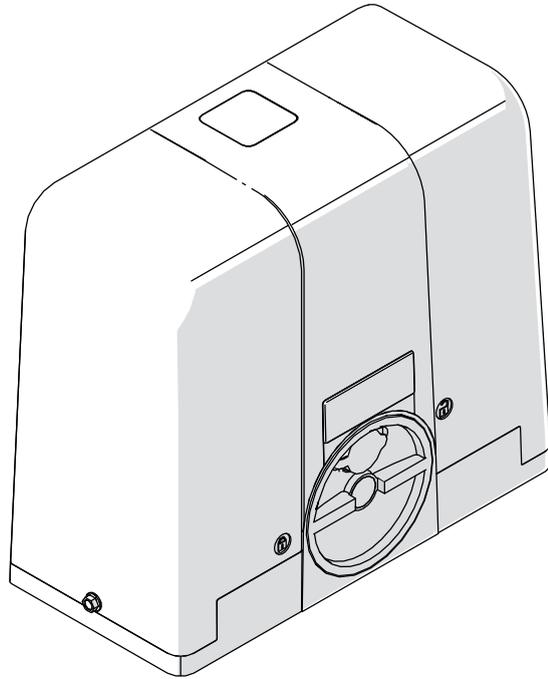


# BLIZZARD 500 BLIZZARD 900



**GENIUS**<sup>®</sup>

Translation of the original instructions

© Copyright FAAC S.p.A. dal 2018. Tutti i diritti riservati.

Nessuna parte di questo manuale può essere riprodotta, archiviata, distribuita a terzi né altrimenti copiata, in qualsiasi formato e con qualsiasi mezzo, sia esso elettronico, meccanico o tramite fotocopia, senza il preventivo consenso scritto di FAAC S.p.A.

Tutti i nomi e i marchi citati sono di proprietà dei rispettivi fabbricanti.

I clienti possono effettuare copie per esclusivo utilizzo proprio.

Questo manuale è stato pubblicato nel 2018.

© Copyright FAAC S.p.A. from 2018. All rights reserved.

No part of this manual may be reproduced, archived, distributed to third parties nor copied in any other way, in any format and with any means, be it electronic, mechanical or by photocopying, without prior written authorisation by FAAC S.p.A.

All names and trademarks mentioned are the property of their respective manufacturers.

Customers may make copies exclusively for their own use.

This manual was published in 2018.

© Copyright FAAC S.p.A. depuis 2018. Tous droits réservés.

Aucune partie de ce manuel ne peut être reproduite, archivée ou distribuée à des tiers ni copiée, sous tout format et avec tout moyen, qu'il soit électronique, mécanique ou par photocopie, sans le consentement écrit préalable de FAAC S.p.A.

Tous les noms et les marques cités sont la propriété de leurs fabricants respectifs.

Les clients peuvent faire des copies pour leur usage exclusif.

Ce manuel a été publié en 2018.

© Copyright FAAC S.p.A. del 2018. Todos los derechos están reservados.

No puede reproducirse, archivar, distribuirse a terceros ni copiarse de ningún modo, ninguna parte de este manual, con medios mecánicos o mediante fotocopia, sin el permiso previo por escrito de FAAC S.p.A.

Todos los nombres y las marcas citadas son de propiedad de los respectivos fabricantes.

Los clientes pueden realizar copias para su uso exclusivo.

Este manual se ha publicado en 2018.

© Copyright FAAC S.p.A. van 2018. Alle rechten voorbehouden.

Niets uit deze handleiding mag gereproduceerd, gearchiveerd, aan derden openbaar gemaakt of op andere wijze gekopieerd worden, in om het even welke vorm en met geen enkel middel, noch elektronisch, mechanisch of via fotokopiëren, zonder schriftelijke toestemming vooraf van FAAC S.p.A.

Alle vermelde namen en merken zijn eigendom van de respectievelijke fabrikanten.

De klanten mogen kopieën maken die enkel voor eigen gebruik bestemd zijn.

De handleiding werd in 2018 gepubliceerd.

© Copyright FAAC S.p.A. 2018. Tüm hakları saklıdır.

Bu kılavuzun hiçbir bölümü önceden FAAC S.p.A.'nın yazılı izni olmaksızın çoğaltılamaz, depolanamaz, üçüncü taraflara dağıtılamaz ve elektronik, mekanik veya fotokopi aracılığıyla herhangi bir formatta hiçbir şekilde çoğaltılamaz.

Tüm isimler ve ticari markalar söz konusu üreticinin mülkiyetidir.

Müşteriler sadece kendi kulları için kopya yoluyla çoğaltma yapabilirler.

Bu kılavuz 2018 yılında yayınlanmıştır.

## CONTENTS

<b>1. INTRODUCTION TO THIS INSTRUCTION MANUAL</b> .....	<b>4</b>
1.1 Meaning of Symbols Used .....	4
<b>2. SAFETY RECOMMENDATIONS</b> .....	<b>5</b>
2.1 Installer safety .....	5
2.2 Transport and storage .....	5
2.3 Unpacking and handling .....	6
2.4 Disposal of the product .....	6
<b>3. BLIZZARD 500-900</b> .....	<b>6</b>
3.1 Intended use .....	6
3.2 Limitations of use .....	6
3.3 Prohibited uses .....	6
3.4 Emergency Use .....	7
3.5 Product Warnings .....	7
3.6 Product Identification .....	7
3.7 Technical Characteristics .....	7
3.8 Component Identification .....	8
3.9 Dimensions .....	8
<b>4. INSTALLATION REQUIREMENTS</b> .....	<b>9</b>
4.1 Mechanical Requirements .....	9
4.2 Electrical System .....	9
4.3 Example System .....	10
<b>5. INSTALLATION</b> .....	<b>10</b>
5.1 Tools Required .....	10
5.2 Installation Dimensions .....	11
5.3 Base plate .....	12
5.4 Fastening the Gear Motor .....	12
5.5 Manual Operation .....	13
5.6 Installing the Rack .....	13
5.7 Adjustments and Checks .....	16
<b>6. START-UP</b> .....	<b>17</b>
6.1 Power supply and grounding .....	17
6.2 Installation of the Limit Switches .....	17
6.3 Final Operations .....	18
<b>7. MAINTENANCE</b> .....	<b>18</b>
7.1 Scheduled Maintenance .....	19
<b>8. INSTRUCTIONS FOR USE</b> .....	<b>20</b>
8.1 Safety recommendations .....	20
8.2 Product Warnings .....	20
8.3 Emergency Use .....	20
8.4 Manual Operation .....	20

### EU DECLARATION OF CONFORMITY

The Manufacturer

**Company name:** FAAC S.p.A. Soc. Unipersonale

**Address:** Via Calari, 10 - 40069 Zola Predosa BOLOGNA - ITALY

hereby declares under his sole responsibility that the following product:

**Description:** Gear motor for sliding gates

**Model:** BLIZZARD 500; BLIZZARD 900.

Complies with the following relevant Union harmonization legislations:

2014/30/EU

2011/65/EU

Furthermore, the following harmonised standards have been applied:

EN61000-6-2:2005

EN61000-6-3:2007 + A1:2011

Bologna, Italy, 06-12-2018

CEO

A. Marcellan

### DECLARATION OF INCORPORATION FOR PARTLY COMPLETED MACHINERY

(2006/42/EC ANNEX II P.1, B)

Manufacturer and person authorised to draft the applicable technical documentation

**Company name:** FAAC S.p.A. Soc. Unipersonale

**Address:** Via Calari, 10 - 40069 Zola Predosa BOLOGNA - ITALY

Hereby declares that the partly completed machinery:

**Description:** Gear motor for sliding gates

**Model:** BLIZZARD 500; BLIZZARD 900.

the following essential requirements of the Machinery Directive 2006/42/EC (including all applicable amendments) have been applied and fulfilled:

1.1.2, 1.1.3, 1.1.5, 1.1.6, 1.2.3, 1.2.6, 1.3.1, 1.3.2,  
1.3.4, 1.3.9, 1.4.1, 1.4.2.1, 1.5.1, 1.5.2, 1.5.5, 1.5.6,  
1.5.7, 1.5.8, 1.5.10, 1.6.1, 1.6.4, 1.7.1, 1.7.2, 1.7.3,  
1.7.4.2, 1.7.4.3

and that the relevant technical documentation has been compiled in compliance with part B of Annex VII.

Furthermore, the following harmonised standards have been applied:

EN60335-1:2012 + A11:2014

EN60335-2-103:2015

EN 12100:2010

EN 13849-1:2015 CAT 2 PL "C"

EN 13849-2:2012

Undertakes to transmit by mail or by e-mail, in response to a reasoned request by the national authorities, relevant information on the partly completed machinery.

It is also declared that the partly completed machinery identified above may not be commissioned until the final machine - into which it will be incorporated - has been declared compliant with the provisions of the above mentioned Machine Directive 2006/42/EC.

Bologna, Italy, 06-12-2018

CEO

A. Marcellan

# 1. INTRODUCTION TO THIS INSTRUCTION MANUAL

This manual provides the correct procedures and requirements for installing BLIZZARD 500-900 and maintaining it in a safe condition. When drafting the manual, the results of the risk assessment conducted by FAAC S.p.A. on the entire product life cycle have been taken into account in order to implement effective risk reduction measures. The following stages of the life cycle of the product have been considered:

- Delivery/handling
- Assembly and installation
- Set-up and commissioning
- Operation
- Maintenance/troubleshooting
- Disposal at the end of the product's life cycle

Risks arising from installation and using the product have been taken into consideration; these include:

- Risks for the installation/maintenance technician (technical personnel)
- Risks for the user of the automation system
- Risks to product integrity (damage)

In Europe, the automation of a gate falls under the Machinery Directive 2006/42/EC and the corresponding harmonised standards. Anyone automating a gate (new or existing) is classified as the Manufacturer of the Machine. They are therefore required by law, among other things, to carry out a risk analysis of the machine (automatic gate in its entirety) and take protective measures to fulfil the essential safety requirements specified in Annex I of the Machinery Directive.

FAAC S.p.A. recommends that you always comply with the EN 12453 standard and in particular that you adopt the safety criteria and devices indicated, without exception, including the dead-man function.

This manual also contains general information and guidelines, which are purely illustrative and not exhaustive, in order to facilitate the activities carried out by the Manufacturer of the Machine in all respects with regard to carrying out the risk analysis and drafting the instructions for use and maintenance of the machine. It should be clearly understood that FAAC S.p.A. accepts no liability for the reliability and/or completeness of the above instructions. As such, the manufacturer of the machine must carry out all the activities required by the Machinery Directive and the corresponding harmonised standards on the basis of the actual condition of the locations and structures where the product BLIZZARD 500-900 will be installed, prior to commissioning the machine. These activities include the analysis of all the risks associated with the machine and subsequent implementation of all safety measures intended to fulfil the essential safety requirements. This manual contains references to European standards. The automation of a gate must fully comply with any laws, standards and regulations applicable in the country where installation will take place.

 Unless otherwise specified, the measurements provided in the instructions are in mm.

## 1.1 MEANING OF SYMBOLS USED

 **1** Symbols: notes and warnings on the instructions

 **WARNING ELECTRIC SHOCK HAZARD** - The operation or stage described must be performed following the supplied instructions and applicable safety regulations.

 **WARNING, PERSONAL INJURY HAZARD OR RISK OF DAMAGE TO COMPONENTS** - The operation or stage described must be performed following the supplied instructions and applicable safety regulations.

 **WARNING** - Details and specifications which must be respected in order to ensure that the system operates correctly.

 **RECYCLING AND DISPOSAL** - The materials used in manufacturing, the batteries and any electronic components must not be sent to landfill. They must be taken to authorised recycling and disposal centres.

 **FIGURE** E.g.:  1-3 see Figure 1 - detail 3.

 **TABLE** E.g.:  1 see Table 1.

**§** **CHAPTER/SECTION** E.g.: §1.1 see section 1.1.

 **2** Symbols: safety indications (ISO 7010)

 **GENERAL HAZARD**  
Personal injury hazard or risk of damage to components.

 **ELECTRIC SHOCK HAZARD**  
Risk of electric shock from live parts.

 **CRUSHING HAZARD, DANGER TO THE MUSCULOSKELETAL SYSTEM**  
Risk of musculoskeletal crushing - Personal injury hazard when manually lifting heavy loads.

 **BURN HAZARD**  
Risk of burns due to the presence of high-temperature parts.

 **CRUSHING HAZARD**  
Risk of crushing to the hands/feet due to the presence of heavy parts.



 **CUTTING/AMPUTATION/PUNCTURE HAZARD**  
Cutting hazard due to the presence of sharp components or the use of pointed/sharp tools (drill).



 **SHEARING HAZARD**  
Risk of shearing from moving parts.

 **IMPACT/CRUSHING HAZARD**  
Risk of impact or crushing due to moving parts.

 **FORKLIFT TRUCK IMPACT HAZARD**  
Risk of collision/impact with forklift trucks.

 **3** Symbols: personal protective equipment

Personal protective equipment must be worn to protect against hazards (e.g. crushing, cutting, shearing etc.):

 Obligatory use of mask/goggles to protect the eyes from the risk of shards produced when using drills or welding equipment.

 Obligatory use of work gloves.

 Obligatory use of safety footwear.

## 2. SAFETY RECOMMENDATIONS

This product is placed onto the market as “partly completed machinery”, therefore it cannot be commissioned until the machine in which it will be incorporated has been identified and declared to conform to the Machinery Directive 2006/42/EC by the actual Manufacturer.



Incorrect installation and/or incorrect use of the product might cause serious harm to people. Read and comply with all the instructions before starting any activity on the product. Keep these instructions for future reference.

Perform installation and other activities adhering to the sequences provided in the instructions manual.

Always comply with all the requirements contained in the instructions and warning tables at the beginning of the paragraphs. Always comply with the safety recommendations.

Only the installer and/or maintenance technician is authorised to work on the automation components. Do not modify the original components in any way.

Close off the work site (even temporarily) and prevent access/transit. EC countries must comply with the legislation that transposes the European Construction Site Directive 92/57/EC.

The installer is responsible for the installation/testing of the automation and for completing the Register of the system.

The installer must prove or declare to possess technical and professional proficiency to perform installation, testing and maintenance activities according to the requirements in these instructions.

### 2.1 INSTALLER SAFETY

Installation activities require special work conditions to reduce to the minimum the risks of accidents and serious damage. Furthermore, the suitable precautions must be taken to prevent risks of injury to persons or damage.



The installer must be in good physical and mental condition, aware of and responsible for the hazards that may be generated when using the product.

The work area must be kept tidy and must not be left unattended.

Do not wear clothes or accessories (scarves, bracelets, etc.) that may get caught in moving parts.

Always wear the personal protective equipment recommended for the type of activity to be carried out.

The required level of workplace lighting must be equal to at least 200 lux.

Operate CE marked machinery and equipment in compliance with the manufacturer's instructions. Use work instruments in good conditions.

Use the transport and lifting equipment recommended in the instructions manual.

Use safety-compliant portable ladders of adequate size, fitted with anti-slip devices at the top and bottom, equipped with retainer hooks.

### 2.2 TRANSPORT AND STORAGE

 4 Symbols: warnings on packaging.



Read the instructions.



Handle with care. Fragile parts.



Up indication.



Keep away from water and moisture.



Maximum number of stacked packages.



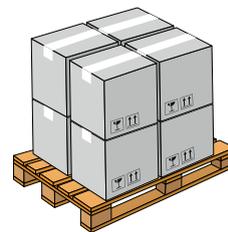
CE marking.

#### SUPPLY ON PALLETS

##### RISKS



##### PERSONAL PROTECTIVE EQUIPMENT



Follow the instructions on the packaging during handling.

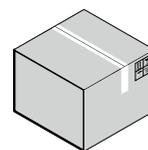
Use a forklift or pallet truck, following safety regulations to avoid the risk of impacts or collisions.

#### SINGLE PACKAGE

##### RISKS



##### PERSONAL PROTECTIVE EQUIPMENT



Follow the instructions on the packaging during handling.

#### STORAGE

Store the product in its original packaging, in closed and dry premises, protected from the sun and free from dust and aggressive substances. Protect from mechanical stress. If stored for more than 3 months, regularly check the condition of the components and the packaging.

- Storage temperature: 5°C to 30°C.
- Percentage of humidity: 30% to 70%.

## 2.3 UNPACKING AND HANDLING

### RISKS



### PERSONAL PROTECTIVE EQUIPMENT



1. Open the package.



The gear motor casing is not fixed.

2. Remove the magnetic limit switches and the bag of accessories.

3. Remove the casing.

4. Lift the gear motor, holding it by the base.



Check that all components are present and intact 2.

5. Dispose of the packaging materials.



The packaging materials (plastic, polystyrene etc.) must not be left within reach of children, as they are potential hazards.

When you have finished with them, dispose of the packaging in the appropriate containers, as per applicable waste disposal regulations.

## 2.4 DISPOSAL OF THE PRODUCT

After having dismantled the product, dispose of it in compliance with the current waste disposal regulations.



Components and structural materials, batteries and electronic components must not be disposed of together with household waste. They must be taken to authorised disposal and recycling centres.

## 3. BLIZZARD 500-900

### 3.1 INTENDED USE

GENIUS BLIZZARD 500-900 series gear motors are designed to operate horizontal sliding gates for residential use (including in apartment complexes).

One gear motor must be installed for each sliding gate section. The gate must be moved via a rack.

Installations of BLIZZARD 500-900 must be used for vehicular traffic.

To operate the gate manually, follow the instructions in § 5.5.



Any other use which is not expressly specified in these instructions is prohibited and could affect the integrity of the product and/or represent a source of danger.

### 3.2 LIMITATIONS OF USE

The maximum force required to move the leaf by hand over its entire length of travel must be 225 N for residential areas and 260 N for industrial or commercial areas.

The maximum force required to start the movement must be less than the maximum torque at initial thrust of the operator indicated in the technical data.

The leaf must fall within the dimensional and weight limits indicated in the technical data.

The presence of weather conditions such as snow, ice and strong wind, even occasional, could affect the correct operation of the automation, the integrity of the components and be a potential source of danger (see § Emergency use).

BLIZZARD 500-900 is not designed to be a security (break-in protection) system.

If there is a pedestrian access gate integrated in the leaf of the gate, the motorised movement must be disabled when the pedestrian gate is not in a safe position.

The installation must be visible during the day and at night. If it is not, appropriate solutions must be provided to make the fixed and moving parts visible.

The BLIZZARD 500-900 must be connected to a GENIUS electronic board as indicated in this manual ( Technical characteristics).

Implementing the automation requires the installation of the necessary safety devices, identified by the installer through an appropriate risk assessment of the installation site.

### 3.3 PROHIBITED USES

- Uses other than the intended use are prohibited.
- It is prohibited to install the automation system outside of the limits specified in the Technical Data and Installation Requirements sections.
- It is forbidden to use BLIZZARD 500-900 in a constructional configuration other than the one provided by the manufacturer.
- No component part of the product may be modified.
- It is prohibited to install the automation system on escape routes.
- It is prohibited to install the automation system to create fire doors.
- It is prohibited to install the automation system in environments in which there is a risk of explosion and/or fire: the presence of flammable gases or fumes is a serious safety hazard.
- It is prohibited to power the system with energy sources other than those specified.
- It is prohibited to integrate commercial systems and/or equipment other than those specified, or use them for purposes not intended and authorised by their respective manufacturers.
- Do not allow water jets of any type or size to come into direct contact with the gear motor.
- Do not expose the gear motor to corrosive chemicals or atmospheric agents.
- It is prohibited to use and/or install accessories which have not been specifically approved by FAAC S.p.A.
- It is prohibited to use the automation system before performing commissioning.
- It is prohibited to use the automation system in the presence of faults which could compromise safety.
- It is prohibited to use the automation system with the fixed and/or mobile guards removed or altered.
- Do not use the automation system unless the area of operation is free of persons, animals or objects.
- Do not enter/remain in the area of operation of the automation system while it is moving.
- Do not try to prevent the movement of the automation system.
- Do not climb on, hold onto or let yourself be pulled by the leaf. Do not climb onto the gear motor.
- Do not allow children to approach or play in the area of operation of the automation system.
- Do not allow the control devices to be used by anyone who is

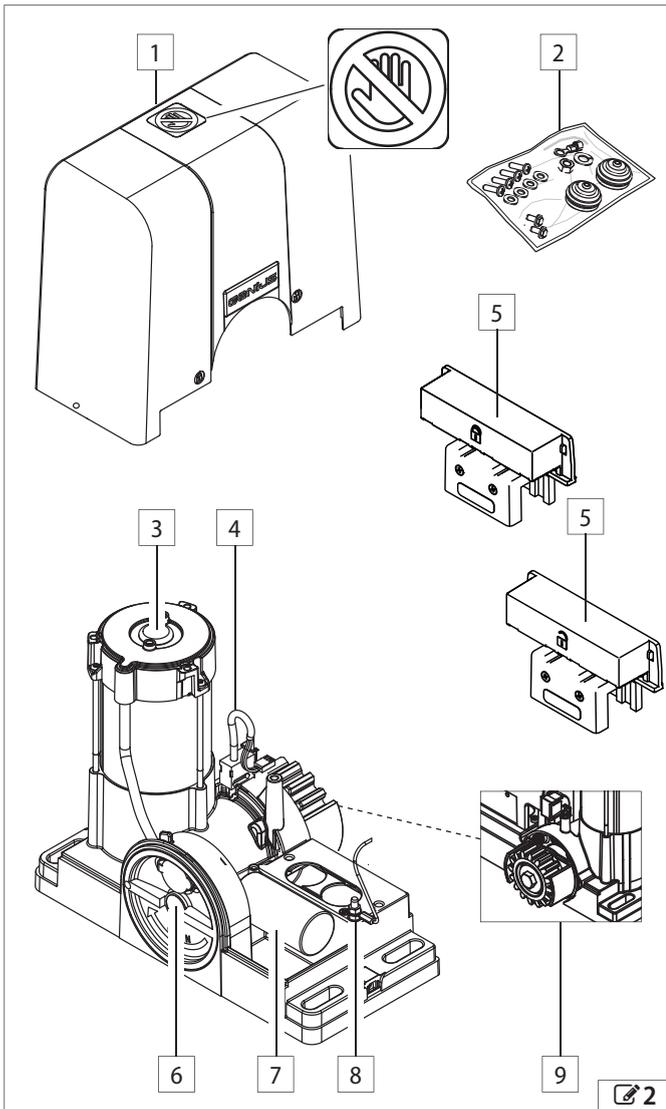


**3.8 COMPONENT IDENTIFICATION**

**INSTALLATION ACCESSORIES WHICH ARE NOT SUPPLIED**

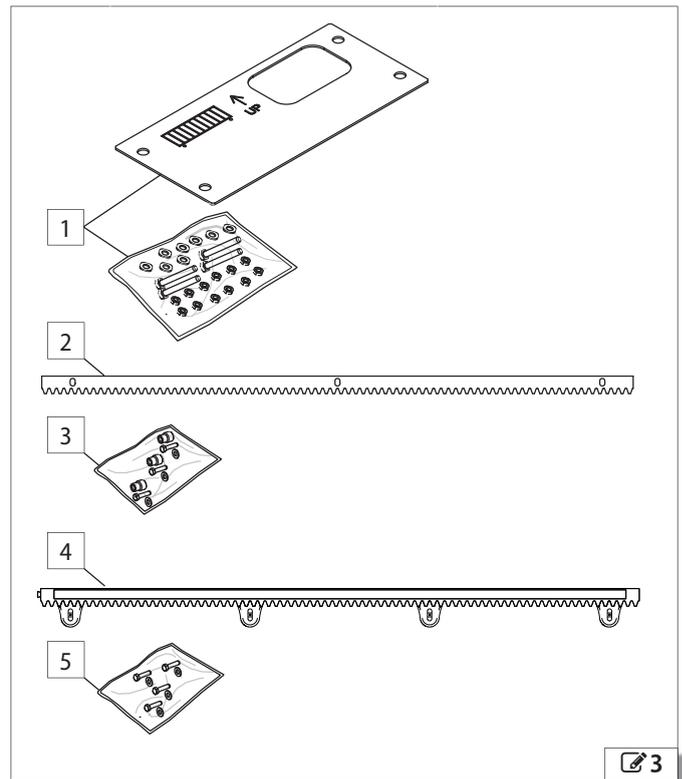
**ENGLISH**

Translation of the original instructions



**6 Components**

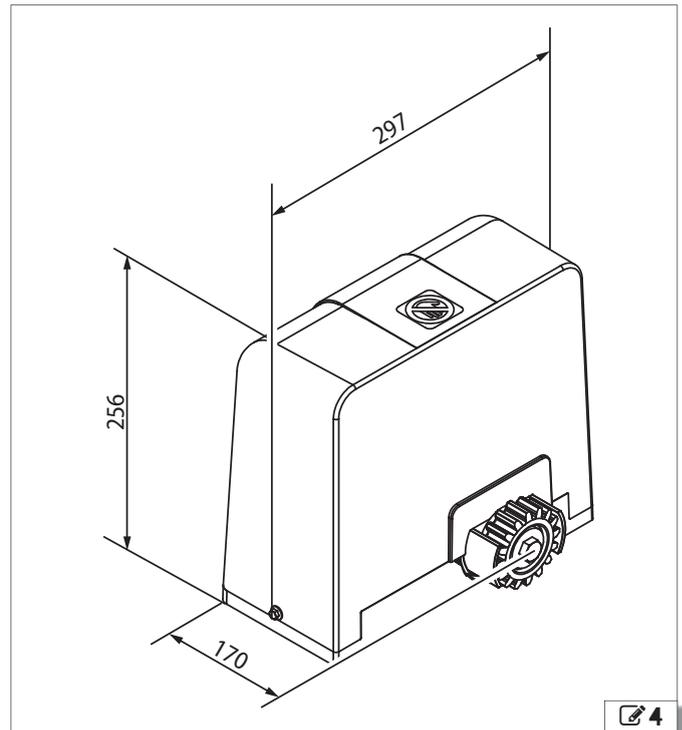
- 1 Case and danger symbol
- 2 Hardware/accessories
- 3 Electric motor
- 4 Magnetic limit stop sensor
- 5 Magnetic limit switches
- 6 Release device
- 7 Start-up capacitor
- 8 Earth connection
- 9 Z16 Module 4 pin



**7 Installation Accessories**

- 1 Base plate with mounting hardware
- 2 Steel rack
- 3 Spacers for steel rack (to be screwed or welded)
- 4 Nylon rack
- 5 Mounting hardware for nylon rack

**3.9 DIMENSIONS**



## 4. INSTALLATION REQUIREMENTS

### 4.1 MECHANICAL REQUIREMENTS

The mechanical structural components must comply with the requirements of EN 12604. Before installing the automation, the suitability of the mechanical requirements must be established and any work that is necessary in order to meet them carried out.

The essential mechanical requirements are as follows:



Solid ground to support the weight of the gate, the structures present and the gearmotor. Flat, horizontal paving in the area of movement of the leaf. There must be no chance of water accumulating in the installation area.

The structure (columns, guides, mechanical stops, leaf and counterweights) must be solid and there must be no risk of detachment or collapse (considering the weight of the leaf and the forces applied by the gearmotor and wind action). Perform structural calculations where necessary.

The structure must show no signs of corrosion or cracking.

The leaf must remain vertical throughout the entire length of travel, with a regular, smooth and uniform movement. The path along which the leaf slides must be perfectly horizontal (the leaf must not have a tendency to open or close spontaneously when it is released).

Appropriate devices must be installed to prevent the leaf from falling.

There should be a solid surface on the leaf sufficiently large to attach the rack to.

The sliding guides must be in good condition; they must be straight and not deformed, they must be fastened securely and there must be no obstacles along their entire length. The diameter of the guide wheels must be appropriate for the weight and length of the leaf and their profile section must coincide with that of the sliding guide. The number and position of the wheels must ensure an adequate and constant distribution of the weight.

A solid guide system for the suspended leaf in the case of a cantilever gate.

Presence of upper containing guide to prevent vertical oscillation of the leaf. The leaf must not under any circumstances come out from its guides and fall. Wheels, rollers and bearings in good condition, lubricated and free from play or friction.

Presence of external mechanical limit stops to limit the travel of the leaf when opening and closing. The stops must be suitably sized and solidly fastened so that they resist any impact of the leaf in the event of improper use (leaf pushed and left to slide freely). The mechanical limit stops must be positioned at 50 mm beyond the stop position of the leaf, and must ensure that the leaf remains inside its sliding guides.

The thresholds and protrusions of the paving must be appropriately shaped in order to prevent the risk of sliding or slipping.

For the creation of detection loops, refer to the specific instructions.

Presence of a safety area between the wall (or other fixed element) and the furthest protruding part of the open leaf, to protect against the risk of persons becoming trapped/crushed. Alternatively, check that the opening force required falls within the maximum permissible limits according to applicable standards and legislation.

Presence of safety areas between the fixed and moving parts, to protect against the risk of hands being trapped. Alternatively, apply protective elements that prevent fingers from being introduced.

Presence of a safety area between the paving and lower edge of the leaf, along its entire path, providing protection from the risk of feet becoming caught in and crushed beneath the wheels. Alternatively, apply protective elements preventing the introduction of feet.

No sharp edges or protruding parts should be present to ensure there are no cutting, hooking or perforation hazards. Alternatively, eliminate or protect any sharp edges and protruding parts.

No slots or openings should be present on the sliding leaf or the fencing to prevent the creation of a shearing hazard. Alternatively, apply protective mesh to any such openings. The mesh should be sufficiently fine to prevent introduction of body parts requiring protection, in relation to the distance between the fixed and moving parts.

For the minimum dimensions to prevent crushing/shearing of body parts, refer to EN 349. For the safety distances required to prevent danger zones being reached, refer to ISO 13857.

If the area of installation gives rise to the risk of impact by vehicles, provide an appropriate protective structure to protect the gearmotor.

### 4.2 ELECTRICAL SYSTEM



Always shut off the power supply before performing any work. If the disconnect switch is not in view, apply a warning sign stating "WARNING - Maintenance in Progress".



The electrical system must comply with applicable legislation in the country of installation.

Use components and materials with CE marking which are compliant with the Low Voltage Directive 2014/35/EU and EMC Directive 2014/30/EU.

The power supply line for the automation must be fitted with a multi-pole circuit breaker, with a suitable tripping threshold, a contact opening distance of at least 3 mm and a breaking capacity that complies with current regulations.

The power supply for the automation must be fitted with a 30 mA differential switch.

The metal parts of the structure must be earthed.

Check that the protective earthing system complies with applicable regulations in the country of installation.

The electrical cables of the automation system must be of a size and insulation class that is compliant with current legislation and laid in appropriate rigid or flexible conduits, either above or below ground.

Use separate conduits for the power supply and the 12-24 V control devices / accessories cables.

Check buried cable plans to ensure that there are no other electrical cables in proximity to the planned digging/drilling locations to prevent the risk of electrocution.

Check that there are no pipes in the vicinity as well.

The conduit fittings and the cable glands must prevent the entry of moisture, insects and small animals.

Protect extension connections using junction boxes with an IP 67 protection rating or higher.

It is recommended to install a flashing light in a visible position to indicate when it is moving.

The control accessories must be positioned in areas that are always accessible and not dangerous for the user. It is recommended to position the control accessories within the field of view of the automation. This is mandatory in the case of hold-to-run controls.

If an emergency stop button has been installed, it must be EN13850 compliant.

Comply with the following heights from the ground:

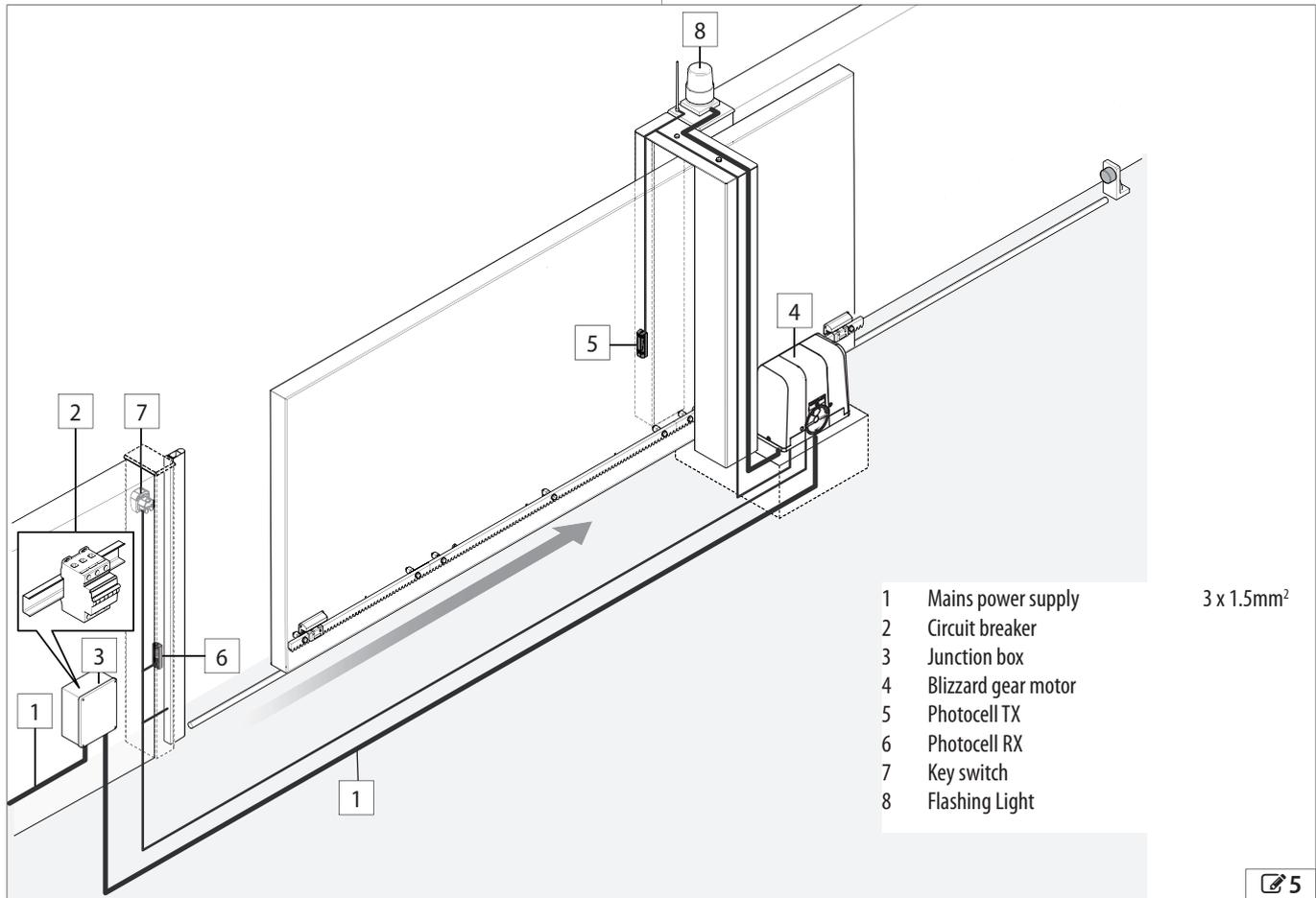
- control accessories = minimum 150 cm

- emergency buttons = maximum 120 cm

If the manual controls are intended to be used by disabled or infirm persons, highlight them with suitable pictograms and make sure that these users are able to access them.

**4.3 EXAMPLE SYSTEM**

The example system is a purely illustrative and not exhaustive representation of BLIZZARD 500-900.



- 1 Mains power supply
  - 2 Circuit breaker
  - 3 Junction box
  - 4 Blizzard gear motor
  - 5 Photocell TX
  - 6 Photocell RX
  - 7 Key switch
  - 8 Flashing Light
- 3 x 1.5mm<sup>2</sup>



**5. INSTALLATION**

**5.1 TOOLS REQUIRED**

Use appropriate tools and equipment in working environments which comply with applicable legislation.

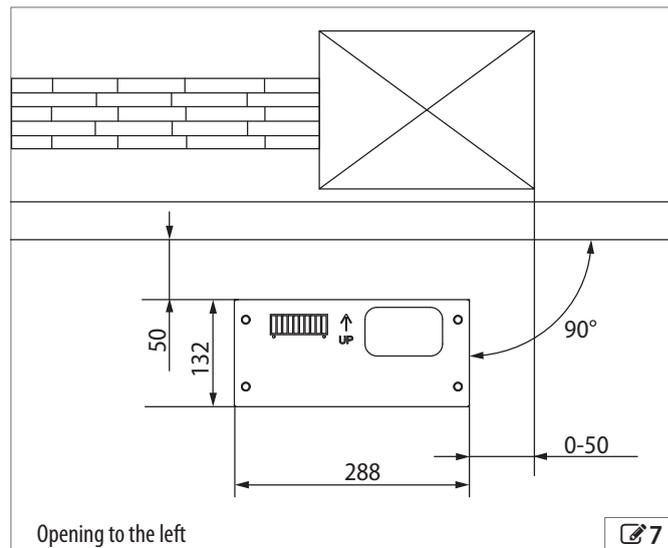
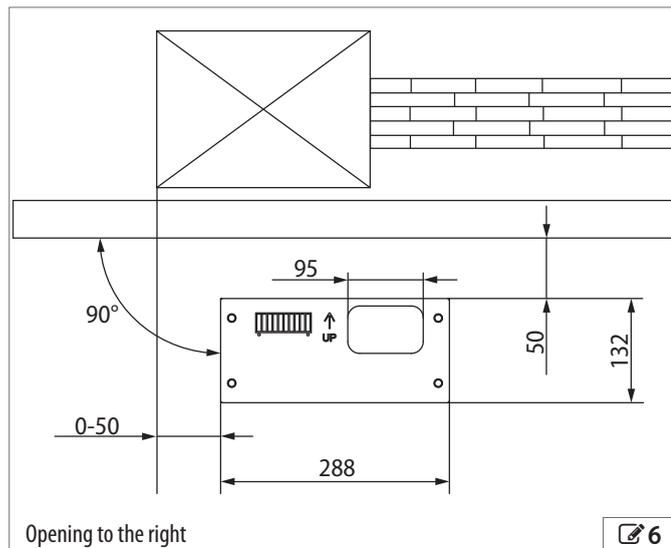
8 Symbols: work tools

- HEX SPANNER of size indicated  
2x17; 13; 10; 8
- TORQUE WRENCH - if necessary for safety, a torque wrench and the TIGHTENING TORQUE will be specified E.g. 6 mm hex spanner set to 2.5 Nm  
x.x Nm 2.5 Nm
- ELECTRICIAN'S SCISSORS
- HSS DRILL BIT of specified sizes  
6.5; 5.5; 3.6
- THREAD CUTTER of specified sizes (for steel rack to be screwed on)  
M8
- SPIRIT LEVEL

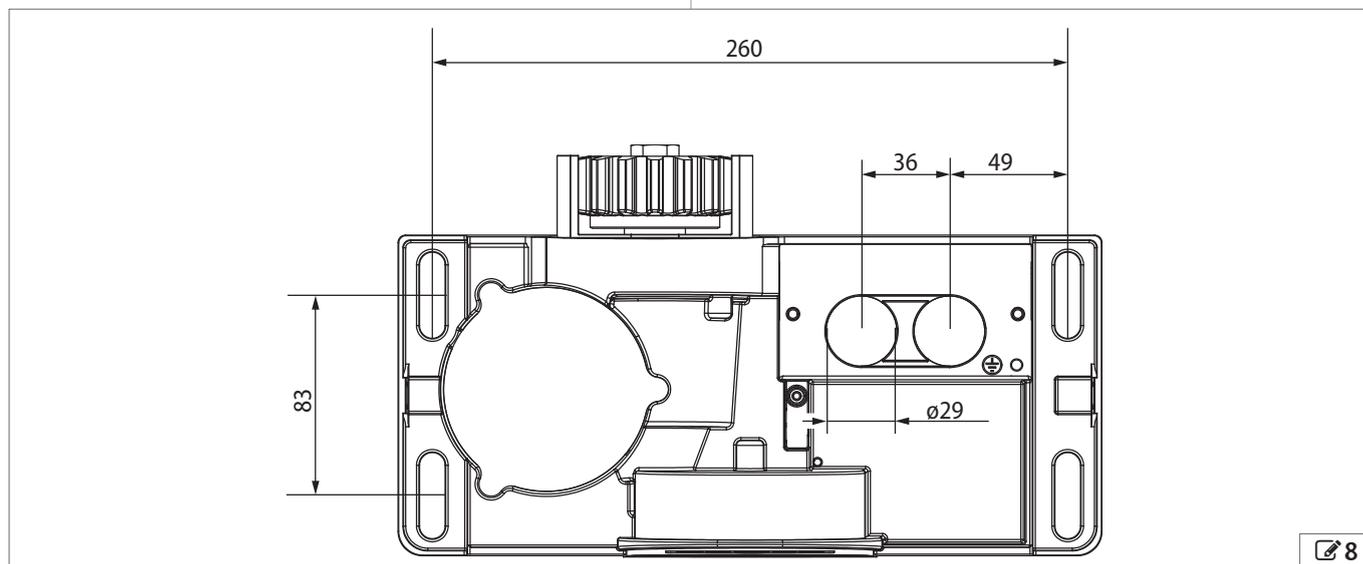
- TAPE MEASURE
- SCREW CLAMP
- WELDING EQUIPMENT (for steel rack to be welded on)
- ANGLE GRINDER
- CALLIPER
- WIRE STRIPPER/TERMINAL CRIMPER

## 5.2 INSTALLATION DIMENSIONS

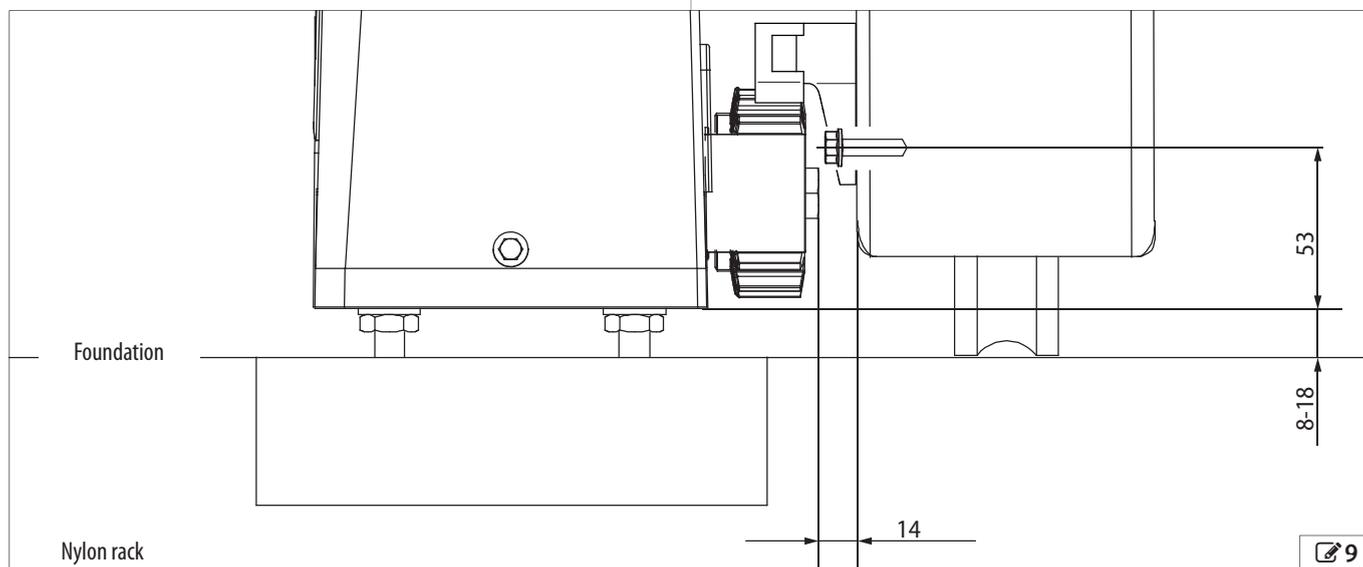
### POSITIONING THE BASE PLATE

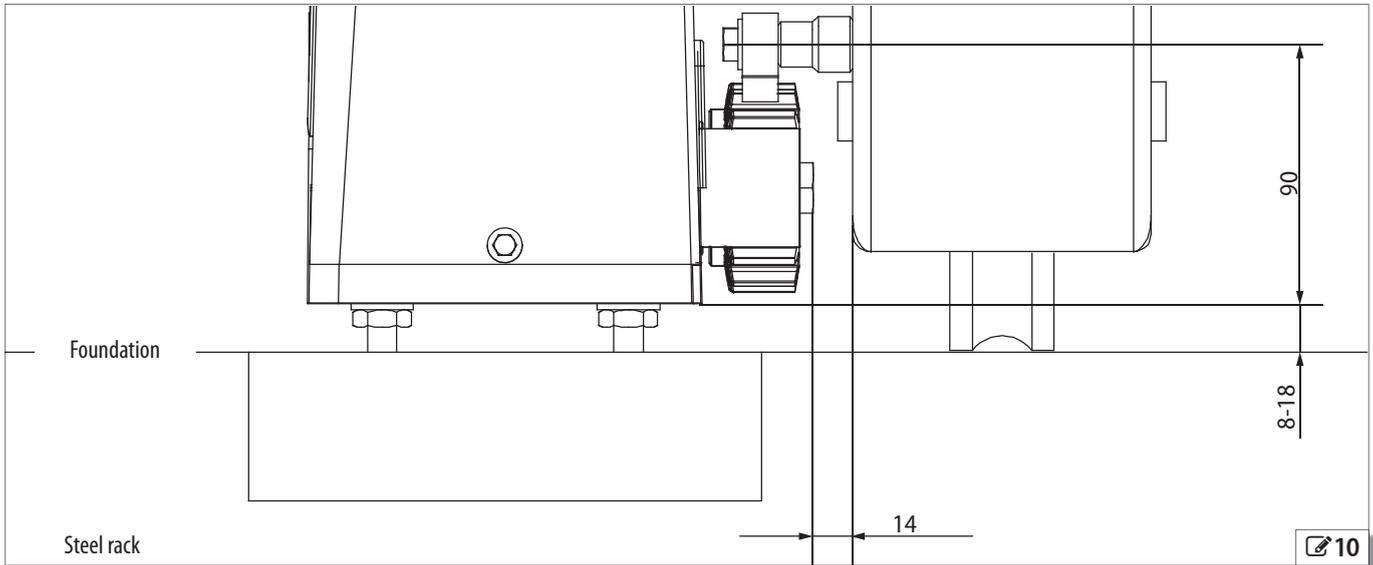


### CENTRELINE DISTANCES



### POSITIONING THE RACK





### 5.3 BASE PLATE

**RISKS**



**PERSONAL PROTECTIVE EQUIPMENT**



**i** Before proceeding, check that the necessary conduits are in place (§ 4.3-5).  
The base plate and corresponding hardware are accessories which are not included.

1. Assemble the base plate as shown in 11; tighten the supplied M10 nuts and locknuts, using two hex spanners.
2. Pour a slab, with reference to 6 and 7 in § 5.2 and 12.
3. Take the cable conduits out from the hole (12-1) and install the base plate.

- i** Do not bury the base plate in the concrete.
4. Use a spirit level to check that the slab is horizontal, making any corrections before the concrete goes off (12).

### 5.4 FASTENING THE GEAR MOTOR

**RISKS**



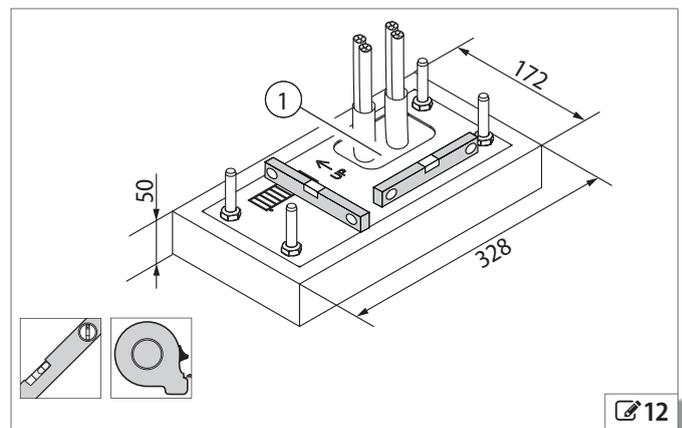
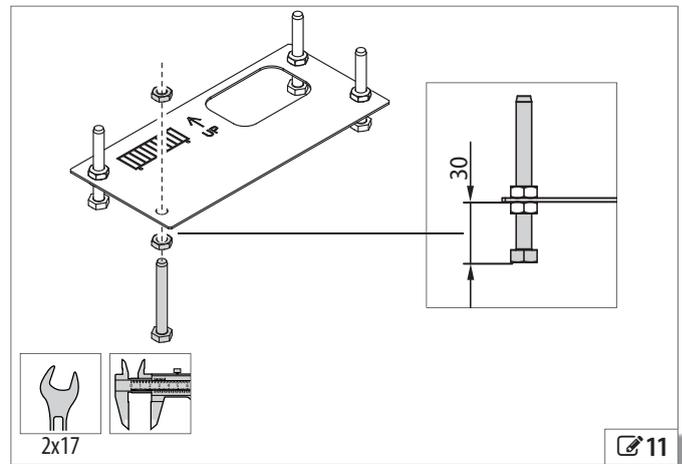
**PERSONAL PROTECTIVE EQUIPMENT**



- i** Wait for the concrete to cure fully before proceeding.
- !** Lift the gear motor, holding it by the base.

1. Pass the cables through the two holes on the gear motor (13-1).
2. Position the gear motor, lining up the slots and the screws on the plate (13-2).
3. Pass the cables through the supplied cable glands, then insert the cable glands in the holes (13-3).

**!** If one of the two holes will not have cables running through it, insert the plastic cable gland whole.



4. Bring the base of the gear motor to 18mm from the base plate using the four support nuts (🔗14-1).
5. Fit four M10 locknuts and four washers, supplied with the base plate, as in 🔗14-2.
6. Ensure there is 13.5mm between the pinion and the sliding gate section (§ 5.2-🔗9-🔗10).
7. Use a spirit level to check that the gear motor is horizontal (🔗14): make any adjustments with the support nuts (🔗14-1).
8. Provisionally tighten the four locknuts using two hex spanners (🔗14-1-2).

### 5.5 MANUAL OPERATION

**!** Shut off the power to the system and ensure that the automation system is stopped before performing manual movement operations and restoring automatic operation.

A lock with personalised key is available as an optional accessory.

#### MANUAL RELEASE

1. Open the plastic cap on the release device (🔗15-1).
2. Turn the lock clockwise using a coin or your personalised key (🔗15-1).
3. Turn the knob clockwise (🔗15-2).

#### RESTORING AUTOMATIC OPERATION

1. Turn the knob anticlockwise.
2. Turn the lock anticlockwise.
3. Manually move the gate until the mechanical system engages.

### 5.6 INSTALLING THE RACK

#### RISKS



#### PERSONAL PROTECTIVE EQUIPMENT



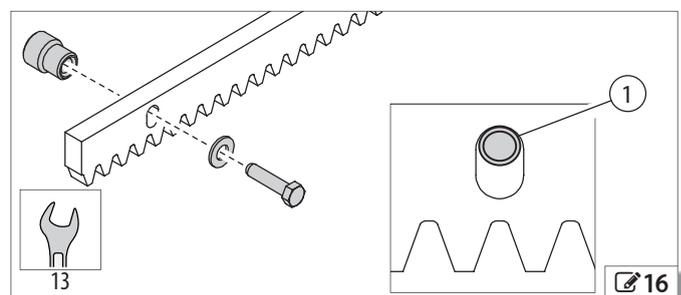
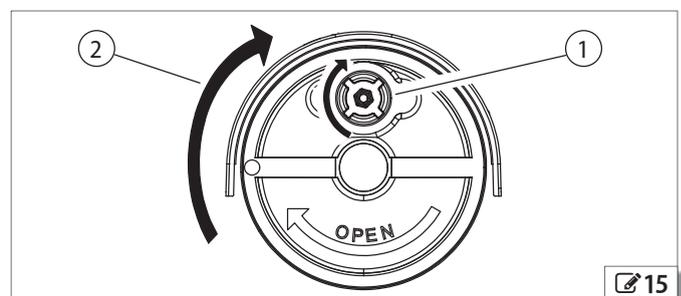
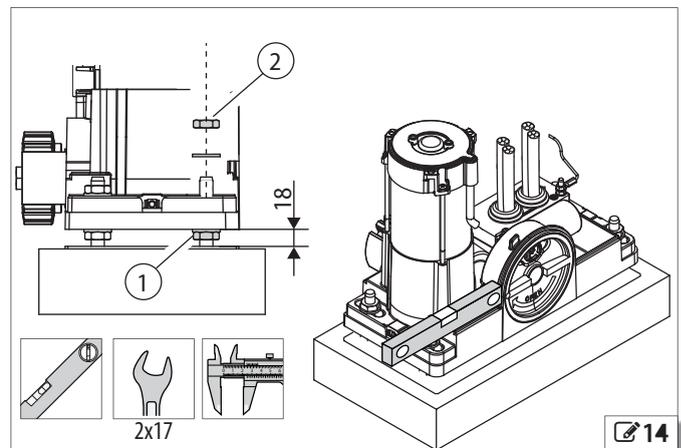
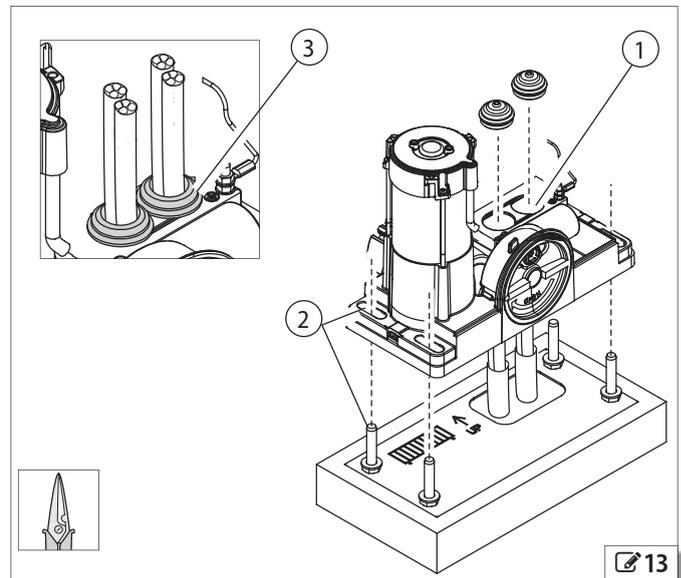
**i** The rack installation accessories contain screws for aluminium or steel sliding gate sections. Use specific screws for other materials.  
Do not use grease or other lubricants.

Manually close the gate (§ 5.5).

#### STEEL RACK WITH SPACERS TO BE WELDED ON

**i** Do not weld the rack components to the spacers or to each other.

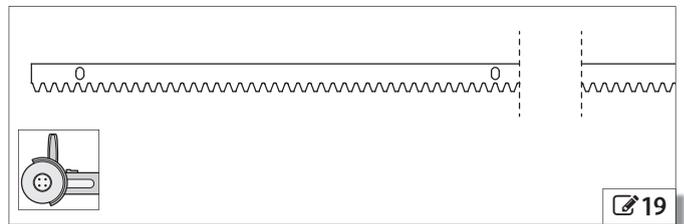
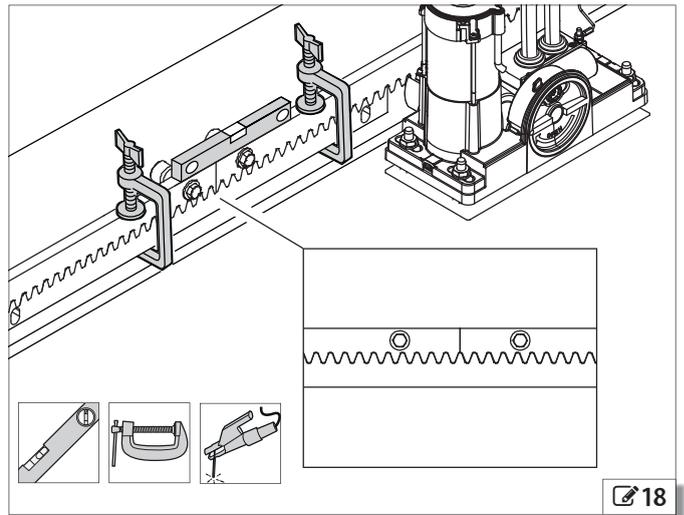
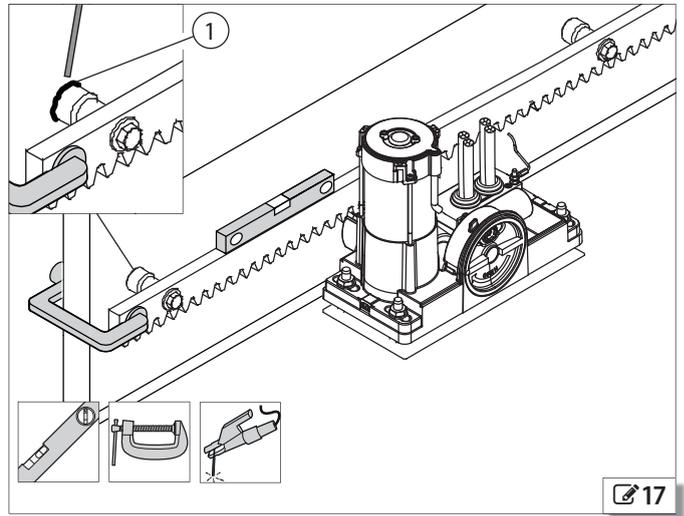
1. Install the spacers and screws in the upper part of the slots (🔗16-1): This will allow future adjustments if the rail is lowered.
2. Rest the assembled component on the pinion.



3. Use a screw clamp to fasten the section to the sliding gate section, then use a spirit level to check it is level (☞17).
4. Weld the spacer to the sliding gate section (☞17-1).
5. Move the sliding gate section forward, checking that the section rests on the pinion.
6. Check the level, then weld the other two spacers, repeating the operations in steps 5 and 6.
7. If necessary, install another rack section, as in step 1.
8. Rest the section on the pinion, bringing it up to the previous one; use a third section, screw clamps and a spirit level to line up the teeth and check it is level (☞18).
9. Weld the spacers, repeating the operations in points 5, 6 and 7.
10. Add other rack sections until the entire length of the sliding gate section is covered.
11. If the final section is too long, cut it with an angle grinder near one of the slots (☞19).

**ENGLISH**

Translation of the original instructions



**STEEL RACK WITH SPACERS TO BE SCREWED ON**

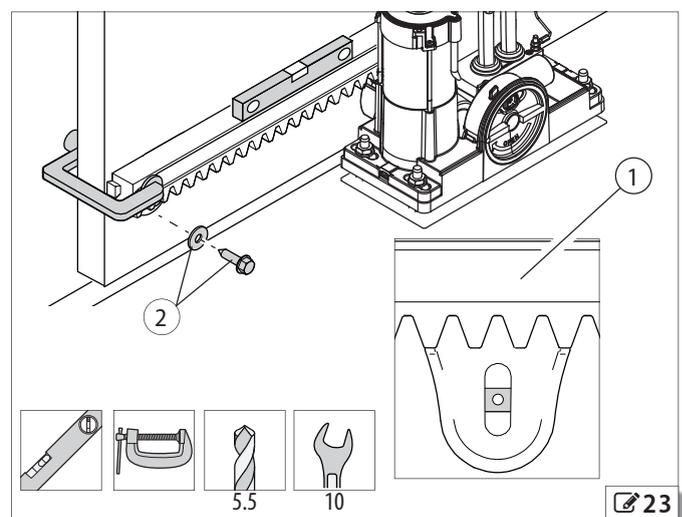
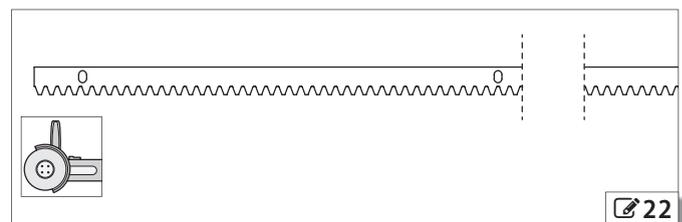
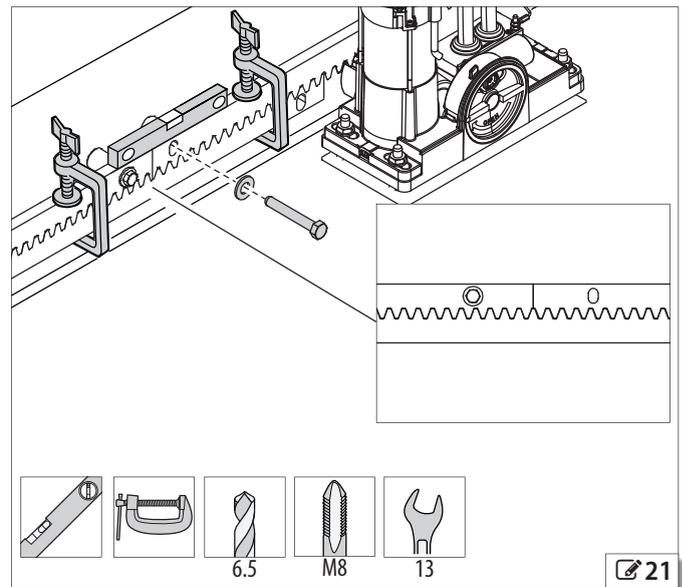
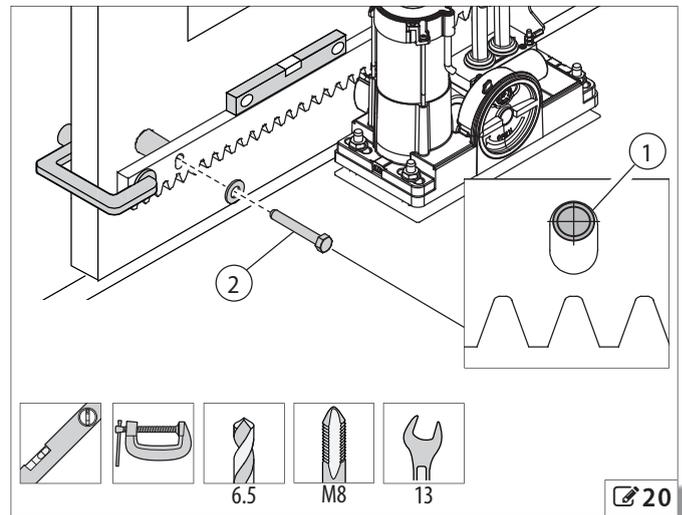
1. Rest a rack section on the pinion (🔧 20).
2. Position the spacers in the upper part of the slots (🔧 20-1): This will allow future adjustments if the rail is lowered.
3. Use a screw clamp to fasten the assembly to the sliding gate section, then use a spirit level to check it is level (🔧 20).
4. Mark the point to drill into the sliding gate section (🔧 20-1). Drill with a 6.5mm bit and use an M8 thread cutter to tap the hole. Screw in the screw for the spacer with the corresponding washer (🔧 20-2).
5. Move the sliding gate section forward, checking that the section rests on the pinion.
6. Screw in the other two spacers, repeating the operations in steps 5 and 6.
7. If necessary, use another rack section; rest it on the pinion, bringing it up to the previous one; use a third section, screw clamps and a spirit level to line up the teeth and check it is level (🔧 21).
8. Install the section, repeating the operations in points 5, 6 and 7.
9. Add other rack sections until the entire length of the sliding gate section is covered.
10. If the final section is too long, cut it with an angle grinder near one of the three slots (🔧 22).

**NYLON RACK AND MOUNTING HARDWARE**

1. Rest a rack section on the pinion (🔧 23).
2. Use a screw clamp to fasten the section to the leaf, then use a spirit level to check it is level (🔧 23).
3. Drill holes at the centre of the slots (🔧 23-1). Fasten using suitable screws and washers.

**!** Use fixing screws that are specific for the material from which the leaf is made. Self-tapping screws and washers are available for aluminium or steel and should be ordered separately (🔧 23-2).

4. Move the leaf forward, checking that the section rests on the pinion.
5. Check the level, then screw in the other two screws, repeating the operations in steps 3 and 4.



6. Move the leaf manually. Assemble the next interlocking section at the end of the previous one and rest it on the pinion (🔗 24). Make sure that it is horizontal using a spirit level.
7. Drill holes at the centre of the slots. Fasten using suitable screws and washers.
8. Repeat steps for all sections of the rack that are required for the length of the leaf.
9. If a section needs to be shortened, cut it with an angle grinder away from the slot (🔗 25).

## 5.7 ADJUSTMENTS AND CHECKS

### RISKS

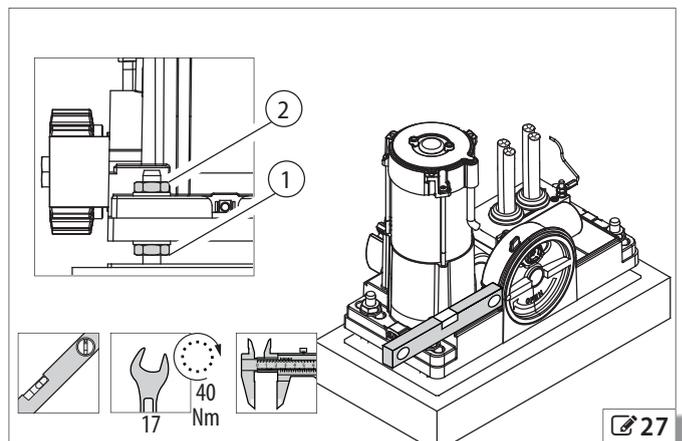
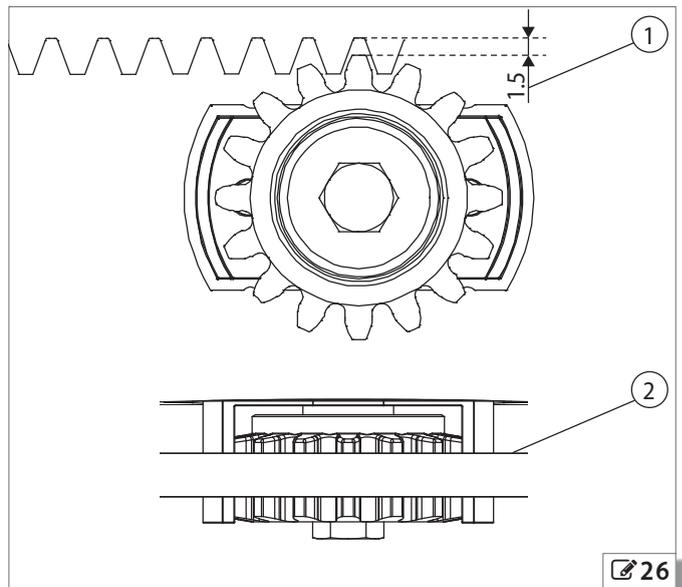
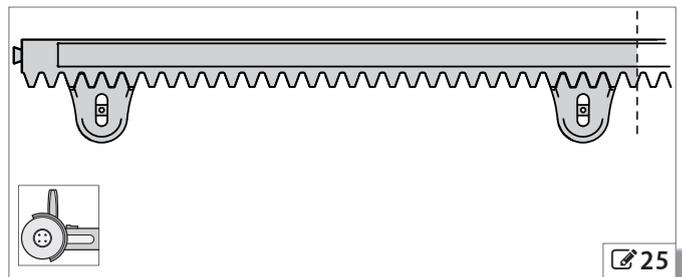
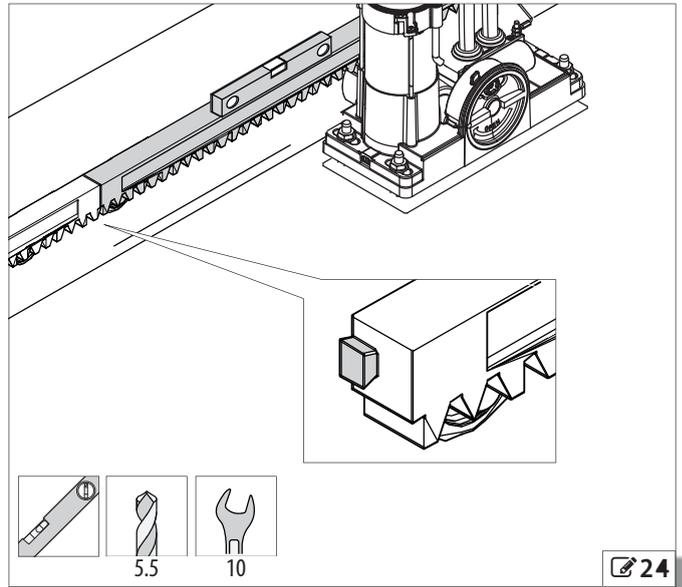


### PERSONAL PROTECTIVE EQUIPMENT



**i** The operations described in this section are fundamentally important to the integrity and operation of the gear motor.

1. When you have installed the rack, lower the gear motor by 1.5mm (🔗 26-1), using the four support nuts (🔗 27-1).
2. Check that the gear motor is level using a spirit level (🔗 27).
3. Tighten the four upper locknuts to a minimum torque of 40Nm (🔗 27-2), using a hex spanner and a torque wrench.
4. Move the gate by hand and check that:
  - There is 1.5 mm between the teeth of the rack and pinion along the travel
  - The rack remains engaged with the pinion along its travel (🔗 26-2)
  - The sliding gate section and gear motor do not touch at any point
  - There is no friction



## 6. START-UP



During operation there is a risk of fingers and hands being trapped between the rack, pinion and casing.

The body of the electric motor can reach high temperatures during operation.

### 6.1 POWER SUPPLY AND GROUNDING

#### RISKS



Cut the power to the system before making the connections.

1. Connect the wire, already connected to the earth connection, to the PE terminal on the electronic board (☞ 28-1).

#### Electric motor cable

Yellow-Green	Earth
Grey	Common
Brown	Phase
Black	Phase

1. Crimp the system's earth wire to the cable lug provided (☞ 28-2).
2. Install the M5 nut, washer and terminal supplied onto the gear motor earth connection (☞ 28-3). Tighten the nut.
3. Connect the limit switch cable to the electronic board (not supplied).
4. Connect the electric motor to the electronic board (not supplied).



For correct connection of the motor phases, refer to the instructions supplied with the electronic board.

5. Connect the start-up capacitor supplied between the two phases of the electric motor.
6. Connect the other accessories to the electronic board (not supplied).
7. Connect the mains power supply cable to the electronic board, and switch on the system power.

### 6.2 INSTALLATION OF THE LIMIT SWITCHES

#### RISKS

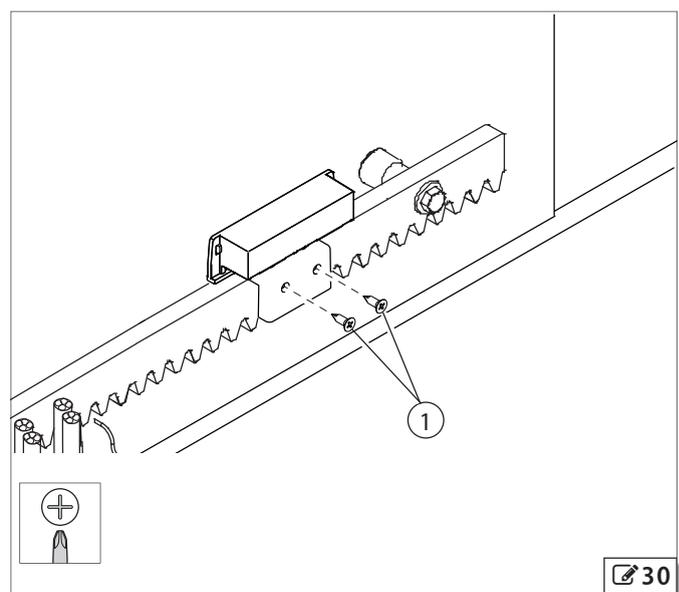
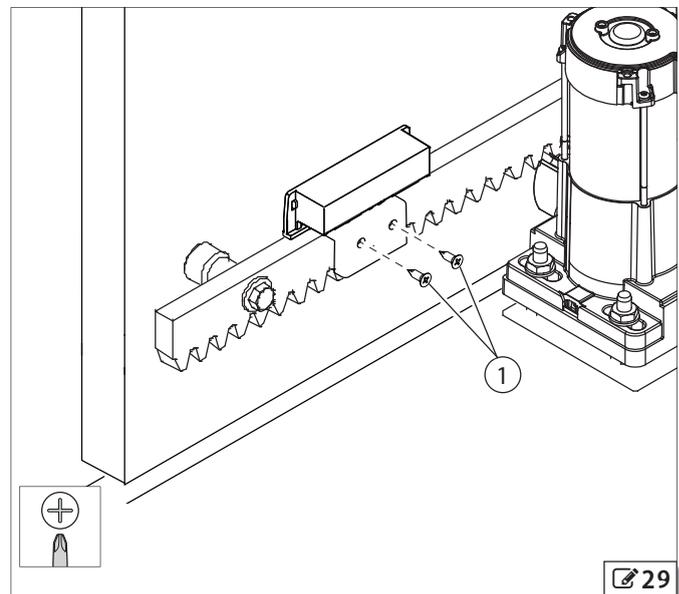
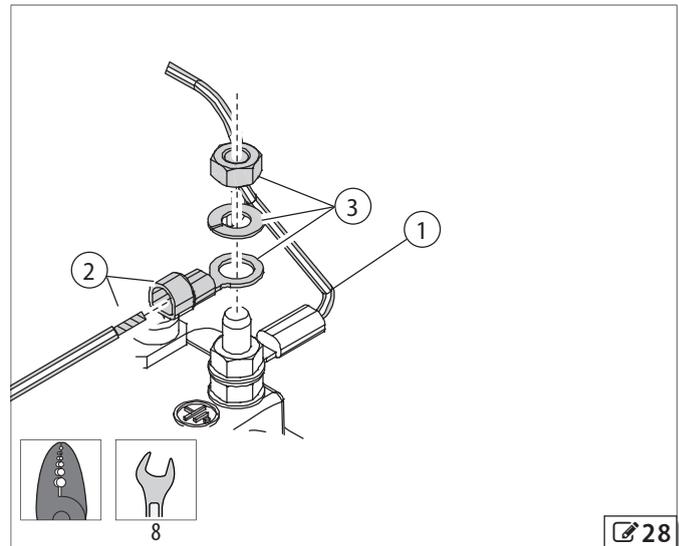


#### PERSONAL PROTECTIVE EQUIPMENT



The two limit switch magnets must be fastened to the rack in the open and closed positions. The magnetic sensor is equipped with two NC contacts, each of which is activated only by one of the two magnets. The magnet with the open padlock symbol must be fixed on the left whilst the magnet with the closed symbol must be fixed on the right.

1. Assemble the two magnets as indicated in the attached sheet.
2. Move the gate to the closed position by hand.
3. Position the closing magnetic limit switch (☞ 29) on the rack and look for the point at which the corresponding N.C. contact opens.
4. Move the gate backwards and fasten the magnet to the rack using the two screws provided (☞ 29-1).
5. Move the gate to the closed position by hand and make sure that the N.C. contact opens.



6. Move the gate to the open position by hand.
7. Position the opening magnetic limit switch (☞ 30) on the rack and look for the point at which the corresponding N.C. contact opens.
8. Move the gate backwards and fasten the magnet to the rack using the two screws provided (☞ 30-1).
9. Move the gate to the open position by hand and make sure that the N.C. contact opens.

**6.3 FINAL OPERATIONS**

**RISKS**



**PERSONAL PROTECTIVE EQUIPMENT**



1. Ensure that the forces generated by the leaf are within the limits allowed by the standard. Use an impact curve gauge in accordance with standards EN 12453. For countries outside the EU, when there is no specific local standard, the force must be less than 150 N static.
2. Ensure that the maximum manual moving force of the leaf is less than 225 N.
3. Use appropriate signs to highlight the areas where residual risks remain despite having implemented all safety measures.
4. Put up the "DANGER: AUTOMATIC MOVEMENT" sign on the gate in a visible position.
5. Put up the CE marking on the gate.
6. Complete the EC Declaration of Conformity of the machine and the system Logbook.
7. Provide the owner/operator of the automation with the EC Declaration, the system Logbook with the maintenance schedule and the user instructions of the automation.

**INSTALLING THE CASING**

Mount the casing following the instructions in ☞ 31: choose between the hexagonal insert screws and the Allen screws provided, size M5.

**7. MAINTENANCE**

**RISKS**

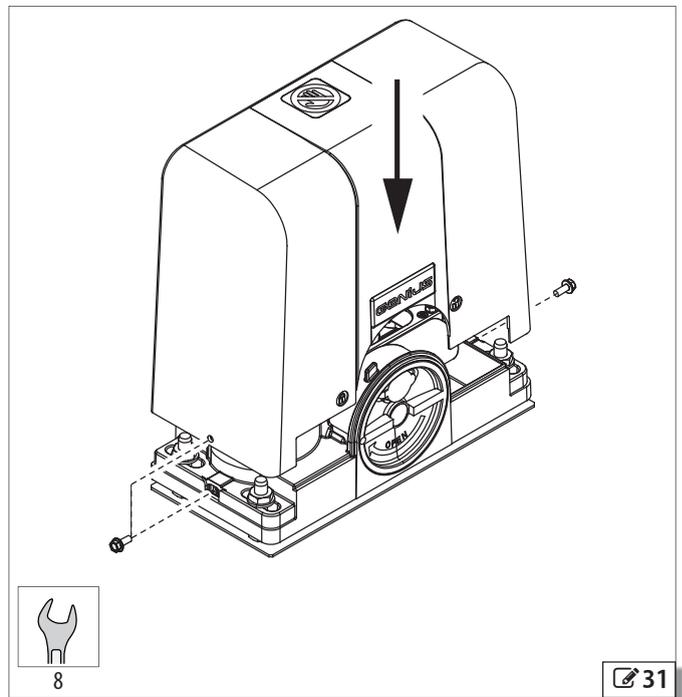


**PERSONAL PROTECTIVE EQUIPMENT**



Before performing any maintenance, disconnect the mains power supply. If the disconnecting switch is not visible, apply a "ATTENTION - Maintenance in progress" sign. Restore the power supply once maintenance is complete and after tidying up the area.

Maintenance must be performed by the installer/maintenance technician.  
Comply with all the safety instructions and recommendations provided in this manual.  
Close off the work site and prevent access/transit. Do not leave the work site unattended.



The work area must be kept tidy and clear upon completing maintenance.  
Before starting activities, wait for the components subject to heating to cool down.  
Do not modify the original components in any way.  
FAAC S.p.A. disclaims any liability for damage caused by components that are modified or tampered with.

The warranty shall be forfeited in the event of tampering with components.  
For replacements, use only original spare parts GENIUS.

## 7.1 SCHEDULED MAINTENANCE

The Scheduled Maintenance Table 9 lists the operations which must be performed on a regular basis in order to keep the automation system working reliably and safely; these are given purely as a guideline and should not be considered exhaustive. The installer/machine manufacturer is responsible for drawing up the maintenance plan for the automation system, supplementing this list or modifying the maintenance operations on the basis of the machine characteristics.

9 Scheduled Maintenance

Operations	Frequency
<b>Structures</b>	
Check the slab, the structures and components of the building/fence adjacent to the automation system, ensuring there is no damage, cracking or subsidence.	12
Check the gate's area of movement, ensuring it is free from obstacles, objects or deposits which would reduce the effectiveness of the safety measures.	12
Check that there are no gaps in the perimeter fence and that any protective grilles in the area where it overlaps with the sliding gate section are intact.	12
Ensure that there are no sharp protrusions which could represent a perforation or hooking hazard.	12
<b>Gate</b>	
Check the gate, ensuring it is intact and free of deformations, rust etc.	12
Check that there are no slots/openings on the gate and that any protective grilles are intact.	12
Check that screws and bolts are correctly tightened.	12
Check that the sliding guides are straight and not excessively worn.	12
Check that the bearings are in good condition and there is no friction.	12
For cantilever systems, check the solidity of the guide system for the suspended gate section and the counterweight, where present.	12
Check that the mechanical strikes are fastened solidly and in good condition. This check must be performed on both sides, simulating any knocks which could occur during use.	12
Check the wheels, ensuring that they are intact, correctly fastened and free of deformation, wear and rust.	12
Check the rack, ensuring it is straight, spaced correctly from the pinion along its entire length, and correctly fastened to the gate.	12
Check the containing guide and the anti-tipping column, ensuring they are correctly fastened and intact.	12
Perform a general clean of the area of movement of the gate.	12
<b>Gear Motor</b>	
Check that the gear motor is intact and correctly fastened.	12
Check that the pinion is correctly keyed to the shaft and tightened correctly.	12
Check that the hand guard around the pinion is present and intact.	12
Check that it is irreversible.	12
Check that there is no loss of grease.	12
Check the condition of the gear motor cables, the cable glands and junction boxes.	12
<b>Electronic Equipment</b>	
Check that the power supply and connecting cables and the cable glands are intact.	12
Check that the connectors and wiring are intact.	12
Check that there are no signs of overheating, burning etc. of electronic components.	12
Check that the earth connections are intact.	12
Check the operation of the circuit breaker and RCD.	12
Check that the limit switch is intact and that it operates correctly.	12
<b>Control Devices</b>	
Check that the installed devices and remote controls are in good condition and that they operate correctly.	12
<b>Sensitive Edges</b>	
Check condition, fastening and correct operation.	6

<b>Deformable Edges</b>	
Check that they are intact and correctly fastened.	12
<b>Photocells</b>	
Check condition, fastening and correct operation.	6
Check the posts, ensuring that they are intact, correctly fastened and free of deformation etc.	6
<b>Flashing Light</b>	
Check condition, fastening and correct operation.	12
<b>Electric Locks</b>	
Check condition, fastening and correct operation.	12
Clean the seats.	12
<b>Access Controls</b>	
Check that the gate opens only when an authorised user is recognised.	12
<b>Complete Automation System</b>	
Check that the automation system operates correctly, following the set logic, when using the various control devices.	12
Check that the gate moves correctly - smooth, regular and without abnormal noise.	12
Check that both the opening and closing speed are correct and that the stop positions and slow-downs provided for are respected.	12
Check that the manual release operates correctly: when the release mechanism is activated, it must only be possible to move the gate manually.	6
Check that the caps on the locks are present.	6
Check that the maximum force required for manual movement of the gate is below 225 N in residential areas and 390 N in industrial or commercial settings.	6
Check that the safety edges operate correctly when faced with an obstacle.	6
Check that the encoder (where present) functions correctly when an obstacle is detected.	6
Check that each pair of photocells is working correctly.	6
Check that there is no optical/light interference between the pairs of photocells.	6
Check the force limitation curve (per EN 12453).	6
Check that all necessary signage and warnings are present, intact and legible: residual risks, exclusive use etc.	12
Check that the gate's CE marking and the DANGER, AUTOMATIC MOVEMENT warning signage is present, intact and legible.	12

## 8. INSTRUCTIONS FOR USE

It is the responsibility of the machine installer/manufacturer to draft the user instructions of the automation in accordance with the Machinery Directive, including all the required information and instructions based on the characteristics of the automation.

The guidelines below, which are purely indicative and in no way exhaustive, help the installer draft the user instructions.

**!** The installer must provide the owner/operator of the automation with the EC Declaration, the system Logbook with the maintenance schedule and the user instructions of the automation.

The installer must inform the owner/operator of any residual risks and the intended use and ways in which the machine should not be used.

The owner is responsible for operating the automation and must:

- comply with all User instructions provided by the installer/maintenance technician and the Safety recommendations
- keep the user instructions
- have the maintenance schedule implemented
- keep the system Logbook, which must be completed by the maintenance technician at the end of all servicing

### 8.1 SAFETY RECOMMENDATIONS

Installations of GENIUS BLIZZARD 500-900 series gear motors must be used for vehicular traffic.

The user must be in good physical and mental health and be aware of and responsible for the dangers which use of the product can lead to.

- !**
- Do not remain in or walk/drive through the area of operation of the automation system while it is moving.
  - Do not use the automation system when the area of operation is not free of persons, animals or objects.
  - Do not allow children to approach or play in the area of operation of the automation system.
  - Do not try to prevent the movement of the automation system.
  - Do not climb on, hold onto or let yourself be pulled by the gate. Do not climb onto or sit on the gear motor.
  - Do not allow the devices to be used by anyone who is not specifically authorised and trained to do so.
  - Do not allow the devices to be controlled by children or persons with mental and physical deficiencies unless they are supervised by an adult who is responsible for their safety.
  - Do not use the automation system with the fixed and/or mobile guards removed or altered.
  - Do not use the automation system in the presence of faults which could compromise safety.
  - Do not expose the automation system to corrosive chemical or atmospheric agents; do not expose the actuator to corrosive chemical or atmospheric agents.
  - Do not expose the automation system to flammable gases or fumes.
  - Do not perform any work on the components of the automation system.

### 8.2 PRODUCT WARNINGS



Risk of fingers and hands being trapped between the rack, pinion and casing (§ 3.8-**2**).

### 8.3 EMERGENCY USE

Environmental phenomena, even occasional, such as ice, snow and strong wind may hinder correct operation of the automation and affect component integrity and may become a potential source of danger.

In emergencies or if there is a fault, turn off the power supply to the automation. If the leaf can be moved safely by hand, use the MANUAL OPERATION mode; otherwise place the automation out of service until it has been reset/repaired.

In the case of a breakdown, the automation must be reset/repaired exclusively by the installer/maintenance technician.

### 8.4 MANUAL OPERATION



Before performing the release operation, shut off the power supply to the automation system.

During manual operation, gently guide the gate the whole way. Do not push it and let it slide freely.

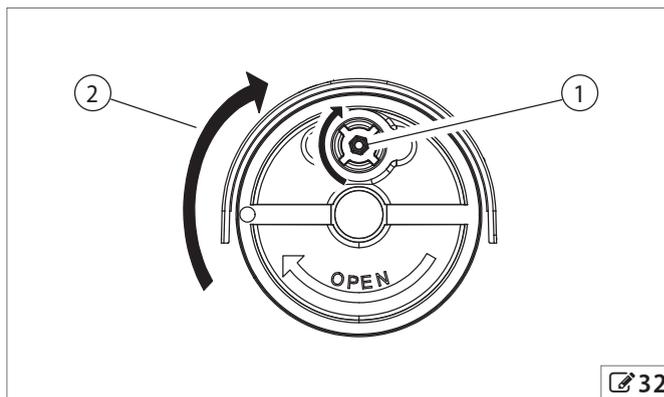
Do not leave the gate with the release engaged: after moving it manually, restore automatic operation.

### RELEASE OPERATION

1. Open the plastic cap on the release device (**32-1**).
2. Turn the lock clockwise using a coin or your personalised key (**32-1**).
3. Turn the knob clockwise (**32-2**).

### RESTORING AUTOMATIC OPERATION

1. Turn the knob anticlockwise.
2. Turn the lock anticlockwise.
3. Manually move the gate until the mechanical system engages.





**GENIUS<sup>®</sup>**

Sede legale: FAAC S.p.A. Soc. Unipersonale  
Via Calari, 10 - 40069 Zola Predosa BOLOGNA - ITALY  
Tel. +39 051 61724 - Fax +39 051 09 57 820  
[www.geniusg.com](http://www.geniusg.com)

