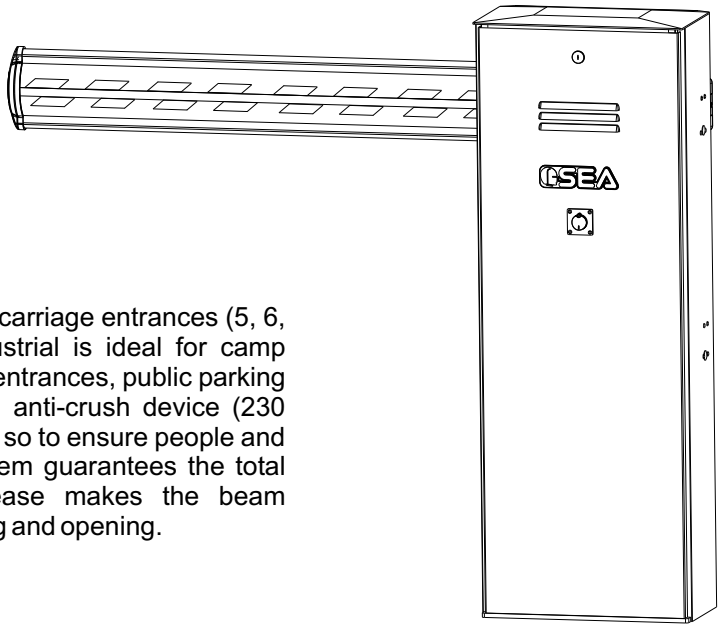
SEA s.r.l. is glad to congratulate and thank you for choosing our product. Your choice will allow you to understand how our factory, according to studies, research and above all the needs of our customers, wants to gather technology, reliability and safety together keeping in mind use and installation easiness.



General characteristics

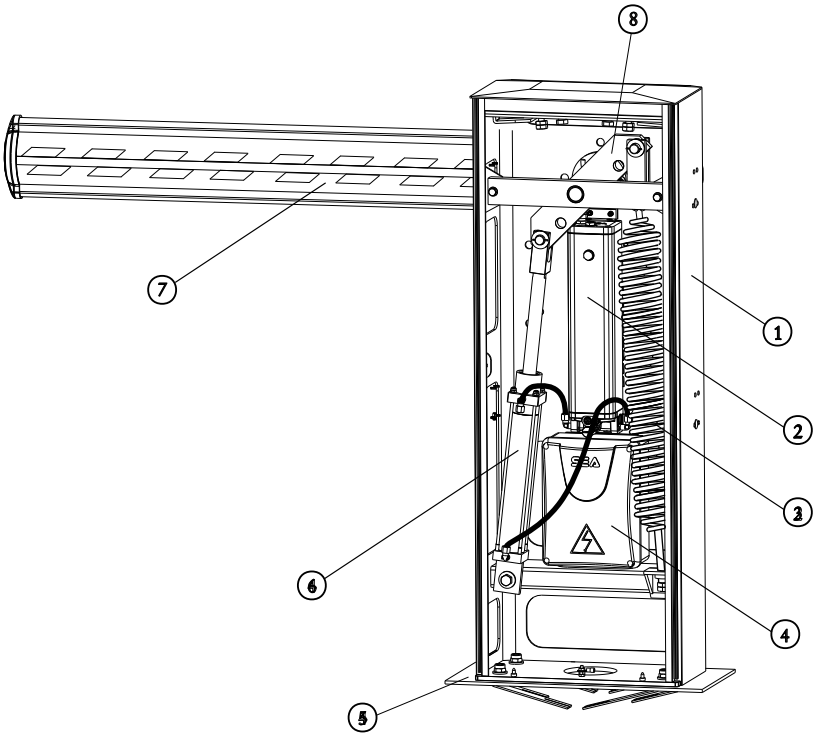
Vela Industrial is an electro-mechanical automation for big carriage entrances (5, 6, 7, 7,5 m). The places for fitting are multiple; Vela Industrial is ideal for camp entrances, hospitals, yards, private roads, port and airport entrances, public parking with half-intensive working cycles. It is provided with an anti-crush device (230 version) that ensures a strength of max. 15 kg on the beam so to ensure people and things against accidents. An accurate slowing down system guarantees the total control of the momentum strength. The manual release makes the beam independent from the operator so to allow the manual closing and opening.

The automation consists of :

1 The cataphoresis and epoxy treated dust painted steel sheet casing protects all mechanical and electric devices from atmospheric agents. On request it is also possible to receive the casing in stainless steel.
2 The balancing spring is delivered according to the beam length, inside the beam kit (See spring tab.)
3 GATE 1 electronic control unit for 230 version, advanced device which allows the programming and control of all working and safety systems.
4 Operator with manual release for the manual opening of the beam in case of damages.
5 Beam in extruded aluminium, available sizes: from 5 to 7,5 m.
6 Mounting plate out of steel sheet coated with zinc.
7 Balancing wheel in galvanized steel.

List of the main parts:

1. Vela Industrial Series casing
2. Hydraulic pump unit
3. Balancing spring
4. Electronic Control Unit Gate 1
5. Vela Ind. mounting plate
6. Piston
7. Aluminium beam
8. Balancing lever



SEA®
Sistemi Elettronici
di Apertura Porte e Cancelli
International registered trademark n. 804888

CE

English

Technical data

Voltage supply:	230 V~ ± 5% - 50/60 Hz
Power absorption:	230W
Opening time:	8-12 s
Max. Beam length:	7,5 m with fork / 7 m side fixation
Protection degree:	Ip55
Motor revolutions:	1400 RPM/min.
Operating temperature:	-20°C / 55°C
Weight:	83 kg
Manual release:	Yes
Use frequency:	75%

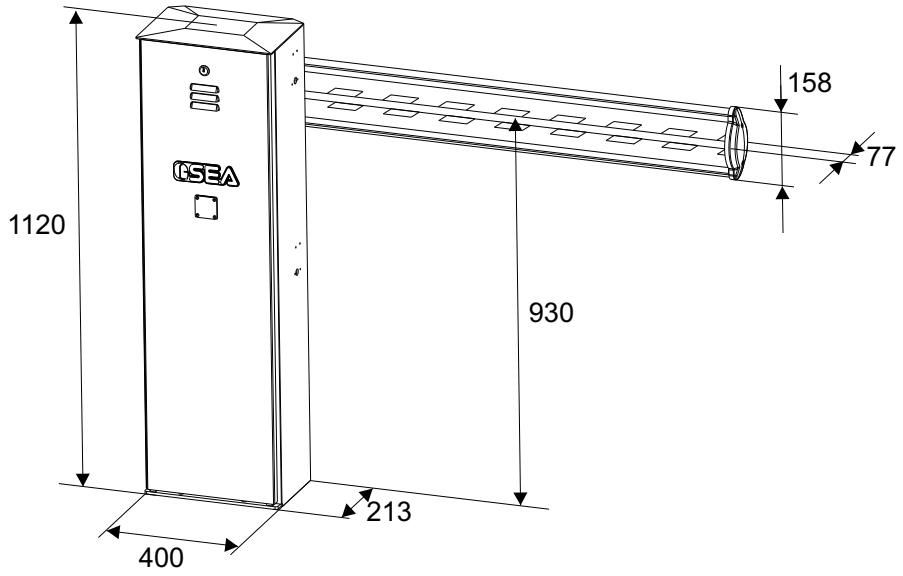
Note1: The frequency of use is valid only for the first hour at 20°C room temperature.
Nota2: For a frequency of more than 60%, it is recommended to use the mechanical and electronic limit switch kit for a best duration in time.

Rectangular beam		
Barrier Length	D. Spring	Fexlible support
5 m	10,5 mm	yes
6 m	11 mm	yes
7 m	11,5 mm	yes
7,5 m	12,5 mm	yes

Linear Beam		
Barrier Length	D. Spring	Fexlible support
5 m	10,5 mm	yes
6 m	11 mm	yes
7 m	11,5 mm	yes

Side beam with skirt		
Barrier Length	D. Spring	Type of skirt
5 m	11 mm	4,5 m
6 m	11,5 mm	5,5 m
7 m	12,5 mm	6,5 m

Dimensions (mm):

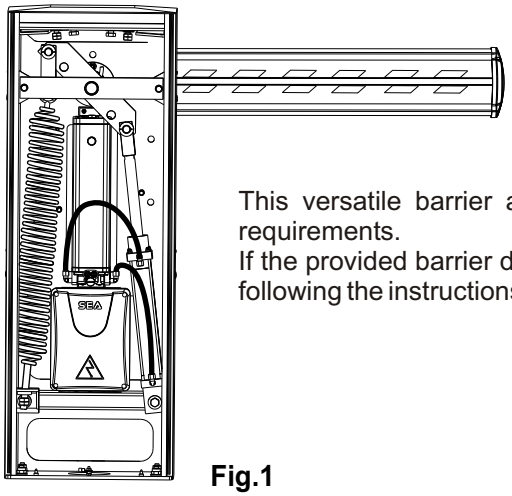


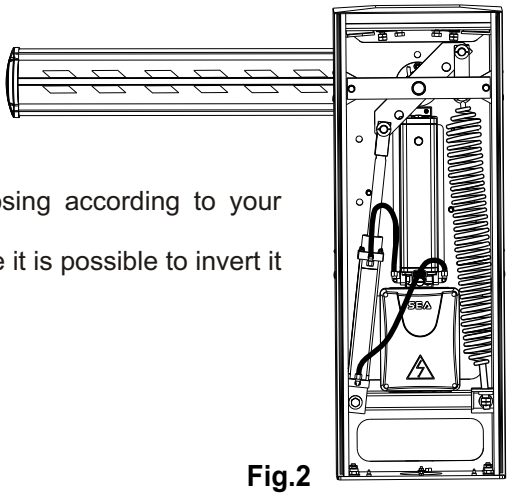
FITTING INSTRUCTIONS

1) Position of spring

Right hand closing barrier

Left hand closing barrier





This versatile barrier allows the left or right hand closing according to your requirements.
If the provided barrier does not close on the desired side it is possible to invert it following the instructions.

Fig.1

Fig.2

N.B.: The operator comes as shown in Fig.1 (Closing on the right hand side).

Example:
Barrier with right hand closing (Fig.1)
Barrier with left hand closing (Fig. 2)

Before installing the spring check the choice of the barrier, if right or left hand side.
If the barrier is with closing on the left hand side move the piston from the right to the left hand side as shown in Fig.4 and 5.

N.B.: Before executing this operation release the operator as shown in Fig.18.

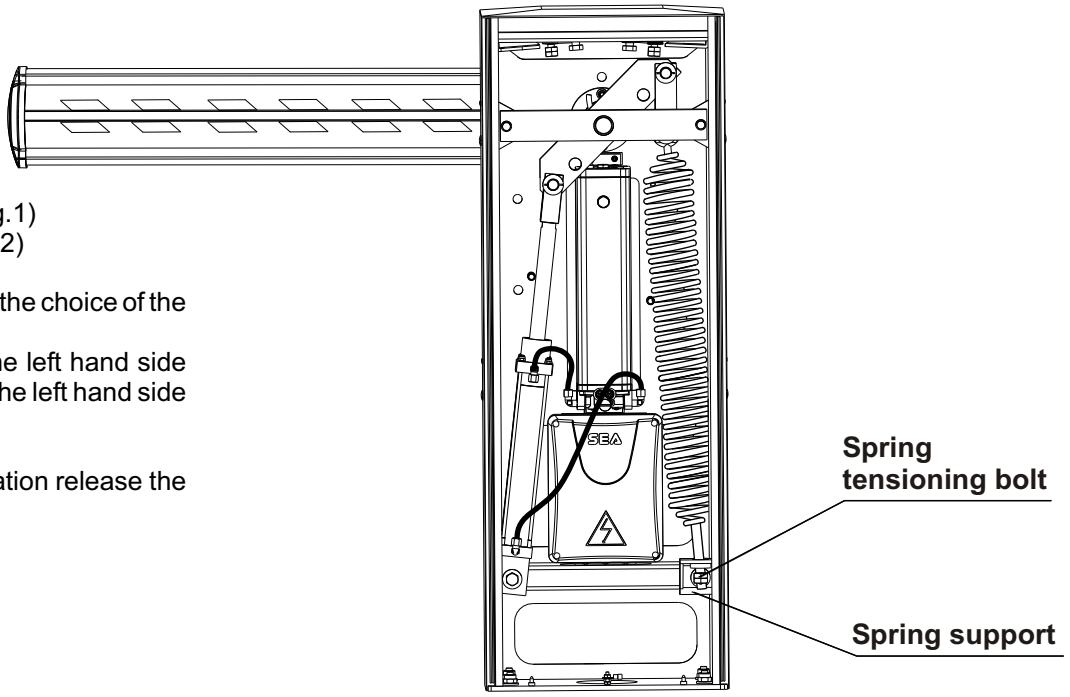


Fig. 3

Once exchanged the piston tighten its fixation screw and lubricate with grease (Use DIN 51502 KP 2 N-20 - K 2 K-20 grease).

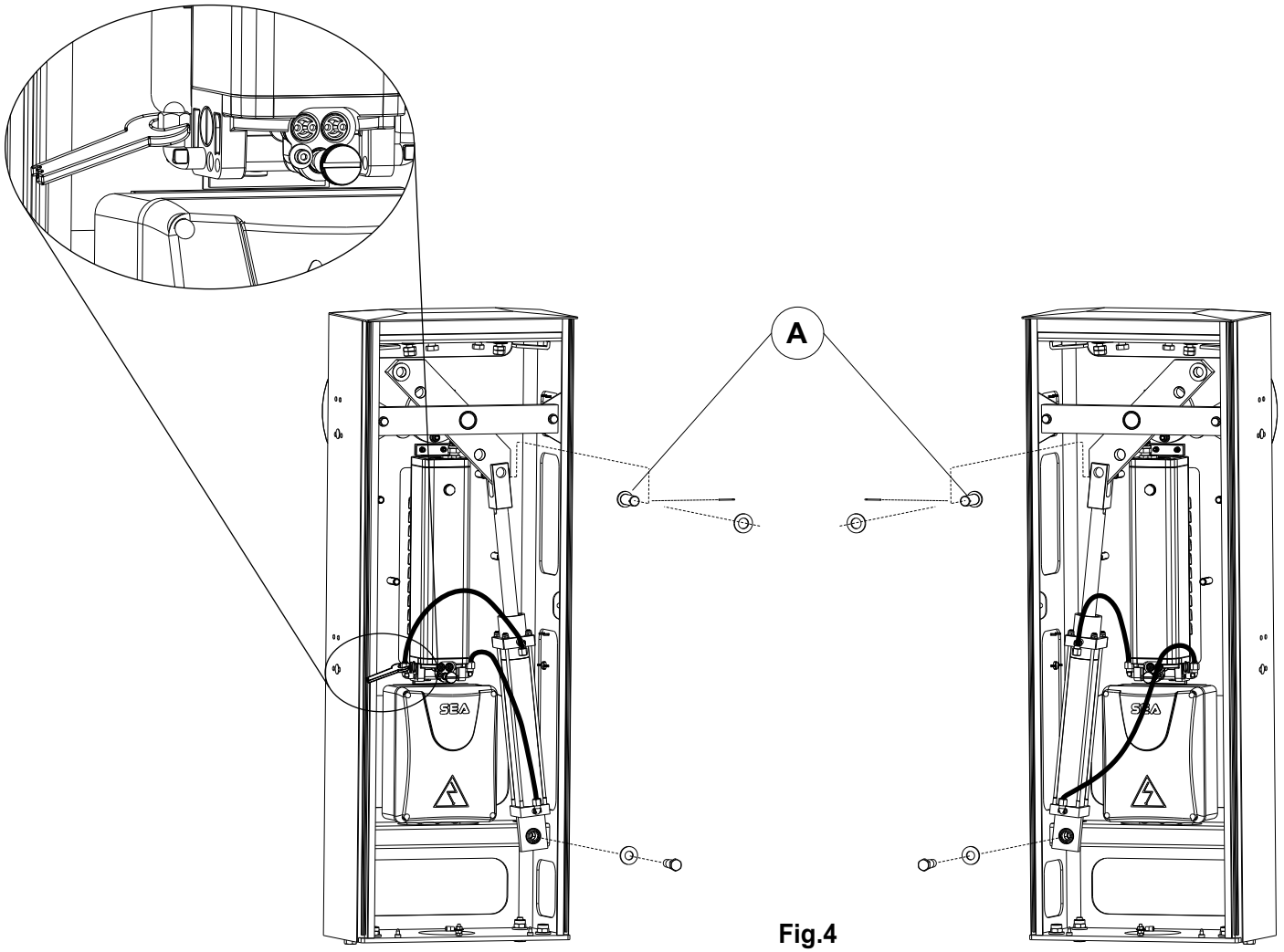


Fig.4

2) Mounting of the spring

Insert the spring in to the carter as shown in Fig.5.

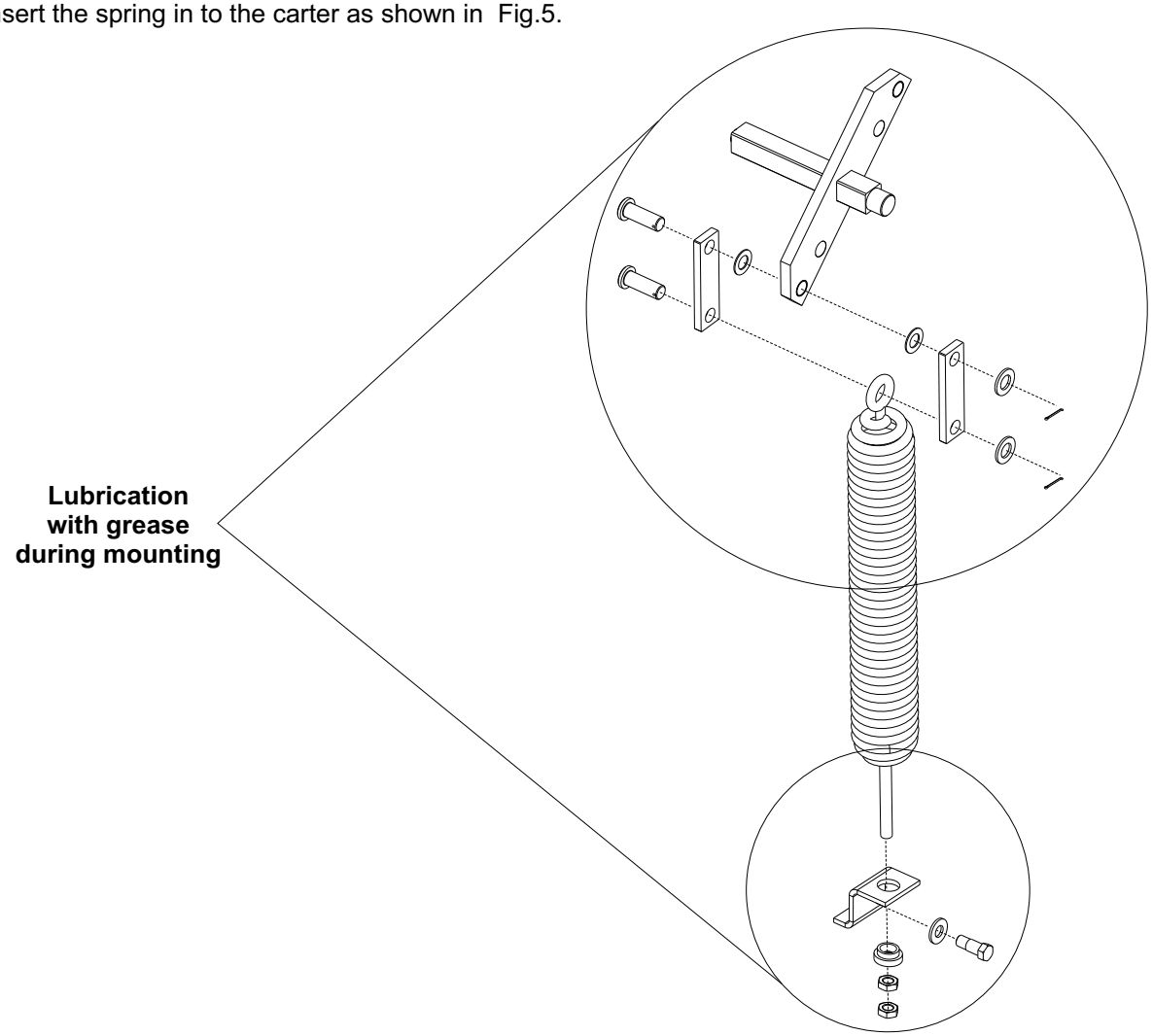


Fig. 5

3) Mounting plate fixing

- Dig a hole 800x600x400

- Widen the foundation plate clamps at 60° (Fig. 6)

- Fill the hole with R425 concrete and place the foundation plate as in Fig. 6.

- Level the plate with care.

* The plate has got a central hole for electric wiring so before filling the hole with concrete put an elettric wire sheathing on the hole.

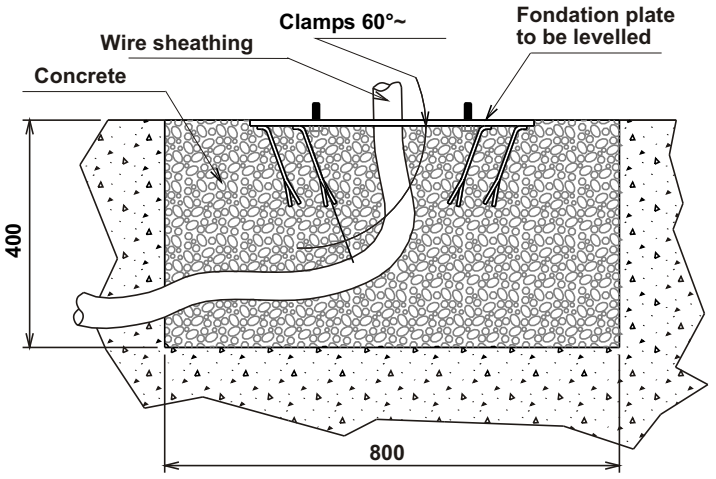


Fig. 6

4) Fixing the column on the foundation plate

- Place the column so that the holes at the base correspond to the screws that emerge from the foundation plate.

- Make sure that the wire sheathing is fixed on the big central hole at the base of the column.

- Tighten the column to the foundation plate screwing the provided nuts and bolts with care.

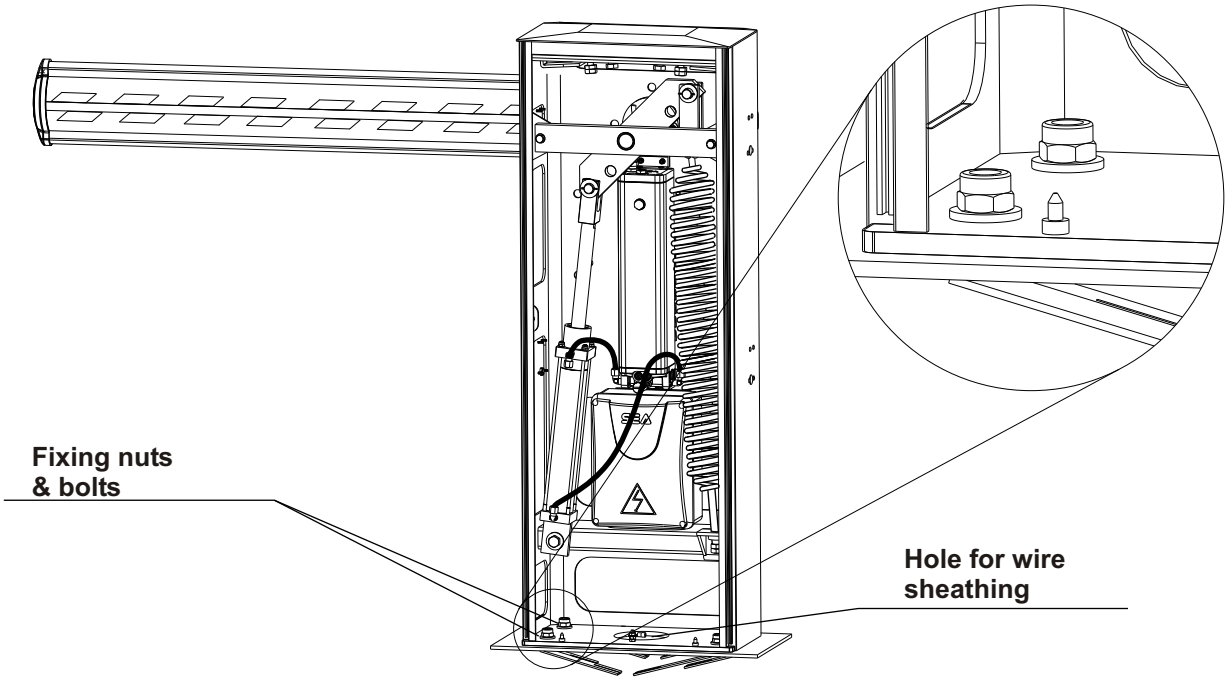


Fig. 7

5) Mounting of the central beam with fork (Fig. 8)

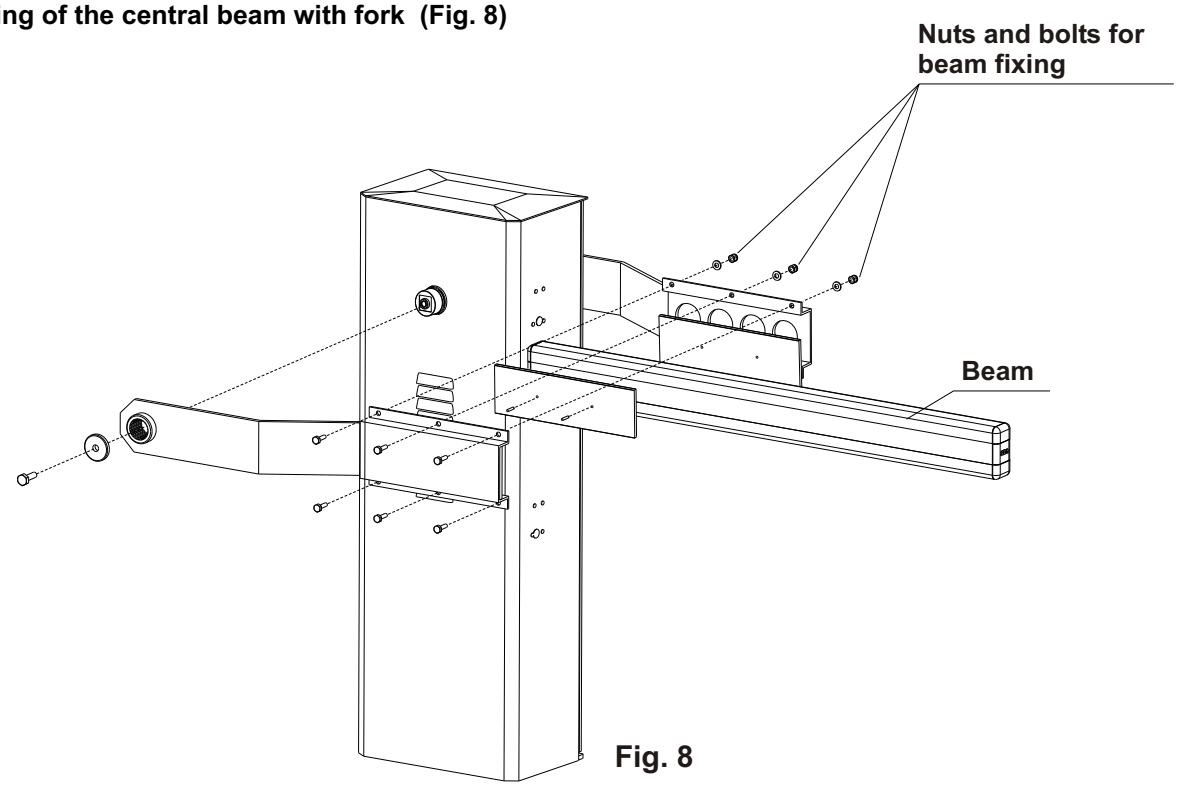


Fig. 8

6) Mounting of the Linear beam (Fig. 9)

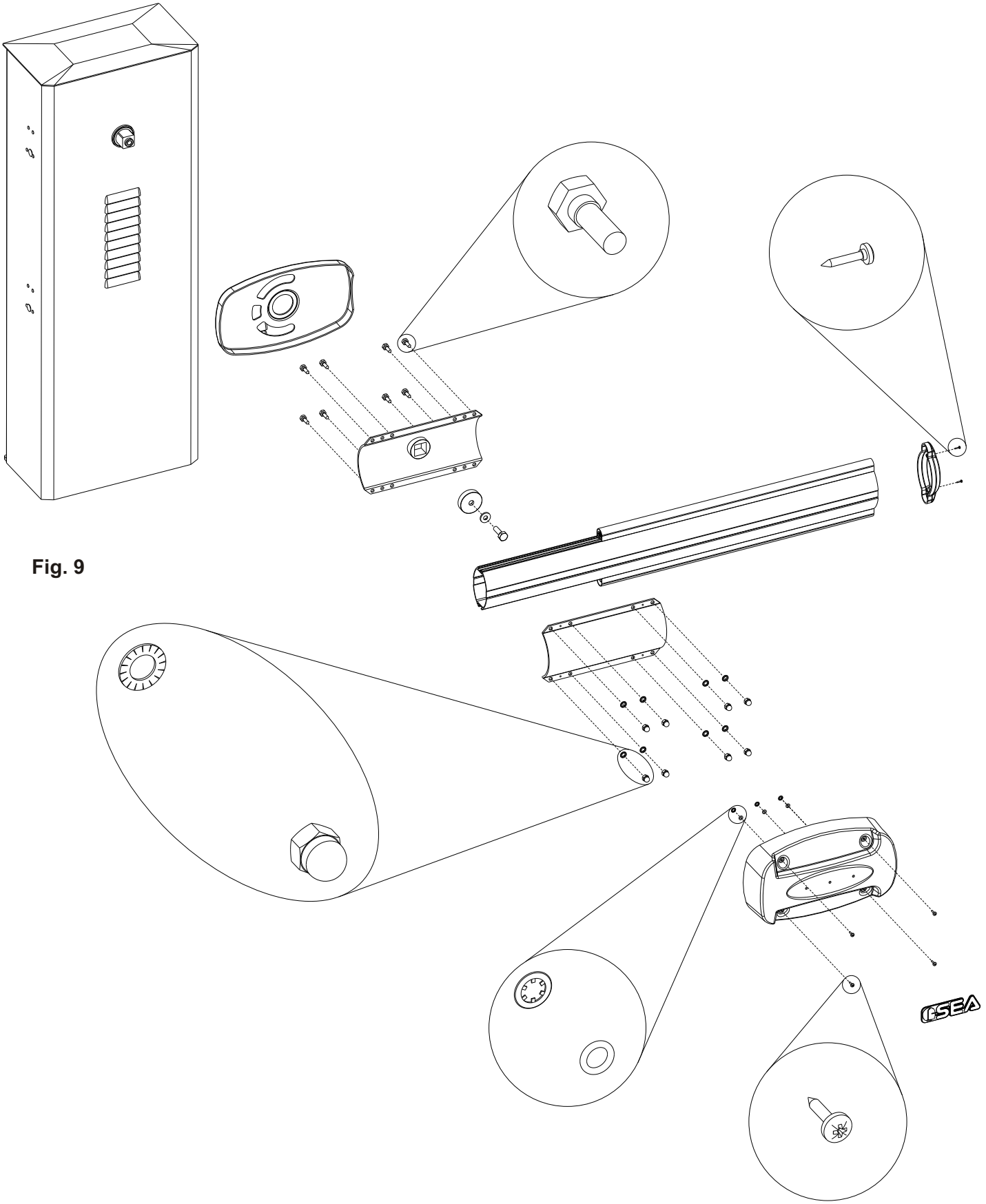


Fig. 9

7) Mounting of the skirt on the beam

N.B.: The skirt can be installed only on lateral mounted beams.

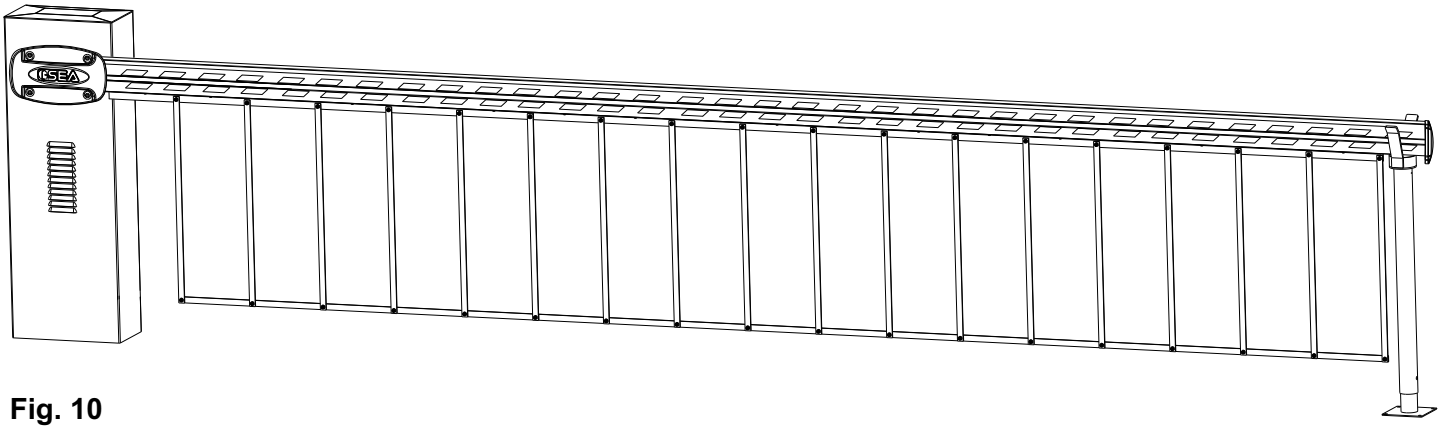


Fig. 10

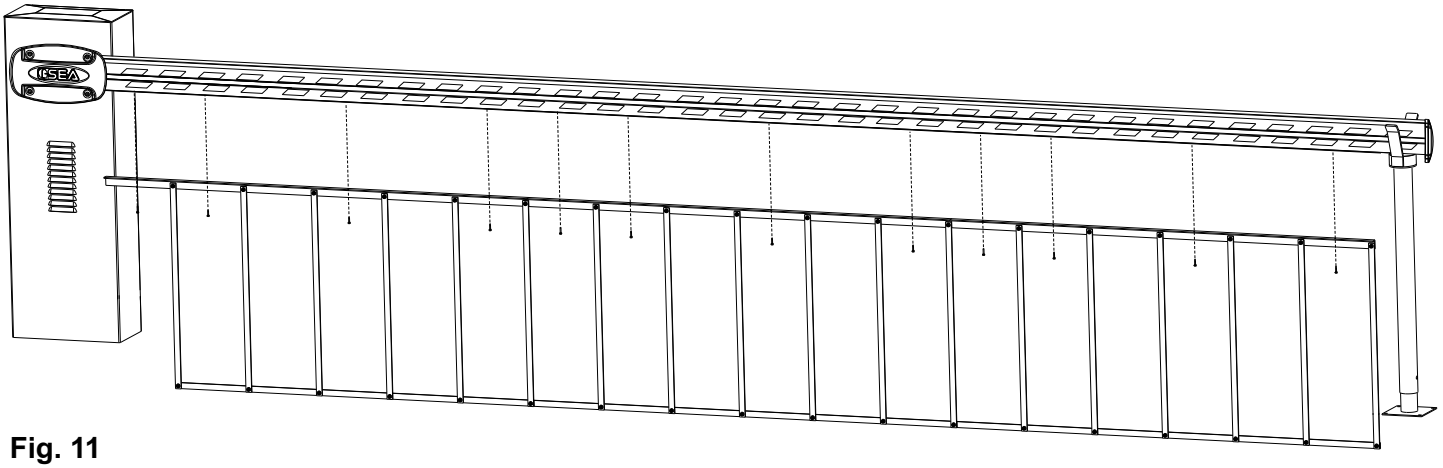


Fig. 11

8) Balancing the spring

- Turn the manual release valve anti-clockwise to release the operator so that the beam can be opened and closed manually.

- Place the beam at approx. 45° and execute the balancing with the nuts of Fig.12.
To obtain a correct balancing the beam must be on 45° and the operator must be unlocked.

- Tight or untight the spring adjusting bolt locknut so that the spring reaches a balance point with the beam at 45° (Fig.12).

- After balancing fix the spring adjusting bolt locknut with the bolt and block the operator.

N.B.: For the correct balancing of the beam it is recommended to unhook the piston from the balance wheel extracting the pivot as in fig.4

9) Barrier power supply

Now it is possible to power supply the barrier with 230V 50/60 Hz.
Check “wiring the connectors” **(paragraph 15)** for more details.

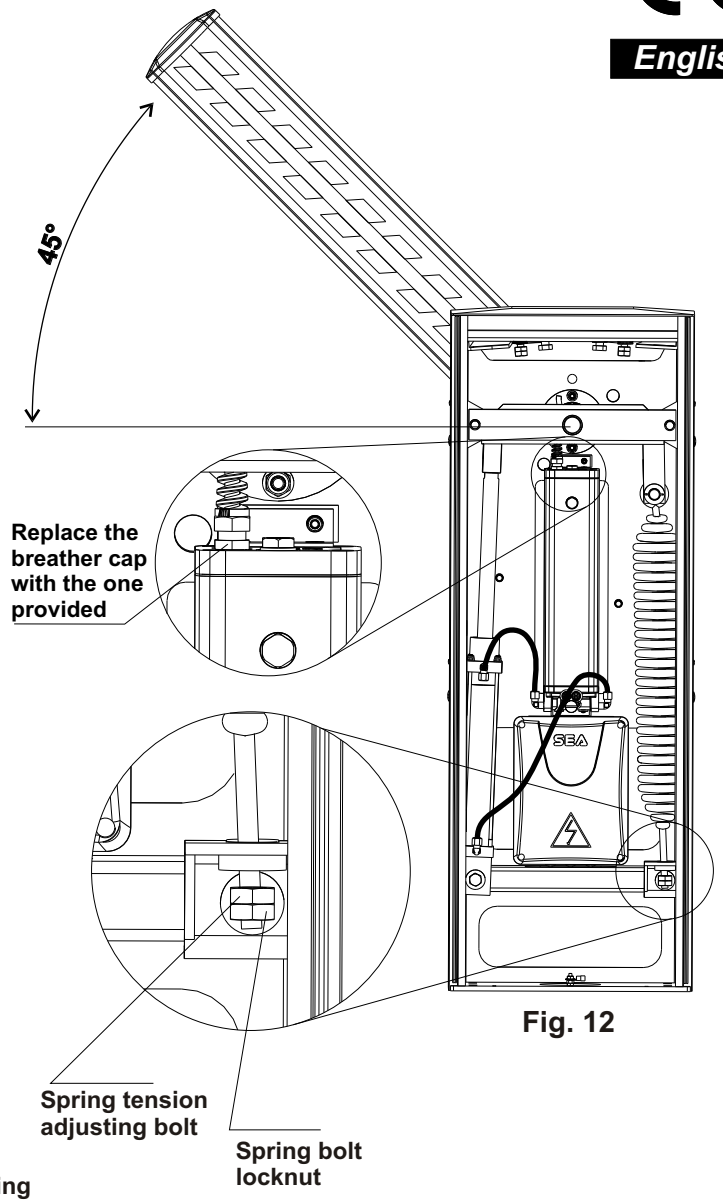


Fig. 12

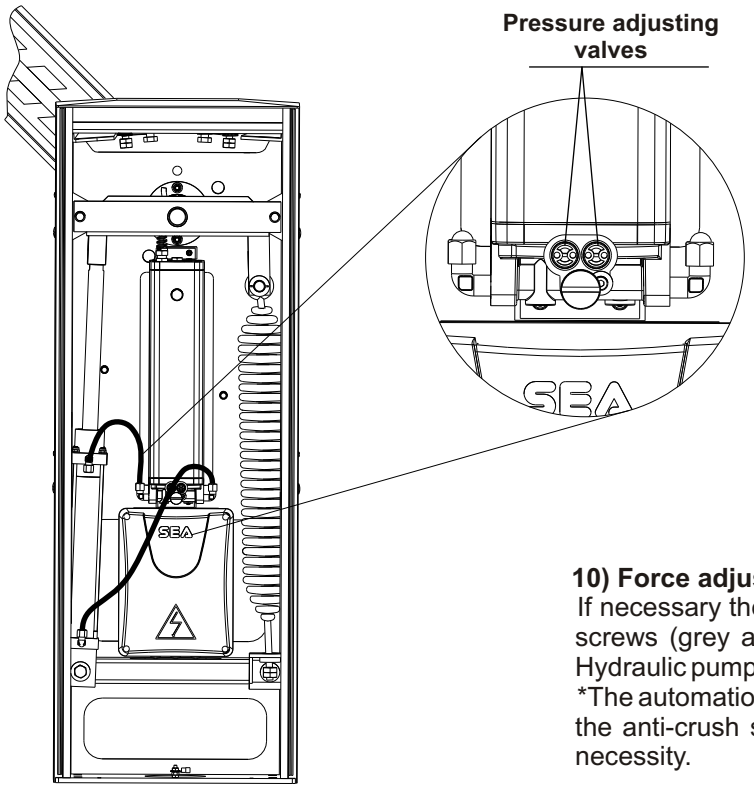


Fig. 13

10) Force adjustment
If necessary the piston force can be adjusted by the two adjusting screws (grey and yellow) placed on the front lower place of the Hydraulic pump unit (Fig. 13).
*The automation is adjusted at 15 Kg force ex works so to guarantee the anti-crush safety. We recommend to adjust it only in case of necessity.

11) Levelling the beam

Important: This manoeuvre must be executed only if at the end stroke the beam is not in perfectly horizontal position in closing or in perfectly vertical position in opening.

- Unlock the actuator through the release screw so that the beam opens and closes manually.

- Release the end stroke screws unscrewing the lock nuts on the limit switch (Fig.14).

- Screw or unscrew the end stroke screws so that the beam stays in perfectly vertical position in opening and in perfectly horizontal position in closing (Fig.14).

- After levelling, fix the end stroke by tightening the lock nuts on the limit switch and block the actuator.

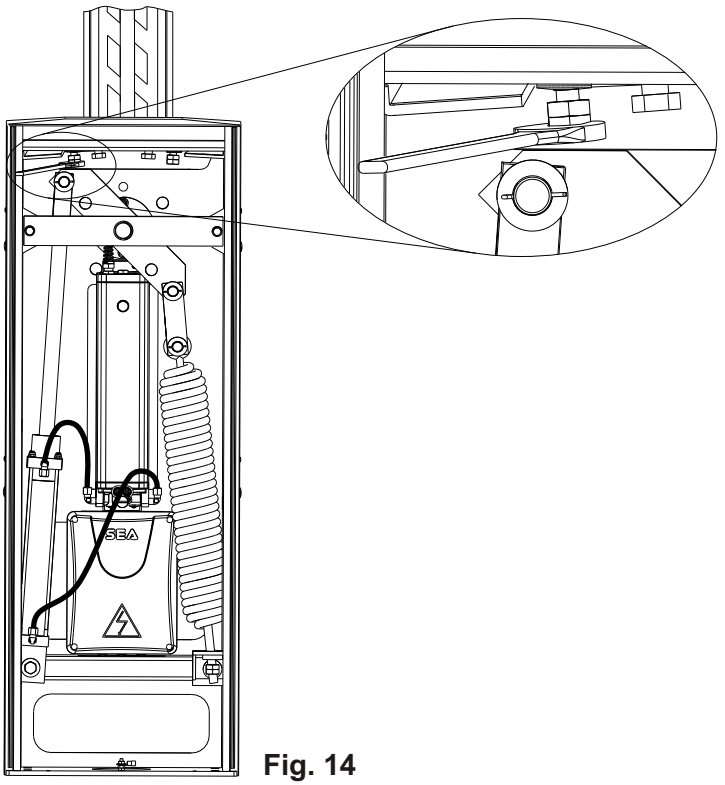


Fig. 14

12) Levelling of the central beam with fork

First extract the screws B, than the screws C (Fig.15).
Continue as described in the preceding paragraph.

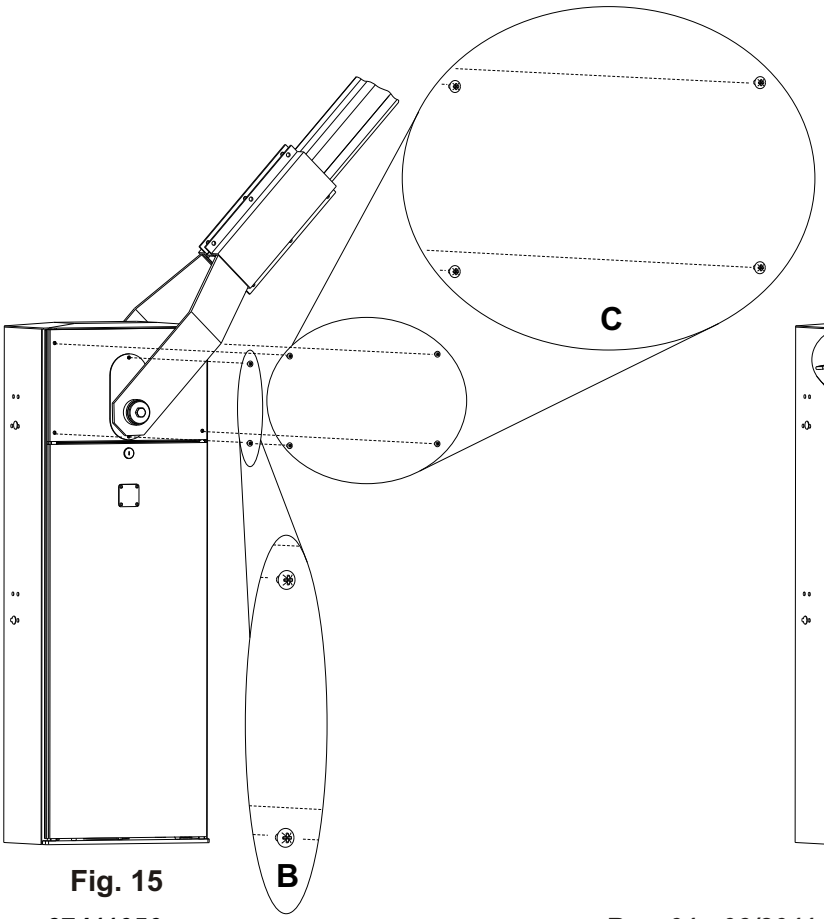


Fig. 15

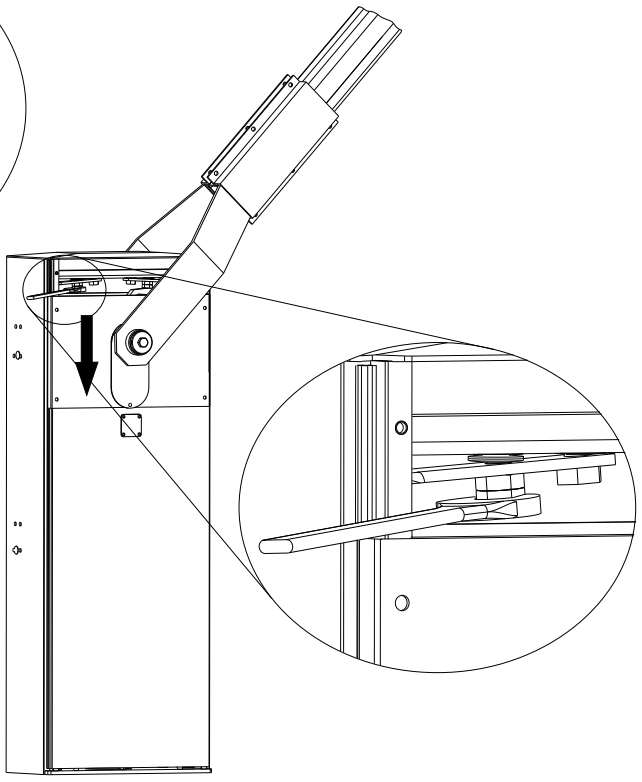


Fig. 16

13) Standard installation

In Fig.17 you find the necessary wiring for the barrier installation.
The two numbers placed next to the electric cables show their quantity and section.

Legend:
1) Electronic control unit
2) Photocell (receiver)
3) Photocell (transmitter)
4) Key switch
5) Radio receiver
6) Warning light
7) Push button board
8) Differential switch

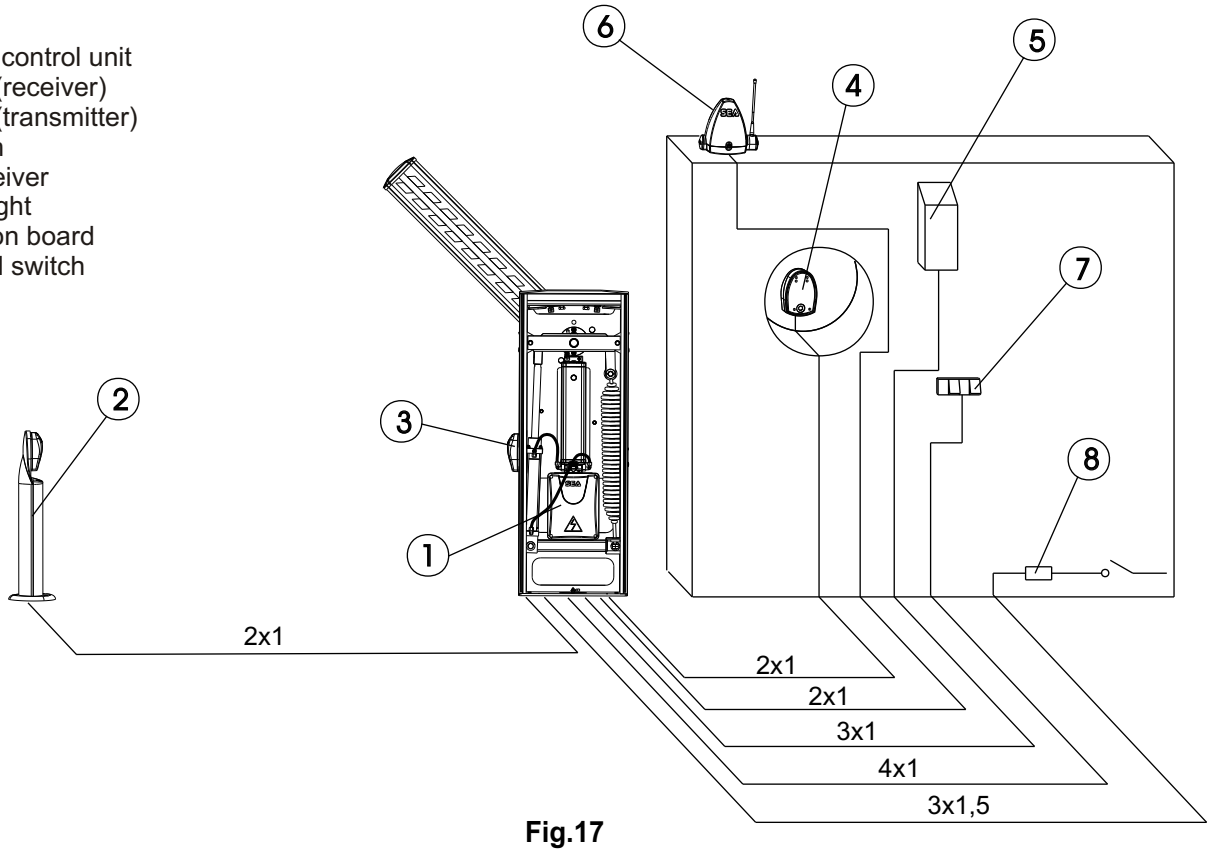


Fig.17

14) Accessories for VELA INDUSTRIALE

KEY SWITCH

SUNSET

SKIRT (ONLY ON SIDE BEAM)

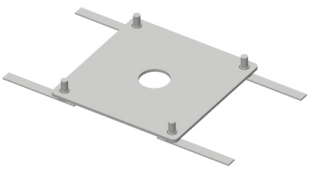
WARNING LAMP

FIXED FORK SUPPORT

ADJUSTABLE FORK SUPPORT

FEXLIBLE FORK SUPPORT

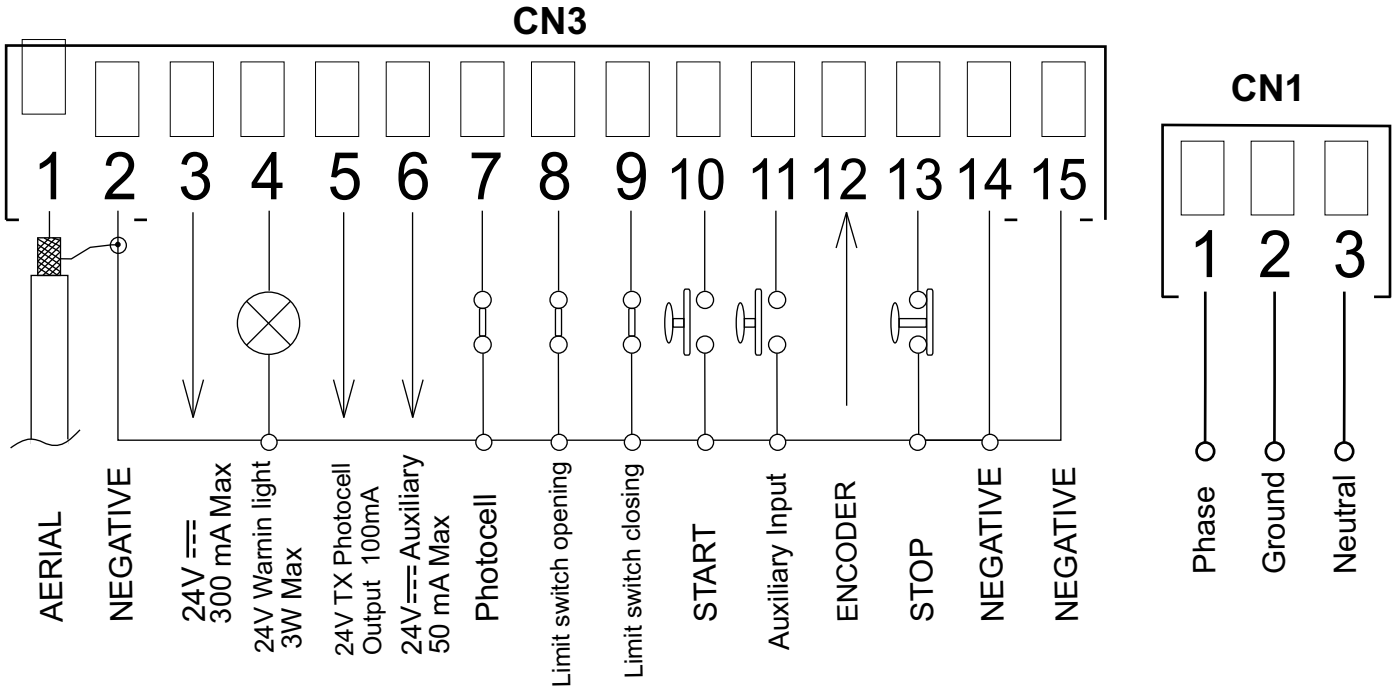
LIMIT SWITCH KIT



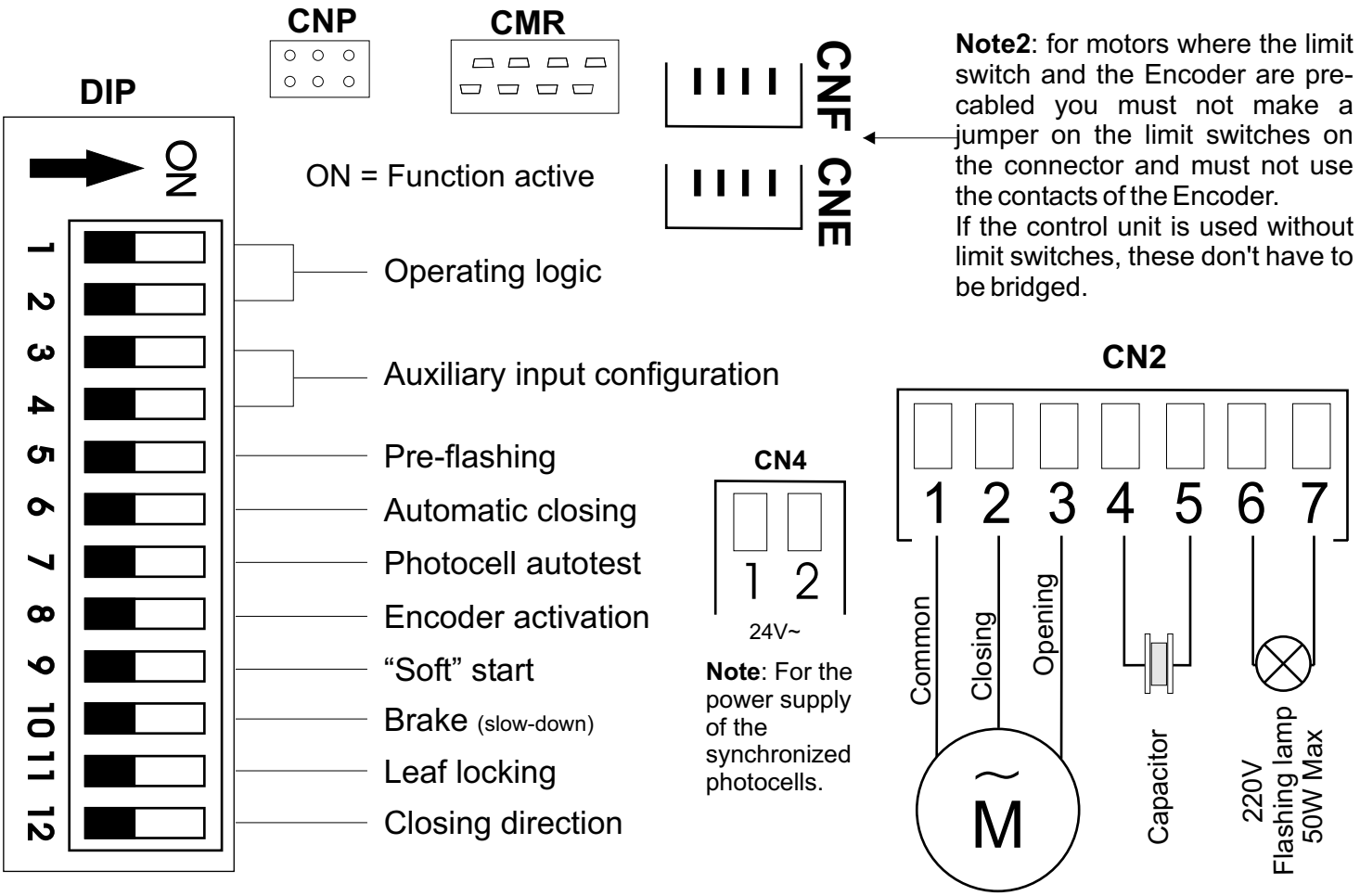
COUNTER PLATE FOR FORK SUPPORT

15) Connectors connection for Gate1 control unit

The electronic control unit is located inside the box. The panel controls all the device functions. It is technologically advanced and you will choose the logic function that suits you most.



Note 1: The 24V⎓ Aux supplies 24 V⎓ during the whole movement of the gate and during the pause when in automatic logic, while in semiautomatic logic only during the gate movement. On this output it is possible to connect a relay with 24V⎓ spool for the activation of a contact for generic use.



Note2: for motors where the limit switch and the Encoder are pre-cabled you must not make a jumper on the limit switches on the connector and must not use the contacts of the Encoder.
If the control unit is used without limit switches, these don't have to be bridged.

Note: For the power supply of the synchronized photocells.

Note3: On the 24V Ph output it is possible to connect a relay for the timed activation of a courtesy light.

To the attention of users and technicians

16) Release system
To release operate as follows:
- Open the door with the delivered special key
- Turn about 90° into anti-clockwise direction the release srew placed on the hydraulic unit.
- Move the beam with the hand

To re-lock operate as follows:
- Turn about 90° into clockwise direction the release screw placed on the hydraulic unit.
- Close the door

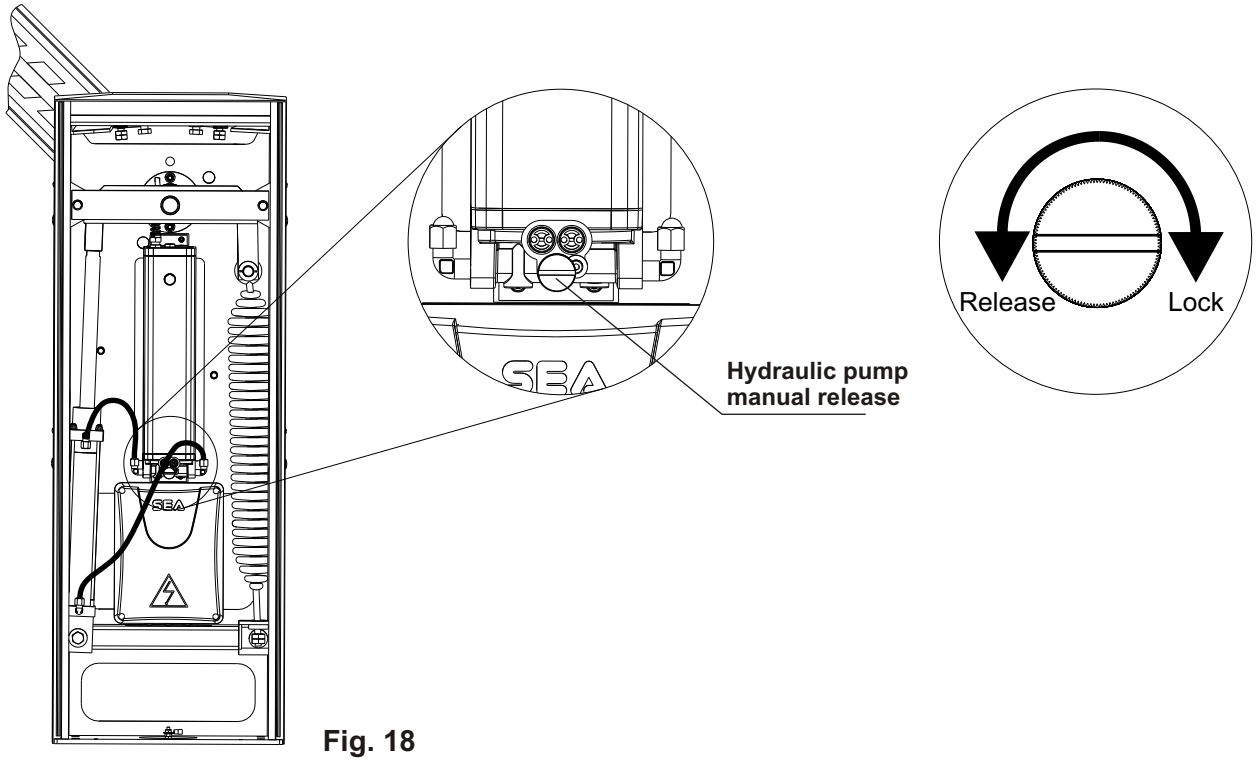


Fig. 18

PERIODICAL MAINTENANCE

Check the functionality of the release	Annually
Lubricate all moving parts	Annually
Check the efficiency of the spring (balancing)	Annually
Check the beam fixing screws, the balance and the casing	Annually
Check the integrity of the connexion cables	Annually
Verify the efficiency of the limit switches (micro-switch)	Annually

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

INITIAL CHECK AND PUTTING INTO SERVICE
After having completed the correct installation of the product VELA INDUSTRIAL, as described in the present manual and after having valued all resting risks which could arise in whatever installation, **it is necessary to test the automation to guarantee the max. security** and in particular way to guarantee the respect of the laws and norms in force. The test must be executed following the **EN12445** ruel which establishes the testing methods for testing the gate operators, respecting the limits foreseen by the **EN 12453 law.**

To the attention of users and technicians

WARNING
The electric installation and the working logic choice must be done according to the existing laws. A 16A - 0,030A differential switch must be foreseen on the source of the operators- main electrical supply and the entire system must be properly earth bonded.
Keep the power cables (motors, power supply) separate from the control cables (push buttons, photocells, radio etc.) . Use two different sheathings to avoid interferences.
Note: Use “cable clips” and/or “duct/box pipes” fittings close to the control panel box so to protect the interconnection cables against pulling efforts.
N.B.: The barrier comes without inversion unit in case of obstacles. For the respect of the laws EN 12453and EN 12445 we reccommend to add external units.

USE
VELA INDUSTRIAL has been designed to be solely used for the automation of barriers.

SPARE PARTS
To obtain spare parts contact:
SEA s.r.l. ZONA Ind.le, 64020 S.ATTO Teramo Italia.

SAFETY AND ENVIRONMENTAL COMPATIBILITY
Do not spoil the environment with product and circuit packing material.

STORAGE

STORAGE TEMPERATURES			
T_{min}	T_{max}	Humidity $_{min}$	Humidity $_{max}$
-40°C	+80°C	5% no condensation	90% no condensation

When being transported this product must be properly packaged and handled with care.

MAINTENANCE AND OUT OF SERVICE
The decommission and maintenance of this unit must only be carried out by specialised and authorised personnel.

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

NOTE: THE MANUFACTURER CAN NOT BE DEEMED RESPONSIBLE FOR ANY DAMAGE OR INJURY CAUSED BY IMPROPER USE OF THIS PRODUCT

SEA reserves the right to modify or adjust the products and information provided in this manual with no obligation to notice.
