record HYBRID Series

TECHNICAL OVERVIEW

record
your global partner for entrance solutions

NSW Forensic Pathology and Coroners Court, Lidcombe

OUTLINE

Welcome to the record Hybrid Series, the door that combines the frameless glass sidewall design of our Diamond Series, with the conventional canopy design of our Fullview Series revolving doors.

The result is a revolving door that provides the convenience of having the drive motor and control system mounted in the canopy, but without the added framing bulk of most conventional revolving door designs. This has been achieved by deleting the supports posts at both entries and increasing the thickness of the curved toughened glass sidewalls to provide lateral restraint for the overhead canopy.

The Hybrid Series design was created in consultation with Bates Smart architects for the plaza entry of 360 Collins Street Melbourne, where existing site restrictions prevented the mounting of the drive motor under the slab. The result is a unique and striking door entrance that is flexible in design with many of the optional extras from our Fullview door available to meet architectural and functional requirements.

20 Customhouse Quay, Wellington

260 Albert Street, East Melbourne

595 Collins Street, Melbourne

140 Sussex Street, Sydney

DESIGN

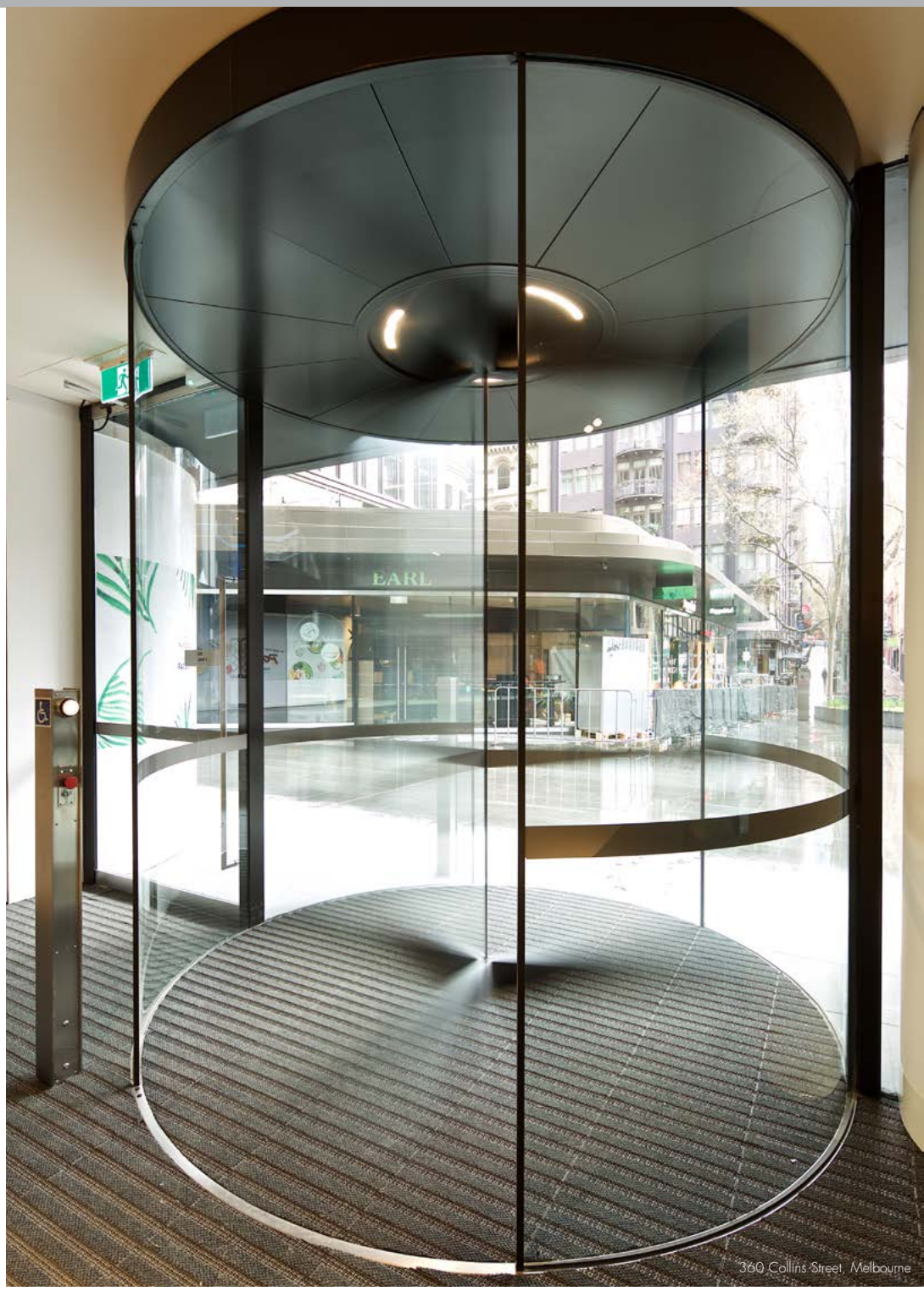
When designing a building entrance with a revolving door, the diameter and door wing configuration are of critical importance in ensuring that the entrance has a door that is safe and able to meet the expected traffic flows of the building occupants.

In general terms the larger the diameter of a revolving door, the more practical this door will be, in terms of pedestrian capacity as well as the ability for people with bulky goods, strollers or in wheelchairs to also use the door.

When it comes to door wing configuration, 3 wing doors are more practical in smaller diameter revolving doors, where maximising the usable space per door segment is very important. In larger diameter doors however, the larger clear opening width provided by a 4 wing door can provide advantages with the flow of people entering and exiting the door at the same time.

When considering the size and configuration of the revolving door(s) for you building, other factors need to be taken into account, such as the general safety and comfort level of the of door users, the entrance location (proximity to public transport) the type of building (commercial, leisure, hotel, shopping) and the type of people expected to use the revolving door (business people, families, senior citizens).

The information contained in the table below is derived from the rotating speed of the carousel (maximum as per AS5007) and the number of people who can, in theory, safety use each segment of the revolving door. The results are for capacity in one direction only and assumes that each possible segment has the maximum prescribed number of people.

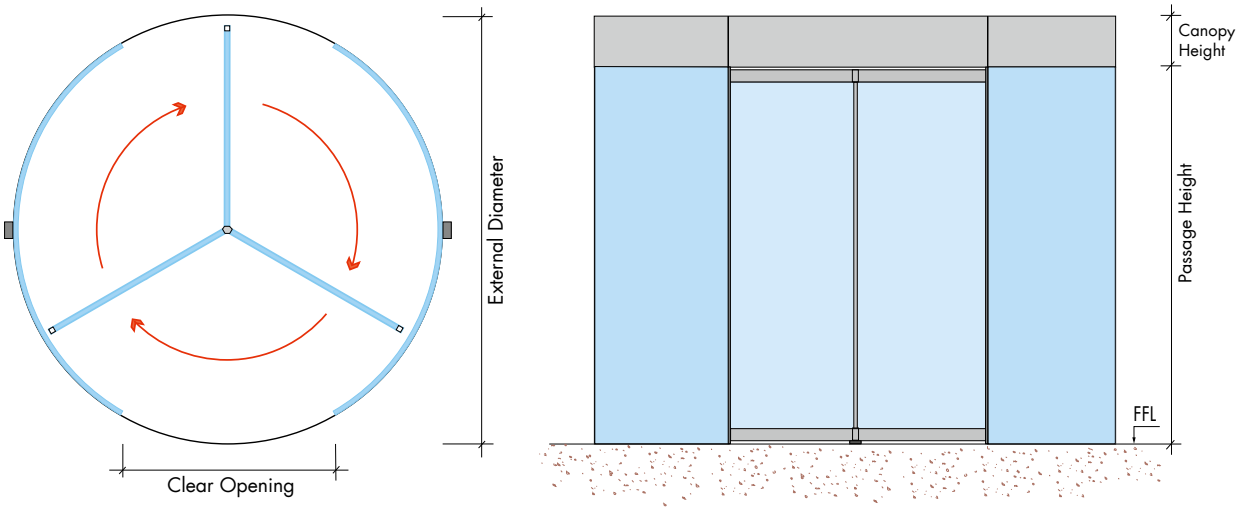


360 Collins Street, Melbourne

Theoretical Door Capacity

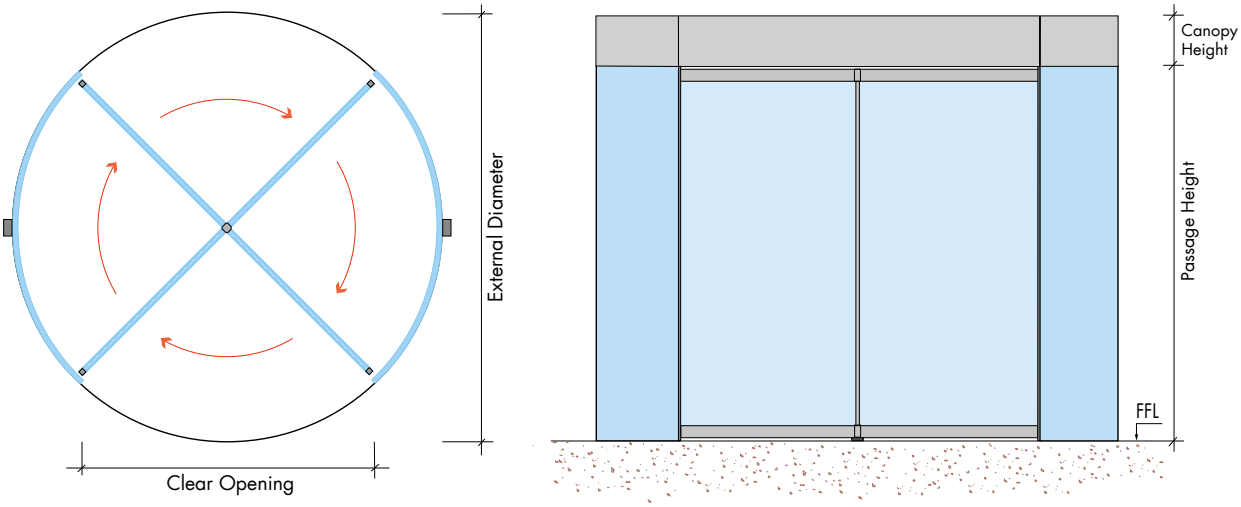
Diameter (mm)	Speed (m/sec)	Revolutions / Minute	3 WING CONFIGURATION Persons / Segment	Capacity / Minute	Capacity / Hour	s	4 WING CONFIGURATION Persons / Segment	Capacity / Minute	Capacity / Hour
2400	0.75	6.0	1	18.0	1080				
2700	0.75	5.3	1.5	23.9	1431				
3000	0.75	4.8	2	28.8	1728		1	19.2	1152
3600	0.75	4.0	3	36.0	2160		2	32.0	1920
4000	0.75	3.6	4	43.2	2592		3	43.2	2592

3 Wing Configuration



External Diameter	2400	3000	3600	4000
Clear Opening	1200	1500	1800	2000
Passage Height Max	3000	3000	3000	3000

4 Wing Configuration



External Diameter	3000	3600	4000
Clear Opening	2000	2400	2700
Passage Height Max	3000	3000	3000

STANDARD FEATURES

CLADDING

Doors can be supplied in a range of finishes including powdercoated and anodised aluminium as well as stainless steel in linished, mirror or coloured finishes.

LOCKING

Electric locking of the doorset is built into the drive wheel to provide a secure entrance at night. This locking is fully concealed..

LIGHTS

LED down lights are fitted within in the inner revolving ceiling. These lights give a high light level within each segment of the door and as the lights rotate within the door there are no 'strobing' effects or shadows within the door caused when the door wings pass under a stationery light. These lights automatically switch off 20 seconds after the door has locked.

GLASS

All glazing within the revolving door meets the requirements of AS1288:2007. The glass to the revolving carousel is 12mm toughened. The glass to the sidewalls is 12mm curved toughened.

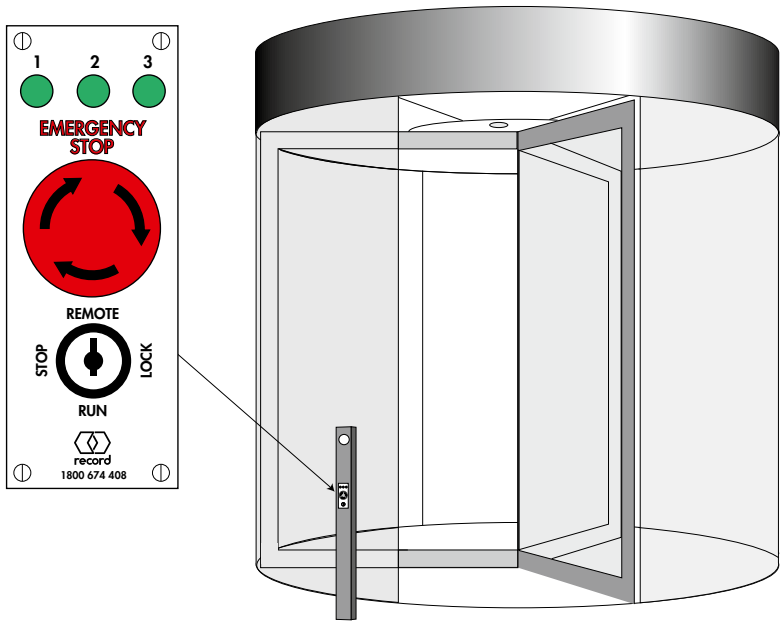
All glass is clear with other options, such as heat soaking, low iron or tinted, available upon request at additional cost.

DOOR OPERATION

Hybrid doors can be programmed to operate in the following ways.

'CONSTANT SPEED' (Standard).
In this mode the door will revolve at a constant speed with no radar sensors mounted on the door canopy.

'STOP - RUN' (Optional Extra).
In this mode the door will remain stationary until a radar sensor picks up an approaching person. The door will then accelerate to the run speed and when no traffic has been detected for a predetermined period the door will slow down to idle speed for two revolutions before stopping. This mode requires the mounting of radar sensors onto the door canopy.



CONTROL SWITCH PANEL

All doors are fitted with a stainless steel control switch plate on the inside door post that has a number of features:

Mode Key Switch

The four position mode switch can have the key removed in any position leaving the door set in that particular operational mode. The functions of the control switch are as follows;

'REMOTE' mode
This mode is used when the door is connected to a remote security system that will automatically switch the door from lock mode to run mode on a programmed basis.

'RUN' mode (automatic operation)
The door will run automatically and override any remote signals.

'LOCK' mode
The door will rotate to the lock position and automatically lock. Should 'clamshell' sidewalls be fitted, these will automatically close. This mode will override a signal from a remote security system.

'STOP' mode
The door will stop in the locking position but the door will not lock.

Mode and Fault Indicator LED's

The 3 indicator LEDs are designed to indicate the current status of the four position mode key switch as well as any fault indications.

The LEDs will either be switched constantly on, slowly flashing or fast flashing and can be in any combination of these to give a particular mode or fault indication.

Emergency Stop Button

When the button is pressed the door will stop immediately.

SPEED 'SLOW DOWN' BUTTON

All doors are fitted with an illuminated push button that will slow the door down to half of its normal speed for two revolutions. This will make the revolving door more safely accessible for wheelchair users and elderly people.

SAFETY FEATURES

AESTHETICS IN SAFETY

Unlike any competing revolving door on the market, the record Hybrid Series revolving door features safety sensors that are fully incorporated into the door design, making them effectively hidden to the untrained eye.

For concealed safety along the leading sidewall edge, photo electric microcell sensors are mounted to the underside of the door canopy.

The door wing infrared sensors are mounted within the custom designed top rail framing that incorporates a curved lens housing (rather than a black plastic sensor mounted on the door rail).

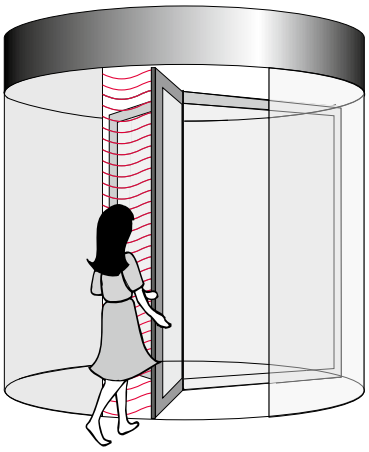
And for additional safety record's bottom rail design incorporates a concealed contact sensor (rather than a rubber bumper sensor mounted on the rail, or no safety sensor).

These safety sensors comply with the Australian Standard on Revolving Doors AS5007:2007.

LEADING EDGE SAFETY SENSORS (A)

The leading edge PE microcell safety sensors provide an invisible safety barrier between the leading edge of the curved glass sidewall and the approaching revolving door leaf.

If an object is detected in front of this leading edge when the door leaf is approaching the carousel will stop rotating until the object has moved from the safety zone.



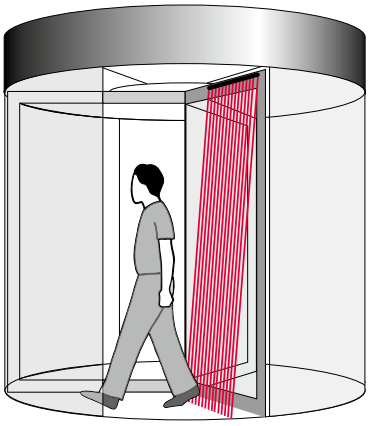
TOP RAIL SAFETY SENSORS (B)

The rotating carousel infrared safety sensors are fitted to the top door rail and scans the area directly in front of each door leaf.

Should a person be detected the door will slow down to the speed of the person and if necessary stop.

The system is designed to minimise the possibility of collision between each revolving door leaf and a person or object inside the revolving door.

For elderly or handicapped persons the ability of a door to slow down to the same speed as they are walking has real safety advantages. This system is ideally suited for larger doors when there is more space inside each door segment.

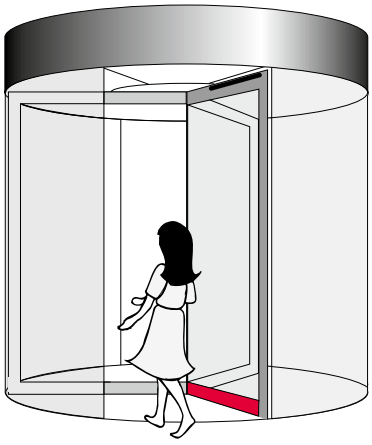


BOTTOM RAIL SAFETY SENSORS (C)

The rotating carousel contact safety sensors are fitted to the front of each door leaf bottom rail.

Should a person's foot come into contact with the bottom rail the revolving door will immediately stop.

The system is designed to stop the revolving door should the infrared sensor fail to pick up the obstruction earlier.



YouTube Video
Revolving Door Safety Features

OPTIONAL FEATURES

AUTO WIND BACK DOOR WINGS w/ BATTERY BACKUP

In addition to manual breakout door wings offer by other revolving door companies, the record Hybrid Series revolving door wings can be fitted with a motor drive system that will automatically open one or two wings on signal from the remote system, fire trip or local key switch. This is shown (below) for Fullview doors installed at the Hilton Hotel, Sydney.

This system is particularly useful if there is a need for emergency egress, smoke ventilation requirements or when high volumes of traffic are anticipated.

A UPS can be fitted to the revolving door to provide continued power to the revolving door (for a limited period) in the event of a power failure. This is particularly useful when used with the auto wind back feature to provide an alternative egress route in an emergency.

YouTube Video
Auto Windback Door Wing

ILLUMINATED CANOPY SIGNAGE

To provide personalised branding or identification to the building entry, the canopy fascia of the revolving door can have numbers, the building name or company logos laser cut out and illuminated from behind, as pictured (below) at 818 Bourke Street, Docklands, and Hilton Hotel Sydney

LED STARLIGHTING

As an alternative to the standard LED downlights in the centre rotating ceiling, a special LED starlight feature can be incorporated into the fixed ceiling panels.

The LED lights are low energy and long lasting, and with the potential to provide a custom design to suit the client, it can provide a unique entrance to any Hybrid revolving door, as demonstrated at Grosvenor Place, Sydney (below).

ILLUMINATED CEILING PANELS

For a more illuminated revolving door entrance, record can replace the standard metal fixed ceiling panels, with translucent glass panels. Within the canopy space a large number of fluorescent lights are installed to provide a bright and consistent lighting feature, as shown below at 126 Phillip Street, Sydney.

LinkedIn Article
Custom Lighting Features

CIRCULAR ROOF LIGHTING

To provide a unique lighting feature to the revolving door entrance, curved LED strip lighting can be recessed into the ceiling panels around the perimeter of the revolving door canopy.

The below entrance at 140 Sussex Street Sydney was designed specifically to meet the design requirements of the architects, Group GSA and complement the feature lighting used elsewhere in the foyer.

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