

INDUSTRIAL SECTIONAL DOOR OPERATOR

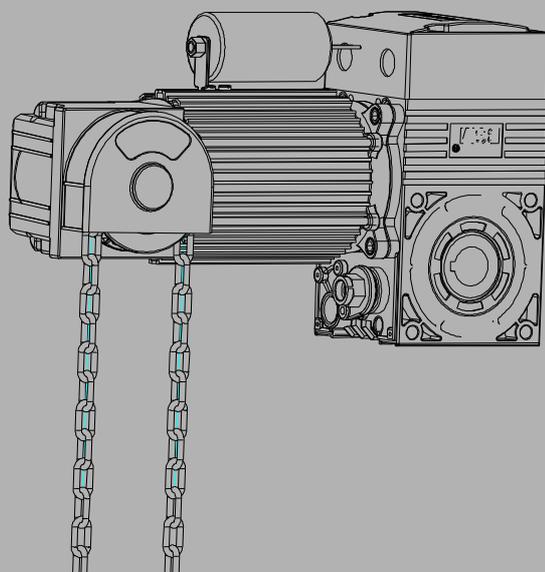


SEA[®]

Sistemi Elettronici
di Apertura Porte e Cancelli

English

INSTALLING AND OPERATING MANUAL



MODEL: TIOS
TIOS Three-phase

**PLEASE READ THE MANUAL CAREFULLY
BEFORE INSTALL AND USE**



Emergency Release device



It is used only in emergency;
It is turned only when the door is open;

Lift device



Do not pull the hand chain when the motor is working ,
Otherwise it may damage the product and cause serious
harm to people!

Technical specifications

Made outside 

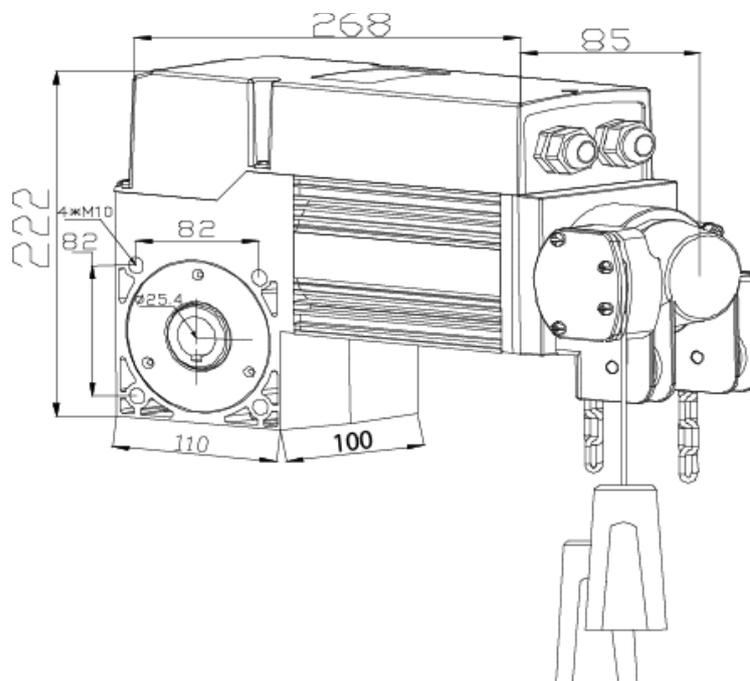
1. Specifications of all models of operator: _____

Model	TIOS (50 Nm)
Power supply	230V ~ 50/60Hz
Motor	230V ~
Maximum output torque	50 Nm
Output speed	22 rpm
Motor power	500W
Current	2,5 A
Protection degree	IP 54
Normal environment	-20°C  ~ +45°C 
Degree of noise	<65 dB
Weight	12 kg
Slow shaft hole	Φ25.4 mm
Length of chain	8 m
Thermal protection	140°C



Model	TIOS (50 Nm) Three-phase	TIOS (120 Nm) Three-phase
Power supply	230V/400V 3 ~ 50/60Hz	
Motor	230V/400V 3 ~	
Maximum output torque	50 Nm	120 Nm
Output speed	22 rpm	
Motor power	550W	750W
Current	2 A	2,5 A
Protection degree	IP 54	
Normal environment	-20°C ~ +45°C	
Degree of noise	<65 dB	
Weight	12 kg	14 kg
Slow shaft hole	Φ25.4 mm	
Length of chain	8 m	
Thermal protection	140°C	

Dimensions (mm)



Before installing the machine, the Torsion spring should be balance with the weight of the door, The door is sure to be opened and closed manually.



Descriptions of product

1. TIOS

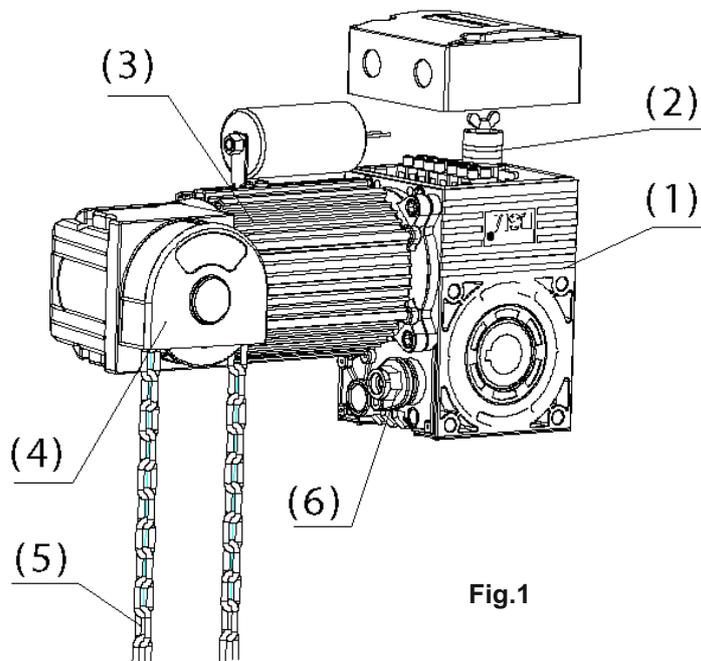


Fig.1

- ① Gear reducer
- ② Gear of fine limit device
- ③ AC motor
- ④ Lift device
- ⑤ Chainlet
- ⑥ Clutch

Gear of limit device

2. Installation fittings:

Picture	Name	Spec	Quantity
1 	Mounting Bracket		1
2 	Straight key	6.4×100 8X100	1
3 	Expand bolt	M10	4
4 	Socket cap screw	M10×20	4
5 	Coil spring washer	Φ 10	4
6 	Flat washer	Φ 10	4

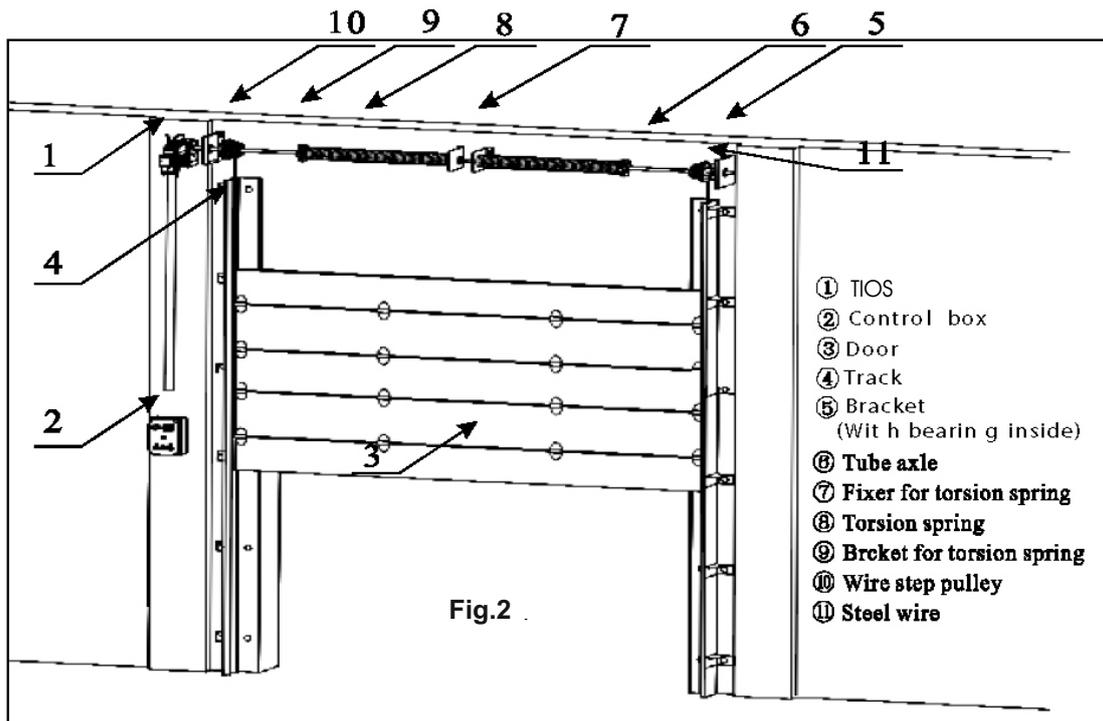


Guide of installation

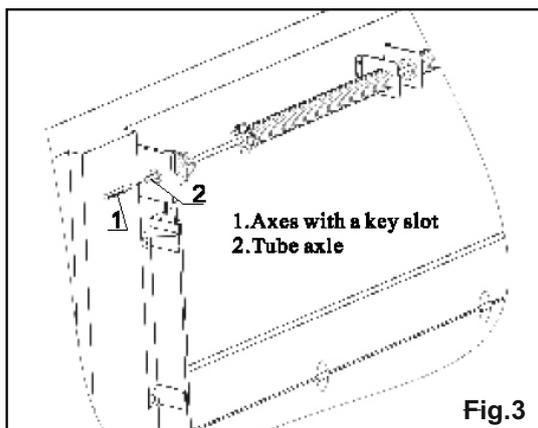


Before installing the machine of B300, the door must be installed completely and be balanced with torsional spring.

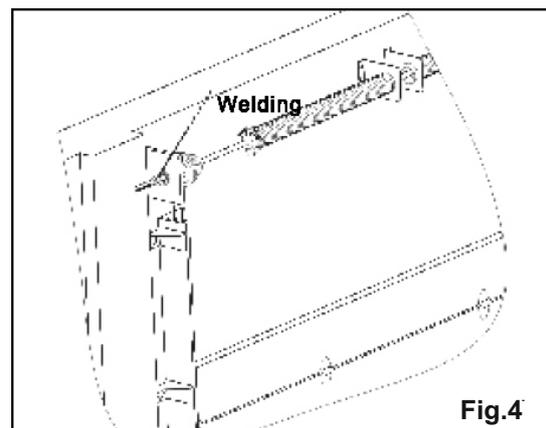
1. Standard installation layout:



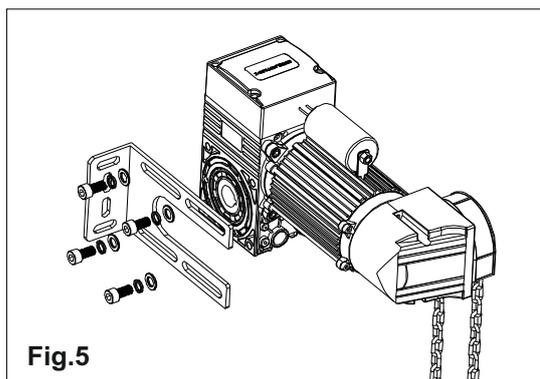
2. Installing the operator:



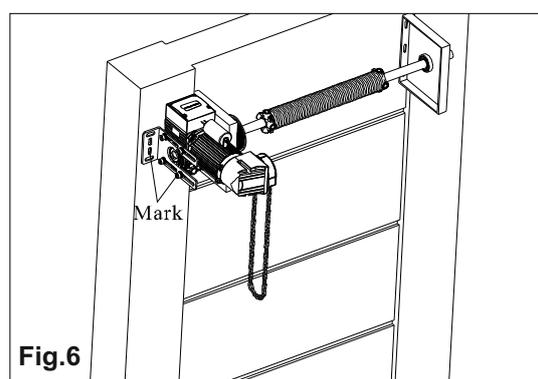
(1) Insert the Axes into the tube.



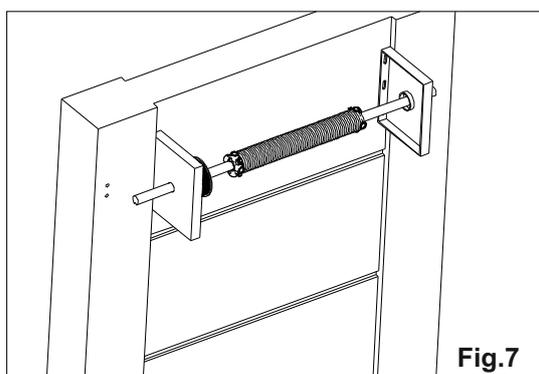
(2) Connect the Axes with the tube axle by welding or bolts.



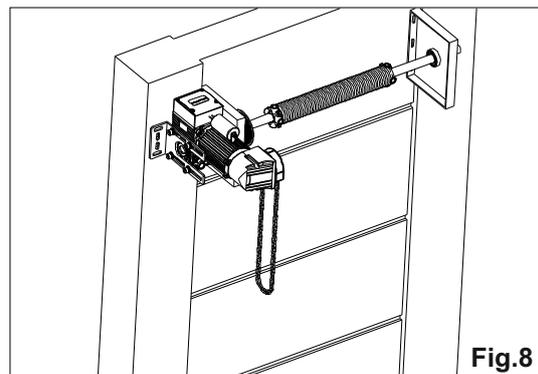
(3) Join the operator with the bracket, but don't tighten the screws here.



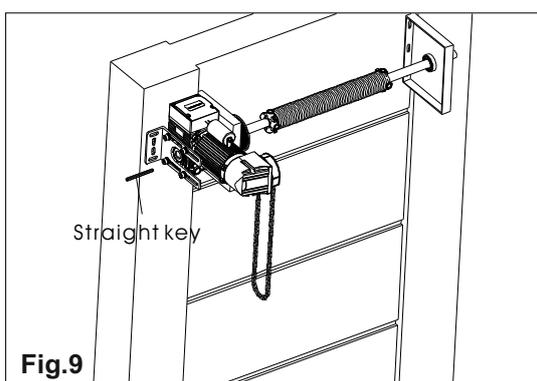
(4) Hang the operator on the tube axle, then locate the exact position of mounting the operator on the wall and mark on the wall.



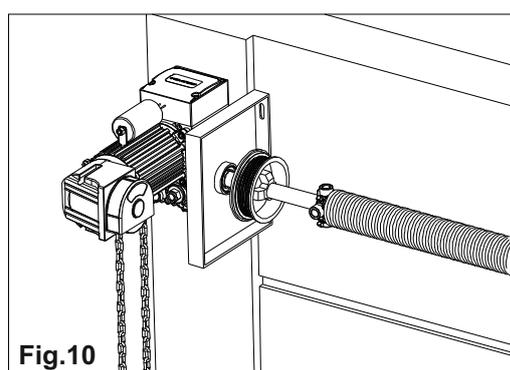
(5) Move the operator away, drill on the marks, and put the expand bolt into the hole.



(6) Hang the operator on the tube axle again, Mount the bracket.



(7) Insert the straight key into the Axes, tighten the screw on the bracket.



3. Direct mounting on door shaft

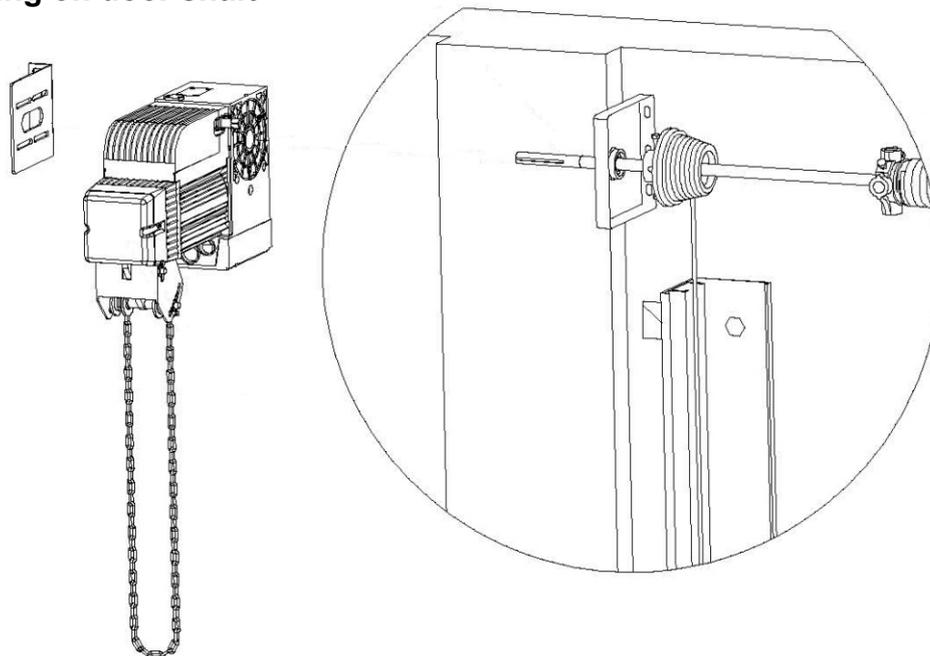


Fig. 11

4. Mounting with adapter with 1: 2 ratio

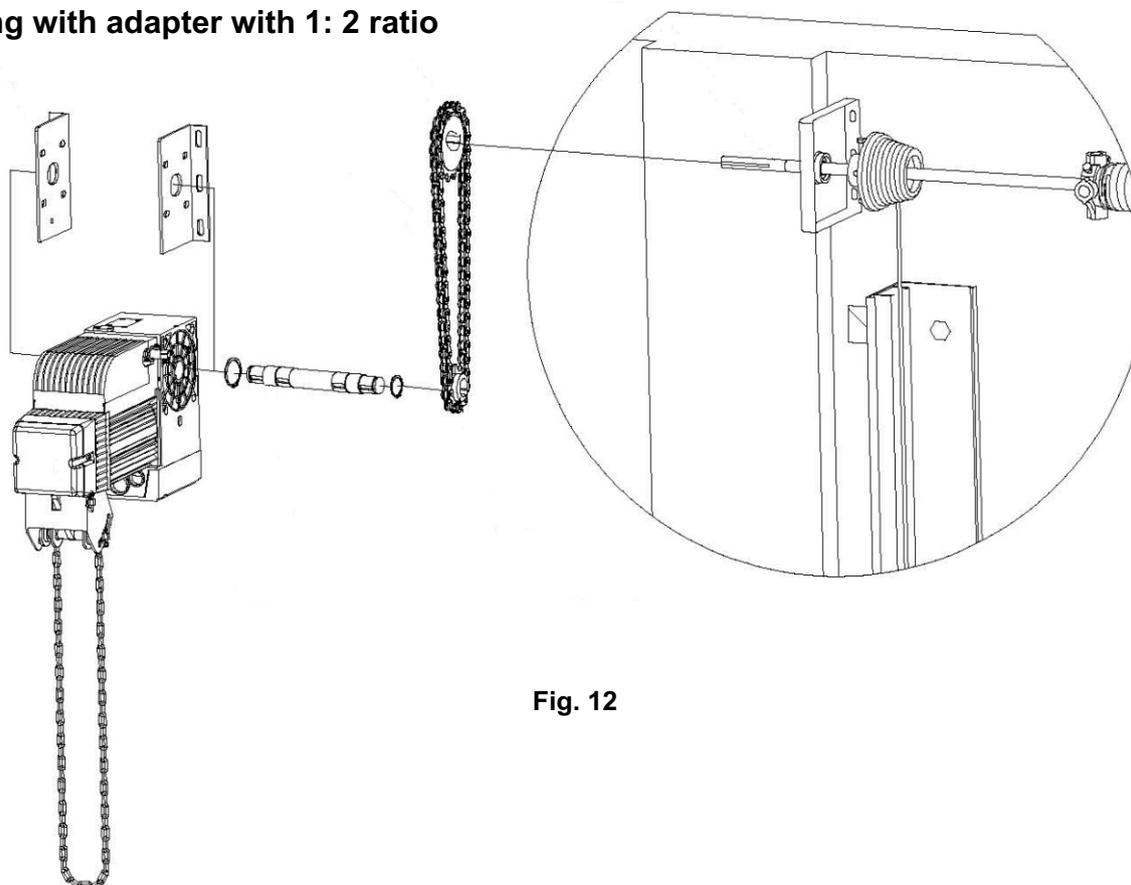


Fig. 12



Limit switch adjustable

Attention: If the operator move in an opposition way, you should change the connection as follow:

Change two connection inside the control box which connect with the motor: L1 \rightleftarrows L2.

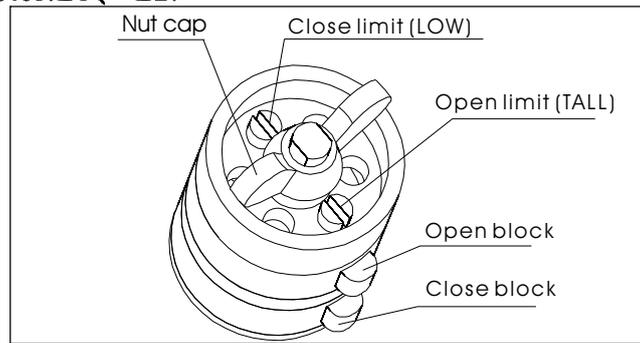


Fig.13. Planetary gear limit switch

1 Adjust Close Limit

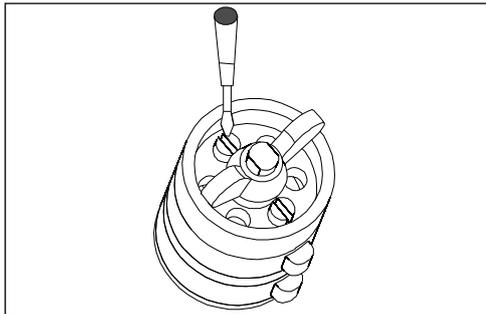


Fig.14

Step1, Close the door completely, and confirm which is the one of Close Limit Block according to the situation, then loosen the screw adjuster on Close Limit Block.

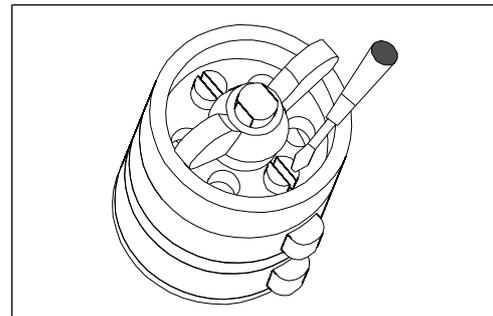


Fig.15

Step2, Adjust the fine adjuster till the Close Limit Block touch the micro switch.

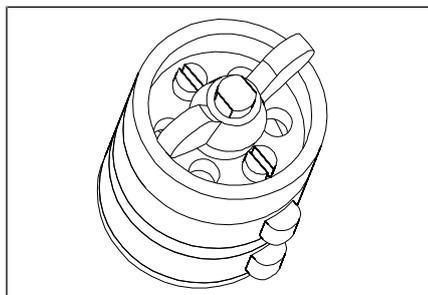


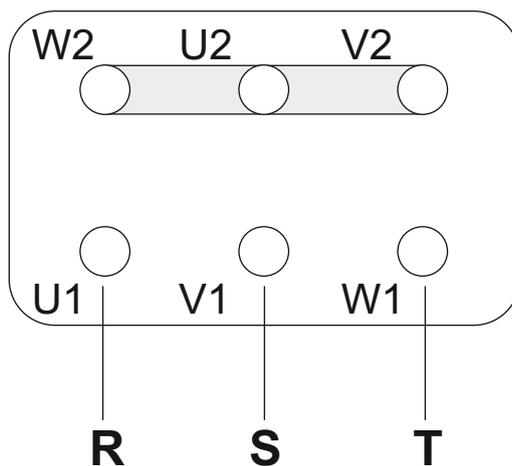
Fig.16

Step3, fasten the screw adjuster on Close Limit Block

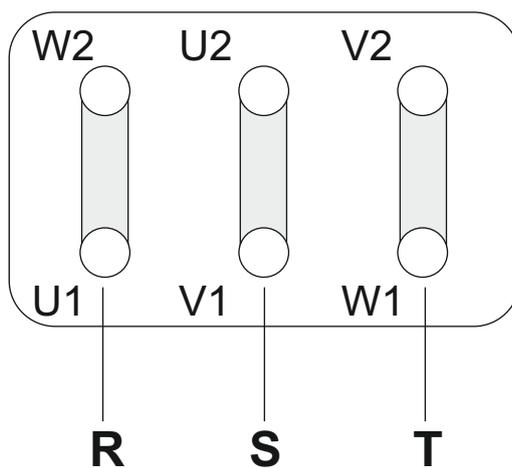
Step4, start the operator, inspect if the Close Limit point is in accord with the door closed totally, If not ,readjust from step2.

6. 380V - 230V motors connexion

380V



230V



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 LOW

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 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.



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International registered trademark n. 804888



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