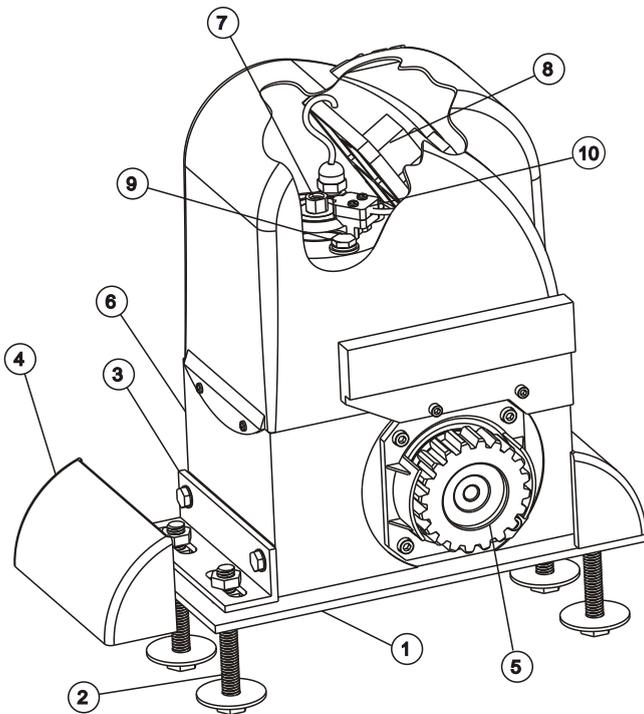




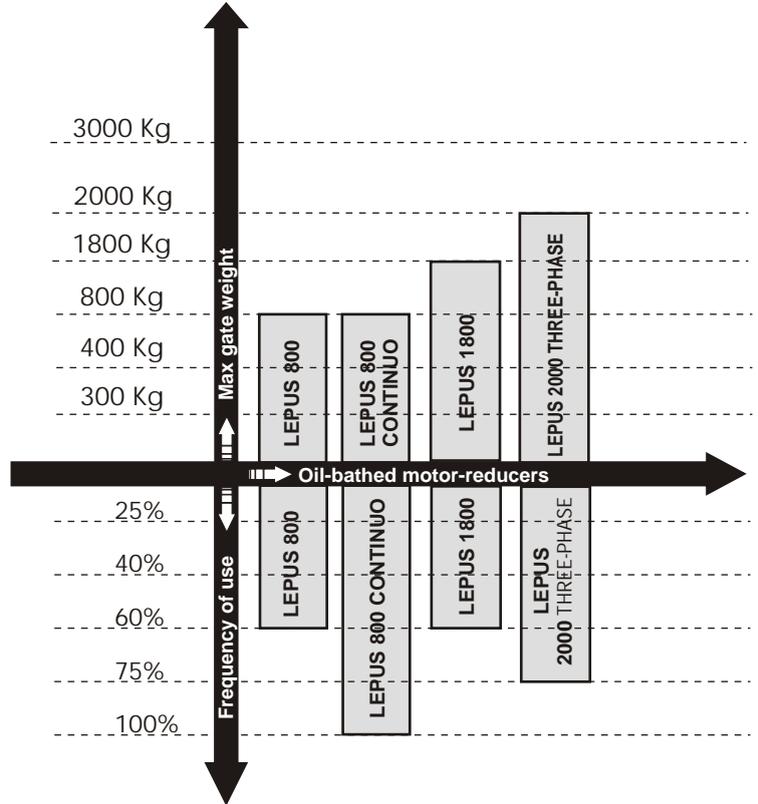
LEPUS is an **oil-bathed motor-reducer** created for sliding gates automation. The motor-reducer **irreversibility** allows a perfect and safe gate closing avoiding the setup of an electrolock and in case of power supply lacking, the release device which is in the frontal part of the motor-reducer allows the manual opening and closing. The operator has a **mechanical adjustable clutch** which ensures the control of the gate pushing. Moreover, **the electronic reversing device** realized through an **encoder** makes the lepus motor-reducer a safe and reliable operator allowing in a simple way to comply with the current norms in the countries where this product is set up.

MAIN PARTS NOMENCLATURE

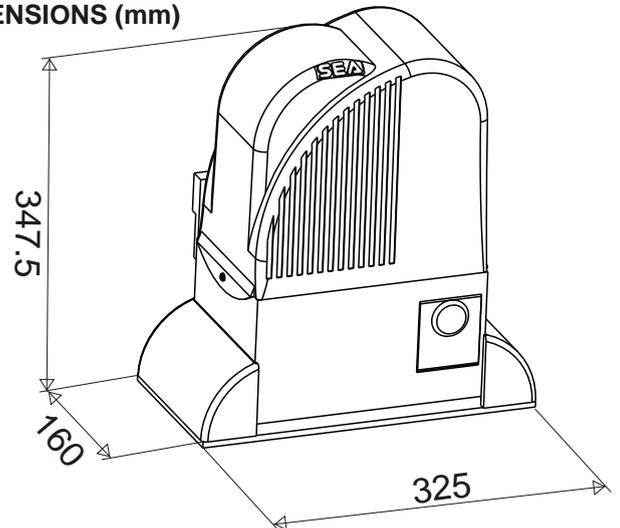
- | | |
|-------------------------------|-------------------------------------|
| 1 Adjustable Foundation plate | 6 Lever release reducer |
| 2 Anchor bolts | 7 Adjusting screw mechanical clutch |
| 3 Fixing angulars | 8 Electronic control unit |
| 4 Angular cover | 9 Oil filling up cap |
| 5 Pinion | 10 Magnetic encoder |



LEPUS MOTOR-REDUCER USING-GRAPHIC



DIMENSIONS (mm)



TECHNICAL DATA	800	1800	2000
Power Supply	230 V (±5%) 50/60 Hz	380V	
Power	330W	450W	450W
Absorbed current	1,5 A	1,7 A	1,2 A
Motor rotation speed	1400 rpm		
Reduction ratio	1/30		
Room temperature	-20°C +55°C		
Thermal protection intervention	130°C		
Weight of the unit with oil	15 Kg		
Oil quantity	1,75 L.		
Protection rating	IP 55		
Gate speed (pinion Z16)	10,5 m/min		
Gate speed (pinion Z20)	12 m/min		
Maximum weight of the gate	800 Kg	1800 Kg	2000Kg
Mechanical clutch			
Inductive or mechanical limit switch			

1. GATE ARRANGEMENT

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

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



2. MOUNTING PLATE INSTALLATION

To install the mounting plate it is necessary to:

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

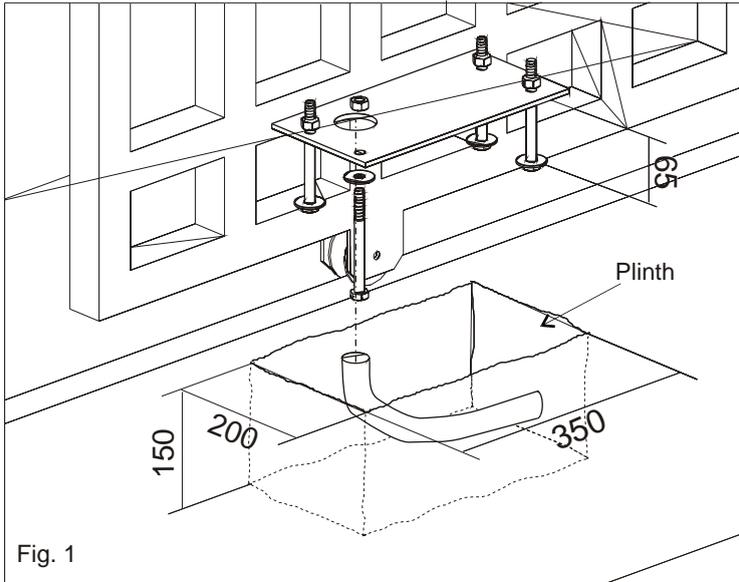


Fig. 1

2.2. 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.

2.3. When concreting in the plate check that the plate is perfectly levelled and that the measurement of 50 - 55 mm given in Fig. 2 is followed.

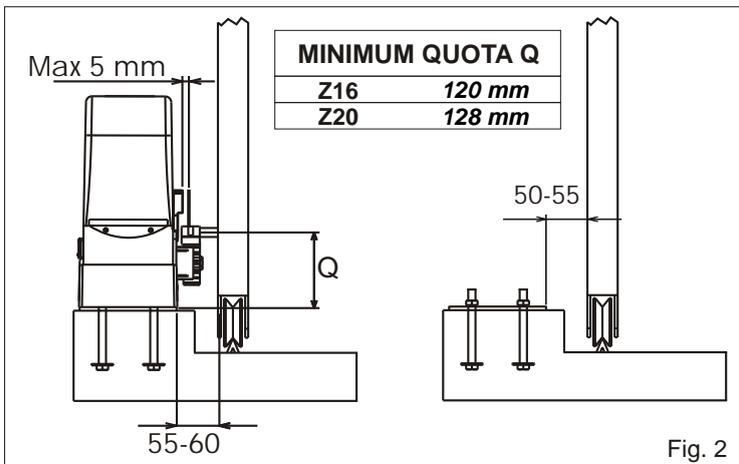


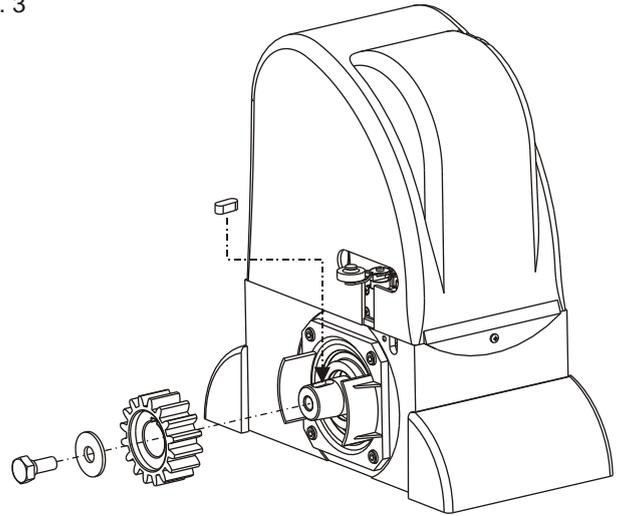
Fig. 2

3. PINION ASSEMBLING

3.1. Put the spline into the motor reducer shaft as in Fig. 3.

3.2. Assemble the pinion to the motor reducer fixing it with the provided bolt (Fig. 3).

Fig. 3



4. FITTING OF THE UNIT

4.1. Fix the side fixing angulars to the motor-reducer with the provided screws (Fig. 4)

4.2. Fix the motor-reducer to the foundation plate adjusting the side position and its height (Fig. 4 - Fig. 5) considering the mentioned measurements in Fig. 2.

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

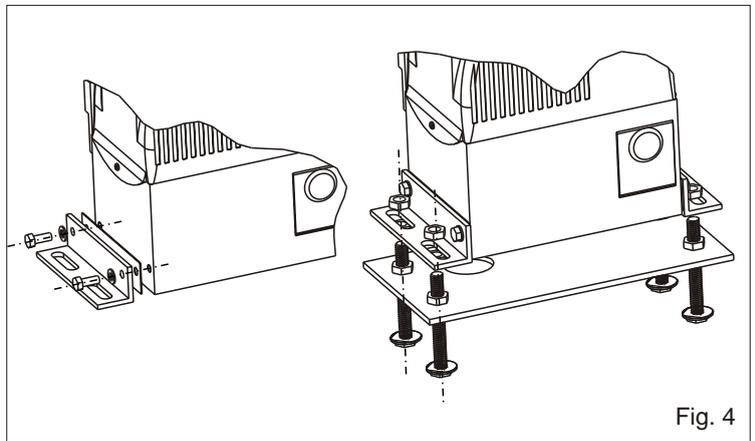


Fig. 4

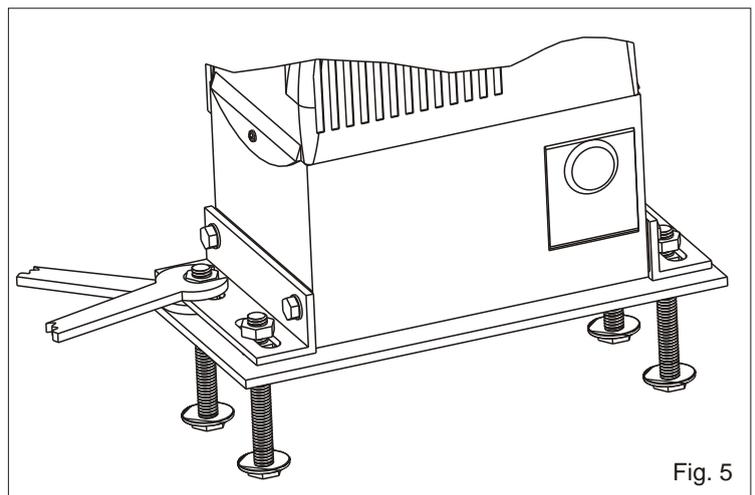


Fig. 5



5. RELEASE SYSTEM

5.1. To release act as follows

- Put the key in and turn it to open the small door which protects the plastic handle (Fig. 6).
- Grab the handle of the release and pull outward winning the resistance of the inner spring (Fig. 7).
- Turn the handle of 90° towards left or right and leave it folding it to 90° to let the small door close.
- Close the small door and take the key away.

5.2. To stop again act as follows:

- Put the key in and turn it to open the small door which protects the plastic handle (Fig. 6).
- grab the handle and turn it of 90° towards left or right
- pull it inward until the stop
- move the leaf by hand until the gears are not inserted again, after this the system is re-established for the automatic use.

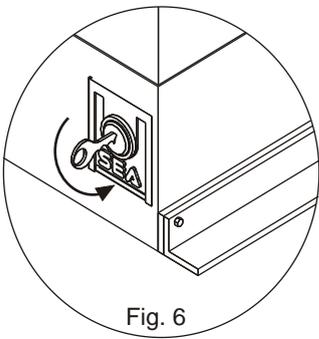


Fig. 6

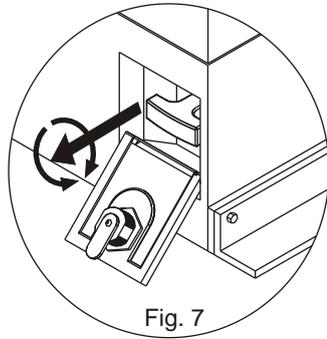


Fig. 7

6. RACK FITTING

6.1. Release the unit and open the gate completely .

6.2. Fit the bolts to each section of rack using the provided blocking screw. Make sure the bolts are placed in the upper part of the holes (See Fig. 8) ;

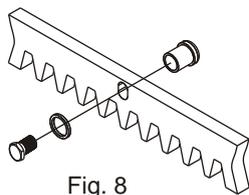


Fig. 8

6.3. Lay the section of rack on the pinion of the operator as in Fig. 9 so that it results parallel to the pavement guide of the gate and tack weld the central bolt B to the gate (Fig. 10).

Manually slide the gate to set the bolt C close to the pinion and tack weld them; repeat with bolt A.

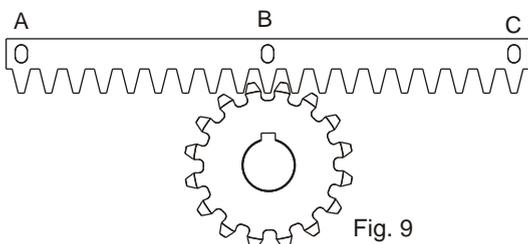


Fig. 9

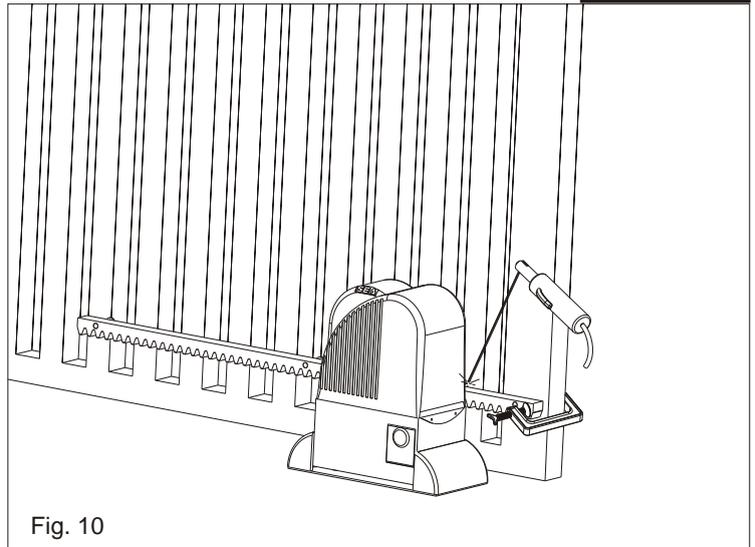


Fig. 10

6.4. Repeat this method for all the pieces of rack that require to be fitted.

6.5. Check all the rack pieces are perfectly aligned and placed correctly (serrations in phases). When fitting the next section of rack use a third piece as shown in Fig. 11 to ensure a good mesh.

6.6. Set the rack 1.5 mm higher to avoid the gate weight loading on the pinion (Fig. 12),

Notice: Keep a gap of about 0,5 mm between pinion cog and gear rack tooth.

6.7. Slide the gate back and forth to check that the rack always stays in the middle of the pinion. If required adjust the length of the spacers.

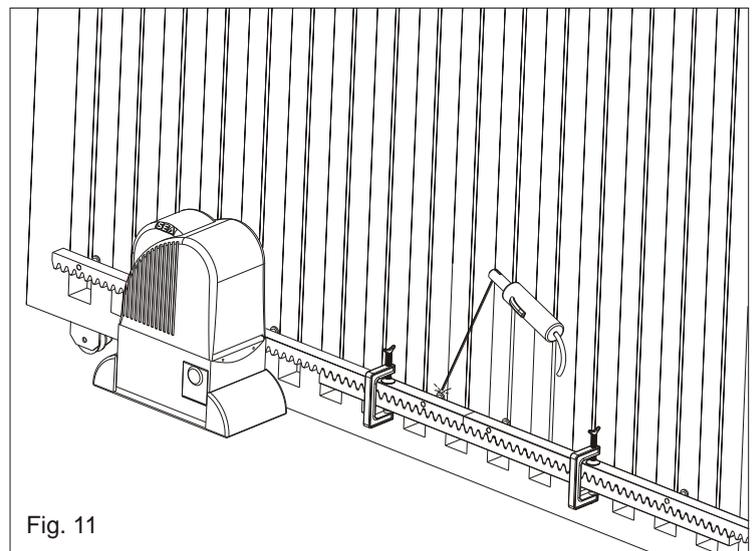


Fig. 11

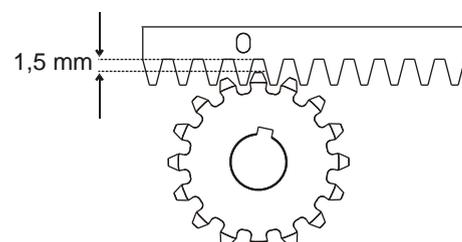


Fig. 12



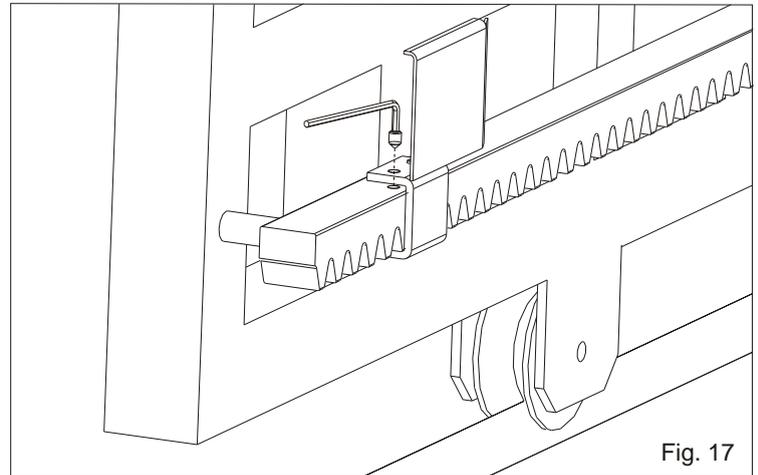
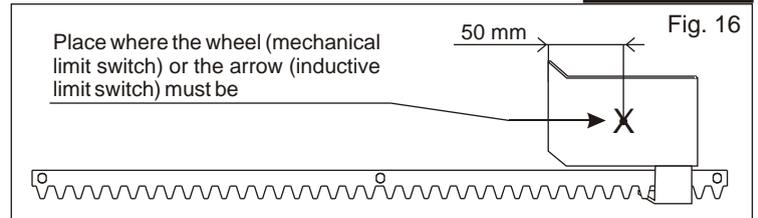
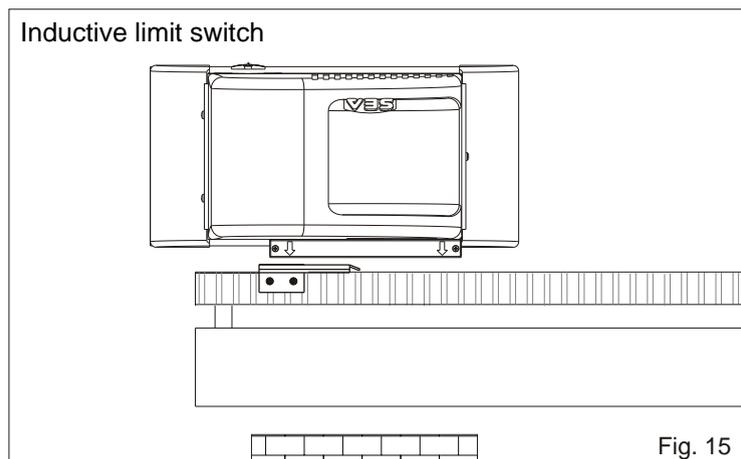
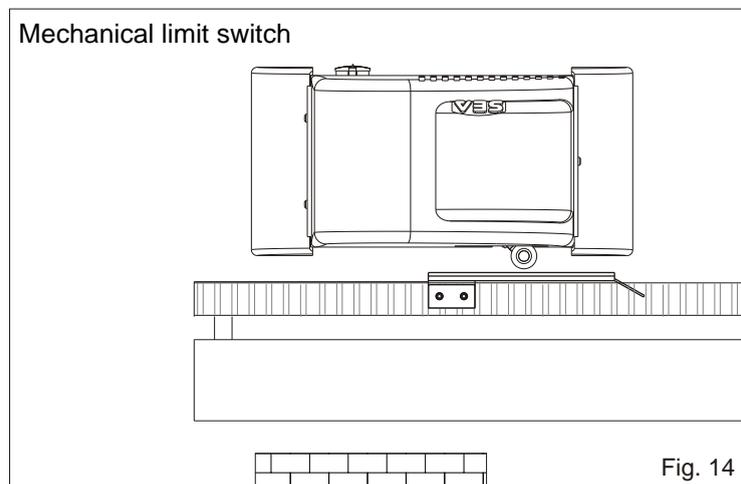
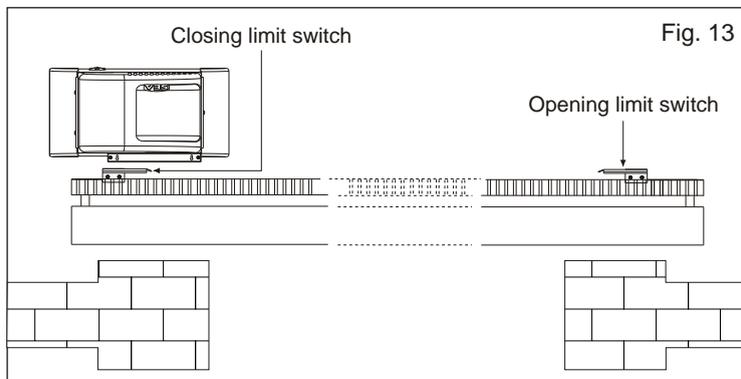
7. LIMIT SWITCH ADJUSTMENT

7.1. To set up and adjust the limit switches in opening, follow the instructions written here (Fig. 13):

- Bring the gate in complete opening,
- Place the limit switch plate on the gear rack to have the limit switch (lever in case of mechanical limit switch (Fig. 14); pointers placed in the higher part in case of inductive limit switch (Fig. 15)) in correspondence with the X point which is 50 mm from the folded side of the plate (Fig. 16) and fix it with the supplied screws (Fig. 17).

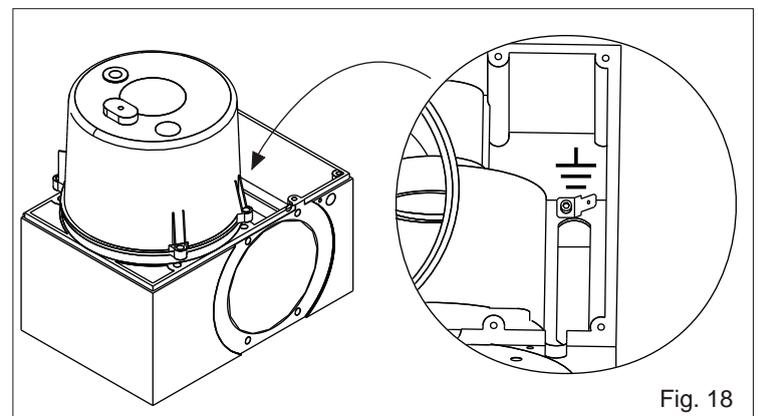
7.2. To set up and adjust the limit switches in closing, follow the instructions written here (Fig. 13):

- Bring the gate in complete closing,
- Place the limit switch plate on the gear rack to have the limit switch in correspondence with the X point which is 50 mm from the folded side of the plate (Fig. 16) and fix it with the supplied screws (Fig. 17).



Through the braking trimmer adjustment placed on the electronic control unit it is possible to stop the gate in the point desired.

8. GROUNDING (Fig. 18)

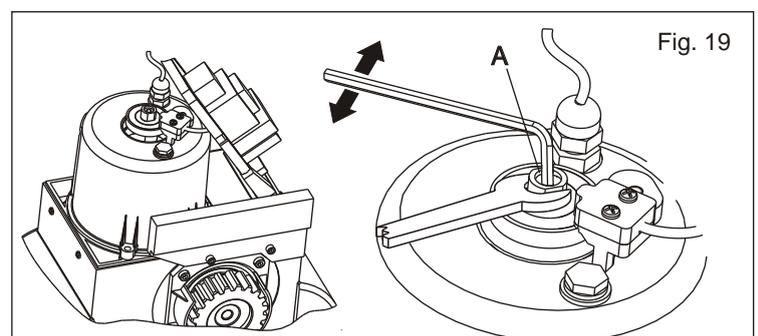


9. CLUTCH ADJUSTMENT

9.1. Take power supply tension off.

9.2. To adjust the clutch act as follows:

- Act on the "A" screw (Fig. 19) in the following way:
- Clockwise = less clutch sensibility and more pushing force
- Anti-clockwise = more clutch sensibility and less pushing force





10. ASSEMBLING OF THE CHAIN SYSTEM

The assembling of the main parts which include the whole chain automation is illustrated in Fig. 20.

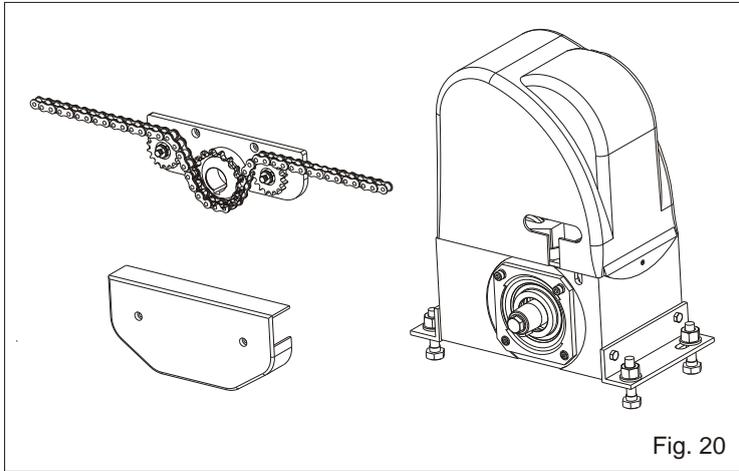


Fig. 20

In the pictures 21 and 22 it is possible to see the correct installation with opened and closed gate respectively; notice the obliged run of the chain inside the pinion group which must not be modified.

For a correct installation follow carefully the indications written below:

10.1. Weld two strong pierced brackets to the two extremities of the gate to couple the chain.

Notice: the holes for the chain tensioner and so the chain itself must be to a minimum distance of 45 mm from the gate (Fig. 23).

10.2. Install the chain making it pass through the pinion group as in Fig.20.

The chain must be always in line both vertically (Fig. 21) and horizontally (Fig.23), if not perfectly aligned (Fig. 24 and 25) it may derail from the pinion group or the motor reducer risks a greater effort not allowing the right operating of the system.

10.3. Set up a fillet chain tensioner to the two extremities of the gate to regulate the tension of the chain.

Notice: do this last operation with the engine completely unlocked through the special unlocking key (5.).

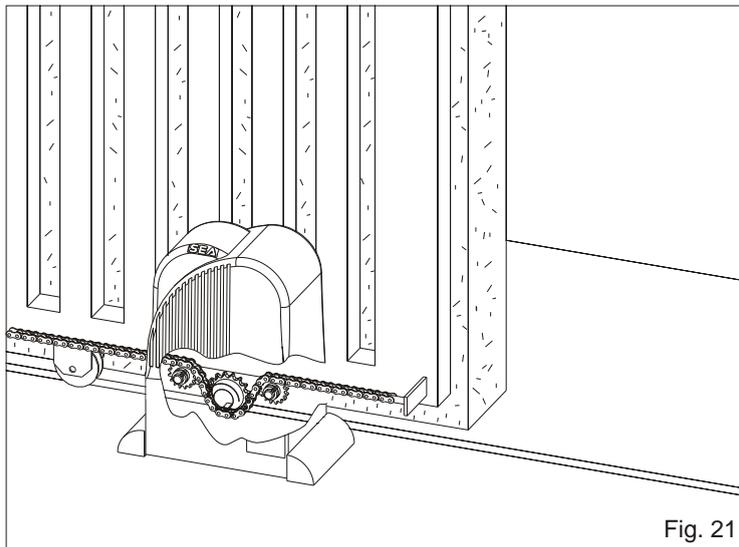


Fig. 21

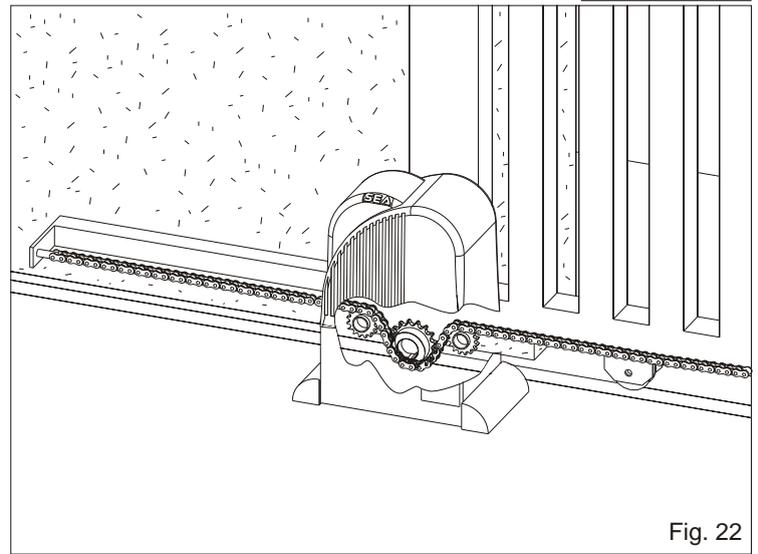


Fig. 22

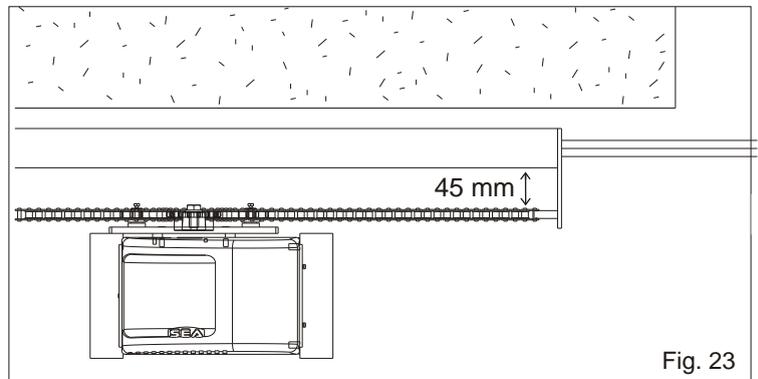


Fig. 23

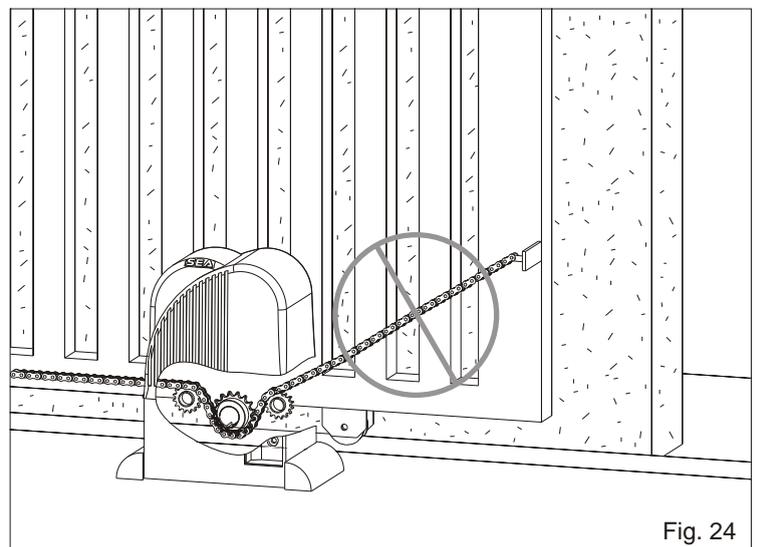


Fig. 24

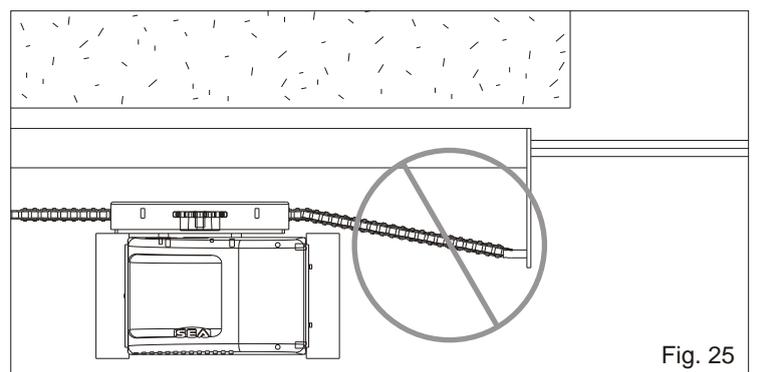
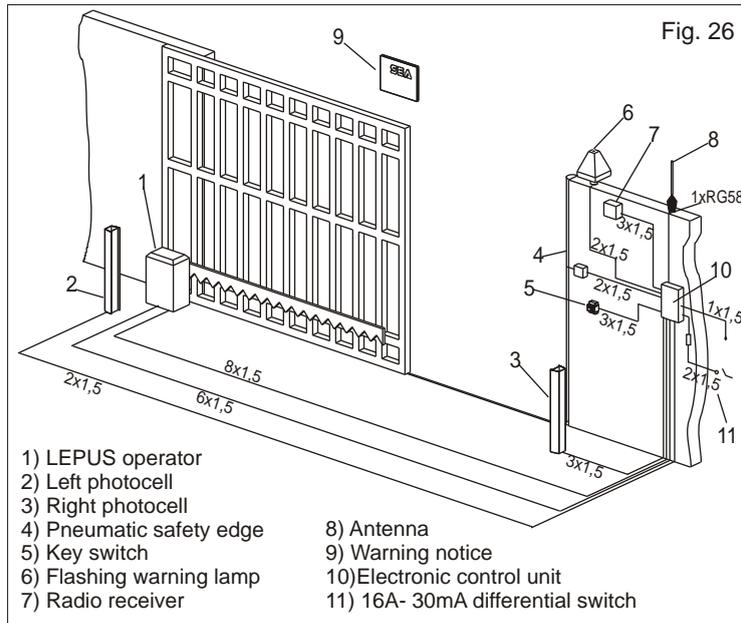


Fig. 25

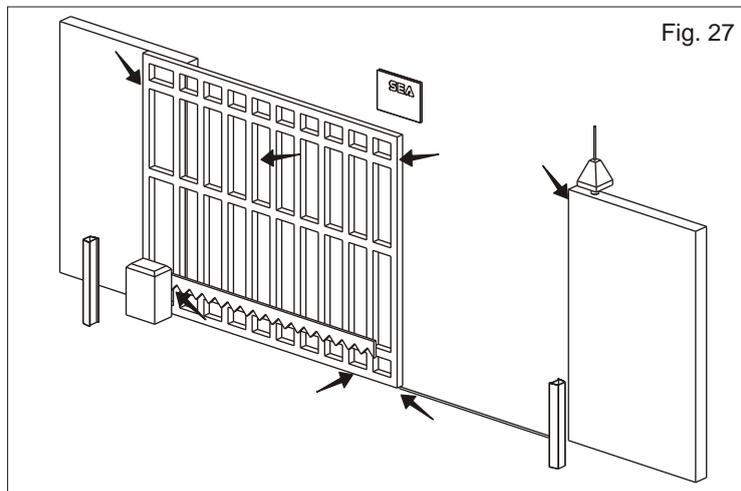


11. CABLE LAYOUT (Fig. 26)



12. RISK EXAMINATION

The points pointed by arrows in Fig. 27 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.)



NOTICE

SEA s.r.l. 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 Srl 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.

DECLARATION OF CONFORMITY

SEA declares under its responsibility that the products

Lepus 800, Lepus 800 CONTINUO, Lepus 1800, Lepus 2000 THREE-PHASE

meet the essential requisites provided for by the following European Directive and following changes:

89/392/CEE (Machine Directive)

89/336/CEE (Electromagnetic Compatibility Directive)

73/23/CEE (Low Tension Directive)

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.

INTENDED USE:

The Lepus operator has been designed to be solely used for the automation of sliding gates.

SPARE PARTS:

To obtain spare parts contact:

SEA s.r.l. -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.

MAINTENANCE AND OUT OF SERVICE:

The decommission and maintenance of this unit 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 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.



TERMS OF SALE

EFFICACY OF THE FOLLOWING TERMS OF SALE: The following general terms of sale shall be applied to all orders sent to SEA srl. All sales made by SEA to all customers are made under the prescription of this terms of sales which are integral part of the sale contract and cancel and substitute all opposed clauses or specific negotiations present in the order or in other documents received from the buyer.

GENERAL NOTICE The gate automation systems must be assembled exclusively with SEA components, unless specific agreements apply. Non-compliance with the applicable safety standards (European Standards EN 12453 EN12445 and others) 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 and always under those Terms of sale. 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.

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 noncompliance of safety standards and good practice during installation and use of the purchased products.

8) WARRANTY.

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.r.l. within 30 days from the purchase date. 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 installation, or if the product label of the manufacturer with the registered SEA trademark n° 804888 has been removed. 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 repairs of products in warranty and out of warranty is accepted only if the procedure of SEA are fully respected by the customer.

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 acquires the property of the goods only after full payment of the invoice.

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. The official language for the interpretation of the catalogue, the manuals, the terms of sale and any other is the italian language. SEA reserves the faculty to make technical changes to improve its own products, which are and are not included 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: with the purchase, the buyer accepts in full the present Terms of Sale and recognizes that SEA has the exclusive legal ownership of the registered SEA International trademark n° 804888 which is attached on each products label, and/or on manuals, packaging and/or in any other documentation, and he will commit himself to use it in its marketing and/or installation activity in a way which does not reduce the value of these rights; he won't also remove, replace or modify the trademark or any other particularity from the products. Any kind of replication or use of SEA brand is forbidden as well as of any change of sings-brands on the products, unless preventive and expressed authorization by SEA.