:MINNOW

MINNOW 500

Irreversible electromechanical
INSTRUCTIONS FOR INSTALLATIONS

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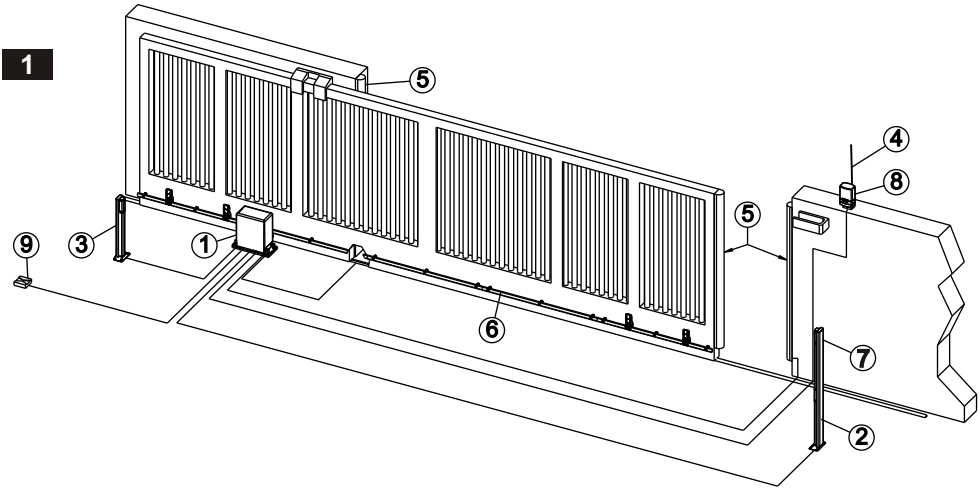

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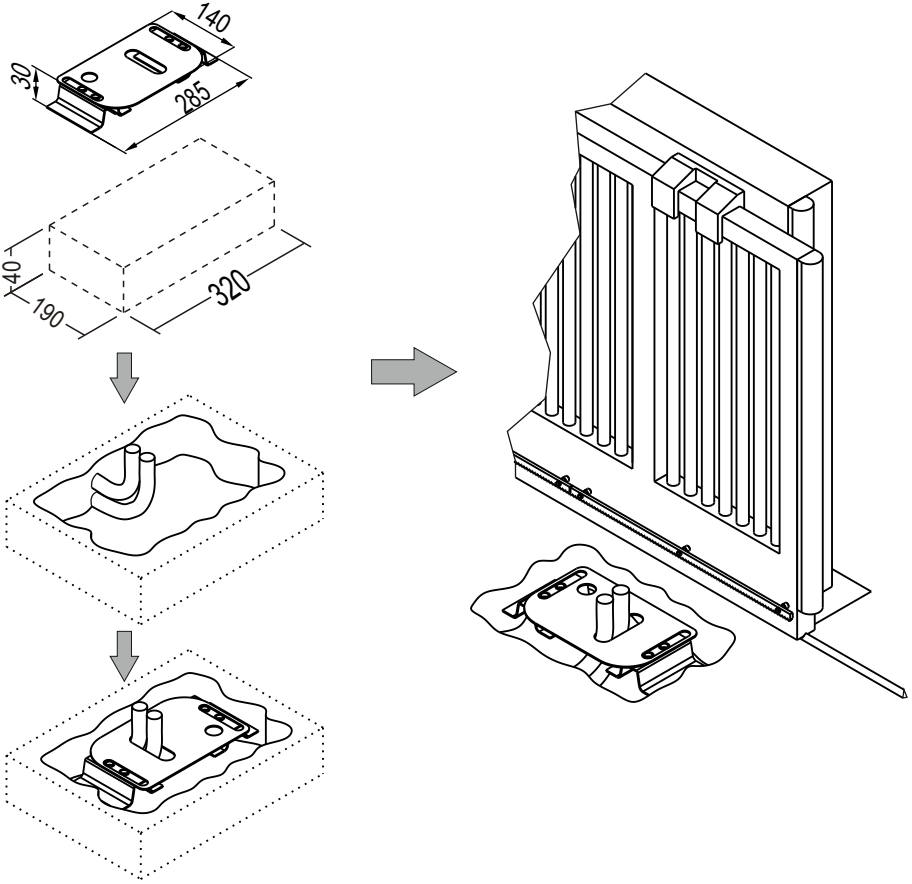

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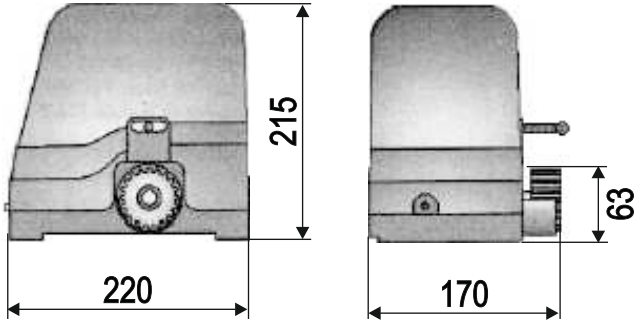

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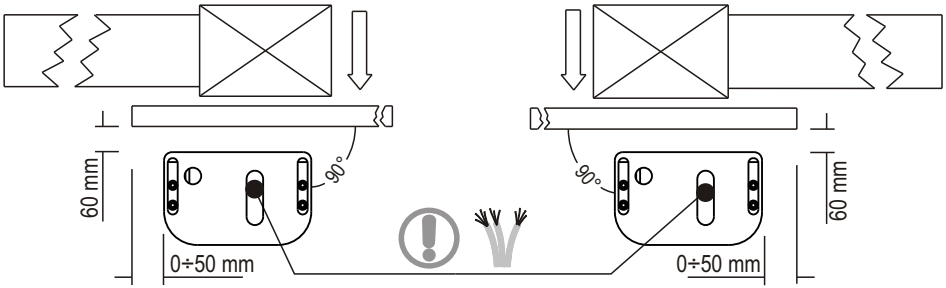

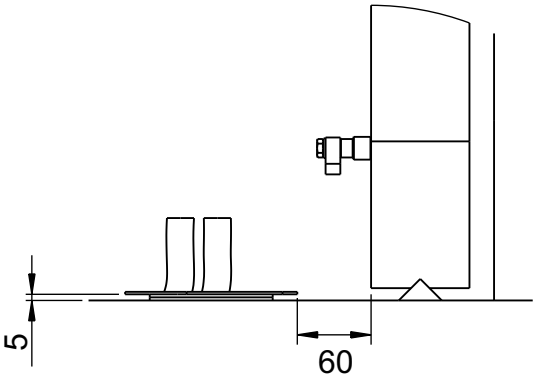

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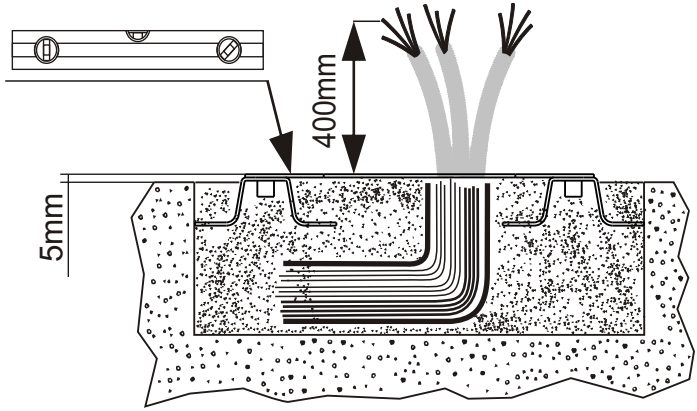

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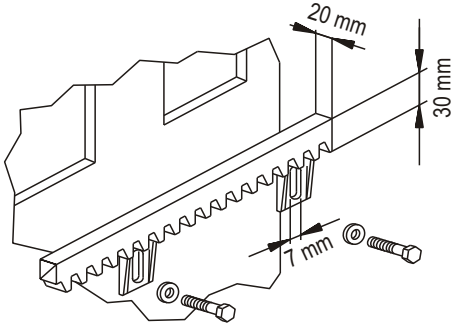

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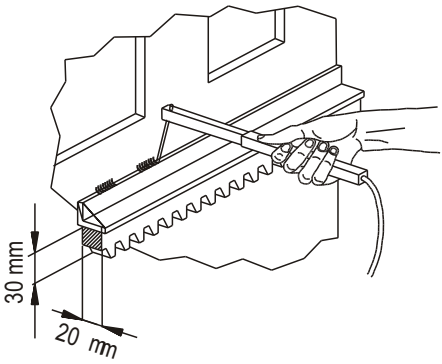

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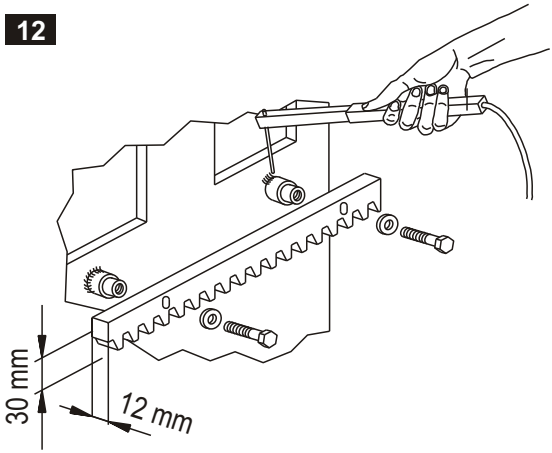

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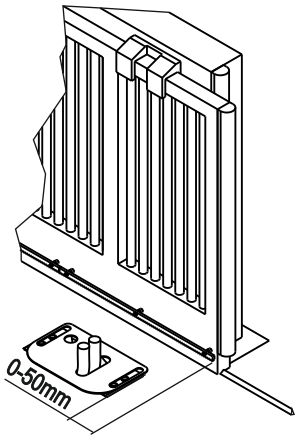

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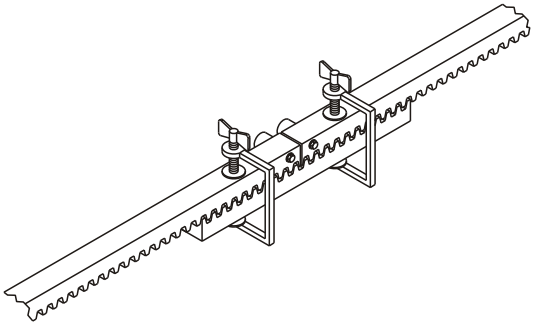

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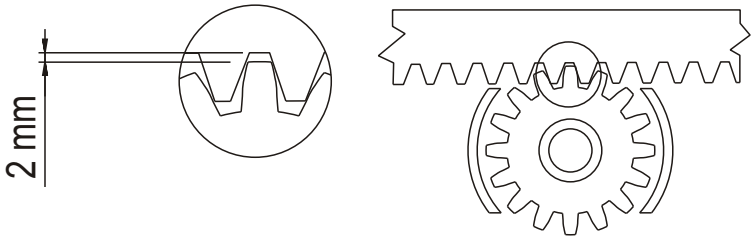

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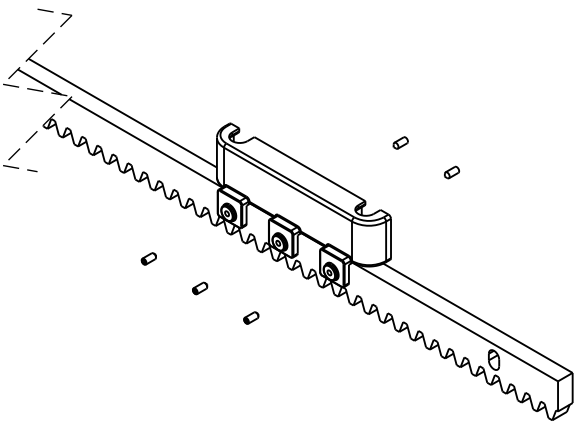

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INTRODUCTION

The gearmotors MINNOW 500 allow automating, easily and fast, gates of large and medium size up to 500 kg. They are suitable for heavy and residential use. Available with or without control unit, it is easy to adapt the system to meet the EN 12453 standards.

WARNINGS FOR THE INSTALLER

- Before proceeding with installation, fit a magnetothermal and differential switch with a maximum capacity of 10A upstream of the system. The switch must guarantee omnipolar separation of the contacts with an opening distance of at least 3mm.
- All the packaging materials must be kept out of reach of children since they are potential sources of danger.
- The manufacturer declines all responsibility for proper functioning of the automated device if failing to use original GIBIDI components and accessories suitable for the intended application.
- When installation has been completed, always carefully check proper functioning of the system and the devices used.
- This instruction manual addresses persons qualified for installation of "live equipment", therefore, good technical
- knowledge is required exercised as profession in compliance with the regulations in force.
- Maintenance must be performed by qualified personnel.
- Before carrying out any cleaning or maintenance operation, disconnect the control unit from the mains.
- This product has been designed and constructed solely for the use indicated in this document. Any other use may cause damage to the product and be a source of danger.
- Verify the intended end use and take the necessary safety precautions.
- Use of the products for purposes different from the intended use has not been tested by the manufacturer and the operations performed are therefore on full responsibility of the installer.
- Mark the automated device with visible warning plates.
- Warn the user that children and animals must not play or stand near the gate.
- Adequately protect the danger points, for example, using a sensitive frame.
- Check proper installation of the earthing system; connect all the metal parts of doors, gates, etc. and all the system components equipped with earthing plate.
- Exclusively use original spare parts for any maintenance or repair.
- Do not make any modification to the components of the automated device unless expressly authorised by GIBIDI.

Thank you for choosing GI.BI.DI.

⚠ **READ CAREFULLY THESE INSTRUCTIONS BEFORE PROCEEDING WITH INSTALLATION.**

WARNINGS:
This product has been tested by GI.BI.DI. for full compliance with the requirements of the directives in force. GI.BI.DI. S.r.l. reserves the right to change the technical data without prior notice in relation to product development.
DISPOSAL: GI.BI.DI. advises recycling the plastic components and to dispose of them at special authorised centres for electronic components thus protecting the environment from polluting substances.

WARNING: IMPORTANT SAFETY INSTRUCTIONS.
It is important for the safety of persons to follow these instructions.
Keep this instruction manual.

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ELECTRICAL EQUIPMENT

1- Gearmotor: power supply, 3x1.5mm² cable (comply with the current standards)
2- Photocell transmitter 2x0.5mm² cable
3- Photocell receiver 4x0.5 mm² cable
4- Antenna screened coaxial cable.
5- Frame 4x0.5mm² cable
6- Rack
7- Key selector 3x0.5mm² cable
8- 230 Vac flashing light signaller 2x0.75mm² cable
9- Omnipolar magnetothermal switch with minimum contact opening of 3 mm. Power supply line to the control unit: 220-230V, 50-60Hz, 3x1.5mm² cable.

ELECTRICAL EQUIPMENT

Operator	MINNOW 500
Type	Irreversible electromechanical gearmotor
Supply Voltage	220/230Vac 50-60Hz
Power adsorbed	250W
Current adsorbed	MAX 1.1A
Thermal cutout	140°C
Capacitor	12µF
Max speed	0,15 m/sec
Max torque	12 N/m
Operating temperature	Elettronica
Torque adjustment	-20°C + 60°C
Degree of protection	IP 44
Max leaf weight	500 Kg
Operating frequency (%)	40% (a 20°C)
Lubrication	Grease
Formula to calculate the operating frequency	$\%Fu = \frac{A + C}{A + C + P} \times 100$	A = Opening time C = Closing time P = Overall pause time A+C+P = Time between two openings

PRELIMINARY WARNINGS

Check that the gate structure is in conformity with the regulations in force and that leaf movement is linear without friction.

Preliminary checks:

- check that the gate structure is sufficiently robust. In any case, check that the weight and dimensions of the gate fall within the limits of use of the operator;
- check that the leaf can be moved manually without force (points of greatest friction) for the entire travel of the gate during both opening and closing;

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- Check that the area where the gearmotor will be fitted is not exposed to flooding. If so, install the gearmotor in a position raised from the ground;
- if the gate is not a new installation, check the state of wear of all the components, repair or replace the defective or worn parts and perform any other operations necessary.
- Use mechanical limits to handle leaf travel excess situations.

The reliability and safety of the automated device is directly dependent on the condition of the gate structure.

EMBEDDING THE PLATE

1- Make the hole for the foundation plate respecting the dimensions **[2]** and arrange the plate according to the closing direction of the gate **[4]**. The hole depth must be at least equal to the length of the cramp-irons **[5]**.
2- Fit the flexible hoses through which the electric cables will run so that they lead out of the plate **[4]** and protrude from the hole by about 30-40 mm **[5]**.
3- Make sure that the plate is level **[5]** and start filling the hole with concrete.
4- Wait for the concrete to dry.
5- Run the electric cables (for connection of the accessories and electrical power supply) through the flexible hoses.

To make it easier to make the electrical connections to the control unit, it is advisable to keep a cable length of 400 mm from the foundation plate hole **[5]**.

INSTALLING THE GEARMOTOR

1 – Put the fixing brackets and remove the gearmotor's cover unscrewing the lateral screws;
2 – Put the gearmotor on the foundation plate matching the threaded holes with the slots;
3 – Keep the gearmotor 2/4 mm up and lower it after finishing fixing the rack;
4 – Screw the 4 screws and fix the gearmotor parallel to the gate;

FITTING THE RACK

1- Manually move the gate to the closed position;
2- unlock the gearmotor (see paragraph Unlocking Device);
3- arrange the rack (optional);
4- place the first element of the rack on the pinion in such a way that it protrudes 50 mm from the gearmotor **[13]** creating the space required for the limit switch bracket;
5- secure the element in the slot with a screw or spacer depending on the type of rack chosen **[10 - 11 - 12]**. It is advisable to tighten the rack retaining screws at the top of the slot so that the gate can be raised and the necessary clearance between the rack and pinion maintained should the gate lower;
6-continue fitting the rack, aligning the modules one after another; to properly secure the modules, use a piece of rack of about 150 mm to allow for tooth timing **[14]**. Once the last module has been secured, cut off the protruding part with a saw.
7- when all the modules have been fitted, manually carry out various gate opening and closing manoeuvres to check that it slides smoothly without friction;
8- lower the operator and lock the gearmotor leaving a clearance of 2 mm between the pinion and the rack **[15]** to ensure that the weight of the gate does not negatively affect the gearmotor shaft.

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FITTING THE LIMIT SWITCHES [16]

When the gate is completely open, position the opening limit switch in correspondence with the centre of the pinion.
When the gate is completely close, position the closing limit switch in correspondence with the centre of the pinion.
At first electrical command, check and adjust the positions of the limit switches.

MANUAL UNLOCKING OPERATION

Insert and turn the key included in the package, pull the unlocking lever from left to right up to 90°. Now it is possible to move the gate manually.
To lock the motor, it is necessary to interrupt the electric line upstream of the operator, position the unlocking lever again in the initial position and lock the lever with the key

FINAL TESTS

Close the gearmotor casing. Power the system and run a complete opening and closing cycle checking that:

- the gate moves smoothly;
- the safety devices function properly;
- the foundation plate is firmly in place;
- the gate assembly is in compliance with the current EN 12453 EN 12445 standards;

For further details and information on the reference standards, visit our site: **www.gibidi.com**

MAINTENANCE

Periodically check the gate structure, in particular:

- check perfect functioning of the rails;
- check that the rack has not lowered with the weight of the gate, since it would weigh down on the gearmotor. Should this be the case, raise the rack and retighten the screws lower down in the slot;
- every 6 months check good functioning of the safety devices;
- unlock the operator and check that there are no points of friction along the entire travel of the gate;
- check proper functioning of the unlocking device (see the relative paragraph);
- check that there is no dirt or fragments on the pinion.
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Gi.Bi.Di. S.r.l. reserves the right to change the technical data without prior notice in relation to product development.

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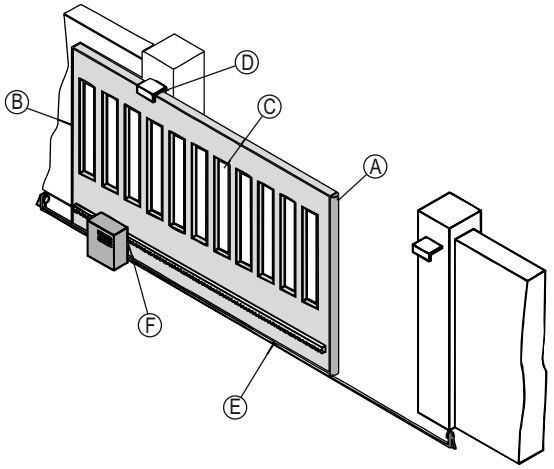
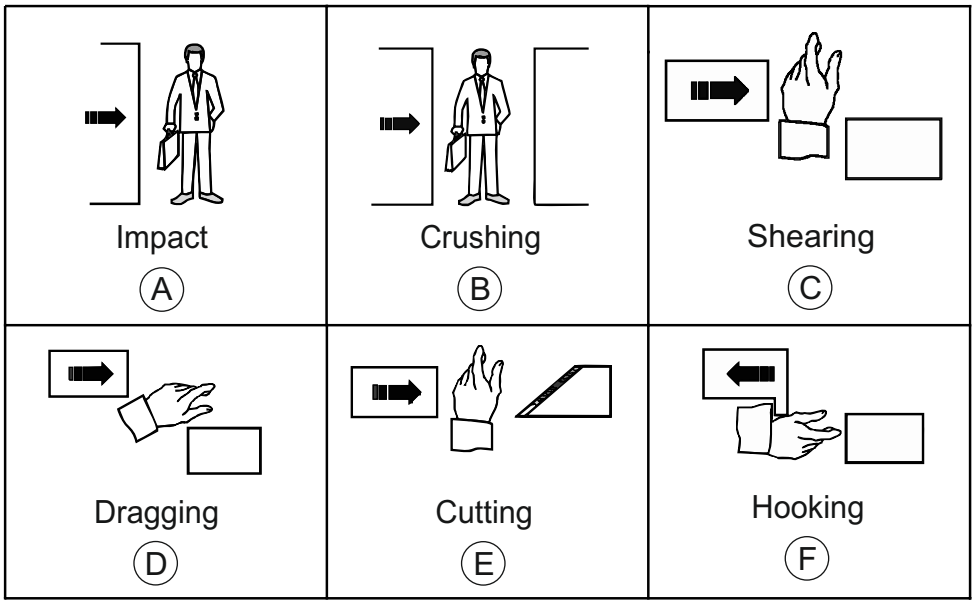
INSTALLATION COMPLIANCE WITH THE REGULATION

When an existing door / gate is automated it becomes a machine, the installer becomes the builder, He is responsible for the safety of the automated device and has to comply with the provisions provided by the 2006/42/CE Directive and by the EN13241-1 product standard.

SLIDING GATE RISK AREAS





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PERIODIC MAINTENANCE BY A TECHNICIAN

Date:	Installer company stamp:
Technician sign:	

Date	Notes	Technician sign

Date:	Installer company stamp:
Technician sign:	

Date	Notes	Technician sign

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WARNINGS FOR THE USER

- In the event of an operating fault or failure, cut the power to the system and call the technical service.
- Do not allow people or objects to stay in the range of action of the automation.
- Keep children far from the control devices.
- Do not obstruct the automation's movement willingly.
- To move the gate by hand it is necessary to unlock the operator and cut the power to the installation.
- Before restoring the automatic movement, it is necessary to re engage the gate.
- Any repairs must be carried out by specialised personnel using original and certified materials.
- The product is not to be used by children or people with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction.
- Do not touch the control board for adjustments and / or maintenance.
- The end user is responsible for the periodical checking of safety devices efficiency and must make the operational maintenance every six months.
- The user must respect the special maintenance plan received by the installer.

USER'S OPERATIONAL MAINTENANCE

- Check periodically the operation of the safety devices: do not use yourself or other people to do it, but only some objects.
- Check periodically that the structure of the gate, hinges and guides do not have signs of failure or instability.
- Cut the power from the installation and check the correct operation of the unlocking device.

Data	Annotazioni	Firma

GIVE THE USER THIS SHEET

GIVE THE USER THIS SHEET

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MANUAL OPERATION

Put the key into the cylinder

Rotate the key of 90° clockwise

Rotate the unlocking device of 180°

GIVE THE USER THIS SHEET

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EU Declaration of conformity

The manufacturer: **GI.BI.DI. S.r.l.**
Via Abetone Brennero, 177/B,
46025 Poggio Rusco (MN) ITALY
declares that the products:

ELECTROMECHANICAL GEARMOTOR MINNOW 500

are in conformity with the following Directives:

- **2014/30/UE;**
- **2014/35/UE;**

and that the following harmonised standards have been applied:

- **EN 61000-6-2:2005; EN 61000-6-3:2007 + A1:2011**
- **EN 60335-1:2002 + A1:2004+ A11:2004 + A12:2006 + A2:2006 + A13:2008 + A14:2010 + A15:2011; EN 60335-2-103:2003 + A11:2009;**

The parts of the product which are subject to the following standards complyWwith them:

- **EN 13241-1:2003 + A1:2011; EN 12445:2002; EN 12453:2002; EN 12978:2003 +A1:2009.**

Moreover declares that the product must not be used until the machine in which it has been incorporated has not been declared in accordance with 2006/42/CE Directive.

Date 16/07/2021

The legal Representative
Michele Prandi

The UKCA declaration of conformity is avaible at http://conformity.gibidi.com

Cod. AIC9960 - 08/2022 - Rev. 02

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