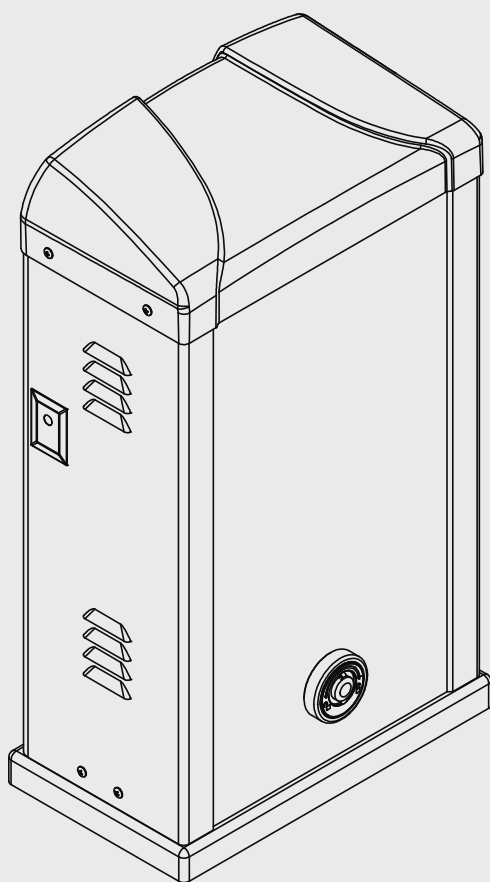
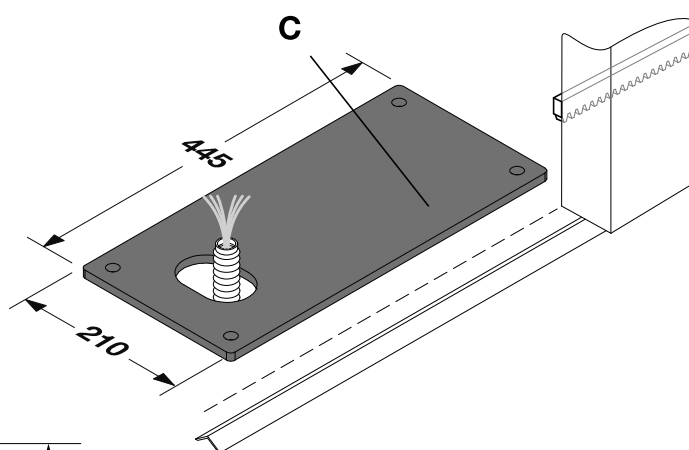
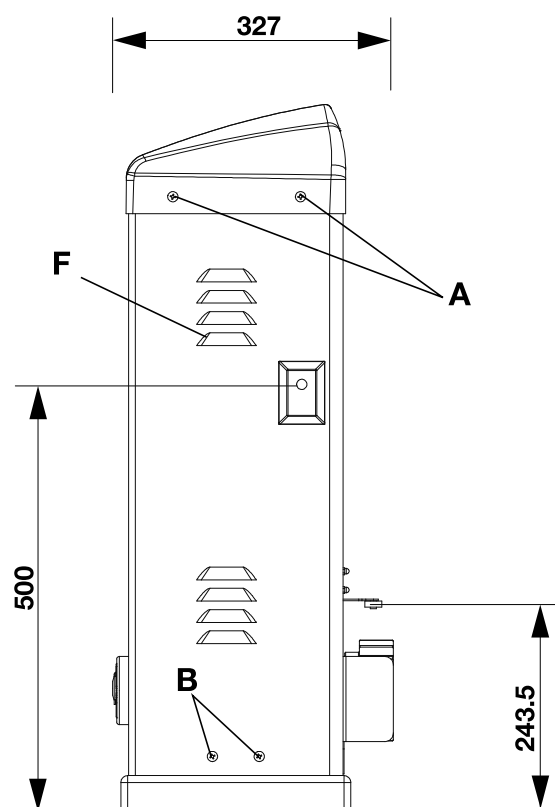


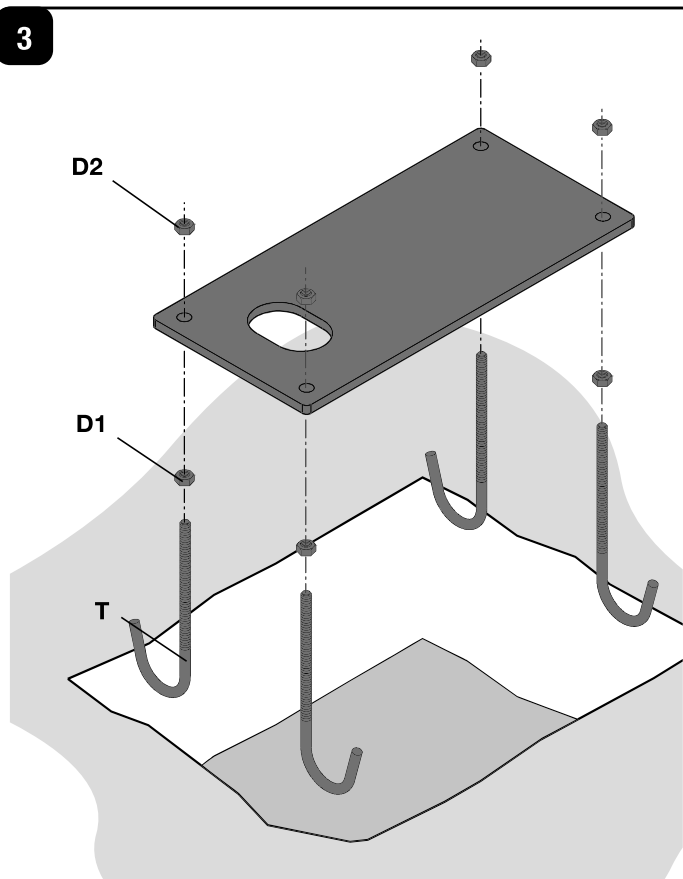
BISON 45 OTI



BENINCA[®]
TECHNOLOGY TO OPEN

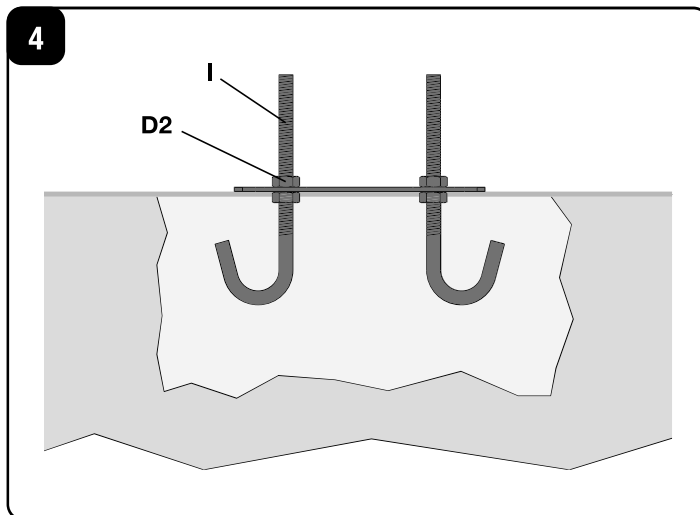


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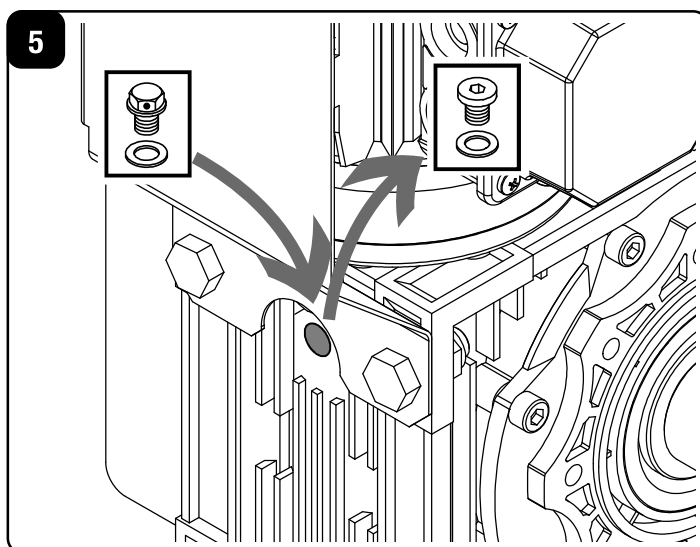


Accessorio piastra BISON.P45 (cod. 9623067) non incluso
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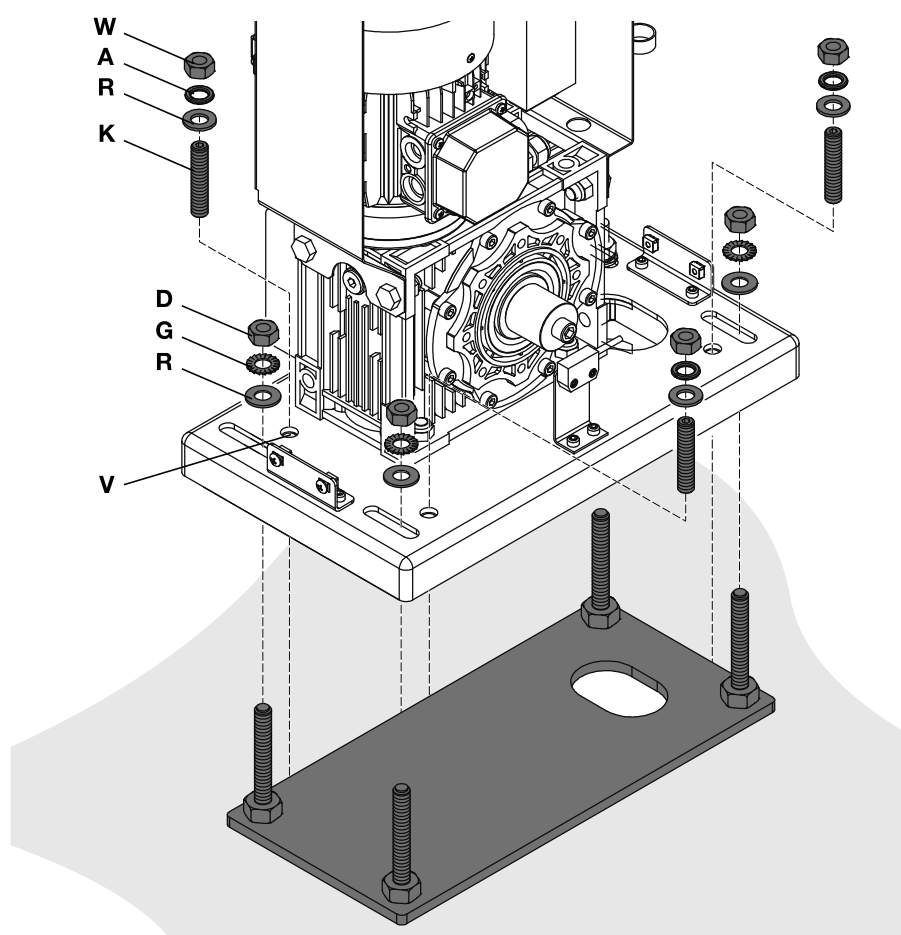
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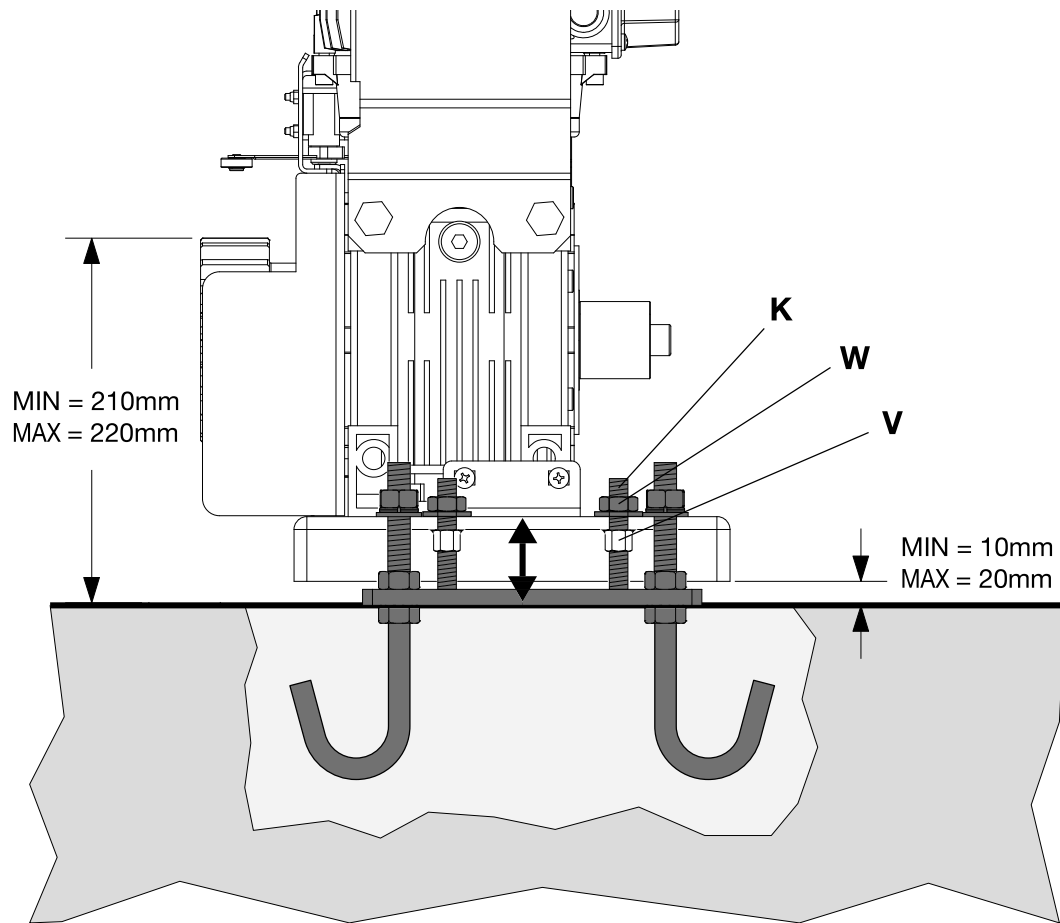
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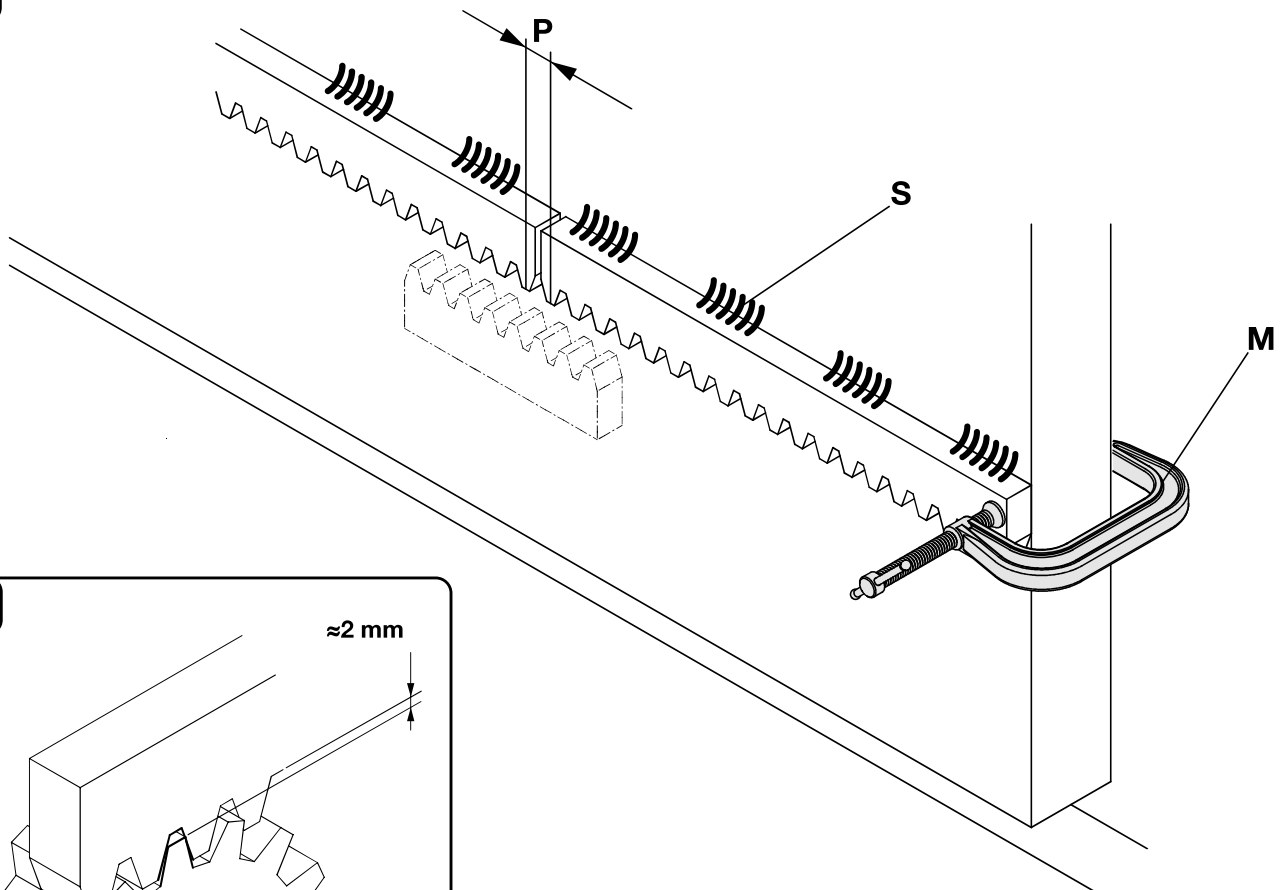
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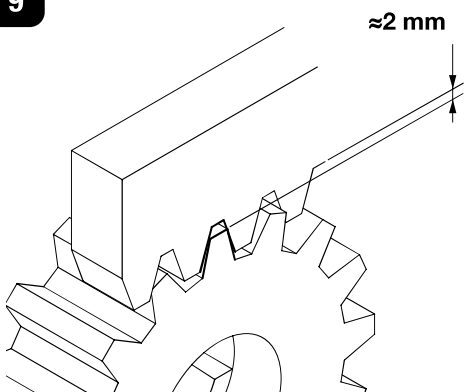
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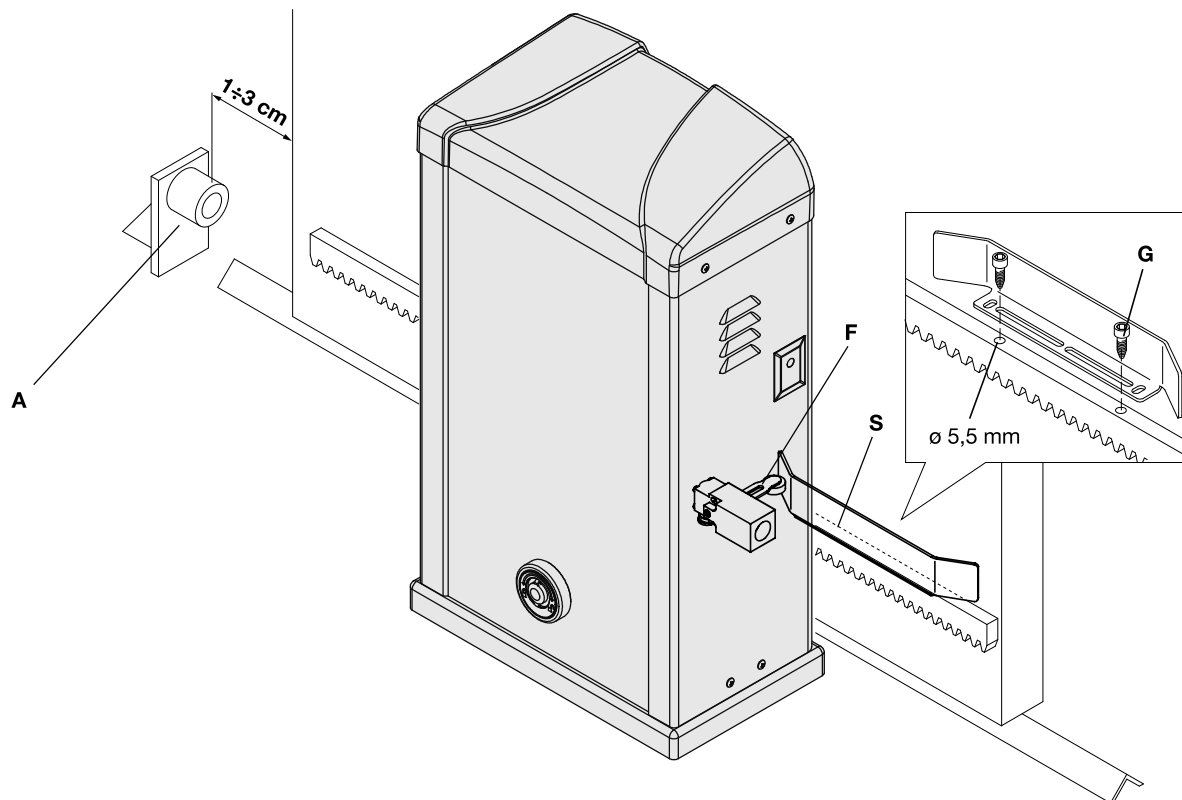
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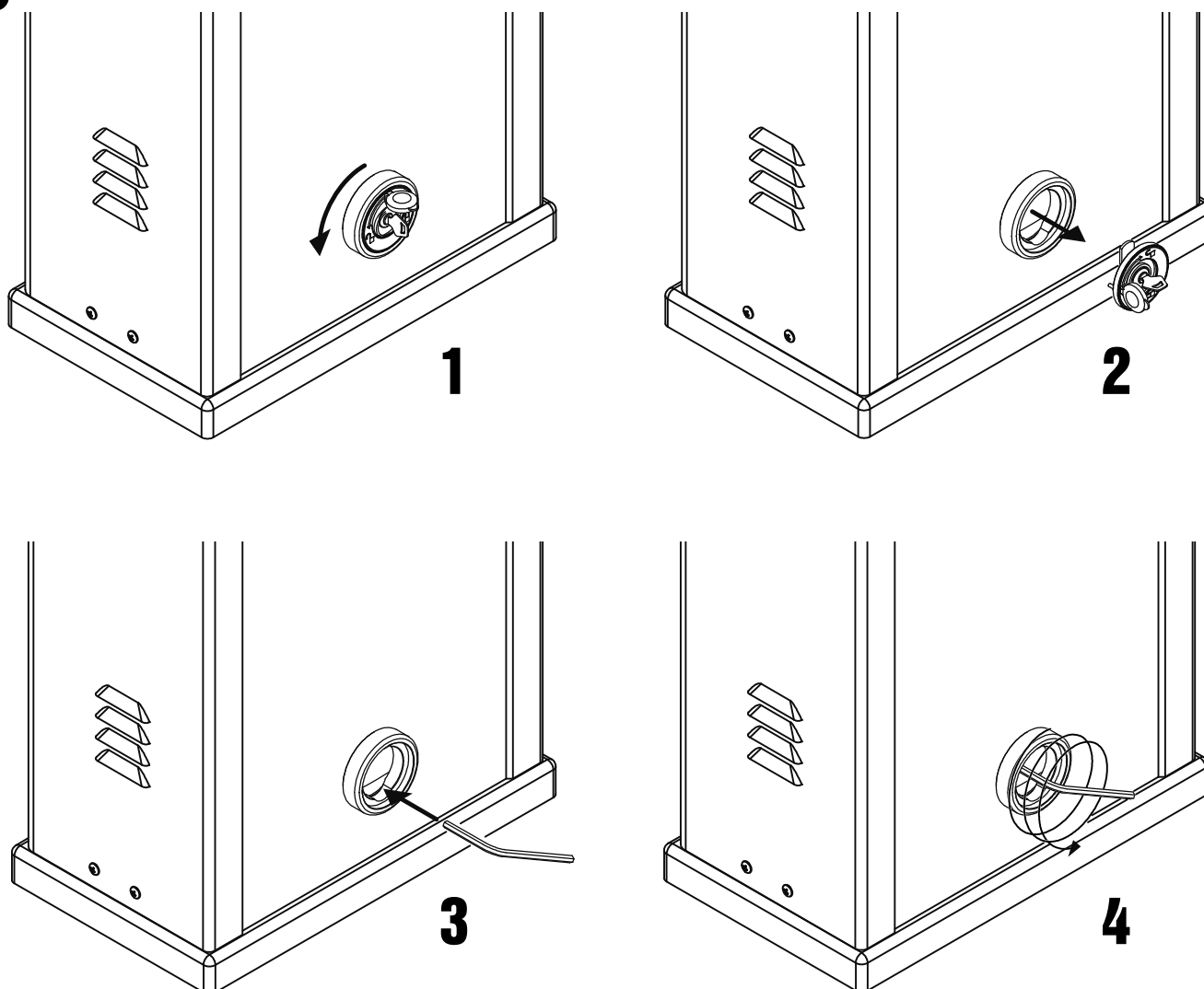
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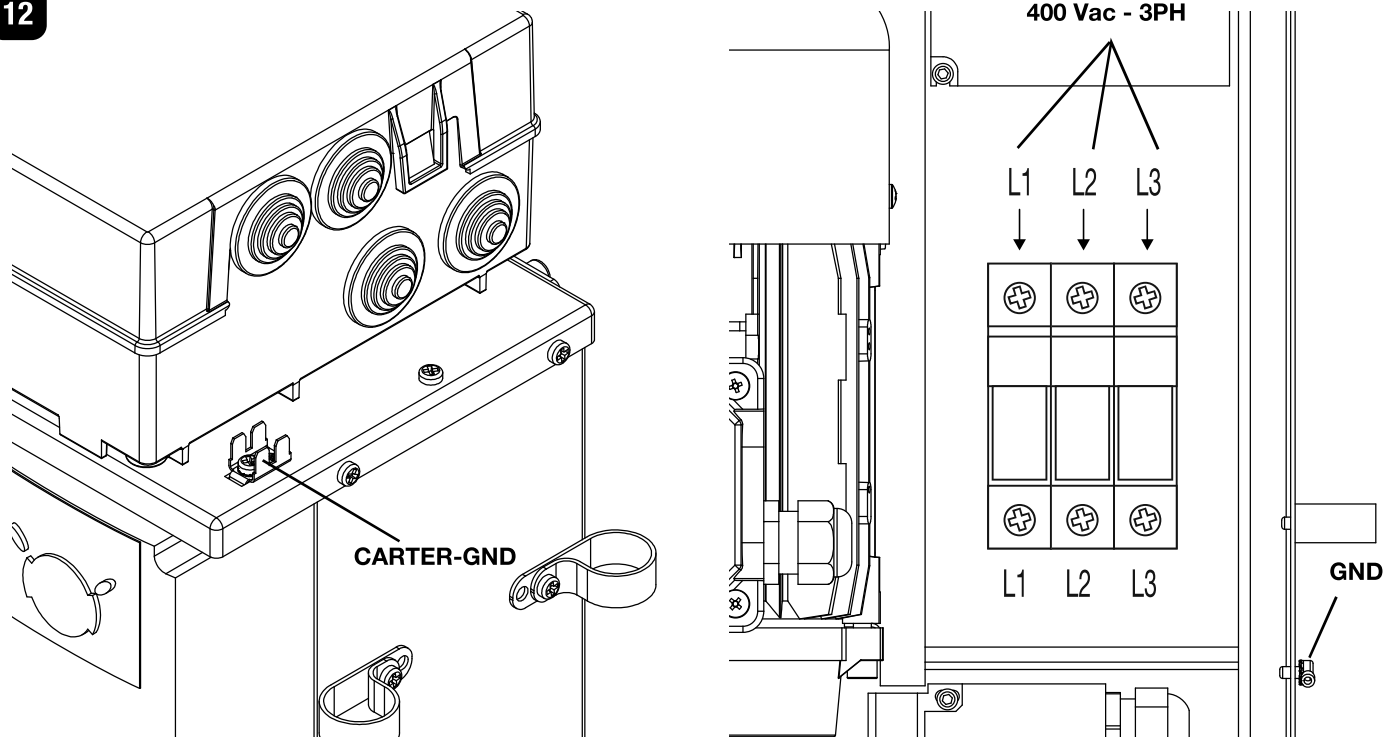
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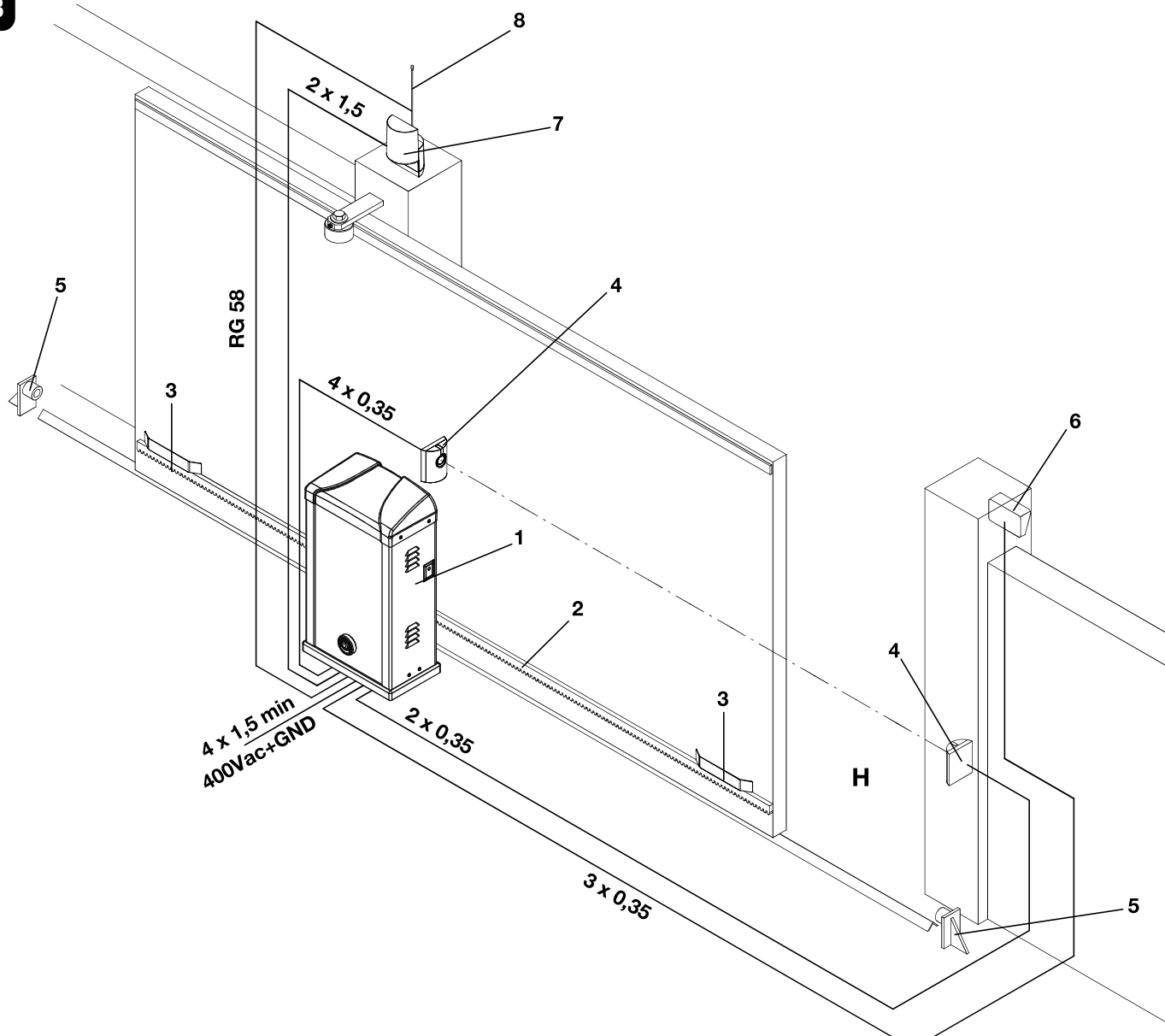
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The product shall not be used for purposes or in ways other than those for which the product is intended for and as described in this manual. Incorrect uses can damage the product and cause injuries and damages.
The company shall not be deemed responsible for the non-compliance with a good manufacture technique of gates as well as for any deformation, which might occur during use. Keep this manual for further use.



This manual has been especially written to be use by qualified fitters. Installation must be carried out by qualified personnel (professional installer, according to EN 12635), in compliance with Good Practice and current code.
Make sure that the structure of the gate is suitable for automation.
The installer must supply all information on the automatic, manual and emergency operation of the automatic system and supply the end user with instructions for use.



Packaging must be kept out of reach of children, as it can be hazardous.
For disposal, packaging must be divided the various types of waste (e.g. carton board, polystyrene) in compliance with regulations in force.
Do not allow children to play with the fixed control devices of the product.
Keep the remote controls out of reach of children.
This product is not to be used by persons (including children) with reduced physical, sensory or mental capacity, or who are unfamiliar with such equipment, unless under the supervision of or following training by persons responsible for their safety. Apply all safety devices (photocells, safety edges, etc.) required to keep the area free of impact, crushing, dragging and shearing hazard. Bear in mind the standards and directives in force, Good Practice criteria, intended use, the installation environment, the operating logic of the system and forces generated by the automated system.
Installation must be carried out using safety devices and controls that meet standards EN 12978 and EN 12453.
Only use original accessories and spare parts, use of non-original spare parts will cause the warranty planned to cover the products to become null and void. All the mechanical and electrical parts composing automation must meet the requirements of the standards in force and outlined by CE marking.



An omnipolar switch/section switch with remote contact opening equal to, or higher than 3mm must be provided on the power supply mains.
Make sure that before wiring an adequate differential switch and an overcurrent protection is provided.
Pursuant to safety regulations in force, some types of installation require that the gate connection be earthed.
During installation, maintenance and repair, cut off power supply before accessing to live parts.
Also disconnect buffer batteries, if any are connected.
The electrical installation and the operating logic must comply with the regulations in force.
The leads fed with different voltages must be physically separate, or they must be suitably insulated with additional insulation of at least 1 mm. The leads must be secured with an additional fixture near the terminals.
During installation, maintenance and repair, interrupt the power supply before opening the lid to access the electrical parts
Check all the connections again before switching on the power. The unused N.C. inputs must be bridged.



WASTE DISPOSAL

As indicated by the symbol shown, it is forbidden to dispose this product as normal urban waste as some parts might be harmful for environment and human health, if they are disposed of incorrectly.
Therefore, the device should be disposed in special collection platforms or given back to the reseller if a new and similar device is purchased.
An incorrect disposal of the device will result in fines applied to the user, as provided for by regulations in force.

Descriptions and figures in this manual are not binding. While leaving the essential characteristics of the product unchanged, the manufacturer reserves the right to modify the same under the technical, design or commercial point of view without necessarily update this manual.

INTRODUCTION

Congratulations on your choice of a **BISON** gear motor. All items included in Benincà's wide product range stem from twenty year of our experience in the sector of automatic systems, always striving to find new materials and advanced technologies. For this reason, nowadays we are able to offer you extremely reliable products that, thanks to their power, efficiency and long-lasting features, entirely meet the end user's requirements.

GENERAL INFORMATION

Automatic system with 400VAC, three-phase power supply for sliding gates with 4500kg max weight, for industrial use, equipped with anti-crash device (encoder) and three-phase inverter.

SPECIFICATIONS

	BISON 45 OTI
Mains power supply	400Vac three-phase 50/60Hz
Motor power supply	400Vac three-phase
Consumption	2.85 A
Thrust	5000 N
Operating jogging	Heavy duty
Protection level	IP44
Operating temperature	-20°C / +50°C
Gate max. weight	4500 kg
Rack module	M6 Z 18
Opening speed	reg. 7-19 m/min
Noise level	<70 dB
Lubrication	BISON C OIL
Weight	75 kg

PRELIMINARY CHECKS

For a good operation of the automatic system for sliding gates, the gate/door to be automated shall feature the following characteristics:

- the guide track and related carriers should be adequately sized and subject to maintenance (in order to avert excessive friction during the gate sliding).
- during operation, no excessive oscillations should be reported to the gate/door.
- the opening and closing stroke should be limited to a mechanical stop (according to the current safety regulation).

These preliminary checks are **MANDATORY**. It is expressly **FORBIDDEN** to use the BISON automatic system on doors and gates not in good conditions or that have not undergone a correct maintenance.

INSTALLATION

OVERALL DIMENSIONS

Figure 1 shows the overall dimensions of the gear motor, expressed in mm.

Given the remarkable weight of the actuator, the device should be handled by at least 2 persons.

Loosen the 4 "B" screws (Fig. 1) and entirely remove the front side of the system. Now all elements of the systems can be accessed.

If only the control unit is to be reached, it is sufficient to remove the 4 "A" screws by lifting the upper cover.

The niches for the photocell mounting (F) are provided on the motor removable side.

CAUTION!

The geared motor is equipped with a safety micro-switch which cuts off the mains power supply to the motor when the lower removable front side is removed or a power failure occurs.

**Accessory plate BISON.P45
(cod. 9623067) NOT INCLUDED**

FOUNDATION PLATE - DIMENSIONS

Fig.2 shows the installation dimensions of the foundation plate, expressed in millimetres.

A hole has been drilled on the plate for the passage of cable. When the corrugated pipe is introduced, keep in mind that the hole to be used should be positioned as shown in Figure 2 (ref. C).

The plate should be positioned at 15mm from the floor (with possible adjustment +/- 5mm), 15 mm above floor-level usually avert any water stagnation.

At this height, the lower edge of the rack tooth should be at 205 mm.

If the rack is already installed, a fitting base, raised with respect to the floor, should be required. However, it is not advisable to lower the fitting surface.

If a different rack is used, find the correct distance by temporarily fitting it to the door/gate leaf, then place the gear motor and check that the pinion and the rack are geared together.

INSTALLATION OF THE FOUNDATION PLATE

Provide for an adequate hole for the foundation.

Prepare the plate by fitting the foundation bolts, as shown in Fig. 3: Tighten the 4 D1 nuts to the foundation bolt T, then insert the plate and fix it with 4 D2 nuts.

Pour cement on the plate (Fig. 4), taking care that the plate level should lie perfectly flat. Check that the threaded inserts (I) for the fitting screws are clean and cement free.

Wait that the cement hardens.

Note: It is also possible to use highly resistant special dowels to fix the foundation plate onto the floor. In this case, make sure that there is no water stagnation.

In any case, the foundation plate should be adequate to the stress exercised on the automatic system.

HOW TO FIT THE GEAR MOTOR

Place to gear motor on the foundation plate, as shown in Figure 6, by inserting the slots "F" on the threaded inserts "I". Fix the gear motor to the base, by using the washers R, the threaded washers Z and nuts D.

The threaded holes allow for the horizontal movement of the gear motor, which is required to gear/ungear the pinion to the rack.

Introduce the 4 grub screws M12x70 "K" in the four threaded holes V. The grub screws must lay on the foundation plate. The gear motor can be lifted from the foundation plate by using the gains K.

HOW TO ADJUST THE GEAR MOTOR HEIGHT

As indicated in the previous paragraph, height is adjusted by using grub screws K which are placed on the plate. Should the gear motor height must be adjusted, proceed as follows:

- back-off nuts D

- back-off nuts W
- adjust the 4 grub screws K by using a 6mm hexagon key.
- once the correct height of the geared motor is obtained, fix nuts W and K again.

Do not raise the plate for more than 20 mm in order not to exercise excessive stress onto the foundation bolts (Fig.7).

HOW TO FIT THE RACK

Temporarily fit the rack by using clamps, for example. Check that the system is perfectly flat, then fit the rack to the gate with various welding points of by using adequate screws.

Keep to the tooth pitch P, even from the rack spaces. To this purpose, it might be useful to match another piece of rack (Fig. 8 - Detail C).

Lastly fix the rack with screws V, making sure that, once the actuator is installed, around 2 mm backlash is left between the rack and the drive wheel (see Fig. 9).

HOW TO POSITION THE LIMIT SWITCH BRACKETS

Manually open the gate, leaving 1 – 3 cm space, according to the weight of the gate, between the gate/door and the mechanical stopper A (Fig. 10).

Then fix the bracket of the limit switch S in order that the micro-switch F of the limit switch is kept pressed.

After drilling two holes of $\varnothing$ 5.5mm, use the two screws G supplied.

Repeat this operation with closed gate/door.

NOTE: The limit switch bracket should be positioned in order to allow that the gate/door stops its movement without hitting the mechanical stopper.

MANUAL OPERATION

In the event of power failure or faults, the gate can be manually operated as follows (Fig.11):

- Open the protective cap from the lock, introduce the customized key supplied and turn it by 90° anti-clockwise.
- Remove the lock group, introduce the hexagonal key supplied, and loosen the screws anticlockwise until the gate leaves are released.
- The gear motor is released and the gate can be manually opened or closed.
- To reset the normal operation, introduce the hexagonal key one again and turn firmly clockwise until it is locked. With an automatic operation check that no slipping occurs when the gate leaf is moving.
- Apply the lock group again, making sure that the anti-rotation pin be introduced in the hole on the gear group.
- Turn the key clockwise, then remove it and close the protection cap again.

CONNECTION TO GROUND (EARTH)

As regards the **COMPULSORY** earthing, a special Faston 4-pin connector fitted onto the central support (Fig. 12 – CARTER-GND) is supplied. Ground connections of the upper removable side and the lower side can be connected to this Faston.

To allow an easy removal of the sides, they are not supplied pre-cabled to the connector. The installer shall provide for their connection, by using the already equipped with Faston terminal.

As shown in Figure 12, mains power supply should be connected to the mains filter (Fig. 12-FILTER), while for grounding the special terminal should be in use (Fig. 12-GND).

WIRE DIAGRAM

Figure 13 shows the cables to the preset for the installation of the gear motor and the main accessories.

As regards the wire connection of the automatic system and the adjustment of the operating modes, see the instruction

manual of the control unit.

Before introducing the cables, check the type of cabling required for the accessories actually used.

Key of components:

- 1 Gear motor with BISON built-in control unit.
- 2 Rack
- 3 Limit switch brackets
- 4 Photocells
- 5 Mechanical stoppers
- 6 Key selector or digital keypad
- 7 Flashing light
- 8 Antenna

Note: The removable side of the BISON gear motor comes already preset for the mounting of the FTC.S photocells.

SAFETY MEASURES

- Do not stand within the gate movement area.
- Children must not play with controls and near the gate.
- In the event of malfunctions, do not attempt to repair the failure but contact the specialised personnel.

MANUAL OPERATION

In the event of power failure or faults, the gate can be manually operated as follows (Fig.1):

- Open the protective cap from the lock, introduce the customized key supplied and turn it by 90° anti-clockwise.
- Remove the lock unit, insert the hexagonal screw and unscrew (anticlockwise) until the gate runs freely
- The gear motor is released and the gate can be manually opened or closed.
- To engage the gears insert again the hexagonal screw and screw tightly clockwise until it stops, then make some openings to check that the gears are engaged firmly
- Apply the lock group again, making sure that the anti-rotation pin be introduced in the hole on the gear group.
- Turn the key clockwise, then remove it and close the protection cap again.

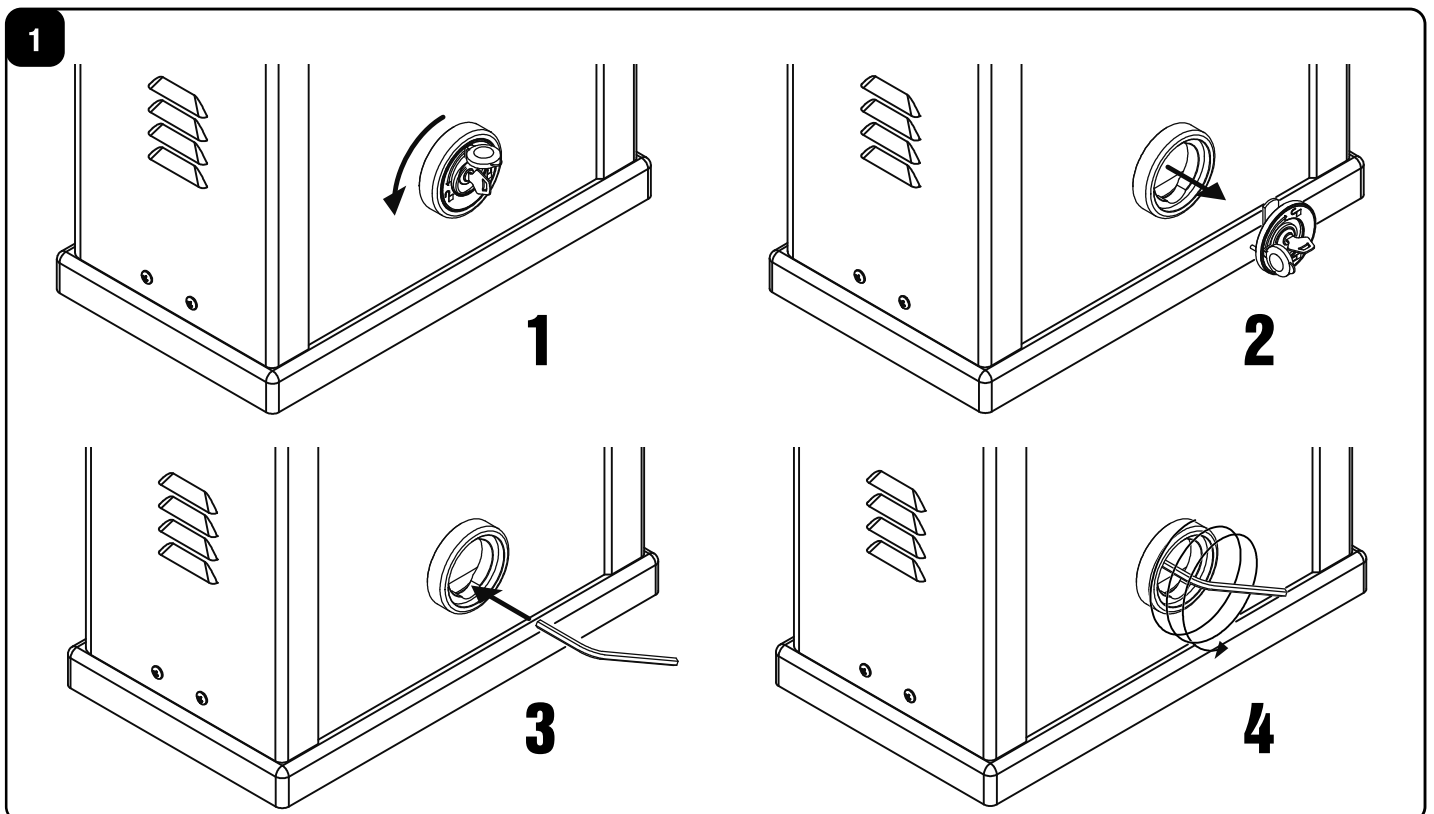
MAINTENANCE

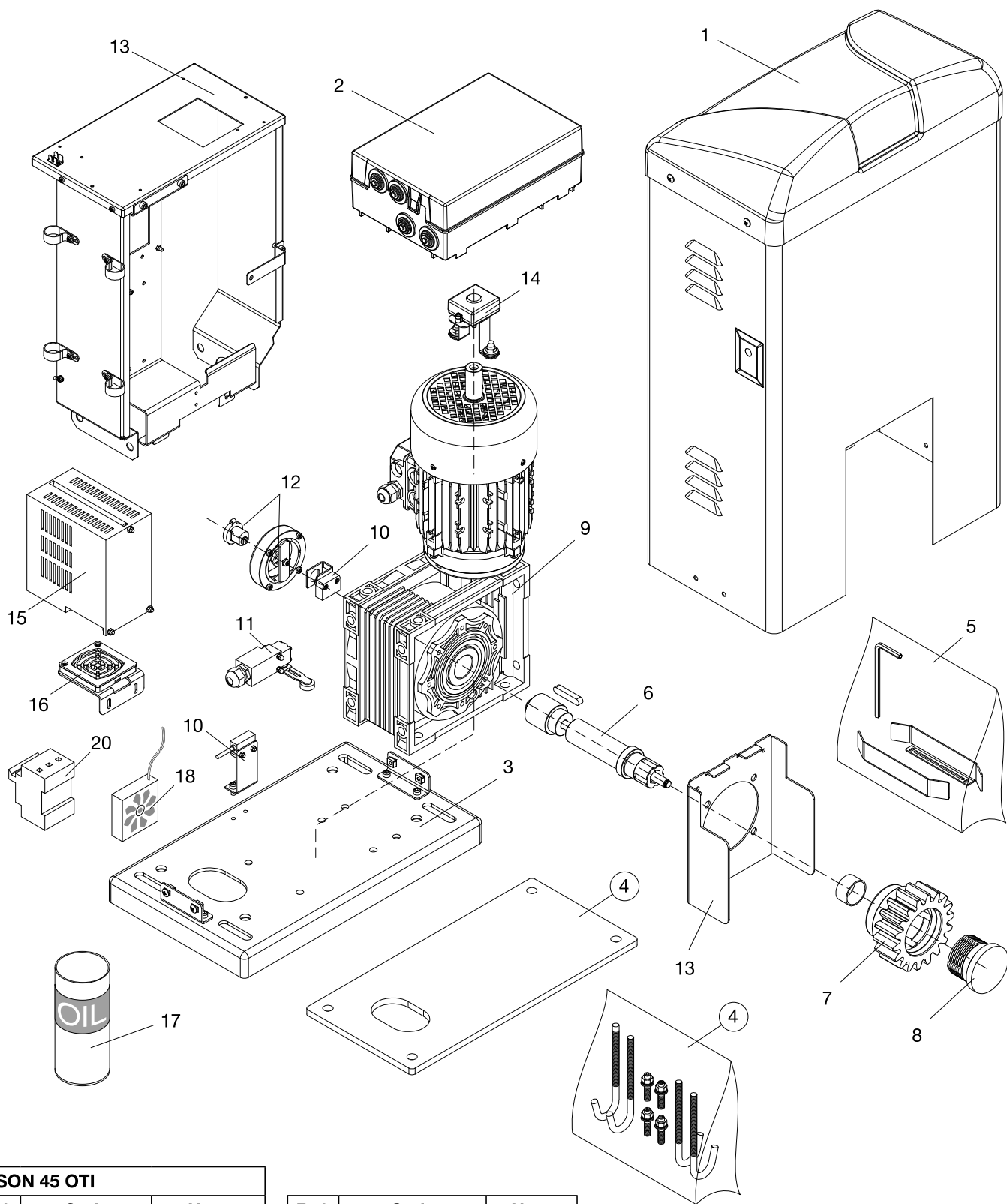
- Every month check the good operation of the emergency manual release.
- It is mandatory not to carry out extraordinary maintenance or repairs as accidents may be caused. These operations must be carried out by qualified personnel only.
- The operator is maintenance free but it is necessary to check periodically if the safety devices and the other components of the automation system work properly. Wear and tear of some components could cause dangers.

WASTE DISPOSAL



As indicated by the symbol shown, it is forbidden to dispose this product as normal urban waste as some parts might be harmful for environment and human health, if they are disposed of incorrectly. Therefore, the device should be disposed in special collection platforms or given back to the reseller if a new and similar device is purchased. An incorrect disposal of the device will result in fines applied to the user, as provided for by regulations in force.





BISON 45 OTI		
Ref.	Code	Note
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2	968603008	
3	9686531	
4	9623067	BISON.P45
5	9688208	
6	9686541	
7	9686540	
8	9686548	
9	9686776	
10	9686537	

Ref.	Code	Note
11	9686538	
12	9686551	
13	968602880	
14	9760021	MAG.E
15	968602881	
16	968602945	
17	9688110	5 LT
18	968602847	
19	968603590	