

Automatic Gate Openers International registered trademark n. 804888



SUPER FULL TANK HYDRAULIC OPERATOR FOR SWING GATE



MANUALE D'INSTALLAZIONE ed informazioni sulla sicurezza

INSTALLATION MANUAL and Security Information



Fig. 3

4

FEATURES AND SPECIFICATIONS

The **SUPER FULL TANK** is a high quality hydraulic operator for condominium and industrial use for gates with leaf lengths up to max.9 m. Available in the following versions:

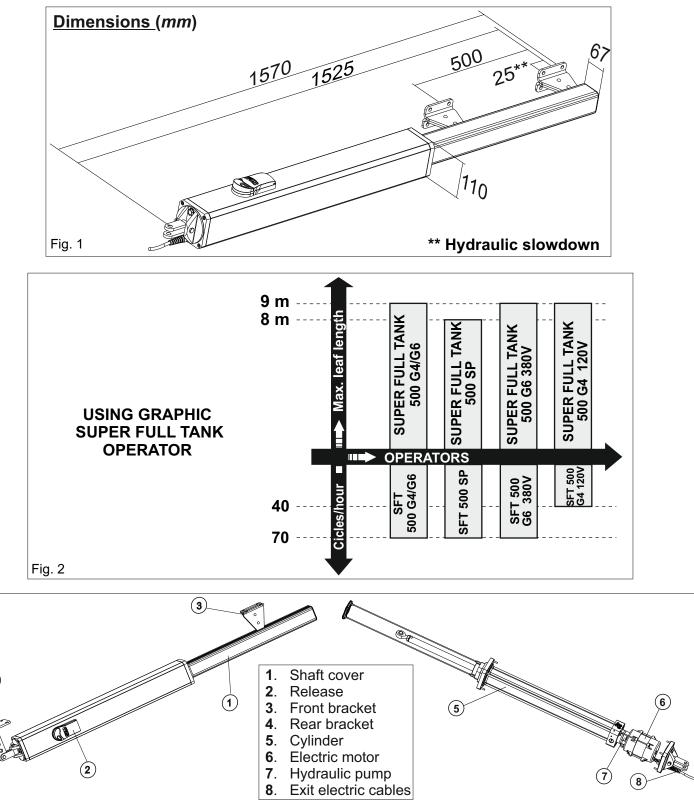
AC (with lock in opening and closing position)

SB (without lock) *

The Super Full Tank is supplied with by-pass valves for the power regulation in both opening and closing. The slowdown is hydraulic only in closing.

* In case of leaves longer than 4 meters or installations in windy places or in case of closed paneled gates, SEA recommends the use of the electric lock on operators without block (SB);

moreover, the exclusion of electronic slowdown is recommended in case of operators with hydraulic slowdown

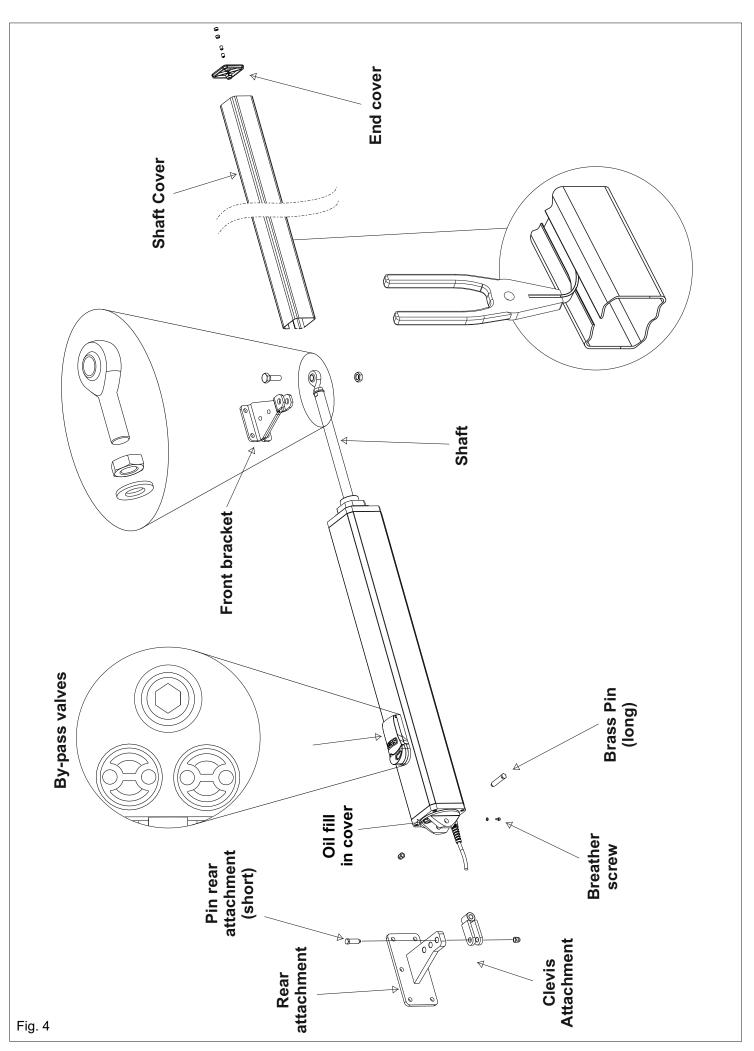


	SUPER FULL TANK	SUPER FULL TANK	SUPER FULL TANK
TECHNICAL FEATURES	500 G4	500 G6	500 SP *
Power supply	2		
Power	310 W		-
Absorbed current	1,6 A		-
Stroke	500 mm		
Shaft speed	1,2 cm/s	2 cm/s	1,5 cm/s
Cycles hour (20°C)	70		
Max working pressure	120 bar	90 bar	40 bar
Operating temperatures	-20°C 🖌 +60°C 🔏		
Thermal protection	130°C		
Max Thrust	3300 da N	2500 da N	1100 da N
Capacitor	16µF		-
Weight	18 kg		13 kg
Protection class	IP55		
Max leaf lenght	9 m		8 m
Opening degree of the leaf	90° / 125°		

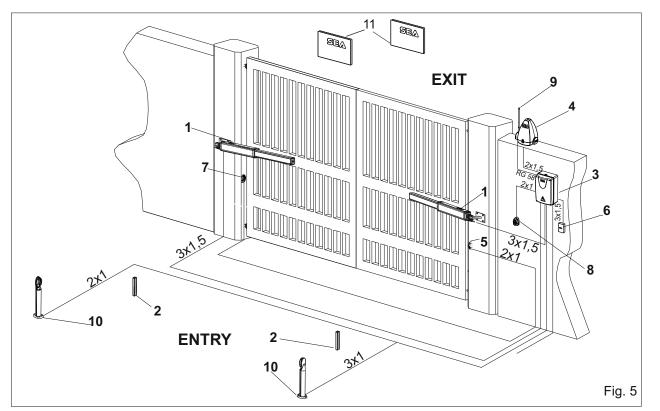
 * In combination with the hydraulic unit Cod. 12001032

TECHNICAL FEATURES	SUPER FULL TANK 500 G6 380V	SUPER FULL TANK 500 G6 120V
Power supply	400V (±5%) 50/60 Hz	120V (±5%) 50/60 Hz
Power	500 W	540W
Absorbed current	1,5 A	5 A
Stroke	500 mm	
Shaft speed	1,7 cm/s	2 cm/s
Cycles hour (at a temp. of 20°C)	70	40
Max working pressure	100 bar	70 bar
Operating temperatures	-20°C 🖌 +60°C 🖌	
Thermal protection	130°C	
Max Thrust	2800 da N	2000 da N
Capacitor	-	60 µF
Weight	18 kg	18 kg
Protection class	lp55	
Max leaf lenght	9 m	
Opening degree of the leaf	90° / 125°	

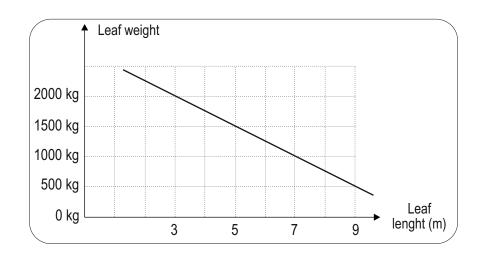
Note: The frequency of use is valid only for the first hour at 20°C room temperature **Note**: in non-automatic logic, use operators without lock



TYPICAL INSTALLATION

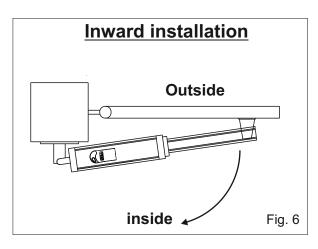


- 1. Super Full Tank operator
- 2. Mechanical stop
- 3. Control board
- 4. Warning lamp
- 5. Photocell tx
- 6. Differential switch 16A-0,03A
- 7. Photocell rx
- 8. Key switch start-stop
- 9. Antenna
- 10. Column for photocells
- 11. Warning notice



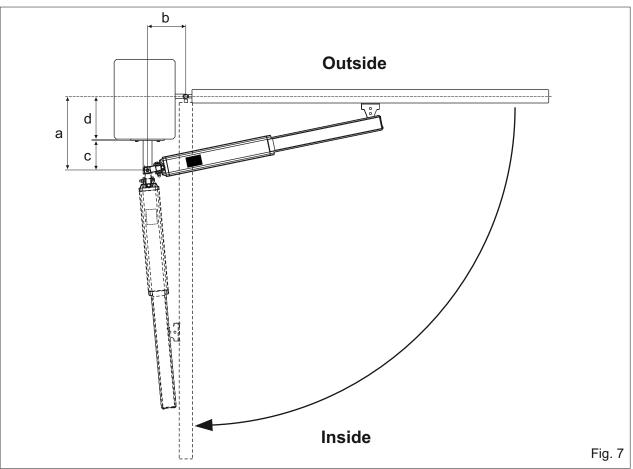
TYPE OF INSTALLATION

It is possible to install the Super Full Tank with opening inside (Fig. 6)





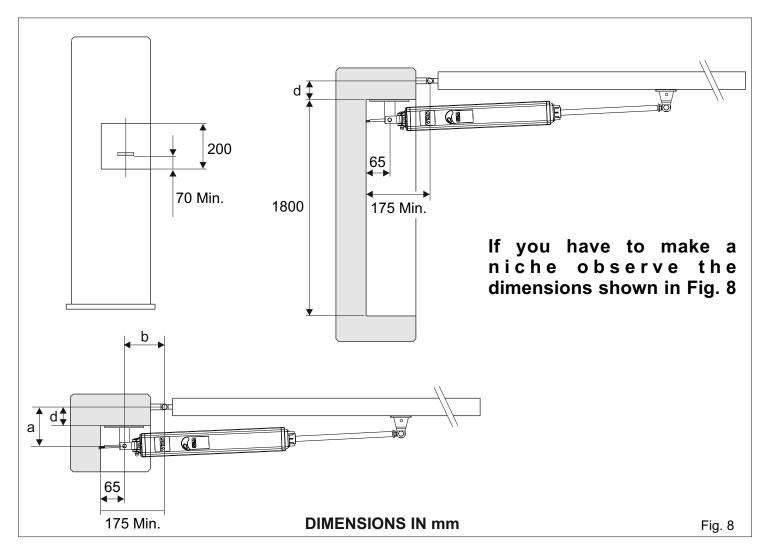
INSIDE OPENING INSTALLATION



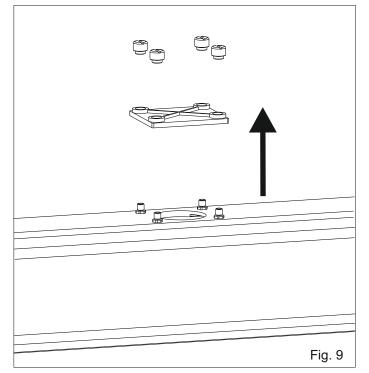
Total stroke 500 mm - max. recommended stroke 480 mm

a (mm)	b (mm)	d _{max} (mm)	Max. Opening Angle	Max. Stroke (mm)	Stroke for 90° (mm)
220	205	80	110°	480	430
260	215	120	90°	480	
225	200	85	110°	480	430
265	210	125	90°	480	
240	195	100	105°	480	440
280	195	140	90°	480	
285	190	145	90°	480	
260	185	120	102°	480	450
300	170	160	90°	480	
265	180	125	102°	480	450
305	165	165	90°	480	
310	160	170	90°	480	
280	170	140	100°	480	470
320	150	180	90°	480	
330	140	190	90°	480	
340	130	200	90°	48	30

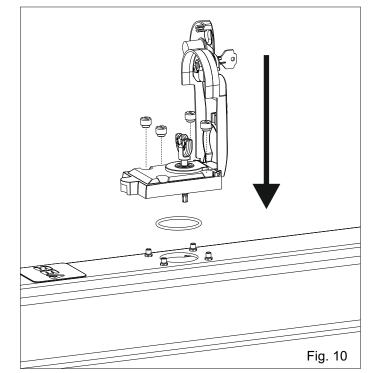
INSTALLATION ON MASONRY PILLARS, MAKING A NICHE



RELEASE MOUNTING

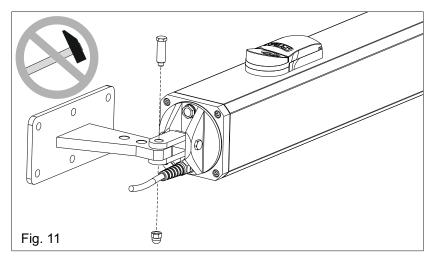


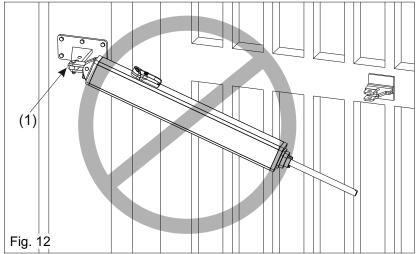
Remove the transporting plate as shown in Fig. 9



Mount the release as shown in Fig. 10

INSTALLATION OF THE OSCILLATING REAR BRACKET





PRELIMINARY:

- Open carefully the package, making sure not to loose parts which are listed in Fig. 4

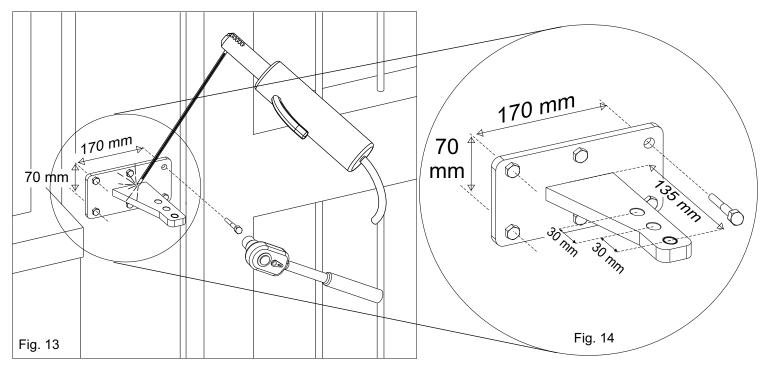
- Attach the rear oscillating bracket as shown in Fig. 11

Attention: Do not use a hammer for the insertion of the short brass pin; its fitting into the bracket and clevis attachment must be done by the simple pressure of the hands.

<u>Attention</u>: Do not incline the hydraulic operator further than the allowed angle of the oscillating bracket (1), risks the possible braking of it.

INSTALLATION OF REAR BRACKET

The rear bracket must first be cut respecting the quote "a" on page 19 and then welded as in Fig. 13 The support must be positioned so that the operator is perfectly leveled (Fig. 13 and Fig. 15)

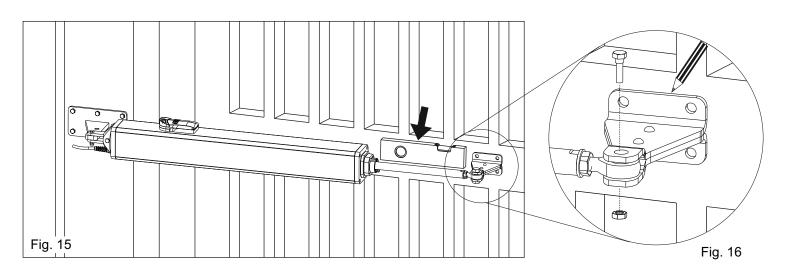


POSITIONING OF THE FRONT BRACKET

Once the operator is attached to the post and the leaf set in the closed position execute the following operations:

- 1. Release the operator.
- 2. Pull-out completely the chromate shaft and push it back in 1 cm
- 3. Attach the shaft to the front bracket (Fig. 16)
- 4. Set the operator perfectly leveled and mark the position of the front bracket (Fig. 15)

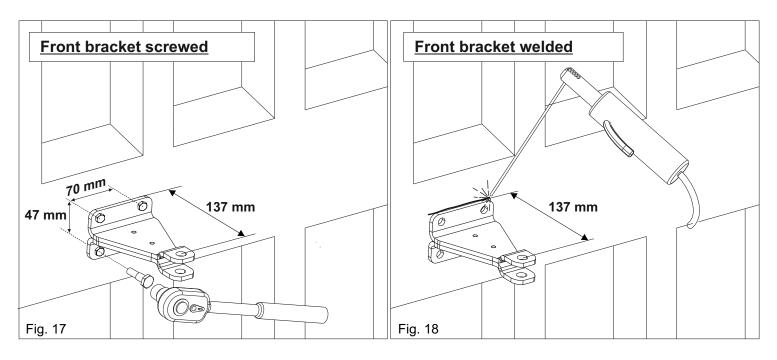
Attention: avoid the welding of the front bracket to the shaft of the hydraulic operator already attached; the welding scraps (daps) could ruin the chromium plating of the shaft.



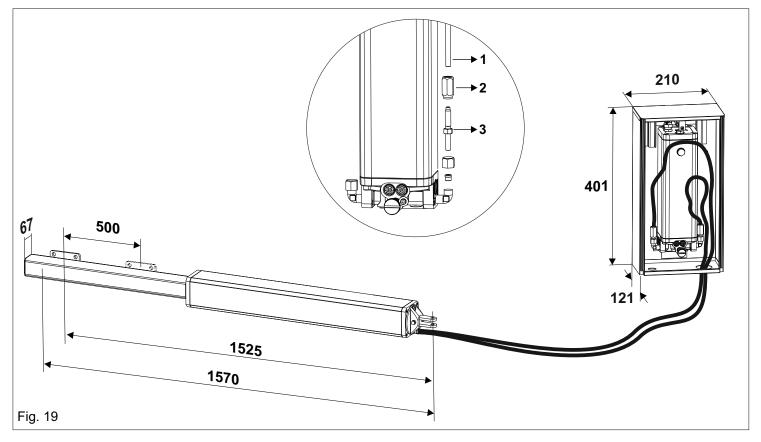
WELDING OF THE FRONT BRACKET TO THE GATE

The front bracket must be positioned so that the operator is perfectly leveled

According to the nature of the gate the front bracket (wood, steal, Aluminium) can be:



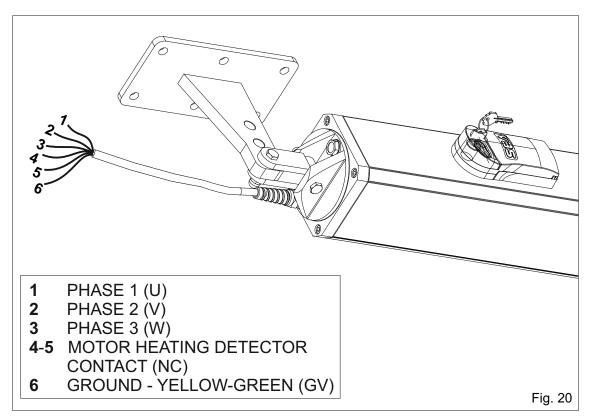
SUPER FULL TANK WITH SEPARATE HYDRAULIC UNIT (SP VERSION)



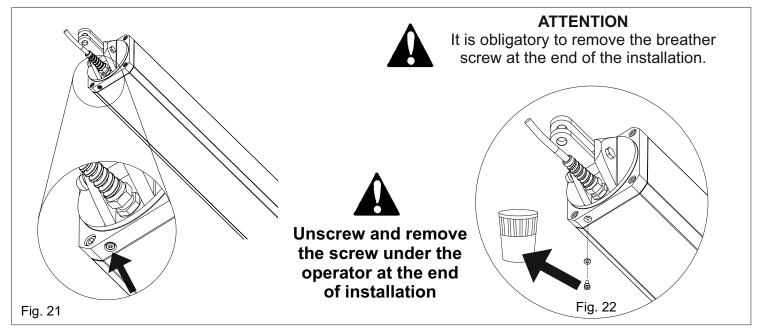
ASSEMBLY OF THE CONNECTOR ON THE FLEXIBLE TUBE

Cut the flexible tube (1) to the desired size, screw the component (2) onto the flexible tube and insert the component (3) by screwing it on both (1) and (2).

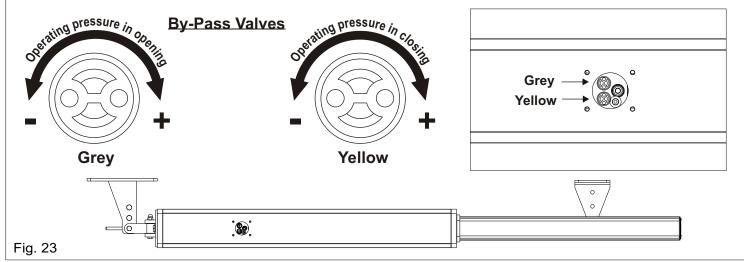
SUPER FULL TANK THREEPHASE - THREEPHASE CABLE CONNECTIONS



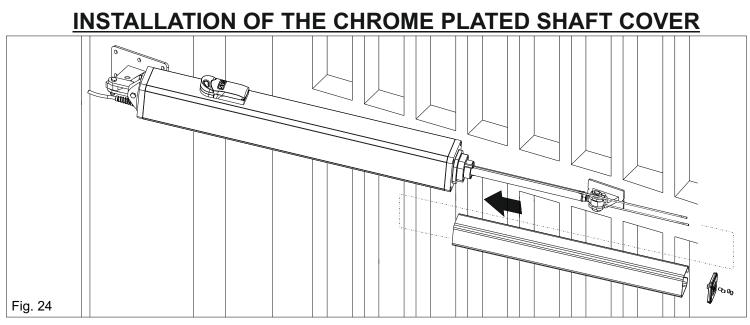
BREATHER SCREW



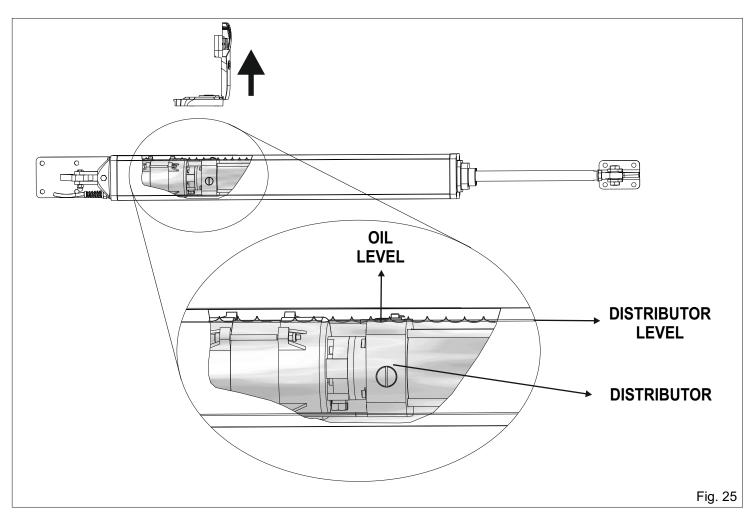
TORQUE ADJUSTMENT (by pass valves)



Adjust the opening and closing forces of the gate so that the diagram of the force is respected (present in the regulation EN 12453); Anyway the max. thrust force should never be superior of 15 kgF.

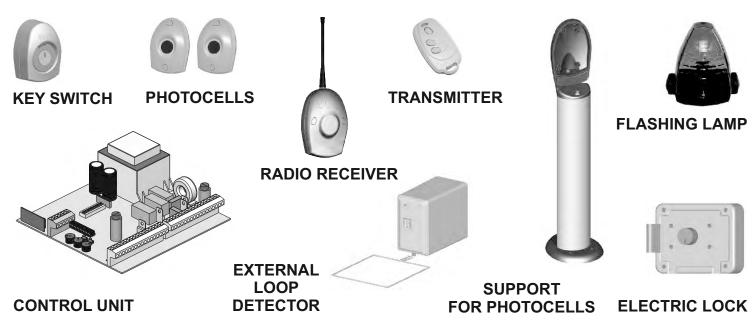


OIL LEVEL MEASUREMENT



The oil level should be measured with the rod inserted into the actuator and the oil level must be at the distributor level

SUPER FULL TANK ACCESSORIES



To the attention of users and technicians

RELEASE SYSTEM

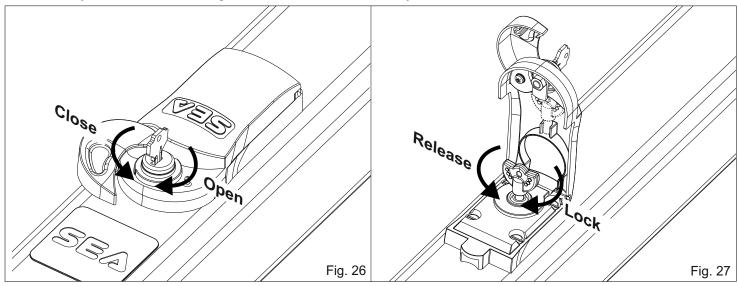
To release operate as follows:

open the lock cover, insert the key, turn it about 90° clockwise (see Fig. 26) and open the lid. Take the red key located under the lid, insert it and turn it about 90° anti-clockwise (see Fig. 27).

To relock the operator do as follows:

turn the red key clockwise until it stops (see Fig. 27), remove it, put it under the lid **and close the lid again.** Attention: Turning the key over 1 turn (360°) could damage the release.

Turn the key anti-clockwise to tighten the lid, remove the key and close the lock cover.



WARNING: SEA recommends to the end user to release the operator only after having switched off the electric power. Always contact a professional installer in case of not correct working of the operator.

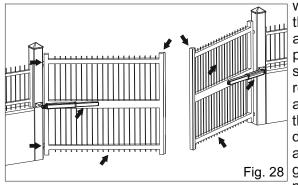
PERIODICAL MAINTENANCE

11	After having executed the periodical maintenance it is neccessary to repeat the tests and the first power up of the automation	Annual
10	Lubricate the shaft using SEA grease (GREASE GL 00 code 65000009)	Annual
9	Check the functionality of all the accessories especially the function of all security devices	Annual
8	Check the good status of all the apparatus which are subject to efforts (back fixation, oscillating fork and front fixation)	Annual
7	Check the integrity of the connecting cables	Annual
6	Check and grease the fixation pivots	Annual
5	Check the by-pass valves functionality	Annual
4	Check the release system functionality	Annual
3	Replace the oil with that recommended by the producer	4 years
2	Check the oil level in hydraulic / oil-bath operators (cap on the back cover of the operator)	Annual
1	Check the robustness and the stability of the gate; especially the supports and the leaning and/or rotation points of the gate (pivots)	Annual

All the above mentioned operations must be executed by an authorised installer only

RISK EXAMINATION

The points pointed by arrows in Fig. 28 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

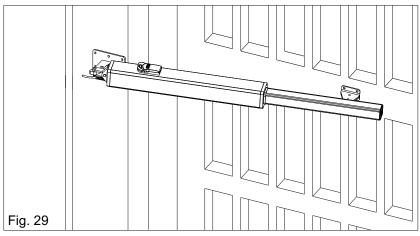


well known place. The installer shall follow the provided intructions thoroughly. SEA products must only be used to automise doors, gates and lwings. Any initiative taken without SEA explicit authorization will preserve the manufacturer from whatsoever responsibility. The installer shall provide warning 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 up-grade 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 Super Full Tank product, as described in this manual, and after having valuated all resting risks which could arise in any installation, it is necessary to test the automation to guaranty the maximum security and, in particular way, to guaranty that the laws and norms



of this sector are fully respected. Especially the test must be executed following the norm **EN 12445** which establishes the methods of tests for checking the gate automations respecting the limits established by the rule **EN 12453**.

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 operator Super Full Tank has been planed to be used for the automation of swing gate operator only.

SPARE PARTS: To obtain spare parts contact: SEA S.p.A. - Zona Ind.le - 64020 - Sant' 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.

LIMIT OF GUARANTEE For the guarantee see the sales conditions on the official SEA price list.

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



TERMS OF SALES

EFFICACY OF THE FOLLOWING TERMS OF SALE: the following general terms of sale shall be applied to all orders sent to SEAS.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. Noncompliance 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 expressively clauses under numbers: 4) PAYMENTS - 8) GUARANTEE - 10) COMPETENT COURT OF LOW



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.



Dichiarazione di conformità Declaration of Conformity

La SEA S.p.A. dichiara sotto la propria responsabilità e, se applicabile, del suo rappresentante autorizzato che, con l'installazione degli adeguati dispositivi di sicurezza e di filtraggio disturbi, i prodotti:

SEA S.p.A. declares under its proper responsability and, if applicable, under the responsability of its authorised representative that, by installing the appropriate safety equipment and noise filtering, the products:

Descrizione / Description	Modello / <i>Model</i>	Marca / Trademark
SUPER FULL TANK 500 G4 AC (e tutti i suoi derivati / and all its by-products)	10701250	SEA
SUPER FULL TANK 500 G6 AC (e tutti i suoi derivati / and all its by-products)	10701350	SEA
SUPER FULL TANK 500 G6 SB TRIFASE 400V SUPER FULL TANK 500 G6 SB THREEPHASE (e tutti i suoi derivati / and all its by-products)	10701400 400V 10701400	SEA SEA
SUPER FULL TANK 500 G6 SB TRIFASE 230V SUPER FULL TANK 500 G6 SB THREEPHASE (e tutti i suoi derivati / and all its by-products)	10701405 230V 10701405	SEA SEA

sono costruiti per essere incorporati in una macchina o per essere assemblati con altri macchinari per costruire una macchina ai sensi della Direttiva 2006/42/CE are built to be integrated into a machine or to be assembled with other machinery to create a machine under the provisions of Directive 2006/42/CE

sono conformi ai requisiti essenziali di sicurezza relativi ai prodotti entro il campo di applicabilità delle Direttive Comunitarie 2014/35/UE e 2014/30/UE are conforming to the essential safety requirements related to the products within the field of applicability of the Community Directives 2014/35/UE and 2014/30/UE

COSTRUTTORE o RAPPRESENTANTE AUTORIZZATO: MANUFACTURER or AUTHORISED REPRESENTATIVE:

> SEA S.p.A. DIREZIONE E STABILIMENTO: Zona industriale 64020 S.ATTO Teramo - (ITALY) Tel. +39 0861 588341 r.a. Fax +39 0861 588344 Http://www.seateam.com

Luogo, data di emissione *Place, date of issue* Teramo, 11/10/2018

L'Amministratore The Administrator Ermio Di Severio

CERTIFICATO DI ESTENSIONE GARANZIA CERTIFICATE OF WARRANTY EXTENTION

		п.
PRODOTTO/ PRODUCT		
- Modello/ <i>Model</i>		
- Matricola n. /Serial Number		
- Data di acquisto/Date of order		
- Data di installazione/Date of installa	ntion	
Centrale/Control unit	SEA 🗆	Altri/ <i>Others</i>
Fotocellule/Photocells	SEA 🗆	Altri/ <i>Others</i>
RX - TX	SEA 🗆	Altri/ <i>Others</i>
Altri accessori /Other accessories	SEA 🗖	Altri/ <i>Others</i>
UTENTE/Customer		
Nome e Cognome		
First Name and Family Name		
Indirizzo/Address		
INSTALLATORE/Installer		
Ragione sociale/ <i>Company Name</i>		
Nome e Cognome/First and Family N	ame	
Indirizzo/Address	unite	
INSTALLATORE/INSTALLER		
Firma per il trattamento dei dati perso	nali ai sensi del I	Regolamento UE 679/2016
Agreement to the GDPR EU Regulation		Copia da restituire

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