





HYDRAULIC OPERATOR FOR SWING GATES



SEA S.p.A. Zona Industriale Sant'Atto - 64100 - Teramo - ITALY Telephone: + 39 0 861 588341 www.seateam.com



FEATURES

SUPER FULL TANK is a high quality hydraulic operator for condominium or industrial use and for gates with leaf length up to max. 9 m (SFT 500) or 12 m (SFT 1000). 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 the electronic slowdown is recommended in case of operators with hydraulic slowdown

















TECHNICAL FEATURES	SUPER FULL TANK 500 G4T	SUPER FULL TANK 500 G6T	SUPER FULL TANK 500 SP *		
POWER SUPPLY	THREE PHASE 23	-			
Power	50	-			
ABSORBED CURRENT	2,	-			
Stroke		500 mm			
SHAFT SPEED	2,4 cm/s	3,4 cm/s	2,4 cm/s		
CYCLES PER HOUR (T = 20°C)					
MAX WORKING PRESSURE	120 bar	90 bar	80 bar		
OPERATING TEMPERATURES	-20°C ∦ +60°C ∦				
THERMAL PROTECTION	130°C				
MAX THRUST	3300 daN 2500 daN		2200 daN		
OPERATOR WEIGHT	18	13 Kg			
PROTECTION CLASS	IP55				
MAX LEAF LENGTH	9	8 m			
LEAF OPENING DEGREES	90° / 125°				

* In combination with the hydraulic unit code 12001055

TECHNICAL FEATURES	SUPER FULL TANK 500 G6T 380V	SUPER FULL TANK 500 G6T 120V	SUPER FULL TANK 1000 G4T 230V		
POWER SUPPLY	400V (±5%) 50/60 Hz THREE PHASE	120V (±5%) 50/60 Hz THREE PHASE	230V (±5%) 50/60 Hz THREE PHASE		
Power	500 W	540W	500 W		
ABSORBED CURRENT	1,5 A	5 A	2,6 A		
Stroke	500	1000 mm			
SHAFT SPEED	3,4 cm/s	3,6 cm/s	2,4 cm/s		
CYCLES PER HOUR (T = 20°C)	70	40	70		
MAX WORKING PRESSURE	100 bar	70 bar	120 bar		
OPERATING TEMPERATURES	-20°C / +60°C /				
THERMAL PROTECTION	130°C				
MAX THRUST	2800 daN	2000 daN	3300 daN		
CAPACITOR	-	60 µF	-		
OPERATOR WEIGHT	18	31 Kg			
PROTECTION CLASS	lp55				
MAX LEAF LENGTH	9	12 m			
LEAF OPENING DEGREES	90° / 125°				

The frequency of use is valid only for the first operating hour and 20°C room temperature
 If the operating logic is «non-automatic», use operators without lock



INWARD INSTALLATION



 $\ensuremath{^{\star}}$ The «f» dimension has been calculated for a 40 mm thick gate

** The «c» dimension refers to the position of the rear bracket intermediate hole. The other two holes are placed respectively at the «c₁» and «c₂» quotas: 83 mm and 143 mm

*** The «c» dimension refers to the position of a hole of the rear bracket. The other three holes are placed respectively at the «c₁», «c₂» and «c₃» quotas: 73 mm, 133 mm e 163 mm



SUPER FULL TANK 500 TOTAL STROKE 500 mm - MAX. RECOMMENDED STROKE 480 mm								
a (<i>mm</i>)	b (mm)	C ** (mm)	d max (mm)	e (mm)	f * (mm)	MAX. OPENING ANGLE	MAX. STROKE (mm)	MAX. STROKE FOR 90° (mm)
220	205	113	107	1319	161	110°	480	425
260	215	113	147	1307	161	90°	480	480
225	200	113	112	1324	161	110°	480	425
265	210	113	152	1312	161	90°	480	480
240	195	113	127	1328	161	105°	480	435
280	195	113	167	1325	161	90°	480	480
285	190	113	172	1330	161	90°	480	480
260	185	113	147	1337	161	102°	480	450
300	170	113	187	1348	161	90°	480	480
265	180	113	152	1341	161	102°	480	450
305	165	113	192	1353	161	90°	480	480
310	160	113	197	1358	161	90°	480	480
280	170	113	167	1350	161	100°	480	455
320	150	113	207	1367	161	90°	480	480
330	140	113	217	1375	161	90°	480	480
340	130	113	227	1384	161	90°	480	480

				SU	JPER FULL	TANK 1000		
	TOTAL STROKE 1000 mm - MAX. RECOMMENDED STROKE 980 mm							
a (<i>mm</i>)	b (<i>mm</i>)	с *** (<i>mm</i>)	d _{max} (mm)	е (<i>mm</i>)	f * (mm)	MAX. OPENING ANGLE	MAX. STROKE (mm)	MAX. STROKE FOR 90° (mm)
553	160	103	450	2364	161	95°	756	745
553	190	103	450	2334	161	95°	788	773
553	210	103	450	2314	161	95°	810	793
403	240	103	300	2303	161	100°	690	653
403	270	103	300	2273	161	110°	752	682
403	300	103	300	2243	161	115°	803	710
353	300	103	250	2247	161	115°	754	655
353	330	103	250	2217	161	120°	807	683
353	360	103	250	2187	161	120°	853	710
303	360	103	200	2191	161	125°	818	657







Make sure that the connection cable do not tangle in the recess during installation



• Insert the item (3) and screw it on the items (1) and (2)



INSTALLATION - PRELIMINARY NOTES

• Open the package carefully, making sure to not loose the parts listed in Fig. 1

• 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. 9



REAR BRACKET INSTALLATION

• Cut the bracket according to the « **a** » dimension shown on **page 16**

• Place the bracket on the gate so that the operator is perfectly horizontal, then screw and weld to the gate as shown in Fig. 10



INSTALLATION OF THE SWING FORK ON THE REAR BRACKET

- Place the swing fork on the rear bracket as shown in Fig. 12;
- Insert the short brass pin between the fork and the bracket using only manual pressure (Fig. 12)
- Secure the pin with the nut (Fig. 12)

KEEP THE OPERATOR IN A HORIZONTAL POSITION DURING THE OPERATION. DO NOT TILT THE OPERATOR TO AVOID THE RISK OF BREAKING THE SWING FORK!



<u>DO NOT use the hammer</u> to insert the short brass pin







INSTALLATION OF THE OPERATOR ON THE FRONT BRACKET Place the operator shaft in the housing of the front bracket (Fig. 18) Secure the shaft to the front bracket by tightening the screw (Fig. 19) Image: the shaft of the front bracket by tightening the screw (Fig. 19) Image: the shaft of the front bracket by tightening the screw (Fig. 19) Image: the shaft of the front bracket by tightening the screw (Fig. 19) Image: the shaft of the front bracket by tightening the screw (Fig. 19) Image: the shaft of the front bracket by tightening the screw (Fig. 19) Image: the shaft of the front bracket by tightening the screw (Fig. 19) Image: the shaft of the front bracket by tightening the screw (Fig. 19) Image: the shaft of the front bracket by tightening the screw (Fig. 19) Image: the shaft of the front bracket by tightening the screw (Fig. 19) Image: the shaft of the front bracket by tightening the screw (Fig. 19) Image: the shaft of the front bracket by tightening the screw (Fig. 19) Image: the shaft of the front bracket by tightening the screw (Fig. 19) Image: the shaft of the front bracket by tightening the screw (Fig. 19) Image: the shaft of the front bracket by tightening the screw (Fig. 19) Image: the shaft of the front bracket by tightening the screw (Fig. 19) Image: the shaft of the front bracket by tightening the screw (Fig. 19) Image: the shaft of the screw (Fig. 19) Image: the screw (Fig. 19) Imag











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)*









Be sure that the operator is in <u>horizontal position</u> and that <u>the shaft is fully inserted</u> before the oil check or the refill





PART FOR BOTH INSTALLER AND END-USER



TO UNLOCK

- Open the lock cover, insert the key and turn about 90° clockwise (Fig. 32)
- Open the lid and keep the red key in the special housing under the lid
- Insert the red release key and turn about 90° anti-clockwise (Fig. 33)

TO LOCK

- Turn the red key clockwise until it stops, remove and pull it in the housing under the lid (Fig. 33)
- Close the lid and turn the lock key anti-clockwise (do not force!)
- Remove the lock key and close the lock cover

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

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 parts subject 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 (GREASE GL 00 code 65000009)	ANNUAL
After the maintenance, it is necessary to repeat the automation testing and commissioning	1

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 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, <u>it is necessary to test</u> 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**

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

<u>STORAGE</u>: 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 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 safety low voltage (SELV) or use an appropriate sheath that provides extra insulation having a thickness of 1 mm



TERMS OF SALE

EFFICACY OF THE FOLLOWING TERMS OF SALE: the following general terms of sale shall be applied to all orders sent to SEA S.p.A. All sales made by SEA to all customers 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 EN12453 – EN 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 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 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 or damage of the goods during transport, are at Buyer's cost 6) COMPLAINTS Any complaints 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 its supplies of raw material which is necessary for the production; Eventual completely or partially unsuccessful executions cannot be reason for complaints 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 property 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 LAW

Automatic Gate Openers International registered trademark n. 804888

DECLARATION OF CONFORMITY DICHIARAZIONE DI CONFORMITÀ

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:

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 - <i>Descriptione</i>	MODEL - MODELLO	TRADEMARK - MARCA
SUPER FULL TANK 500 G4 SB THREEPHASE (AND ALL ITS BY-PRODUCTS - E TUTTI I SUOI DERIVATI)	10701205	SEA
SUPER FULL TANK 500 G4 AC THREEPHASE (AND ALL ITS BY-PRODUCTS - E TUTTI I SUOI DERIVATI)	10701255	SEA
SUPER FULL TANK 500 G6 SB THREEPHASE (AND ALL ITS BY-PRODUCTS - E TUTTI I SUOI DERIVATI)	10701405	SEA
SUPER FULL TANK 500 G6 AC THREEPHASE (AND ALL ITS BY-PRODUCTS - E TUTTI I SUOI DERIVATI)	10701410	SEA
SUPER FULL TANK 1000 G4 AC THREEPHASE (AND ALL ITS BY-PRODUCTS - E TUTTI I SUOI DERIVATI)	10701260	SEA
SUPER FULL TANK SP 500 IV (AND ALL ITS BY-PRODUCTS - E TUTTI I SUOI DERIVATI)	10701086	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 RAPPRESENTATE AUTORIZZATO

PLACE AND DATE OF ISSUE LUOGO E DATA DI EMISSIONE

TERAMO, 06/09/2022

SEA S.P.A. Zona Industriale Sant'Atto 64100 - Teramo - Italy + 39 0 861 588341 www.seateam.com

'Amministratore he/Admin/strator



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