



# **Ditec LUXO**

## Swing gates automation

(Original instruction)

IP2128EN  
**Technical manual**

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## Caption



This symbol indicates instructions or notes regarding safety, to which special attention must be paid.



This symbol indicates useful information for the correct functioning of the product.

# 1. General safety precautions



This installation manual is intended for qualified personnel only.

Installation, electrical connections and adjustments must be performed in accordance with Good Working Methods and in compliance with the present standards. Read the instructions carefully before installing the product.

Bad installation could be dangerous.



The packaging materials (plastic, polystyrene, etc.) should not be discarded in the environment or left within reach of children, as these are a potential source of danger.

Before installing the product, make sure it is in perfect condition.

Do not install the product in explosive areas and atmospheres: the presence of inflammable gas or fumes represents a serious safety hazard.

Before installing the motorisation device, make all the necessary structural modifications in order to create safety clearance and to guard or isolate all the crushing, shearing, trapping and general hazardous areas.

Make sure the existing structure is up to standard in terms of strength and stability. The motorisation device manufacturer is not responsible for failure to observe Good Working Methods when building the frames to be motorised or for any deformation during use.



The safety devices (photocells, safety edges, emergency stops, etc.) must be installed taking into account: applicable laws and directives, Good Working Methods, installation premises, system operating logic and the forces developed by the motorised door.

The safety devices must protect the crushing, cutting, trapping and general hazardous areas of the motorised door.

Display the signs required by law to identify hazardous areas.

Each installation must bear a visible indication of the data identifying the motorised door.

When requested, connect the motorised door to an effective earthing system that complies with current safety standards.

During installation, maintenance and repair operations, cut off the power supply before opening the cover to access the electrical parts.



The automation protection casing must be removed by qualified personnel only.

The electronic parts must be handled using earthed antistatic conductive arms. The manufacturer of the motorisation declines all responsibility in the event of component parts being fitted that are not compatible with the safe and correct operation. Use original spare parts only for repairs or replacements of products.

The installer must supply all information on automatic, manual and emergency operation of the motorised door and must provide the user with the operating instructions.

## 2. Declaration of incorporation of partly completed machinery

(Directive 2006/42/EC, Annex II-B)

The manufacturer Entrematic Group AB with headquarters in Lodjursgatan 10, SE-261 44 Landskrona, Sweden, declares that the automation for Ditec LUXO type swing gate:

- has been constructed to be installed on a manual door to construct a machine pursuant to the Directive 2006/42/EC. The manufacturer of the motorised door shall declare conformity pursuant to the Directive 2006/42/EC (Annex II-A), prior to the machine being put into service;
- conforms to the applicable essential safety requirements indicated in ANNEX I, Chapter 1 of the Directive 2006/42/EC;
- conforms to the Low Voltage Directive 2006/95/EC;
- conforms to the Electromagnetic Compatibility Directive 2004/108/EC;
- the technical documentation conforms to Annex VII-B of the Directive 2006/42/EC;
- the technical documentation is managed by Marco Pietro Zini with headquarters in Via Mons. Banfi, 3 - 21042 Caronno Pertusella (VA) - ITALY;
- a copy of technical documentation will be provided to national competent authorities, following a suitably justified request.

Landskrona, 06-05-2013

Marco Pietro Zini  
(President)



### 2.1 Machinery Directive

Pursuant to Machinery Directive (2006/42/EC) the installer who motorises a door or gate has the same obligations as the manufacturer of machinery and as such must:

- prepare the technical file which must contain the documents indicated in Annex V of the Machinery Directive;  
(The technical file must be kept and placed at the disposal of competent national authorities for at least ten years from the date of manufacture of the motorised door);
- draw up the EC Declaration of Conformity in accordance with Annex II-A of the Machinery Directive and deliver it to the customer;
- affix the EC marking on the motorised door in accordance with point 1.7.3 of Annex I of the Machine Directive.

### 2.2 Operating instructions

Service class: 4 (minimum 100 cycles a day for 10 years or 200 cycles a day for 5 years)

Use: INTENSIVE (For vehicle or pedestrian accesses to large condominiums, industrial or commercial complexes and parking lots with very frequent use).

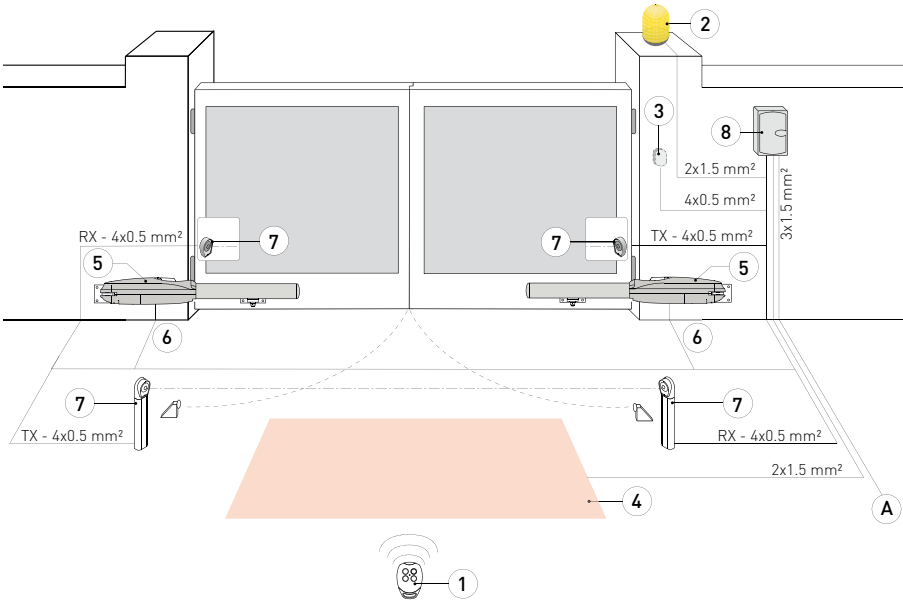
- Performance characteristics are to be understood as referring to the recommended weight (approx. 2/3 of maximum permissible weight). When used with the maximum permissible weight a reduction in the above mentioned performance can be expected.
- Service class, running times, and the number of consecutive cycles are to be taken as merely indicative Having been statistically determined under average operating conditions, and are therefore not necessarily applicable to specific conditions of use.
- Each automatic entrance has variable elements such as: friction, balancing and environmental factors, all of which may substantially alter the performance characteristics of the automatic entrance or curtail its working life or parts thereof (including the automatic devices themselves). The installer should adopt suitable safety conditions for each particular installation.

### 3. Technical specifications

	LUX03BH	LUX04BH	LUX05BH LUX05VBH
Power supply	24 V $\overline{\text{AC}}$	24 V $\overline{\text{AC}}$	24 V $\overline{\text{AC}}$
Absorption	4 A	4 A	12 A
Thrust	2000 N	2000 N	3000 N
Max run	350 mm	500 mm	500 mm
Opening time	20÷50 s / 90°	30÷60 s / 90°	20÷45 s / 90°
Service class	4 - INTENSIVE	4 - INTENSIVE	4 - INTENSIVE
Intermittence	S2 = 20 min S3 = 50%	S2 = 20 min S3 = 50%	S2 = 20 min S3 = 50%
Temperature	min -20° C max +55° C	min -20° C max +55° C	min -20° C max +55° C
Degree of protection	IP24D	IP24D	IP24D
Control panel	E2HLX - VIVAH	E2HLX - VIVAH	VIVAH
Applications m = leaf width kg = leaf weight  <div style="display: inline-block; width: 15px; height: 15px; background-color: yellow; margin-right: 5px;"></div> Limit dimensions <div style="display: inline-block; width: 15px; height: 15px; background-color: green; margin-right: 5px;"></div> Recommended dimensions			

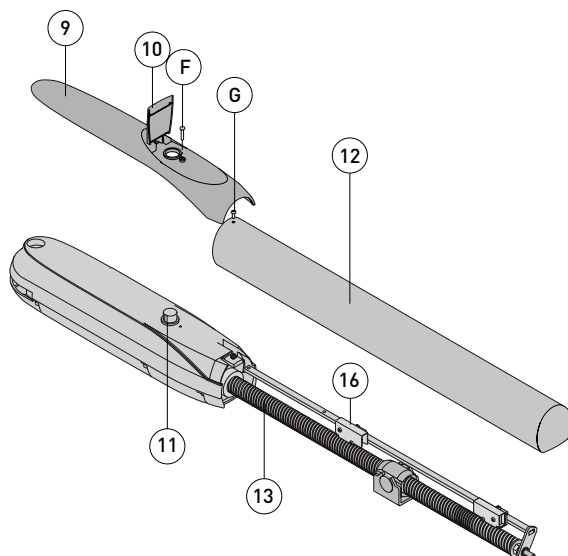
	LUX03B	LUX05B
Power supply	230 V~ 50 Hz	230 V~ 50 Hz
Absorption	1.1 A	1.1 A
Thrust	3000 N	3000 N
Max run	350 mm	500 mm
Opening time	22 s / 90°	32 s / 90°
Service class	4 - INTENSIVE	4 - INTENSIVE
Intermittence	S2 = 20 min S3 = 50%	S2 = 20 min S3 = 50%
Temperature	min -20° C max +55° C	min -20° C max +55° C
Degree of protection	IP24D	IP24D
Control panel	E2 - LOGICM	E2 - LOGICM
Applications m = leaf width kg = leaf weight  <div style="display: inline-block; width: 15px; height: 15px; background-color: yellow; margin-right: 5px;"></div> Limit dimensions <div style="display: inline-block; width: 15px; height: 15px; background-color: green; margin-right: 5px;"></div> Recommended dimensions		

# 4. Standard installation

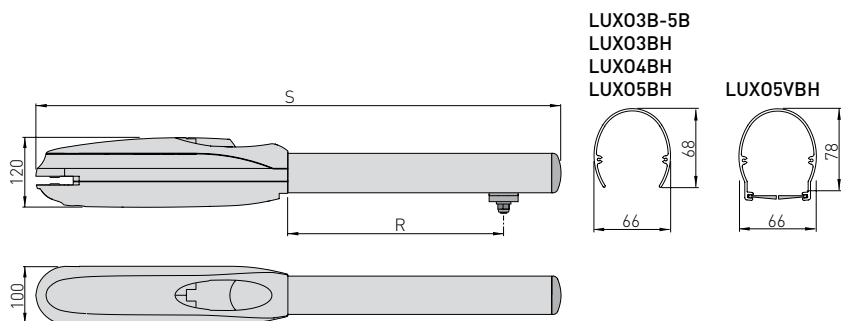


Ref.	Code	Description
1	GOL4	Transmitter
2	LAMPH	Flashing light
3	XEL5 GOL4M	Key selector Codified via radio control keyboard
4	LAB9	Magnetic loop detection device for traffic monitoring
5	LUX03B	AC reversible and irreversible actuator for door wing of up to 3.5 m
	LUX03BH	DC irreversible actuator for door wing of up to 3.5 m
	LUX04BH	DC irreversible actuator for door wing of up to 4 m
	LUX05B	AC reversible and irreversible actuator for door wing of up to 5 m
	LUX05BH	DC irreversible actuator for door wing of up to 5 m
	LUX05VBH	DC irreversible actuator for door wing of up to 5 m with limit switch
6	LUX03B LUX05B	Cable 4x1,5 mm²
	LUX03BH LUX04BH LUX05BH LUX05VBH	Cable 2x1,5 mm²
7	XEL2 LAB4	Photocells Photocells IP55
8		Control panel
A		Connect the power supply to an approved omnipolar switch with an opening distance of the contacts of at least 3mm (not supplied). The connection to the mains must be made via an independent channel, separated from the connections to command and safety devices.

## 5. Dimensions and references



Ref.	Code	Description
9		Cover
10		Lock flap
11		Release lock
12		Drive screw cover
13		Drive screw
14		Tail bracket
15		Head bracket
16	LUX0FCH	Limit switch [only standard on LUX05VBH]
F		Cover fastening screw
G		Drive cover fastening screw



S = 890 [LUX03B-3BH]  
1040 [LUX04BH-5B-5BH-5VBH]

R = max 350 [LUX03B-3BH]  
max 500 [LUX04BH-5B-5BH-5VBH]

# 6. Installation

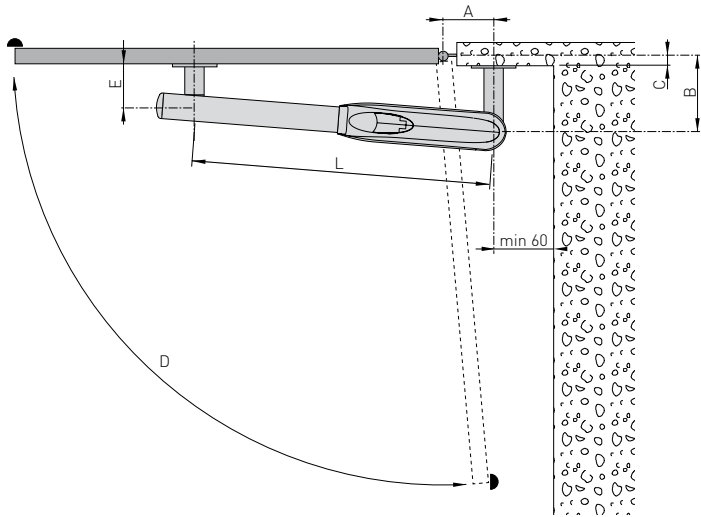
The given operating and performance features can only be guaranteed with the use of ENTREMATIC accessories and safety devices.

Unless otherwise specified, all measurements are expressed in mm.

## 6.1 Preliminary checks

Check that the structure is sufficiently rugged and that the hinge pivots are properly lubricated. Provide an opening and closing stop.

Position tail bracket [14] on to the pillar to check installation measurements and secure it. The installation measurements indicated in the table allow you to choose the values of [A] and [B] on the basis of the desired opening angle and in relation to the on site spaces and overall dimensions. NOTE: The measurements [A] and [B] must be the same, in order to have a regular movement. Increasing [A] decreases the coming up speed during opening. Reducing [B] increases the extent of gate opening. Measurements [A] and [B] must in any case be compatible with the useful travel of the piston so that; if [A] is increased, [B] must be decreased and vice versa.



[\*] Use measurements between minimum and maximum values

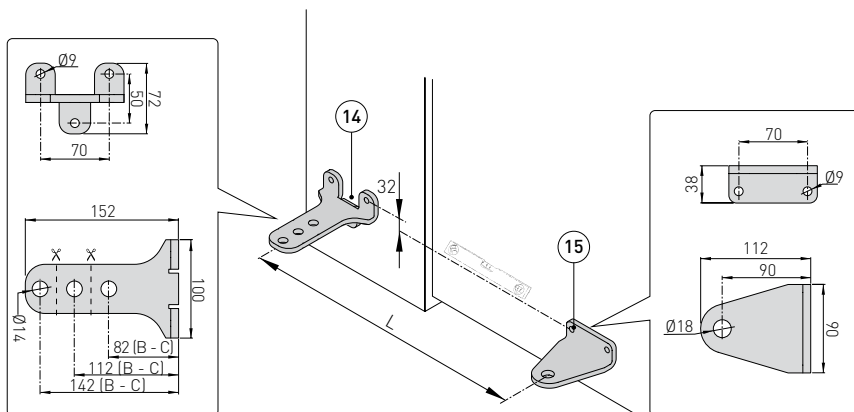
	A*	B*	A	B	C	D	E	L
LUX03B LUX03BH	min 105 max 160	min 130 max 170	130	170	100	90°	90	760
			105	140	70	90°		
			130	130	60	95°		
			160	130	50	110°		
LUX04BH LUX05B LUX05BH LUX05VBH	min 130 max 200	min 170 max 290	170	170	100	90°	120	910
			200	200	130	95°		
			200	170	100	120°		
			130	290	220	90°		



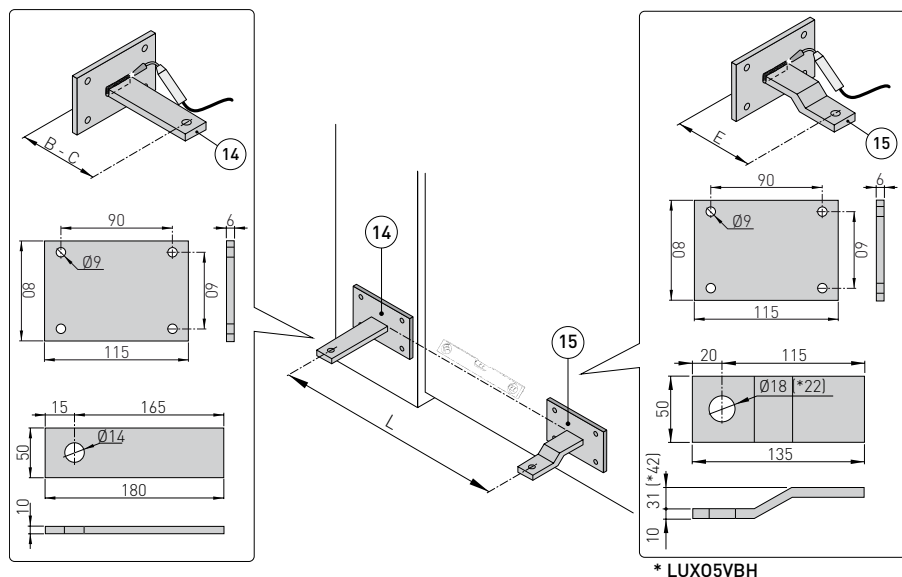
## 6.2 Bracket fastening

- Once you have fastened the tail bracket [14] following the measurements indicated on page 26, fasten the head bracket [15] to the gate.
- NOTE: shorten the tail bracket [14] by following the instructions on page 26.
- When the gate is completely closed, place the head bracket [15] near the piston attachment complying with measurements [E] and [L]. Make sure that the head brackets [15] and tail brackets [14] are perfectly level as shown in the following figures and fasten the head bracket [15] to the gate.

### LUX03BH



### LUX03B-LUX04BH-LUX05B-LUX05BH-LUX05VBH

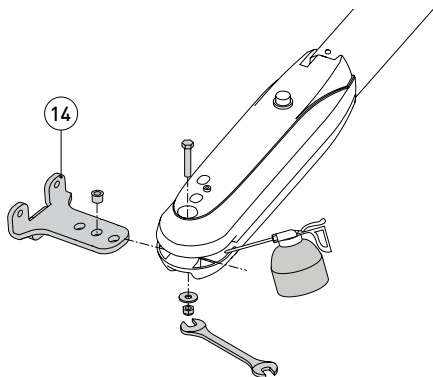


## 6.3 Geared motor installation

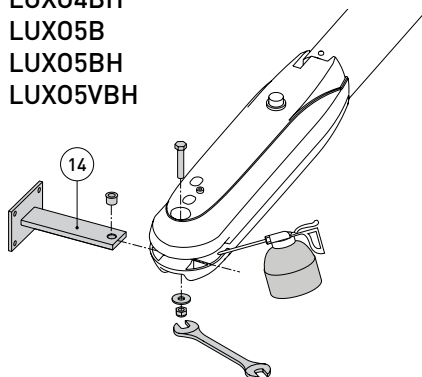
- Open the lock flap [10] unscrew the screw [F] and remove the cover [9]. Unscrew the screw [G] and remove the drive screw cover [12] as shown in the figure on pag. 7. Release the piston (see OPERATING INSTRUCTIONS).
- Mount the piston on tail [14] and head bracket [15], tightly screwing down the self-locking nut and lubricate the turning points.

NOTE: pay special attention to the correct assembly of the washer on the head bracket.

### LUX03BH

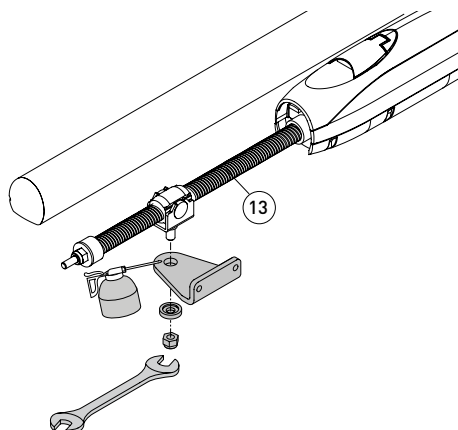


### LUX03B LUX04BH LUX05B LUX05BH LUX05VBH

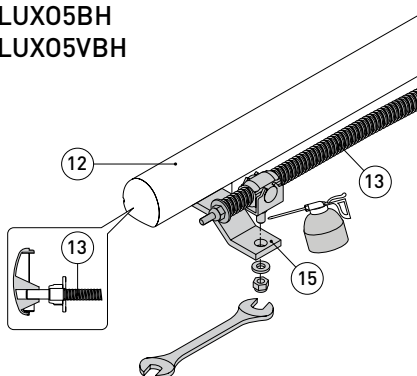


- Fit and secure the drive screw cover [12] on the drive screw [13] by means of the screws provided [G]. NOTE: ensure that the drive screw [13] is properly inserted onto the screw cover head [12] (see figure).
- Move the gate by hand and check for smooth and free movement throughout.

### LUX03BH



### LUX03B LUX04BH LUX05B LUX05BH LUX05VBH

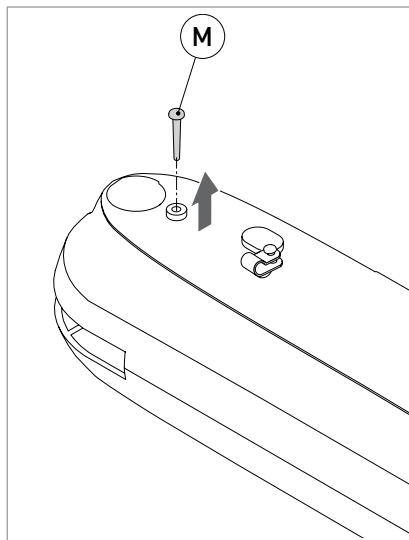
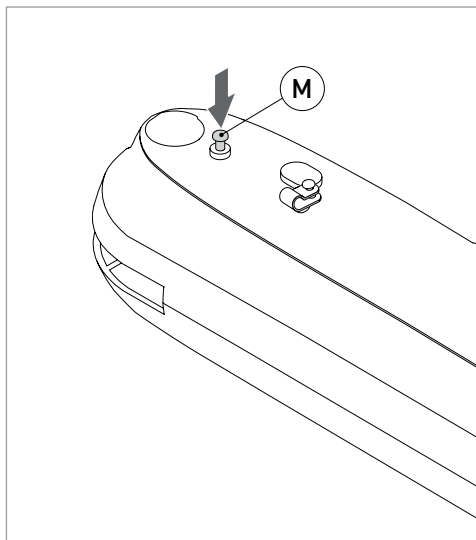


## 6.4 Reversible and irreversible piston (only LUX05BH and LU-X05VBH)

To make the piston reversible, insert pin [M].

NOTE: the operation must be carried out with the piston moving.

Removing the pin [M], the piston becomes irreversible, and the release can only be made with the key (see OPERATING INSTRUCTIONS).



## 7. Electrical connections

Before connecting the power supply, make sure the plate data correspond to that of the mains power supply.

An omnipolar disconnection switch with minimum contact gaps of 3 mm must be included in the mains supply.

Check that upstream of the electrical installation there is an adequate residual current circuit breaker and a suitable overcurrent cutout.

The gearmotors LUX03B and LUX05B can be connected to the E2 and LOGICM control panels.

The gearmotors LUX03BH and LUX04BH can be connected to the E2HLX and VIVAH control panels.

The gearmotors LUX05BH and LUX05VBH can be connected to the VIVAH control panel.

The electrical wiring and the start-up of the gearmotors LUXO are shown in figure and in the installation manuals of the E2, LOGICM, E2HLX and VIVAH control panels.

To increase the protection of the motor cable, a flexible Ø16 raceway [N] may be used and the associated Ø20 union [P], not supplied by us.

Tighten the screw [F].

## 8. Routine maintenance plan

Perform the following operations and checks every 6 months according to intensity of use of the automation.

Disconnect the 230 V~ power supply and batteries if present:

- Clean and lubricate, using neutral grease, the turning pins, the hinges of the gate and the drive screw
- Check that fastening points are properly tightened.
- Check the electrical wiring is in good condition.

Reconnect the 230 V~ power supply and batteries if present:

- Check the power adjustments.
- Check the good operation of all command and safety functions (photocells).
- Check the good operation of the release.
- If present, check for battery continuity by powering off and performing several manoeuvres in sequence. Upon test completion, power back on (230 V~).

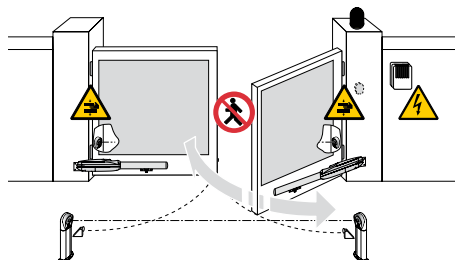


NOTE: For spare parts, see the spares price list.

# Operating instructions

## General safety precautions

**Ditec**  
**ENTREMATIC**



These precautions are an integral and essential part of the product and must be supplied to the user.

Read them carefully since they contain important information on safe installation, use and maintenance.

These instructions must be kept and forwarded to all possible future users of the system.

This product must only be used for the specific purpose for which it was designed.

Any other use is to be considered improper and therefore dangerous. The manufacturer cannot be held responsible for any damage caused by improper, incorrect or unreasonable use.

This product must not be used by people (including children) with reduced physical, sensorial or mental abilities, or lack of experience or knowledge, unless they are given proper surveillance and instructions for operating the device by a person responsible for their safety.

Avoid operating in the proximity of the hinges or moving mechanical parts.

Do not enter within the operating range of the motorised door while it is moving.

Do not block the movement of the motorised door since this may be dangerous.

Do not allow children to play or stay within the operating range of the motorised door.

Keep remote controls and/or any other control devices out of the reach of children in order to avoid possible involuntary activation of the motorised door.

In the event of a fault or a malfunction of the product, turn off the power supply switch, do not attempt to repair or intervene directly and contact only qualified personnel.

Failure to comply with the above may cause a dangerous situation.

All cleaning, maintenance or repair work must be carried out by qualified personnel.

To ensure that the system works efficiently and correctly, the manufacturer's indications must be complied with and only qualified personnel must see to the routine maintenance of the motorised gate.

In particular, regular checks are recommended in order to verify that the safety devices are operating correctly.

All installation, maintenance and repair work must be documented and made available to the user.



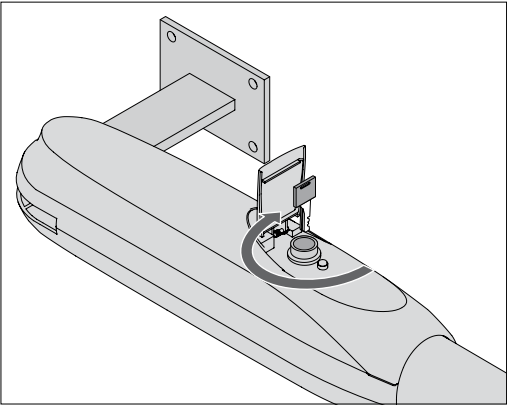
To dispose of electrical and electronic equipment as well as batteries correctly, users must take them to special "recycling centres" provided by the municipal authorities.

# Manual release instructions

In the event of a fault or blackout, insert the key and turn it clockwise. Unlock the electric lock, if mounted. Manually slide the gate open. To relock the wings, turn the key anti-clockwise.



**WARNING:** the door wing block and release operations must be performed with the motor idle.



For any problems and/or information, contact the support service.

Installer's stamp	Operator
	Date of intervention
	Technician's signature
	Customer's signature

Intervention performed \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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