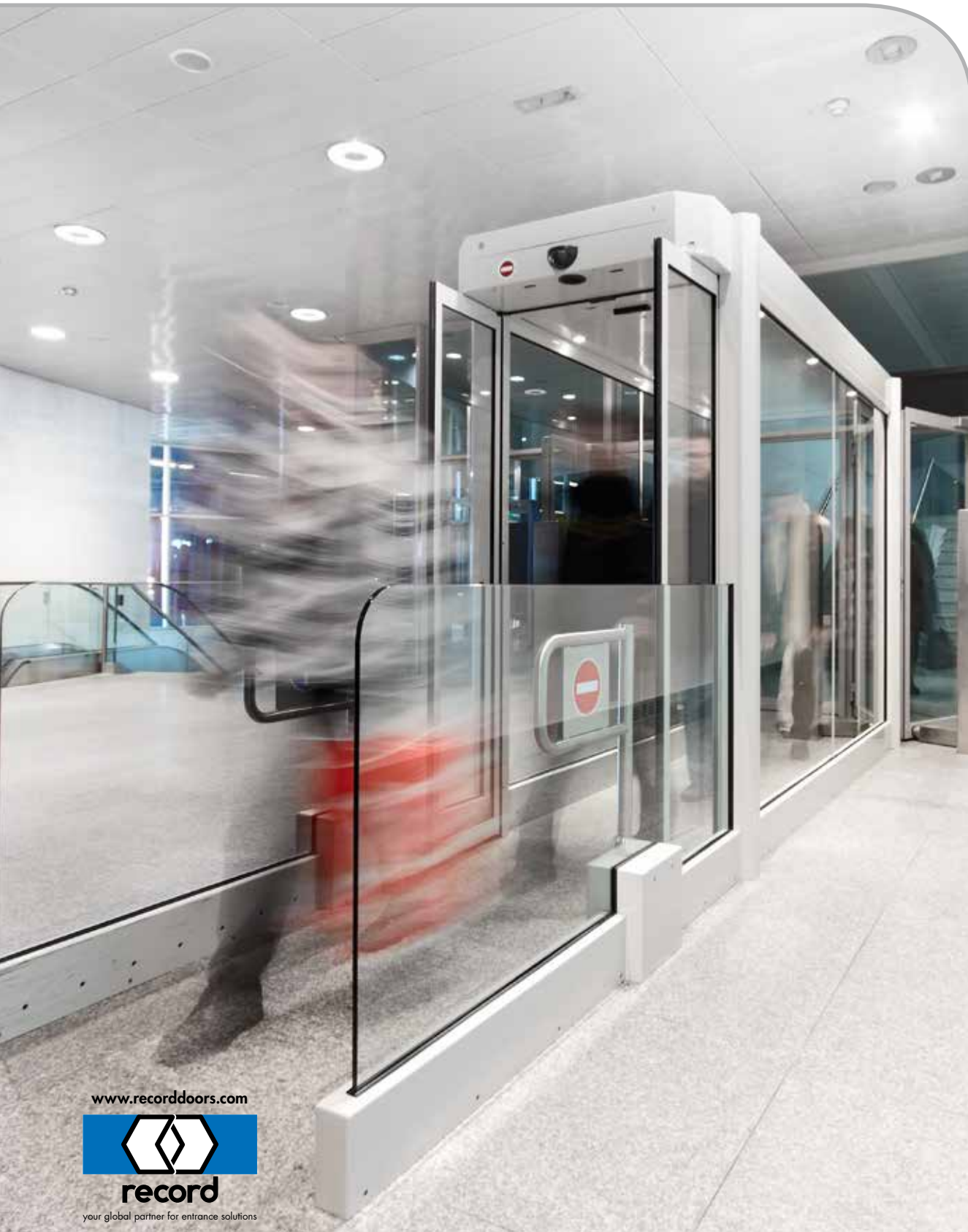


aviation security

record product range overview



aviation security

www.recorddoors.com



record

your global partner for entrance solutions

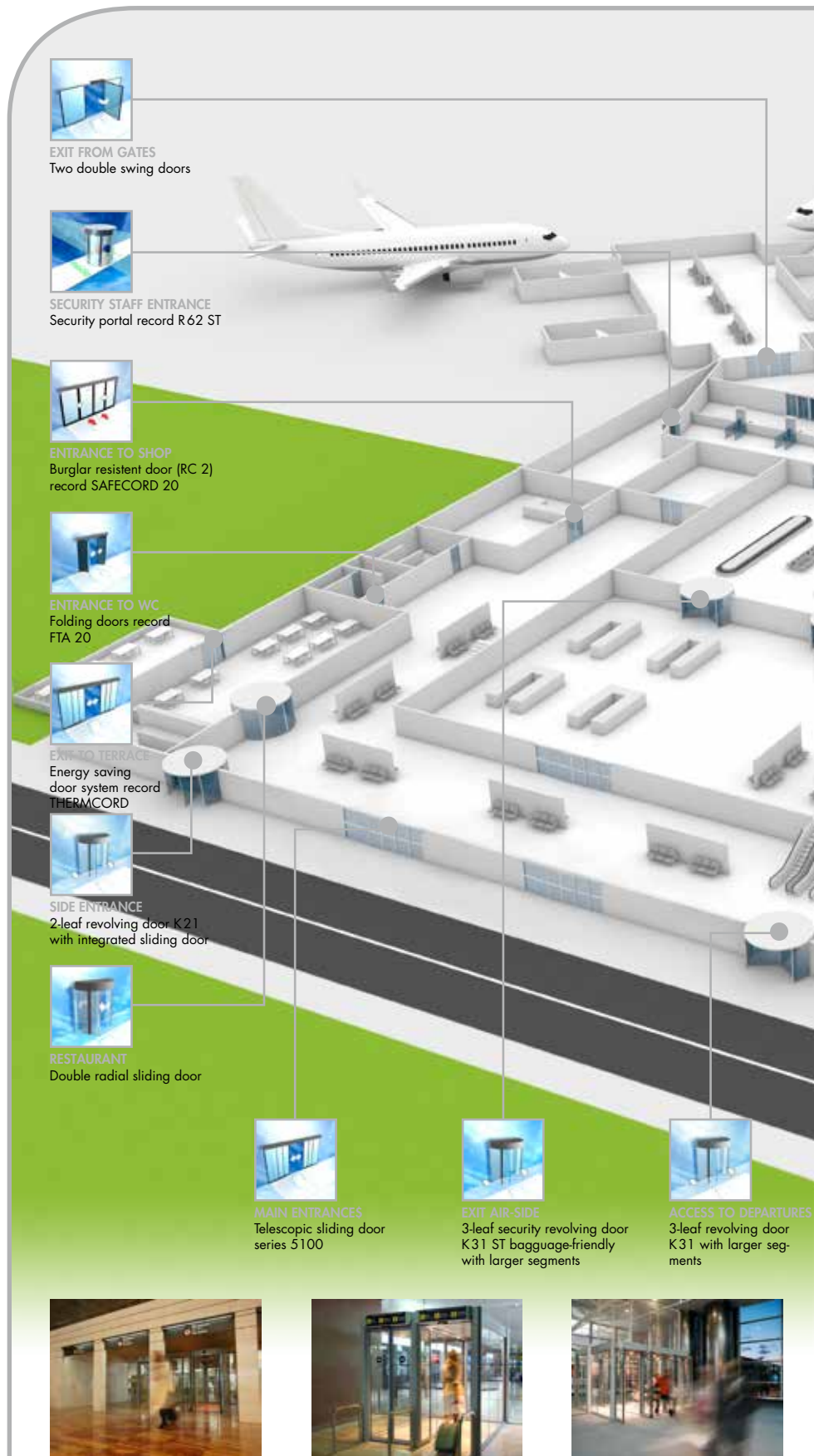
record security range overview – secure, efficient, comfortable

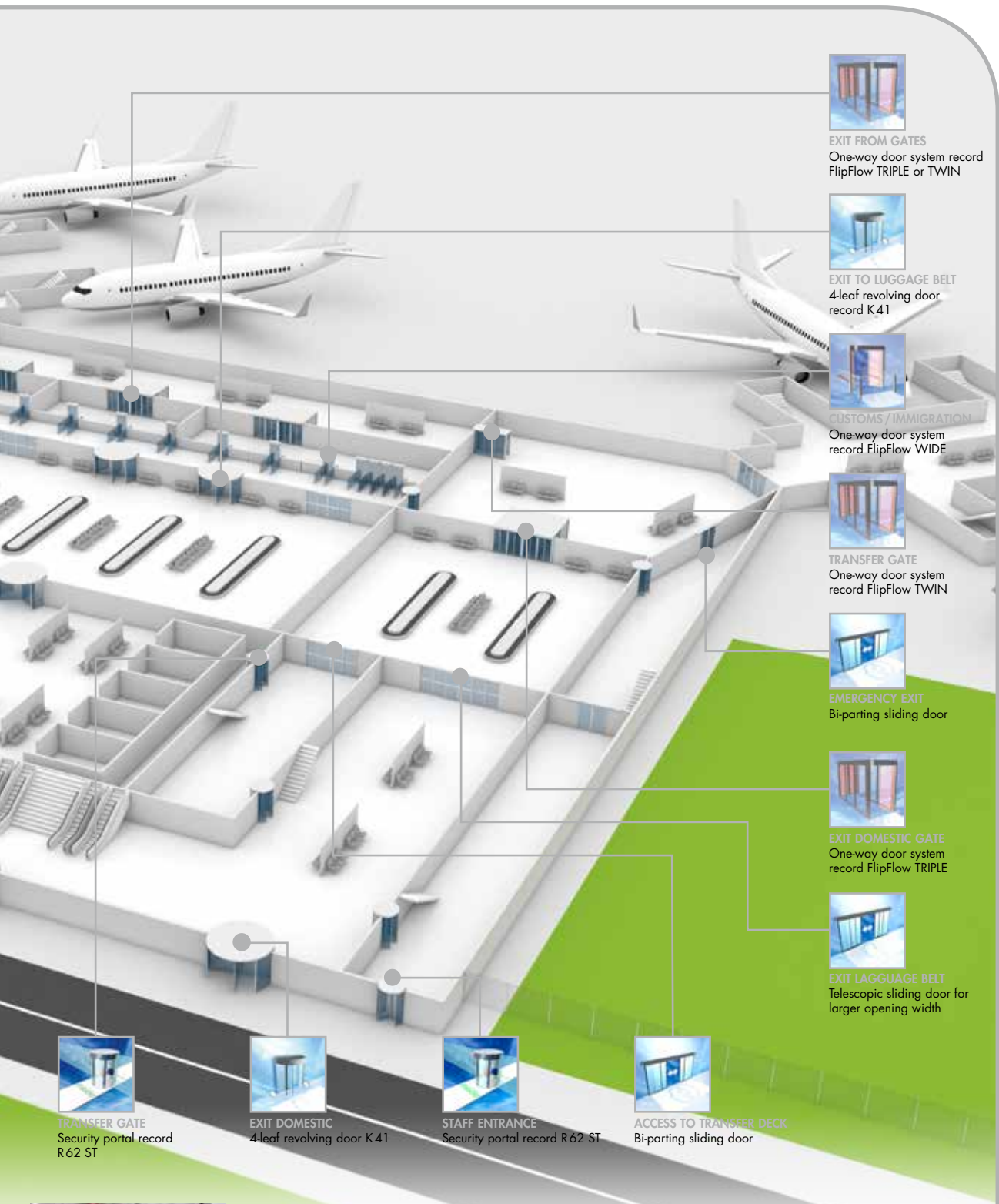
With over sixty (60) years in the automatic sliding door industry and over eleven (11) years experience in exit lane technology, record has the solutions for your airport needs. With automatic sliding door systems, portals, revolvers and a proven exit lane technology we can provide a high level of security to meet a variety of requirements.



record FlipFlow TWIN extended Zurich

- Portals are a great product for employee entrances. The employee would badge themselves in and out, giving the airport an audit trail.
- The record K31 revolving door (three leaf) is a perfect application for passenger entrances with disabilities.
- The record K41 revolver (four leaf) is commonly used at main entrances and /or exits from baggage claim.
- The record FlipFlow TRIPLE or TWIN Extended is specifically used where security is a premium. Passengers will pass through these going from the airside (secure) to the land side (non-secure).
- A 5100 sliding door system offers convenience, safety and an energy efficient solution for main entrances to the airport.





TRANSFER GATE
Security portal record
R62 ST



EXIT DOMESTIC
4-leaf revolving door K41



STAFF ENTRANCE
Security portal record R62 ST



ACCESS TO TRANSFER DECK
Bi-parting sliding door



EXIT FROM GATES
One-way door system record
FlipFlow TRIPLE or TWIN



EXIT TO LUGGAGE BELT
4-leaf revolving door
record K41



CUSTOMS / IMMIGRATION
One-way door system
record FlipFlow WIDE



TRANSFER GATE
One-way door system
record FlipFlow TWIN



EMERGENCY EXIT
Bi-parting sliding door



EXIT DOMESTIC GATE
One-way door system
record FlipFlow TRIPLE



EXIT LAGGUAGE BELT
Telescopic sliding door for
larger opening width



aviation security

corridor

No retrocedisca
No retroceda
Do not return



Avance
Avance
Keep walking



No es pare
No se detenga
Do not stop



No retrocedisca
No retroceda
Do not return

Corredor sense retorn/Pasillo sin retorno / One-way corridor



aviation security

www.recorddoors.com



record

your global partner for entrance solutions

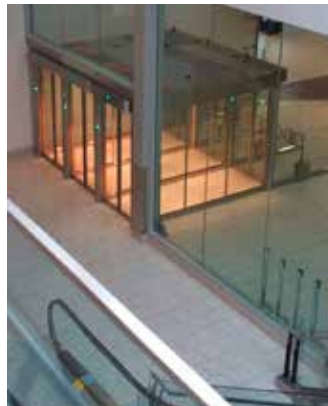
How to improve security and safety

The record FlipFlow family provides a high level of security for a wide range of applications. The user friendly one-way security entrance system delivers an array of solutions to meet a variety of requirements. It provides safety and security at the desired level while being user friendly and easy to maintain. The FlipFlow adds value to your building or installation, offers improved performance and provides discreet but reliable security and safety.

Advanced Sensing Zones

Sensing Zones are in the FlipFlow tunnel system to identify various activities:

- zones set for entrance, passage, exit (monitored walking direction)
- systems utilize multiple sensing zones to control traffic direction and control flow.
- alarms triggered for reverse direction, static object detection.



Halifax, NS - 2015



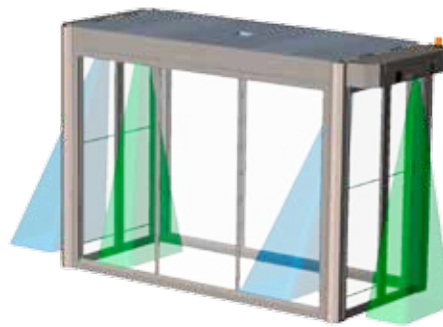
Toronto Pearson International - 2015

Door Activation

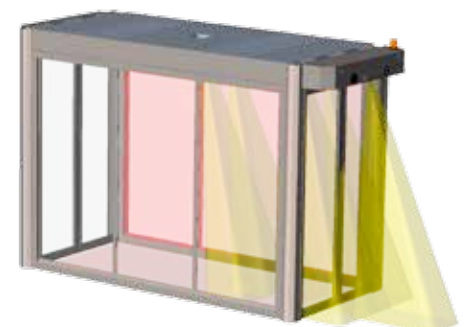
- Radar-based door activation sensors installed in the ceiling above the door triggers the door opening in order to get the highest possible passenger throughput. (Blue Area)

Door Safety

- Safety beams, installed in the door opening, protect passengers from impact of the door during closing.
- Infrared sensors installed in the ceiling above the door wings protect the passengers from impact of the door during opening. (Green Area)



FlipFlow Door Activation and Door Safety



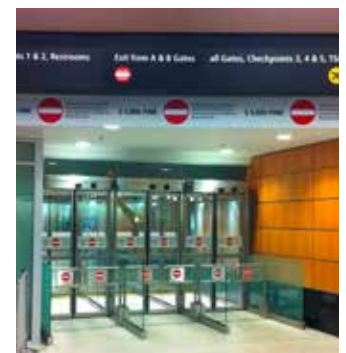
FlipFlow Breach Control and Object Detection

Object Detection

- A set of light curtains are installed at the floor level which allows for detection of objects with a minimum size of 2" x 2" x 2". (Pink Area)
- An optional set of light curtains allows detection of objects placed on the ceiling and walls with a minimum size of 2.4" x 2.4" x 2.4". (Pink Area)

Breach response

- The detection of a person moving in the opposite direction through an exit door will close the entry doors and trigger an alarm.
- The detection is based on several infrared sensitive video cameras with image analysis installed in the ceiling of the tunnel. (Yellow Area)
- The exit door has an additional radar, installed on the exit side, which acts as a pre-alarm for passengers approaching the door from the land side.





aviation security

www.recorddoors.com



record

your global partner for entrance solutions

The record FlipFlow family

With over eleven years' experience and over 1,100 units installed and operational throughout the world, the record FlipFlow family provides a high level of security for a wide range of applications. The user friendly one-way security entrance system delivers an array of solutions to meet a variety of requirements. With durable construction and practical modularity, it provides safety and security at the desired level while being user friendly and easy to maintain. The FlipFlow adds value to your building or installation, offers improved performance and provides discreet but reliable security and safety.

Some facts about FlipFlows

- Worldwide success and results with over 1,100 proven installations
- Varying widths, lengths and clear opening dimensions to provide for complete freedom and accessibility of all intended users
- Individual personalized announcements can be recorded to fulfil each users requirements. Up to 8 different recordings can be stored.
- Object detection as small as 2" x 2" x 2" – detection areas on floor, and 2.4" x 2.4" x 2.4" on the ceiling and side panels.
- Access to all repair components from **inside** the breach unit – no need to have work in awkward, unsafe or confined ceiling areas

Features

- The **only** manufacturer to offer object detection on side panels and ceiling as an option
- Traffic signals at entrance and exit doors
- Interior maintenance hatches
- 8 relay outputs for integration into the airport's building management system
- Customizable voice module

Operation modes

- Flow – allows constant "flow" of passengers achieving the highest throughput
- Interlock – controls each segment individually
- Flow to Interlock – effectively manage throughput by automatically changing from flow to interlock depending on traffic
- Cleaning mode
- Bi-directional use of authorized airport staff possible

Advantages of Stainless Steel Cladding

- Maintenance cost benefit over the lifetime of the unit
- Easily replace damaged piece(s) and/or components
- Minimize "down time" during maintenance
- Geometrically more advanced - optimized strength to size ratio



record FlipFlow – system overview

Version	TWIN	TRIPLE	Option: extended
Auto flow / interlock*	●	●	
Throughput flow	approx. 2500 per hour		no influence
Throughput interlock	approx. 500 per hour		no influence
record security level	low - 123456789 - high	low - 123456789 - high	+1

* automatic change from interlock to flow mode for higher throughput depending on counting of passengers



Security product plan



Exit lane tunnel systems, security portals, security revolvers or security gates offer various security rating levels. Define or choose your level based on your application.

Revolving Doors

The record revolving door K41 is designed for passenger access in and out of the terminal. The four leaf revolver provides high throughput for entrances and exits and is suitable for passenger access.

With a larger entrance and a smaller round drum-shaped segment, this revolver is ideal for passenger throughput.

The K31 revolver offers the same security and throughput as the four leaf revolver but offers larger segments. The larger segment allows for wheelchair and disabilities access. The K31 also has a switchable control to reduce speed.

Security Doors & Portals			
Version	record K31 ST	record K41 ST	record R62 ST
Description	3 leaf revolving door	4 leaf revolving door	Portal
Throughput	12 persons per minute	16 persons per minute	6 – 8 persons per minute
record security level	low - 123456789 - high	low - 123456789 - high	low - 123456789 - high



The record revolving door range offers individual systems that will fulfill every building requirement. In order to handle large traffic throughputs and provide emergency escape options record is the right choice for your main entrance also.

Portals

The round security portal R62 ST offers the highest security level as only one person at the time can pass through.

This small curved security slider works like a man trap where the opposite curved sliding door will open once the door behind has been closed and secured. The throughput is minimal at approximately 6 persons per minute.

The R62 Security Portal, when integrated with the airport's access control system, allows personnel to badge in and/or badge out to ensure validation. Combined with anti-tailgating and anti-piggybacking ensures the airport with the highest security for employee entrances.

Breach control systems						
	TRIPLE	TWIN extended	TWIN	K41 ST	K31 ST	R62 ST
Interlock Mode	●	●	●	○	○	●
Flow Mode	●	●	●	●	●	○
Object Detection	●	●	●	○	○	○
Real Image Camera	●	●	●	○	○	●
High Throughput	●	●	●	○	○	○
Bi-Directional use	○*	○*	○*	●*	●	●
ADA Accessible	●	●	●	○	●	●

www.recorddoors.com

* possible on request in case of emergency for security personnel

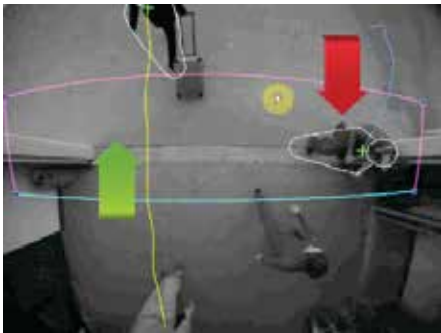


record

your global partner for entrance solutions

Features:

- **Highly Accurate Detection** The Ex-O-Flow uses Patented "Virtual 3-D" technology to track persons within its field of view.
- This technology guarantees higher than 95% accuracy for detection of persons and object within its field of view.
- **Wrong Way Tracking** Can track a high volume of targets simultaneously and ignore all motion in the proper direction.
- However, if a person attempts to move the wrong way through the coverage area, the Ex-O-Flow immediately detects the movement and creates an output.



- **Self-Contained** The Ex-O-Flow does not require a separate computer. All processing is built into its controller which is normally mounted near the camera.
- A separate PC or Laptop can be used for set-up and adjustment but is not required for normal operation.
- **Inconspicuous** The Ex-O-Flow Camera module is very small and inconspicuous.
- A flush mount version of the camera is also available.
- **Warning and Alarm Zone** The Early Warning Zone is designed to provide advanced notice of wrong way movement and deliver a visual and verbal deterrent to the intruder. Typically, this will result in avoiding a breach. If they continue, the alarm zone will activate causing additional deterrent measures.

The record Ex-O-Flow

Exit Lane Breach Control

The Ex-O-Flow One-Way Traffic Sensor is designed to detect and report the movement of persons the wrong way through a secured area. By utilizing its unique "virtual 3-D" Technology, the Ex-O-Flow can be used to improve security in areas where reverse traffic is not allowed. The most common application for this technology is exit lanes in airport terminals. When Ex-O-Flow is used in this application, it will immediately report any movement against the approved flow of traffic. Although not designed to work stand-alone, the output from the Ex-O-Flow can be used to notify a guard, close automated gates or doors and activate CCTV.

OPTION 1

Dual Sensor with record 5100 Series Door

Pre-Alarm Zone

- 1) Actuate Verbal Warning (Auto Reset)

Alarm Zone

- 1) Audible/Visual/Voice Alarm
- 2) CCTV Activation
- 3) Auto door to lock secure airside (Manual Key Reset)



OPTION 2

Dual Sensor

Pre-Alarm Zone

- 1) Actuate Verbal Warning (Auto Reset)

Alarm Zone

- 1) Audible/Visual/Voice Alarm
- 2) CCTV Activation (Manual Key Reset)



OPTION 3

Dual Sensor

Pre-Alarm Zone

- 1) Actuate Verbal Warning (Auto Reset)

Alarm Zone

- 1) Audible/Visual/Voice Alarm
- 2) CCTV Activation (Manual Key Reset)



ticket-ease Boarding System

Self Boarding Check-in



Buy American Act: The ticket-ease Boarding System meets BAA requirements
Warranty: Three (3) year return-to-factory warranty on all electrical
Software: Open software platform - SDK
Available Widths: 32" and 36"
Available Glass Heights: 48" (HG) and 60" (FG)
Options: Mounting Platform

Product Comparison

We Offer:

- All stainless steel construction
- 4 different audible tones
- Combo Reader – passport included
- ICAO Compliant reader
- UL/UL-CE/UL-CSA Listing
- Crawl Over/Under detection
- BAA Compliant
- Green initiative

Competition:

- Stainless steel with glass side panels
- 2 audible sounds
- Paper, airport issued and smartphone only
- No UL/UL-CSE/UL-CSA listing

TEBS-HG/FG – Optical Barrier Swing Glass

The Optical Barrier Swing Glass turnstile enables passengers to scan their own boarding pass leaving the ticket agent free to assist other passengers.

Operation: The passenger presents their boarding ticket (paper, airport issued or smart phone) and/or passport, to the access control reader mounted inside the casework. If boarding is authorized, the top mounted LED will light as a green arrow pointing in the direction authorized and a chime will sound indicating the passenger may board. Unauthorized passengers and/or tailgaters are singled out by local visual /audible alarms.

Optical Detection: Industrial duty infrared photoelectric beams (36) linked to Primary Input/output Board – 32-bit microprocessor with optional on board wireless LAN connectivity.

Tailgate Detection: The system recognizes patterns of movement through the lane to differentiate between a person pushing or pulling luggage and a person attempting to piggy back on a valid entry.

Sound Card: The sound card emits 4 different tones via an 8 ohm speaker to indicate lane status – valid transaction, invalid boarding pass, unauthorized access attempt, or tailgate attempt.

Crawl Under Detection: Beams detect barrier arm crawl-under attempts, as low as ten inches from the floor, and will trigger a visible and audible alarm and appropriate trigger signal to the access control system.

Crawl Over Detection: Utilizes load cell technology to detect an intruder attempting to walk or crawl along the length of the pedestal top to gain entry into the boarding area.

Power: 240w 24VDC 10A power supply is provided for each set of up to 4 lanes. A dedicated 120V 15A circuit should be provided at each location.

Status Light: LED arrays are fitted into the pedestal top to visually assist the passenger when passing through the lane.

Green Initiative: 75% of the steel used in manufacturing is made from recycled material. Low wattage consumption of .8 amps used at full operation.

Safety Features: The ticket-ease Boarding System is equipped with "fail safe" operation mode which powers the barriers to the open position in case of emergency. In the event of power outage, the barriers push open with very little force.

www.recorddoors.com



record

your global partner for entrance solutions

Complementing record doors provide comfort

Other products ideal for use in airports

5100 Series Sliding Door Systems

- Ideal for airport club entrances
- Virtually silent operation
- Single slide or bi-part
- Breakout available
- All glass, heavy duty, impact rated hurricane, non-impact rated hurricane, and bullet resistant
- Electric locking, back up battery optional
- Partial open feature – partial opening can be constant or automatic depending on traffic
- Independent door speeds for opening and closing
- Safety sensors in the clear opening to prevent door from shutting if a person or object is in the detection zone
- Safety automatic reverse mechanism if the door leaves are inhibited when closing
- Green initiative – lower wattage consumption
- Utilizes the S.M.A.R.T. panel with intuitive interface and visual feedback of door status – EXCLUSIVE



8100 Series Automatic Swing Door Operators

- Low energy or high energy
- Non-handed
- Inswing or outswing
- Reveals up to 24" in depth
- UL listed both UL325 and UL228
- Push or pull operation
- Overhead concealed available
- Double egress available
- On/off/hold open switch provides as standard
- ADA compliant
- Built in interface for electric lock eliminates the need for costly peripherals
- Push to start operation saves on additional activation devices
- Latch assist ensures closing to overcome stack and wind conditions
- Virtually silent operation



Contact

International references within the aviation business (excerpt)

USA: Chicago O'Hare International Airport, Dallas, Fort Worth Texas, Piedmont Triad International Airport, Greensboro, Springfield Illinois, George W. Bush International, Houston Texas, Lubbock Texas, Savannah, Arkansas, SEATAC, Washington, Kalamazoo, Michigan, Eugene, Oregon; Plattsburgh International, New York, Sioux Falls, South Dakota // Austria: Vienna Airport A // Belgium: Brussels Airport B // Canada: Ft. Mc Murray, Halifax, NS; Ottawa, ON; Toronto Pearson International, Vancouver, British Columbia // Denmark: Billund Airport // Germany: Munich Airport D, Dusseldorf, Nuremberg, Stuttgart, Saarbrücken // France: Lyon Airport, Paris Orly Airport F and Roissy Airport, Nantes, Marseille, Rennes, Toulouse, Nice, Grenoble, Bastia, Pau, Ajaccio, Biarritz, Rodez, Bordeaux // Greece: Athens Airport // Italy: Rome, Venice, Naples, Bologna // Netherlands: Amsterdam Airport // Spain: Barcelona, Madrid, Malaga, Bilbao, Valencia, Alicante // Switzerland: Zurich, Geneva, Basel // UK: London Heathrow and Gatwick, Glasgow

→ record USA

4324 Phil Hargett Court – Post Office Box 3099 – Monroe, NC 28110
tel. +1 704 289-9212 – e-mail: info@record-usa.com – www.recorddoors.com

→ Headquarters

agta record ltd – Allmendstrasse 24 – 8320 Fehraltorf – Switzerland
tel.: +41 44 954 91 91 – e-mail: info@agta-record.com – www.agta-record.com



www.recorddoors.com



record

your global partner for entrance solutions