

KA 023

Three/Four-Wing Revolving Door

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The KBB logo is located in the bottom right corner of the page. It consists of the letters 'KBB' in a bold, blue, italicized sans-serif font. The background of the entire page features a large, faint, green line-art illustration of a revolving door with three wings, which is the product being advertised.

About Revolving Doors

Revolving doors offer an impressive aesthetic appearance and effectively separate indoor and outdoor conditions. KBB's superior designs provide an imposing entrance to any building, while serving as an airlock as well, to minimize a building's heating and air conditioning losses, therefore maximizing energy savings. There are numerous variations and functions according to the needs passing.

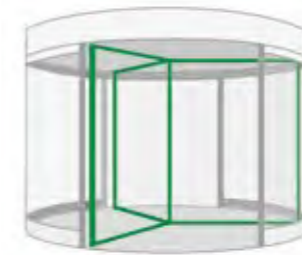
Revolving doors are categorized in two different categories according to the way they revolve: two-wing doors and three/four-wing doors. Each door consists of a glass body with an aluminum frame. The operation of the doors can be manual or automatic.



KBB Three /Four-Wing Revolving Door – KA023

The KA023 are elegant and economical three/four-wing revolving doors. More than just granting the entry and exit of heavy passing traffic, the KA023 marks the highest standards in wind-proofing, dustproofing, warm-keeping and energy-saving. In summary, they can be regarded as the safest three/four-wing revolving

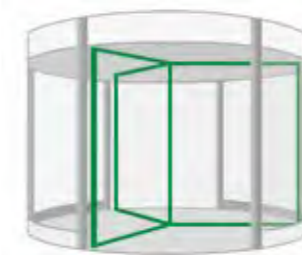
doors in the world and an excellent choice by exceeding the expectations of customers and architects. KA023 comes in three operational modes: manual, automatic, and manual/automatic activation driving; and two driving models: top and underground driving.



KA023/KM023
Classic Door



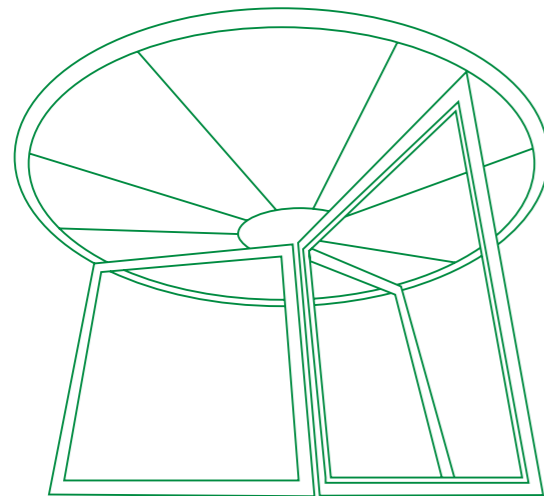
KA071/KM071
All-glass Door



KA061/KM061
Drum-Wall-Pillar
Decorated Door



Drum Wall Load-Bearing



One of the outstanding features in the KA023 doors is KBB's exclusive drum wall load-bearing structure. This component is essential to increase structural safety and overall quality, allowing for the door to have better stability, especially when comparing the doors with other two-wing pole bearing doors.



↑
KBB
drum wall load-bearing



↑
Other
pillar-bearing

Manual revolving doors are separated in two categories: three-wing and four-wing doors, which do not require electric power and will never suffer from severe weather conditions. KBB's manual revolving doors are also equipped with an exclusive speed

controlling device that allows the door to operate safely. Simultaneously, other standards such as energy-saving and dustproofing are maintained to the best level keeping the most competitive price.

• The Speed Control Function

KBB's original speed limitation patent ensures safety as it prevents the doors from rotating too fast. This mechanical system is safer and more reliable compared to other electric operated devices.



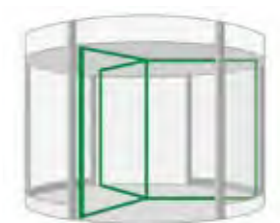
Applied for:



KM023



KM071



KM061

Automatic Revolving Door

The difference between automatic and manual revolving doors is that the automatic doors are equipped with drive units and sensor systems, which make the door operate automatically. Three/four-wing doors are cost-efficient, and are commonly used in banks, shopping centers, hotels, office buildings, amongst others.



• Anti-Squeeze Sensor:

The anti-squeeze sensor will stop the door immediately when activated.



• Key Switch:

Automatic doors can be operated through three different functions: night lock, go-stop and continuous revolving.

[Note] The go-stop, the door will automatically revolve (through sensor activation) when the door is approached upon. This setting is ideal to reduce energy consumption.



• Fire Alarm Function:

The pre-installed signal output also allows for the door to be connected to the fire system in the building. When the door receives a fire alarm signal, the revolving door will automatically switch to the emergency open mode.



• Disabled Access Function:

The low-speed button is used to control the speed of the door and slow it down for the safety of younger, older and disabled passersby.



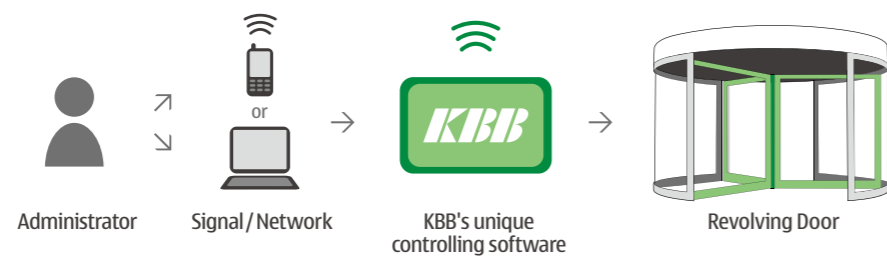
• Emergency Stop Function:

The emergency stop button is able to stop movement of the automatic door under any circumstance, ensuring safety of the passersby in case of any emergency.



• Mobile Phone/Internet Monitoring:

KBB's unique control software can be used to facilitate the management of the door through mobile phones or the internet. With this feature, the operator could monitor the operation status and alarms of the door.



KA071 crystal door is made of a special safety glass, featuring a unique structure and an impeccable appearance. As the door is designed without a central column, clearer visibility allows

it to become sparkling and more elegant. With KBB's unique music note style clamp, the KA071 door incorporates exceptional mechanics with aesthetics, increasing both safety and beauty.

• Music Note Style Clamp

The music note style clamp is one of KBB's most distinguished patents.

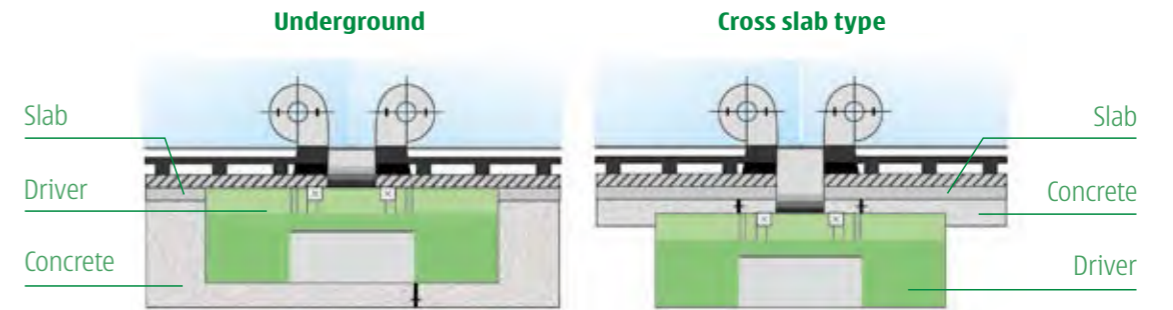
Before the emergence of the music note style clamping system, most of the crystal doors use the conventional square clamping system. However, the traditional square clamp is unable to decentralize the pressure effectively, weakening the glass around the clamp, and therefore creating safety hazard.

The music note style clamp is named after its appearance, similar to one of the musical notes. The clamp's round shape makes the bearing points of the edge distribute pressure equally, keeping the door body steady and firm. This system has proven an impeccable safety record for KBB's crystal doors.



• Installation

The KA071 door uses a unique bottom driving design. This allows the door body to be smooth and transparent, satisfying modern designers' preferences.



• Specifications of Crystal Doors

• Model	• Diameter	• Outer diameter	• Total height	• Height	• Opening	• Persons/min
KA071-3-18	1800mm	1852mm	2346mm	2300mm	849mm	x9
KA071-3-21	2100mm	2152mm	2346mm	2300mm	949mm	x9
KA071-3-24	2400mm	2452mm	2346mm	2300mm	1149mm	x12
KA071-3-27	2700mm	2752mm	2346mm	2300mm	1249mm	x18
KA071-3-30	3000mm	3052mm	2346mm	2300mm	1455mm	x18
KA071-3-32	3200mm	3252mm	2346mm	2300mm	1552mm	x24
KA071-4-18	1800mm	1852mm	2346mm	2300mm	1236mm	x9
KA071-4-21	2100mm	2152mm	2346mm	2300mm	1448mm	x9
KA071-4-24	2400mm	2452mm	2346mm	2300mm	1660mm	x12
KA071-4-27	2700mm	2752mm	2346mm	2300mm	1872mm	x18
KA071-4-30	3000mm	3052mm	2346mm	2300mm	2084mm	x24
KA071-4-32	3200mm	3252mm	2346mm	2300mm	2226mm	x24

• The Differences between 071 and 071A

Item Model	Materials	Central Axis	Emergency Breakout	Manual / Automatic	Canopy Height	Diameter	Others
KA/KM071	Narrow frame: Width 30mm thickness 26mm	N/A	N/A	N/A	46mm	Standard inner diameter is less than 3 meters	KM071 with knob
KA/KM071A	Narrow frame: Width 80mm thickness 30mm	With axis and crossbeam	Optional	Optional	75mm	Standard inner diameter can be extended to 3.2 meters to 3.6 meters	KM071A with knob; Manual/automatic KA071A with knob

KBB's three/four-wing revolving doors can be equipped with a security system for access control. Access could only be granted to those with authorized cards.

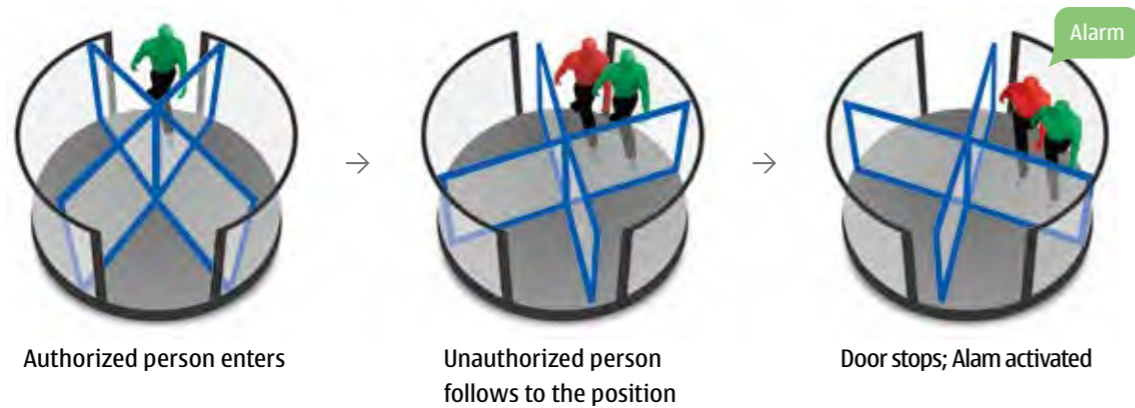
• Following Prevention

In order to ensure that only the authorized person is granted access through the security door, the door rotation will only allow access to the individual with the access card. Any person attempting to follow the first user would be locked inside the door as the door will stop and sound a warning.



• Video Analysis

Advanced video analysis software is used to ensure that only one person passes through each passage space. The alarm system of the security door would be triggered off in the case that two or more people breach access through the same passage space.



• Pass Indication

The passersby can be indicated whether they are authorized to pass by a set of LED lights mounted on the curved wall of the revolving door. When the green light shows, it means that the user is granted access whereas the red light denies it.



• Pass Identification

KBB products provide various of identification systems, including card reader system, finger print reader system and so on, to ensure only identified people can get free access into the buildings. Meanwhile, the systems also help to track the record easily and accurately.

KBB mainly provides two kinds of swiping-card poles as below.



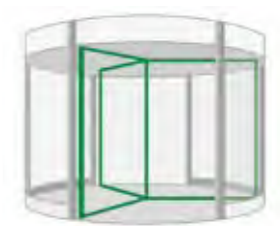
Applied for:



KM023



KM071



KM061

- **Force-Sensitive Door Leaf**

If the resistance that the revolving wings encounter exceeds a preset value (adjustable), the automatic door will stop revolving to ensure safety and to protect the door at the same time.



- **Torque Control Function**

When the gap to the closing position is less than a certain distance, the driving force of the driving system will be reduced. So even if a passerby tries to rush in, he will not be injured.

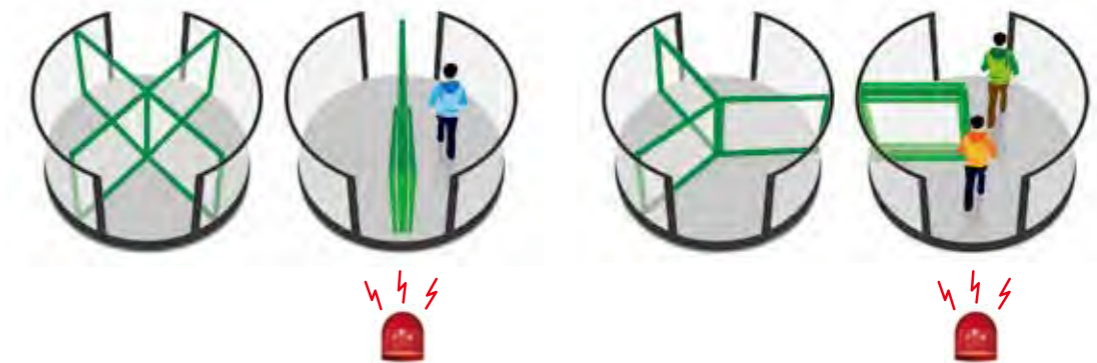


- **Horizontal Safety Light Barriers**

The anti-collision light barriers installed on top of the revolving wings allow the doors to brake when any passerby or objects are detected within a defined scale.



- **Breakout Function**



- **Night Security Door**

Depending on customer preferences, two curved doors can be added outside the drum wall to close the whole revolving door system when needed. This option provides extra protection to the building and the door.



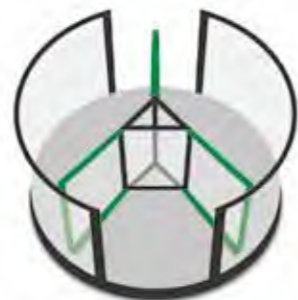
Large Diameter Three/Four-Wing Revolving Doors

• **KA052**

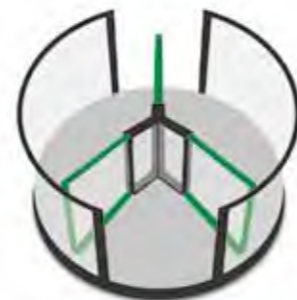
Comparing with ordinary revolving doors, the KA052 series provide a wider passage, allowing easier and safer access to shopping carts in supermarkets and building material supply centers. In addition to providing an elegant entry, the KA052 is a great complement to a more delightful shopping environment.



Square



Triangle



Without showcase

• **KA072**

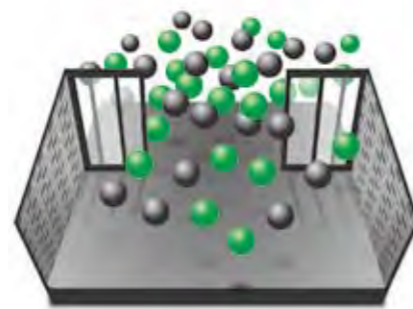
KA072 is the best solution for the buildings where there are columns in door areas. The ingenious design incorporates the columns inside the door frame, enhancing the overall appearance and practicality.



KBB's revolving doors use a unique design referred to as windmill revolving body. Its revolving direction is consistent with that of the wind. The design cuts off the exchange of indoor and outdoor air, allowing for cost and energy savings of 10% or more than other revolving doors. It is estimated that the cost of a KBB two-wing automatic revolving door is equivalent to the money it saves in three years.

The price difference of revolving doors and sliding doors are equal to the energy consumption cost of a 2-3 year timeframe.

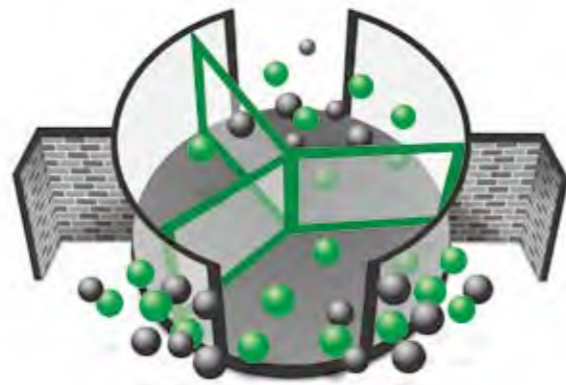
As for the sliding doors, the amount of air exchanged varies according to the size of the area, time of the opening of the door and the speed of airflow.



sliding doors

● ● = Air

The air exchange for revolving doors depends only on the inside air volume and the number of times the doors open.



revolving doors

$$E = (T_i - T_e) \times V \times C$$

Environment Energy Consumption (EC) = Temperature Difference Between Internal & External (TD) × Air Exchange Volume (EV) × Specific Heat Capacity of Air (C)

	KA023	KM023	KA061	KM061	KA071	KM071	KA071A	KM071A
 Three-wing doors	✓	✓	✓	✓	✓	✓	✓	✓
 Four-wing doors	✓	✓	✓	✓	✓	✓	✓	✓
 Automatic	✓		✓		✓		✓	
 Manual		✓		✓		✓		✓
 With central axis	✓	✓	✓	✓			✓	✓
 With drum - wall - pillar			✓	✓				
 Top driving	✓	✓	✓	✓				
 Underground driving					✓	✓	✓	✓

Series of Three / Four-Wing Revolving Doors

• Specifications

KA023 Three-wing Revolving Doors Dimension

• Model	• Diameter	• Outer Diameter	• Total Height	• Clear Passage Height	• Opening	• Persons/min
KA023-3-18	1800mm	1888mm	2500mm	2200mm	805mm	12
KA023-3-21	2100mm	2188mm	2500mm	2200mm	955mm	24
KA023-3-24	2400mm	2488mm	2500mm	2200mm	1105mm	24
KA023-3-27	2700mm	2788mm	2500mm	2200mm	1255mm	24
KA023-3-30	3000mm	3088mm	2500mm	2200mm	1405mm	30
KA023-3-32	3200mm	3288mm	2500mm	2200mm	1510mm	30
KA023-3-36	3600mm	3688mm	2500mm	2200mm	1705mm	36

KA023 Four-wing Revolving Doors Dimension

• Model	• Diameter	• Outer Diameter	• Total Height	• Clear Passage Height	• Opening	• Persons/min
KA023-4-18	1800mm	1888mm	2500mm	2200mm	1177mm	12
KA023-4-21	2100mm	2188mm	2500mm	2200mm	2390mm	24
KA023-4-24	2400mm	2488mm	2500mm	2200mm	1620mm	24
KA023-4-27	2700mm	2788mm	2500mm	2200mm	1824mm	24
KA023-4-30	3000mm	3088mm	2500mm	2200mm	2026mm	30
KA023-4-32	3200mm	3288mm	2500mm	2200mm	2172mm	30
KA023-4-36	3600mm	3688mm	2500mm	2200mm	2450mm	36

Technical Parameters

• Power supply	220V/AC ± 10% 50Hz
• Lighting	12V/AC 120W/240W
• Rated power	600W
• Motor power	250W
• Lighting power	300W
• Control system power	50W
• Low speed adjustment range	0.5~2.5rpm
• High speed adjustment range	1~4rpm

Configuration

• Standard	• Optional
Aluminum alloy door leaf	Waterproof cover
PLC control system	Fire alarm
Ceiling – Fire plate	Anti-collision
4+4mm laminated curved glass	Anti-squeeze
3+3mm laminated plane glass	Night security door
Mechanical lock	Remote control
Ceiling spot light: 12V/AC	Internet monitoring system
Safety bumper	Manual /Automatic activation device
Emergency stop button	
Handicap button	

Note: Design and specifications are subject to change without notice, as they are based on product development.

Surface Treatment

• Anodizing

KBB keeps the strictest and highest standards in its process. The finish of the anodized aluminum is no exception, offering more than twenty different choices of color and surface texture finishing. Other standards of this stainless material include its wear-resistance, corrosion resistance, electrostatic prevention, amongst other features to meet different architectural styles and demands.



• Stainless Steel Cladding

Mirror surface



Satin pattern



Hair pattern



Carving pattern



Arenaceous pattern



• Coating

KBB provides two kinds of coating: electrostatic coating and coated by fluorin and carbon.