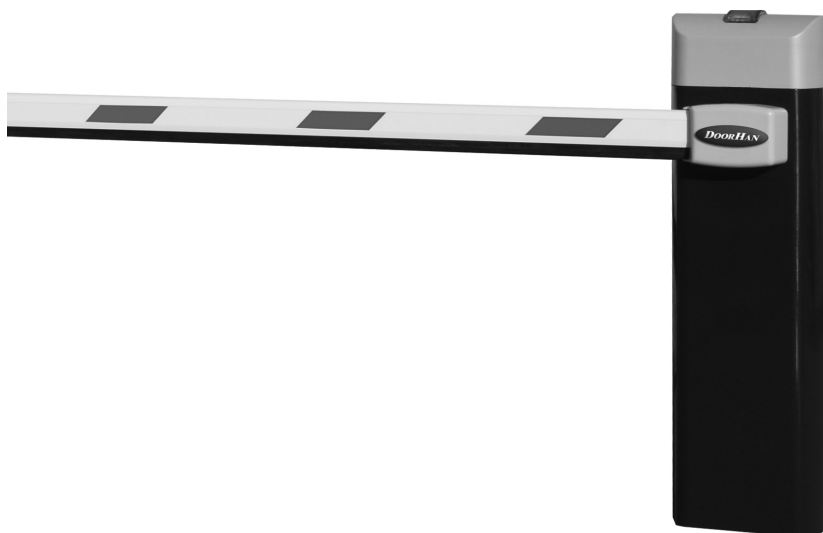


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BARRIER

BARRIER-N



Installation and Operation Manual

1. GENERAL INFORMATION

Barrier is ideal for managing access points in residential and industrial areas in moderate to heavy traffic. It suits for passage clearances of up to 6 m. The barrier cabinet has only one spring if the boom length doesn't exceed 3 and 4 m. If the boom length is 6 m a second spring should be installed. The boom should be balanced irrespective of its length.

The cabinet encloses a motor, a reduction gear, a boom fastening unit, a balancing mechanism, magnetic limit switches and a control board in a separate casing. The boom is made of aluminium profile with red light-reflectors, which are easy to see in the dark.

The system ensures fixation of the boom in any position, that's why manual opening is possible only if the system is released. A signal lamp is blinking when the boom moves.

1.1. SPECIFICATIONS

Parameters	Characteristics
Maximum boom length	6 m
Maximum opening/closing time	6 sec / 2 sec*
Supply voltage	220-240 V, 50-60 Hz
Boom type	rigid
Use intensity (at 20 °C)	70 %
Motor rotation speed	1400 rpm
Thermal protection	120 °C
Operating temperature	-40...+35 °C
Rated power	300 W
Protection class	IP54

* For the barrier model Barrier-3000

1.2. CARTON INVENTORY

After receiving the device, it must be unpacked and inspected for damage. In case of any defects, please contact the supplier of the device..

The barrier components included in the standard delivery set are listed in the following table.

#	Name	Quantity
1	Cabinet with integrated control block	1 pc.
2	Boom	1 pc.
3	Key-switch	1 pc.
4	User manual	1 pc.
5	Photocells	1 pair
6	V-holder	1 pc.

2. SAFETY RULES



WARNING!

To reduce the risk of injury or death read and follow all instructions. Incorrect installation and improper use of the device could cause equipment damage and/or personal injury.

- Keep these Instructions for the entire period of the barrier operation (for barrier maintenance).
- Use the barrier only for its intended purpose. Any other use of this barrier system is not permitted.
- Installation must be performed in accordance with EN12453 and EN 12445 standards. For non-EU countries, to obtain an adequate level of safety, the Standards mentioned above must be observed, in addition to national legal regulations.
- Prior to installation make sure that the installation site meets the climatic conditions of the barrier.

- Before installing or maintaining the equipment the main power must be disconnected.
- Securely ground all metal elements of the barrier.
- Verify the power supply network meets the requirements specified in this manual.
- The mains power supply of the automated system must be fitted with an all-pole switch with contact opening distance of 3 mm or greater. Use of a 6A thermal breaker with all-pole circuit break is recommended.
- Transport the barrier complying with all the safety requirements.
- Use tools specified in Tools section hereof during assembly, installation and adjustment of the device.
- Always wear protective gloves and eye protection when drilling.
- To fasten the device, use the hardware supplied with the barrier or the corresponding one.
- Do not make any changes to the automatic system that are not specified in this manual.
- Remove the product packaging and dispose of it. Do not leave packaging materials within reach of children.
- Never allow children to play in the barrier area. All remote controls, as well as stationary control buttons, must be inaccessible to children.
- While the barrier boom is in motion no pedestrian and no vehicle shall be in the immediate vicinity of the barrier.
- The manufacturer assumes no liability for damage or injury to persons or property which occur as a result of incorrect use of the barrier.
- DoorHan assumes no liability for incorrect installation or damage occurred during operation.
- DoorHan Company assumes no liability for unstable operation of the automatic system when using safety devices and accessories produced by other than DoorHan manufacturers without the approval of DoorHan.
- Only original DoorHan spare parts and accessories shall be used, as other manufacturers accessories may cause the automatic system to malfunction.
- Installation of accessories must be performed in accordance with EN12453 and EN 12445 standards. For non-EU countries these requirements are to be met too.

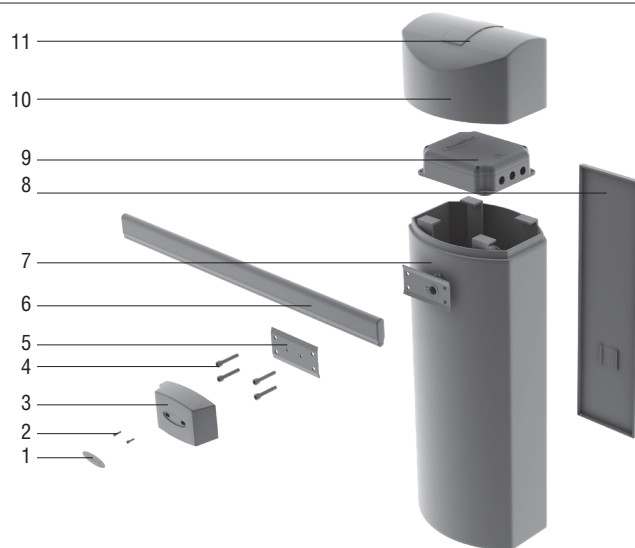
**WARNING! SHOCK HAZARD!**

Have a qualified technician lay the cables 220-240 V AC. The cables must be laid in protective corrugated tubes. In case of supply cable damage, use the suitable type of the cable.

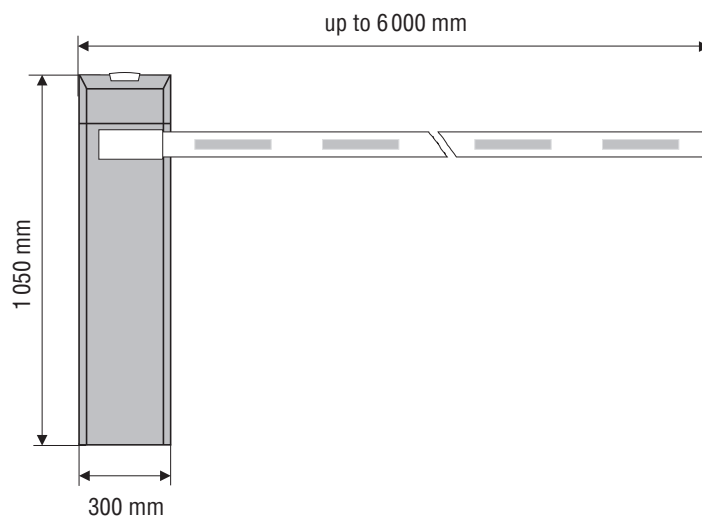
Cables needed for installation of the barrier and accessories (if available):

- cable $2 \times 0,5 \text{ mm}^2$ (photocell transmitter);
- cable $4 \times 0,5 \text{ mm}^2$ (photocell receiver);
- cable $3 \times 1,5 \text{ mm}^2$ (power supply);
- the cables should be appropriately insulated.

3. BARRIER UNIT

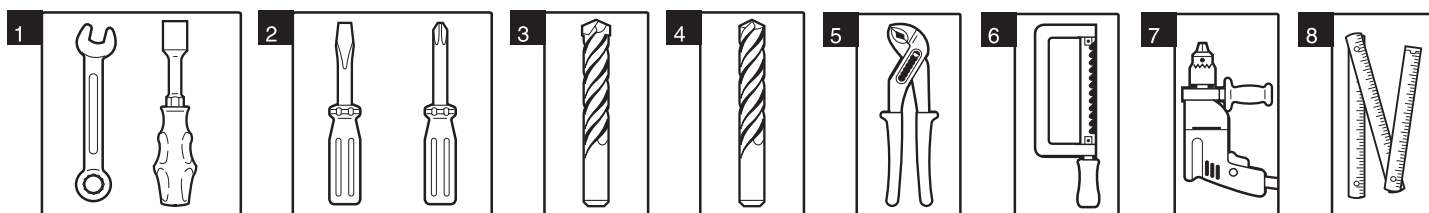


- | | | |
|---------------|-------------------------|-----------------------|
| 1. Logo plate | 5. Boom fastening plate | 9. Control block |
| 2. Hex bolt | 6. Boom | 10. Cabinet top cover |
| 3. Boom cover | 7. Cabinet | 11. LED lamp |
| 4. Hex bolt | 8. Side cover | |



4. INSTALLATION

4.1. TOOLS

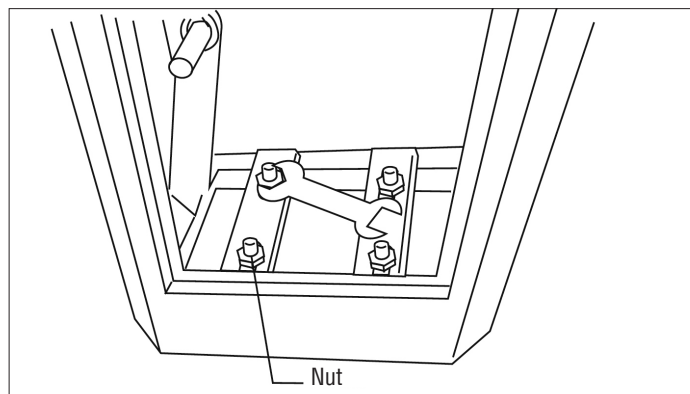
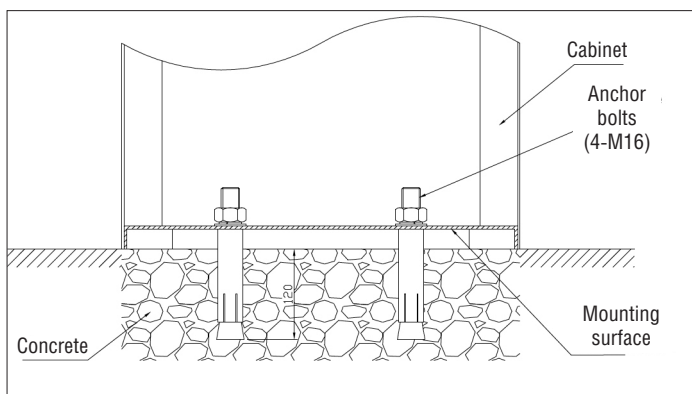


- | | | |
|--|-------------------------------|--------------------------------|
| 1. Set of spanners | 4. Set of drills for concrete | 7. Electric drill |
| 2. Set of slotted and cross screwdrivers | 5. Pliers | 8. Tape measure (folding rule) |
| 3. Set of drills for metal | 6. Hacksaw for metal | |

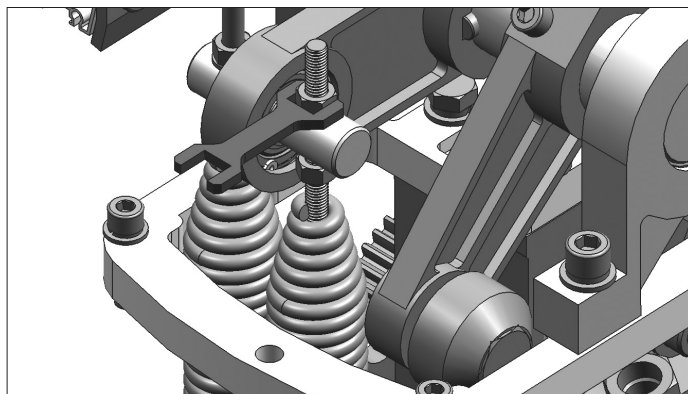
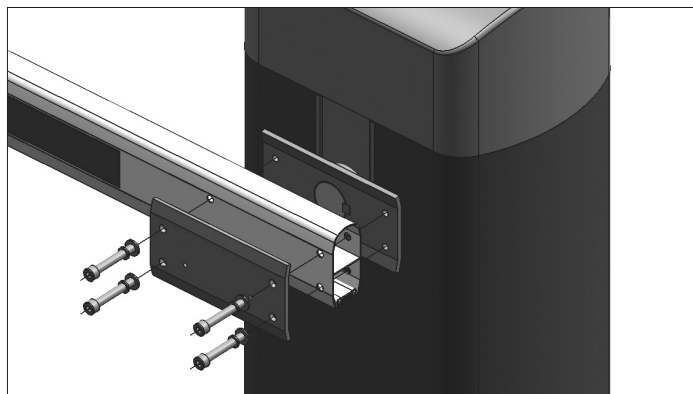
4.2. INSTALLATION GUIDELINES

Follow the directions given below to install the barrier properly:

- Enter the guarded territory and choose the place for the barrier cabinet.
- Make sure that nothing impedes the boom's travel (i.e. tree branches) and a safe clearance distance of at least 2 m is provided between the tip of the barrier boom and the overhead power lines.
- If the barrier cabinet has no protection against accidental damage by passing-by automobiles, install an additional protection means, if it is possible.
- The cabinet must be installed on a concrete mounting surface. If the surface isn't strong enough, make a foundation pit and concrete it. Before concreting reinforce the foundation pit and lay conduit pipes to run the mains supply cable, the control cables and the induction loop lead wires. Once the concrete has set to an adequate hardness, install the barrier cabinet.
- The cabinet should be fixed to the foundation with anchor bolts or embedded concrete fittings. The depth of concreting depends on the ground type and depth of frost penetration.
- The ground must be stable. Otherwise increase the depth of the foundation pit according to recommendations of the specialists.
- Make sure there are no pipes and/or electric cables running through the foundation pit.
- Direct the cabinet and use a level to ensure that it is perfectly horizontal, mark and drill the bore holes for the anchor bolts.
- Install the cabinet and tighten the anchor bolt nuts as shown in the picture.



4.3. BOOM INSTALLATION

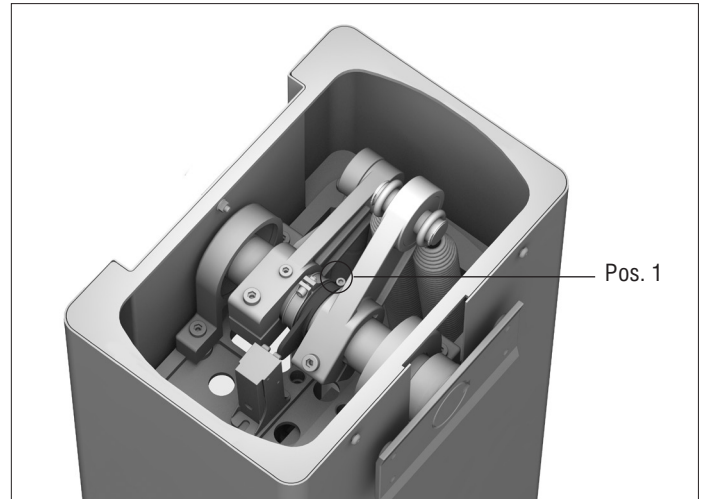


- Remove the cabinet casing panel.
- Direct the boom in accordance with opening direction and insert it in the U-shaped fastening bracket.
- Put on the second U-shaped bracket on the boom (as shown in the picture).
- Place and fix 4 fastening bolts.
- Unlock the release (for release operation see par. 5).
- Install and adjust the balancing springs using tension bolt, so that the boom remains stationary in any position when the operator is released.
- Resume the barrier operation locking the release.

4.4. ADJUSTMENT OF BOOM EXTREME POSITIONS

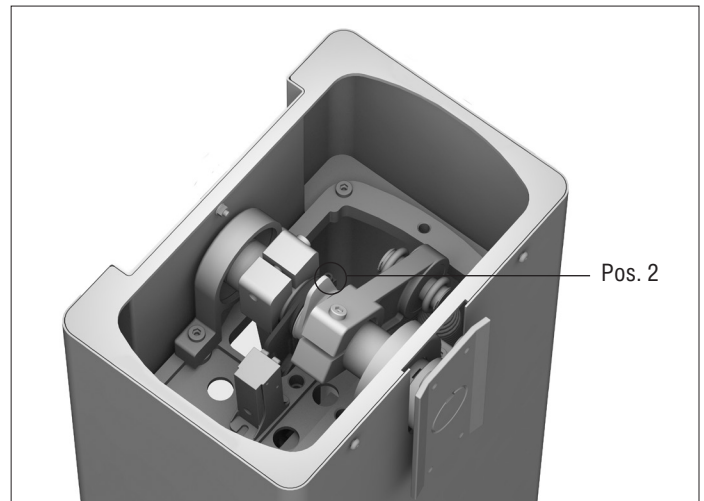
4.4.1. Setting the boom closed position (red cam)

- Verify the barrier is fixed rigidly. Move the barrier to the manual control mode and move the boom to the closed position.
- Loosen the screw (pos. 1) which fastens the cam of the boom closed position.
- Move the cam till the end switch is actuated (SW1 LED indicator at the control panel will go down).
- Tighten the cam fixing screw.
- Raise and lower the boom to verify that the closing end switch operates properly.



4.4.2. Setting the boom open position (green cam)

- Verify the barrier is fixed rigidly. Move the barrier to the manual control mode and move the boom to the open position.
- Loosen the screw (pos. 2) which fastens the cam of the boom open position.
- Move the cam till the end switch is actuated (SW2 LED indicator at the control panel will go down).
- Tighten the cam fixing screw.
- Raise and lower the boom to verify that the opening end switch operates properly.



WARNING! After adjusting the boom extreme positions, make sure that end switches work properly: at their triggering, a corresponding LED on the control unit should go down. If the indicator won't go down, repeat the adjustment.



WARNING! NEXT PART OF THE MANUAL IS FOR SPECIALISTS ONLY! Incorrect adjustment may cause irreversible consequences and damage your equipment. Do not perform these procedures unless absolutely necessary!

- If the boom won't reach vertical or horizontal position, adjust its position with the rod located in the barrier cabinet.
- Loosen nuts.
- Rotate the rod counter-clockwise to raise the boom.
- To lower the boom, rotate the rod clockwise.
- Tighten the nuts in the necessary position.
- Check the vertical and horizontal position of the boom.
- Repeat the adjustment if necessary.
- Levers and the rod should never be arranged in one line.

5. RELEASE OPERATION

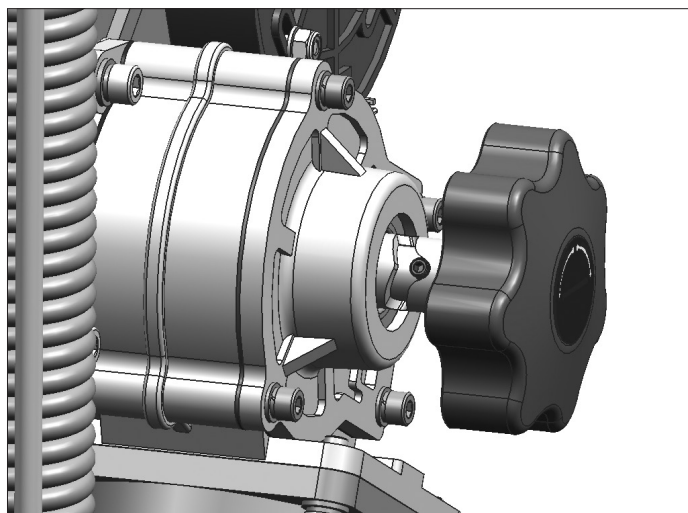
- Use the lever of the integral release to release the barrier.
- After release is completed, the boom can be opened and closed manually.

In order to raise or lower the boom in case of a power failure do the following:

- Turn the release lever (see the picture) clockwise till the stop.
- Raise or lower the boom manually.

In order to return to automatic control do the following:

- Turn the release lever to mid-position.
- Raise and lower the boom using the operator.



6. MAINTENANCE

- The Barrier automatic system does not require any special servicing.
- Repairs may be carried out only by a qualified technician trained and certified at an authorized DoorHan centre.
- The installer shall supply all information concerning manual operation of the system in case of an emergency, and shall hand over to the User the Manual supplied with the product.
- It is highly recommended to use DoorHan original spare parts when servicing the barrier.
- Carry out maintenance of the automatic system at least every six months.
- Verify the boom moves smoothly when automatically operated.
- Regularly check if the extreme positions of the boom travel are properly adjusted and safety devices are in good working condition.
- In case of power failure the barrier will stop. As soon as power supply is restored you can control the barrier as usual.
- After expiration of life time, the item shall be delivered to a specialized disposal point!
- If you have lost this Manual, you may request for the duplicate copy to the following address: Kralovsky VRCH 2018, Kadan, 43201, Czech Republic, or by email: europe@doorhan.com.
- The manufacturer (DoorHan) does not supervise barrier installation, or carry out their maintenance, thus DoorHan cannot be held liable for safety of installation, operation and maintenance of the equipment.

7. TROUBLESHOOTING

Symptom	Possible reason	Solution
The barrier won't operate	Electric power is disconnected	Verify the power is on
	Boom movement is restricted	Remove the restriction
	Bad connection of electric wires	Check wires connection
	The barrier is released	Engage the barrier
After emergency release the barrier won't operate even after pushing the buttons of control panel or remote control	Return to starting position was not executed	Move the release lever to midposition (refer to "Release operation")
Sudden stop of the barrier	Force protection is activated	Adjust the barrier force
The boom lifts or lowers in jerks or stops suddenly	The boom is not balanced	Adjust the balancing spring
The boom won't open/close fully	Wrong adjustment of the limit switches	Adjust the limit switches

DoorHAN®

We very much appreciate that you have chosen the product manufactured by our company and believe that you will be satisfied with its quality.

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