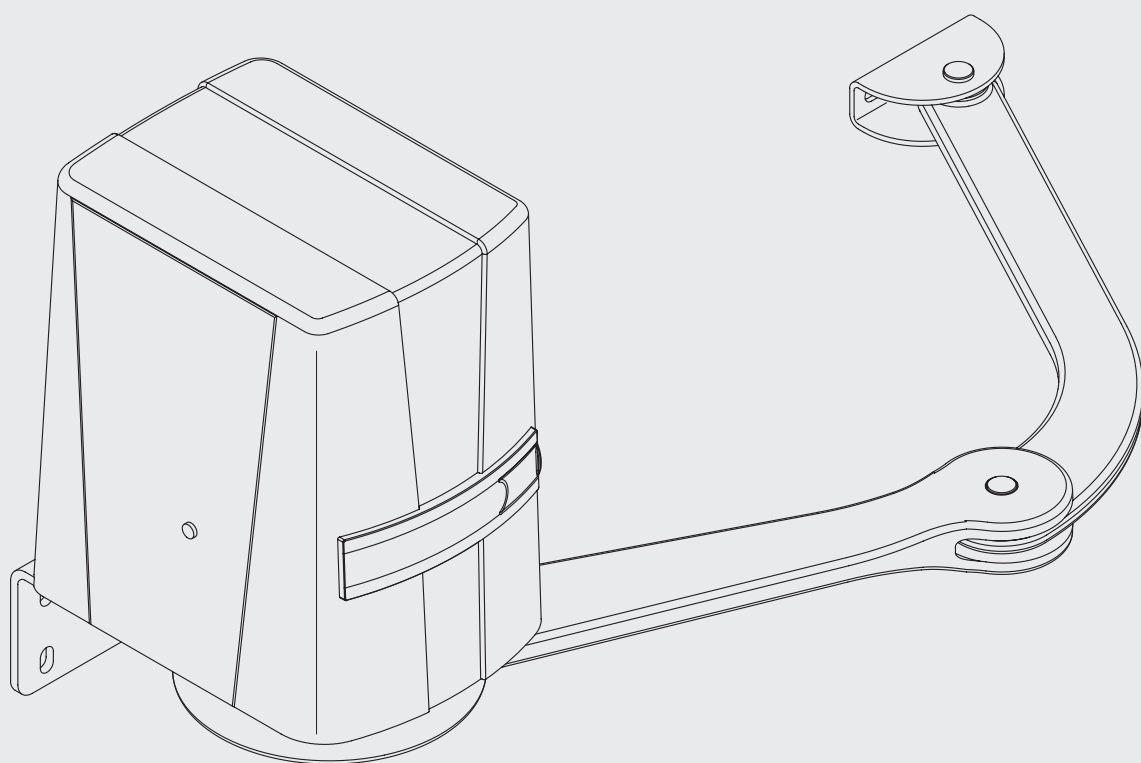


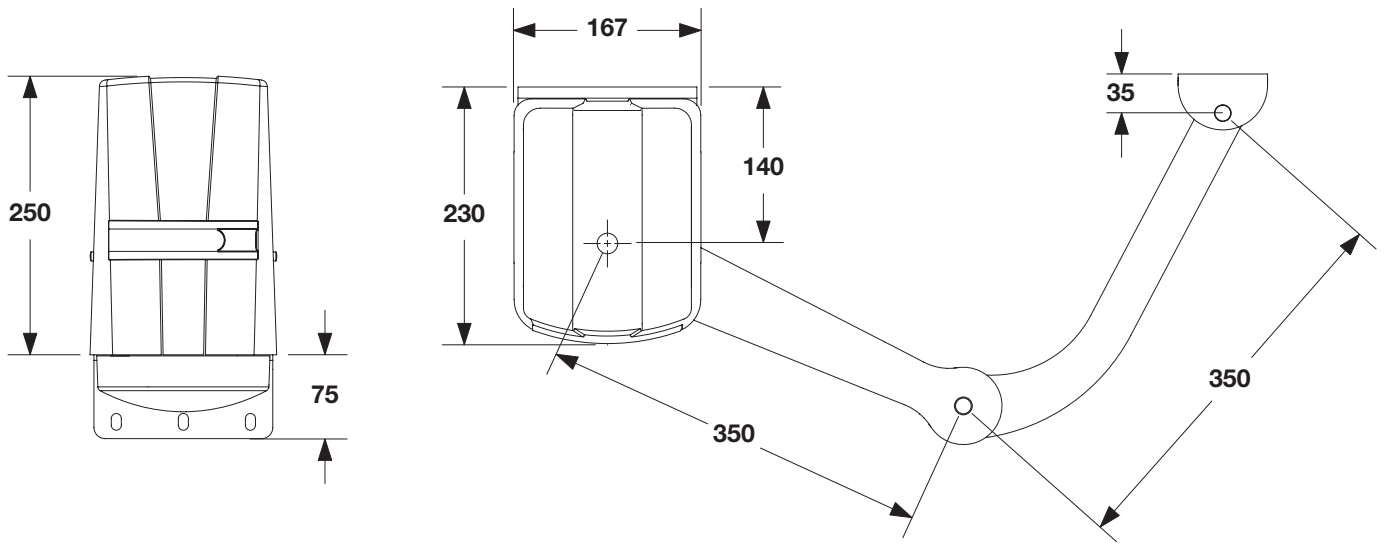
BEN



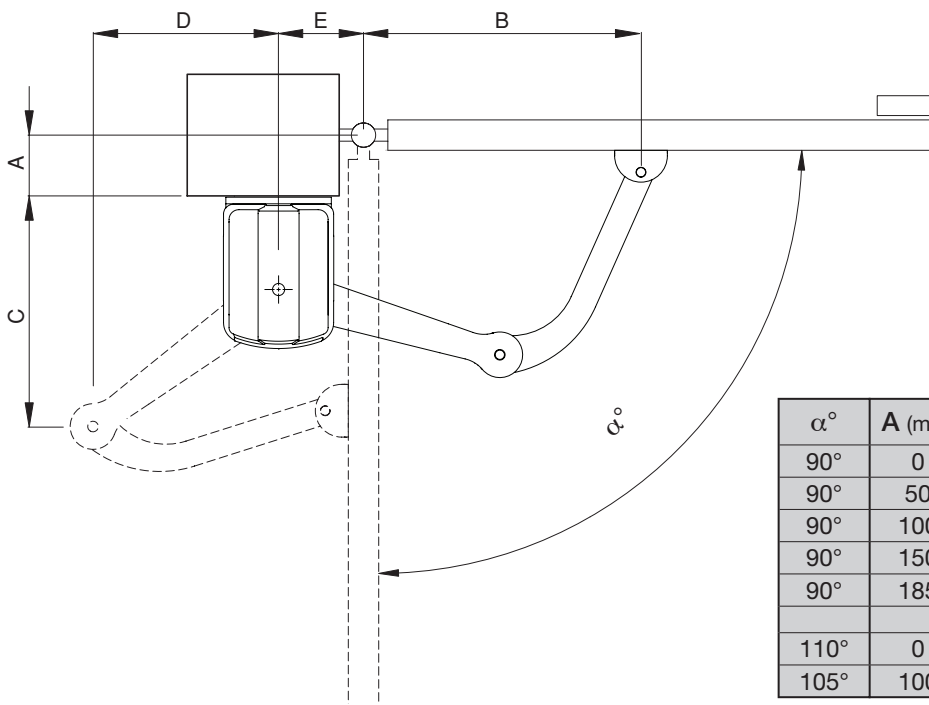
BENINCA[®]
TECHNOLOGY TO OPEN



1

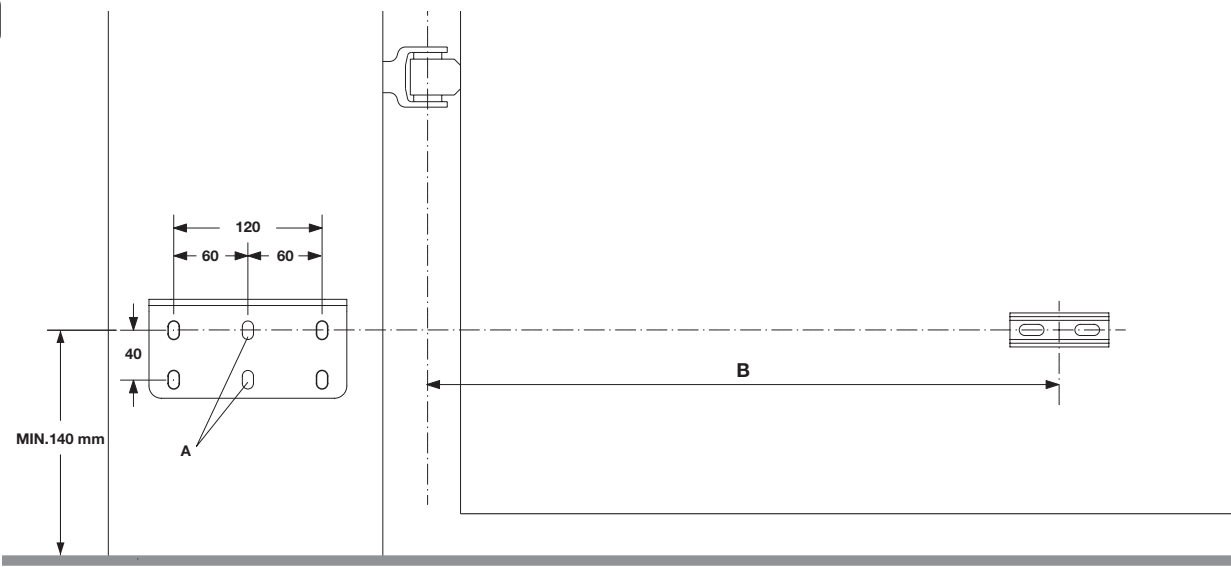


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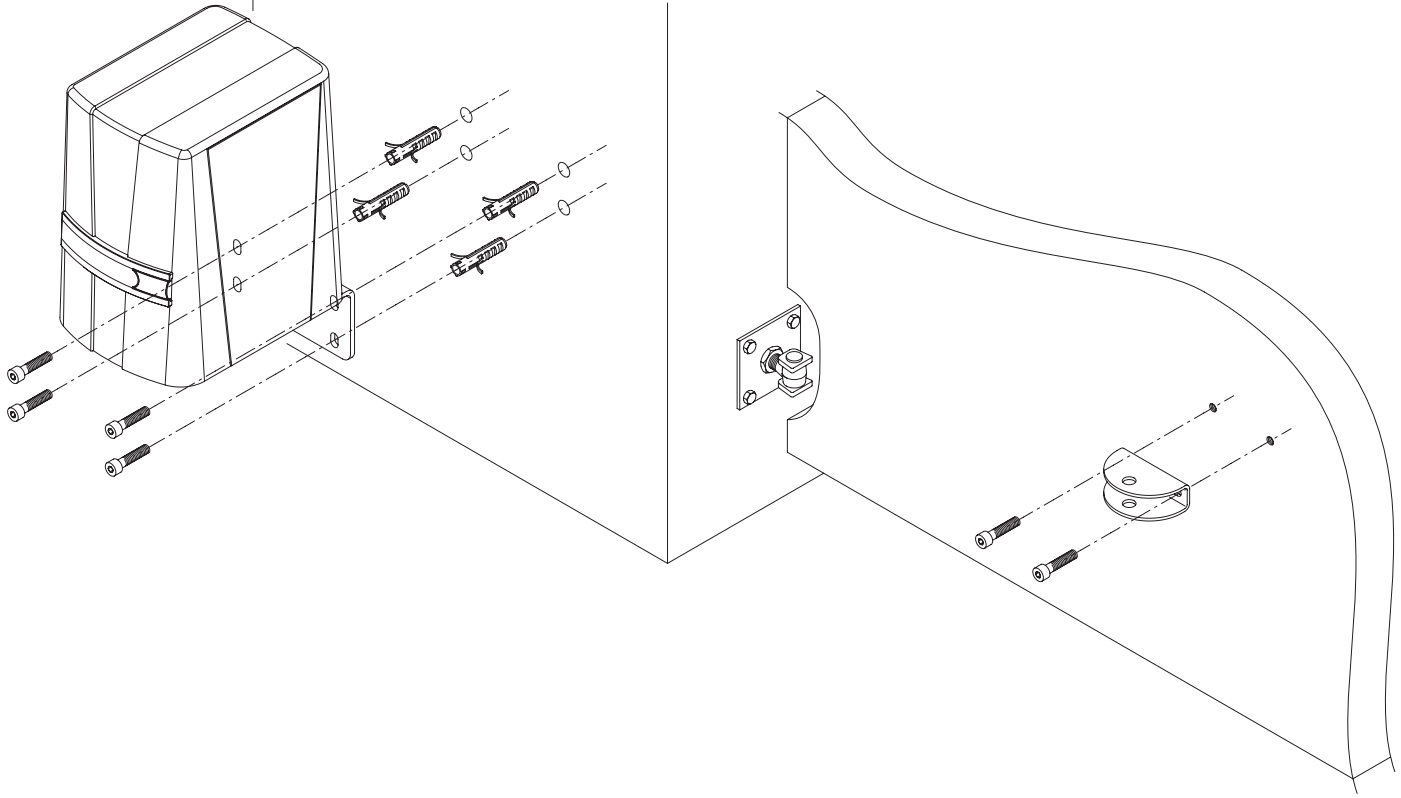


α°	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)
90°	0	470	382	253	140
90°	50	470	373	261	140
90°	100	470	370	264	140
90°	150	470	375	260	140
90°	185	470	412	220	160
110°	0	420	266	327	200
105°	100	420	305	309	200

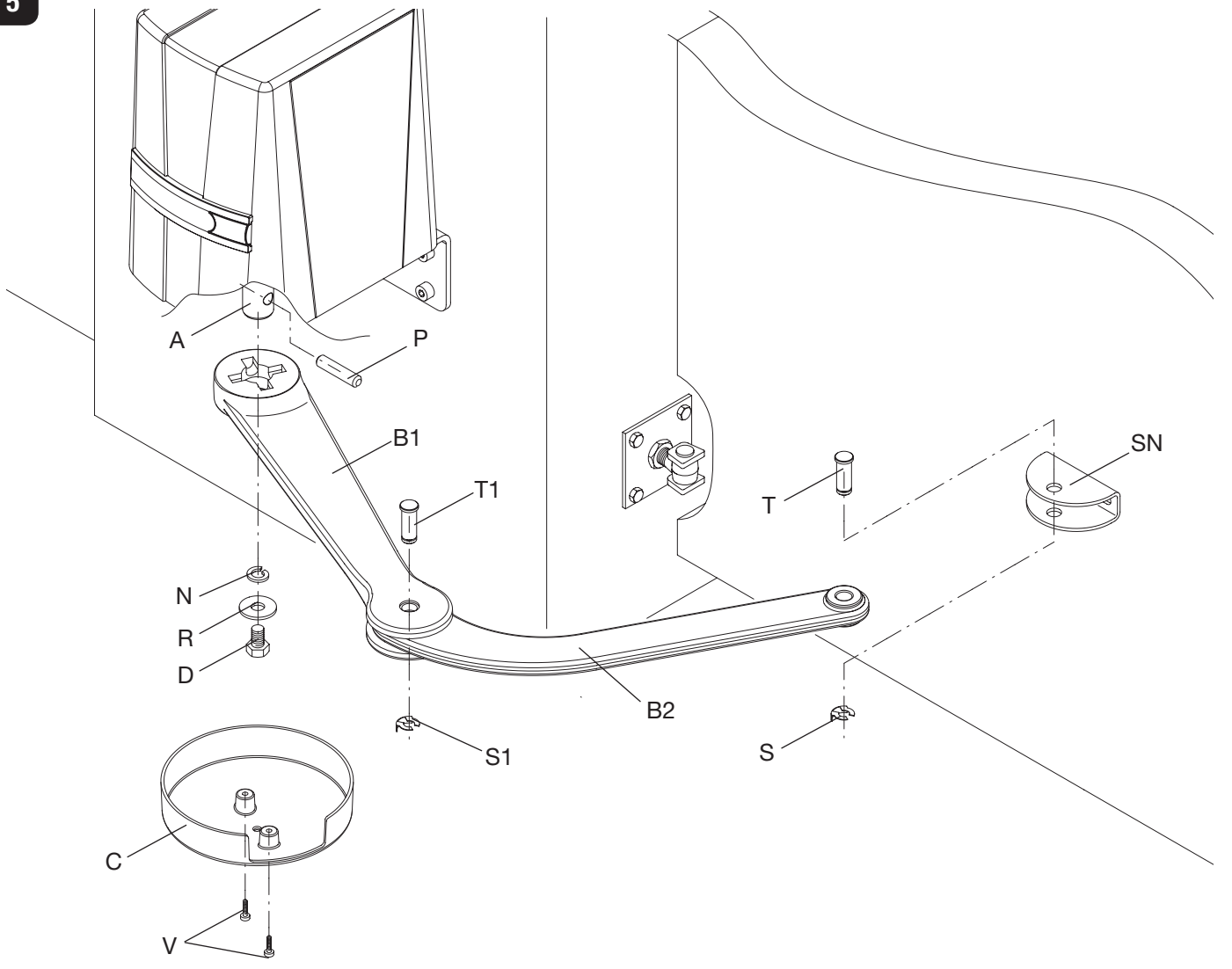
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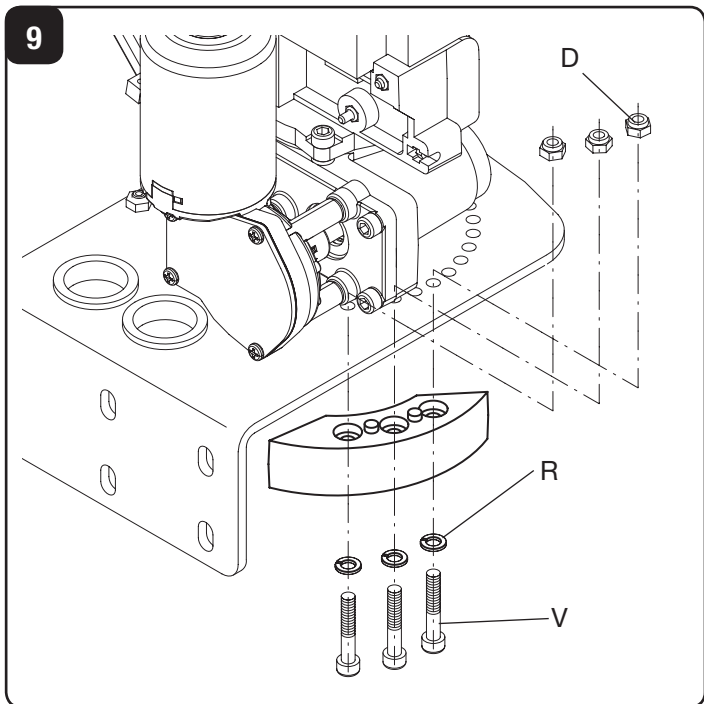
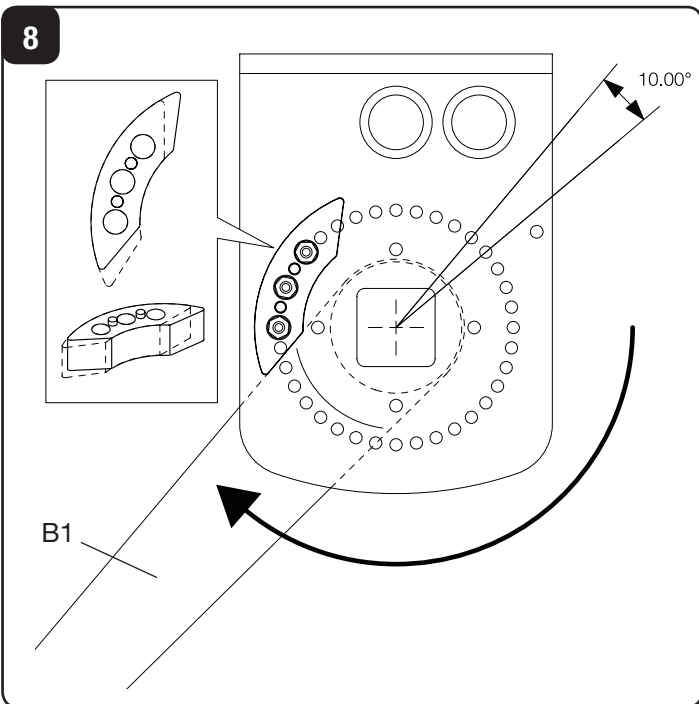
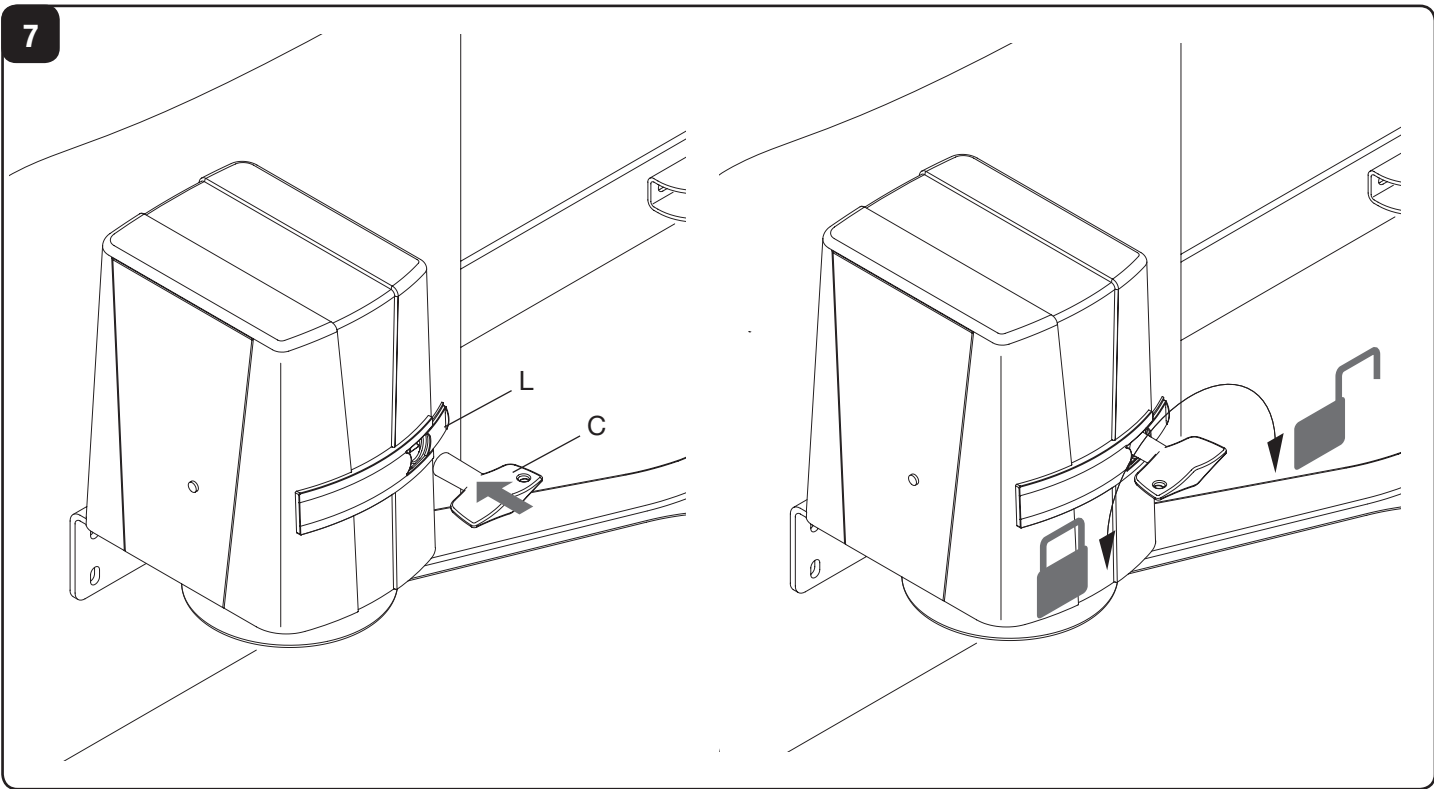
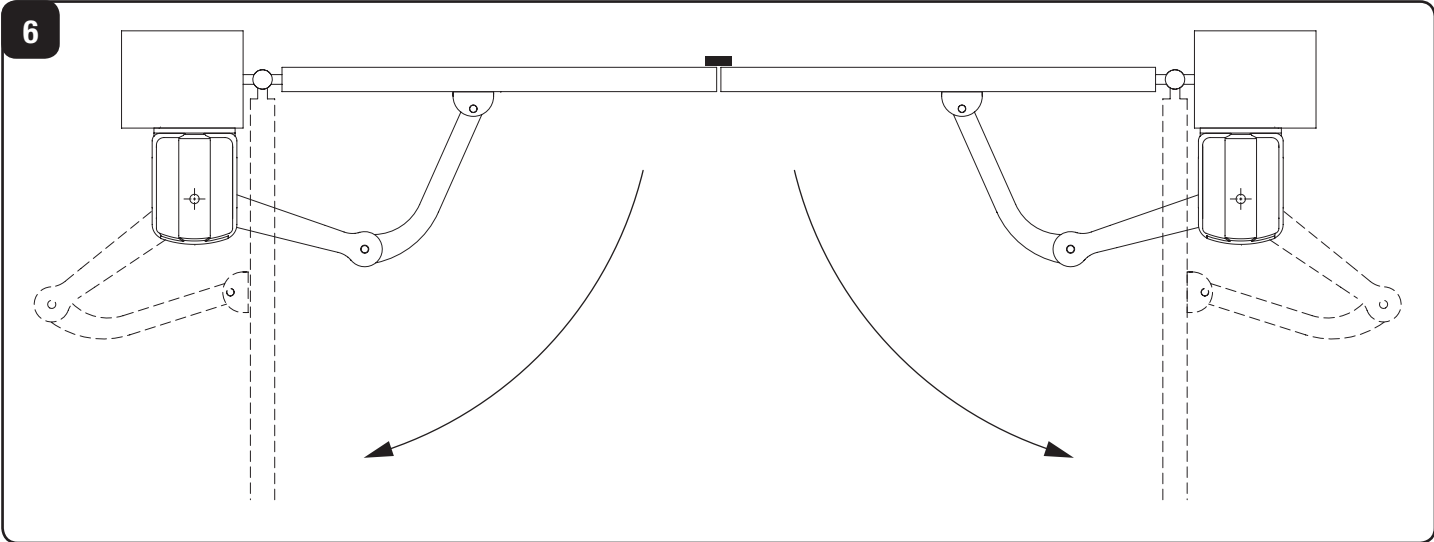


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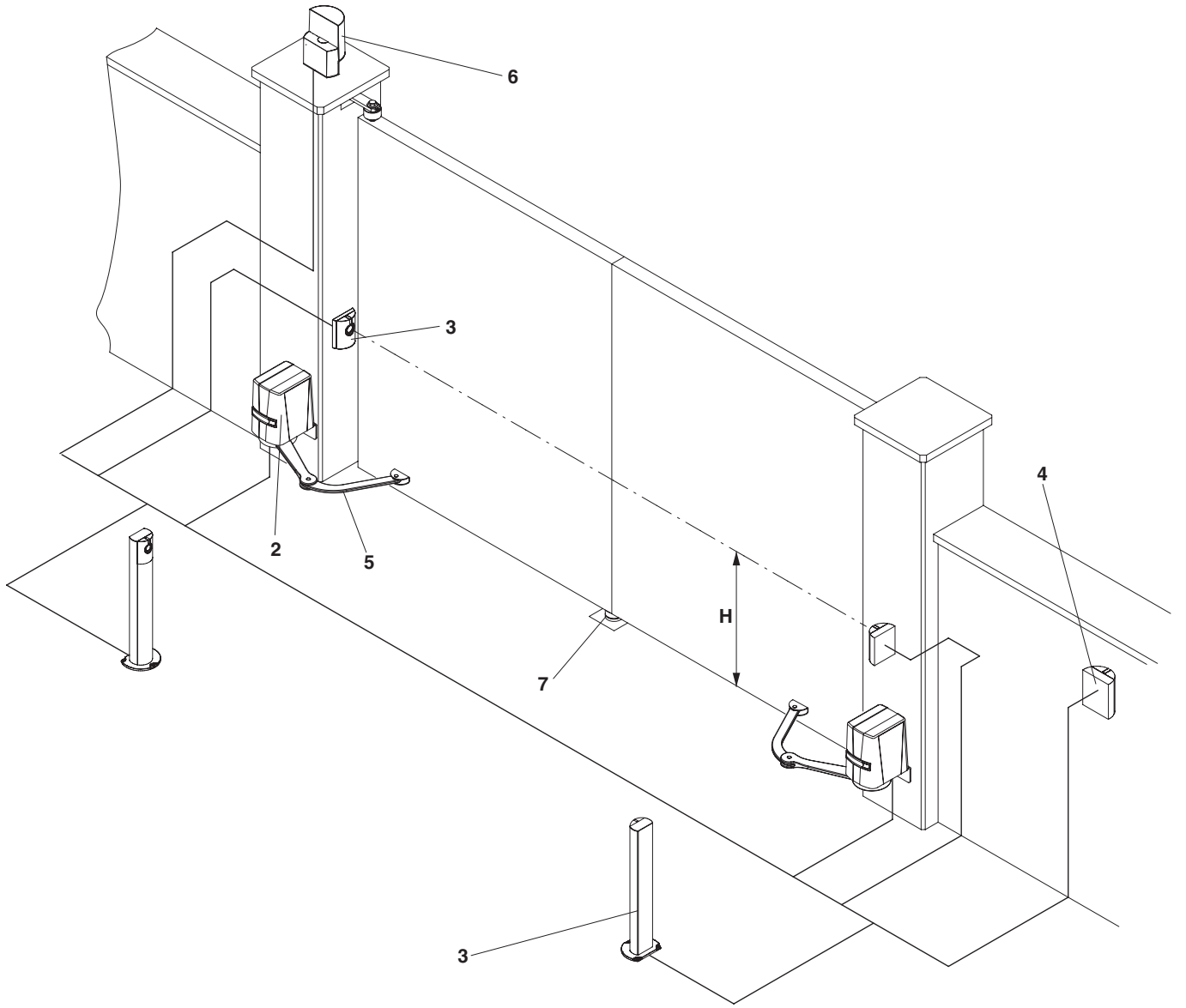


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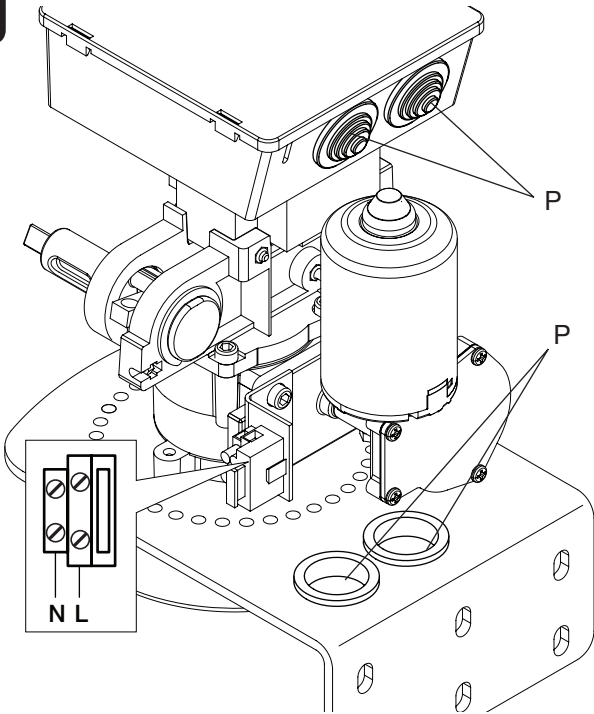




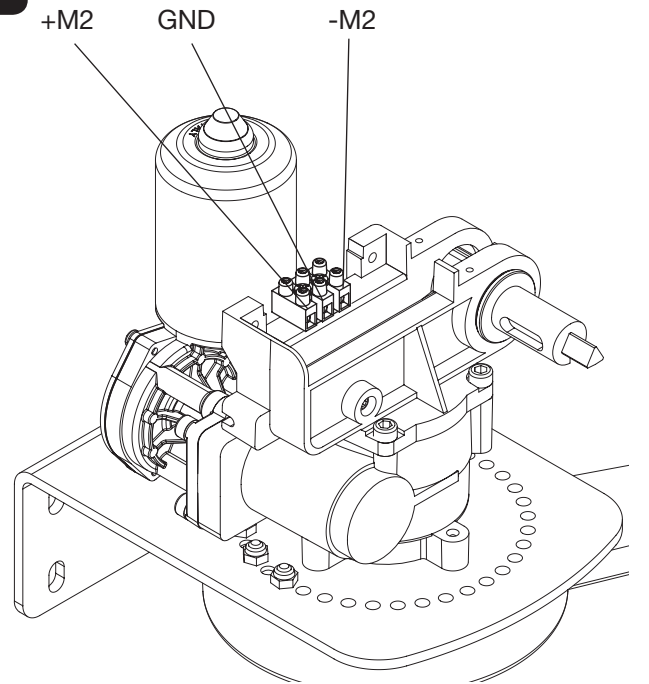
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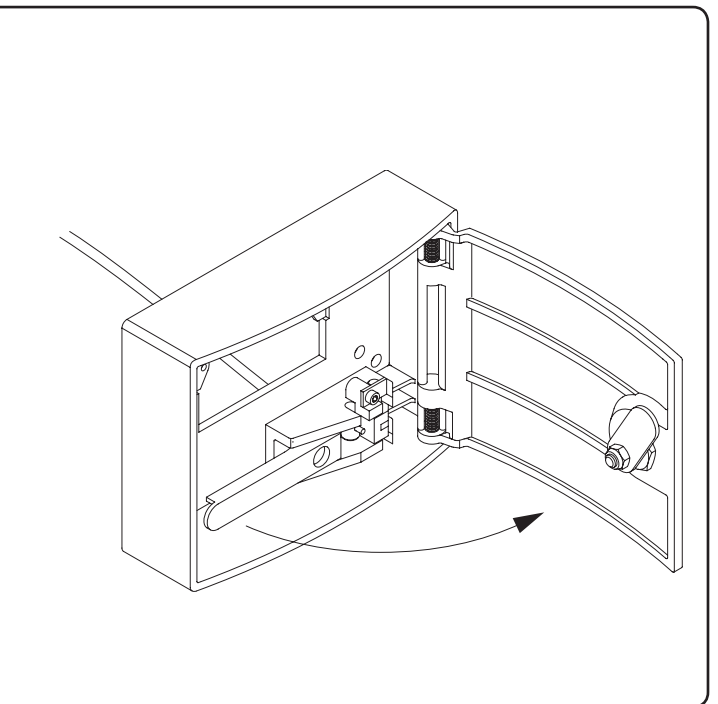
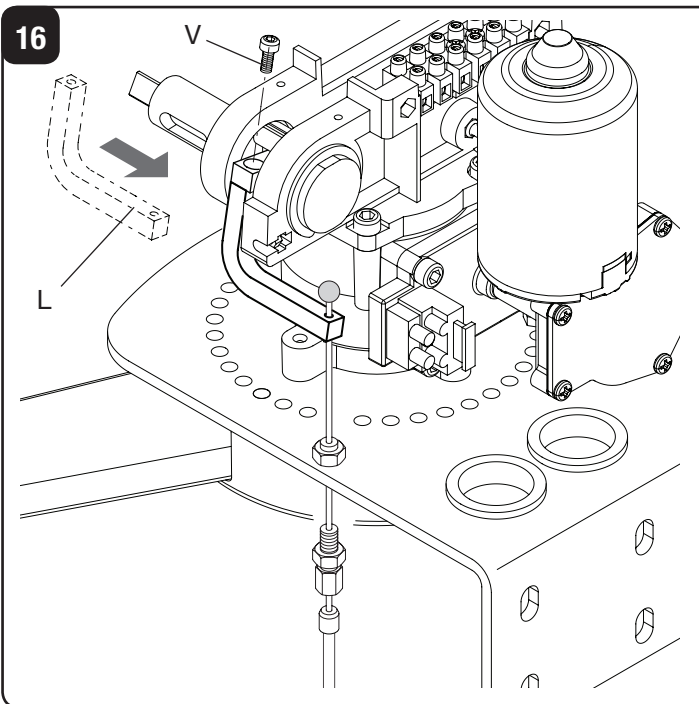
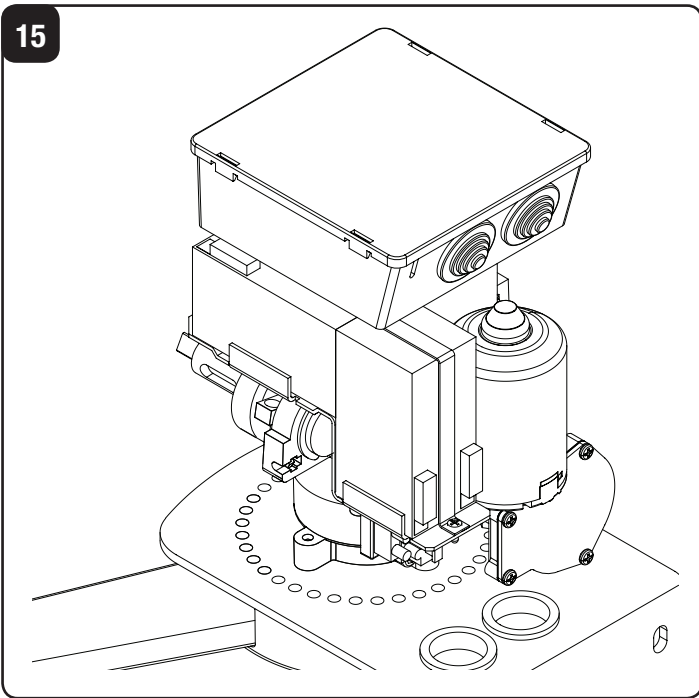
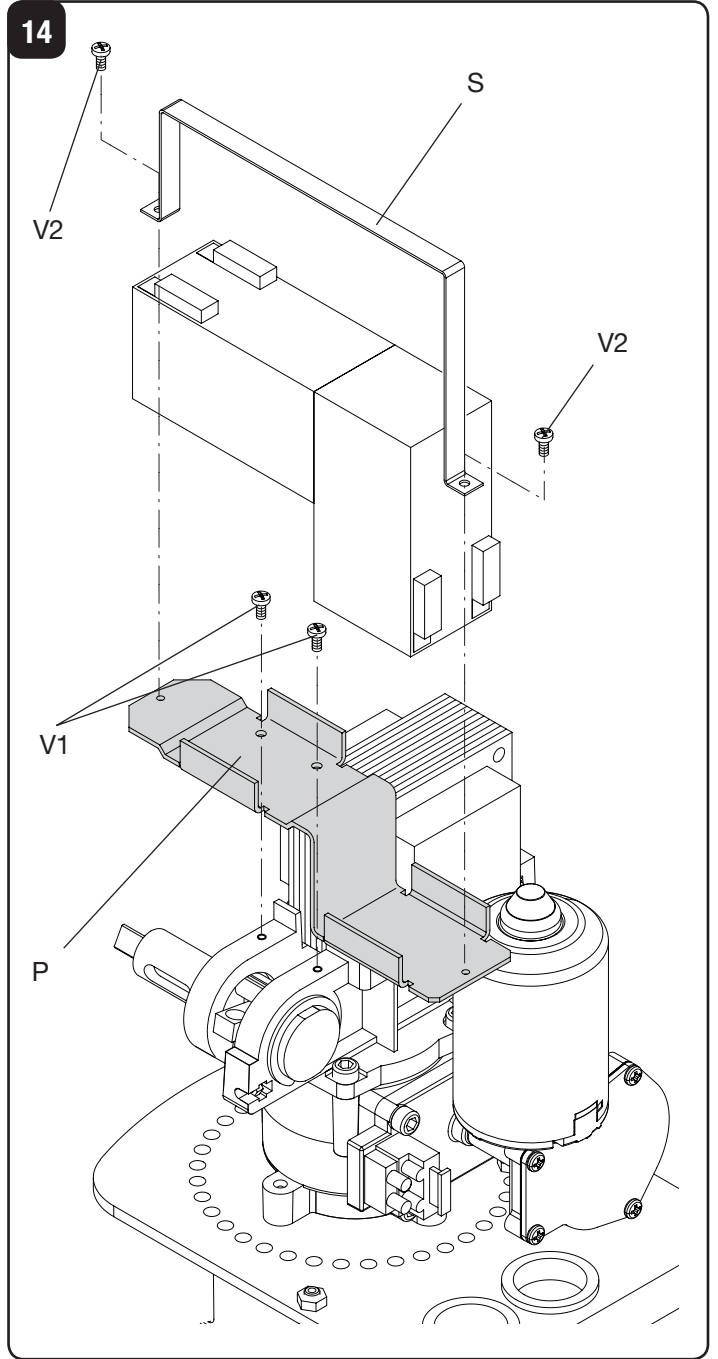
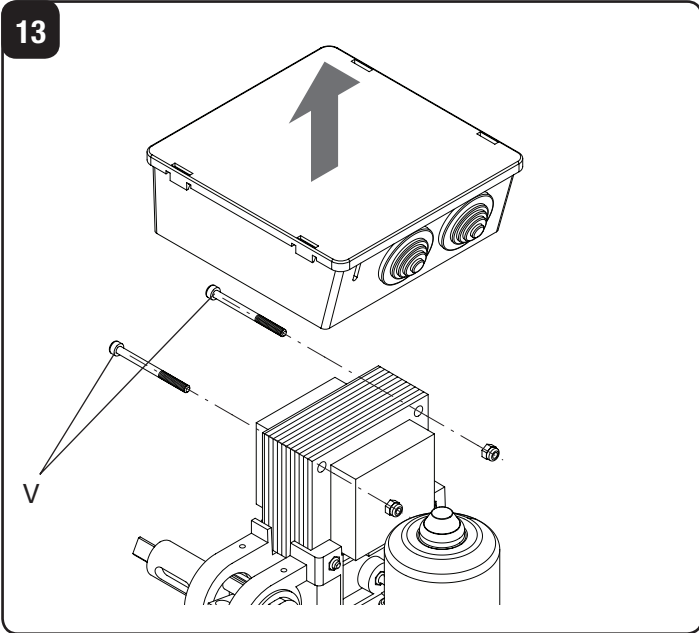


11



12





EC Declaration of Conformity regarding machines (Directive 89/392 CE, Annex II B) - No servicing

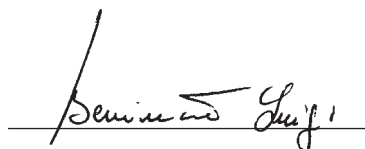
Manufacturer: **Automatismi Benincà SpA.**
Address: Via Capitello, 45 - 36066 Sandrigo (VI) - Italia

We herewith declare that:the automatic system for swing gates, **BEN** model.

- is intended to be incorporated into a machine or assembled together with other devices to form a machine in compliance with the EC Directive 98/37, as amended;
- therefore, is not in every respect complying with this Directive;
- is complying with provisions set forth by the following other EC Directive:
EC Low voltage Directive (73/23/EEC, 93/68/EEC).
EC Directive of Electromagnetic Compatibility (89/336/EEC, 93/68/EEC)

Moreover, we herewith declare that the system shall not be put into service until the machine in which the same will be incorporated or of which it will become a component, is acknowledged compliant with the EC Directive 98/73 and applicable national legislation and a related declaration of conformity is drawn up. In other words, no servicing shall be carried out until the system under this declaration does not form one single final machine with other components.

Benincà Luigi, Legal responsible.
Sandrigo, 08/04/2008.



WARNING

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.

Qualified personnel, in compliance with regulations in force, shall install the system.

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.

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.



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.

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 BEN 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.

All our products are covered by a guarantee. Furthermore, an R.C. insurance policy signed with a primary insurance company, covers any injuries or damages caused by manufacturing faults.

GENERAL INFORMATION

This system is suited for the automation of gate or door leaves where obstacles, such as large piers or columns, impair the use of traditional actuators.

BEN is complete with an articulated arm, which allows a smooth and noiseless movement. It is easy to mount and, thanks to its pleasant design, it is able to fulfil the most demanding requirements.

This system is composed of an irreversible gear motor, made with highly rugged materials. The leaf opening is regulated through the amperometric sensor.

An adjustable mechanical stop stops the gate leaf movement during closure. It is mandatory to provide for a stop fitted to ground.

The emergency release is the lever with customized key which permits the opening or closing of the gate by hand in the event of power failure.

PRELIMINARY CHECKS

For a good operation of this automatic system, the door to be automated shall fulfil the following characteristics:

- Good strength and stiffness of leaves.
- Efficient hinges.
- The door leaves should be moved by hand and without any effort for their entire stroke.
- Presence of a stop in the closing phase.

In the negative, replace the defective parts.

The reliability and safety of the system depend on the good conditions of the gate structure.

SPECIFICATIONS	BN.E	BN.E
Mains power supply	--	230Vac 50Hz
Motor power supply	24Vdc	24Vdc
Absorbed power	75 W	75 W
Absorbed current	3 A	0,6 A
Torque	120 Nm	120 Nm
Jogging	Intensive use	
Protection level	IP44	
Operation temperature	-20°C / +70°C	
Opening time (90°)	10 s	
Noise	<70 dB	
Lubrication	CASTROL OPTITEMP LP2	
Built-in control unit	NO	SI
Weight	6 kg	7,9 kg

DOOR LEAF WIDTH (m)	LEAF MAXIMUM WEIGHT (kg)
1	250
1.5	200
1.8	170

VERSIONS AND ACCESSORIES

BN.E: Irreversible gear motor, 24Vdc, with built-in control unit.

BN: Irreversible gear motor, 24Vdc

BN.CB: Battery charger kit, which can be installed on board (optional)

BN. SE: Cord release for emergency opening from outside (optional).

INSTALLATION

FIG.1 DIMENSIONS

Overall dimensions expressed in millimetres.

ANCHORING OF BRACKETS

FIG. 2

Measure dimension A and, according to the desired opening angle, the E dimension value (fitting axis of the gear motor) and the B dimension value (fitting axis of the bracket on the door leaf) are obtained.

After defining the above measures, check the clearance required to the arms to complete their opening movement (C and D measures).

FIG. 3

Referring to the figure, drill 4 holes with a diameter adequate to the type of screw anchors to fix the gear motor to the pier.

Usually the two central holes A on the plate are not necessary for fitting. They should be used only in the event the pier is of such reduced dimensions that the external holes are not suited.

Keep to the minimum dimension of 140 mm shown to avoid that installation of the gear motor is excessively near ground-level.

If the installation measure is however lower than 250 mm, to facilitate installation it is advisable to pre-assemble the articulated arm and the cover (see "TO ASSEMBLE ARTICULATED ARMS").

Drill 2 holes to fit the articulated joint referring to dimension B and aligning the gear motor to the gear motor bracket, as shown in Fig. 3.

If the fitting areas feature a reduced thickness, or are in any case weak, reinforce them.

FIG. 4

Fix the gear motor and the articulated joint by means of screw anchors.

The articulated joint can be also welded to the gate, referring in any case to the installation measures.

HOW TO ASSEMBLE THE ARTICULATED JOINTS

FIG. 5 - 6

- Release the gear motor (see paragraph "Emergency manual operation")
- Insert pin P in the hole of the motor shaft A
- Join arm B1 to arm B2 and lock them by means of pin T1 and lock ring S1
- Fix the arms to the motor shaft A and lock them by means of nut D by inserting washer R and ring N
- Hook the arm to bracket SN and lock it by means of pin

T1 and release ring S1.

- Apply cover C and fix it by means of the two screws V.
- The gear motor can be installed on the other gate leaf (Fig. 6) in a similar way. The only difference between right-hand and left-hand leaves relies in the position of arm B2.
- With released gear motor, completely open the gate and check the operating clearances of the two arms.

EMERGENCY MANUAL OPERATION

FIG.7

To open the gate/door by hand in the event of power failure or breakdown:

- Open the sliding door L
- Insert the customized key C, turn it clockwise by about 180°.
- The reduction gear is released and the gate can be opened or closed by hand.
- To reset the normal operation, turn key C anticlockwise by around 180°.
- Open or close the gate by hand until the motor is geared.

HOW TO POSITION THE OPENING MECHANIC STOPS

FIG.8 - 9

The actuator is complete with an adjustable mechanical stop which locks the gate leaf once the opening position has been reached.

When the reduction gear is released, open the gate leaf in the desired opening position (Fig.8).

Fit the mechanical stops with arm B1 straight, at stoke-end.

The mechanical stops should be fitted by means of the three screws V and nuts D, by inserting washers R as shown in Fig.9.

The holes on the plate allow for increases by steps of 10° opening. The asymmetric shape of the mechanical stop allows for intermediate stops by simply turning the fitting position upside down.

WIRE CONNECTIONS

FIG.10

Fig.10 shows cables to be provided for a standard installation. Before proceeding with the cable insertion, check the type of cabling required for the accessories actually used.

Measure H is the installation height of the photocells. A clearance between 40 and 60 cm is recommended.

Key of components:

- 1 Gear motor with built-in control unit BN.E
- 2 Gear motor BN.
- 3 Photocells
- 4 Key selector or digital keypad
- 5 Articulated arm
- 6 Flashing warning light with built-in antenna
- 7 Mechanical stop in closed position (compulsory)

BN.E (Fig.11): the motor BN.E is equipped with control unit, to which the reduction gear BN, accessories (flashing light, photocells, etc.) and control devices (push-buttons, key selectors, etc.) must be connected.

The mains power supply is to be connected to the special terminal with fuse holder, as shown in Fig.10.

Introduce the remaining cables, suitably positioned into the cable ducts, through cable glands P.

Refer to instructions supplied with the control unit.

BN. (Fig.12): A terminal board for connection to the control unit (+M2/-M2) is provided on the gear motor BN.

For connection of motor BN to the control unit, the cable section should be as follows:

Cable length	Cable size
up to 5 m	2x2,5mm ²
from 5m to 7,5m	2x4mm ²
from 7.5 to 10m	2x6mm ²
Longer than 10m	Not recommended

Furthermore, it should be noted that ground connection must be made by means of the special terminal.

BUFFER BATTERIES BN.24

FIG.13-14-15

The buffer battery kit BN.24V is available as optional accessory. This allows to operate the automatic system also in the event of power failure.

To install batteries, proceed as follows:

- temporarily remove the control unit, fixed to the transformer by means of the two screws V, shown in Fig.13.
- by referring to Fig. 14, fix the battery support plate P to the gear motor by means of screws V1. Then position the two batteries and fix them with bracket S and screws V2.
- reset the control unit, in Fig.15 the gear motor is shown with batteries installed.

To connect the batteries, refer to instructions supplied with kit BN.24V.

EXTERNAL CORD RELEASE BN.SE

FIG.16

The external cord release BN.SE is available as optional accessory. This allows to release the automatic system through a lever installed in an anti-shift box with customized key.

Lever L should be installed as shown in Fig.16 and locked with screw V.

Insert then the steel cable C through the hole of lever L and through the gear motor support plate.

Then introduce the cable in the sheath and adjust the device.

For further information refer to instructions supplied with the device.

WARNING

The RC product insurance policy, which covers any injuries or damages to objects caused by manufacturing defects, requires the use of Benincà's original accessories.

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 AND EMERGENCY MANOEUVRE

To open the gate/door by hand in the event of power failure or breakdown:

- Open the sliding door L
- Insert the customized key C, turn it clockwise by about 180°.
- The reduction gear is released and the gate can be opened or closed by hand.
- To reset the normal operation, turn key C anticlockwise by around 180°.
- Open or close the gate by hand until the motor is geared.

MAINTENANCE

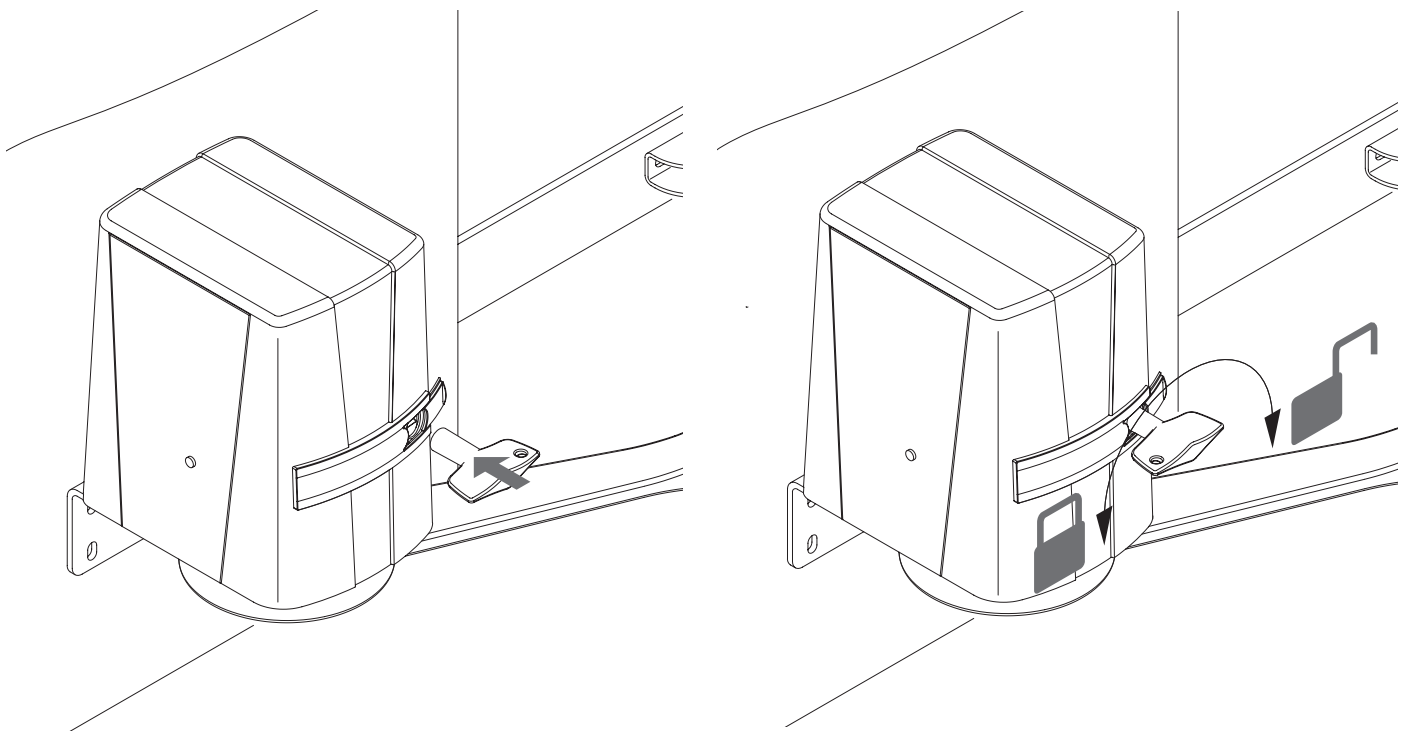
- Every month check the good operation of the emergency manual release.
- It is mandatory not to carry out extraordinary maintenance or repairs as accidents may be caused. These operations must be carried out by qualified personnel only.
- The operator is maintenance free but it is necessary to check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

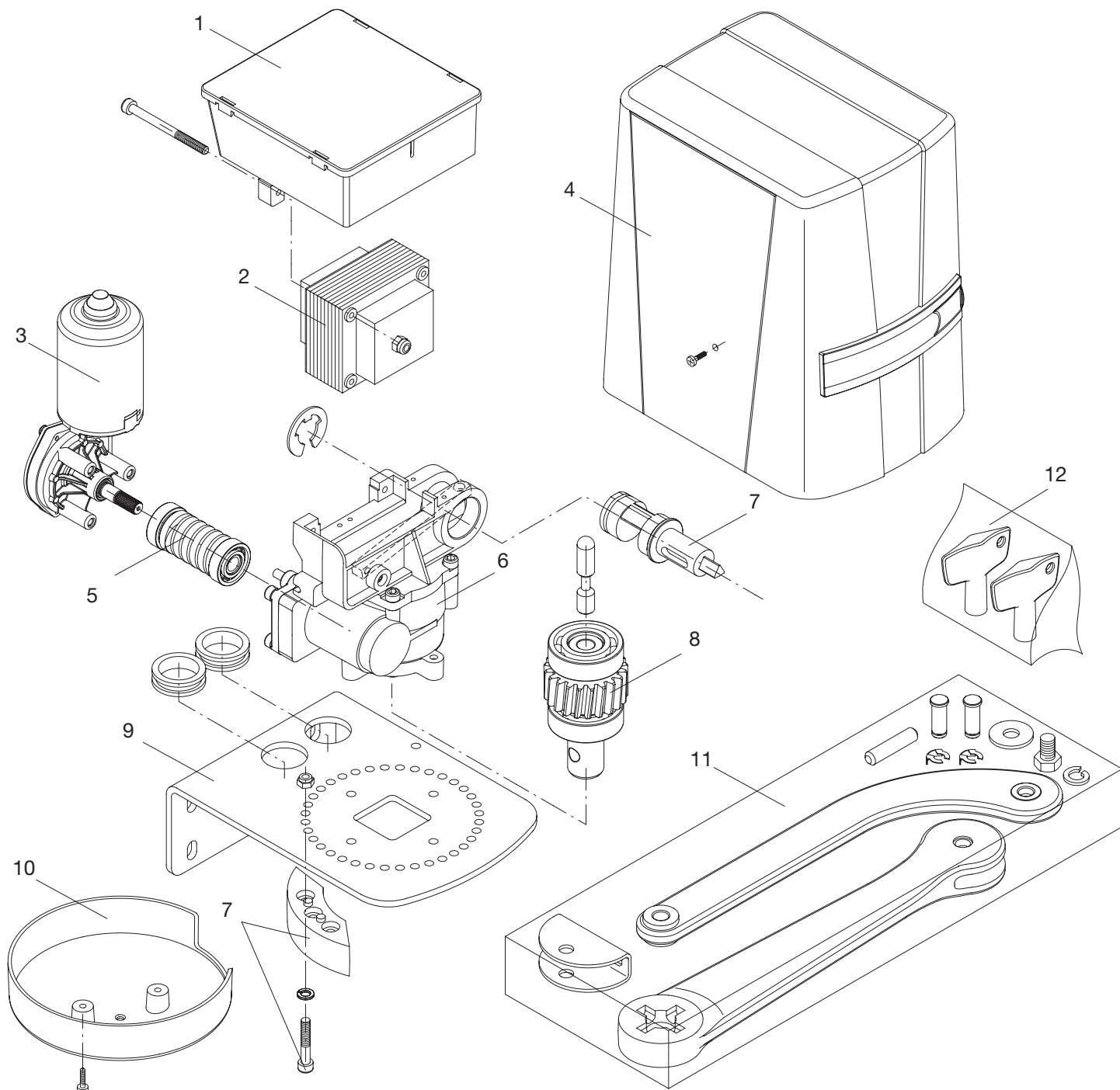
WASTE DISPOSAL

If the product must be dismantled, it must be disposed according to regulations in force regarding the differentiated waste disposal and the recycling of components (metals, plastics, electric cables, etc.). For this operation it is advisable to call your installer or a specialised company.

WARNING

All Benincá products are covered by insurance policy for any possible damages to objects and persons caused by construction faults under condition that the entire system be marked CE and only Benincá parts be used.





Ref.	Code	Note
1	9686487	
2	9686484	
3	9686483	
4	9686482	
5	9686491	
6	9686481	
7	9686486	
8	9686480	
9	9686485	
10	9686489	
11	9686490	
12	9686488	

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