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APPROVED BY

VZR.247800.001 LU

TURNSTILE MODEL CUBE C-03

VZR.247800.001OM
OPERATION MANUAL

40 sheets



CONTENTS

1	Desc	ription and operation	4
	1.1	Product description and operation	2
	1.2	Description and operation of Oxgard Praktika control panel	8
2	Inten	ded useded	9
	2.1	Operating limits	9
	2.2	Preparing the product for use	10
	2.3	Product operation	14
	2.4	Actions in extreme conditions	18
3	Maint	tenance	19
	3.1	General Provisions	19
	3.2	Safety precautions	19
	3.3	Product maintenance procedure	20
	3.4	Visual inspection of the product	21
	3.5	Partial disassembly of the product	21
	3.6	Checking the product components	26
	3.7	Lubricating moving parts of the product mechanism	26
	3.8	Product assembly and testing	27
4	Routi	ne repairs	28
	4.1	Routine repairs of the product	28
	4.2	Routine repairs of the product components	29
	4.3	Malfunctions during warranty period	29
5	Stora	ge	30
6	Trans	sportation	31
7	Utiliz	ationation	32
ΑP	PENDI	X A — Distributors and service centers	33
۸h	hrovis	tions	30



This Operation Manual (OM) applies to Turnstile Oxgard CUBE C-03 and its modifications (hereinafter referred to as the product).

Product firmware version:

FW v.d. 4.

The manufacturer reserves the right to change configuration, technical characteristics and appearance of the product without further notice

Before using the product, please read VZR.247800.001 Logbook (LB) as well.

This OM is a document certifying the product's basic parameters and characteristics guaranteed by the manufacturer.

The Operation Manual is intended to instruct the user on the principle of operation, structure of the product to correctly operate the product, fully utilize its technical capabilities and maintain its constant readiness for operation.



1 DESCRIPTION AND OPERATION

1.1 Product description and operation

1.1.1 Turnstile Oxgard CUBE C-03 is designed to control access and manage people traffic separating it in one-by-one manner.

The product can be used at checkpoints of enterprises, organizations and banks, in educational institutions, sports and entertainment facilities, shops, terminal stations and other institutions.

To ensure convenient and fast passage of people, it is recommended to install one product per 500 people working during one shift.

1.1.2 The structural components of the product are detailed in Table 1.

Table 1 – Product components

Product designation	Product name	Quantity	Note
Turnstile	CUBE C-03	1	
Control panel (CP)	Universal control panel Praktika	1	
Power supply source*		1	
Barrier section set	Praktika barrier	1	



Note - Product components marked with (*) are optional.



The product specifications are given in Table 2. 1.1.3

Table 2 – Product specifications

<u> </u>			
Value			
1,024x800x830			
1,024x200x300			
25.0			
+1+40			
+1+40			
80			
550-580			
30			
2			
8			
12.0			
10.813.2			
0.7			
0.7			
1.5			



Note - * Values of current are given for nominal supply voltage



1.1.4 Product structure.

The turnstile body is made of painted and polished stainless steel and the barrier arms are made of polished stainless steel.

The turnstile stand has a removable stainless steel plate for quick access to the place where control cables are laid down. A hole is provided in the bottom part of the turnstile stand to input these cables. The control board located under the removable cover in the block of barrier arms is used for connection of the PSU, CP and ACS cables.

Figure 1 –the base cover (secured with a double-sided adhesive tape) hides the turnstile fixation to the floor.

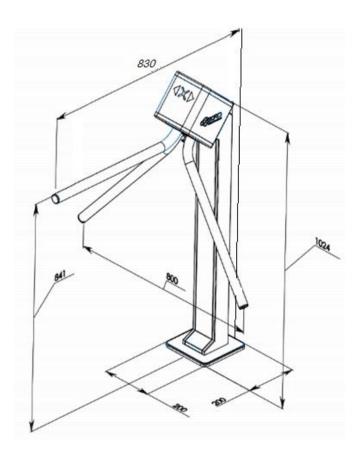


Figure 1 – General view of the turnstile



1.1.5 Indication system

The indication panel is located at the upper part of the turnstile behind the insert made of acrylic glass. Figure 2 –the operation modes of the turnstile are displayed on the panels in the form of mnemonic signs depicting authorization and non-authorization of passage.

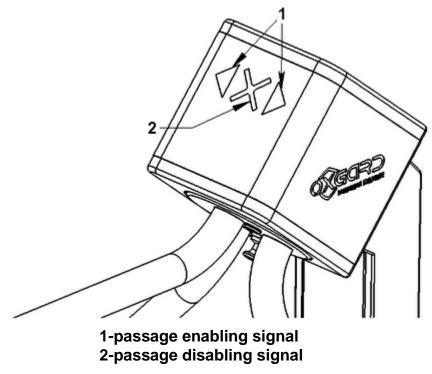


Figure 2 – Appearance of the indication panel

- 1.1.6 Marking contains manufacturer's trademark, designation and serial number.
 - 1.1.7 Overall dimensions of the packaging container are:
 - 1) Height 270 mm;
 - 2) Width 430 mm;
 - 3) Length 970 mm.



1.2 Description and operation of Oxgard Praktika control panel

Universal Oxgard Praktika control panel is designed for controlling Oxgard turnstiles.

1.2.1 The housing is made of stainless steel and the control buttons and operating mode LED indicators are located on the front side. The specifications are given in Table 3.

Table 3 – Product specifications

Parameter	Value
Overall dimensions (HxWxL), mm	25X107x107
Weight, kg	0.5
Temperature range, °C: - operation - transportation and storage	+1+40 +1+40
Air relative humidity, %, not more than	80
Service life, years	8
Supply voltage (direct current), V: - nominal - working	12.0 7.515.0

1.2.2 Design features:

- 1) Possibility to connect two control panels to one turnstile;
- 2) High noise immunity;
- 3) Length of the wire from the panel to the turnstile can reach up to a kilometer without losing the speed of transmission of commands;
- 4) Standard length of the cable included in the package is 5 meters.



2 INTENDED USE

2.1 Operating limits

ATTENTION: FAILURE TO COMPLY WITH THE SAFETY REQUIREMENTS SPECIFIED IN THIS SECTION CAN RESULT IN DEATH AND DAMAGE TO HEALTH, COMPLETE OR PARTIAL LOSS OF PERFORMANCE OF THE PRODUCT AND/OR AUXILIARY EQUIPMENT.

ATTENTION: THE TURNSTILE SHOULD BE INSTALLED BY QUALIFIED SPECIALISTS ACCORDING TO THE INSTALLATION MANUAL

ATTENTION: MANUFACTURER WAIVES ANY RESPONSIBILITY FOR DEATH AND DAMAGE TO HEALTH, COMPLETE OR PARTIAL LOSS OF PERFORMANCE OF THE PRODUCT AND/OR AUXILIARY EQUIPMENT IF USER FAILS TO COMPLY WITH THE SAFETY REQUIREMENTS SPECIFIED IN THIS SECTION, AND ALSO VOIDS THE PRODUCT WARRANTY.





TO INSTALL THE 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.

INSTALL THE TURNSTILE OUTSIDE DRY AND HEATED ROOMS.

PREVENT OR ACCELERATE MOVEMENT OF THE TURNSTILE ARMS.

APPLY PASTES AND LIQUIDS CHEMICALLY AGGRESSIVE TO MATERIALS OF THE HOUSING WHEN CLEANING THE PRODUCT.

2.2 Preparing the product for use

2.2.1 Safety measures during product preparation

ATTENTION: TO AVOID INJURIES AND BLOCKING OF THE TURNSTILE, BEFORE CONNECTING THE TURNSTILE, CLEAR THE ARM ROTATION AREA FROM PEOPLE AND FOREIGN OBJECTS.

2.2.2 Rules and procedures for visual inspection of the product

Visual inspection of the product before connecting it to the mains should be obligatory and include:

- 1) Check for absence of mechanical damage to the product housing: cracks, through holes from dropped out fasteners;
- 2) Thorough inspection of all connections of the product.



2.2.3 Turning on the product.

Connect the PSU to \sim 220 volts mains and turn it on. The red cross on the indication panel of the turnstile will light up, prohibiting the passage, the LED indicator of the button (Figure 5 – 2) located on the CP will become red. One of the arms is in the blocking state that prohibits the passage.

The turnstile is ready to work.

2.2.4 Visual inspection and verification of the product readiness for use:

Figure 3 –possible free travel of the arm, it makes 6 degrees on each side in "STOP" mode.

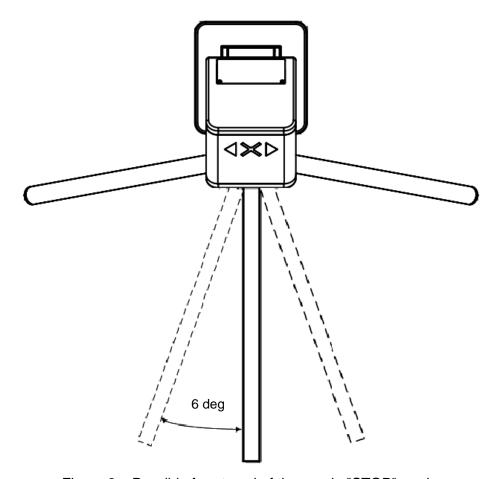
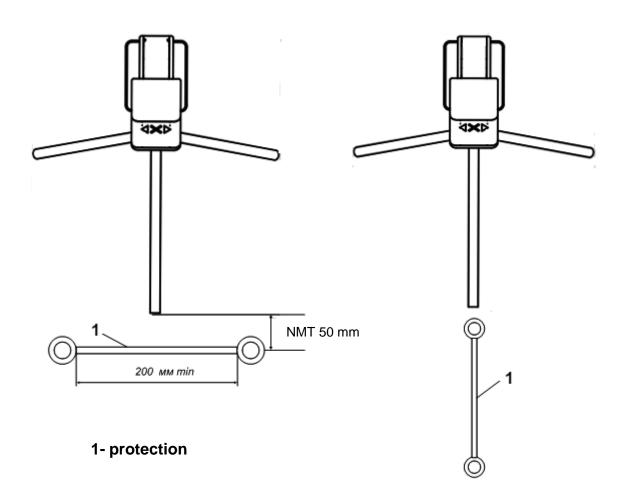


Figure 3 – Possible free travel of the arm in "STOP" mode



2.2.5 Guidelines on product orientation.

ATTENTION: THE PASSAGE ZONES SHALL BE ARRANGED TO ALLOW RECORDING OF PASSAGES DURING TURNSTILE OPERATION UNDER ACS CONTROL AND TO AVOID UNAUTHORIZED PASSAGES.



Recommended diagram

Not recommended diagram

Figure 4 – Turnstile passage zone arrangement



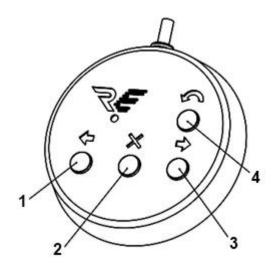
2.2.6 Control panel settings

Figure 5 – CP appearance. The product can be installed in different ways relative to the user. In some cases, it is necessary to swap left/right passage buttons. This can be done using the following operations:

- 1) Turn on power;
- 2) Press and hold **LEFT** (1) and **RIGHT** (3) buttons until the LEDs on **LEFT** (1) and **RIGHT** (3) buttons blink.
- 3) Press and release **STOP** button (2).
- 4) Press and release LEFT button (1).

Now when LEFT button is pressed, it will be allowed to pass to the right and vice versa. Current button assignment is stored and not reset when the power is turned off. To return to the initial setting, it is necessary to repeat the above sequence of actions.

Figure 5 – control buttons 1 (LEFT), 2 (STOP), 3 (RIGHT), 4 (ANTI-PANIC) and LED indicators of the product operating modes.



1 - left, 2 - stop, 3 - right, 4 - anti-panic

Figure 5 – Appearance of the control panel



2.3 Product operation

2.3.1 Product operating modes

Product can operate in several modes. Desired mode can be enabled using the CP or ACS. The indication of the operation modes is displayed on the panel in the form of mnemonic signs depicting authorization and non-authorization of passage. The product operation on the ACS basis is described in the IM.

2.3.2 Controlling the product using the control panel

Figure 5 – over each CP button, there is a LED indicator that displays the turnstile operation mode.

"STOP" mode

The "STOP" mode is set when the turnstile is turned on. Entering the "STOP" mode from another mode is performed using button 2, while the LED indicator over button 2 lights up red. The passage is non-authorized in both directions in this mode.

The central arm can be deflected from its initial position on a small angle of 6 grades. When the arm is deflected, the stopper will not let it rotate for passage in any direction.

One-time passage mode

Button 1 (3) enables one-time passage mode to the left (right). When this mode is enabled, one pass to the left (right) will be allowed, followed by entering the "STOP" mode. The arrow indicator turns on on the indication panel showing a free passage to the left (right).



On the CP, the LED indicator over the button, located on the side where passing is allowed, lights green, and lights red over button 2. If a pass has not been completed within 5 seconds, the product automatically enters the "STOP" mode.

Multiple passage in one direction mode

To enter this mode, press and hold button 2, then press button 1 (3). Both buttons can be released thereafter.

Multiple pass mode is displayed on the control panel by green light above button 1 (3), the red LED indicator above button 2 is off. The arrow indicator on the indication panel shows the direction of the authorized passage.

The passage is allowed in the authorized direction for an unlimited number of times in this mode.

It is also possible to authorize a single pass into the non-authorized direction by pressing button 1 (3). The product will return to the original mode after this passage or within 5 seconds.

Free passage mode

To enter this mode, press and hold button 1, then press button 3 and release both buttons. In this mode, passes in both directions are allowed for an unlimited number of times.

The arrow indicators on the indication panel blink in both directions. On the CP, the LED indicators over buttons 1 and 3 light green.

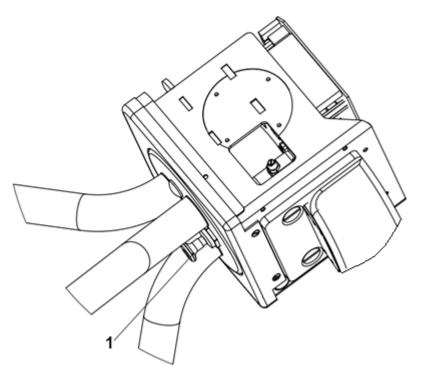


"Antipanic" mode

Switching to this mode is carried out mechanically.

Switch the turnstile to "Antipanic" mode, to do this press button 4 on the control panel.

Pull off fixation limit stop (Figure 6 - 1) of the arms, holding one arm by hand in a fixed position, rotate the other arm clockwise in such a way that all the arms are aligned (Figure 7 - 1).



1 - Fixation limit stop of the arms

Figure 6 – Fixation limit stop of the arms



Then tighten further down all the arms folded together (Figure 7 - 2).

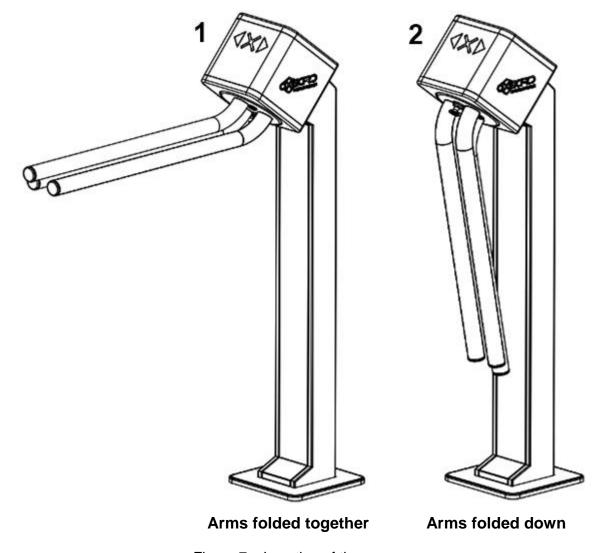


Figure 7 – Location of the arms

While doing so the arrows indicating both directions will blink on the indication panel.



2.4 Actions in extreme conditions

To open the passageway in an emergency situation, use the "Antipanic" mode: fold the product arms and clear the passageway in this mode.

ATTENTION: WHEN OPERATING THE PRODUCT REMEMBER THAT, IN CASE OF SHORT CIRCUIT, INSULATION BREAKDOWN AND SPARKING, ELECTRIC CIRCUIT CAN BE A SOURCE OF FIRE DANGER.

If a fire occurs, external power supply should be switched off. Fire, which occurred in the product, wiring and cables, should be extinguished using powder extinguishers.



3 MAINTENANCE

3.1 General Provisions

Maintenance (hereinafter referred to as MNT) of the product should be carried out in accordance with this Operation Manual.

- 3.1.1 To maintain performance and ensure estimated service life of the product during operation, it is necessary to periodically perform MNT of the product, including performing MNT during warranty period.
- 3.1.2 Scheduled maintenance should be performed once per 6 months. If a fault occurs, maintenance should be performed immediately after troubleshooting.
- 3.1.3 Maintenance is recommended to be performed by two persons who are qualified mechanical and electromechanical specialists (or electricians), at least category 3, and who have studied this Operation Manual.

3.2 Safety precautions

When performing maintenance, safety measures should be observed. Maintenance should be performed by specially trained technical personnel.





TO PERFORM WORK WHEN THE TURNSTILE POWER IS ON. FAILURE TO COMPLY WITH THESE SAFETY REQUIREMENTS CAN RESULT IN DEATH AND DAMAGE TO HEALTH, COMPLETE OR PARTIAL LOSS OF PERFORMANCE OF THE PRODUCT AND/OR AUXILIARY EQUIPMENT.

TO REMOVE THE MOTHERBOARD LOCATED UNDER THE INDICATION PANEL FROM ITS MOUNTS. OTHERWISE, THE MANUFACTURER WILL TERMINATE PRODUCT WARRANTY.

ATTENTION: IT IS NOT RECOMMENDED TO ADJUST THE STROKE LIMITERS OF THE SOLENOIDS OR TENSION OF THE SPRINGS. THESE ASSEMBLIES ARE FACTORY-ADJUSTED. FAILURE TO COMPLY WITH THESE ADJUSTMENTS MAY CAUSE MALFUNCTION OF THE ENTIRE ELECTROMECHANICAL SYSTEM.

3.3 Product maintenance procedure

Maintenance includes the following scope of work:

- 1) visual inspection of the product condition;
- 2) partial disassembly of the turnstile, cleaning of the supporting frame;
- 3) checking fastening parts and assemblies of the turnstile;



- 4) lubrication of the wear-prone parts of the actuating device and locking mechanisms;
- 5) installing dismantled parts to their place;
- 6) general check of the turnstile operation.

3.4 Visual inspection of the product

3.4.1 Visually inspect the product. There should not be visible damage on the product.

3.5 Partial disassembly of the product

To get access to all necessary assemblies of the turnstile, the latter should be partially disassembled.

Figure 8 – this scope of works includes dismounting of the safety cover (3), decorative panel (6) and barrier arm assembly (under the cover).



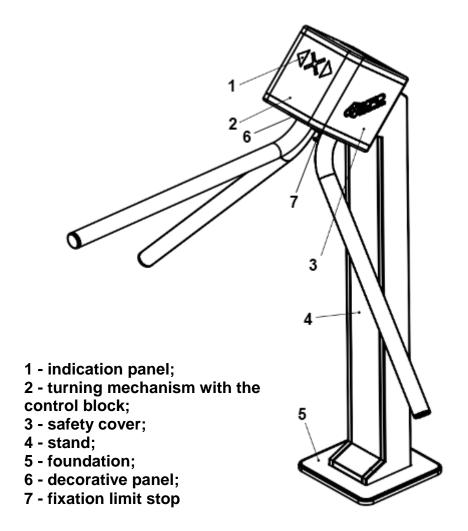


Figure 8 – Main panels of the product

Fold the barrier arms for convenience in operation: pull off fixation limit stop (7) of the arms and, holding one arm by hand in a fixed position, rotate the other arm clockwise in such a way that all the arms are aligned. Then push the folded arms down.



3.5.1 Turn off the turnstile power supply and disconnect it from power network.

3.5.2 Dismounting of the safety cover:

Figure 9 – unscrew two screws (1) and four screws (2), smoothly slide the cover up (in the direction of the arrow)

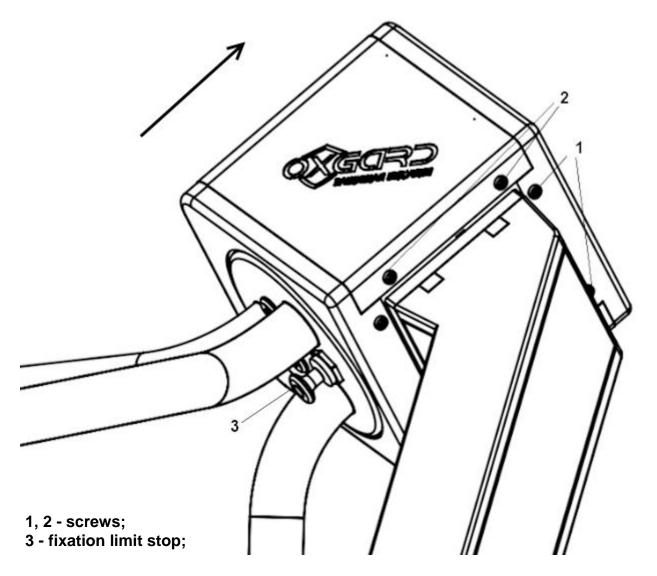


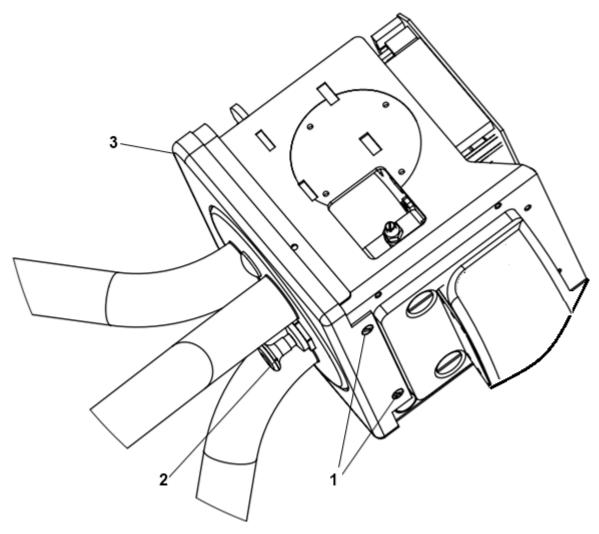
Figure 9 – Dismounting of the safety cover

Slide the cover till the end and free access to the rotation mechanism.



3.5.3 Remove the decorative panel:

Figure 10 – unscrew two screws (1) and remove the decorative panel (3).



1 - screws; 2 - fixation limit stop; decorative panel

Figure 10 – Dismounting of the decorative panel



3.5.4 Remove the barrier arm assembly:

Figure 11 – unscrew fixation limit stop (2) with the help of the D22 socket wrench.

Undo M6 screw located inside the hole, where the fixation limit stop was fixed, using the S5 hexagonal key.

Figure 11 – undo two M6 screws (1) with the help of the S5 hexagonal key and remove the assembly.

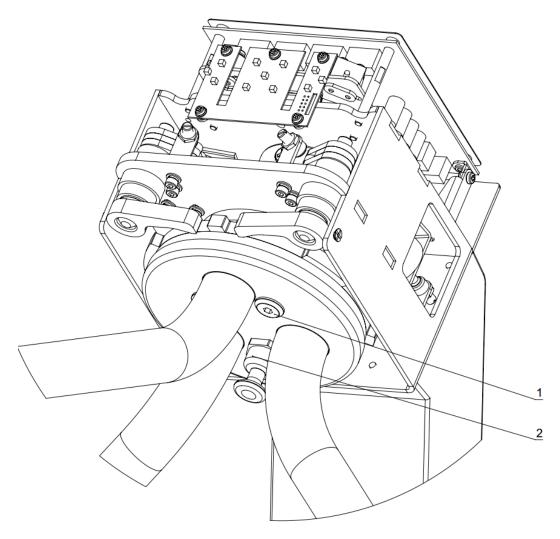


Figure 11 – Dismounting of the barrier arm assembly



3.6 Checking the product components

- 3.6.1 Clean the load-bearing frame from dirt.
- 3.6.2 Check that all cables are securely attached.
- 3.6.3 Check and, if necessary, tighten threaded connections of the fasteners of the turnstile assemblies.

3.7 Lubricating moving parts of the product mechanism

Lube with machine oil, 5W-20 viscosity class, 2-3 drops per moving assembly.

Figure 12 – lubricate the turnstile mechanism elements (1, 2)

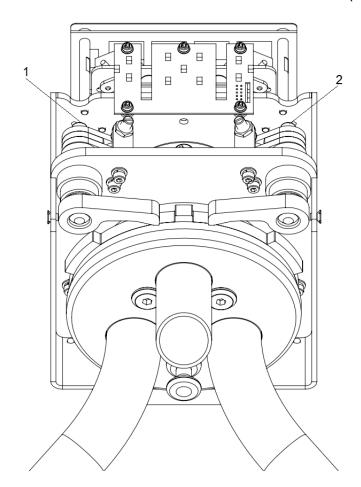


Figure 12 – Turnstile mechanism elements



3.8 Product assembly and testing

To assemble the product, perform disassembly operation in reverse order:

- 1) install the barrier arm assembly:
- 2) install the decorative panel:
- 3) install the safety cover:
- 4) turn up the turnstile power;
- 5) perform a health check by performing several test passes.

If extraneous noise and any violations of operating modes are absent, the turnstile is ready for operation.

If any defects in the product components are found during MNT, we recommend to contact service department for advice.

List of addresses of official distributors and service centers is given in Appendix A and is also available on website: www.oxgard.ru

If it is necessary to repair damaged painted surfaces, use powder paint identical to the damaged one (RAL9005) in accordance with the paint instructions for application.



4 ROUTINE REPAIRS

4.1 Routine repairs of the product

No routine repairs are provided for the product. If the faults listed in Table 4 occur, take the following actions.

Table 4 – Typical product malfunctions

Malfunction	Action
PSU is connected, but the	1) Check if the power wires are connected correctly;
turnstile does not work	2) Check the fuse on the cross-board.
The CP doesn't work	1) Check if the panel is connected correctly;
	2) If +12V and GND terminals are connected correctly, try
	to swap the CL and CH terminals.
The turnstile does not operate	Calibrate the turnstile.
correctly	

If any other problems occur, contact the service department.



4.2 Routine repairs of the product components

Routine repairs of the product components shall be carried out by replacing faulty parts with known good ones.

If such replacement is impossible or there are no known good components available for the product, a proprietary repair method should be used.

4.3 Malfunctions during warranty period

If a malfunction occurred during warranty period (Logbook VZR.247800.001 (LB)), please send a claim to the manufacturer.

To do this:

- 1) prepare a technically substantiated Claim Report;
- 2) make extracts from the FO section "Repair".
- 3) make extracts from the FO section "Preservation".



5 STORAGE

The product should be stored in dry (without moisture condensation) heated rooms at a temperature of +1 to + 40 °C. The storage room should not contain acid, alkali, or corrosive gases.

The product shall be permitted to be stored in its original package for a short time, no more than for 3 days, in dry unheated rooms, enclosed transport bodies.

After storage in unheated rooms, before commissioning, the turnstile should be kept in a room with normal climatic conditions for 12 hours.



6 TRANSPORTATION

The product in the original package can be transported without limiting the range by air, closed motor road and rail transport provided it is protected against direct exposure to precipitation and dust.

When transporting and storing products on Euro pallets, it is allowed to stack boxes in 2 rows.

Loading and unloading operations should be carried out in compliance with safety regulations.



7 UTILIZATION

Upon expiry of its service life, the product should be disposed of along with its components.

Examples of such disposal can be disassembly (dismantling) of the product and sorting its components into groups of similar parts, converting the product into a learning aid or using it for purposes other than intended use.



APPENDIX A — DISTRIBUTORS AND SERVICE CENTERS

Lists of official distributors and service centers are given in Tables 5-6 and are constantly updated. The latest information is available at website www.oxgard.ru.

Table 5 - Distributors and service centers in Russia

No.	Company	Contact details	Status
1	Eliks trading house	107023, Moscow, 3, M. Semyonovskaya str., (Elektrozavodskaya metro station) 7(495)725–66–80 www.elics.ru, elics@elics.ru	Distributor Service center Warehouse
2	Luis + LLC	125040, Moscow, Center, 1st Street Yamskogo Polya, 28 7(495)637–63–17, 7(495)280–77–50 www.luis.ru luis@luis.ru	Distributor Warehouse
3	Luis + LLC	192029, Saint-Petersburg, Obukhovskoy Oborony Ave., 70, bld. 3A 7 (812) 331–40–41; www.luis.ru luis-spb@luis-spb.ru	Distributor Warehouse
4	Luis + LLC	400081, Volgograd, Bureyskaya str., 7 7 (8442) 43–97–98 www.luis.ru info@luis-don.ru	Distributor Warehouse
5	Luis + LLC	620100, Yekaterinburg, ul. Sibirsky trakt, 12, p. 6 7 (343) 298–20–28 www.luis.ru info@luis-ural.ru	Distributor Warehouse
6	Luis + LLC	350051, Krasnodar, Dalnaya str., 2 7 (861) 273–99–03 www.luis.ru info@luis-don.ru	Distributor Warehouse
7	Luis + LLC	Republic of Tatarstan, 420059, Kazan, Orenburg tract, 128, building 1 7 (843) 204–22–33 www.luis.ru luis@luis.ru	Distributor Warehouse
8	Luis + LLC	603086, Nizhny Novgorod, Manufakturnaya str., 14, room 1 7 (831) 214 –71–17 www.luis.ru luis@luis.ru	Distributor Warehouse



No.	Company	Contact details	Status
9	Luis + LLC	630007, Novosibirsk, Fabrichnaya str., 10 7 (383) 285–33–77 www.luis.ru luis@luis.ru	Distributor Warehouse
10	Luis + LLC	614064 Perm, Chkalova str., 7a 7 (342) 206–07–47 www.luis.ru luis@luis.ru	Distributor Warehouse
11	Luis + LLC	344029, Rostov-on-don, Menzhinsky str., 4A 7 (863) 261–82–10 www.luis.ru info@luis-don.ru	Distributor Warehouse
12	Luis + LLC	443028, Samara, 18 km of Moscow highway 7 (846) 203–04–24 www.luis.ru samara@luis.ru	Distributor Warehouse
13	Luis + LLC	625048, Tyumen, Ervye str., 9 7 (3452) 48–95–20 7 (3452)48–95–40 7 (3452)48–95–35 www.luis.ru samara@luis.ru	Distributor Warehouse
14	Luis + LLC	454090, Chelyabinsk, Lenin Ave., 35 7 (351) 220–00–72 www.luis.ru luis@luis.ru	Distributor Warehouse
15	Layta trading house	410056, Saratov, Ulyanovskaya str., 17A 7 (8452) 392–057, 7 (8452) 735–575 7 (8452) 524–586 www.layta.ru info@layta.ru	Dealer
16	Layta trading house	355000, Stavropol, Pirogova str. 20 A 7 (8652) 550–111 7(8652) 551–529 7 (8652) 552–311 7 (8652) 552–411 7 (8652) 553–211 www.layta.ru info@layta.ru	Dealer
17	Bezopasnost	Moscow, 12-th Parkovaya str., 5 7(495)150-10-71 (multi-channel) sales@podkontrolem.ru www.podcontrolem.ru	Dealer Service center
18	Pocketkey	123290, Moscow, Prichalny driveway, 8, building 1, room 502 7(495) 107-09-10 hello@pocketkey.ru www.pocketkey.ru	Dealer
19	Revelin Ltd	Professor Popov str., 4 7(812) 327-50-32 ravelin@ravelinspb.ru, www.ravelinspb.ru	Dealer Service center
20	Corporate Business Systems	123181, Moscow, Isakovsky str., 33, bldg. 3 7(495) 234-68-51 www.cbs-group.ru sales@cbs- group.ru	Dealer Service center



No.	Company	Contact details	Status
21	Corporate Business Systems	344002, Rostov-on-don, Solyanoy spusk lane, 8-10, 34 7(495) 234-68-52 www.cbs-group.ru sales@cbs-group.ru	Dealer Service center
22	Inforser Group of companies (Unified System Technologies)	109428, Moscow, Ryazansky ave, 24, building 2 7(495)660 17 33 www.inforser.ru	Dealer Service center
23	Benar	Khabarovsk, Neftyanaya, 14 8 962 587 11 69 бенар.рф sales@khab-tech.ru	Dealer Service center
24	ATM	Saint Petersburg, Shosse Revolyutsii, 31 7 (812) 640-85-84 7 (812) 655-62-05 www.atmcompany.ru info@atmcompany.ru	Dealer
25	CJSC Center for Security Systems	195197, Saint Petersburg, Polyustrovsky Ave., 32 Lit. K, office 201 7 (812) 240-31-00 market@cesb.ru ,http://www.cesb.ru/	Dealer
26	SMNP-3 LLC	Magadan, Gorkogo str. 8 7 (41322)307 47 fuks@smnp-3.ru	Dealer Service center
27	IT-solutions for business	236009, Kaliningrad, Krasnokamennaya str., 42 7 (4012) 33-79-18 7 (4012) 76-79-18 it@it-sb.ru	Dealer
28	Intellectual systems	394006, Voronezh, Chelyuskintsev str., 145 7 (473) 250-20-01 inbox@int-sys.ru	Dealer
29	Intellectual systems	398026, Lipetsk region, Lipetsk, Zhelyabova str., 2, office 307. 7 (4742) 51-58-77 inbox@int-sys.ru	Dealer
30	Tinko trading house	111141, Moscow, 3rd Proezd Perova Polya, 8 (business center "Perovo Polye", 3rd floor), m. Perovo 7(495) 708-42-13 www.tinko.ru tinko@tinko.ru	Sub-dealer
31	Satro-Paladin LLC	129515, Moscow, Kondratyuka str., 9, bld. 1 7 (831) 272–55–75 7 (831)412–93–11 www.satro-paladin.com dir@nn.satro-paladin.com	Dealer
32	Satro-Paladin LLC	603070, Nizhny Novgorod, Meshchersky ave, 7, bld. 3, office 10 7 (831) 272–55–75 7 (831)412–93–11 www.satro-paladin.com dir@nn.satro-paladin.com	Dealer



No.	Company	Contact details	Status
33	Satro-Paladin LLC	400009, Volgograd, Tarifnaya str., 13 7 (8442) 56–49–94 7 (8442)71–08–01 7 (8442)76–56–29 www.satro-paladin.com dir@nn.satro-paladin.com	Dealer
34	Videoglaz Center LLC	105187, Moscow, Volnaya str., 35, bld. 19 7–(495)–280–71–70 www.videoglaz.ru zakaz@videoglaz.ru	Dealer
35	Videoglaz	Saint Petersburg, Ligovsky Prospekt, 266V 3rd floor 7(812)245-28-24 www.videoglaz.ru zakaz@videoglaz.ru	Dealer
36	Birzha LLC	109052, Moscow, Nizhegorodskaya str., 29- 33, bld. 32, office 402 7 (495) 229-45-15 www.global-id.ru info@global-id.ru	Dealer
37	STELS LLC	Amur region, Blagoveshchensk, Artilleriyskaya str., 17 7 (4162) 777–888 7 (4162) 525–777 7 (4162) 519–777 www.global-id.ru ctb@stels-amur.ru sale@stels-amur.ru	Dealer Service center Warehouse
37	"Complex security systems" Group of companies	Vladikavkaz, Kolka Kesaeva str., 3 7 (8672) 40–35–4 7 (8672)40–58–94 www.ksb-rso.ru ksb-rso@mail.ru	Dealer Service center
39	Profbezopasnost LLC	Sochi, Roses str., 115/1 7 (800) 700-51-90 www.profbez.pro info@profbez.pro sale@profbez.pro	Dealer Service center
40	APL LLC	Saint Petersburg, 9-th Sovetskaya str., 4, office 312 7 (812) 401 63 34, 7 921 55 111 01 www.aplspb.ru info@aplspb.ru	Dealer Service center
41	ALPRO	Address: 194100, Saint Petersburg, Bolshoy Sampsonievsky Ave., 70, lit. "V", office 3N, POLAR Business Center 7 (812) 702-17-52 www.alpro.ru sales@alpro.ru	Dealer
42	InfoTekh LLC	Saint Petersburg, Moskovsky ave., 103/3 7 (812) 327 95 10 7 (812)327 95 06 www.infotec.ru contact@infotec.ru	Dealer
43	ForTreid LLC	196105, Saint Petersburg, Lyubotinsky ave., 5 LIT "B" office 310 8 (812) 309-58-53 www.fteq.ru 4trade@fteq.ru	Dealer



No.	Company	Contact details	Status
44	Grumant Corporation LLC	630123, Novosibirsk, Krasnogorskaya str. 27A 8 (383) 210–352–353 www.grumant.ru info@grumant.ru	Dealer
45	Grumant Corporation LLC	107553, Moscow, 1st Pugachevskaya str., 25 office 118 7 (495)783-29-60 7 (499)161-06-91. www.grumant.ru mf@grumant.ru	Dealer
46	Grumant Corporation LLC	299038, Crimea, Sevastopol, Kolobova str., 35/4 7 (978) 744 38-86 7 (978) 744-38-59 www.grumant.ru krim1@grumant.ru krim2@grumant.ru	Dealer
47	ModusTreid LLC	644046, Omsk, Mayakovsky str., 14 7 (3812) 51-00-93 7 (3812) 51-07-29	Dealer



Table 6 – Foreign distributors and service centers

No.	Company	Contact details	Status
1	VZR System OU	Tulika tn 19, Tallinn 372 5844 4957 8 921 996 2746 www.vzrsystem.ee info@vzrsystem.ee	Distributor Warehouse
2	VZR System OU	Hofer Str. 39 95183 Feilitzsch-Zedtwitz Deutschland 372 5844 4957 8 921 996 2746 49 9281 140 11 65 49 928 1 140 11 16 www.multitrans.net ksemjonow@multitrans.net ue@multitrans.net	Distributor Warehouse
3	TOO "TD INTANT"	Republic of Kazakhstan, Almaty, Muratbayev str., 61 7 (727) 225–35–35 7 (727) 220–95–31 www. security.intant.kz intant@intant.net	Dealer Warehouse
4	«A+A Security» MMC	AZ1110, Azerbaijan, Baku city, Akhmad Bay Aga oglu str. 24B 8 (+994 12) 496-00-56 www.aasecurity.az info@aplusa- security.com	Dealer
5	Victiana S.R.L. (Videosecurity Moldova)	The Republic of Moldova, Chisinau, Hajdeu str., 66/3 373 (22) 876-000 373 (22) 876- 001 www.videosecurity.md info@videosecurity.md	Dealer
6	Unitary enterprise "Security and Safety Systems"	Minsk, Petra Glebki str., 1 375 (17) 390-66-66 (multi-channel) Mob.: +375 (33) 340-11-11 (MTS) www.sob.by info@sob.by	Dealer Service center
7	OÜ Almasel	Mustamäe tee 102-106 Tallinn Harjumaa 12917 Tel +372 59192909 info@almasel.com	Service center



ABBREVIATIONS

The following abbreviations are used in this document:

LB — Logbook;

OM — Operation Manual;

IM — Installation Manual;

PSU - power supply unit;

CP - control panel;

ACS - access control system;

MNT — maintenance.

VOZROZHDENIE LLC 192289 Saint-Petersburg 66, Sofiiskaya st. Telephone/Fax +7 (812) 366 15 94 www.oxgard.com info@oxgard.com