

# OPERATOR

GENERAL INFORMATION	2
DELIVERY SET	2
SAFETY INSTRUCTIONS	3
TOOLS	5
OPERATOR COMPONENTS	5
INSTALLATION	6
EXTREME POSITIONS ADJUSTMENT	8
RELEASE OPERATION	9
MAINTENANCE	9

Installation and Operating Manual

## 1. GENERAL INFORMATION

The electromechanical linear operator is intended for automation of a street double-leaf swinging gate with the load-bearing structure.

The body of the operator consists of 2 silumin parts, in which a motor, a reducer and a lead screw are positioned.

The operator is equipped with built-in electrical end switches for opening and closing.

The self-blocking system, consisting of a worm gear and a planetary gearbox blocks gate leaves, if the motor is off. The easy-to-use and safe release system allows to open/close manually the leaf, in case of power cut or any troubles in the control unit. Operation of the automatic system is controlled from the remote control unit, which is protected with a shockproof and hermetic case.

### 1.1. Range of Use

#### Swing-500

Leaf width	m	Leaf weight	kg
2.00		1000	
2.50		800	
3.00		600	
4.00		500	
5.00		400	

#### Swing-300

Leaf width	m	Leaf weight	kg
2.00		800	
2.50		600	
3.00		400	

### 2.2. Specifications

<b>Weight</b>	Swing-500 — 11 kg, Swing-300 — 10 kg
<b>Supply voltage</b>	220V, 50Hz
<b>Current consumption</b>	1.2A
<b>Capacity</b>	150W
<b>Intensity</b>	50%
<b>Ingress protection rating</b>	IP54
<b>Gear ratio</b>	1/36
<b>Rod speed</b>	1.5cm/sec
<b>Force</b>	3000N
<b>Temperature range</b>	-40...+55 °C
<b>Capacitor</b>	10mf

## 2. DELIVERY SET

After receiving the operator, unpack it and make sure, that the operator is not damaged. If any damages are found, please contact the supplier of the operator.

**A standard components set of operator SW-500KI T/SW-300KI T includes:**

No	Name	Quantity
1	Operator	2
2	Rear fastening bracket	2
3	Front fastening bracket	2
4	Set of fasteners	1
5	Control unit with case	1
6	Key-switch	1
7	Signal lamp	1
8	Photo cells	1
9	User manual	1

### 3. SAFETY INSTRUCTIONS



**For safe operation of the automated gate, do observe these installation instructions.**

- Incorrect installation can cause serious damage to persons and property.
- Before installation read carefully this manual.
- Do not make any modifications in the automated system, which are not mentioned in this manual.
- The operator SWING is intended for automation of swinging gates. Do not install the operator for uses other than indicated in this manual.
- To fasten the product, use the supplied hardware or other suitable.
- Check if the gate conforms to the standards EN12604 and EN 12605 (see documentation accompanying the gate). For countries, which are not EC members, the above mentioned requirements shall be met in order to obtain an appropriate safety level.
- Make sure, that the gate is correctly operational and equipped with mechanical end limits.
- Check periodically for tear and wear indications the installation, particularly, cables.
- Do not use the operator if it is observed to function improperly or requires adjustment, as installation defects or non-balanced door can cause injury.
- The operator is not appropriate for the usage with doors, which opening diameter exceeds 10mm or which have an edge or a protruding part, that can be seized or stopped by a person.



**When installing it is strictly recommended to observe the following:**

- Obtain the tools indicated in section "Tools" of this manual.
- When performing operations at a height, use a stable support.
- Protect your face and hands adequately when making holes with a drill.
- Do not let children play near the moving gate.
- Remove any restrictions' in the coverage area of the automatic system before its start.
- Before automatic opening the gate, make certain, that the mechanical lock is open.
- Install the external control devices at a height not less than 1.50 m where visible and far enough from the automatic system, so that the user is prevented from coming into contact with the gate while operating the controls.
- The operator is not intended for installation at a height exceeding 2.5 m.



**After you have finished installing:**

- Use the automatic system SWING, observing operating instructions.
- Fill in regularly maintenance register.
- A warning label must be fixed permanently on protruding parts or near the stationary control.
- A permanent fixed label, related to the manual release, must be placed near the proper elements of the operator.
- The automatic system SWING is maintenance-free.



**IMPORTANT! DANGER.**

If the supply cable is damaged, a cable of proper type shall be used as a replacement. Cable replacement is to be carried out by qualified personnel in the service-centre.



**ATTENTION: Important safety instruction. To avoid injury, follow the instructions contained in this manual. Save this manual.**

**Materials and accessories (if available) for installation of the operator SWING:**

- Cable 2×0.5 mm<sup>2</sup> (photocell transmitter, stepped control button)
- Cable 4×0.5 mm<sup>2</sup> (photocell receiver)
- Cable 3×1.5 mm<sup>2</sup> (supply)
- Use the cables with proper voltage insulation.



Have a qualified technician lay the cables 230V AC.

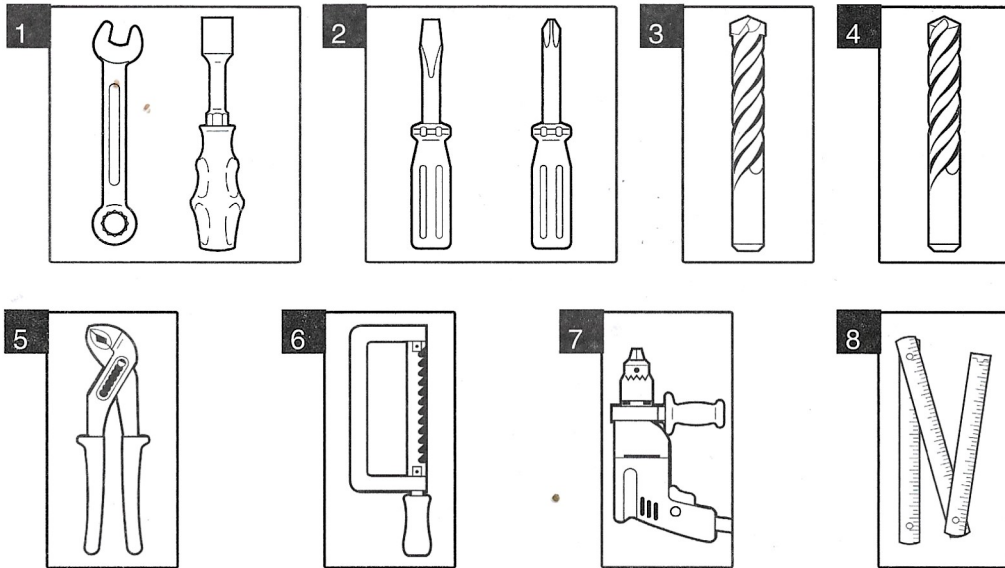
Cabling shall be protected by protective flutes, avoid contact of the cables with moving parts of the gate.



## SAFETY AT INSTALLATION

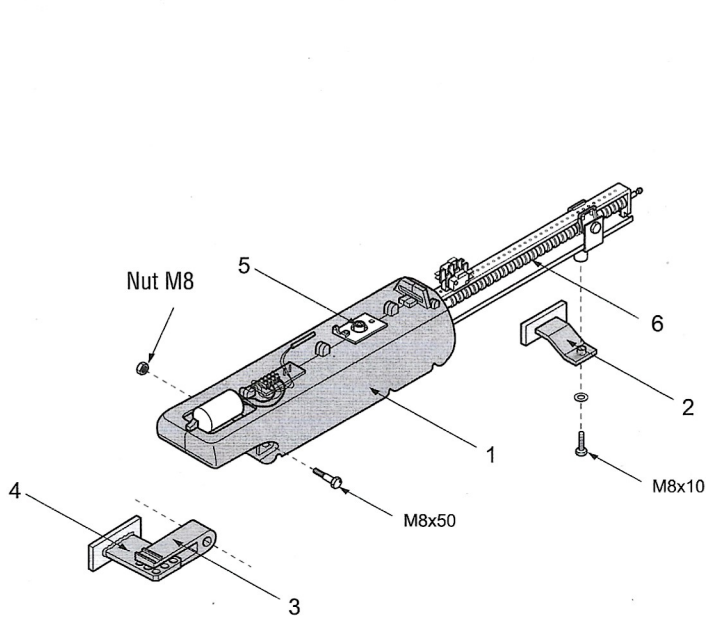
1. ATTENTION! Read carefully these instructions, incorrect installation and improper use of the operator can cause injury of people.
2. Before installation read carefully this manual.
3. Remove the packing of this product and dispose of it. Do not leave the packing material within reach of children.
4. Save this manual for possible maintenance during the operational life of the operator.
5. This product was designed for automation of swinging gates, other uses can cause injury to people.
6. Company shall not be held responsible in case of injury or other health impairment caused by unintended use of the operator.
7. Do not install the equipment in premises with quick-inflammables materials or in other dangerous environments, because it can cause explosion or fire.
8. Mechanical units of the gate shall be constructed and installed in accordance with the standards EN12604 and EN 12605.
9. Company is not responsible in case of incorrect installation of the product and if it is damaged during operation.
10. The installation must be performed in accordance with the standards EN12453 and EN 12445. For countries, which are not EC members, these requirements are to be met.
11. Before carrying out the works, de-energize the system.
12. The automatic system shall be connected to the mains supply through an automatic switch. At that the distance between the contacts shall not be less than 3 mm. It is recommended to use the automat 6A.
13. The safety devices of the operator protect against hazard of pinch through the gate while opening.
14. Company is not responsible for unstable work of the automatic system, if the safety devices and accessories, which were produced by other manufacturers and without agreement with company, are used.
15. Use the accessories of the company, as the accessories of other manufactures can cause failure of the system.
16. For maintenance, use only company original parts.
17. Do not make modification in the components of the automatic system.
18. Be sure, that the installer has instructed you how to release the gate in case of emergency and on the proper operation and maintenance of the automatic system.
19. Do not let any people to be in the operation area of the automatic system when it is working.
20. Never let children play and be in the operation area of the automatic system, under the gate and near the gate, when the gate is moving and the operator is running.
21. Passage is allowed only after the gate has been stopped and the operator is switched off.
22. Have only qualified personnel, which was trained in the authorized centre company, carry out repairs.
23. Check good working condition of the safety sensors monthly.
24. Maintenance: make diagnostics of the system SWING at least once a half-year, pay special attention to the gate travel smoothness in the released state and to good working condition of the release.
25. It is forbidden to perform operations, which are not permitted by this manual.

## 4. TOOLS



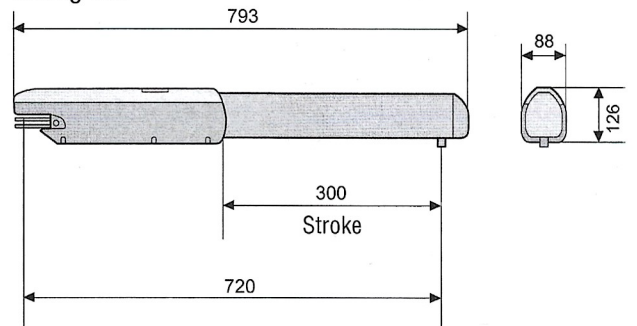
1. Set of spanners
2. Set of screwdrivers for cross-head and cut-head screws
3. Set of metal drills
4. Set of concrete drills
5. Flat-nose pliers
6. Metal hacksaw
7. Electric drill
8. Folding rule

## 5. OPERATOR COMPONENTS

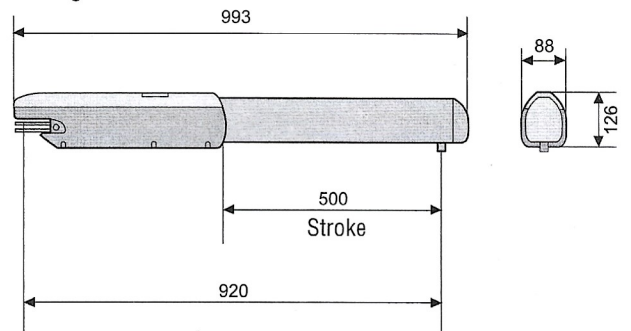


1. Operator
2. Front bracket
3. Rear fork
4. Rear bracket
5. Release unit
6. Lead screw

### Swing 300



### Swing 500



## 6. INSTALLATION



Before installation make sure, that the gate move free and it is possible to fasten reliably the operator on the pole and the leaf.

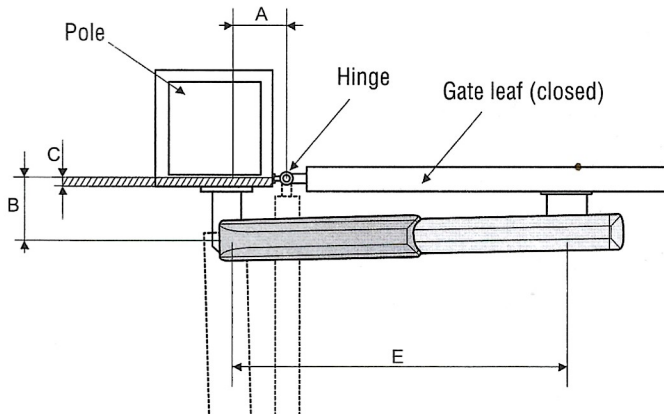
Installation of the operator is shown below:

### 6.1. Inward Gate Opening



Attention! Make certain, that the dimension C does not exceeds the value indicated in the table. Otherwise it is necessary to improve the pole according to the indicated dimension value.

Install the operator as shown below:

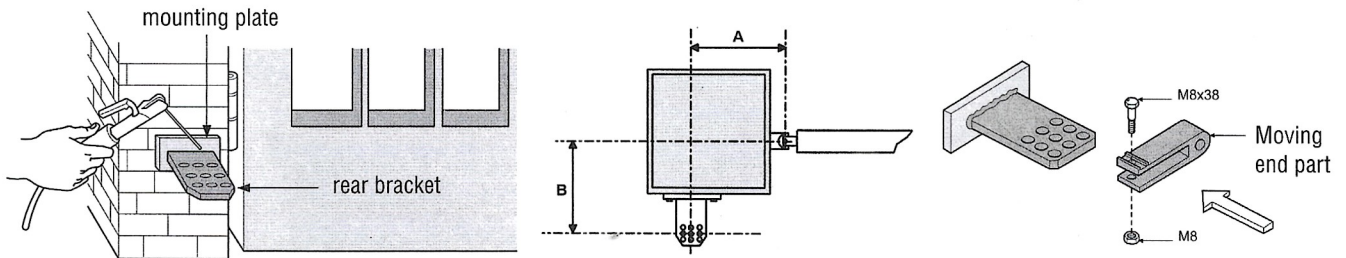


#### Swing-300

Opening angle	A, mm	B, mm	C <sub>max</sub> , mm	D, mm
90°	130	130	60	720
120°	130	110	50	720

#### Swing-500

Opening angle	A, mm	B, mm	C <sub>max</sub> , mm	D, mm
90°	200	200	120	920
120°	200	140	70	920

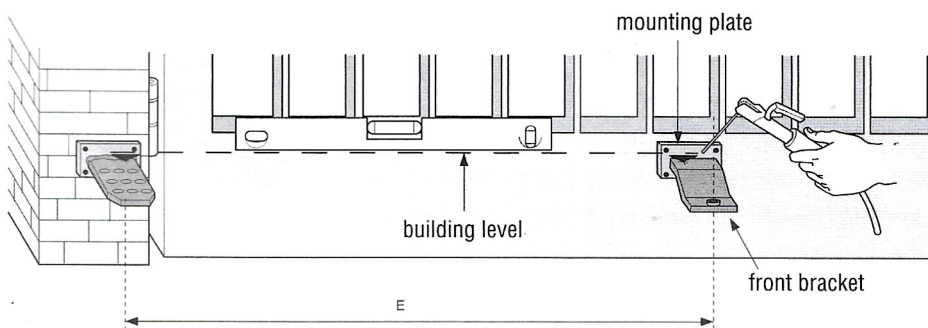


1) Fasten the rear bracket with the appropriate fastening plate on the pole so, as shown in the picture, observing dimensions A and B, namely, the distance between the axis of the bracket's central hole and of the gate hinge shank. The rear bracket has several holes, which makes installation of the operator easier and allow changing opening angle of the gate. Depending on the position of the gate hinges you can lengthen or shorten the rear bracket.



Attention! Increase of the dimension B results in decrease of the gate opening angle, angle speed of the leaf and in increase of the operator's linear force. Increase of the dimension B results in increase of the gate opening angle, angle speed of the leaf and the operator's linear force.

2) Install the steel end piece and lubricate the whole installation using neutral grease.

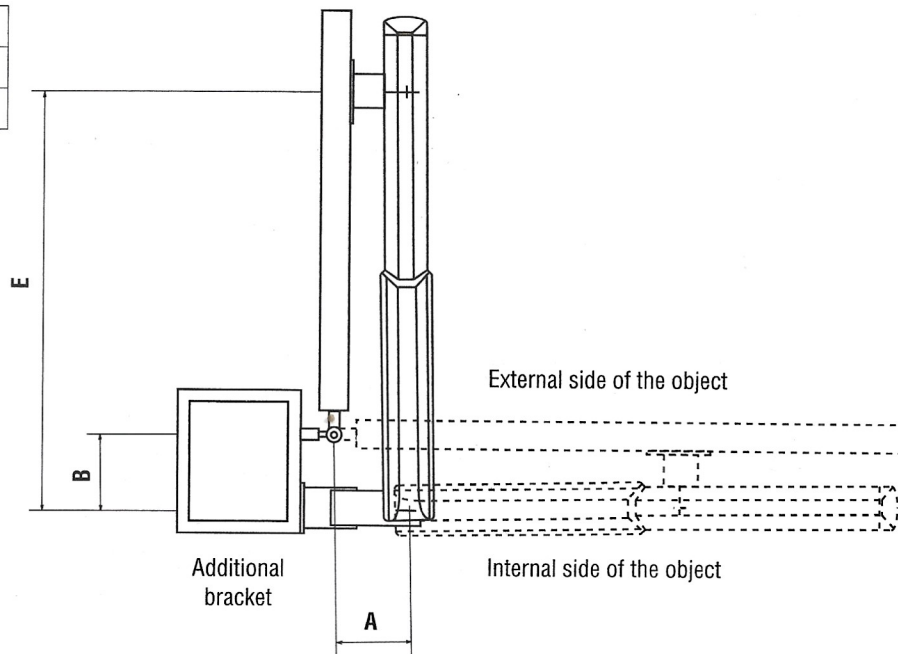


When the gate is closed, install the mounting plate on the gate leaf. Make sure, that the front bracket is positioned horizontally on the same level with the rear bracket and that the dimension E has been observed.

## 6.2. Outward opening of gate with operator SWING-500

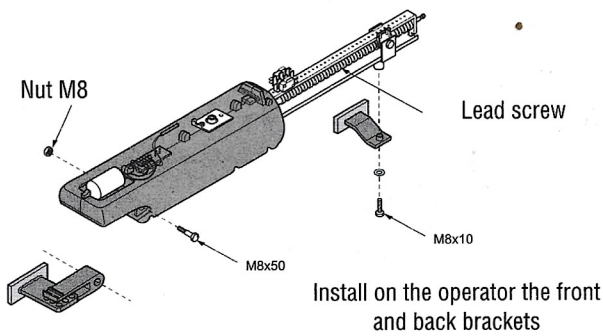
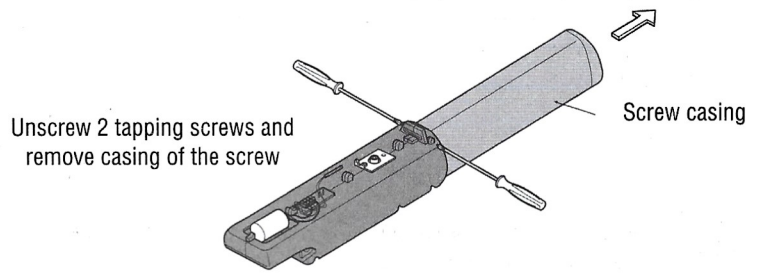
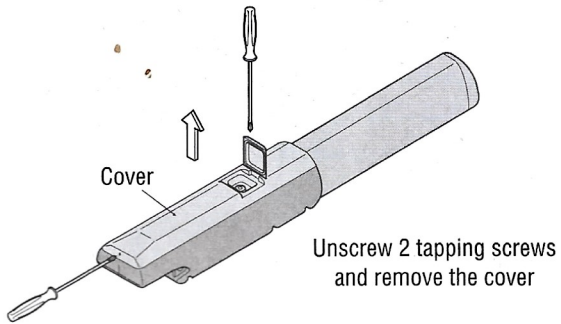
- 1) Measure dimensions A and B
- 2) Install and fasten the rear bracket on the pole using an additional bracket.
- 3) Open the gate, measure distance E and fasten the front bracket on the gate leaf.

A	±130
B	130
E	720



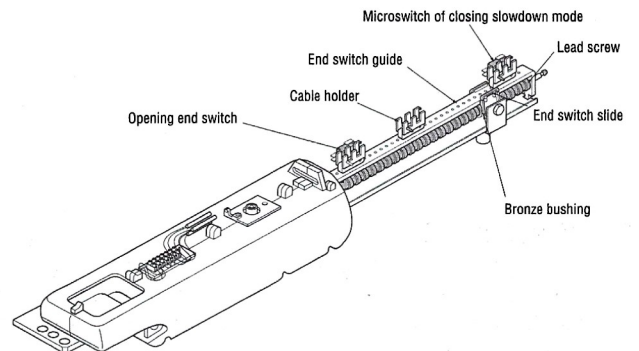
## 7. EXTREME POSITIONS ADJUSTMENT

### 7.1. Preparation



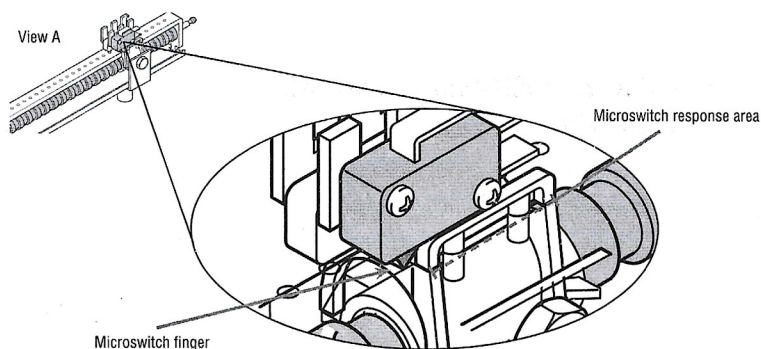
### 7.2. Open Position

1. Release the operator and put the gate leaf in fully open position.
2. Unscrew fastening of the opening end switch.
3. Move the end switch along the guide, until the microswitch contacts with the slide.
4. Fix the microswitch.



### 7.3. Closed Position:

1. Put the gate leaf in fully closed position, which can be determined by the mechanical stop.
2. Unscrew fastening of the closing microswitch.
3. Move the end microswitch along the guide until the microswitch contacts with the slide.
4. Move the microswitch ahead until the microswitch finger leaves response area.
5. Fix the microswitch.



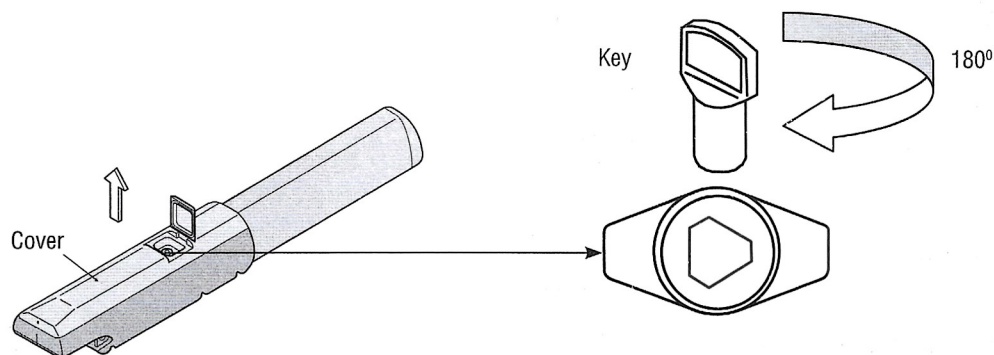
**When adjusted final position, make sure that the limit switches working correctly: When you press the microswitch the gate movement should be stopped.**

### 8. RELEASE OPERATION

1. Lift the cover.
2. Insert the key and turn it by 180°
3. Open or close the gate by hand.
4. To link the operator, turn the key by 180° again.



**Attention! Before releasing (linking) the operator, disconnect power supply**



### 9. MAINTENANCE

- Make sure, that the gate is operable and move evenly.
- Check good working condition of the system units and safety devices at least once every 6 month.
- Maintenance of the operator must be carried out by qualified specialists.
- Keep the operator clean.

The manufacturing plant reserves the right to make changes in the products described in this manual without notice and without obligation to notify any persons of any such revisions or changes.

The manual describes installation and adjustment operations of the operator SWING-500\SWING-300.

Following the recommendations on operation and maintenance of the operator as well as recommendations on installation of the operator and the gate, described in this manual, will ensure long life of the equipment and will reduce the risk of accidents during installation and operation of the gate.

Do observe safety rules during installation, operation and maintenance.

The manufacturer does not handle installation, maintenance and operation of gates and gate automation and is not responsible for safety of installation, operation and maintenance of gates and gate automation.

The content of this manual shall not be basis for any claim.