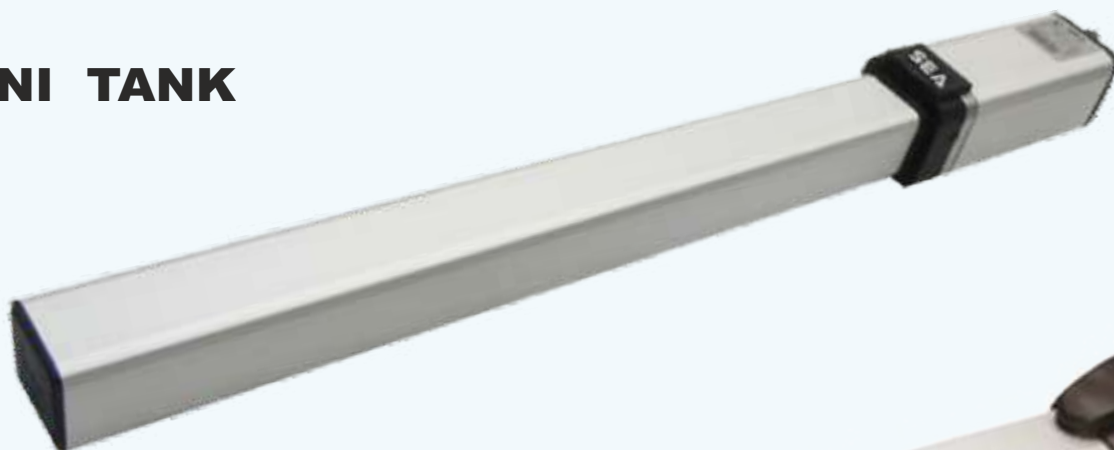


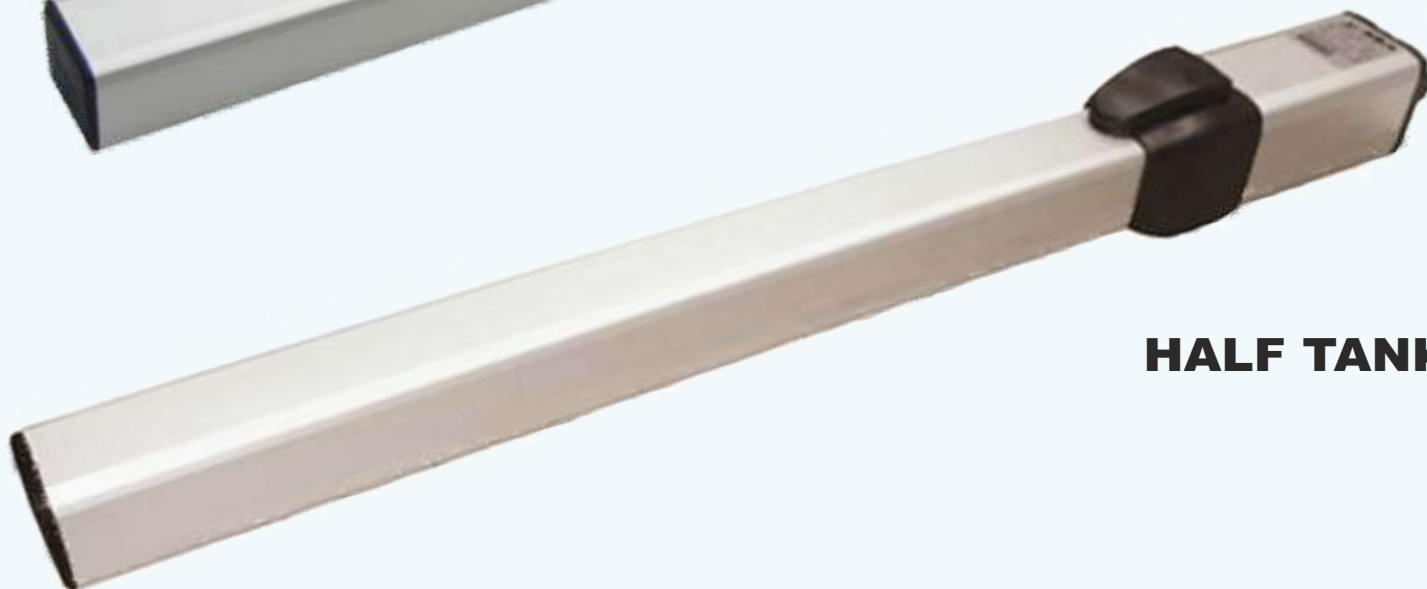
# **MINI TANK - HALF TANK**

**OPERATORI OLEODINAMICI PER CANCELLI A BATTENTE**  
**HYDRAULIC OPERATORS FOR SWING GATES**  
**OPÉRATEURS HYDRAULIQUES POUR PORTAILS À BATTANT**

**MINI TANK**



**HALF TANK**



**SEA S.p.A.**  
Zona Industriale Sant'Atto - 64100 - Teramo - ITALY  
Telephone: + 39 0 861 588341  
[www.seateam.com](http://www.seateam.com)

## 1 FEATURES

**MINI TANK** and **HALF TANK 270 / HALF TANK 390** are high quality hydraulic operators for residential and condominium use, suitable for leaf length up to respectively 3m and 6 m / 7 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 leaf length up to 1.80 m for MINI TANK and HALF TANK 270 and on leaf length up to 2.20 m for HALF TANK 390. All models are equipped with by-pass valves (for power adjustment in both opening and closing) and electronic slow-down in opening and closing which is adjustable via 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 detect the gate position and reverse in case of obstacle.

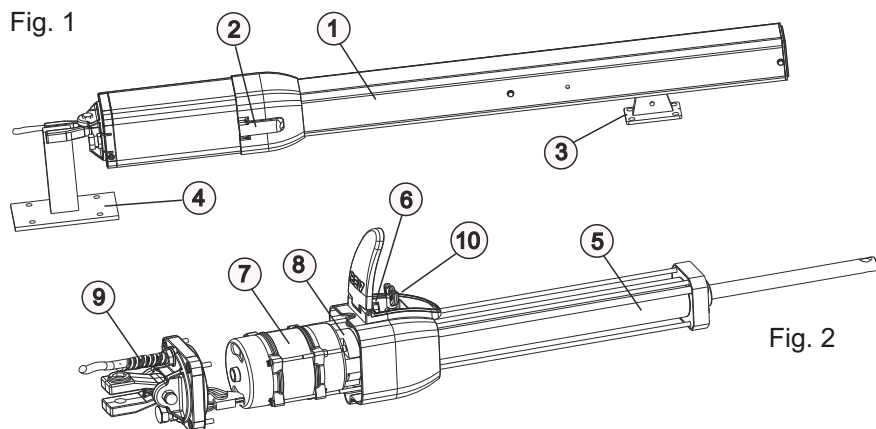


**In case of leaf lengths greater than 1.80 m or 2.20 m (see above) or in the case of installations in windy places or in case of closed paneled gates, the use of an electric lock is mandatory on all versions, moreover, the exclusion of the electronic deceleration is recommended or the use of operators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

**For SB versions, the use of the electric lock is always mandatory**

## 2 COMPONENTS

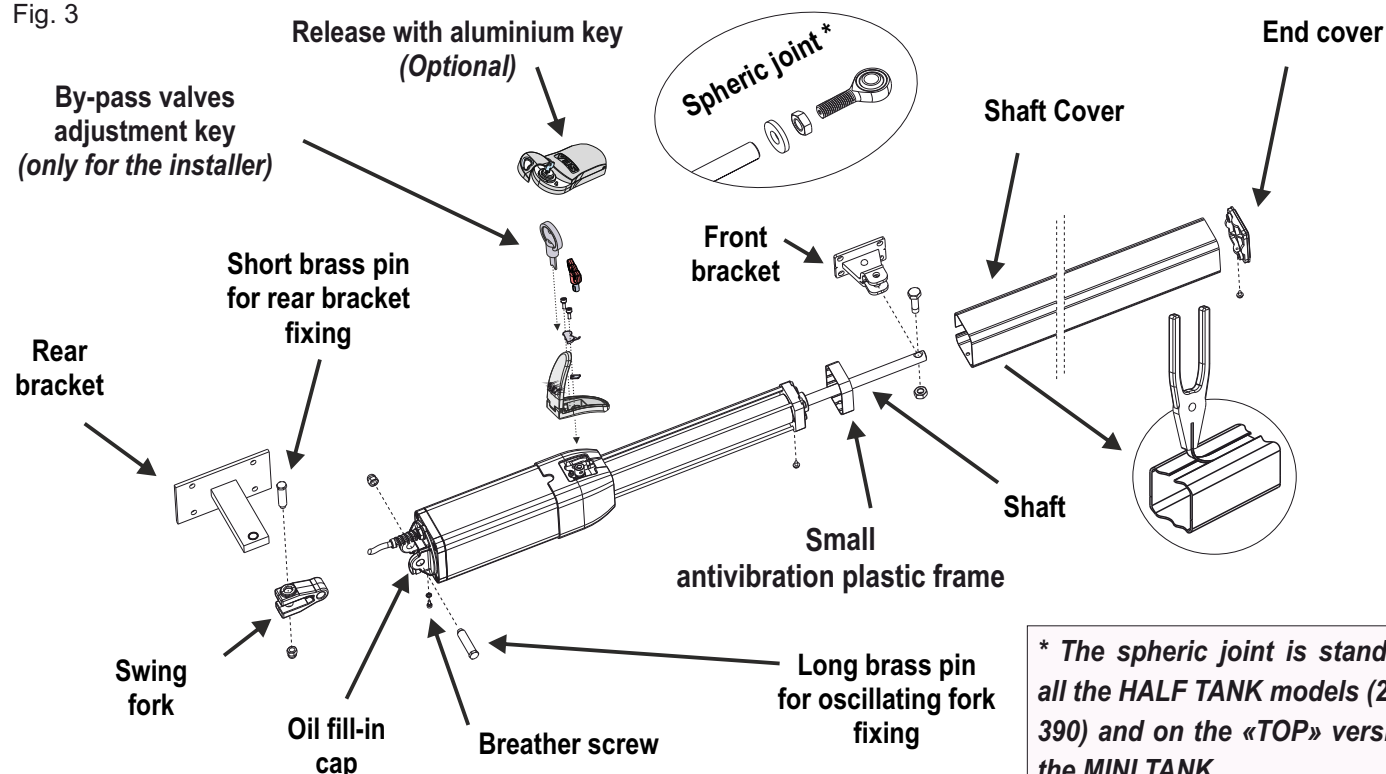
Fig. 1



- 1 Shaft cover
- 2 External release housing
- 3 Front fixing bracket
- 4 Rear fixing bracket
- 5 Hydraulic cylinder
- 6 By-pass valves
- 7 Electric motor
- 8 Hydraulic pump
- 9 Electric cables outlet
- 10 Release key

Fig. 2

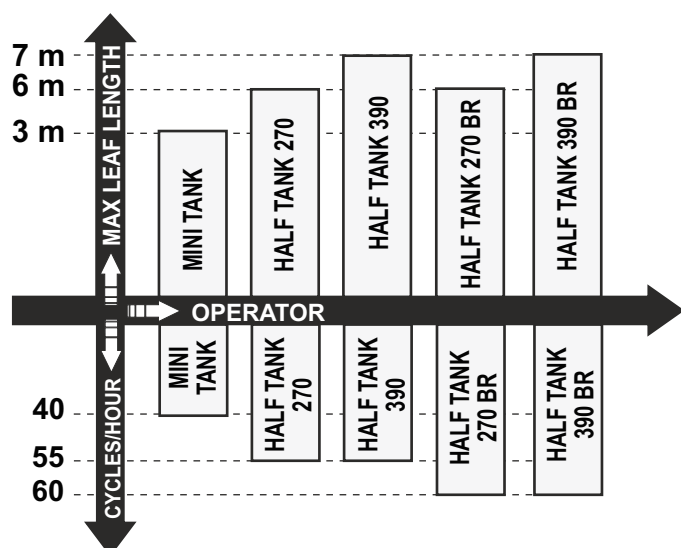
Fig. 3



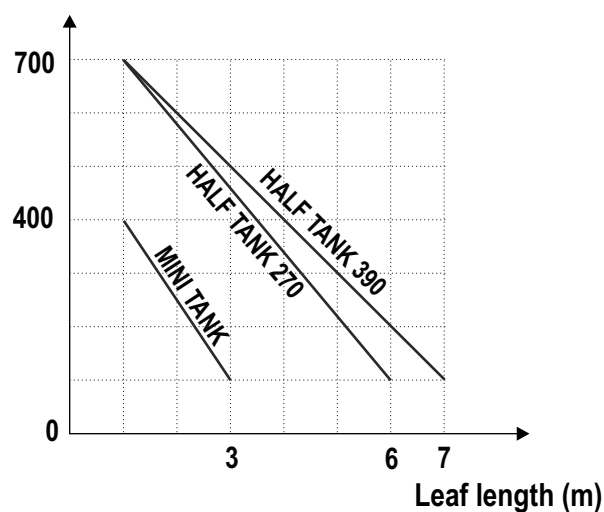
\* The spheric joint is standard on all the HALF TANK models (270 and 390) and on the «TOP» versions of the MINI TANK

3

## APPLICATION CHARTS



Leaf weight (Kg)



4

## DIMENSIONS (mm)

### MINI TANK - MINI TANK PEDESTRIAN\*

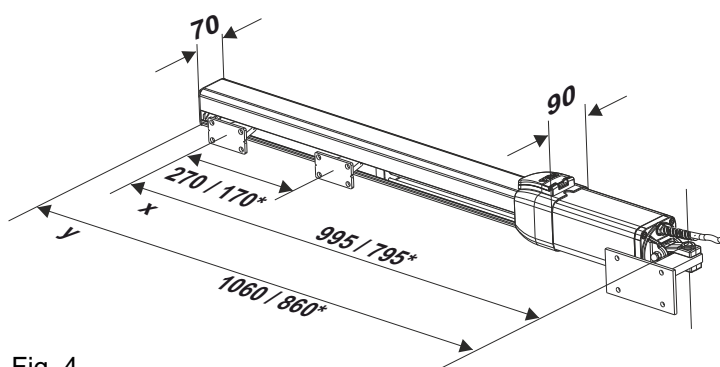


Fig. 4

Version with brake in closing: + 25 mm to X and Y

Version with brake in opening and closing: + 50 mm to X and Y

The Max. opening of MINI TANK for PEDESTRIAN GATES is 95°

### HALF TANK 270 - HALF TANK 390\*

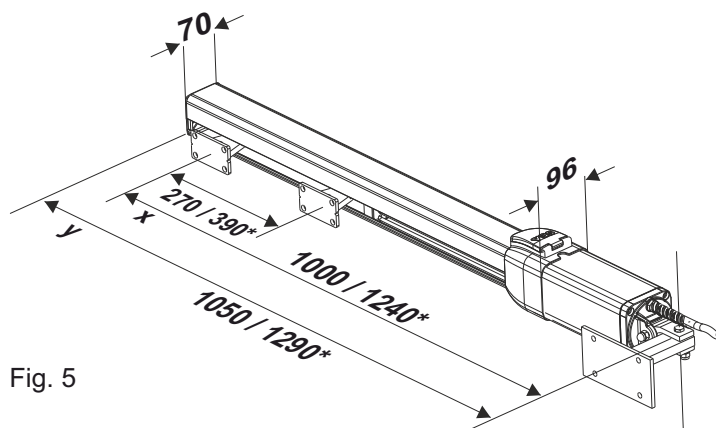


Fig. 5

Version with brake in closing: + 25 mm to X and Y

Version with brake in opening and closing: + 50 mm to X and Y

5

## ELECTRIC WIRINGS

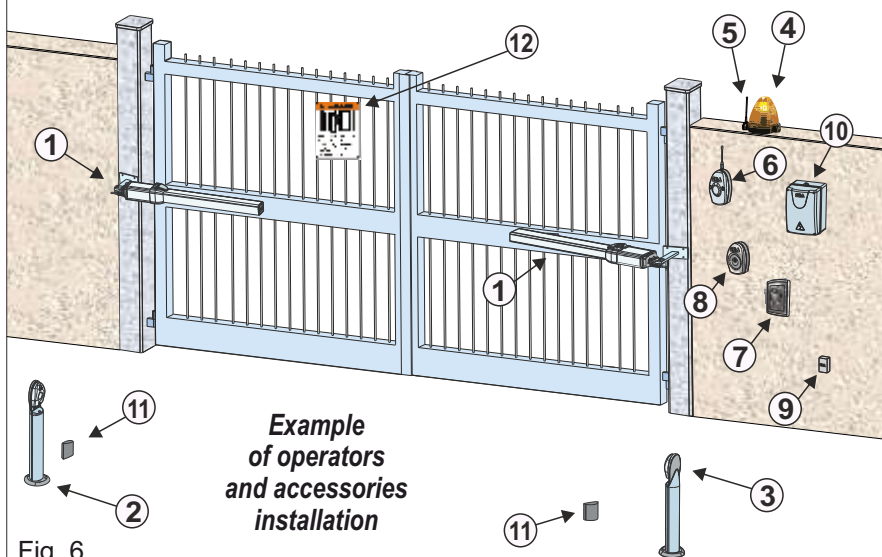


Fig. 6

### RECOMMENDED CABLES NUMBER AND SECTION FOR WIRINGS ON CONTROL UNIT

- |                          |            |
|--------------------------|------------|
| 1) OPERATORS             | → 4 x 1,5  |
| 2) PHOTOCELL TX          | → 2 x 0,5  |
| 3) PHOTOCELL RX          | → 4 x 0,5  |
| 4) FLASHING LAMP         | → 2 x 0,5  |
| 5) ANTENNA               | → 1 x RG58 |
| 6) EXTERNAL RECEIVER     | → 4 x 0,5  |
| 7) KEYPAD                | → 4 x 0,5  |
| 8) KEY-BUTTON            | → 4 x 0,5  |
| 9) DIFFERENTIAL 16A/30MA | → 3 x 1,5* |
| 10) CONTROL UNIT BOX     |            |
| 11) MECHANICAL STOPS     |            |
| 12) WARNING SIGNS        |            |

\* Increase the cable section in case of high distance from the control unit

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		
Shaft 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 ⚡ below -20° C we recommend the use of the heater		
Thermal protection	130° C		
Max Thrust	300 daN	350 daN	350 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

➡ To operate in NON-AUTOMATIC LOGIC, the use of operators without lock is strongly suggested

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
Shaft speed	1cm/s	1,5 cm/s	1,2 cm/s	1,7 cm/s	REGOLABILE	
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 ⚡ below -20° C we recommend the use of the heater					
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°					

➡ The frequency of use is valid only for the first working hour and at 20°C temperature

➡ To operate in NON-AUTOMATIC LOGIC, the use of operators without lock is strongly suggested

# 6 INWARD INSTALLATION

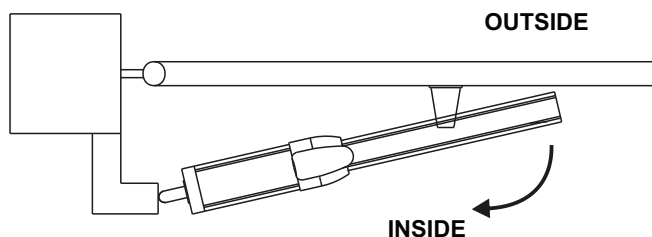


Fig. 7

## MINI TANK

TOTAL STROKE 270 mm - MAX. RECOMMENDED STROKE 250 mm

a (mm)	b (mm)	c* (mm)	d <sub>max</sub> (mm)	e (mm)	f** (mm)	MAX. OPENING ANGLE	MAX. STROKE (mm)	MAX. STROKE FOR 90° (mm)
100	115	50	50	880	96	110°	250	215
100	150	50	50	845	96	90°	250	250
105	110	50	55	885	96	110°	246	215
105	145	50	55	850	96	90°	250	250
120	105	50	70	890	96	105°	248	225
120	130	50	70	865	96	90°	250	250
125	125	50	75	870	96	90°	250	250
140	95	50	90	899	96	100°	250	236
140	110	50	90	884	96	90°	250	250
145	95	50	95	899	96	100°	255	241
145	105	50	95	889	96	90°	250	250
150	100	50	100	894	96	90°	250	250
155	85	50	105	908	96	95°	248	242
160	90	50	110	903	96	90°	252	252
170	75	50	120	917	96	92°	250	248
180	65	50	130	926	96	92°	250	248

## HALF TANK 270

TOTAL STROKE 270 mm - MAX. RECOMMENDED STROKE 250 mm

a (mm)	b (mm)	c* (mm)	d <sub>max</sub> (mm)	e (mm)	f** (mm)	MAX. OPENING ANGLE	MAX. STROKE (mm)	MAX. STROKE FOR 90° (mm)
100	115	50	50	885	96	110°	250	215
100	150	50	50	850	96	90°	250	250
105	110	50	55	890	96	110°	245	215
105	145	50	55	855	96	90°	250	250
120	105	50	70	895	96	107°	250	225
120	130	50	70	870	96	90°	250	250
125	125	50	75	875	96	90°	250	250
140	95	50	90	904	96	100°	250	236
140	110	50	90	889	96	90°	250	250
145	95	50	95	904	96	100°	255	241
145	105	50	95	895	96	90°	250	250
150	100	50	100	899	96	90°	250	250
155	85	50	105	913	96	96°	250	242
160	90	50	110	908	96	90°	252	252
170	75	50	120	922	96	92°	250	248
180	65	50	130	932	96	93°	250	247

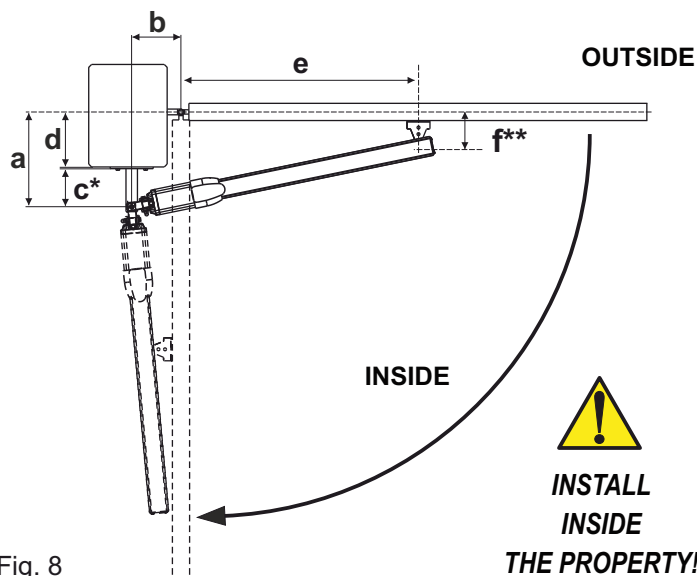


Fig. 8

## HALF TANK 390

TOTAL STROKE 390 mm - MAX. RECOMMENDED STROKE 370 mm

a (mm)	b (mm)	c* (mm)	d <sub>max</sub> (mm)	e (mm)	f** (mm)	MAX. OPENING ANGLE	MAX. STROKE (mm)	MAX. STROKE FOR 90° (mm)
125	170	50	75	1070	123	125°	368	294
130	170	50	80	1070	123	125°	372	300
140	235	50	90	1005	123	90°	370	370
145	165	50	95	1075	123	120°	372	310
145	230	50	95	1010	123	90°	370	370
160	210	50	110	1029	123	90°	370	370
175	195	55	120	1044	123	90°	370	370
185	145	55	130	1094	123	110°	370	330
185	190	55	130	1049	123	90°	374	374
195	140	55	140	1098	123	110°	371	337
195	175	55	140	1063	123	90°	370	370
240	110	55	185	1125	123	100°	370	355
240	125	55	185	1110	123	90°	370	370
250	105	55	195	1129	123	95°	370	360
250	115	55	195	1118	123	90°	372	372
260	95	55	205	1137	123	95°	369	363
260	100	55	205	1132	123	90°	370	370
270	90	55	215	1141	123	90°	370	370
280	80	50	230	1150	123	90°	368	368
295	65	50	245	1163	123	90°	370	370

\* For the «c» dimension the reference is the minimum value that could be considered

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

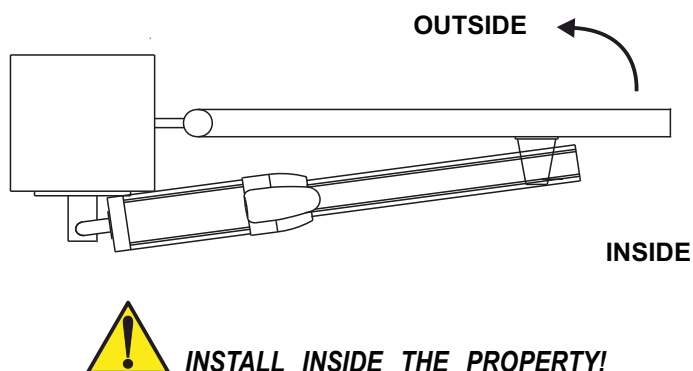
To get 110° with d > 55 mm it is necessary to make a recess on the gate wall

To get 125° with d > 55 mm it is necessary to make a recess on the gate wall



## 7 OUTWARD INSTALLATION

Fig. 9



\* For the «c» dimension the reference is the minimum value that could be considered

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

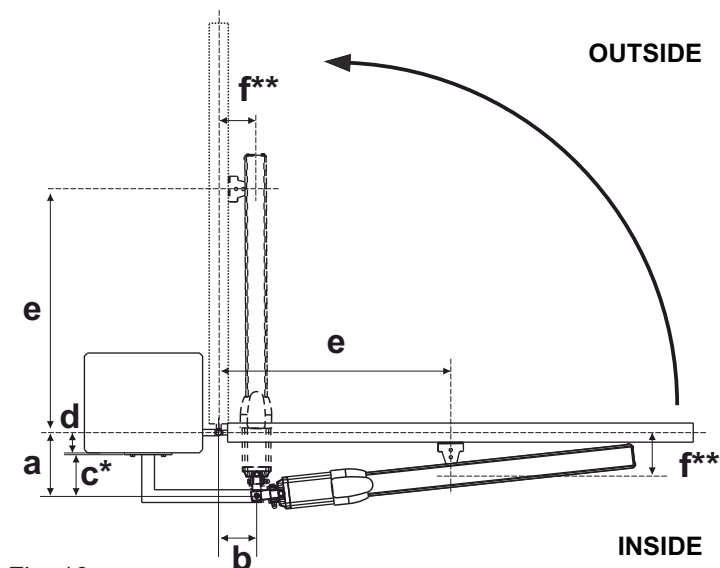


Fig. 10

### MINI TANK - HALF TANK 270

TOTAL STROKE 270 mm - MAX. RECOMMENDED STROKE 250 mm

a (mm)	b (mm)	c* (mm)	d <sub>max</sub> (mm)	e (mm)	f** (mm)	MAX. OPENING ANGLE	MAX. STROKE (mm)	MAX. STROKE FOR 90° (mm)
150	90	50	100	838	96	95°	245	238
160	90	50	110	838	96	90°	250	250
165	80	50	115	827	96	95°	249	242
175	80	50	125	826	96	90°	251	251
180	70	50	130	815	96	90°	245	245
180	65	50	130	810	96	90°	241	241

### HALF TANK 390

TOTAL STROKE 390 mm - MAX. RECOMMENDED STROKE 370 mm

a (mm)	b (mm)	c* (mm)	d <sub>max</sub> (mm)	e (mm)	f** (mm)	MAX. OPENING ANGLE	MAX. STROKE (mm)	MAX. STROKE FOR 90° (mm)
250	100	50	200	976	123	100°	356	341
255	95	50	205	970	123	95°	363	355
265	95	50	215	969	123	93°	354	349
270	90	50	220	963	123	94°	355	348
275	90	50	225	962	123	90°	352	352
275	85	50	225	957	123	90°	348	348

## 8 INSTALLATION ON MASONRY PILLARS, BY MAKING A RECESS

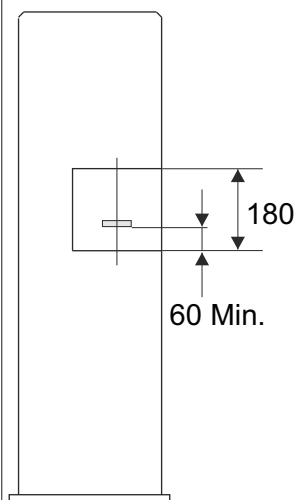


Fig. 11

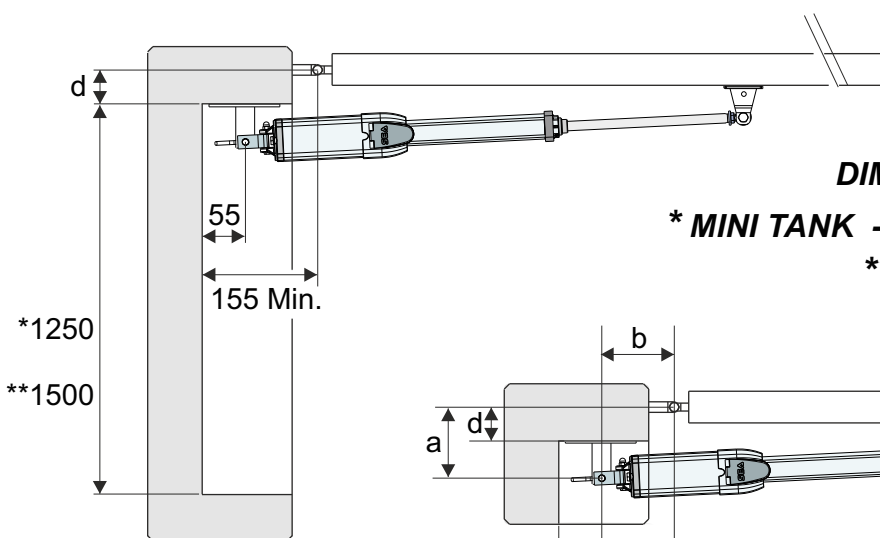


Fig. 12

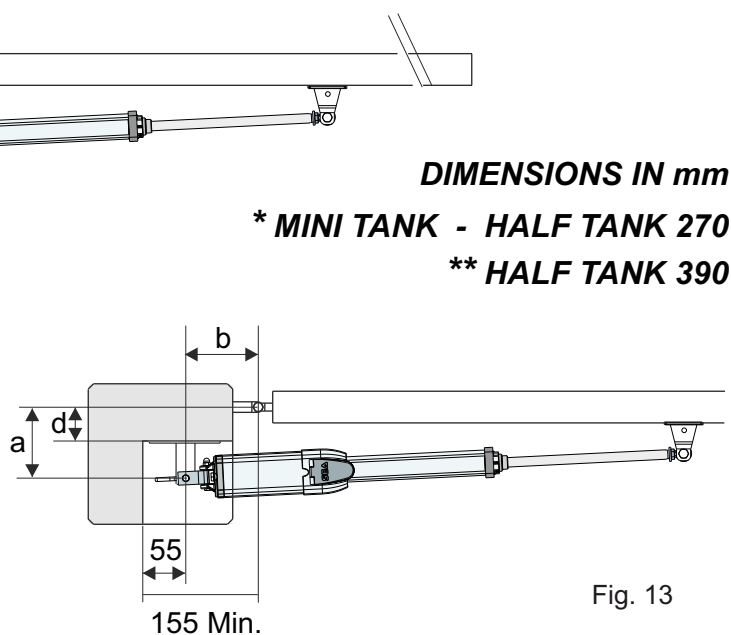


Fig. 13

**DIMENSIONS IN mm**

\* **MINI TANK - HALF TANK 270**

\*\* **HALF TANK 390**

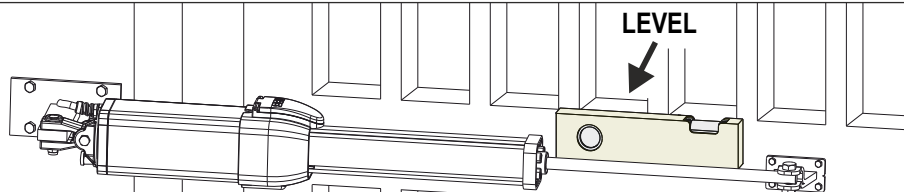
- ➔ In case you need to make a recess, observe the shown dimensions
- ➔ Make sure that the connection cable do not tangle in the recess during installation

9

## INSTALLATION - PRELIMINARY NOTES

- Open the package carefully, making sure to not loose the parts listed in Fig. 3
- 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. 14
- INSTALL THE MECHANICAL STOPS (if in use) BEFORE placing the operator on the front bracket!

Fig. 14



10

## REAR BRACKET INSTALLATION

- According to the opening (*inward or outward*) and to the choice of the leaf max. rotation, the bracket must first be cut by respecting the «a» dimension shown on chapters 6 or 7 and then welded - Fig. 16
- **THE REAR BRACKET MUST BE POSITIONED SO THAT THE OPERATOR IS PERFECTLY HORIZONTAL - Fig. 14**

STANDARD BRACKET

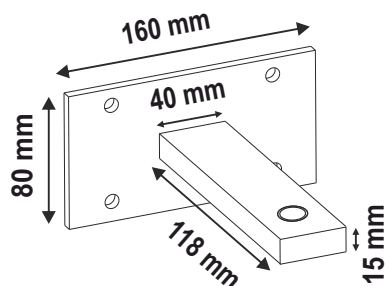


Fig. 15

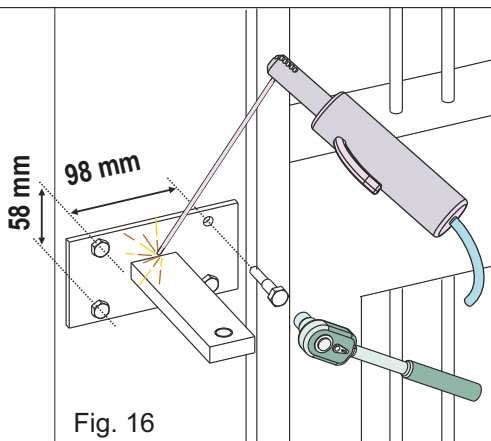


Fig. 16

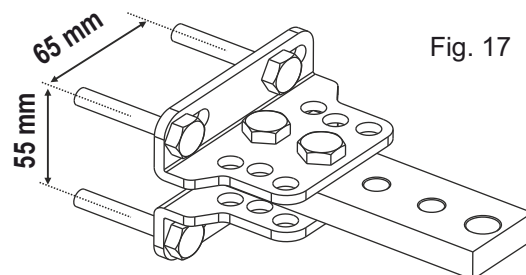
ADJUSTABLE REAR BRACKET  
WITH SCREWS  
- ACCESSORY ON DEMAND -


Fig. 17

11

## INSTALLATION OF THE SWING FORK ON THE REAR BRACKET

- Place the swing fork on the rear bracket (*previously fixed to the gate frame*) - Fig. 18
- Insert the short brass pin (A) and the long pin (B) as shown in Fig. 18, using only manual pressure
- Secure the pins with their nuts - Fig. 18



**KEEP THE OPERATOR IN A HORIZONTAL POSITION DURING THE OPERATION!**

**DO NOT TILT THE OPERATOR TO AVOID THE RISK OF BREAKING THE SWING FORK «C»!**

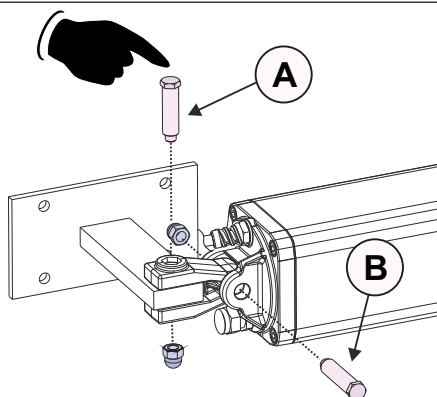


Fig. 18

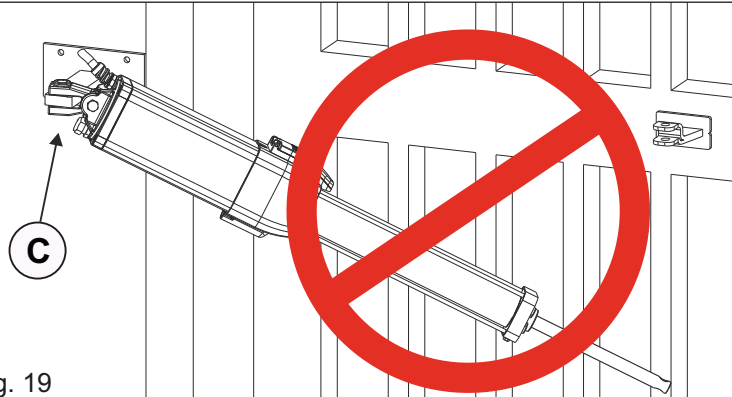


Fig. 19



**DO NOT tilt the operator further than the swing fork «C» allowed angle - Fig. 19**

**DO NOT use the hammer to insert the pins!**

## 12 FRONT BRACKET INSTALLATION

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

- Unlock the operator by following the unlocking procedure shown in chapter 23
- Pull out completely the chrome shaft, **then bring it back about 1 cm**
- Place the front bracket on the gate and place the shaft in the housing - Fig. 20
- With the help of a level - Fig. 20, **make sure that the operator is in a perfectly horizontal position** then mark the front bracket and the holes position - Fig. 21

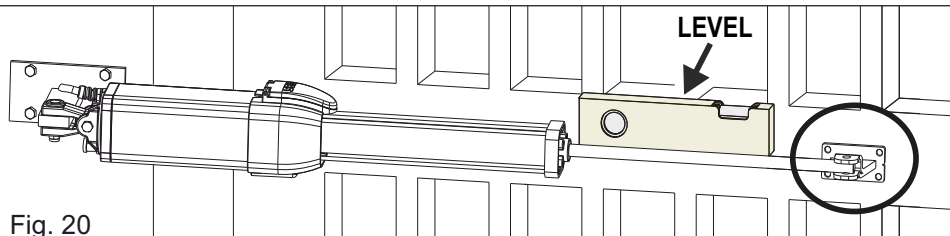
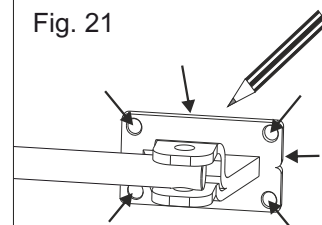


Fig. 20

Fig. 21



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

### SCREWED FRONT BRACKET

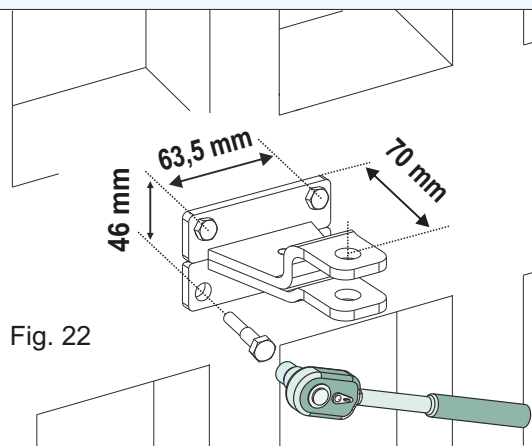


Fig. 22

### WELDED FRONT BRACKET

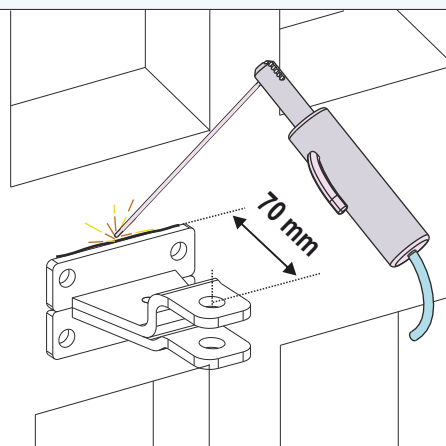


Fig. 23



**DO NOT WELD THE FRONT  
FIXATION IF THE SHAFT  
IS ALREADY INSERTED!**

*The welding scraps (squirts) could  
damage the shaft chrome plating*



**INSTALL THE MECHANICAL STOPS, IF IN USE, BEFORE POSITIONING THE OPERATOR ON THE FRONT BRACKET!**

## 13 INSTALLATION OF THE OPERATOR ON THE FRONT BRACKET

- Place the operator shaft in the housing of the front bracket - Fig. 24 or Fig. 26
- Secure the shaft to the front bracket by tightening the screw - Fig. 25 or Fig. 27

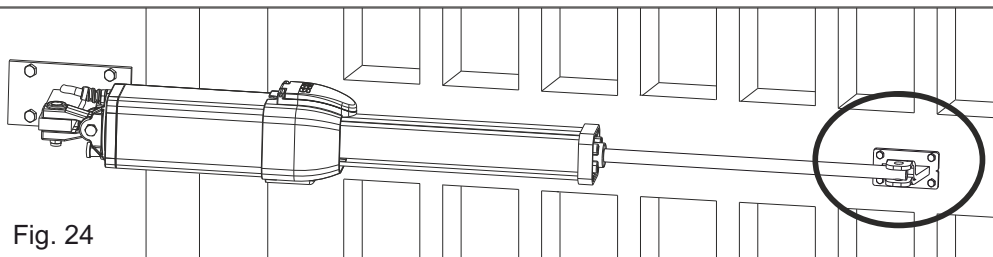


Fig. 24

### STANDARD MODEL

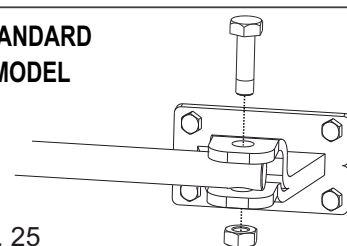


Fig. 25

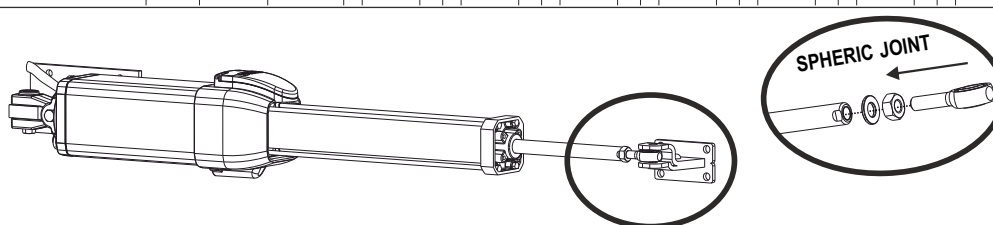


Fig. 26

### SPHERIC JOINT

### SPHERIC JOINT MODEL

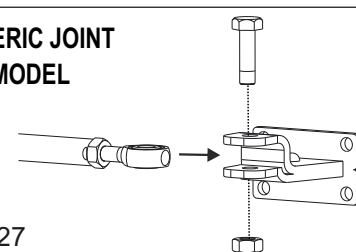


Fig. 27

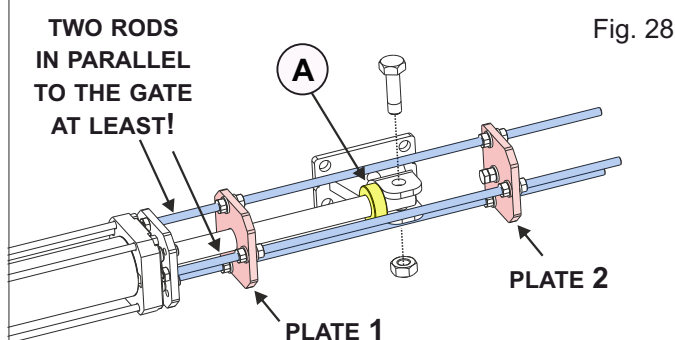


**! INSTALL THE MECHANICAL STOPS, IF IN USE, BEFORE POSITIONING THE OPERATOR ON THE FRONT BRACKET!**

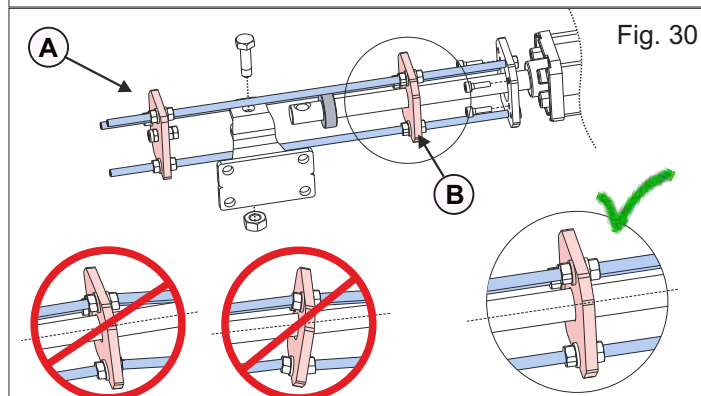
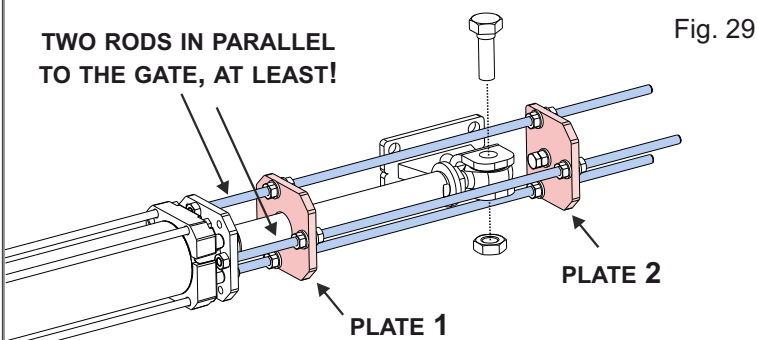
## 14 MECHANICAL STOPS INSTALLATION (Accessory on demand)

- Unlock the operator by following the unlocking procedure shown in chapter 23
- Pull out the chrome shaft up to 3/4 of its stroke
- Place the mechanical stops on the front flange; be sure that two rods at least are parallel to the gate - Fig. 28 or 29
- Fix the mechanical stops with the two supplied **SPECIAL SELF-TAPPING SCREWS**
- ➔ **FOR MINI TANK OPERATOR ONLY:** insert the supplied bush (A) in the shaft - Fig. 28
- Hook the shaft on the front bracket (*see the previous chapter*)
- ➔ **TO ADJUST THE MECHANICAL STOP IN OPENING ACT ON PLATE 1**
- ➔ **TO ADJUST THE MECHANICAL STOP IN CLOSING ACT ON PLATE 2**

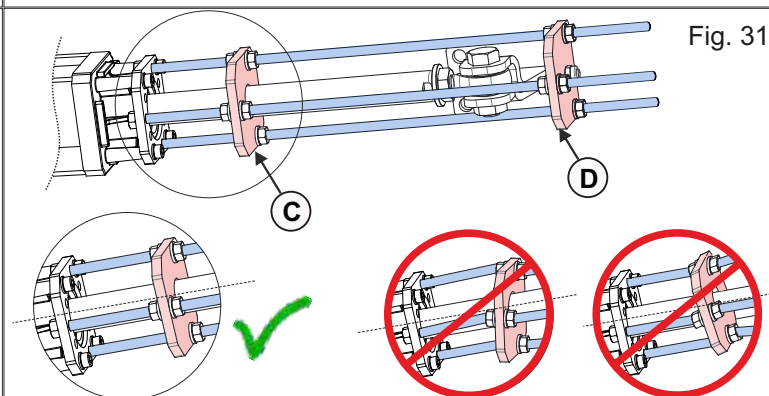
### MINI TANK MECHANICAL STOP KIT



### HALF TANK 270/390 MECHANICAL STOP KIT



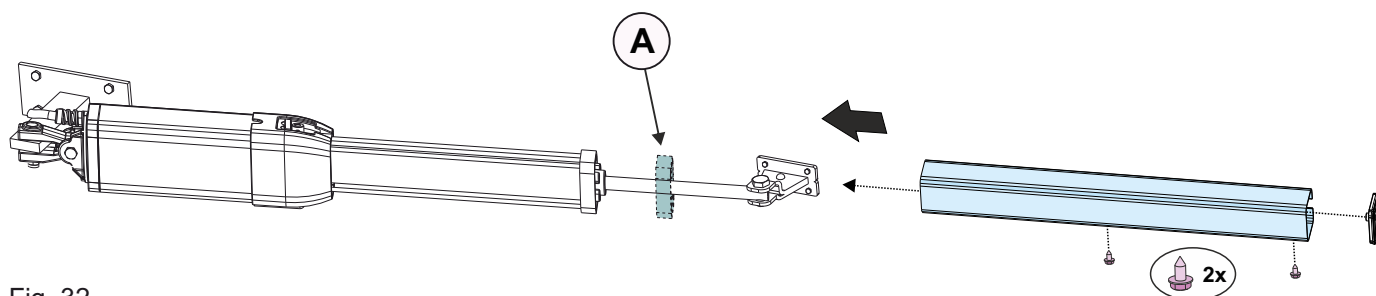
Make sure that the two plates A and B perfectly match during the opening movement and that they are not tilted in respect to the axis



Make sure that the two plates C and D perfectly match during the opening phase and that they are not tilted in respect to the axis

**! THE INSTALLATION OF THE MECHANICAL STOP DOES NOT CAUSE THE REDUCTION OF THE STROKE!**

## 15 INSTALLATION OF THE EXTRUDED COVER FOR CHROME PLATED SHAFT



**! Insert the anti-vibration plastic frame (A) before inserting the extruded shaft cover!**  
**Insert the shaft cover only when all works for the operator installation on the gate have been completed!**

## TORQUE ADJUSTMENT THROUGH THE BY-PASS VALVES

- The by-pass valves are inside the manual release housing; **During the first installation**, the manual release is not yet assembled therefore, after having carried out the adjustments of the by-pass valves, you can proceed with the assembly of the release (see the next page).
- For future adjustments (for example in case of periodic maintenance), being the release already installed, it will be necessary to proceed as indicated below, according to the model in use.

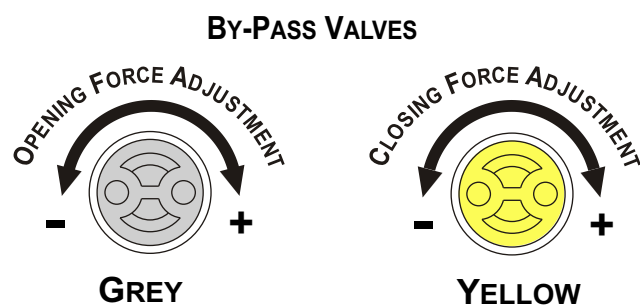
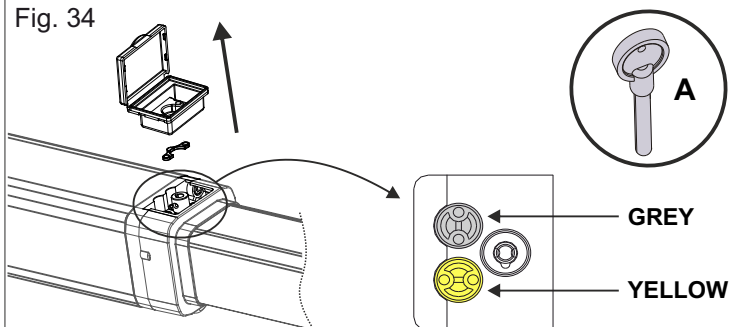


Fig. 33

### MINI TANK

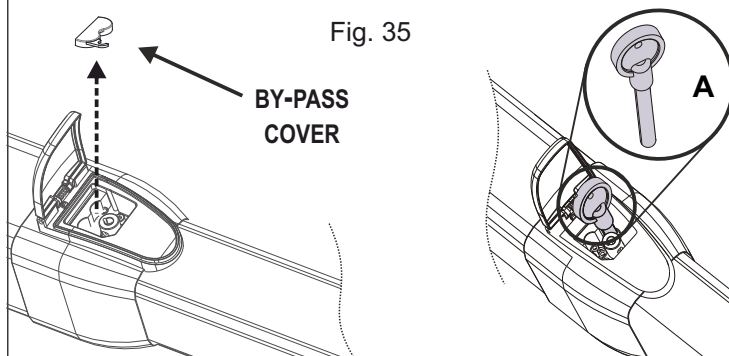
Fig. 34



- Disassemble the manual release completely
- Adjust the by-pass valves using the special key (A) supplied to installers

### HALF TANK 270/390

Fig. 35



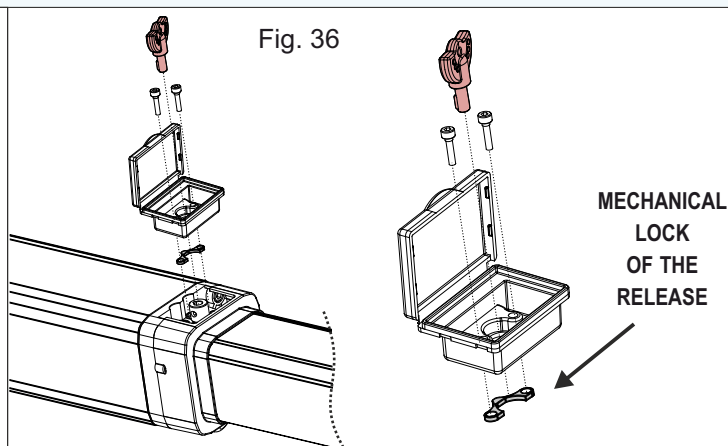
- Remove the by-pass cover only by unscrewing it
- Adjust the by-pass valves using the special key (A) supplied to installers

➡ Adjust the gate opening and closing force in order to respect the force diagram as per EN12453; however, the thrust force must never exceed 15 KgF

➡ The valves must be adjusted in parallel; calibration differences between opening and closing valves can cause malfunctions. **(i.e. if you adjust the grey valve by half a turn, then the yellow valve must be adjusted in the same way)**

## 17 PLASTIC RELEASE INSTALLATION for MINI TANK and HALF TANK - «PG» VERSION

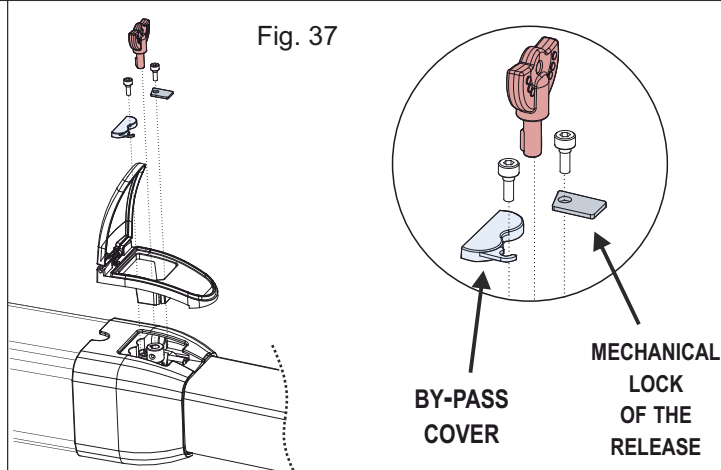
- Assemble the plastic release as shown in Fig. 36. Assemble the plastic release only at the end of the installation and after adjusting the by-pass valves.
- For future adjustments of the by-pass valves (*for example in case of periodic maintenance*), **unscrew and lift the whole release group, including the mechanical lock, to access the valves**



➔ The mechanical lock of the release must necessarily be mounted as shown in Fig. 36, respecting the parts orientation and the assembly procedure

## 18 PLASTIC RELEASE INSTALLATION for HALF TANK 270

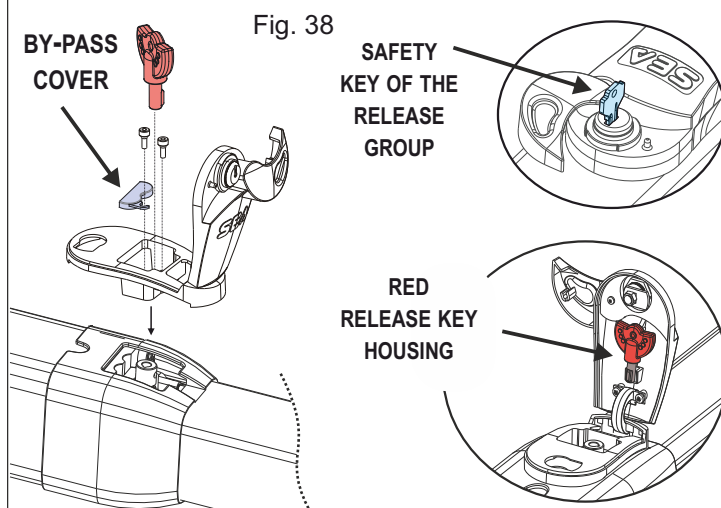
- Assemble the plastic release as shown in Fig. 37. Assemble the plastic release only at the end of the installation and after adjusting the by-pass valves.
- For future adjustments of the by-pass valves (*for example in case of periodic maintenance*), **just remove the by-pass cover only**



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

## 19 ALUMINIUM RELEASE (WITH KEY) INSTALLATION for HALF TANK 390 \*

- For HALF TANK 390, the aluminum release with special safety key is available - Fig. 38  
\* Also available on demand for HALF TANK 270!
- Assemble the aluminium release group as shown in Fig. 38. Assemble the release group only at the end of the installation and after adjusting the by-pass valves.
- For future adjustments of the by-pass valves (*for example in case of periodic maintenance*), **just remove the by-pass cover only**



➔ The red release key is kept in a special housing inside the aluminium release lid - Fig. 38

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## EXTERNAL RELEASE INSTALLATION - ACCESSORY ON DEMAND

Fig. 39

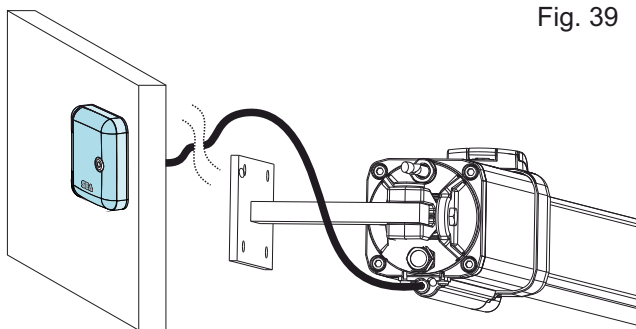
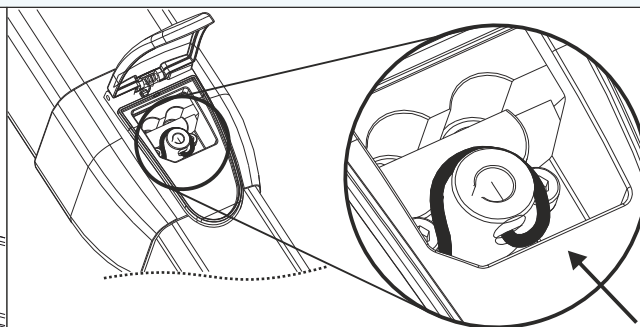


Fig. 40



CONNECTION OF THE RELEASE CABLE INSIDE THE OPERATOR

- Install the external release as shown in the images above - Fig. 39 and Fig. 40; For further information, consult the assembly instructions of the EXTERNAL RELEASE KIT

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## BREATHER SCREW REMOVAL

Fig. 41

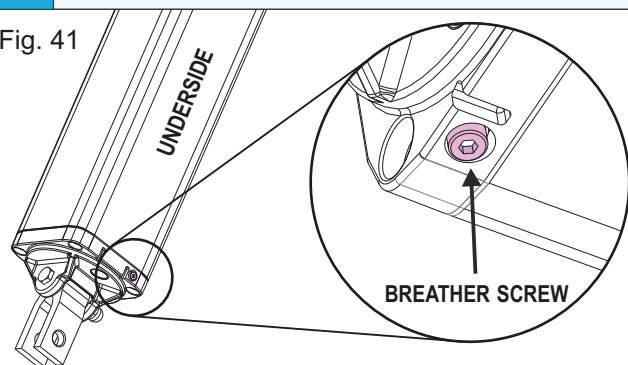
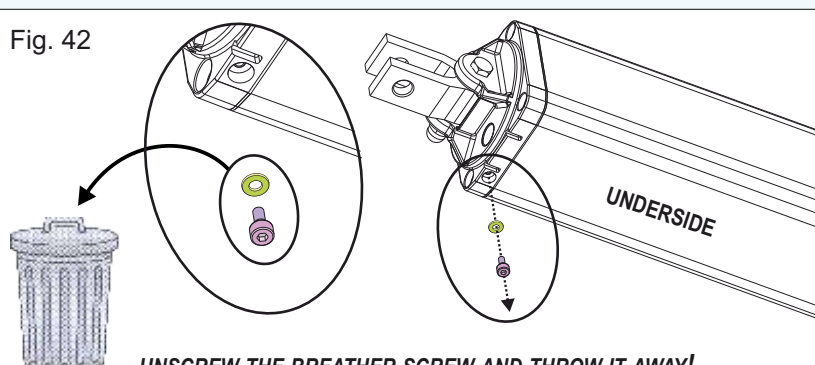


Fig. 42



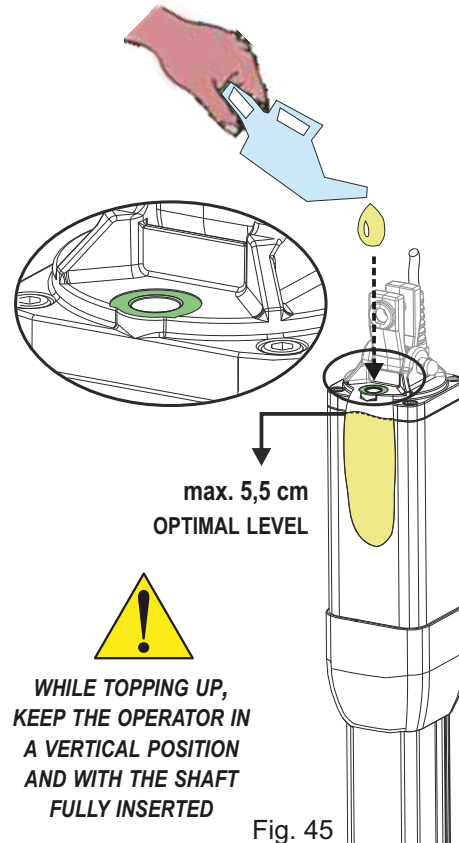
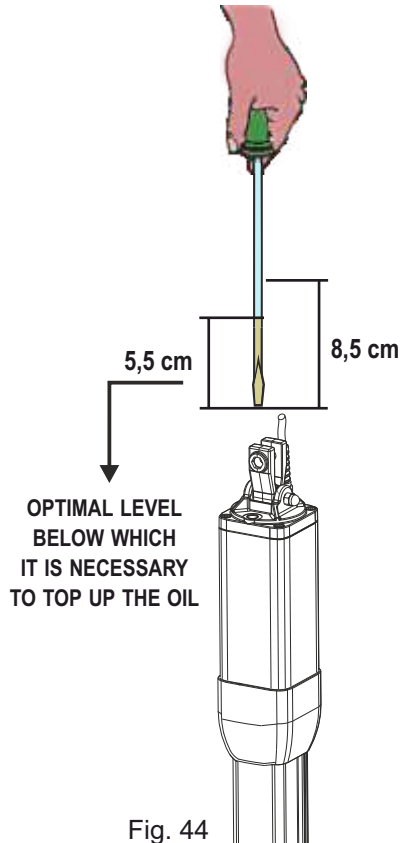
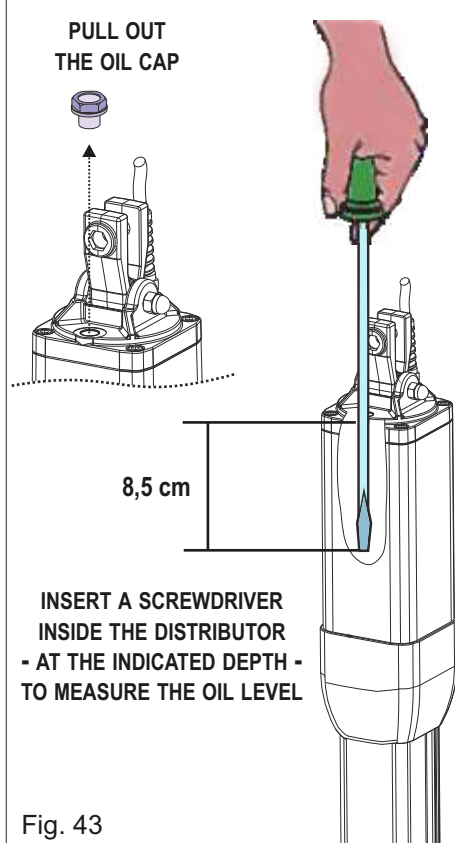
UNSCREW THE BREATHER SCREW AND THROW IT AWAY!



**IT IS MANDATORY to remove the breather screw at the end of the installation!**

22

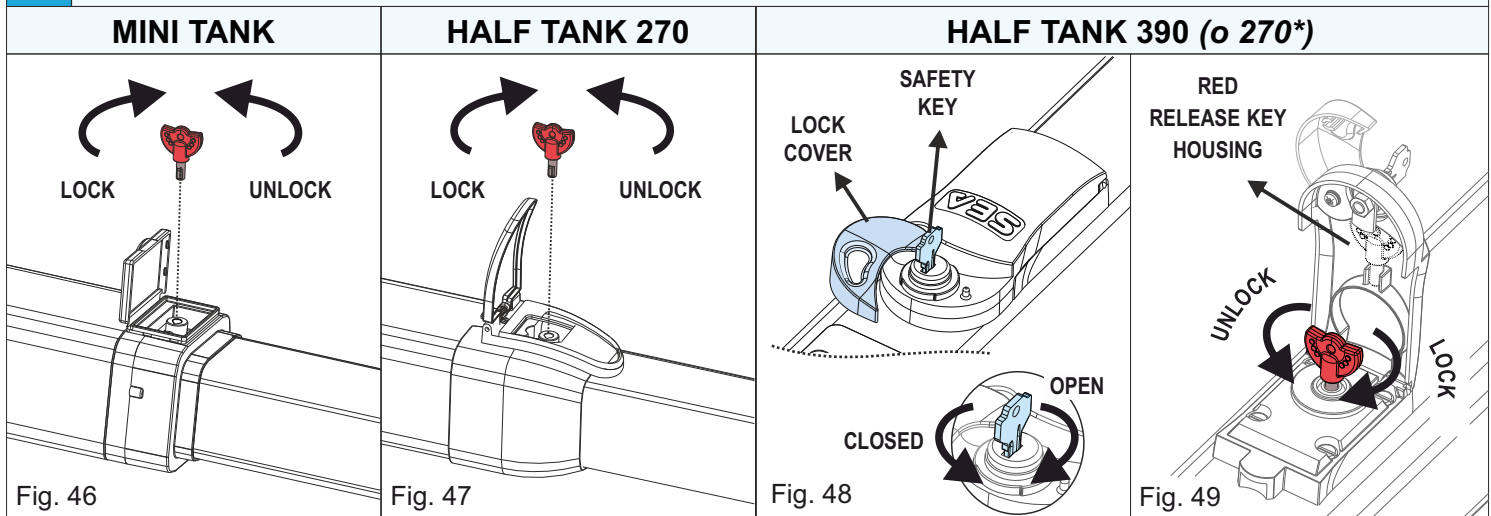
## OIL LEVEL CHECKING AND REFILL



WHILE TOPPING UP, KEEP THE OPERATOR IN A VERTICAL POSITION AND WITH THE SHAFT FULLY INSERTED

## PART FOR BOTH INSTALLER AND END-USER

### 23 RELEASE SYSTEM



\* The release group with special safety key is also available for HALF TANK 270 on demand!

➔ **ONLY FOR HALF TANK 390:** open the lock cover, insert the special safety key and turn it in the direction indicated, to tighten or release the lid - Fig. 48

● **FOR ALL MODELS:** open the release lid, insert the red key and turn it 90° in the direction indicated in the figures - according to the model in use - depending on whether you want to lock or unlock the operator

**CAUTION! SWITCH-OFF THE POWER SUPPLY BEFORE TO LOCK OR UNLOCK THE OPERATOR! IN CASE OF MALFUNCTION, ALWAYS CONTACT AN AUTHORIZED INSTALLER!**

### 24 PERIODIC MAINTENANCE

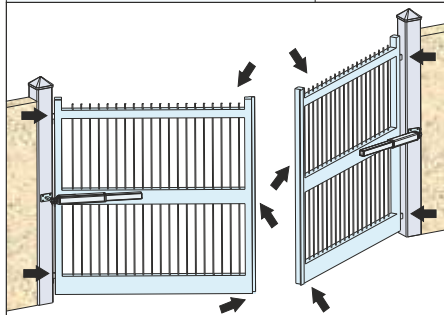
Check the robustness and the stability of the gate, particularly the leaning and the rotation points of the gate (hinges)	ANNUAL
Check the oil level	ANNUAL
Replace the hydraulic oil with the oil recommended by the producer	4 YEARS
Check the correct operation of the release system	ANNUAL
Check the correct operation of the by-pass valves	ANNUAL
Check and grease the fixation pivots	ANNUAL
Check the integrity of the electric cables	ANNUAL
Check the correct operation and the conditions of the opening and closing mechanical stops (where this accessory is installed)	ANNUAL
Check the correct operation and the conditions of the parts which are subjected to strain (rear and front brackets, swing fork)	ANNUAL
Check the correct operation and the conditions of all accessories, especially the safety devices	ANNUAL
Lubricate the shaft with SEA grease ( <b>GREASE GL 00 code 65000009</b> )	ANNUAL
AFTER THE MAINTENANCE, IT IS NECESSARY TO REPEAT THE AUTOMATION TESTING AND COMMISSIONING	

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



## PART FOR BOTH INSTALLER AND END-USER

### GENERAL NOTICE



**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 cannot 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 safety and 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 works 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 grounded. 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:** T = -30°C/+60°C ; Humidity = min. 5% / max. 90% (without condensation); 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 specialized and authorized 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.

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. SEAS.p.A. declines all liability caused by improper use or different use in respect to the intended one.
4. The mechanical parts must comply with Directives: 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 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 grounding system is perfectly constructed, and connect to it the metal parts of the gate
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 declines all liability concerning the automated system safety 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 the system 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. The 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 mm<sup>2</sup> 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 safety low voltage (SELV) or use an appropriate sheath that provides extra insulation having a thickness of 1 mm

# DECLARATION OF CONFORMITY

## DICHIARAZIONE DI CONFORMITÀ

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:

*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:*

DESCRIPTION - DESCRIZIONE	MODEL - MODELLO	TRADEMARK - MARCA
MINI TANK 270 AC (AND ALL ITS BY-PRODUCTS - E TUTTI I SUOI DERIVATI)	10103505	SEA
HALF TANK 270 AC (AND ALL ITS BY-PRODUCTS - E TUTTI I SUOI DERIVATI)	10401026	SEA
HALF TANK 390 AC (AND ALL ITS BY-PRODUCTS - E TUTTI I SUOI DERIVATI)	10501036	SEA
HALF TANK 270 AC BR 36V (AND ALL ITS BY-PRODUCTS - E TUTTI I SUOI DERIVATI)	10401115	SEA
HALF TANK 390 AC BR 36V (AND ALL ITS BY-PRODUCTS - E TUTTI I SUOI DERIVATI)	10501060	SEA

- 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;

- comply with the essential safety requirements related to the products within the field of applicability of the Community Directives 2014/35/UE and 2014/30/UE

*- 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;*

*- 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*

THE MANUFACTURER OR THE AUTHORIZED REPRESENTATIVE  
IL COSTRUTTORE o IL RAPPRESENTANTE AUTORIZZATO

PLACE AND DATE OF ISSUE  
LUOGO E DATA DI EMISSIONE

TERAMO, 02/05/2024

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L'Amministratore  
The Administrator  
Ennio Di Saverio





**SEA<sup>®</sup>**



**Automatic Gate Openers**

International registered trademark n. 804888

**SEA S.p.A.**

**Zona Industriale Sant'Atto - 64100 - Teramo - ITALY**

**Telephone: + 39 0 861 588341**

**[www.seateam.com](http://www.seateam.com)**