2000: Class 2
Resistance to water penetration according to EN 12425:2000: Class 3
Resistance to wind load according to EN 12424:2000: Class 3

Test procedure
Air permeability
A positive air pressure was established in the chamber and the air leakage was measured at 50 Pa.
The tests were carried out in accordance with EN 12427:2000.

Resistance to water penetration
Water was applied through three horizontal rows of nozzles with ten nozzles on each row. The upper row supplied 2±0.2 l/min of water per nozzle. The two lower rows supplied 1±0.1 l/min of water per nozzle.

The test was carried out in accordance with EN 12489:2000.

Resistance to wind load
The door was tested in an air pressure chamber. Before the test measures were taken to minimize air leakage in the door and its supporting construction. The air pressure in the test chamber was increased in steps in accordance with the different classes given in EN 12424:2000.

The test was carried out in accordance with EN 12444:2000.

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Date 2019-04-30 Reference 9P02246-2 Page 1 (3)

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Testing

BILKA otomatik kapı sistemleri
Mimarşan OSB 9, Cadde no:1
TR-38520 MELİKGАЗI/KAYSERİ
Turkiet

Determination of air permeability, resistance to water penetration and resistance to wind load according to EN 13241:2003+A2:2016
(1 appendix)

Test object
Client: BILKA otomatik kapı sistemleri - ISODOOR
Product name: Industrial Door, ISO-E
Type of door: Overhead, sectional door
Daylight size: Width 2300 mm, Height 2250 mm
The door was supplied and installed by the client in the opening of an airtight chamber, with its exterior facing inwards towards the chamber, see description and figures in appendix 1.

Summary of classification
Air permeability according to EN 12426:2000: Class 3
Resistance to water penetration according to EN 12425:2000: Class 3, 110 Pa
Resistance to wind load according to EN 12424:2000: Class 5, 1300 Pa

Test procedure
Air permeability
A positive air pressure was established in the chamber and the air leakage was measured at 50 Pa.
The tests were carried out in accordance with EN 12427:2000.

Resistance to water penetration
Water was applied through two horizontal rows of nozzles with six nozzles on each row. The upper row supplied 2±0.2 l/min of water per nozzle. The lower row supplied 1±0.1 l/min of water per nozzle.

The test was carried out in accordance with EN 12489:2000.

Resistance to wind load
The door was tested in an air pressure chamber. Before the test measures were taken to minimize air leakage in the door and its supporting construction. The air pressure in the test chamber was increased in steps in accordance with the different classes given in EN 12424:2000.

The test was carried out in accordance with EN 12444:2000.

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Date 2019-05-23 Reference 9P02246-1C Page 1 (2)

**BILKA otomatik kapı sistemleri
Mimarşan OSB 9, Cadde no:1
TR-38520 MELİKGАЗI/KAYSERİ
Turkiet**

Calculation of thermal transmittance according to EN12428:2013
(3 appendices)

Work requested
The linear thermal transmittance Ψ for top, bottom and side section of a door with panel and thermal transmittance for the complete door were calculated. Heat losses are calculated based on the drawings and material data supplied by the client.

Test object
Client: BILKA otomatik kapı sistemleri - ISODOOR
Product name: Industrial Door, ISO-E
Type of door: Overhead, sectional door
Daylight size: Width 4000 mm, Height 3380 mm
Type of panel: PUR with steel cover

Calculation and test methods
Calculations were performed according to EN 12428:2013. The THERM 6.3 software was applied when calculating linear heat losses. Values of the thermal conductivity and applied boundary conditions are shown in appendix 1. The calculations are shown with more details in appendix 2.

Results
The thermal transmittance of door with size 3000mm * 2250mm was calculated to $U_{h,1} = 1.4 \text{ W/(m}^2\text{K)}$

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