



**SEA**® USA  
ELECTRONIC  
OPENING  
SYSTEMS  
International registered trademark n. 2.777.971

# TORG

## FITTING AND CONNECTION INSTRUCTIONS



**TORG** is composed by an aluminum pressure die-cast monobloc, into which reduction gears are contained. If there is an obstacle in front of the gate while it is moving, the **mechanical clutch** guarantees the **anti-crushing safety**.

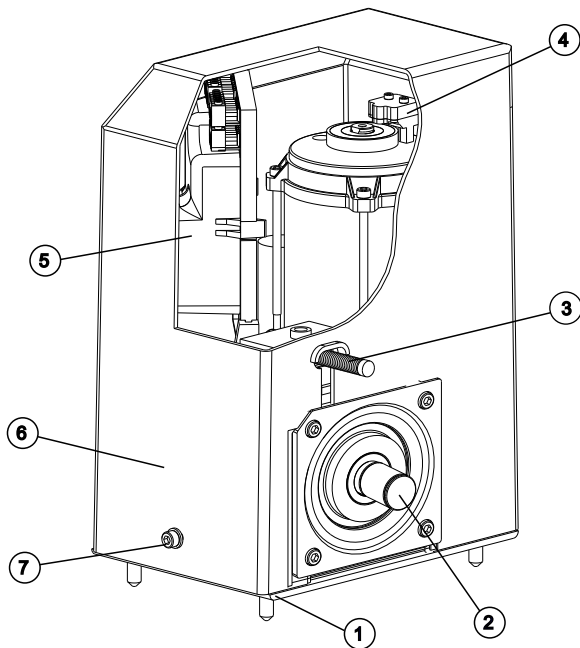
In case of power supply or servicing lacking, **TORG** has a release system which allows the uncoupling of the gears in a rapid and easy way through a key supplied with the operator.

The limit switch is of mechanical type.

The electronic managing equipment together with the **encoder** (optional fitting purchasable separately) keeps control on all the functions of the automation system and on the reversing of the movement in case of obstacle.

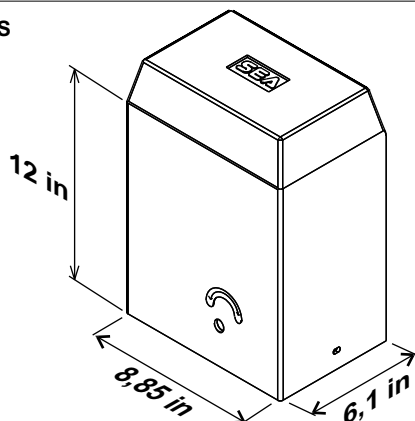
### MAIN PARTS NOMENCLATURE

- |                           |                           |
|---------------------------|---------------------------|
| 1 Mounting plate          | 5 Electronic control unit |
| 2 Pinion group connection | 6 Carter                  |
| 3 Mechanical limit switch | 7 Fixing carter screw     |
| 4 Encoder                 |                           |



TECHNICAL DATA	Torg 600	Torg 800
Power supply	115 V (±5%) 50/60 Hz	
Power	320 W	340 W
Motor rotation speed	1450/1720 rpm	
Reduction ratio	1/32	
Room temperature	-4°F +131°F	
Thermal protection intervention	266°F	
Weight of the unit	29,7 Pound	30,8 Pound
Capacitor	45uF	60uF
Protection rating	IP44	
Gate speed	32,8 feet/min	
Maximum weight of the gate	1323 Lbs	1764 Lbs
Mechanical limit switch		

### DIMENSIONS



## 1. GATE ARRANGEMENT

The first thing to check is that the gate is in good running order as follows:

- The gate is rigid and straight and runs smoothly throughout its travel.
- The lower track is in good order, straight and levelled.
- The lower support wheels have sealed bearings or grease points.
- The top guide must be manufactured and installed so that the gate is perfectly upright.
- Physical gate stops must be fitted to prevent the gate coming out of its guides and track.

## 2. MOUNTING PLATE INSTALLATION

To install the mounting plate it is necessary to:

**2.1.** Have a mounting plate manufactured to the dimensions shown in Fig. 1. The plate will require to have concrete holding into which the foundation plate and the anchor bolts will be walled up. It is best if the gate structure allows the plate to be raised up from the finished level by 1,96 in. This will stop water gathering around the operator.

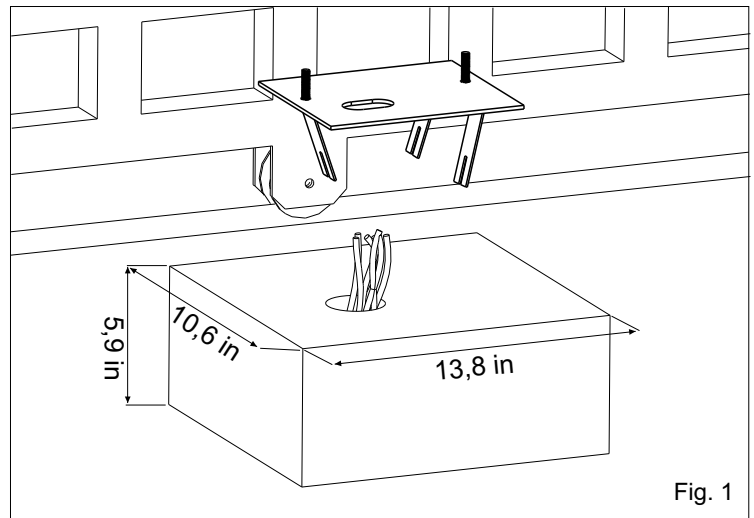


Fig. 1

**2.2.** When you are concreting in the plate install any necessary cable ducts (Ø 1,38 in minimum) and cables in through the base plate. Cable ducts should have sweep bends not elbow ones.

**2.3.** When concreting in the plate check that the plate is perfectly levelled and that the measurement of 1,96 - 2,16 in given in Fig. 2 is followed.

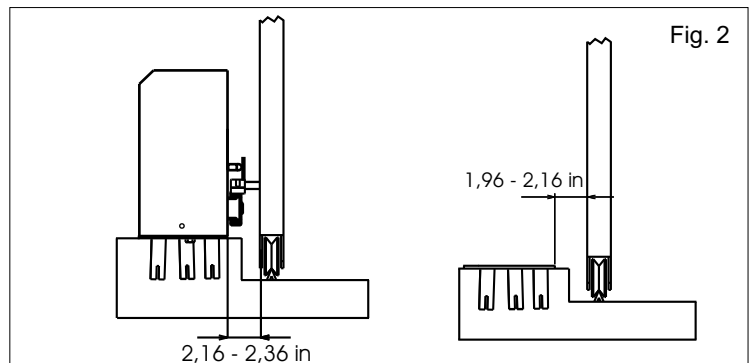


Fig. 2

## 3. FITTING OF THE UNIT

**3.1.** Take the carter away unscrewing the screws placed in the two sides of the motor reducer.

**3.2.** Adjust the motor reducer height using the four supplied grains (Fig. 3) respecting the quotes mentioned in Fig. 2. The adjusting grains can be used to correct a previous and imperfect levelling of the foundation plate.

**3.3.** Fix the motor reducer to the foundation plate with the supplied dices and washers (Fig. 4)

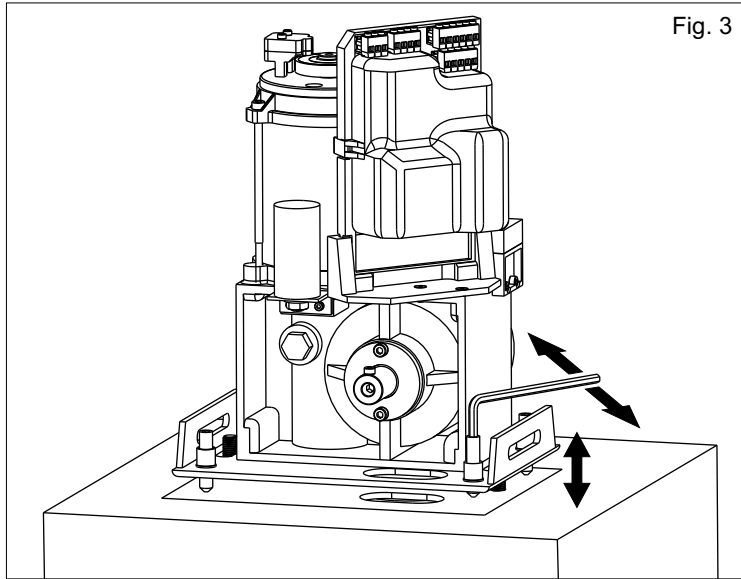


Fig. 3

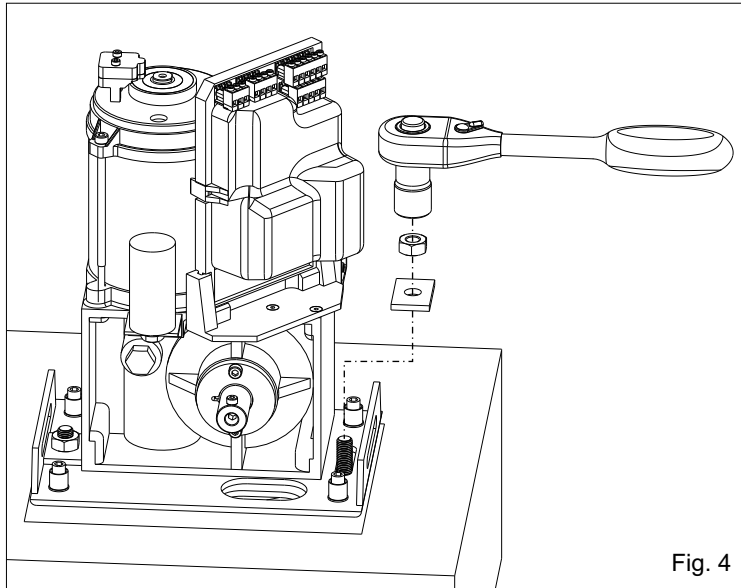


Fig. 4

## 4. RELEASE SYSTEM

### 4.1. To release act as follows:

- Open the little door of the release turning it towards the right or the left side to enter the release system (Fig. 5)
- Insert the hexagonal T-shaped key without forcing and turn it clockwise until it stops (Fig. 6).
- Close the little door
- Open or close the leaf by hand.

### 4.2. To stop again act as follows:

- Open the little door of the release turning it towards the right or the left side to enter the release system
- Insert the hexagonal T-shaped key and turn it anti-clockwise.
- Move the leaf in both directions **by hand** until the unit mechanism reconnects.
- Close the little door

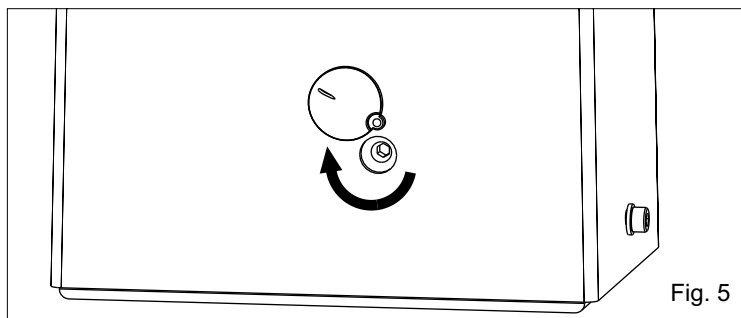


Fig. 5

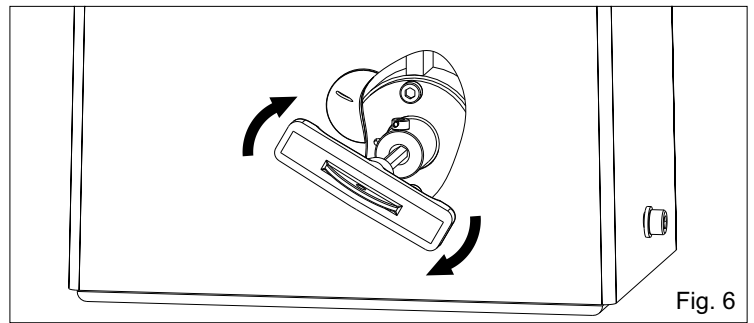


Fig. 6

### Important:

For a higher security, SEA advises to install infrared photocells and a magnetic encode.

## 5. ASSEMBLING OF THE CHAIN SYSTEM

The assembling of the main parts which include the whole chain automation is illustrated in Fig. 7.

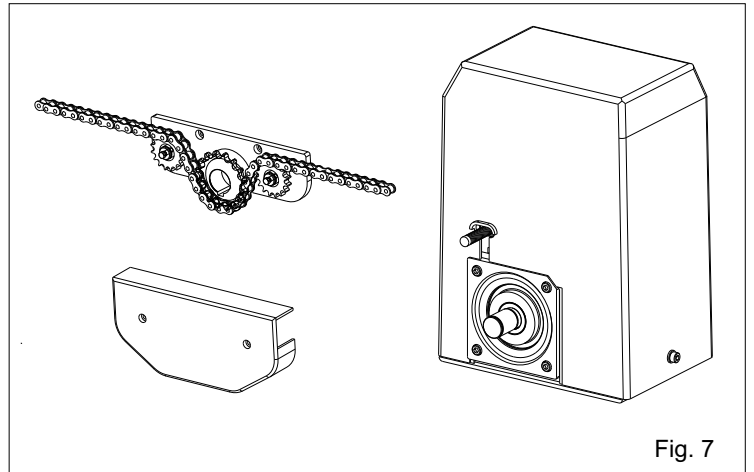


Fig. 7

In the pictures 8 and 9 it is possible to see the correct installation with opened and closed gate respectively; notice the obliged run of the chain inside the pinion group which must not be modified.

For a correct installation follow carefully the indications written below:

**5.1.** Weld two strong pierced brackets to the two extremities of the gate to couple the chain.  
**Notice: the holes for the chain tensioner and so the chain itself must be to a minimum distance of 1,77" from the gate (Fig. 10).**

**5.2.** Install the chain making it pass through the pinion group as in Fig. 7. The chain must be always in line both vertically (Fig. 8) and horizontally (Fig. 10), if not perfectly aligned (Fig. 11 and 12) it may derail from the pinion group or the motor reducer risks a greater effort not allowing the right operating of the system.

**5.3.** Set up a fillet chain tensioner to the two extremities of the gate to regulate the tension of the chain.

**Notice: do this last operation with the engine completely unlocked through the special unlocking key (4.).**

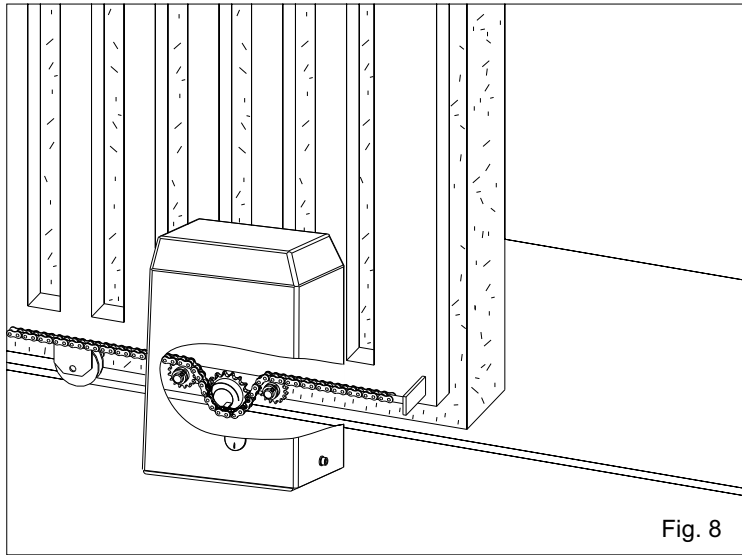


Fig. 8

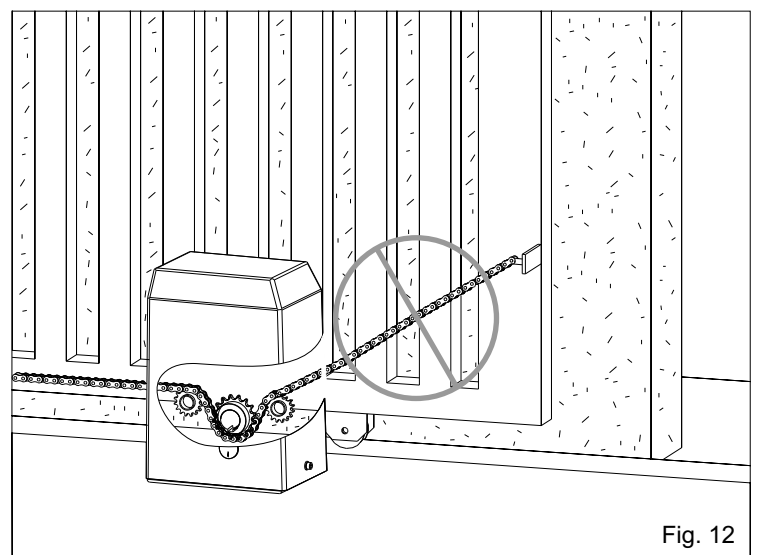


Fig. 12

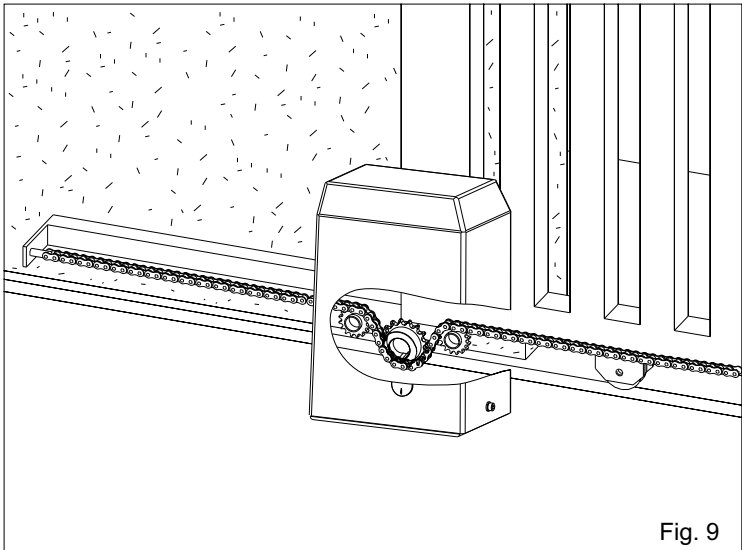


Fig. 9

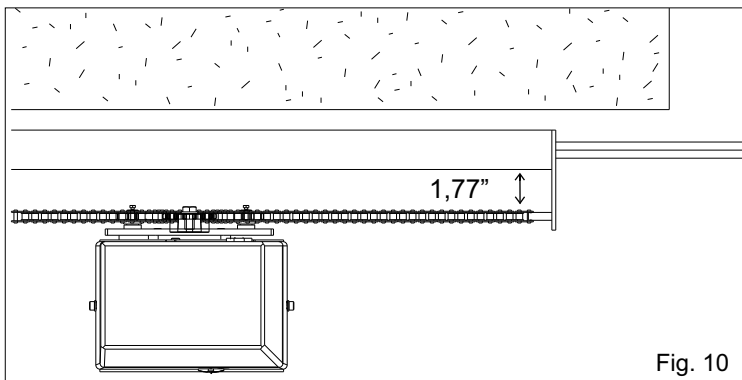


Fig. 10

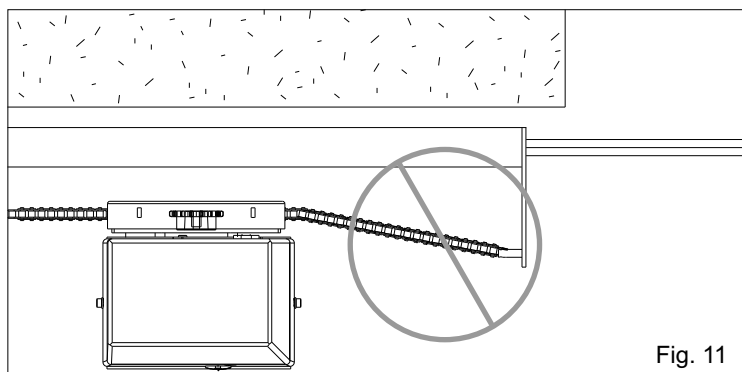


Fig. 11

## 6. GROUNDING (Fig. 13)

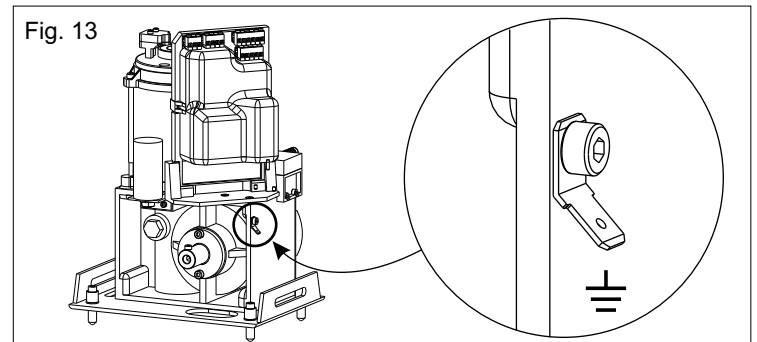


Fig. 13

## 7. CABLE LAYOUT (Fig. 14)

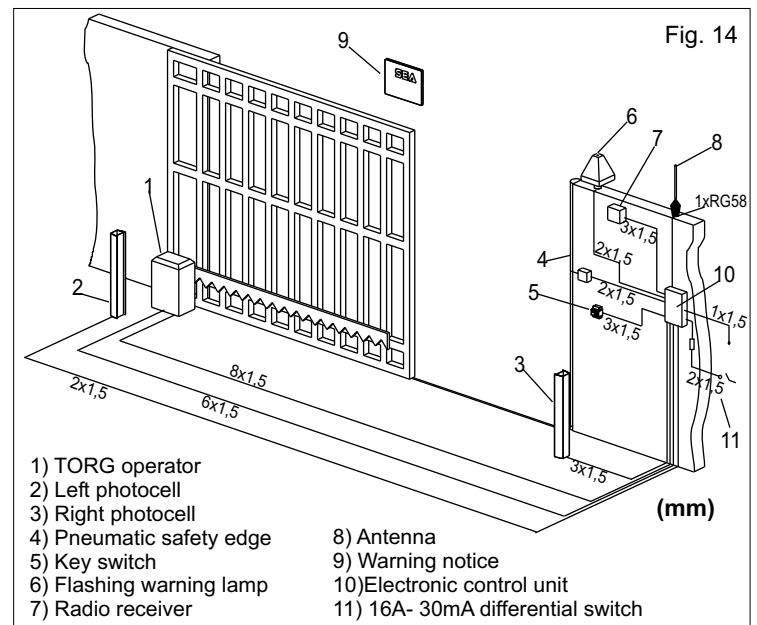
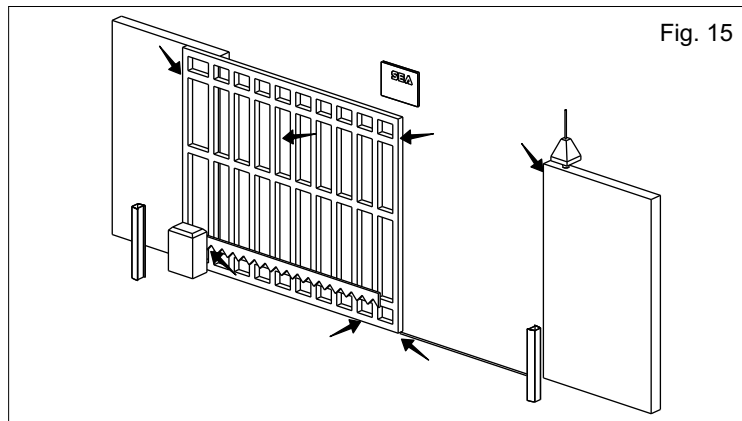


Fig. 14

- 1) TORG operator
- 2) Left photocell
- 3) Right photocell
- 4) Pneumatic safety edge
- 5) Key switch
- 6) Flashing warning lamp
- 7) Radio receiver
- 8) Antenna
- 9) Warning notice
- 10) Electronic control unit
- 11) 16A- 30mA differential switch

## 8. RISK EXAMINATION

The points pointed by arrows in Fig. 15 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 the installation has been made.)



## NOTICE

SEA s.r.l 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 (according to Machine Law) will be nullified if SEA Srl 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. This is a quotation from the GENERAL DIRECTIONS that the installer must read carefully before installing. Packaging materials such as plastic bags, foam polystyrene, nails etc must be kept out of children's reach as dangers may arise.

## PERIODICAL MAINTENANCE

Check the release function	Annual
Verify the functioning of the electronic clutch	Annual
Check the distance between the pinion and the rack (1.5 mm)	Annual
Check the wear condition of the pinion and of the rack	Annual
Check the fixing screws	Annual
Check the integrity of the connection cables	Annual
Check the function and the limit switch condition in opening and closing and the related plates	Annual

All the above described operations must be made exclusively by an authorized installer.

## DECLARATION OF CONFORMITY

SEA declares under its responsibility that the product

*Torg*

meet the essential requisites provided for by the following European Directive and following changes:

**89/392/CEE (Machine Directive)**

**89/336/CEE (Electromagnetic Compatibility Directive)**

**73/23/CEE (Low Tension Directive)**

### SAFETY PRECAUTIONS:

All electrical work should conform to current regulations. A 16 A 0,030 A differential switch must be incorporated into the source of the operators main electrical supply and the entire system properly earth bonded. Always run mains carrying cables in separate ducts to low voltage control cables to prevent mains interference.

### INTENDED USE:

The Torg operator has been designed to be solely used for the automation of sliding gates.

### SPARE PARTS:

To obtain spare parts contact:

**SEA USA Inc. 10850 N.W. 21st unit 160 DORAL MIAMI Florida (FL) 33172**

### SAFETY AND ENVIRONMENTAL COMPATIBILITY:

Don't waste product packing materials and/or circuits.

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.

**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 do changes or variations that may be necessary to its products with no obligation to notice.*



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