



B u i l d i n g D o o r

Hilton



TECNOVA is a modern concept in the elevator, escalator & automatic building door industry. It's aim is to create smart choice & fulfill the mega trend of urbanization demand.

TECNOVA automatic building doors are designed, global sourcing & partially manufactured by KBB international company & exported to customers in 56 countries including Europe and USA. A wide range of products including sliding door, curved door, hermetic door, telescopic sliding door & revolving door are offered by **TECNOVA** door segment.

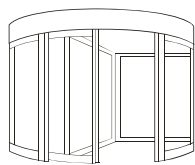


PRODUCT

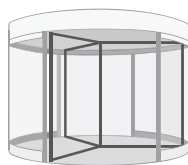
Composition

Product Series

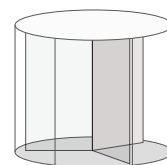
Revolving Door Series



Two Wings Door

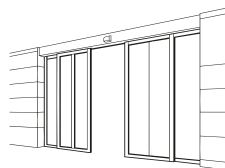


3/4 Wings Door

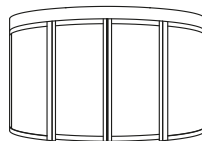


Crystal Door

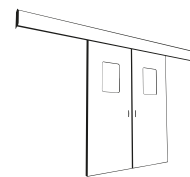
Sliding door series



Sliding Door

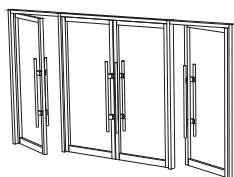


Curved Door



Hospital Door

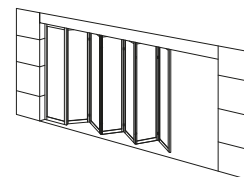
Venue door series



Swing Door



Balanced Door

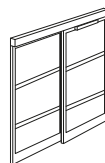


Folding Door

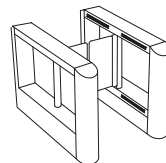
Complex series



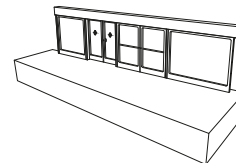
Automatic Swing Door



Residential Door







Turnstile & Gate



Platform Screen Door

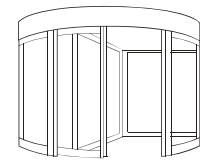


International Standards

| | | | |
|---|---|---|--|
|  <p>ISO 9001 INTERNATIONAL ORGANIZATION FOR STANDARDIZATION</p> |  <p>CE</p> |  <p>UL</p> |  <p>TÜV Rheinland</p> |
| ISO 9001 QUALITY MANAGEMENT SYSTEM CERTIFICATION | CE CERTIFICATION & EN16005 STANDARD | UL CERTIFICATION STANDARDS | TUV CERTIFICATION STANDARDS |



TWO WING Revolving Door



Two-wing revolving doors, as the high-end revolving doors, are widely used for hotels, shopping centers, office building & airports. Based on EN16005, the highest European safety standard of revolving door, there are up to 30 detection sensors, photocells & safety monitoring devices equipped to our revolving door, which are used for providing comprehensive protection for pedestrians.



THE MAIN FUNCTIONS

| FUNCTION | FUNCTION INTRODUCTION |
|---|--|
|  | <p>Three in one</p> <p>Revolving door, sliding door and balanced door</p> |
|  | <p>Key Switch</p> <p>The key switch has three modes:Revolving door,sliding door and remote-controlled door</p> |
|  | <p>LCD Display</p> <p>The LCD panel displays the operating state of the door and showspossible error codes for troubleshooting</p> |
|  | <p>Program Selector</p> <p>During revolving, there are Night Lock, Opening Position Start/Stop, Closing Position Start/Stop, Low/Normal Speed, Revolving Counter-Clockwise Manually, Revolving Clockwise Manually</p> |
|  | <p>Emergency Stop Button</p> <p>Emergency Stop Button could stop door revolving if there is any emergency and switch to sliding door status</p> |
|  | <p>Disabled Button</p> <p>Door will revolve one circle with half of normal speed after pressing disabled button</p> |
|  | <p>UPS</p> <p>The UPS ensures normal operations when the door is powered off</p> |
|  | <p>Anti-Squeeze Function</p> <p>It works when revolving door leaves revolve to drum wall at the distance of 700mm. Anti-Squeeze sensor could be activated and brake the door</p> |
|  | <p>Anti-Collision Function</p> <p>Sensor is installed at the front edge of door leave to prevent colliding passenger, when sensor detects passengers or objects, system begins to brake, door stops running</p> |

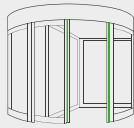
THE SAFETY FUNCTIONS

| SAFETY FEATURES | FUNCTION INTRODUCTION |
|-----------------|-----------------------|
|-----------------|-----------------------|



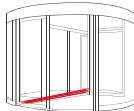
Drum Wall Load-bearing

This structure strengthens door stability by increasing load-bearing area.



Vertical Safety Buffer

Installed on drum wall right column, when it's active, door stop revolving, it's kind of passive safety protection of features.



Anti-collision photocell

There are three pairs of photocell, when there are too many passengers in the door and active photocell, door will slow down, brake and stop revolving to make sure passengers' safety.

| ADVANCED SECURITY FEATURES | FUNCTION INTRODUCTION |
|----------------------------|-----------------------|
|----------------------------|-----------------------|



Safety Relay

The safety relay can monitor whether the safety buffer works at any moment. The door will stop immediately when the buffer breaks down.



Torque control Function

When the distance between the moving door wing and the fixed one is less than 700mm, the drive power output from the motor will reduce to a safe level, so that the pedestrian will not be hurt even if all the other sensors are breakdown.



Reversing Function

When passengers make both safety buffer on revolving leaf and drum wall column, revolving door will reverse within safety distance (70mm)



Emergency Stop Function

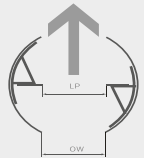
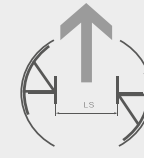
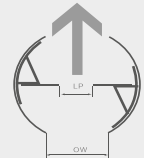
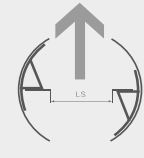
When there is emergency, emergency stop button could be pressed in any operating status to stop working.

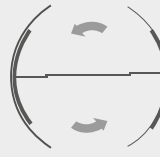
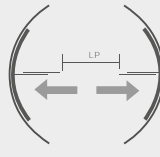
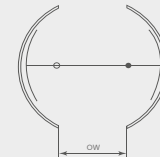
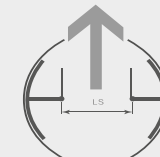


Emergency Evacuation Function

When revolving door encounters an emergency power failure, using internal UPS power to evacuate passengers trapped in the revolving door.

SPECIFICATON

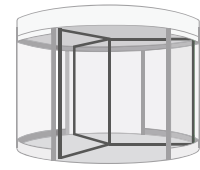
| KA022 4 Series with Showcase Revolving+Sliding+Balanced door | | KA022 5 Series with Showcase Revolving+Sliding | |
|---|---|--|---|
|  |  |  |  |
| Inner Diameter | 3600 | 4200 | 4800 |
| Outer Diameter | 3688 | 4288 | 4888 |
| Total Height | 2640 | 2640 | 2640 |
| Passage Height | 2300 | 2300 | 2300 |
| Canopy Height | 340 | 340 | 340 |
| Max.Passage Opening | 1800 | 2100 | 2400 |
| Sliding door Opening | 1100 | 1400 | 1700 |
| Persons/Min | 48 | 64 | 80 |

| KA022 5W without Showcase Revolving+Sliding | | KA022 2W without Showcase Revolving+Swing | |
|---|---|--|---|
|  |  |  |  |
| Inner Diameter | 3000 | 3200 | 3600 |
| Outer Diameter | 3088 | 3288 | 3688 |
| Total Height | 2540 | 2540 | 2540 |
| Passage Height | 2200 | 2200 | 2200 |
| Canopy Height | 340 | 340 | 340 |
| Max.Passage Opening | 1800 | 2100 | 2400 |
| Sliding Door Opening | 1100 | 1400 | 1700 |
| Persons/Min | 48 | 64 | 80 |

STANDARD TECHNICAL INFORMATION

| | |
|--|-----------------------------|
| Power Supply | 110V/220V/AC ±10% 50Hz-60Hz |
| Revolving door motor power consumption | 250W/AC×2=500W/AC |
| Sliding door motor power consumption | 100W×2=200W |
| Lighting power | 12V/AC 600W |
| High speed adjustment range | 1~4r.p.m. |
| Low speed adjustment range | 0.5~2.5r.p.m. |
| Ambient temperature range | -15°C~50°C |

THREE / FOUR Wing Revolving door



More
Stable

More
Security












More
Beautiful

As the common use door type in automatic revolving doors, three/four wing revolving door are widely used in hotels, shopping malls, office buildings, where have moderate traffic requirements. After redesign, traditional pillar-bearing is updated by drum wall load-bearing, which makes the structure more stable & more secure.

Considering aesthetic & transparent overall facade, decorative pillars & all glass revolving door could also be offered. And manual revolving door could be another economical choice too.



THE MAIN FUNCTIONS

| FUNCTION SELECTION | FUNCTION INTRODUCTION | |
|---|--------------------------------------|--|
|  | <p>Key Switch</p> | <p>Could be operated by Locking, Continuous operation, Eco-mode</p> |
|  | <p>Handicap Button</p> | <p>Revolving door would rotate one revolution with half normal speed for handicap pedestrian, senior citizen and kids.</p> |
|  | <p>Emergency stop button</p> | <p>Emergency situation, door could halt immediately when press button</p> |
|  | <p>Force-sensitive</p> | <p>If resistance of revolving wings encounter exceed a pre-set value, automatic door will halt to ensure safety.</p> |
|  | <p>Speed control</p> | <p>With mechanical damper, control operating speed for safety.</p> |
|  | <p>Vertical safety buffer</p> | <p>Conductive safety rubber, be activated by small force and halt the door.</p> |
|  | <p>Anti-squeeze Sensor</p> | <p>Distance between revolving wing and curved wall smaller than 700mm, anti-squeeze sensor could be activated and brake the door.</p> |
|  | <p>Panic breakout</p> | <p>Emergency situation, door wings could be manually collapsible, provide a fleet passage space.</p> |
|  | <p>Infrared safety light curtain</p> | <p>Non-contact anti-collision light curtain installed on top of door wings, any pedestrian or objects detected within a defined scale, anti-collision system is activated and brake door wing revolving.</p> |
|  | <p>Night Security Door</p> | <p>Make the door closed at night, in case of any wanderer stays in door area.</p> |
|  | <p>Assisted function</p> | <p>Design specifically for manual revolving door, door would rotate one revolution after gently push and then stop at</p> |

STRUCTURAL CHARACTER

FUNCTION INTRODUCTION



Center Shaft

Door wings rotated by center shaft, compared with other door clamp type would be more stable



Bottom-driving

Bottom-driving, which need driving box to be embedded in advance. Normally used for all glass automatic revolving doors



Top-driving

Assemble driving system, and electronic parts inside revolving door canopy



Drum wall load-bearing

Strength door stability by increased stressed area, compared with other pillar-bearing, firmness is greatly enhanced

ADVANCED FEATURES

FUNCTION INTRODUCTION



Manual/Automatic switching

When power failure, automatic door could be manually operated by this device



Speed Control Function

Speed limitation ensures safety as it prevents the doors from rotating too fast



Anti- piggybacking function (used for security door)

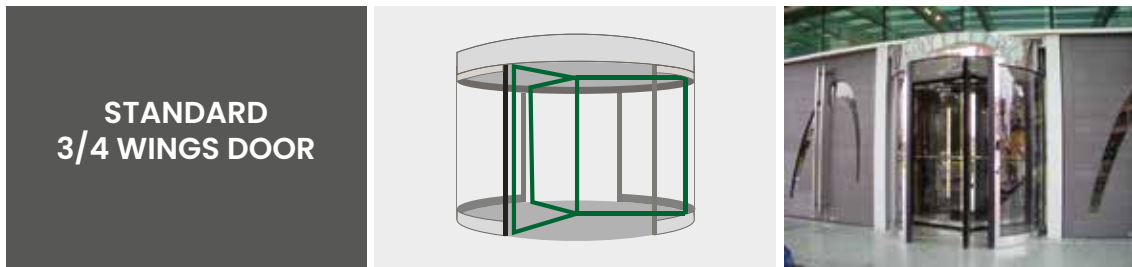
Under access control function, ensuring only one passenger passing of each authorization, the following passenger will be locked in an enclosed space. The security door will warn and back to start place



Anti-tracking function (used for security door)

By a video analyzing software, ensure every passing space only pass one passenger. If there are more than 2 passengers enter 1 passing area, the security door will warn and back to start place

STANDARD TYPE



| STANDARD 3/4 WINGS DOOR | | 1800 | 2100 | 2400 | 2700 | 3000 | 3200 | 3600 |
|----------------------------|---------|------|------|------|------|------|------|------|
| Inner Diameter | | 1800 | 2100 | 2400 | 2700 | 3000 | 3200 | 3600 |
| Outer Diameter | | 1888 | 2188 | 2488 | 2788 | 3088 | 3288 | 3688 |
| O.Width | 3 wings | 772 | 924 | 1074 | 1224 | 1374 | 1474 | 1675 |
| | 4 wings | 1172 | 1385 | 1597 | 1810 | 2022 | 2164 | 2448 |
| Passage Height | | 2300 | 2300 | 2300 | 2300 | 2300 | 2300 | 2300 |
| Total Height | | 2600 | 2600 | 2600 | 2600 | 2600 | 2600 | 2600 |
| Canopy Height | | 300 | 300 | 300 | 300 | 300 | 300 | 300 |

LARGE & HIGH TYPE

LARGE & HIGH TYPE 3/4 WINGS DOOR



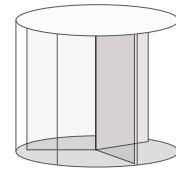
| | | | |
|----------------|------|------|------|
| Inner Diameter | 3600 | 4200 | 4800 |
| Outer Diameter | 3688 | 4288 | 4888 |
| Passage Height | 2300 | 2300 | 2300 |
| Canopy Height | 300 | 300 | 300 |
| Total Height | 2600 | 2600 | 2600 |

THE MAIN FUNCTION

| | |
|--|-----------------------------|
| Power Supply | 110V/220V/AC ±10% 50Hz/60Hz |
| Revolving door motor power consumption | 250W/AC |
| Lighting | 300W |
| High speed adjustment range | 1~4r.p.m. |
| Low speed adjustment range | 0.5~2.5r.p.m. |
| Ambient temperature range | -15°C~50°C |

CRYSTAL

Revolving door



More
Stable


More
Security

More
Beautiful

Crystal revolving door is an all glass revolving door type, which is made of tailor-made security glass, has unique structure & flowing lines. The transparent & stylish appearance cater the modern design requirements adequately. The high resistance laminated glass cannot broke into pieces even under impacted, so could provide high security.



THE MAIN FUNCTIONS

| FUNCTION SELECTION | FUNCTION INTRODUCTION | |
|---|-------------------------------|--|
|  | Key Switch | Could be operated by Locking, Continuous operation, Eco-mode |
|  | Handicap Button | Revolving door would rotate one revolution with half normal speed for handicap pedestrian, senior citizen and kids. |
|  | Emergency stop button | Emergency situation, door could halt immediately when press button |
|  | Force-sensitive | If resistance of revolving wings encounter exceed a pre-set value, automatic door will halt to ensure safety |
|  | Speed control | With mechanical damper, control operating speed for safety |
|  | Vertical safety buffer | Conductive safety rubber, be activated by small force and halt the door |
|  | Anti-squeeze Sensor | Distance between revolving wing and curved wall smaller than 700mm, anti-squeeze sensor could be activated and brake the door |
|  | Panic breakout | Emergency situation, door wings could be manually collapsible, provide a fleet passage space |
|  | Infrared safety light curtain | Non-contact anti-collision light curtain installed on top of door wings, any pedestrian or objects detected within a defined scale, anti-collision system is activated and brake door wing revolving |
|  | Night Security Door | Make the door closed at night, in case of any wanderer stays in door area |
|  | Assisted function | Design specifically for manual revolving door, door would rotate one revolution after gently push and then stop at initial position |

SPECIFICATONS



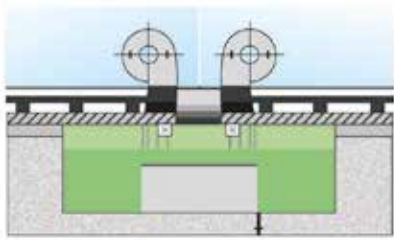
KA071 CRYSTAL DOOR(WITHOUT CENTER AXIS)

| | | | | | | | |
|----------------|---------|------|------|------|------|------|------|
| Inner Diameter | 1800 | 2100 | 2400 | 2700 | 3000 | 3200 | 3600 |
| Outer Diameter | 1852 | 2152 | 2452 | 2752 | 3052 | 3252 | 3652 |
| O.Width | 3 wings | 849 | 999 | 1149 | 1299 | 1449 | 1749 |
| | 4 wings | 1236 | 1448 | 1660 | 1872 | 2084 | 2508 |
| Total Height | 2246 | 2246 | 2246 | 2246 | 2246 | 2246 | 2246 |
| Passage Height | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 |
| Canopy Height | 46 | 46 | 46 | 46 | 46 | 46 | 46 |

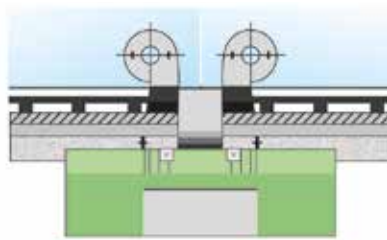
KA071A CRYSTAL DOOR(WITH CENTER AXIS,BREAK-OUT)

| | | | | | | | |
|----------------|---------|------|------|------|------|------|------|
| Inner Height | 1800 | 2100 | 2400 | 2700 | 3000 | 3200 | 3600 |
| Outer Diameter | 1860 | 2160 | 2460 | 2760 | 3060 | 3260 | 3660 |
| O.Width | 3 wings | 784 | 934 | 1085 | 1235 | 1387 | 1685 |
| | 4 wings | 1183 | 1395 | 1607 | 1819 | 2032 | 2456 |
| Total Height | 2270 | 2270 | 2270 | 2270 | 2270 | 2270 | 2270 |
| Passage Height | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 |
| Canopy Height | 70 | 70 | 70 | 70 | 70 | 70 | 70 |





Underground embedded type



Slab-cross type

STRUCTURAL CHARACTER

FUNCTION INTRODUCTION



Center Shaft

Door wings rotated by center shaft, compared with other door clamp type would be more stable.



Bottom-driving

Bottom-driving, which need driving box to be embedded in advance. Normally used for all glass automatic revolving doors.



Top-driving

Assemble driving system, and electronic parts inside revolving door canopy.



Drum wall load-bearing

Strength door stability by increased stressed area, compared with other pillar-bearing, firmness is greatly enhanced.

ADVANCED FEATURES

FUNCTION INTRODUCTION



Manual/Automatic switching

When power failure, automatic door could be manually operated by this device



Speed Control Function

Speed limitation ensures safety as it prevents the doors from rotating too fast.



Anti-piggybacking (used for security door)

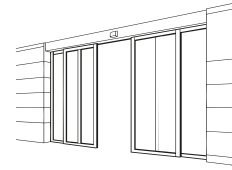
Under access control function, ensuring only one passenger passing of each authorization, the following passenger will be locked in an enclosed space. The security door will warn and back to start place.



Anti-tracking (used for security door)

By a video analyzing software, ensure every passing space only pass one passenger. If there are more than 2 passengers enter 1 passing area, the security door will warn and back to start place.

AUTOMATIC Sliding Door



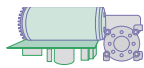
As the world's most widely used automatic door products, automatic sliding doors can be used in almost every place. Sliding door system which is designed by Entrance solution, using the concept from European-style design team, with the appearance of the European popular sliding door texture, while enhancing the function & customer using experience. In addition to the common functions of most sliding doors in the market, it uses professional control board to control as many as 30 functions including door basic functions.

Considering the design concept of many top designers in the high-end projects for building permeability and safety, we could also provide the system with framed and frameless sliding door panic breakout system. As a derivative of the sliding door series, Entrance solution could also provide products related to curved sliding doors, ATM security doors, hermetic doors & so on, which are suitable for different fields & maximally satisfy the aesthetic needs of different groups of people.



THE MAIN FUNCTIONS

MAIN FUNCTION



Various drive system

As an upgraded product of KS1000 series, KS100 retained all features of KS1000. At the same time, it gathered the main control board, drive board and battery board to one board. And use more stable power supply which is more sophisticated and artistic.



High-speed processing chip

Using high-speed processing chip and optimized programming, covering all the features of sliding door products. It is a full-featured smart product.



PSA control panel

Standard operator equipped with PSA control panel. Not only to realize program switch by users, but also real-time display operating status and error code, which could allow users to determine the abnormal parts of the door quickly and solve problem quickly. The panel is equipped with password self-locking, which could effectively prevent illegal operation.



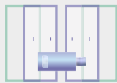
Self-checking function

When the automatic door activates, the system can automatically calculate the door body weight, friction, opening width and other parameters. Based on these parameters, the door could calculate the optimal opening / closing speed, acceleration / deceleration time, low-speed distance, etc., to ensure the operation is always under the best condition.



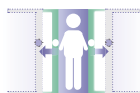
Ultra-quiet operation

High-frequency PWM drive design (outside the audio range), silent rail, aluminum alloy gear, synthetic rubber timing belt and other technical measures to accelerate the door, running, brake more stable, quiet, the minimum noise, remaining minimum noise below 49db



Power failure set up

According to customer's request to set up the door open / closed status when power failure before leaving the factory. Customers could choose whether the automatic doors are open or closed when power failure. (Note: The factory setting is the door is closed when power failure)



Anti-squeeze force sensitive

When the resistance of the automatic door body is larger than the set value (the setting value can be adjusted), the door body will automatically reverse running and decelerate tentative operation before running to the obstacle point again until it is closed normally to ensure pedestrians to the greatest extent Traffic safety.



Safety beam (optional)

Installing a pair of safety beam at a height of 1 meter from the fixed leave of the door to the ground to ensure that the door leaf automatically opens when there are people or objects in the automatic door to avoid squeezing people or objects.



Backup battery

The unique UPS battery backup system allows the automatic door to operate continuously for 30 minutes after power failure.

KS100/KS300 SERIES OPERATORS

As an upgraded product of KS1000 series, KS100 retained all features of KS1000. At the same time, it gathered the main control board, driver board and battery board to one board. And use more stable power supply which is more sophisticated and artistic.

KS100 operator adopts modular design, including DC motor drive unit, microprocessor main control unit, control setting panel, and the control units are connected by control cables.



Drive circuit and power integrated into the controller, integrated all functions including power supply, drive, UPS, program selection, parameter adjustment.



Through the installation of the main control on the single LED display, increasing calculation functions, convenient statistics



Protection level IP54 , making the usage more reliable



Design according to standard EN16005, accord with all EN16005 safety standard



Maximum power supply up to 350W, easy to change AC220V and AC110V , suitable for different countries power requirements



Three ways to choose the automatic door working modes : key switch mode, PSA control panel mode, the controller key mode



RS485 communication interface, built-in MODBUS RTU communication protocol, communication distance can reach 1.2 km.

| OPERATOR TYPE | KS100 | KS300 |
|-------------------------|--|---------------|
| Operator length | 3200mm/4300mm/6100mm | |
| Operator width | 165mm | 185mm |
| Operator height | 200mm | 105mm |
| Max weight | Single 180Kg Double 250Kg | |
| Opening width | 800mm-3000mm | |
| Motor power | 100W-200W | |
| Opening/closing speed | Opening:0.32m-0.80m/s (adjustable) Closing:0.26m-0.80m/s (adjustable) | |
| Opening holding time | 5s-10s(adjustable) | |
| Input power supply | 110V/220V/AC ±10% 50Hz/60Hz,10A | |
| Relative humidity | Less than 90% | |
| Framed panic breakout | Optional, with 45 thick frame | not available |
| Framless panic breakout | Optional, with 45 thick frame | not available |



AUTOMATIC SLIDING DOOR OPERATOR

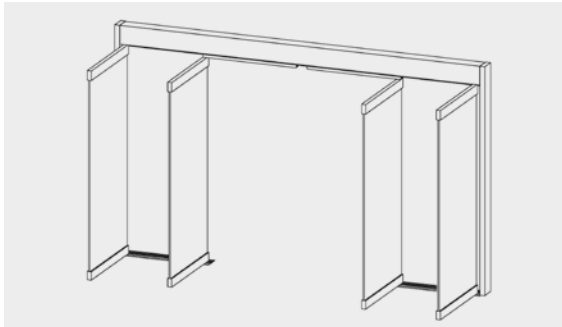
| OPERATOR SERIES | PRODUCT PICTURES |
|-----------------------------------|--|
| KS1000 SERIES OPERATORS |  |
| KS3000 SERIES OPERATORS |  |
| KS4000 SERIES TELESCOPIC OPERATOR |  |
| SMART ECONOMIC OPERATOR |  |

SPECIFICATION

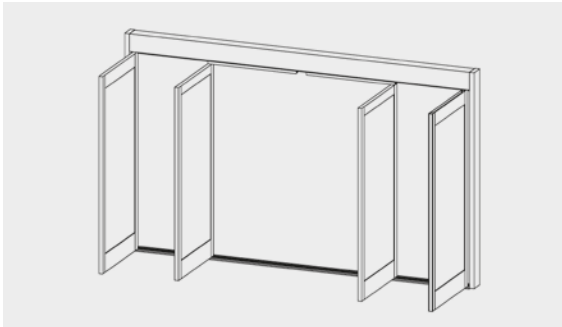
| MODEL | KS1000 | KS3000 | KS4000 | SMART |
|--------------------------|----------------------------------|-----------------------|---------------|------------------------------|
| Operator length | 3200mm/4300mm /6100mm | 3200mm/4300mm /6100mm | 4000mm-7000mm | 3200mm/4300mm /6100mm |
| Operator width | 165mm | 185mm | 235mm | 106mm |
| Operator height | 200mm | 105mm | 204mm | 129mm |
| Max weight | 200Kg | 200kg | 250Kg | 200Kg |
| Opening width | 800mm-3000mm | | MAX 4000mm | 800mm-3000mm |
| Motor power | 100W-200W | | | 55W |
| Opening/closing speed | 0.4m/s-1.0m/s(adjustable) | | | 0.15m/s - 0.8m/s(adjustable) |
| Hold opening time | 5s-10s(adjustable) | | | 0-9S(adjustable) |
| Input power supply | 110V/220V/AC ±10% 50Hz/60Hz, 10A | | | 110V/220V/AC ±10% 50Hz |
| Relative humidity | less than 90% | | | Less than 90% |
| Framed panic breakout | Optional, 50 thick frame | Not available | Not available | Not available |
| Frameless panic breakout | Optional,50 thick frame | Not available | Not available | Not available |

PANIC BREAK OUT

System For Sliding door



Frameless Break-out system



Framed Break-out system

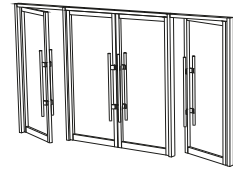
FEATURES

- 1- Open at any position: During the running process of the door, the sliding leaf & the fixed leaf can be urgently pushed open at any time during the process of opening, closing & stopping to facilitate the escape.
- 2- Automatic stop function: Once the door leaf is pushed open, the horizontal movement stops automatically; effectively prevent passengers from squeezed by horizontal moving leaf when escaping.
- 3- Fixed leaf & sliding leaf are made by a completed piece of glass, with good transparency, simple & elegant.

PARAMETERS

| PARAMETERS | SINGLE OPEN | DOUBLE OPEN |
|-----------------------------|----------------------------------|-------------|
| Max.opening width | 2500mm | 5000mm |
| Max.opening width | 2400mm | 4800mm |
| Door body weight | Single Leaf 100Kg | |
| Max. Height | 2900mm | |
| Transparent glass thickness | 10mm | |
| Sensors | Inside & outside microwave radar | |

AUTOMATIC Swing Door



Automatic swing door could be divided into two types: fully automatic & half-automatic. Automatic swing door operators could be easily installed, & they are mostly installed at office buildings, hospitals, cleaning rooms, disabled access etc. The operator could be connected to fire alarm & used as fire barrier automation.



Dynamic and spring structure: Gearbox and spring closed module

Main control unit : Independent control panel

Power panel: Integrated ring transformer, with independent power design

Drive unit: DC brushed motor, low working noise

Arm: According to different application, push/pull arm optional

Function switch: Switch from push and go and automatic mode easily



| MODEL | KP1000 |
|---------------------------|---|
| Dimension | 580mm X 124mm X 84 mm |
| Max.door weight | 150Kg |
| Surface treatment | 304 Stainless steel or Aluminum |
| Motor type | DC brushed motor |
| Voltage | 110V/220V±10% 50/60 Hz |
| Hold time | 3 ~ 21S(adjustable) |
| Opening speed | 3 ~ 9S(adjustable) |
| Closing speed | 3 ~ 9S(adjustable) |
| Auto return and Push & go | Yes |
| Optional parts | Light curtain, radar, photocell, sense switch |

MAIN FUNCTION



Bi-directional auto-return

The door leaf will auto-return if it meets obstacles during opening and closing cycle, to ensure the safety of passenger



Push and go

With program selector the door could be set to push and go mode



Light curtain

Non-contact safety device could effectively ensure the safety of passenger



Electric open and closed by spring force

The door is opened by electrical power and closed by spring force



Hand push and spring closed

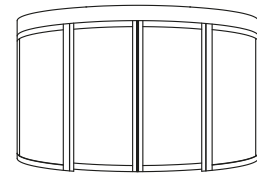
After de-energized, the door could be manually opened and closed by spring force



Fire alarm function

The swing door operator could be connected to fire alarm

AUTOMATIC Curved Sliding Door



Automatic curved sliding door has unique appearance due to different curvature & combination. Full circular curved sliding door which with interlock function could massively reduce the energy consumption caused by indoor & outdoor air exchange. Automatic curved sliding doors are suitable for hotel, airport, super market, hospital, office building.



DOOR TYPE



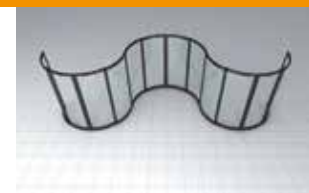
Segmental



Semi-circular



Full circular



Customized

MAIN FUNCTION



PSA control panel

Standard configuration, users could change sliding door working modes, and display working mode and error code. The users could judge the door abnormal reason. PSA has self-locked function, without password, unauthorized operations are prohibited.



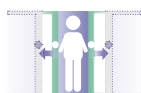
Low-noise operation

High frequency PWM driven design (audio range) mute guide rail, aluminum alloy molding gear, and synthetic rubber synchronous belt make the speed of the door, run and brake more stable, quiet, minimum noise below 49 db.



Setting after de-energized

Setting after de-energized could be set in factory according to customer's need. The door could be set open or closed when de-energized (Remark: default setting is closed when de-energized)



Force-sensitive anti-squeeze

When the door leaf meet bigger resistance (bigger than default setting value, the default setting value could be adjusted)/meet obstacle, the door leaf will auto-return, and slow down when next time come to the same point until to closing position.



Photocell (optional)

The photocell is installed on the fixed leaf to ensure the door keep open when passengers are in-between the door leaf area.



Backup battery (optional)

Backup battery system allows the automatic sliding doors to continue operating for 30 minutes in the case of power failure.



Interlock function (optional)

Interlock refers to the status of one door leaf being locked while the other remains open during the curved sliding door's motion. This function could effectively reduce energy consumption due to indoor and outdoor air exchange.

DIMENSIONS

| | | | | | |
|---------------|------|------|------|------|------|
| Diameter | 2400 | 2700 | 3200 | 3600 | 4200 |
| Inner Height | 2200 | 2200 | 2200 | 2200 | 2200 |
| Canopy Height | 300 | 300 | 300 | 300 | 300 |
| Total Height | 2500 | 2500 | 2500 | 2500 | 2500 |

BANK SOLUTIONS

ATM Security Door

ATM security door is Entrance Solution specially designed for bank ATM machines for the safety of the users. The product adopts arc type design, which can protect directly by ATM machine, while providing the maximum privacy protection for the withdrawer. ATM security door adopts intelligent safety control, it could be opened by push button or swiping card. ATM door has automatic lighting, automatic lock, automatic ventilation, panic breakout function & anti-collision function.



MAIN FUNCTION



Automatic lock

ATM door adopts presence radar, when the user enters into the door, the door will lock automatically.







Automatic lighting

ATM door adopts presence radar, when the user enters into the door, the door will light automatically.



Automatic ventilation

ATM door adopts presence radar, when the user enters into the door, the door will vent automatically.

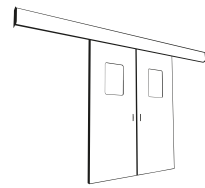
| | | |
|---|--|--|
|  | Panic breakout | ATM door integrated panic breakout device which allows users to open the door manually after de-energized. |
|  | Protection mode | When there is user inside the ATM door, other users can not open the door from outside. |
|  | Access control | ATM door could connect to access control or bank security system, by swiping card to access |
|  | Anti-squeeze auto return function | ATM door has anti-squeeze and auto return function to ensure the safety of the users. |

| SPECIFICATIONS | | | | | |
|------------------------|------------------------------------|----------------------------|---------------------|---------------------------|------------|
| Total Height | O.Width | P.Width | Canopy | O.Diameter | I.Diameter |
| 2330 | 580 | 2050 | 230 | 1192 | 1112 |
| FEATURES | | | | | |
| Intelligent lock | | Intelligent lighting | | Intelligent ventilation | |
| SECURITY FEATURES | | | | | |
| Anti-squeeze | | Anti-collision auto return | | Panic breakout (optional) | |
| STANDARD CONFIGURATION | High strength aluminum alloy track | | Main power supply | Drive unit | |
| | Infrared radar | Lighgting | Ventilation | Power supply | |
| OPTIONAL CONFIGURATION | Bullet-proof | Card Reader | Break-out Function | | |
| | Light box in canopy | | Anti-squeeze sensor | | |



MEDICAL DOOR

Solutions



Medical doors integrated hermetic, sound-proof, heat-insulating, pressure-resistant, dust-proof, fire-proof & radiation-proof together. They could be divided into hermetic doors, radiation-proof door, ICU doors & sick rooms doors. They are mainly used places with high requirements for sound insulation, heat insulation & airtightness. The professional vacuum airtight rubber strip & equipped with unique airtight technology to ensure the door panel & door frame matched closely to achieve airtightness when door is closed.



Hermetic



Antisepsis



Sound-proof



Fire-proof



Radiation-proof

FUNCTIONS

| STANDARD FUNCTION | | OPTIONAL FUNCTION | |
|-------------------------|------------------------------------|-----------------------|-----------------------|
| Visual window | Stainless steel handle | Double safety beam | Backup battery |
| Foot induction switch | Sealing rubber strip | Hand induction switch | Lead plate protection |
| Safety beam | Operator cover | Radar | Stainless steel cover |
| Door body width | 600mm-2500mm | | |
| Door body height | 2100mm-2700mm | | |
| Max door weight | 200Kg-350Kg | | |
| Opening direction | Left/Right/Bi-direction open | | |
| Power supply voltage | 220V/110V | | |
| Motor type& motor power | Brushless,36V/100W,3A Max:180W, 5A | | |
| Temperature range | -15°C-55°C | | |
| Surface treatment | Steel, Aluminum, 304S.S, HPL | | |

PRODUCT FEATURES

Different from many other hermetic door products, the hermetic door products provided by ENTRANCE SOLUTION adopt three-directional door frame seal structure to achieve airtightness. At the same time, the high-stability & high-power DC brushless motor can be used to provide a better solution for the door area & the maximum door weight can reach 400Kg.

OPERATION FEATURES

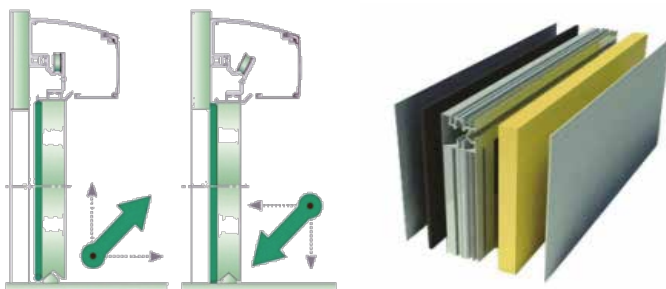
When the door is closed, the hermetic door will automatically sink about 15mm & close to the wall to achieve airtightness by squeezing the sealing strip.

DOOR PANEL FEATURES

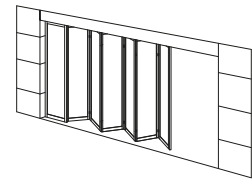
According to different site requirements, could provide four kinds of surface treatment such as HPL plate, steel plate, aluminum plate & stainless steel plate. It also could be built in lead plate or replace lead glass as per different requirement to reach radiation protection.

RADIATION PROTECTION FRAME

Unique radiation-proof frame design makes the space between door body & wall form effective block to prevent harmful rays.



VENUE DOOR Series



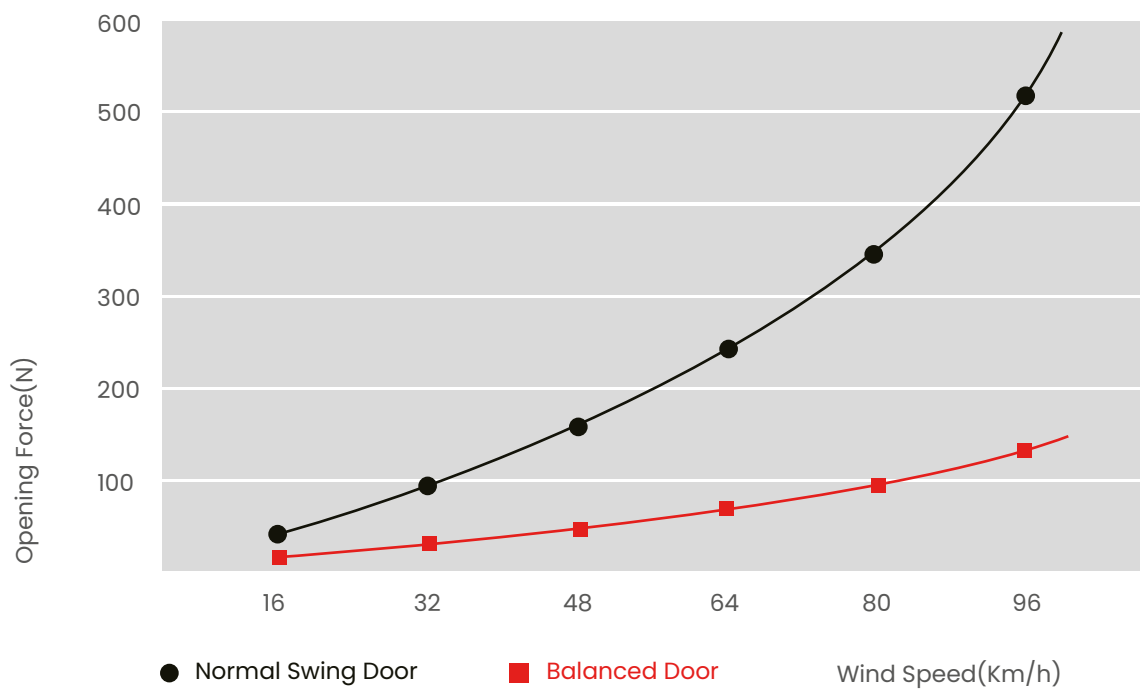
The stadium door is a large door area solution specially designed for large stadiums, convention centers, business centers & other places. Mainly covers balanced doors, folding doors, ground spring doors & swing doors.

Based on the premise of traditional stadium door & related solutions. Entrance Solution can provide higher & wider solutions, allowing designers to have more choices for designing in the door area to meet different customers' special requirements.

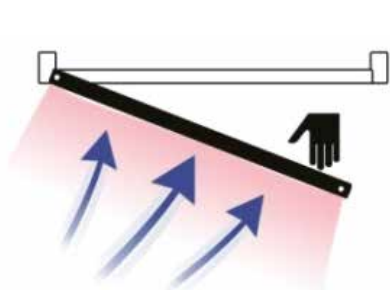


BALANCED DOOR SOLUTION

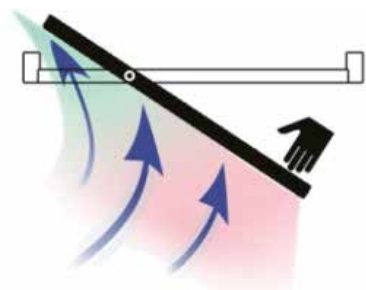
The balanced door mainly solves the problems of traditional swing door height & weight limitation. In terms of design, fully considering the pressure difference caused by inner & outer temperature difference & wind pressure. It allows the users to open a 5m high door with small force. At the same time, it could realize automatic & manual integrated function to maximize pedestrian passage.



● Normal Swing Door ■ Balanced Door Wind Speed(Km/h)

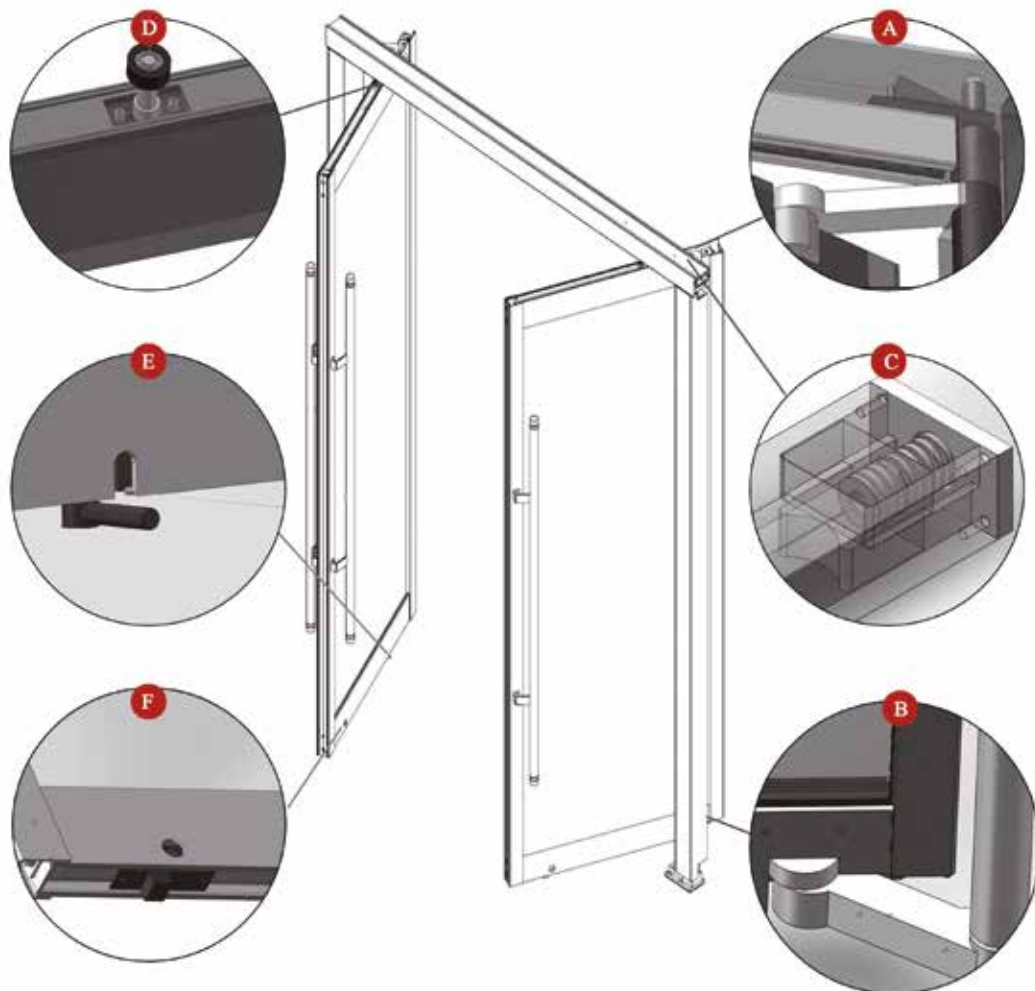


Wind pressure on the door



Balanced door balance wind pressure

BALANCED DOOR SOLUTION



BALANCED DOOR STRUCTURE

A: Top support arm mainly plays the role of support, fixation & cooperates with the guide wheel to keep the door body in orbit.

B: Bottom support arm mainly used for supporting & fixing, the guide wheel is used to keep the door body in a predetermined orbital motion.

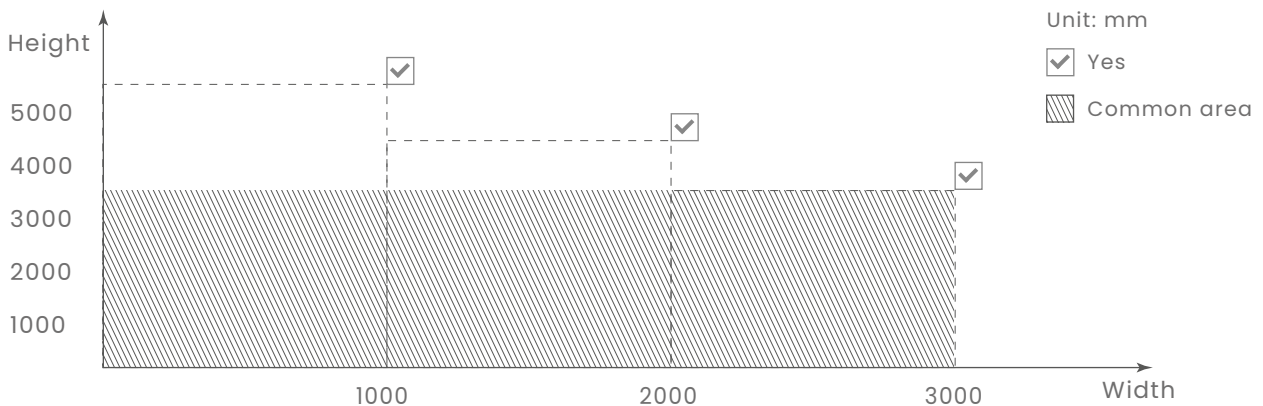
C: Spring mechanism mainly used to resist wind pressure & can bear up to force 8 wind.

D: The guide wheel is mainly used for guiding, to make the door body runs in specific orbit.

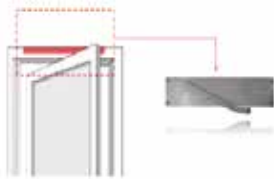
E: Normally open lock: When the door needs to be set to normally open, normally open lock can be reserved on the ground to keep the door body 90° normally open state.

F: When the door area stops using, the door can be locked by the normally closed lock.

| Glass thickness | Weight range | Working mode | Surface treatment |
|-----------------|--------------|------------------|---------------------------------|
| 10mm-28mm | 150Kg-480Kg | Manual/automatic | RAL painting Stainless steel |

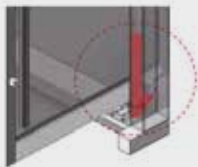


BALANCED DOOR SPECIFICATION



Closer balanced door

Suitable for installation in inside and outside wind pressure environment, good wind resistance; with double brush structure excellent sealing performance; so far, single door panel width can reach 880mm-1500mm, height can reach 2200-5000mm; glass thickness is 12 -28mm or less



Pivot balanced door

With double brush structure, excellent sealing performance; With door closer function inside, the axis is hidden in the door area frame, and it has an adjustment function to facilitate the adjustment of door body opening and closing speed and force.



Assisting balanced door

Based on the original pivot balanced door, add a self-developed main control unit, stable working performance, safe usage, simple and beautiful appearance. The drive unit adopts Dunkermotoren motor with excellent performance and high efficiency reducer with gear transmission. Compact structure, long service life

FOLDING DOOR SOLUTION

Folding doors are the most commonly used large-area door solutions in the door field, are mainly used in places where the overall opening requirements in super huge door area. For example, customs, airports, large convention centers, large shopping malls, automobile sales & exhibition center, maintenance factory etc. At the same time, both manual & automatic opening methods could be provided. Using the built-in driving and hanging structure to achieve the overall opening.



SPECIFICATION

| | | | | |
|----------------------------|---------------|--------------|--------------------------|------------------|
| Single leaf width | 500mm-1000mm | | 500mm-1000mm | |
| Quantity of door leaf | 2/4/6/8/10/12 | | 16/18/20 | |
| Door body height | 2400mm-6000mm | | 2400mm-6000mm | |
| Driving method | Single drive | | Above 16-20 double drive | |
| Door body vertical frame | 25mm | 50mm | 65mm | 100mm |
| Door body horizontal frame | 80mm | 100mm | 120mm | 180mm |
| Door leaf material | Tempered | Hollow glass | Laminated | Fire rated glass |
| Surface treatment | RAL painting | | Stainless steel cladding | |



HARDWARE SYSTEM

The load-bearing wheels equipped with high-intensity customized imported POM hanging wheels & customize wheels. Each pair of hanging wheels can bear a weight of 400kg or more, the high-quality aluminum alloy track can run smoothly with low noise & wear resistance. The hinge used customized high-intensity concealed hinges, the door closing hinges are hidden inside the door to ensure the overall style of the door is not affected. Brushes, strips & other sealing methods for customers to choose.

FUNCTION OPTION

Hand-held remote switch control, wall switch control, radar detection open, full open, half open (energy saving), one-way passing, normally open, normally closed & other functional options, also according to the customer's request, it can be equipped with opening functions such as access control opening, license plate recognition, long-distance card reading and remote central control.

SAFETY SYSTEM

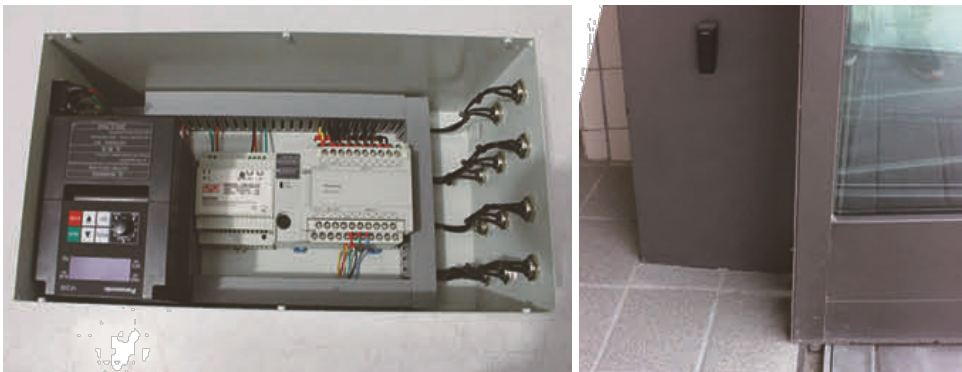
Infrared anti-squeeze sensor, door closing resistance reverse opening, emergency stop button, floor sensor (metal detection optional) & so on. High sensitivity, high stability & full safety for pedestrians.

CONTROL SYSTEM

Using imported Japanese original PLC (programmable controller), transducer, low energy consumption, stable operation & reliable quality.

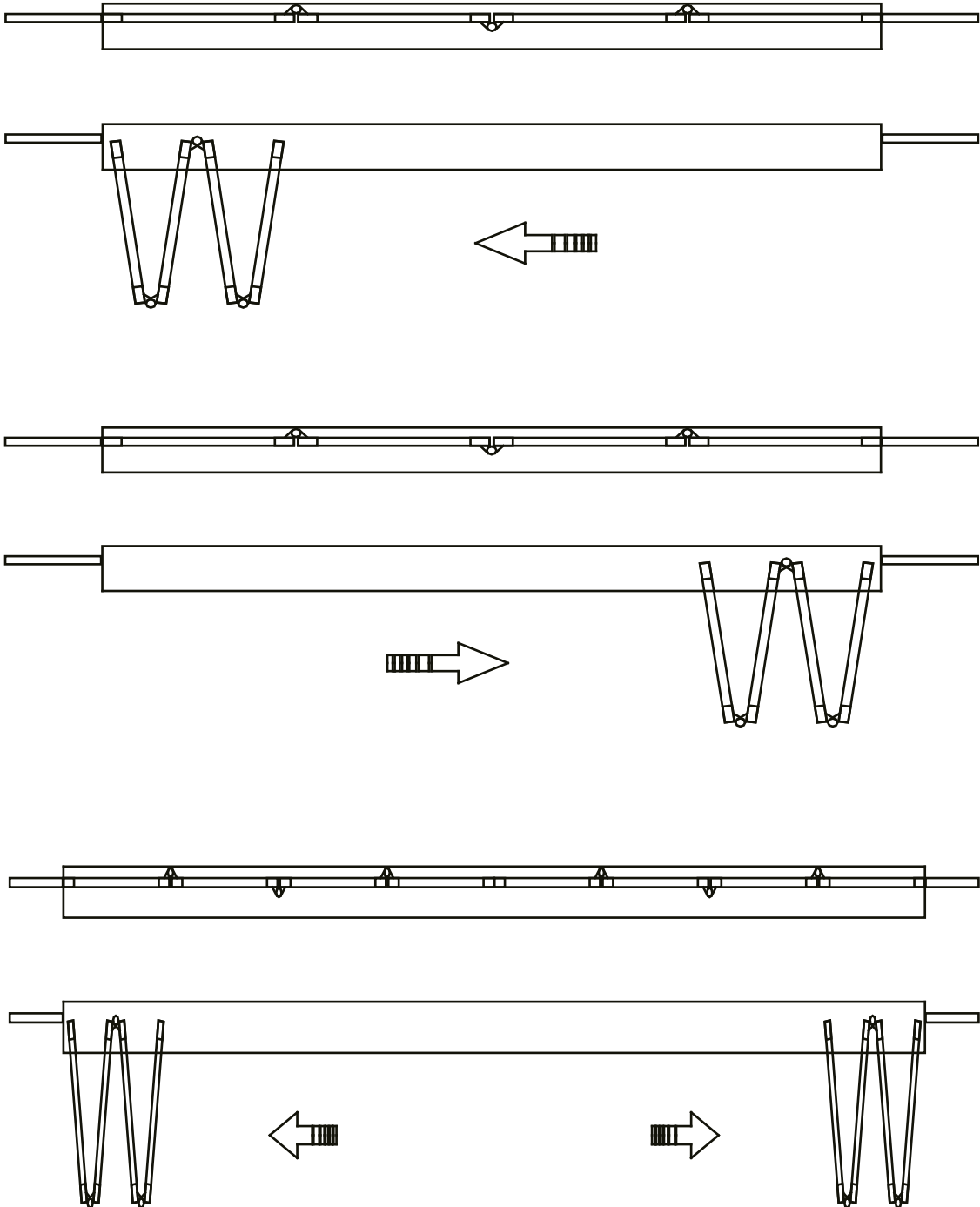
FIRE PROTECTION FUNCTION

It can be linked with the fire control. The door will open automatically to the fully open position to form an evacuation channel when receiving fire signal. Special places with large open width such as shopping malls, large-scale convention & exhibition centers, railway stations, airports offer larger to offer than 4m*4m fire passage for fire engine. If the emergency power supply cannot be connected to the building backup power supply, could optional equipped a UPS power supply to ensure the doors opened to the fully open position after the fire signal is intervened.

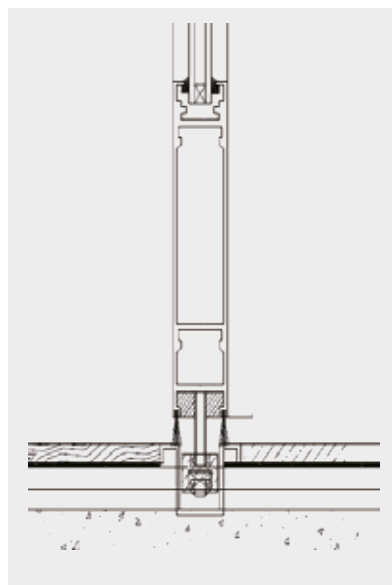
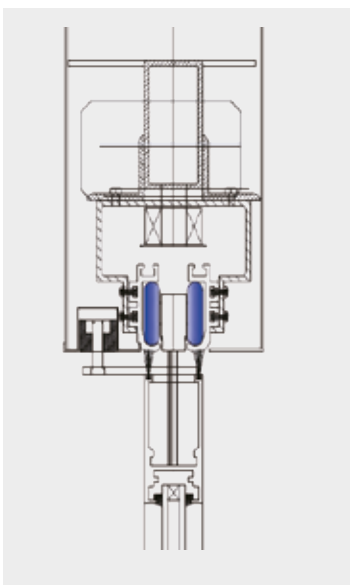
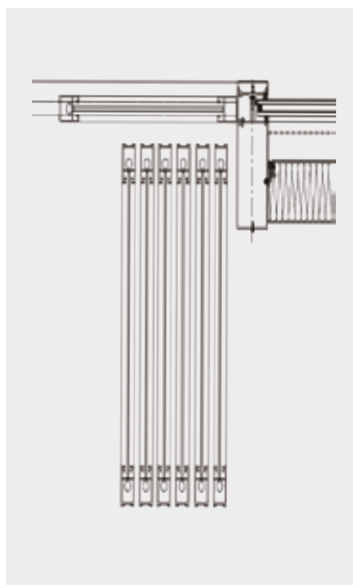


OPEN MODE

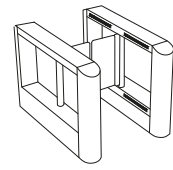
Folding door can be divided into three kinds of open mode, which are left open, right open and bidirectional open, both manual & automatic methods are supported, as well as single drive & double driven supported. It can meet the needs of super big door & big entrance. According to the customer's requirements on entrance permeability, we can also provide the solution of the frameless door.



OVERALL STRUCTURE



TURNSTILE Series



Appearance

Door body frame is made of high-quality stainless steel, the gap between door wing and the control box is very small, internal components are antirust and anticorrosive, durable in use.

Drive System

Adapted by international brand brushless DC motor to drive the door wing, good performance of synchronicity, smooth running, no jitter, low noise, fast speed, available to adjust open speed & time delay.








Safety

Matched with over 10 pairs military-grade high-performance infrared detectors, which can accurately achieve the prevention of trailing, detection of illegal access, clamp prevention and impact and direction discrimination functions.



FUNCTIONS

FUNCTIONS & DESCRIPTION

| | | |
|---|--------------------------------------|---|
|  | Emergency escape | When the turnstils is powered down or receives a fire signal, it can be opened manually, door wings could be put back into door body, to provide max passage width. |
|  | Anti-break-in | Unauthorized personnel entering the door area, the system can automatically light or alarm. |
|  | Anti-trailing | When the authorized person passes, if an unauthorized person follows, the system will automatically alarm. |
|  | Safety photocell | The system standardly match with 10 pairs photocells, under different circumstances, play the function of anti-clamp, anti-trailing and anti-reverse. |
|  | Anti-trailing | The photocell function can prevent unauthorized personnel from following through the door area. |
|  | Anti-reverse | It can effectively prevent the passage after the reverse exit, so as not to interfere with other pedestrian. |
|  | Connection to external device | It can match with RS232 or RS485 terminal, available to connect with access control system, monitoring system and fire alarm system. |

MATERIAL AND SURFACE TREATMENT

| SURFACE MATERIAL | MATERIAL THICKNESS | SURFACE TREATMENT | WING DOOR MATERIAL |
|---------------------|--------------------|---|--------------------|
| 304 Stainless steel | 2.0mm | Brushed (standard) Mirror (optional) | Tempered glass |

ENERGY CONSUMPTION

| INPUT POWER | RATED VOLTAGE | DRIVE MOTOR | DATA EXCHANGE PORT | AMBIENT TEMPERATURE |
|--------------------------------------|---------------|--------------------|--|---------------------|
| AC220V AC85 ~ 230V 3A 5A (Max) | DC24V | Brushless DC motor | RS485 (1CH) RS232 (3CH) CAN BUS Ethernet (Optional) | -20°C ~ 60°C |

FUNCTIONS



FUNCTION PARAMETERS

Bidirectional passage, free mode and control mode are adjustable.

Mode and NC could be set after user.

Automatic reset function: if passenger don't pass door area in pre-set time, the system could close the door automatically. (Default 5 seconds, adjustable)

Self-check function, easy for the user to use and maintain.

Trailing detection and intrusion alarm function.

Anti-clamp function: prevent finger-jammed and personal injury.

Emergency escape function: press the emergency button, door open automatically, and use remote control to control door open or not.

THREE ARM GATE



SWING GATE



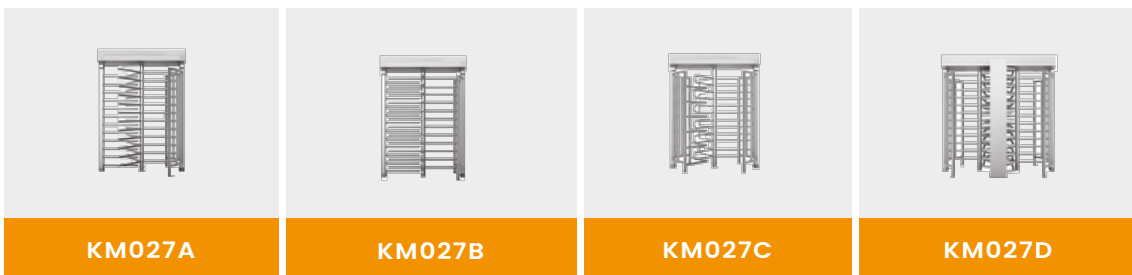
WING GATE



SLIDING GATE

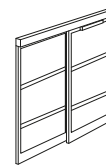


FULL HEIGHT GATE

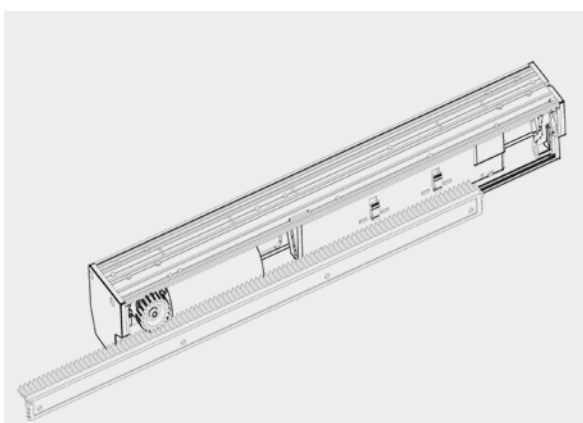


RESIDENTIAL

Door Series











Residential door operator is a type of Intelligent automatic door product for residence. It could change the manual sliding door to the automatic sliding door. The residential door operator adopt modular design under mechatronics, it has compact structure, don't need to destroy existing sliding doors & easy to installation. All the features makes the residential door operator could be widely used in home, meeting room etc.



| | |
|----------------------------|----------------------|
| Width of the door | 720-1200 |
| Height of the door | 2100-2400 |
| Appearance of the operator | Black&White |
| Max. opening width | 920mm |
| Input voltage | 110-240V, 50/60Hz |
| Output voltage | DC 15V, ≤2A |
| Dimensions of operator | 1000mm x 71mm x 64mm |
| Max. weight of the door | 75Kg |

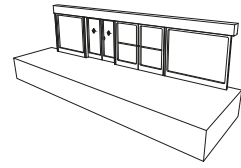
FUNCTION

| FUNCTION | DESCRIPTION |
|---|--|
|  <p data-bbox="539 555 762 582">Resistance rebound</p> | <p data-bbox="890 535 1327 607">Once encounter resistance, the residential door will run on the opposite direction in order to guarantee safety.</p> |
|  <p data-bbox="576 701 735 728">Safety voltage</p> | <p data-bbox="890 674 1334 763">The power supply of residential door adopts 36V to guarantee the safety to human body, at the same time, it could achieve energy saving.</p> |

| Wireless hand pressure switch | Wireless remote control | Toothed Guide |
|---|---|--|
|  |  |  |
| Pet radar | Hand induction switch | Radar |
|  |  |  |

| THE MAIN FUNCTION | OPTIONAL FEATURES |
|--------------------|--|
| Manual/ Automatic | Key switch/ Hand switch/Remote control |
| Resistance rebound | Infrared radar/ Pet radar |
| Hand touch switch | Battery backup |

PLATFORM Screen Door



As an important part of urban development, rail transit is an important symbol of the development of modern cities. With the rapid development of public transport all over the world, Shielding door has become an important supporting solution for rail transit. Entrance Solution own complete rail transit solution, could achieve a one-stop solution from the door to the system.



Full height door



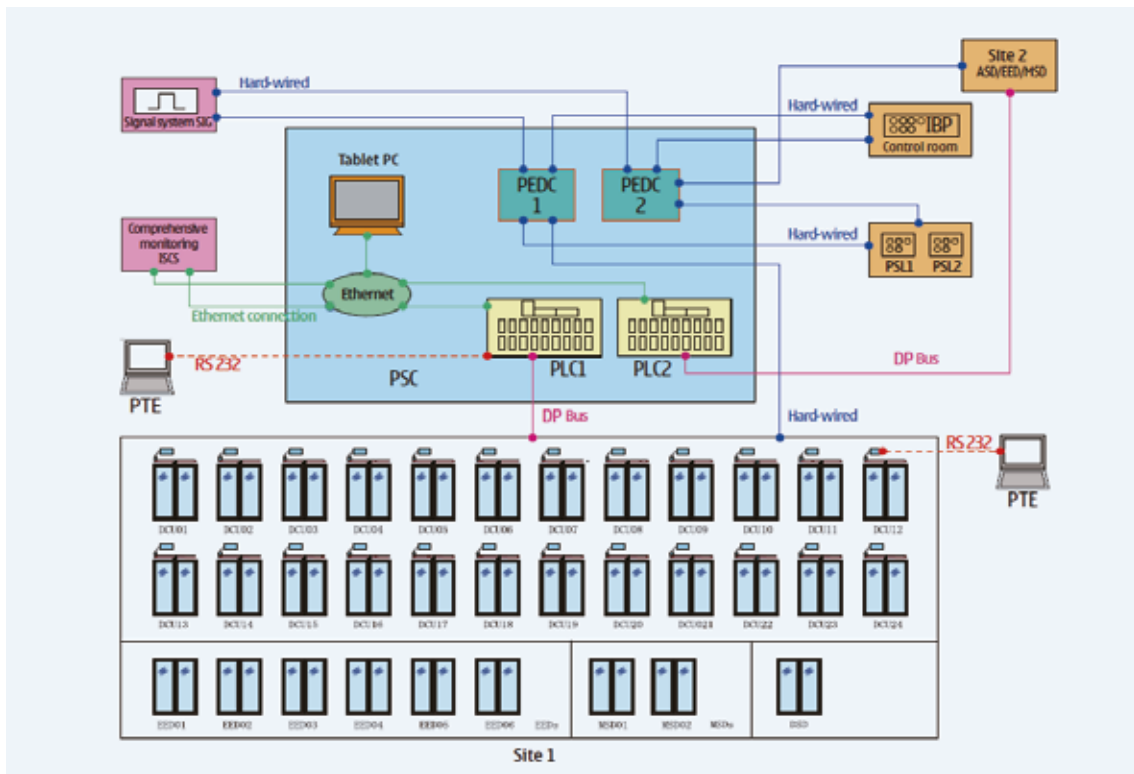
Half height door

FEATURES

Safe: To prevent passengers from entering the running track, in order to protect the passenger & train moving safety.

Saving energy: To prevent the air circulation take away the air from the air conditioning in the train.

| PRODUCT | APPLICATION |
|------------------|--|
| Screen Door | The under ground station with opening environment system or the station with AC system, elevated station shielding the platform from the train. |
| Full Height Door | Underground station with opening environment system or the station with AC system, elevated station, both the top and bottom of the platform has Ventilation area. |
| Half Height Door | Underground station with opening environment system or the station with AC system, Come into being a semi closed partition from the platform to the train. |



ROLLING

Door

Rolling doors deliver all of the performance features necessary for the self storage industry, teamed with the quality finish you've come to expect from International leading door manufacturer.

- Smooth, Quiet Operation
- HighWind Rated Roller Door
- Precision Springing
- Consistent Balance
- BottomWeatherseal
- Wide range of colors



| PRODUCT | SPECIFICATION | | |
|-------------------------------|--|-----------------|-----------------|
| Material | PVC | Steel | Steel & Glass |
| Standard max width | 30'4" (9246 mm) | 30'4" (9246 mm) | 30'4" (9246 mm) |
| Standard max height | 28'4" (8636 mm) | 28'4" (8636 mm) | 28'4" (8636 mm) |
| Curtain | 24 ga. galvanized steel front & 24 ga. galvanized steel back | | |
| Insulation | Foamed-in-place, CFC-free polyurethane, R-value 7.7 (1.35W/m2) | | |
| Finish | Gray, tan, white or brown | | |
| Wind load | 20 psf | | |
| Standard mounting & operation | Face of wall & Chain hoist | | |



ISOLATED

Sectional Door

Isolated Sectional Door is developed as an overhead door as such that this sectional door can be used in standardised universal industrial buildings & in more demanding design projects. Development & production of the sectional door takes place within our company. We thereby integrate the latest developments in the market. It continues to bring our products to a higher level whereby complying with the European laws & regulations. Our high quality sectional door with a long life span at affordable costs. The 80 mm thick isolated steel door panels are fitted with a panel with a thermal break.



| PRODUCT | SPECIFICATION | | |
|-------------------------------|--|-----------------|-----------------|
| Material | PVC | Steel | Steel & Glass |
| Standard max width | 30'4" (9246 mm) | 30'4" (9246 mm) | 30'4" (9246 mm) |
| Standard max height | 28'4" (8636 mm) | 28'4" (8636 mm) | 28'4" (8636 mm) |
| Curtain | 24 ga. galvanized steel front & 24 ga. galvanized steel back | | |
| Insulation | Foamed-in-place, CFC-free polyurethane, R-value 7.7 (1.35W/m2) | | |
| Finish | Gray, tan, white or brown | | |
| Wind load | 20 psf | | |
| Standard mounting & operation | Face of wall & Chain hoist | | |

High Speed Door

Door frame

The doorframe is made from either stainless steel or galvanized steel with a polyester powder-coated finish, depending on the door solution you choose. Doorframes are available in a wide range of RAL colors.

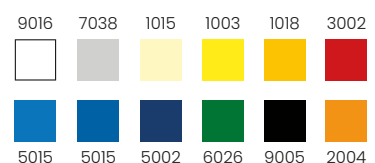


Curtain Material

The high-density PVC fabric and the unique fiber structure ensure good ventilation, while steel or composite bars are used to provide exterior doors with wind resistance of up to 120 km/h (Class 4).

Color

Curtains are available in the following RAL colors:



Height

The curtain height can be customized according to your requirements.

Windows

Folding doors are available with oblong windows; roll doors are available with oblong or full-vision windows.

Winding roll

Innovative design prevents bending and ensures long curtain lifetime.



Seal

The flexible bottom edge of the curtain ensures a close seal, even with rough surfaces. This unique system helps to minimize dust & dirt contamination, as well as heating or cooling losses. With KONE Roll Clean, the curtain moves inside the tight guides & stays in contact with the uprights to minimize air leakage. A special sealing top hood is also fitted between the drum & the transom.

Motor and control system

The motors that power all our high-speed door solutions are designed for outstanding energy efficiency. They ensure rapid, reliable door operation & optimal performance.

Safety features

KONE high-speed door solutions include a wide range of innovative safety features as standard. We also offer a number of optional safety enhancements for even greater peace of mind.

Standard features

- Soft bottom – edge technology prevents impact.
- Safety button for immediate emergency stop.
- Full manual operation in the event of a power failure.
- Traffic Control system – flexible guides allow automatic reinsertion of roll-door curtain.
- Safe Control system – vertical photocells detect contact under the curtain for 180° safety protection.

Optional features

- Hand crank for manual operation in case of power failure.
- UPS backup battery for roll doors.
- Semi-automatic counterweight for folding doors, for manual operation in case of power failure.

Operating devices

KONE high-speed doors can be operated both manually & automatically. In manual mode the door is operated from the control box. In automatic mode you can use pulse generators such as pull or key switches, buttons, RFI D systems, lasers, radar detectors and card readers.

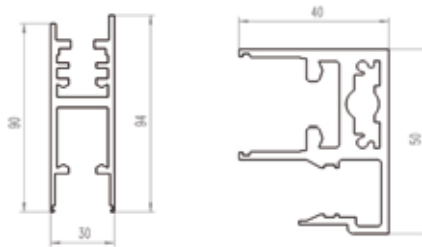
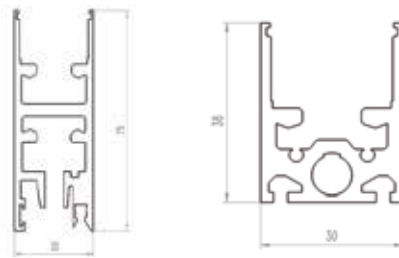
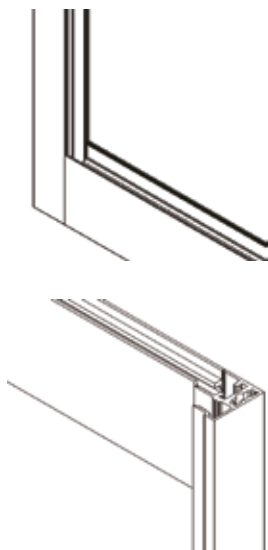
Contact-less pulse generators such as RFI Ds, lasers and radar detectors are mainly used for operating doors that handle vehicle traffic, such as trucks or forklifts. Manually operated buttons or pull switches with cantilevers are commonly used with doors intended for pedestrian traffic. We can customize any of our high-speed door solutions to meet your requirements, including combining different types of pulse generator systems.

PROFILES

For Sliding Door

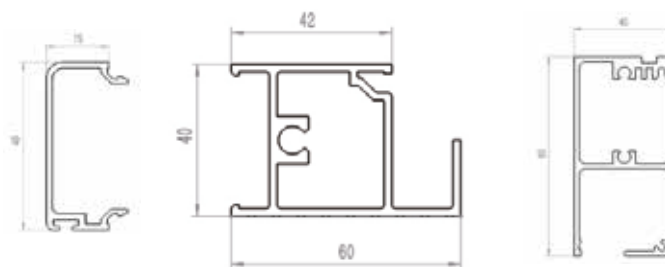
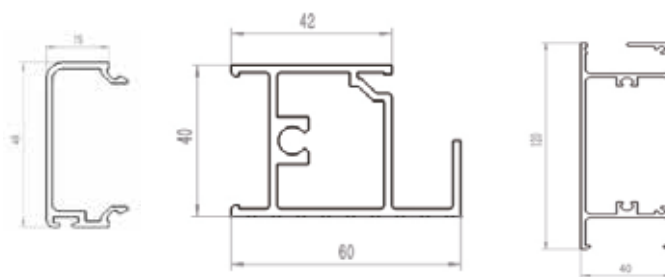
Profiles 30

Sliding Door Body



Profiles 40

Sliding Door Body

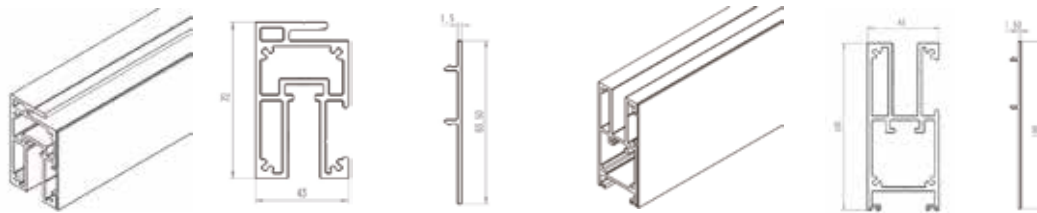


PROFILES

For Sliding Door

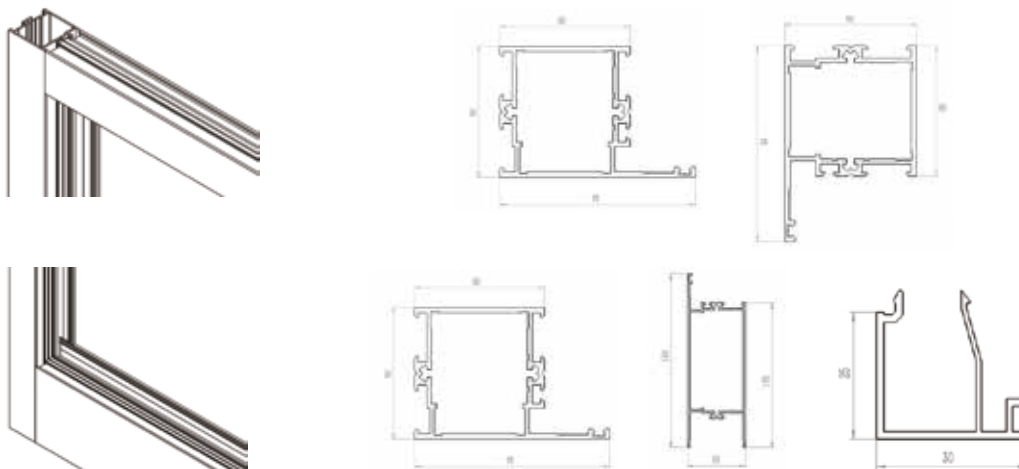
Profiles 45

Frameless Sliding Door Body



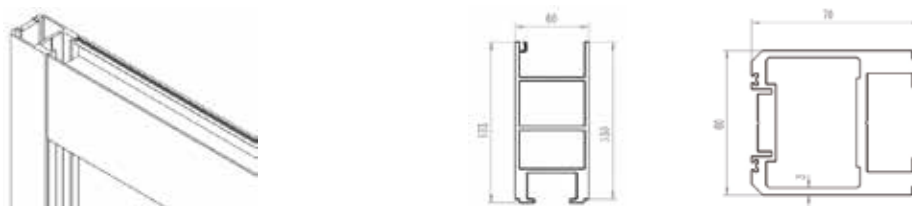
Profiles 50

Break-Out Sliding Door Body



Profiles 50

Balanced Door Body



OUR Commitment



• Excellence in Service & Maintenance

Service & maintenance of **TECNOVA** products is presented by the only one service company in our industry in IRAN that has the largest service network & 24/7 method in addition to experienced staff & storage centers to bring better customer care & support. We are using modern methods for maintenance of Elevators, Escalators & Automatic Building Doors which brings significant increase in life span of products.

• Reliable installation

TECNOVA products are installed by experienced & educated SABA installation team which has already installed more than 4000 units of Elevators, Escalators & Automatic Building Doors. Engineering, Installation, Quality Control & Project Control are different cores of **TECNOVA** team that all guarantee reliable process & operation. Installation teams are equipped with modern & precious tools which follow the latest safety standards. Continuous training system & multi-level quality control assures the quality of installation & provides the maximum customer satisfaction.





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