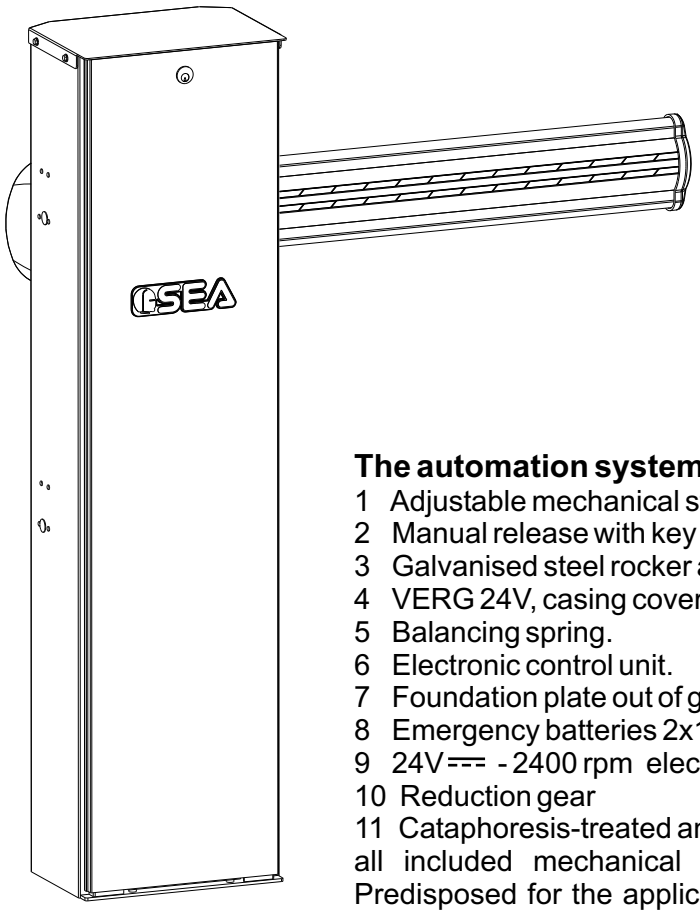
VERG 24V BARRIER



General features

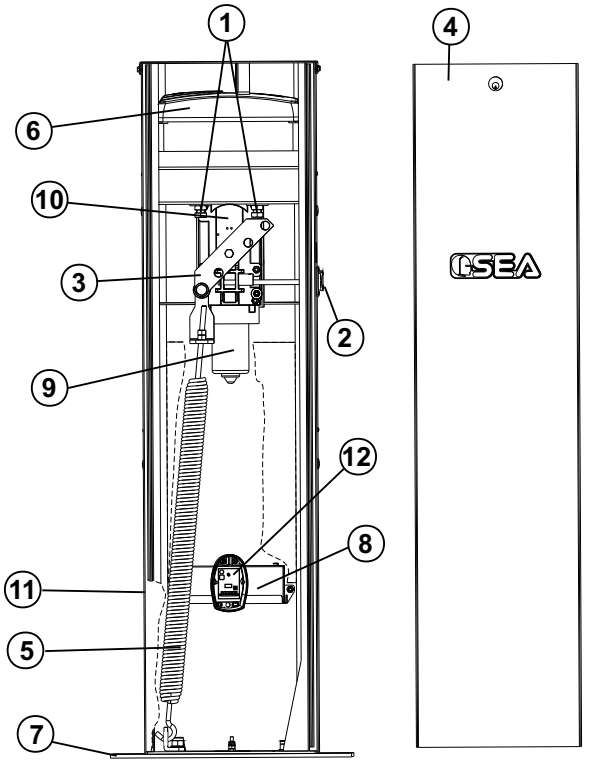
VERG 24V is an electro-mechanical barrier (2, 3, 4, 5 m) recommended for the automation of access points which require a high opening/closing speed (parking lots, motorways, airports, etc.) and frequent use features. The automation includes an anti-crush security system with adjustable sensitivity, which guarantees a barrier force value not exceeding 15 kg, thus protecting people and objects from any accidents. A highly reliable slowdown device guarantees the total control of the forces of inertia.
The emergency batteries guaranty at least 15 opening cycles (depending on the installed accessories) in case of power failure and a release system allows the manual opening in case of emergency.

The automation system is composed of the following elements:

1 Adjustable mechanical stop
2 Manual release with key
3 Galvanised steel rocker arm.
4 VERG 24V, casing cover with lock and DIN key
5 Balancing spring.
6 Electronic control unit.
7 Foundation plate out of galvanized steel
8 Emergency batteries 2x12V 2Ah.
9 24V⎓ - 2400 rpm electric motor
10 Reduction gear
11 Cataphoresis-treated and polyester painted VERG 24V casing, for outside, protects all included mechanical and electronic devices from fire, flood, lightning, etc. Predisposed for the application of photocells, key switch, proximity reader. Stainless steel casing available on request.
12 Battery charger circuit

Main components:

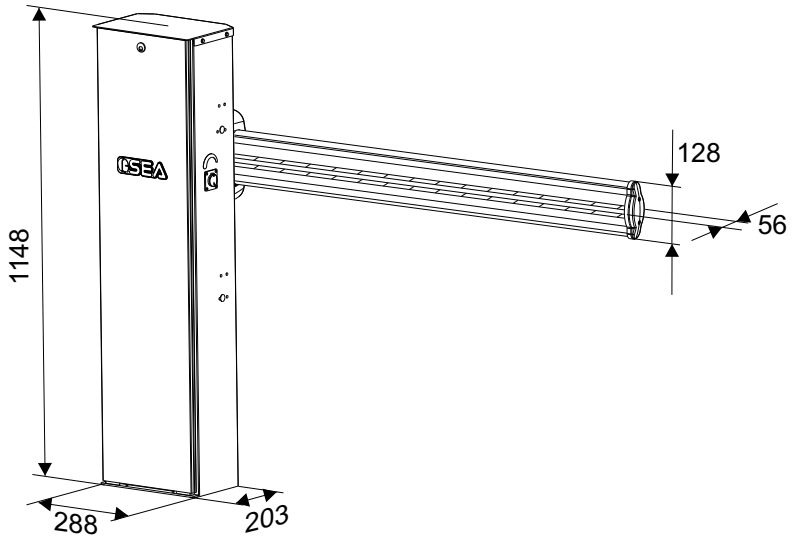
1) Adjustable mechanical stop
2) Manual release system
3) Rocker arm
4) VERG 24V casing cover
5) Balancing spring
6) Electronic control unit
7) VERG anchoring plate (optional)
8) Emergency batteries 2x12V 2Ah (optional)
9) 24V⎓ electric motor
10) Gearbox
11) VERG casing
12) Battery charger circuit (optional with battery kit)



TECHNICAL FEATURES	VERG 230V	VERG 115V
Supply voltage	230 V~ ± 5% - 50/60 Hz	115 V~ ± 5% - 50/60 Hz
Motor power supply	24Vdc	
Motor power	60 W	
Motor speed	2400 RPM	
Working temperature	-20° + 55°C	
Opening/closing time	Adjustable	
Protection class	IP55	
Manual release system	Yes	
Usage frequency	60%	
Anti-crushing device	Ammeter	
Holding block	Yes	
Slowdown	Electronic	
Barrier body treatment	Cataphoresis treated and polyester painted	
Weight	39 kg	
Electronic equipment	USER 1 24V	

Note: The frequency of use is valid only for the first hour at 20°C room temperature.

OVERALL DIMENSIONS:



BEAMS RECOMMENDED SPEED

VERG	2mt	3mt	4mt	5mt
Max Speed*	2-3 sec	3-4 sec	4-5 sec	5-6 sec
Cycles**	60%	50%	45%	35%

*To guarantee longer life of the barrier, SEA recommend to adjust the speed giving an extra time of at least 1 sec from the Max Speed as for this chart.
** SEA grant those performances only for the 1st hour of operation. After 1 st hours cycles can drop up to 50%. Cycles are granted only with slowdown active. Periodically check the balance of the beam.

INSTALLATION INSTRUCTIONS

1) Spring position

Opening on the right ⟷ Opening on the left

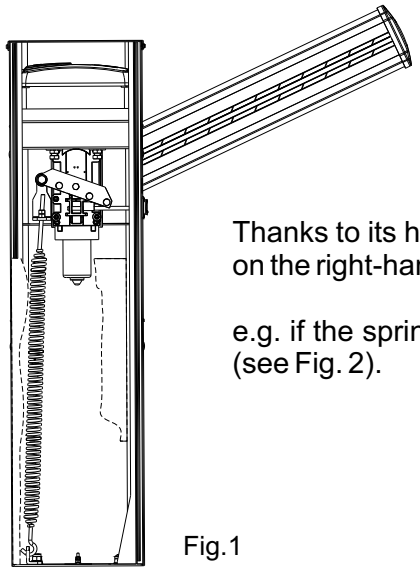


Fig.1

Thanks to its high flexibility, the barrier you are installing can be closed on the right-hand or left-hand side of the post, according to your needs.

e.g. if the spring is on the right-hand side, the guard closes on the left (see Fig. 2).

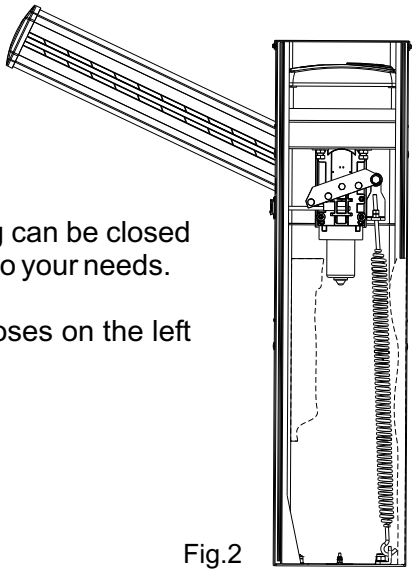


Fig.2

2) Foundation plate anchoring

– Make a 500 x 500 x 300 mm (depth) hole in the ground.
– Widen the foundation plate clamps till they reach approx. 60° (Fig. 3).
– Fill the hole with R425 concrete and place the foundation plate as shown in Fig. 3.
– Accurately level the plate.

***** The middle hole of the plate must be used for cable routing. Therefore, make sure that the conduit connected to the hole complies with current regulations, before filling the hole with concrete.

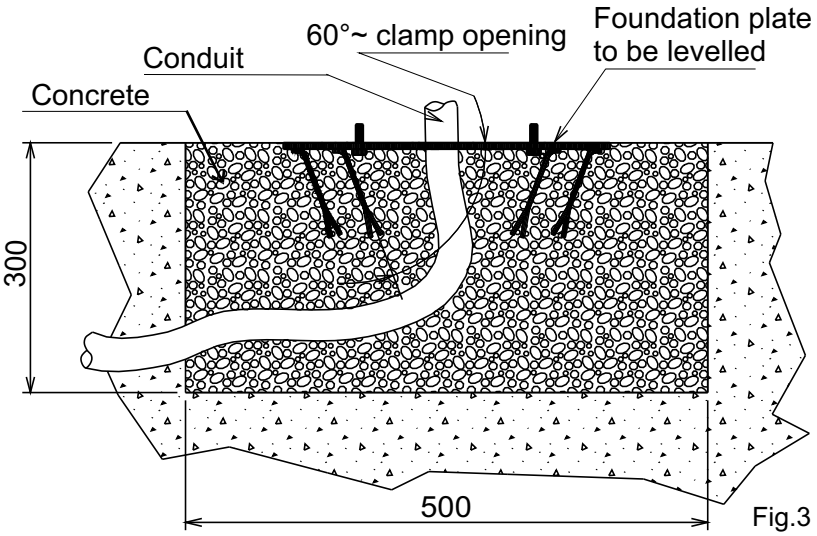


Fig.3

3) Post anchoring on the foundation plate

– Place the casing so that the holes on the base match the screws located on the foundation plate.
– Make sure that the conduit for the cables goes through the large hole of the casing base.
– Insert the bracket for anchoring the spring: A in case of left-hand mounting, B in case of right-hand mounting; the bracket must always be positioned towards the inside as in Fig.4
– Fix the casing on the foundation plate, screwing the supplied nuts and washers carefully.

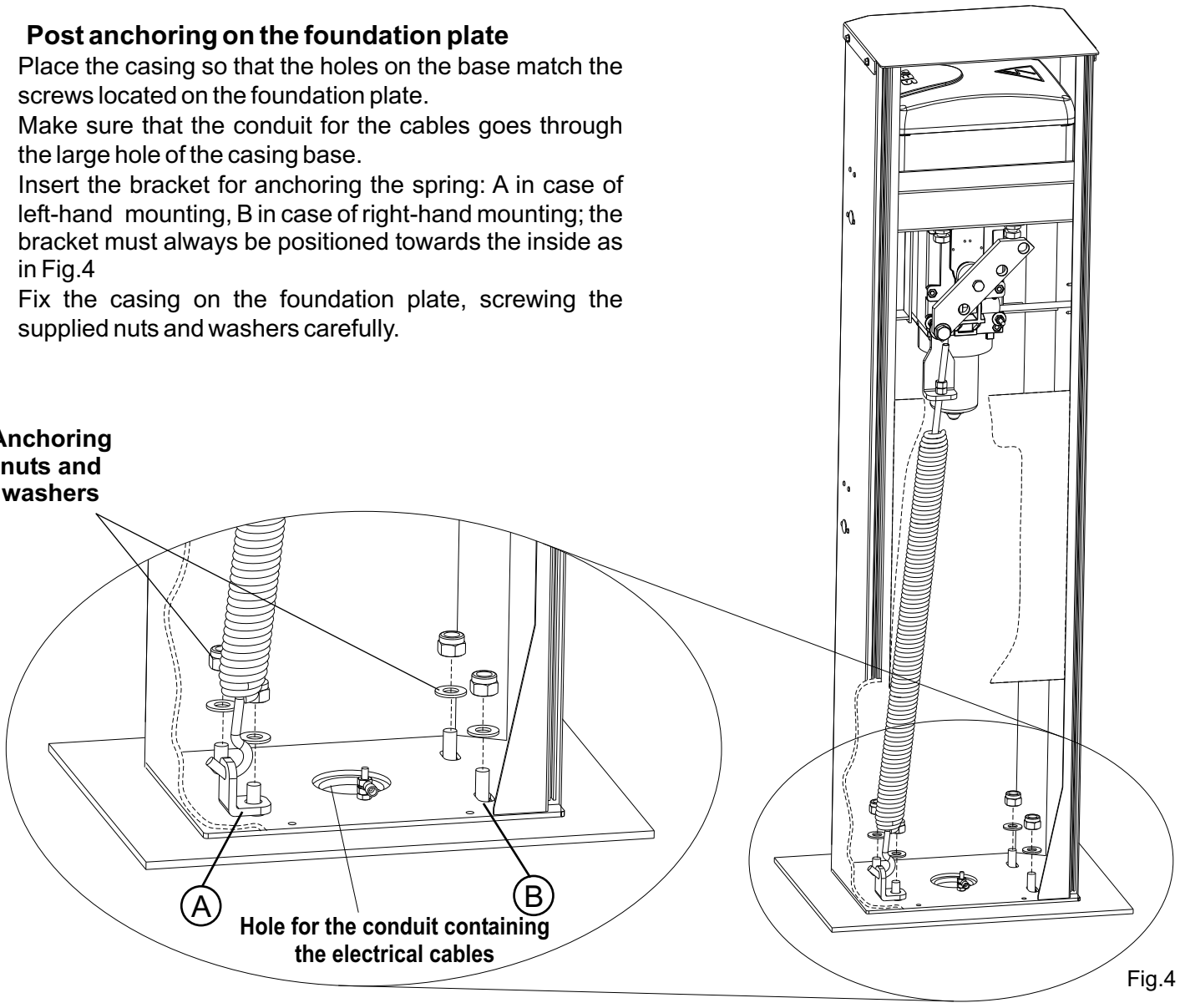


Fig.4

4) Fixation of the balance

– Carefully insert the roll bearing (A) into the hole 1 or 2 of the balance in case of left-hand mounting; into hole 3 or 4 in case of right-hand mounting using hinge P and a nylon hammer.

Attention: The choice of the hole varies according to the beam length. (SEE BOARD)

– **Lubricate with grease the bearing and the washers during assembling.**

– Mount the resting devices as shown in Fig. 5

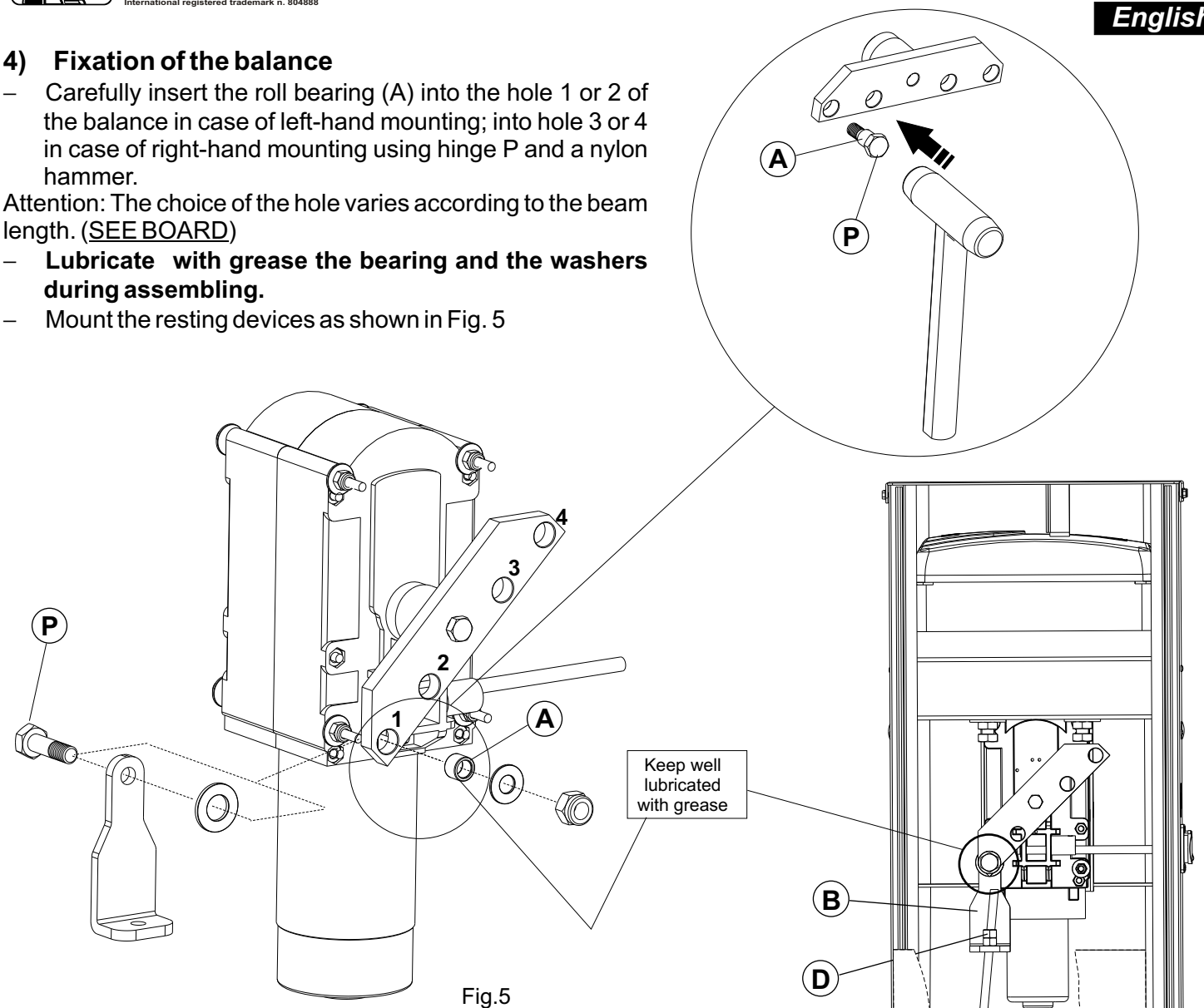


Fig.5

OVAL BEAM

Length (m)	Balance position	Spring (Ø mm)	**Opening time**
3	1 / 4	6	**3" ÷ 4"**
4	1 / 4	7,5	**4" ÷ 5"**
5	1 / 4	8,5	**5" ÷ 6"**

Note: Strictly follow the opening time to avoid bad working

Note: The springs and the bracket of anchorage are supplied with the beam.

5) Mounting of the spring

– Anchor the spring on the bracket which has been mounted before (S)

– Insert the rod of the spring into the bracket (B) and insert the nuts (D) without tightening them.

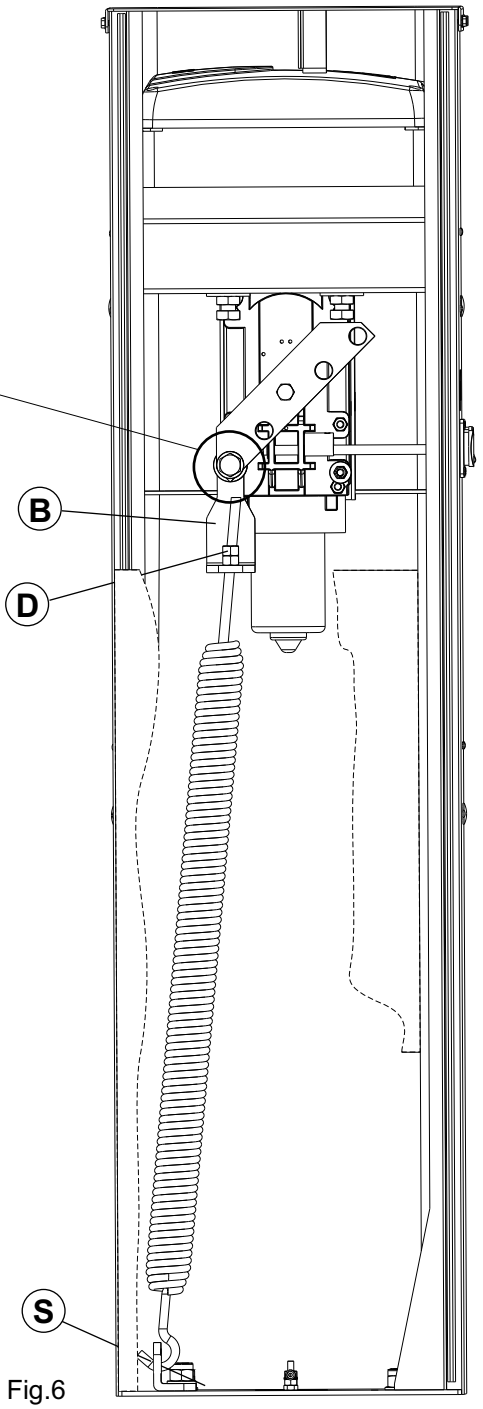


Fig.6

6) Mounting of the oval beam

Note: For 4 and 5 m beams it is recommended to use the fork support or the flexible support.

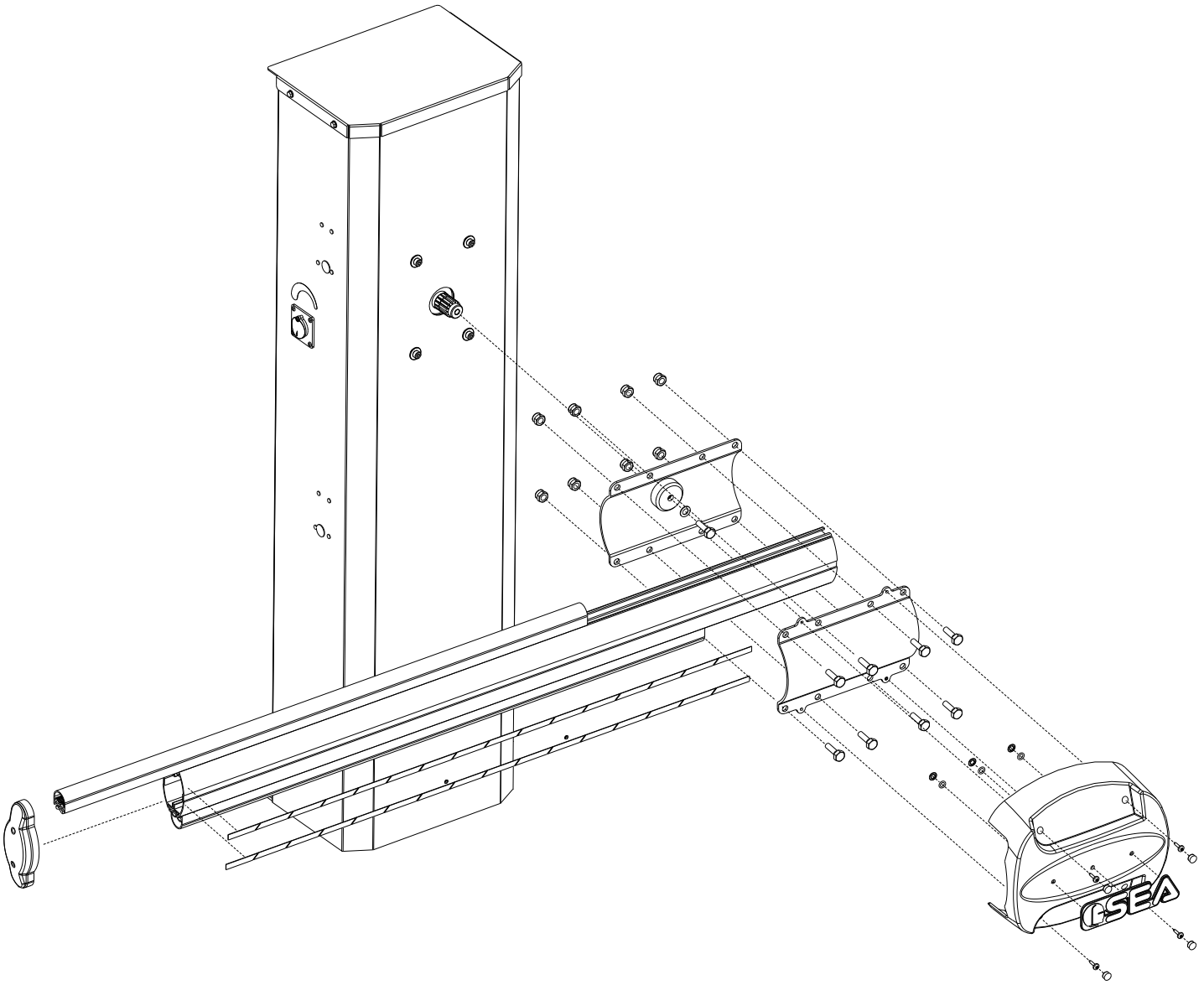


Fig.7

7) Beam balancing

- Release the beam with manual release, so that it is free to be opened and closed manually (Fig.8).
- Place the beam at approx. 45°.
- Loosen or tighten the spring stretching nut until the spring counterbalances the weight of the 45° beam (Fig. 8). The best balancing position is obtained when the beam reaches the position shown in Fig. 8.
- After having obtained the balancing, lock the nuts of the spring stretcher with the counter nut and re-block the motor.

Should the balancing of the beam not be perfect and the length of the spring stretcher (T) be too long, cut it about half of its length.

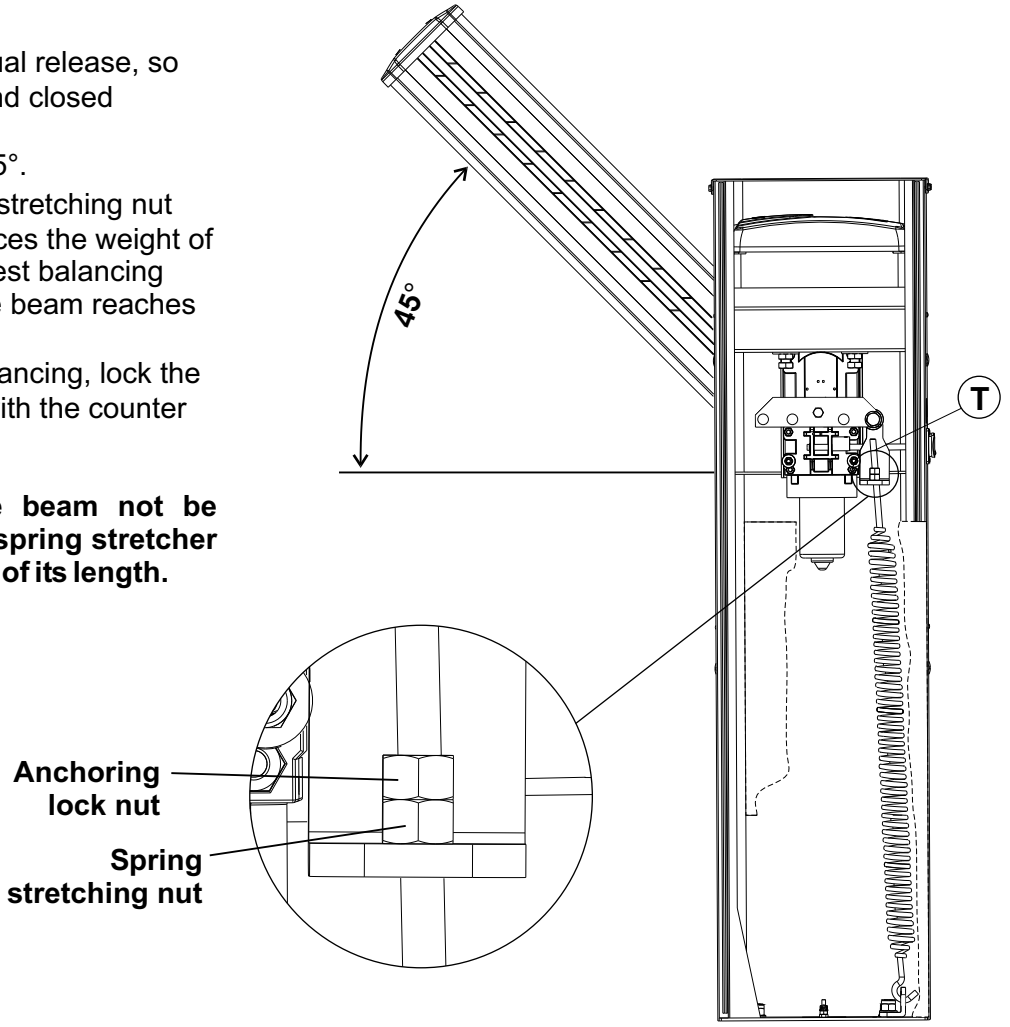


Fig. 8

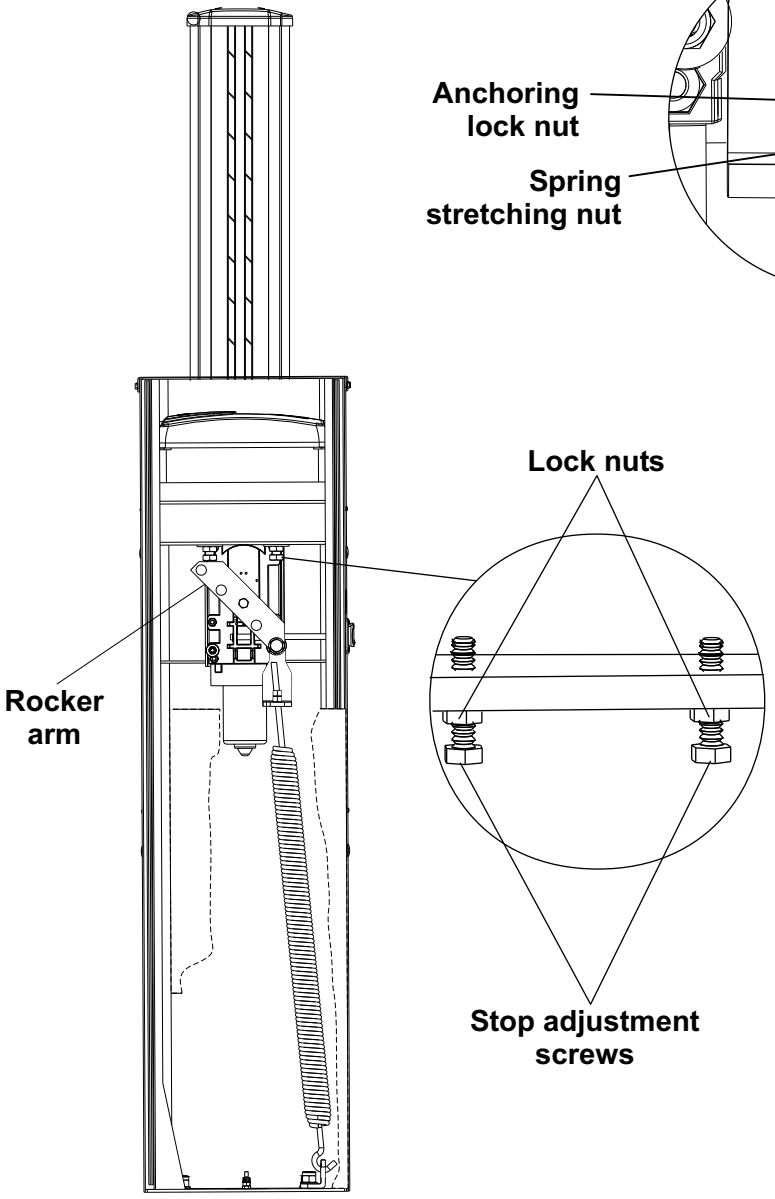


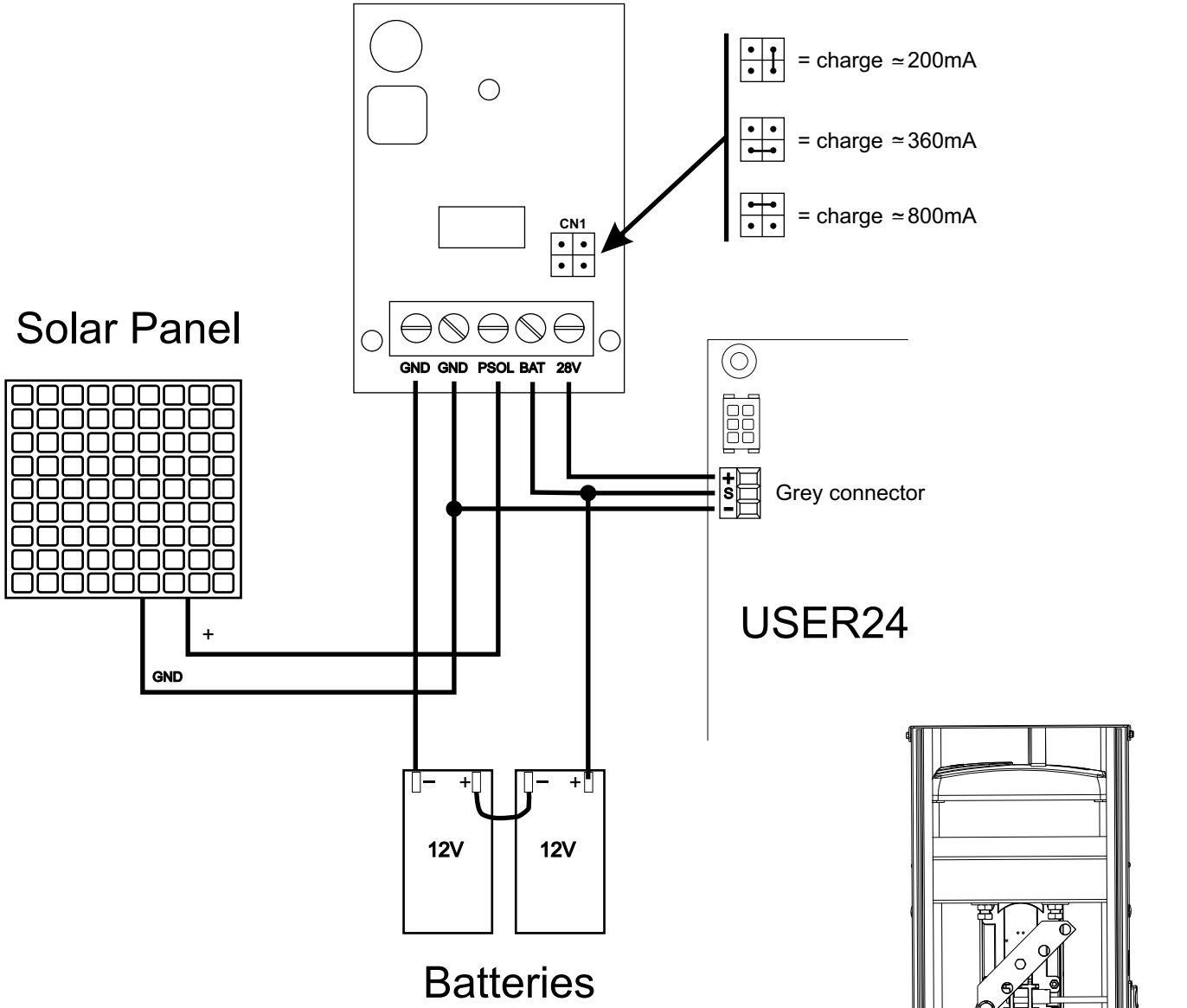
Fig.9

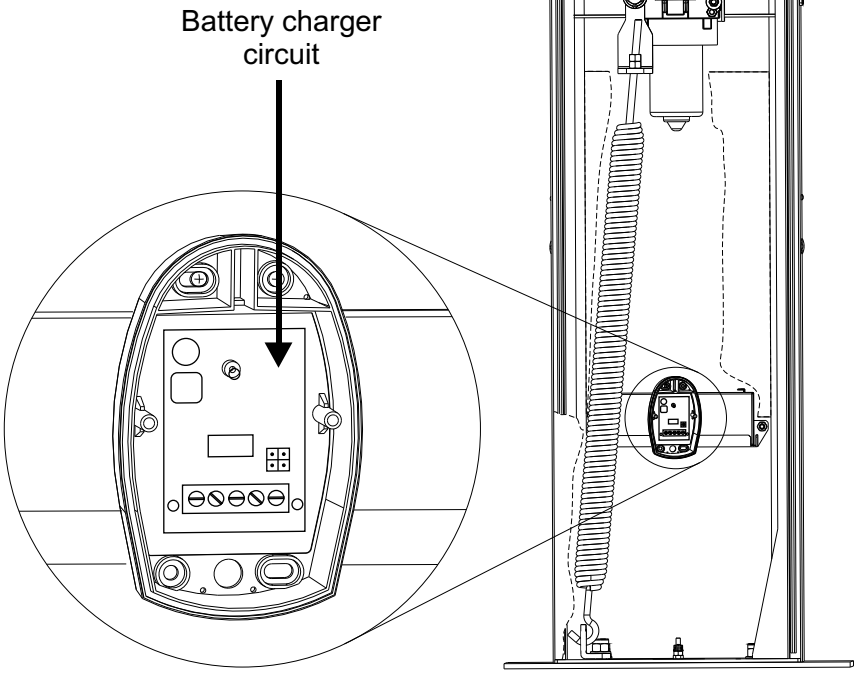
8) Beam levelling

Note: this operation must be carried out only if the beam is not perfectly horizontal (closing stage) or vertical (opening stage) at the end of its stroke.

- Release the beam with the special manual release so that it is free to open and close manually.
- Release the screws of the limit switch on unscrewing the nuts on the mechanical stops (fig.9).
- Loosen or tighten the stop screws so that the beam is released in its vertical position (opening stage) (Fig. 9) and horizontal position (closing stage).
- After having executed the levelling lock the screws of the limit switch tightening the nuts on the mechanical stops and re-lock the beam.

9) Battery charger circuit





Note: For a longer duration of the battery it is recommended to set the charging current according to the following table:

Battery current (mA)	Battery (Ah)
800	12 or 16
360	7
200	2

Fig.10

10) Electrical system

Fig. 11 sketches the electrical system that the barrier requires.
The two numbers located near the electrical cables indicate the cable number and section.

Captions:
1- VERG electronic control unit
2- Transmitting photocell
3- Receiving photocell
4- Key switch
5- Radio receiver
6- Flashing light
7- Push-button station
8- Differential switch

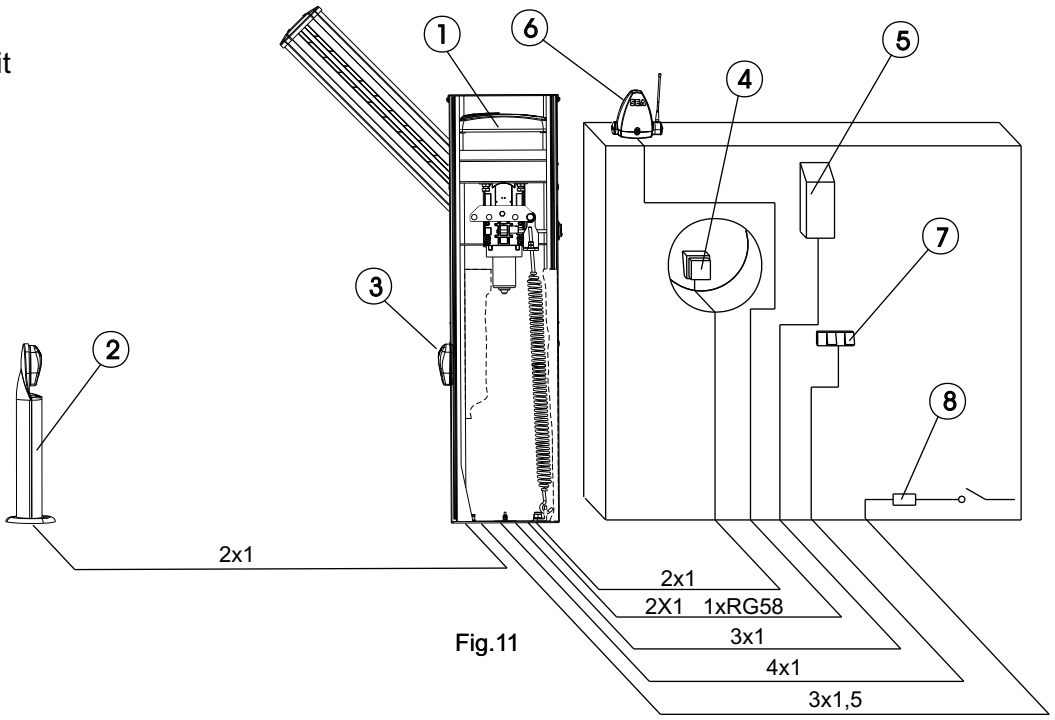


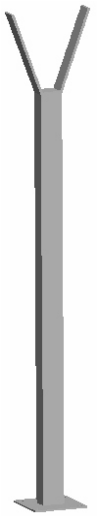
Fig.11

ACCESSORIES FOR **VERG**

KEY SWITCH

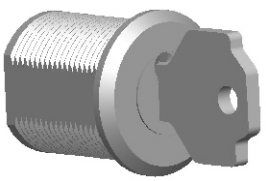
PHOTOCELLS

WARNING LAMP

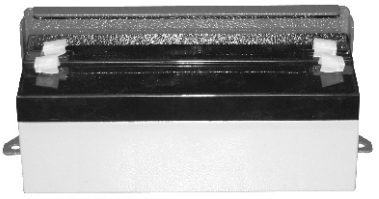


FORK SUPPORT

LED LIGHTS KIT



RELEASE LOCK (Optional)



BATTERY KIT

To the attention of users and technicians

11) Release system

To release operate as follows
- Turn the protection cap of the release.
- Insert the T shaped key and turn it about 180° into clockwise direction until the beam is released (Fig. 12).
- Open manually the beam.

To re-lock operate as follows
- Turn the T shaped key into anti-clockwise direction (Fig. 13).
- Extract the key.
- Re-close the protection cap.

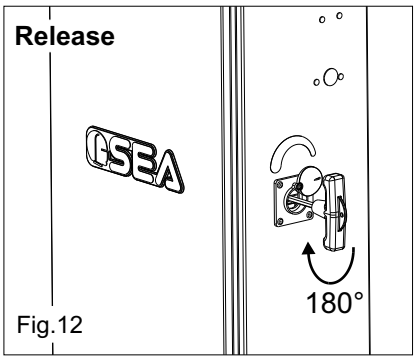


Fig.12

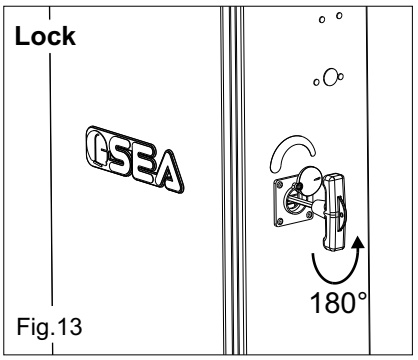


Fig.13

PERIODICAL MAINTENANCE

Check the functionality of the release	Annually
Lubricate the bearing of the balance	Annually
Check the efficiency of the spring	Annually
Check the beam fixing screws and the balance and the casing	Annually
Check the integrity of the connexion cables	Annually
Check the efficiency of the batteries (where included)	Annually
Check and eventually adjust the value of intervention of the anti-crash sensor.	Annually

Release key with extractable cylinder (OPTIONAL)

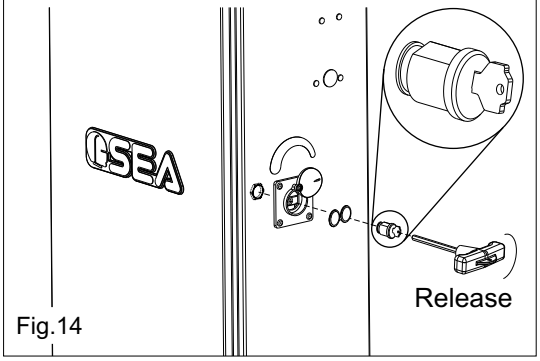


Fig.14

All above mentioned operations must be executed exclusively by authorized installers.

NOTES
The electrical installation and the operation logics must comply with current regulations. Keep the power cables (motors, power supply) separated from the control cables (push-buttons, photo-eyes, radio, etc.). Separate conduits should be used to prevent noise issues.
Note: Use “cable clips” and/or “duct/box pipes” fitting close to the control panel box so to protect the interconnection cables against pulling efforts.

INTENDED USE
VERG system has been designed exclusively for the automation of barriers.

SPARE PARTS
The spare parts orders must be sent to:
SEA S.p.A. Zona Ind.le, 64020 S.ATTO Teramo Italy

SAFETY AND RESPECT FOR THE ENVIRONMENT
We recommend not to spoil the environment with product and circuit packing material.

STORAGE

STORAGE TEMPERATURE			
T_{min}	T_{max}	$Humidity_{min}$	$Humidity_{max}$
-30°C	**+60°C**	**5% without condensation**	**90% without condensation**

The product must be handled using suitable means.

LONG-TERM STOP AND MAINTENANCE
The disassembly and/or stop and /or maintenance of the VERG automation system must be carried out by skilled and expert technicians.

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

NOTE: THE MANUFACTURER SHALL NOT SHOULDER ANY RESPONSIBILITIES IN CASE OF DAMAGE CAUSED BY INAPPROPRIATE, WRONG OR CARELESS USE.

SEA reserves the right to make all the necessary changes and modifications of the products and / or manuals without giving prior notice.