

## Cube C-01 turnstile



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## **List of Abbreviations used**

- PS – Power Supply
- SFAS – Security and Fire Alarm System
- ACS – Access Control System

## 1. Product purpose

**Cube C-01** turnstile is designed for access control and crowd management. The turnstile can be used at the guard desks of enterprises and organizations, in the institutions, banks, educational institutions, sport and recreational facilities, shops, stations etc.

To ensure a convenient and quick passage of persons it is recommended to install one turnstile for each 500 persons operating at one shift.

## 2. Delivery set

*Table 1. Scope of supply*

| <b>Denomination</b>                       | <b>Quantity</b> |
|---|-----------------|
| <b>Cube C-01</b> turnstile                | 1 pc            |
| Remote control panel with a cable         | 1 pc            |
| Base Cover                                | 1 pc            |
| Product Passport                          | 1 pc            |
| Installation Instructions                 | 1 pc            |
| Technical Maintenance                     | 1 pc            |
| Operating Instructions                    | 1 pc            |
| Anchor with a screw of FH 12/10 SK * type | 3 pcs           |
| Connecting cable PVA 2x1.5                | 1 pc            |

\*- optional

### 3. Basic specifications

*Table 2. Basic Specifications*

| <b>Specification</b>   | <b>Turnstile</b>             | <b>Panel</b>         |
|--|------------------------------|----------------------|
| Overall dimensions (H x W x D), mm:<br>-in operating condition<br>-with fold down arms | 1024x800x900<br>1024x200x361 | 107x107x25           |
| Weight, kg   | 25                           | 0.5                  |
| Temperature range, °C:<br>- in operation<br>- transportation and storage               | +1...+40<br>+1...+40         | +1...+40<br>+1...+40 |
| Relative humidity, %, no more  | 80                           | 80                   |
| Width of the passage formed, mm  | 500                          |                      |
| Capacity, person/min   | 30                           |                      |
| Lifetime, years  | 8                            | 8                    |

*Table 3. Electrical characteristics*

| <b>Specification</b>                           | <b>Turnstile</b>  | <b>Panel</b>     |
|--|-------------------|------------------|
| Power supply voltage, V:<br>-rated<br>-working | 12<br>10.8...13.2 | 12<br>7.5...15.0 |
| Standby average current *, A                   | 0.4               |                  |
| Average current in a pass mode **, A           | 0.4               |                  |
| Maximum absorbed current                       | 1.5               |                  |

\*- values indicated at rated voltage

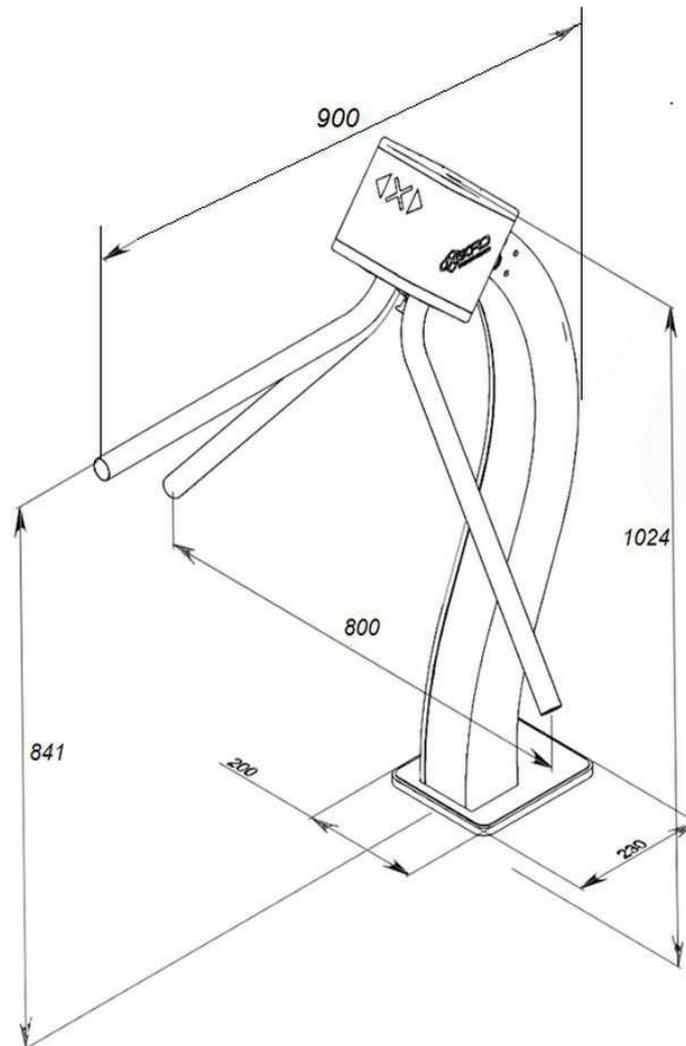
\*\*The manufacturer reserves the right for changing configuration, technical specifications and appearance of the product

## 4. Product design

### *Turnstile housing*

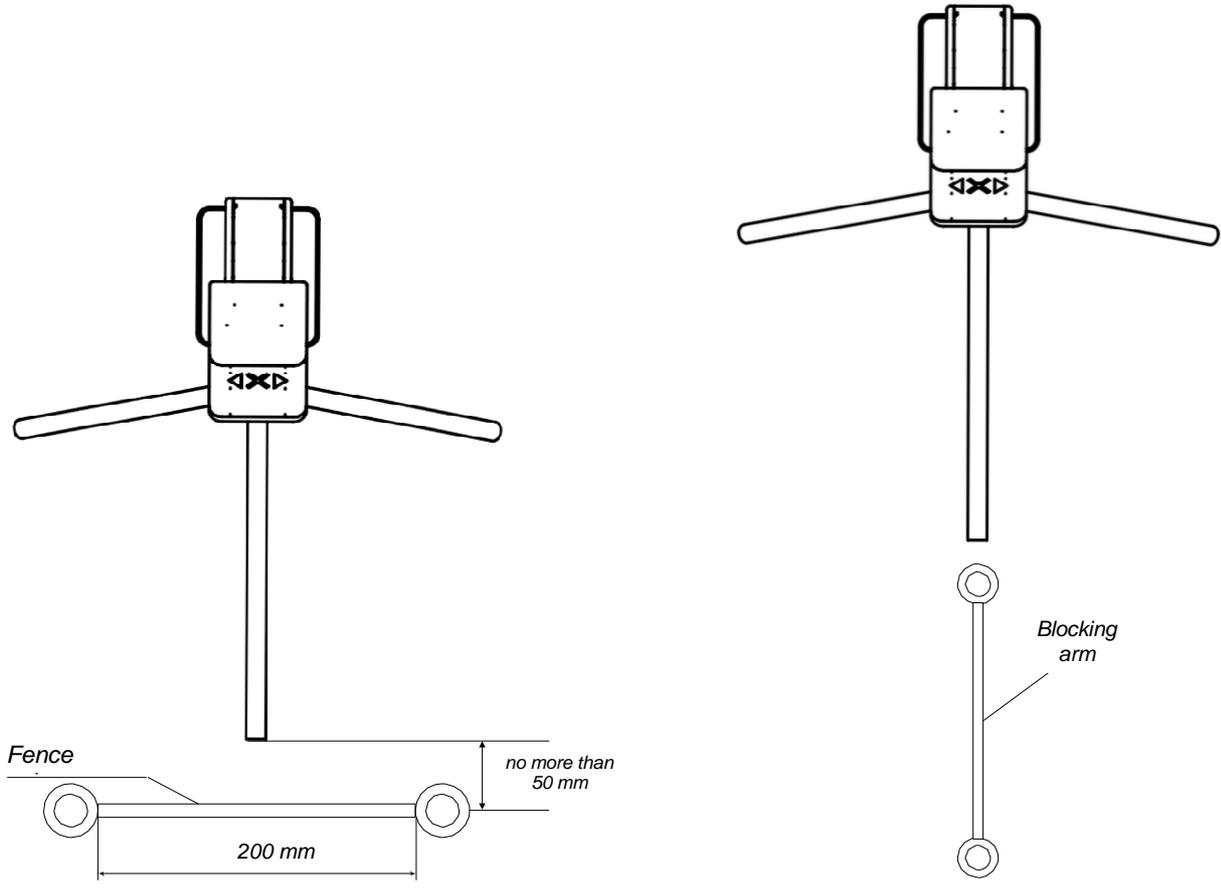
Turnstile housing and arms are made of brushed stainless steel. In the middle part of the body frame there is a dismantlable bent plate made of stainless steel for quick access to the cross-board for connection of cables PS, remote control panel and ACS. At the lower part of the turnstile rack there is a hole for entry of these cables

Basement cover shall be fixed with double-sided adhesive tape or sealing compound. The cover hides turnstile fixation to the floor (Fig.1).



*Fig. 1. General view and overall dimensions of turnstile*

**ATTENTION!** To log passages during turnstile operation under ACS control and to avoid unauthorized passages, it is required to arrange passage zones as per Fig.2

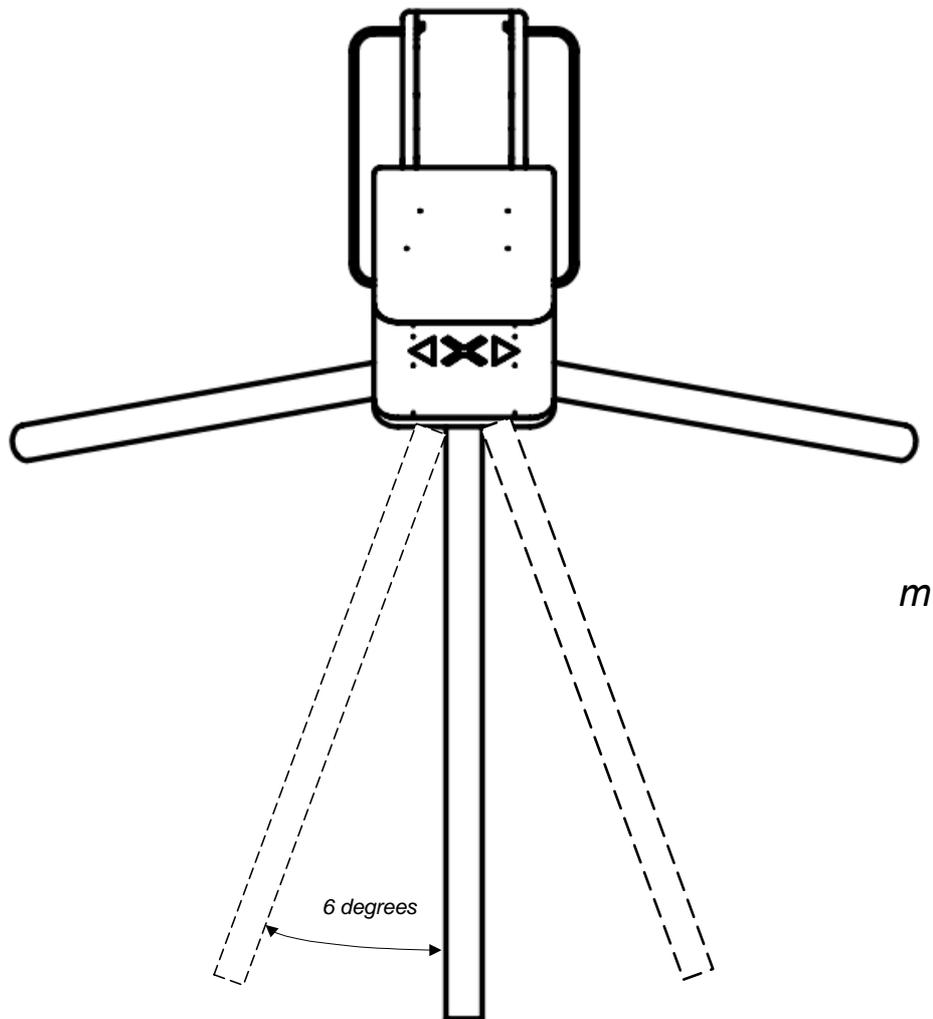


*Recommended installation diagram*

*Not recommended installation diagram*

*Fig.2. Arrangement of turnstile passage zone*

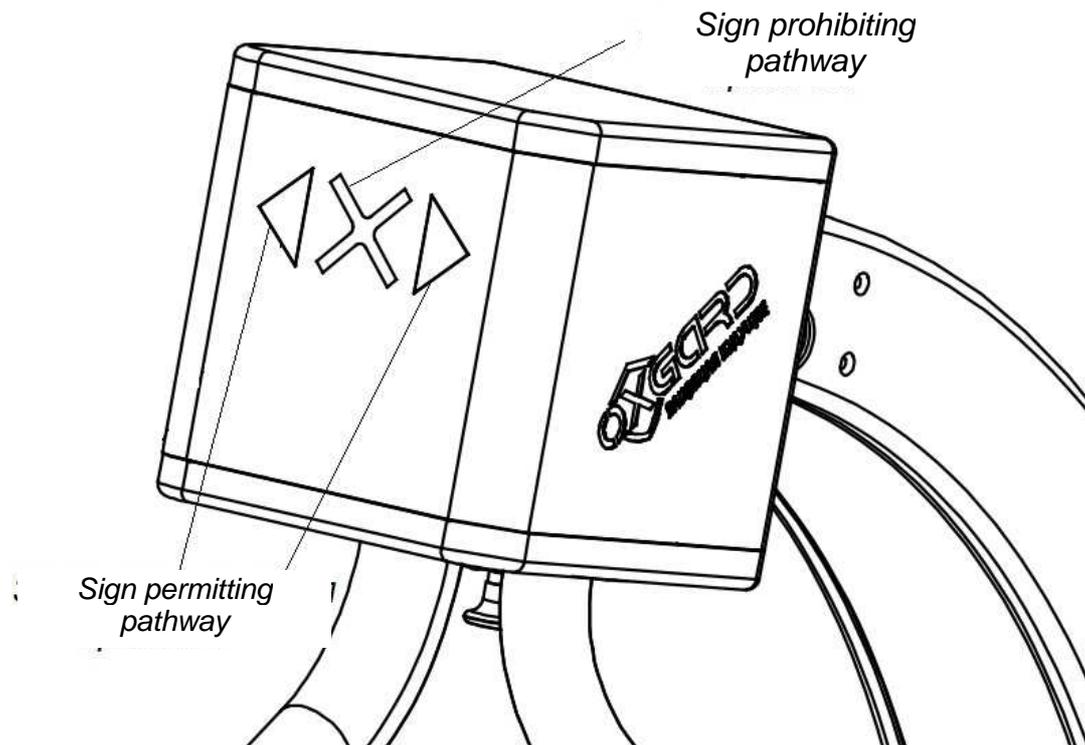
When installing the turnstile it is necessary to take into account possible free movement of the arm, in the STOP mode it constitutes 6 grades in each side, Fig 3



*Fig. 3. Possible free movement of the arm, in “STOP” mode*

### ***Indication panel***

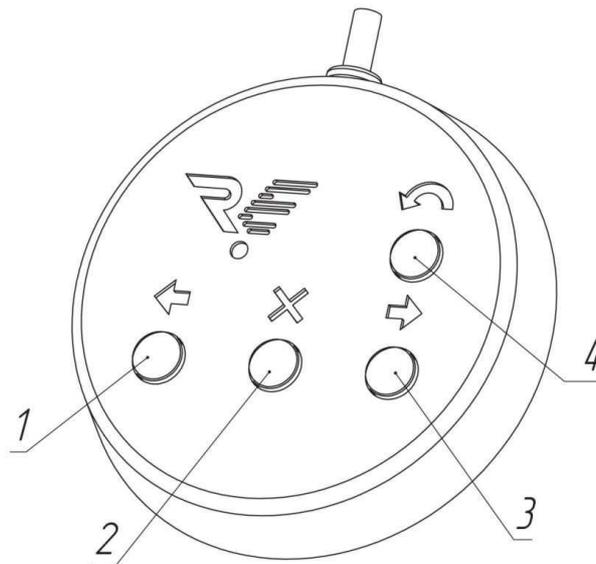
Indication panel of the turnstile is located at the upper part of the turnstile behind the insert made of acryl glass. Operation modes of the turnstile are displayed on the panel in form of pneumonic signs allowing and prohibiting a passage (Fig. 4).



*Fig. 4. Appearance of indication panel*

### ***Remote Control Panel***

Housing of turnstile and arms are made of brushed stainless steel. In the front there are located control buttons 1 - 4 and LEDs indicating operation modes on the panel (Fig.5). Standard cable length, included in the delivery set, is 5 meters.



*Fig. 5. External view of control panel*

## **5. Transportation and Storage**

Turnstile in its original packaging shall be transported by air, by road and by railroad with protection from direct exposure to rain and dust without range limitation. For transportation the turnstile is required to be folded in following i.7.2 of the Instruction7.2. Turnstile Operating Modes It is allowed to stack boxes in 2 rows during transportation and storage if Euro-pallets are used. Keep the turnstile in dry (no moisture condensation) heated places within +1 to + 40 °C temperature range. Avoid vapors of acids, alkalis, and corrosive gases at the storage place. Storage of turnstile in the original package in a dry unheated premises or closed transport containers is permitted for short periods, no more than 3 days. Before startup, the turnstile must be kept in a room with normal climate conditions for 12 hours after storage in unheated rooms.

Packaging dimensions 270x430x970 mm (H x W x L).

## 6. Safety Requirements

**ATTENTION!** A failure to observe safety requirements, indicated in this Section, may cause damage to life and health of people, complete or partial loss of operating capability of the product and (or) auxiliary equipment.

**ATTENTION!** Installation of turnstile shall be carried out by skilled professionals according to Installation Instruction.

**ATTENTION!** The manufacturer shall disclaim the liability for causing injury to human life and health complete or partial loss of operating capability of the product and (or) auxiliary equipment in case of a failure to observe safety requirements, indicated in this Section, and will terminate the validity of the product warranty.

## **IT IS FORBIDDEN:**

- to install power supply module inside the body of the turnstile as it may result in an injury of the human beings due to an electric shock;
- to install the turnstile outside dry and heated premises;
- to use pastes and liquids chemically aggressive to the materials of the housing for cleaning purposes of the product.

## **7. Turnstile Operation**

### **7.1. Turnstile Switch On**

The turnstile is supplied in a folded state (transportation mode). Before starting the operation it shall be transferred to the working position:

- unscrew a fixing screw 4 (Fig.9) and elevate the turnstile head up to the stop.
- screw in a fixing screw 4 (Fig.9) for fasten purpose of a turnstile head
- screw in a screw 3 (Fig.9) for secure fastening of the turnstile head.
- retract a fixation lock 2 of the arms (Fig.6), holding one arm by the hand in a fixed position, unfold other arms into operating position.

Connect PS to the mains ~220V and switch it on. On the indication panel of the turnstile the red cross will light up, prohibiting the passage, LED indicator of the button 2 located on REMOTE CONTROL PANEL (Fig 5) will light red. One of the arms is in state of blocking that prohibits the passage. The turnstile is ready for operation.

## **7.2. Turnstile Operating Modes**

The turnstile has several modes of operation. The desired mode is set by using RC panel or ACS. Operational modes displayed on the panel in the form of mnemonic signs depicting authorization and non-authorization of passage. Operation by ACS is described in the installation guidelines. This section describes operation by RC panel. General view of RC panel is shown in Fig. 3.

### *The "Stop" mode*

"Stop" mode is set when the turnstile is turned on. Switch from another mode to "Stop" is performed by pressing button 2, in this case LED indicator above button 2 turns red. In this mode the passage is non-authorized in both directions. Central arm can be deflected from its initial position on a small angle. The stopper will be turned on automatically and will not let the arm to rotate for passage, and then the arm will return to its original state.

### *Single passage mode*

Button 1 (3) turns on single passage mode to the left (right). This mode allows one pass to the left (right) with a subsequent changing to "Stop" mode. Green arrow indicator turns on on the display showing a free passage to the left (right). Green LED indicator on the RC panel turns on above the button corresponding to the authorized passage and a red indicator - above button 2. If the passage is not performed within 5 seconds, the turnstile switches to "Stop" automatically.

#### Multiple passage in one direction mode

In order to switch to this mode press and hold button 2 and then press button 1 (3). After that release both buttons. Multiple pass mode is displayed on the RC panel by green light above the button 1 (3). Red LED indicator above button 2 is off. Arrow indicator on the LED panel shows the direction of the authorized passage. In this mode the passage is allowed in the authorized direction for an unlimited number of times. It is also possible to authorize a single pass into the non-authorized direction by pressing button 1 (3). After this passage or within 5 seconds turnstile will return to the original mode.

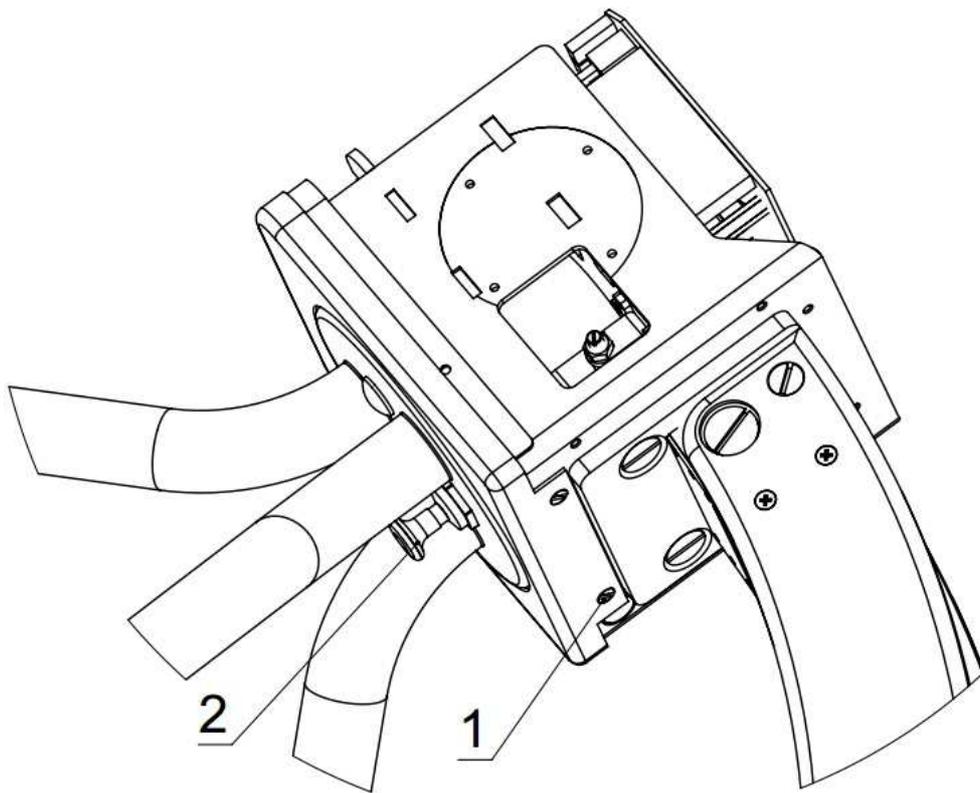
#### Free passage mode

In order to switch to this mode it is required to press and hold button 1, then press 3 and release both buttons. In this mode passage is allowed in both directions for an unlimited number of times. Arrow indicators on the LED panel blink in both directions. Green LED indicators on the RC panel turn on above the buttons 1 and 3.

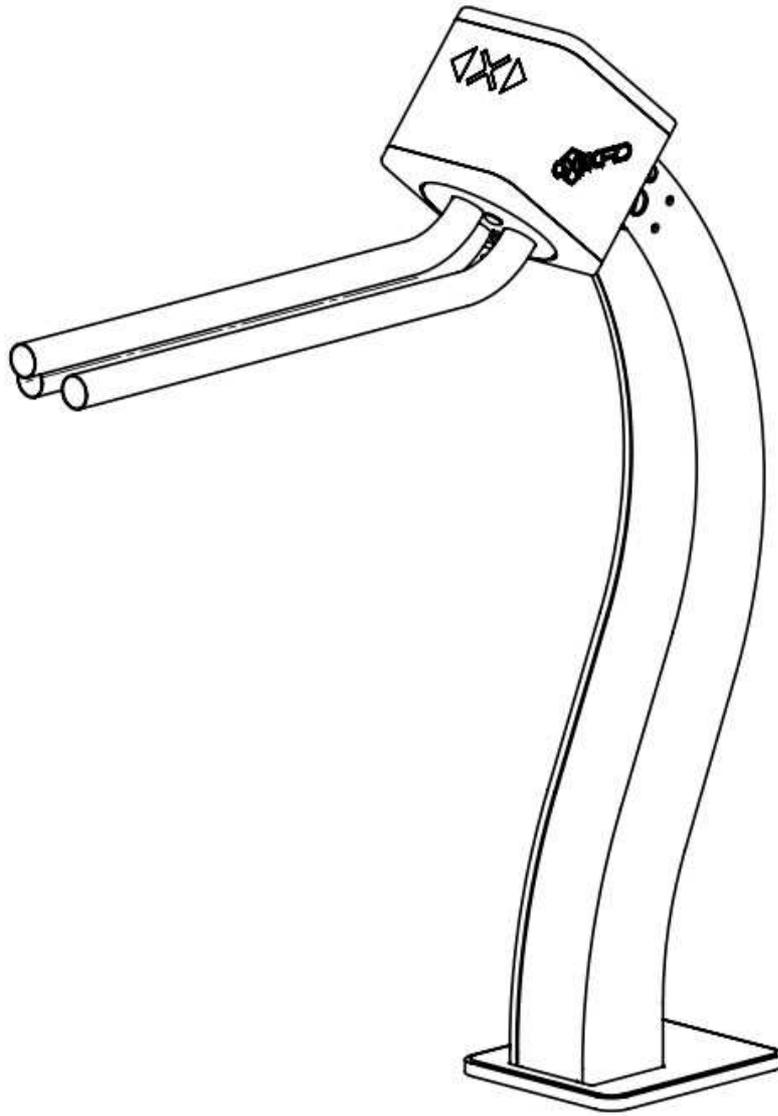
“Antipanic” mode

Switching to this mode is carried out by mechanical way. Switch the turnstile to “Antipanic” mode, to do this press button 4 on the control panel. Pull off fixation limit stop 2 of the arms (Fig.6), holding one arm by hand in a fixed position, rotate the other arm clockwise in such a way that all the arms are aligned (Fig.7). Then tighten further down all the arms folded together (Fig.8)

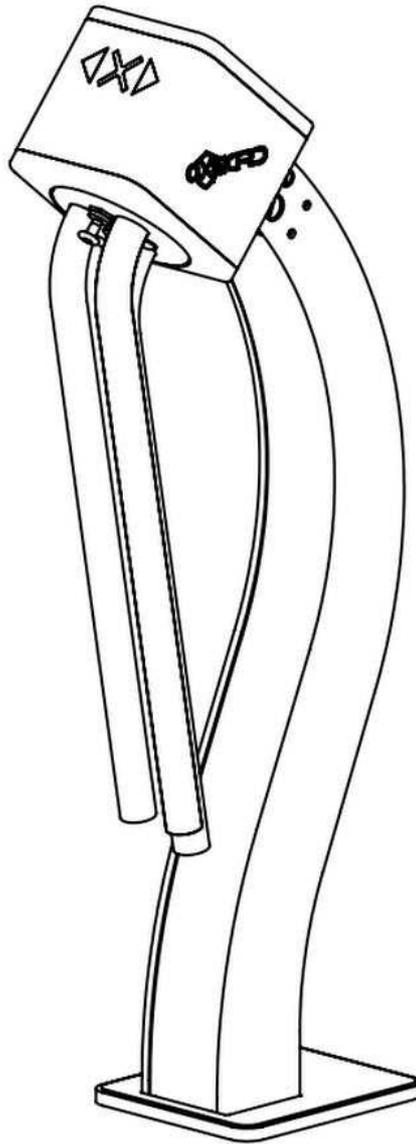
While doing so there green arrows will flash indicating both directions on the indication panel.



*Fig.6.*



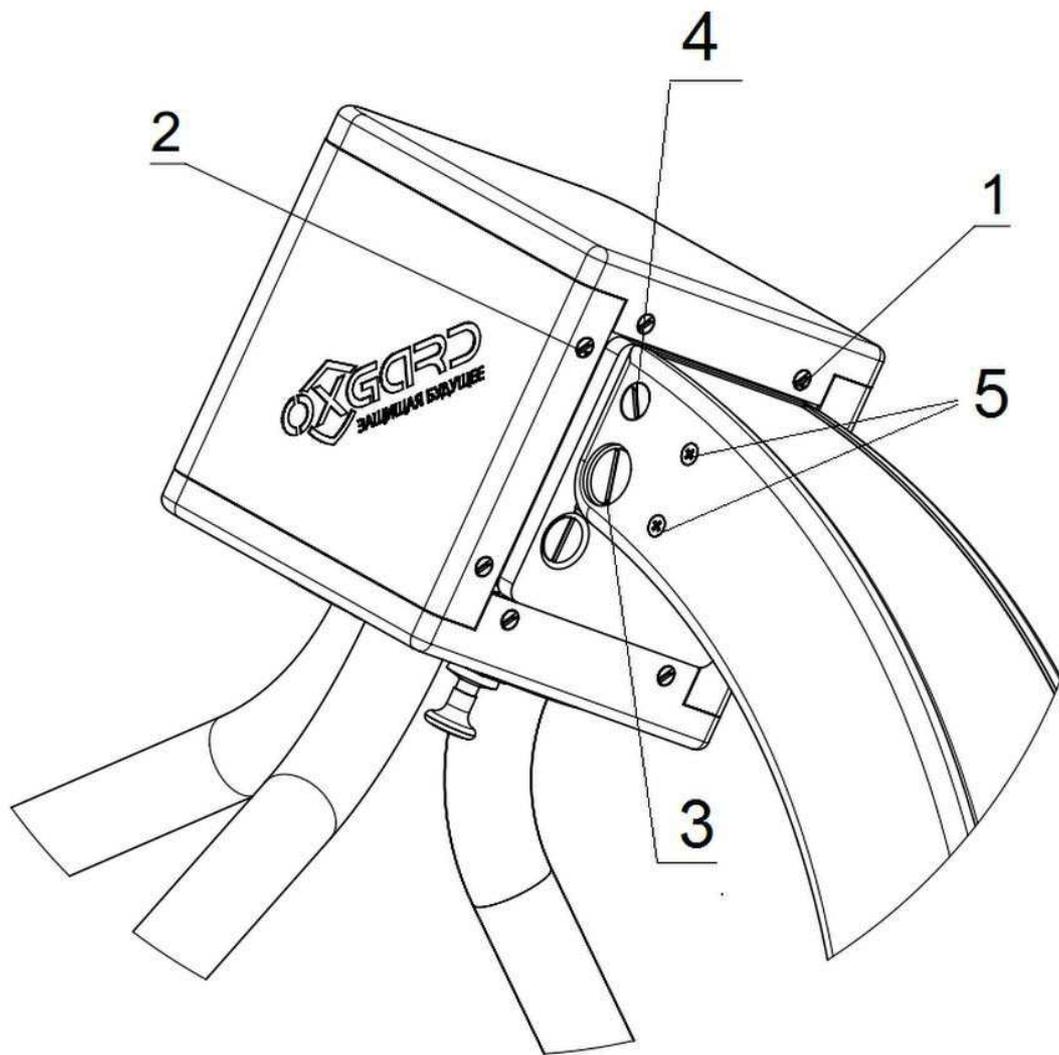
*Fig 7.*



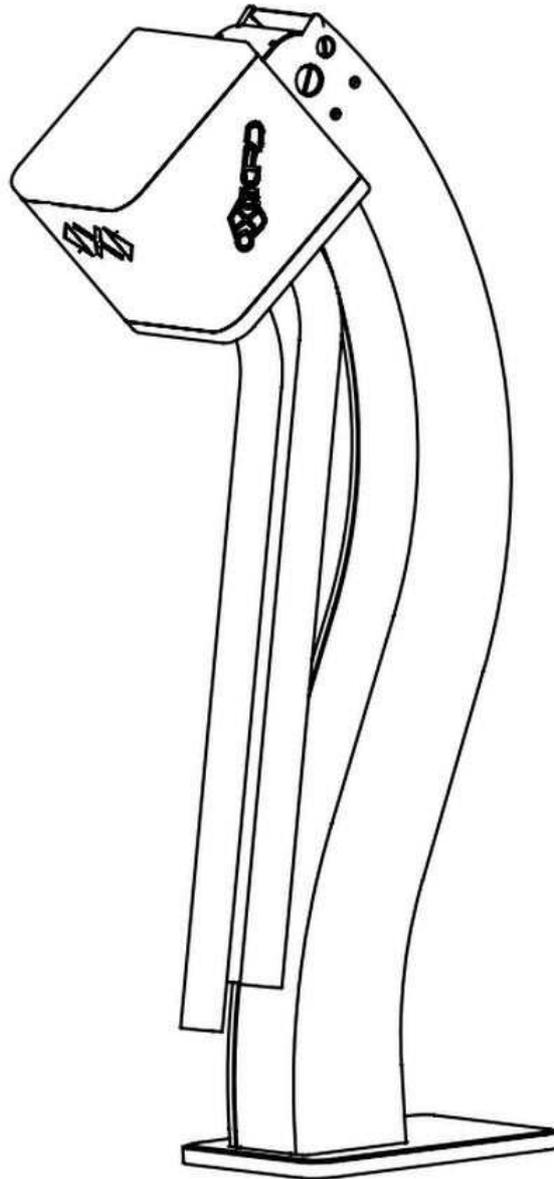
*Fig. 8.*

*“Transportation” mode*

This mode is used for transportation. To enter this mode, arms shall be folded as described in “Antipanic” mode. Raise all folded arms to horizontal position, then fully unscrew the screw 4 (Fig.9) located on turnstile housing, loose the screw 3 (Fig.9) and move the turnstile head down so that all folded arms would fit the bent of the turnstile leg (Fig.10).



*Fig.9.*



*Fig. 10.*

### **7.3. Adjustment of remote control panel**

Turnstile can be set in various directions in relation to the user. In some cases it is needed to reverse left / right passage buttons. This can be done by the following operations:

- Switch off the power of the turnstile;

- Press and hold down the buttons of passage to the left (1) and to the right (3);
- Switch on the turnstile power;
- Holding down buttons 1 and 3, press button 2;
- Release buttons 1 and 3;
- Release button 2.

Now when you click left button passage will be allowed to the right and vice versa. The current functions of the buttons are saved and do not reset when power is turned off. In order to return to the initial modification re-do the above sequence.

## 8. Troubleshooting

*Table 4. Troubleshooting*

| <b>Failure</b>  | <b>Remedy</b>  |
|---|--|
| PS unit is connected, but the turnstile does not function   | 1. Please check for a proper connection of the power wires<br>2. Check the fuse on the cross-board                               |
| Remote control panel does not function  | 1. Make sure that the control panel is connected properly.<br>2. If +12V and GND are properly connected, try reversing CL and CH |
| The turnstile does not work correctly   | Calibrate the turnstile.   |
| Remote control panel displays operating state of the turnstile but the turnstile does not respond to pressing buttons | Check J2 jumper on the cross-board (the jumper shall be removed, please, see Article 5.4 of Installation guidelines)             |

Calibration sequence:

The turnstile can be calibrated by two ways:

**1. Using *BUT1* button, located on the cross-board .**

- switch off the PS
- press the single button on the cross-board (BUT1).
- switch on the PS, holding the button (BUT1)
- wait for the turnstile LED flashing and release the button BUT1.

- while indicators are flashing, press the button (BUT1) once. After that the automatic calibration sequence will start even if the control panel is not connected.

## *2. Using the control panel.*

- power off the turnstile.
- switch on the power , the LED's located on REMOTE CONTROL PANEL first will light up and turn off, except for the button (2), press shortly the button (2), the button(4) will light up, press shortly the button (4), these manipulations should be done in time before lighting up of the red cross sign on the indication panel.
- after that the red cross sign will light up on the indication panel

The turnstile is calibrated.

After calibration connect the turnstile to your system and check the proper functioning of the turnstile.

**PRODUCT IS CERTIFIED**

Voltage: 12V DC Current: 5A

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