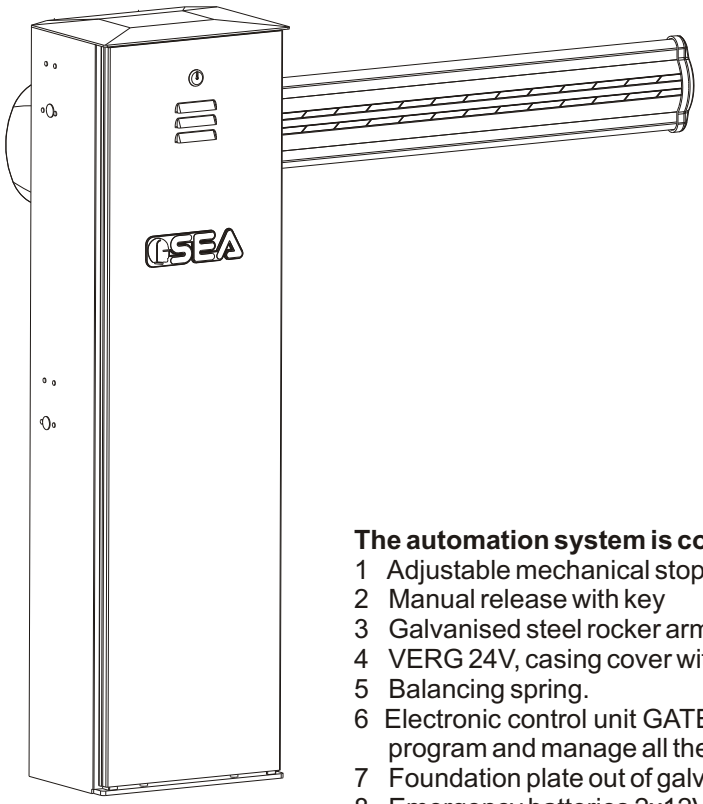
VERG 24V BARRIER

INSTALLATION MANUAL



Thank you for choosing a SEA s.r.l. product. This choice will give you the opportunity to understand that our company aims at combining high-tech and remarkable reliability and safety, thanks to studies, research and the accurate analysis of our customers' needs, without undermining the simple use and installation of our products.

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 (optical encoder), 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.

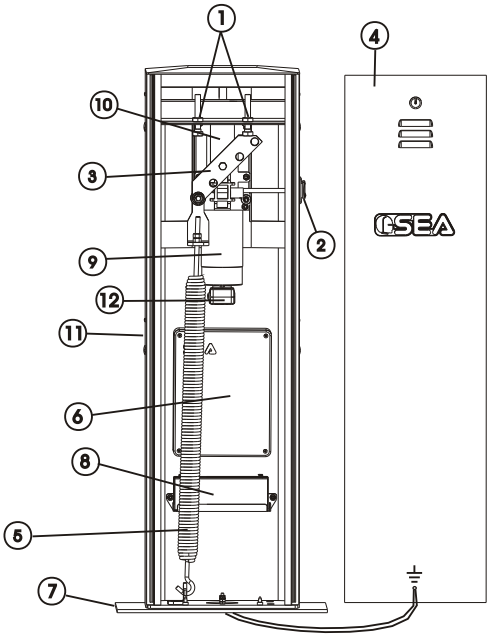
The emergency batteries guaranty at least 15 opening cycles (depending on the installed accessories) in case of power failure and a release system allows the manual opening in case of emergency.

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 GATE 1 24V (code 23001130), a complex device which can be used to program and manage all the operation and safety systems.
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 GHOST 40, key switch Key Plus, proximity reader Reader Prox. Stainless steel casing available on request.
12 Optical encoder 12 impulsion for a higher sensitivity of inversion.

Main components:

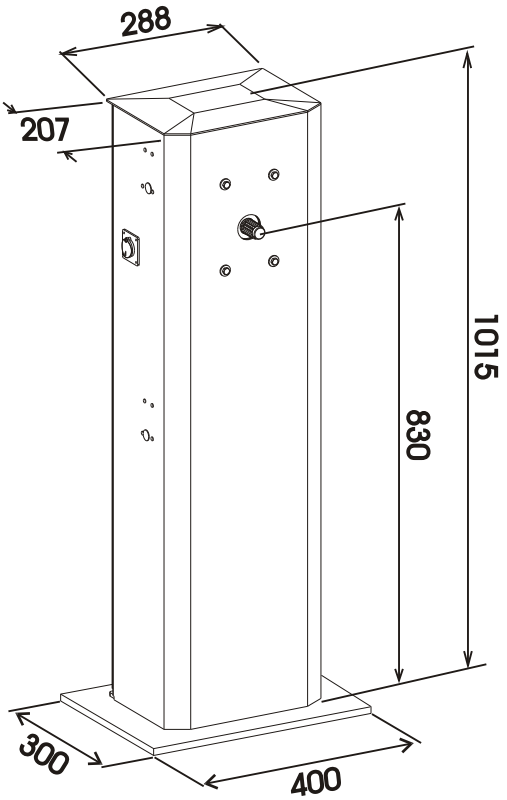
1) Adjustable mechanical stop
2) Manual release system
3) Rocker arm
4) VERG 24V casing cover
5) Balancing spring
6) Electronic control unit
7) VERG anchoring plate (optional)
8) Emergency batteries 2x12V 2Ah (optional)
9) 24V⎓ electric motor
10) Gearbox
11) VERG casing
12) Optical encoder



Technical features

Supply voltage	: 230 V~ ± 5% - 50/60 Hz
Absorbed power	: 6 A
Motor power	: 90 W
Motor speed	: 2400 RPM
Working temperature	: -20°C + 55°C
Opening/closing time	: Adjustable
Protection class	: IP55
Manual release system	: yes
Usage frequency	: 60%
Anti-crushing device	: optical encoder
Holding block	: yes
Slowdown	: electronic
Barrier body treatment	: Cataphoresis treated and polyester painted
Weight	: 39 kg
Electronic equipment	: GATE 1 24V (code 23001130)

Overall dimensions:



INSTALLATION INSTRUCTIONS

1) Spring position

Left-hand mounting

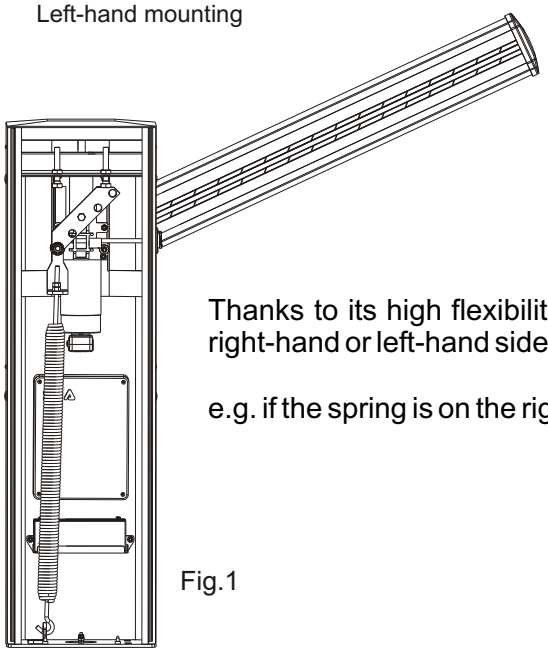


Fig.1

Right-hand mounting

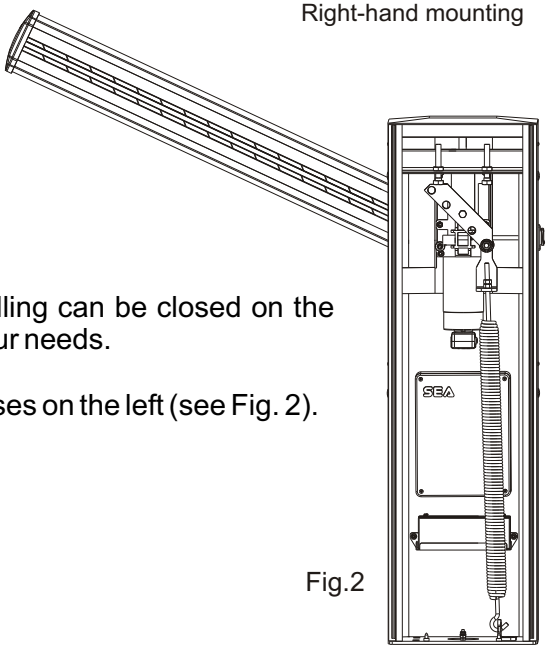


Fig.2

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).

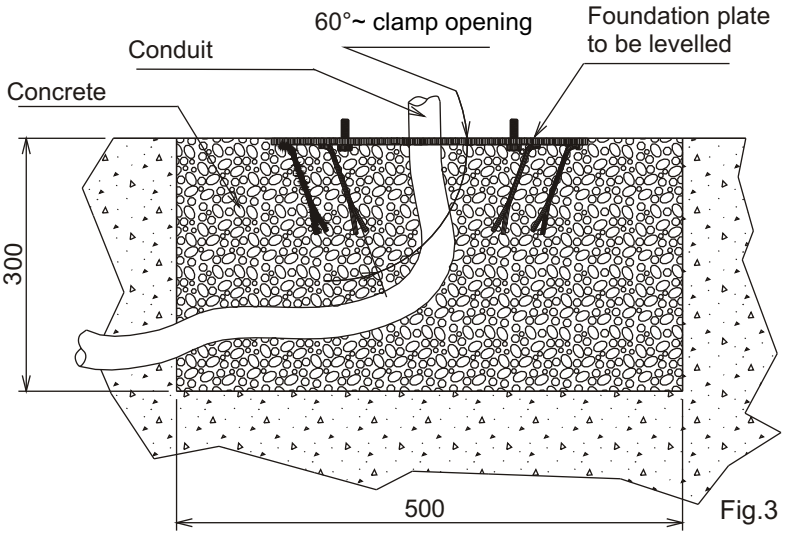


Fig.3

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.

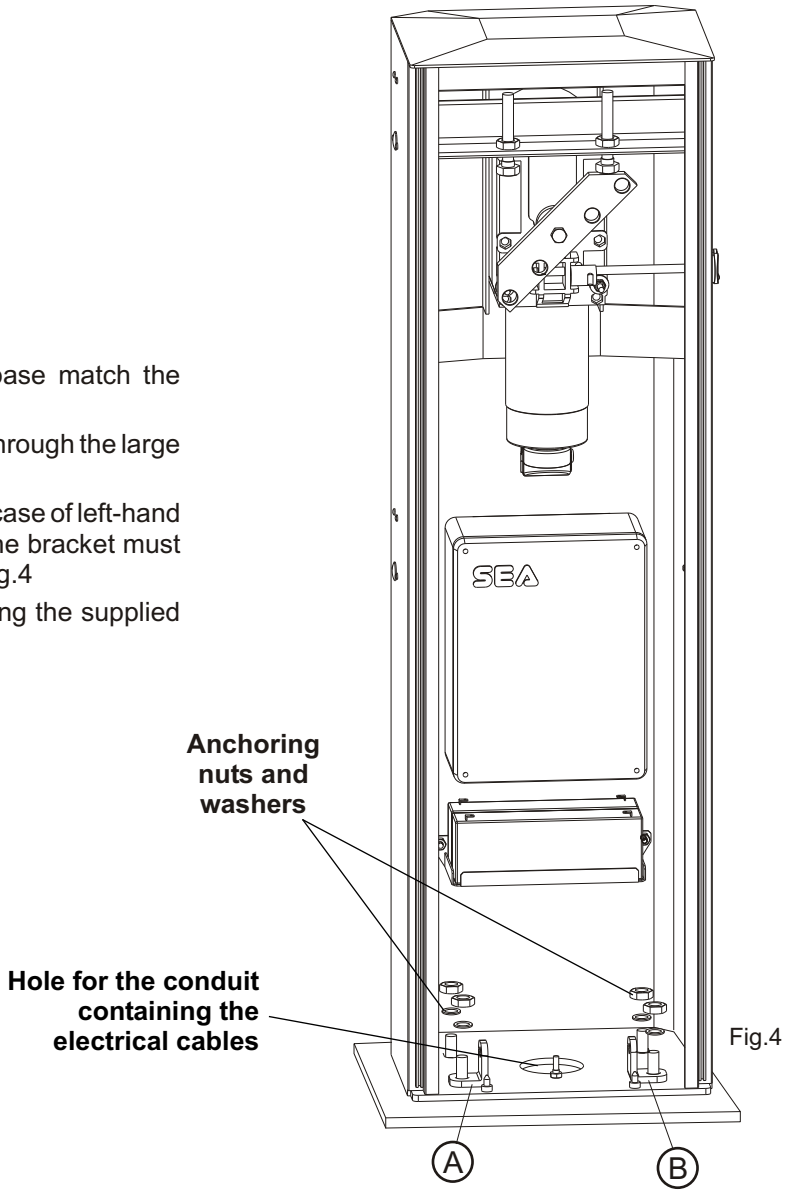


Fig.4

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.

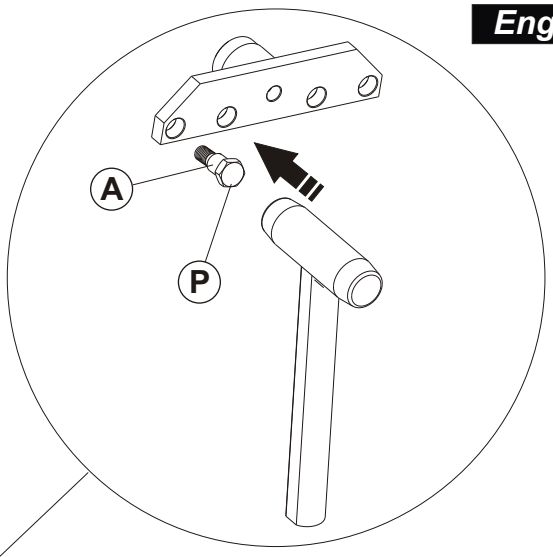
4) Fixation of the balance

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



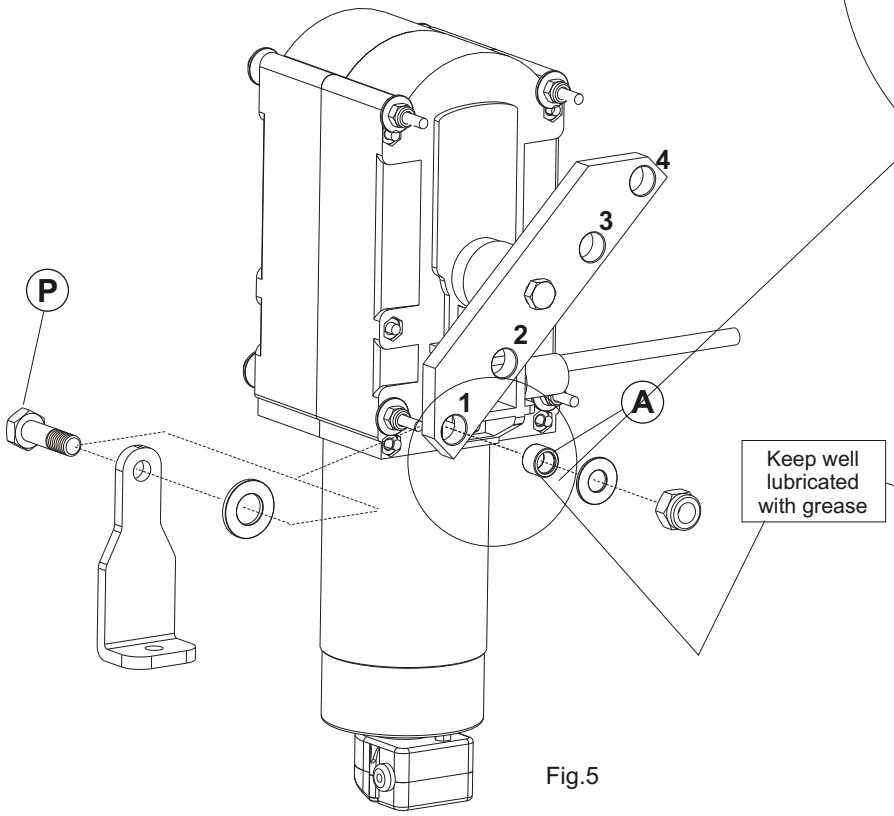


Fig.5

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" ÷ 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.

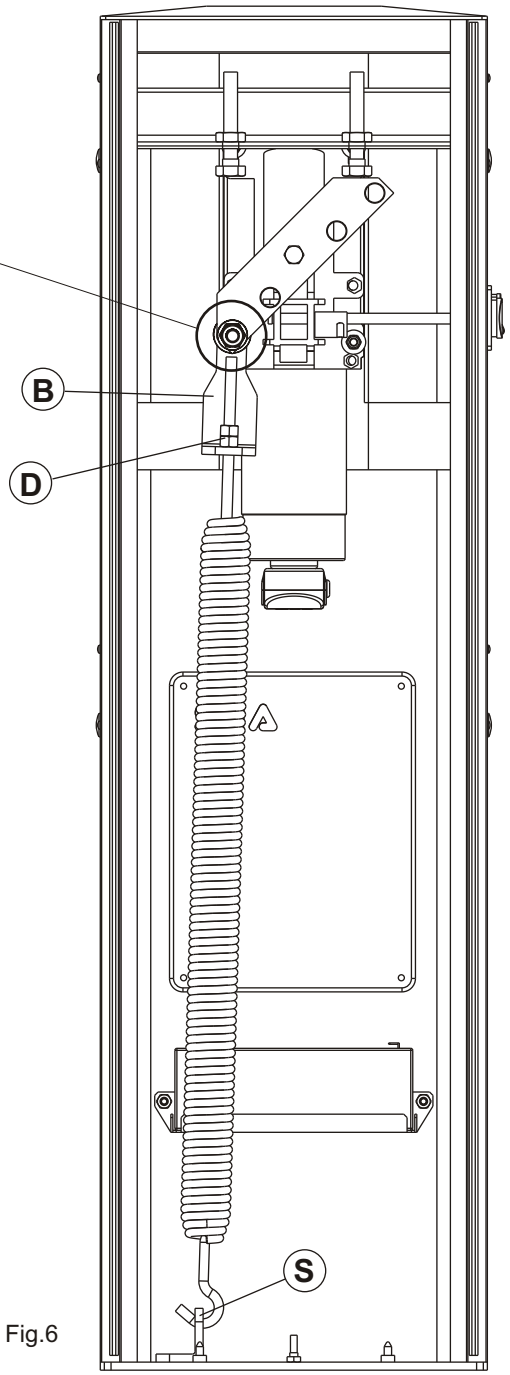


Fig.6

Mounting of the oval beam

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

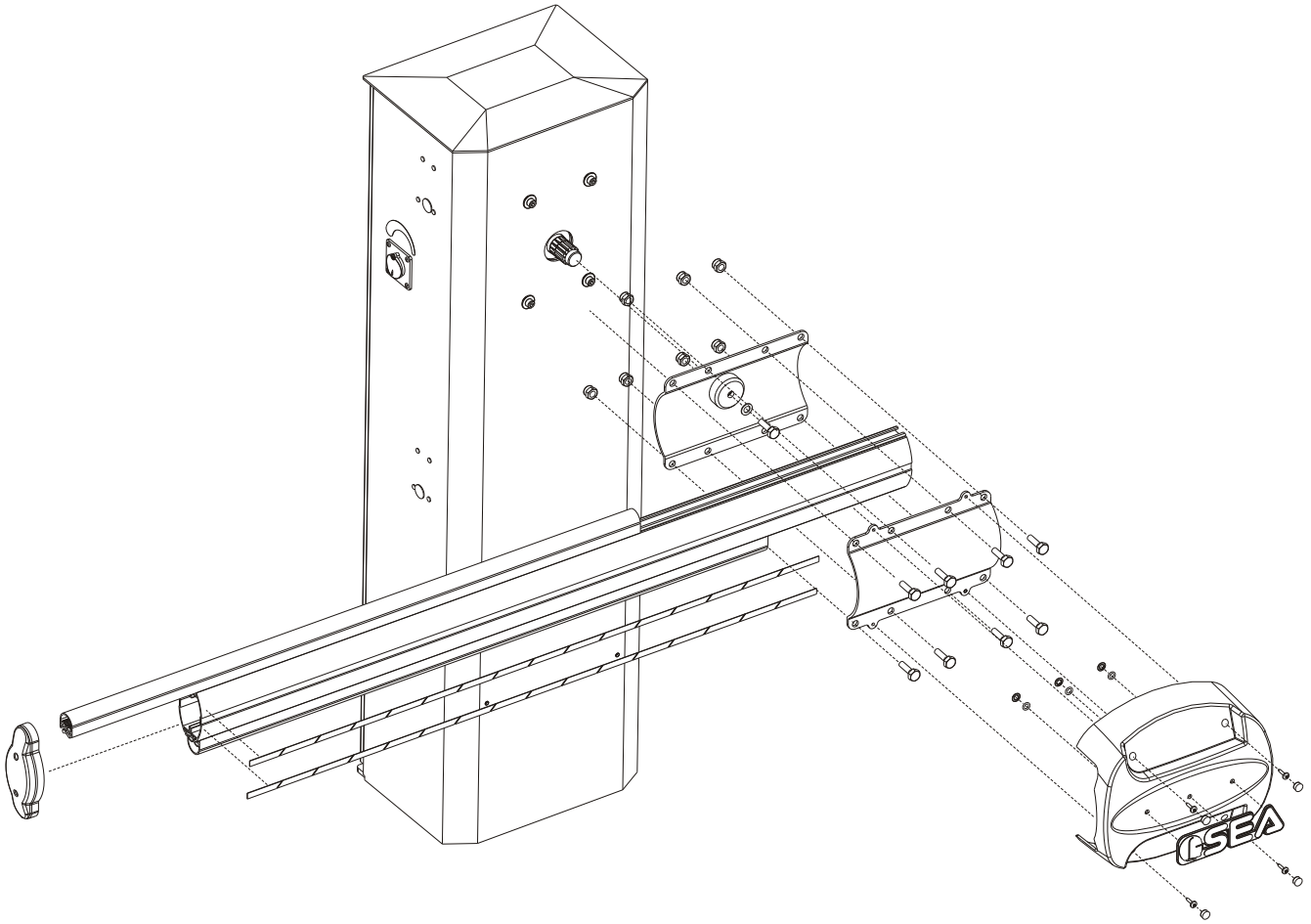


Fig.7

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.

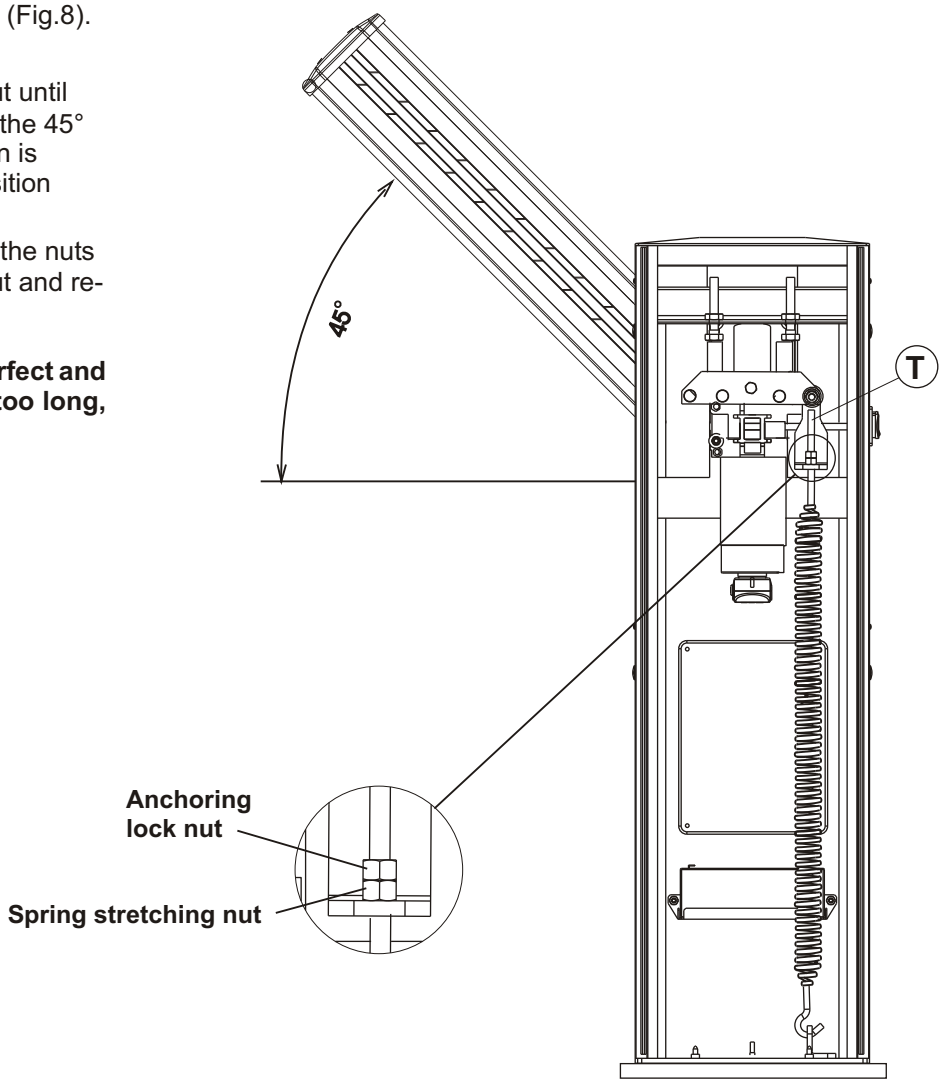


Fig. 8

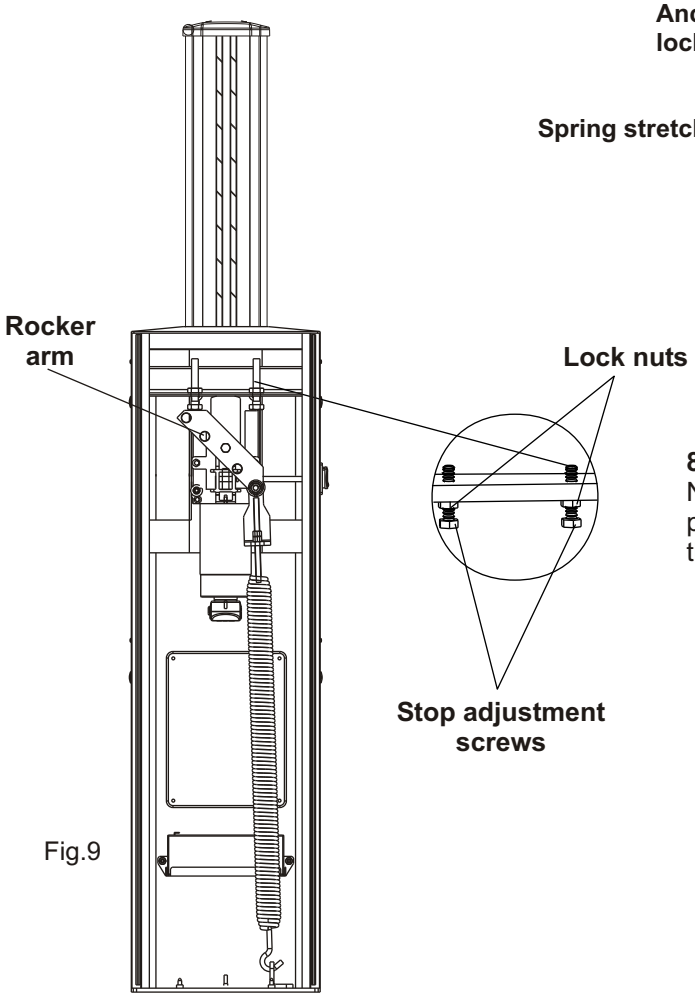


Fig.9

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) and horizontal position (closing stage) (Fig. 9).

After having executed the levelling lock the screws of the limit switch tightening the nuts on the mechanical stops and re-lock the beam.

10) Electrical system

Fig. 10 sketches the electrical system that the barrier requires.
The two numbers located near the electrical cables indicate the cable number and section.

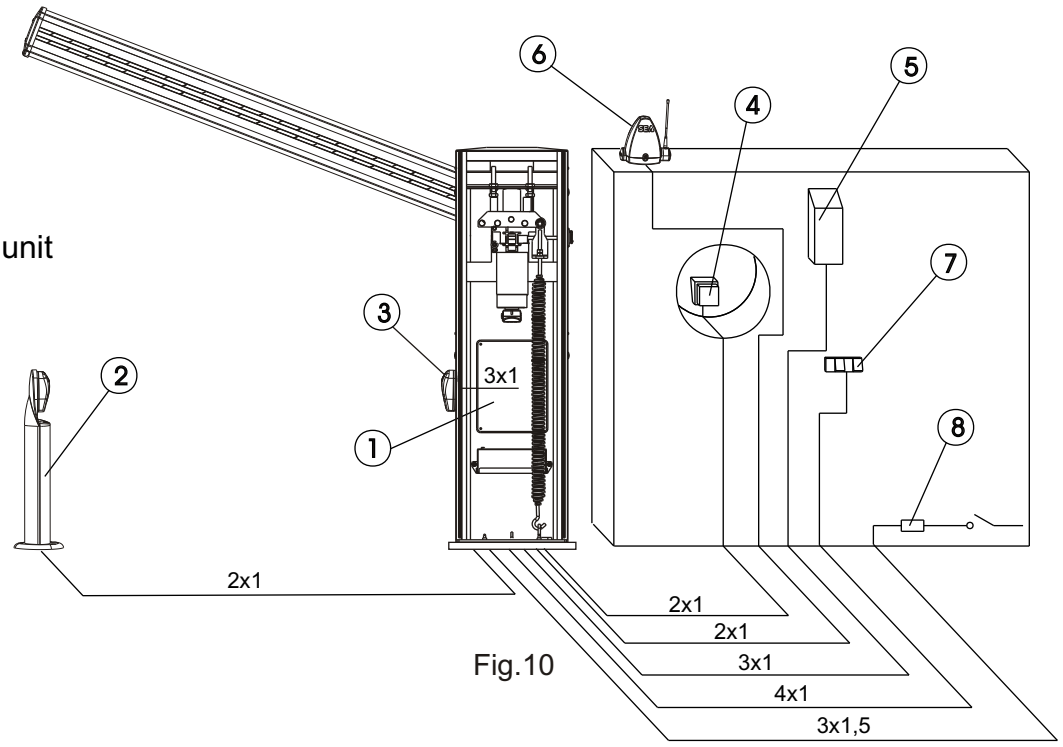


Fig.10

Captions:

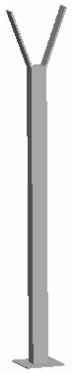
1- VERG electronic control unit
2- Transmitting photocell
3- Receiving photocell
4- Key switch
5- Radio receiver
6- Flashing light
7- Push-button station
8- Differential switch

PERIODICAL MAINTENANCE

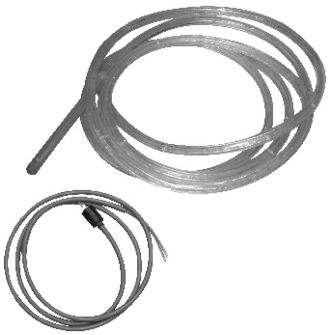
Check the functionality of the release	Annually
Lubricate the bearing of the balance	Annually
Check the efficiency of the spring	Annually
Check the beam fixing screws and the balance and the casing	Annually
Check the integrity of the connexion cables	Annually
Check the efficiency of the batteries (where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

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

ACCESSORIES FOR **VERG**



FORK SUPPORT



LED LIGHTS KIT

BATTERY KIT

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.r.l. 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.

CONFORMITY REQUIREMENTS
VERG automation system complies with the following standards:
89/392/CEE (Machine Directive)
89/336/CEE (Electromagnetic Compatibility Directive)
73/23/CEE (Low Voltage Directive)

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
VERG system is guaranteed for 24 months, starting from the date stamped on the product. The product is covered by the guarantee provided that the damaged was not caused by inappropriate use, changes or tampering.
The warranty shall be valid only for the original buyer.

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.