

119G3265EN

FULL-HEIGHT
TURNSTILE



INSTALLATION MANUAL

PSGS4 - PSGD4



CAUTION!
important personal safety instructions:
READ CAREFULLY!



Foreword

• This product should only be used for the purpose for which it was explicitly designed. Any other use is considered improper and therefore dangerous. CAME Cancelli Automatici S.p.A. will not be held liable for damage caused by improper, incorrect or unreasonable use. • The safety of the product, and therefore its proper installation, depends on total compliance with the technical specifications and installation procedures, as well as with rules regarding safety and use, expressly mentioned in the technical documentation for the products themselves. • Keep these warnings together with the installation and operation manuals for the operator system components.

Before installing

(preliminary check: in case of a negative outcome, do not proceed until you have complied with the safety requirements)

• Installation and testing must only be performed by qualified personnel • Cable routing, installation, connection and testing must be carried out to the highest levels of workmanship in accordance with applicable laws and regulations • Before starting any operation, read all the instructions carefully; incorrect installation can be dangerous and harm persons or property • Check that the operator is in good mechanical condition, balanced and aligned, and that it opens and closes properly. If needed, also install suitable guards or use appropriate additional safety sensors • If the operator will be installed at a height of less than 2.5 m from the ground or other access level, check whether you will need any protections and/or warnings • Ensure that opening the turnstile does not create a dangerous situation • Do not mount the operator upside down or onto any elements that may fold under its weight. If needed, add suitable reinforcements at the points where it is secured • Do not install on ground that is not level • Check that any lawn watering devices will not wet the operator from the bottom up.

Installation

• Carefully section off the entire site to prevent unauthorised access, especially by minors and children • Be careful when handling operators that weigh more than 20 kg. In such cases, use proper weight handling safety equipment • CE safety devices (photocells, platforms, sensitive edges, emergency button etc.) must be installed in compliance with applicable legislation and according to the highest standards of workmanship, bearing in mind the environment, the type of service required and the operating forces applied to the moving turnstiles. Points where there is a risk of crushing, shearing or dragging must be protected using suitable sensors • End users must be informed of any residual risks by means of special pictograms as envisaged by legislation • All opening commands (buttons, key selectors, magnetic readers etc.) must be installed at least 1.85 m from the perimeter of the area of turnstile movement, or where they cannot be reached from outside through the turnstile. Also, the direct commands (buttons, touch commands etc.) must be installed at a height of at least 1.5 m and must not be accessible to the public • The turnstile identification data must be clearly visible • Before connecting the turnstile to the power supply, make sure the identification data corresponds to the mains data • The turnstile must be connected to an effective, compliant earthing system.

• The manufacturer disclaims any liability for the use of non-original products; this also results in the invalidation of the warranty • All 'hold-to-run' commands must be placed where the moving turnstile, transit areas and driveways are completely visible • Before delivery to the user, check that the system complies with the EN 12453 and EN 12445 standards (impact tests), check that the operator has been properly adjusted and that the safety and protective devices work correctly • As appropriate and in a visible position, affix warning symbols.

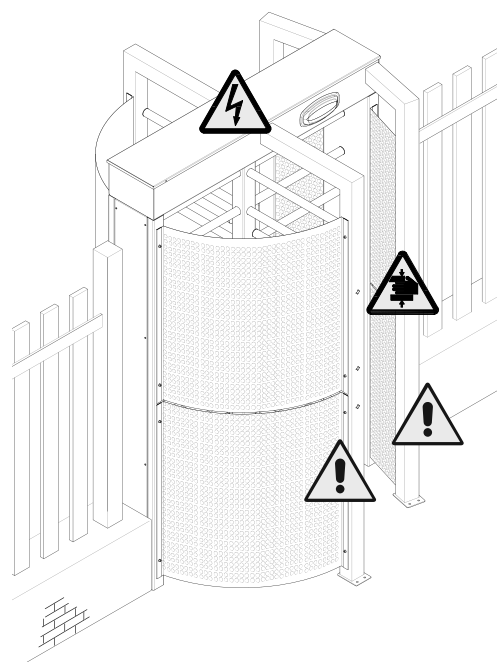
Special instructions and advice for users

• Keep the turnstile's area of operation clean and clear of any obstacles. Check that the photocells' area of operation is free from obstacles • Children must be supervised to make sure they do not play with the operator and the fixed control

devices or stand in the turnstile's area of operation. Keep any remote control devices (i.e. transmitters) or any control devices away from children as well, to prevent the operator from being activated accidentally • The operator is not designed to be used by persons (including children) whose physical, sensorial or mental capacities are limited, or who are lacking in experience or knowledge, unless said persons can be supervised or given instructions regarding using the operator by a person responsible for their safety • Frequently check the system, to see whether any anomalies or signs of wear and tear appear on the moving parts, on the component parts, on the securing points, on the cables and any accessible connections. Keep any joints lubricated and clean, and do the same where friction may occur • Perform functional tests on photocells every six months. Ensure that the glass on the photocells is kept clean (use a cloth slightly moistened with water; do not use solvents or any other chemicals as these could damage the devices) • If the system requires repairs or modifications, disconnect the power to the operator and do not use it until safety conditions have been restored • Cut off the electrical power supply for manual opening. Read the instructions • If the power cable is damaged, it must be replaced by the manufacturer or the technical assistance service or by a person with a similar qualification so as to prevent any risks • It is STRICTLY FORBIDDEN for users to perform OPERATIONS THEY ARE NOT EXPLICITLY REQUIRED AND ASKED to do. For repairs, adjustments and extraordinary maintenance, CONTACT THE SPECIALIST TECHNICAL SERVICE CENTRE. On the periodic maintenance log, note down the checks you have done.

Further special instructions and advice for all

• Avoid working near the turnstiles or moving mechanical parts • Stay clear of the turnstile's area of operation when in motion • Do not resist the direction of movement of the operator; this may present a safety hazard • At all times be extremely careful about dangerous points that must be indicated by proper pictograms and/or black and yellow stripes • When using a selector or command in 'hold-to-run' mode, keep checking that there are no people in the area of operation of the moving parts. Do this until you release the command • The turnstile may move at any time without warning • Always cut the power when cleaning or performing maintenance.



Danger of hand crushing



Danger - live parts



Warning Impact Hazard

KEY

-  This symbol indicates parts to read carefully.
-  This symbol indicates parts about safety.
-  This symbol tells you what to say to the end users.

ILLUSTRATIONS AND TEXT REFER TO SINGLE TURNSTILE (PSGS4) AND, EXCEPT THE OPERATIONS APPLY TO BOTH UNLESS EXPRESSLY STATED

REGULATORY REFERENCES

This product has been designed and built by CAME CANCELLI AUTOMATICI S.p.A. in compliance with applicable safety standards in the declaration of conformity.

DESCRIPTION

001PSGS4	Single full height bidirectional electromechanical turnstile with 4x90° sectors, galvanised, painted steel structure, complete with electronic panel and hydraulic damper, LED arrows, multi-purpose display and courtesy light.
001PSGD4	Double full height bidirectional electromechanical turnstile with 4x90° sectors, galvanised, painted steel structure, complete with electronic panel and hydraulic damper, LED arrows, multi-purpose display and courtesy light.

The turnstile consists of two side loading bearing columns and an top crosspiece with casing that can be opened to route cables and fit add-on control boards and electronic devices.

The middle rotating column is made of AISI 304 stainless steel and comes complete with 4 sets of polished steel arms (Ø 40 mm). The protective grids are made of perforated AISI 304 sheet steel.

It is operated by a control device that unlocks the mechanism. The arms are pushed manually until the damper is triggered to slowdown rotation, and remains active until the arms return to their idle position. The system does not reset the arms when exceeds 45°.

Intended use

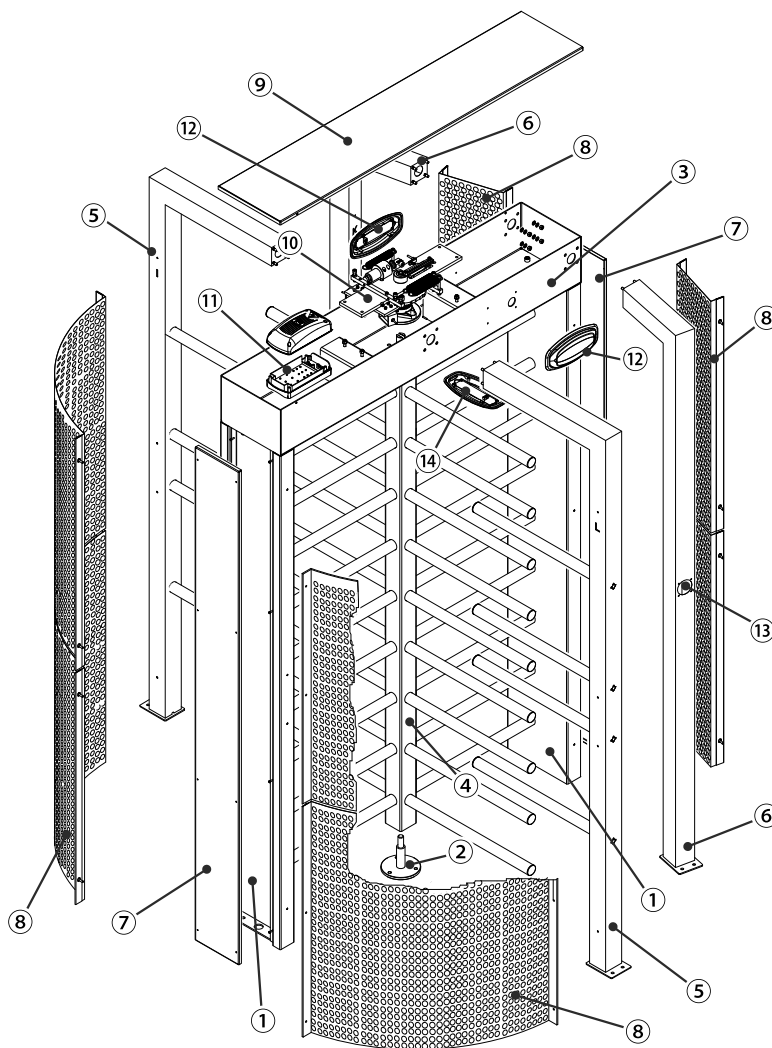
The full height electromechanical turnstiles are used to manage access points and control and filter pedestrian transit along large entrances with heavy traffic flows such as stadiums, airports, train stations and public offices.

Technical data

Type	PSGS4	PSGD4
Protection rating (IP)	44	
Power supply (V 50/60 Hz)	120 - 230 AC	
Operating power supply (V)	24 DC	
Absorption (mA)	223	446
Weight (kg)	430	800
Insulation class	I	
Operating temperature (°C)	-20 - +55	

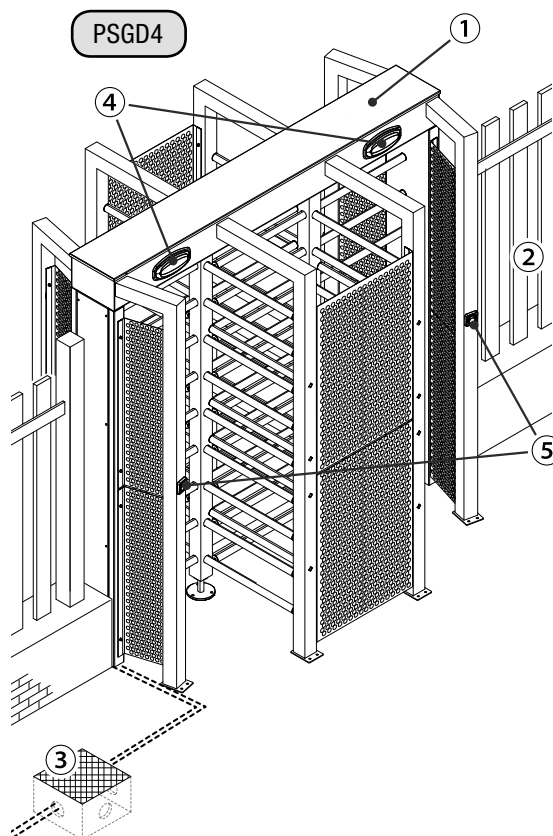
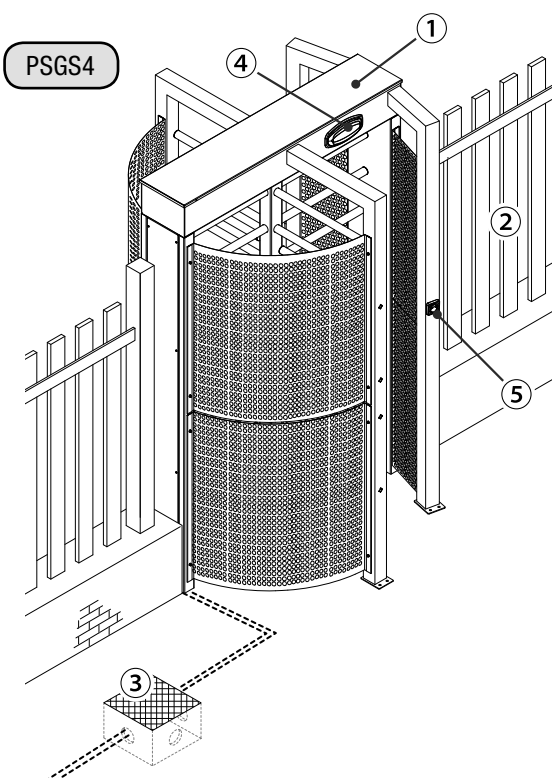
Description of the components

1. Load-bearing column
2. Bottom plate with pin
3. Top crosspiece
4. Central rotating column
5. Central post with fixed arms
6. Side post
7. Removable column casing
8. Protective grid
9. Removable crosspiece casing
10. Rotation mechanism
11. Control panel
12. LED arrows with display
13. Transponder fitting
14. Courtesy light

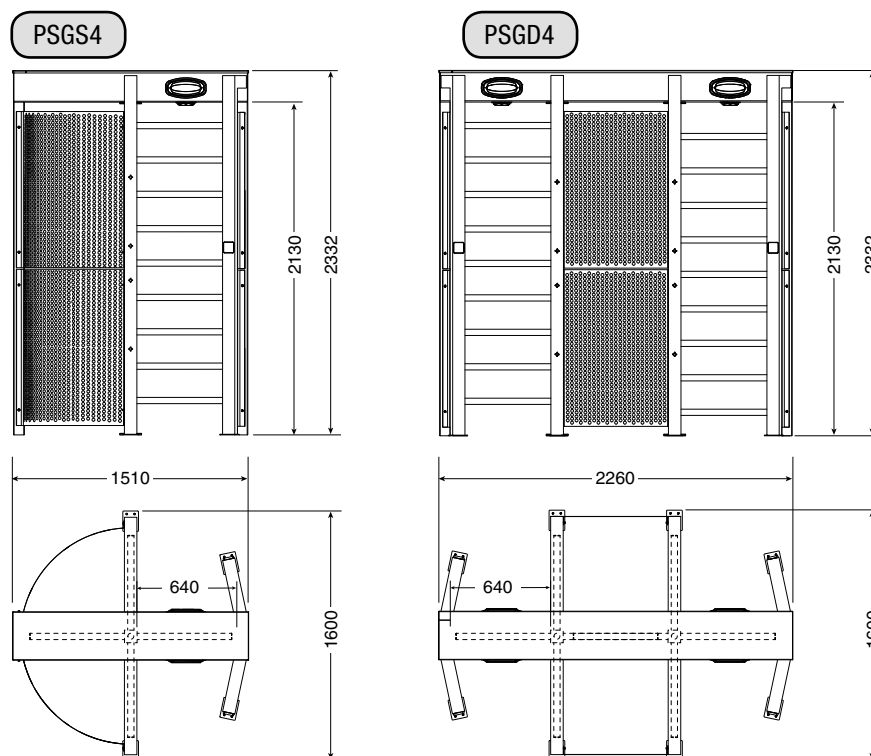


Example of a system

1. Turnstile
2. Enclosure
3. Inspection chamber
4. LED arrows with display
5. Transponder reader (optional)



Dimensions



GENERAL INSTRUCTIONS FOR INSTALLATION

⚠ Installation must be carried out by qualified and experienced personnel in compliance with applicable regulations. Any installation and operation that differs from what is set out in this manual is prohibited.

Preliminary checks

⚠ Before starting installation:

- provide a suitable omnipolar disconnecter with a maximum of 3 mm between the contacts to disconnect the power supply;
- prepare piping and ducts that are suitable for routing electrical cables, making sure that they are protected against mechanical damage;
- ⚡ make sure that any connections inside the container (made to ensure the continuity of the protection circuit) are fitted with extra insulation compared to other internal conductive parts;
- check that the area around the opening is in good condition and free of dips. Prepare a concrete anchoring base for the turnstile if necessary.

Tools and materials

Make sure you have all the tools and materials you will need for the installation at hand to work in total safety and compliance with current standards and regulations. The figure shows some examples of installer's tools.



Types of cables and minimum thicknesses

Connection	Cable type	Cable length 1 < 10 m	Cable length 10 < 20 m	Cable length 20 < 30 m
Control panel power supply 230 V	FROR CEI 20-22 IEC EN 50267-2-1	3G x 1.5 mm ²	3G x 1.5 mm ²	3G x 1.5 mm ²
Accessory power supply		2 x 0.5 mm ²	2 x 0.5 mm ²	2 x 1 mm ²
Control and safety devices		2 x 0.5 mm ²	2 x 0.5 mm ²	2 x 0.5 mm ²

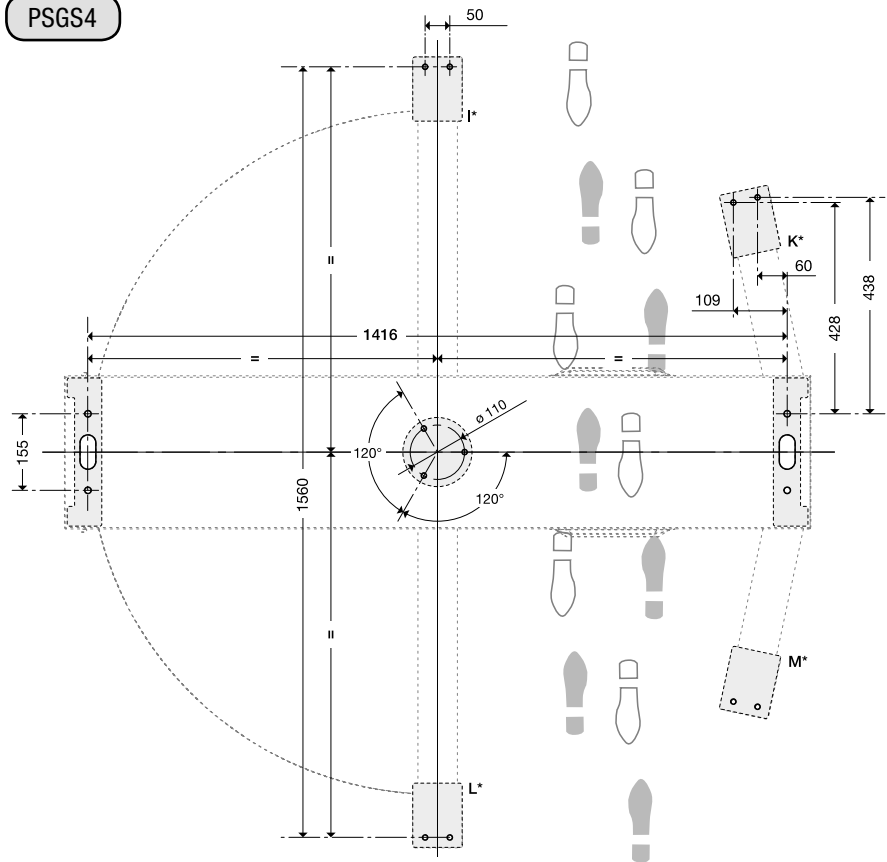
⚠ If the cables differ in length from what is shown in the table, the cable cross-section is determined according to the actual current draw of the devices connected and provisions of the IEC EN 60204-1 standard.

The sizes given in the table must be re-evaluated based on actual current draw and effective distances for connections that require several sequential loads. When connecting products that are not specified in this manual, please refer to the documentation provided with said products.

⚠ Risk of tipping over! Do not lean on the full-height turnstile until it is fully secured. While securing the turnstile, it may be unstable and could topple over, so take care not to let go of it until it is completely secure.

PSGS4

 *The figures are important to determine the transit flow side.*

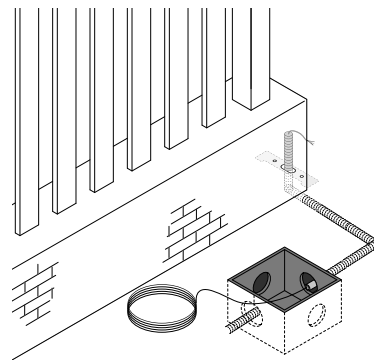


Technical drawing of the PSGD4 layout, showing a rectangular table with dimensions and footprints of people standing around it. The drawing includes labels for various components: T* (top), S* (side), M* (middle), and K* (corner). Dimensions include 1555, 708, 750, 2166, 1560, 428, 438, 109, 60, 50, 120°, and 110°.

Installing corrugated tubes

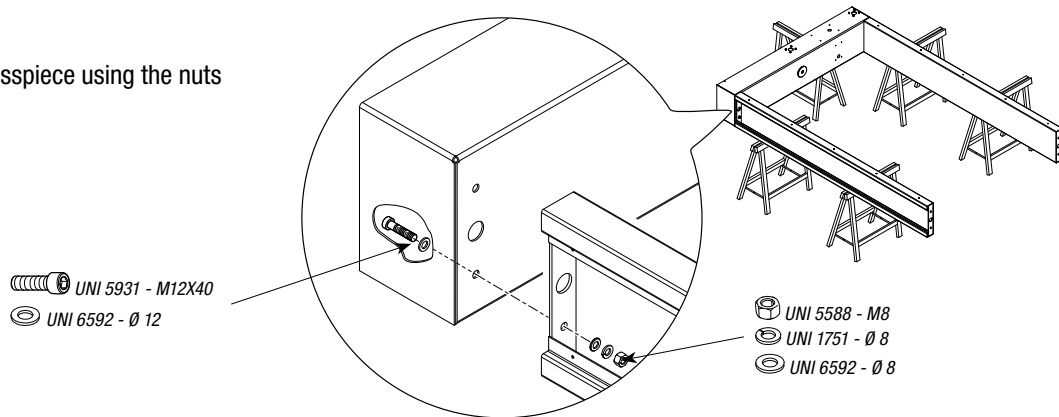
Set up corrugated tubes for the connections coming from the junction box.

 The number of tubes depends on the type of system installed and any accessories.



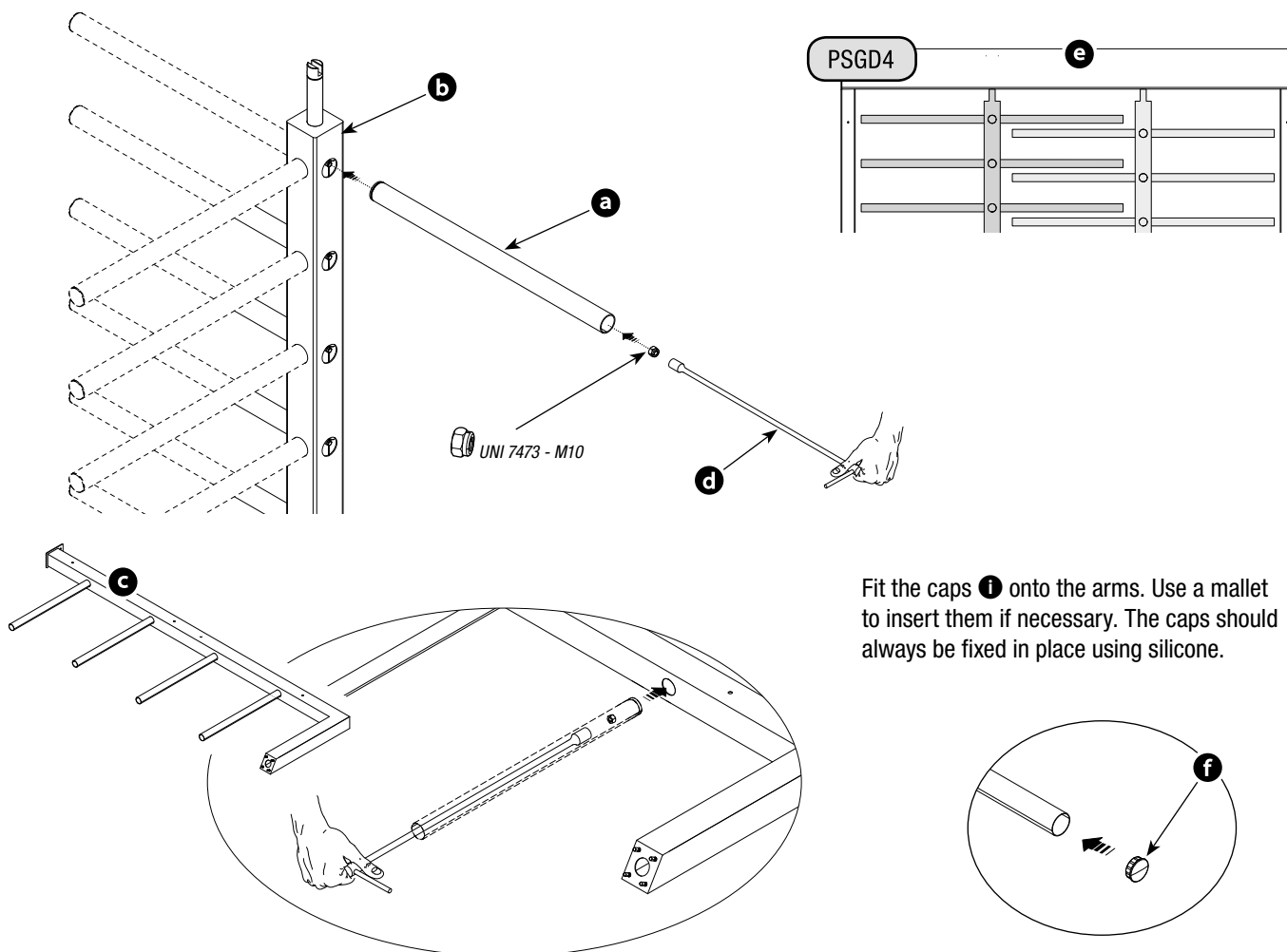
Assembling the structure

Secure the side posts to the crosspiece using the nuts and bolts provided.



Assemble the arms **a** to the central rotating column **b** and to the central posts **c**, using the nuts and hex head "T" wrench **d** provided.

 For PSGD4 check that the arms of the two central rotating columns are offset **e**.

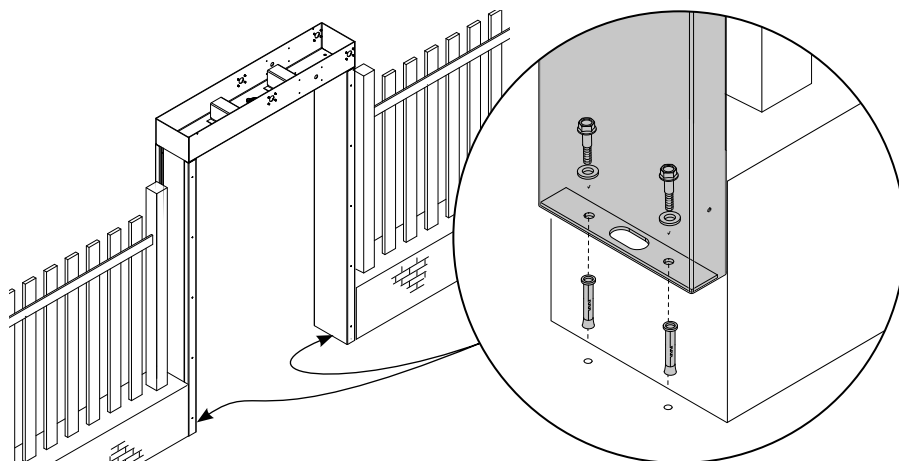


Mounting the structure

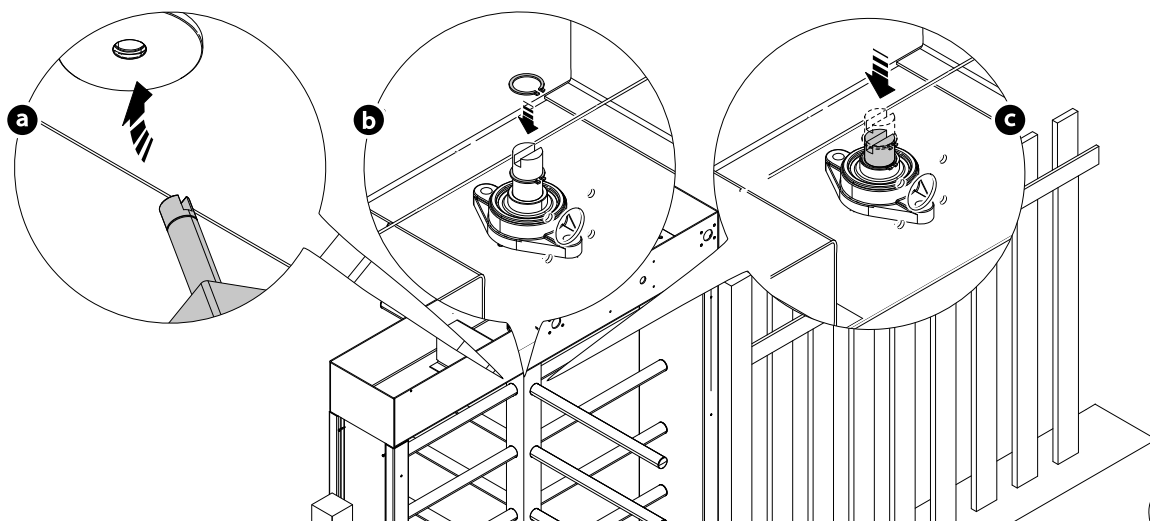
Lift the assembled structure and set it in position of the gate.

Anchor the side posts to the ground using the pre-drilled holes ($\varnothing$ 10,5).

 *The use of AISI 304 stainless steel bolts is recommended and must always suit the type of flooring.*

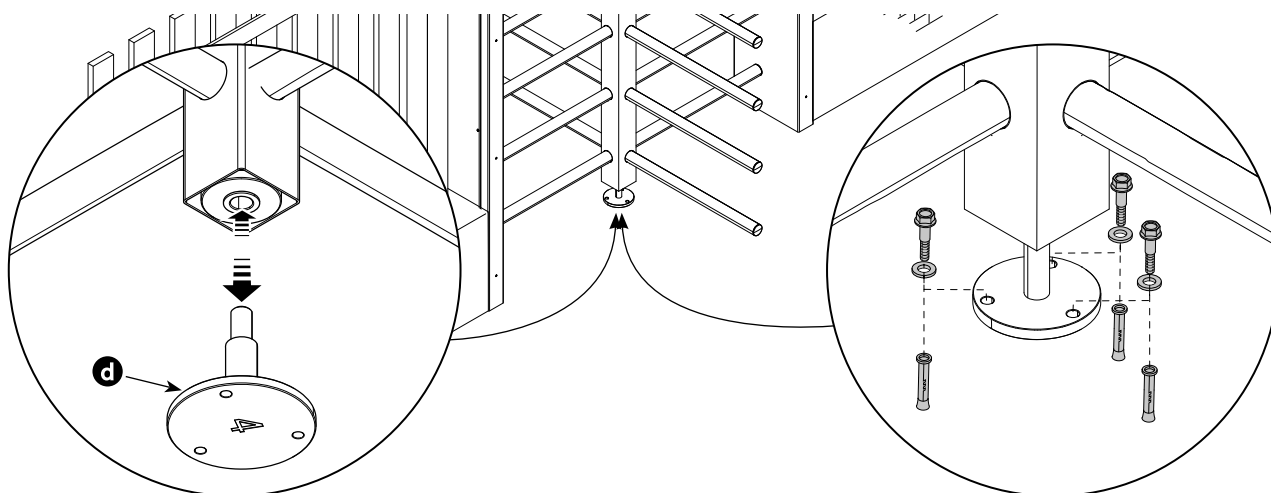


Mount the central rotating column by inserting the top pin into the hole under the crosspiece **a**; fit the seeger ring supplied into the pin seat **b** and leave the column suspended **c**.



Fit the anchoring plate with pin **d** under the central rotating column and fix it

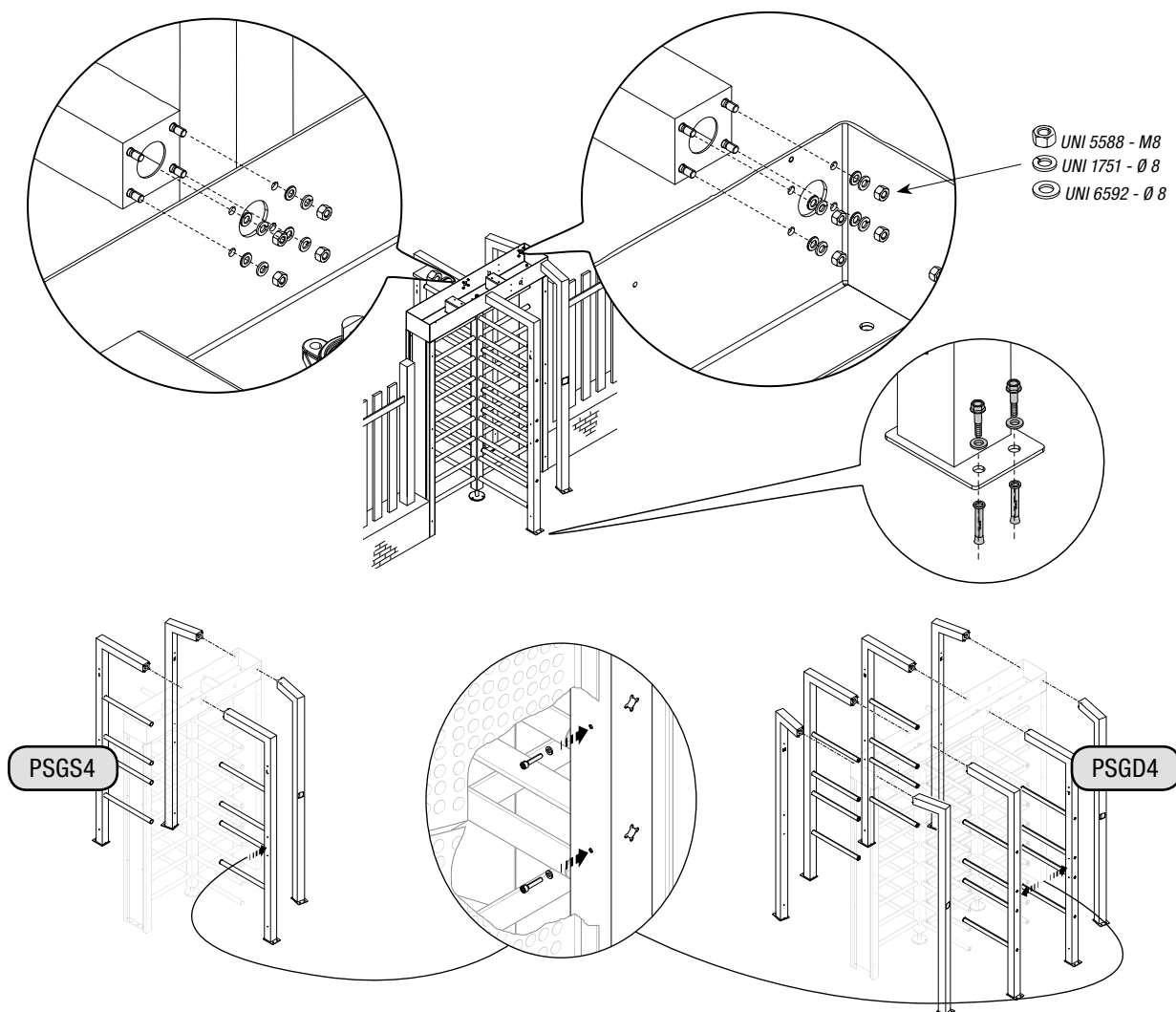
 *The use of AISI 304 stainless steel bolts is recommended and must always suit the type of flooring.*



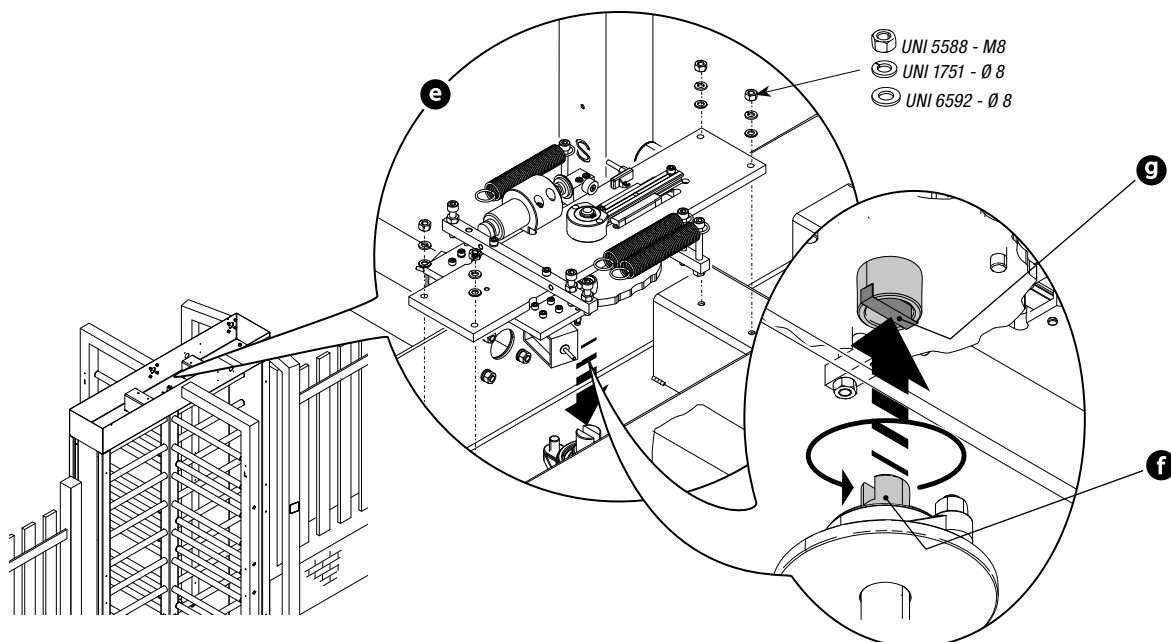
Secure the side and central posts to the crosspiece using the nuts and bolts supplied, and subsequently anchor to the floor atop the prepared holes.

 The central posts must be secured using the fixing holes of the protective grids as shown.

 The use of AISI 304 stainless steel bolts is recommended and must always suit the type of flooring.

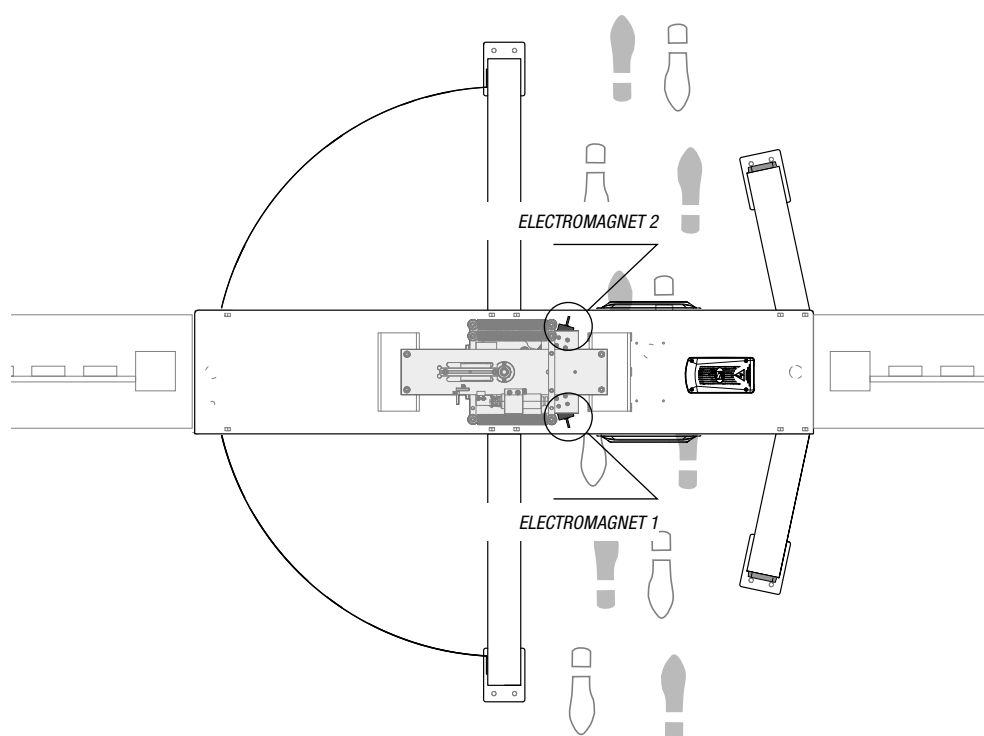


Place the rotation mechanism above the top pin **e** turning the column until engaging the pin **f** onto the key **g**. Secure the mechanism using the nuts and bolts supplied.

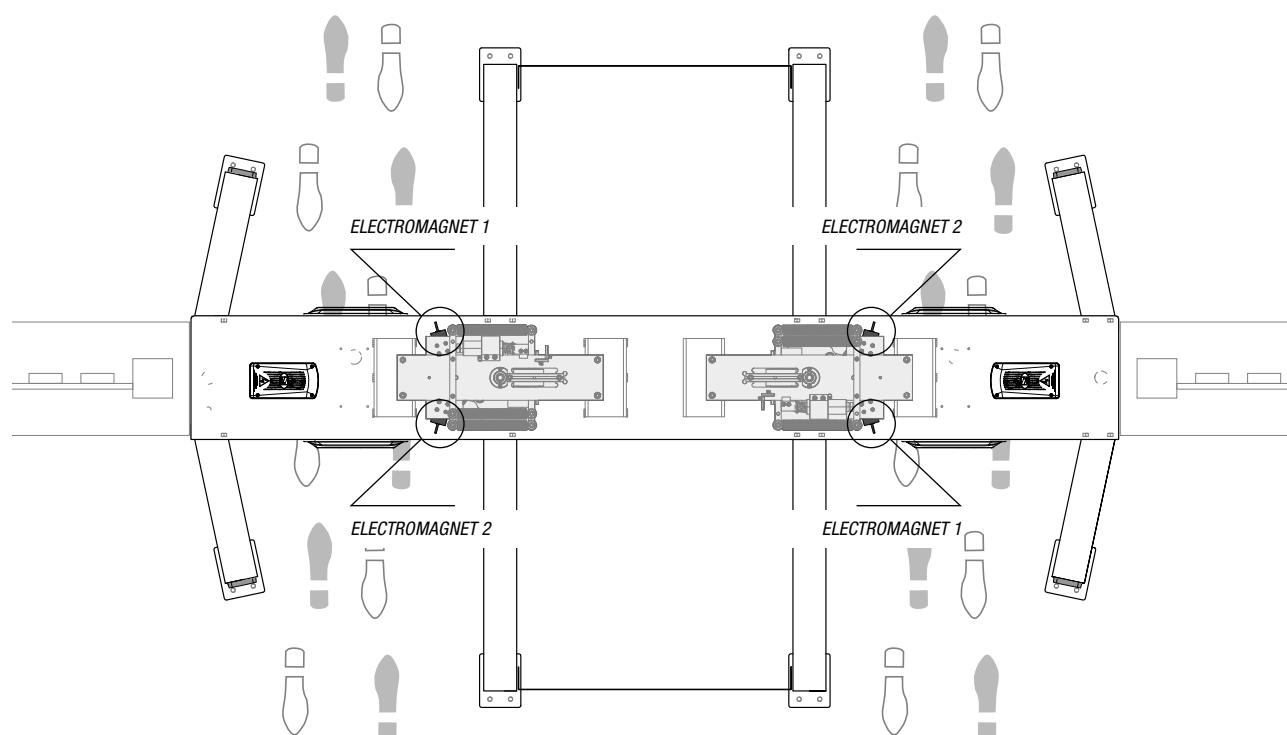


 The rotating mechanism and its electromagnets must be installed as shown in the drawings.

PSGS4



PSGD4



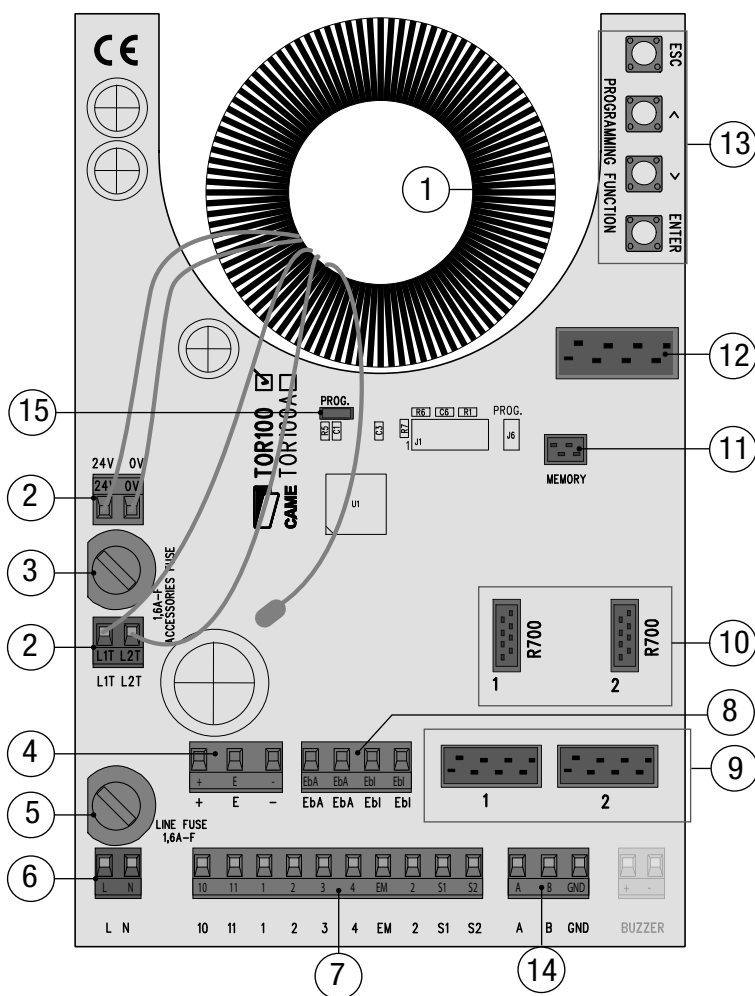
 The 24 V AC output power is SELV.

All the connections are protected by quick fuses.

Circuit	Fuse value
Control board (LINE)	3.15 A-F (120 V)
	1.6 A-F (230 V)
ACCESSORIES	1.6 A-F

Description of the components

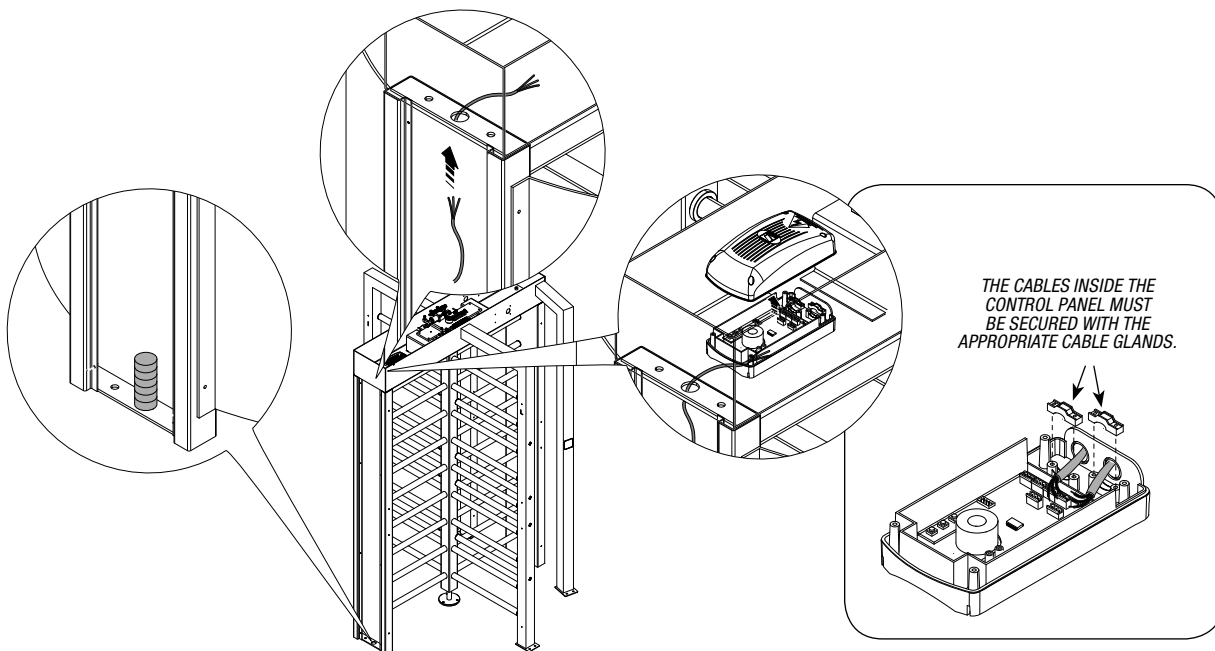
1. Transformer
2. Transformer terminal block
3. Accessory fuse
4. Entrance/exit sensor terminal block
5. Line fuse
6. Power supply terminal block
7. Terminal block for control and safety devices
8. Electric lock terminal block
9. Transponder connectors
10. R700 card connectors
11. Memory Roll card connector
12. Direction arrows with display terminal block
13. Function programming buttons
14. RBM84 terminal block
15. Indicator LED



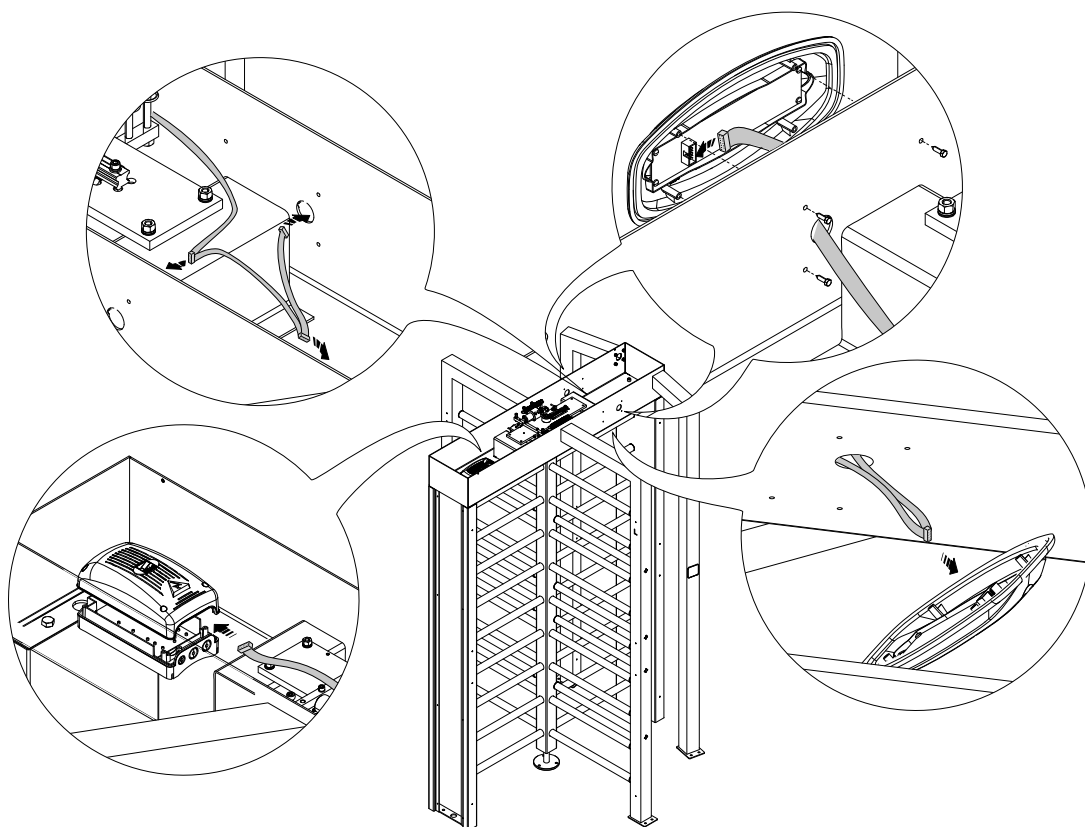
Cable routes

Place the control panel inside the crosspiece.

Route the power cord of the control panel and accessories along the entire length of the side post.



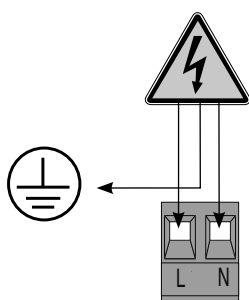
From the crosspiece, connect the direction arrows to the courtesy light using a metal strip.



ELECTRICAL CONNECTIONS:

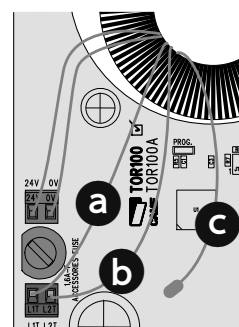
Power supply

120 - 230 V AC (50 / 60 Hz)



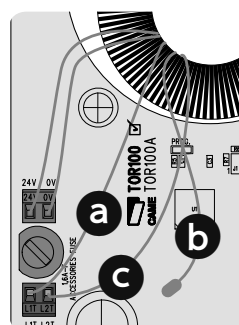
230 V AC power supply for transformer
(default connection)

Ref.	Description
a	L1T = White
b	L2T = Red
c	Black (isolated)



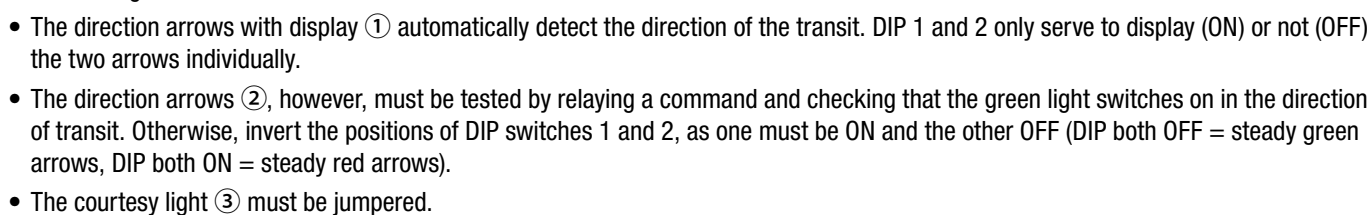
120 V AC power supply for transformer
(reverse wires **b** and **c**)

Ref.	Description
a	L1T = White
b	Red (⚠ isolate!)
c	L2T = Black

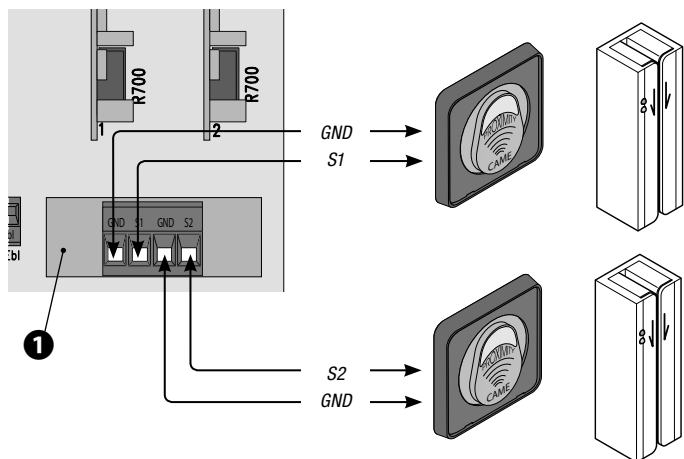


Replace the 1.6A line fuse with a 3.15 A unit.

ENTRANCE/EXIT SENSOR



TRANSPONDER



Anti-clockwise operation transponder (N.O. contact).

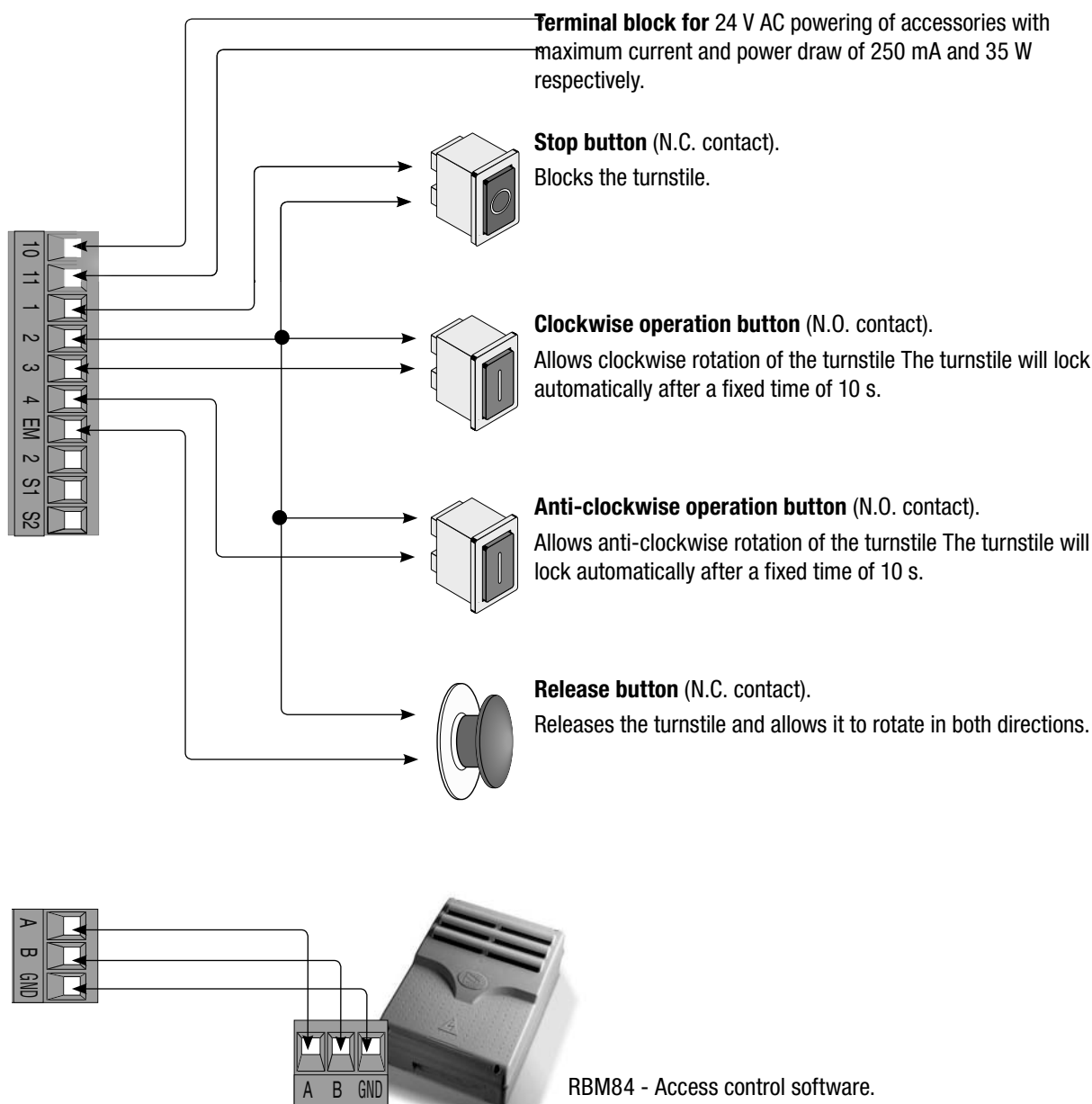
Releases the turnstile in an anti-clockwise direction. The turnstile will lock automatically after a fixed time of 10 s.

Clockwise operation transponder (N.O. contact).

Releases the turnstile in an clockwise direction. The turnstile will lock automatically after a fixed time of 10 s.

To connect the sensors, in addition to the R700 cards, enter the card with terminals ❶ provided with the panel but not mounted.

Control devices

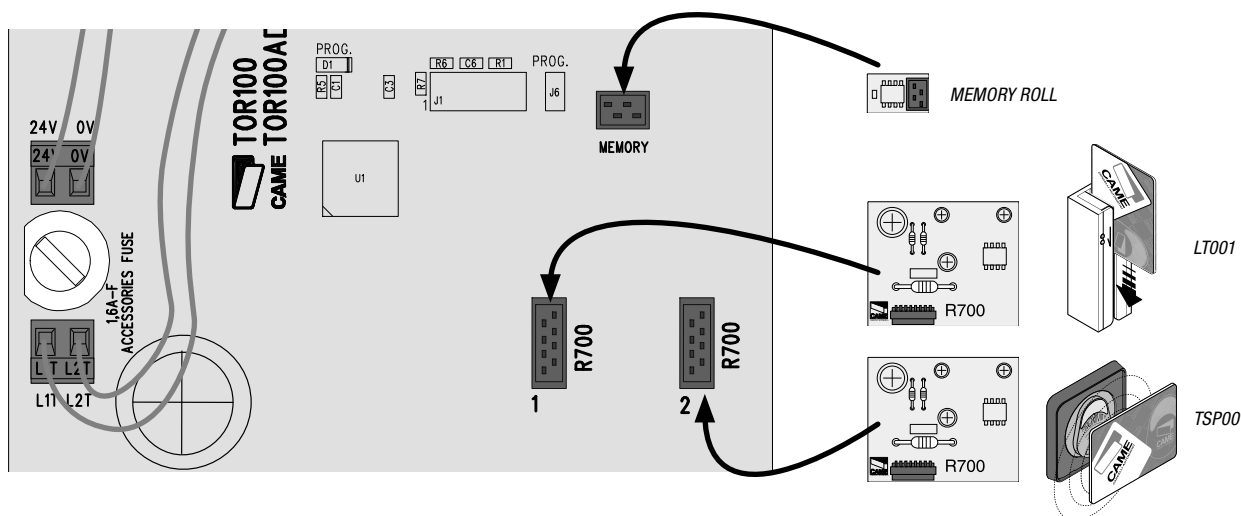


RBM84 - Access control software.

Decoder card

The R700 decoder cards control the turnstile with the sensors (TSP00/LT001) and the MEMORY ROLL to save and load all the settings including users stored on another card.

⚠ For proper operation, before inserting any plug-in card (e.g.: AF, R700), the LINE VOLTAGE MUST BE REMOVED and any batteries disconnected.



 Wait 10 seconds after powering before attempting any operation

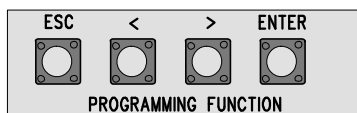
PROGRAMMING:

Functions can be programmed using the push-button panel.

⚠ All unused N.C. contacts must be shorted.

 *In order to use the programming, the traffic light with display must always be installed on the turnstile.*

 Before programming, read the instructions carefully. Follow the subsequent instructions in the order otherwise the programming will not be successful.



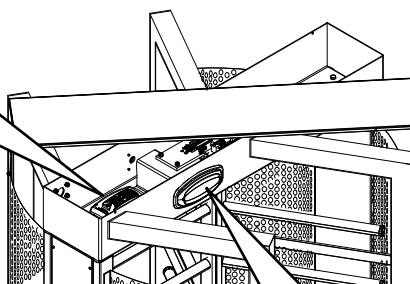
The ENTER key is used to

- enter the programming mode
- enter the individual menus
- confirm/store the set value.

The < > keys are used to:

- move from one menu item to the next
- increase or decrease a value

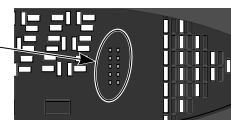
The ESC key is used to exit the menu and cancel the changes.



Display that shows the functions and settings assigned using the programming keys.



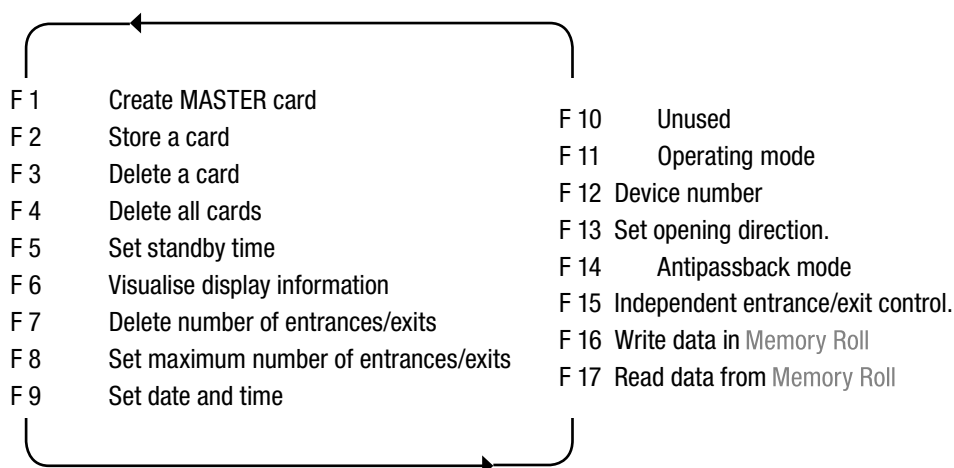
 *A flashing display dot means that the Master card has not been created yet.*



Menu mapping

The functions from F-1 to F-4 and from F-14 to F-17 are reserved for access managing using transponder or magnetic cards, and will be available only if their relative TSP00 or LT001 have been installed.

The functions F-2, F-3 and F-4 appear on the display only if the MASTER card is created..



Description of functions

Function	Description
F-1	Create a MASTER card. A Master card is always required in the presence of proximity or magnetic sensors. No cards can be stored without a Master card. After accessing F-1, press (ENTER) again: the RED LED of sensor S1 flashes and the display visualises (.....). Within 10 seconds, move a card close to the flashing sensor and leave it there for a few seconds until the display reads (Sto). This creates and stores the Master card. To delete it use F-3.
F-2	Store a card. After accessing F-2, you will automatically be positioned on the first free card number. Within 10 seconds, take the first card to add and move it close to or swipe it through the flashing sensor (max 500 cards).
F-3	Delete a card. Select the number of the card to be deleted or place it on the flashing sensor. When the display shows the number of the card, press (ENTER) to delete it. To delete the Master card, all other cards stored must first be deleted (F-4). Only then the display will show the number (0) corresponding to the master card.
F-4	Delete all cards Pressing (ENTER) deletes all stored cards except the Master card (CLR-A).
F-5	Set standby time. This function sets the amount of time (from 10 to 60 seconds) available to pass through the turnstile after issuing an open command.
F-6	See display information. The user can select the type of information to view on the display: number of entrances/exits, (12345), time (10:00) or neither of the two (OFF).
F-7	Delete number of entrances/exits. To clear the number of entrances/exits recorded by the turnstile (54321), press (ENTER).
F-8	Set maximum number of entrances/exits This function is used to set the maximum number of entrances/exits (up to 65000) that are allowed in the direction set in F-13. The number shown on the display indicates the presence of users at the entrance at that moment.
F-9	Set date and time. Press (ENTER) in succession to view the sequence of items that can be modified (minutes / hour / day of the week / day of the month / month / year / DST ON - Standard Time OFF).
F-11	Operating mode. It is possible to select either "independent" (OFF) or "access control" operating modes (ON), which manages all functions by an external device (such as the RBM84 access control system).
F-12	Device number. Assigns a number to each turnstile (useful for the "access control" mode).
F-13	Set opening direction. Used to select the entrance count direction, set in F-8. The arrow that flashes on the display (< --- / --- >) indicates the direction enabled.
F-14	Antipassback Mode. (< ON >) Prevents access to an area when the person is already within the confines. This function avoids the use of a card for two or more consecutive accesses to the same area.

Function Description

F-15 Independent entrance/exit control. This function is only active in "independent" mode (see F-11) and disables F-8 and F-14.

Select the entrance/exit control mode according to the following table:

selection ◀ ▶		
OFF	Controlled	Controlled
< -1- >	Unrestricted	Restricted
< -2- >	Restricted	Unrestricted
< -3- >	Controlled	Restricted
< -4- >	Restricted	Controlled
< -5- >	Controlled	Unrestricted
< -6- >	Unrestricted	Controlled

Key

Controlled = access allowed only to authorised users	= green and flashing
Unrestricted = unrestricted entrance	= green arrow
Restricted = entrance denied for all users	= red arrow

F-16 Write data in Memory Roll Saves registered users and data settings in Memory Roll .

F-17 Read data from Memory Roll Loads registered users and data settings from Memory Roll .

FINAL OPERATIONS

Adjusting the hydraulic damper

Proper adjustment of the hydraulic damper is a necessary condition for the correct turnstile operation with reduction of mechanical stress on the system. Both the working temperature and duty cycle must be taken into account to properly adjust the hydraulic damper.

Remove line voltage during installation and make sure that the tripod moves freely.

Turn the central column rotating until the springs **a** are at their maximum extension; temporarily lock the column.

Loosen the nut **b**

Turn the damper **c** until the distance from the block is 3mm **d**; tighten the nut **b**.

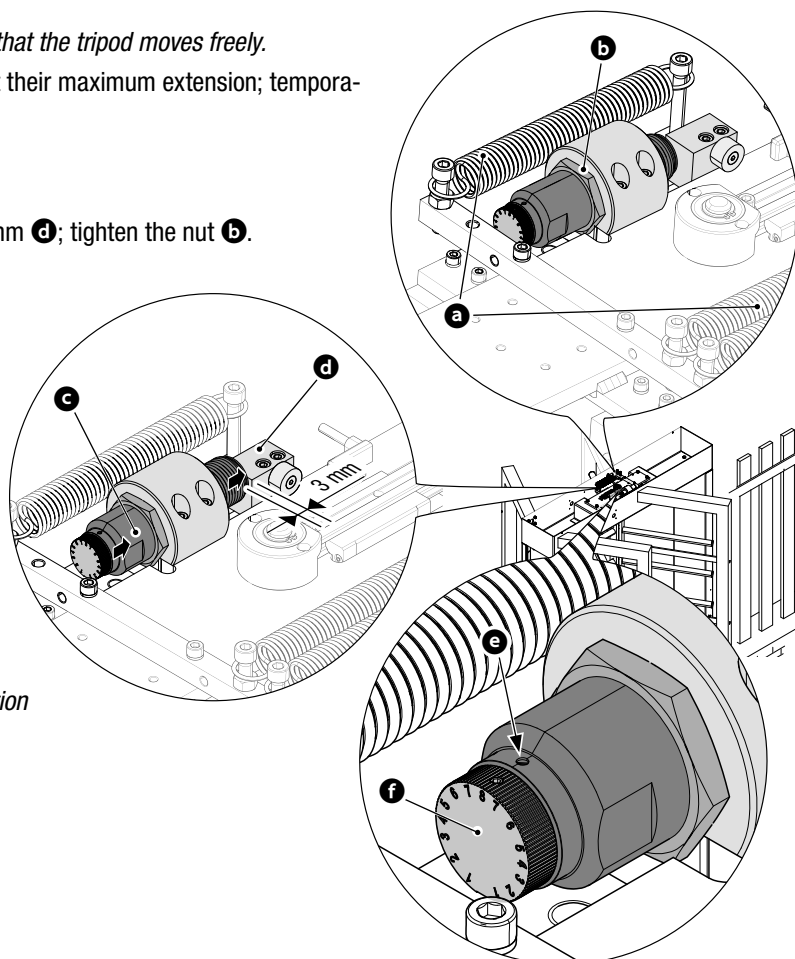
Loosen the ring nut locking screw **e**; turn the adjustment ring nut **f** clockwise until the turnstile begins to slowdown when turning the column.

Turn the power ON.

Perform simulated use and, while slowly turning the ring nut clockwise or anti-clockwise, adjust the braking force of the rotating mechanism: it must smoothly reach the end run when slowing down.

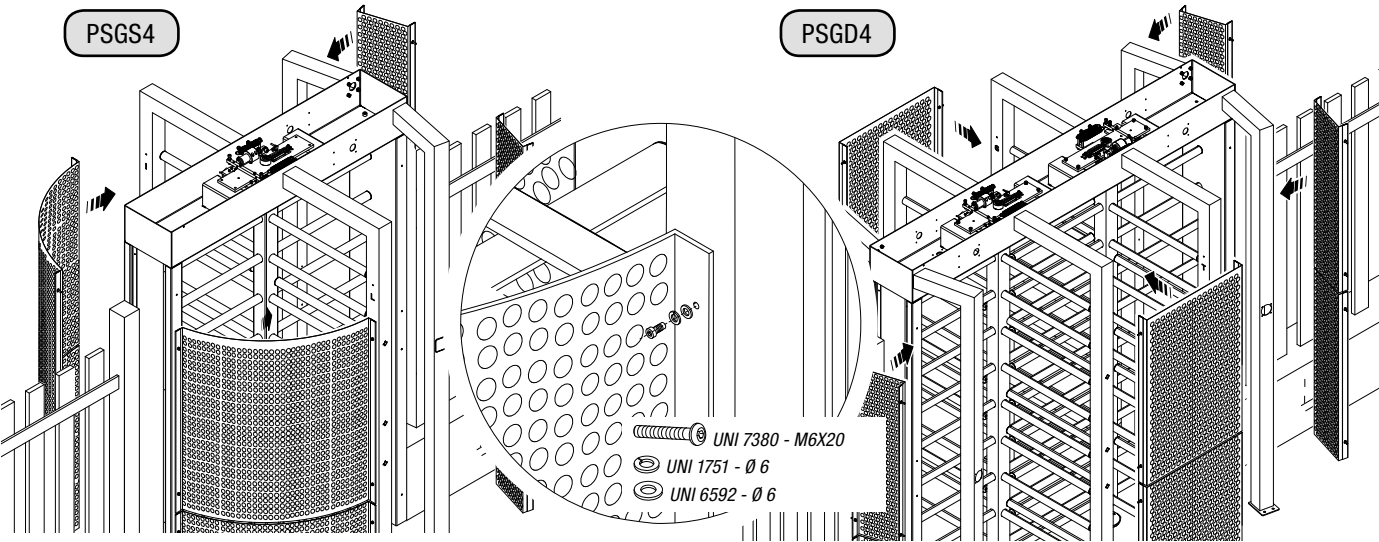
Make sure that slowdown is as expected for each position of rotation.

Fully tighten the ring nut locking screw **a n d** nut.

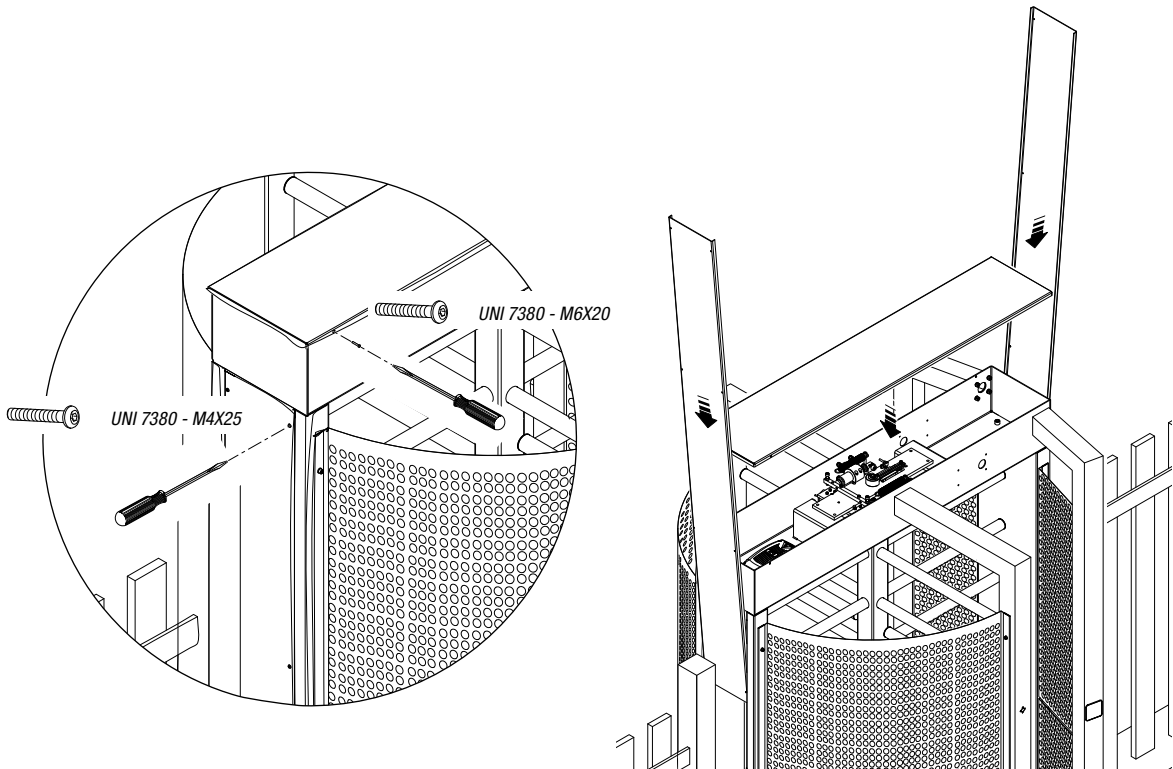


Fixing the grids and casings

Fit and secure all protective grids with the nuts and bolts provided.



Assemble the casing for the side columns and the top crosspiece.



MAINTENANCE

⚠ Before any maintenance, disconnect line voltage to prevent any possible dangerous situations that can be caused by accidental movement.

📖 Please consult the manual 119RW48 on steel cleaning operations for proper AISI 304 steel care.

Table of the mean number of cycles between failures (MCBF) for Guardian turnstiles accounting for proper installation and maintenance as specified in this manual.

Model	Operating Limits	MCBF
PSGS4 / PSGD4	Maximum number of daily cycles: 10,000 Maximum number of cycles per minute: 10 (1 cycle every 6 seconds)	1,000,000

Periodic maintenance

- **Every 400,000 cycles and at least every 6 months:**
 - Check turnstile internal wiring and verify that there are no loose or damaged cables.
 - Check that there are no abnormal movements and that rotation is smooth by turning the turnstile. Any sudden locking could be a sign of malfunction.
 - Check that turnstile is securely fixed to the ground by trying to move it; poor ground anchoring could lead to danger.
 - Check bolt tightness.
 - Check hydraulic damper adjustment.
- Check the efficiency of lock/release levers.
- Linear rail cleaning/lubrication.
- Check roller condition.
- **Each 1,000,000 cycles, replace:**
 - Rollers and electric locks.
- **Each 3,000,000 cycles, replace:**
 - Runner springs.

Troubleshooting

PROBLEM	POSSIBLE CAUSES	CHECKS AND REMEDIES
The turnstile remains unlocked in both directions	• No power • Emergency or release button pressed • Electric locks out of order	• Check for mains power • Reset the emergency button or release button • Contact service
The turnstile unlocks only in one direction	• One of the electric locks is out of order • The spring of one of the electric locks has come unlatched • Button 2-3 or 2-4 is pressed	• Contact service • Restore the spring • Check the contact
The turnstile remains locked	• The person going through leaned on the arm too early. • Both electric locks remain energised • The stop button is active	• Ask the person to stand free of the arm and try unlocking again • Contact service • Check the release command validity
The turnstile fails to slowdown at end run	• The hydraulic damper is out of order	• Adjust the hydraulic damper
The turnstile remains unlocked after passing through it	- The entrance/exit sensor is positioned incorrectly - The entrance/exit sensor is out of order	- Check the position of the entrance/exit sensor - Contact service

DISMANTLING AND DISPOSAL

 CAME CANCELLI AUTOMATICI S.p.A. implements an EN ISO 14001 certified and compliant Environmental Management System at its plants, to ensure environmental protection.

Please continue our efforts to protect the environment, something that CAME considers to be one of the foundations in developing its business and market strategies, simply by observing brief recommendations as regards disposal:

DISPOSAL OF PACKAGING

Packaging components (cardboard, plastic, etc.) can be disposed of together with normal household waste without any difficulty, by simply separating the different types of waste and recycling them.

Before proceeding, it is always advisable to check specific regulations in force in the place of installation.

DISPOSE OF PROPERLY!

DISPOSAL OF THE PRODUCT

Our products are made with different materials. Most of them (aluminium, plastic, iron, electrical cables) can be disposed of together with normal household waste. They can be recycled if collected, sorted and sent to authorised centres.

Other components (control boards, transmitter batteries etc.), on the other hand, may contain pollutants. They should therefore be removed and handed over to companies authorised to recover and recycle them.

Before proceeding, it is always advisable to check specific regulations in force in the place of disposal.

DISPOSE OF PROPERLY!

DECLARATION OF CONFORMITY

Declaration  - Came Cancelli Automatici S.p.A. declares that this device complies with the essential requirements and other relevant provisions established in Directives 2006/95/EC and 2014/30/UE.

A true copy of the declaration of conformity is available upon request.



IT • Per ogni ulteriore informazione su azienda, prodotti e assistenza nella vostra lingua:

EN • For any further information on company, products and assistance in your language:

FR • Pour toute autre information sur la société, les produits et l'assistance dans votre langue :

DE • Weitere Infos über Unternehmen, Produkte und Kundendienst bei:

ES • Por cualquier información sobre la empresa, los productos y asistencia en su idioma:

NL • Voor meer informatie over het bedrijf, de producten en hulp in uw eigen taal:

PT • Para toda e qualquer informação acerca da empresa, de produtos e assistência técnica, em sua língua:

PL • Wszystkie inne informacje dotyczące firmy, produktów oraz usług i pomocy technicznej w Waszym języku znajdują się na stronie:

RU • Для получения дополнительной информации о компании, продукции и сервисной поддержке на вашем языке:

HU • A vállalatra, termékeire és a műszaki szervizre vonatkozó minden további információért az Ön nyelvén:

HR • Za sve dodatne informacije o poduzeću, proizvodima i tehničkoj podršci:

UK • Для отримання будь-якої іншої інформації про компанію, продукцію та технічну підтримку:



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