

JOINT

HYDRAULIC SWING OPERATOR 230V



INSTALLATION MANUAL and Safety Information

SEA S.p.A.

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FEATURES

JOINT is a jointed swing operator pad mounted for residential or commercial use

TECHNICAL FEATURES

Gate Speed: 8 - 12 seconds per 90° cycle

Maximum Gate Length: 6 m

Maximum Gate Weight: 455 kg

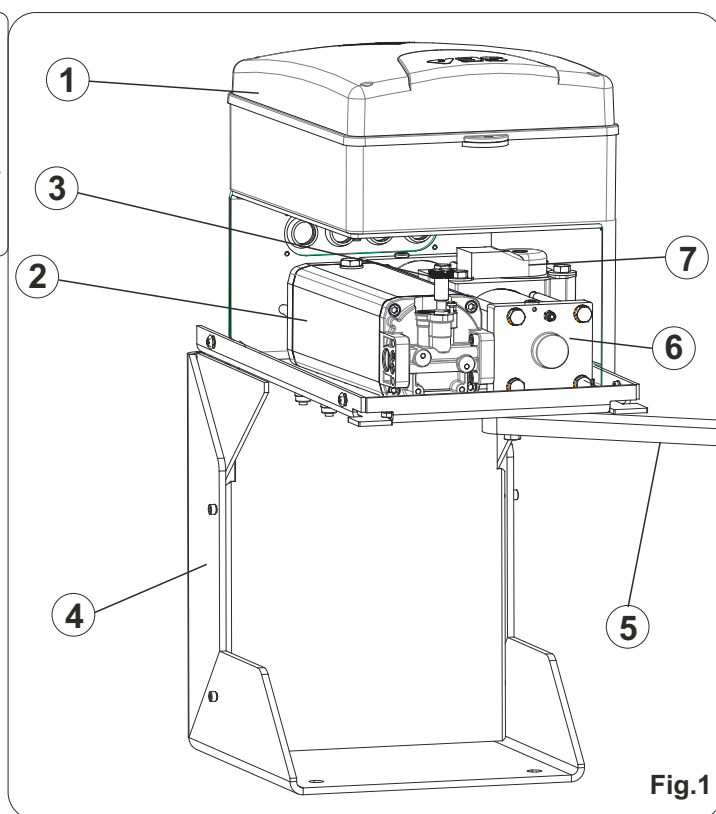
Maximum Cycles: 250 cycles per day with Sea's Plug-In Transformer. (Gate size 6 m x 2,4 m)

AC Power Supply Wire: 14 gauge or greater landscape lighting cable rated for direct burial and 300 watts at maximum length of 305 m

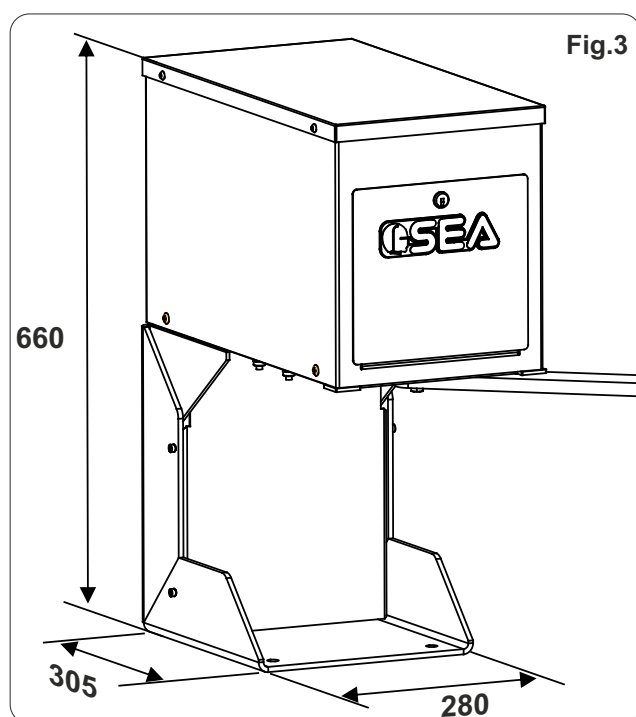
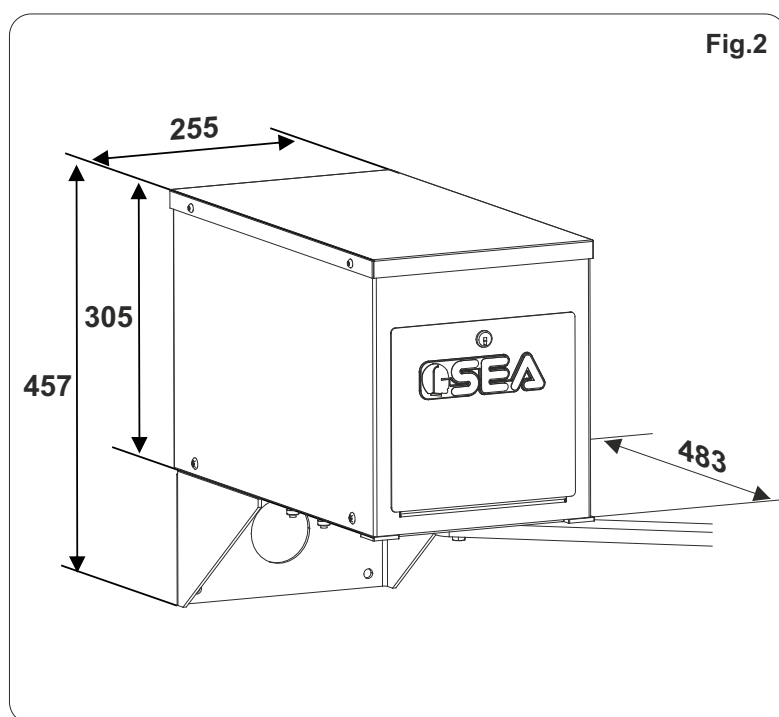
MAIN COMPONENTS

- | | |
|---------------------------------------|---------------------|
| 1. Electronic control unit | 5. Articulated arm |
| 2. Hydraulic unit | 6. Jack |
| 3. Manual release | 7. Absolute Encoder |
| 4. Ground support (<i>OPTIONAL</i>) | |

SPECIFICATIONS	JOINT
Power supply	230V
Motor power	280 W
Operation temperature	-20°C to +55°C*
Max. gate length	6 m
Protection class	Ip44
Opening time 90° (sec.)	8 - 12 sec
Cycles/hour	40
Max leaf weight	455 kg
Max opening angle (degrees)	100°
Anti-crushing protection	By pass valve
Encoder	Absolute
Slow-down	Electronic



DIMENSIONS (mm)



SAFETY OPERATING GATE

The Joint 230V is for intensive applications

DO NOT Use for Apartment or Condominium Applications

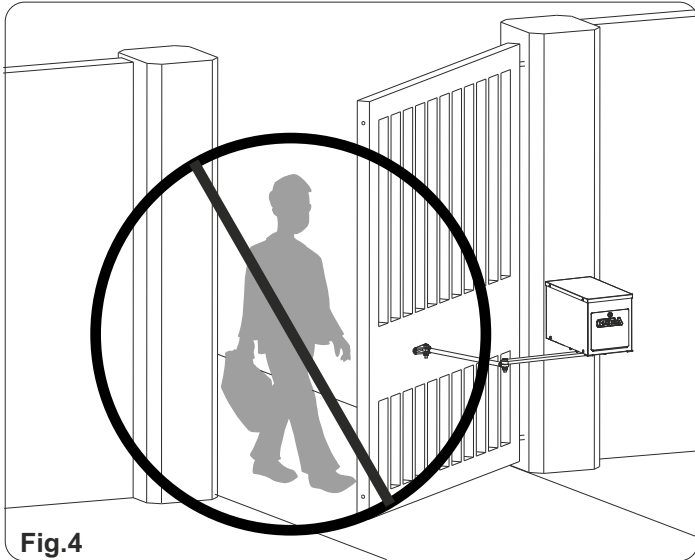


Fig.4



Fig.5



Owners Must Never Let Pedestrians Cross the Path, Step or Hang on a Moving Gate! (Fig.4)

Owners Must Never Mount Any Gate Operating Device Accessible Through the Gate! (Fig.5)

CONFIGURATION AND SPECIFICATIONS

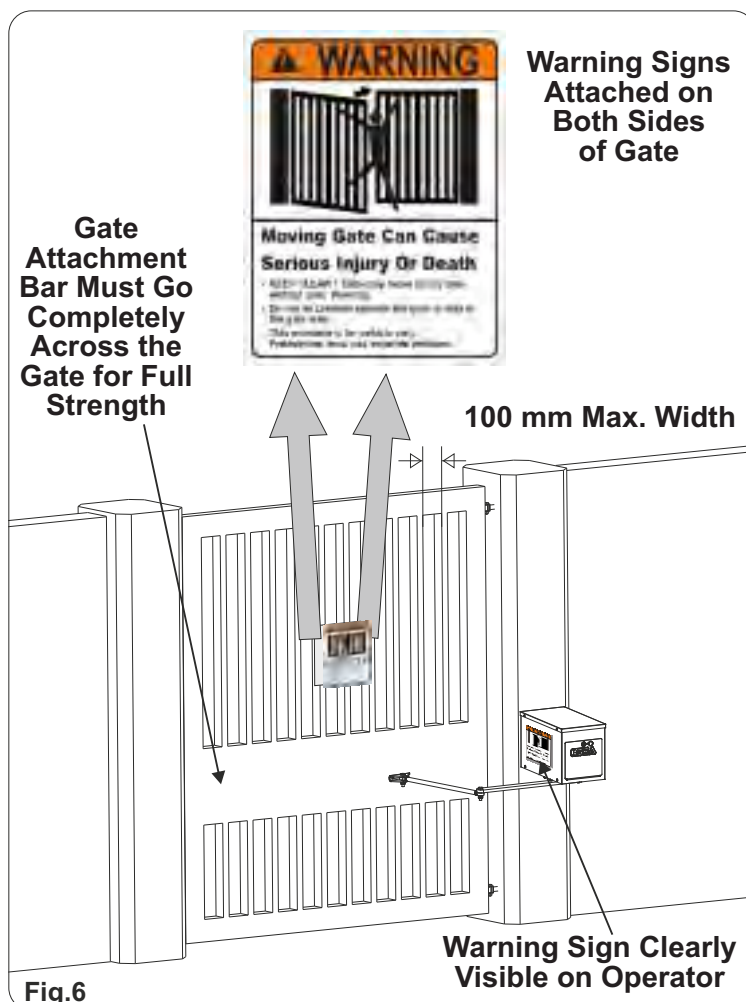
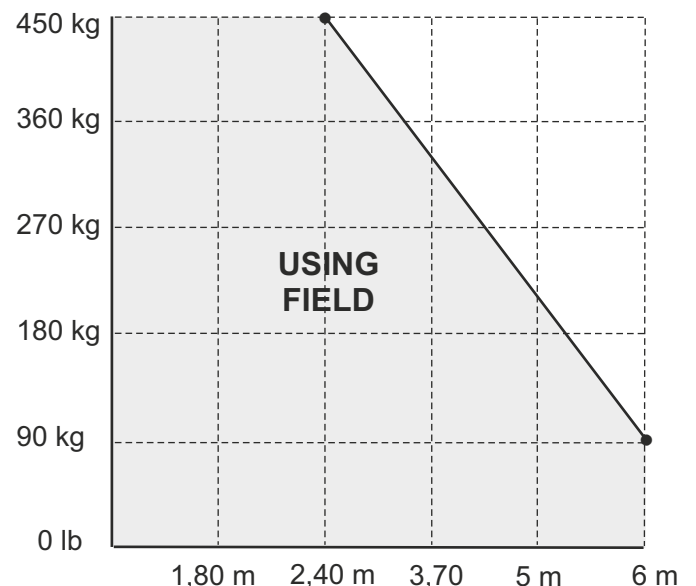


Fig.6

DRAWING LEAVES DIMENSIONS



MECHANICAL INSTALLATION

Concrete pad and fixation

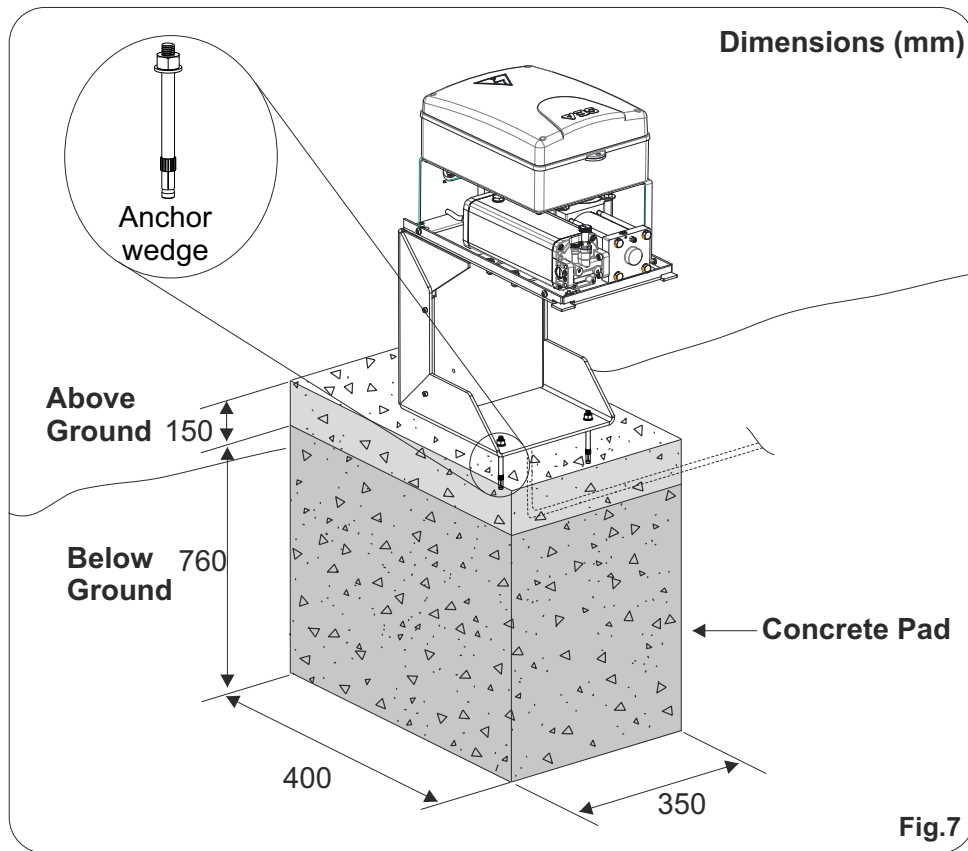
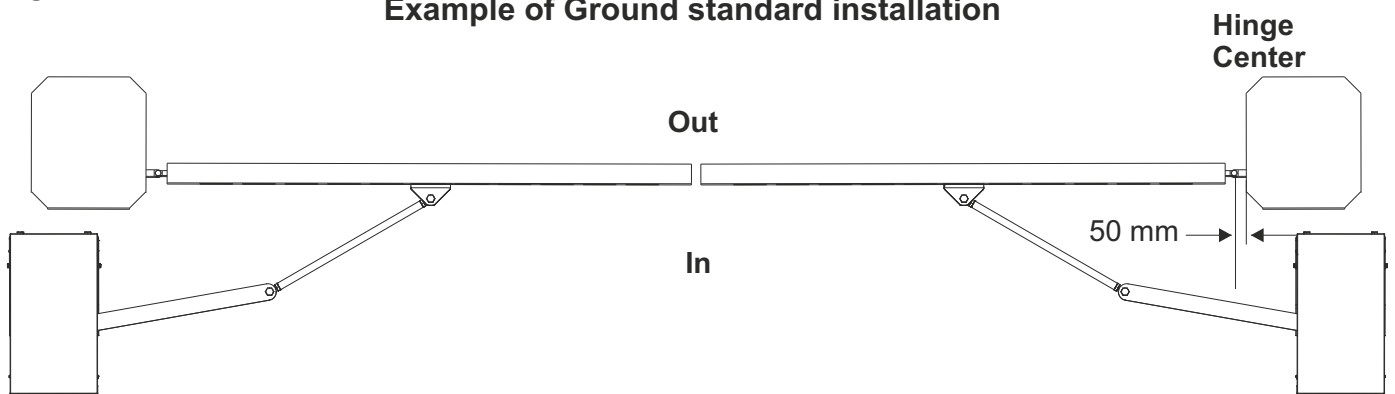
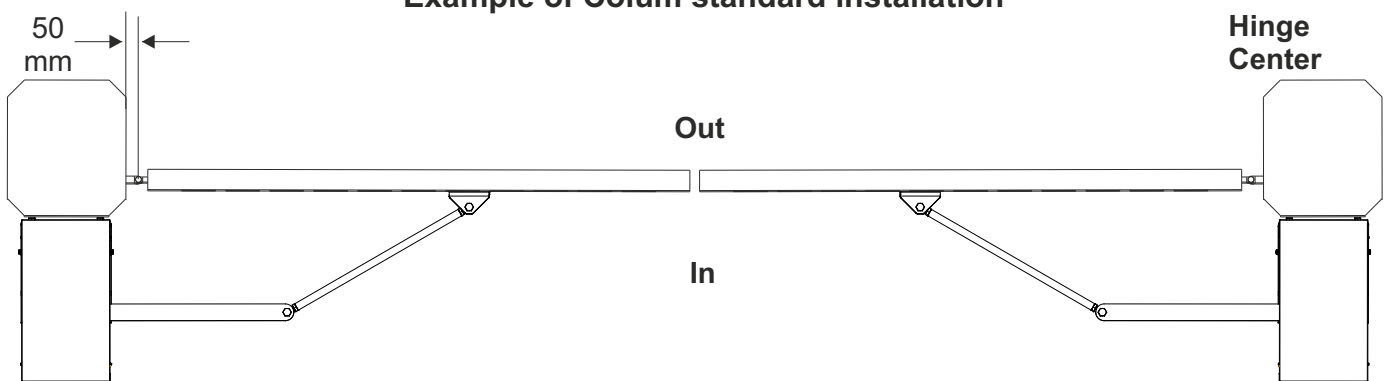


Fig.8

Example of Ground standard installation

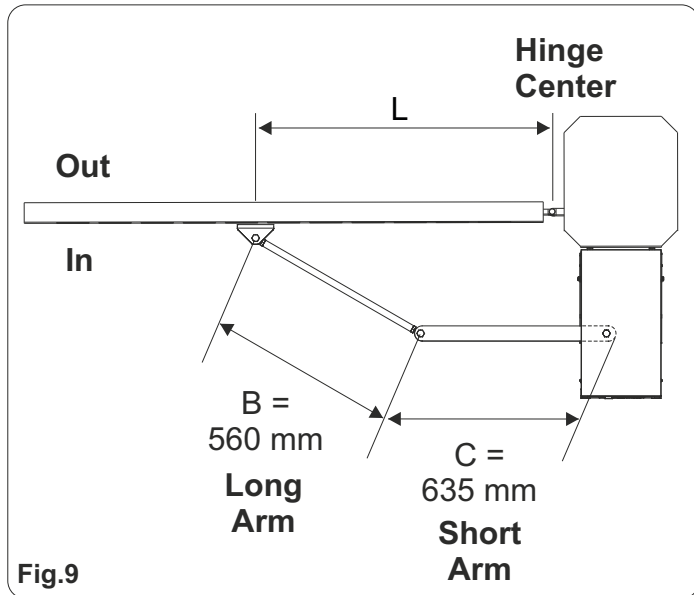


Example of Column standard installation



Standard installation

Sample of Standard Installation is Shown on Previous Page

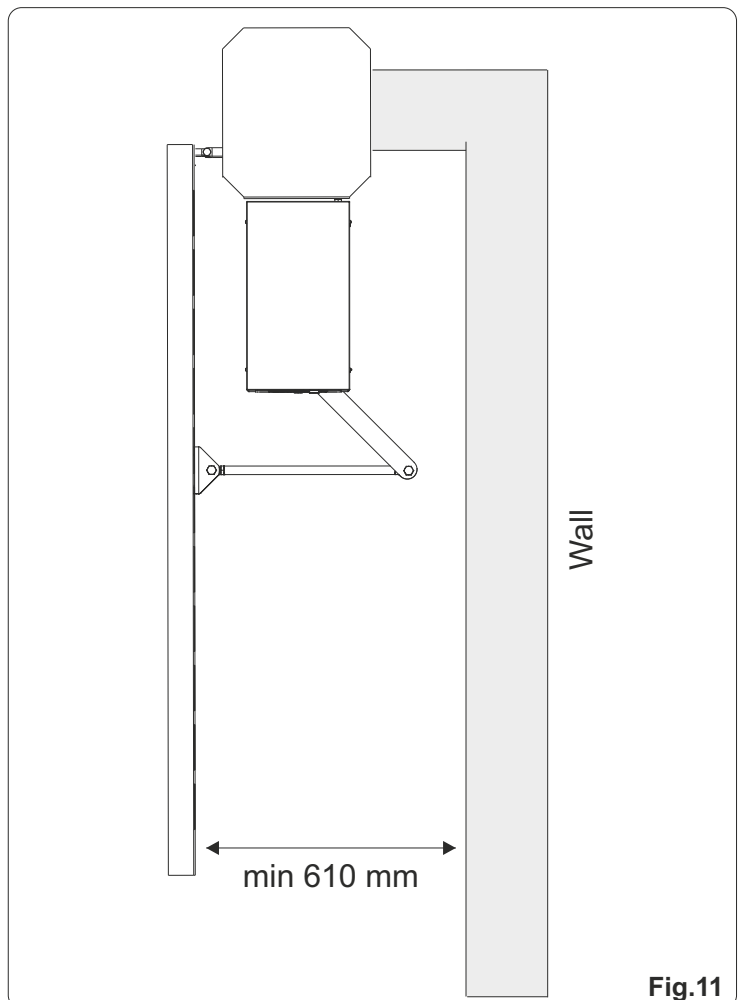
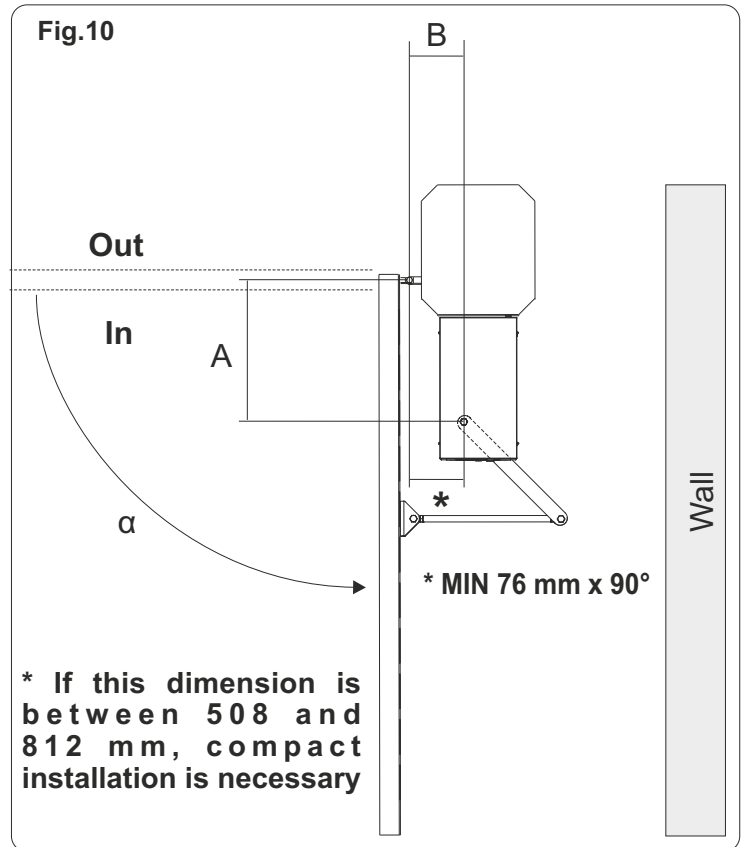


Caution:

If the gate is longer than 5,5 m,
follow **Chart A : A-2**.

Chart A

	L (mm)	A (mm)	B (mm)	α
1	1030	300	100	90°
2	980	300	150	95°
3	930	300	200	100°
4	1020	350	100	90°
5	970	350	150	95°
6	920	350	200	100°
7	1000	400	100	90°
8	950	400	150	95°
9	900	400	200	100°
10	980	470	100	90°
11	930	470	150	95°
12	880	470	200	100°



Gate arm installation

Fig.12

**Incorrect
Installation**

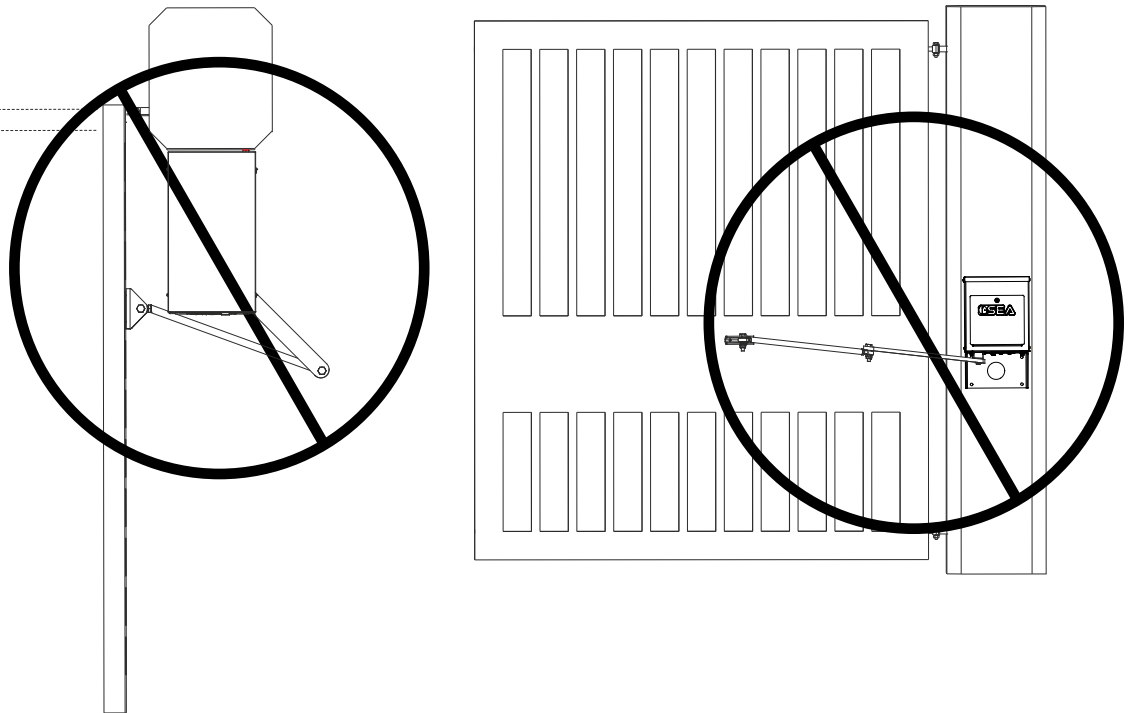
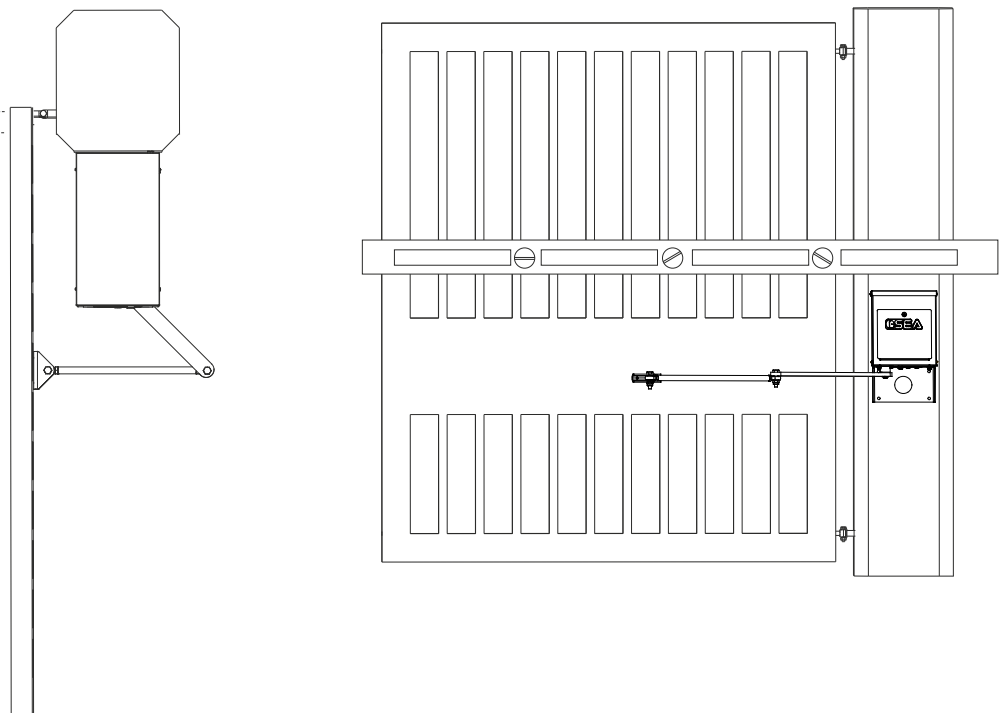
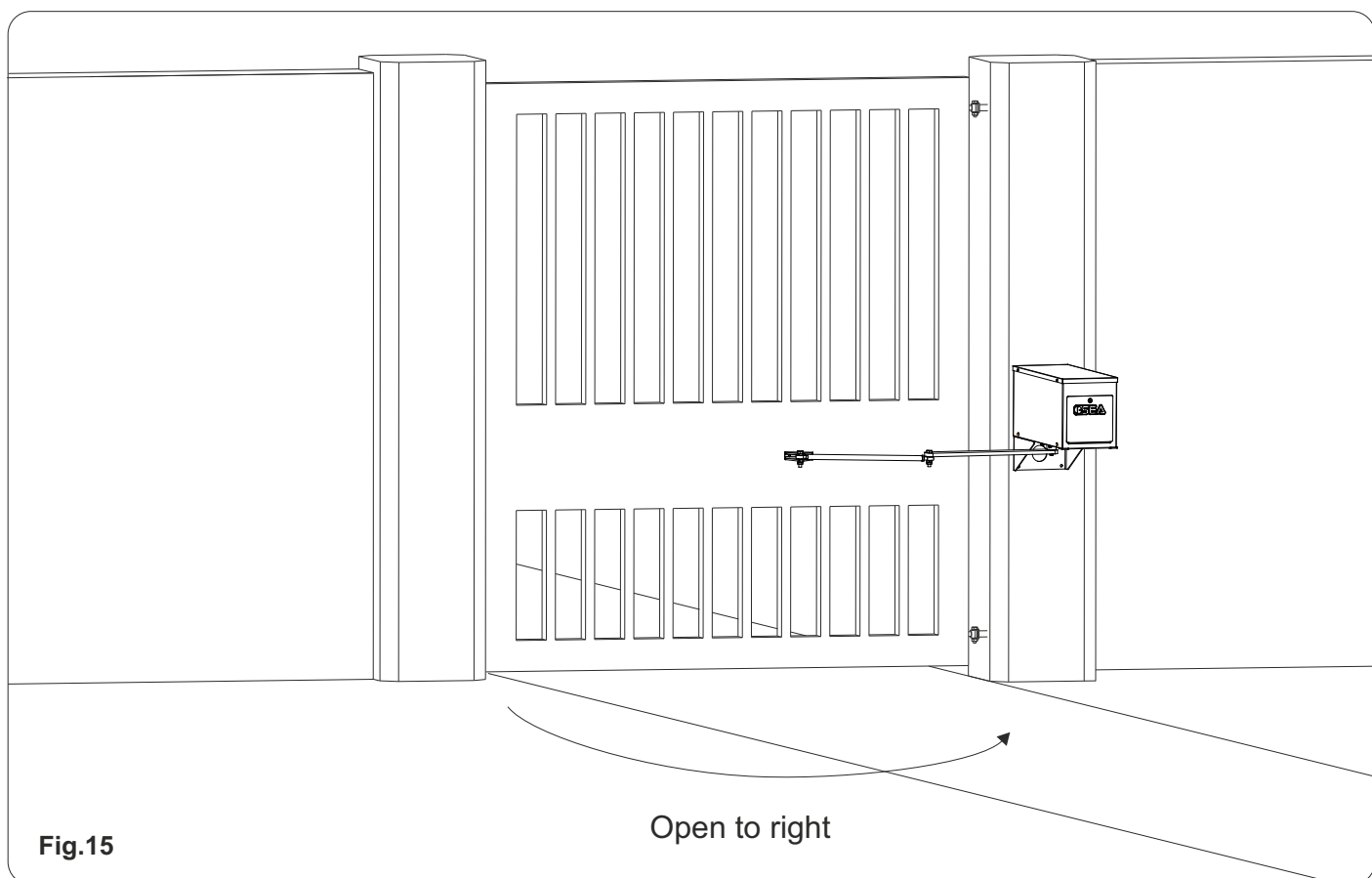
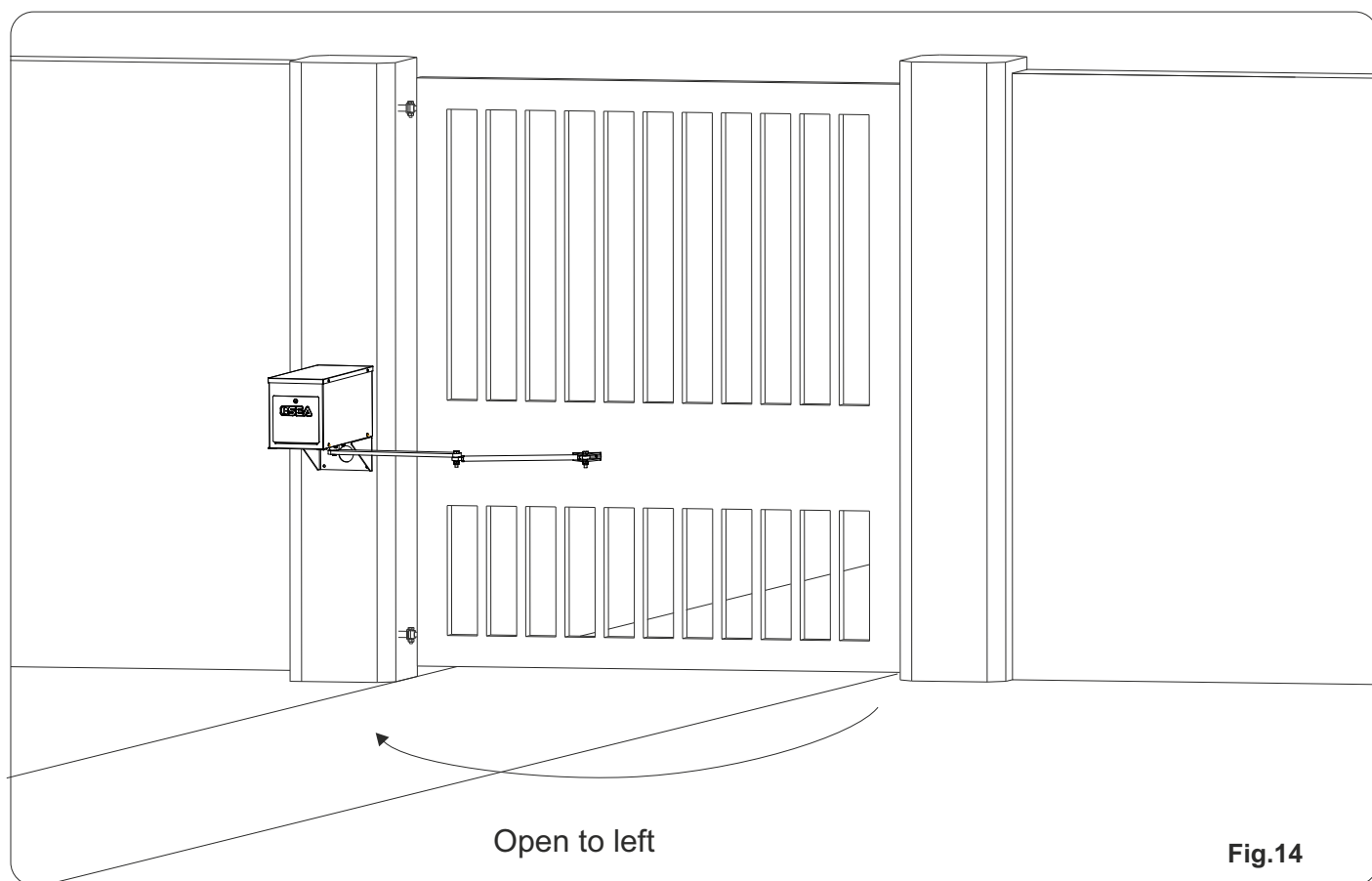


Fig.13

**Correct
Installation**



Gate movement direction



Left operator mounting

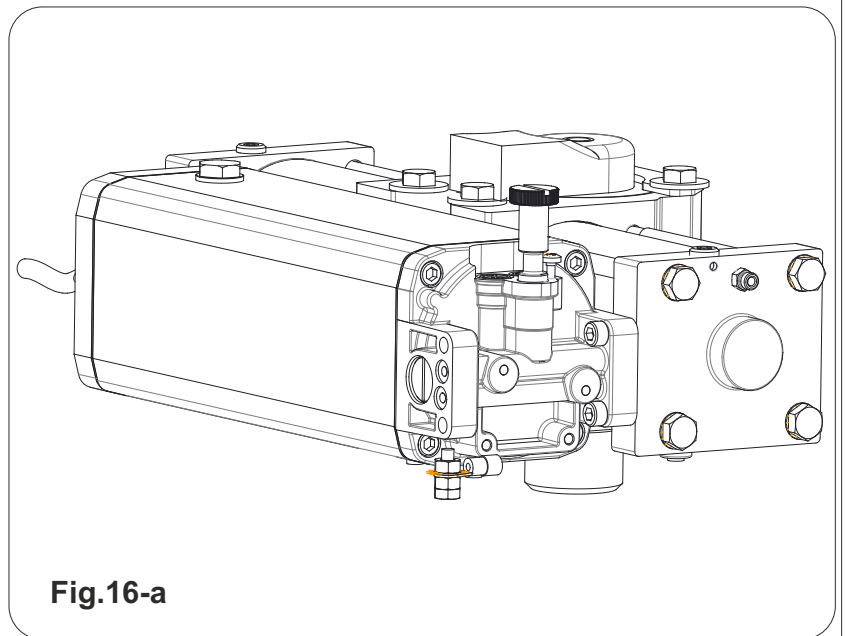
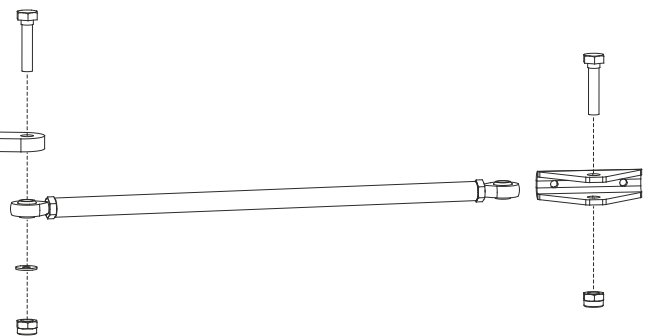
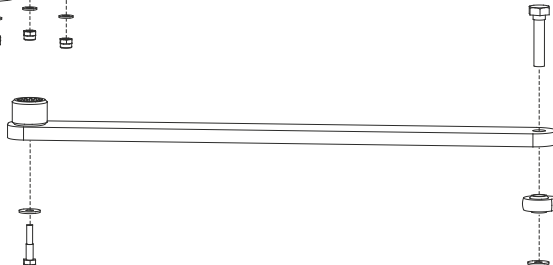
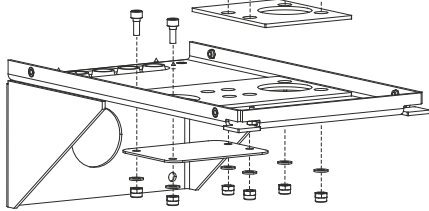
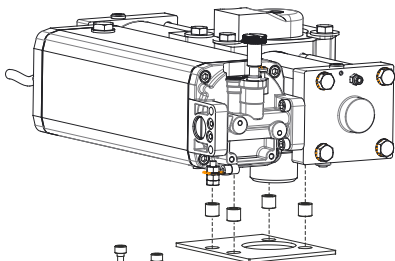
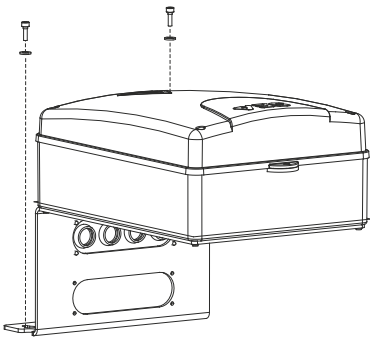
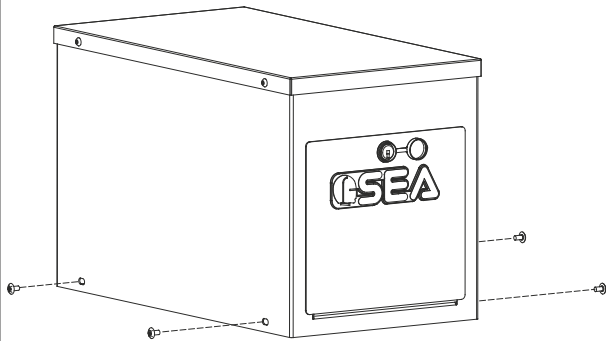


Fig.16

Right operator mounting

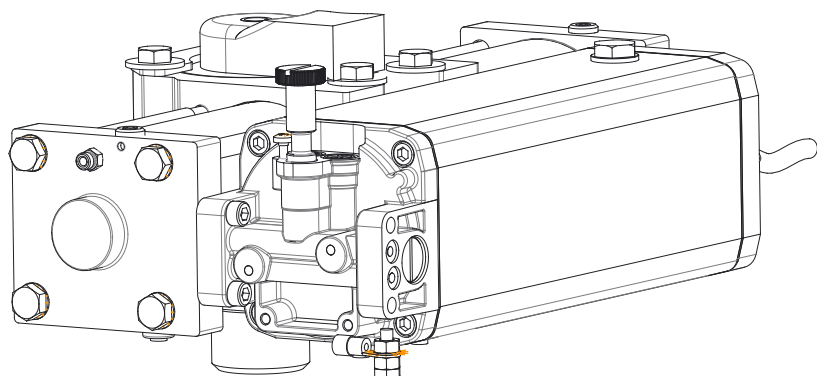


Fig.17-a

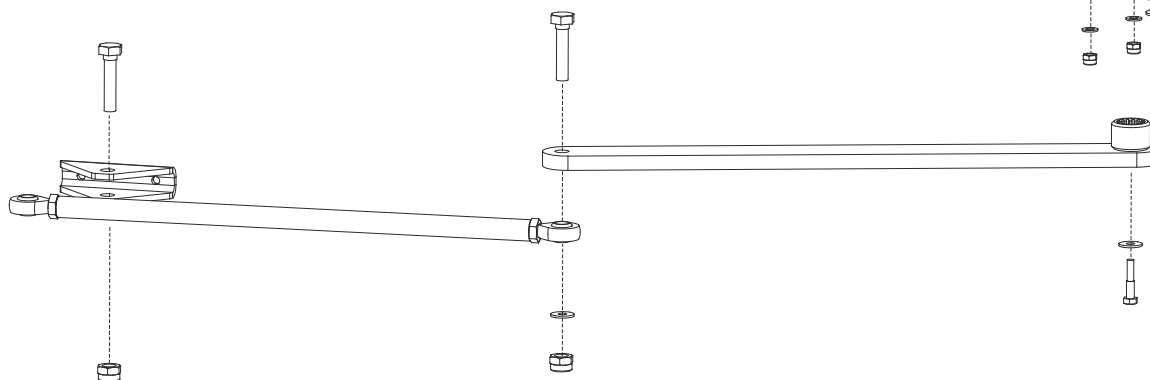
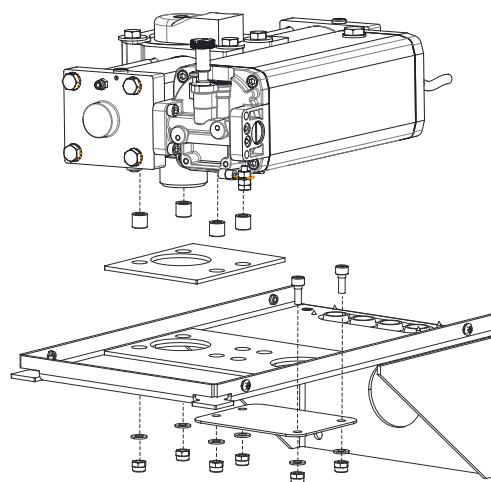
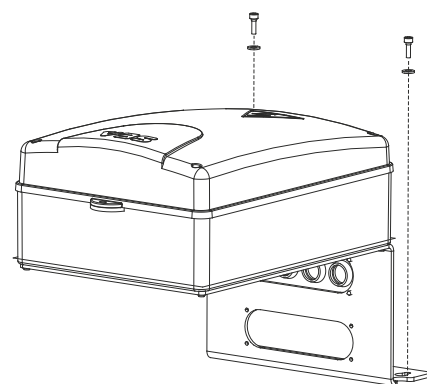
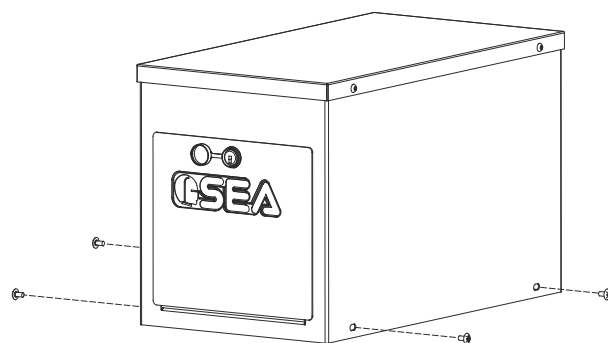


Fig.17

Mounting plate

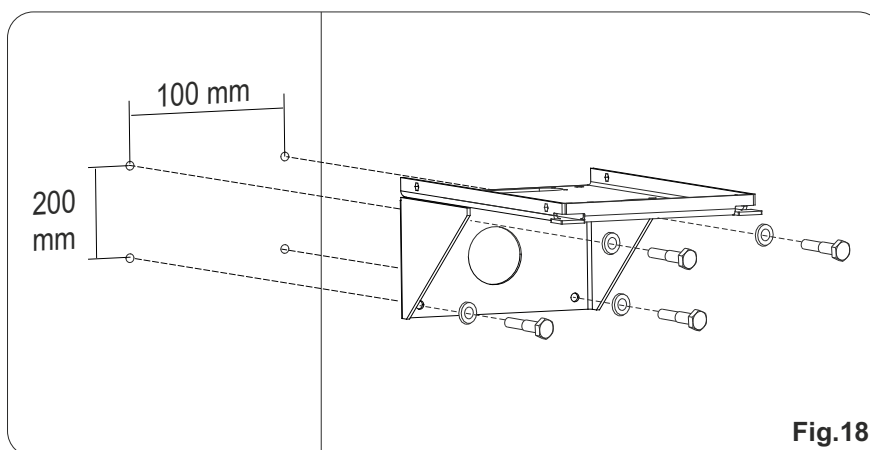


Fig.18

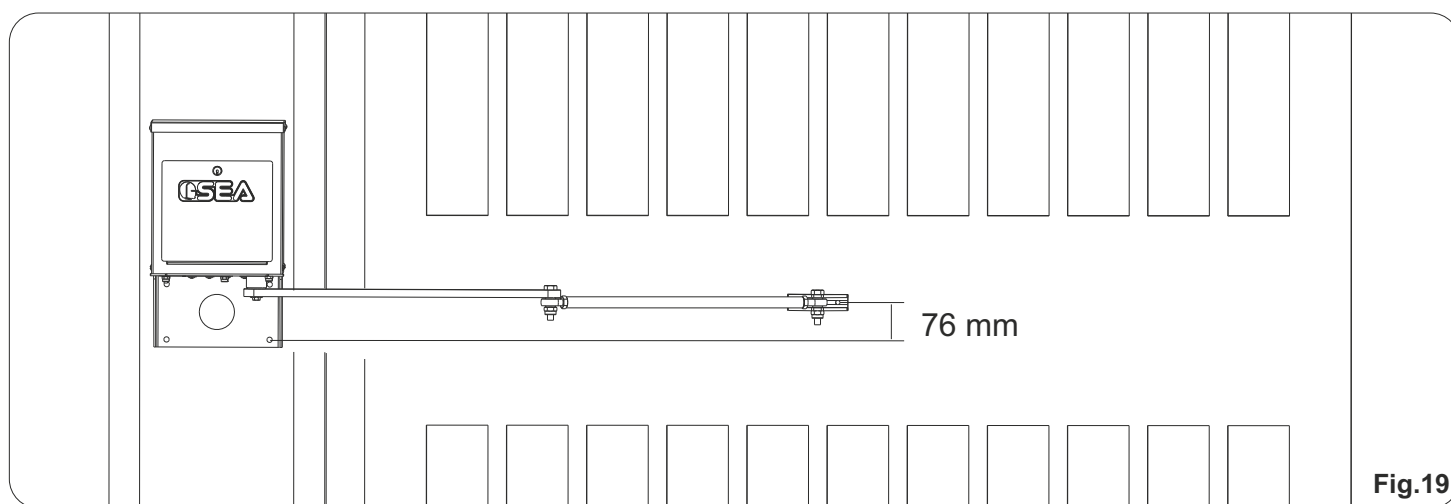


Fig.19

Torque adjustment (By-Pass Valves)

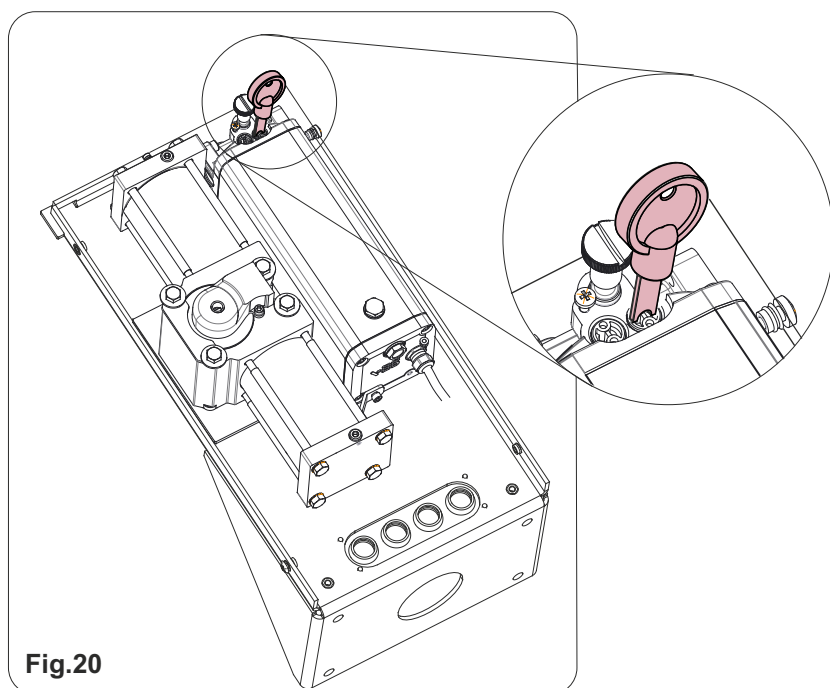
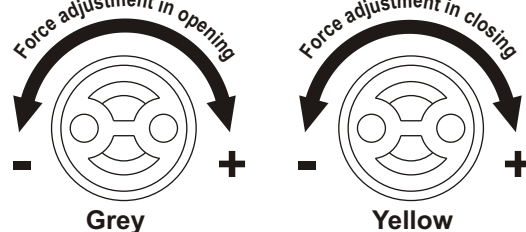


Fig.20

By-Pass Valves



Regulate the opening and closing forces of the gate respecting the force diagram. **THE MAXIMUM THRUST FORCE DURING THE MOVEMENT, MEASURED AT THE LEADING EDGE OF LEAF, IS SUBJECTED TO THE LAWS IN FORCE IN THE COUNTRY WHERE THE GATE IS INSTALLED**

Control unit support

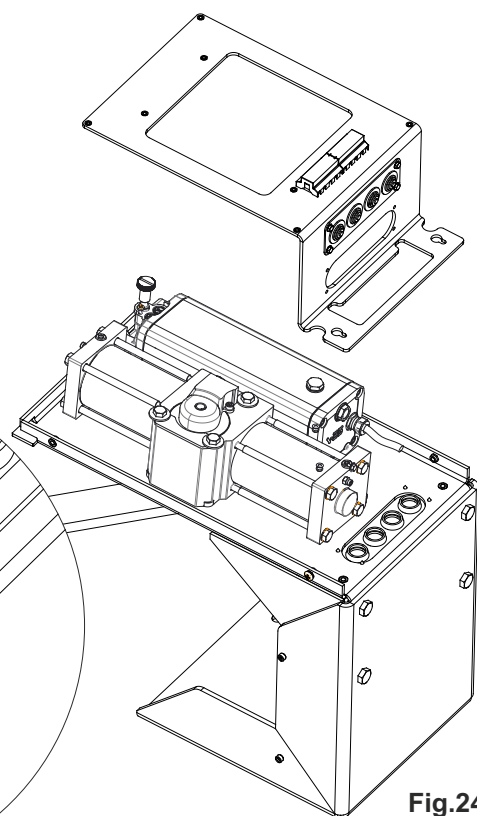
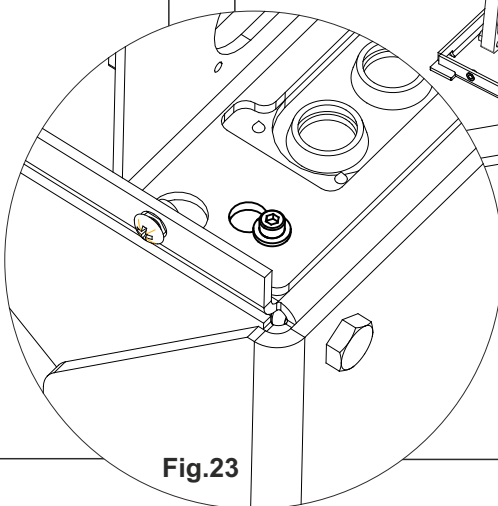
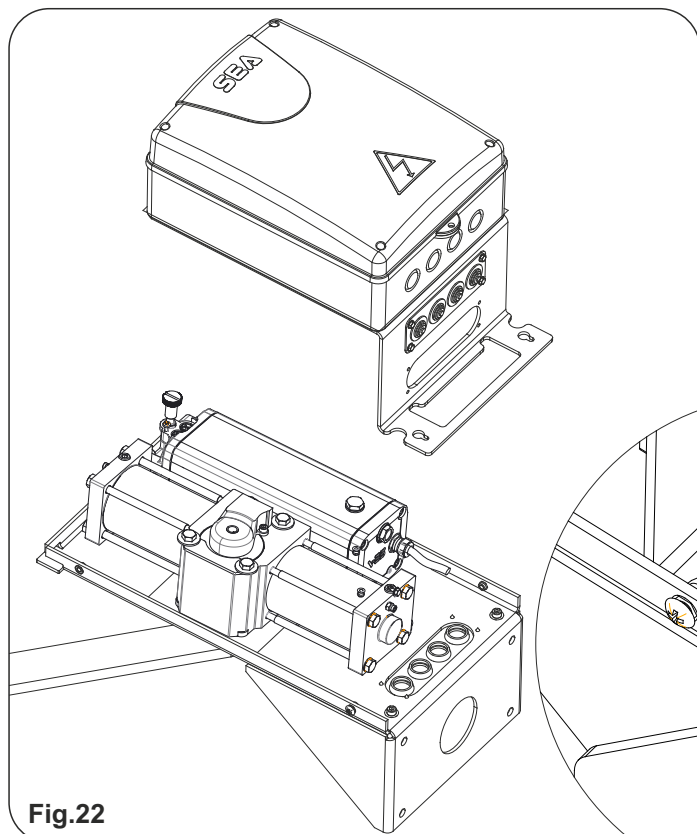
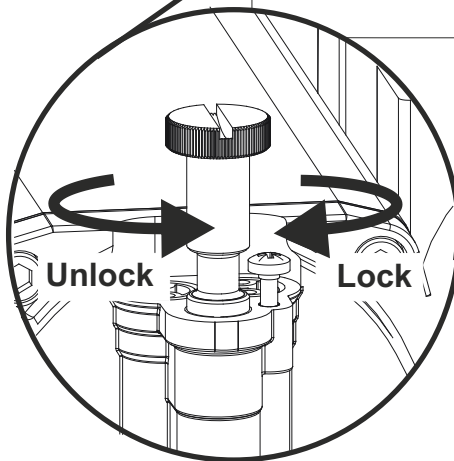
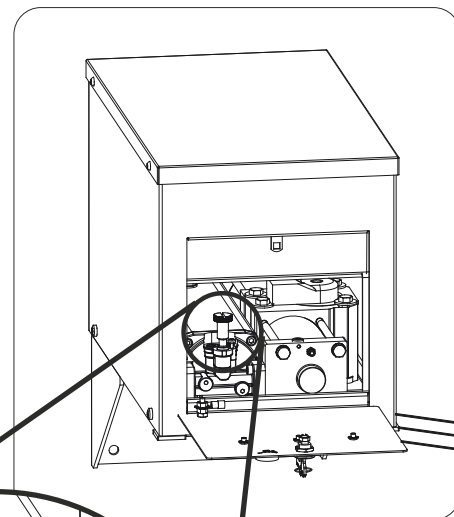
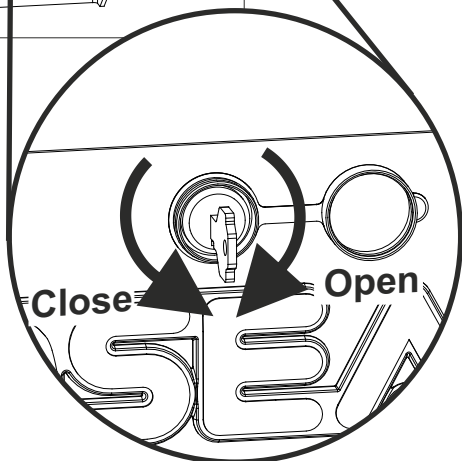
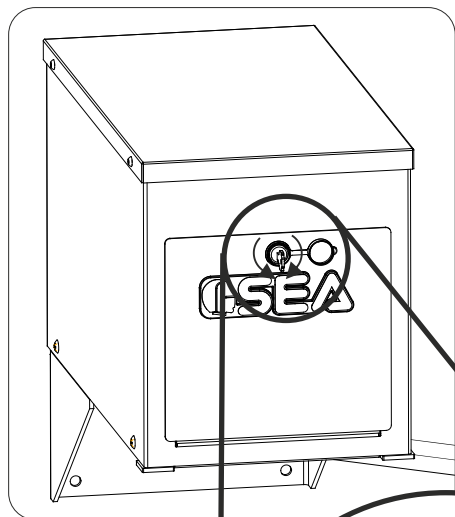
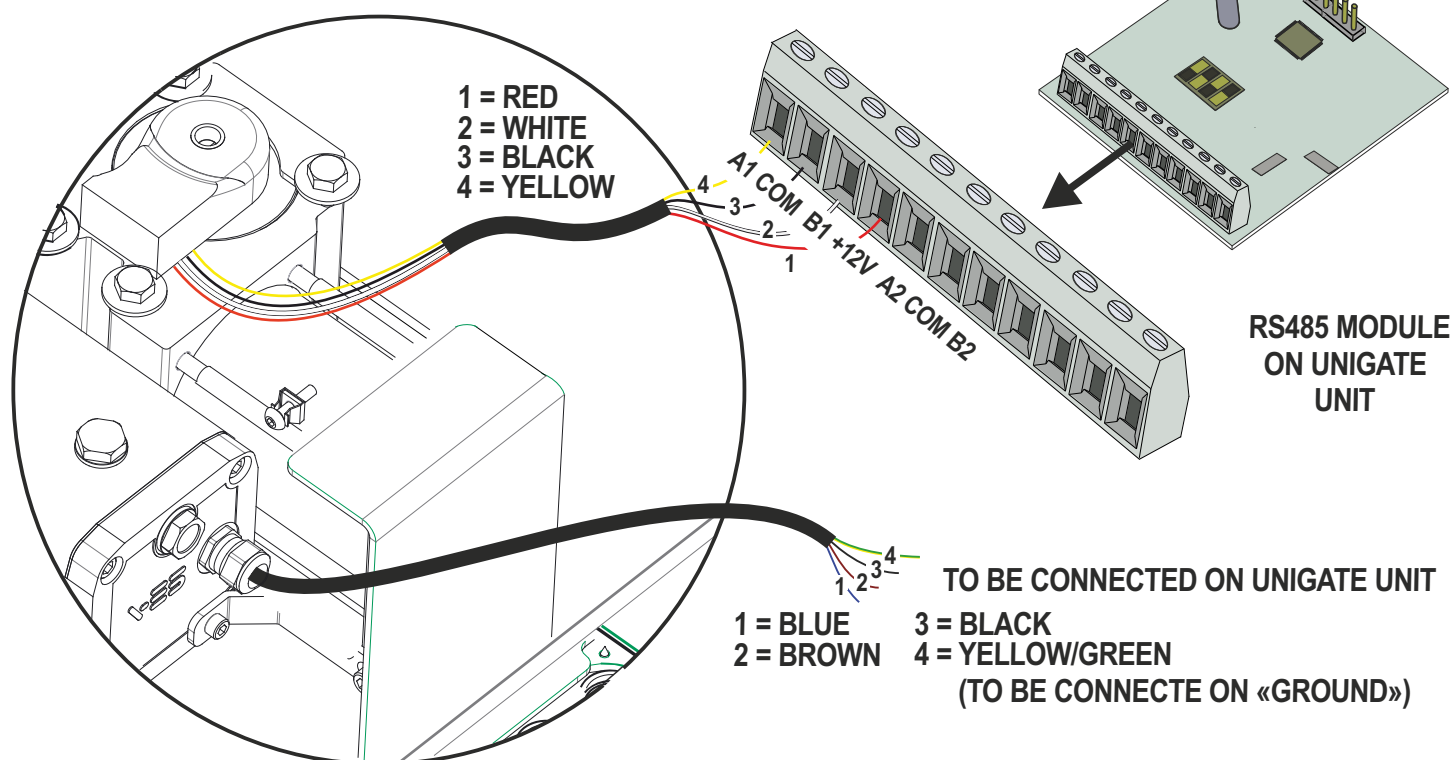


Fig.25 Fig.26

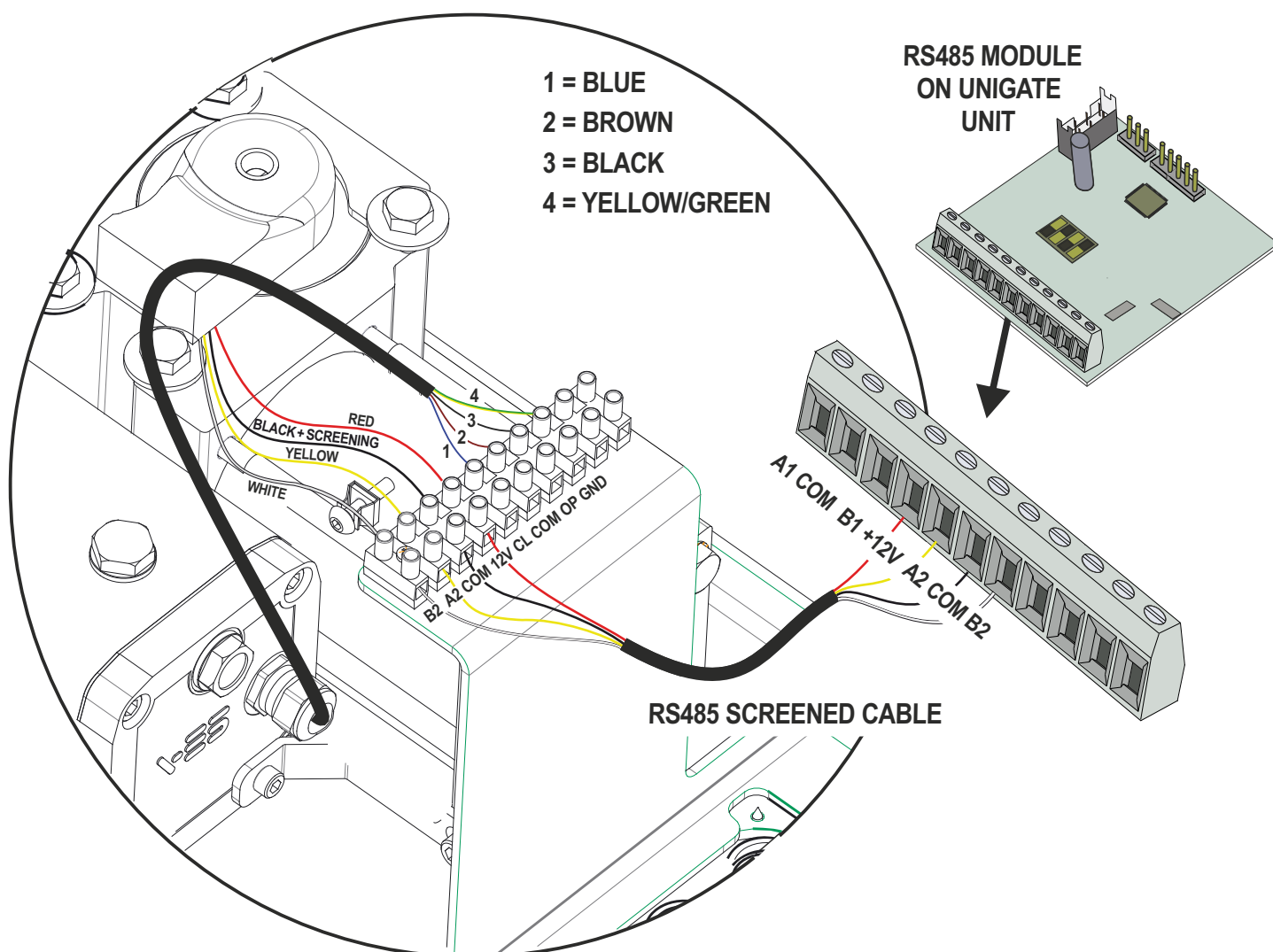
Manual release system



MASTER operator electric connections



SLAVE operator electric connections



TO THE ATTENTION OF THE TECHNICIAN AND THE END-USER

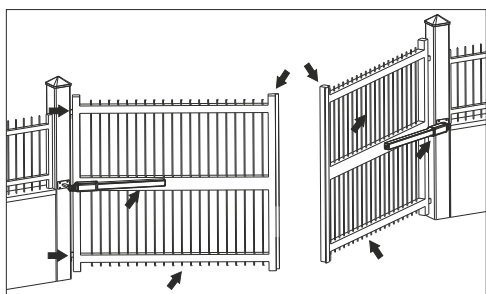
PERIODICAL MAINTENANCE

1) Check the robustness and the stability of the gate; particularly the leaning and/or rotation points of the gate (hinges)	Annual
2) Check the oil level and replace, in case of low level, with the oil recommended by the producer	Annual
3) Check the function of the release	Annual
4) Check the function of the by-pass valves	Annual
5) Check and grease the fixation pivots and screws	Annual
6) Check the integrity of the connecting cables	Annual
7) Check the good status of all components and replace them if corroded	Annual
8) Check the functionality of all the accessories especially the function of all security devices and of the Absolute Encoder	Annual
After having executed the periodical maintenance it is necessary to repeat the test and to reactivate the automation	

All the above described operations MUST be made exclusively by an authorized installer

RISK EXAMINATION

The points pointed by arrows are potentially dangerous. The installer must take a thorough risk examination to prevent crushing, conveying, cutting, grappling, trapping so as to guarantee a safe installation for people, things and animals. (Re. Laws in force in the country where installation has been made.) As for misunderstandings that may arise refer to your area distributor or call our help desk. These instructions are part of the device and must be kept in a well known place. The installer shall follow the provided instructions thoroughly. SEA products must only be used to automate doors, gates and wings. Any initiative taken without SEA explicit authorization will preserve the manufacturer from whatsoever responsibility. The installer shall provide warning notices on not assessable further risks. SEA in its relentless aim to improve the products, is allowed to make whatsoever adjustment without giving notice. This doesn't oblige SEA to upgrade the past production. SEA can not be deemed responsible for any damage or accident caused by product breaking, being damages or accidents due to a failure to comply with the instructions herein. The guarantee will be void and the manufacturer responsibility will be nullified if SEA original spare parts are not being used. The electrical installation shall be carried out by a professional technician who will release documentation as requested by the laws in force. Packaging materials such as plastic bags, foam polystyrene, nails etc must be kept out of children's reach as dangers may arise.



INITIAL TEST AND STARTING OF THE AUTOMATION

After having completed the necessary operations for a correct installation of the product and after having evaluated all the risks which could arise in any installation, **it is necessary to test the automation to guarantee the maximum security and, in particular, to guarantee that the laws in force are fully respected.** The first Start must be executed according to the rule **EN 12445** which establishes the methods of tests for checking the gate automations respecting the limits established by the rule **EN 12453**.

TO THE ATTENTION OF THE TECHNICIAN AND THE END-USER

SAFETY PRECAUTIONS: All electrical work should comply with the current regulations. A 16A / 0,030 differential switch must be used. Separate the source cables (operators, power supply) and command cables (photocells, push-buttons, etc). Be sure the entire system is properly earth bonded. Always run cables in separate ducts to prevent interferences.

INTENDED USE: The operator has been designed to be used for the automation of swing gates only.

SPARE PARTS: Send request for spare parts to: **SEA S.p.A. - Teramo - ITALY** - www.seateam.com

SAFETY AND ENVIRONMENTAL COMPATIBILITY: Don't waste product packing materials and/or circuits.

STORAGE: Materials must be properly packaged, handled with care and with appropriate vehicles;

WARRANTY LIMITS - see the sales conditions

MAINTENANCE AND OUT OF SERVICE: The decommission and maintenance must only be carried out by specialised and authorised personnel.

NOTE: THE MANUFACTURER CAN NOT BE DEEMED RESPONSIBLE FOR ANY DAMAGE OR INJURY CAUSED BY IMPROPER USE OF THIS PRODUCT

SEA S.p.A. reserves the right to make any required modification or change to the products and/or to this manual without any advanced notice obligation.

GENERAL NOTICE FOR THE INSTALLER AND THE USER

1. **Read carefully these Instructions** before beginning to install the product. Store these instructions for future reference
2. Don't waste product packaging materials and /or circuits.
3. This product was designed and built strictly for the use indicated in this documentation. Any other use, not expressly indicated here, could compromise the good condition/operation of the product and/or be a source of danger. SEA S.p.A. declines all liability caused by improper use or different use in respect to the intended one.
4. The mechanical parts must be comply with Directives: Machine Regulation 2006/42/CE and following adjustments), Low Tension (2006/95/CE), electromagnetic Consistency (2004/108/CE) Installation must be done respecting Directives: EN12453 and En12445.
5. Do not install the equipment in an explosive atmosphere.
6. SEA S.p.A. is not responsible for failure to observe Good Techniques in the construction of the locking elements to motorize, or for any deformation that may occur during use.
7. Before attempting any job on the system, cut out electrical power and disconnect the batteries. Be sure that the earthing system is perfectly constructed, and connect it metal parts of the lock.
8. Use of the indicator-light is recommended for every system, as well as a warning sign well-fixed to the frame structure.
9. SEA S.p.A. declines all liability as concerns the automated system's security and efficiency, if components used, are not produced by SEA S.p.A..
10. For maintenance, strictly use original parts by SEA.
11. Do not modify in any way the components of the automated system.
12. The installer shall supply all information concerning system's manual functioning in case of emergency, and shall hand over to the user the warnings handbook supplied with the product.
13. Do not allow children or adults to stay near the product while it is operating. The application cannot be used by children, by people with reduced physical, mental or sensorial capacity, or by people without experience or necessary training. Keep remote controls or other pulse generators away from children, to prevent involuntary activation of the system.
14. Transit through the leaves is allowed only when the gate is fully open.
15. The User must not attempt to repair or to take direct action on the system and must solely contact qualified SEA personnel or SEA service centers. User can apply only the manual function of emergency.
16. The power cables maximum length between the central engine and motors should not be greater than 10 m. Use cables with 2,5 mm² section. Use double insulation cable (cable sheath) to the immediate vicinity of the terminals, in particular for the 230V cable. Keep an adequate distance (at least 2.5 mm in air), between the conductors in low voltage (230V) and the conductors in low voltage safety (SELV) or use an appropriate sheath that provides extra insulation having a thickness of 1 mm

TERMS OF SALES

EFFICACY OF THE FOLLOWING TERMS OF SALE: the following general terms of sale shall be applied to all orders sent to SEA S.p.A. All sales made by SEA to all costumers are made under the prescription of this terms of sales which are integral part of sale contract and cancel and substitute all apposed clauses or specific negotiations present in order document received from the buyer.

GENERAL NOTICE The systems must be assembled exclusively with SEA components, unless specific agreements apply. Non-compliance with the applicable safety standards (European Standards EM12453 – EM 12445) and with good installation practice releases SEA from any responsibilities. SEA shall not be held responsible for any failure to execute a correct and safe installation under the above mentioned standards.

1) PROPOSED ORDER The proposed order shall be accepted only prior SEA approval of it. By signing the proposed order, the Buyer shall be bound to enter a purchase agreement, according to the specifications stated in the proposed order.

On the other hand, failure to notify the Buyer of said approval must not be construed as automatic acceptance on the part of SEA.

2) PERIOD OF THE OFFER The offer proposed by SEA or by its branch sales department shall be valid for 30 solar days, unless otherwise notified.

3) PRICING The prices in the proposed order are quoted from the Price List which is valid on the date the order was issued. The discounts granted by the branch sales department of SEA shall apply only prior to acceptance on the part of SEA. The prices are for merchandise delivered ex-works from the SEA establishment in Teramo, not including VAT and special packaging. SEA reserves the right to change at any time this price list, providing timely notice to the sales network. The special sales conditions with extra discount on quantity basis (Qx, Qx1, Qx2, Qx3 formula) is reserved to official distributors under SEA management written agreement.

4) PAYMENTS The accepted forms of payment are each time notified or approved by SEA. The interest rate on delay in payment shall be 1.5% every month but anyway shall not be higher than the max. interest rate legally permitted.

5) DELIVERY Delivery shall take place, approximately and not peremptorily, within 30 working days from the date of receipt of the order, unless otherwise notified. Transport of the goods sold shall be at Buyer's cost and risk. SEA shall not bear the costs of delivery giving the goods to the carrier, as chosen either by SEA or by the Buyer. Any loss and/or damage of the goods during transport, are at Buyer's cost.

6) COMPLAINTS Any complaints and/or claims shall be sent to SEA within 8 solar days from receipt of the goods, proved by adequate supporting documents as to their truthfulness.

7) SUPPLY The concerning order will be accepted by SEA without any engagement and subordinately to the possibility to get it's supplies of raw material which is necessary for the production; Eventual completely or partially unsuccessful executions cannot be reason for complains or reservations for damage. SEA supply is strictly limited to the goods of its manufacturing, not including assembly, installation and testing. SEA, therefore, disclaims any responsibility for damage deriving, also to third parties, from non-compliance of safety standards and good practice during installation and use of the purchased products.

8) WARRANTY The standard warranty period is 12 months. This warranty time can be extended by means of expedition of the warranty coupon as follows:

SILVER: The mechanical components of the operators belonging to this line are guaranteed for 24 months from the date of manufacturing written on the operator.

GOLD: The mechanical components of the operators belonging to this line are guaranteed for 36 months from the date of manufacturing written on the operator.

PLATINUM: The mechanical components of the operators belonging to this line are guaranteed for 36 months from the date of manufacturing written on the operator. The base warranty (36 months) will be extended for further 24 months (up to a total of 60 months) when it is acquired the certificate of warranty which will be filled in and sent to SEA S.p.A. The electronic devices and the systems of command are guaranteed for 24 months from the date of manufacturing. In case of defective product, SEA undertakes to replace free of charge or to repair the goods provided that they are returned to SEA repair centre. The definition of warranty status is by unquestionable assessment of SEA. The replaced parts shall remain propriety of SEA. Binding upon the parties, the material held in warranty by the Buyer, must be sent back to SEA repair centre with fees prepaid, and shall be dispatched by SEA with carriage forward. The warranty shall not cover any required labour activities.

The recognized defects, whatever their nature, shall not produce any responsibility and/or damage claim on the part of the Buyer against SEA. The guarantee is in no case recognized if changes are made to the goods, or in the case of improper use, or in the case of tampering or improper assembly, or if the label affixed by the manufacturer has been removed including the SEA registered trademark No. 804888. Furthermore, the warranty shall not apply if SEA products are partly or completely coupled with non-original mechanical and/or electronic components, and in particular, without a specific relevant authorization, and if the Buyer is not making regular payments. The warranty shall not cover damage caused by transport, expendable material, faults due to non-conformity with performance specifications of the products shown in the price list. No indemnification is granted during repairing and/or replacing of the goods in warranty. SEA disclaims any responsibility for damage to objects and persons deriving from non-compliance with safety standards, installation instructions or use of sold goods. The repair of products under warranty and out of warranty is subject to compliance with the procedures notified by SEA.

9) RESERVED DOMAIN A clause of reserved domain applies to the sold goods; SEA shall decide autonomously whether to make use of it or not, whereby the Buyer purchases propriety of the goods only after full payment of the latter.

10) COMPETENT COURT OF LAW In case of disputes arising from the application of the agreement, the competent court of law is the tribunal of Teramo. SEA reserves the faculty to make technical changes to improve its own products, which are not in this price list at any moment and without notice. SEA declines any responsibility due to possible mistakes contained inside the present price list caused by printing and/or copying. The present price list cancels and substitutes the previous ones. The Buyer, according to the law No. 196/2003 (privacy code) consents to put his personal data, deriving from the present contract, in SEA archives and electronic files, and he also gives his consent to their treatment for commercial and administrative purposes.

Industrial ownership rights: once the Buyer has recognized that SEA has the exclusive legal ownership of the registered SEA brand num.804888 affixed on product labels and / or on manuals and / or on any other documentation, he will commit himself to use it in a way which does not reduce the value of these rights, he won't also remove, replace or modify brands or any other particularity from the products. Any kind of replication or use of SEA brand is forbidden as well as of any particularity on the products, unless preventive and expressed authorization by SEA.

In accomplishment with art. 1341 of the Italian Civil Law it will be approved expressly clauses under numbers:

4) PAYMENTS - 8) GUARANTEE - 10) COMPETENT COURT OF LAW



Automatic Gate Openers

International registered trademark n. 804888



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