

# **HALF TANK - MINI TANK**

HYDRAULIC OPERATORS FOR SWING GATES

**HALF TANK**



**MINI TANK**



**INSTALLATION MANUAL  
and Safety Information**

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## FEATURES AND SPECIFICATIONS

The **HALF TANK 270**, **HALF TANK 390** and **MINI TANK** are high quality hydraulic operators for residential and condominium use, suitable for leaf length up to respectively 6 m, 7 m and 3 m. Available in the following versions:

**AC** (with lock in opening and closing position)

**SC** (with lock only in closing position)

**SA** (with lock only in opening position)

**SB** (without lock)

Hydraulic locking is guaranteed on gates with length up to 1.80 m with HALF TANK 270 and MINI TANK and with length up to 2.20 m with HALF TANK 390. All models are equipped with by-pass valves (for the power regulation in both opening and closing) and electronic adjustable slow-down in opening and closing through control unit (the exclusion of electronic slow-down is recommended in case of operators with hydraulic slowdown). The European laws in force strongly recommend to use the POSITION GATE (linear encoder) to read the gate position and reverse in case of obstacle.

**⚠ In case of leaf lengths greater than 1.80 m or 2.20 m (see above) or in the case of installations in windy places or in case of closed paneled gates, the use of an electric lock is mandatory on all versions, moreover, the exclusion of the electronic deceleration is recommended or the use of operators with hydraulic deceleration (on request) is recommended. For SB versions, the use of the electric lock is always mandatory**

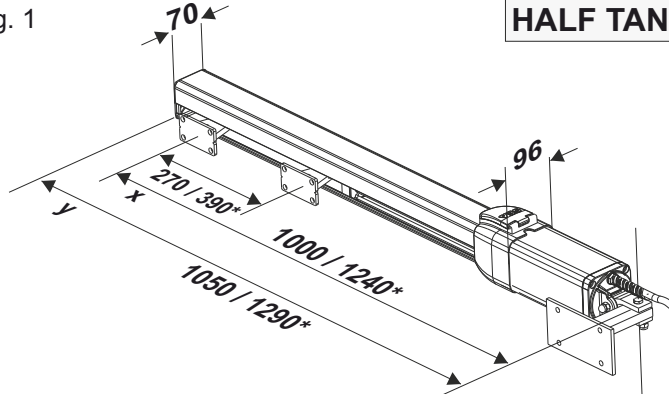
Fig. 1		<b>HALF TANK 270/390</b>	<b>NOTES</b>
			<ul style="list-style-type: none"> <li>● Version with brake in closing: + 25 mm in X and Y</li> <li>● Version with brake in opening and closing: + 50 mm in X and Y</li> <li>● Dimensions in millimeters: HALF TANK 270 HALF TANK 390*</li> </ul>

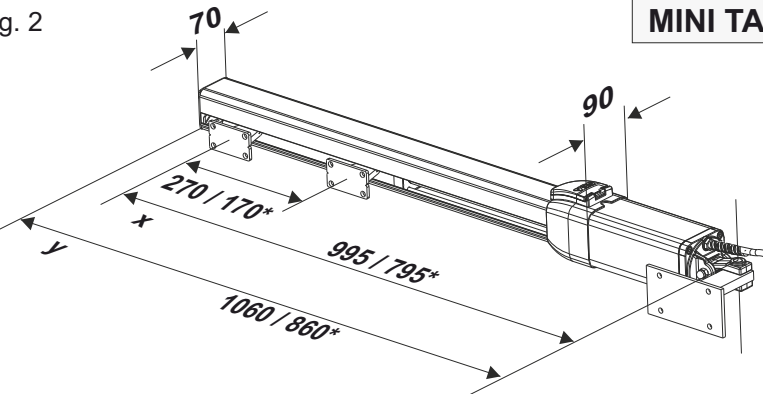
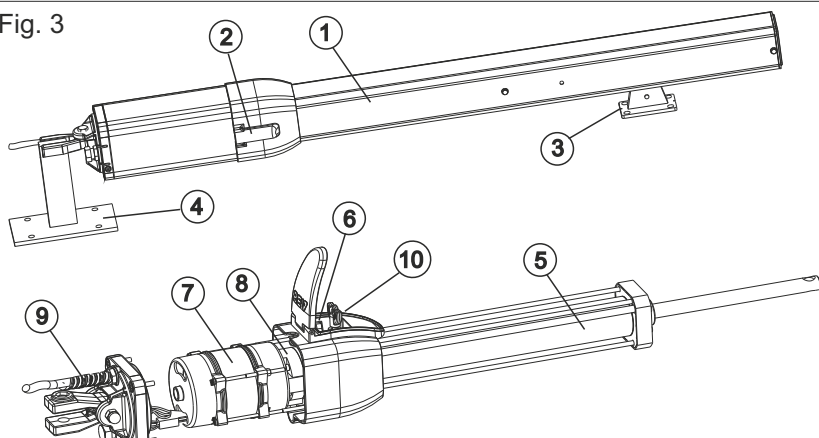
Fig. 2		<b>MINI TANK</b>	<b>NOTES</b>
			<ul style="list-style-type: none"> <li>● Version with brake in closing: + 25 mm in X and Y</li> <li>● Version with brake in opening and closing: + 50 mm in X and Y</li> <li>● Dimensions in millimeters: MINI TANK MINI TANK PEDESTRIAN ENTRY *</li> </ul>

Fig. 3		<ol style="list-style-type: none"> <li>1 Shaft cover</li> <li>2 External release joint</li> <li>3 Front fixing bracket</li> <li>4 Rear fixing bracket</li> <li>5 Hydraulic cylinder</li> <li>6 By-pass valves</li> <li>7 Electric motor</li> <li>8 Hydraulic pump</li> <li>9 Electric cable</li> <li>10 Release key</li> </ol>
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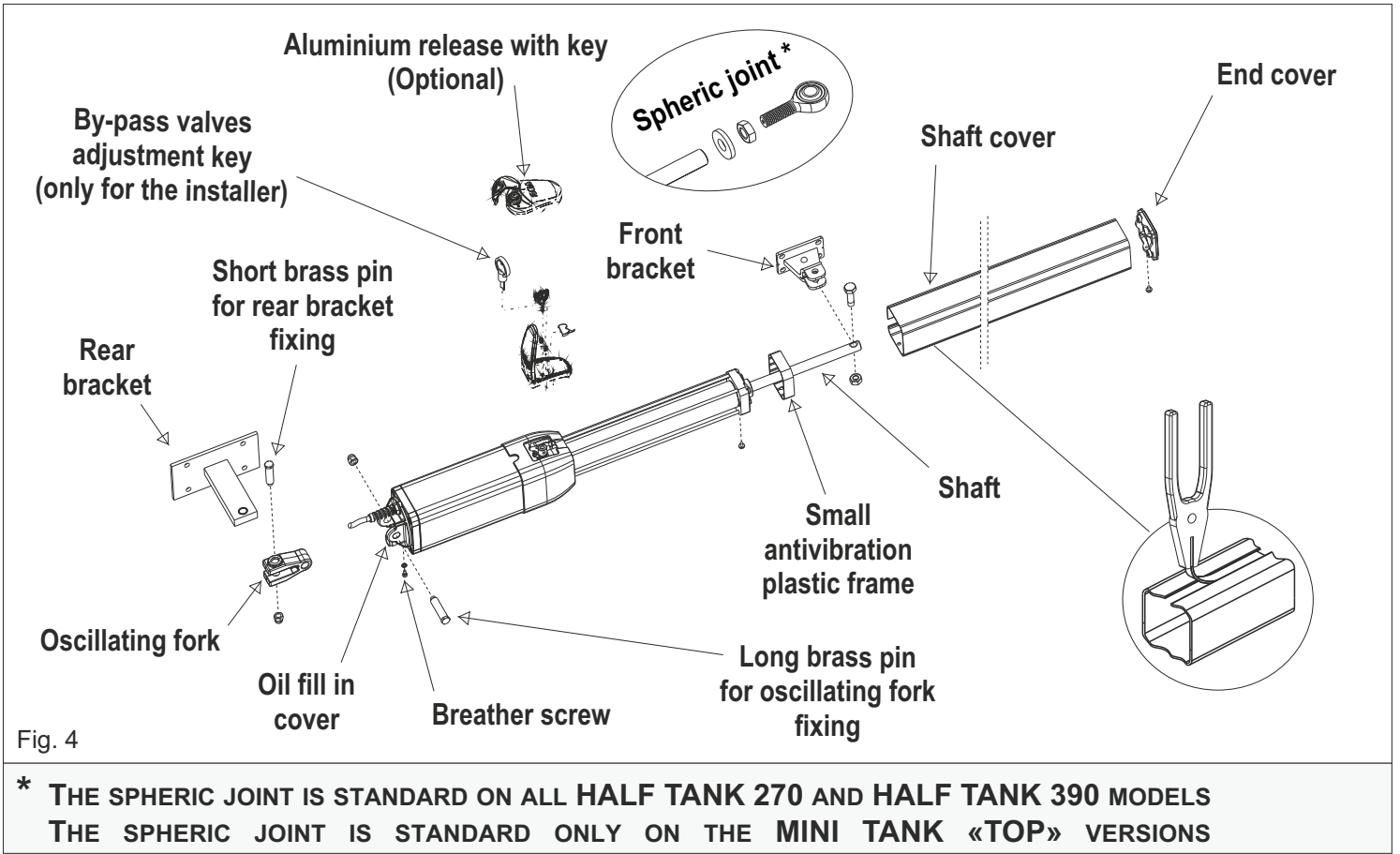
## TECHNICAL DATA

TECHNICAL DATA	HALF TANK 270 (230V)	HALF TANK 390 (230V)	HALF TANK 270 (120V)	HALF TANK 390 (120V)	HALF TANK 270 BR (36V)	HALF TANK 390 BR (36V)
Power supply	230V~ (± 5%) 50/60 Hz		120V~ (± 5%) 50/60 Hz		36V~	
Absorbed power	220 W				260 W	
Absorbed current	1 A		2 A		—	
Stroke	270 mm	390 mm	270 mm	390 mm	270 mm	390 mm
Rod speed	1cm/s	1,5 cm/s	1,2 cm/s	1,7 cm/s	ADJUSTABLE	
Cycles per hour * (at 20°C temperature)	55				60	
Max working pressure	40 bar	30 bar	40 bar	30 bar	45 bar	40 bar
Operating temperatures	- 40° C ⚡ + 60° C ⚡					
Thermal protection	130° C				—	
Max Thrust	640 daN					
Capacitor	12,5 µF		60 µF		—	
Operator weight	11,4 Kg	13,6 Kg	11,4 Kg	13,6 Kg	11,4 Kg	13,6 Kg
Protection class	IP 55					
Max leaf length	6 m	7 m	6 m	7 m	6 m	7 m
Leaf opening degrees	90° - 125°					
<p><b>* The frequency of use is valid only for the first working hour and at 20°C temperature</b>  <b>- If operator works in non-automatic logic, the use of operators without lock is suggested</b></p>						

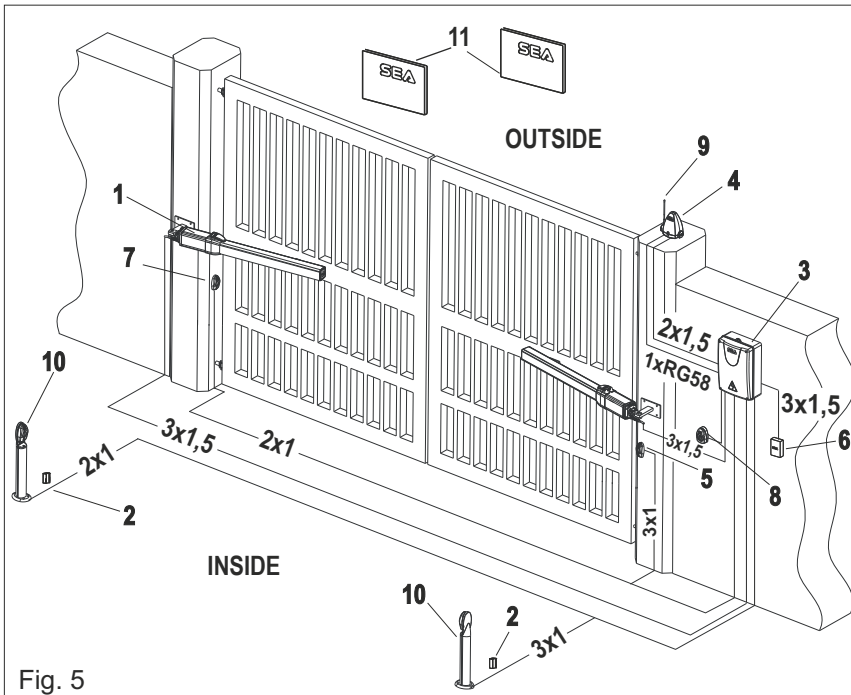
TECHNICAL DATA	MINI TANK (230V)	MINI TANK WITH JOINT (230V)	MINI TANK (120V)
Power supply	230V~ (± 5%) 50/60 Hz		120V~ (± 5%) 50/60 Hz
Absorbed power	180 W		240 W
Absorbed current	1 A		2,45 A
Stroke	270 mm		
Rod speed	1,5 cm/s	1 cm/s	1,7 cm/s
Cycles per hour * (at 20°C temperature)	40		
Max working pressure	30 bar		
Operating temperatures	- 40° C ⚡ + 60° C ⚡		
Thermal protection	130° C		
Max Thrust	250 daN		
Capacitor	6,3 µF		60 µF
Operator weight	10 Kg		
Protection class	IP 55		
Max leaf length	3 m		
Leaf opening degrees	90° - 110°		

**\* The frequency of use is valid only for the first working hour and at 20°C temperature**  
**- If operator works in non-automatic logic, the use of operators without lock is suggested**

## HALF TANK - MINI TANK

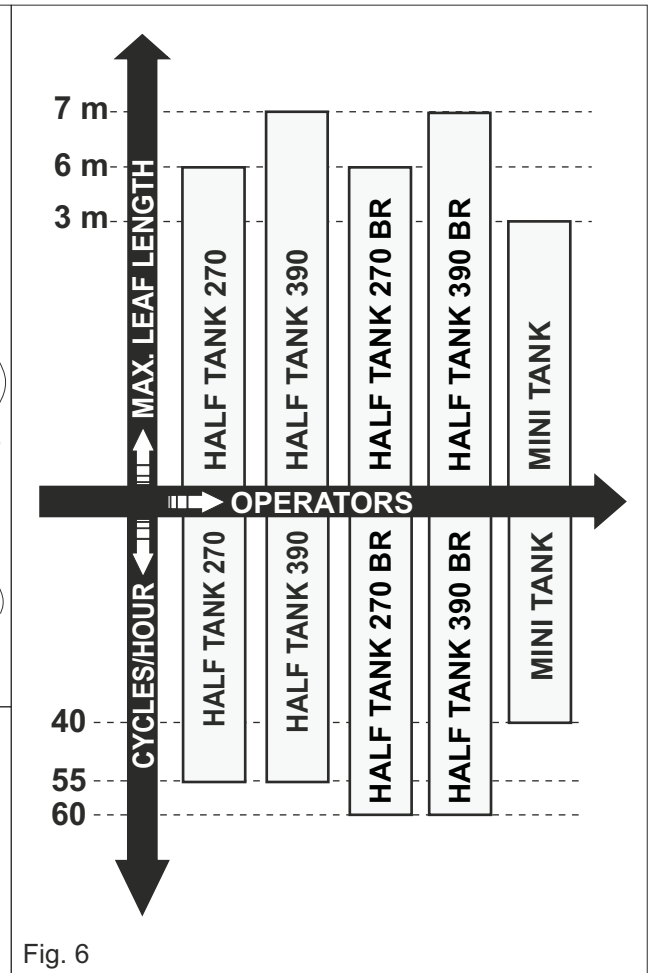


### STANDARD INSTALLATION



- |                                  |                            |
|----------------------------------|----------------------------|
| 1) Operator                      | 7) Sx photocell            |
| 2) Mechanical stop               | 8) Start-Stop push button  |
| 3) Electronic control unit       | 9) Antenna                 |
| 4) Flashing lamp                 | 10) Support for photocells |
| 5) Dx photocell                  | 11) Warning notice         |
| 6) Differential switch 16A/0,03A |                            |

### USING GRAPHIC



## INWARD OPENING INSTALLATION

### INWARD INSTALLATION

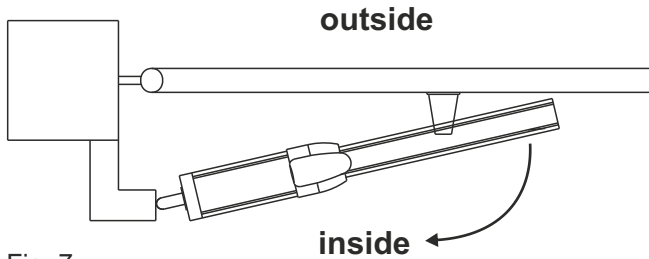


Fig. 7

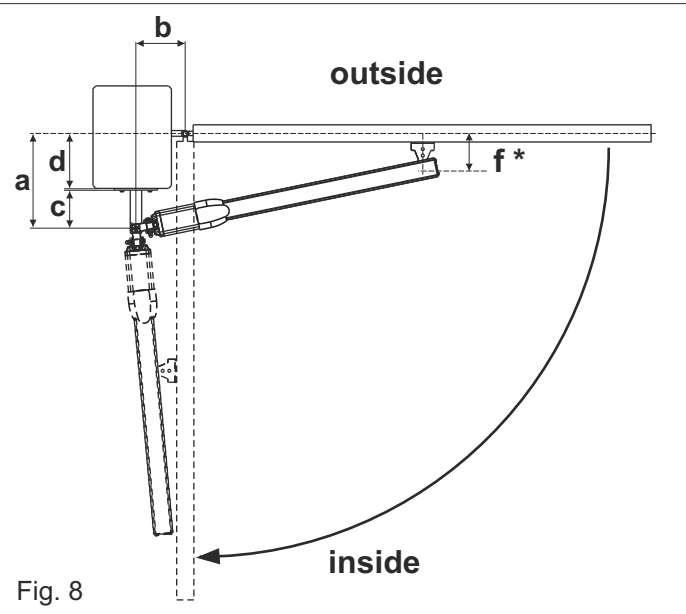


Fig. 8

### NOTES

- To get 110° with  $d > 55$  mm it is necessary to make a recess on the gate wall
- To get 125° with  $d > 55$  mm it is necessary to make a recess on the gate wall
- \* The « f » dimension has been calculated for a 40 mm thick gate



ALWAYS INSTALL THE OPERATOR INSIDE THE PROPERTY

### HALF TANK 270

TOTAL STROKE 270 MM - MAX SUGGESTED STROKE 250 MM

a (mm)	b (mm)	d <sub>max</sub> (mm)	f* (mm)	Max opening angle	Max stroke (mm)	Stroke for 90° (mm)
100	115	50	96	110°	250	215
100	150	50	96	90°	250	
105	110	55	96	110°	245	215
105	145	55	96	90°	250	
120	105	70	96	106°	250	225
120	130	70	96	90°	250	
125	125	75	96	90°	250	
140	95	90	96	100°	250	235
140	110	90	96	90°	250	
145	95	95	96	100°	255	242
145	105	95	96	90°	250	
150	100	100	96	90°	250	
155	85	105	96	96°	250	242
160	90	110	96	90°	253	
170	75	120	96	92°	250	
180	65	130	96	92°	250	

### HALF TANK 390

TOTAL STROKE 390 MM - MAX SUGGESTED STROKE 370 MM

a (mm)	b (mm)	d <sub>max</sub> (mm)	f* (mm)	Max opening angle	Max stroke (mm)	Stroke for 90° (mm)
125	170	75	123	125°	368	295
130	170	80	123	125°	372	300
140	235	90	123	90°	370	
145	165	95	123	120°	372	310
145	230	95	123	90°	370	
160	210	110	123	90°	370	
175	195	120	123	90°	370	
185	145	130	123	110°	370	330
185	190	130	123	90°	370	
195	140	140	123	110°	371	355
195	175	140	123	90°	370	
240	110	185	123	100°	370	355
240	125	185	123	90°	370	
250	105	195	123	95°	370	360
250	115	195	123	90°	370	
260	95	205	123	95°	369	365
260	100	205	123	90°	370	
270	90	215	123	90°	370	
280	80	230	123	90°	370	
295	65	245	123	90°	369	

### MINI TANK

TOTAL STROKE 270 MM - MAX SUGGESTED STROKE 250 MM

a (mm)	b (mm)	d <sub>max</sub> (mm)	f* (mm)	Max opening angle	Max stroke (mm)	Stroke for 90° (mm)
100	115	50	96	110°	250	215
100	150	50	96	90°	250	
105	110	55	96	110°	246	215
105	145	55	96	90°	250	
120	105	70	96	105°	249	225
120	130	70	96	90°	250	
125	125	75	96	90°	250	
140	95	90	96	100°	250	235
140	110	90	96	90°	250	
145	95	95	96	100°	255	240
145	105	95	96	90°	250	
150	100	100	96	90°	250	
155	85	105	96	95°	249	240
160	90	110	96	90°	250	
170	75	120	96	90°	248	
180	65	130	96	90°	247	

## OUTWARD OPENING INSTALLATION

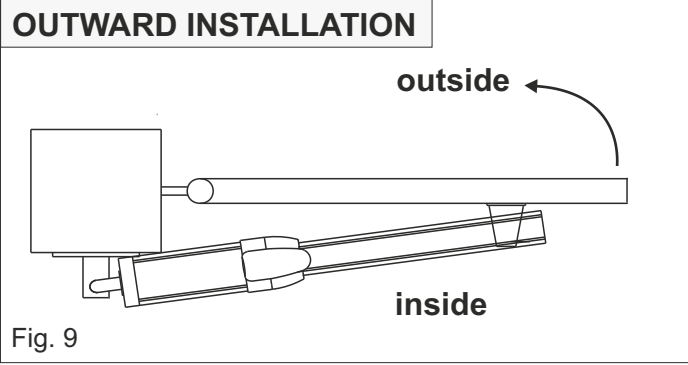


Fig. 9

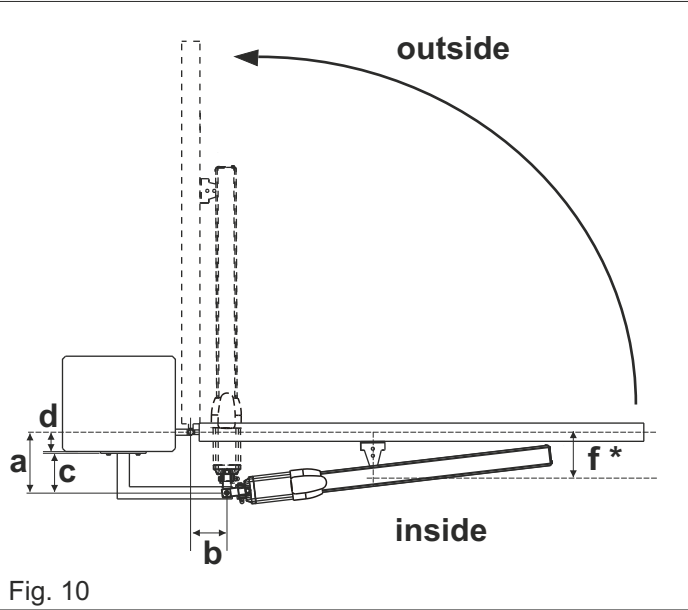


Fig. 10

**NOTES** \* The « f » dimension has been calculated for a 40 mm thick gate

**!** ALWAYS INSTALL THE OPERATOR INSIDE THE PROPERTY

### HALF TANK 270 - MINI TANK

TOTAL STROKE 270 MM - MAX SUGGESTED STROKE 250 MM

a (mm)	b (mm)	f* (mm)	Max opening angle	Max stroke (mm)	Stroke for 90° (mm)
150	90	96	95°	250	240
160	90	96	90°	250	
165	80	96	95°	249	243
175	80	96	90°	250	
180	70	96	90°	250	
180	65	96	90°	241	

### HALF TANK 390

TOTAL STROKE 390 MM - MAX SUGGESTED STROKE 370 MM

a (mm)	b (mm)	f* (mm)	Max opening angle	Max stroke (mm)	Stroke for 90° (mm)
250	100	123	100°	356	342
255	95	123	95°	345	336
265	95	123	95°	342	335
270	90	123	90°	330	
275	90	123	90°	325	
275	90	123	90°	319	

## INSTALLATION ON MASONRY PILLARS, MAKING A RECESS

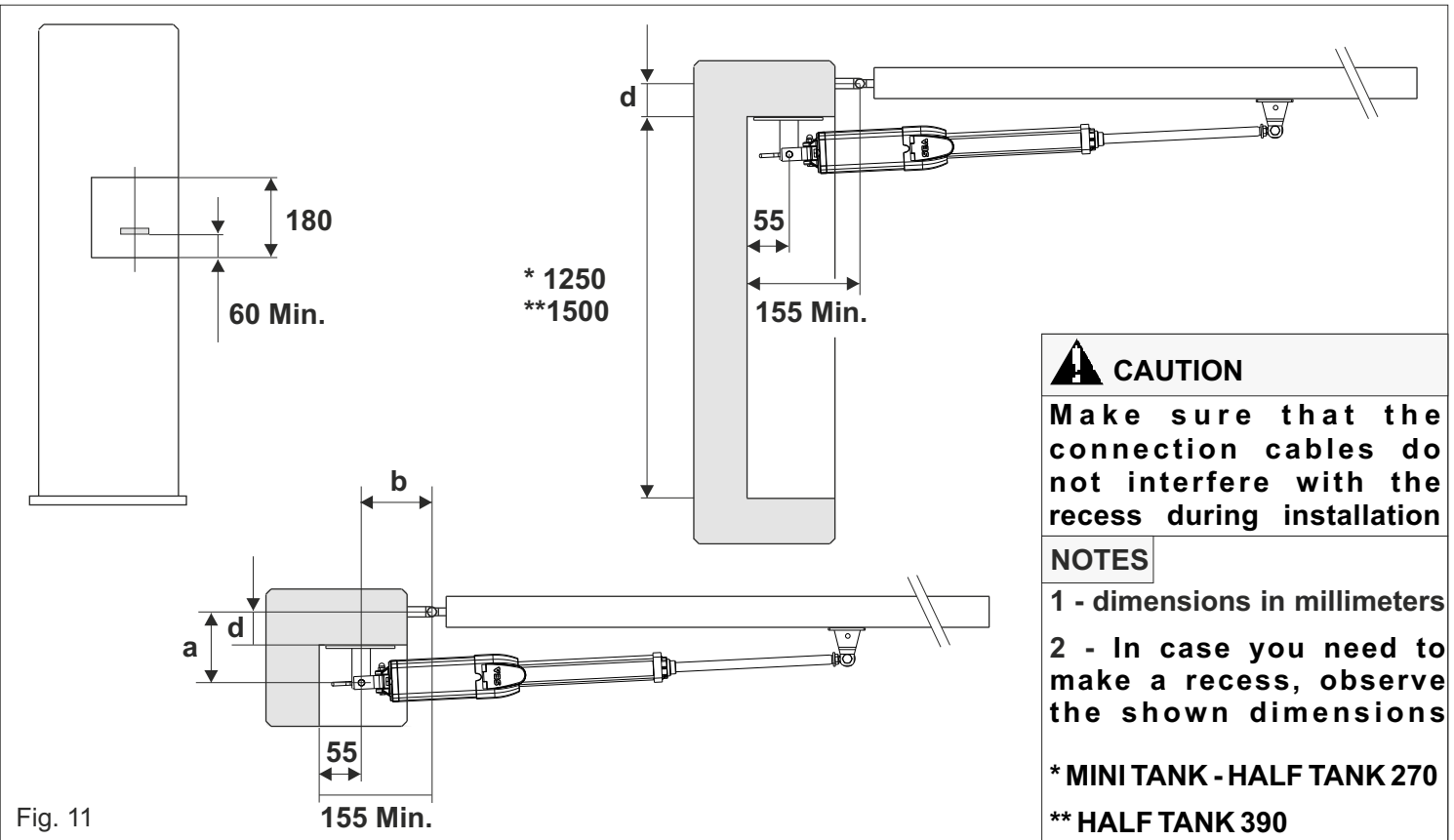


Fig. 11

**!** CAUTION

Make sure that the connection cables do not interfere with the recess during installation

**NOTES**

- 1 - dimensions in millimeters
- 2 - In case you need to make a recess, observe the shown dimensions

\* MINI TANK - HALF TANK 270

\*\* HALF TANK 390

## **PRELIMINARY NOTES**

- 1 - Open the package carefully, making sure to not lose the parts listed in Fig. 4
- 2 - For a proper operation, it is important to place as the operator as the front and rear brackets in a perfectly horizontal position with the help of a level, as shown in Fig. 12
- 3 - In case of use of MECHANICAL STOPS, these MUST BE INSTALLED BEFORE placing the operator on the front bracket

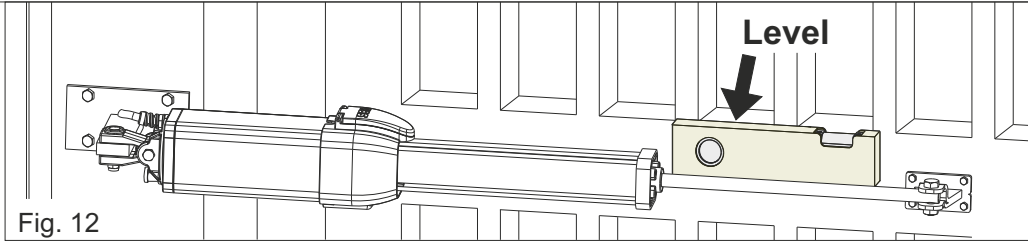


Fig. 12

### **REAR BRACKET INSTALLATION**

According to the type of opening (inward or outward) and to the choice of the leaf maximum rotation, the bracket must first be cut by respecting the «a» dimension shown on page 18 and 19 and then welded (Fig. 14)

**The rear bracket must be positioned so that the operator is perfectly horizontal (Fig. 12)**

**ADJUSTABLE REAR BRACKET (WITH SCREWS)  
(ACCESSORY ON DEMAND)**

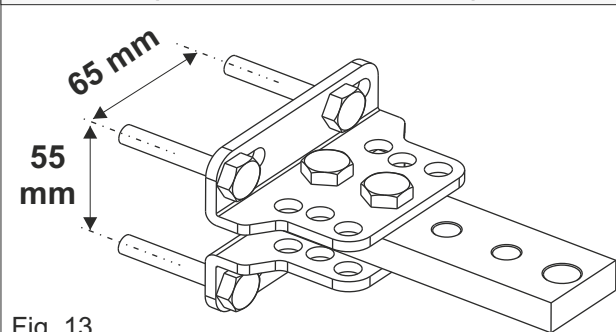


Fig. 13

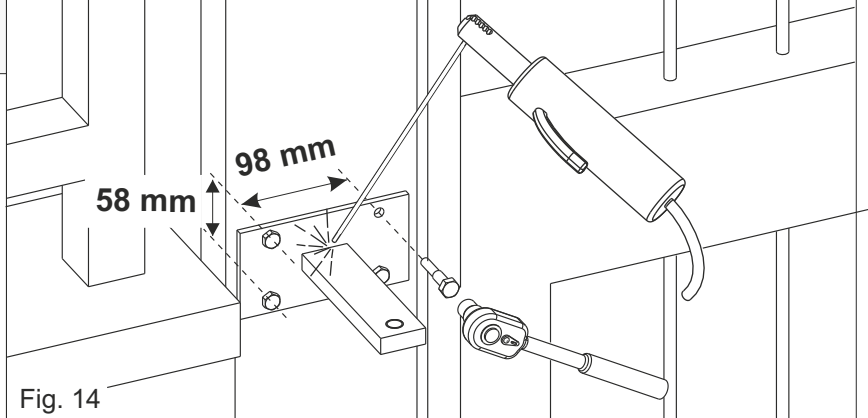


Fig. 14

### **INSTALLATION OF THE OSCILLATING FORK ON THE REAR BRACKET**

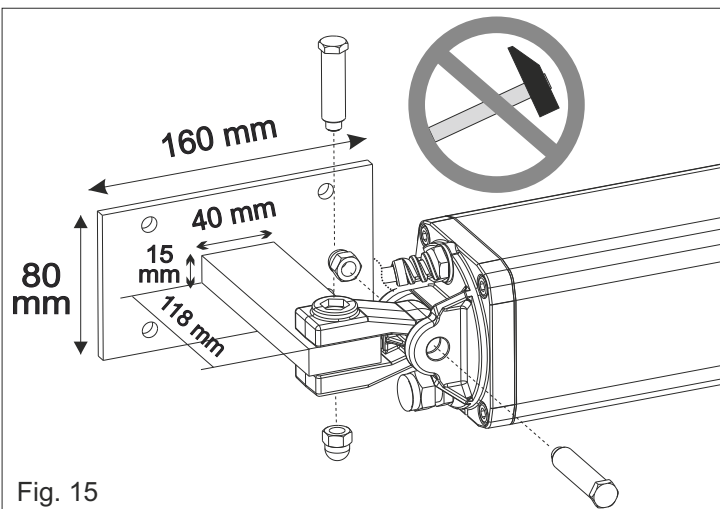


Fig. 15

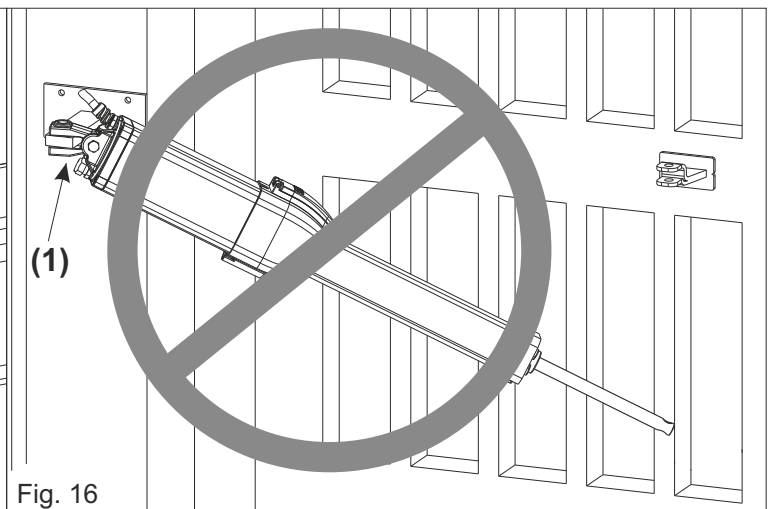




Fig. 16

- Mount the operator oscillating fork on the rear bracket (previously fixed on the gate), by the use of the two fixing pins (long and short) then secure them as shown in Fig. 15

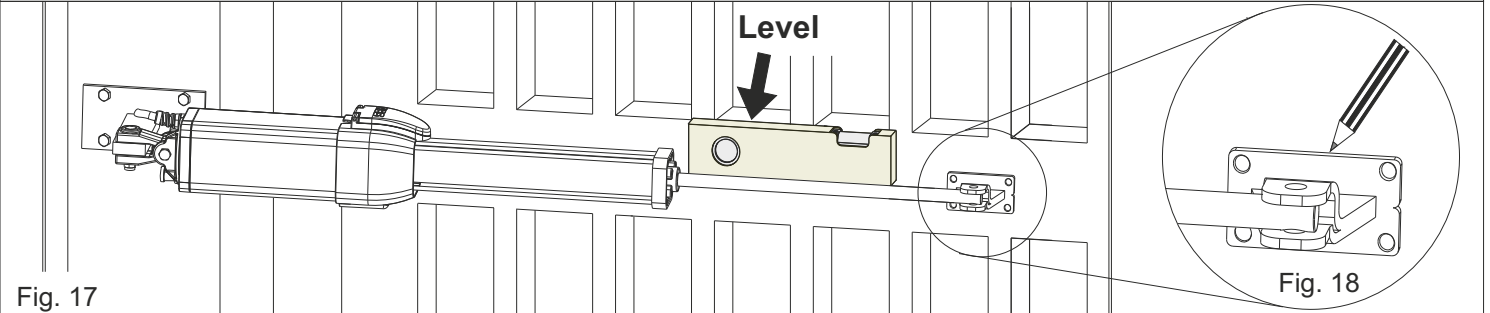
 **DO NOT use the hammer to insert the short brass pin; its fitting into the fork and the bracket must be get by the simple pressure of the hands**

 **DO NOT incline the hydraulic operator further than the oscillating fork allowed angle (1), it may cause its breaking (Fig. 16)**

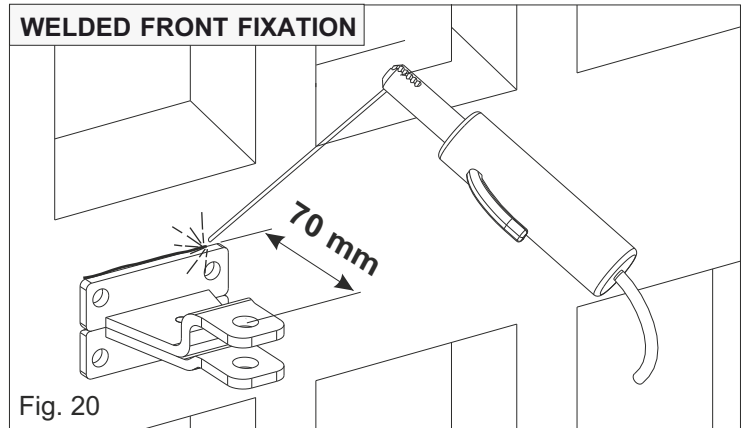
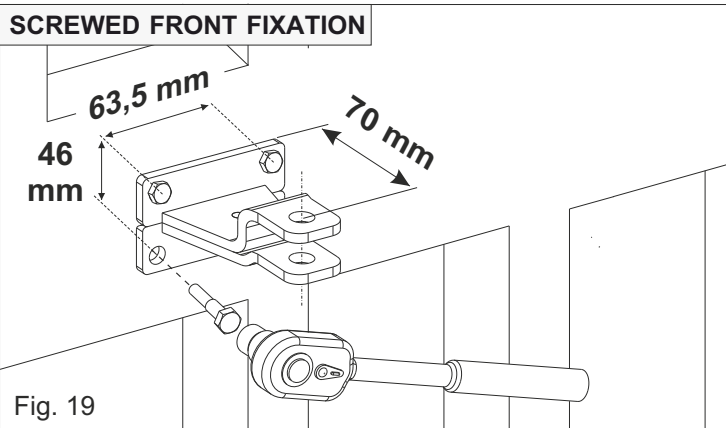
## FRONT BRACKET INSTALLATION

Once the operator has been fixed on the rear bracket, close the leaf and proceed as follows:

- 1) Unlock the operator (see the unlocking procedure in Fig. 49 and Fig. 50)
- 2) Pull out completely the chrome shaft, **then bring it back about 1 cm**
- 3) Place the front bracket on the gate and place the shaft in the housing (Fig. 17)
- 4) With the help of a level (Fig. 17), **make sure that the operator is in a perfectly horizontal position** then mark the front bracket position (Fig. 18)



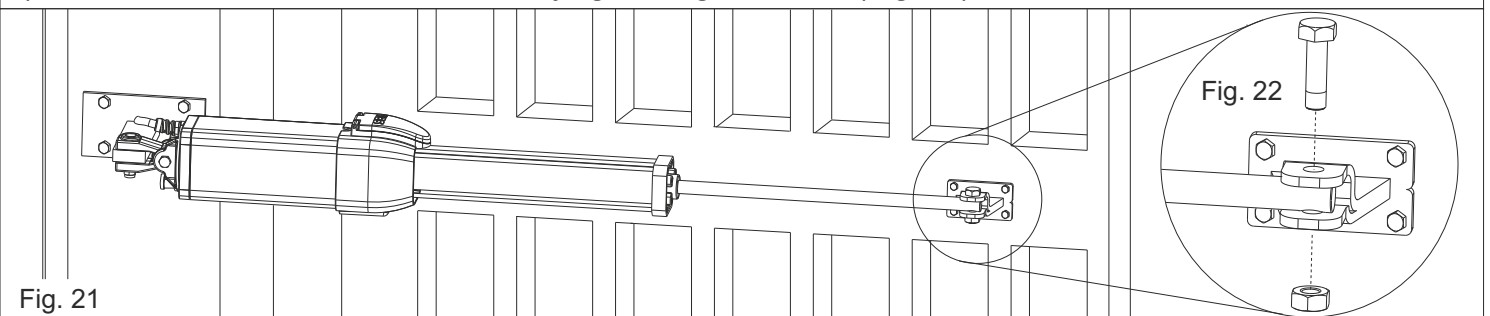
**DEPENDING ON THE GATE MATERIAL (WOOD, IRON O ALUMINIUM)  
THE FRONT FIXATION CAN BE SCREWED OR WELDED**



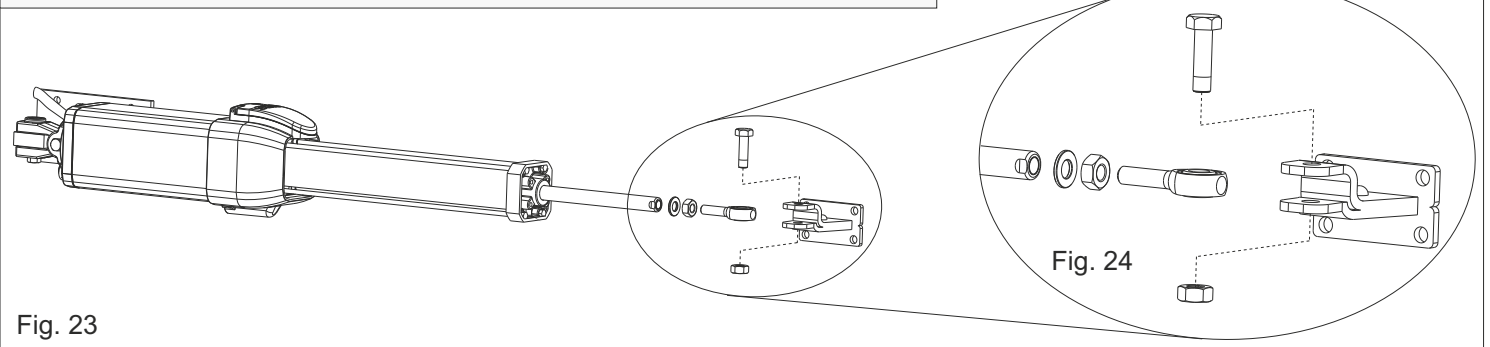
**⚠ DO NOT WELD THE FRONT FIXATION WITH THE SHAFT ALREADY INSERTED!**  
The welding scraps (squirts) could damage the shaft chrome plating

## INSTALLATION OF THE OPERATOR ON THE FRONT BRACKET

- 1) Place the operator shaft in the housing of the front bracket
- 2) Secure the shaft to the front bracket by tightening the screw (Fig. 22)



## INSTALLATION OF MODELLS WITH SPHERIC JOINT ON THE FRONT BRACKET





## MECHANICAL STOPS INSTALLATION

**(ACCESSORY ON DEMAND)**

**⚠** The mechanical stops must be installed before positioning the operator on the front bracket

- 1) Unlock the operator (see unlocking procedure in Fig. 49 and Fig. 50)
- 2) Let the chrome shaft come out for 3/4 of its stroke
- 3) Place the mechanical stops on the front flange, with two rods at least in parallel to the gate (Fig. 25)
- 4) Fix the mechanical stops with the two included screws
- 5) **FOR MINI TANK OPERATOR ONLY:** insert the supplied bush (C) in the shaft (Fig. 26)
- 6) Now hook the shaft on the front bracket (see the previous paragraph)

**TO ADJUST THE MECHANICAL STOP IN OPENING ACT ON DISK 1**

**TO ADJUST THE MECHANICAL STOP IN CLOSING ACT ON THE DISK 2**

**NOTE: THE ASSEMBLY OF THE MECHANICAL STOP DOES NOT CAUSE THE REDUCTION OF THE STROKE**

### HALF TANK 270/390 MECHANICAL STOP KIT

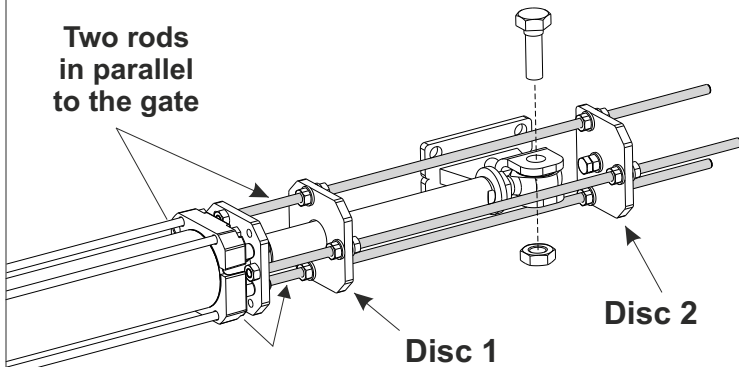


Fig. 25

### MINI TANK MECHANICAL STOP KIT

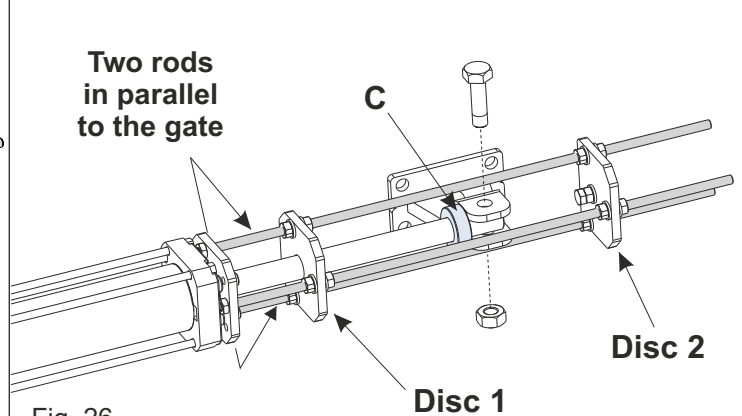


Fig. 26

**⚠ MAKE SURE THAT THE TWO DISCS A AND B PERFECTLY MATCH DURING OPENING MOVEMENT AND THEY ARE NOT TILTED COMPARED TO THE AXIS**

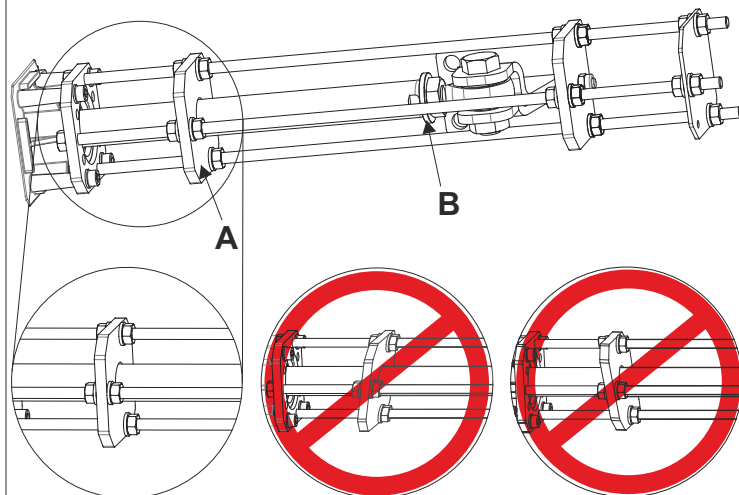


Fig. 27

**⚠ MAKE SURE THAT THE TWO DISCS C AND D PERFECTLY MATCH DURING OPENING MOVEMENT AND THEY ARE NOT TILTED COMPARED TO THE AXIS**

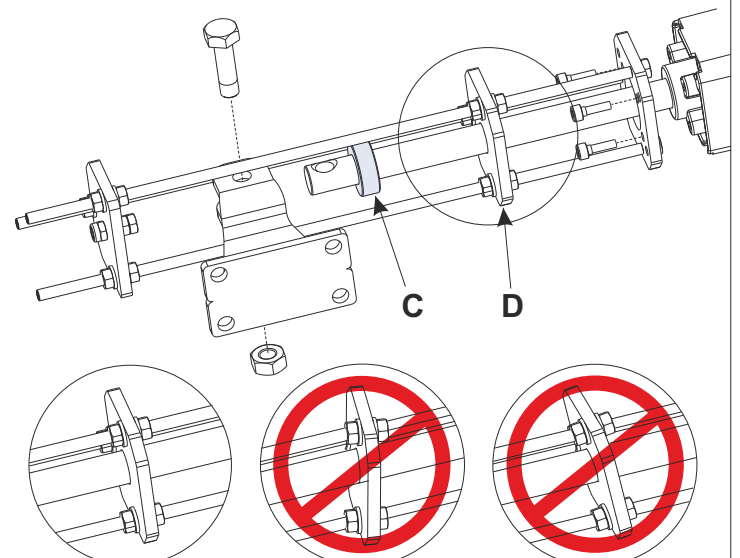


Fig. 28

## INSTALLATION OF THE CHROME PLATED SHAFT COVER

**⚠ MAKE SURE TO HAVE INSERTED THE ANTI-VIBRATION PLASTIC FRAME « A » BEFORE INSERTING THE SHAFT COVER**

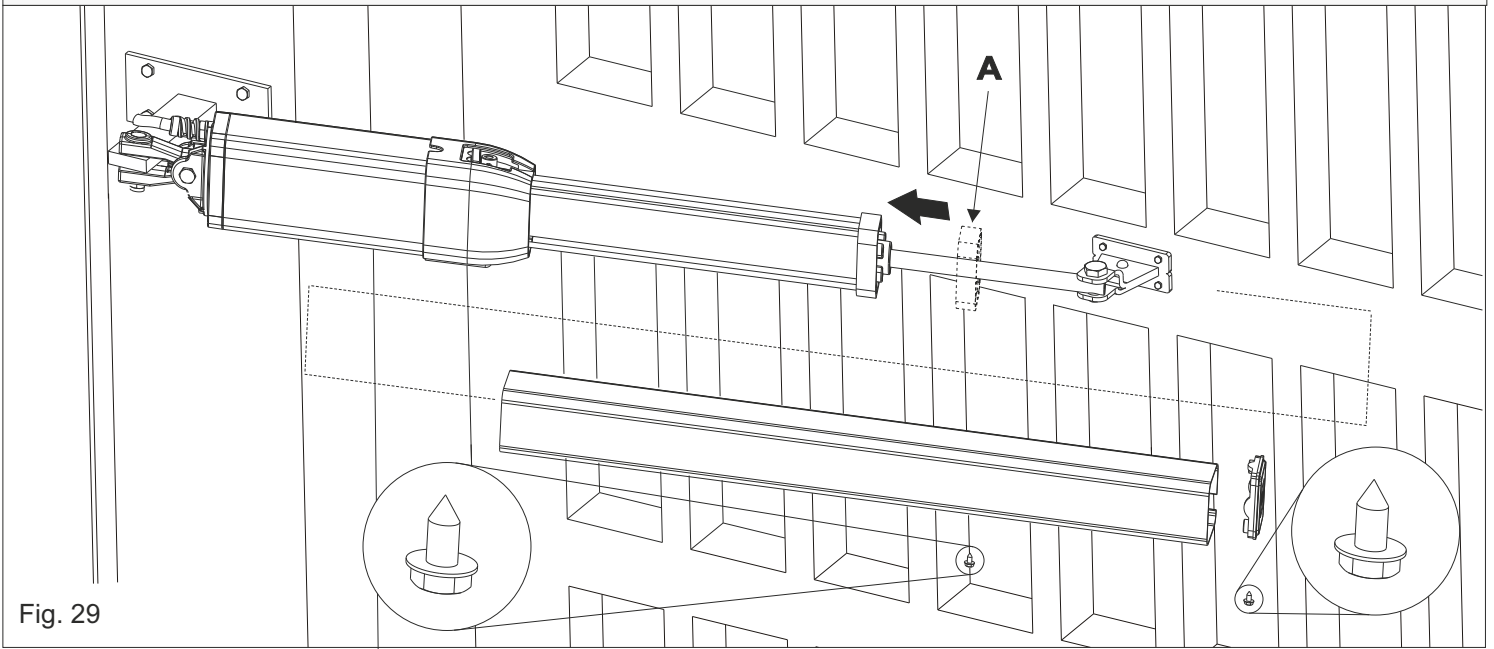


Fig. 29

## TORQUE ADJUSTMENT THROUGH BY-PASS VALVES

At the first installation the manual release is not yet mounted (Fig. 30), so after adjustments, it can be mounted as shown on the next paragraphs. For all the successive adjustments (eg. periodic maintenance) proceed as follows :

- **HALF TANK 270/390:** remove the by-pass cover only by unscrewing it (Fig. 33) then make adjustments using the special key (A) supplied to the installer (Fig. 34)
- **MINI TANK:** disassemble the manual release completely (see next paragraph) then make adjustments using the special key (A) supplied to the installer (Fig. 32)

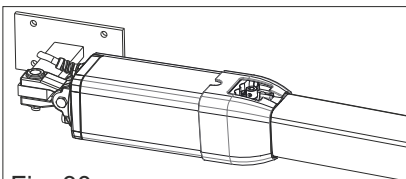


Fig. 30

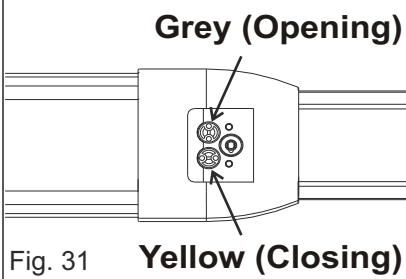


Fig. 31

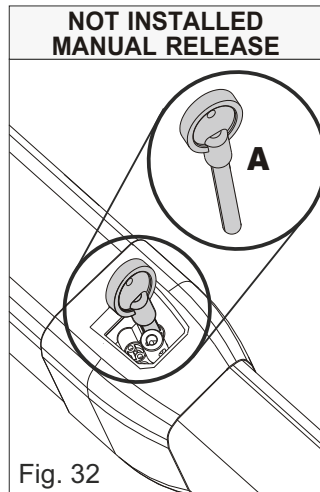


Fig. 32

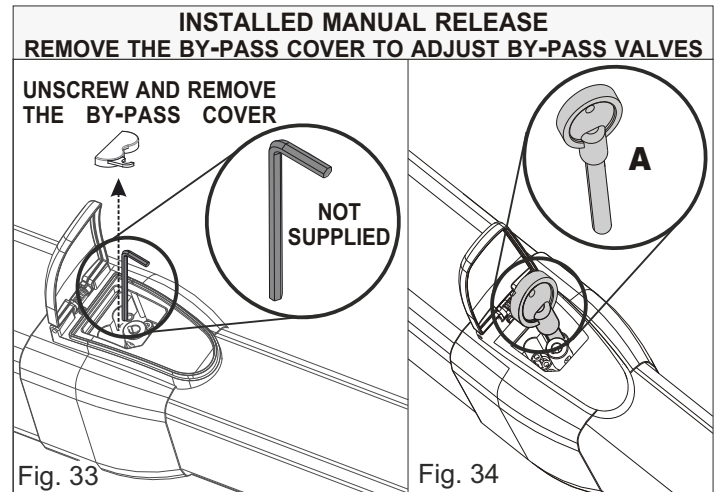


Fig. 33

Fig. 34

### BY-PASS VALVES

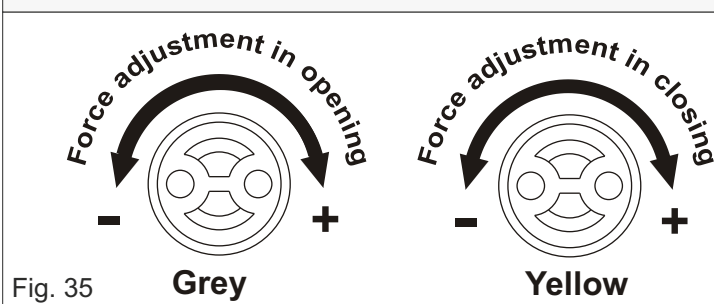
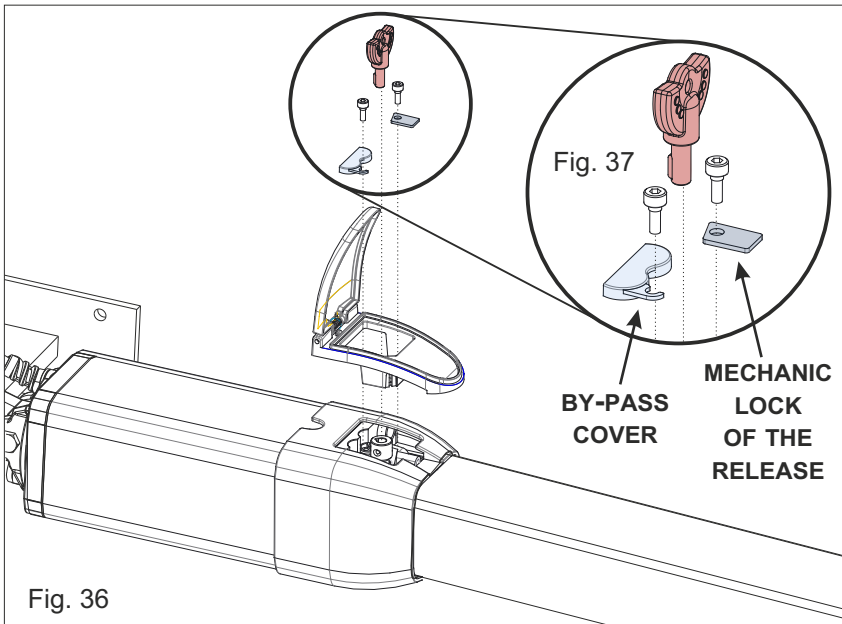


Fig. 35

Regulate the opening and closing forces of the gate respecting the Laws in force; However the thrust force must not be superior than 15 KgF.

**⚠** The valves must be adjusted in parallel, there must be no calibration differences between them (ie. between opening and closing).  
*Example: if you adjust the grey valve by half a turn, then the yellow valve must also be adjusted in the same way*

## **INSTALLATION OF THE PLASTIC RELEASE FOR HALF TANK 270**

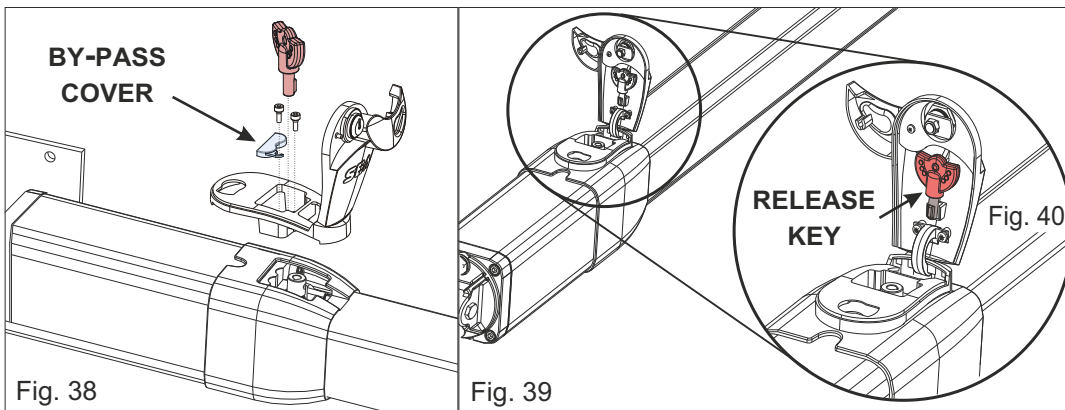


Assembly the plastic release as shown in Fig. 36 only after having completed the operator installation, the assembly of the shaft cover and the calibration of the by-pass valves.

For the **following adjustments** of the by-pass valves (eg. periodic maintenance) **remove the by-pass cover only** (see previous paragraph)

**⚠** The mechanic lock of the release must necessarily be mounted as shown in Fig. 37, respecting the parts orientation and the assembly procedure

## **INSTALLATION OF THE ALUMINIUM RELEASE WITH KEY FOR HALF TANK 390 (ACCESSORY ON DEMAND)**

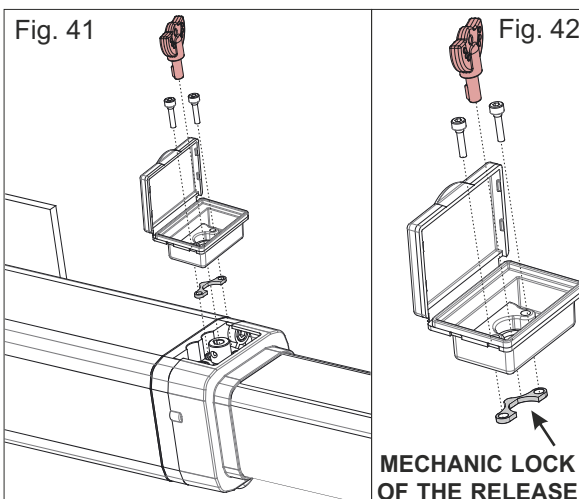


Assembly the aluminium release as shown in Fig. 38 only after having completed the operator installation, the assembly of the shaft cover and the calibration of the by-pass valves

For the **following adjustments** of the by-pass valves (eg. periodic maintenance) **remove the by-pass cover only** (see previous page)

**⚠** The manual release key is kept in a special housing inside the aluminium release lid as shown in Fig. 40

## **INSTALLATION OF THE PLASTIC RELEASE FOR MINI TANK and HALF TANK in « PG » VERSION**

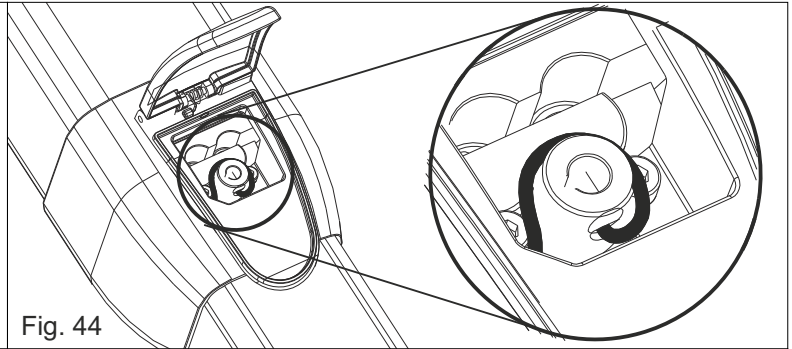
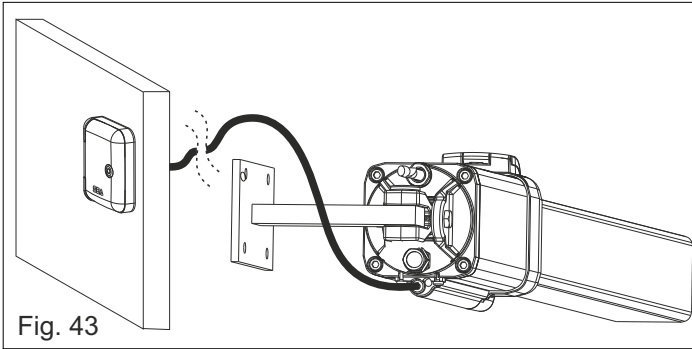


Assembly the plastic release as shown in Fig. 41 only after having completed the operator installation, the assembly of the shaft cover and the calibration of the by-pass valves

For the **following adjustments** of the by-pass valves (eg. periodic maintenance) **lift the complete release group by removing the fixing screws to reach the by-pass valves** (see the previous page)

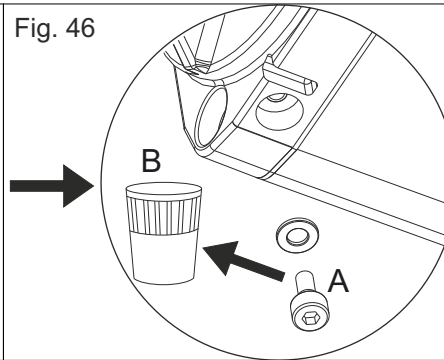
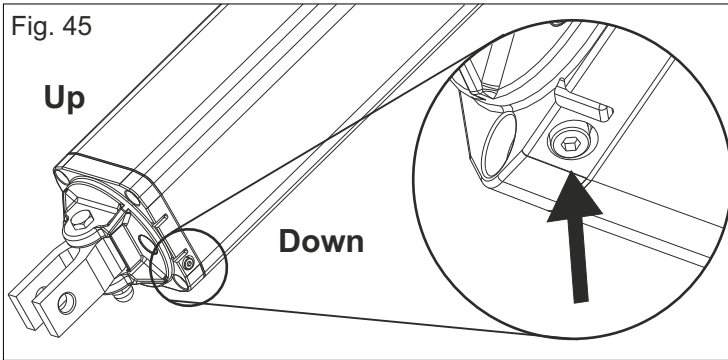
**⚠** The mechanic lock of the release must necessarily be mounted as shown in Fig. 42, respecting the parts orientation and the assembly procedure

## **INSTALLATION OF THE EXTERNAL RELEASE (ACCESSORY ON DEMAND)**



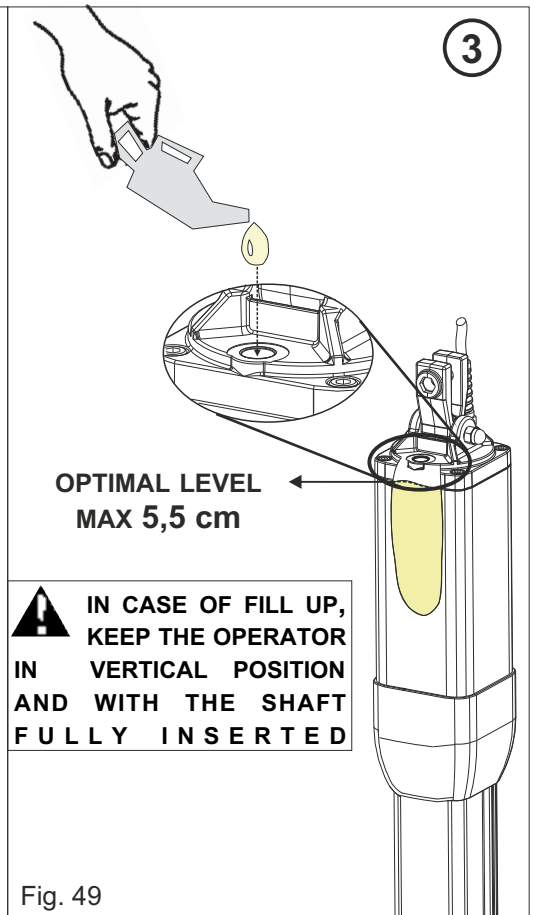
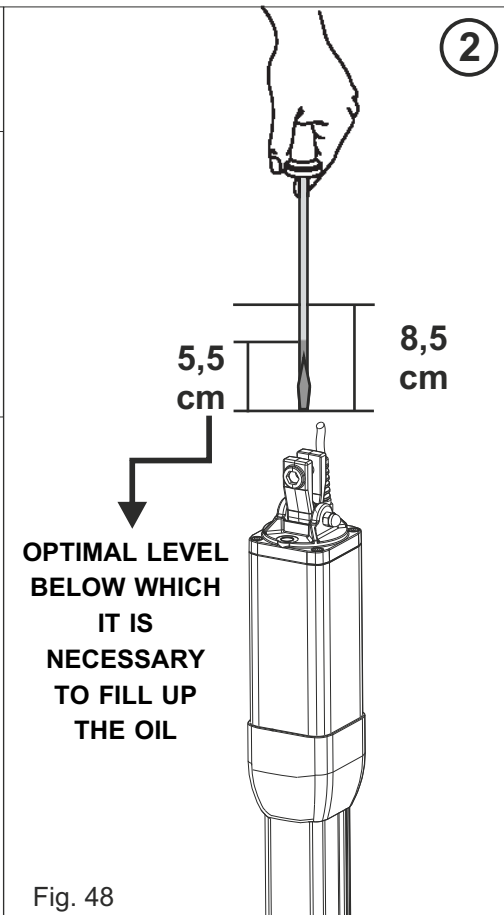
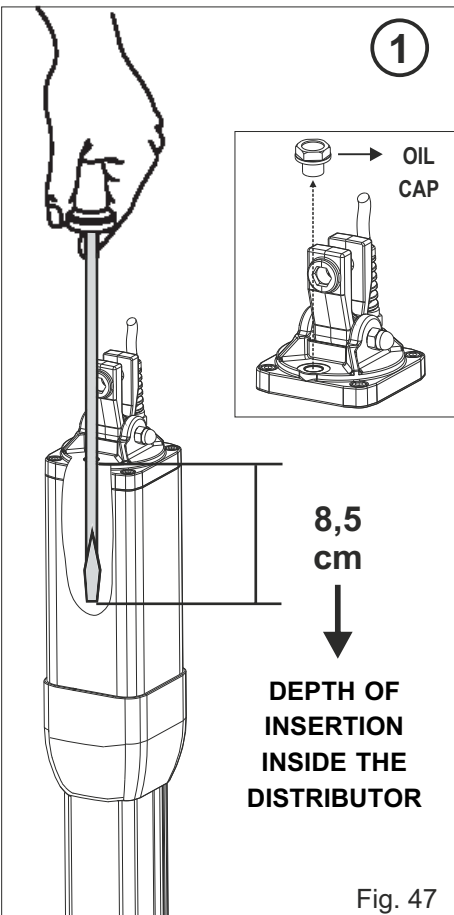
**⚠** To assemble the external release, refer to Fig. 43 and Fig. 44  
For further details, see the assembly instructions for the **EXTERNAL RELEASE KIT**

## **BREATHER SCREW REMOVAL**



**Unscrew the «A» screw and remove the «B» breather plug at the end of the installation procedure**  
**⚠ IT IS MANDATORY TO REMOVE THE SCREW AT THE END OF THE INSTALLATION**

## **OIL LEVEL MEASUREMENT AND REFILL**



**⚠ IN CASE OF FILL UP, KEEP THE OPERATOR IN VERTICAL POSITION AND WITH THE SHAFT FULLY INSERTED**

**TO THE ATTENTION OF THE TECHNICIANS AND THE END-USERS**



**ALL THE UNLOCKING AND LOCKING OPERATIONS AND THE PERIODIC MAINTENANCE MUST BE CARRIED OUT IN ABSENCE OF POWER SUPPLY**

**RELEASE SYSTEM**

**TO RELEASE THE OPERATOR:**

- Insert the special release key and turn it anti-clockwise by 180° (Fig. 50 and Fig. 51)

**TO LOCK THE OPERATOR AGAIN:**

- Insert the special release key and turn it clockwise until it closes (Fig. 50 and Fig. 51)

**HALF TANK**

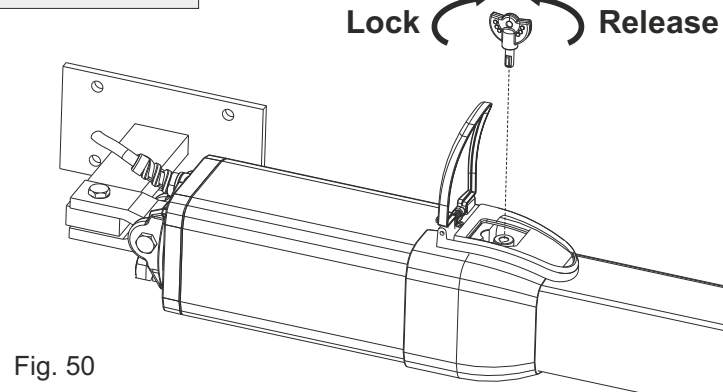


Fig. 50

**MINI TANK**

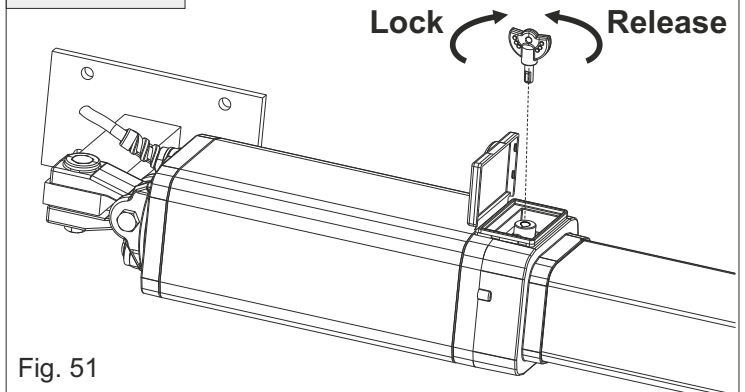


Fig. 51

**PERIODIC MAINTENANCE**

1) Check the robustness and the stability of the gate, particularly the leaning and the rotation points of the gate (hinges)	<b>Yearly</b>
2) Check the oil level	<b>Yearly</b>
3) Replace the hydraulic oil with the oil recommended by the producer	<b>4 Years</b>
4) Check the function of the release	<b>Yearly</b>
5) Check the function of the by-pass valves	<b>Yearly</b>
6) Check and grease the fixation pivots	<b>Yearly</b>
7) Check the integrity of the connecting cables	<b>Yearly</b>
8) Check the function and the conditions of the mechanical stops in opening and closing (where the mechanical stop accessory is present)	<b>Yearly</b>
9) Check the good status of all the components subject to efforts (rear fixing bracket, oscillating fork, front fixing bracket etc.)	<b>Yearly</b>
10) Check the functionality of all the accessories especially the function of all security devices and of the Linear Encoder	<b>Yearly</b>
11) Lubricate the shaft with SEA grease ( <i>GREASE GL 00 Code: 65000009</i> )	<b>Yearly</b>

**AFTER CARRYING OUT ALL THE PERIODIC MAINTENANCE OPERATIONS IT IS NECESSARY TO REPEAT THE AUTOMATION TESTING AND COMMISSIONING**

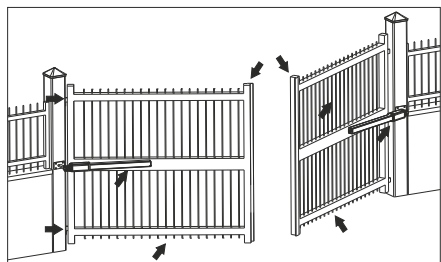


**ALL OPERATIONS MUST BE CARRIED OUT EXCLUSIVELY BY AN AUTHORIZED INSTALLER**

## TO THE ATTENTION OF THE TECHNICIANS AND THE END-USERS

### RISK EXAMINATION

The points pointed by arrows are potentially dangerous. The installer must take a thorough risk examination to prevent crushing, conveying, cutting, grappling, trapping so as to guarantee a safe installation for people, things and animals (Re. Laws in force in the Country where installation has been made). As for misunderstandings that may arise refer to your area distributor or call our help desk. These instructions are part of the device and must be kept in a well known place. The



installer shall follow the provided instructions thoroughly. SEA products must only be used to automate doors, gates and wings. Any initiative taken without SEA explicit authorization will preserve the manufacturer from whatsoever responsibility. The installer shall provide warning notices on not assessable further risks. SEA in its relentless aim to improve the products, is allowed to make whatsoever adjustment without giving notice. This doesn't oblige SEA to upgrade the past production. SEA can not be deemed responsible for any damage or accident caused by product breaking, being damages or accidents due to a failure to comply with the instructions herein. The guarantee will be void and the manufacturer responsibility will be nullified if SEA original spare parts are not being used. The electrical installation shall be carried out by a professional technician who will release documentation as requested by the laws in force. Packaging materials such as plastic bags, foam polystyrene, nails etc must be kept out of children's reach as dangers may arise.

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

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

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

**SPARE PARTS:** Send request for spare parts to: **SEA S.p.A. - Teramo - ITALY - [www.seateam.com](http://www.seateam.com)**

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

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

**WARRANTY LIMITS** - see the sales conditions

**MAINTENANCE AND DECOMMISSION:** must only be carried out by specialised and authorised personnel.

**THE MANUFACTURER CAN NOT BE DEEMED RESPONSIBLE FOR ANY DAMAGE OR INJURY CAUSED BY IMPROPER USE OF THIS PRODUCT;** SEA S.p.A. reserves the right to make any required modification or change to the products and/or to this manual without any advanced notice obligation.

### GENERAL NOTICE FOR THE INSTALLER AND THE USER

1. **Read carefully these Instructions** before beginning to install the product. Store these instructions for future reference
2. Don't waste product packaging materials and /or circuits.
3. This product was designed and built strictly for the use indicated. Any other use could compromise the condition and the operation of the product or be a source of danger. SEA S.p.A. declines all liability caused by improper or different use in respect to the intended one.
4. The mechanical parts must be comply with: Machine Regulation 2006/42/CE and following adjustments, Low Tension (2006/95/CE), Electromagnetic Consistency (2004/108/CE). Installation must respect 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 concerning system security and efficiency, if components used are not produced by SEA
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 control unit and motors should not be greater than 10 m. Use cables with 2,5 mm<sup>2</sup> section. Use double insulation cable (cable sheath) close to the terminals, in particular for the 230V cable. Keep an adequate distance (at least 2.5 mm in air), between low voltage (230V) cables and safety low voltage cables (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**

**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 responsibility and, if applicable, under the responsibility of its authorised representative that, by installing the appropriate safety equipment and noise filtering, the products:*

<b>Descrizione / Description</b>	<b>Modello / Model</b>	<b>Marca / Trademark</b>
<b>HALF TANK 270 AC</b> (e tutti i suoi derivati / <i>and all its by-products</i> )	10401026	SEA
<b>HALF TANK 390 AC</b> (e tutti i suoi derivati / <i>and all its by-products</i> )	10501036	SEA
<b>HALF TANK 270 AC BR 36V</b> (e tutti i suoi derivati / <i>and all its by-products</i> )	10401115	SEA
<b>HALF TANK 390 AC BR 36V</b> (e tutti i suoi derivati / <i>and all its by-products</i> )	10501060	SEA
<b>MINI TANK 270 AC</b> (e tutti i suoi derivati / <i>and all its by-products</i> )	10103505	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, 16/03/2021

L'Amministratore  
The Administrator  
Ennio Di Saverio  






## Automatic Gate Openers

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 elaboración 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/ <i>Control unit</i>	SEA <input type="checkbox"/>	Altri/ <i>Others</i>	<input type="checkbox"/>
Fotocelle/ <i>Photocells</i>	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 / <i>Other accessories</i>	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 ai sensi del Regolamento UE 679/2016  
Agreement to the GDPR EU Regulation No. 679/2016

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**<sup>®</sup>  
Sistemi Elettronici  
di Apertura Porte e Cancelli  
International registered trademark n. 804888

SEA S.p.A. - Zona Industriale San Atto- 64020 Teramo (Italy)  
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[www.seateam.com](http://www.seateam.com) - [info@seateam.com](mailto:info@seateam.com)





**Automatic Gate Openers**

International registered trademark n. 804888

**SEA S.p.A.**  
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**[seacom@seateam.com](mailto:seacom@seateam.com)**