FlipFlow TWIN
BASIC
System description

High capacity anti-return system

Brief description

Function

The FlipFlow TWIN is an *automatic high capacity anti-pass-back* system, serving the regulation of the passenger flows in airports and other sensitive areas in various types of buildings. Persons can pass through this secure mono block in single file and in one direction only. Attempts to reverse or go back are detected by an *intelligent sensor system* and, in addition, an alarm message is triggered.

Applications

- Passenger flow regulation in airports (separates airside from landside)
- Protection of other sensitive areas in seaports and railway stations
- Access to sensitive areas in public or industrial buildings
- Side entrances in supermarkets

Construction

- Self-supporting aluminium construction. Two double leaf **record DDF** swing door operators, for a long life. The entrance door is, in addition, equipped with a robust electromagnetic lock.
- A master control, supplemented with a modular, extendable sensor package, monitors correct passenger flow.
- Transparent side panels in laminated security glass facilitate monitoring requirements.
- Interior lighting is provided by 6 spot lights
- Tunnel status is indicated by red/green signals at the entrance and exit door.

Surface treatment / Glass specifications

Aluminium parts
- powder coated – standard RAL/NCS colours

Glass panels
- door leaves and side panels: laminated glass 44/2
- small side panels: tempered security glass

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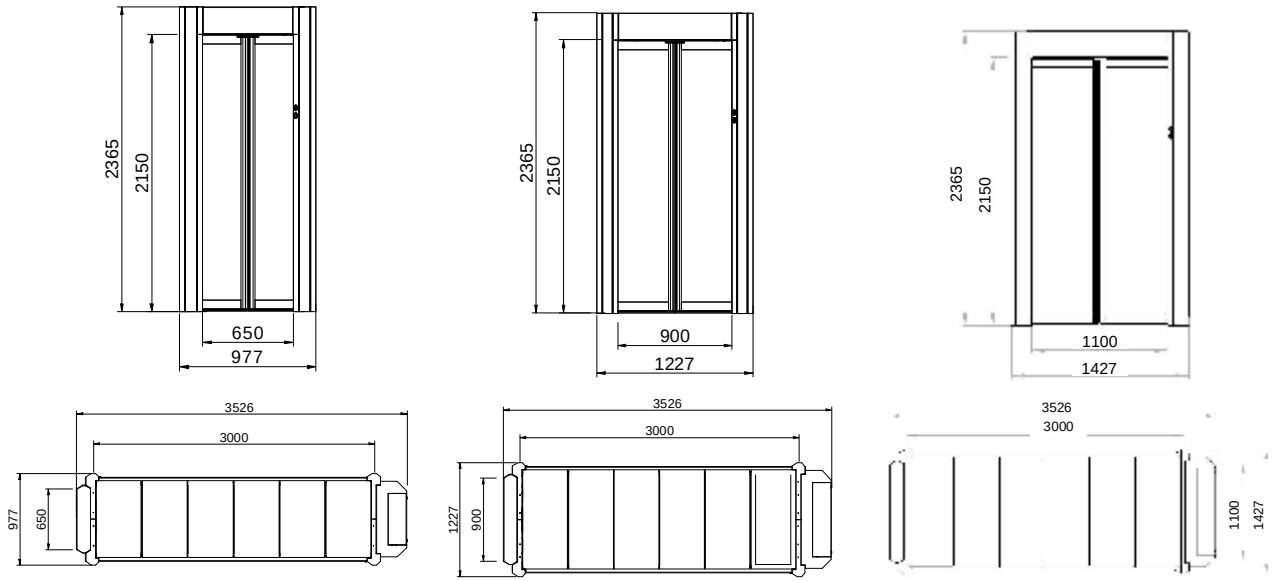
System description

record

Product range

TWIN 650	*TWIN 900*	*TWIN 1100*

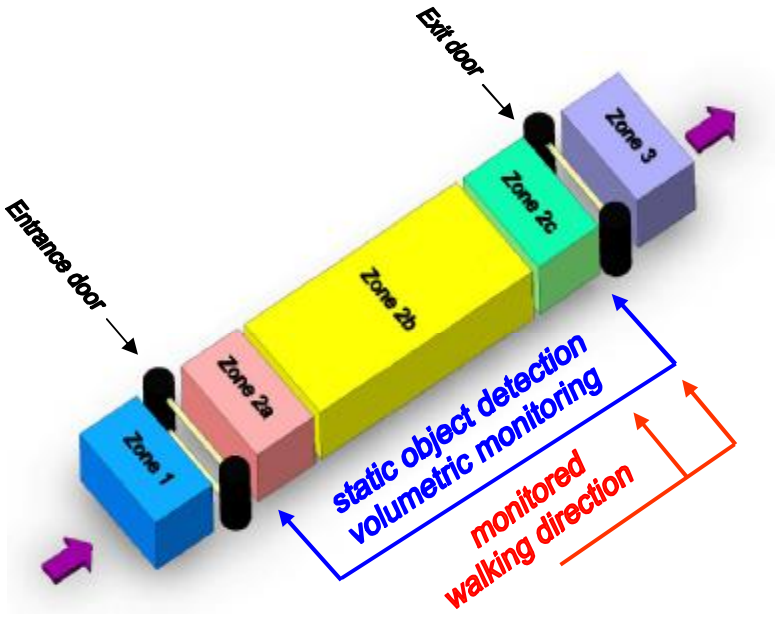


- Dimensions of FlipFlow 1200 are available on request

Basic equipment

- Basic sensor package / standard signals
- Key operated selector for operation modes

Detection zones



Max. capacity

- 1'500 – 2'000 persons / h
  Depending on how the tunnel is used, the indicated values may vary considerably.

Operation modes

FLOW mode

- Opening “entrance door” by sensor (zone 1)
- User proceeds into the anti-pass-back tunnel
- The “entrance door” closes if there is no movement detected in zone1, or if the opening door is free and no presence is detected in the door leaf swinging area (zone 2a)
- The user proceeds across zone 2b
- The “exit door” opens, activated by the “exit” sensor (zone 2c)
- The anti-pass-back tunnel is then exited
- “green” traffic light signals correct walking direction
- Lights inside are “on”

OPEN mode

- Entrance and exit doors are kept open
- The FlipFlow can be freely accessed
- The monitoring sensor system is disenabled (optional alarm available to indicate “incorrect walking direction”)
- “green” traffic light signals correct walking direction
- Lights inside are “on”

LOCKED mode

- Both doors are closed, entrance door is locked (optionally the exit door is also locked)
- The FlipFlow can not be accessed
- “red” traffic light signal is “on” and inside lights are “off”

Maintenance + cleaning

Additional switch for maintenance work (optional)

Integrated switch, accessible via service hatch

- Suppresses alarm messages
- Allows the service engineer to service, adjust and test the FlipFlow
- A local alarm is triggered if the maintenance switch is not reset after a preset, configurable timer.
- Status messages are available on a dry contact to be transmitted to the relevant department

Additional switch to clean the tunnel

An additional cleaning-switch allows functions to be extended (can be supplied locally). Connectable from “airside” and/or “landside” of FlipFlow

- For security reasons, the entrance door is kept closed and locked
- The exit door opens
- Alarm messages are suppressed
- Status messages are available on a dry contact to be transmitted to the relevant department
- If this mode is not disenabled within a preset, configurable time, the FlipFlow automatically reverts to the functional mode selected earlier.

Incorrect use and alarm messages

A local buzzer is triggered when one of the following alarm messages is dispatched. To distinguish between alarms, individual messages are available on dry contacts to allow integration of Building Management Systems.

Wrong walking direction and intrusion

- An alarm message is immediately be triggered if a person tries to gain access to the tunnel from the wrong side, or if somebody turns back in zone 2c. Depending on the status of the entrance door, a range of messages are dispatched:
  - Entrance door closed **à** "wrong walking direction" alarm
  - Entrance door open **à** "intrusion" alarm
- In both situations, the entrance door is closed and locked if not deliberately being hindered from doing so.
- Persons can, however, turn back in zones 2a and 2b without triggering an alarm.

Disturbance of people flow

Should the regular flow of people be hindered by external influences, the alarm message "disturbance of people flow" will be triggered, i.e.:

- A person or object is obstructing access to the free passage in the opening.
- A person or an object is detected inside the FlipFlow with both doors closed (this optional requires additional sensors).

Technical disturbance

Should a fault occur in one of the operator units or sensors or camera, the technical fault alarm is triggered.

Remote control

Remote control

The following commands are triggered by existing building management systems, *by-passing operation modes which are selected on the local control panel.*

- total opening of both doors
- emergency closing and locking of the entrance door / simultaneous opening of the exit door

Connection of flashing lights

A dedicated contact is available (24 VDC / max. 25W) for the connection of locally delivered flashing lights.

This contact is activated if an **intrusion alarm** is triggered, allowing immediate, direct intervention by security personnel.

Optional extension modules allowing remote monitoring and control

record ADM^{pro}
***A**dvanced **D**oor **M**angement*

record's ADM^{pro} (**A**dvance **D**oor **M**anagement) system provides convenient, centralised monitoring and control of the entire FlipFlow TWIN installation(s). Alarm messages are instantly dispatched to multiple e-mail addresses, and video surveillance further enhances security.

record ADM^{pro} user-friendly graphic interface

record LON-16
interface

record LON-16 interfaces are LONMark certified and can be integrated into any LNS-based, open building management system.

Integration into building management systems

The controls of the FlipFlow can be extended by relay output and digital input modules to allow integration into existing building management systems. Detailed information on active alarm messages, current operation mode and door status are available on pre-configured outputs.

Integration in PC networks (LAN)

A standard interface is available for the integration into local PC networks (LAN). Useful information, such as alarm messages as well as information on the door status are transmitted to a centralised monitoring station.

The integration and visualisation will be executed by a local systemintegrator, appointed by the customer.

Options

Inside monitoring

A range of sensors are available to allow monitoring inside the FlipFlow. The following options are available individually or in combination:

- Detection of stationary objects **at the floor**
- Detection of stationary objects **on the side panels**
- Detection of stationary objects **at the ceiling**
- Volumetric **inside monitoring,** allowing unauthorized persons remaining inside the tunnel to be monitored (should be used together with stationary object detection **at the floor**)

Integration of Access Control System

A special operation mode is available in the “closed / locked” position

- The connection of an access control system (card reader etc.) admits one single passage of the FlipFlow in direction of “landside”
- For security reasons, only one door is opened at the same time
- After the person has passed though, the system is locked again

Control panel for EURO locking cylinders

Extension of the control panel for EURO half-cylinders
The control panel is prepared to receive a locally delivered EURO type cylinder.

Emergency operation

Both automatic doors are equipped with battery packs. Following a power failure, the doors complete a final movement (entrance door is closed and locked; exit door is opened). The tunnel can be freely exited to the public area.

- Emergency Open buttons as well as additional phones inside the tunnel are recommended options for emergency evacuations.

Locking device at the exit door

Security can be enhanced by adding additional locking devices at the exit door, combined with manual override in case of power failures.

Service Display

The record Service Display module was chiefly designed for use by service engineers, and provides the following:

- Allows setting and modifying parameters
- Allows setting of various timers according to customers’ requirements
- Displays status list of digital inputs / relay outputs
- Displays error messages in user-friendly text
- Password protected access levels

To meet individual requirements, this useful tool is provided in two different options:

- Securely integrated into the cladding of each FlipFlow OR
- As a portable Service Tool, compatible with all FlipFlows of the latest generation

Additional signals at the exit door

An additional signal indicating tunnel status (red/green light) is also available at the exit door.