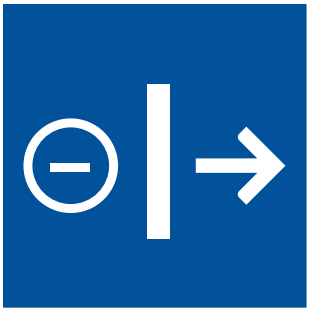
dormakaba

Orthos PIL-M02

The efficient exit lane breach control

Transition from airside to landside



A clear advantage

The transition from airside to landside places the strictest demands on access security. With its transparent exit lane breach control, dormakaba helps keep secure areas clear. The corridor plays a key role in the airports' overall security concept. The goal is to make it virtually impossible to pass through unnoticed without authorisation.

Providing a warm welcome while keeping sensitive areas secure: separating public areas from security areas is one of the most problematic aspects of airport security and is governed by clear laws.

Unauthorised persons are not allowed through to airside under any circumstances. At the same time, inbound passengers expect to be welcomed warmly. dormakaba offers modular exit lane breach control corridors that are monitored by sensors and combined with quick-response door systems. After landing, passengers can make their way quickly and easily to the exit, while unauthorised persons are reliably prevented from entering the security zone.

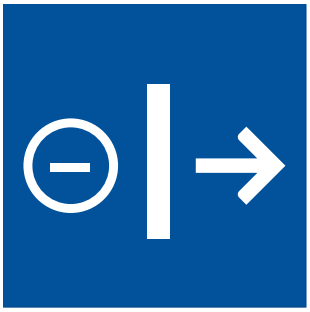
Benefits

- High reliability
- State-of-the-art sensor technology for detection of movements in the unauthorised direction
- Detection of left objects on floor level
- Simple integration into existing systems
- Various security levels
- Can be flexibly integrated into challenging architectural designs
- Over 1,000 units installed worldwide
- Low power consumption (162 W during idle for version with one full-height door)

Effective, precise, secure:
Orthos PIL-M02 exit lane breach control

Orthos PIL-M02 exit lane breach control corridors reliably meet the highest security requirements. The modular corridor's sophisticated sensor systems detect movement in unauthorised directions and objects being passed through.

Airport security



No compromise

Passengers, employees, service providers and visitors are to be protected under all circumstances. And the infrastructure itself shall not be put at risk. Hence the sterile area on the airside cannot be compromised. The automated dormakaba solution Orthos PIL-M02 secures the passageway out of this area.

Unremittedly and undistractedly Orthos PIL-M02 by dormakaba protects the airside from unauthorised access.

At the same time, the protection of the airside must be guaranteed. No objects shall be introduced. Sterile and non-sterile passengers shall not mix. And all this at reasonable cost and at all times.

Possible areas of application: airside/landside, Schengen/non-Schengen areas, national/international flights, arrival/departure etc.

Security Benefits

- Locked airside doors in case of loss of power (fail secure)
- Automated, unstaffed system with state-of-the art sensors to sense, deter, and alarm in case of a security breach
- Security staff can take appropriate actions in case of an alarm
- Detection of left objects on floor level
- Detection of objects thrown into the corridor (optional)
- Fast-moving half-height doors serve as a first, quick-moving barrier during alarm sequences (optional)

Pedestrian safety

dormakaba exit lanes respect pedestrian safety and facilitate smooth and quick exit

Landed passengers must be able to leave the airport quickly and unhindered.

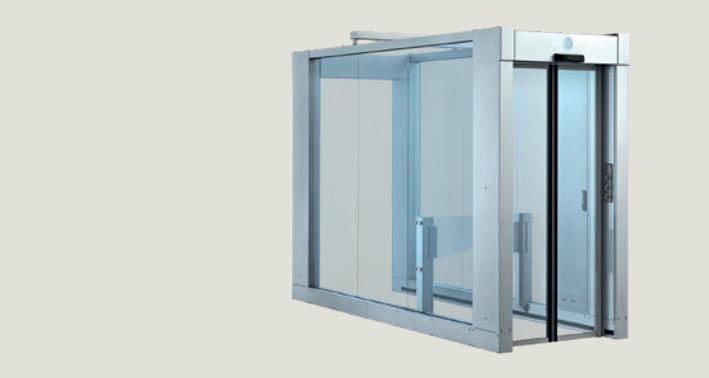
Safety Benefits

- Certified low-energy drive units
- Additional safety sensors
- Unlocked landside doors in case of loss of power (no entrapment possible)
- Material of optional half-height swing doors features damping characteristics for passive safety (internal damping)

The solution at a glance

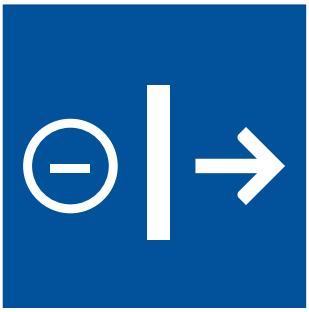
A model kit for all airports

Modular layout with different lengths, widths and doorsets, a choice of different sensors and standard security features: Orthos PIL-M02 for all airports.

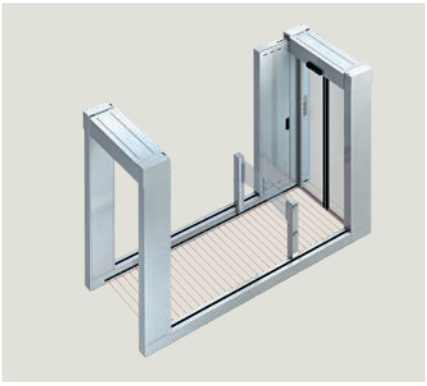


The number of full-height doors provides different security levels and door layouts. This allows for configuratons suitable for almost any airport situation.
Airports have individual architectural environments. Some have vast open spaces even at the arrival level while others must cope with growing numbers of passengers in a fixed area.
Orthos PIL-M02 offers suitable solutions for a great variety of airport environments.
Versions with only one full-height door provide good object security even when space is limited. No-one will intrude to the airside unnoticed.
Versions with two or three full-height doors allow for enhanced security. Additional fast-moving half-height swing doors and video-based stereo sensors make it virtually impossible for intruders to get to the airside unnoticed. Also objects thrown through the corridor will not pass unnoticed: direction-sensing light grids alarm in case of objects being thrown from the non-secure to the secure side.

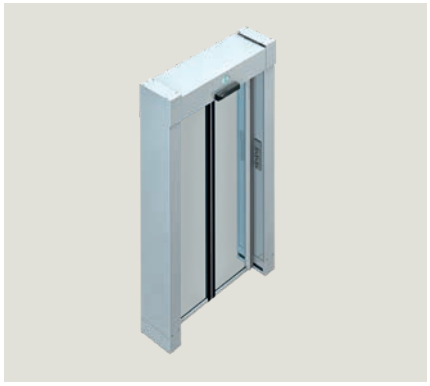
Your choice



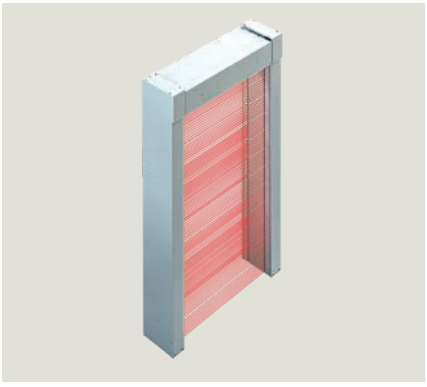
Orthos PIL-M02 helps meet various needs. Different passage widths not only fit to architectural conditions, but also help to comply with local legal provisions.
Larger passage widths offer enough space for wheelchair users as well as for passengers with voluminous baggage. Especially in long corridors this helps to keep up pedestrian flow and avoid congestion.
Sensors detect not only movement in the unauthorised direction, but also objects left behind and objects thrown into the corridor.



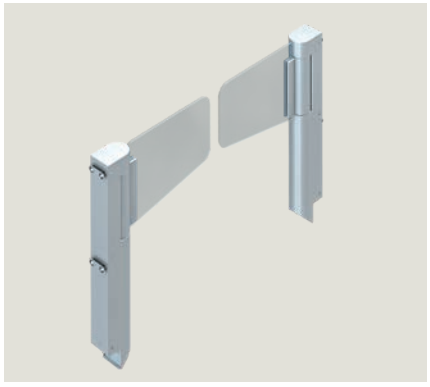
Horizontal sensor for pedestrian safety, door opening and detection of left objects. Recognises objects down to 50 x 50 x 50 mm.



Full-height door for object security.

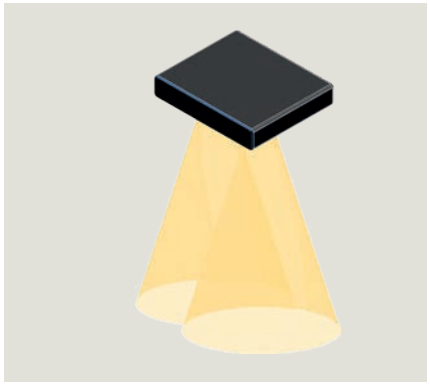


Vertical sensor for objects thrown in. Recognises objects down to 100 x 100 x 100 mm with a speed of 10 m/s.



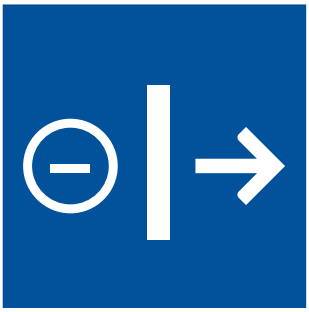
Fast-moving half-height swing doors serve as a first barrier for an intruder to overcome.

Radar sensor for detection of recognition of movement in unauthorised direction and door opening.



High performance stereo sensor for wrong way detection, increased detection reliability and decreased false alarm rates.

Solution basics



Facts and figures

Concept
The unit provides a controlled-access secure path of travel configured to allow high-volume single-direction pedestrian movement, and to sense, deter, and provide local and remote notification for attempts to enter corridor from the restricted direction. It is often employed at airports for the sake of controlled crossing of all passengers from airside (sterile area) to landside (non-sterile area). The modular system consists of a combination of several fast-moving half- and full-height door sets. The required security level may be achieved by different unit lengths and sensor combinations. The sophisticated sensor systems ensure a high object security with simultaneous regard to pedestrian safety.

Finish
Light alloy profiles stainless steel AISI 304 for all visible parts.

Construction
Modular system (different lengths, widths, and door combinations)
Sensor-controlled corridor for passage in one direction only, consisting of:
- 1 to 3 full-height doors (double swing doors), 6 mm safety glass ANSI Z97.1; hampering of object transfer and of passages into the security area; monitored swing range for safe passage; signaling by LED display, voice module (optional), low-energy drive concept
- up to 2 fast-moving low-energy half-height swing doors creating an additional obstacle in case of a security breach attempt; opening and closing sensor system incorporated in the corridor, swing range monitoring by horizontal sensors at foot level; swing door material with internal damping characteristics
- transparent glass sidewalls; 10 mm glass ANSI Z97.1 in unit height
- boundary plates at foot level protecting against bumping baggage, strollers etc; end-to-end integration of horizontal sensors
- modular sensor system (pedestrian safety, detection of attempted security breaches, detection of objects left within the corridor) available in different performance levels
- signal light (arrow-cross) for pedestrian guidance

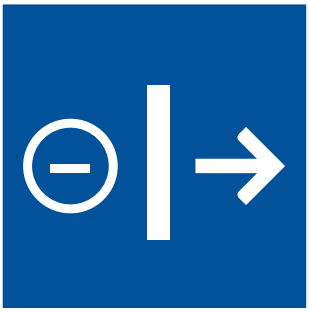
Possible corridor combinations
- multiple units (parallel corridors for increased passenger flow)
- different lengths and widths (meeting architectural and security requirements)

Dimensions
Total length: 3,091 – 9,129 mm depending on door configuration
Total height: ca. 2,500 mm
Passage height: 2,100 mm
Passage width: 650, 920, 1,120, or 1,400 mm

Capacity/Throughput rate
60 people per minute are possible when walking 1 m/s (3.6 km/h) in a distance of 1 m from each other.
Higher capacities are technically feasible, especially for wider corridor lanes.

Functions
Basic process: pedestrian approaches door → door opens → door remains open if further passengers approach the system. All the while, the system monitors the direction of movements. In case of a breach attempt, the system alarms and tries to close doors while respecting pedestrian safety.

Solution basics



Power failure
All full-height doors are closed by UPS. Airside doors are closed and locked. All landside doors remain unlocked. All half-height doors are freely movable. Pedestrians may leave the corridor towards the landside, thus the security is never compromised.

Return of power
Complete unit is initialized automatically. Set operation mode is resumed.

Pedestrian safety
Areas of door movement are monitored by sensors, helping to prevent pedestrians from being touched. Limited rotational energy due to low energy drives.

Object security
See chapter "Sensor System". Project-specific security levels may be achieved by different sensor levels, corridor dimensions, and door combinations.

Sensor systems
- radar sensors as standard for wrong way detection
- optional high performance stereo sensors for wrong way detection, increased detection reliability and decreased false alarm rates. Virtually immune to surrounding conditions, i.e. ambient light or floor surfaces.
- horizontal sensor for presence detection and detection of left objects 50 x 50 x 50 mm
- vertical sensor for throw-in objects detection 100 x 100 x 100 mm / 10 m/s (optional)

Electric system
Power supply
100 – 240 VAC, 50 – 60 Hz, power supply rated at 600 VA

Power consumption of version with 2 full-height doors and one half-height door: 162 W during idle
For variant with 2 full-height doors and one or two half-height doors: 210 W during idle

Controls integrated in electrical cabinet

Operating modes
normal flow, blocked, cleaning, interlock maintenance.

Alarm schemes
Full alarm in case of further breach attempt. Thrown objects (optional). Left objects.

Parameter settings
Runtime monitoring of sensors and drives, acoustic alarm duration, alarm reset (time-driven, manually, automatic), initialization time.

Installation
On finished floor level

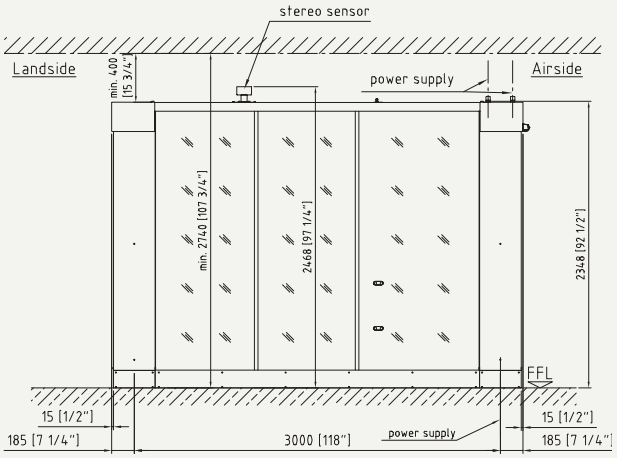
Options
Operating panel, optionally with key switch. Remote operation via dry contacts, LAN interface.
Pre-alarm (suppressed first alarm)
Stereo sensor
LED lighting (4W power rating per LED)
Voice module
Mesh ceiling to prevent objects from being thrown over the top and into the corridor
Vertical sensors for throw-in object detection

Advantages
- detection of thrown objects (optional)
- minimal energy consumption (drive units and LED lighting)
- high degree of modularity
- no top access needed: controls integrated in electrical cabinet
- sensors independent of ambient light conditions
- open ceiling (easy integration into sprinkler and smoke detection systems)

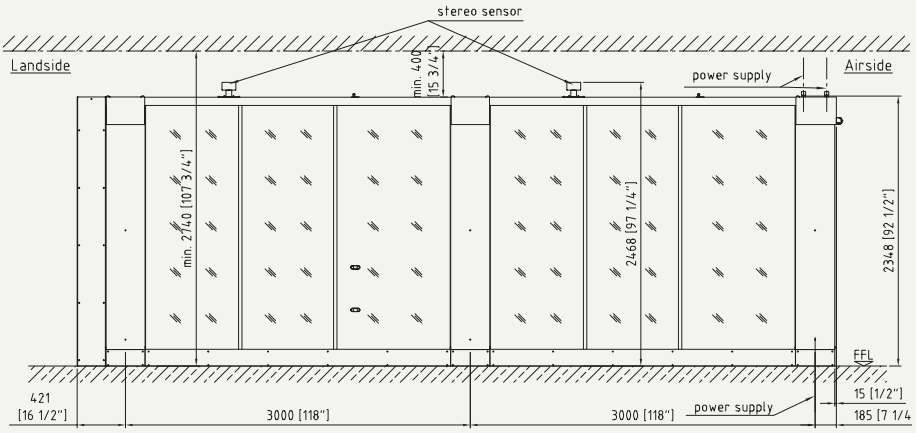
Layout examples

(optional equipment shown)

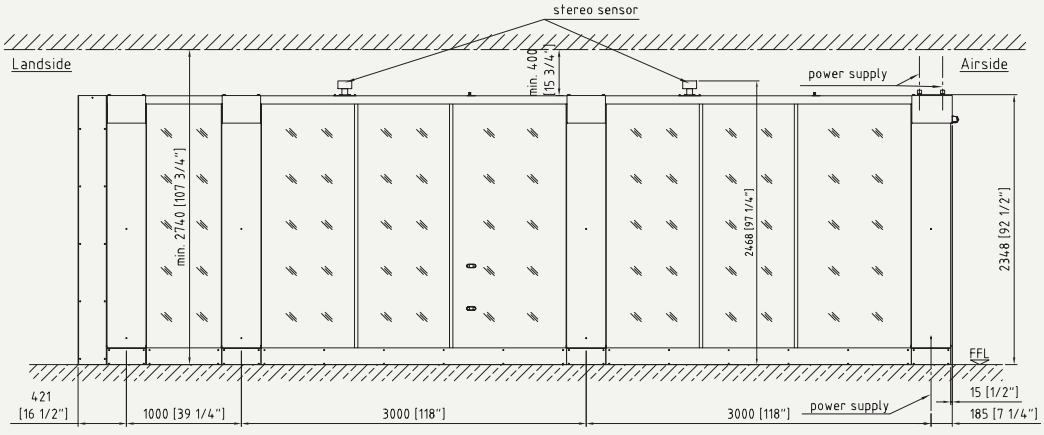
Version with one full-height door



Version with two full-height doors and throw-in detection



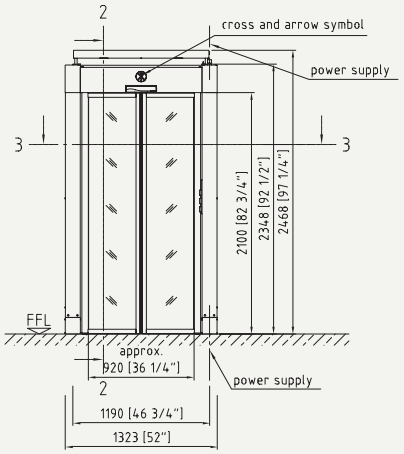
Version with three full-height doors and throw-in detection



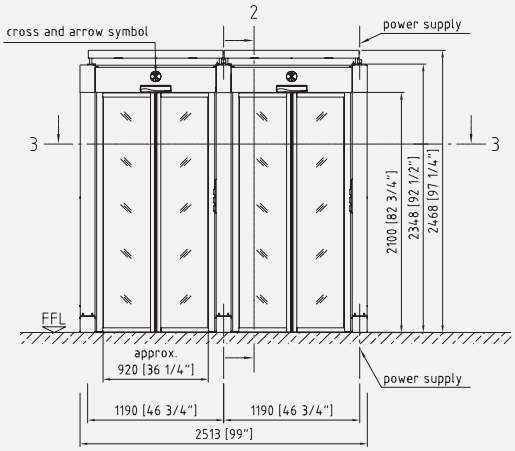
Layout examples

(optional equipment shown)

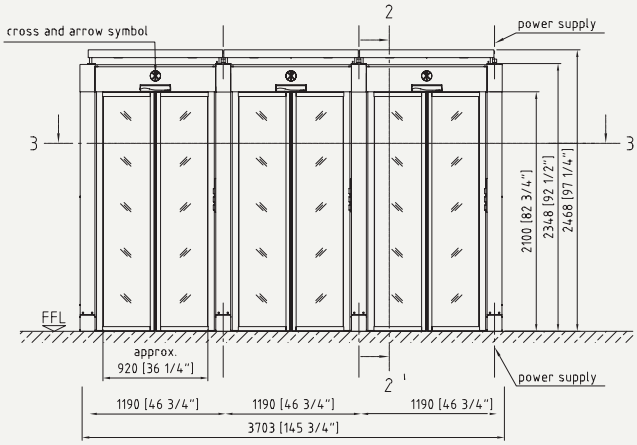
Single lane side view



Double lane front view



Triple lane front view



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dormakaba Deutschland GmbH
DORMA Platz 1
58256 Ennepetal
T +49 2333 793-0
info.de@dormakaba.com
www.dormakaba.com

dormakaba Austria GmbH
Ulrich-Bremi-Strasse 2
A-3130 Herzogenburg
T +43 2782 808-0
office.at@dormakaba.com
www.dormakaba.at

dormakaba Schweiz AG
Lerchentalstrasse 2a
9016 St. Gallen
T +41 848 85 86 87
info.ch@dormakaba.com
www.dormakaba.ch

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