



LET'S MAKE LIFE SAFER!

PRODUCT CATALOGUE

Physical and Access Control

- ◇ Speed gates
- ◇ Tripods
- ◇ Swing gates
- ◇ Full-heights
- ◇ Road blockers
- ◇ Bollards
- ◇ Tire-killers



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Pedestrian access control

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Vehicle access control

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Making life safer since 1996



Speed gates



Tripod turnstiles

30 years of evolution

We have come a long way — evolving from its first solutions to comprehensive products that set industry standards.

Today, we can rightfully be counted among the world's leading manufacturers. Our approach is to make innovation accessible, practical and genuinely useful for businesses.

And we continue to grow, creating solutions that are built for the future.



Full-height turnstiles

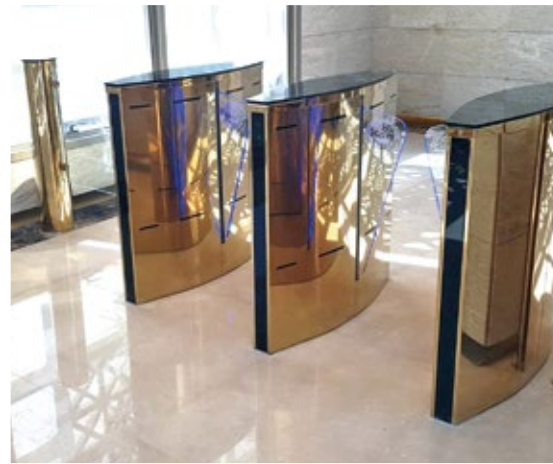


Road blockers

Speed Gates

- The speed gates have an ultra-modern futuristic design. Our speed gates of this series are ideal for stylish lobby interiors in hotels, banks, office centers, etc.
- BMDrive® Reliable mechanism with powerful BLDC gear motor ensures long term maintenance-free operation;
- The smart self-diagnosing system of mechanism BMDrive® automatically analyzes the system, detects critical malfunctions, and records error log and warnings;
- The BMDrive® mechanism controller is equipped with an OLED display for easy setup and configuration without special programmers, also a full configuration and diagnostics is possible via a USB connector by using service software for Windows OS;
- Digital control of force and leaf speed in combination with safety sensors prevent a passing person from being struck by a leaf, even in case of an unauthorized passage;
- By use of artificial intelligence algorithms and large number of high-precision infrared passage sensors, the speed gate detects and alarms when two people try to pass by one card, pass in the wrong direction and pass without authorization;
- Sensor system allows detecting the passage of person with luggage, arranging a free exit without the need for identification.





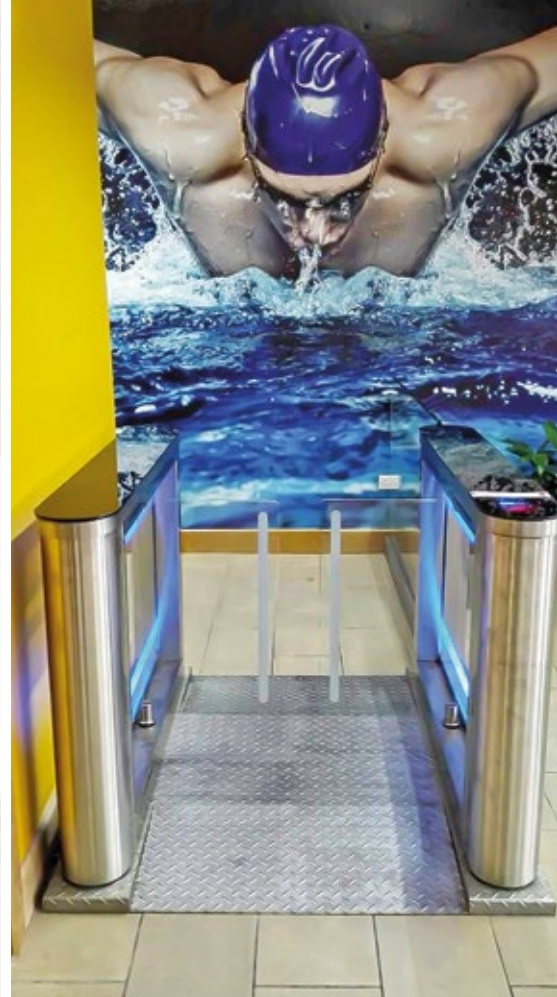


Touchless Access

that means even much safer than ever

Global pandemic situation influenced all areas of life. New trends force organizations adapt workers space according to new norms. We help companies to choose the right entrance solutions, taking into account new requirements.

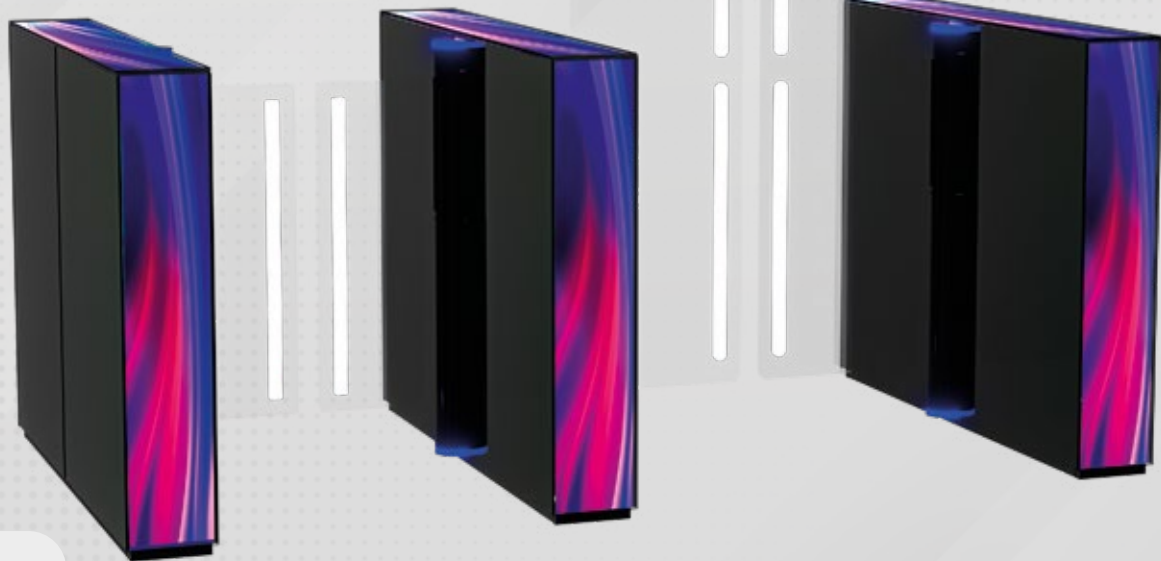
Ideal solution for contactless access are our speed gate series. Such speed gates open automatically without impact at gate. Thus, the norms are observed safety during a global pandemic. Speed gates by TiSO are adapted for the installation of any contactless readers (**face recognition system, temperature or mask detection system etc**). Such access control systems allow supporting the idea of contactless secure access to the territory.





Sweeper-S-HG

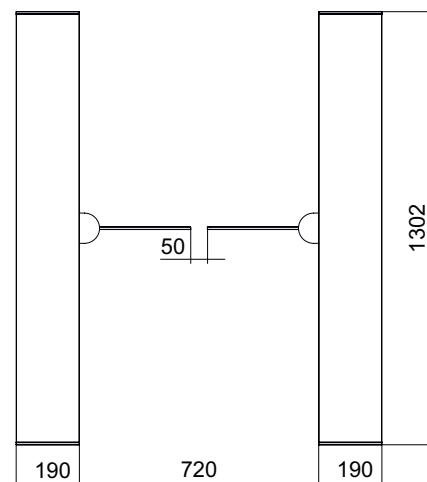
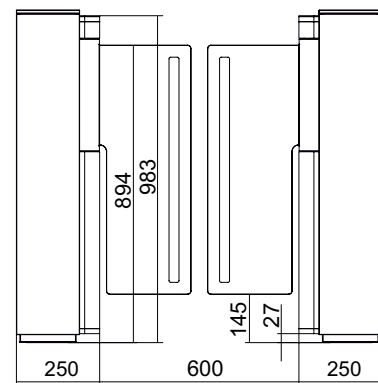
- BMDrive® - Reliable mechanism with powerful BLDC gear motor;
- The safety function of locking system FoldEmLock®;
- The smart self-diagnosing system of mechanism BMDrive® automatically analyzes the system.



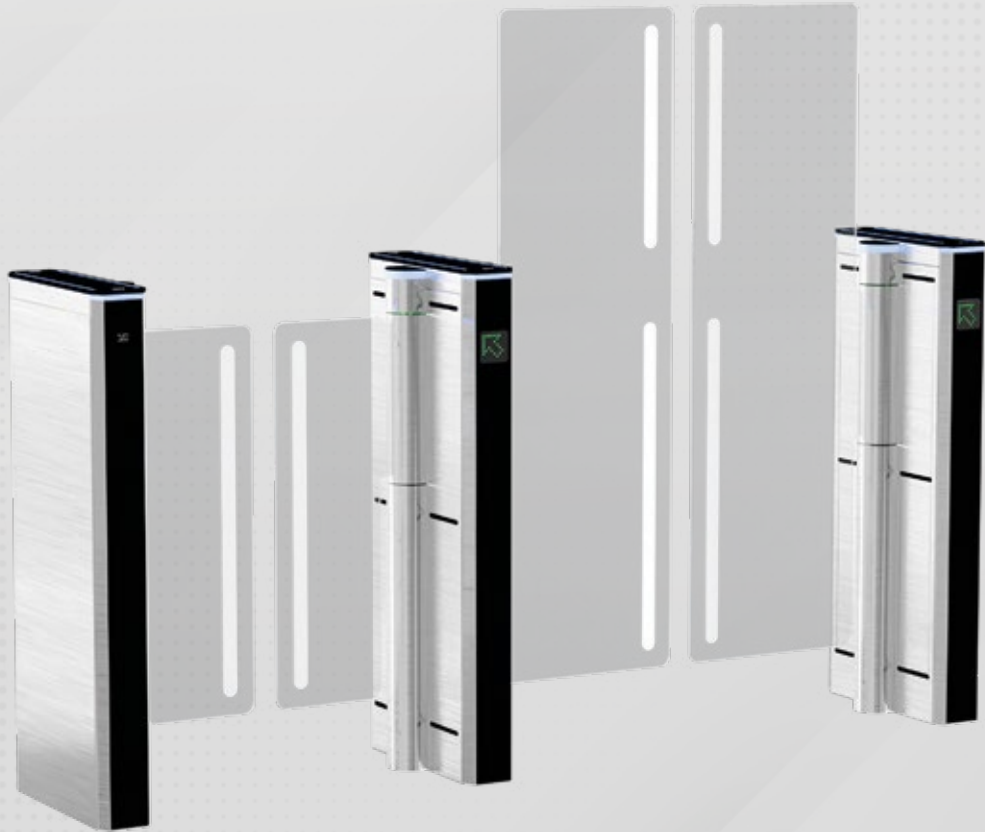
Sweeper-M



Model	Sweeper-M
Mechanism	BMDrive® servo-drive (BLDC)
Anti-tailgating function	+
Blocking mechanism	ToothLock®
Emergency mode	Free entry/exit (gates are opened automatically)
Power fail	Fail-safe (gates could be opened manually – standard) Automatically open – super capacitor (option)
Standard housing	Tempered glass, brushed SS AISI 304
Available housing	Tempered glass powder coated any RAL
Top lid	Solid glass top
Voltage	AC (100-240)V, 50/60Hz; DC source 12V

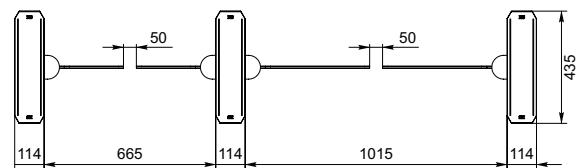
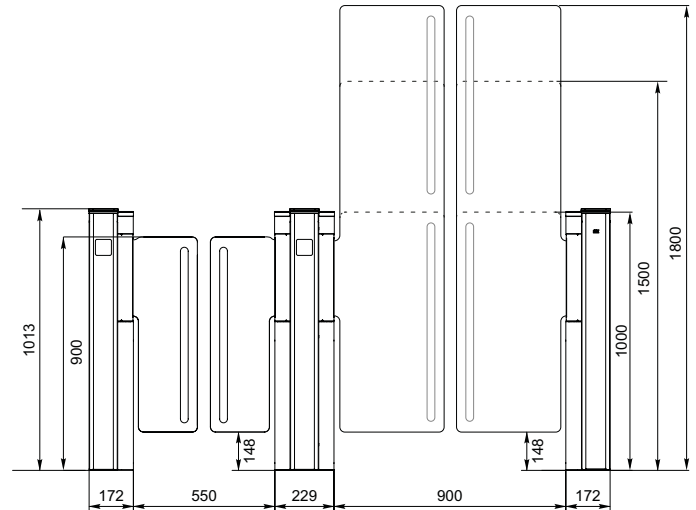


Sweeper-SH



- 
550
900
mm
PASSAGE WIDTH
- 
30
pers/min
SINGLE ACCESS
- 
60
pers/min
FREE ACCESS
- 
0,6
0,8
sec
OPENING/CLOSING
- 
IP 41
PROTECTION LEVEL
- 
ANTI-TAILGATING ALARM
- 
ACCESS CONTROL SYSTEM
- 
MANUAL CONTROL
- 
BI-DIRECTIONAL
- 
FIRE ALARM INTEGRATION

Model	Sweeper-SH
Mechanism	BMDrive® servo-drive (BLDC)
Anti-tailgating function	+
Blocking mechanism	ToothLock®
Emergency mode	Free entry/exit (gates are opened automatically)
Power fail	Fail-safe (gates could be opened manually – standard) Automatically open – super capacitor (option)
Standard housing	Brushed stainless steel AISI 304
Available housing	Brushed stainless steel AISI 316 Polished stainless steel AISI 304 Polished stainless steel AISI 316 Powder coated (any RAL upon request)
Top lid	Solid glass top
Voltage	AC (100-240)V, 50/60Hz; DC source 12V

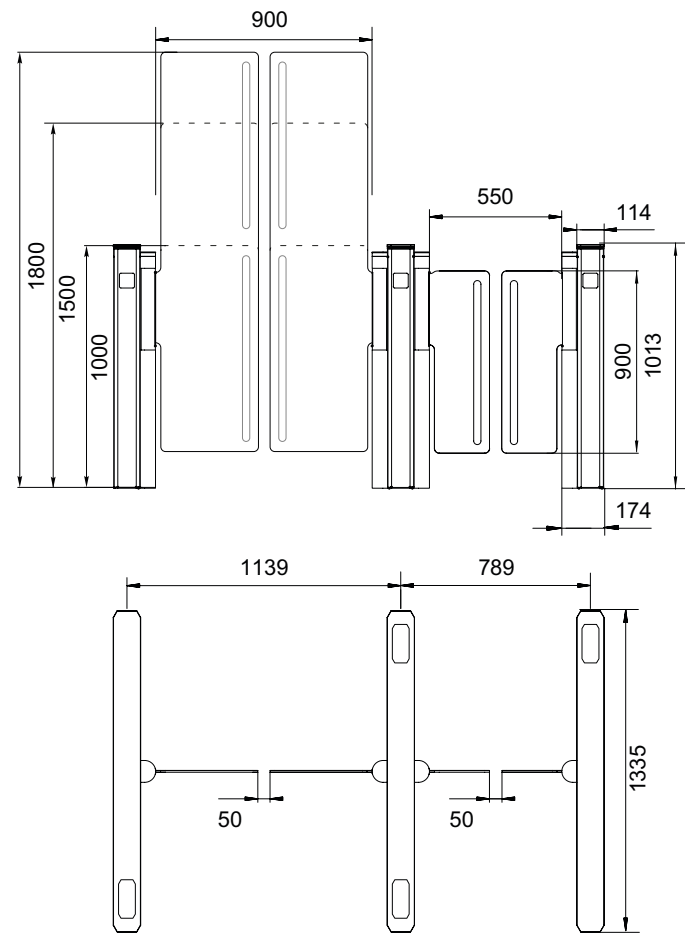




Sweeper-S-HG

- 
550
900
mm
 PASSAGE WIDTH
- 
30
25
pers/min
 SINGLE ACCESS
- 
60
pers/min
 FREE ACCESS
- 
0,6
0,8
sec
 OPENING/CLOSING
- 
IP 41
 PROTECTION LEVEL
- 
ANTI-TAILGATING
- 
ACCESS CONTROL SYSTEM
- 
MANUAL CONTROL
- 
BI-DIRECTIONAL
- 
FIRE ALARM INTEGRATION

Model	Sweeper-S-HG
Mechanism	BMDrive® servo-drive (BLDC)
Anti-tailgating function	+
Blocking mechanism	ToothLock®
Emergency mode	Free entry/exit (gates are opened automatically)
Power fail	Fail-safe (gates could be opened manually – standard) Automatically open – super capacitor (option)
Standard housing	Brushed stainless steel AISI 304
Available housing	Brushed stainless steel AISI 316 Polished stainless steel AISI 304 Polished stainless steel AISI 316 Powder coated (any RAL upon request)
Top lid	Solid glass top
Voltage	AC (100-240)V, 50/60Hz; DC source 12 V

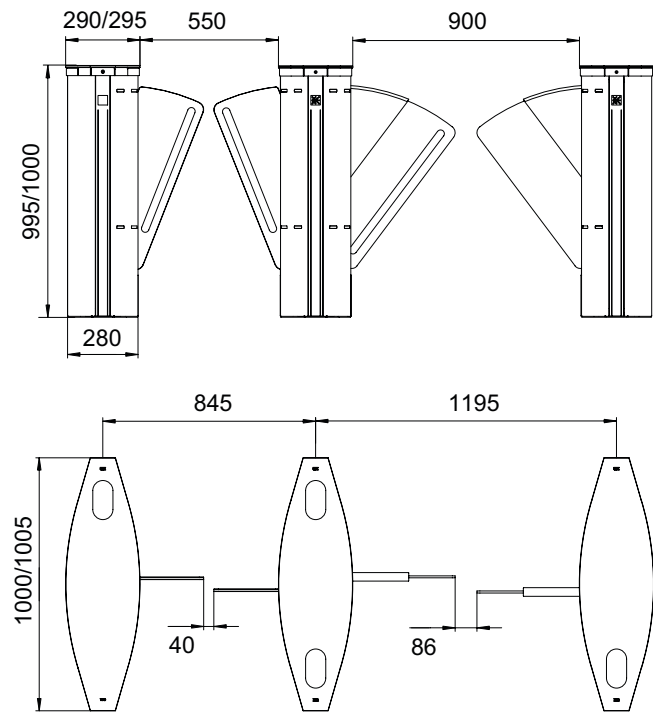




Speedblade

- 
550
900
mm
 PASSAGE WIDTH
- 
40
25
pers/min
 SINGLE ACCESS
- 
60
pers/min
 FREE ACCESS
- 
0,5
0,8
sec
 OPENING/
 CLOSING
- 
IP 41
 PROTECTION LEVEL
- 
ANTI-TAILGATING
- 
ACCESS CONTROL SYSTEM
- 
MANUAL CONTROL
- 
BI-DIRECTIONAL
- 
FIRE ALARM INTEGRATION

Model	Speedblade
Mechanism	BMDrive® servo-drive (BLDC)
Anti-tailgating function	+
Blocking mechanism	DeadLock®
Emergency mode	Free entry/exit (gates are opened automatically)
Power fail	Fail-safe (gates could be opened manually – standard) Automatically open – super capacitor (option)
Standard housing	Brushed stainless steel AISI 304
Available housing	Brushed stainless steel AISI 316 Polished stainless steel AISI 304 Polished stainless steel AISI 316 Powder coated (any RAL upon request)
Top lid	Solid glass top
Voltage	AC (100-240)V, 50/60Hz; DC source 12 V

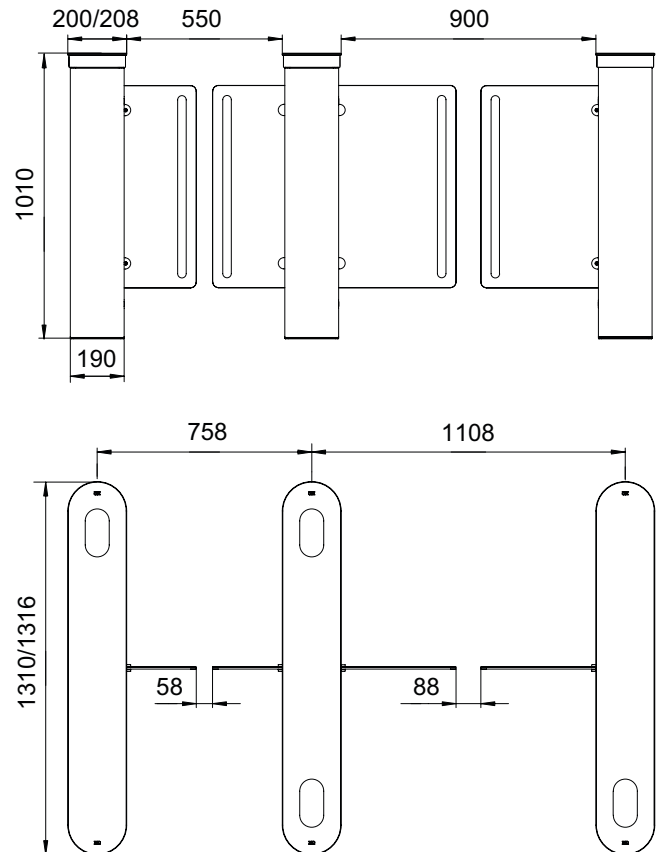




Sweeper



Model	Sweeper
Mechanism	BMDrive® servo-drive (BLDC)
Anti-tailgating function	+
Blocking mechanism	ToothLock®
Emergency mode	Free entry/exit (gates are opened automatically)
Power fail	Fail-safe (gates could be opened manually – standard) Automatically open – super capacitor (option)
Standard housing	Brushed stainless steel AISI 304
Available housing	Brushed stainless steel AISI 316 Polished stainless steel AISI 304 Polished stainless steel AISI 316 Powder coated (any RAL upon request)
Top lid	Stainless steel top (with glass inserts) Solid glass top
Voltage	AC (100-240)V, 50/60Hz; DC source 12 V





Sweeper-S

550
1000
mm

PASSAGE
WIDTH

30
25
pers/min

SINGLE
ACCESS

60
pers/
min

FREE
ACCESS

0,7
1,0
sec

OPENING/
CLOSING

IP 41

PROTECTION
LEVEL

ANTI-TAILGATING

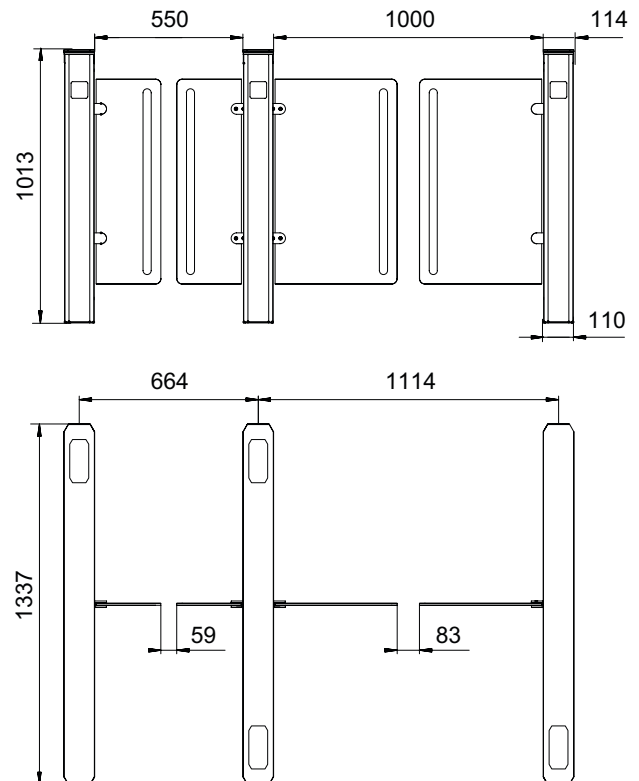
ACCESS CONTROL SYSTEM

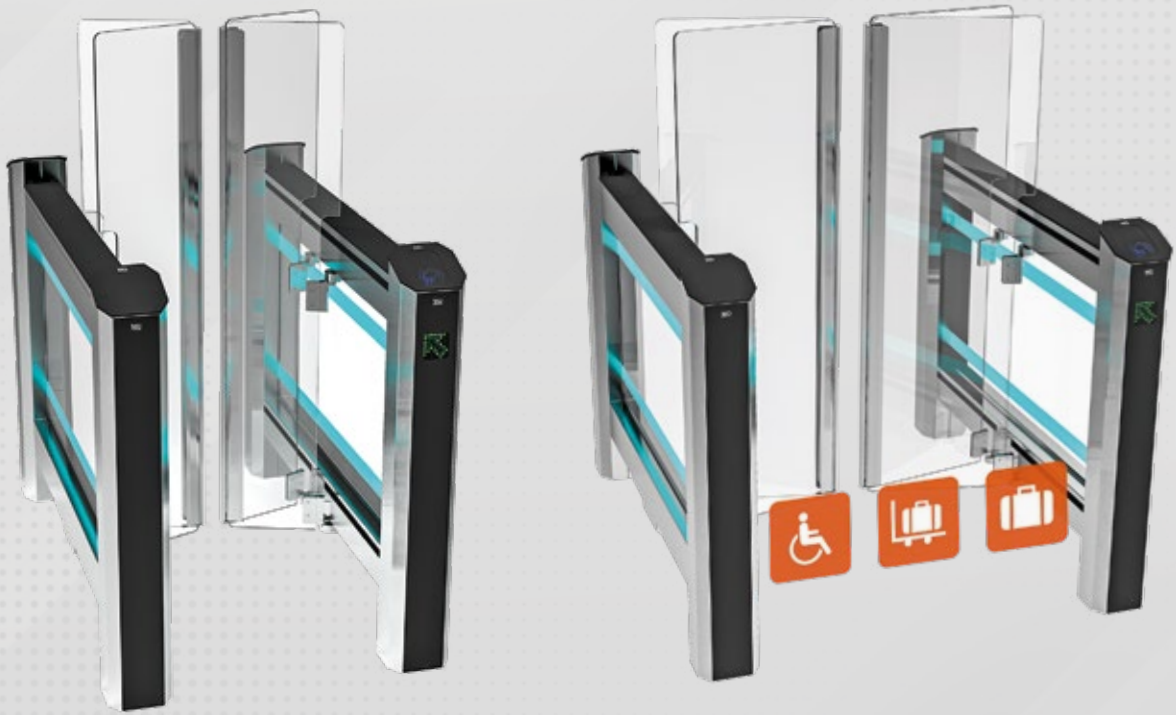
MANUAL CONTROL

BI-DIRECTIONAL

FIRE ALARM INTEGRATION

Model	Sweeper-S
Mechanism	BMDrive® servo-drive (BLDC)
Anti-tailgating function	+
Blocking mechanism	PinLock®
Emergency mode	Free entry/exit (gates are opened automatically)
Power fail	Fail-safe (gates could be opened manually – standard) Automatically open – super capacitor (option)
Standard housing	Brushed stainless steel AISI 304
Available housing	Brushed stainless steel AISI 316 Polished stainless steel AISI 304 Polished stainless steel AISI 316 Powder coated (any RAL upon request)
Top lid	Stainless steel top (with glass inserts) Solid glass top
Voltage	AC (100-240)V, 50/60Hz; DC source 12 V

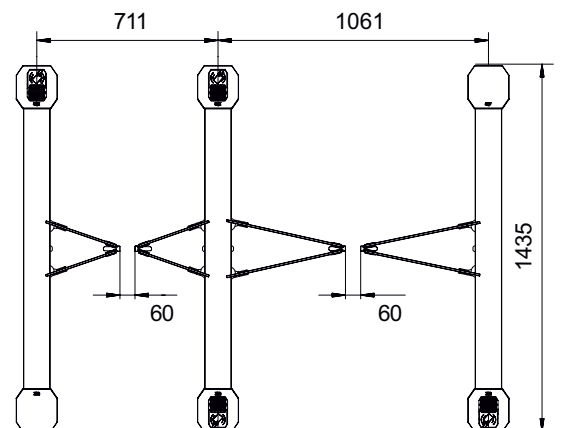
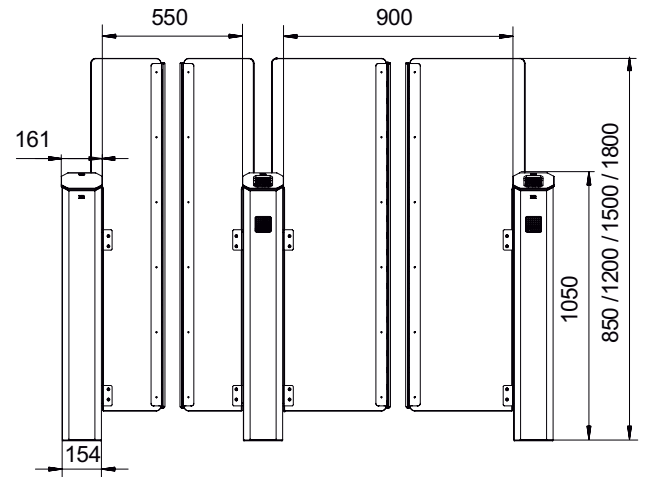




Slide





Model	Slide
Mechanism	BMDrive® servo-drive (BLDC)
Anti-tailgating function	+
Blocking mechanism	FoldEmLock®
Emergency mode	Free entry/exit (gates are opened automatically)
Power fail	Fail-safe (gates could be opened manually – standard) Automatically open – super capacitor (option)
Standard housing	Brushed stainless steel AISI 304
Available housing	Brushed stainless steel AISI 316 Polished stainless steel AISI 304 Polished stainless steel AISI 316 Powder coated (any RAL upon request)
Top lid	Solid glass top
Voltage	AC (100-240)V, 50/60Hz; DC source 12V

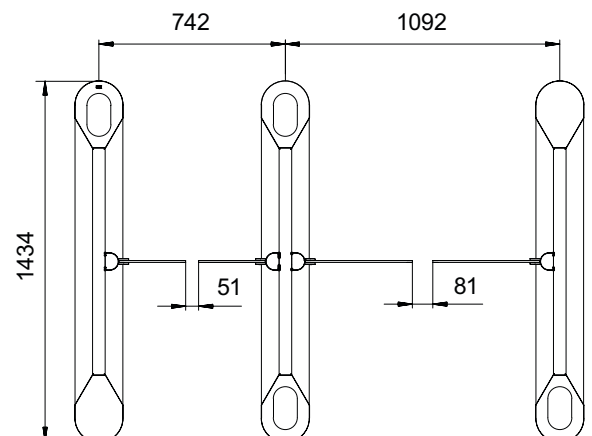
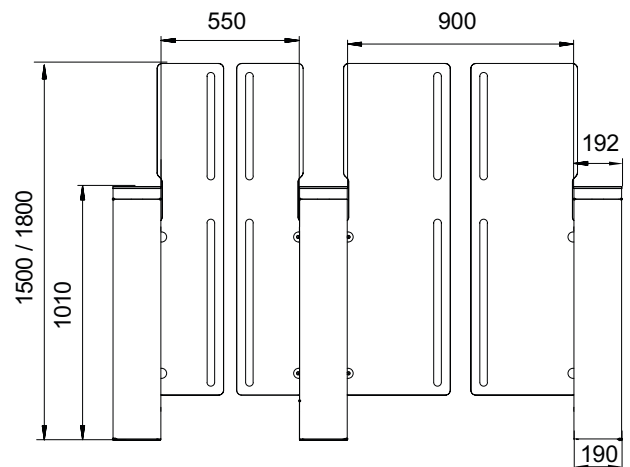




Sweeper-HG

- 
550
900
mm
 PASSAGE WIDTH
- 
30
25
pers/min
 SINGLE ACCESS
- 
60
pers/min
 FREE ACCESS
- 
0,7
0,9
sec
 OPENING/CLOSING
- 
IP 41
 PROTECTION LEVEL
- 
 ANTI-TAILGATING
- 
 ACCESS CONTROL SYSTEM
- 
 MANUAL CONTROL
- 
 BI-DIRECTIONAL
- 
 FIRE ALARM INTEGRATION

Model	Sweeper-HG
Mechanism	BMDrive® servo-drive (BLDC)
Anti-tailgating function	+
Blocking mechanism	ToothLock®
Emergency mode	Free entry/exit (gates are opened automatically)
Power fail	Fail-safe (gates could be opened manually – standard) Automatically open – super capacitor (option)
Standard housing	Brushed stainless steel AISI 304
Available housing	Brushed stainless steel AISI 316 Polished stainless steel AISI 304 Polished stainless steel AISI 316 Powder coated (any RAL upon request)
Top lid	Stainless steel top (with glass inserts)
Voltage	AC (100-240)V, 50/60Hz; DC source 12V

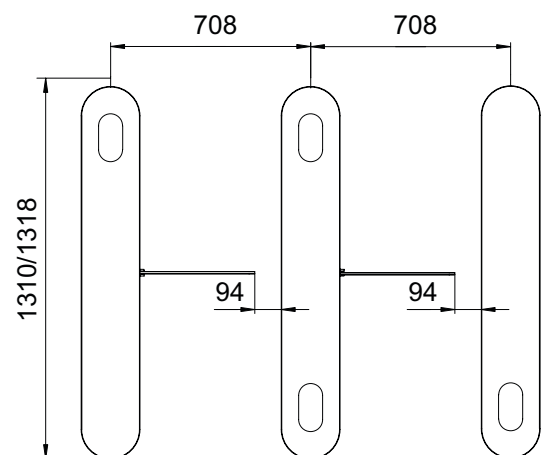
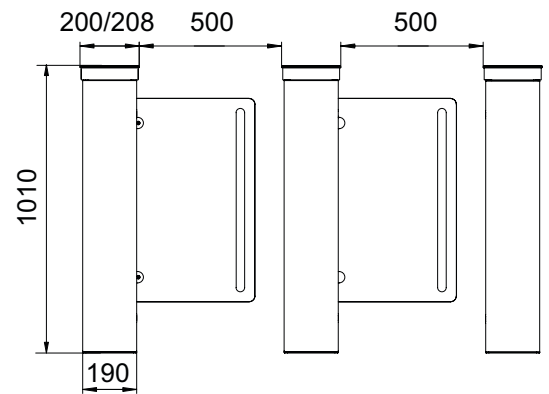


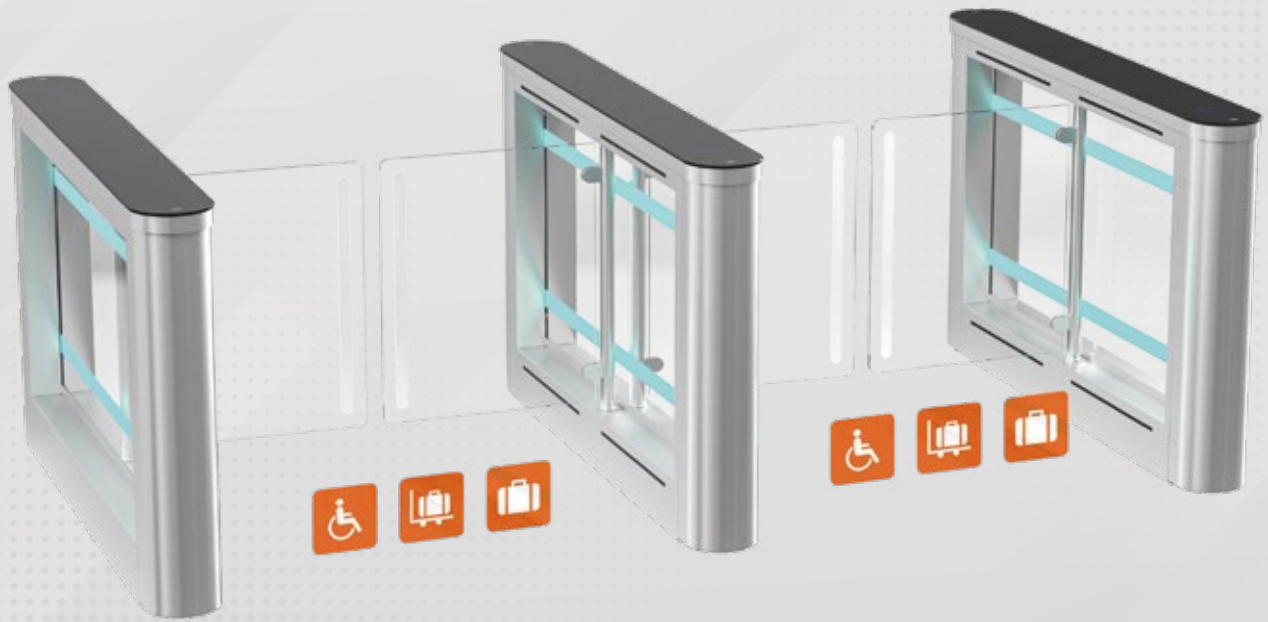


Sweeper-G

-  **500**
mm
PASSAGE WIDTH
-  **40**
pers/min
SINGLE ACCESS
-  **60**
pers/min
FREE ACCESS
-  **0,3**
sec
OPENING/CLOSING
-  **IP 41**
PROTECTION LEVEL
-  **ANTI-TAILGATING**
-  **ACCESS CONTROL SYSTEM**
-  **MANUAL CONTROL**
-  **BI-DIRECTIONAL**
-  **FIRE ALARM INTEGRATION**

Model	Sweeper-G
Mechanism	BMDrive® servo-drive (BLDC)
Anti-tailgating function	+
Blocking mechanism	ToothLock®
Emergency mode	Free entry/exit (gates are opened automatically)
Power fail	Fail-safe (gates could be opened manually – standard) Automatically open – super capacitor (option)
Standard housing	Brushed stainless steel AISI 304
Available housing	Brushed stainless steel AISI 316 Polished stainless steel AISI 304 Polished stainless steel AISI 316 Powder coated (any RAL upon request)
Top lid	Solid glass top
Voltage	AC (100-240)V, 50/60Hz; DC source 12V





Sweeper-W

900
1200
mm
PASSAGE
WIDTH

30
20
pers./min
SINGLE
ACCESS

60
pers./min
FREE
ACCESS

0,6
0,9
sec
OPENING/
CLOSING

IP 41
PROTECTION
LEVEL

**ANTI-
TAILGATING**

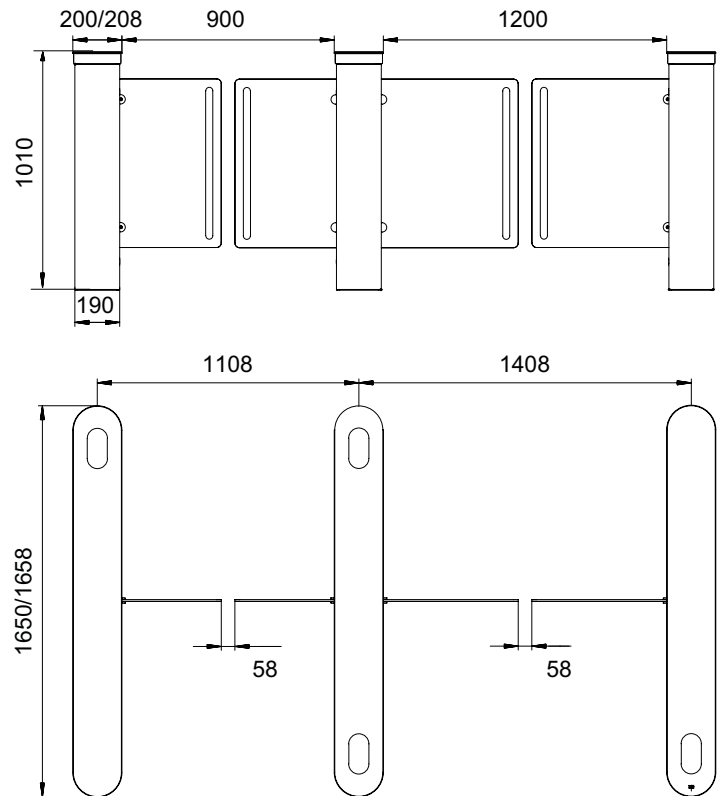
**ACCESS CONTROL
SYSTEM**

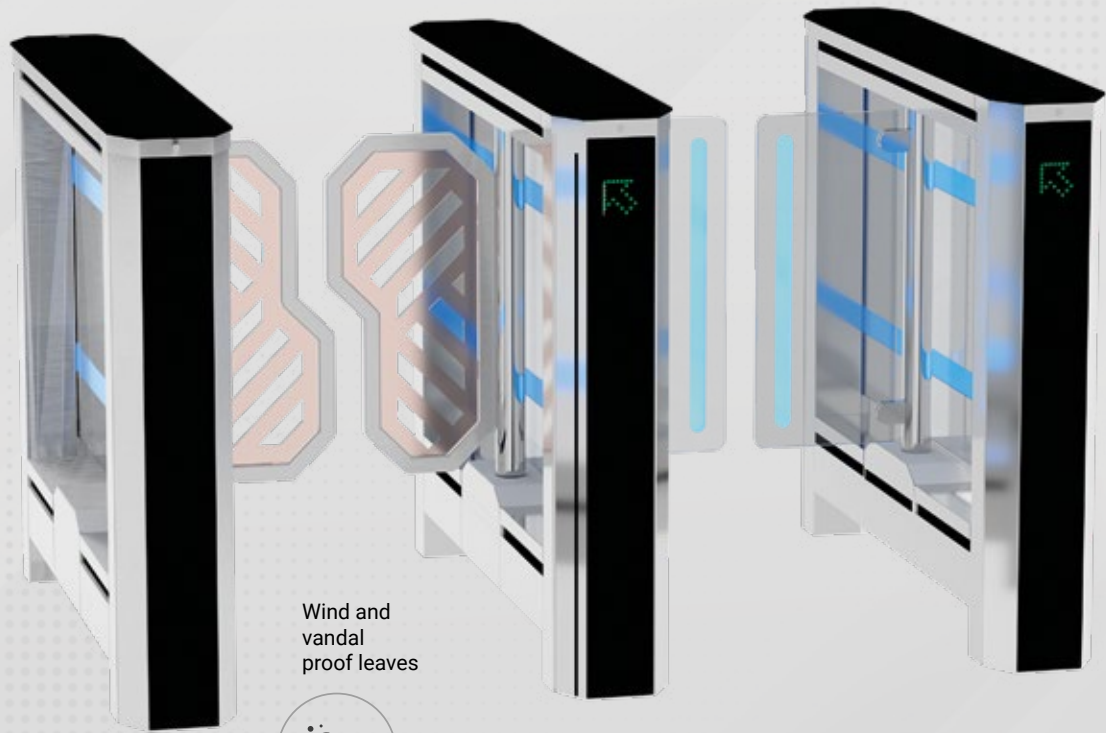
**MANUAL
CONTROL**

BI-DIRECTIONAL

**FIRE ALARM
INTEGRATION**

Model	Sweeper-W
Mechanism	BMDrive® servo-drive (BLDC)
Anti-tailgating function	+
Blocking mechanism	ToothLock®
Emergency mode	Free entry/exit (gates are opened automatically)
Power fail	Fail-safe (gates could be opened manually – standard) Automatically open – super capacitor (option)
Standard housing	Brushed stainless steel AISI 304
Available housing	Brushed stainless steel AISI 316 Polished stainless steel AISI 304 Polished stainless steel AISI 316 Powder coated (any RAL upon request)
Top lid	Stainless steel top (with glass inserts) Solid glass top
Voltage	AC (100-240)V, 50/60Hz; DC source 12V

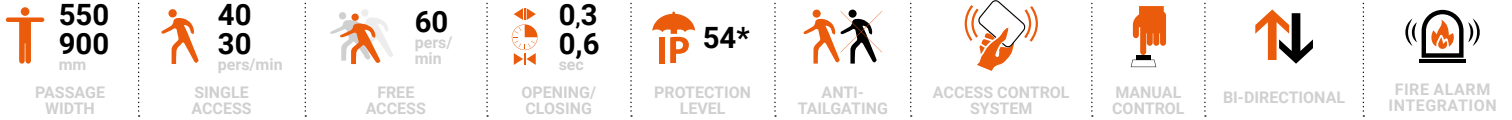




Wind and
vandal
proof leaves

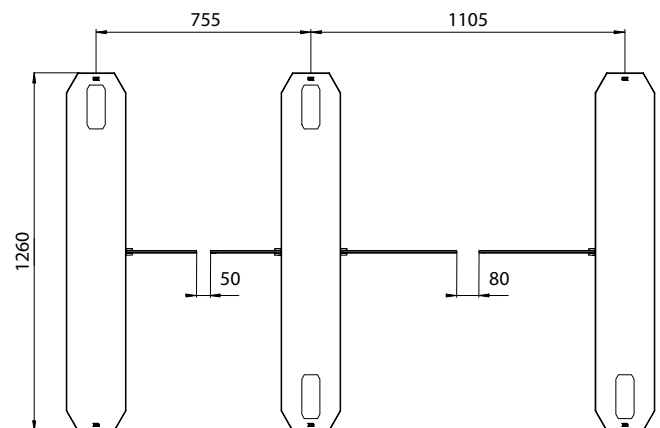
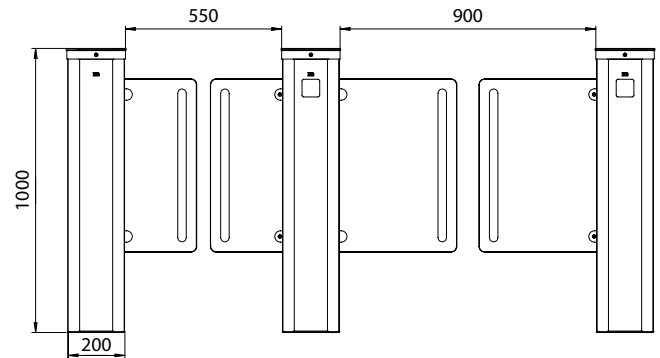


Sweeper-WP



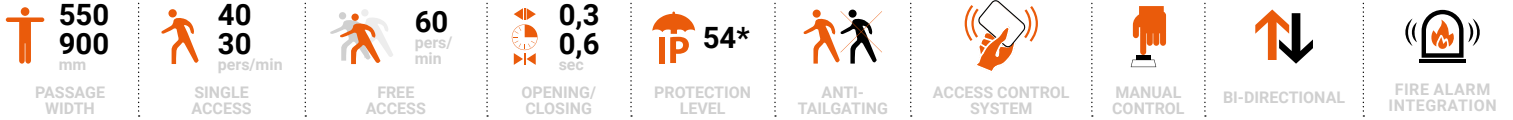
*Preventive regular cleaning of housing required for areas with dust and sand

Model	Sweeper-WP
Mechanism	BMDrive® servo-drive (BLDC)
Anti-tailgating function	+
Blocking mechanism	ToothLock®
Emergency mode	Free entry/exit (gates are opened automatically)
Power fail	Fail-safe (gates could be opened manually – standard) Automatically open – super capacitor (option)
Standard housing	Brushed stainless steel AISI 304
Available housing	Brushed stainless steel AISI 316 Polished stainless steel AISI 304 Polished stainless steel AISI 316 Powder coated (any RAL upon request)
Top lid	Solid glass top
Voltage	AC (100-240)V, 50/60Hz; DC source 12V



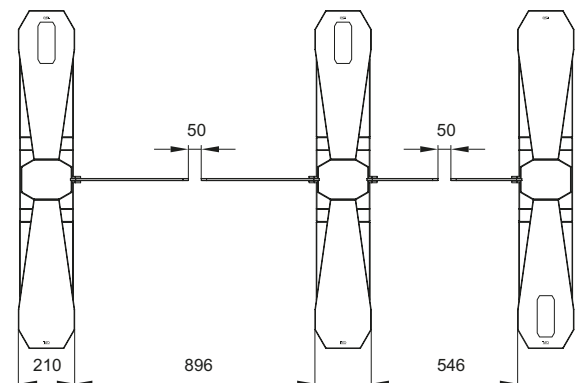
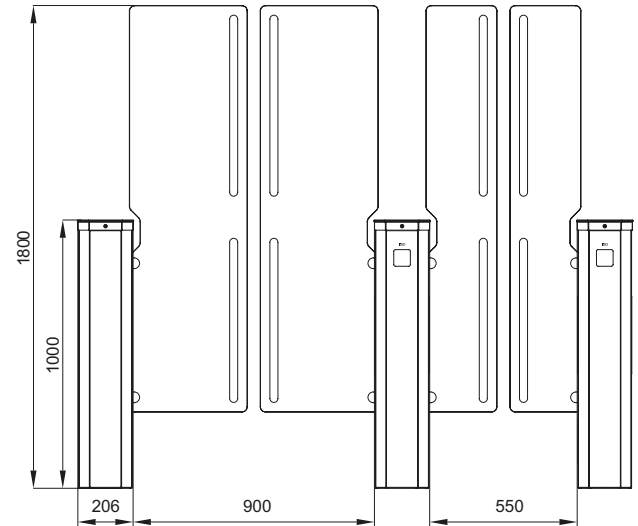


Sweeper-WP-HG










*Preventive regular cleaning of housing required for areas with dust and sand

Model	Sweeper-WP-HG
Mechanism	BMDrive® servo-drive (BLDC)
Anti-tailgating function	+
Blocking mechanism	ToothLock®
Emergency mode	Free entry/exit (gates are opened automatically)
Power fail	Fail-safe (gates could be opened manually – standard) Automatically open – super capacitor (option)
Standard housing	Brushed stainless steel AISI 304
Available housing	Brushed stainless steel AISI 316 Polished stainless steel AISI 304 Polished stainless steel AISI 316 Powder coated (any RAL upon request)
Top lid	Glass top
Voltage	AC (100-240)V, 50/60Hz; DC source 12V

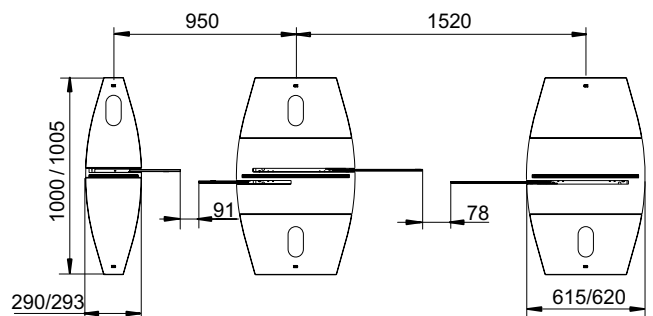
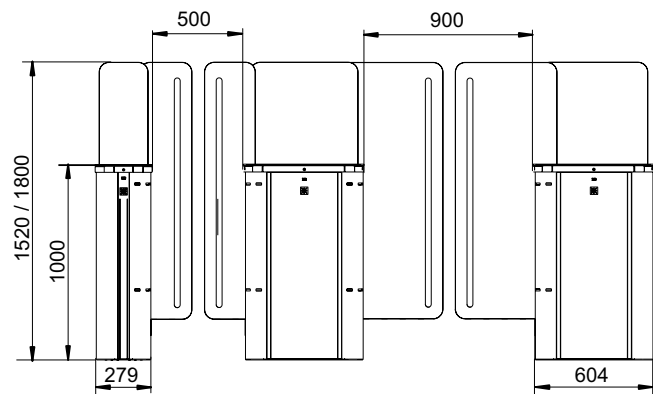




Jetpan

- 
500
900
mm
 PASSAGE WIDTH
- 
30
18
pers/min
 SINGLE ACCESS
- 
60
pers/min
 FREE ACCESS
- 
0,7
2,2
sec
 OPENING/
 CLOSING
- 
IP 41
 PROTECTION LEVEL
- 
ANTI-TAILGATING
- 
ACCESS CONTROL SYSTEM
- 
MANUAL CONTROL
- 
BI-DIRECTIONAL
- 
FIRE ALARM INTEGRATION

Model	Jetpan	Jetpan-900
Mechanism	BMDrive® servo-drive (BLDC)	Servo-drive
Anti-tailgating function	+	
Blocking mechanism	DeadLock®	Electromagnetic brake
Emergency mode	Free entry/exit (gates are opened automatically)	
Power fail	Fail-safe (gates could be opened manually – standard) Automatically open – super capacitor (option)	
Standard housing	Brushed stainless steel AISI 304	
Available housing	Brushed stainless steel AISI 316 Polished stainless steel AISI 304 Polished stainless steel AISI 316 Powder coated (any RAL upon request)	
Top lid	Stainless steel top (with glass inserts) Solid glass top	Stainless steel top (with glass inserts)
Voltage	AC (100-240)V, 50/60Hz; DC source 12V	



Tripod turnstiles

- Bi-directional motorized tripod turnstile;
- Integration with any type of access control and ID systems;
- Low power consumption;
- Panic / bar drop function with automatic reset;
- Whisper quiet, low noise operation;
- Optional indoor or outdoor housing types;
- Wide range of accessories;
- Availability of a backup battery connection;
- Any additional devices could be integrated (*e.g. passage counter, RFID/Proximity/BioMetric readers, coin acceptor, push-button, barcode and QR-code reader*).





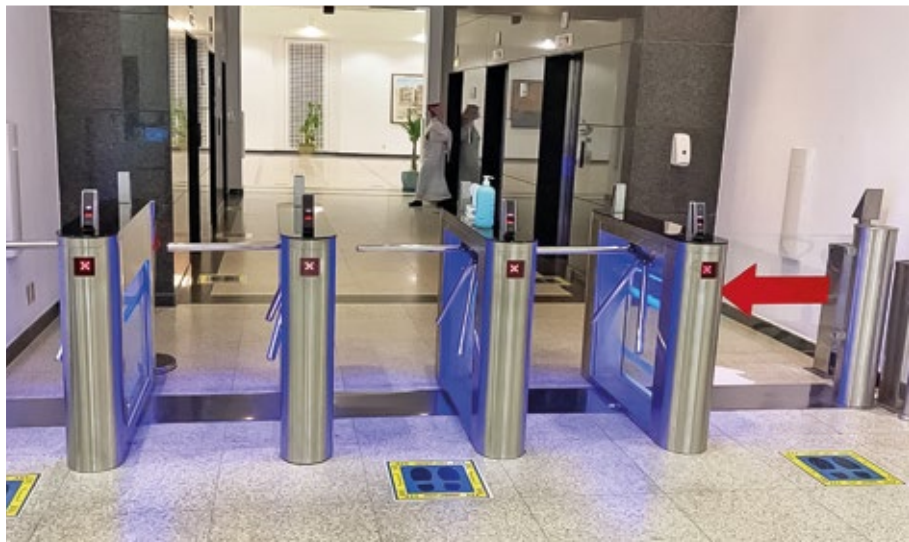
Functionality and Availability

Tripod turnstiles by TiSO company are appropriate solution for access control for high traffic area. The mechanism of our tripod turnstiles will withstand the most intense loads and will make access quick and safe.

Our tripods have anti-panic function (standard), which makes these turnstiles safe users. In case of emergency, the turnstile leashes are automatically lowered, so people can quickly leave the dangerous area.

The range of tripod turnstiles has very stylish models that are suitable for installation in stylish interiors and will definitely be an excellent addition to great design solutions.








Onyx Series


These turnstiles are equipped with an automatic bi-directional servo drive mechanism with a robust locking system and are able to operate reliably and efficiently in high traffic flow locations. This model has a robust hub with stainless steel pods and a fully automatic anti-panic system, where in the case of an emergency, the arms are automatically lowered and users can freely pass through unhindered.




Onyx-XS/S/M

- 


600
mm

PASSAGE WIDTH
- 


25
pers/min


SINGLE ACCESS
- 


60
pers/min


FREE ACCESS
- 


IP 41


PROTECTION LEVEL
- 

MOTORIZED
- 

DROP-ARM
- 

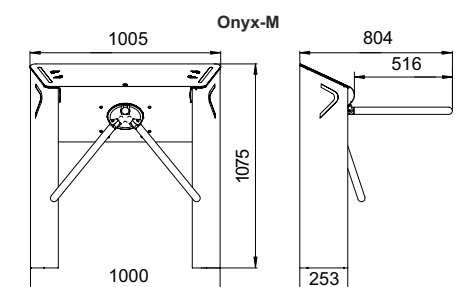
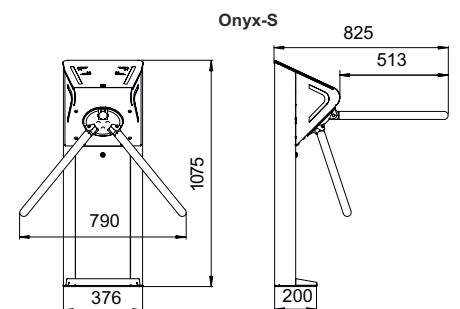
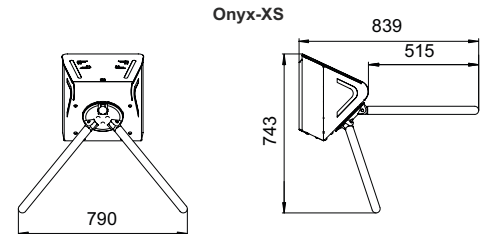
ACCESS CONTROL SYSTEM
- 

MANUAL CONTROL
- 

BI-DIRECTIONAL
- 

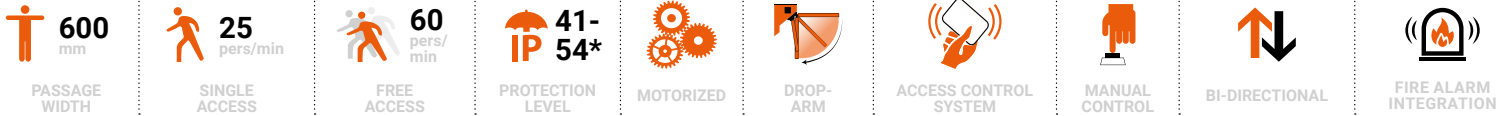
FIRE ALARM INTEGRATION

Model	Onyx-XS/S/M
Mechanism	Servo-driven (Triservo-M)
Blocking mechanism	Two electromagnetic stoppers (separate locking system)
Emergency mode (when the power goes off)	Fail-safe (Arm drops)
Drop arm function	Activates manually by push button/ fire alarm system; Activates automatically when power goes off; The arm returns automatically in locking position after the power on
Standard housing	Brushed stainless steel AISI 304
Available housing	Brushed stainless steel AISI 316 Polished stainless steel AISI 304 Polished stainless steel AISI 316 Powder coated (any RAL upon request)
Voltage	AC (100-240)V, 50/60Hz; DC source 12V





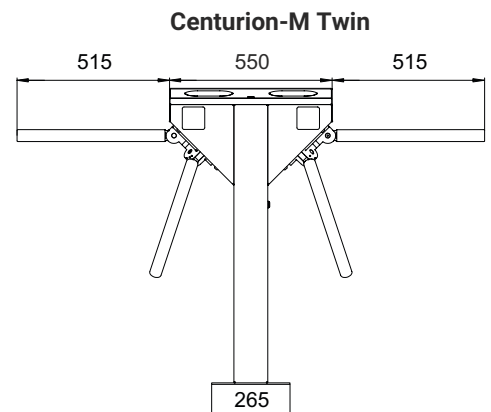
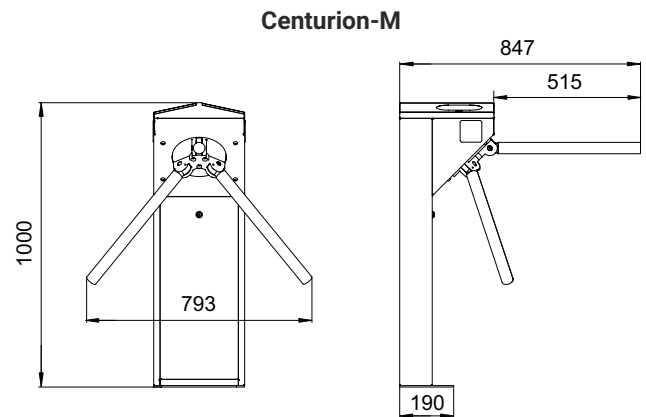
Centurion-M



*Available upon request

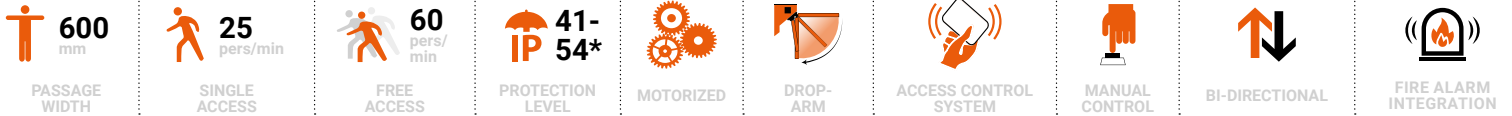
Model	Centurion-M/M Twin
Mechanism	Servo-driven (Triservo-M)
Blocking mechanism	Two electromagnetic stoppers (separate locking system)
Emergency mode (when the power goes off)	Fail-safe (Arm drops)
Drop arm function	Activates manually by push button/ fire alarm system; Activates automatically when power goes off; The arm returns automatically in locking position after the power on
Standard housing	Brushed stainless steel AISI 304
Available housing	Brushed stainless steel AISI 316 Polished stainless steel AISI 304 Polished stainless steel AISI 316 Powder coated (any RAL upon request)

Voltage AC (100-240)V, 50/60Hz; DC source 12V





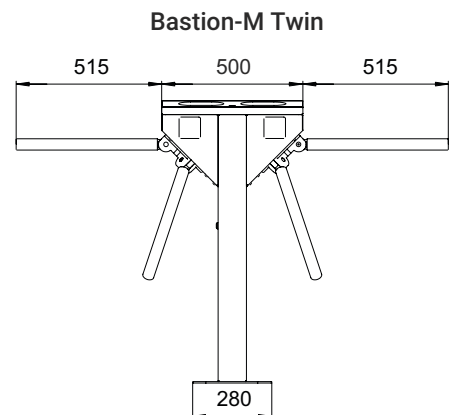
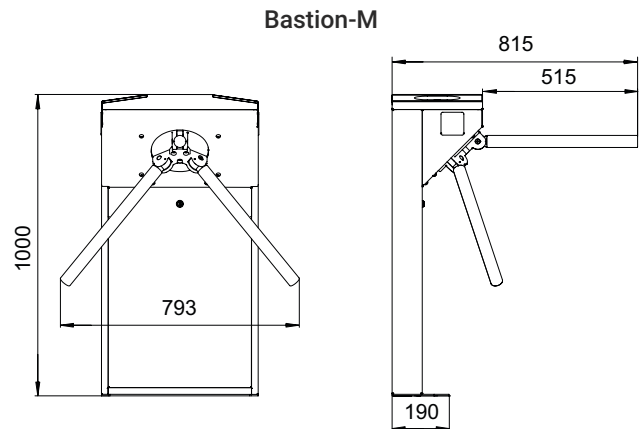
Bastion-M



*Available upon request


Model	Bastion-M/M Twin
Mechanism	Servo-driven (Triservo-M)
Blocking mechanism	Two electromagnetic stoppers (separate locking system)
Emergency mode (when the power goes off)	Fail-safe (Arm drops)
Drop arm function	Activates manually by push button/ fire alarm system; Activates automatically when power goes off; The arm returns automatically in locking position after the power on
Standard housing	Brushed stainless steel AISI 304
Available housing	Brushed stainless steel AISI 316 Polished stainless steel AISI 304 Polished stainless steel AISI 316 Powder coated (any RAL upon request)

Voltage AC (100-240)V, 50/60Hz; DC source 12V







Skull

- 


600
mm

PASSAGE
WIDTH
- 


25
pers/min


SINGLE
ACCESS
- 


60
pers/
min


FREE
ACCESS
- 


**41-
54***


PROTECTION
LEVEL
- 

MOTORIZED
- 

DROP-
ARM
- 

ACCESS CONTROL
SYSTEM
- 

MANUAL
CONTROL
- 

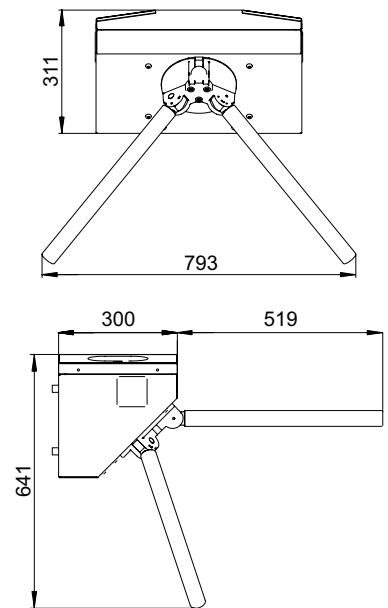
BI-DIRECTIONAL
- 

FIRE ALARM
INTEGRATION

*Available upon request

Model	Skull-M
Mechanism	Servo-driven (Triservo-M)
Blocking mechanism	Two electromagnetic stoppers (separate locking system)
Emergency mode (when the power goes off)	Fail-safe (Arm drops)
Drop arm function	Activates manually by push button/ fire alarm system; Activates automatically when power goes off; The arm returns automatically in locking position after the power on
Standard housing	Brushed stainless steel AISI 304
Available housing	Brushed stainless steel AISI 316 Polished stainless steel AISI 304 Polished stainless steel AISI 316 Powder coated (any RAL upon request)

Skull-M













Voltage

AC (100-240)V, 50/60Hz; DC source 12V



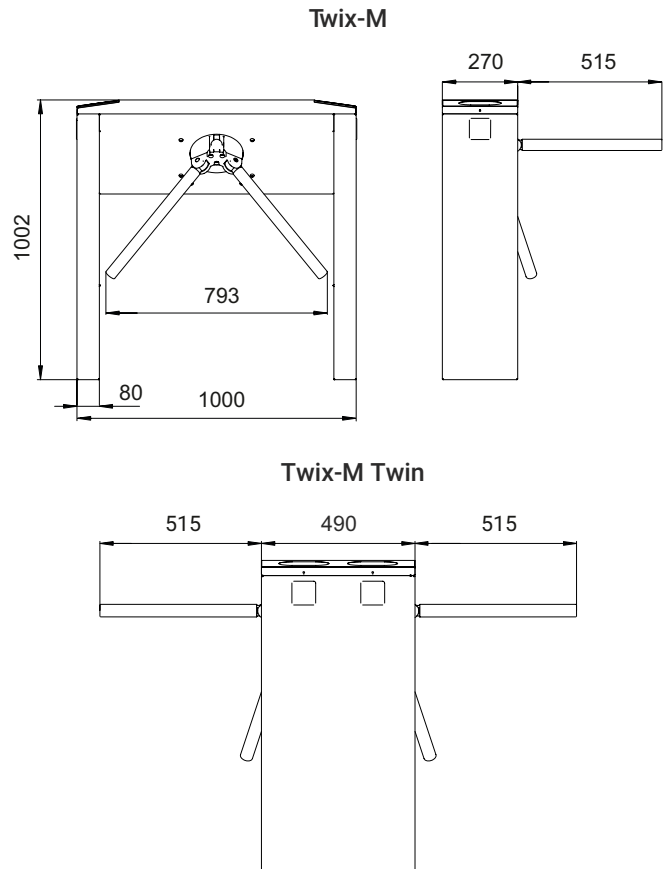
Twix-M

-  **600**
mm
PASSAGE WIDTH
-  **25**
pers/min
SINGLE ACCESS
-  **60**
pers/min
FREE ACCESS
-  **41-54***
IP
PROTECTION LEVEL
-  **MOTORIZED**
-  **DROP-ARM**
-  **ACCESS CONTROL SYSTEM**
-  **MANUAL CONTROL**
-  **BI-DIRECTIONAL**
-  **FIRE ALARM INTEGRATION**

*Available upon request

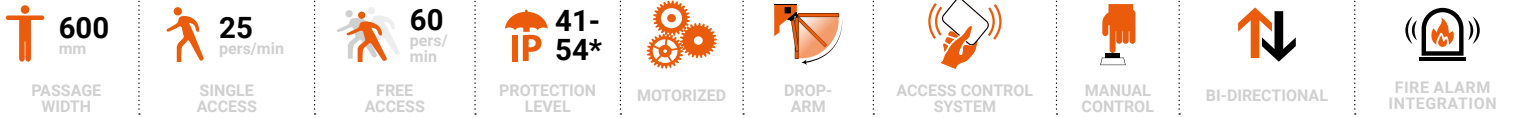
Model	Twix-M/M Twin
Mechanism	Servo-driven (Triservo-M)
Blocking mechanism	Two electromagnetic stoppers (separate locking system)
Emergency mode (when the power goes off)	Fail-safe (Arm drops)
Drop arm function	Activates manually by push button/ fire alarm system; Activates automatically when power goes off; The arm returns automatically in locking position after the power on
Standard housing	Brushed stainless steel AISI 304
Available housing	Brushed stainless steel AISI 316 Polished stainless steel AISI 304 Polished stainless steel AISI 316 Powder coated (any RAL upon request)

Voltage AC (100-240)V, 50/60Hz; DC source 12V



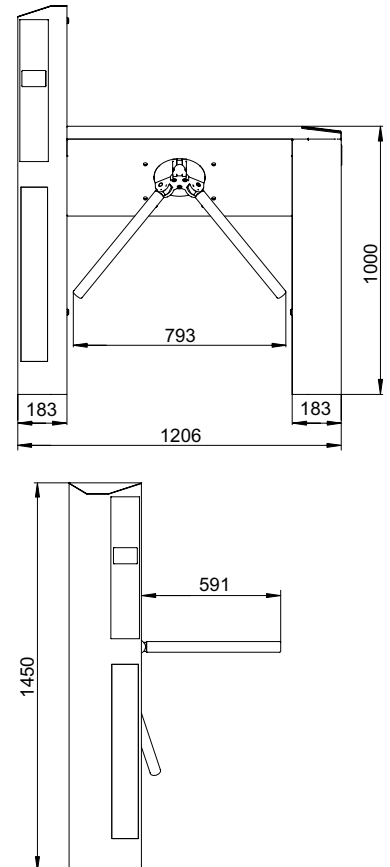


Twix All-in-one-M



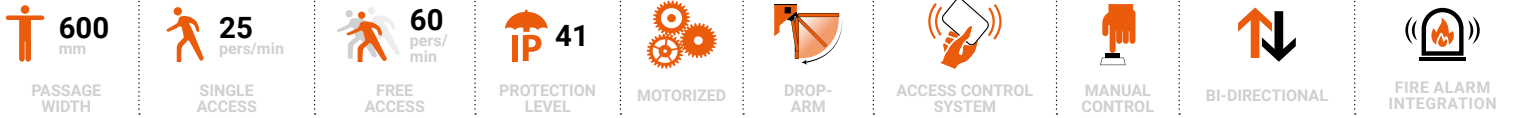
*Available upon request

Model	Twix All-in-one-M
Mechanism	Servo-driven (Triservo-M)
Blocking mechanism	Two electromagnetic stoppers (separate locking system)
Emergency mode (when the power goes off)	Fail-safe (Arm drops)
Drop arm function	Activates manually by push button/ fire alarm system; Activates automatically when power goes off; The arm returns automatically in locking position after the power on
Standard housing	Brushed stainless steel AISI 304
Available housing	Brushed stainless steel AISI 316 Polished stainless steel AISI 304 Polished stainless steel AISI 316 Powder coated (any RAL upon request)
Voltage	AC (100-240)V, 50/60Hz; DC source 12V



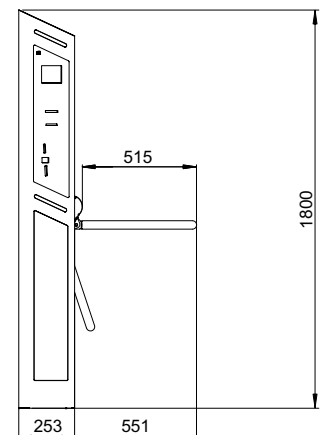
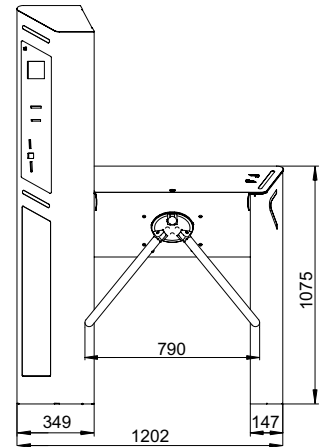


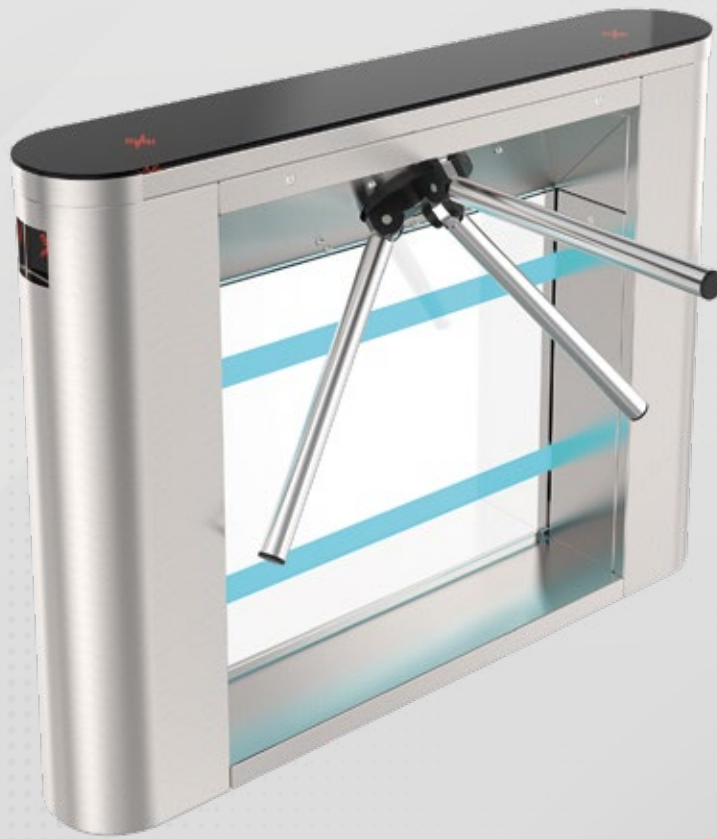
Onyx-XL













*Available upon request

Model	Onyx-XL
Mechanism	Servo-driven (Triservo-M)
Blocking mechanism	Two electromagnetic stoppers (separate locking system)
Emergency mode (when the power goes off)	Fail-safe (Arm drops)
Drop arm function	Activates manually by push button/ fire alarm system; Activates automatically when power goes off; The arm returns automatically in locking position after the power on
Standard housing	Brushed stainless steel AISI 304
Available housing	Brushed stainless steel AISI 316 Polished stainless steel AISI 304 Polished stainless steel AISI 316 Powder coated (any RAL upon request)
Voltage	AC (100-240)V, 50/60Hz; DC source 12V

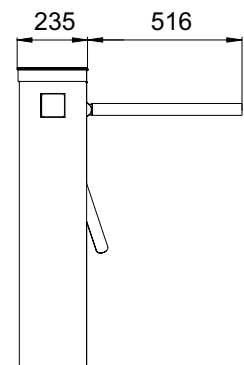
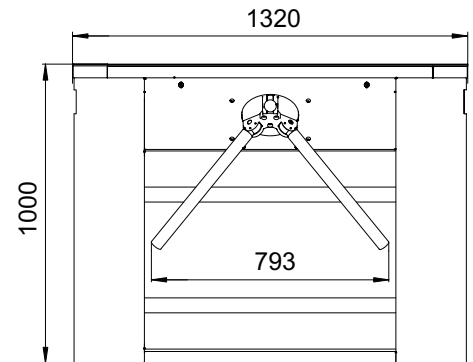




Galaxy-M

-  **600**
mm
PASSAGE WIDTH
-  **25**
pers/min
SINGLE ACCESS
-  **60**
pers/min
FREE ACCESS
-  **IP 41**
PROTECTION LEVEL
-  **MOTORIZED**
-  **DROP-ARM**
-  **ACCESS CONTROL SYSTEM**
-  **MANUAL CONTROL**
-  **BI-DIRECTIONAL**
-  **FIRE ALARM INTEGRATION**

Model	Galaxy-M
Mechanism	Servo-driven (Triservo-M)
Blocking mechanism	Two electromagnetic stoppers (separate locking system)
Emergency mode (when the power goes off)	Fail-safe (Arm drops)
Drop arm function	Activates manually by push button/ fire alarm system; Activates automatically when power goes off; The arm returns automatically in locking position after the power on
Standard housing	Brushed stainless steel AISI 304
Available housing	Brushed stainless steel AISI 316 Polished stainless steel AISI 304 Polished stainless steel AISI 316 Powder coated (any RAL upon request)
Voltage	AC (100-240)V, 50/60Hz; DC source 12V





Swing Gates

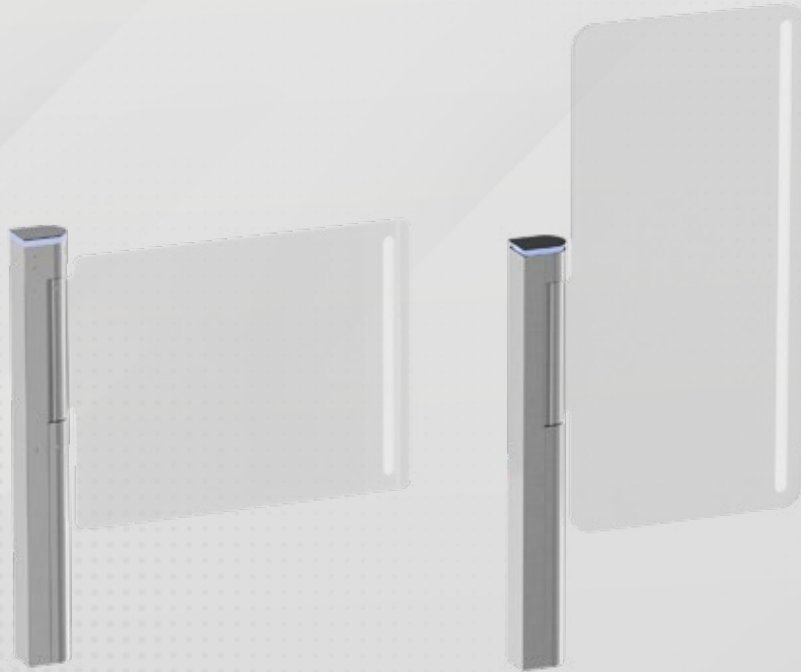
- Motorized;
- Bi-directional;
- Integration with any type of access control and ID systems;
- Low power consumption;
- Whisper quiet, low noise operation;
- Possibility of a barrier gate customization;
- Complete supply set as a standard.






**Inalienable part
of the entrance group of turnstiles**







XGate-GSH/GS

- 


**650
900**
mm

PASSAGE
WIDTH
- 


30
pers/min


SINGLE
ACCESS
- 

60
pers/
min


FREE
ACCESS
- 


IP 41


PROTECTION
LEVEL
- 


MOTORIZED
- 

**2,5
3**
sec

OPENING/
CLOSING
- 

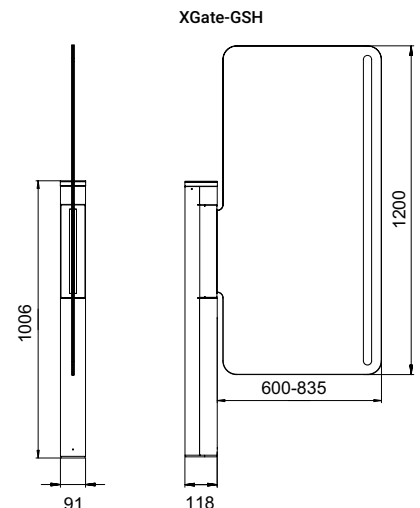
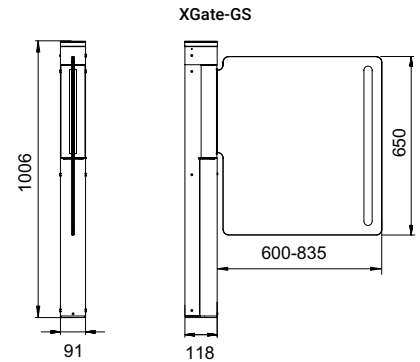
ACCESS CONTROL
SYSTEM
- 

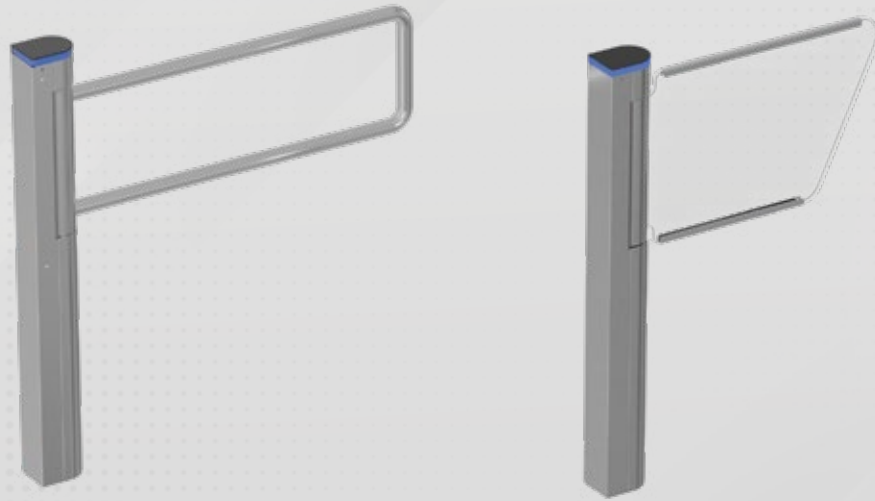
MANUAL
CONTROL
- 

BI-DIRECTIONAL
- 

FIRE ALARM
INTEGRATION

Model	XGate-GS/GSH
Mechanism	BMDrive® servo-drive (BLDC)
Operation mode	CW (90°) and CCW (90°)
Blocking mechanism	ToothLock®
Emergency mode	Free exit/entry (gate opens automatically)
Power fail	Fail-safe – leaf could be opened manually Automatically open – super capacitor (option)
Standard housing	Brushed stainless steel AISI 304
Available housing	Brushed stainless steel AISI 316 Polished stainless steel AISI 304 Polished stainless steel AISI 316 Powder coated (any RAL upon request)
Voltage	AC (100-240)V, 50/60Hz; DC source 12V

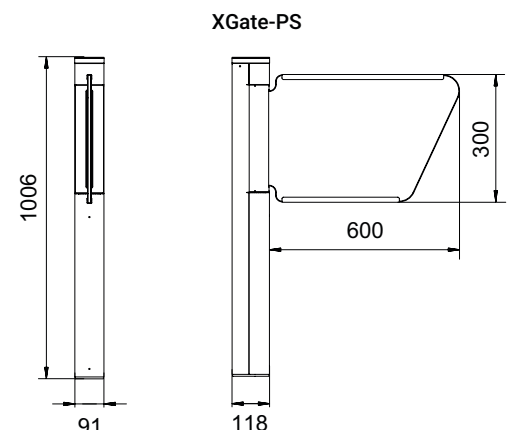
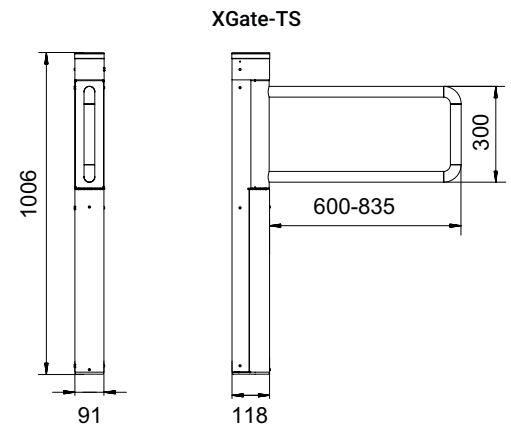


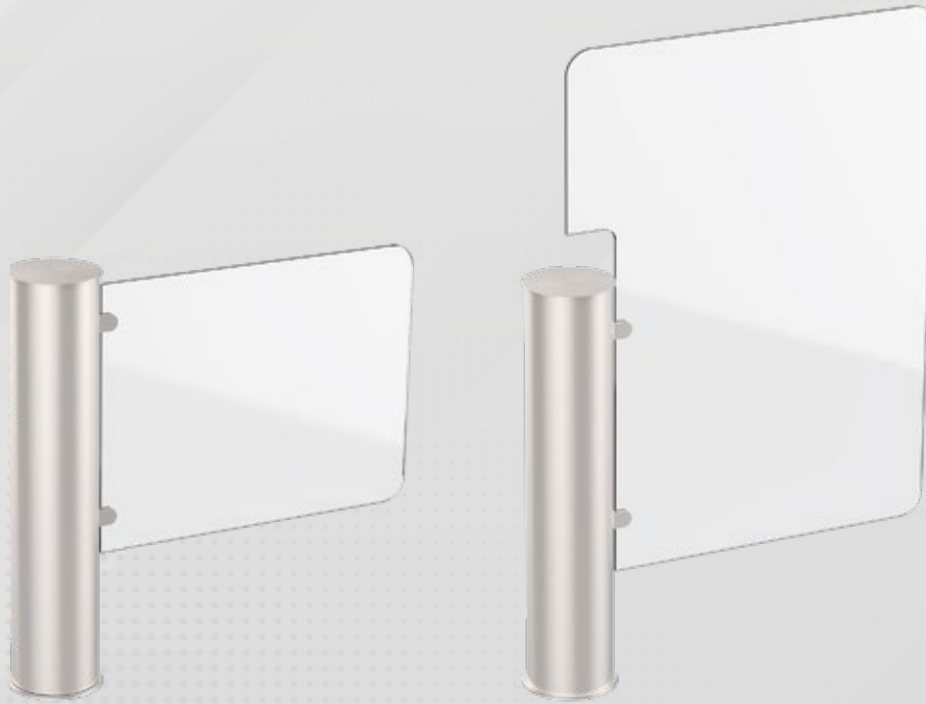


XGate-TS/PS

 650 900 mm	 30 pers/min	 60 pers/min	 IP 41	 2,5 3 Sec				
PASSAGE WIDTH	SINGLE ACCESS	FREE ACCESS	PROTECTION LEVEL	OPENING/CLOSING	ACCESS CONTROL SYSTEM	MANUAL CONTROL	BI-DIRECTIONAL	FIRE ALARM INTEGRATION

Model	XGate-TS/PS
Mechanism	BMDrive® servo-drive (BLDC)
Operation mode	CW (90°) and CCW (90°)
Blocking mechanism	ToothLock®
Emergency mode	Free exit/entry (gate opens automatically)
Power fail	Fail-safe – leaf could be opened manually Automatically open – super capacitor (option)
Standard housing	Brushed stainless steel AISI 304
Available housing	Brushed stainless steel AISI 316 Polished stainless steel AISI 304 Polished stainless steel AISI 316 Powder coated (any RAL upon request)
Voltage	AC (100-240)V, 50/60Hz; DC source 12V



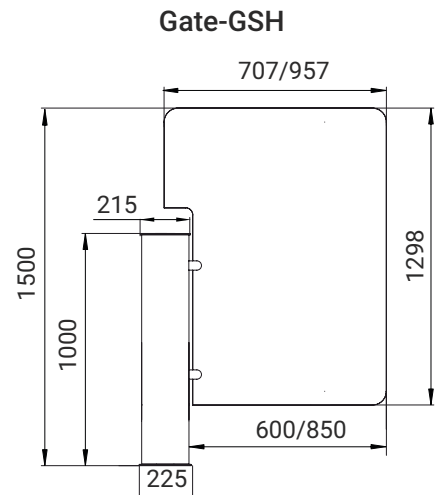
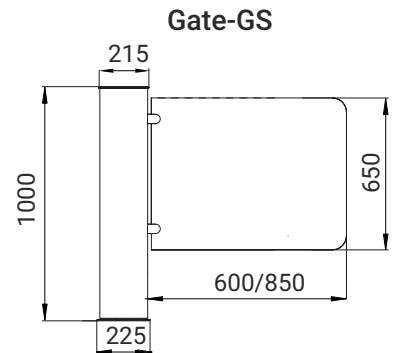


Gate-GS/GSH



*Available upon request

Model	Gate-GS/GSH
Mechanism	Servo-driven
Operation mode	CW (100°) and CCW (100°)
Blocking mechanism	Single electromagnetic brake
Emergency mode	Free exit/entry (gate opens automatically)
Power fail	Fail-safe – can be rotated manually (standard) Automatically open – super capacitor (option)
Standard housing	Brushed stainless steel AISI 304
Available housing	Brushed stainless steel AISI 316 Polished stainless steel AISI 304 Polished stainless steel AISI 316 Powder coated (any RAL upon request)
Voltage	AC (100-240)V, 50/60Hz; DC source 12V



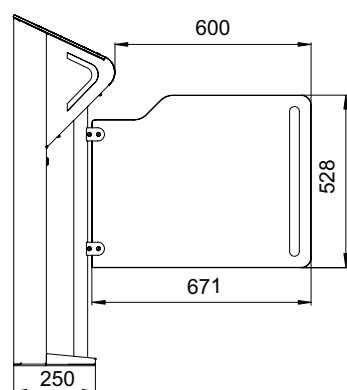
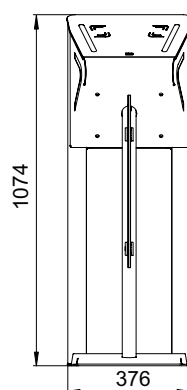


Onyx-GS/TS

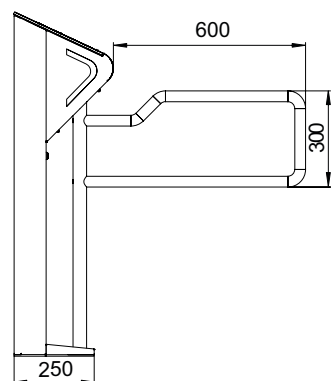
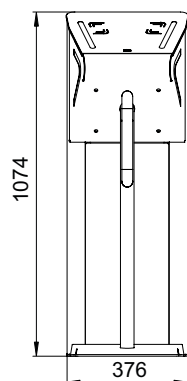


Model	Onyx-GS/TS
Mechanism	BMDrive® servo-drive (BLDC)
Operation mode	CW (90°) and CCW (90°)
Blocking mechanism	ToothLock®
Emergency mode	Free exit/entry (gate opens automatically)
Power fail	Fail-safe – leaf could be opened manually Automatically open – super capacitor (option)
Standard housing	Brushed stainless steel AISI 304
Available housing	Brushed stainless steel AISI 316 Polished stainless steel AISI 304 Polished stainless steel AISI 316 Powder coated (any RAL upon request)
Voltage	AC (100-240)V, 50/60Hz; DC source 12V

Onyx-GS



Onyx-TS





Gate-TS/TTS/SPR

650
1050
mm
PASSAGE
WIDTH

41
IP
54*
PROTECTION
LEVEL

MOTORIZED

ACCESS CONTROL
SYSTEM

PASSAGE
FOR DISABLED

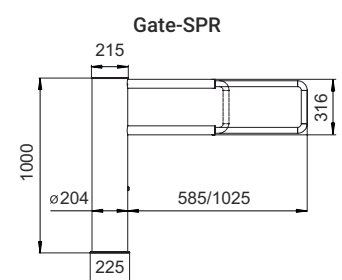
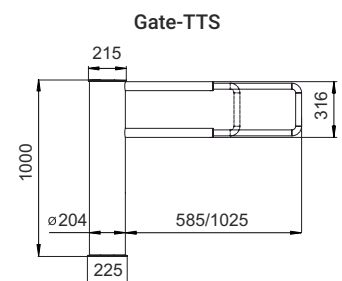
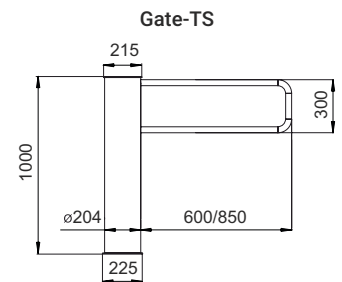
MANUAL
CONTROL

BI-DIRECTIONAL

FIRE ALARM
INTEGRATION

*Available upon request

Model	Gate-TS/TTS	Gate-SPR
Mechanism	Servo-driven	Mechanical
Operation mode	CW (100°) and CCW (100°)	
Blocking mechanism	Single electromagnetic brake	Can be locked manually by key
Emergency mode	Gate is open	Can be unlocked manually by key
Drop arm function	Fail-safe – free rotation (standard) Automatically open – super capacitor (option)	–
Standard housing	Brushed stainless steel AISI 304	
Available housing	Brushed stainless steel AISI 316 Polished stainless steel AISI 304 Polished stainless steel AISI 316 Powder coated (any RAL upon request)	
Voltage	AC (100-240)V, 50/60Hz; DC source 12V	–





Cyclone-L

- 

650
900
mm

PASSAGE
WIDTH
- 

30
pers/min

SINGLE
ACCESS
- 

60
pers/min

FREE
ACCESS
- 

41
IP **65***

PROTECTION
LEVEL
- 

MOTORIZED
- 

ACCESS CONTROL
SYSTEM
- 

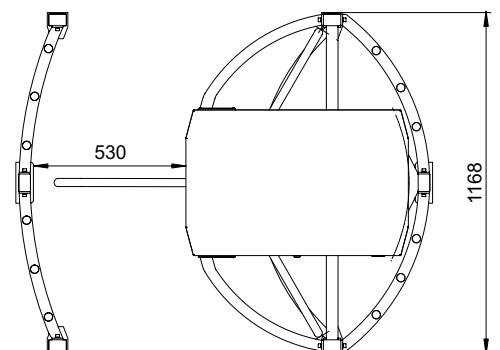
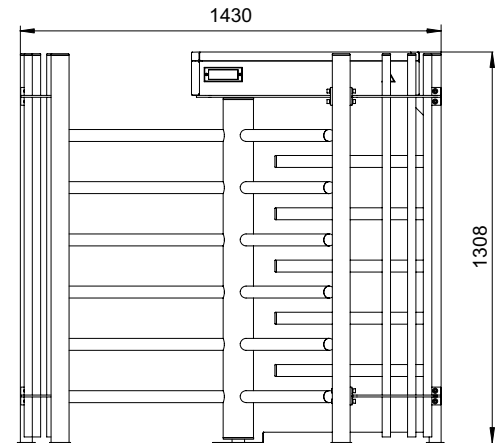
MANUAL
CONTROL
- 

BI-DIRECTIONAL
- 

FIRE ALARM
INTEGRATION

*Available upon request

Model	Cyclone-L
Mechanism	Servo-drive (Triservo-M)
Blocking mechanism	Two electromechanical stop catches (separate locking system)
Emergency mode	Free pass in both directions
Power fail	Fail safe (standard) Fail secure (option)
Standard housing	Brushed stainless steel AISI 304
Available housing	Brushed stainless steel AISI 316 Polished stainless steel AISI 304 Polished stainless steel AISI 316 Powder coated (any RAL upon request)



Voltage **AC (100-240)V, 50/60Hz; DC source 12V**

Full-height turnstiles

- Can be supplied as fully welded or in disassembled condition which has perfect effect to transportation cost;
- Turnstile is bi-directional;
- Depending on installation place conditions and Customer`s requirements can be produced of different types of material;
- Y-type or X-type of rotor is available for your choice;
- Easy integration with any type of ACS;
- Low power consumption as well as low noise operation;
- Possibility of customization;
- Fail safe or fail secure for your choice;
- Indoor/outdoor application.





TOTAL SECURITY OF THE SITE

TiSO full-height turnstiles ensure vandal proof security level to large variety of possible applications: stadiums, factories, parks, premises with highest security requirements etc. Strength and durability is granted by robust fully welded design. On the other hand, attractive for shipment assembly modification of automatic barrier gate is also available.







HighWay-G/NG

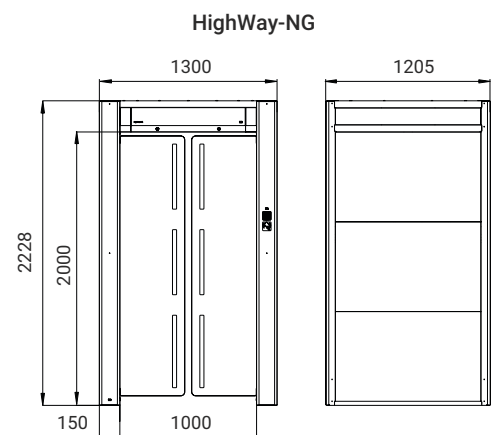
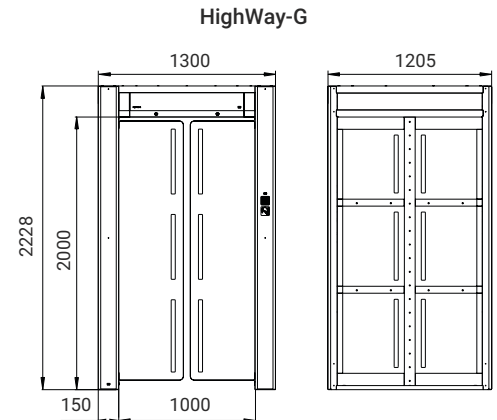
HighWay-G/NG combining different technologies to achieve state of the art performances, passage detection algorithms constantly monitor the flow of persons through the monitored area until they exit.



HighWay-G/NG



Model	HighWay-G	HighWay-NG
Mechanism	BMDrive® servo-driven (BLDC)	
Blocking mechanism	ToothLock® (standard); ToothLock® + PinLock® (option)	
Emergency mode	Free entry/exit (gates are opened automatically)	
Power fail	Fail-safe (gates could be opened manually - standard) Automatically open - super capacitor (option)	
Standard housing	Brushed stainless steel AISI 304 and tempered glass	Brushed stainless steel AISI 304
Available housing	Brushed stainless steel AISI 316 Polished stainless steel AISI 304 Polished stainless steel AISI 316 Powder coated (any RAL upon request) and tempered glass	Brushed stainless steel AISI 316 Polished stainless steel AISI 304 Polished stainless steel AISI 316 Powder coated (any RAL upon request)
Voltage	AC (100-240)V, 50/60Hz; DC source 12V	





GlassGO-BP

- 

640
min

PASSAGE
WIDTH
- 

15
pers/min

SINGLE
ACCESS
- 

30
pers/
min

FREE
ACCESS
- 

IP 41

PROTECTION
LEVEL
- 

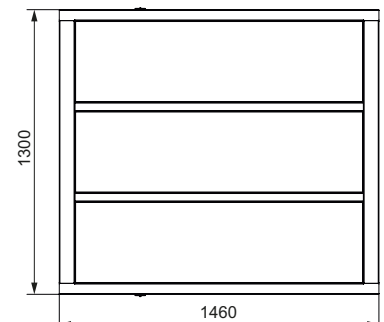
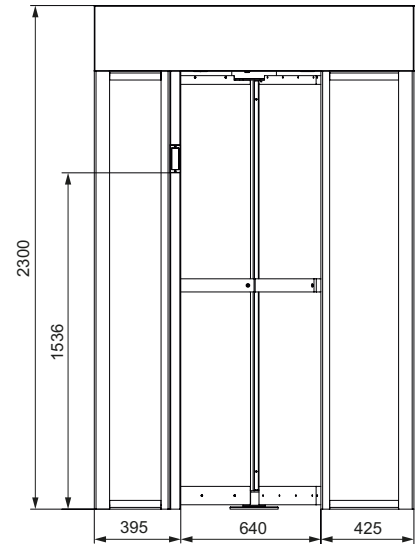
ACCESS CONTROL
SYSTEM
- 

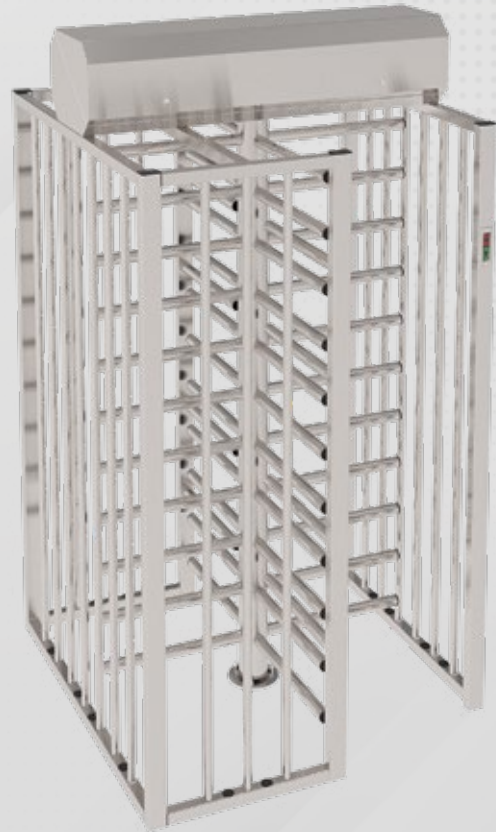
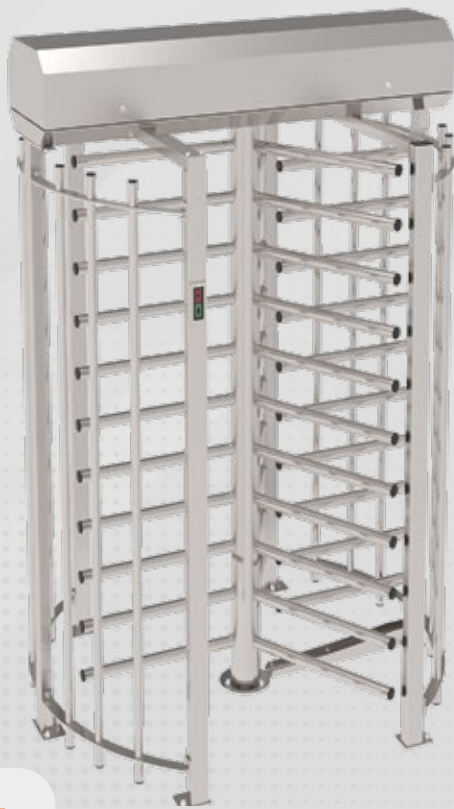
MANUAL
CONTROL
- 

BI-DIRECTIONAL
- 

FIRE ALARM
INTEGRATION

Model	GlassGO-BP
Mechanism	Servo-driven (BLDC)
Blocking mechanism	Two electromechanical stop catches
Emergency mode	Free entry/exit (gates are opened automatically)
Power fail	Fail secure (rotor is locked – standard)
Standard housing	Brushed stainless steel AISI 304 and tempered glass
Available housing	Brushed stainless steel AISI 316 Polished stainless steel AISI 304 Polished stainless steel AISI 316 Powder coated (any RAL upon request) and tempered glass
Voltage	AC (100-240)V, 50/60Hz; DC source 12V





Sesame-A

Y: 650
X: 535
mm

PASSAGE
WIDTH

20
pers/min

SINGLE
ACCESS

30
pers/min

FREE
ACCESS

41
IP 65*

PROTECTION
LEVEL



ACCESS CONTROL
SYSTEM



MANUAL
CONTROL



BI-DIRECTIONAL

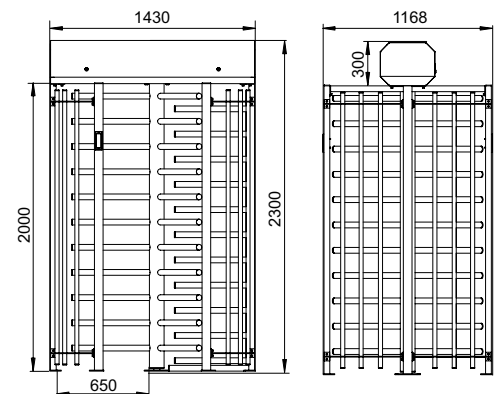


FIRE ALARM
INTEGRATION

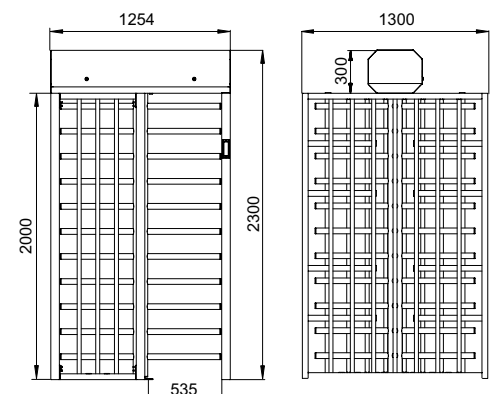
*Available upon request

Model	Sesame-A
Mechanism	StrongLock-EM (standard) StrongLock-Servo (option)
Blocking mechanism	Two electromechanical stop catches (separate locking system)
Emergency mode	Free pass in both directions
Power fail	Fail-safe (standard) Fail-secure (option)
Construction features	Disassembled (standard) Full welded (option) Could be installed by a crane
Standard housing	Brushed stainless steel AISI 304
Available housing	Brushed stainless steel AISI 316 Polished stainless steel AISI 304 Polished stainless steel AISI 316 Powder coated (any RAL upon request)
Voltage	AC (100-240)V, 50/60Hz; DC source 12V

Sesame-A Y-type



Sesame-A X-type





Sesame-A Basic

Y: 650
X: 535
mm

PASSAGE
WIDTH

20
pers/min

SINGLE
ACCESS

30
pers/min

FREE
ACCESS

41
IP 65*

PROTECTION
LEVEL



ACCESS CONTROL
SYSTEM



MANUAL
CONTROL



BI-DIRECTIONAL

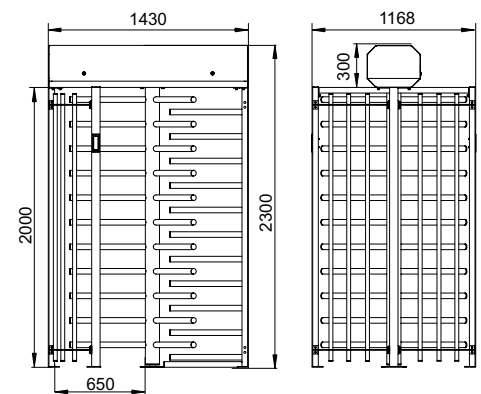


FIRE ALARM
INTEGRATION

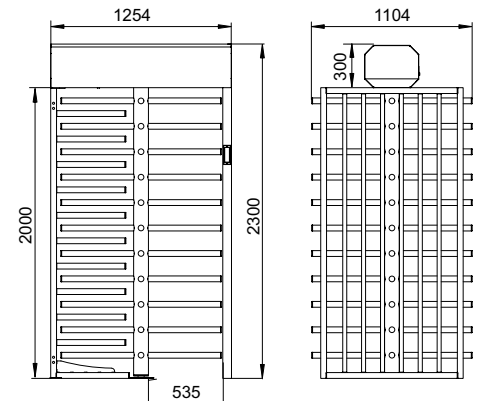
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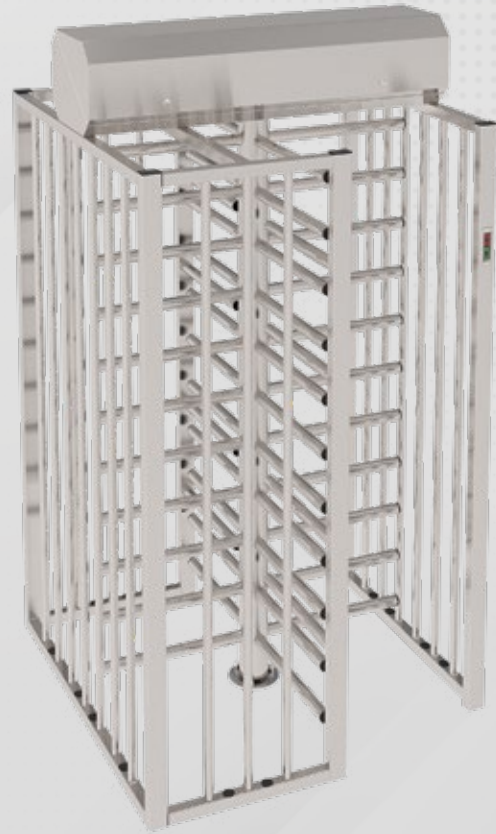
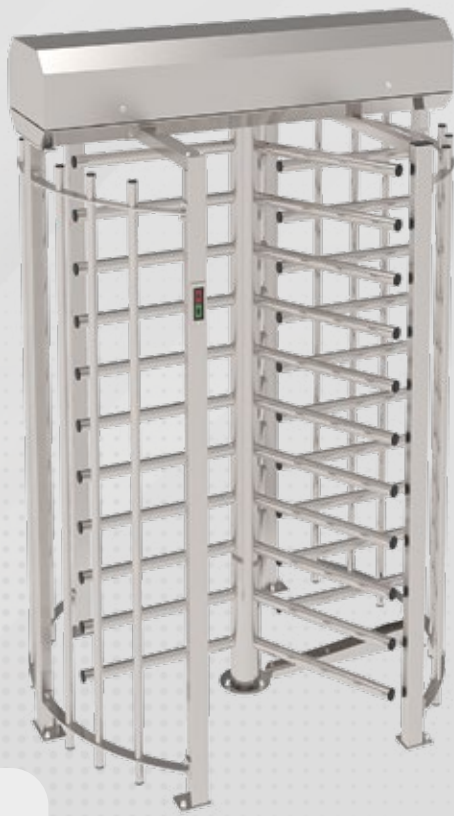
Model	Sesame-A Basic
Mechanism	SafeLock-EM (standard) StrongLock-Servo (option)
Blocking mechanism	Two electromechanical stop catches (separate locking system)
Emergency mode	Free pass in both directions
Power fail	Fail secure (standard) Fail safe (option)
Construction features	Disassembled (standard) Full welded (option) Could be installed by a crane
Standard housing	Brushed stainless steel AISI 304
Available housing	Brushed stainless steel AISI 316 Polished stainless steel AISI 304 Polished stainless steel AISI 316 Powder coated (any RAL upon request)
Voltage	AC (100-240)V, 50/60Hz; DC source 12V

Sesame-A Basic Y-type



Sesame-A Basic X-type





Sesame-L



Y: 650
X: 535
mm

PASSAGE
WIDTH



20
pers/min

SINGLE
ACCESS



30
pers/min

FREE
ACCESS



41
IP 65*

PROTECTION
LEVEL



ACCESS CONTROL
SYSTEM



MANUAL
CONTROL



BI-DIRECTIONAL

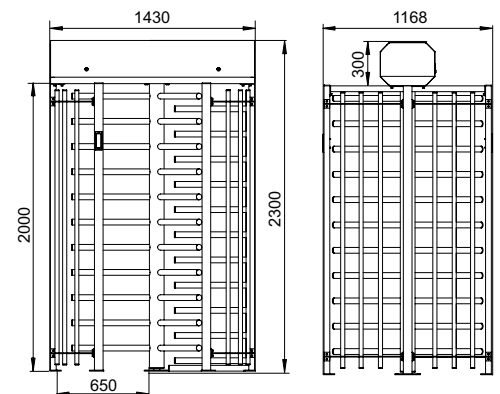


FIRE ALARM
INTEGRATION

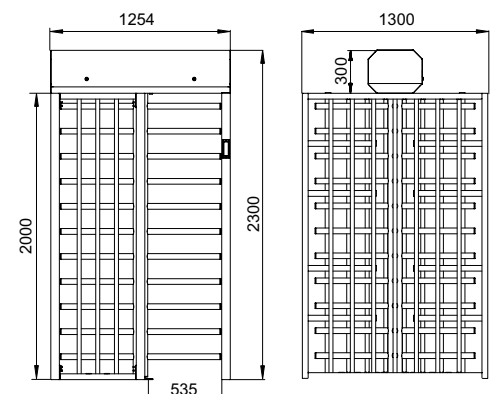
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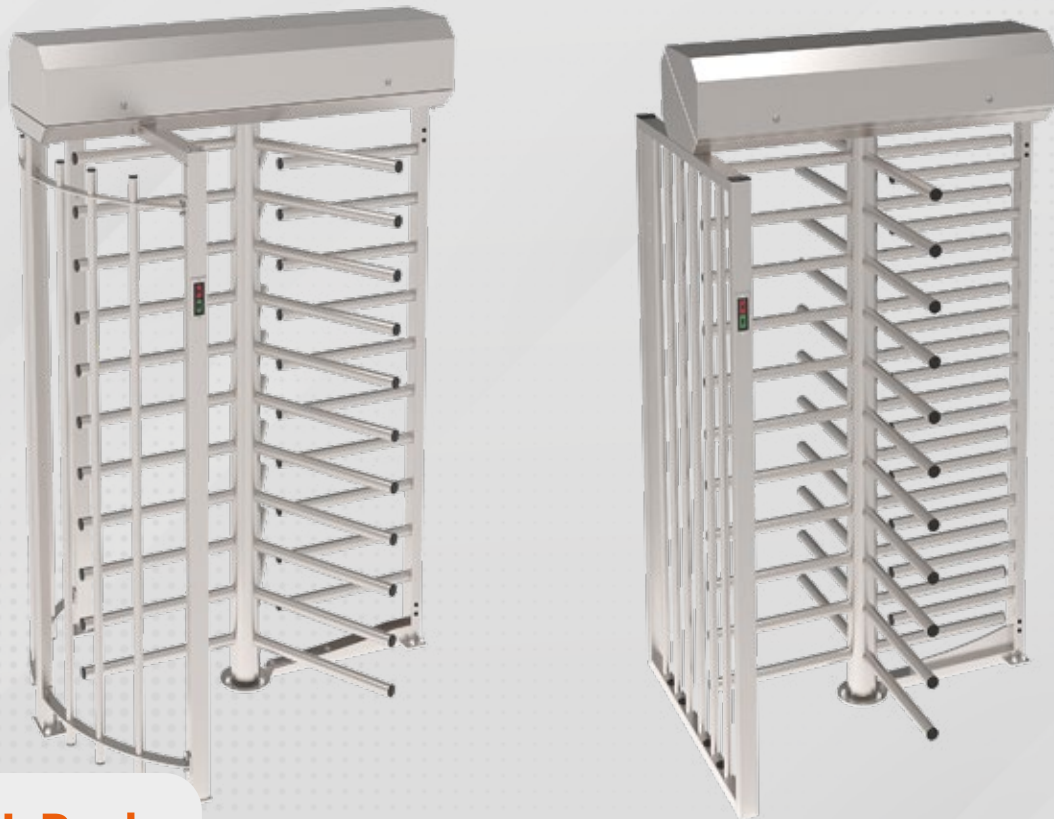
Model	Sesame-L
Mechanism	TriServo
Blocking mechanism	Two electromechanical stop catches (separate locking system)
Emergency mode	Free pass in both directions
Power fail	Fail safe (standard) Fail secure (option)
Construction features	Disassembled (standard) Full welded (option) Could be installed by a crane
Standard housing	Brushed stainless steel AISI 304
Available housing	Brushed stainless steel AISI 316 Polished stainless steel AISI 304 Polished stainless steel AISI 316 Powder coated (any RAL upon request)
Voltage	AC (100-240)V, 50/60Hz; DC source 12V

Sesame-L Y-type



Sesame-L X-type





Sesame-L Basic



Y: 650
X: 535
mm

PASSAGE
WIDTH



20
pers/min

SINGLE
ACCESS



30
pers/
min

FREE
ACCESS



41
IP 65*

PROTECTION
LEVEL



ACCESS CONTROL
SYSTEM



MANUAL
CONTROL



BI-DIRECTIONAL

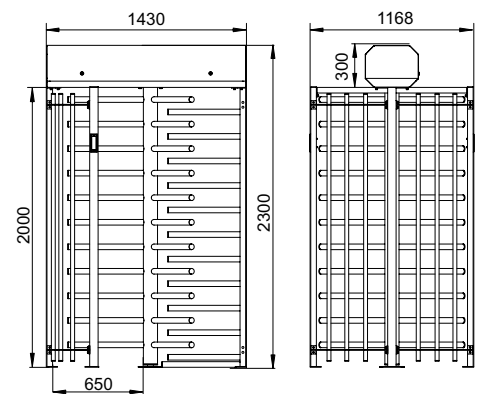


FIRE ALARM
INTEGRATION

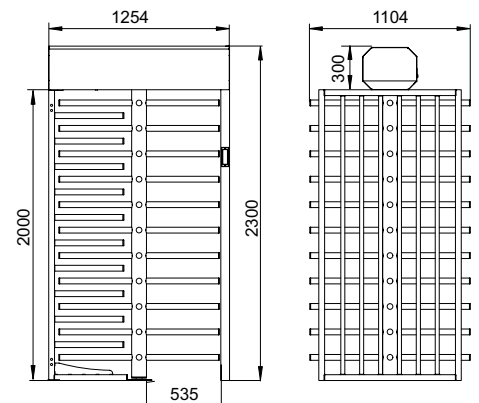
*Available upon request

Model	Sesame-L Basic
Mechanism	Servo-drive (Triservo-M)
Blocking mechanism	Two electromechanical stop catches (separate locking system)
Emergency mode	Free pass in both directions
Power fail	Fail safe (standard) Fail secure (option)
Construction features	Disassembled (standard) Full welded (option) Could be installed by a crane
Standard housing	Brushed stainless steel AISI 304
Available housing	Brushed stainless steel AISI 316 Polished stainless steel AISI 304 Polished stainless steel AISI 316 Powder coated (any RAL upon request)
Voltage	AC (100-240)V, 50/60Hz; DC source 12V

Sesame Basic-L Y-type



Sesame Basic-L X-type





Sesame-S

- 
**505
530**
mm
PASSAGE
WIDTH
- 
20
pers/min
SINGLE
ACCESS
- 
30
pers/
min
FREE
ACCESS
- 
**41
65***
PROTECTION
LEVEL
- 

ACCESS CONTROL
SYSTEM
- 

MANUAL
CONTROL
- 

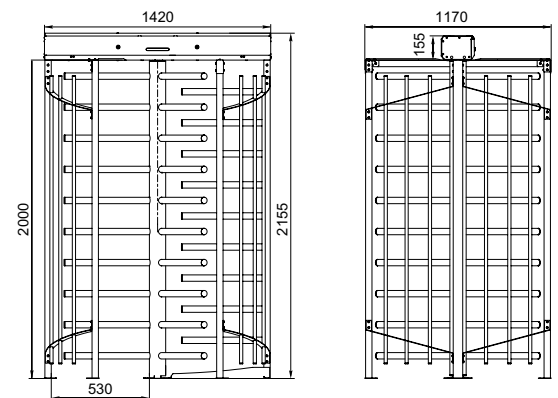
BI-DIRECTIONAL
- 

FIRE ALARM
INTEGRATION

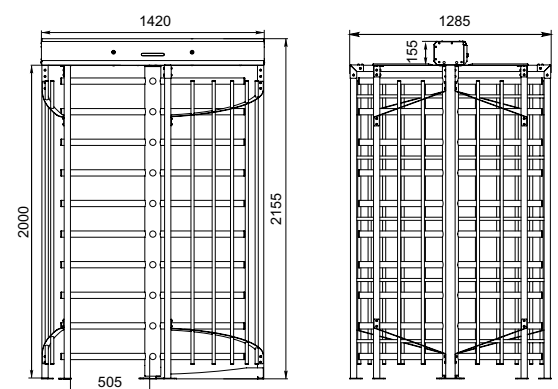
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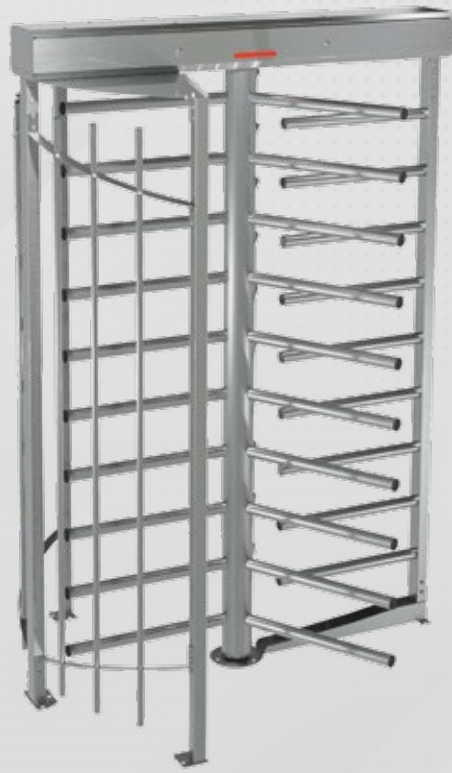
Model	Sesame-S
Mechanism	SafeLock-EM
Blocking mechanism	Two electromechanical stop catches
Emergency mode	Free pass in both directions
Power fail	Fail safe (standard) Fail secure (option)
Construction features	Disassembled
Standard housing	Brushed stainless steel AISI 304
Available housing	Brushed stainless steel AISI 316 Polished stainless steel AISI 304 Polished stainless steel AISI 316 Powder coated (any RAL upon request)
Voltage	AC (100-240)V, 50/60Hz; DC source 12V

Sesame-S Y-type



Sesame-S X-type





Sesame-S Basic



505
530
mm

PASSAGE
WIDTH



20
pers/min

SINGLE
ACCESS



30
pers/min

FREE
ACCESS



41
65*

PROTECTION
LEVEL



ACCESS CONTROL
SYSTEM



MANUAL
CONTROL



BI-DIRECTIONAL

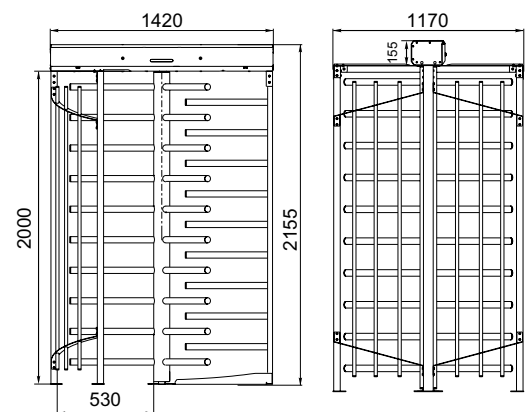


FIRE ALARM
INTEGRATION

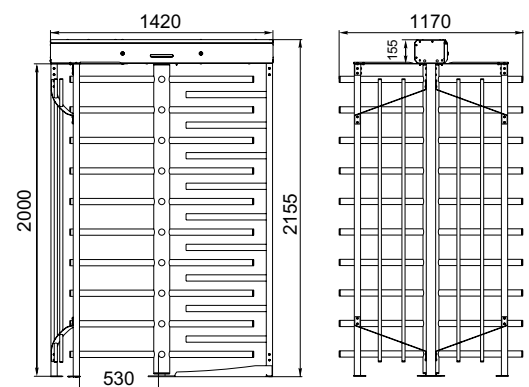
*Available upon request

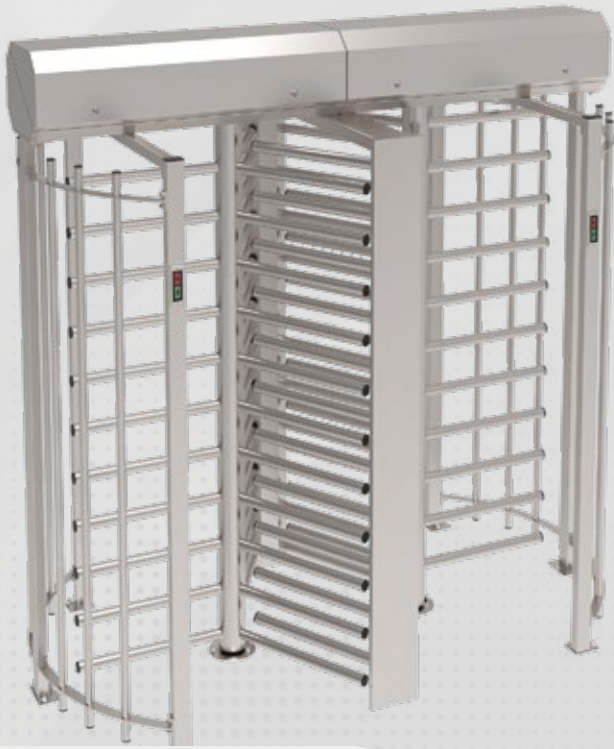
Model	Sesame-S Basic
Mechanism	SafeLock-EM
Blocking mechanism	Two electromechanical stop catches
Emergency mode	Free pass in both directions
Power fail	Fail-secure (for entrance) Fail-safe (for exit)
Construction features	Disassembled
Standard housing	Brushed stainless steel AISI 304
Available housing	Brushed stainless steel AISI 316 Polished stainless steel AISI 304 Polished stainless steel AISI 316 Powder coated (any RAL upon request)
Voltage	AC (100-240)V, 50/60Hz; DC source 12V

Sesame Basic-S Y-type



Sesame Basic-S X-type





Sesame-A/L Twin



650
570
mm

PASSAGE
WIDTH



40
pers/min

SINGLE
ACCESS



60
pers/min

FREE
ACCESS



41
65*

PROTECTION
LEVEL



ACCESS CONTROL
SYSTEM



MANUAL
CONTROL



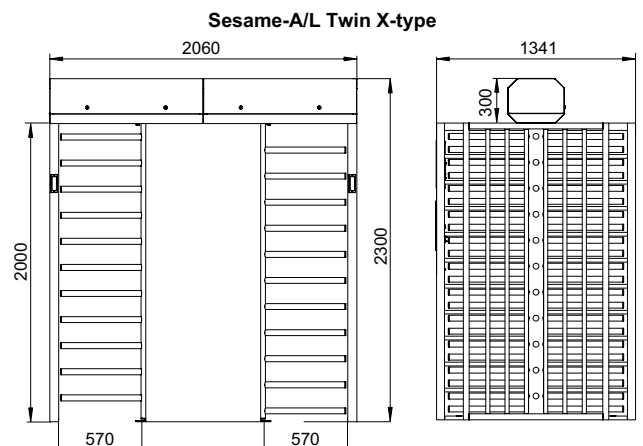
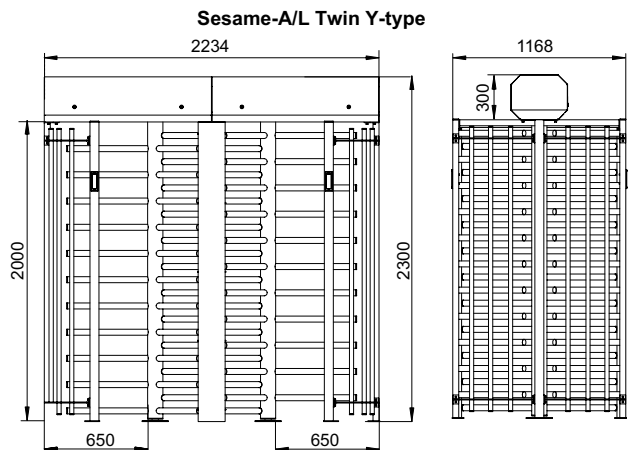
BI-DIRECTIONAL



FIRE ALARM
INTEGRATION

*Available upon request

Model	Sesame-A Twin	Sesame-L Twin
Mechanism	Electromechanical (standard) Servo-drive (option)	Servo-drive (Triservo-M)
Blocking mechanism	Two electromechanical stop catches (separate locking system)	
Emergency mode	Free pass in both directions	
Power fail	Fail-secure (standard) Fail-safe (option)	Fail-safe (standard) Fail-secure (option)
Construction features	Disassembled (standard) Full welded (option) Could be installed by a crane	
Standard housing	Brushed stainless steel AISI 304	
Available housing	Brushed stainless steel AISI 316 Polished stainless steel AISI 304 Polished stainless steel AISI 316 Powder coated (any RAL upon request)	
Voltage	AC (100-240)V, 50/60Hz; DC source 12V	





Byclone/L

Rotor: 620
Gate: 700/900
mm
PASSAGE WIDTH

20
pers/min
SINGLE ACCESS

30
pers/min
FREE ACCESS

IP 41
65*
PROTECTION LEVEL

ACCESS CONTROL SYSTEM

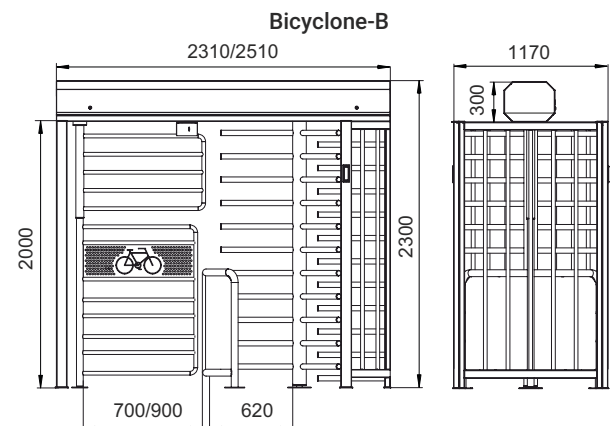
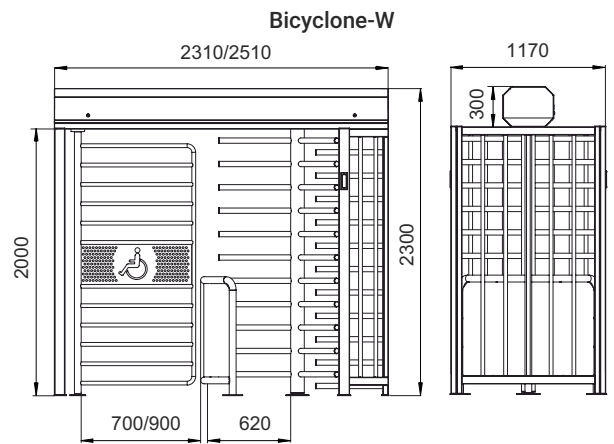
MANUAL CONTROL

BI-DIRECTIONAL

FIRE ALARM INTEGRATION

*Available upon request

Model	Byclone	Byclone-L
Mechanism rotor	Electromechanical (standard) Servo-drive (option)	Servo-drive (Triservo-M)
Mechanism gate	Servo-drive (Triservo-M)	
Blocking mechanism	Two electromechanical stop catches (separate locking system)	
Emergency mode	Free pass in both directions	
Power fail	Fail-secure (standard) Fail-safe (option)	Fail-safe (standard) Fail-secure (option)
Construction features	Disassembled (standard) Full welded (option) Could be installed by a crane	
Standard housing	Brushed stainless steel AISI 304	
Available housing	Brushed stainless steel AISI 316 Polished stainless steel AISI 304 Polished stainless steel AISI 316 Powder coated (any RAL upon request)	
Voltage	AC (100-240)V, 50/60Hz; DC source 12V	

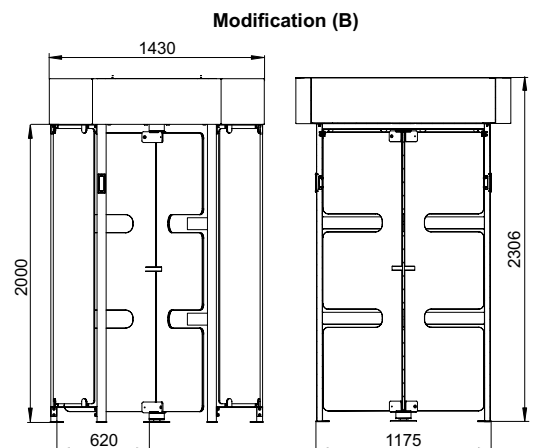
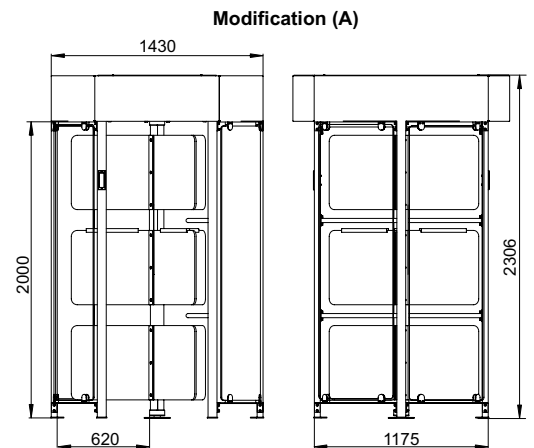




GlassGO (A)/(B)

- 
620
mm
PASSAGE WIDTH
- 
20
pers/min
SINGLE ACCESS
- 
30
pers/min
FREE ACCESS
- 
IP 41
PROTECTION LEVEL
- 
ACCESS CONTROL SYSTEM
- 
MANUAL CONTROL
- 
BI-DIRECTIONAL
- 
FIRE ALARM INTEGRATION

Model	GlassGO (A)	GlassGO (B)
Rotor type	Nine glass leaves angle between arms 120°	Tree shaped glass leaves angle between arms 120°
Wrong way prevention	Fencing	
Mechanism	StrongLock-Servo	
Blocking mechanism	Two electromechanical stop catches (separate locking system)	
Emergency mode	Free pass in both directions	
Power fail	Fail secure (standard) Fail safe (option)	
Standard housing	Brushed stainless steel AISI 304	
Available housing	Brushed stainless steel AISI 316 Polished stainless steel AISI 304 Polished stainless steel AISI 316 Powder coated (any RAL upon request)	
Voltage	AC (100-240)V, 50/60Hz; DC source 12V	

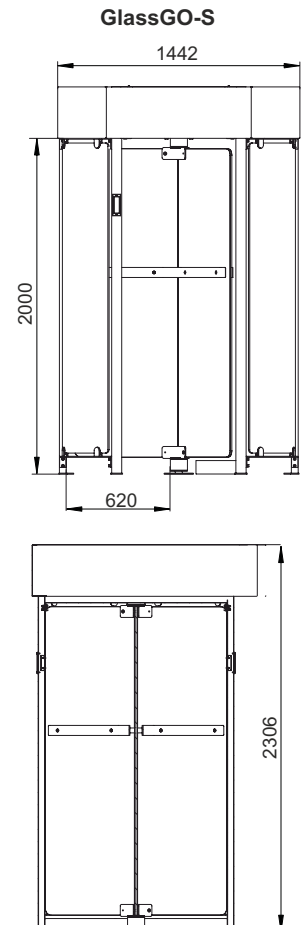




GlassGO-S

- 
620
mm
PASSAGE
WIDTH
- 
20
pers/min
SINGLE
ACCESS
- 
30
pers/min
FREE
ACCESS
- 
IP 41
PROTECTION
LEVEL
- 
**ACCESS CONTROL
SYSTEM**
- 
**MANUAL
CONTROL**
- 
BI-DIRECTIONAL
- 
**FIRE ALARM
INTEGRATION**

Model	GlassGO-S
Rotor type	Three solid glass leaves angle between arms 120°
Wrong way prevention	Motion sensors (with sound alarm)
Mechanism	StrongLock-Servo
Blocking mechanism	Two electromechanical stop catches (separate locking system)
Emergency mode	Free pass in both directions
Power fail	Fail secure (standard) Fail safe (option)
Standard housing	Brushed stainless steel AISI 304
Available housing	Brushed stainless steel AISI 316 Polished stainless steel AISI 304 Polished stainless steel AISI 316 Powder coated (any RAL upon request)
Voltage	AC (100-240)V, 50/60Hz; DC source 12V





TWiC

TWiC manages and controls large group of turnstiles and road blockers. The user friendly 8" touch screen display graphics requires minimal training for proficiency in navigating the various pages, remotely controlling the lanes and understanding the real time feedback such as alarm events when unauthorized access is detected.



Card reader/Card collector

Card readers/Card collectors are designed for installation as a part of an access control system for enterprises, administrative facilities, banks and other sites. Elegance, lightness and simplicity make this model very popular as part of access control system.



Enclosure

Stylish enclosure (*balustrade*) from TISO now unseparatable accessory for any our turnstiles. Its design is very simple but really efficient and easy-to install. You can purchase any combination of side or middle posts with different width of glass.

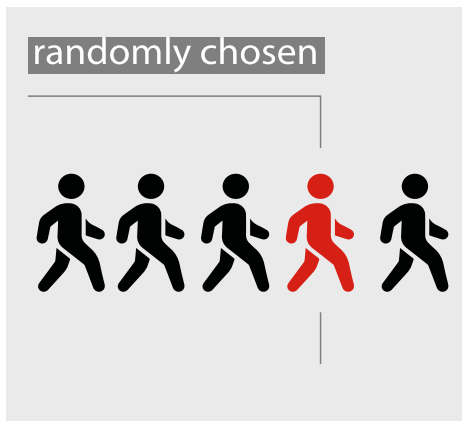


Mobile Platform

Mobile Platform consists of landing, enclosure, and can have any tripod turnstile attached to it. The main purpose of the Mobile Platform is to ensure quick and easy displacement of an installed tripod turnstile to a place of temporary usage.

Optional and standard features

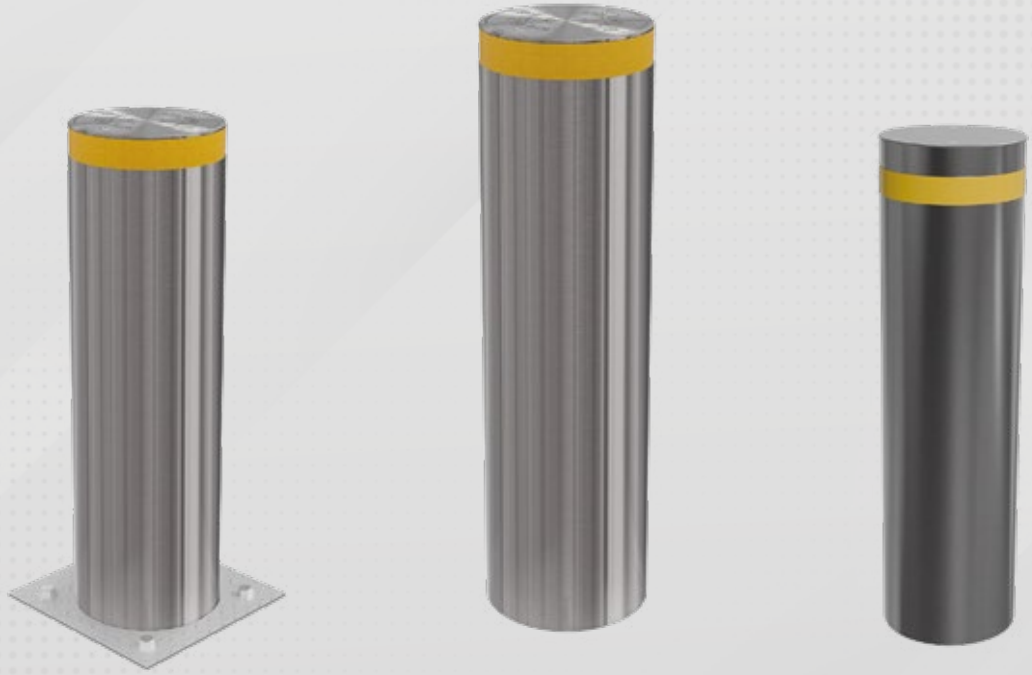
TiSO turnstiles come with numerous standard and optional features, making them incredibly convenient and effective for any facility. It's truly impressive how customizable they are to meet your needs! To learn more about all the features, simply scan the QR code.



Bollards







ASTM F2656/IWA14-1

High security fixed/removable bollards

TiSO high security fixed and removable bollards are the most cost effective solution for vehicle unauthorized access prevention. Being pedestrian friendly, TiSO high security bollards correspond to the requirements of anti-terroristic protection. Installation simplicity and absence of necessity in service maintenance are the main features to be outlined. On the other hand, the greatest advantage related to its mobility, when free access is required. Advanced technologies and large manufacturing experience allow TiSO high security fixed bollards to be simple, reliable, and wellfitting equipment.

Model	RB343-68	RB345-09-S-035	RB 273-09-S
Type	High security removable / fixed bollards		
Security class	ASTM F2656/F2656 M-15, M50, P2; IWA 14-1:2013, Bollard V/7200[N2B]/80/90:4.1	ASTM F2656/2656M-20, C750 (K12), P1; IWA 14-1:2013, Bollard V/7200[N2B]/80/90:0.7	ISO 22343-1 Triple Bollard V/7200[N2A]/80/90:2.5/30.8
Tube diameter, mm	325	355	273
Tube height, mm	1000	1200	1000
Tube materials	Epoxy polyurethane coating Stainless steel sleeve / casing up on request		Galvanized and powder coated tube (any RAL upon request) Stainless steel sleeve / casing up on request

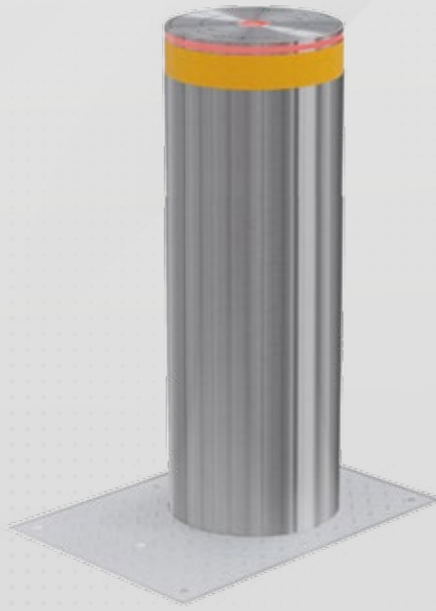


ASTM F2656

High-security automatic bollards

TISO automatic high security bollards intend to prevent vehicles unauthorized access to secured areas and keep the highest level of antiterrorism protection. It is demanded for installation sites with high risk of heavy vehicle attack: public places (stadiums, fairgrounds), governmental institutions, or military infrastructures etc. This type of equipment can be easily connected with ACS and other vehicle access control equipment (arm barriers etc.).

Model	RB348	RB342
Type	High security hydraulic bollards	
Security class	ASTM F2656-07, M30, P1	ASTM F2656-07, M50, P1
Tube diameter, mm	325	325
Tube height, mm	1000	1200
Wall thickness, mm	20	30
Impact resistance, J	679 900	1 845 000
Axle load, t	15	
Rising/Lowering time, s (+/- 1s)	4,0/3,5 (1,5 with EFO)	
Operating temperature, °C	-40 / +60	
Power supply	3 phase 400V, 50/60 Hz	
Protection level	IP 67 (for bollard); IP54 (for control box)	
Tube materials	Epoxy polyurethane coating Stainless steel sleeve / casing up on request	



Traffic automatic bollards

TISO automatic bollards are engineered in order to provide maximum operation durability. Traffic bollards is the perfect choice for installations at private and other areas without strict requirement to antiterrorism protection. All equipment is designed and tested for high intensity operation.

Model	RB343-21	RB343-23	RB349-11	RB349-12	RB343-24	RB343-26	RB349-14	RB349-15
Type	Traffic hydraulic bollards							
Tube diameter, mm	114	170	220	273	114	170	220	273
Tube height, mm	600				800			
Wall thickness, mm	3	5	4	8	3	5	4	8
Axle load, t	15							
Rising/Lowering time, s (+/- 1s)	7,0/5,5				9,0/8,0			
Operating temperatures, °C	-40 / +60							
Power supply	1 phase 230V, 50/60 Hz							
Protection level	IP 67 (for bollard); IP 55 (for control box)							
Tube materials	Brushed stainless steel AISI 304. Brushed stainless steel AISI 316. Galvanized and powder coated tube (any RAL upon request)							

Removable bollards



Traffic removable bollards

TiSO removable traffic bollards is one more solution for vehicle access control management. The main difference of regular fixed/static bollards determined by mobility which provides free driveway in case of necessity. To get bollard unlocked, the only thing which has to be done is a simple turn of a key. The range of removable bollards available in different dimensions, blocking heights, tube materials, and diameters. Intended for vehicle access control with little traffic intensity.

Model	RB345-02	RB345-01	RB345-05	RB345-04
Type	Traffic removable bollards			
Tube diameter, mm	170	220	170	220
Tube height, mm	600		800	
Wall thickness, mm	4		4	
Installation depth, mm	300			
Tube materials	Brushed stainless steel AISI 304. Brushed stainless steel AISI 316. Galvanized and powder coated tube (any RAL upon request)			



Traffic manual retractable bollards

Manually retractable bollard intends to be used as a static obstacle in order to secure pedestrian or other areas from unauthorized vehicle traffic. Herewith these bollards can be a perfect choice for installations which require temporary free driveways during certain hours of a day, night time for instance. As for other advantages, these bollards do not need power supply.

Model	RB345-62	RB345-51	RB345-65	RB345-54
Type	Traffic manual retractable bollards			
Tube diameter, mm	140	220	140	220
Tube height, mm	600		800	
Wall thickness, mm	4			
Installation depth, mm	915		1115	
Tube materials	Brushed stainless steel AISI 304. Brushed stainless steel AISI 316. Galvanized and powder coated tube (any RAL upon request)			

With gas-spring mechanism

TiSO semi-automatic bollards is a perfect solution for effective vehicle access control under the circumstances of unavailable power supply. Semi-automatic bollards have gas spring mechanism which is locked at down position and rise rapidly when released. Being complete and independent solution, semi-automatic bollards require manual impact for driveway opening or closing.



Model	RB343-60	RB343-61	RB343-63	RB343-64
Drive	Gas-spring mechanism			
Tube diameter, mm	220	273	220	273
Tube height, mm	600		800	
Wall thickness, mm	4			
Axle load, t	15			
Tube materials	Brushed stainless steel AISI 304. Brushed stainless steel AISI 316. Galvanized and powder coated tube (any RAL upon request)			

With drill drive mechanism

The same like semi-automatic, TiSO drill drive bollards intend to fit installations without power supply availability. The operation principle determined by the drill impact, which gets blocking segment up or down according to screw direction. This solution intends to manage traffic of low intensity and featured with outstanding lifetime, due to lack of consumables in its operation and design concept.

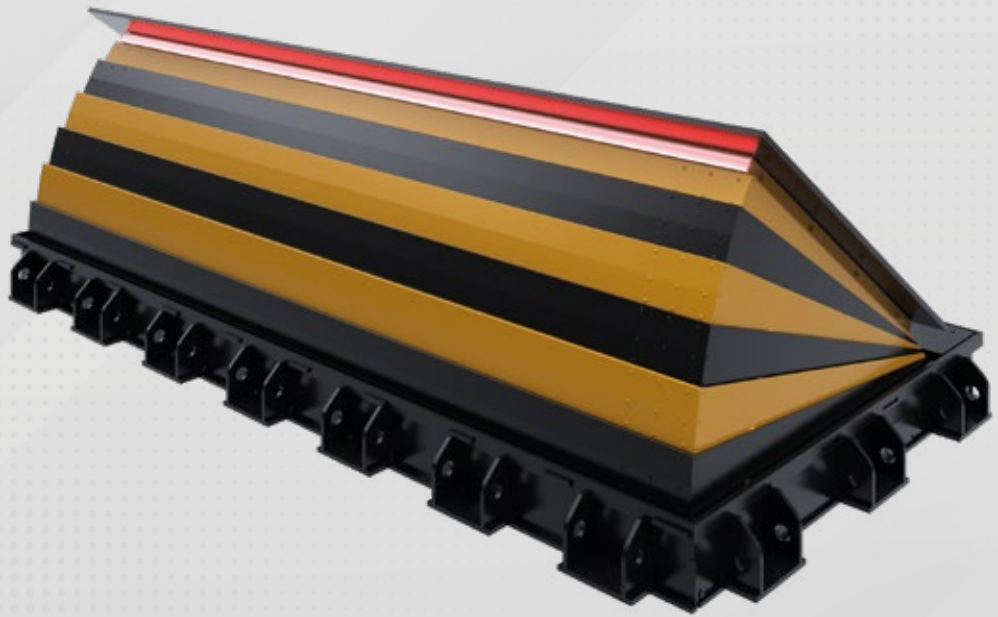


Model	RB343-01	RB343-02	RB343-04	RB343-05
Drive	Drill drive mechanism			
Tube diameter, mm	220	273	220	273
Tube height, mm	600		800	
Wall thickness, mm	4		4	
Axle load, t	15			
Tube materials	Brushed stainless steel AISI 304. Brushed stainless steel AISI 316. Galvanized and powder coated tube (any RAL upon request)			

Road blockers







PAS68/IWA14-1

Ultra shallow road blockers

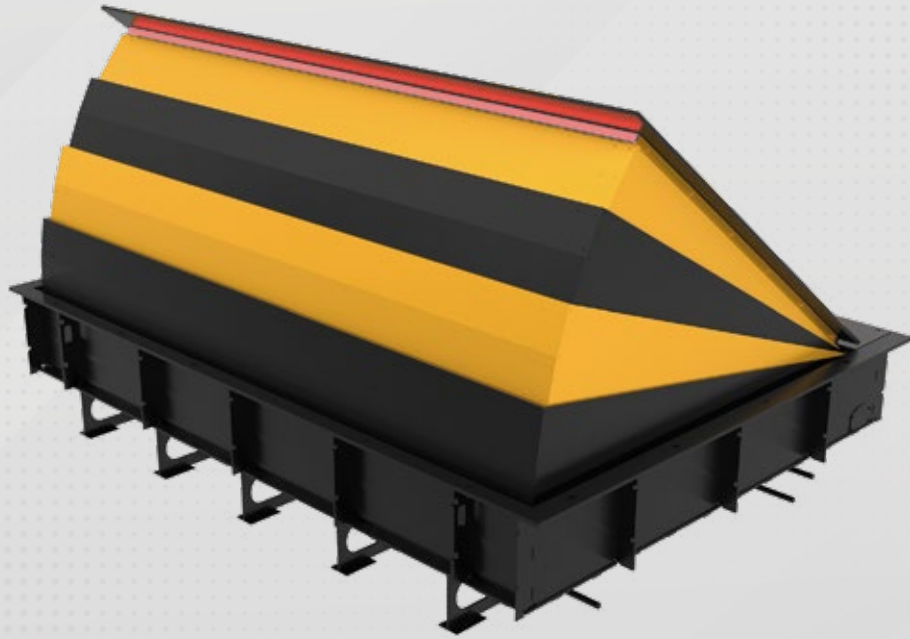
safety skirt goes as an option

Ultra shallow road blockers were designed to protect the perimeter of the protected area. This blocker can stop truck of 7 500 kg (7,5 t) mass driving at 48 kph (30 mph)/64 kph (40 mph)/80 kph (50 mph). This is confirmed by successfully passed tests BSI PAS 68:2013 and IWA 14-1:2013. Such a blocker fully meets the requirements for the protection of highly classified objects. In addition to anti-ramming properties, this blocker has another advantage - this is a minimal installation depth of 200 mm. The completely innovative design of this lock allows you to combine its main anti-ram function with the simplicity and speed of installation.

Model	RB312-01	RB313-01	RB314-01	RB322-01	RB323-01	RB324-01	RB332-01	RB333-01	RB334-0
Security class	PAS68/IWA14-1 (7,5t@48kph)			PAS68/IWA14-1 (7,5t@64kph)			PAS68/IWA14-1 (7,5t@80kph)		
Impact resistance, J	689 000			1 139 000			1 868 000		
Installation type	Shallow mounted								
Drive	Hydraulic (HPU)								
Width, mm	2000	3000	4000	2000	3000	4000	2000	3000	4000
Height, mm	800			950			950		
Installation depth, mm	200								
Axle load, t	15 (up to 50 with increased foundation depth)								
Rising time, s (+/- 1s)	3.5 (1.5 with EFO*)								
Lowering time, s (+/- 1s)	3,5								
Operating temperatures**, °C	-40 / +60								
Power supply	3 phases 400 V, 50/60 Hz (standard); 1 phase 230 V, 50/60 Hz (option)								
Protection level	IP 67 (for road blocker); IP 54 (for control box)								
Materials	Structural steel C22 (powder coated)								

*EFO - emergency fast operator

** for temperatures lower than -10 °C use the heating device
for temperatures higher than +40 °C use the cooler device



ISO 22343/ASTM F2656

High security road blockers

High security road blockers engineered and designed to prevent unauthorized access of vehicles to a secured area and keep the standards of antiterrorism protection. This is heavy duty equipment for projects with appropriate requirements. TiSO road blockers have successfully passed crash test and certified according to ASTM F2656-07, M50, P1 and ASTM F2656-07, M30, P1. Being developed by engineers with extensive background in appropriate field, this type of wedge barriers is featured with installation simplicity, easy service, reliability, durability, and multi functionality.

Model	RB312	RB313	RB314	RB322	RB323	RB324	RB332	RB333	RB334
Security class	Certified ASTM F2656-07, M30, P1			Designed to keep ASTM F2656 M40 standard			Certified ASTM F2656-07, M50, P1 ISO 22343-1: Blocker V/7200 [N2A]/80/90:0.2/1 7,8		
Installation type	Shallow mounted								
Drive	Hydraulic (HPU)								
Width, mm	2000	3000	4000	2000	3000	4000	2000	3000	4000
Height, mm	800			1000			1200		
Impact resistance, J	656 000			1 110 000			1 859 000		
Axle load, t	15 (up to 50 with increased foundation depth)								
Rising time, s (+/- 1s)	3,5 (1,5 with EFO*)			3,5 (1,5 with EFO*)			3,5 (1,5 with EFO*)		
Lowering time, s (+/- 1s)	3,5			3,5			3,5		
Operating temperatures**, °C	-40/ +60								
Power supply	3 phase 400V, 50/60 Hz								
Protection level	IP 67 (for road blocker) IP 54 (for control box)								
Materials	Structural steel C22 (powder coated)								

*EFO - emergency fast operator

** for temperatures lower than -10 °C use the heating device
for temperatures higher than +40 °C use the cooler device

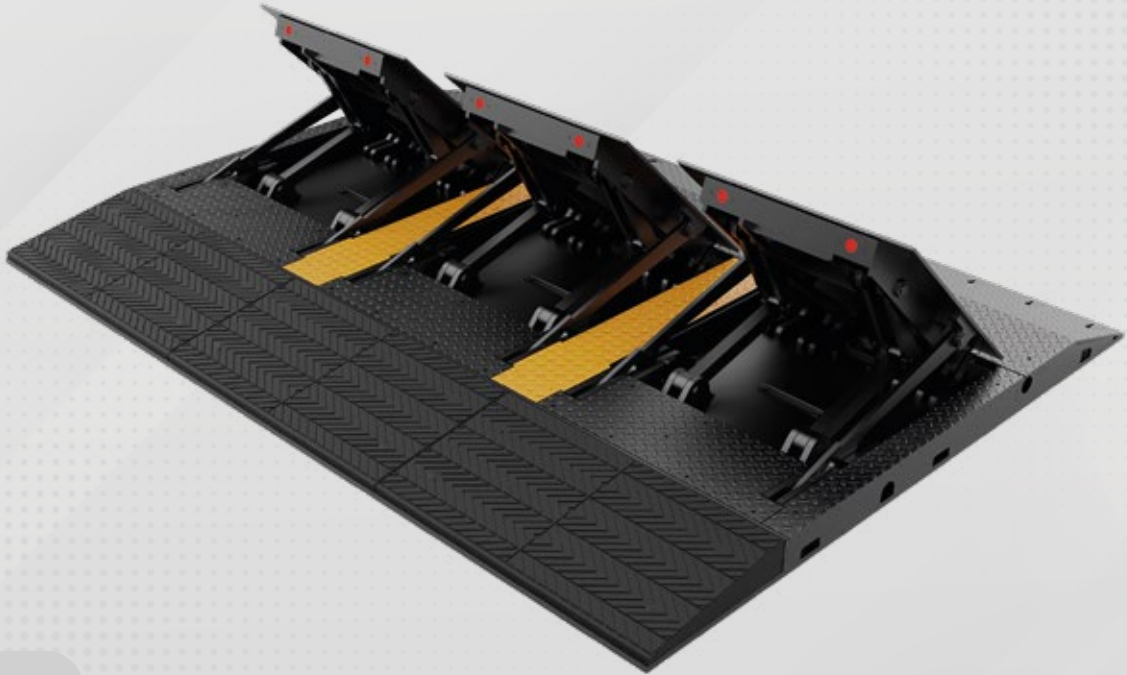


ASTM F2656/IWA14-1

High security Speedbumps

This type of equipment has been certified according to ASTM F2656/F2656-15, M30, P1 & IWA14-1, Blocker V/7200[N2B]/48/90:0,3 standards, this access control equipment is useful to provide anti-terroristic protection level. The standard delivery set includes blocking segment, control box with HPU and PLC, connection cable, power/oil hoses, and push-button control unit. Herewith large list of accessories enables its adapting to various severe weather and environment conditions. Well selected list of available blocking widths, together with availability of customized solutions, installation simplicity, and high security are useful to get a wide extension of successful projects.

Model	RB359-02	RB359-03	RB359-04
Security class	ASTM F2656/F2656 M-15, M30, P1; IWA 14-1:2013 Blocker V/7200 [N2B]/48/90:-0,3		
Installation type	Shallow mounted / Above the ground (with ramps)		
Drive	Hydraulic (HPU)		
Width, mm	2000	3000	4000
Height, mm	500		
Impact resistance, J	664 000		
Axle load, t	15		
Rising time, s	3,5 (1,5 with EFO)		
Lowering time, s	3,5		
Operating temperatures, °C	-40 / +60		
Power supply	3 phase 400V, 50/60 Hz		
Protection level	IP 67 (for blocker) IP 54 (for control box)		
Moving part materials	Structural steel C22 (powder coated)		
Ramp materials	Structural rubber		



ASTM F2656/IWA14-1

High security Mobile Speedbumps

TISO high security Mobile Speedbumps are reliable compact solution to provide security of your territory. It does not require any installation to the ground. High security Mobile Speedbump was tested and certified according to ASTM F2656/F2656-18a and IWA14-1:2013 standards. Key advantages of Mobile Speedbumps M30:

- full mobility of crash-rated, automatic wedge barrier;
- easy application: setting up within 10 minutes: simply by delivering to the site – unloading – plug in to the power;
- no civil works required: no anchors/no bolts.

High security Mobile Speedbump has warning LED indication and warning painting. Also can be interfaced with any ACS. Ideal for organising temporary protection of driveways during public events (fairs, festivals, weekly markets, public holidays etc.).

Model	RB358-06	RB358-07	RB358-08
Security class	ASTM F2656/F2656M-18a, M30, P2; IWA 14-1:2013, Blocker V/7200[N2B]/48/90:5.3		
Installation type	Above the ground (mobile, with no fixation)		
Drive	Hydraulic (build-in)		
Width, mm	2000	3000	4000
Height, mm	570		
Impact resistance, J	649 000		
Axle load, t	15		
Rising time, s (+/- 1s)	4		
Lowering time, s (+/- 1s)	3		
Operating temperatures, °C	-40 / +60		
Power supply	1 phase 230V, 50/60 Hz		
Protection level	IP 67 (for road blocker) IP 54 (for control box)		
Materials	Structural steel (galvanized and powder coated)		



PAS68/IWA14-1

Mobile Mechanical Road blockers

Model	RB319-25-M
Security class	PAS68 / IWA14-1 7,5t@48km/h
Installation type	Above the ground
Drive	mechanical
Width, mm	4900
Height, mm	830
Impact resistance, J	689 000
Protection level	IP 67
Moving part materials	Structural steel C22 (hot galvanizing 70-110 / priming / painting)

The road blocker RB319-25-M designed to limit access / reduce the speed of cars to the territory.

The feature of the blocker is the construction of sections (the blocker and the ramp), so there are almost no restrictions on the width of the limitation of the moving part.

Also, one of the main advantages is the mobility of the blocker, it does not need to be installed in the road surface. Such a mobile version of the blocker just needs to be installed on the road surface and it is ready for work.

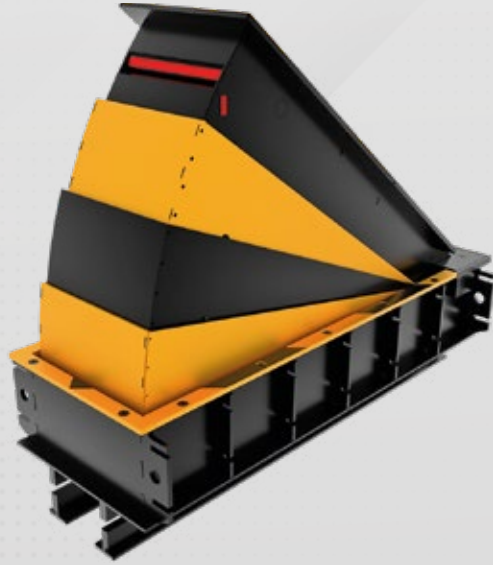
Mechanical road blocker RB319-25-M was tested and certified according to PAS68 / IWA14 - 1 (7,5t@48km/h).

When unfolded, it does not interfere with the free passage of citizens.

Ideal for organising temporary protection of driveways during public events (fairs, festivals, weekly markets, public holidays etc.)



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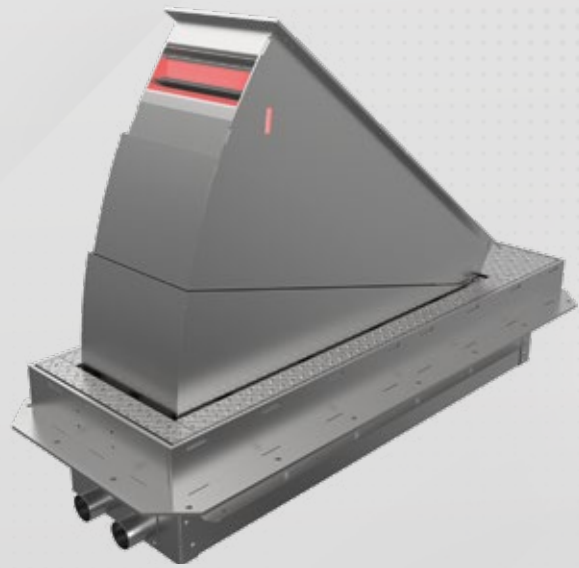
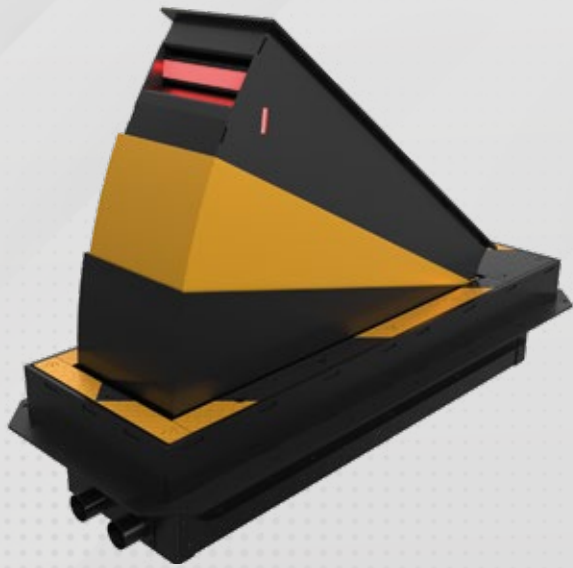


ASTM F2656/IWA14-1

High security Cyclopes

High security Cyclopes ensure highest level of anti-terrorism protection. As far as it was certified according to ASTM F2656/F2656-15, M40, P1 & IWA14-1, Blocker V/7200[N2B]/64/90:12.1 standards. The blocking segment is operated from outside control box with HPU and PLC in it. Interconnection between two elements provided via connection cable and power/oil hoses.

Model	RB320-01	RB320-02	RB320-03
Security class	Designed to keep ASTM F2656, M30 (K4) standard	ASTM F2656/F2656 M-15, M40, P1; IWA 14-1:2013 Blocker V/7200 [N2B]/64/90:-0,2	Designed to keep ASTM F2656, M50 (K12) standard
Installation type	Shallow mounted		
Drive	Hydraulic (HPU)		
Width, mm	520		
Height, mm	800	900	1100
Impact resistance, J	656 000	1 110 000	1 680 000
Axle load, t	15		
Rising time, s (+/- 1s)	3,5		
Lowering time, s (+/- 1s)	2,0		
Operating temperatures, °C	-40/ +60		
Power supply	3 phase 400V, 50/60 Hz		
Protection level	IP 67 (for road blocker) IP 54 (for control box)		
Materials	Structural steel C22 (powder coated)		



City-light Cyclopes

City-light Cyclopes is an outstanding part of TiSO traffic barriers range. This type of equipment intends to manage pedestrian friendly vehicle access control. In difference to bollards, Cyclope does not require big installation depth. This kind of approach is a good solution to simplify installation and service maintenance procedures. All features in common make Cyclope well applicable solution to the widest range of projects with large scope of requirements.

Model	RB319-01
Installation type	Shallow mounted
Drive	Hydraulic
Width, mm	270
Height, mm	600
Axle load, t	15
Rising time, s (+/- 1s)	3,5
Lowering time, s (+/- 1s)	2
Operating temperatures, °C	-10/ +40
Power supply	1 phase 230V, 50/60 Hz
Protection level	IP 67 (for road blocker); IP 54 (for control box)
Materials	Brushed stainless steel AISI 304; Structural steel C22 (powder coated)



City-light Speedbumps

Its biggest advantage relates to installation type options, including both surface/ above the ground and shallow mounting/ground level installations, with frequent use at high intensity mode all the same. Dealing with surface / above the ground installation, at raised position TISO city-light speedbumps serve like a regular wedge barrier. When closed, it performs the function of a speed hump. In this case, we also get the benefit of equipment mobility, as user is able to remove it from the driveway if necessary.

Model	RB357-02	RB357-03	RB357-04
Installation type	Shallow mounted / Above the ground (with ramps)		
Drive	Hydraulic (HPU)		
Width, mm	2000	3000	4000
Height, mm	350		
Axle load, t	15		
Rising time, s (+/- 1s)	4,0	5,5	7,5
Lowering time, s (+/- 1s)	2,5	3,5	4,5
Operating temperatures, °C	-40 / +60		
Power supply	1 phase 230 V, 50/60 Hz		
Protection level	IP 67 (for road blocker) IP 54 (for control box)		
Moving part material	Structural steel C22 (powder coated)		
Ramp material	Structural rubber		

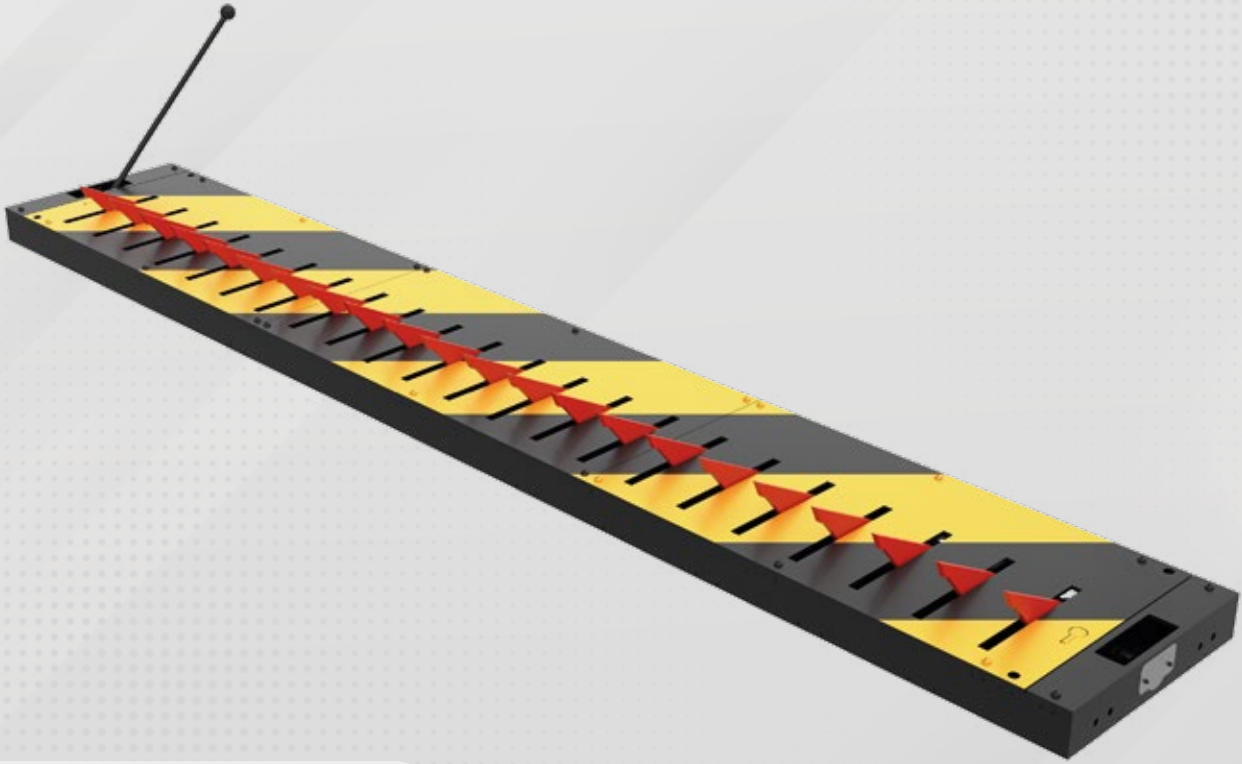


Automatic Tire-killers

TiSO Tire-killers are affordable and at the same time efficient solution for vehicle access control management. Among available configurations, we should stress out installation type options (surface /above the ground or shallow/ground level), one or two directional driveway control, and spikes of varied lengths. The diversity of options enables this traffic barriers to be widely applicable for projects at different sorts of area. The concept of built-in hydraulic unit advances equipment to be suitable for installations under severe climate conditions, as well as for projects which require large distances between PLC and blocking segment.

Model	RB373-02	RB373-03	RB373-04	RB370-02	RB370-03	RB370-04
Installation type	Shallow mounted / Above the ground (with ramps)					
Drive	Hydraulic (HPU)					
Spikes direction	One-directional			Bi-directional		
Width, mm	2000	3000	4000	2000	3000	4000
Height, mm	170					
Axle load, t	15					
Rising time, s (+/- 1s)	2.5					
Lowering time, s (+/- 1s)	1,5					
Operating temperatures,* °C	-40 / +60					
Power supply	1 phase 230 V, 50/60 Hz					
Protection level	IP 67 (for road blocker) IP 54 (for control box)					
Material	Structural steel C22 (powder coated)					

* for temperatures lower than -10 °C use the heating device
for temperatures higher than +40 °C use the cooler device



Mechanical Tire-killers

Mechanical Tire killers is a good choice for vehicle access control projects without available power supply. TiSO offers two types of such devices: springs or lever drive. In the first case, spikes always remain raised and one direction free to pass. Dealing with lever operated tyre killers, you get three operation modes: spikes up and blocked to both directions, spikes down and blocked, spikes up and free to one direction. The range is classified according to variety of blocking widths and spikes lengths. Also, we should mention optional installation configurations: surface / above the ground or submerge / ground level.

Model	RB379-06	RB379-07	RB379-16	RB379-17
Installation type	Above the ground (with ramps)		Shallow mounted	
Drive	Mechanical			
Spikes direction	One-directional			
Width, mm	2000	3000	2000	3000
Height, mm	80			
Axle load, t	15 (up to 50 with increased foundation depth)			
Material	Structural steel C22 (powder coated)			



Boom barrier

Automatic boom barrier Optimus-50 BM, featuring a 24V BMDrive mechanism, is designed to control vehicle access for passageways up to 5 meters wide. It is typically installed at entry/exit points and can be integrated with parking management systems to ensure robust site security.

The BMDrive® is a reliable mechanism powered by a robust brushless DC motor (BLDC), guaranteeing sustained, long-term operation.

Its high boom opening/closing speed of 3–5 seconds ensures rapid vehicle throughput.

A key feature of this model is its reversible operation

(right-hand or left-hand) without requiring mechanism replacement.

Exceptional corrosion protection is provided by the galvanized and powder-coated steel housing.

The aluminum boom offers excellent resistance to wind loads.

The design ensures easy installation and maintenance, complying with all European safety standards.

In the event of a power failure, the boom barrier can be operated manually.

Remote control operation is provided (including a radio receiver and two remote controls).

Model	Optimus 50 BM
Drive	electro-mechanical
Arm length*	3-5 m
Operation mode	left / right version
Cabinet dimensions (LxWxH)	255 x 340 x 1050 mm
Raising/lowering time	3-5 s
Power supply	220-240 V, 50/60 Hz, 240 W
Mechanism	24V BMDrive (BLDC)
Protection class	IP 54
Operating temperature	-40°C / + 60°C*
Material of cabinet	Powder-coated galvanized steel (standard). Brushed stainless steel AISI 304 / AISI 316 (optional).
Material of arm	Powder coated aluminium
Signalling	Standard - RGB indication on all sides of the cabinet optional - arm lighting RGB

* other arm length is available upon request

** for temperatures below -40 °C heating system to be used /
for temperatures above +60 °C cooling system to be used (option)



Radio remote controller kit 433Mhz (one controller, two keyfobs)

Radio remote controller kit makes it possible to remotely open and close the equipment like bollards, road blockers, tire killers, arm barriers.



LED traffic light (section 95mm diameter Green/Red) and sound alarm

Traffic light has two lights, facing the oncoming traffic, red on top and green below that. Can be installed with support post or wall-mounted.



One-channel induction loop (controller + 30m of cable)

Indicates the appropriate sensitivity setting the vehicle positioned on the loop.



Manual hydraulic pump (for external hydraulic station)

Manual pump used for hydraulic operation in power failure conditions.



E.F.O. (emergency fast operation)

Emergency fast operation system is intended to provide fast rising speed up to 1 sec.



High-pressure hydraulic hose

Hose that provide high-pressure supply of power fluids.



Photocells

Photocells are installed in the kit to exclude the possibility of blocker lifting when the vehicle is on it.



Heating device

Heating device is intended to prevent the system freezing (recommended for cold climates). Use for temperatures conditions lower than -10°C.



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