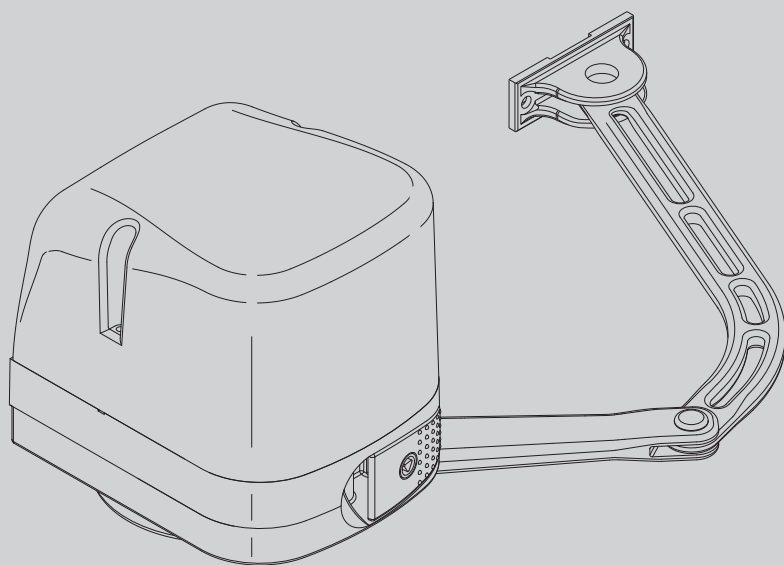




AUTOMAZIONI A BRACCIO PER CANCELLI A BATTENTE
 ARM AUTOMATIONS FOR SWING GATES
 AUTOMATIONS A BRAS POUR PORTAILS BATTANTS
 ARM AUTOMATIONEN FÜR FLÜGELGITTERTÜRE
 AUTOMATIZACIONES A BRAZO PARA PORTONES CON BATIENTE
 AUTOMATIZAÇÕES DE BRAÇO PARA PORTÕES DE BATENTE



ISTRUZIONI DI INSTALLAZIONE
 INSTALLATION MANUAL
 INSTRUCTIONS D'INSTALLATION
 MONTAGEANLEITUNG
 INSTRUCCIONES DE INSTALACION
 INSTRUÇÕES DE USO E DE INSTALAÇÃO

VIRGO

BFT



((€R-Ready))

AZIENDA CON SISTEMA DI GESTIONE
 INTEGRATO CERTIFICATO DA DNV
 = UNI EN ISO 9001:2008 =
 UNI EN ISO 14001:2004

Fig. 1

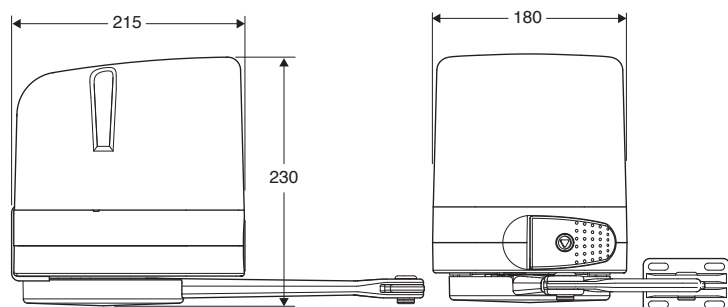


Fig. 2

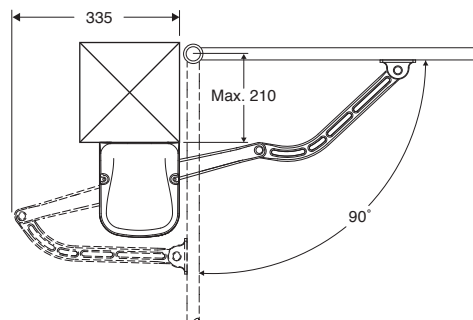


Fig. 3

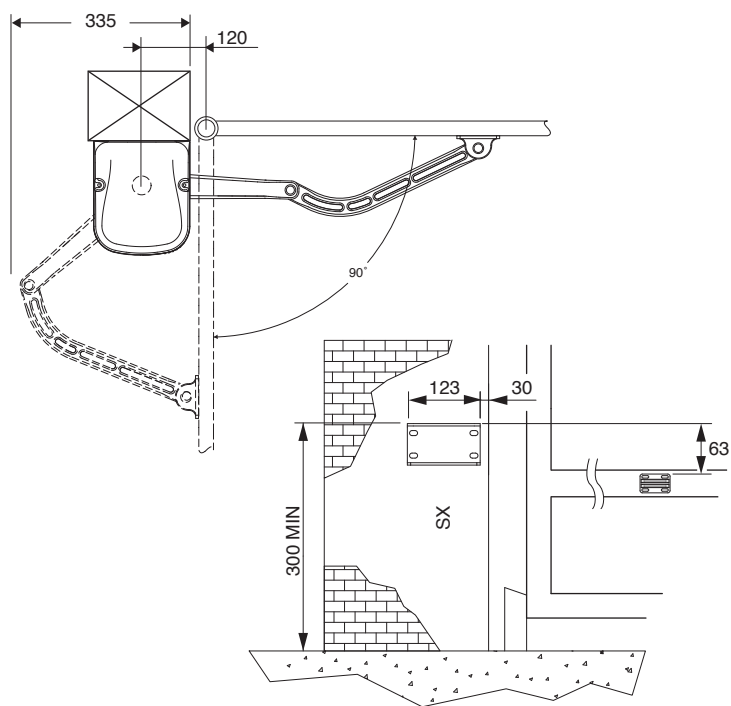


Fig. 5

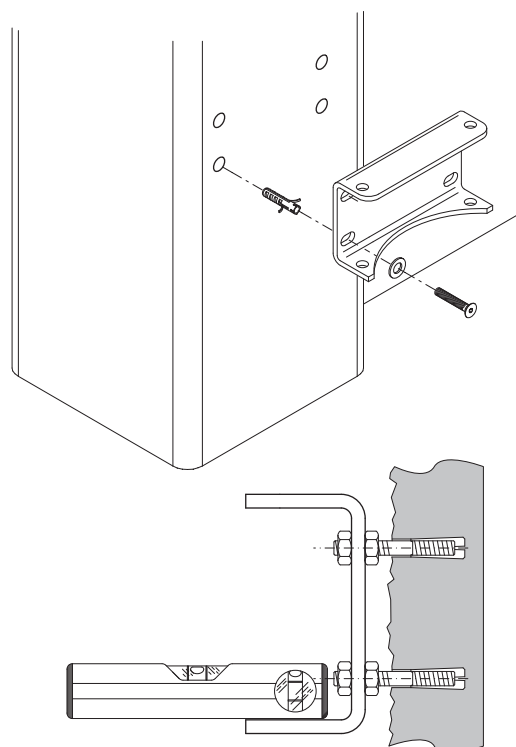


Fig. 4

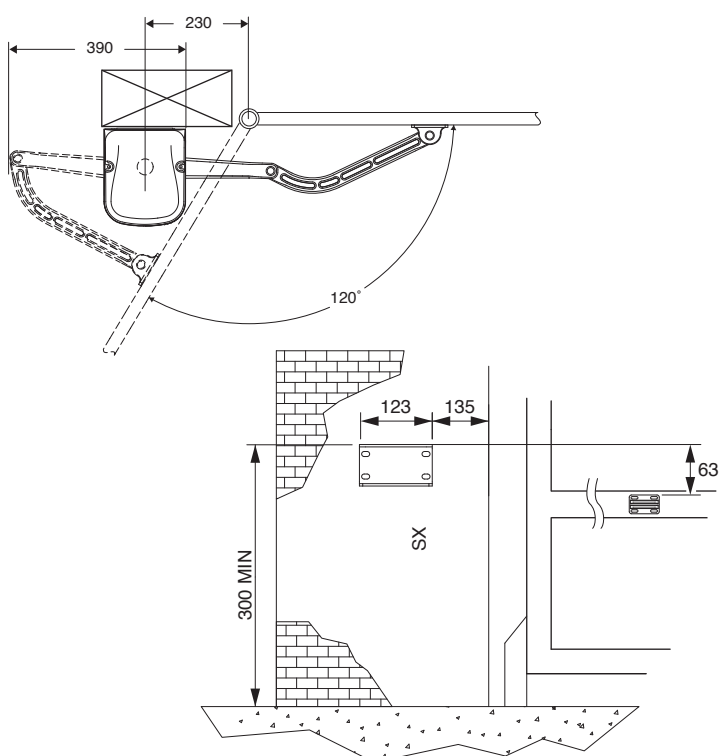


Fig. 6

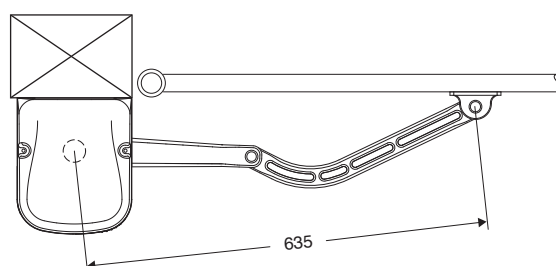


Fig. 7

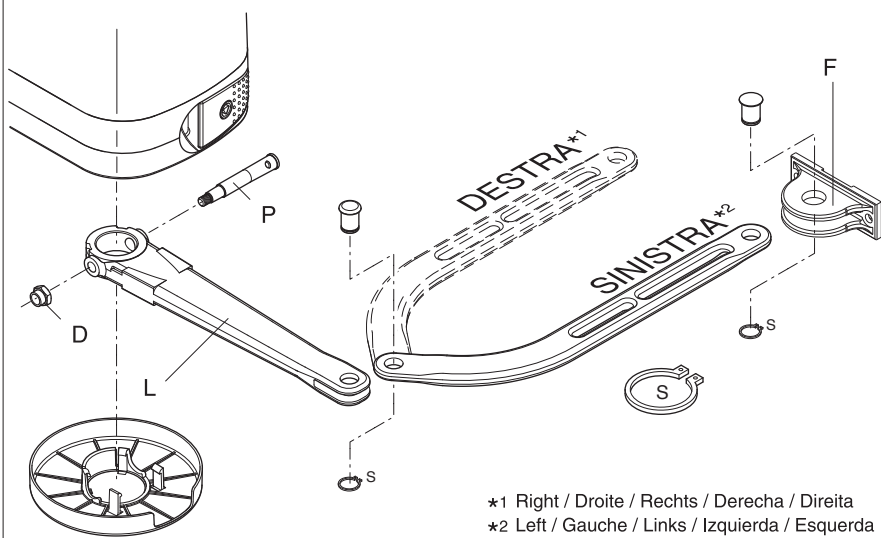


Fig. 8

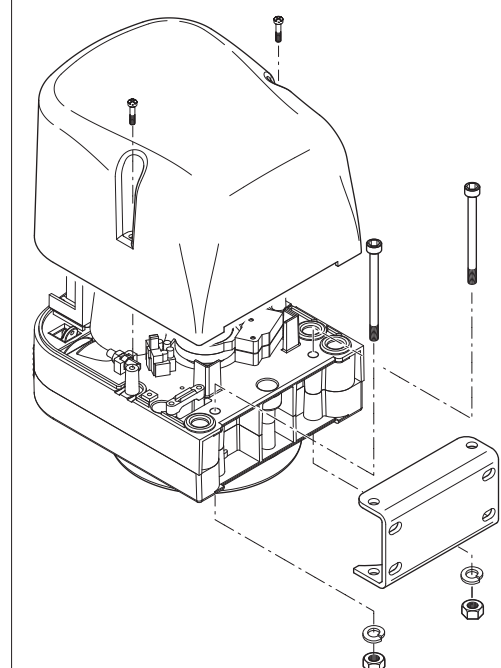


Fig. 9

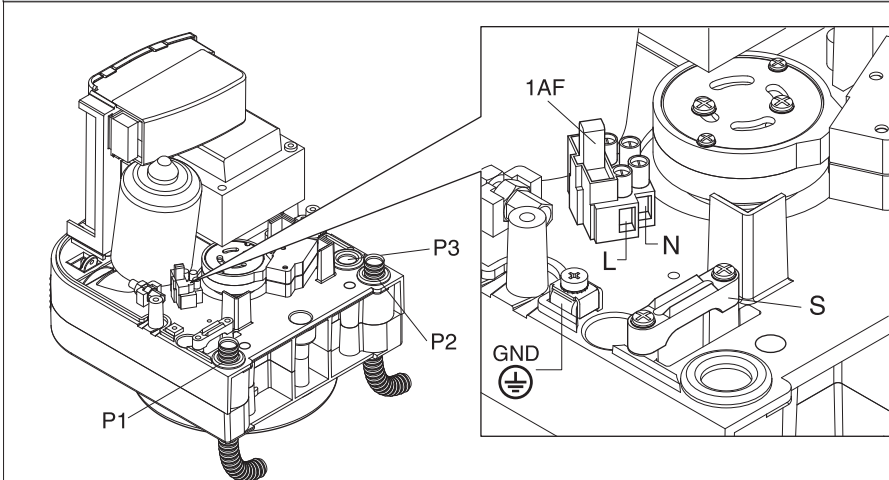


Fig. 10

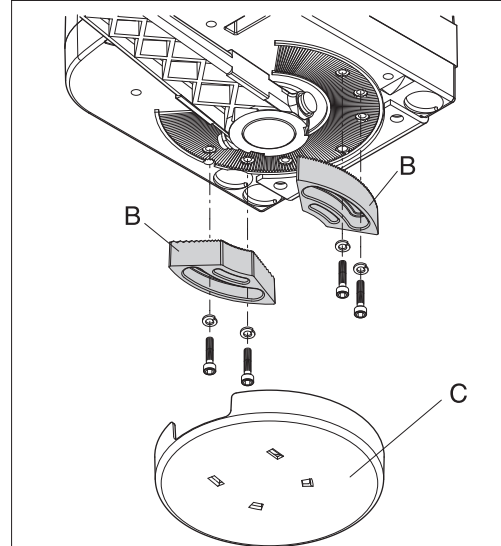


Fig. 11

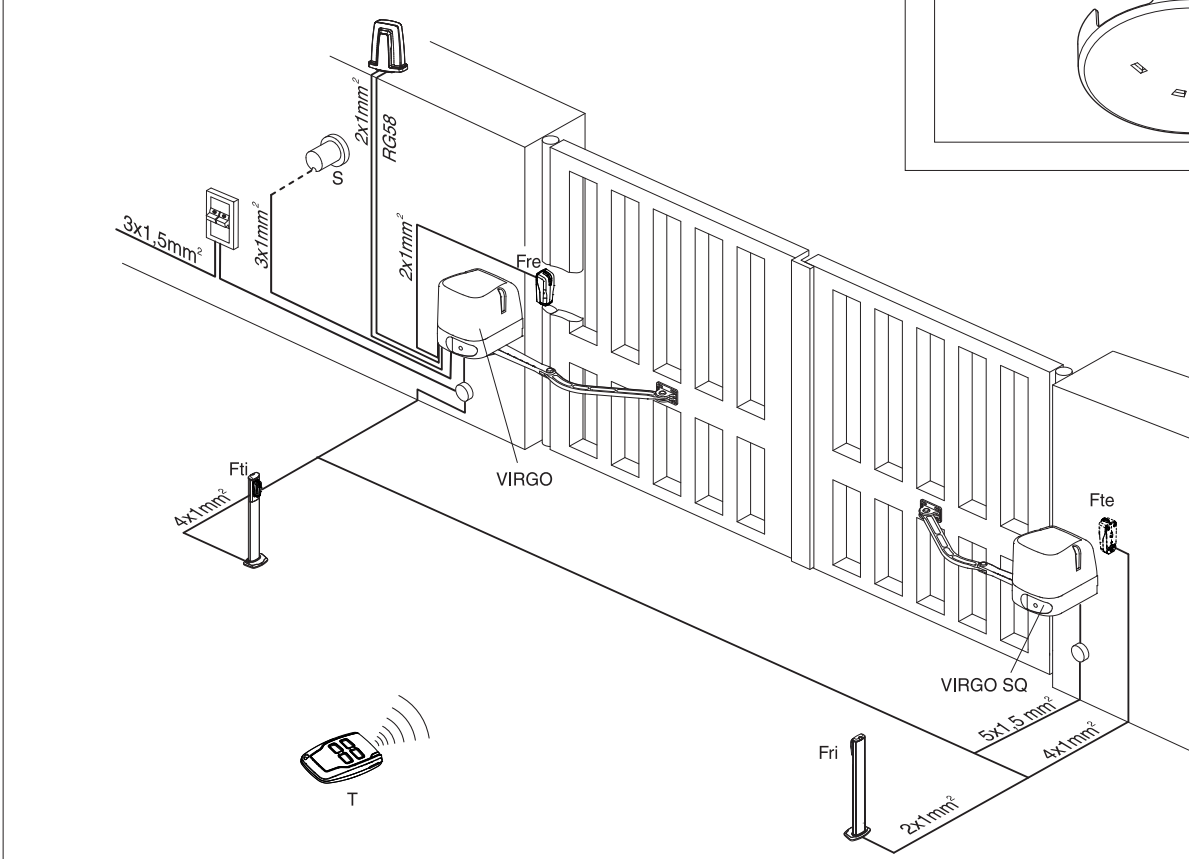
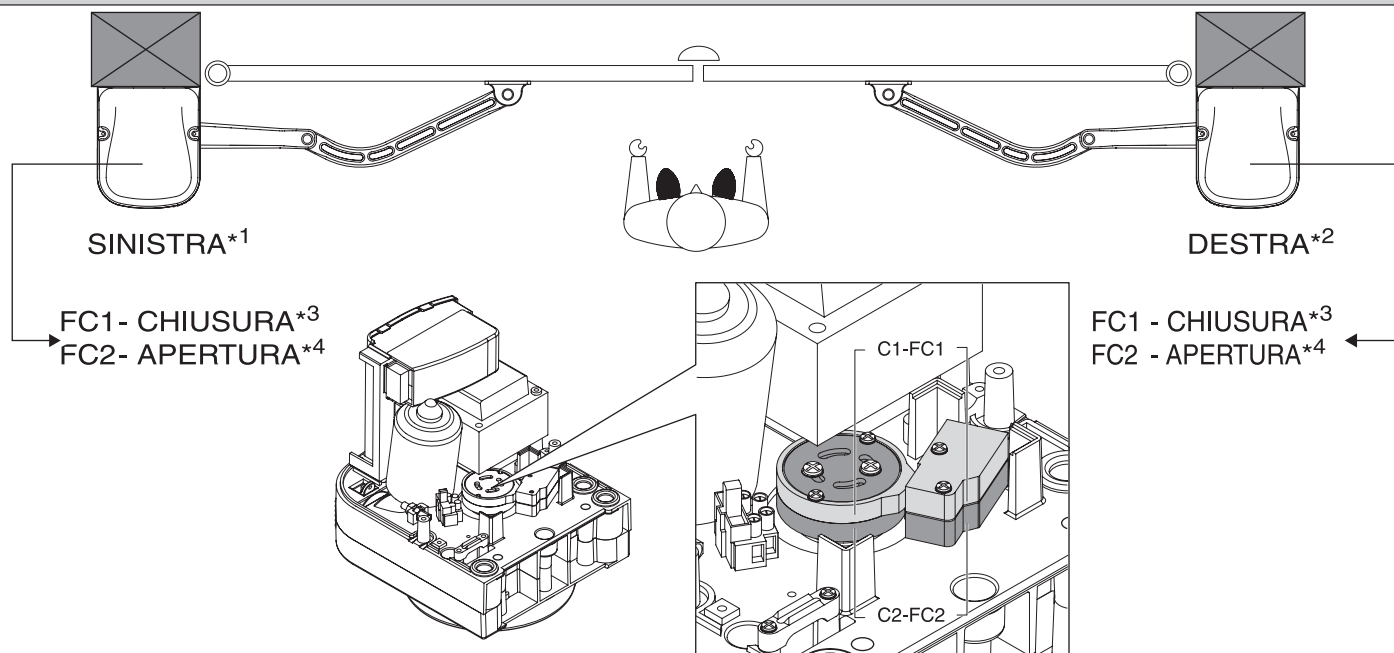


Fig. 12



*1 Sinistra / Left / Gauche / Links / Izquierda / Esquerda

*2 Destra / Right / Droite / Rechts / Derecha / Direita

*3 CHIUSURA / CLOSING / FERMETURE / SCHLISSUNG / CIERRE / FECHO

*4 APERTURA / OPENING / OUVERTURE / ÖFFNUNG / APERTURA / ABERTURA

Fig. 13

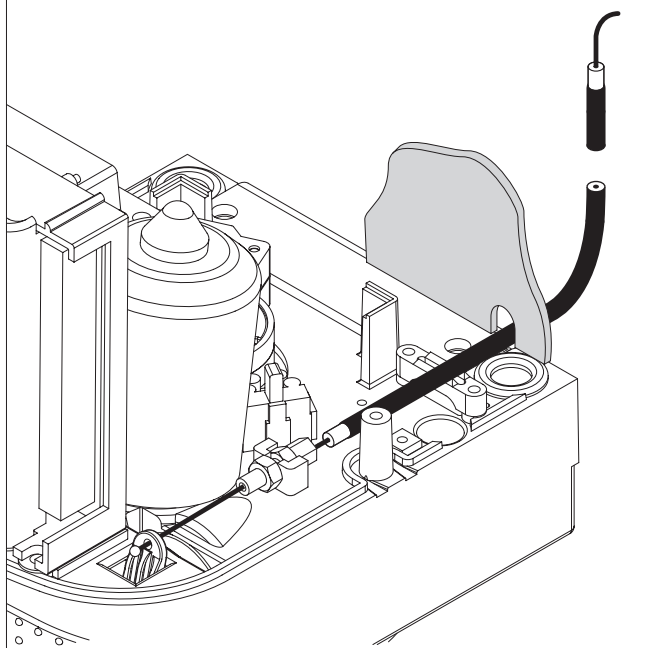


Fig. 14

VIRGO BAT

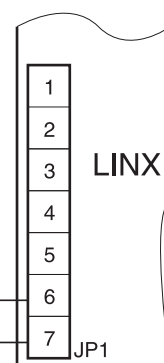
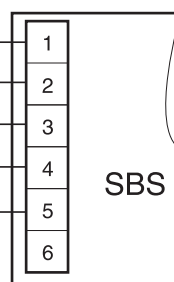
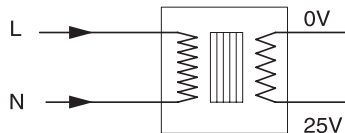
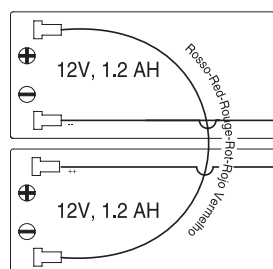
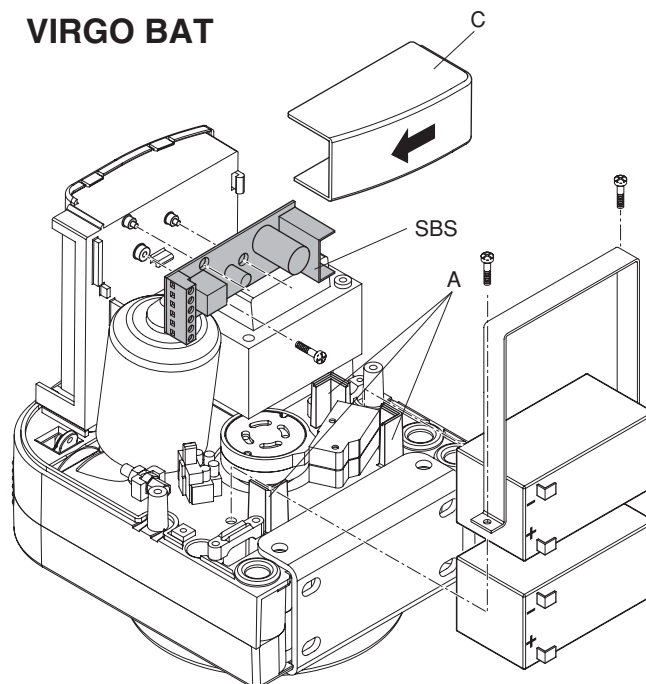


Fig. 15

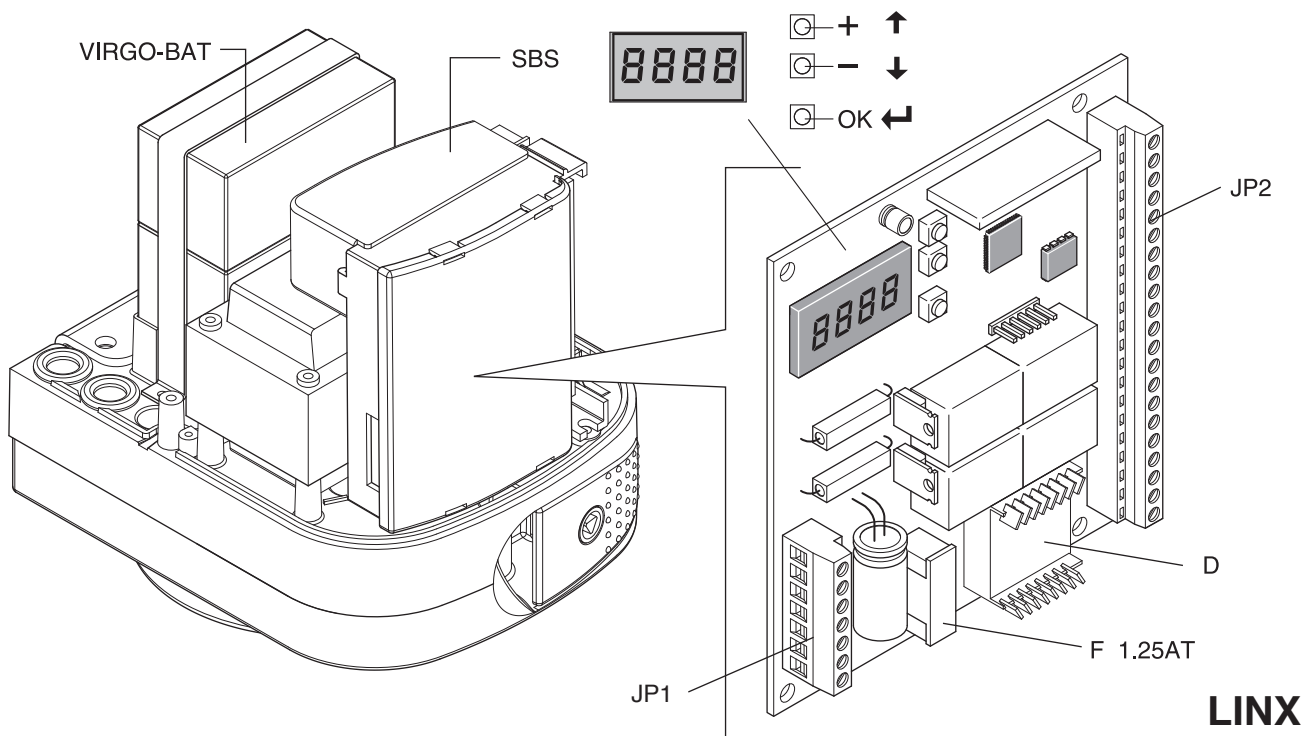


Fig. 16

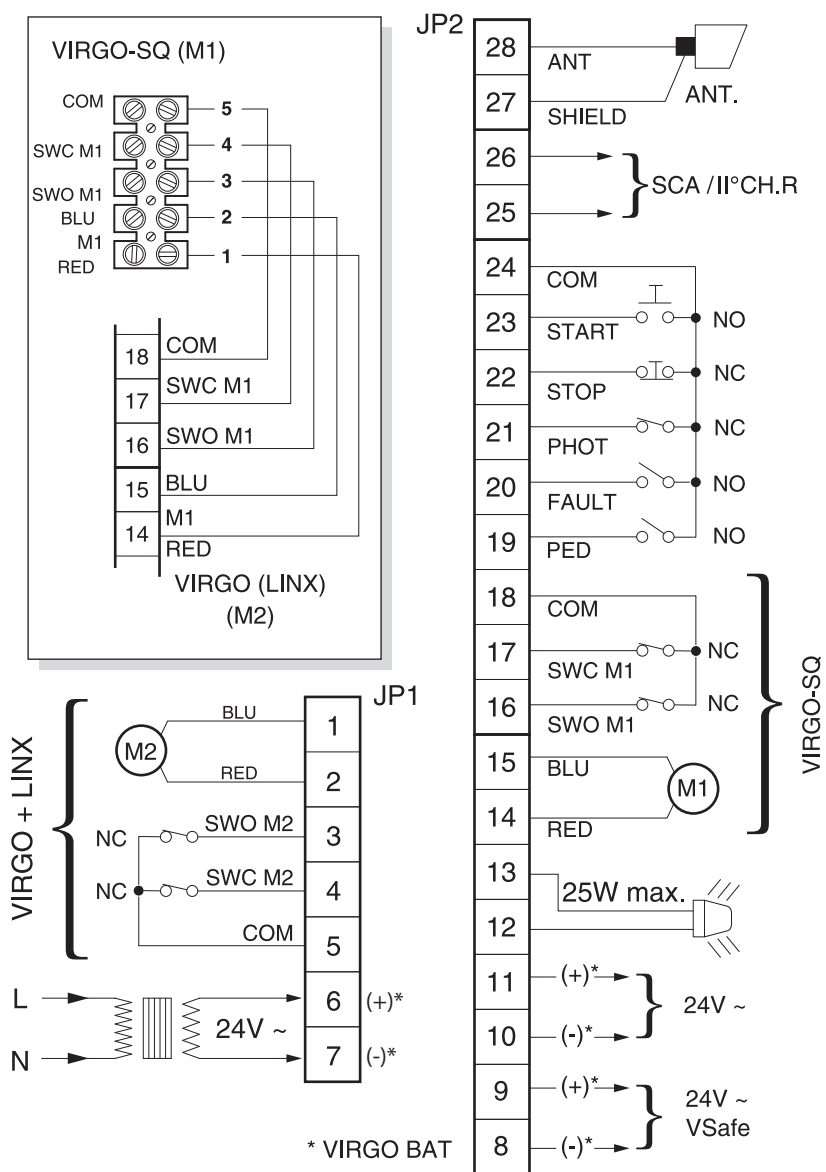


Fig. 17

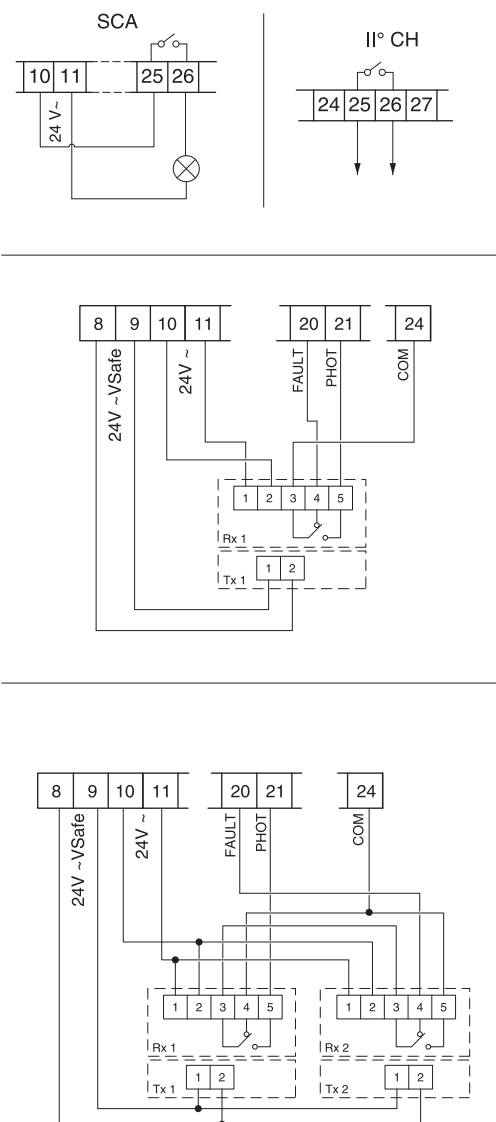


Fig. 18

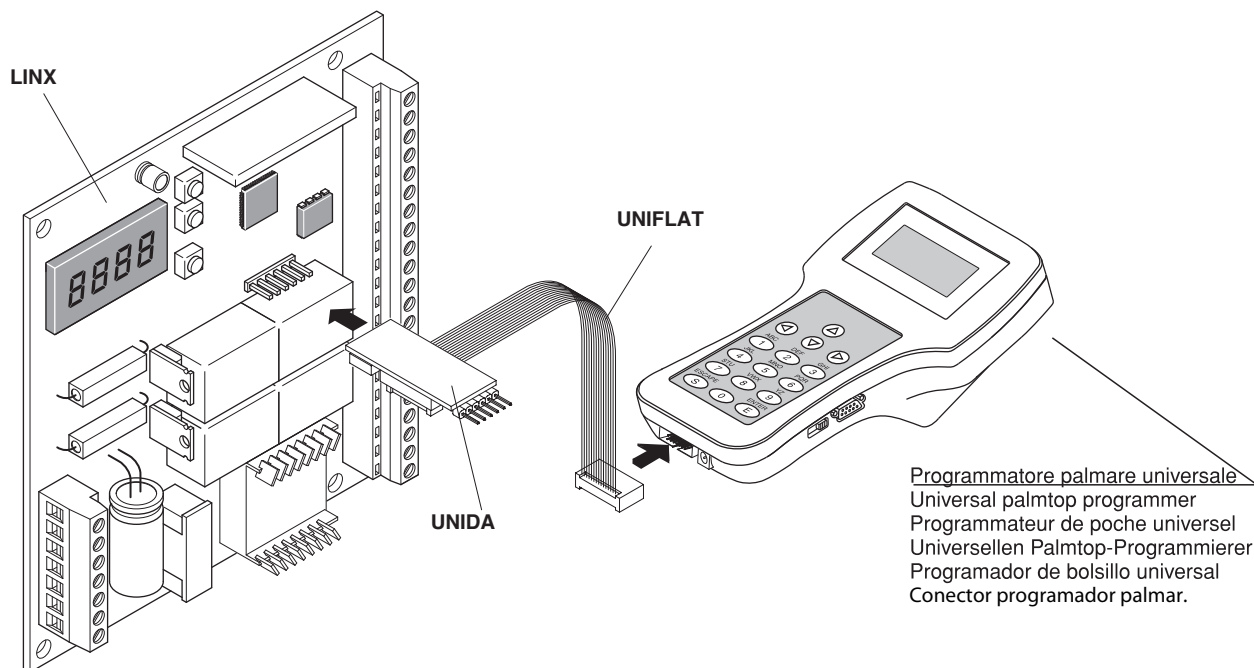
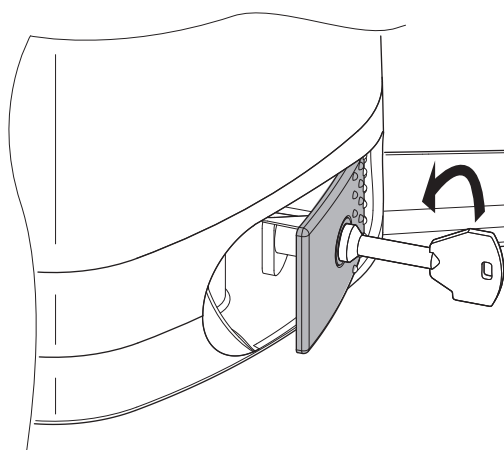
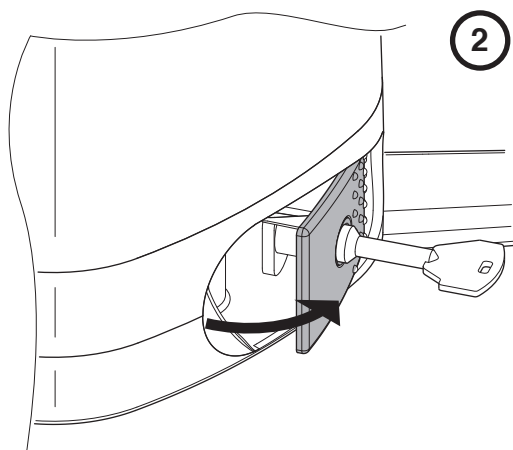
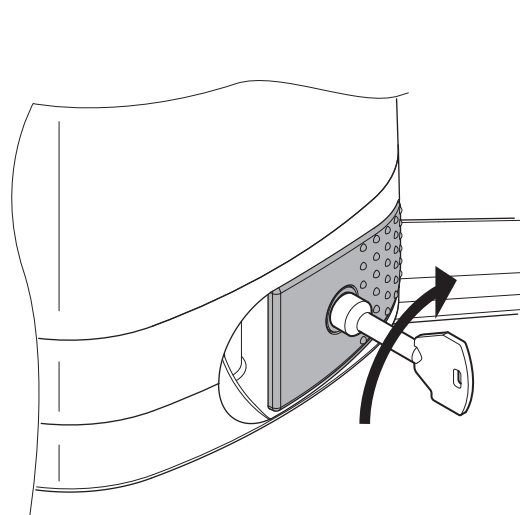
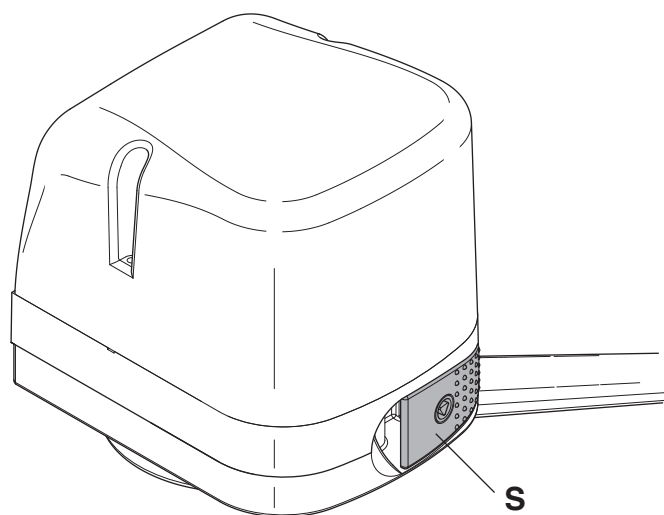


Fig. 19







INSTALLER WARNINGS

WARNING! Important safety instructions. Carefully read and comply with all the warnings and instructions that come with the product as incorrect installation can cause injury to people and animals and damage to property. The warnings and instructions give important information regarding safety, installation, use and maintenance. Keep hold of instructions so that you can attach them to the technical file and keep them handy for future reference.

GENERAL SAFETY

This product has been designed and built solely for the purpose indicated herein. Uses other than those indicated herein might cause damage to the product and create a hazard.

- The units making up the machine and its installation must meet the requirements of the following European Directives, where applicable: 2004/108/EC, 2006/95/EC, 2006/42/EC, 89/106/EC, 99/05/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 Manufacturer of this product (hereinafter referred to as 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.
- Installation must be carried out by qualified personnel (professional installer, according to EN 12635), in compliance with Good Practice and current code.
- Before installing the product, make all structural changes required to produce safety gaps and to provide protection from or isolate all crushing, shearing and dragging hazard areas and danger zones in general in accordance with the provisions of standards EN 12604 and 12453 or any local installation standards. Check that the existing structure meets the necessary strength and stability requirements.
- Before commencing installation, check the product for damage.
- The Firm is not responsible for failure to apply Good Practice in the construction and maintenance of the doors, gates, etc. to be motorized, or for deformation that might occur during use.
- Make sure the stated temperature range is compatible with the site in which the automated system is due to be installed.
- Do not install this product in an explosive atmosphere: the presence of flammable fumes or gas constitutes a serious safety hazard.
- Disconnect the electricity supply before performing any work on the system. Also disconnect buffer batteries, if any are connected.
- Before connecting the power supply, make sure the product's ratings match the mains ratings and that a suitable residual current circuit breaker and overcurrent protection device have been installed upline from the electrical system. Have the automated system's mains power supply fitted with a switch or omnipolar thermal-magnetic circuit breaker with a contact separation that provide full disconnection under overvoltage category III conditions.
- Make sure that upline from the mains power supply there is a residual current circuit breaker that trips at no more than 0.03A as well as any other equipment required by code.
- Make sure the earth system has been installed correctly: earth all the metal parts belonging to the entry system (doors, gates, etc.) and all parts of the system featuring an earth terminal.
- Installation must be carried out using safety devices and controls that meet standards EN 12978 and EN 12453.
- Impact forces can be reduced by using deformable edges.
- In the event impact forces exceed the values laid down by the relevant standards, apply electro-sensitive or pressure-sensitive devices.
- Apply all safety devices (photocells, safety edges, etc.) required to keep the area free of impact, crushing, dragging and shearing hazards. Bear in mind the standards and directives in force, Good Practice criteria, intended use, the installation environment, the operating logic of the system and forces generated by the automated system.
- Apply all signs required by current code to identify hazardous areas (residual risks). All installations must be visibly identified in compliance with the provisions of standard EN 13241-1.
- Once installation is complete, apply a nameplate featuring the door/gate's data.
- This product cannot be installed on leaves incorporating doors (unless the motor can be activated only when the door is closed).
- If the automated system is installed at a height of less than 2.5 m or is accessible, the electrical and mechanical parts must be suitably protected.
- For roller shutter automation only
 - 1) The motor's moving parts must be installed at a height greater than 2.5 m above the floor or other surface from which they may be reached.
 - 2) The gearmotor must be installed in a segregated and suitably protected space so that it cannot be reached without the aid of tools.
- Install any fixed controls in a position where they will not cause a hazard, away from moving parts. More specifically, hold-to-run controls must be positioned within direct sight of the part being controlled and, unless they are key operated, must be installed at a height of at least 1.5 m and in a place where they cannot be reached by the public.
- Apply at least one warning light (flashing light) in a visible position, and also attach a Warning sign to the structure.
- Attach a label near the operating device, in a permanent fashion, with information on how to operate the automated system's manual release.
- Make sure that, during operation, mechanical risks are avoided or relevant protective measures taken and, more specifically, that nothing can be banged, crushed, caught or cut between the part being operated and surrounding parts.
- Once installation is complete, make sure the motor automation settings are correct and that the safety and release systems are working properly.
- Only use original spare parts for any maintenance or repair work. The Firm disclaims all responsibility for the correct operation and safety of the automated system if parts from other manufacturers are used.
- Do not make any modifications to the automated system's components unless explicitly authorized by the Firm.
- Instruct the system's user on what residual risks may be encountered, on the control systems that have been applied and on how to open the system manually in an emergency. Give the user guide to the end user.

- Dispose of packaging materials (plastic, cardboard, polystyrene, etc.) in accordance with the provisions of the laws in force. Keep nylon bags and polystyrene out of reach of children.

WIRING

WARNING! For connection to the mains power supply, use: a multicore cable with a cross-sectional area of at least 5x1.5mm² or 4x1.5mm² when dealing with three-phase power supplies or 3x1.5mm² for single-phase supplies (by way of example, type H05 VV-F cable can be used with a cross-sectional area of 4x1.5mm²). To connect auxiliary equipment, use wires with a cross-sectional area of at least 0.5 mm².

- Only use pushbuttons with a capacity of 10A-250V or more.
- Wires must be secured with additional fastening near the terminals (for example, using cable clamps) in order to keep live parts well separated from safety extra low voltage parts.
- During installation, the power cable must be stripped to allow the earth wire to be connected to the relevant terminal, while leaving the live wires as short as possible. The earth wire must be the last to be pulled taut in the event the cable's fastening device comes loose.

WARNING! safety extra low voltage wires must be kept physically separate from low voltage wires.

Only qualified personnel (professional installer) should be allowed to access live parts.

CHECKING THE AUTOMATED SYSTEM AND MAINTENANCE

Before the automated system is finally put into operation, and during maintenance work, perform the following checks meticulously:

- Make sure all components are fastened securely.
- Check starting and stopping operations in the case of manual control.
- Check the logic for normal or personalized operation.
- For sliding gates only: check that the rack and pinion mesh correctly with 2 mm of play along the full length of the rack; keep the track the gate slides on clean and free of debris at all times.
- For sliding gates and doors only: make sure the gate's running track is straight and horizontal and that the wheels are strong enough to take the weight of the gate.
- For cantilever sliding gates only: make sure there is no dipping or swinging during operation.
- For swing gates only: make sure the leaves' axis of rotation is perfectly vertical.
- For barriers only: before opening the door, the spring must be decompressed (vertical boom).
- Check that all safety devices (photocells, safety edges, etc.) are working properly and that the anti-crush safety device is set correctly, making sure 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.
- Impact forces can be reduced by using deformable edges.
- Make sure that the emergency operation works, where this feature is provided.
- Check opening and closing operations with the control devices applied.
- Check that electrical connections and cabling are intact, making extra sure that insulating sheaths and cable glands are undamaged.
- While performing maintenance, clean the photocells' optics.
- When the automated system is out of service for any length of time, activate the emergency release (see "EMERGENCY OPERATION" section) so that the operated part is made idle, thus allowing the gate to be opened and closed manually.
- If the power cord is damaged, it must be replaced by the manufacturer or their technical assistance department or other such qualified person to avoid any risk.
- If "D" type devices are installed (as defined by EN 12453), connect in unverified mode, foresee mandatory maintenance at least every six months.
- The maintenance described above must be repeated at least once yearly or at shorter intervals where site or installation conditions make this necessary.

WARNING!

Remember that the drive is designed to make the gate/door easier to use and will not solve problems as a result of defective or poorly performed installation or lack of maintenance



SCRAPPING

Materials must be disposed of in accordance with the regulations in force. Do not throw away your discarded equipment or used batteries with household waste. You are responsible for taking all your waste electrical and electronic equipment to a suitable recycling centre.

DISMANTLING

If the automated system is being dismantled in order to be reassembled at another site, you are required to:

- Cut off the power and disconnect the whole electrical system.
- Remove the actuator from the base it is mounted on.
- Remove all the installation's components.
- See to the replacement of any components that cannot be removed or happen to be damaged.

**DECLARATIONS OF CONFORMITY CAN BE FOUND AT <http://www.bft-automation.com/CE>
INSTRUCTIONS FOR USE AND ASSEMBLY CAN BE FOUND IN THE DOWN-LOAD SECTION.**

Anything that is not explicitly provided for in the installation manual is not allowed. The operator's proper operation can only be guaranteed if the information given is complied with. The Firm shall not be answerable for damage caused by failure to comply with the instructions featured herein.

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.

2) GENERAL OUTLINE

Low-voltage operator (24V~) suitable for residential use. Designed for swing gates having small-sized pillars. The operating arm, with its special antishearing shape, allows the leaves to be manoeuvred even when the operator is positioned well away from their fulcrum. The irreversible electromechanical gearmotor keeps the gate locked in the closing and opening positions.

The release lever, fitted to the outside of each operator, allows the manual manoeuvre to be carried out very easily.

ATTENTION! The **VIRGO** model controller is not equipped with mechanical torque adjustment. It is compulsory to use a control panel of the same manufacturer, in compliance with the basic safety requirements of directives 2006/95/CEE, 2004/108/CEE, 2006/42/CEE equipped with appropriate electric adjustment of the torque.

Before carrying out the manual manoeuvre make sure that this operation will not create a dangerous situations.

Check in the relevant literature that the thermal field in the working area is suitable for the operator.

Make sure that the movement of the door does not cause entrapment risks between the movable and fixed parts of the door.

If swing gates with built-in doors are used, the motor must not run when the door is left open.

WARNING! The operator must be installed by a qualified technician as special safety components are used for every specific site and therefore safety depends on installation.

3) TECHNICAL SPECIFICATIONS

3.1) VIRGO OPERATOR

Motor:24V~ 2500 min⁻¹
 Power:110W
 Insulation class:F
 Lubrication:Permanent grease
 Reduction ratio:1-1224
 Output shaft revolutions:2 min⁻¹ MAX
 Opening time 90°:14s
 Torque supplied:170 Nm
 Max leaf weight and length:2000N (~200kg) for 2m long leaf
 Impact reaction:Integrated torque limiter
on LINX control panel
 Motion drive:Lever arm
 Stop:Incorporated electrical limit switches + mechanical locks
 Manual manoeuvre:Release lever with CLS key
 Number of manoeuvres in 24h:60
 Environmental conditions:from -15 to +50 °C
 Degree of protection:IPX4
 Operator weight:VIRGO:80N (~8kg) - VIRGO SQ:60N (~6kg)
 Dimensions:see fig.1

3.2) LINX CONTROL PANEL

Power supply:230V~ ±10% 50Hz*
 Mains/low voltage insulation:> 2MΩm 500Vdc
 Working temperaturefrom -15 to +50 °C
 Dielectric strength:mains/l.v. 3750V~ for 1 minute
 Motor output current:3.5A+3.5A max
 Motor relay commutation current:10A
 Maximum motor power:110W (24V~)
 Power supply for accessories:24V~ (180mA max absorption)
24V~ safe (180mA max absorption)
 Gate-open warning light:N.O. contact (24V~/1A max)
 Blinker:24V~ 25W max
 Dimensions:see figure 1
 Fuses:see fig.9-15
 (*other voltages available on request)

3.3) VIRGO BAT BATTERY KIT (OPTIONAL - Fig.14)

Allows operation to continue even when the mains power supply is off for a short time.

Charge voltage:27.2V~ Charge current:130mA
 Data detected with external temperature of:25°C
 Battery capacity:2x (12V 1.2Ah)
 Exhausted battery protection threshold:20.4V~
 Battery recharge time:12/14 h

NOTE: In case of operation with battery back up, the outputs to terminals 8-9 (Vsafe 24V~) and 10-11 (Vsafe 24V~) show a voltage of 24V~ polarised as indicated in Fig.16.

At the time of installing the VIRGO BAT Kit, check that the safety devices are connected correctly.

4) OPERATOR INSTALLATION

4.1) Preliminary checks

Check that:

- The gate structure is sufficiently sturdy and rigid.
The fixing position must be worked out according to the leaf structure. In any case, the manoeuvring arm must push against a reinforced leaf point.
- The leaves can be moved manually along their entire stroke.
If the gate has not been installed recently, check the wear condition of all its components. Repair or replace defective and worn parts.
Operator reliability and safety are directly affected by the condition of the gate structure.

5) SUPPORT PLATE FIXING (Fig.5)

The operator is supplied with a fixing bracket and lever arm.

Having identified the leaf reinforcement point, with the gate closed, trace an imaginary horizontal line from the centre of the reinforcement point to the pillar (fig. 3-4).

Fig. 2 illustrates the most common types of installation:

- with the leaf hinge pivot not aligned with the fixing plate (90° opening - maximum distance between hinge pivot and plate: 210mm).
- with the hinge pivot aligned with the fixing plate

Position the anchoring bracket observing the dimensions shown in fig.3 for opening up to 90°, or in fig.2-4 for opening over 90° up to a max of 120°. The pillar surface, where the bracket is fixed, must be flat and parallel to the leaf. Use screws and expansion plugs adequate for the type of pillar. In the case where the pillar surface is irregular, use expansion plugs with studs, in order to be able to adjust the fixing bracket parallel to the leaf (fig.5).

- Assemble the lever arm as in fig.7.
DX = fitting to right leaf
SX = fitting to left leaf
Choose the most suitable position for fixing bracket "F" to the leaf.
- Insert lever L into the gearmotor output shaft, and fix it using appropriate pivot P and self-locking nut D (fig.7).
- Release the operator by activating the release lever to allow the arm to move easily (see paragraph "EMERGENCY MANOEUVRE").
- Open the gearmotor cover and fix it to the plate as indicated in Fig.8.
- Fix towing angle bar "F" to the leaf.
- The correct position for the operator arm is illustrated in fig.6. The leaf attachment point can be identified by positioning the arm according to the dimension indicated in fig.6.
- With the operator released, check the arm for correct movement.
- Repeat the same procedure for the other leaf.

6) BACKSTOP FIXING

The VIRGO operator is provided with mechanical end-of-stroke backstops, which make the installation of ground stop plates redundant.

With reference to Fig. 10 proceed as follows:

- Identify the opening and closing end-of-stroke points and fix the backstops accordingly.
- Fix protection cover C.

7) ELECTRICAL INSTALLATION SET-UP

Arrange the electrical installation as shown in fig.11.

Keep the mains voltage connections definitely separate from the very low voltage connections (24V).

For this purpose, the operator is provided with appropriate fittings, indicated in Fig.9, for a spiral flexible raceway with an inside diameter of 20:

- P1 input for mains power supply + GND.
- P2/P3 inputs for safety devices and accessories.

For the mains power supply, use the appropriate cable clamp (Fig.9-"S"), the terminal bar with an incorporated protection fuse (Fig.9-"L-N") and the GND terminal.

Connect the yellow/green cable to the earth terminal.

Fig.16 shows the cross-section and the number of connections.

8) TERMINAL BAR CONNECTIONS (Fig.16)

NOTE: The VIRGO operators provided with incorporated LINX control panels are preset for fitting to the left leaf, whereas the operators without panels (VIRGO-SQ) are preset for fitting to the right leaf, as illustrated by the example given in Fig.11.

Should it be necessary to reverse the operator opening direction, proceed as follows:

- 1 – Reverse motor polarity (JP1 terminals 1-2)
- 2 – Reverse motor polarity (JP2 terminals 14-15)

WARNING – During the wiring and installation operations, refer to the current standards as well as principles of good technical practice.

The (24V) very low voltage conductors must be physically separated from the low voltage conductors or otherwise be adequately isolated by means of an additional insulation of at least 1 mm.

The wires must be clamped by an extra fastener near the terminals, for example by bands.

All the connection cables must be kept at an adequate distance from the dissipator (Fig.15 "D").

WARNING! For connection to the mains, use a multipolar cable with a minimum of 3x1.5mm² cross section and complying with the previously mentioned regulations. For example, if the cable is outside (in the open), it has to be at least equal to H07RN-F, but if it is on the inside (or outside but placed in a plastic cable channel) it has to be or at least equal to H05VV-F with section 3x1.5mm².

JP1

- | | |
|-----|---|
| 1-2 | Motor 2 connection (VIRGO with LINX panel): |
| 3-5 | Opening limit switch SWO M2 (N.C.) |
| 4-5 | Closing limit switch SWC M2 (N.C.) |
| 6-7 | 24 V~ power supply input from the transformer |

JP2

- | | |
|-------|---|
| 8-9 | 24V~ Vsafe 180mA max output – power supply for photocell transmitters with check (Fig.17) |
| 10-11 | 24V~ 180mA max output – power supply for photocells or other devices |
| 12-13 | Blinker connection (24V~ 25W max) |
| 14-15 | Motor 1 connection (VIRGO-SQ – without LINX panel -): |
| 16-18 | Opening limit switch SWO M1 (N.C.) |
| 17-18 | Closing limit switch SWC M1 (N.C.) |
| 19-24 | Pedestrian opening button PED (N.O.). Controls partial opening of Motor M2. |
| 20-24 | Fault input (N.O.). Input for photocells or safety devices provided with an N.O. check contact. |
| 21-24 | Photocell input (N.C.). If not used, leave bridged (Fig.17). |
| 22-24 | STOP button (N.C.). If not used, leave bridged. |
| 23-24 | START button (N.O.). |
| 25-26 | Output for gate-open warning light (N.O. contact (24V~/1A max) or alternatively for 2nd radio channel (see configuration - "logics" menu) |
| 27-28 | Antenna input for incorporated radio-receiver board (27 braid - 28 signal). |

9) PROGRAMMING

The control panel provided with a microprocessor is supplied with function parameters preset by the manufacturer, suitable for standard installations. The predefined parameters can be altered by means of either the incorporated display programmer or Universal palmtop programmer. In the case where programming is carried out by means of Universal palmtop programmer, carefully read the instructions relating to Universal palmtop programmer, and proceed in the following way.

Connect the Universal palmtop programmer to the control unit through the UNIFLAT and UNIDA accessories (See fig. 18). The LINX control unit does not supply the Universal palmtop programmer with power, and therefore requires an appropriate supply unit.

Enter the "CONTROL UNITS" menu, and the "PARAMETERS" submenu, then scroll the display screenfuls using the up/down arrows to set the numerical values of the parameters listed below.

For the function logics, refer to the "LOGIC" submenu.

In the case where programming is carried out by means of the incorporated programmer, refer to Fig. A and B and to the paragraph on "Configuration".

10) CONFIGURATION

The display programmer is used to set all the LINX control panel functions. The programmer is provided with three pushbuttons for menu scrolling and function parameter configuration:

- + menu scrolling/value increment key
- menu scrolling/value reduction key

OKEnter (confirm) key

The simultaneous pressure of the + and - keys is used to exit the active menu and move to the preceding menu.

The modifications made are only set if the OK key is subsequently pressed. When the OK key is pressed for the first time, the programming mode is entered.

The following pieces of information appear on the display at first:

- Control unit software version
- Number of total manoeuvres carried out (the value is expressed in thousands, therefore the display constantly shows 0000 during the first thousand manoeuvres).
- Number of manoeuvres carried out since the latest maintenance operation (the value is expressed in thousands, therefore the display constantly shows 0000 during the first thousand manoeuvres).
- Number of memorised radio control devices.

When the OK key is pressed during the initial presentation phase, the first menu can be accessed directly.

Here follows a list of the main menus and the respective submenus available. The predefined parameter is shown between square brackets [0]. The writing appearing on the display is indicated between round brackets. Refer to Figures A and B for the configuration procedure.

10.1) PARAMETER MENU (PAR-RN)

- Automatic Closing Time (t_{cR}) [10s]

Set the numerical value of the automatic closing time from 3 to 90 seconds.

- Motor 1 torque (T₁) [50%]

Set the numerical value of the motor 1 torque between 1% and 99%.

- Motor 2 torque (T₂) [50%]

Set the numerical value of the motor 2 torque between 1% and 99%.

- Motor 1 slow-down torque (T₁ t_{sl}) [45%]

Set the numerical value for slow-down torque of motor 1 between 1% and 99%.

- Motor 2 slow-down torque (T₂ t_{sl}) [45%]

Set the numerical value for slow-down torque of motor 2 between 1% and 99%.

NOTES: In case of obstacle detection, the Ampere-stop function stops the leaf movement, reverses the motion for 1 sec. and then halts in the STOP status. The motor slow-down torque represents the maximum torque supplied to the motor during the slow-down phase. It must be set to a lower value with respect to the motor torque, in order to allow the Ampere-stop function to be also activated during the slow-down phase.

WARNING: Check that the impact force value measured at the points established by the EN 12445 standard is lower than that specified in the EN 12453 standard.

Incorrect sensitivity setting can cause injuries to persons or animals, or damage to things.

- Opening delay time (oPEn dELAY t₁) [1s]

Set the opening delay time for motor 2 relative to motor 1, between 1 and 10 seconds.

- Closing delay time (cLS dELAY t₁) [1s]

Set the closing delay time for motor 1 relative to motor 2, between 1 and 30 seconds.

- Motor 1 Normal Speed Time (T₁ FASt t₁) [15s]

Set the time to normal speed (not slowed down), ranging from 1 to 30 seconds.

- Motor 2 Normal Speed Time (T₂ FASt t₁) [15s]

Set the time to normal speed (not slowed down), ranging from 1 to 30 seconds.

Note: The slow-down time, on closing and on opening, is obtained by timing one manoeuvre, and setting a lower value within this parameter. If, for example, one manoeuvre lasts 25 seconds, set "normal speed time" to 20s to obtain 5s of slow-down time, both on closing and on opening.

- Slow-down speed (SLow SPED) [0]

Set the slow-down speed by choosing from the following values:

- 0 – slow-down disabled
- 1 – slow-down to 50% of normal speed

- 2 – slow-down to 33% of normal speed.
- 3 – slow-down to 25% of normal speed.

10.2) LOGIC MENU (LōĠ ĩc.)

- TCA (ĩcR) [OFF]

- ON Activates automatic closing
- OFF Excludes automatic closing

- 3 Steps (3 5ġEP) [OFF]

- ON Enables 3-step logic. A Start impulse has the following effects:
 door closed:.....opens
 on opening:.....stops and enters TCA (if configured)
 door open:.....closes
 on closing:.....stops and reopens
- OFF Enables 4-step logic. A Start impulse has the following effects:
 door closed:.....opens
 on opening:.....stops and enters TCA (if configured)
 door open:.....closes
 on closing:.....stops and does not enter TCA (stop)
 after stopping:opens

- Impulse lock (ĩbĠ oPEŋ) [OFF]

- ON The Start impulse has no effect during the opening phase.
- OFF The Start impulse becomes effective during the opening or closing phase.

- Rapid closing (FR5ġ cĠ5) [OFF]

- ON Closes the gate after photocell disengagement, before waiting for the end of the TCA set.
- OFF Command not entered.

- Photocells on opening (Phoġc. oPEŋ) [OFF]

- ON In case of obscuring, this excludes photocell operation on opening. During the closing phase, it immediately reverses the motion.
- OFF In case of obscuring, the photocells are active both on opening and on closing. When a photocell is obscured on closing, it reverses the motion only after the photocell is disengaged.

- Photocell test (ġE5ġ Phoġc) [OFF]

- ON Activates photocell check
- OFF Deactivates photocell check
 If this setting is not activated (OFF), it inhibits the photocell checking function, allowing connection of devices not provided with additional checking contact.

- Gate-open or 2nd radio channel warning light (5cR 2ch) [OFF]

- ON The output between terminals 25 and 26 is configured as Gate-open warning light, in this case the 2nd radio channel controls pedestrian opening.
- OFF The output between terminals 25 and 26 is configured as 2nd radio channel.

- Motors in operation (ĩ Pōġ on) [OFF]

- ON Only motor 2 is in operation (terminals 1 and 2).
 With this configuration, the pedestrian input is disabled.
- OFF Both motors are in operation.

- Lock hold (bĠac PER5 ġ5ġ) [OFF]

- ON To be used when opening and closing mechanical backstops are fitted.
 This function activates leaf pressure on the backstop, without this being considered as an obstacle by the ampere-stop sensor. Then the leaf continues its stroke for another 0,5s, after intercepting the limit switches. Therefore the limit switches are triggered slightly in advance, and the leaves will stop perfectly on the end stop plate.
- OFF To be used when no mechanical backstops are fitted.
 Movement is exclusively stopped by the limit switches being triggered; in this case it is necessary to set the opening and closing limit switch triggering point with precision.

- Prealarm (PREĠĠ) [OFF]

- ON The blinker comes on about 3s before the motors start.
- OFF The blinker comes on at the same time as the motors start

- Fixed code (F ġĤEd cōdġ) [OFF]

- ON The receiver is configured for operation in fixed-code mode, see paragraph on "Radio Transmitter Cloning".
- OFF The receiver is configured for operation in rolling-code mode, see paragraph on "Radio Transmitter Cloning".

- Radio transmitter programming (rRd ġo Pōġ) [ON]

- ON This enables transmitter storage via radio (REPLAY, CLONI):
 1 – First press the hidden key (P1) and then the normal key (T1, T2, T3 or T4) of a transmitter already memorised in standard mode by means of the radio menu.

- 2 – Within 10s press the hidden key (P1) and the normal key (T1, T2, T3 or T4) of a transmitter to be memorised.

The receiver exits the programming mode after 10s, other new transmitters can be entered before the end of this time.

This mode does not require access to the control panel.

- OFF This disables transmitter storage via radio.

The transmitters can only be memorised using the appropriate Radio menu.

Wireless memorizing disabled: wireless learning of any remote control disabled (including CLONI and REPLAY).

- Motor logic reversal (chRŋĠĠ Pōġ) [OFF]

- ON Mot.1: it is the first to start on opening and the last to start on closing.
 Mot.2: it is the last to start on opening and the first to start on closing.
- OFF Mot.1: it is the last to start on opening and the first to start on closing.
 Mot.2: it is the first to start on opening and the last to start on closing.

10.3) RADIO MENU (rRd ġo)

- Add

Allows you to add one key of a radio control device to the receiver memory; after storage it displays a message showing the receiver number in the memory location (from 01 to 64).

Add Start button (Rdd 5ġRrġ)

associates the required key to Start command

Add 2ch button (Rdd 2ch)

associates the required key to 2nd radio channel

- Read (rERd)

Checks one key of a receiver; if stored it displays a message showing the receiver number in the memory location (from 01 to 64), and the key number (T1, T2, T3 or T4).

- Eliminate list (ERER5ġ 5ġ)

WARNING! Completely removes all memorised radio control devices from the receiver memory.

- Receiver code reading (RX code)

This displays the code entered in the receiver.

Consult paragraphs 12-13-14-15 for further information concerning the advanced functions of the Clonix incorporated receiver.

10.4) LANGUAGE MENU (ĠRŋĠURĠĠĠ)

Allows you to set the language on the display programmer.

- ITALIAN (ġĠR)

- FRENCH (FRR)

- GERMAN (dĠĠ)

- ENGLISH (ĠŋĠ)

- SPANISH (Ġ5P)

10.5) DEFAULT MENU (dĠFRĠĠĠĠĠ)

Restores the preset default values on the control unit. After restoring, a new autoset operation must be carried out.

10.6) DIAGNOSTICS AND MONITORING

The display on the LINX panel shows some useful information, both during normal operation and in the case of malfunctions.

Diagnostics:

In the case of malfunctions, the display shows a message indicating which device needs to be checked:

- PED = PED input activation
- STRT = START input activation
- STOP = STOP input activation
- PHOT = PHOT input activation
- FLT = FAULT input activation for checked photocells
- SWO1 = activation of Motor 1 opening limit switch input
- SWC1 = activation of Motor 1 closing limit switch input
- SWO2 = activation of Motor 2 opening limit switch input
- SWC2 = activation of Motor 2 closing limit switch input

In the case where an obstacle is found, the LINX panel stops the door and activates a reverse manoeuvre; at the same time the display shows the "AMP" message.

Monitoring:

During the opening and closing phases, the display shows four digits separated by a dot, for example 35.40. The digits are constantly updated during the manoeuvre, and represent the maximum torque reached by motor 1 (35) and motor 2 (40).

These values allow the torque setting to be corrected.

If the maximum torque value reached during the manoeuvre gets sensibly

close to the value set in the parameter menu, malfunctions may occur in the future following wear or slight door deformation. It is therefore advisable to check the maximum torque reached during some of the manoeuvres carried out in the course of installation, and if necessary set a value about 15-20 percent points higher in the parameter menu.

10.7) AUTOSSET MENU (RUŁOŚĆ)

Allows you to automatically set the Motor torque.

WARNING!! The autoset operation is only to be carried out after checking the exact leaf (opening/closing) movement, and correct limit-switch activation.

As soon as the OK pushbutton is pressed, the "...." message is displayed, and the control unit executes an opening manoeuvre followed by a closing manoeuvre, during which the minimum torque value needed for leaf movement is automatically set.

During this phase, it is important to avoid obscuring the photocells, as well as using the START, STOP or PED commands and the display.

After this, if autosetting has been successfully completed, the control unit displays the "OK" message and, after pressing any key, returns to the Autoset menu.

If, on the other hand, the control unit displays the "KO" message, it means that the autoset procedure has not been successfully completed; it is thus necessary to check the wear condition of the gate and the regular movement of the leaves before proceeding to a new autoset operation. **WARNING!** During the autoset phase, the obstacle detection function is not active, therefore the installer must control the automation movement and prevent persons and things from approaching or standing within the automation working range.

In the case where buffer batteries are used, autosetting must be carried out with the control panel supplied by mains power voltage.

WARNING: Check that the impact force value measured at the points established by the EN 12445 standard is lower than that specified in the EN 12453 standard.

Incorrect sensitivity setting can cause injuries to persons or animals, or damage to things.

11) STATISTICS

Having connected the Universal palmtop programmer to the control unit, enter the CONTROL UNIT / STATISTICS menu and scroll the screenful showing the statistical parameters:

- Board microprocessor software version.
- Number of cycles carried out. If motors are replaced, count the number of manoeuvres carried out up to that time.
- Number of cycles carried out from the latest maintenance operation. It is automatically set to zero after each self-diagnosis or parameter writing.
- Date of latest maintenance operation. To be updated manually from the appropriate menu "Update maintenance date".
- Installation description. 16 characters can be entered for installation identification.

12) INTEGRATED RECEIVER TECHNICAL SPECIFICATION

Receiver output channels:

- output channel 1, if activated, controls a START command.
- output channel 2, if activated, controls the excitation of the 2nd radio channel relay for 1s.

Transmitter versions which can be used:
all Rolling Code transmitters compatible with



All REPLAY transmitters compatible with: ((€R-Ready)).

ANTENNA INSTALLATION

Use an antenna tuned to 433MHz.

For Antenna-Receiver connection, use RG8 coaxial cable.

The presence of metallic masses next to the antenna can interfere with radio reception. In case of insufficient transmitter range, move the antenna to a more suitable position.

13) RECEIVER CONFIGURATION

The on-board receiver combines characteristics of utmost safety in copying variable code (rolling code) coding with the convenience of carrying out transmitter "cloning" operations thanks to an exclusive

system.

Cloning a transmitter means creating a transmitter which can be automatically included within the list of the transmitters memorised in the receiver, either as an addition or as a replacement of a particular transmitter.

Cloning by replacement is used to create a new transmitter which takes the place of the one previously memorised in the receiver; in this way a specific transmitter can be removed from the memory and will no longer be usable.

Therefore it will be possible to remotely program a large number of additional transmitters or, for example, replacement transmitters for those which have been lost, without making changes directly to the receiver.

When coding safety is not a decisive factor, the on-board receiver allows you to carry out fixed-code additional cloning which, although abandoning the variable code, provides a high number of coding combinations, therefore keeping it possible to "copy" any transmitter which has already been programmed.

PROGRAMMING

Transmitter storage can be carried out in manual mode or by means of the Universal palmtop programmer which allows the complete installation database to be managed through the Eedbase software.

In this second case, receiver programming takes place through the connection of Universal palmtop programmer to the LINX control panel, using the UNIFLAT and UNIDA accessories as indicated in Fig. 18.

14) MANUAL PROGRAMMING

In the case of standard installations where advanced functions are not required, you can proceed to manual storage of the transmitters, making reference to fig. B for basic programming.

- If you wish the transmitter to activate output 1 (START) by means of key1, key2, key3 or key4, enter the transmitter in menu "Start key", as in fig. B.
- If you wish the transmitter to activate output 2 (2nd radio channel relay) by means of key1, key2, key3 or key4, enter the transmitter in menu "2nd ch. key", as in fig. B.

Note: Hidden key P1 appears differently depending on the transmitter model.

For transmitters with hidden key, press hidden key P1 (fig. B1). For transmitters without hidden key, the key P1 function corresponds to simultaneously pressing the 4 transmitter keys or, after opening the battery compartment, bridging the two P1 points by means of a screwdriver (fig. B2).

IMPORTANT NOTE: ATTACH THE ADHESIVE KEY LABEL TO THE FIRST MEMORISED TRANSMITTER (MASTER).

In the case of manual programming, the first transmitter assigns the key code to the receiver; this code is necessary in order to carry out subsequent cloning of the radio transmitters.

15) RADIO-TRANSMITTER CLONING

Rolling-code cloning / Fixed-code cloning

Make reference to the Universal palmtop programmer Instructions and the CLONIX Programming Guide.

15.1) ADVANCED PROGRAMMING: COLLECTIVE RECEIVERS

Make reference to the Universal palmtop programmer Instructions and the CLONIX Programming Guide.

16) LIMIT SWITCH ADJUSTMENT (Fig.12)

- Identify the opening and closing limit switches (FC1 and FC2) taking into account that:

FC1 corresponds to the **CLOSING** limit switch

FC2 corresponds to the **OPENING** limit switch.

- With the gate completely closed or opened, rotate the corresponding cam until the relevant limit microswitch is heard being tripped, then lock the cam into position by means of the appropriate screws.
- Check that the limit switches are triggered correctly, by initiating a few complete motor-driven opening and closing cycles.
- If the "lock hold" logic is set to ON in the LINX panel, the leaf continues its stroke for about 0,5 seconds, in order to ensure stability and perfect leaf stopping against the end-of-stroke backstops.

17) EMERGENCY MANOEUVRE (Fig.19)

In the case where the power supply is off, or any faults are present, the manual emergency manoeuvre can be carried out by operating the

external release lever (Fig.1 ref."S").

- 1) Insert the release key and turn it clockwise (Fig.19 ref."1").
- 2) Move lever "S" until the lock is released (Fig.19 ref."2").
- 3) Keep the lever in the release position by turning the key clockwise (Fig.19 ref."3").
- 4) Push the leaf slowly to open or close the gate.

To reactivate motor-driven operation, turn the key clockwise to free the lever from its released position, then return it to its initial position for normal operation.

18) MANUAL WIRE RELEASE DEVICE (Fig.13)

The manual emergency release can be operated by a wire device:

- Take all the metal cable out of the sheath and insert it into the release lever.
- Lock the sheath and suitably adjust its position by means of the appropriate screw.
- The cover is provided with a section to be torn off for the sheath to go through.
- For further information, refer to the specific instructions for the release device.

19) VIRGO BAT KIT INSTALLATION

- Fix the SBS board on the back of the panel box by means of a screw, as indicated in Fig.14.
- Fix the board protection box (Fig.14 - "C") supplied with the kit.
- Position the two batteries on the supports, as indicated in Fig.14 ("A").
- Secure the batteries using the bracket and screws supplied.
- Proceed to wire the SBS board with reference to the diagram in Fig.14.

20) AUTOMATION CHECK

Before allowing the automation to be used normally, carry out the following procedure very carefully:

- Check the correct functioning of all safety devices (limit microswitches, photocells, sensitive edges etc.).
- Check that the thrust (anti-squash) force of the leaf is within the limits set by current regulations.
- Check the manual opening command.
- Check the opening and closing operations with the control devices in use.
- Check the standard and customised electronic functioning logic.

21) AUTOMATION OPERATION

Since the automation can be remote-controlled by means of a remote control device or a start button, and so out of sight, the good working order of all the safety devices should be checked regularly. In the event of any anomalous functioning of the safety devices, consult a specialised technician immediately. Keep children at a safe distance from the automation operation area.

22) CONTROL

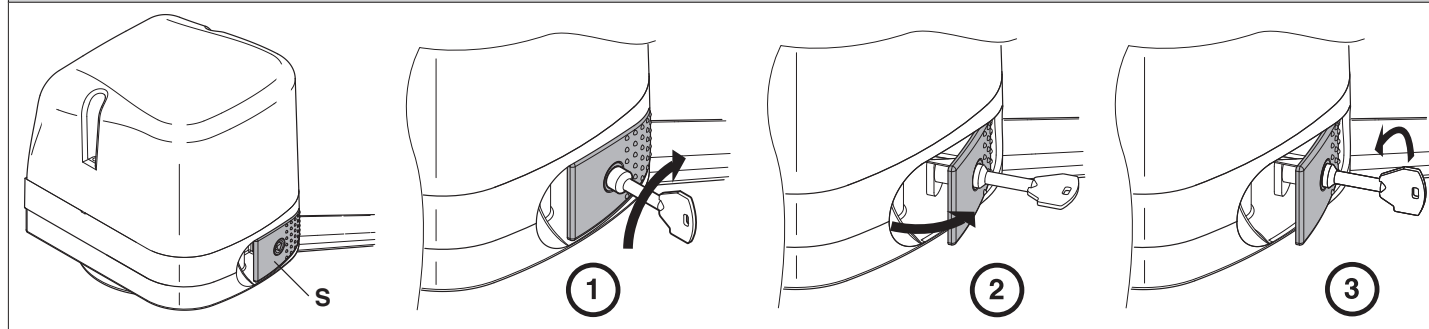
The automation is used for the power-operated opening and closing of the gate. The control can be of a number of types (manual, remote-controlled, magnetic badge access control, etc.) depending on requirements and the characteristics of the installation. See the specific instructions for the various control systems. Users of the automation must be instructed about its control and operation.

23) MAINTENANCE

Disconnect the power supply when carrying out any maintenance operations.

- Lubricate the **VIRGOs** of the manoeuvring arm regularly.
- Clean the lenses of the photocells every so often.
- Have a qualified person (installer) check correct motor torque setting.
- In the event of any anomalous functioning which cannot be resolved, disconnect the power supply and contact a specialised technician (installer). Whilst the automation is out of order, activate the manual release to allow manual opening and closing.

Fig. 1



MANUALE D'USO

2) SICUREZZA

ATTENZIONE! L'attuatore **VIRGO** non è dotato di regolazione meccanica di coppia. È obbligatorio utilizzare un quadro di comando del medesimo costruttore, conforme ai requisiti essenziali di sicurezza delle direttive 2006/95/CEE, 2004/108/CEE, 2006/42/CEE e dotato di adeguata regolazione elettrica della coppia.

3) MANOVRA DI EMERGENZA (Fig.1)

In caso di assenza di tensione di rete o anomalie di funzionamento, la manovra manuale di emergenza può essere eseguita agendo sulla leva di sblocco esterna (Fig.1 rif."S").

- 1) Inserire la chiave di sblocco e ruotarla in senso orario (Fig.1 rif."1").
- 2) Azionare la leva "S" fino ad ottenere lo sblocco (Fig.1 rif."2").
- 3) Mantenere la leva in posizione di sblocco con una rotazione antioraria della chiave (Fig.1 rif."3").
- 4) Spingere lentamente l'anta per aprire o chiudere il cancello.

Per riattivare il funzionamento motorizzato, ruotare la chiave in senso orario in modo da liberare la leva dalla posizione di sblocco e riportarla nella posizione iniziale di normale funzionamento.

ATTENZIONE! Prima di attivare la manovra manuale verificare che ciò non possa causare una situazione pericolosa.

- the key clockwise (Fig.1 ref."3").
- 4) Push the leaf slowly to open or close the gate. To reactivate motor-driven operation, turn the key clockwise to free the lever from its released position, then return it to its initial position for normal operation.

WARNING! Before carrying out the manual manoeuvre make sure that this operation will not create dangerous situations.

USER'S MANUAL

2) SAFETY

ATTENTION! The **VIRGO** model controller is not equipped with mechanical torque adjustment. It is compulsory to use a control panel of the same manufacturer, in compliance with the basic safety requirements of directives 2006/95/CEE, 2004/108/CEE, 2006/42/CEE equipped with appropriate electric adjustment of the torque.

3) EMERGENCY MANOEUVRE (Fig. 1)

In the case where the power supply is off, or any faults are present, the manual emergency manoeuvre can be carried out by operating the external release lever (Fig.1 ref."S").

- 1) Insert the release key and turn it clockwise (Fig.1 ref."1").
- 2) Move lever "S" until the lock is released (Fig.1 ref."2").
- 3) Keep the lever in the release position by turning

AVVERTENZE PER L'UTILIZZATORE (I)

ATTENZIONE! Importanti istruzioni di sicurezza. Leggere e seguire attentamente le Avvertenze e le Istruzioni che accompagnano il prodotto poiché un uso improprio può causare danni a persone, animali o cose. Conservare le istruzioni per consultazioni future e trasmetterle ad eventuali subentranti nell'uso dell'impianto.

Questo prodotto dovrà essere destinato solo all'uso per il quale è stato espressamente installato. Ogni altro uso è da considerarsi improprio e quindi pericoloso. Il costruttore non può essere considerato responsabile per eventuali danni causati da usi impropri, erronei e irragionevoli.

SICUREZZA GENERALE

Nel ringraziarVi per la preferenza accordata a questo prodotto, la Ditta è certa che da esso otterrete le prestazioni necessarie al Vostro uso.

Questo prodotto risponde alle norme riconosciute della tecnica e della disposizioni relative alla sicurezza se correttamente installato da personale qualificato ed esperto (installatore professionale). L'automazione, se installata ed utilizzata correttamente, soddisfa gli standard di sicurezza nell'uso. 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 movimento.
- Non permettere a bambini di giocare o sostare nel raggio di azione dell'automazione.
- Questa automazione non è destinata all'uso da parte di bambini o da parte di persone con ridotte capacità mentali, fisiche e sensoriali, o persone che esse non abbiano potuto beneficiare, attraverso l'intermediazione di una persona responsabile della loro sicurezza, di una sorveglianza o di istruzioni riguardanti l'uso dell'apparecchio.
- I bambini devono essere sorvegliati per sincerarsi che non giochino con l'apparecchio. Non permettere ai bambini di giocare con i controlli fissi. Tenere i telecomandi lontani dai bambini.
- Evitare di operare in prossimità delle cerniere o organi meccanici in movimento.
- Non contrastare il movimento dell'anta e non tentare di aprire manualmente la porta se non è stato sbloccato l'attuatore con l'apposita manopola di sblocco.
- Non entrare nel raggio di azione della porta o cancello motorizzati durante il loro movimento.
- Non lasciare radiocomandi o altri dispositivi di comando alla portata dei bambini onde evitare azionamenti involontari.
- L'attivazione dello sblocco manuale potrebbe causare movimenti incontrollati della porta se in presenza di guasti meccanici o di condizioni di squilibrio.
- In caso di apritapparelle: sorvegliare la tapparella in movimento e tenere lontano le persone finché non è completamente chiusa. Porre cura quando si aziona lo sblocco se presente, poiché una tapparella aperta potrebbe cadere rapidamente in presenza di usura o rotture.
- La rottura o l'usura di organi meccanici della porta (parte guidata), quali ad esempio cavi, molle, supporti, cardini, guide.. potrebbe generare pericoli. Far controllare periodicamente l'impianto da personale

qualificato ed esperto (installatore professionale) secondo quanto indicato dall'installatore o dal costruttore della porta.

- Per ogni operazione di pulizia esterna, 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.
- Non utilizzare l'automatismo se necessita di interventi di riparazione. In caso di guasto o di malfunzionamento dell'automazione, togliere l'alimentazione di rete sull'automazione, astenersi da qualsiasi tentativo di riparazione o intervento diretto e rivolgersi solo a personale qualificato ed esperto (installatore professionale) per la necessaria riparazione o manutenzione. Per consentire l'accesso, attivare lo sblocco di emergenza (se presente).
- Per qualsiasi intervento diretto sull'automazione o sull'impianto non previsto dal presente manuale, avvalersi di personale qualificato ed esperto (installatore professionale).
- Con frequenza almeno annuale far verificare l'integrità e il corretto funzionamento dell'automazione da personale qualificato ed esperto (installatore professionale), in particolare di tutti i dispositivi di sicurezza.
- Gli interventi d'installazione, manutenzione e riparazione devono essere documentati e la relativa documentazione tenuta a disposizione dell'utilizzatore.
- Il mancato rispetto di quanto sopra può creare situazioni di pericolo.



DEMOLIZIONE

L'eliminazione dei materiali va fatta rispettando le norme vigenti. Non gettate il vostro apparecchio scartato, le pile o le batterie usate nei rifiuti domestici. Avete la responsabilità di restituire tutti i vostri rifiuti da apparecchiature elettriche o elettroniche lasciandoli in un punto di raccolta dedicato al loro riciclo.

Tutto quello che non è espressamente previsto nel manuale d'uso, non è permesso. Il buon funzionamento dell'operatore è garantito solo se vengono rispettate le prescrizioni riportate in questo manuale. La Ditta non risponde dei danni causati dall'inosservanza delle indicazioni riportate in questo manuale.

Lasciando inalterate le caratteristiche essenziali del prodotto, la Ditta si riserva di apportare in qualunque momento le modifiche che essa ritenga convenienti per migliorare tecnicamente, costruttivamente e commercialmente il prodotto, senza impegnarsi ad aggiornare la presente pubblicazione.

USER WARNINGS (GB)

WARNING! Important safety instructions. Carefully read and comply with the Warnings and Instructions that come with the product as improper use can cause injury to people and animals and damage to property. Keep the instructions for future reference and hand them on to any new users.

This product is meant to be used only for the purpose for which it was explicitly installed. Any other use constitutes improper use and, consequently, is hazardous. The manufacturer cannot be held liable for any damage as a result

of improper, incorrect or unreasonable use. GENERAL SAFETY

Thank you for choosing this product. The Firm is confident that its performance will meet your operating needs.

This product meets recognized technical standards and complies with safety provisions when installed correctly by qualified, expert personnel (professional installer).

If installed and used correctly, the automated system will meet operating safety standards. 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 moving.
- Do not allow children to play or stand within range of the automated system.
- This automated system is not meant for use by children or by people with impaired mental, physical or sensory capacities, or people who do not have suitable knowledge, unless a person who is responsible for their safety provides them with necessary supervision or instructions on how to use the device.
- Children must be supervised to ensure they do not play with the device. Do not allow children to play with the fixed controls. Keep remote controls out of reach of children.
- Do not work near hinges or moving mechanical parts.
- Do not hinder the leaf's movement and do not attempt to open the door manually unless the actuator has been released with the relevant release knob.
- Keep out of range of the motorized door or gate while they are moving.
- Keep remote controls or other control devices out of reach of children in order to avoid the automated system being operated inadvertently.
- The manual release's activation could result in uncontrolled door movements if there are mechanical faults or loss of balance.
- When using roller shutter openers: keep an eye on the roller shutter while it is moving and keep people away until it has closed completely. Exercise care when activating the release, if such a device is fitted, as an open shutter could drop quickly in the event of wear or breakage.
- The breakage or wear of any mechanical parts of the door (operated part), such as cables, springs, supports, hinges, guides..., may generate a hazard. Have the system checked by qualified, expert personnel (professional installer) at regular intervals according to the instructions issued by the installer or manufacturer of the door.
- When cleaning the outside, 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.
- Do not use the automated system if it is in need of repair. In the event the automated system breaks down or malfunctions, cut off mains power to the system; do not attempt to repair or perform any other work to rectify the fault yourself and instead call in qualified, expert personnel (professional installer) to perform the necessary repairs or maintenance. To allow access, activate the emergency release (where fitted).
- If any part of the automated system requires direct work of any kind that is not contemplated herein, employ the services of qualified, expert personnel

(professional installer).

- At least once a year, have the automated system, and especially all safety devices, checked by qualified, expert personnel (professional installer) to make sure that it is undamaged and working properly.
- A record must be made of any installation, maintenance and repair work and the relevant documentation kept and made available to the user on request.
- Failure to comply with the above may result in hazardous situations.

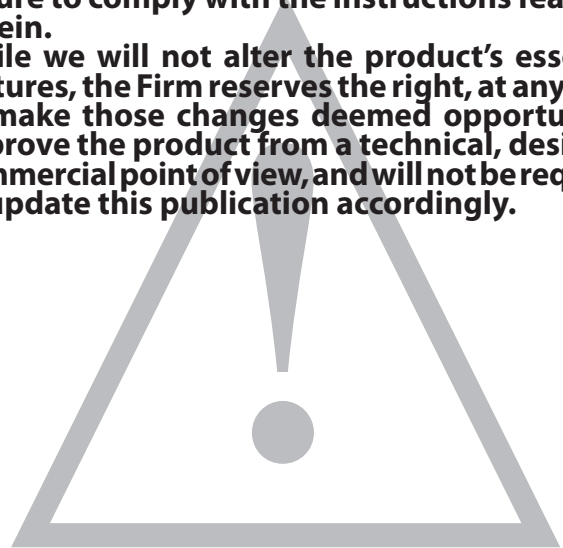


SCRAPPING

Materials must be disposed of in accordance with the regulations in force. Do not throw away your discarded equipment or used batteries with household waste. You are responsible for taking all your waste electrical and electronic equipment to a suitable recycling centre.

Anything that is not explicitly provided for in the user guide is not allowed. The operator's proper operation can only be guaranteed if the instructions given herein are complied with. The Firm shall not be answerable for damage caused by failure to comply with the instructions featured herein.

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.



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