



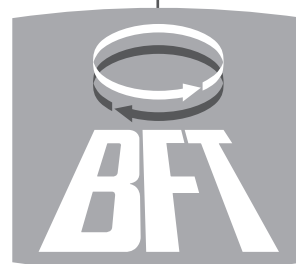
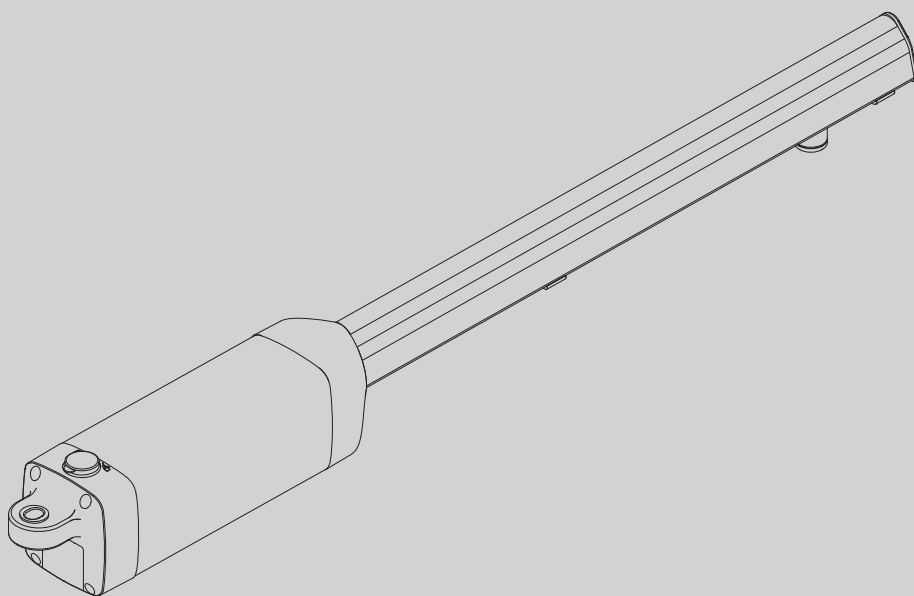
D811610 00100_01 28-01-10

AUTOMAZIONI A PISTONE PER CANCELLI A BATTENTE
PISTON AUTOMATIONS FOR SWING GATES
AUTOMATIONS A PISTON POUR PORTAILS BATTANTS
HYDRAULISCHER DREHTORANTRIEB
AUTOMATIZACIONES A PISTON PARA PORTONES CON BATIENTE
AUTOMATISERINGSSYSTEMEN MET ZUIGER VOOR VLEUGELPOORTEN

PHOBOS NL BT

PHOBOS BT BT

ISTRUZIONI DI INSTALLAZIONE
INSTALLATION MANUAL
INSTRUCTIONS D'INSTALLATION
MONTAGEANLEITUNG
INSTRUCCIONES DE INSTALACION
INSTALLATIEVOORSCHRIFTEN



AZIENDA CON SISTEMA DI GESTIONE
INTEGRATO CERTIFICATO DA DNV
= UNI EN ISO 9001:2000 =
UNI EN ISO 14001:2004

INSTALLAZIONE VELOCE-QUICK INSTALLATION-INSTALLATION RAPIDE SCHNELLINSTALLATION-INSTALACIÓN RÁPIDA - SNELLE INSTALLATIE

ITALIANO

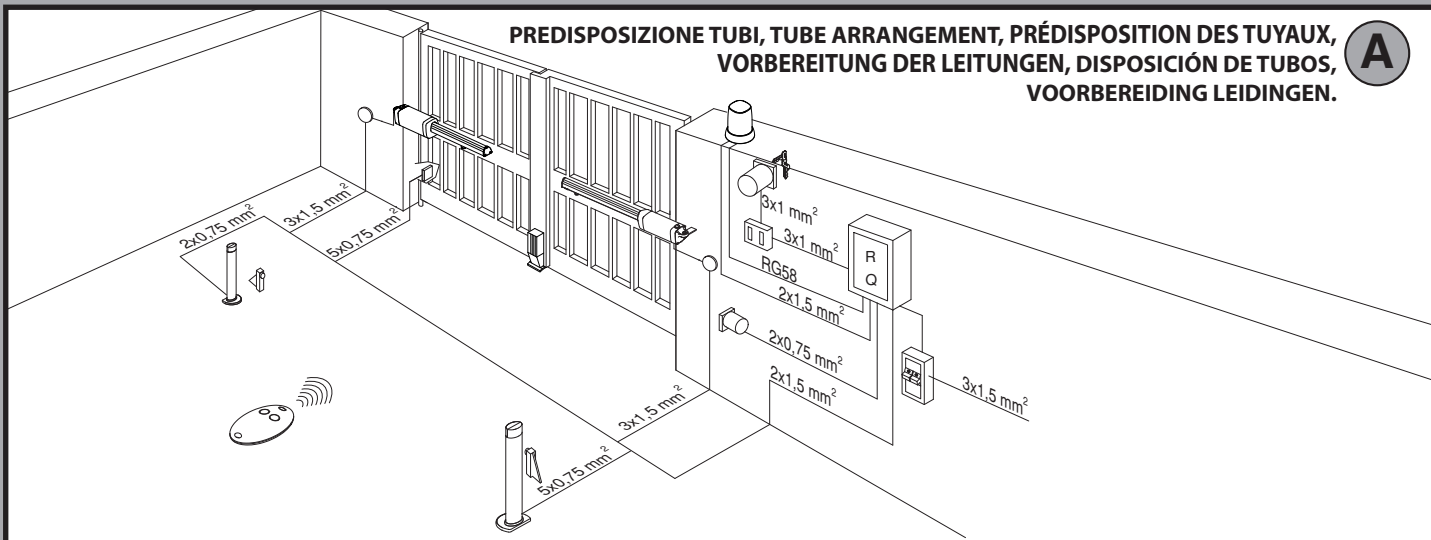
ENGLISH

FRANÇAIS

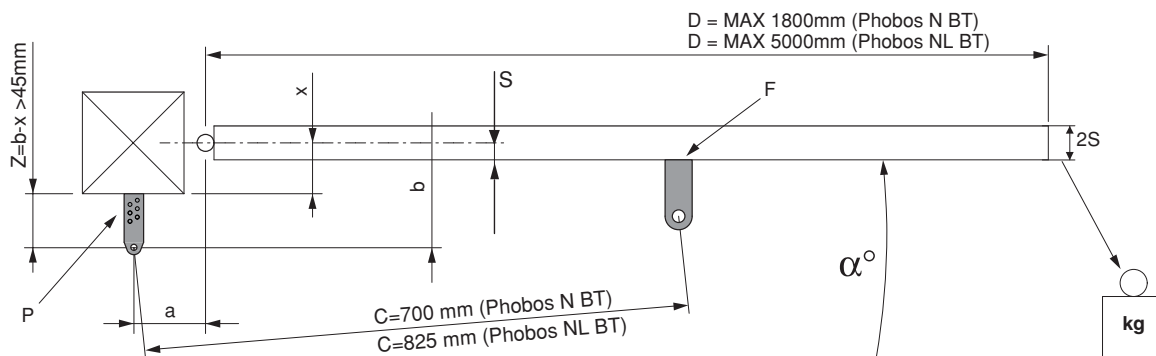
DEUTSCH

ESPAÑOL

NEDERLANDS



SCHEMA D'INSTALLAZIONE. INSTALLATION DIAGRAM. SCHÉMA D'INSTALLATION. INSTALLATIONSSCHEMA. ESQUEMA DE INSTALACIÓN. INSTALLATIESCHEMA.



S (mm)	Phobos N BT		Phobos NL BT	
	125 kg (~ 1250 N)	250 kg (~ 2500 N)	125 kg (~ 1250 N)	250 kg (~ 2500 N)
	b (mm)		b (mm)	
20	100 ÷ 120	130 ÷ 210	130 ÷ 160	170 ÷ 260
30	100 ÷ 130	140 ÷ 210	130 ÷ 170	180 ÷ 260
40	100 ÷ 140	150 ÷ 210	130 ÷ 180	190 ÷ 260
50	100 ÷ 150	160 ÷ 210	130 ÷ 190	200 ÷ 260

2 PHOBOS N BT

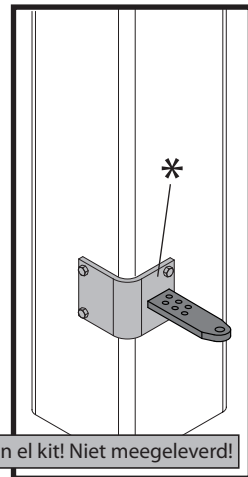
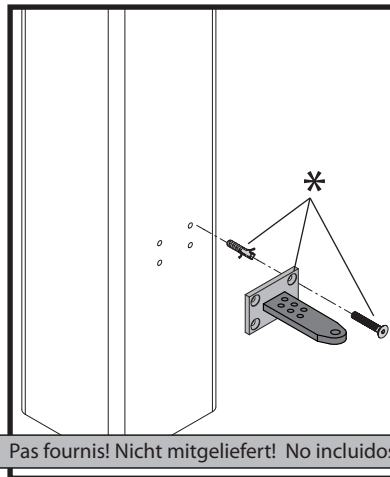
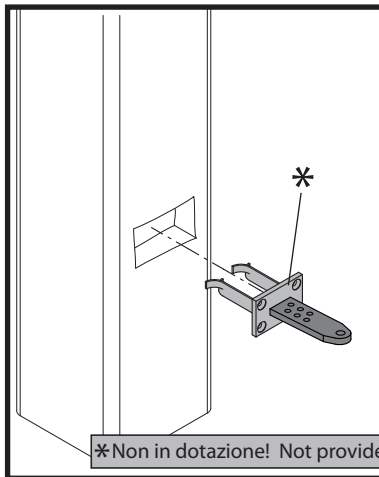
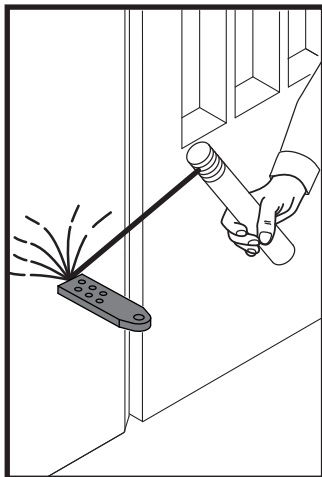
b \ a	100	110	120	130	140	150	160	170	180
100					118	116	108	103	99
110					116	105	103	99	96
120					114	100	99	95	
130				108	107	100	96	92	
140				107	101	96	92		
150			102	105	96	92	88		
160			102	97	91	88			
170		100	97	92	87	84			
180		98	91	87	84				
190	93	90	86	83					
200	90	85	82						
210	84	81							α°

3 PHOBOS NL BT

b \ a	100	110	120	130	140	150	160	170	180	190	200	210	220	230
130	104	107	111	115	116	120	123	125	127	128	128	126	122	116
140	103	107	109	114	115	118	121	124	126	126	126	123	118	114
150	103	106	108	112	114	117	120	122	123	125	125	120	114	111
160	102	105	108	111	112	116	118	121	122	124	123	116	111	106
170	101	105	108	111	111	115	117	120	120	122	118	112	107	
180	101	104	107	109	111	114	116	118	119	118	113	110		
190	100	103	106	108	110	113	115	117	117	115	108			
200	99	103	106	108	109	112	114	115	111	110				
210	99	103	104	107	108	111	112	112	109					
220	99	102	103	107	106	109	110	110						
230	98	101	102	105	106	108	110							
240	98	100	102	105	105	108								
250	98	100	102	106	105									
260	97	100	104	110										α°

ANCORAGGI DEGLI ATTACCHI AL PILASTRO. FASTENING OF FITTINGS TO PILLAR. ANCRAGES DES RACCORDEMENTS SUR LE PILIER. VERANKERUNGEN DER ANSCHLÜSSE AM PFEILER. ANLAJES DE LAS FIJACIONES AL PILAR. VERANKERING VAN DE BEVESTIGINGEN AAN DE PIJLER.

C

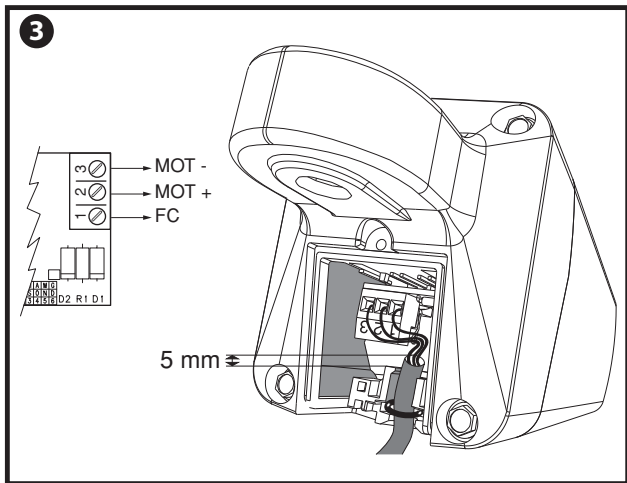
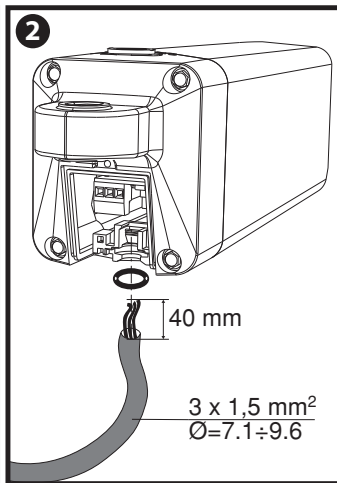
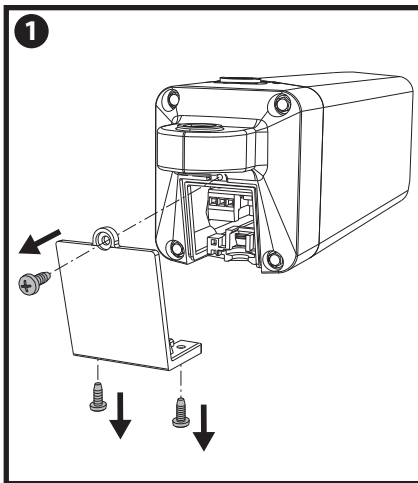


*Non in dotazione! Not provided! Pas fournis! Nicht mitgeliefert! No incluidos en el kit! Niet meegeleverd!

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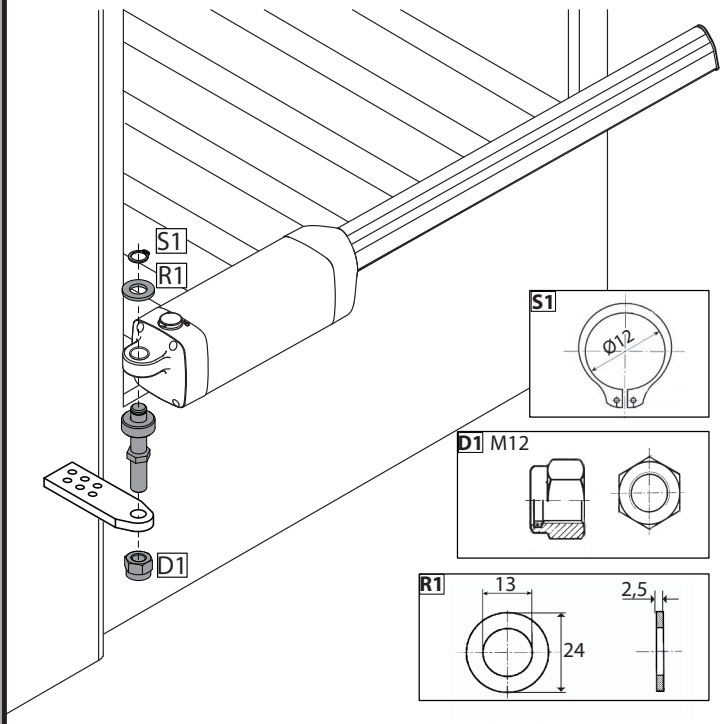
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D



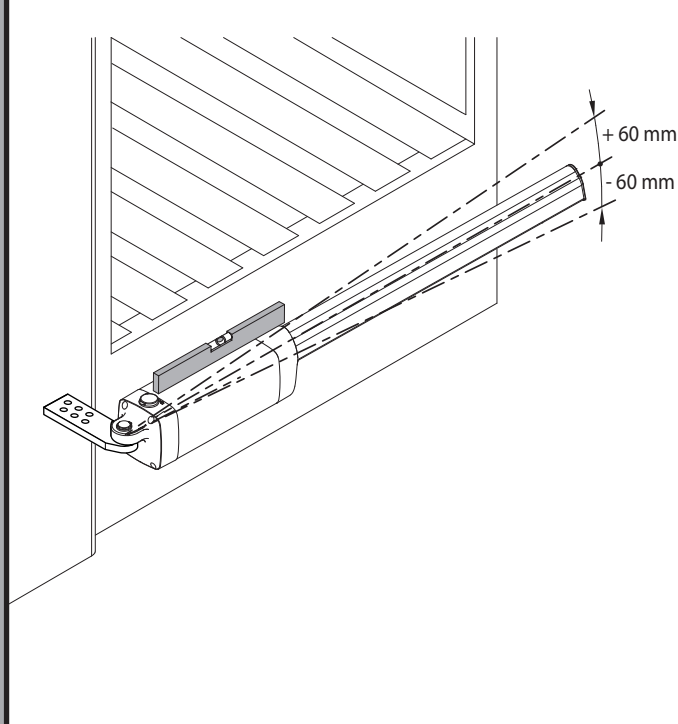
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E



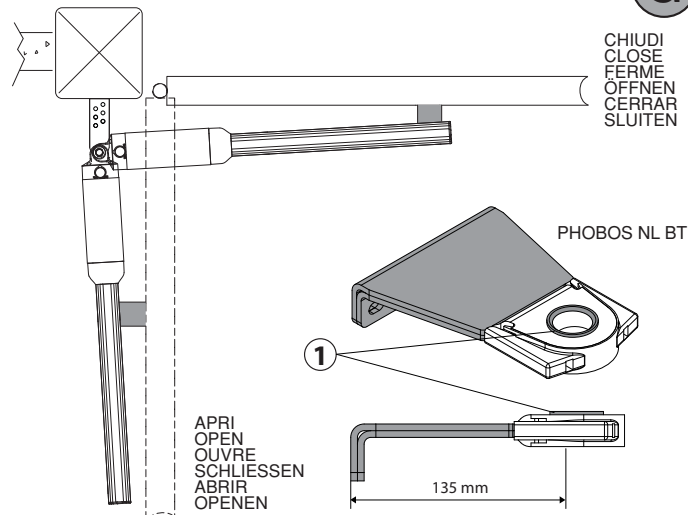
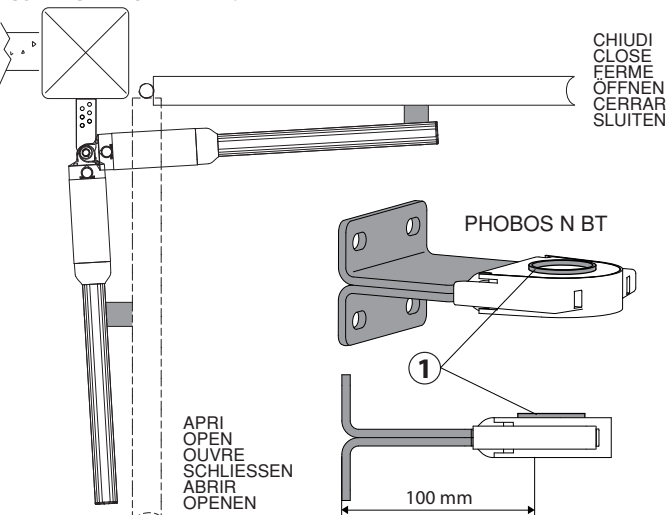
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F



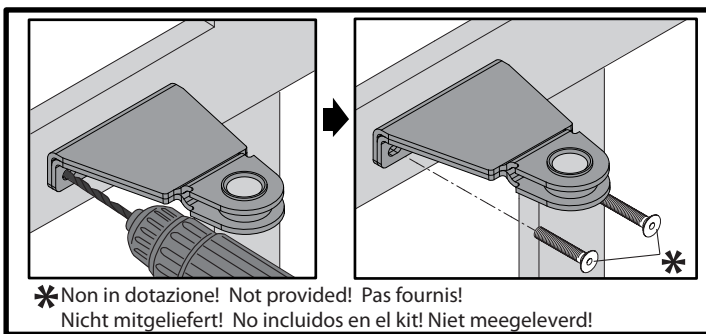
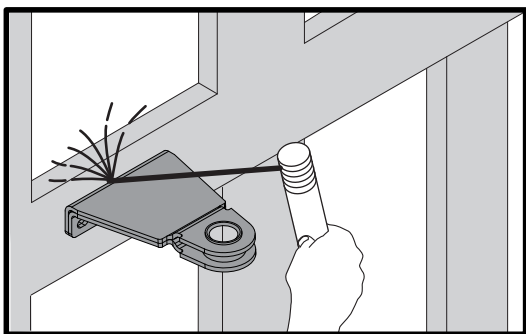
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G



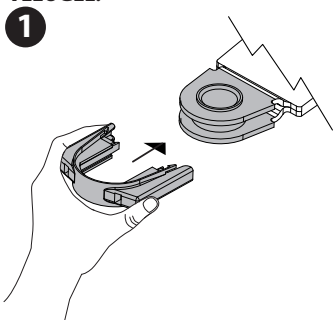
ANCORAGGI DEGLI ATTACCHI ALL'ANTA. FASTENING OF FITTINGS TO LEAF. ANCRAGES DES RACCORDEMENTS SUR LE VANTAIL. VERANKERUNGEN DER ANSCHLÜSSE AM FLÜGEL. ANCLAJES DE LAS FIJACIONES A LA HOJA. VERANKERING VAN DE BEVESTIGINGEN AAN DE VLEUGEL.

H



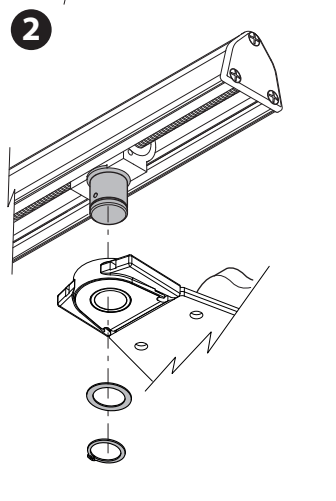
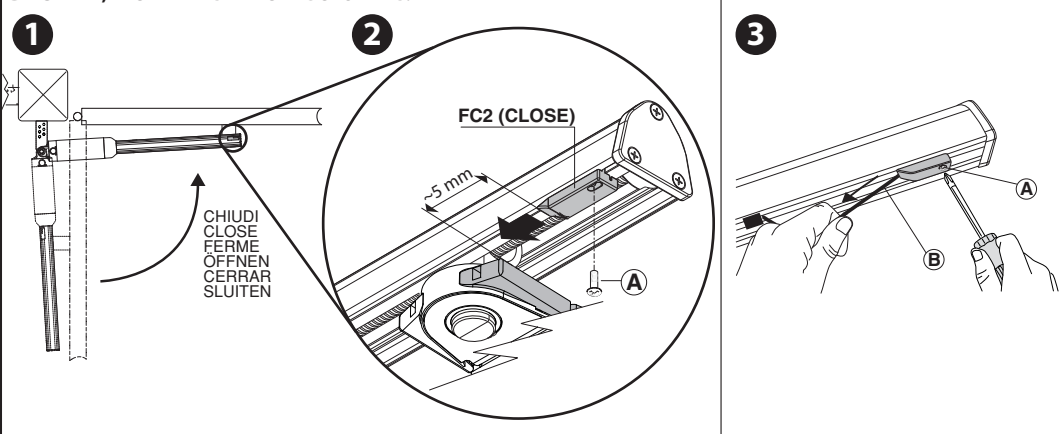
FISSAGGIO OPERATORE SULL'ANTA, OPERATOR ATTACHMENT ON DOOR, FIXATION DE L'ACTIONNEUR SUR LE VANTAIL, BEFESTIGUNG DES TRIEBES AM FLÜGEL, FIJACIÓN OPERADOR EN LA HOJA, BEVESTIGING BEDIENING OP DE VLEUGEL.

I



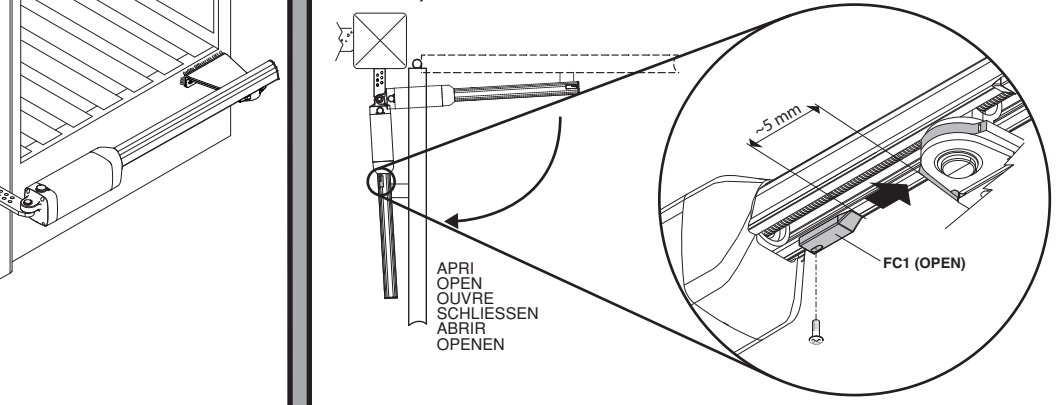
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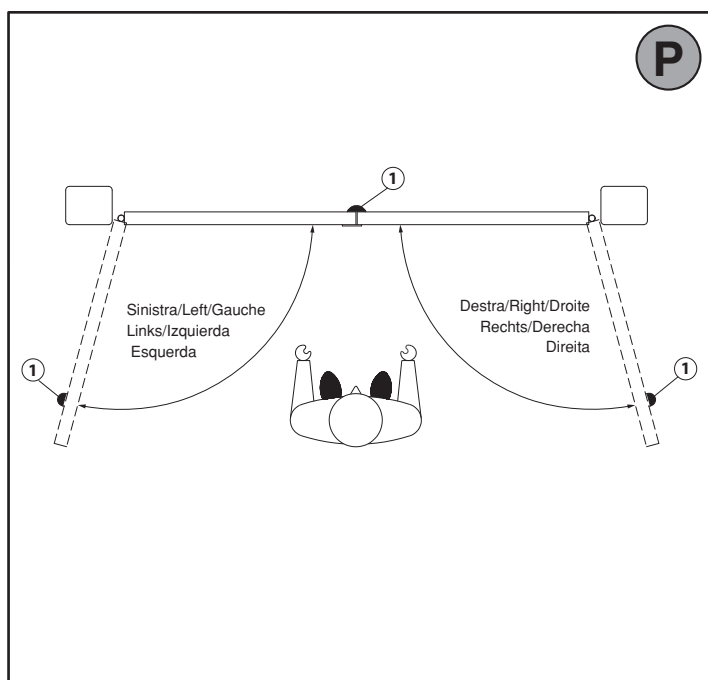
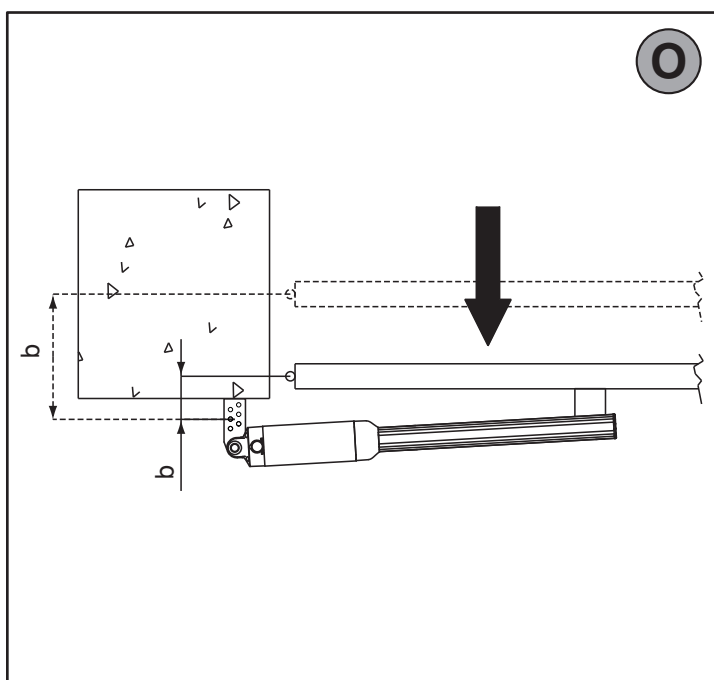
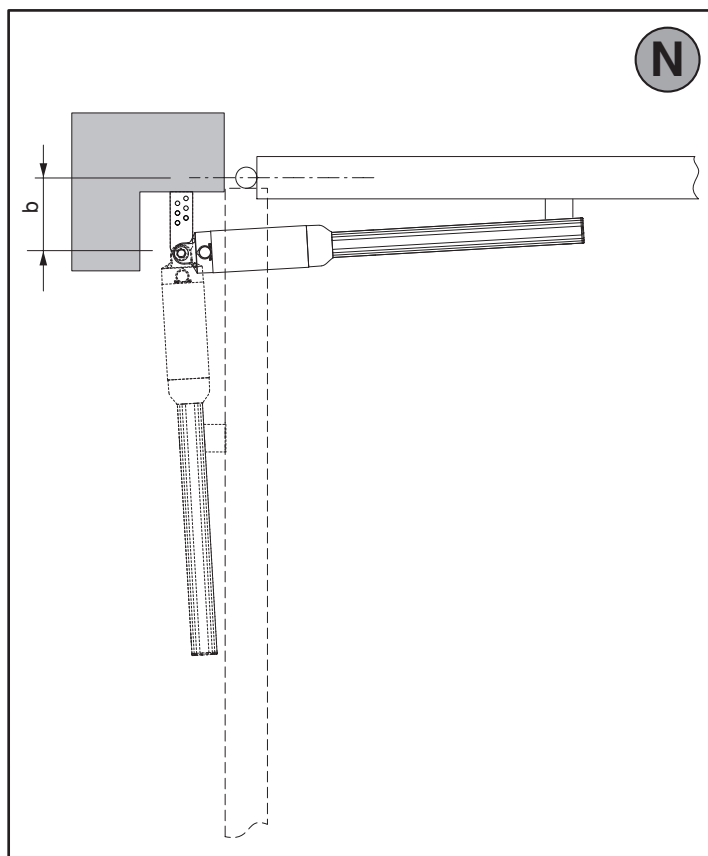
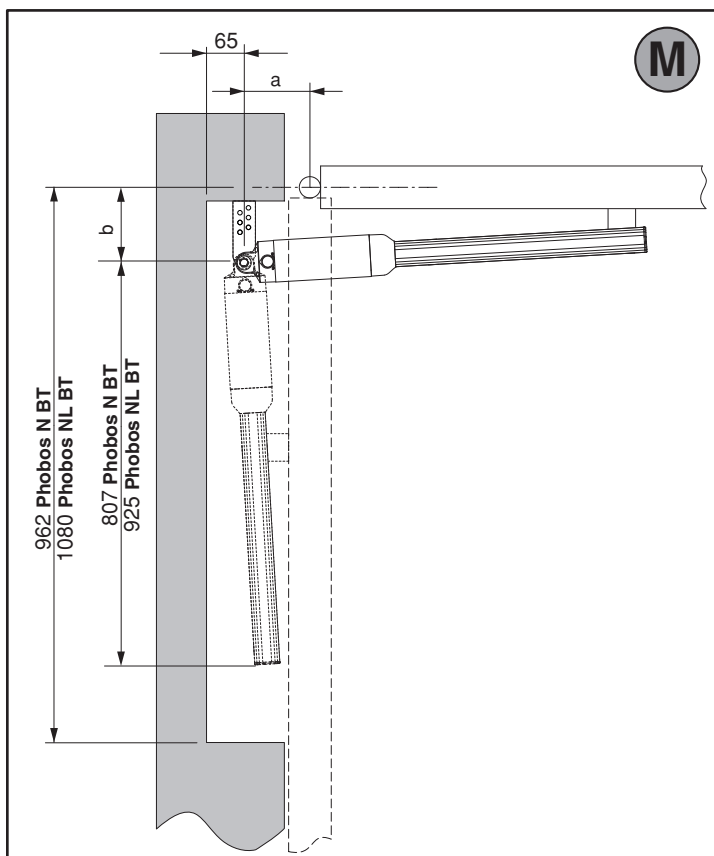
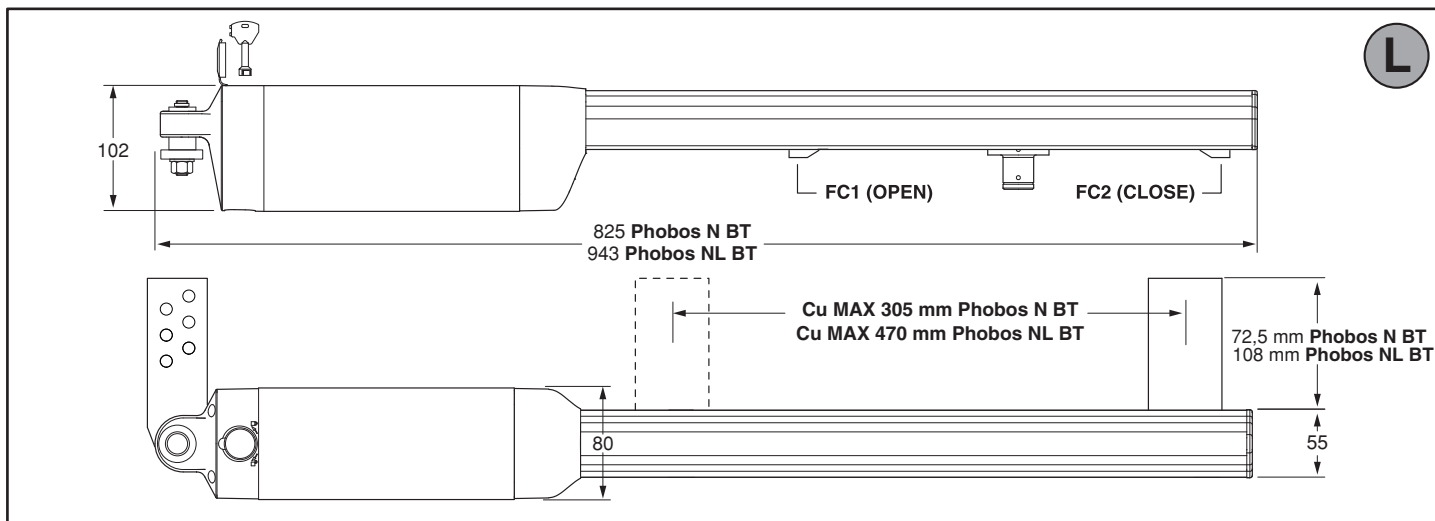
J



REGOLAZIONE FINECORSO DI APERTURA, OPENING LIMIT DEVICE ADJUSTMENT, RÉGLAGE DE LA FIN DE COURSE D'OUVERTURE, EINSTELLUNG DES ÖFFNUNGS-ENDSCHALTERS, REGULACIÓN DEL FIN DE CARRERA DE APERTURA, AFSTELLING EINDAANSLAG OPENING.

K





GENERAL WARNINGS

WARNING! Important safety instructions. Carefully read and comply with the Warnings booklet and Instruction booklet that come with the product as incorrect installation can cause injury to people and animals and damage to property. They contain important information regarding safety, installation, use and maintenance.

1) GENERAL SAFETY

WARNING! An incorrect installation or improper use of the product can cause damage to persons, animals or things.

- Scrap packing materials (plastic, cardboard, polystyrene etc) according to the provisions set out by current standards. Keep nylon or polystyrene bags out of children's reach.
- Keep the instructions together with the technical brochure for future reference.
- This product was exclusively designed and manufactured for the use specified in the present documentation. Any other use not specified in this documentation could damage the product and be dangerous.
- The Company declines all responsibility for any consequences resulting from improper use of the product, or use which is different from that expected and specified in the present documentation.
- Do not install the product in explosive atmosphere.
- The units making up the machine and its installation must meet the requirements of the following European Directives: 2004/108/EEC, 2006/95/EEC, 2006/42/EEC, 99/05/EEC (and later amendments). For all countries outside the EEC, it is advisable to comply with the above-mentioned standards, in addition to any national standards in force, to achieve a good level of safety.
- The Company declines all responsibility for any consequences resulting from failure to observe Good Technical Practice when constructing closing structures (door, gates etc.), as well as from any deformation which might occur during use.
- The installation must comply with the provisions set out by the following European Directives: 2004/108/EEC, 2006/95/EEC, 2006/42/EEC, 99/05/EEC and subsequent amendments.
- Disconnect the electrical power supply before carrying out any work on the installation. Also disconnect any buffer batteries, if fitted.
- Fit an omnipolar or magnetothermal switch on the mains power supply, having a contact opening distance equal to or greater than 3,5 mm.
- Check that a differential switch with a 0.03A threshold is fitted just before the power supply mains.
- Fit all the safety devices (photocells, electric edges etc.) which are needed to protect the area from any danger caused by squashing, conveying and shearing, according to and in compliance with the applicable directives and technical standards.
- Position at least one luminous signal indication device (blinker) where it can be easily seen, and fix a Warning sign to the structure.
- The Company declines all responsibility with respect to the automation safety and correct operation when other manufacturer's components are used.
- Only use original parts for any maintenance or repair operation.
- Do not modify the automation components, unless explicitly authorised by the Company.
- Instruct the product user about the control systems provided and the manual opening operation in case of emergency.
- Anything which is not expressly provided for in the present instructions, is not allowed.
- Installation must be carried out using the safety devices and controls prescribed by the EN 12978 Standard.

CHECKING INSTALLATION

Before the automated device is finally put into operation, perform the following checks meticulously:

- Make sure all components are fastened securely.
- Check that all safety devices (photocells, pneumatic safety edge, etc.) are working properly.
- Check the emergency operation control device.
- Check opening and closing operations with the control devices applied.
- Check the electronic logic for normal (or personalized) operation in the control panel.

ADJUSTING OPERATING FORCE

WARNING! Check that the force of impact measured at the points provided for by standard EN 12445 is lower than the value laid

down by standard EN 12453.

Operating force is adjusted with extreme precision by means of the control unit's electronic control. Operation at the end of travel is adjusted electronically in the control panel.

To provide good anti-crush safety, the operating force must be slightly greater than that required to move the leaf both to close and to open it. Whatever the case, the force, which is measured at the top outer edge of the leaf, must not exceed the limits laid down by the above-mentioned standards.

CONTROL

There are various options when it comes to the control system (manual, remote control, access control with magnetic badge, etc.) depending on the installation's needs and characteristics. See the relevant instructions for the various control system options.

People due to use the automated device must be instructed how to control and use it.

TROUBLESHOOTING

Gearbox malfunctioning

- Use an appropriate instrument to check for voltage across the gearbox motor terminals after giving the opening or closing command. If the motor vibrates but does not rotate, the problem may be:
- Incorrect wiring (see wiring diagram)
- If the leaf moves in the wrong direction, swap over the motor's start connections in the control unit.

The first command following a mains power outage should be open STOP LEAVES.

SCRAPPING

Materials must be disposed of in conformity with the current regulations. In case of scrapping, the automation devices do not entail any particular risks or danger. In case of recovered materials, these should be sorted out by type (electrical components, copper, aluminium, plastic etc.).

DISMANTLING

WARNING: before opening the door, the spring must be unloaded (vertical boom). When the automation system is disassembled to be reassembled on another site, proceed as follows:

- Disconnect the power supply and the entire electrical installation.
- Remove the actuator from its fixing base.
- Disassemble all the installation components.
- In the case where some of the components cannot be removed or are damaged, they must be replaced.

Correct controller operation is only ensured when the data contained in the present manual are observed. The Company is not to be held responsible for any damage resulting from failure to observe the installation standards and the instructions contained in the present manual. The descriptions and illustrations contained in the present manual are not binding. The Company reserves the right to make any alterations deemed appropriate for the technical, manufacturing and commercial improvement of the product, while leaving the essential product features unchanged, at any time and without undertaking to update the present publication.

2) GENERAL INFORMATION

Electromechanical operator designed to automate residential-type gates. The gearmotor keeps the gate locked on closing and on opening, without needing an electric lock for leaves up to 3 m long. For leaves ranging between 3m and 5m long, the electric lock becomes indispensable. The operator is provided with an electronic torque limiter. It must be controlled by an electronic control panel provided with torque setting. The end-of-stroke operation is controlled by two magnetic limit devices. The operator is provided with an obstacle detection system complying with EN12453 and EN 12445 standards.

The following optional accessories are available on request:

- Buffer battery kit mod. BT BAT

Allows operation of the automation even when there is no mains power supply for a short period of time.

3) TECHNICAL SPECIFICATIONS

PHOBOS N - NL BT	
Power supply	24V $\overline{\text{---}}$
Max. Absorbed power	40 W
Absorbed current	1,5 A
Push and pull force	2000 N (~200 kg)
Stem speed	15 mm/s approx.
Impact reaction	Torque limiter aboard control board
Limit devices	Magnetic, incorporated and adjustable
Manual manoeuvre	CLS release key
Environmental conditions	- 20°C a +50°C
Type of use	semi-intensive
Maximum leaf length without electric lock	1,8 m Phobos N BT 3 m Phobos NL BT
Maximum leaf length with electric lock	5 m Phobos NL BT
Max. leaf weight	2500 N (~250 kg)
Protection level	IP X4
Controller weight	50N (~5kg) PHOBOS N BT 77N (~7,7kg) PHOBOS NL BT
Dimensions	See Fig. L
Lubrication	permanent grease

4) TUBE ARRANGEMENT Fig. A

Install the electrical system referring to the standards in force for electrical systems CEI 64-8, IEC 364, harmonization document HD 384 and other national standards.

5) INSTALLATION DIAGRAM Fig. B

- P rear bracket fastening to pillar
- F front fork fastening leaf
- a-b distances for determining bracket "P" fastening point
- C value of fastening centre-to-centre distance
- D gate length
- X distance from gate axis to corner of pillar
- S half door thickness
- Z value always greater than 45 mm (b - X)
- kg max. weight of leaf
- α° leaf opening angle

6) PILLAR FASTENINGS INSTALLATION DISTANCES Fig. B Rif. 2-3

6.1) How to read the installation distance tables

Select "a" and "b" according to the angle in degrees α° that the gate has to open. The optimum "a" and "b" values for 92° opening at constant speed are highlighted. If there is too large a difference between "a" and "b", the leaf will not travel smoothly and the pushing or pulling force will fluctuate during its stroke. To respect the opening speed and ensure the controller operates correctly, it is best to keep the difference between "a" and "b" as low as possible. The table has been worked out for a 40 mm (PHOBOS NL BT), 20 mm (PHOBOS N BT) thick medium-size gate. Always check that there is no possible collision between the gate and the operator.

7) FASTENING OF FITTINGS TO PILLAR Fig. C

8) POWER CABLE Fig. D

The board power supply cable must be of the H 05 RN-F type or equivalent. The equivalent cable must guarantee:

- permanent outside use
- maximum temperature on the cable surface of +50° C
- minimum temperature of -25° C

9) ATTACHING MOTOR TO FASTENING ON PILLAR Fig. E

10) MAXIMUM TILT Fig. F

11) CORRECT INSTALLATION Fig. G

Correct installation entails maintaining a rod stroke margin of approx. 5-10 mm to avoid possible trouble with operation.

12) FASTENING OF FITTINGS TO LEAF Fig. H

IMPORTANT: the front bracket must be fitted with the bush collar protruding UPWARDS (Fig. G Ref. 1).

13) OPERATOR ATTACHMENT ON DOOR Fig. I

14) CLOSING LIMIT DEVICE ADJUSTMENT Fig. J

ATTENTION! To avoid braking the limit switch cable, tighten screw A keeping the wire B well tightened (as shown in Fig. J Rif. 3).

15) OPENING LIMIT DEVICE ADJUSTMENT (Fig. K)

16) DIMENSIONS Fig. L

17) TIPS FOR SPECIAL INSTALLATIONS Fig. M, N, O.

With the leaf fully open, create a recess to accommodate the operator.

Fig. M gives the minimum dimensions of the recess for the various **PHOBOS N BT - PHOBOS N L BT** models.

If distance "b" is greater than the values given in the installation tables:

- create a recess in the pillar **Fig. N**
- move the leaf so that it is flush with the pillar **Fig. O**.

18) LEAF STOPS AT GROUND LEVEL

For the actuator to work properly, it is advisable to use stops "Fig. P Rif. 1" to stop the leaves both when they are open and closed, as illustrated in **Fig. P**. The leaf stops must prevent the actuator rod from reaching the end of its travel.

19) MANUAL OPENING (See USER GUIDE -FIG.Y-).

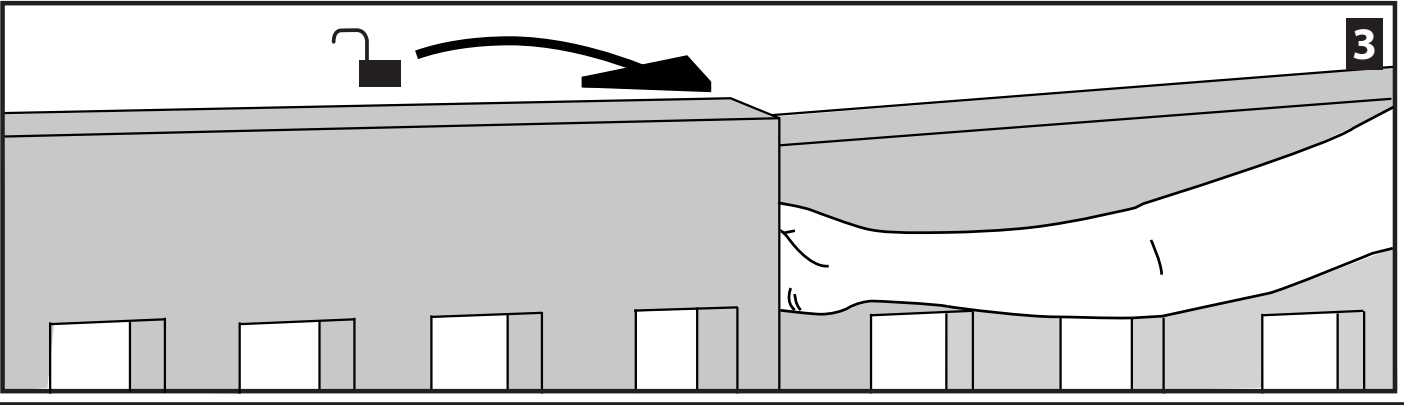
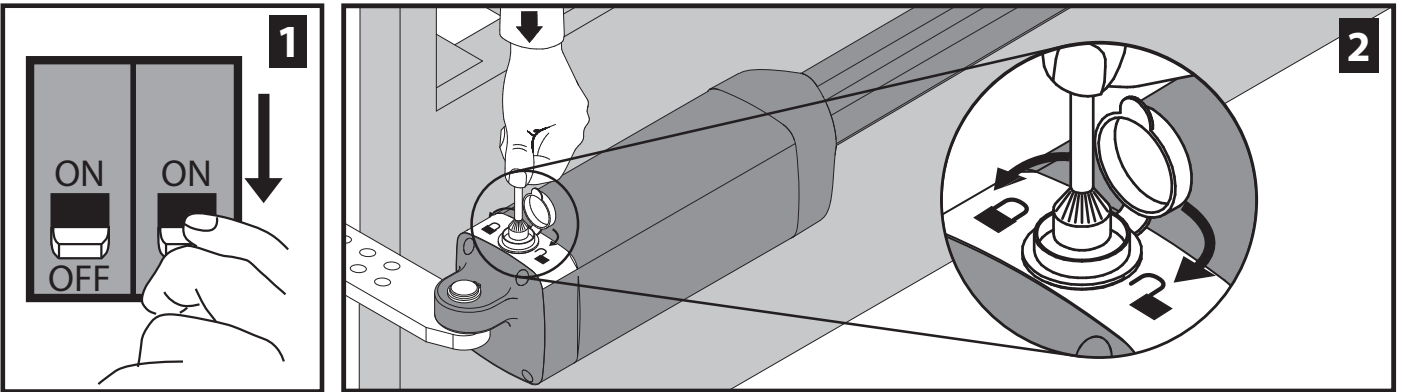
20) ELECTRIC LOCK

 **WARNING: In the case of leaves longer than 3m, it is indispensable to install a solenoid latch.**

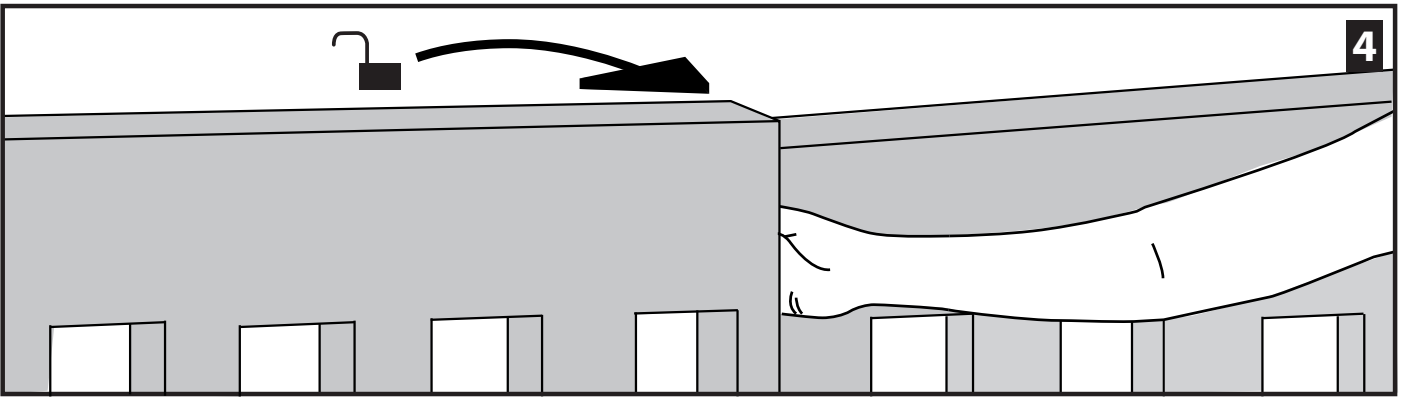
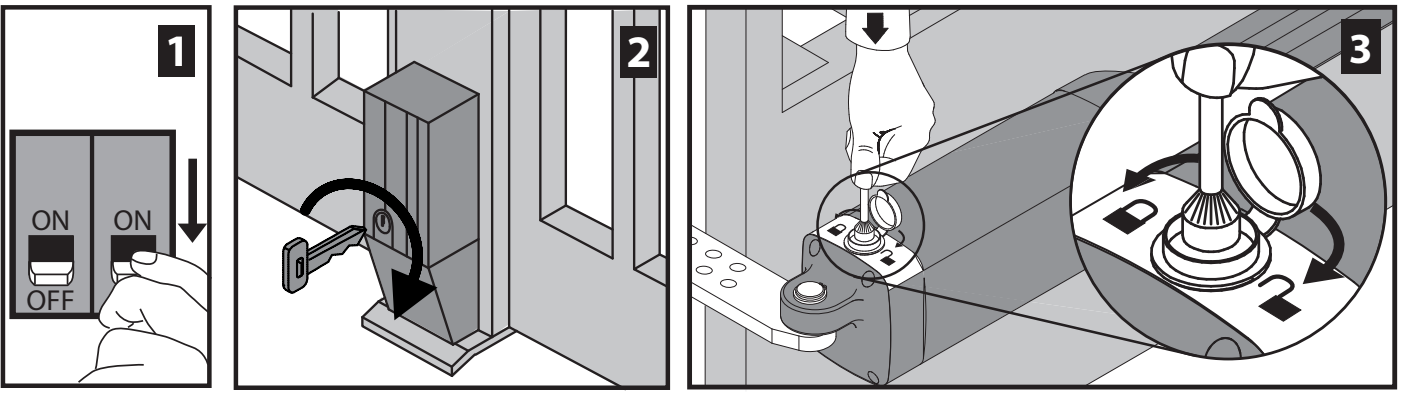
For electric lock connection, the optional board is required (refer to the appropriate instruction).

FIG. Y

Senza Elettroserratura, Without electric lock, Sans serrure électrique, Ohne Elektroschloß, Sin electrocerradura, Zonder elektrische sluiting.



Con Elettroserratura, With electric lock, Avec serrure électrique, Mit Elektroschloß, Con electrocerradura, Met elektrische sluiting.



Nel ringraziarVi per la preferenza accordata a questo prodotto, la Ditta è certa che da esso otterrete le prestazioni necessarie al Vostro uso. Leggete attentamente l'opuscolo "AVVERTENZE" ed il "LIBRETTO ISTRUZIONI" che accompagnano questo prodotto in quanto forniscono importanti indicazioni riguardanti la sicurezza, l'installazione, l'uso e la manutenzione. Questo prodotto risponde alle norme riconosciute della tecnica e della disposizioni relative alla sicurezza. Confermiamo che è conforme alle seguenti direttive europee: 2004/108/CEE, 2006/95/CEE, 2006/42/CEE, 99/05/CEE (e loro modifiche successive).

1) SICUREZZA GENERALE

ATTENZIONE **Importanti istruzioni di sicurezza. Leggere e seguire attentamente l'opuscolo Avvertenze ed il Libretto istruzioni che accompagnano il prodotto poiché un uso improprio può causare danni a persone, animali o cose. Conservare le istruzioni per consultazioni future.**

Questo prodotto è stato progettato e costruito esclusivamente per l'utilizzo indicato in questa documentazione. Usi non indicati potrebbero essere fonte di danni al prodotto e fonte di pericolo.

- Gli elementi costruttivi della macchina e l'installazione devono essere in accordo con le seguenti Direttive Europee: 2004/108/CE, 2006/95/CE, 2006/42/CE, 89/106/CE e loro modifiche successive. Per tutti i Paesi extra CEE, oltre alle norme nazionali vigenti, per un buon livello di sicurezza è opportuno rispettare anche le norme citate.
- La Ditta declina qualsiasi responsabilità derivante da un uso improprio o diverso da quello per cui è destinato ed indicato nella presente documentazione nonché dall'inosservanza della Buona Tecnica nella costruzione delle chiusure (porte, cancelli, ecc.) e dalle deformazioni che potrebbero verificarsi durante l'uso.
- L'automazione, se installata ed utilizzata correttamente, soddisfa il grado di sicurezza richiesto. Tuttavia è opportuno osservare alcune regole di comportamento per evitare inconvenienti accidentali:
- Tenere bambini, persone e cose fuori dal raggio d'azione dell'automazione, in particolare durante il funzionamento.
- Poiché l'automazione può essere comandata a distanza e quindi non a vista, è indispensabile controllare frequentemente la perfetta efficienza di tutti i dispositivi di sicurezza.
- Quest' applicazione non è destinata all'uso da parte di persone (inclusi i bambini) con ridotte capacità mentali, fisiche e sensoriali, o persone che mancano di conoscenze adeguate, a meno che non siano sotto supervisione o abbiano ricevuto istruzioni d'uso da persone responsabili della loro sicurezza.
- I bambini devono essere controllati affinché non giochino con l'applicazione. Non lasciare radiocomandi o altri dispositivi di comando alla portata dei bambini onde evitare azionamenti involontari.
- Controllare spesso l'impianto, in particolare cavi, molle o supporti per scoprire eventuali sbilanciamenti e segni di usura o danni.
- Per ogni operazione di pulizia esterna o altra manutenzione, togliere l'alimentazione di rete
- Tenere pulite le ottiche delle fotocellule ed i dispositivi di segnalazione luminosa. Controllare che rami ed arbusti non disturbino i dispositivi di sicurezza (fotocellule).
- Non utilizzare l'automatismo se necessita di interventi di riparazione. In caso di malfunzionamento, togliere l'alimentazione, attivare lo sblocco di emergenza per consentire l'accesso e richiedere l'intervento di un tecnico qualificato (installatore professionale).
- Per qualsiasi intervento diretto all'automazione, avvalersi di personale qualificato (installatore professionale).
- Annualmente far controllare l'automazione da personale qualificato.
- Tutto quello che non è espressamente previsto in queste istruzioni, non è permesso.
- Il buon funzionamento dell'operatore è garantito solo se vengono rispettati i dati riportati in questo manuale. La ditta non risponde dei danni causati dall'inosservanza delle norme di installazione e delle indicazioni riportate in questo manuale.
- Le descrizioni e le illustrazioni del presente manuale non sono impegnative. Lasciando inalterate le caratteristiche essenziali del prodotto, la Ditta si riserva di apportare in qualunque momento le modifiche che essa ritiene convenienti per migliorare tecnicamente, costruttivamente e commercialmente il prodotto, senza impegnarsi ad aggiornare la presente pubblicazione.

Thank you for choosing this product. The Firm is confident that its performance will meet your operating needs. Carefully read the "WARNINGS" booklet and "INSTRUCTION BOOKLET" that come with this product as they provide important information regarding safety, installation, use and maintenance. This product meets recognized technical standards and complies with safety provisions. We hereby confirm that it is in conformity with the following European directives: 2004/108/EEC, 2006/95/EEC, 2006/42/EEC, 99/05/EEC (and later amendments).

1) GENERAL SAFETY

WARNING **Important safety instructions. Carefully read and comply with the Warnings booklet and instruction booklet that come with the product as improper use can cause injury to people and animals and damage to property. Keep hold of instructions for future reference.**

This product has been designed and built solely for the purpose indicated herein. Uses not contemplated herein might result in the product being damaged and could be a source of danger.

- The units making up the machine and its installation must meet the requirements of the following European Directives: 2004/108/EC, 2006/95/EC, 2006/42/EC, 89/106/EC and later amendments. For all countries outside the EEC, it is advisable to comply with the standards mentioned, in addition to any national standards in force, to achieve a good level of safety.
- The Firm disclaims all responsibility resulting from improper use or any use other than that for which the product has been designed, as indicated herein, as well as for failure to apply Good Practice in the construction of entry systems (doors, gates, etc.) and for deformation that could occur during use.
- If installed and used correctly, the automated system will meet the required level of safety. Nonetheless, it is advisable to observe certain rules of behaviour so that accidental problems can be avoided:
- Keep adults, children and property out of range of the automated system, especially while it is operating.
- As automation can be remotely controlled and therefore not within sight, it is essential to frequently check that all safety devices are perfectly efficient.
- This application is not meant for use by people (including children) with impaired mental, physical or sensory capacities, or people who do not have suitable knowledge, unless they are supervised or have been instructed by people who are responsible for their safety.
- Children must be supervised to ensure they do not play with the application. Keep remote controls or other control devices out of reach of children in order to avoid the automated system being operated inadvertently.
- Check the system frequently, especially cables, springs or supports, to detect any loss of balance and signs of wear or damage.
- When cleaning the outside or performing other maintenance work, always cut off mains power.
- Keep the photocells' optics and illuminating indicator devices clean. Check that no branches or shrubs interfere with the safety devices (photocells).
- Do not use the automated system if it is in need of repair. In the event of a malfunction, cut off the power, activate the emergency release to allow access and call in qualified technical personnel (professional installer).
- If the automated system requires work of any kind, employ the services of qualified personnel (professional installer).
- Have the automated system checked by qualified personnel once a year.
- Anything that is not explicitly provided for in these instructions is not allowed.
- The operator's proper operation can only be guaranteed if the information given herein is complied with. The Firm shall not be answerable for damage caused by failure to comply with the installation rules and instructions featured herein.
- Descriptions and illustrations herein are not binding. While we will not alter the product's essential features, the Firm reserves the right, at any time, to make those changes deemed opportune to improve the product from a technical, design or commercial point of view, and will not be required to update this publication accordingly.

