

TurnOGate



Installation, Commissioning and Maintenance Manual

Original instructions

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1 CONTENT AND CONSULTATION

1.1 FOREWORD

To ensure the product safety, TurnOGate must be handled, installed, commissioned, maintained and dismantled carefully in accordance with the instructions given in this manual and in compliance with the applicable laws.

1.2 PURPOSE OF THE MANUAL

This manual is an integral part of the TurnOGate product and has been entirely compiled by the manufacturer with the aim of providing the necessary information to those people authorised to interact with it.

This manual describes the state of the product at the time of its publication and can in no way reflect future or non-standard versions of the product.

The content of this manual has been checked for correctness and conformity with the described equipment. It is however not possible to guarantee the absence of possible differences.

1.3 COPYRIGHT

This manual is protected by copyright. No part of this manual can be reproduced in any form without prior written consent from Zwei S.r.l.

All products and trademarks listed in this document are property of their respective owners.

1.4 ADDITIONS AND UPDATED

This manual reflects the state of technical knowledge at the moment of the manufacture of the TurnOGate product, of which it is an integral part.

The manufacturer reserves the right to update the product and consequently to update other editions of the manual with no obligation to update previous products or manuals, except in special cases concerning the health and safety of people.

1.5 SUGGESTIONS AND COMMENTS

Comments and suggestions regarding this manual are welcome. Please direct them to:

Zwei S.r.l.

Via Rogeno, 19 - 23845 Costa Masnaga - (LC) - Italy

email: info@e-co.us

1.6 PERSONS FOR WHOM THIS MANUAL IS INTENDED

This manual is intended for the personnel assigned to installation, commissioning and maintenance.

This manual DOES NOT include topics that describe special maintenance. These operations must be performed and authorised by Zwei S.r.l. personnel.

1.7 CARE OF THE MANUAL

Preserve and keep this manual in an appropriate place, accessible and available to the installation, commissioning and maintenance personnel.




If this manual is damaged, lost or in poor conditions, another copy can be requested from your retailer or directly from Zwei S.r.l. specifying product identification data.

If the TurnOGate product is ever transferred to other owners, the user is invited to also transfer this manual, which must accompany the TurnOGate product even in case of transfer to other owners.

1.8 TERMINOLOGY AND SAFETY SYMBOLS


This manual contains safety instructions that must be followed to ensure personal safety and to prevent damage to property. Information referring to personal safety are highlighted by a triangle while information referring to property damage are not preceded by a triangle. Warnings are shown as follows and indicate the different levels of risk in descending order.

1.8.1 Hazard categories

	DANGER	This symbol indicates that failure to comply with proper safety precautions will result in death or serious injury.
	WARNING	This symbol indicates that failure to comply with proper safety precautions can cause death or serious injury.
	CAUTION	With a danger triangle indicates that failure to comply with safety precautions can cause minor or moderate injury.
	CAUTION	Without a danger triangle indicates that failure to comply with safety precautions can cause damage to property.
	ATTENTION	Indicates that undesired situations or consequences can occur if appropriate safety measures are not followed.

1.8.2 Hazard categories

Hazard categories may fall within danger levels or specific symbols can replace the common symbols of level of danger.

	ELECTRICAL HAZARD	Dangerous voltage. Risk of death or serious injury. Disconnect power before working on this device.
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2 INTENDED USE AND IMPROPER USE

The TurnOGate product is a device that has been designed for the control of pedestrian flow and has to be assembled as indicated in following chapters.

This equipment must only be used for the purposes it has been designed for, as shown in the catalogue and in relevant technical documentation.

Any other use is considered improper and therefore potentially dangerous. Zwei S.r.l. is not responsible for any damage caused by improper use.

3 SAFETY INSTRUCTIONS

	WARNING	<p>Important personal safety instructions are contained in this chapter. CAREFULLY READ contents in order to understand warnings. Failure to comply with warnings can result in personal injury or property damage.</p>
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3.1 GENERAL SAFETY WARNINGS

3.1.1 Introduction

This manual must be complied with and referred to for any matter relating to the safety of that product.

3.1.2 General warnings

Product safety and therefore its correct installation is subject to compliance with technical specifications, directions contained in this manual, and correct installation up to standard and in accordance with safety and compliance of use expressly indicated in the technical documentation supplied with Zwei products.

3.1.3 Personnel involved

Installation, commissioning and maintenance must be carried out by qualified and authorised personnel. This personnel must use the correct equipment for installation and/or maintenance as indicated in this manual (see paragraph 6.1).

3.2 SAFETY WARNINGS FOR INSTALLATION AND COMMISSIONING

3.2.1 Preparing the installation site

Carefully read all instructions before performing any operations. Incorrect installation can be dangerous and cause damage to people or things.

Installation, commissioning and connection must be performed up to standard and in compliance with applicable laws and regulation.

3.2.2 Preliminary operations

Properly mark and demarcate the entire installation site to avoid careless access to the work area by unauthorised persons, especially minors and children. The site and equipment must be under surveillance in the installation phase.

Be careful when handling products weighing more than 20 kg. When doing so, utilise appropriate tools for safe handling.

Any residual risks should be reported to the end user with appropriate pictograms as required by law.

3.2.3 Moving parts

The TurnOGate product has been designed for the control of pedestrian flow and has to be assembled as indicated in the following paragraphs. The TurnOGate product contains rotating components which can store discrete amount of energy.

Installation, commissioning and maintenance imply full understanding of operations to be performed and/or the use of all safety precautions normally associated with machines containing moving parts.

3.2.4 Spare parts

Use original spare parts. The use of non-original spare parts can cause malfunction conditions that can cause hazardous conditions for the operator and damage to property.

3.2.5 Using third-party components

Any products or components from other third-party manufacturers must be first approved by Zwei S.r.l. Any type of tampering or unauthorised replacement of non-original components can be hazardous to the operator's safety and release Zwei S.r.l. from any liability.

3.2.6 Hardware modifications

No hardware modifications can be made without the written permission of Zwei S.r.l. **All unauthorised hardware modifications will make the warranty null and void.**

3.3 SAFETY WARNINGS FOR MAINTENANCE

Make sure that the unit has been disconnected from mains before performing any cleaning or maintenance operations.

Adjustment and programming must be carried out by qualified personnel.

Errors or incorrect adjustments can cause hazardous conditions and/or poor operation.

3.4 SAFETY WARNINGS FOR USERS

Keep passageway maneuvering areas free of obstructions and clean. Check that the range of action of any photocells and radar devices is clear.

Children should be supervised to ensure that they do not play with the device and control devices or remain in the gate maneuvering area. Keep remote control devices (if any) and any other control devices out of their reach to prevent the equipment from being activated accidentally.

The device is not intended for use by people (including children) with reduced physical, sensory, mental capacity or by people with little experience or knowledge unless they are supervised or instructed on use of the device by the person responsible for its safety.

Users are **NOT PERMITTED** to perform any OPERATIONS THAT HAVE NOT BEEN EXPRESSLY REQUESTED AND INDICATED. CONTACT TECHNICAL SUPPORT for repairs, adjustment changes and special maintenance.

3.5 RESIDUAL RISKS

We hereby inform the installer and the customer that the following residual risks can be generated upon installation of the TurnOGate product:


- **Residual risk:** Risk of contact of the rotating arms on people, animals or objects that are within its range.
- **Frequency of exposure:** Accidental
- **Degree of damage:** Slight injuries (usually reversible)
- **Measures taken:** Obligation, before commissioning, to ensure that there are no people, animals or objects whose safety may be accidentally jeopardised within the range of action. Keep passageway maneuvering areas free of obstructions and clean. Pictograms and written signs clearly informing of this residual risk must be affixed near the product.

3.6 RISK ASSESSMENT

Risk assessment is defined within the risk categories that go from 1 to 8 (where 8 is the highest risk level).

Level of risk	Activity	Who is at risk	Hazards	Envisioned control
1	Cleaning	Installation technicians or personnel	Incorrect use of detergents.	Respect of hygiene regulations
2	General installation	Installation personnel	Objects/equipment in the area of installation	Trained installation personnel
3	General maintenance	Installation personnel	Objects/equipment in the area of maintenance	Trained maintenance personnel
	Maintenance – Use of chemical adhesives	Personnel adjacent to the work area	Inhalation of chemical substances	Compliance with health regulations
4	Commissioning	Plant technicians	Moving parts	Carefully consider any interferences
8	Drilling the pavement	Personnel in charge of installation	Emission of fragments and noise	It is mandatory to wear protection equipment

3.7 WARNING FOR THE CORRECT DISPOSAL OF THE PRODUCT IN ACCORDANCE WITH EC DIRECTIVE 2012/19/EU

	WARNING	Disposal of the product implies that the product has been uninstalled following the steps outlined in chapter 6 to page 19.
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The product must not be disposed of as municipal waste at the end of its useful life.

The product can be taken to a special waste collection centre provided by local government or to a dealer providing this service.

Dispose of this device separately to prevent possible negative consequences for the environment and health deriving from an inappropriate disposal and to permit the recovery of materials of which it is composed for significant savings in energy and resources.

The product is marked with a crossed-out wheeled bin as a reminder of the need to dispose of the devices separately.

3.8 INFORMATIONS ON NOISE EMISSIONS

The TurnOGate product was designed so to reduce to the minimum possible level the noise emissions from the source.

Evaluations conducted in a non reverberating environment highlighted a product's level lower than 70 dB(A).

4 PRODUCT DESCRIPTION

4.1 INTRODUCTION

The TurnOGate product has been developed for the control and management of pedestrian flow and to avoid an improper use.

The TurnOGate product is based on a unidirectional rotation with pushing arms which allows to walk through in a unidirectional way one person at a time and it is equipped with an anti-panic device and a safety device.

It is still extremely effective and it is made of chrome steel. Installation is easy and it does not require the intervention of specialised technicians.

4.2 BASIC ELEMENT AND COMPONENTS

4.2.1 Basic element

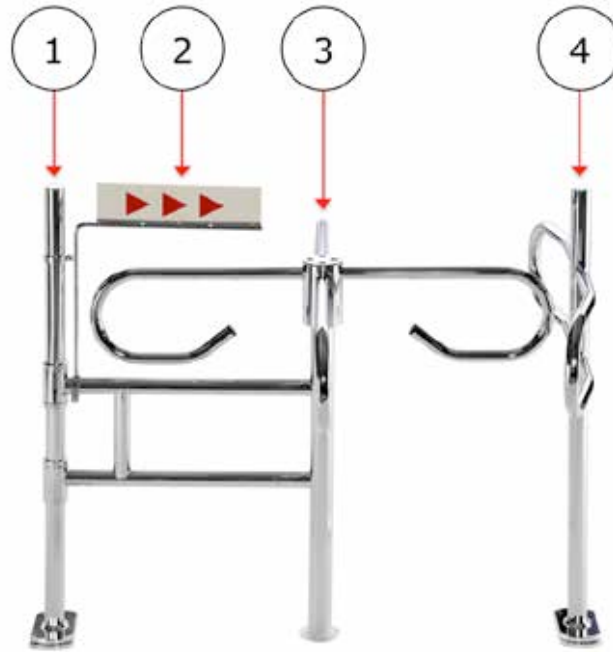
Model	Equipment	Surface finish	Code
TurnOGate	• Without upright and guide arch	chromed	242 456 710

4.2.2 Components

Model	Equipment	Surface finish	Code
Upright for TurnOGate	• Ø 48 - h = 1.120 mm	Chromed	242 858 204
Upright extension	<ul style="list-style-type: none"> • Upright extension Ø 48 - L = 300 mm • Fixing ferrule • Sleeve 	<ul style="list-style-type: none"> • Sleeves colour: x = 4 → black x = 5 → grey RAL 7035 • Chromed extension and ferrule 	2x2 851 004
Anti-climb turnstile table's support with sign	Left		532 457 011
	Right		532 457 010
Shopping cart passage table's support with sign			530 800 604
Shopping cart passage	• 4 flaps • 1.000 mm bar	<ul style="list-style-type: none"> • Flaps' colour: x = 4 → black x = 5 → grey RAL 7035 	2x2 802 606
	• 6 flaps • 1.500 mm bar		2x2 802 604
	• 8 flaps • 2.000 mm bar	• Bar: chromed	2x2 802 605
Shopping cart passage with anti-panic device	<ul style="list-style-type: none"> • Anti-panic device • 4 flaps • 1.200 mm bar 	<ul style="list-style-type: none"> • Flaps' colour:. x = 4 → black x = 5 → grey RAL 7035 • Bar: chromed 	2x2 456 810
One way device	<ul style="list-style-type: none"> • One way device (disassembled) • Clips • Screws 	Black	230 800 504
		Grey RAL 7035	250 800 504
		Grey RAL 7005	290 800 504
Upright extension	Ø 48 mm	<ul style="list-style-type: none"> • Extension: chromed • Sleeve's colour: x = 4 → black x = 5 → grey RAL 7035 	2x2 851 004
Guide arch	• Arch • 1.120 mm upright	Chromed	242 850 004

4.3 TYPICAL CONFIGURATION

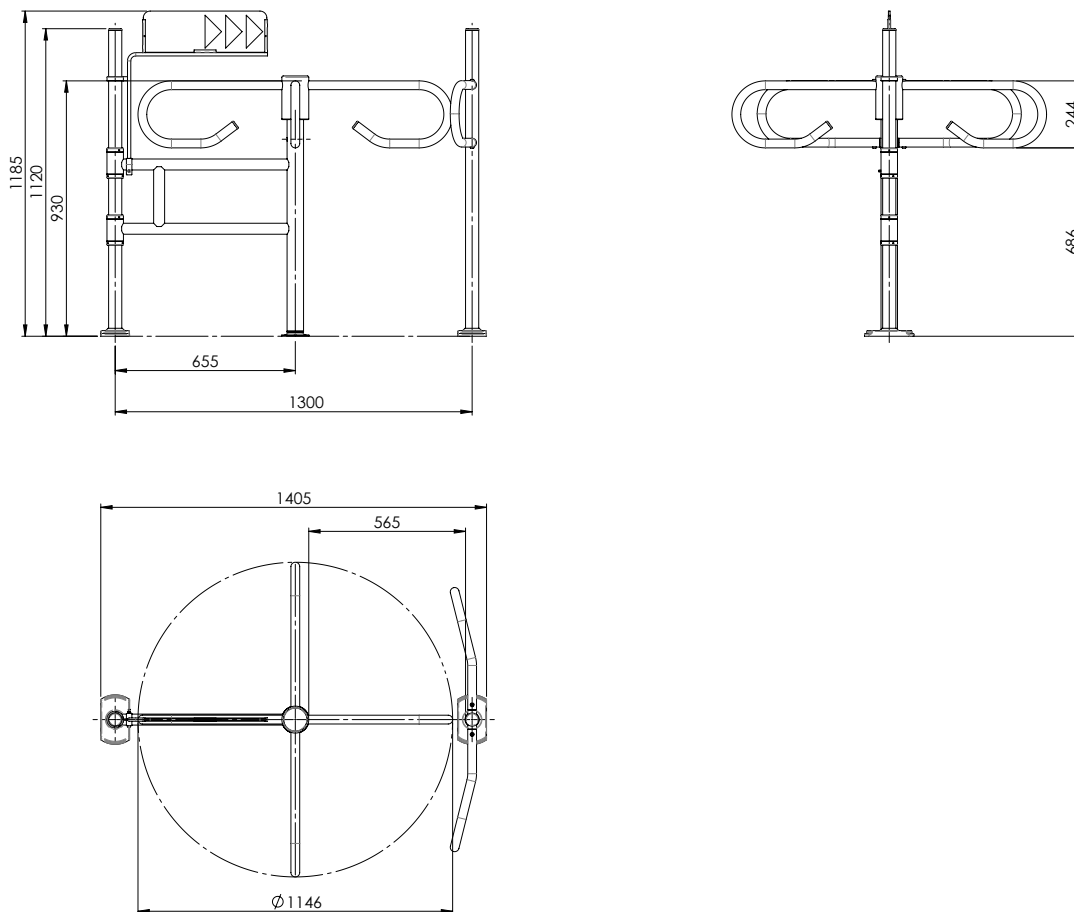
4.3.1 TurnOGate with guide arch



Picture 1–TurnOGate with guide arch

Key codes products configuration					
1	242 858 004	Upright Ø48 - h=1.120 mm	3	242 456 710	TurnOGate
2	532 457 010	Signage	4	242 850 004	Guide arch with upright

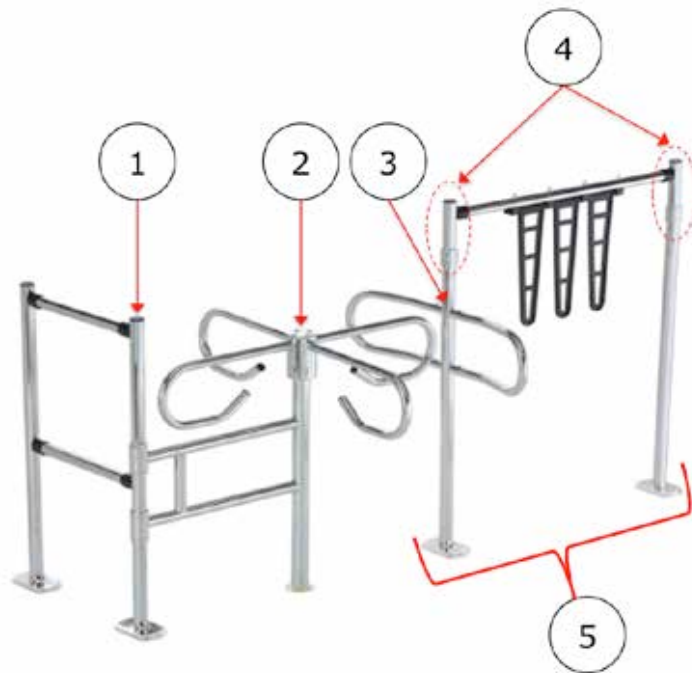
4.3.1.1 Dimensions



Picture 2–TurnOGate with guide arch - dimensions

4.3.2 TurnOGate with guide arch and standard cart passage

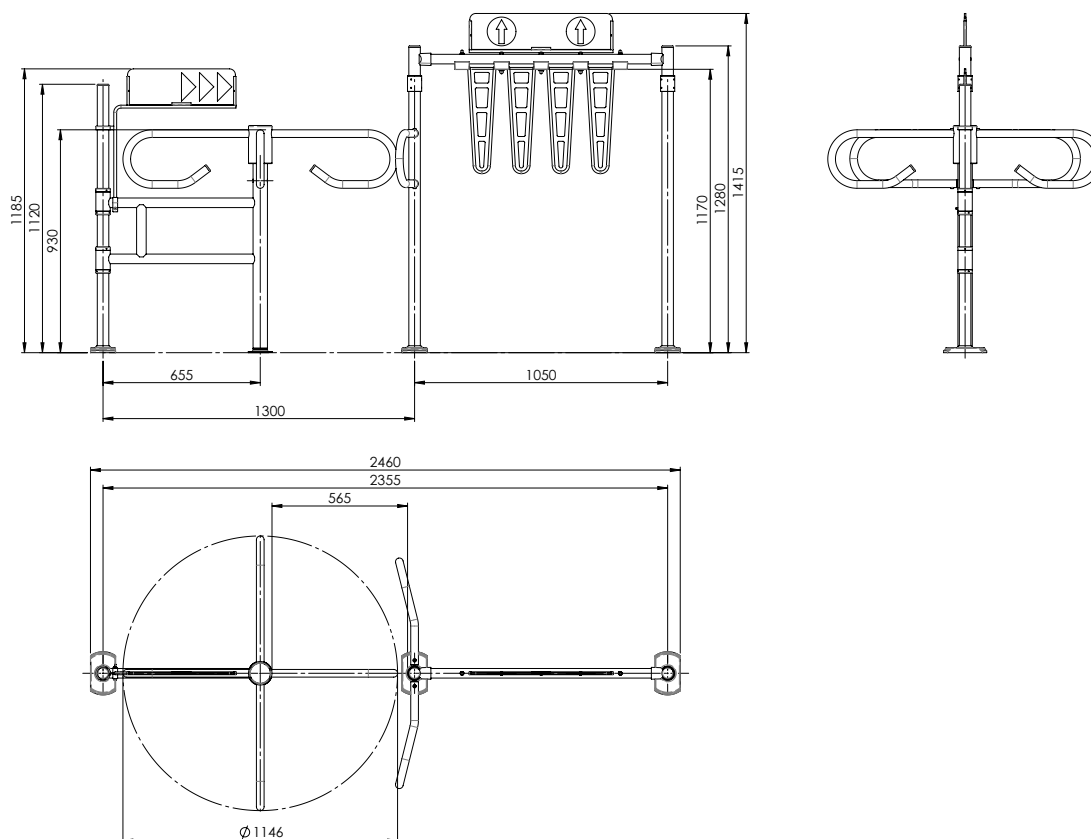
4.3.2.1 Overview



Picture 3–TurnOGate with guide arch and cart passage

Key codes products configuration					
1	242 858 004	Upright Ø48 - h=1.120 mm	4	2x2 851 004	Upright extensions with sleeve and fixing ferrule
2	242 456 710	TurnOGate	5	2x2 851 004	Shopping cart passage
3	242 850 004	Guide arch with upright	6	240 311 010	Upright Ø48 - h=1.120 mm

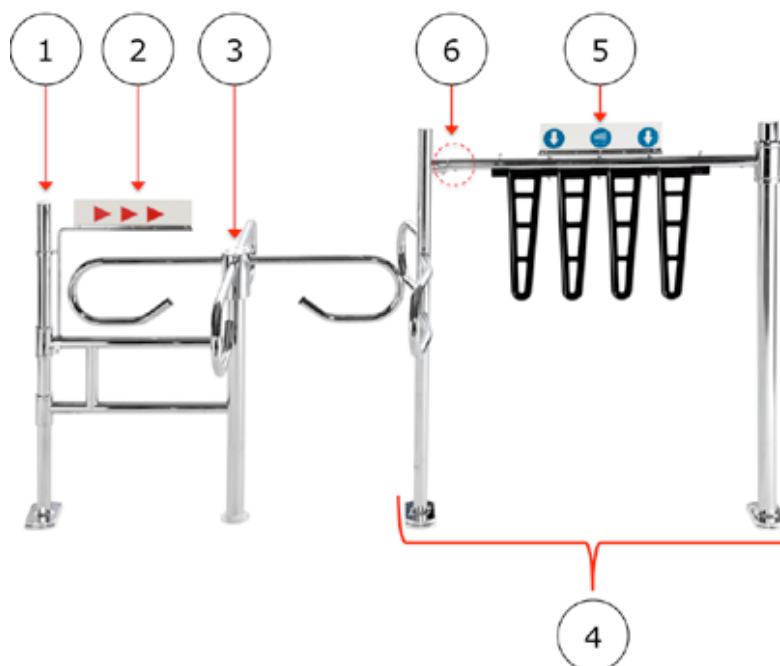
4.3.2.2 Dimensions



Picture 4–TurnOGate with guide arch and cart passage - Dimensions

4.3.3 TurnOGate with guide arch, cart passage with anti-panic device

4.3.3.1 Overview

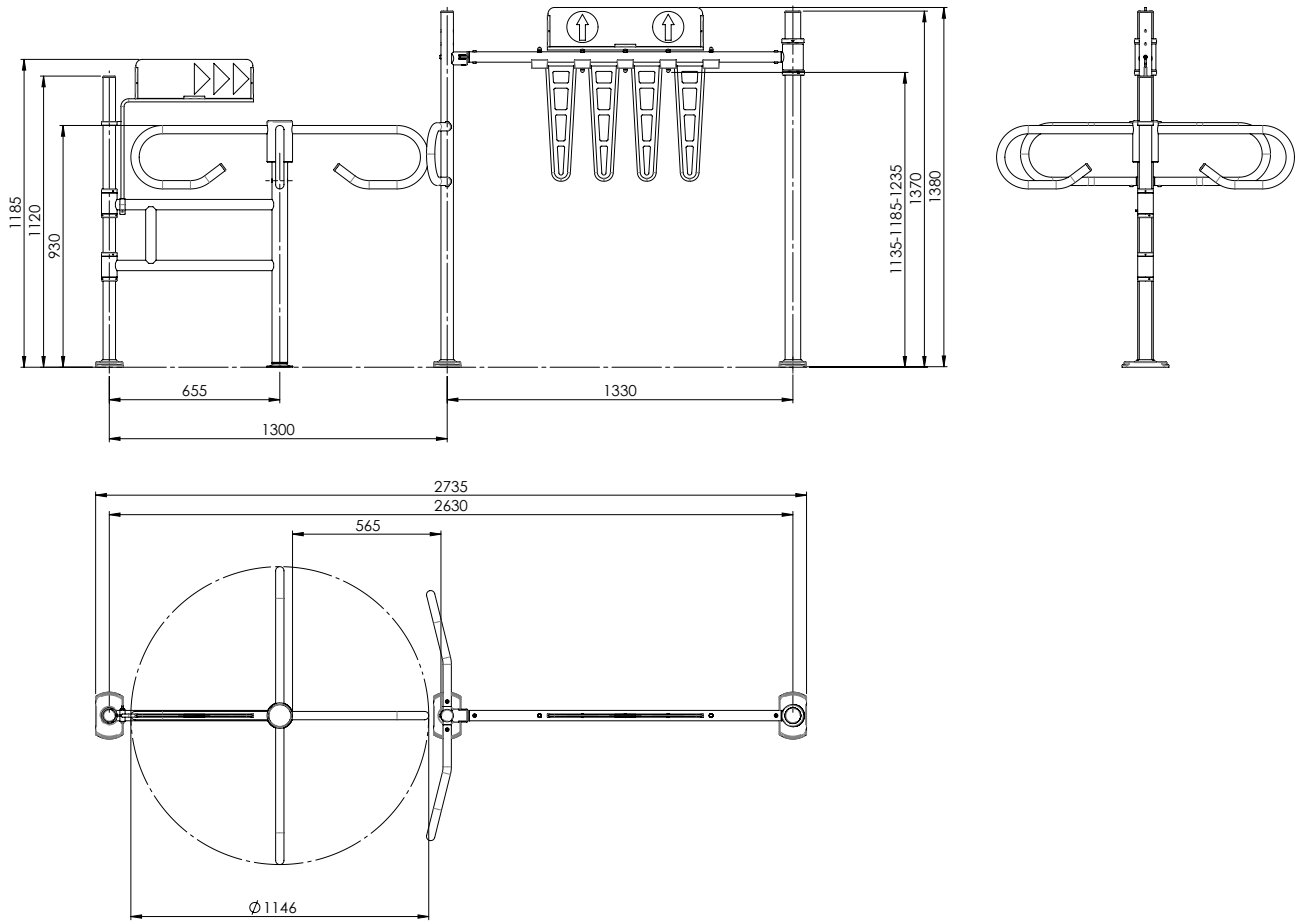


Picture 5–TurnOGate with guide arch and cart passage with anti-panic device

Key codes products					
1	242 858 004	Upright Ø48 - h=1.120 mm	4	2x2 456 810	Shopping cart passage with anti-panic device with guide arch and upright Ø60
2	532 457 010	Turnstile's signage (optional)	5	530 800 604	Shopping cart passage's signage (optional)
3	242 456 710	TurnOGate	6	Included in 2x2 456 810	Release device

	WARNING	It is the client's responsibility to identify and evaluate the use of the product as an emergency exit in compliance with the current norms and regulations that can be applied.
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4.3.3.2 Dimensions



Picture 6-TurnOGate with guide arch and cart passage with anti-panic device - Dimensions

4.4 OPERATION PRINCIPLE

4.4.1 Description

It is the oldest and easiest access control system. It is safe, efficient and cheap.

With the unidirectional rotation of the arms, it allows the passage of one person in one direction at a time. It is still extremely effective and it is entirely made of chrome-plated steel. The device for the passage of shopping carts can be added on request and it is available with different dimensions.

This turnstile is easy to install and it does not require the work of specialised technicians. It always guarantees a fast installation without the need for an electrical or construction configuration.

The basic kit is made up of the frame, the upright axis with the unidirectional rotation and the supporting metal ring.

4.4.2 Areas of use

The main areas of use are:

- Hypermarkets
- Supermarkets
- Discounts
- DIY stores
- Garden Centers
- Sport facilities
- Gyms
- Museums

4.4.3 Operation

The turnstile has a manual push mechanism. Rotation is unidirectional.

The turnstile is integrated with an anti-panic device and a safety device as indicated in paragraph 5 to page 16.

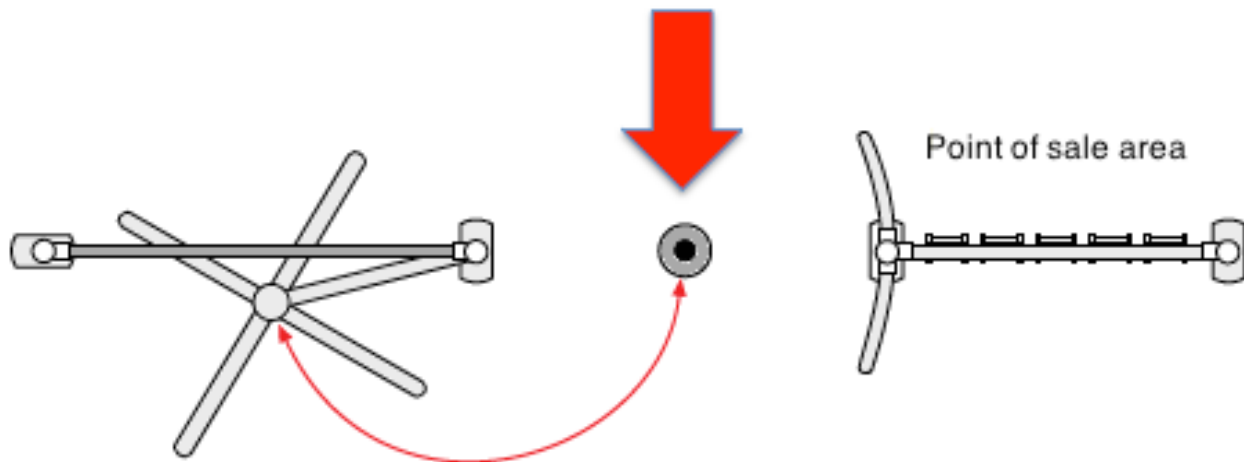
	WARNING	The clockwise or counter-clockwise rotation can be defined during the installation process and can be varied with a few simple manual operations or by asking our maintenance service for information:
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5 SAFETY DEVICES

The TurnOGate product is designed with the following safety devices.

5.1 TURNSTILE'S ANTI-PANIC DEVICE

By pushing the turnstile's rotating part it is possible to forcibly unhook the turnstile itself from the fixing support on the ground, without lifting the turnstile, and allowing it to rotate in the exit direction as shown in the picture. This requires an adequately foreseen operating space as demonstrated in the picture.




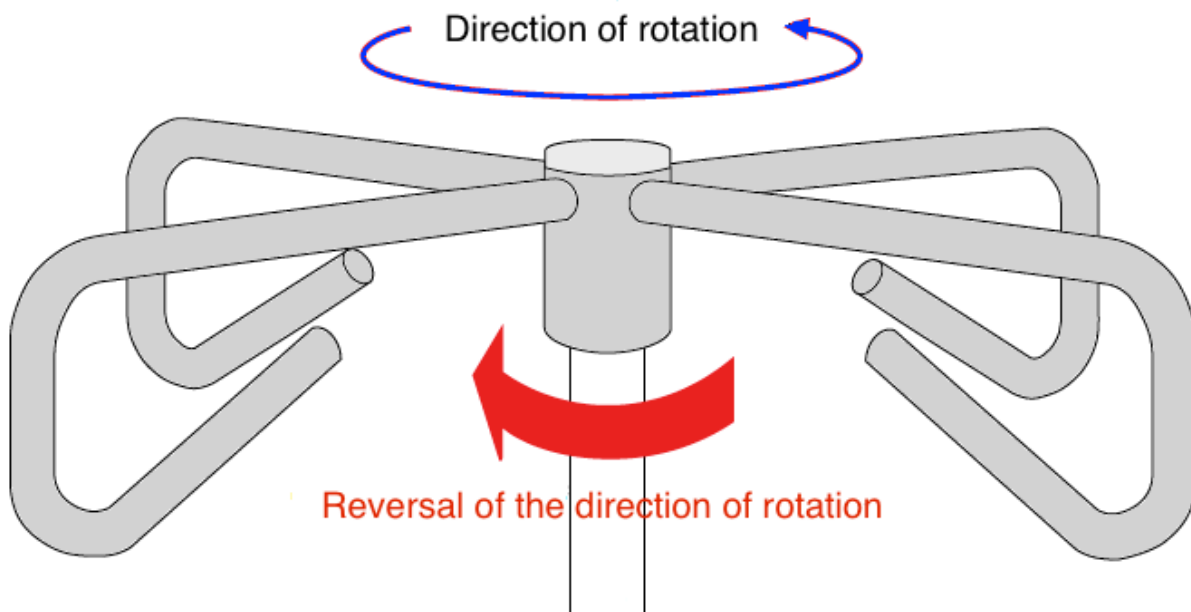
Picture 7-Turnstile's anti-panic device

	<p>WARNING</p>	<p>It is the client's responsibility to identify and evaluate the use of the product as an emergency exit in compliance with the current norms and regulations which can be applied.</p>
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5.2 SAFETY DEVICE

If the turnstile receives a 100 N·m push in the opposite direction compared to the foreseen one, the rotation is inverted. After a 90° rotation the turnstile goes back to its normal operation. This prevents people, potentially stuck in the turnstile, from getting injured.

	<p>WARNING</p>	<p>The safety device is pre-set from factory. No setting is required from the client.</p> <p>Eventual alterations or modifications will make the warranty null and void and could cause damages to the user.</p>
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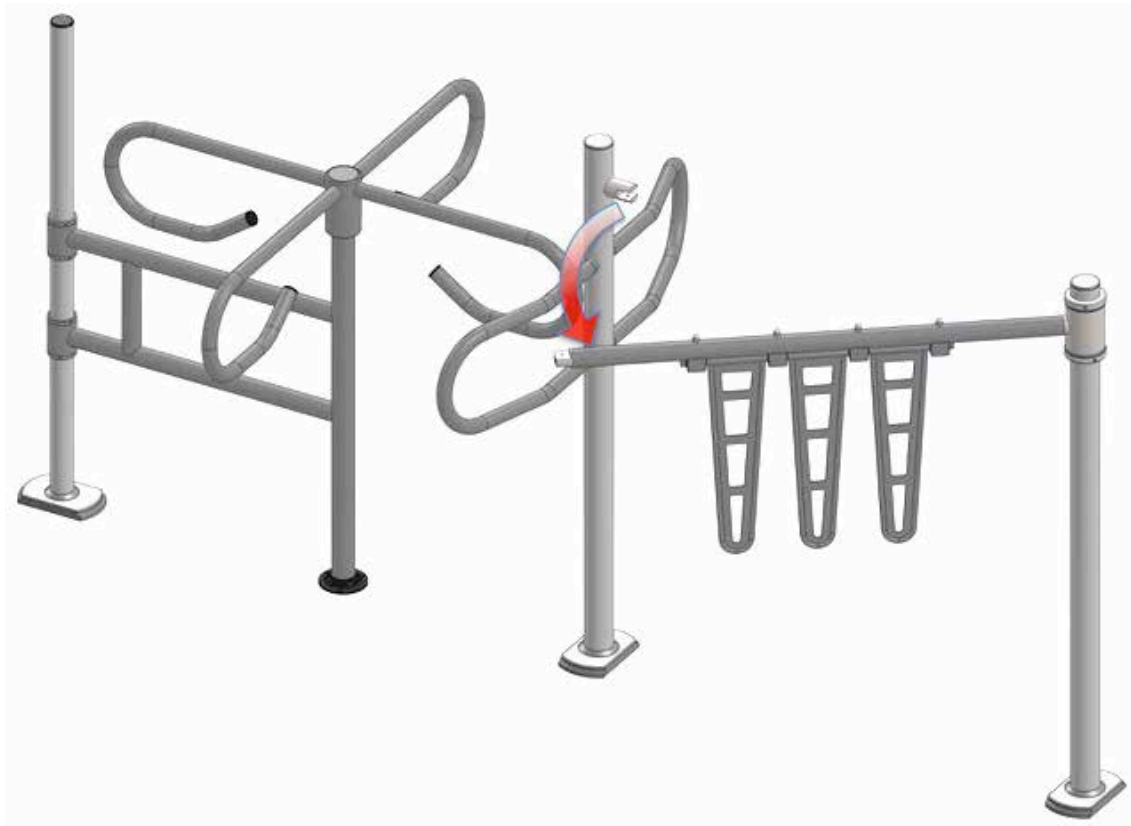


Picture 8–Safety device

	<p>WARNING</p>	<p>It is the client's responsibility to identify and evaluate the use of the product as an emergency exit in compliance with the current norms and regulations which can be applied.</p>
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5.3 SHOPPING CART PASSAGE'S ANTI-PANIC DEVICE

By pushing the superior bar of the cart passage it is possible to force the unhook from the fixing support, allowing it to rotate in the exit direction as indicated in the picture. This requires an adequately foreseen operating space as demonstrated in the picture.



Picture 9–Dispositivo antipánico passaggio carrelli

It is possible to regulate the release pair of the arm. For more information see paragraph "CART PASSAGE WITH ANTI-PANIC DEVICE INSTALLATION" to page 32.

	<p>WARNING</p>	<p>It is the client's responsibility to identify and evaluate the use of the product as an emergency exit in compliance with the current norms and regulations which can be applied.</p>
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6 INSTALLATION



WARNING

Before starting TurnOGate's installation, make sure you have carefully read and understood the warnings in the chapter.

6.1 EQUIPMENT FOR INSTALLATION

Before starting TurnOGate's installation, make sure you have the following materials:

Percussion drill with a set of tips for porcelain and ceramic materials



Set of cup cutters for tiles



Set of tips for iron



Screw gun



Short magnetic level



Set of keys from 5 to 22



Heavy hammer



Rubber mallet



Hacksaw for iron



Small angle grinder



Cutting disc for iron



Markers / Pencils



Measuring tape



Protective helmet



Wire tracer with powder



Vacuum cleaner



Scissors



Universal clamp



Needle-nose pliers



Wrench



Pin punch set



Safety goggles



Cut resistant protective gloves



Protective shoes



Dust mask



Protective headphones



Screwdriver set



Hex key set



6.2 INSTRUCTIONS

6.2.1 Preparation

Before the installation, the following aspects must be considered:

- Environmental conditions;
- Physical space.

6.2.2 Environmental conditions for use

Operating temperature: $-10 \div +50$ °C @ $20 \div 90$ % RH (without condensation)

- TurnOGate must be installed indoor, away from the rain or water, since it is not protected from the damages caused by water;
- This device must not be used in potentially explosive areas;
- It is important to evaluate the type of users and pedestrian flow that could go through the device;
- The device and the surrounding environment must be designed and arranged to allow a safe pedestrian flow;
- Every installation and electrical connection must be done by QUALIFIED PERSONNEL.

6.2.3 Physical space

For the installation, it is good practice to compare the TurnOGate's dimensions (see paragraph 4 to page 10) with the space effectively available at the client's facility.

6.2.4 Handling the product

Use, where necessary, adequate equipment to lift the product.

The maximum weight that can be manually handled by an adult man is 25 kg in accordance with regulation ISO 11228.

6.2.5 Drilling

	CAUTION	Follow the instructions of the hammer drill to drill the holes to fix the product to the ground.
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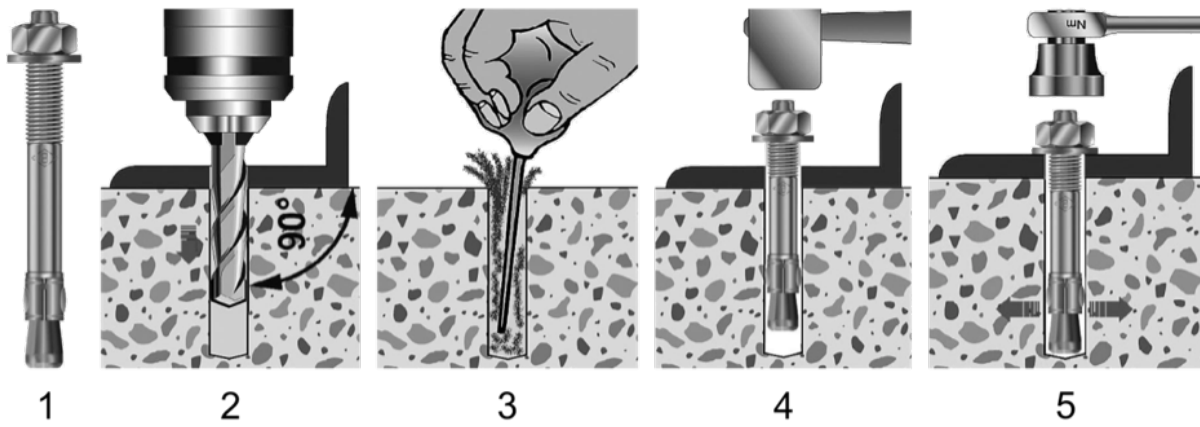
The following guidelines are provided to position the unit in a correct way.

- Carefully mark the fixing positions on the ground;
- If the installation is multiple, mark and check the fixing positions before proceeding with the drilling of the holes;
- Put the unit on the marked positions;
- Check that the holes at the basis of the unit correspond to the signs marked on the ground;
- Lift the plastic cover of the basement plate;
- Use the landmarks to orientate the unit;
- Mark the holes' position;
- Distance the unit;
- Drill the ground

CAUTION	Use a M10 threaded bar to fix the unit and make sure that the anchoring system is suitable to support TurnOGate's weight.
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- Position the components with the ground mount of the TurnOGate product;
- Mount the anchor bolts.

For more information about the installation process, see paragraph "6.3 BASIC TURNSTILE WITH GUIDE ARCH INSTALLATION" to page 23.



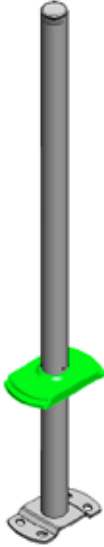
Picture 10-Example of fixing

Key

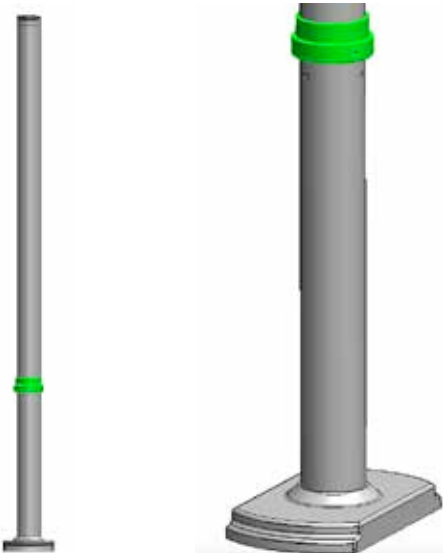
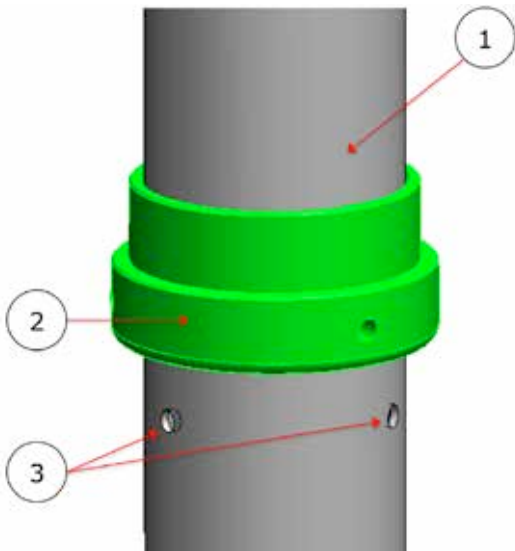
1	Fixing element	4	Insert the fixing element
2	Drilling	5	Fix the product
3	Hole's cleaning		

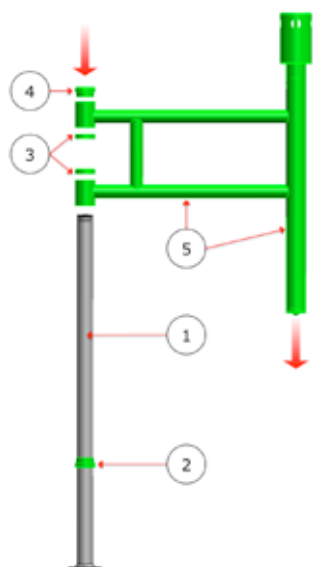
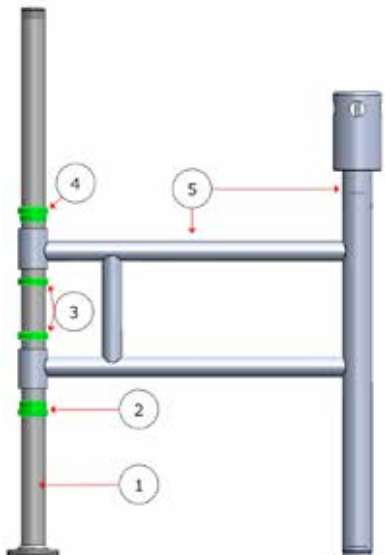
6.3 BASIC TURNSTILE WITH GUIDE ARCH INSTALLATION

6.3.1 Fixing to the ground of the upright Ø48

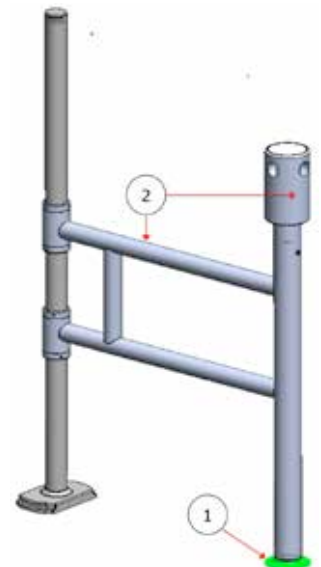
#	Phase description	
1	<p>Before starting the upright Ø48 installation, see paragraph "4.3 TYPICAL CONFIGURATION" to page 11, to understand the dimensions linked to the various configurations and relate them to the actual situation.</p> <p>Position the upright in the chosen spot, then lift the cover to access the basis of the upright. For the drilling and ground fixing of the upright see paragraph "6.2.5 Drilling" to page 21.</p>	

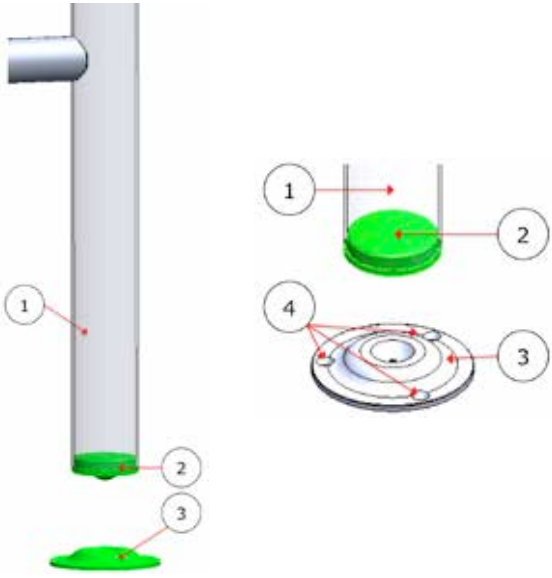
6.3.2 TurnOGate assembly

#	Phase description	
1	<p>After having fixed the upright Ø48 to the ground as described in paragraph "6.3 BASIC TURNSTILE WITH GUIDE ARCH INSTALLATION" to page 23, fix, with the supplied grains, the first profiled ferrule (2) in the lower part of the upright (1).</p>	
2	<p>As a reference, use the three threaded holes (3) on the upright (1).</p> <p>These holes have been drilled to make the installation of the ferrule (2) and the positioning of the TurnOGate's central part easier.</p>	

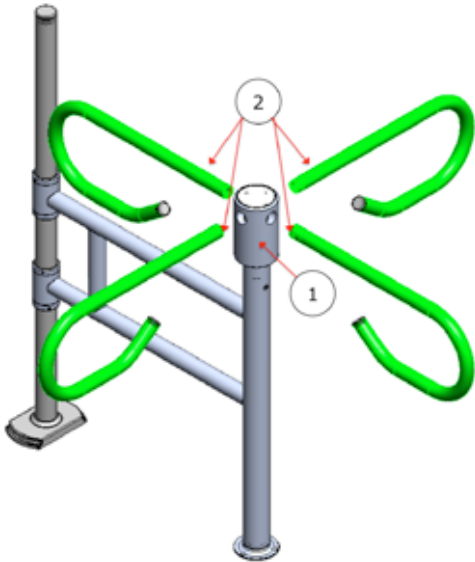
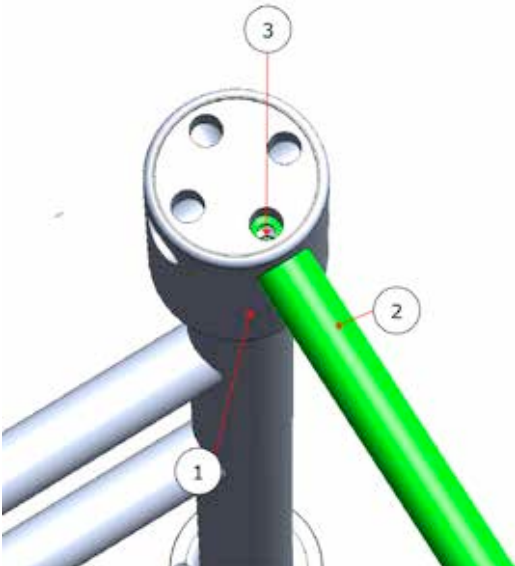
<p>3</p> <p>Once the lower ferrule has been fixed (2) on the upright (1), position the TurnOGate's central part (5) inserting it in the upright as indicated in the aside picture.</p> <p>Carefully position the central ferrules (3) and the final ferrule (4) as shown in the aside picture.</p>	
<p>4</p> <p>Once the TurnOGate's central part is inserted (5) into the upright (1) you will have the same situation as the one described in the aside picture.</p> <p>Fix the central ferrules(3) and the superior ferrule (4) with the supplied grains without permanently blocking them, because this has to be done at the end of TurnOGate's installation.</p>	

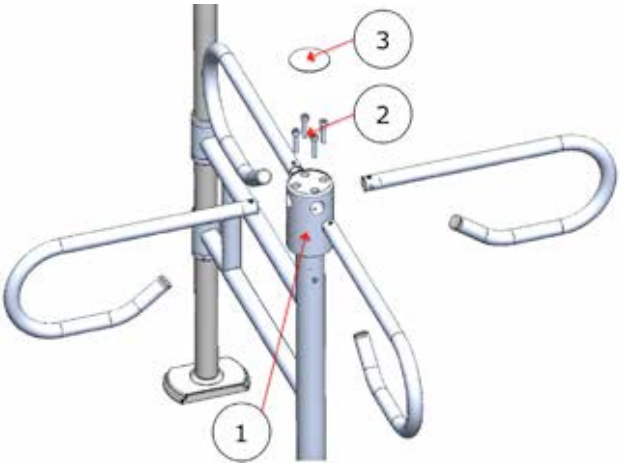
6.3.4 Fixing to the ground of the anti-panic device

#	Phase description	
1	<p>The anti-panic device (1) is positioned as indicated in the aside picture.</p>	

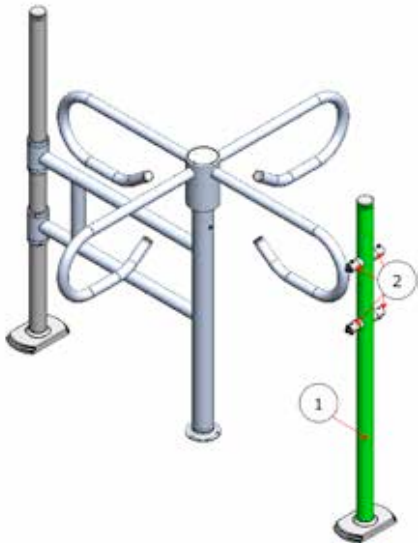
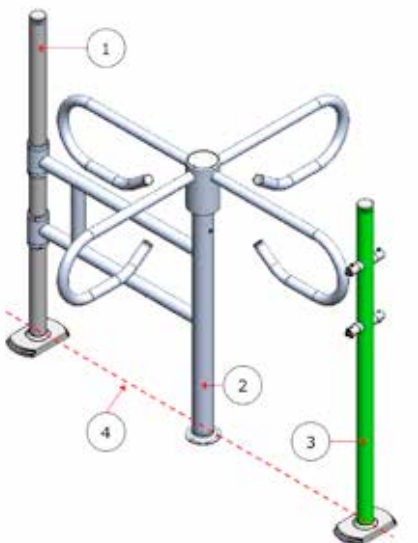
2	<p>It is made up of two elements:</p> <ol style="list-style-type: none"> 1. A shaped and plastic end inserted in the superior part of the central part's upright (2) and 1. A shaped plate (3) to be fixed to the ground through three available holes(4). <p>To position the plate see paragraph "4.3 Typical configurations" to page 11.</p> <p>For the plate's drilling and fixing see paragraph "6.2.5 Drilling" to page 21.</p>	
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6.3.5 Arms assembly

#	Phase description	
1	<p>The four arms (2) have to be fixed to the rotating part (1) of the TurnOGate turnstile.</p>	
2	<p>To do this, insert the arms one at a time in the holes on the rotating part (1) until the hole on the arm (3) is aligned to the hole on the rotating part.</p> <p>See the aside picture for the sake of clarity.</p>	

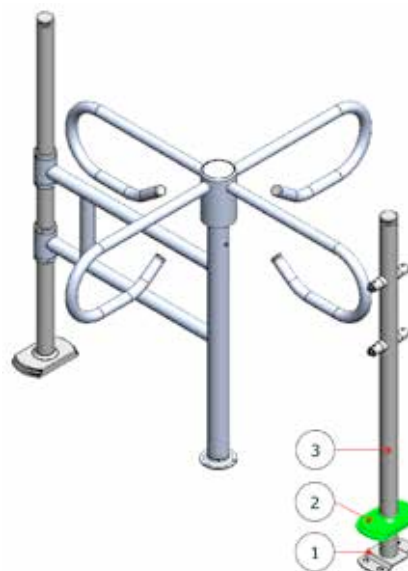
<p>3</p> <p>Fix the four arms with the supplied bolts (2).</p> <p>Once the bolts are fixed, apply the supplied adhesive cap with the ECo mark on the superior part of the extremity (3).</p>	
--	--

6.3.7 Fixing to the ground of the upright for the guide arch

#	Phase description	
1	<p>The upright for the guide arch is supplied with the couplings (2), which are already installed on the upright.</p> <p>For the positioning of the upright for the guide arch (1) see paragraph "4.3 Typical configurations" to page 11.</p>	
2	<p>The uprights (1), (2) and (3) must be aligned (4) as shown in the aside picture.</p>	

- 3 To install the upright (3), lift the base cover (2) and proceed with the drilling and fixing of the upright, see paragraph "6.2.5 Drilling" to page 21 as a reference.

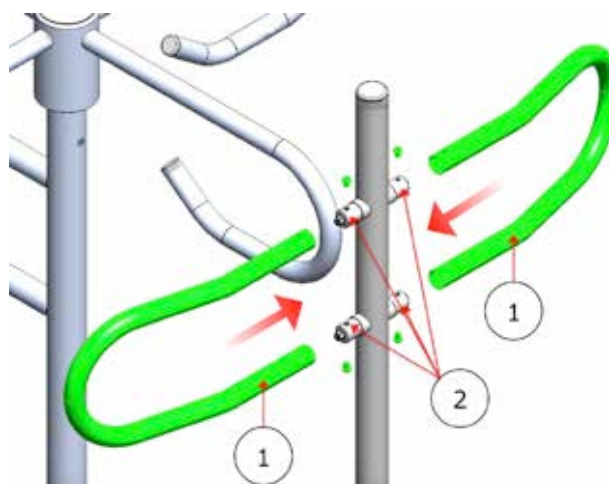
Note: The basis (1) must be aligned as shown in the picture.



6.3.8 Guide arch assembly

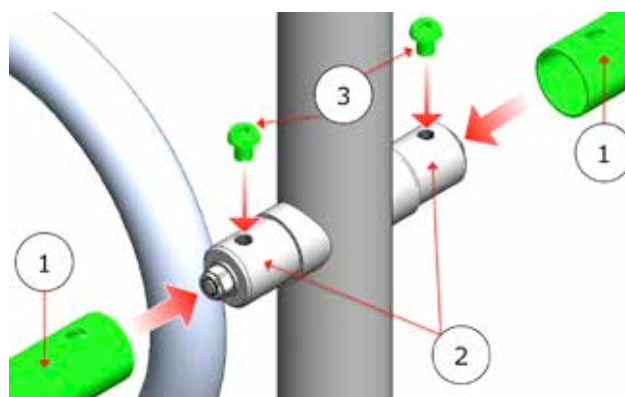
Phase description

- 1 The two supplied arches (1) must be inserted on the relative couplings (2) installed on the guide arch's upright as indicated in the aside picture.



- 2 Insert the arches (1) on the couplings (2) until they are aligned and fix them with the screw (3).

For further details see the aside picture.



6.4 STANDARD CART PASSAGE INSTALLATION

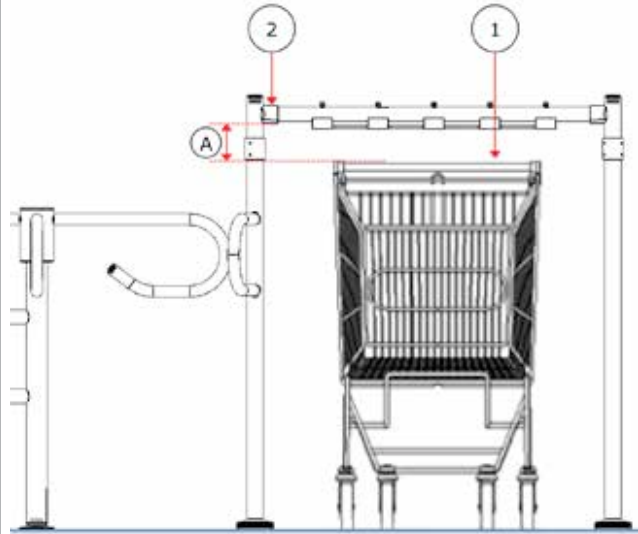
6.4.1 Upright extension assembly

#	Phase description	
1	<p>The installation of the standard cart passage (2), regardless of the passage's width, requires the installation of two extensions (1) on the guide arch upright (3) and on the upright (4), to position the bar where the flaps are mounted at a height from the ground to allow the correct passage of carts.</p> <p>The aside picture shows where the upright extensions have to be installed.</p>	
2	<p>For the upright's installation (4), see the instructions indicated in paragraph "6.3.1 Fixing to the ground of the upright Ø48" to page 23, considering the dimensions of the chosen cart passage's width.</p>	
3	<p>The upright extension is already assembled when supplied and it is made of the following elements:</p> <ol style="list-style-type: none"> 1. Ferrule for the upright's fixing 2. Upright's extension (300 mm) 3. Sleeve in the colour chosen during the order 4. Cap with Eco logo 	

4

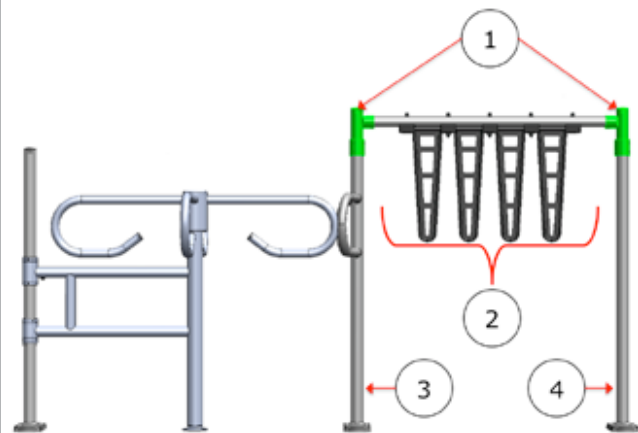
The extension's length must be dimensioned and cut in a way that makes the distance (A) between the lowest level of the upright and the cart's height not lower than 50 mm.

See the aside picture for further details.



5

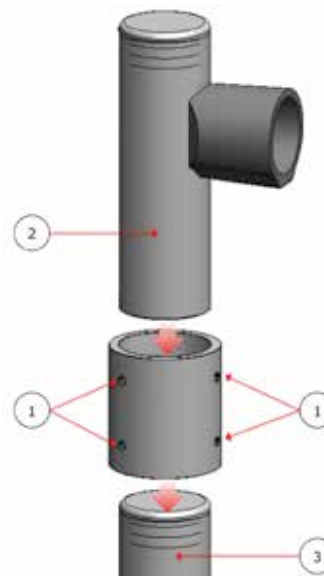
Once the upright extension has been dimensioned and cut, the extensions (1) can be fixed to the respective uprights [(3) and (4)] after inserting the bar where the flaps will be mounted (2) for the cart passage.



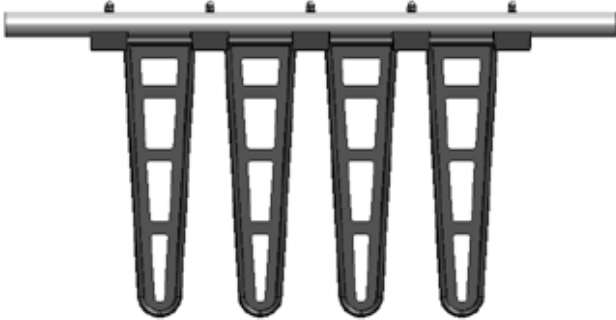
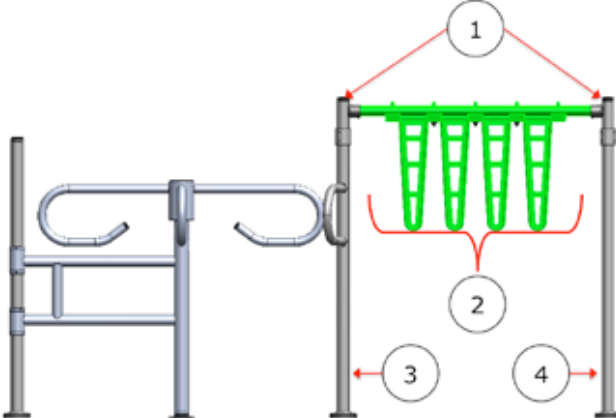
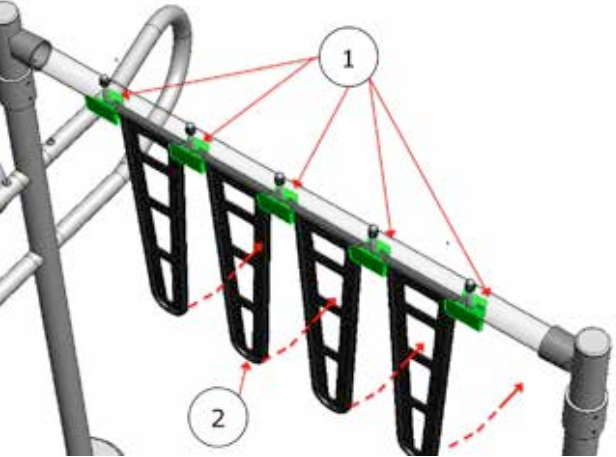
6

The extension (2) has to be fixed to the uprights (3) through the ferrule using the 6 supplied grains (1) as shown in the aside picture.

Note: the ferrule has an internal ring where the upright extension and the upright itself have to be aligned before proceeding to fixing the six supplied grains.

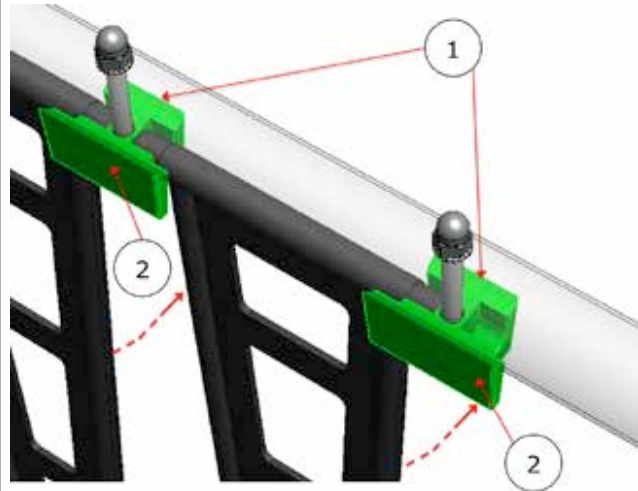


6.4.2 Bar with flaps assembly

#	Phase description	
1	<p>The bar with the flaps, regardless of the width chosen during the order, is already assembled when supplied, as shown in the side picture.</p>	
2	<p>The bar with the flaps (2) has to be positioned as shown in the side picture after having dimensioned correctly the length of the upright extensions (1).</p> <p>Note: For the dimensioning and installation of the upright extension see paragraph "6.4.1 upright extension assembly" to page 28.</p>	
3	<p>The flaps are installed with clips (1) that allow a 90° rotation only in one direction (2) (unidirectional).</p> <p>Therefore the bar with the flaps must be positioned carefully considering the direction of movement of the flaps so that these can rotate in the chosen direction.</p>	


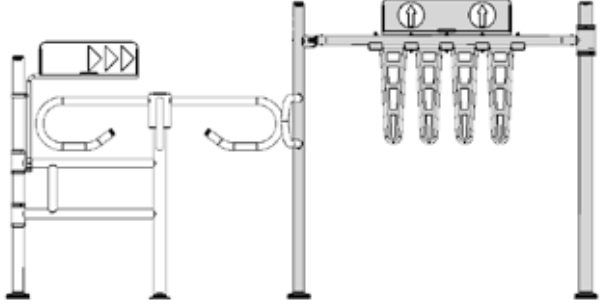
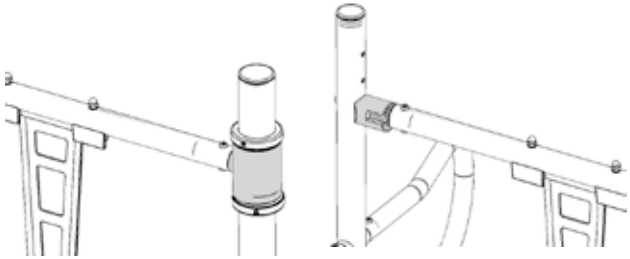
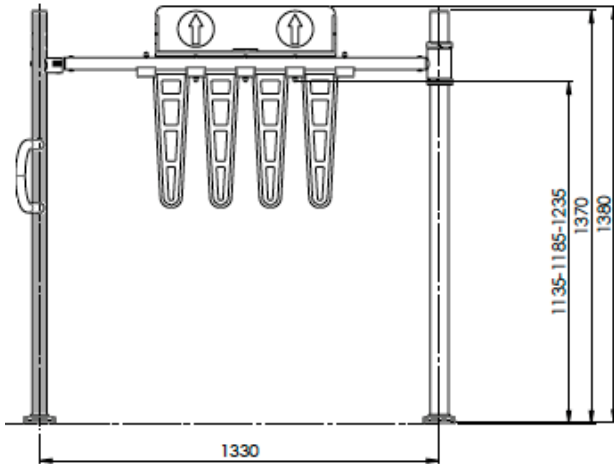
The aside picture shows the detail of the clip position according to the allowed direction of rotation.

- 4 Note: The long side of the clip (2) must be positioned towards the entrance area of the hole, whereas the short side (1) has to be positioned towards the area where the movement is not allowed.



6.5 CART PASSAGE WITH ANTI-PANIC DEVICE INSTALLATION

6.5.1 Cart passage with anti-panic device assembly

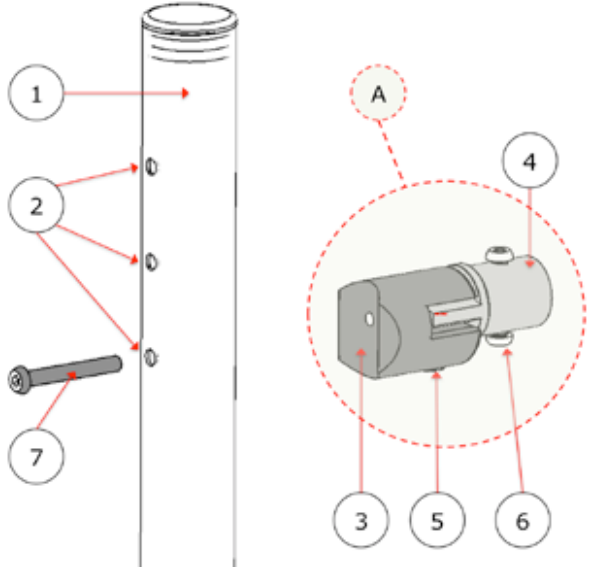
#	Phase description	
1	<p>The aside picture shows (in grey) the arrangement of the cart passage with an anti-panic device.</p> <p>The wheelbase between the uprights is 1.330 mm with a clear opening of 1.200 mm.</p> <p>Warning: It is the client's responsibility to identify and evaluate the use of the product as an emergency exit in compliance with the current norms and regulations which can be applied.</p> 	
2	<p>The particular aspects that differentiate it from the standard cart passage is linked to:</p> <ul style="list-style-type: none"> • the casing (1) to allow the rotation of the bar where the flaps are installed; • the release device (2) on the upright of the guide arch; <p>highlighted in grey in the aside picture.</p>	
3	<p>Keep in mind that in the cart passage with the anti-panic device, the upright of the guide arch (highlighted in grey in the aside picture) is different compared to the standard cart passage both for the height and the way the bar with the flaps is positioned.</p>	

4

The guide arch upright (1) has three holes (2) in order to position the anti-panic device (A) as indicated in the aside picture.

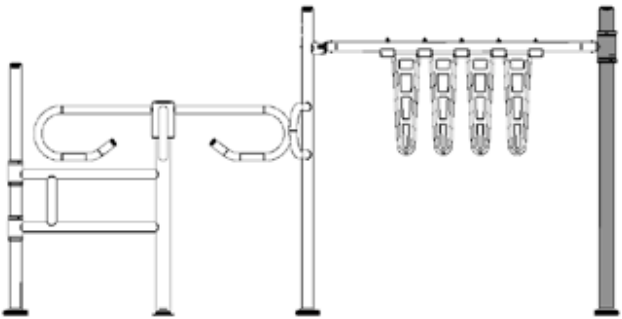
The position must be chosen (2) according to the height where the bar with the flaps will be positioned, to allow the correct passage of the carts.

The block (3) of the anti-panic device (A) must be fixed with the supplied screw (7).



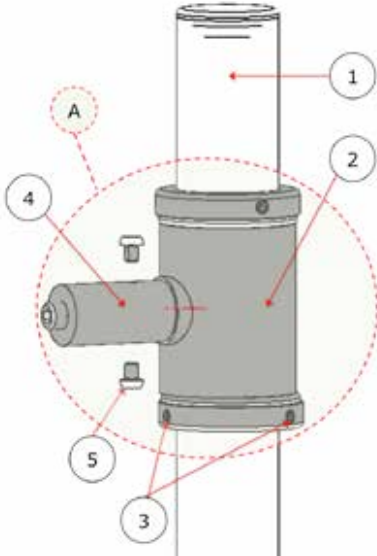
5

Once the anti-panic device has been fixed to the upright of the guide arch you have to position and install the upright Ø60 to the ground (highlighted in grey in the aside picture) which is already ready with the casing to allow the bar's rotation, on which the flaps are installed.



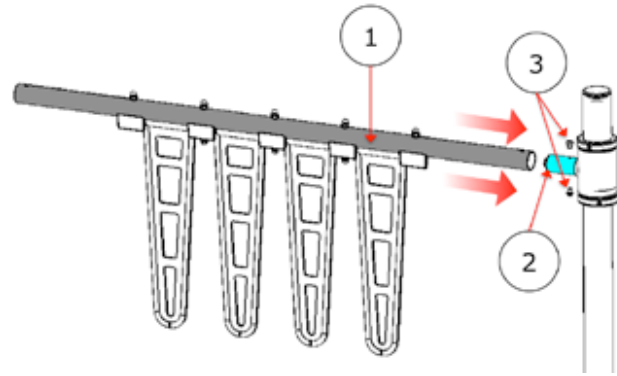
6

The aside picture shows the detail of the casing (A) and the pivot (4) that was used for the following fixing through the screws (5) of the bar with the flaps is highlighted.



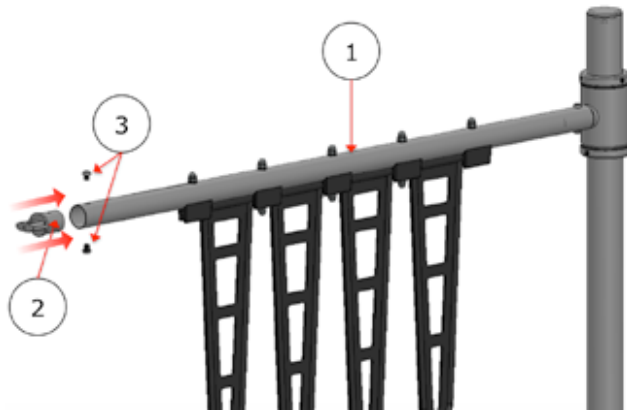
7

The bar with the flaps (1) must be inserted and fixed to the pivot (2) through the screws (3) as indicated in the aside picture.



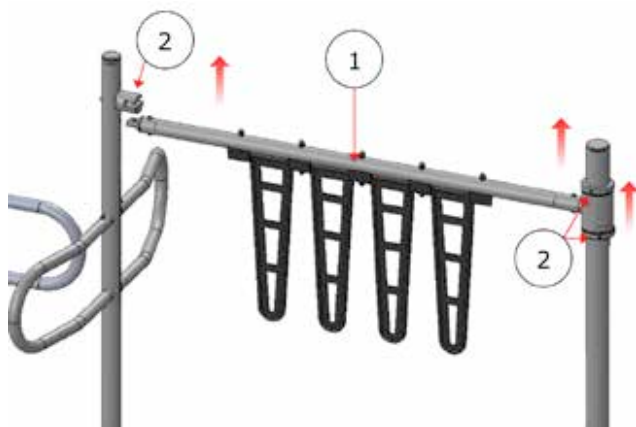
8

Once phase 7 is completed, insert and fix the hub (2) of the anti-panic device in the bar (1) with the flaps using the supplied screws (3).



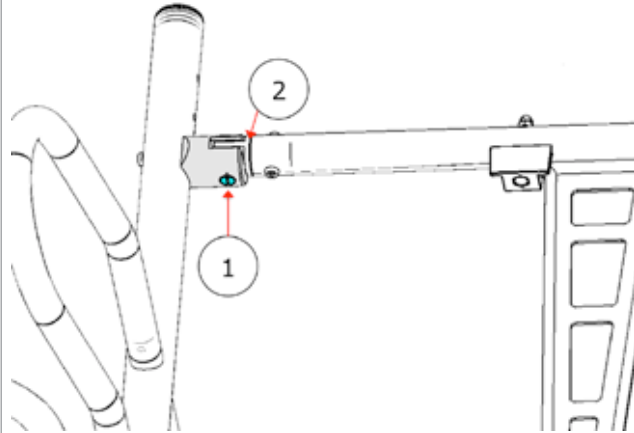
9

Note: According to the chosen position for the anti-panic device (2) on the upright of the guide arch, it could be necessary to adjust the casing's position loosening the grains (2) that fix the ferrules and making it slide along the upright until the bar is aligned (1).



10

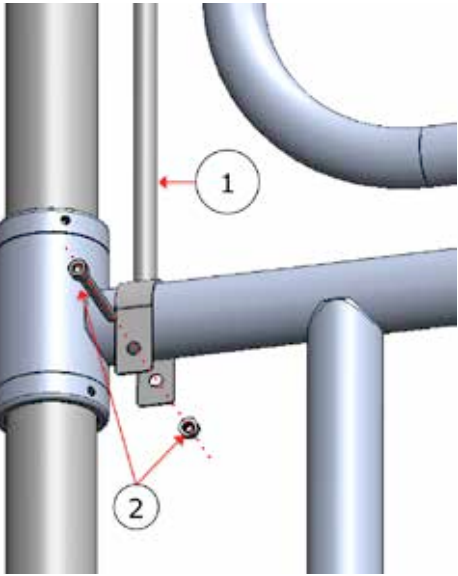
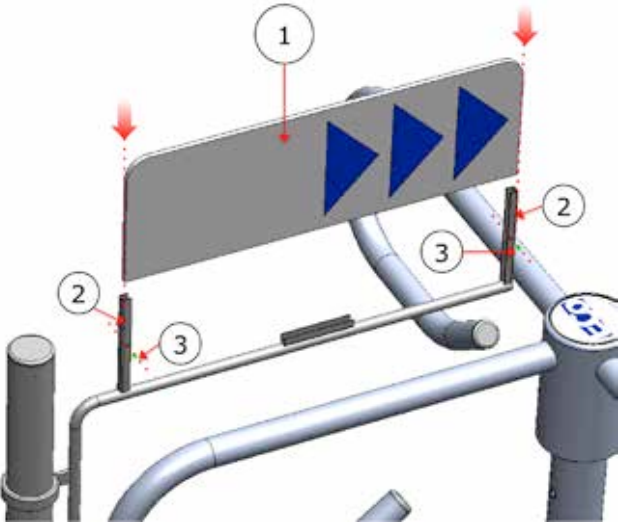
Through the adjusting screw (1) it is possible to vary the release pair of the anti-panic device (2).



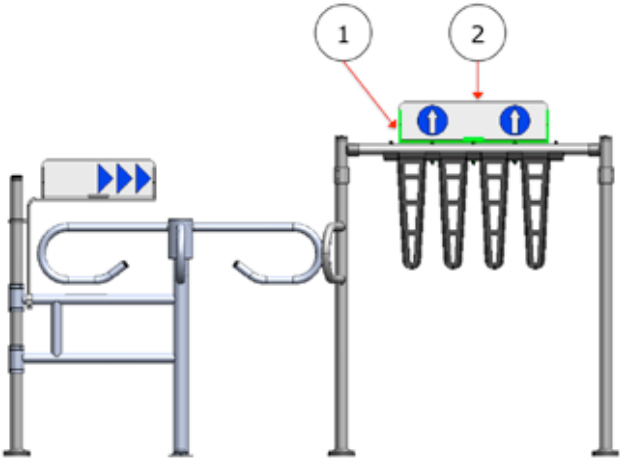
6.6 SIGNS INSTALLATION

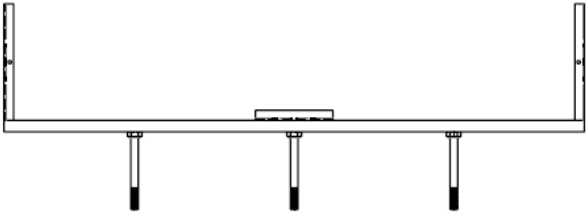
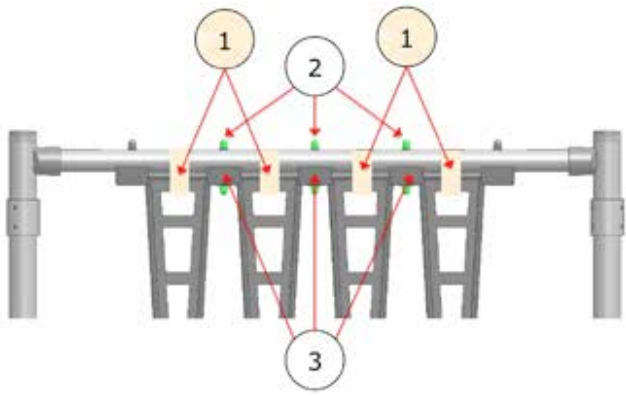
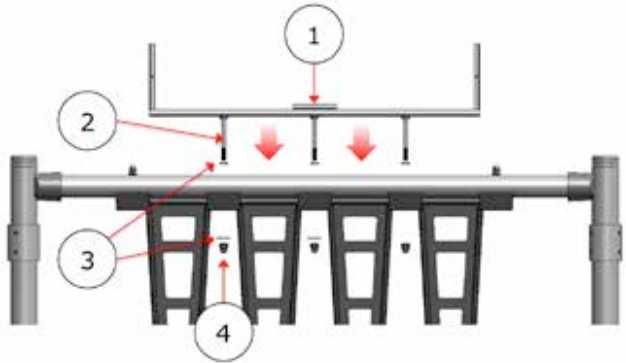
6.6.1 Turnstile's sign

#	Phase description	
1	<p>The sign table has to be positioned over the turnstile as indicated in the aside picture.</p> <p>It is made of a support profile (1) and of a plastic panel (2) where there is the pictogram requested with the order.</p>	
2	<p>The sign table has to be installed on the TurnOGate, inserting the profile (1) as shown in the aside picture until the lower slot is aligned to the linking superior bar of the turnstile.</p> <p>The slot must then be fixed through the supplied screw and nut (2), as shown in detail in picture n. 3.</p>	

<p>3</p> <p>The aside picture shows in detail how to fix the profile's slot (1) to the superior bar of the TurnOGate.</p> <p>Insert the screw (2) in the holes of the slot and correctly fix the nut (2).</p>	
<p>4</p> <p>Once the profile has been fixed, you can insert the plastic panel (1) with the pictogram requested with the order.</p> <p>The panel (1) has to be inserted in the profiles (2) making sure to have taken out the grains before (3), to install it correctly.</p> <p>Once it has been inserted, fix it using the supplied grains (3).</p>	

6.6.3 Cart passage's sign

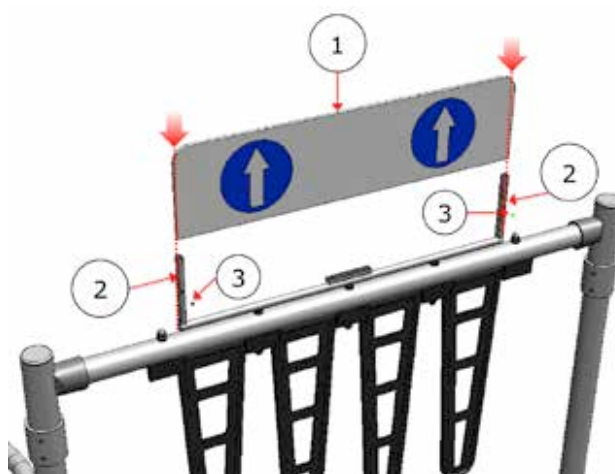
#	Phase description	
1	<p>The sign table over the cart passage is positioned as shown in the aside picture.</p> <p>It is made of a supporting profile (1) and of a plastic panel (2) with the pictogram requested with the order.</p>	

<p>2</p> <p>The supporting profile for the sign table over the cart passage is made as shown in the aside picture.</p> <p>It has three screws welded on the lower side of the profile.</p> <p>The profile must be installed as shown in the following phase n. 3.</p>	
<p>3</p> <p>The profile installation requires the removal of the three central screws (2) on the bar of the car passage.</p> <p>We suggest fixing the flaps with some paper tape (1) as indicated in the picture so that the screws (29) don't fall while removing them.</p> <p>While removing the screws (2), pull out the central clips (3) and put them in a safe place as you will need them in the following phase n. 4 for the profile's installation.</p>	
<p>4</p> <p>The profile (1) must be inserted on the bar of the cart passage as shown in the aside picture.</p> <p>The screws (2) must be inserted in the bar to replace those you have pulled out in the previous phase n. 3 and fixed with the respective nuts (4), making sure you have already inserted the clips and the washers (3) as shown in the aside picture.</p>	

Once the profile has been fixed you can insert the plastic panel (1) with the pictogram requested with the order.

- 5 The panel (1) must be inserted in the profiles (2) making sure you have already pulled out the grains (3) to allow a correct insertion.

Once it has been inserted, fix it using the supplied grains (3).



7 MAINTENANCE

7.1 ROUTINE MAINTENANCE


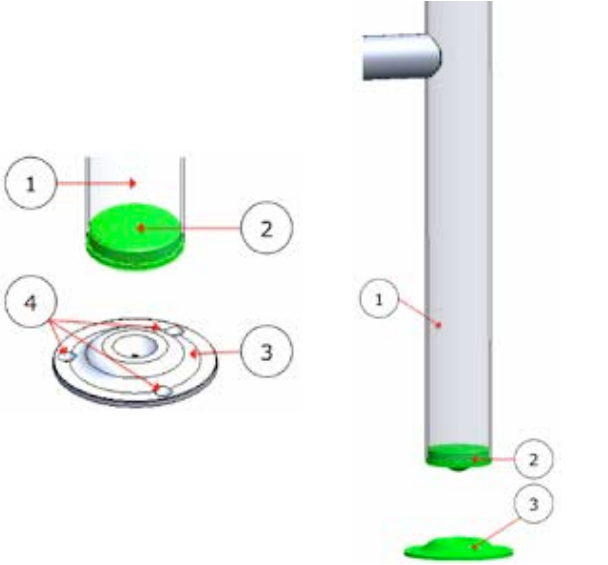
7.1.1 GENERAL INDICATIONS

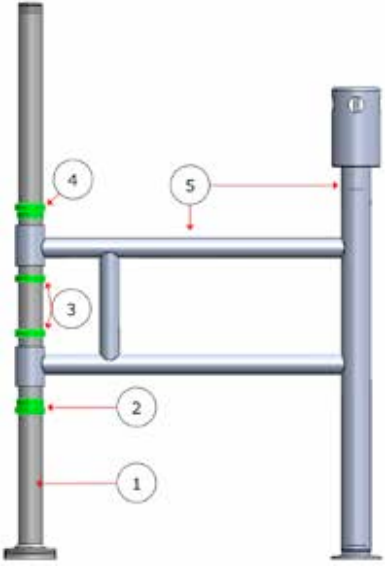
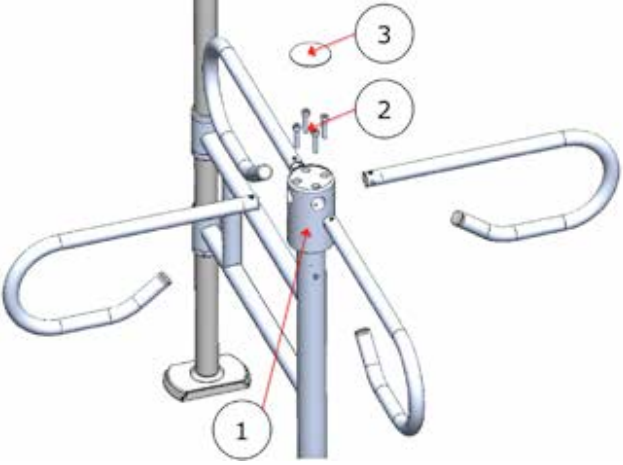
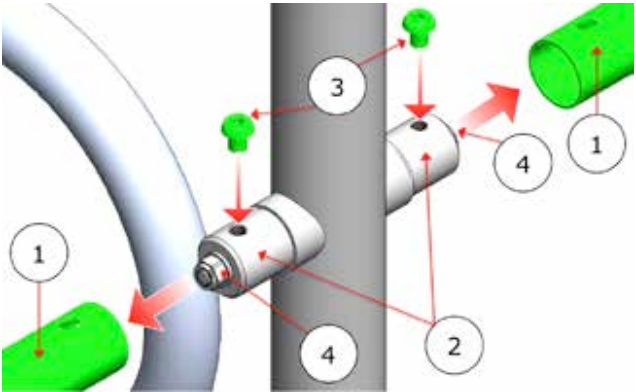
The mechanism must be controlled and cleaned at regular intervals in order to guarantee the correct operation of the components and to prevent damage from wear.

Shorten the control intervals if the mechanism is used in heavy duty conditions.

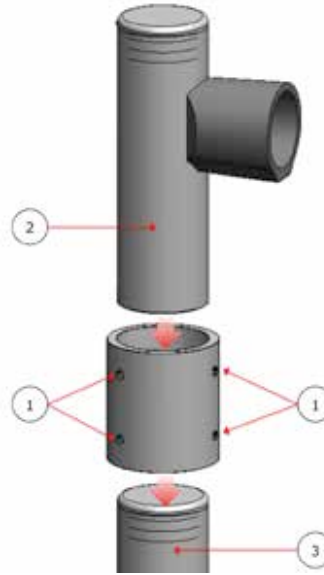
7.1.2 COMPONENTS

Every 450.000 passages implement the following control operations:

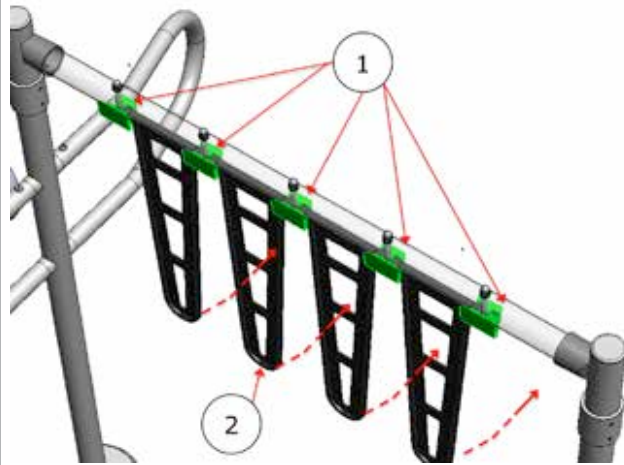
#	Phase description	
1	<p>Lift the upright anchor plate's cover (1) and (2), and check the tightening of the clamping screws of the ground plate.</p> <p>If installation also includes the cart passage, check the tightening of the ground clamping screws of the pole plate which is shown in the picture with the number (3).</p>	
2	<p>Check the tightening of the three screws (4) that fix the anti-panic device's plate of the turnstile to the ground.</p> <p>Check that the plastic device (2) inserted in the turnstile's upright is not worn out. If it is, pull it out from the upright and change it to guarantee the correct functioning of the anti-panic device.</p>	

3	<p>Check the tightening of the grains that fix the ferrules (1), (2), (3) and (4) to the upright (1).</p> <p>Check, with a level, that the bar (5) is orthogonal to the upright (1).</p>	
4	<p>After taking the cap (3) with the ECo logo away (3), check the tightening of the four screws (2) that fix the arms to the rotating part of the turnstile (1).</p> <p>Once the operation is completed, insert the cap (3) again with some tape on the rotating part (1) of the turnstile.</p>	
5	<p>Check the guide arches' installation (1) on the respective upright. If you notice they are a bit loose, pull them out from the respective sleeves (2) once you have already removed the fixing screws (3).</p> <p>Then check the tightening of the bolt and the nut (4) that fix the sleeves to the upright.</p> <p>Install the guide arches again, following the instructions indicated in paragraph "6.3.8 Guide arch assembly" to page 27.</p>	

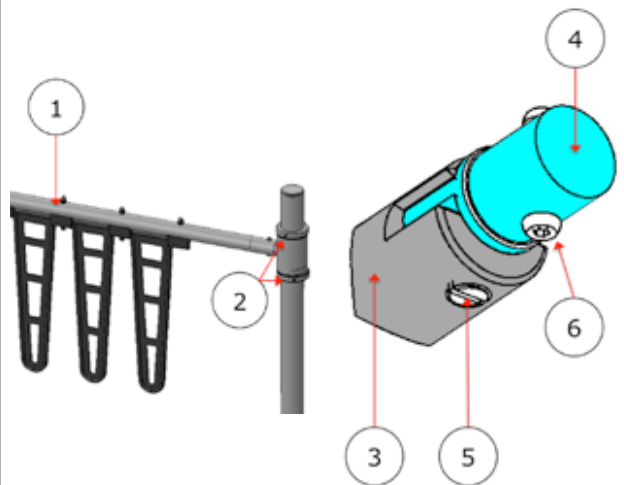
6 If there is a standard cart passage, check the tightening of the grains (1) of the up-right extensions (2).



7 If there is a standard cart passage check also the tightening of the screws that fix the anchor clips (1) of the flaps (2) to the horizontal bar.

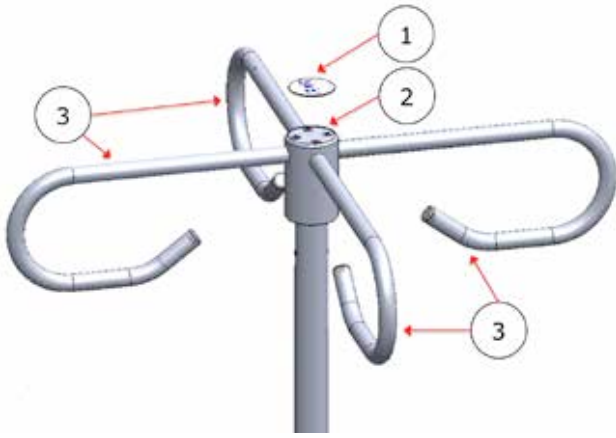
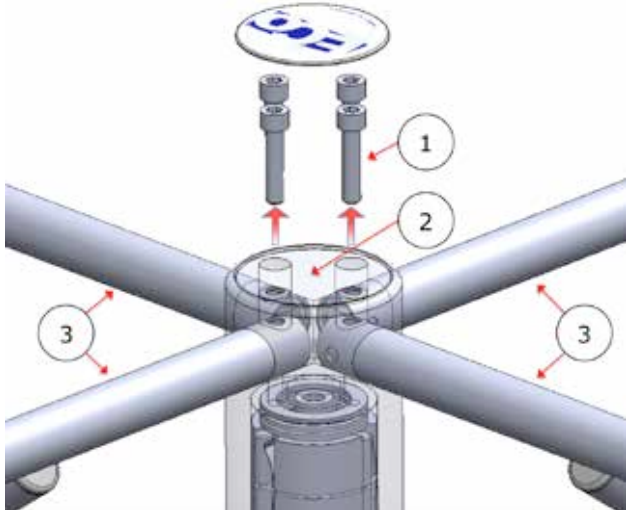
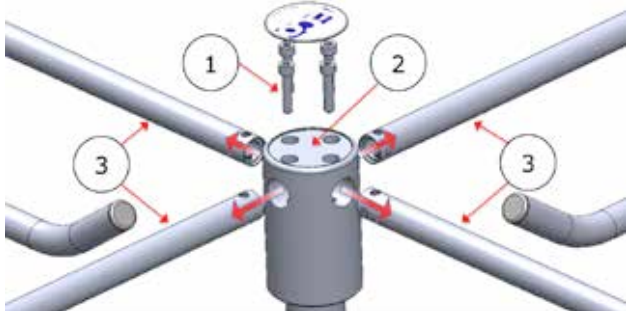


8 If there is a cart passage with an anti-panic device check the tightening of the casing's grains (2) and check the adjustment of the screw (5) of the anti-panic device related to the cart passage.



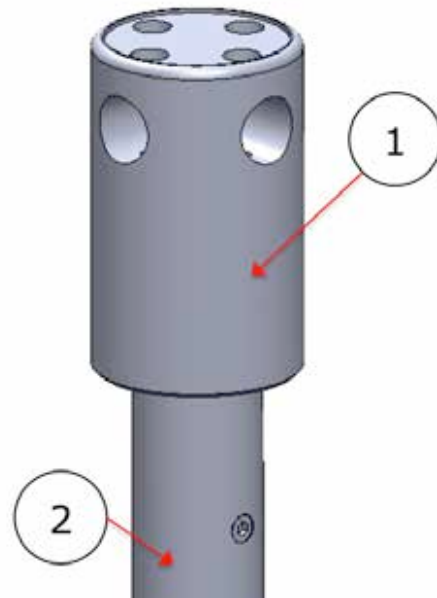
7.2 EXTRACTION OF THE TURNSTILE'S CENTRAL HUB

The TurnOGate product was designed to easily change the rotation direction. To do this, implement the following steps.

#	Phase description	
1	<p>The 4 arms (3) must be removed so you can easily work on the head part.</p> <p>To take them out, you have to remove the plastic cap (1) with the "ECo" logo on the rotating part (2).</p> <p>In this way, you will have access to the four cylinder-head bolts M10 that fix the arms (3) to the head part (2).</p>	
2	<p>Unscrew the bolts (1) with a 10 hex key, pull them out and put them in a safe place because you will need them to install the arms (3) to the head part (3) again.</p>	
3	<p>Once the fixing bolts (1) have been removed, pull the four arms out (3) from the head part (2) paying attention not to bend them or move them in an inappropriate way.</p> <p>Put them in a safe place because you will need them later when you have to assemble them again.</p>	

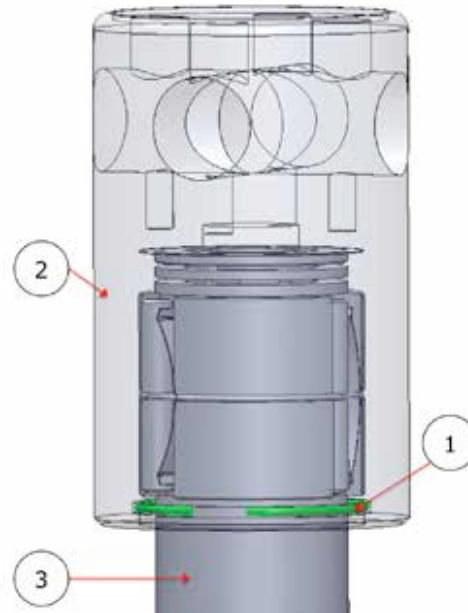
4

At this point, once you have taken away all the four arms, the head part (1) installed on the turnstile's support tree, as shown in the aside picture, is available.



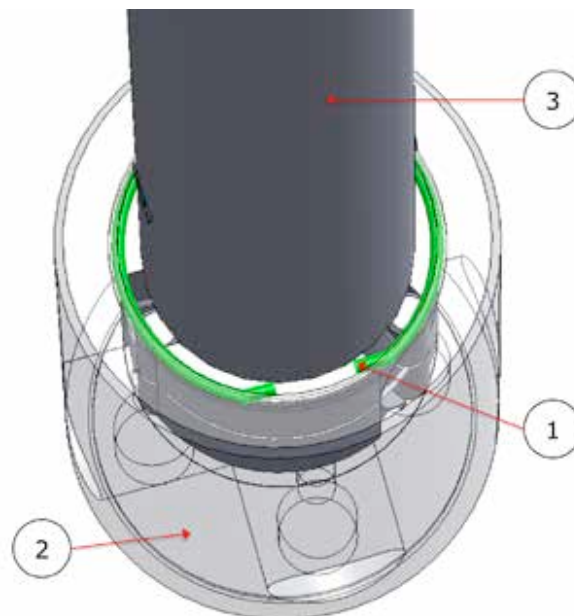
5

Remove the elastic fixing ring (1) of the head part (2) from the support tree (3) of the turnstile.



6

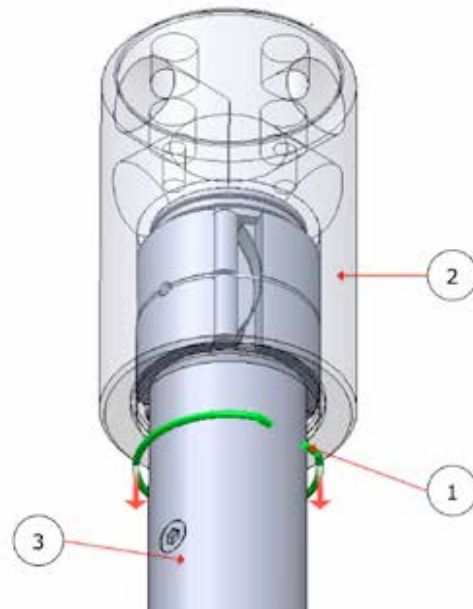
To make the elastic ring's removal (1) easier (1), it could be useful to reverse the head part (2) and the support tree (3) to which it is fixed as shown in the aside picture.



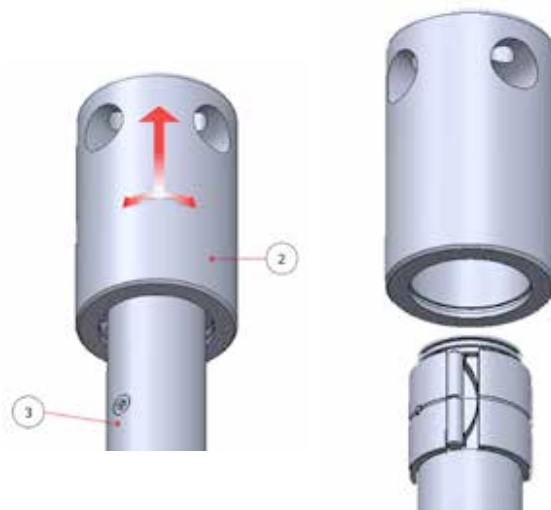
- 7 To remove the elastic ring (1), it is necessary to use a flat head screwdriver as shown in the aside picture.



- 8 Pull the elastic ring out (1) along the support tree (3) of the turnstile as shown in the aside picture.

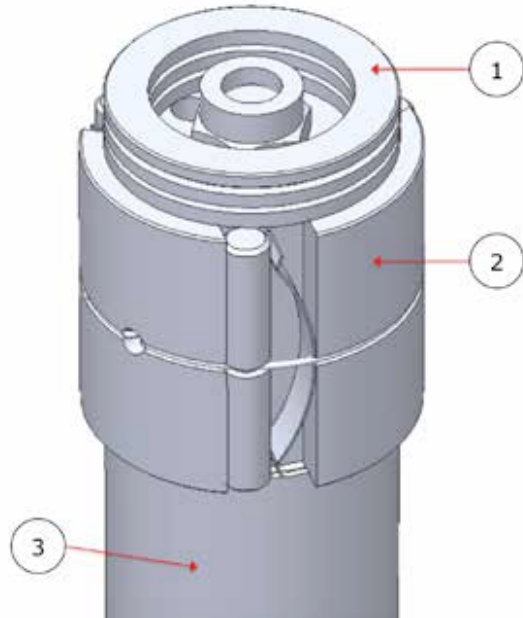


- 9 At this point pull the head part out (2) from the support tree (3) pulling it upwards.
During this operation, slightly rotate the head part (2) clockwise and counterclockwise compared to the support tree (3) to facilitate the action.



10

Once the head part (2) has been pulled out, you have access to the internal structure of the turnstile where you will find the thrust bearing (1) and the hub (2).



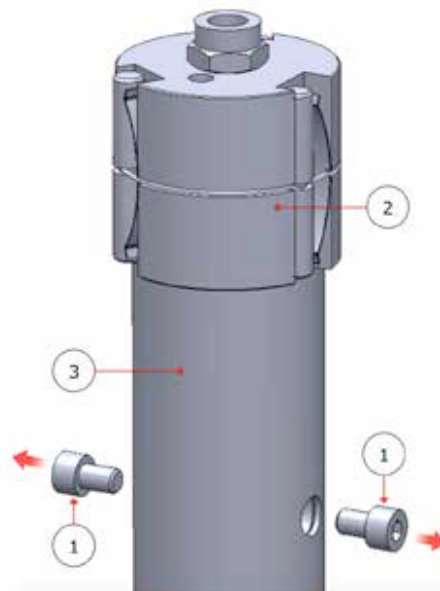
11

Remove the thrust bearing (1) above the hub (2) and store it in a safe place as you will need it when you reinstall the head part.



12

Remove the two fixing screws (1) of the central hub (2) from the support tree (3) and put them in a safe place as you will need them later during the reinstallation phase.



13

Pull the central hub out (2) from the support tree (3).



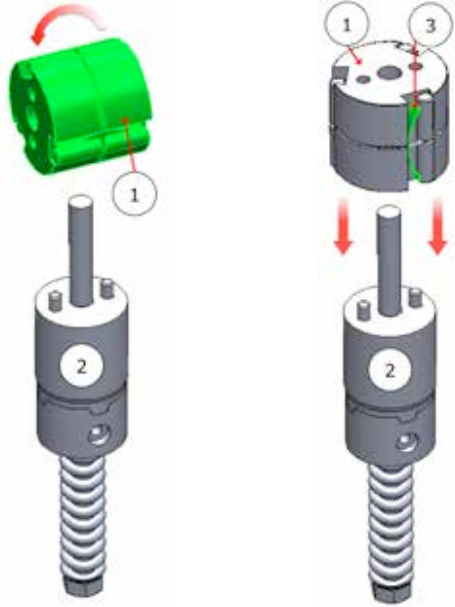
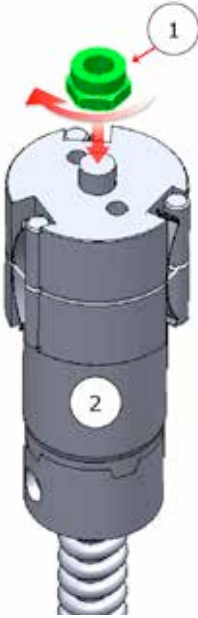
7.3 REVERSING THE TURNSTILE'S DIRECTION OF ROTATION




WARNING

First of all pull the central hub out, carefully following all the steps indicated in paragraph "7.2 Extraction of the turnstile's central hub" to page 42.

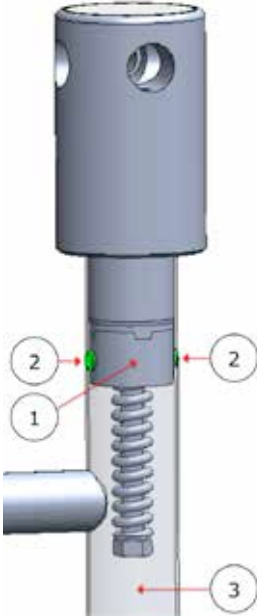
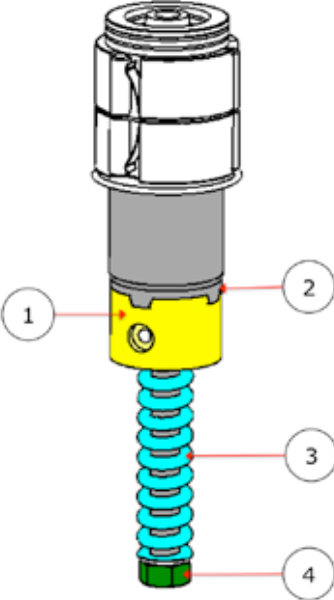
#	Phase description	
1	Position the central hub (2) carefully without damaging it, then remove the superior nut (1) with a wrench n. 22.	
2	Pull the central part (1) of the hub out of the anti-panic device (2).	

<p>3</p> <p>Rotate the central part of 180° (1) and insert it again on the anti-panic device (2) as shown in the picture.</p> <p>You will notice that the arch spring (3) will be positioned on the opposite side compared to the initial status.</p>	 <p>The diagram illustrates the process of rotating the central part (1) 180 degrees and reinserting it into the anti-panic device (2). The arch spring (3) is shown moving to the opposite side of the device. Red arrows indicate the rotation and the insertion of the central part.</p>
<p>4</p> <p>Reinstall the superior nut (1) with a wrench n.22.</p>	 <p>The diagram shows the superior nut (1) being reinstalled onto the anti-panic device (2). A red arrow indicates the direction of rotation for the nut.</p>
<p>5</p> <p>Reinsert the central hub in the support tree carefully following backwards all the steps indicated in paragraph "7.2 Extraction of the turnstile's central hub" to page 42.</p>	

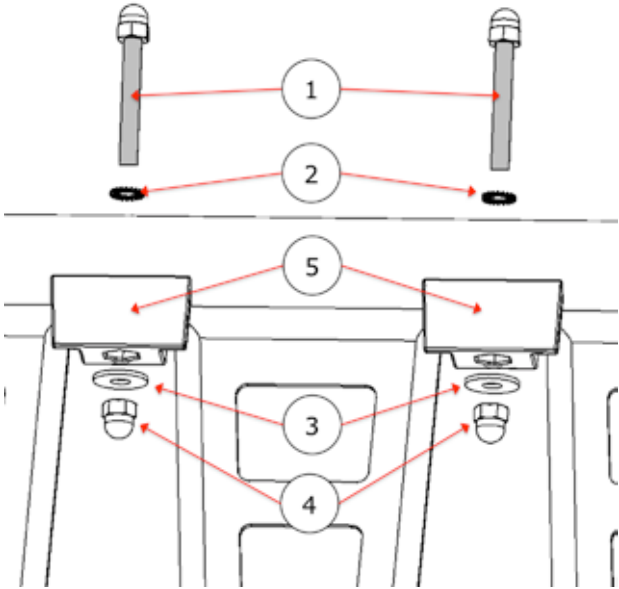
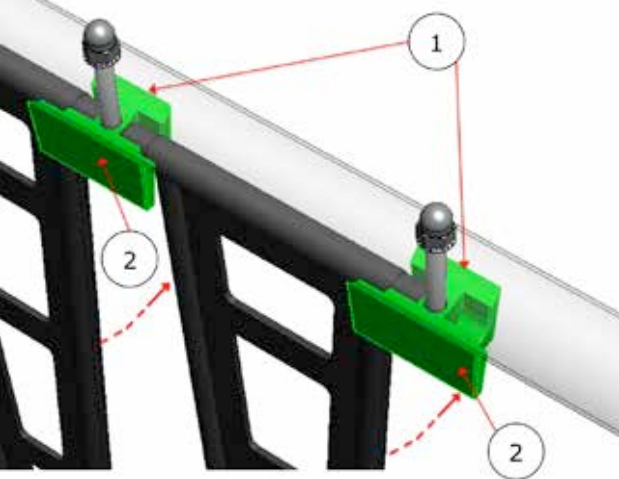
7.4 ADJUSTMENT OF THE SAFETY DEVICE OF THE CENTRAL HUB

	<p>WARNING</p>	<p>The safety device is pre-set from factory. No setting is required from the client. Eventual alterations or modifications will make the warranty null and void and could cause damages to the user.</p>
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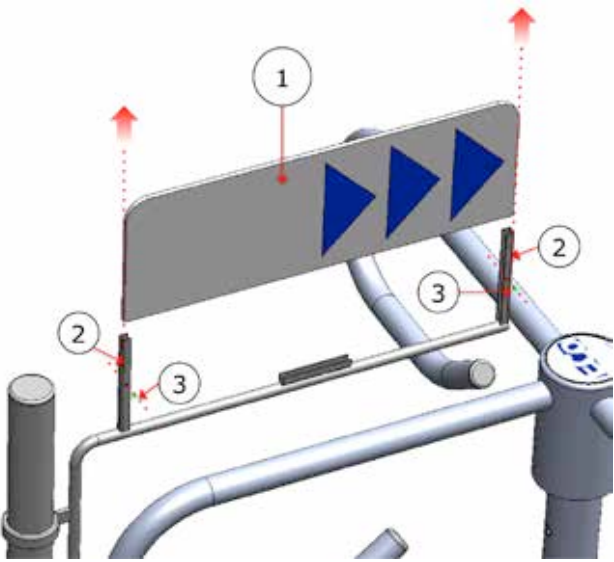
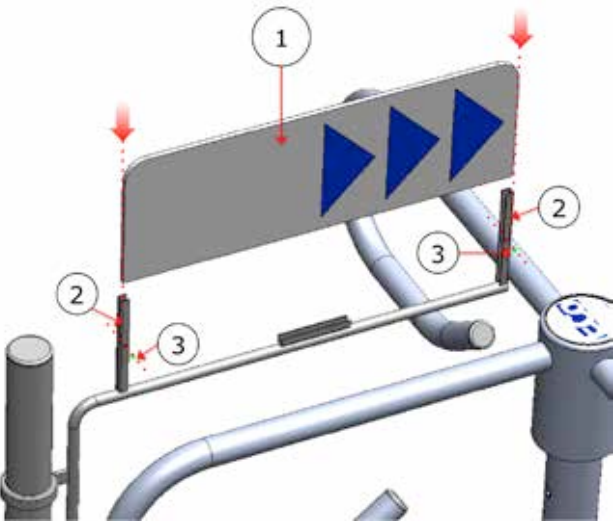
The safety device is described below only for technical purposes.

#	Phase description	
1	<p>The turnstile's safety device is shown in the aside picture.</p> <p>It is made of the body (1) which is fixed to the turnstile's upright (3) through the screws (2) and from the body (2) to the rotating part.</p>	
2	<p>The torque that determines the unhook of the body (2) of the rotating part, from the body (1) to the turnstile's upright, is determined from the load applied by the spring (3) through the tightening of the nut (4).</p>	

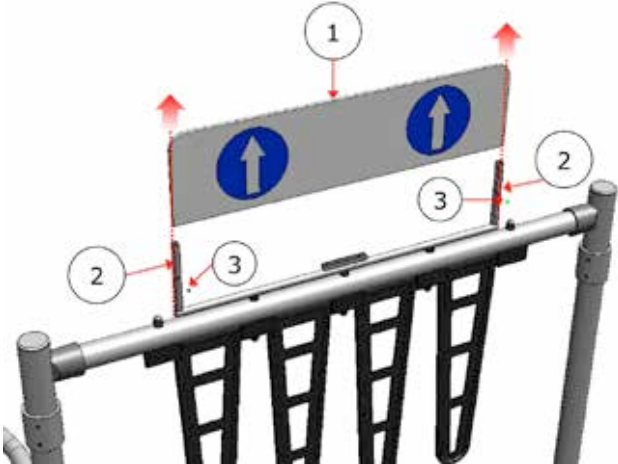
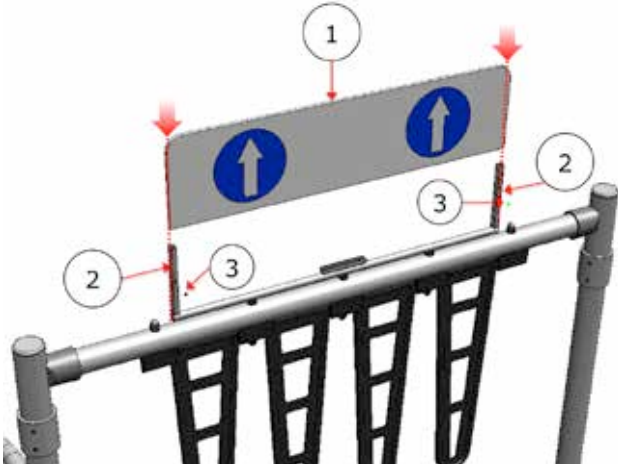
7.5 REPLACEMENT OF THE CART PASSAGE'S FLAP

#	Phase description	
1	<p>To replace a cart passage's flap you have, first of all, to remove the clips (5) that fix the flap to the bar.</p> <p>To do this, unscrew the screws (1) that fix the clips (5) to the bar and put them in a safe place together with the screws (1), washers and nuts. (2), (3) and (4) for the consequent reinstallation.</p>	
2	<p>While replacing the flap and reinstalling the clips, pay attention to their correct positioning and make sure that the long side (2) of the clip faces the entrance side of the cart passage and the short side (1) faces the area where the passage is not allowed.</p> <p>In this way, the correct direction of rotation will be preserved to allow the cart passage only in one direction.</p>	

7.6 TURNSTILE'S SIGN REPLACEMENT

#	Phase description	
1	<p>To replace the turnstile's sign first unscrew the grains (3) that fix the sign to its casing (2). Put the grains (3) in a safe place for the following phase of reinstallation.</p> <p>Pull the table out of the casings. (2).</p>	
2	<p>Insert in the casings (2) the new sign (1) and fix it to those with the grains (3) that you have put in a safe place during phase n. 1.</p>	

7.7 CART PASSAGE'S SIGN REPLACEMENT

#	Phase description	
1	<p>To replace the cart passage's sign you have to unscrew the grains (3) that fix the sign to the casing (2).</p> <p>Put the grains (3) in a safe place for the later phase of reinstallation.</p> <p>Pull the sign out of the casings (2).</p>	
2	<p>Insert in the casings (2) the new sign (1) and fix it to those with the grains (3) that you have put in a safe place during phase n. 1.</p>	

8 ANNEX 1: SPARE PARTS

Model	Equipment	Surface finish	Code
Turnstile's sign	Left		AAB 020 009
	Right		AAB 020 010
Cart passage's sign			AAB 020 008
Safety device	For the turnstile's head part	Ø	801 900 010
Anti-panic device	For the ground upright	Ø	232 456 510
Unit complete with anti-panic device	Ø	Ø	232 456 410
Arm for the rotating part		Chromed	232 456 110
Arch for the guide arch		Chromed	AAB 010 004
Flap for the cart passage	With fixing clips	Black	230 800 504
		Grey RAL 7035	250 800 504
		Grey RAL 7005	290 800 504