



SEA[®]
Sistemi Elettronici
di Apertura Porte e Cancelli
International registered trademark n. 804888



English

LEPUS INDUSTRIAL

MOTOR REDUCER FOR SLIDING GATES



SEA S.p.A.
Zona industriale 64020 S.ATTO Teramo - (ITALY)
Tel. +39 0861 588341 r.a. Fax +39 0861 588344
www.seateam.com
seacom@seateam.com

LEPUS INDUSTRIAL is an **oil-bathed motor-reducer** created for sliding gates automation. Models **LEPUS INDUSTRIAL 600**, **LEPUS INDUSTRIAL 1600**, **LEPUS INDUSTRIAL 2000 24V** and **LEPUS INDUSTRIAL 2000 THREEPHASE** are **IRREVERSIBLE**; The **irreversibility** allows a perfect and safe gate closing avoiding the setup of an electrolock and in case of power supply lacking, the release device which is in the frontal part of the motor-reducer allows the manual opening and closing. The model **LEPUS INDUSTRIAL 1000 REVERSIBLE** is equipped with **ELECTRIC BRAKE**. All operators are equipped with **mechanical adjustable clutch** which ensures the control of the gate pushing. Moreover, the **electronic reversing device** realized through an **Encoder** makes the LEPUS motor-reducers safe and reliable allowing in a simple way to comply with the current norms in the countries where this product is set up.

MAIN PARTS NOMENCLATURE

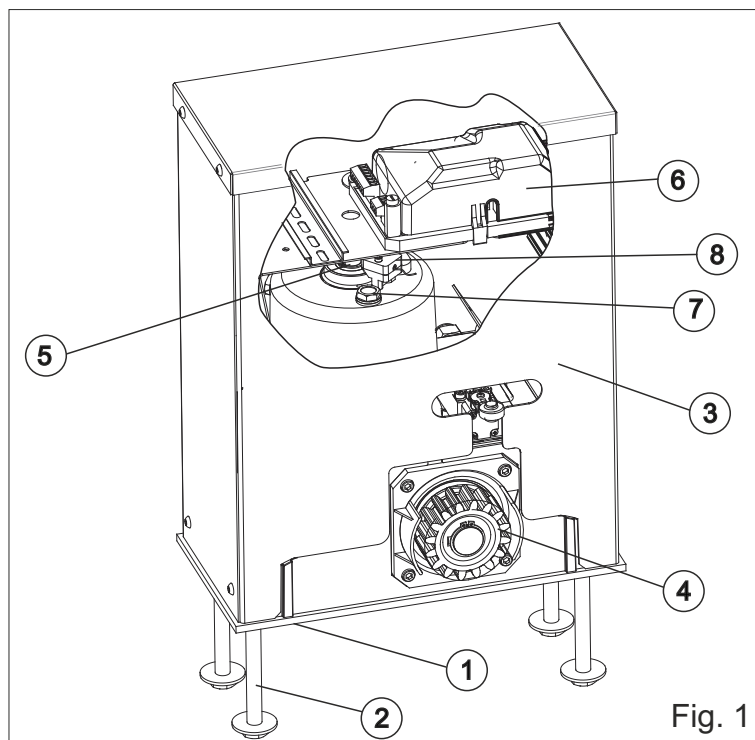


Fig. 1

- 1 Adjustable Foundation plate
- 2 Anchor bolts
- 3 Carter
- 4 Pinion
- 5 Adjusting screw mechanical clutch
- 6 Electronic control unit
- 7 Oil filling up cap
- 8 Magnetic encoder

DIMENSIONS (mm)

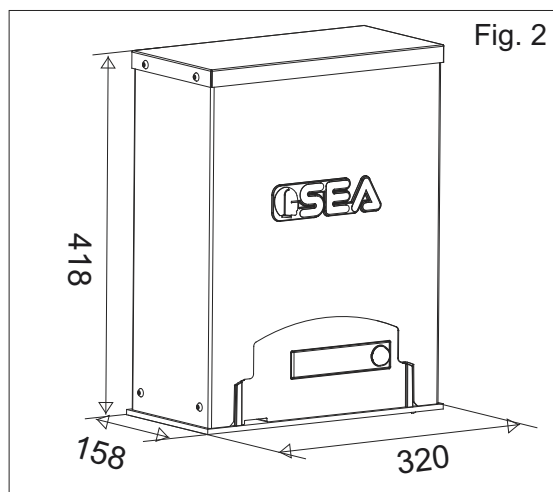
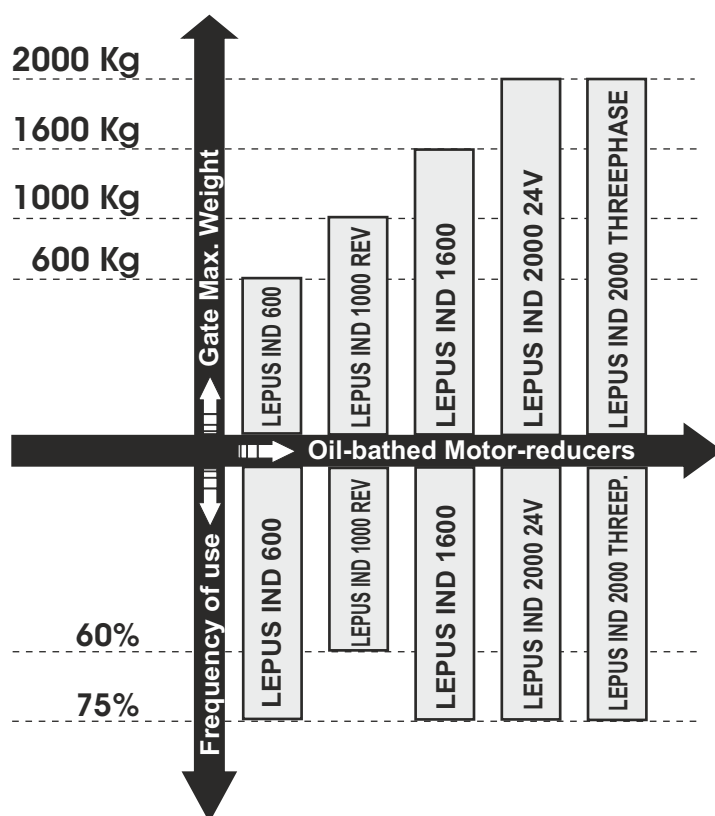


Fig. 2

LEPUS USING-GRAPHIC



TECHNICAL FEATURES

TECHNICAL DATA	LEPUS IND 600	LEPUS IND 1000 REV	LEPUS IND 1600	LEPUS IND 2000 24V	LEPUS IND 2000 TRIF.
Power Supply	230V (±5%) 50/60 Hz	230V (±5%) 50/60 Hz	230V (±5%) 50/60 Hz	24V	400V/230V~ (±5%) 50/60 Hz
Power	330W	330W	450W	100W	650W
Motor capacitor	25 µF	25 µF	35 µF	-	-
Working Frequency	75%	60%	75%	75%	75% intensive
Motor rotation speed	1400 rpm	1400 rpm	1400 rpm	3500 rpm	1400 rpm
Reduction ratio	1/30	1/30	1/30	1/30	1/30
Room temperature	-20°C +55°C	-20°C +55°C	-20°C +55°C	-20°C +55°C	-20°C +55°C
Thermal protect. intervent.	130°C	130°C	130°C	-	-
Weight of the unit with oil	17 Kg	17 Kg	17 Kg	17 Kg	17 Kg
Oil quantity	1,75 L	1,75 L	1,75 L	1 L	1,75 L
Protection rating	IP 55	IP 55	IP 55	IP 55	IP 55
Gate speed (pinion Z13)	0,125 m/s	-	0,125 m/s	0,23 m/s	0,125 m/s
Gate speed (pinion Z16)	0,175 m/s	0,13 m/s	0,175 m/s	-	0,175 m/s
Gate speed (pinion Z20)	0,2 m/s	-	0,2 m/s	-	0,2 m/s
Maximum torque	50Nm	70Nm	70Nm	70Nm	90Nm
Maximum weight of the gate	600 Kg	1000 Kg	1600 Kg	2000 Kg	2000 Kg
Anti- crushing clutch	Mechanical	Mechanical	Mechanical	Mechanical	Mechanical
Limit switch	Mechanical	Mechanical	Mechanical	Mechanical	Mechanical
Electric Brake	No	Yes	No	No	No

Note: The frequency of use is valid only for the first hour at 20°C room temperature

GATE ARRANGEMENT

The first thing to check is that the gate is in good running order as follows:

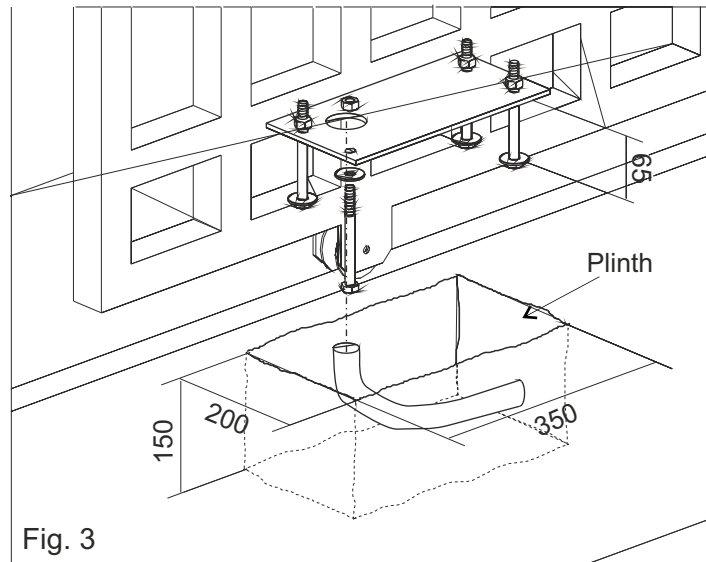
- a) The gate is rigid and straight and runs smoothly throughout its travel.
- b) The lower track is in good order, straight and levelled.
- c) The lower support wheels have sealed bearings or grease points.
- d) The top guide must be manufactured and installed so that the gate is perfectly upright.
- e) Physical gate stops must be fitted to prevent the gate coming out of its guides and track.

MOUNTING PLATE INSTALLATION

To install the mounting plate it is necessary to:

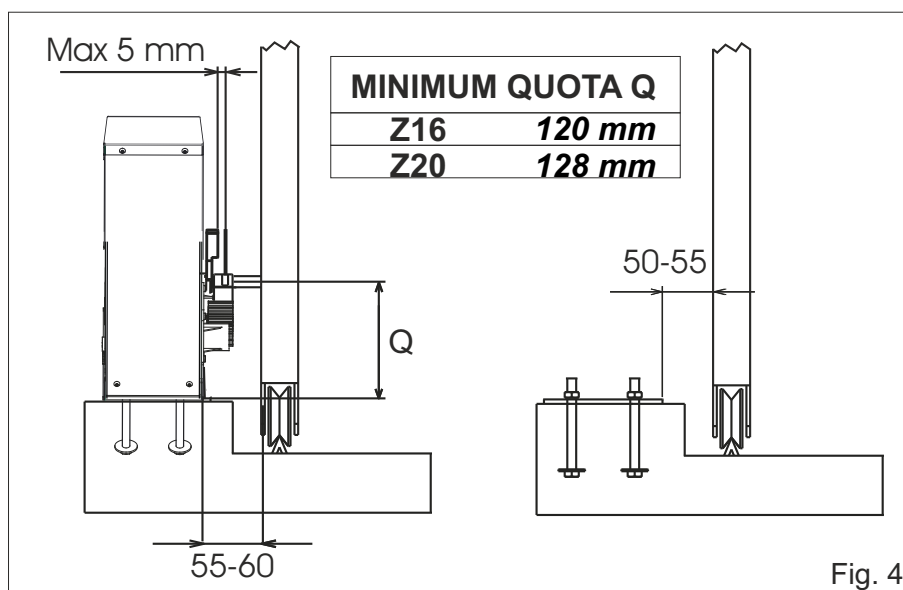
1. Have a mounting plate manufactured to the dimensions shown in Fig. 3. The plate will require to have concrete holding into which the foundation plate and the anchor bolts will be walled up.

Note: It is best if the gate structure allows the plate to be raised up from the finished level by 50 mm. This will stop water gathering around the operator.



2. When you are concreting in the plate install any necessary cable ducts (30 mm dia. minimum) and cables in through the base plate. Cable ducts should have sweep bends not elbow ones.

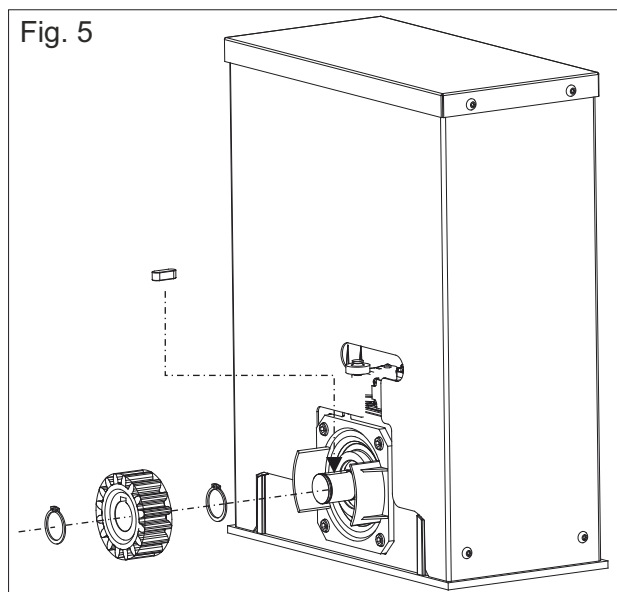
3. When concreting in the plate check that the plate is perfectly levelled and that the measurement of 50 - 55 mm given in Fig. 4 is followed.



PINION ASSEMBLING

To replace the existing pinion, proceed as follows:

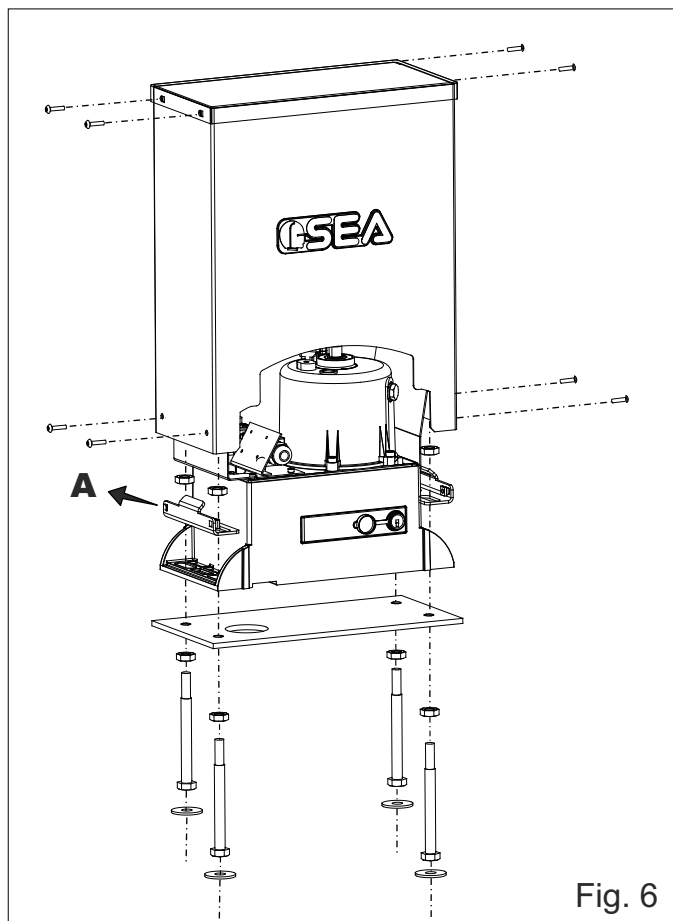
1. Remove existing seeger and pinion as shown in Fig.5
2. Remove the shaft tab
3. Insert the new spare parts (shaft tab, seeger and pinion) as shown in Fig. 5



FITTING OF THE UNIT

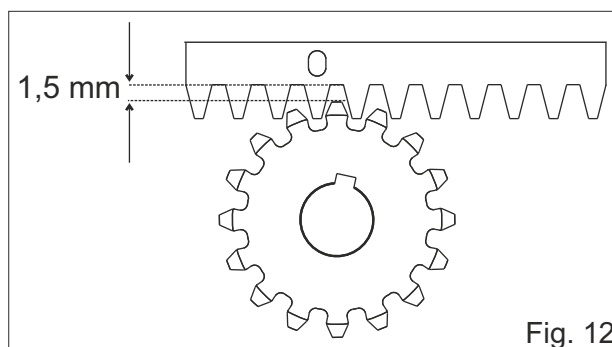
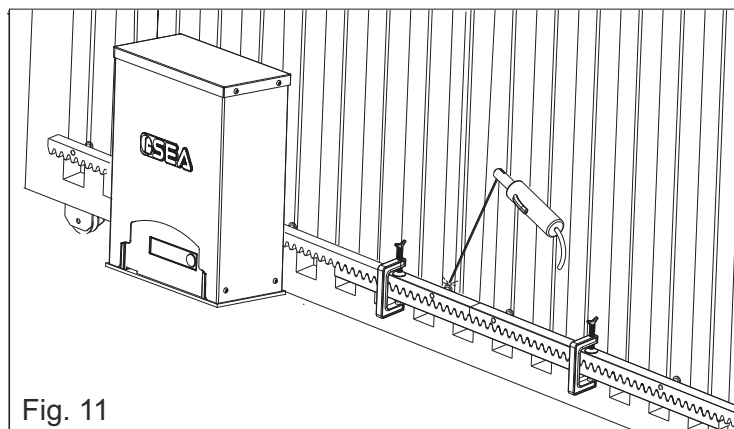
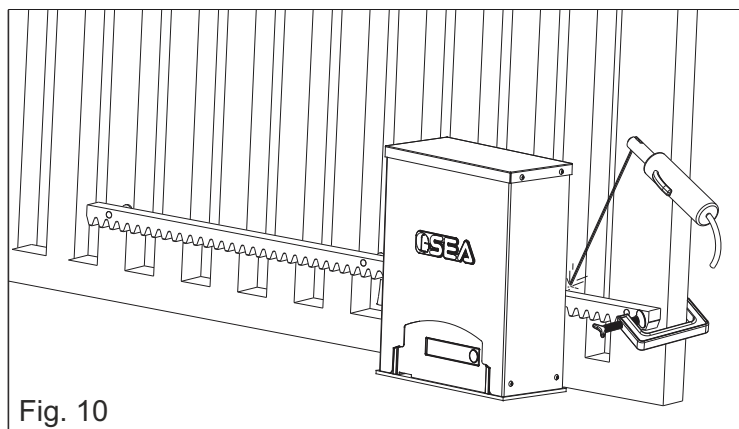
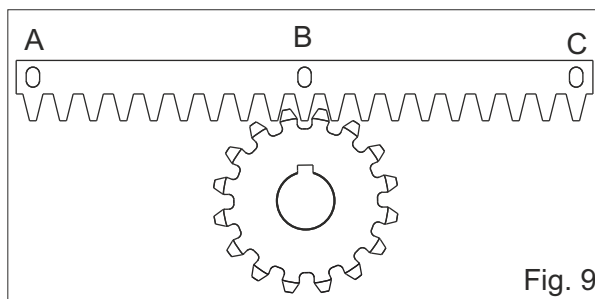
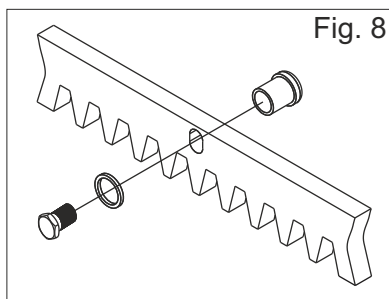
1. Fix the motor-reducer to the foundation plate adjusting the side position and its height (Fig. 6 - Fig. 7) considering the mentioned measurements in Fig. 4
2. **Pay Attention** that plate **A** fits correctly in the housing and fix it to the motor-reducer as shown in Fig. 6

IMPORTANT: Remove the closing loading oil cap (red) and substitute it with that supplied apart provided with the airhole (black)



GEAR RACK MOUNTING

1. Release the motor reducer and take the leaf to complete opening;
 2. Fix to each gear rack element the support pawls using the appropriate lock screws, taking care to place them in the upper part of the hole (Fig. 8) ;
 3. Lean the gear rack element on the toothed pinion of the motor so that it results parallel to the ground slideway of the gate, place it as shown in Fig. 9 and electrically weld the central pawl **B** to the gate structure (Fig. 10). Manually move the gate until pawl **C** is placed in correspondence to the pinion, now fix it with electric welding. Repeat the same procedure for pawl **A** after having placed it in correspondence to the pinion;
 4. Make sure that all the gear rack elements are perfectly aligned and placed correctly (teeth in phase). It's suggested to place two aligned elements in front of a third one as shown in Fig. 11;
 5. Repeat the above described operation for all the remaining gear rack elements which have to be installed;
 6. To avoid that the door weights down on the pinion (Fig. 12) lift up the whole rack about 1,5 mm.
- Warning: Keep a gap of about 0,5 mm between pinion tooth and gear rack tooth;**
7. Make sure that the gear rack works at the center of the pinion along all rack elements, if necessary, adjust the distance pieces length.



LIMIT-SWITCH ADJUSTMENT

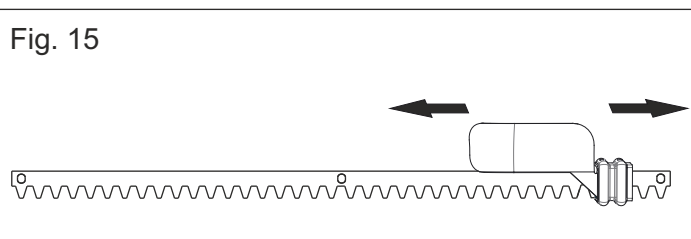
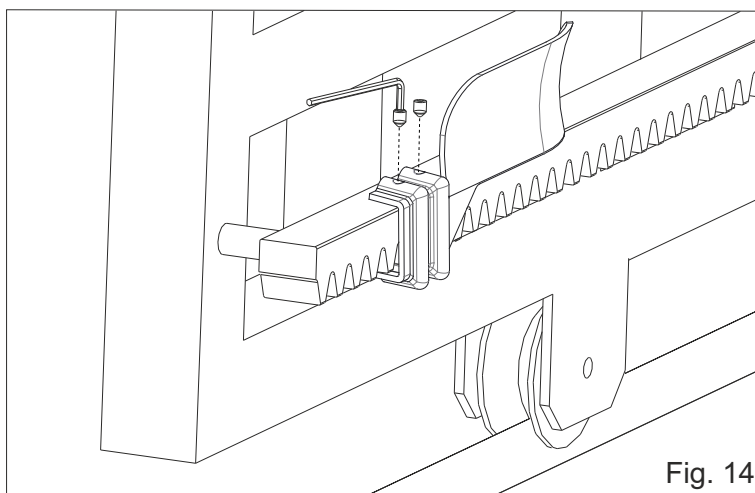
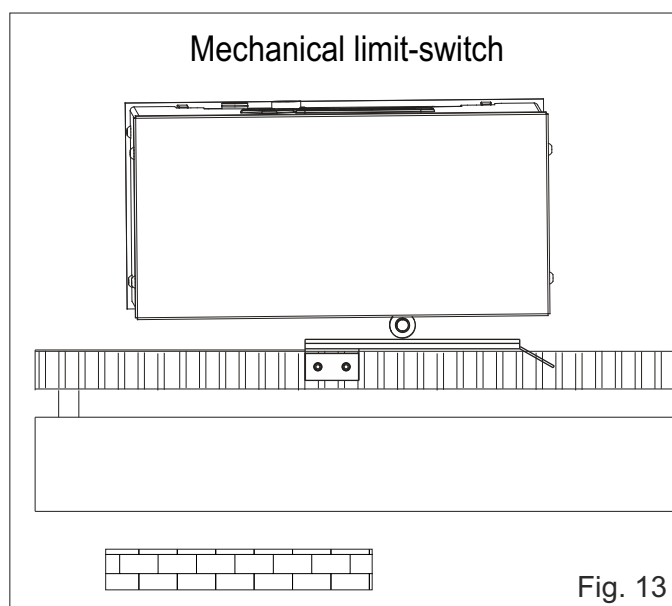
1. To install and adjust the limit switches in opening, follow the instructions below:

- Bring the gate in full opening
- Place the plate on the rack and fix it with the supplied screws (Fig. 14).

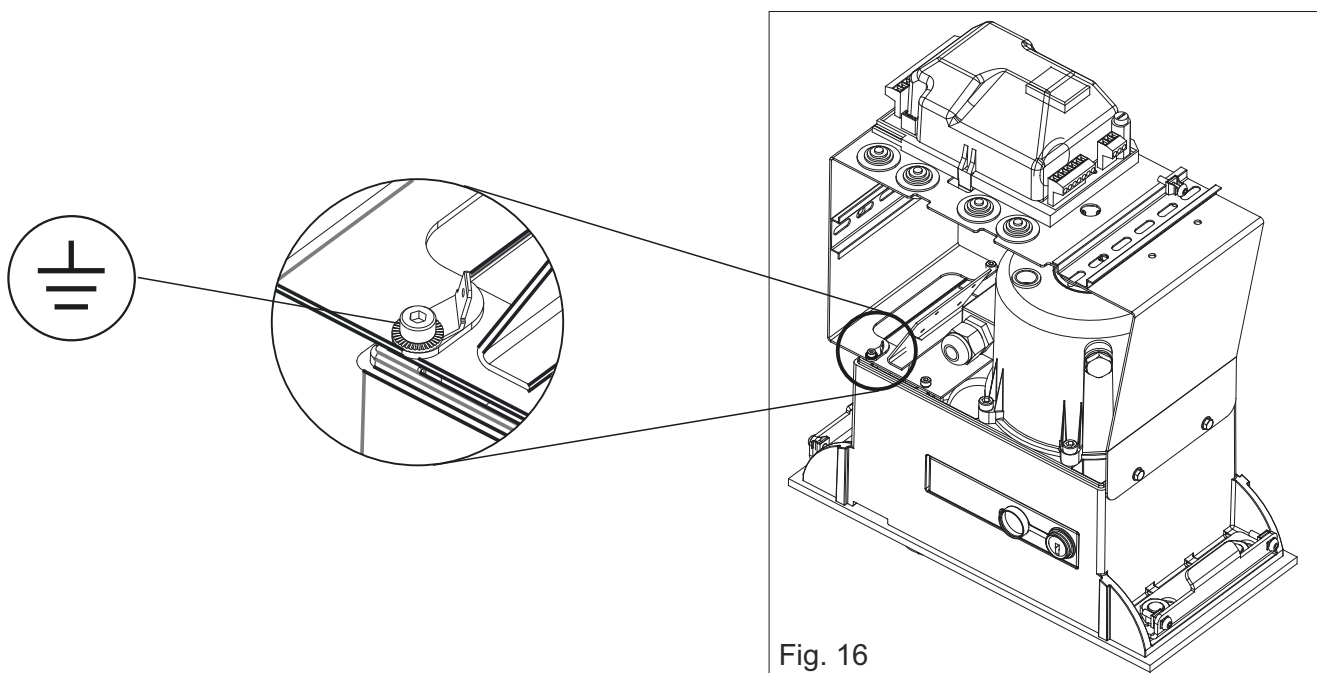
2. To install and adjust the limit switches in closing, follow the instructions below:

- Bring the gate in full closing
- Place the plate on the rack and fix it with the supplied screws (Fig. 14).

3. To adjust the limit switch play in opening and closing, move the respective plates to the right or to the left, as shown in Fig. 15

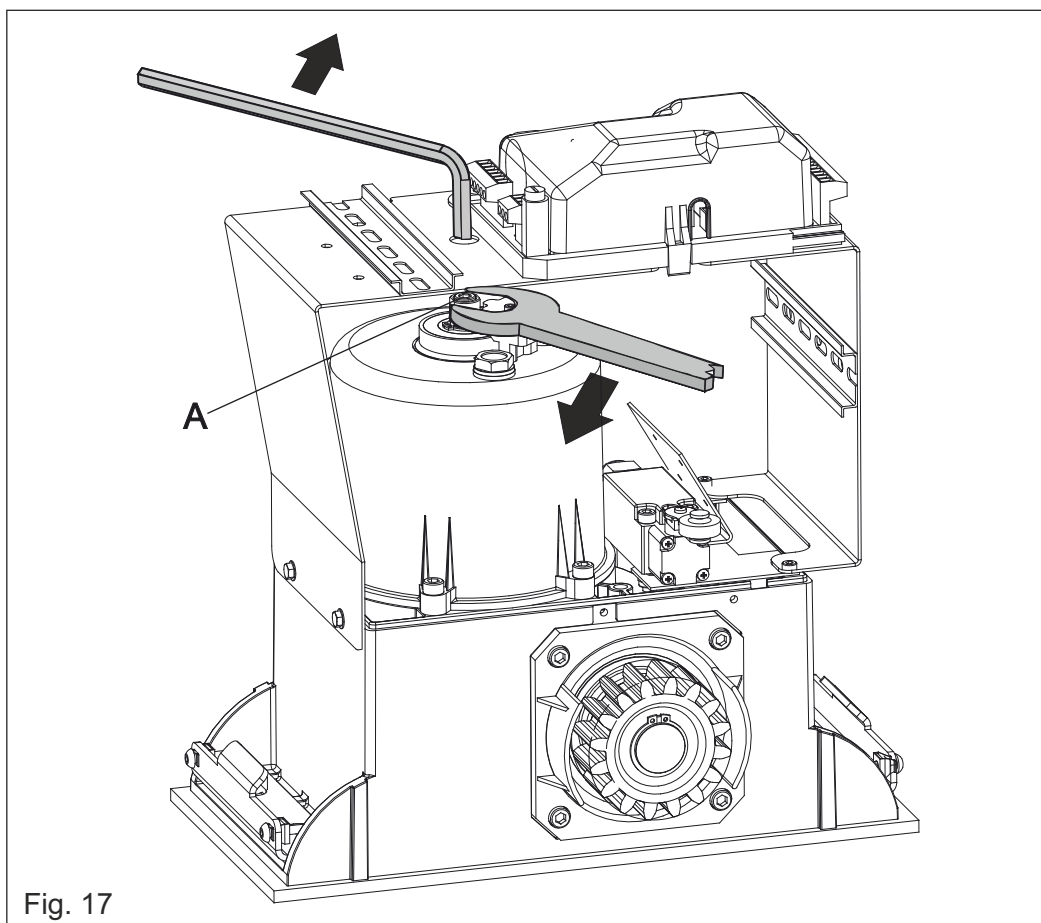


GROUNDING (Fig. 16)



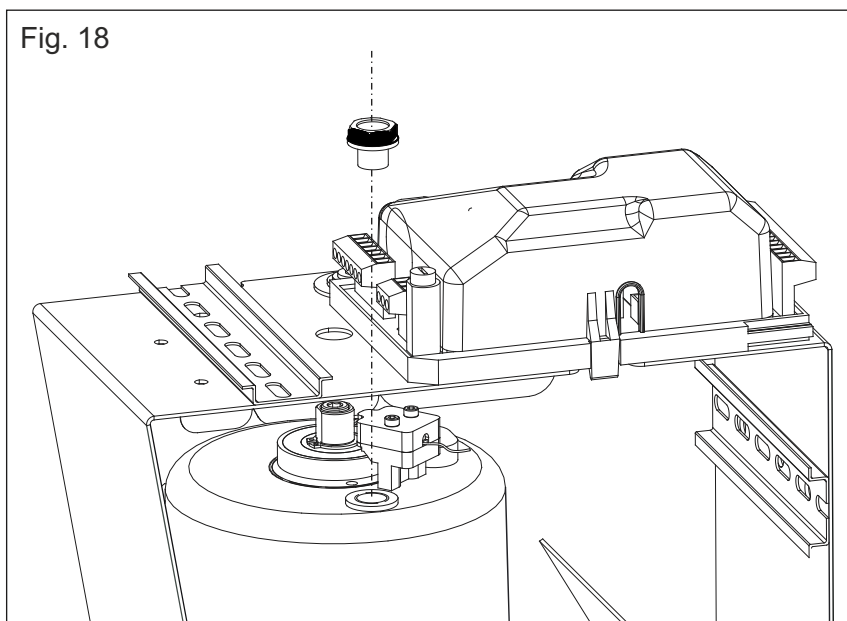
CLUTCH ADJUSTMENT

1. Take power supply tension off.
2. To adjust the clutch act as follows:
 - Act on the "A" screw (Fig. 17) in the following way:
 - Clockwise = less clutch sensibility and more pushing force
 - Anti-clockwise = more clutch sensibility and less pushing force



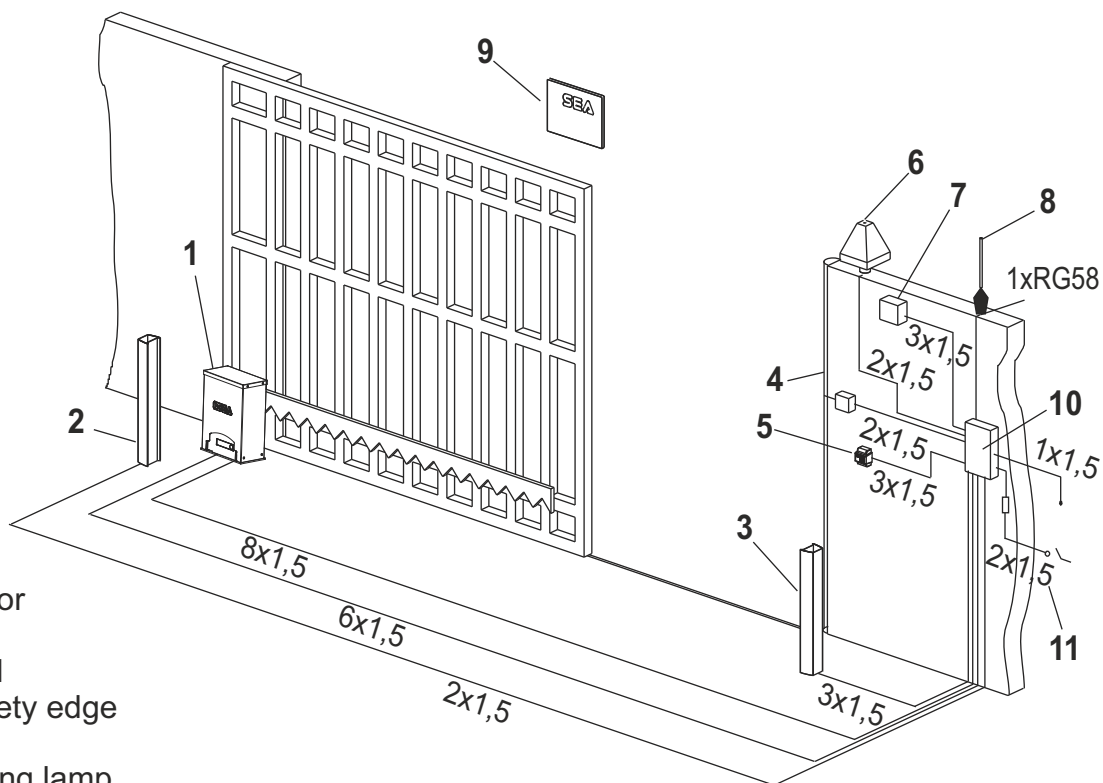
BREATHER SCREW REPLACEMENT

Before the startup remove the red cap and replace it with the supplied black breather screw



CABLE LAYOUT (Fig. 19)

Fig. 19



- 1) LEPUS operator
- 2) Left photocell
- 3) Right photocell
- 4) Pneumatic safety edge
- 5) Key switch
- 6) Flashing warning lamp
- 7) Radio receiver
- 8) Warning notice
- 9) Electronic control unit or junction box
- 10) 16A- 30mA differential switch

Page for both installer and user

RISK EXAMINATION

The points pointed by arrows in Fig. 20 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 the installation has been made)

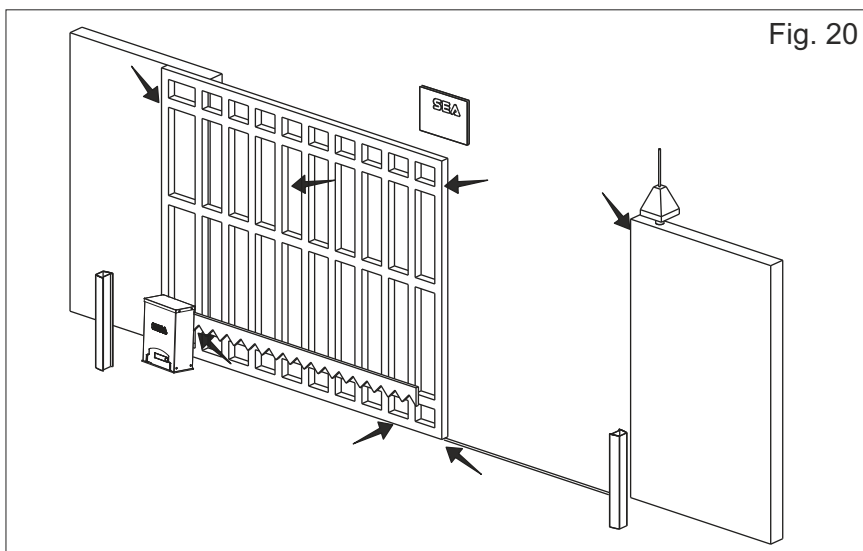


Fig. 20

RELEASE SYSTEM

1. In order to release do as follows:

- Open the lock cover, insert the key and rotate it 90° clockwise (Fig. 22 and 23).
- Pull the release lever until it stops, about 90° approximately (Fig. 24).

Note: when you pull the release lever, the electronic control unit receives a stop impulse thanks to a micro-switch placed inside.

2. In order to relock do as follows:

- Push the release lever to complete closing.
- Rotate the key counter-clockwise and extract it.
- Close the protective lock cover.

Once the lock has been restored the electronic control unit reactivates



Fig. 21



Fig. 22

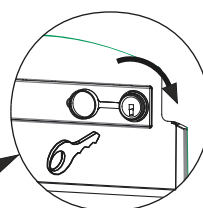


Fig. 23



Fig. 24

Page for both installer and user

NOTICE

SEA S.p.A. 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 (according to Machine Law) will be nullified if SEA S.p.A. 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. This is a quotation from the GENERAL DIRECTIONS that the installer must read carefully before installing. Packaging materials such as plastic bags, foam polystyrene, nails etc must be kept out of children's reach as dangers may arise.

SAFETY PRECAUTIONS:

All electrical work should conform to current regulations. A 16 A 0,030 A differential switch must be incorporated into the source of the operators main electrical supply and the entire system properly earth bonded. Always run mains carrying cables in separate ducts to low voltage control cables to prevent mains interference.

SPARE PARTS:

To obtain spare parts contact:

SEA S.p.A. -Zona Ind.le, 64020 S.ATTO Teramo Italia

SAFETY AND ENVIRONMENTAL COMPATIBILITY:

Don't waste product packing materials and/or circuits.

When being transported this product must be properly packaged and handled with care.

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

SEA reserves the right to do changes or variations that may be necessary to its products with no obligation to notice.

PERIODICAL MAINTENANCE

Check the oil level (trasparent cap placed on the side of the bell)	Annual
Change the oil	4 years
Check the release function	Annual
Check the clutch function on the gate	Annual
Check the distance between the pinion and the rack	Annual
Check the wear condition of the pinion and of the rack	Annual
Check the fixing screws	Annual
Check the integrity of the connection cables	Annual
Check the function and the limit switch condition in opening and closing and the related plates	Annual

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

English 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), electromgnetic 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 SEAS.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



SEA[®]
electronic opening system

Questo articolo è stato prodotto seguendo rigide procedure di lavorazione ed è stato testato singolarmente al fine di garantire i più alti livelli qualitativi e la vostra soddisfazione. Vi ringraziamo per aver scelto SEA.

This item has been produced following strict production procedures and has been singularly tested for the highest quality levels and for your complete satisfaction.
Thanks for choosing SEA.

Cet article a été produit suivant des procédures d'usinage strictes et il a singulièrement été testé afin de garantir les plus hauts niveaux de qualité pour votre satisfaction.
Nous vous remercions d'avoir choisi SEA.

Este artículo ha sido producido siguiendo rigidos procedimientos de elaboracion y ha sido probando singolarmente a fin de garantizar los mas altos niveles de calidad y vuestra satisfaccion.
Le agradecemos por haber escogito SEA.

CERTIFICATO DI ESTENSIONE GARANZIA CERTIFICATE OF WARRANTY EXTENTION

n.

PRODOTTO/ PRODUCT

- Modello/*Model* _____
- Matricola n. /*Serial Number* _____
- Data di acquisto/*Date of order* _____
- Data di installazione/*Date of installation* _____

Centrale/Control unit	SEA <input type="checkbox"/>	Altri/ <i>Others</i>	<input type="checkbox"/>
Fotocellule/Photocells	SEA <input type="checkbox"/>	Altri/ <i>Others</i>	<input type="checkbox"/>
RX - TX	SEA <input type="checkbox"/>	Altri/ <i>Others</i>	<input type="checkbox"/>
Altri accessori /Other accessories	SEA <input type="checkbox"/>	Altri/ <i>Others</i>	<input type="checkbox"/>

UTENTE/Customer

Nome e Cognome _____
First Name and Family Name _____
Indirizzo/Address _____

INSTALLATORE/Installer

Ragione sociale/*Company Name* _____
Nome e Cognome/*First and Family Name* _____
Indirizzo/Address _____

INSTALLATORE/INSTALLER

Firma per il trattamento dei dati personali 196/2003
Agreement of law No. 196/2003 (Privacy Code)

Copia da restituire
Copy to be returned

Firma e Timbro
Sign and Stamp _____

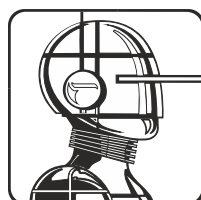
N.B: L'estensione della garanzia legale di 12 mesi a 24 mesi e 36 mesi è valida solo se il presente modulo viene rispedito per posta o fax a SEA S.p.A. entro 15gg dalla data di acquisto. Allegare relativa fattura d'acquisto.

Note: The extension of the legal standard warranty of 12 months to 24 months and to 36 months, is valid only if the present form is returned by mail or fax to SEA S.p.A within 15days from the date of purchase. Attach customer invoice.



SEA®
Sistemi Elettronici
di Apertura Porte e Cancelli
International registered trademark n. 804888

SEA S.p.A. - Zona Industriale San Atto- 64020 Teramo (Italy)
Phone +39 0861 588341- Fax +39 0861588344
www.seateam.com - info@seateam.com



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SEA S.p.A.
Zona industriale 64020 S.ATTO Teramo - (ITALY)
Tel. +39 0861 588341 r.a. Fax +39 0861 588344

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seacom@seateam.com