COMPACT 1200

SLIDING GATE OPERATOR

USER'S MANUAL

Sliding Gate Operator
Compact 1200

OUTLINE

2. Important safety information

— Carefully read and follow all safety precaution and warnings before attempting to install and use this operator, incorrect installation can lead to severe injury.

— The gate operator should be installed by a qualified technician; otherwise, serious personal injury or property damage may occur.

— Before installation, the clutch should be unlocked.

— When opening or closing the gate, do not attempt to walk or drive through the gate.

— Children should not be allowed to play near to or operate automatic gates.

— The automatic gate operator, and the doors itself must be electrically grounded.

— Install the gate operator on the inside of the property; DO NOT install it on the outside of the property where the public has access to it.

— Be careful when in close proximity to moving parts where hands or fingers or clothes could be trapped.

— In the event of power failure, an emergency release key allows you to operate the gate manually.

— The operator should be switched off before repairing it or opening its cover.

— As this is electric equipment, check with your Electric Authority the standards to install this class of equipment.

— After installing the device, paint the floor the security area where the people must stand-out during the door operation.

— Attach a warning over the door announcing that this is an automatic device.

— Every time you operate the door, keep it in line of sight.

— Remove the packing of this product and dispose of it. Do not leave the packing material within reach of children.

— Save this manual for possible maintenance during the operational life of the operator.

— This product was designed for automation of sliding gates; other uses can cause injury to people.

— Company shall not be held responsible in case of injury or other health

impairment caused by unintended use of the operator.

— Do not install the equipment in premises with quick-inflammables materials or in other dangerous environments, because it can cause explosion or fire.

— Mechanical units of the gate shall be constructed and installed in accordance with the standards EN12604 and EN 12605.

— Manufacturer or the resellers are not responsible in case of incorrect installation of the product and i f it is damaged during operation.

— 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.

— 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.

— The safety devices of the operator protect against hazard of pinch through the gate while opening.

— 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.

— Use the accessories of the company, as the accessories of other manufactures can cause failure of the system.

— For maintenance, use only company original parts.

— Do not make modification in the components of the automatic system.

— 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.

— Do not let any people to be in the operation area of the automatic system when it is working.

— 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.

— Passage is allowed only after the gate has been stopped and the operator is switched off.

— Check good working condition of the safety sensors monthly.

— Maintenance: make diagnostics of the system 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.

— It is forbidden to perform operations, which are not permitted by this manual.

Sliding Gate Operator
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2. Main technical parameters

Type	Compact 1200 220V	Compact New 110V
Power supply	AC 220 X (1±10%)V,	AC110 X (1±10%)V,
Output Torque	20 N/m	13 N/m
Motor speed	1400 r/min	1540 r/min
Gate moving speed	12 m/min	13 m/min (24 teeth)
Working Time	90 Sec.	
Limit switch	Magnetic limit switch	
Noise	≤58dB;	
Environmental	-20ºC~+50ºC	

4. Working principle and main structure

The device is composed of a single-phase motor, worm and worm gear. The main shaft of the motor rotates the worm with the clutch engaged, the worm rotates the worm gear and output gear, which pushes rack attached to the sliding gate, thus moving the gate. The dimension is shown in Fig.1.

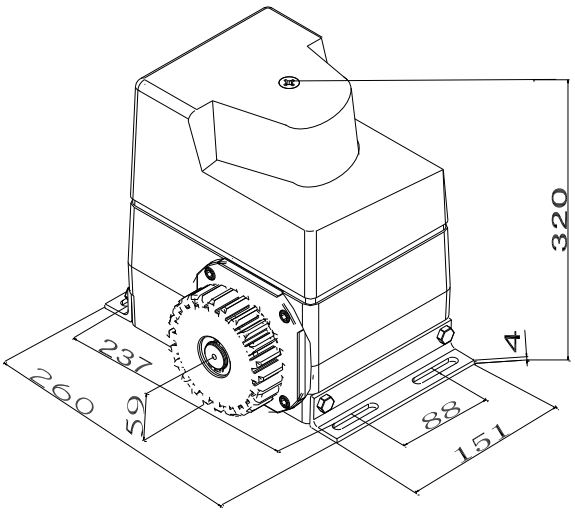


Fig 1

The structure of the motor and worm is shown in Fig2. Output torque can be adjusted by pressure screw, tighten (or release) the pressure screw to increase (or decrease) the output torque.

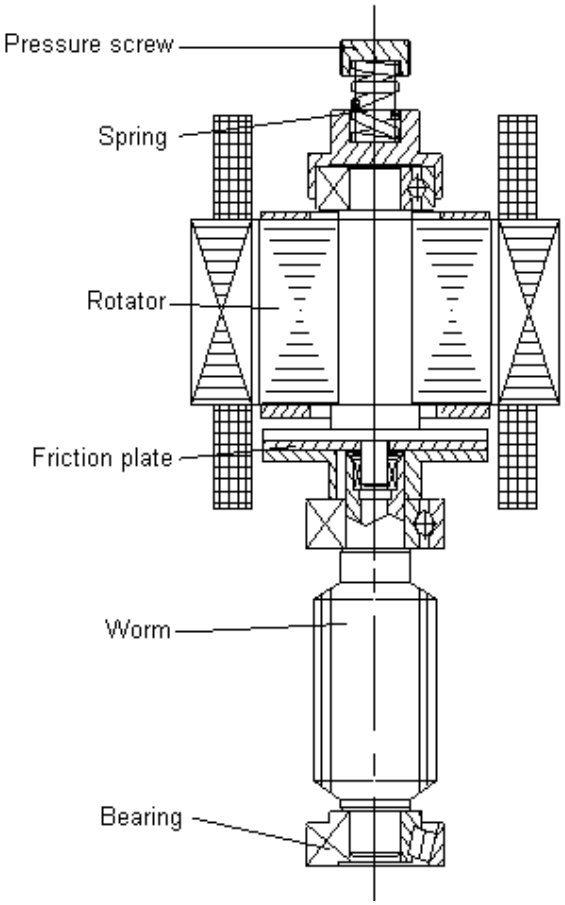


Fig.2

Release function: the worm gear components are shown in Fig.3. It includes a pair of plastic gear clutches. In case of power failure you can use the key to release the clutch, and then the gate can be moved manually.

The device is well lubricated and cooled by the cooling oil (#25 transformer oil), which fills the whole device, including the stator, the rotator of the motor, the worm gear and the worm.

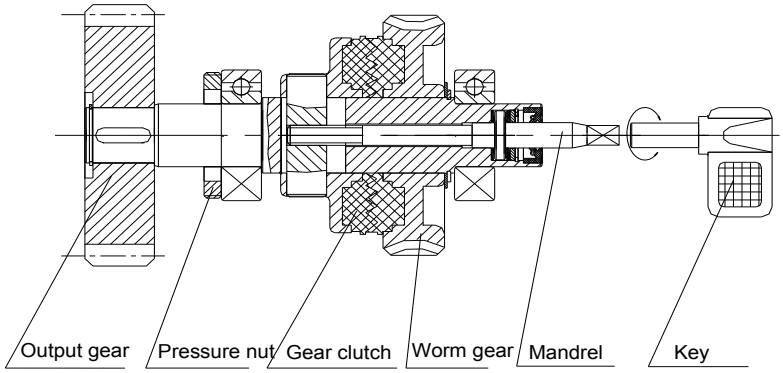


Fig.3

The device is equipped with a thermal protector, the thermal protector will switch off the motor automatically in case of temperature is higher than 95ºC and switch on the motor automatically when the temperature is lower than 60±5ºC

3. Installation and adjustment

The Compact 1200 rack-driven Gate Operator operates by forcing a drive rack past a drive gear. The entire configuration is shown in Fig.4.

Conduit

In order to protect the wires, use PVC conduit for wires, conduit must be set into the concrete when it is poured. Wires within the conduit shall be located or protected so that no damage can result from contact with any rough or sharp part.

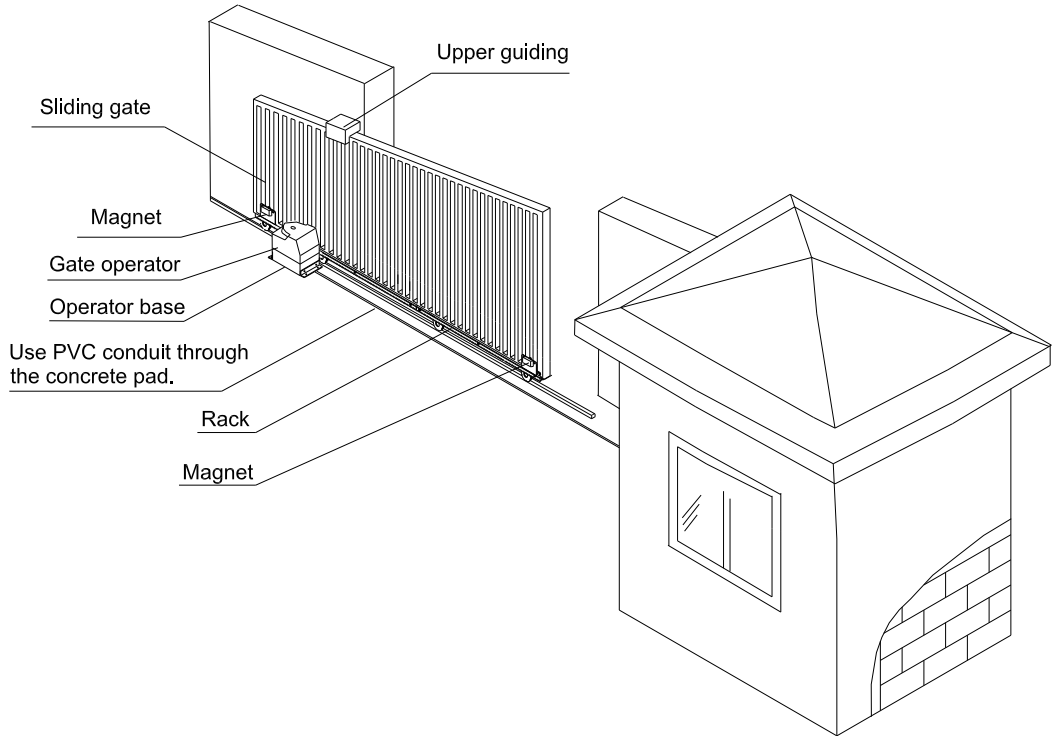


Fig.4

Conduit

In order to protect the wires, conduit must be preset into the concrete when it is poured. Wires within the conduit shall be located or protected so that no damage can result from contact with any rough or sharp part. If you have installed an external button switch, we advise you to use two conduits: one for main power wire, another one for control wire. Always separate power wires from control wires.

Concrete pad

The base unit of the gate operator requires a concrete pad in order to maintain proper stability. The concrete pad should be approximately 300mm x 200mm x 200mm deep in order to provide a good stand for adequate operation.

Anchors

You can use the anchor bolts, anchors, washers, and nuts. These anchors must be set into the concrete when it is poured, or you can use wedge anchors.

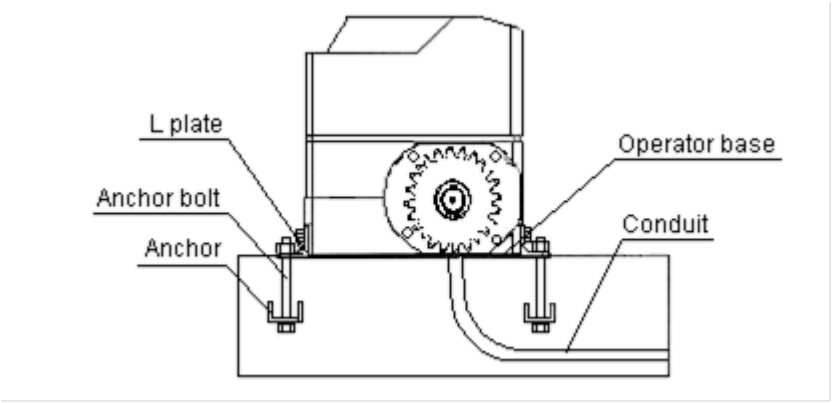


Fig.5

Operator Base.

Mount the gate operator base to the concrete pad.

Operator

Mount the gate operator to the base using nuts and washers. Verify that the operator is leveled properly.

Installation of rack (see Fig.6)

- Fix the three nuts (in the same package with rack) on the rack element.

- Lay the first piece of rack on the gear and weld the first nut on the gate.
- Move the gate manually, checking if the rack is resting on the gear, and weld the second and third nut.
- Bring another rack element near to the previous one. Move the gate manually and weld the three nuts as the first rack, thus proceeding until the gate is fully covered.
- When the rack has been installed, to ensure it meshes correctly with the gear.
- The space between rack and gear is about 1mm.

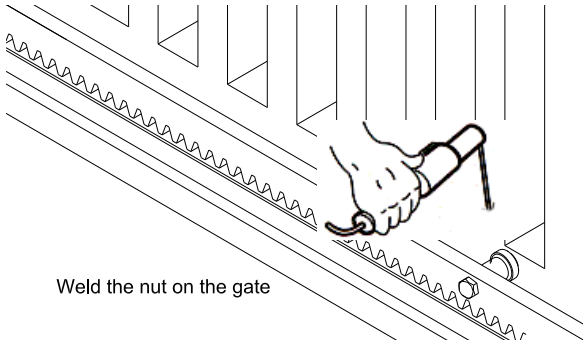


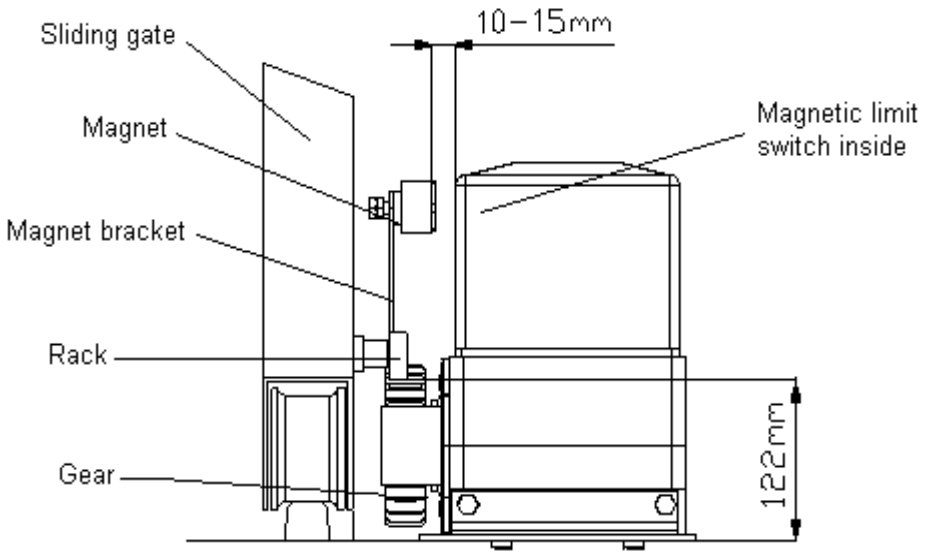
Fig.6

Magnets for limit switch

Install the magnet as shown in Fig.7 and Fig.8 below. The magnet and limit switch are used to control the position of the gate.

When the magnet is installed, release the gear clutch and push the sliding gate manually to pre-determine the position.

Weld the magnet bracket to the rack and then tighten the gear clutch. The lower bracket is for open position and higher bracket is for close position. Finally adjust



the magnet to the proper position by moving the gate with the motor.
The magnet should be 10~15mm away from the magnetic limit switch.
If it is too far away, the switch will fail to work. Adjust the position of the magnetic limit switch until the positions of the opening and closing meet the requirement.

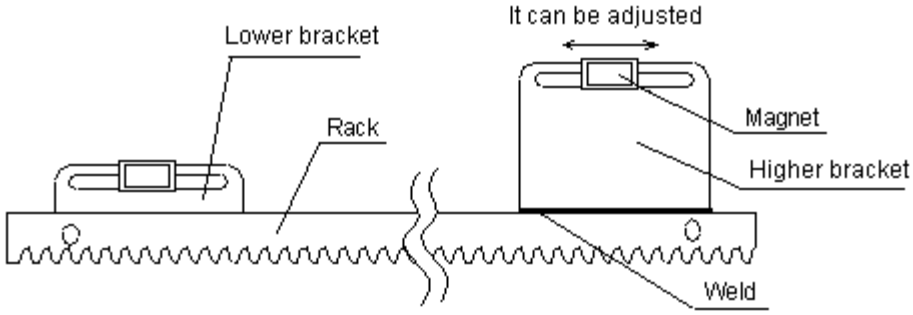
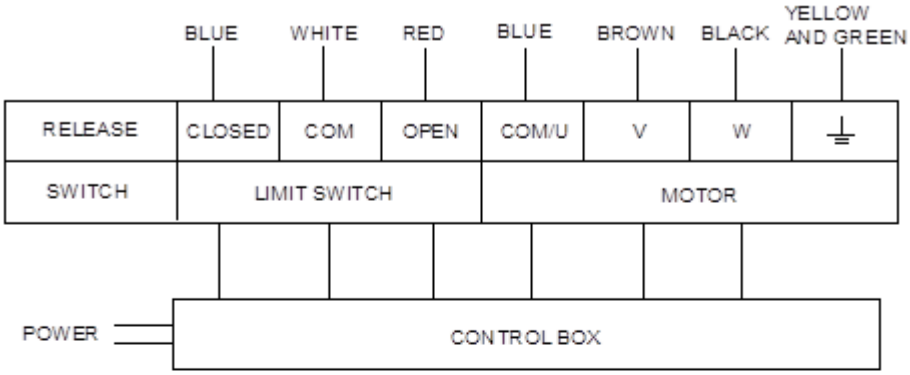
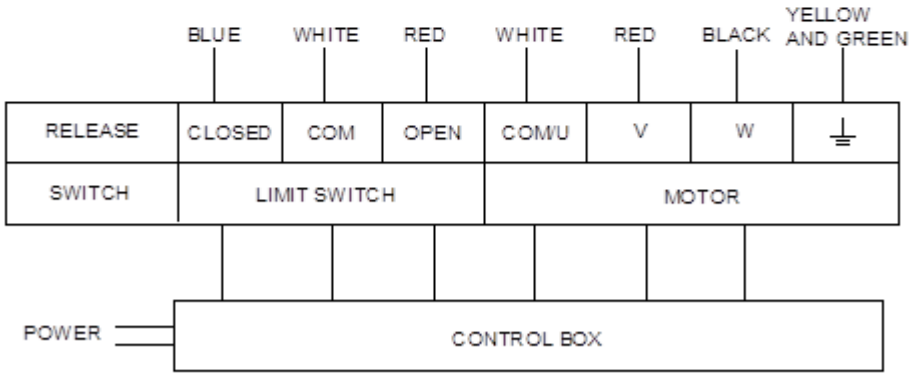


Fig.8

Wiring Information



220VCA Compact New Version



110VAC Compact New Version

Fig.6

4. Check

— Release the gear clutch with the release key to determine whether or not the gate can be moved manually. If everything is in good working order, tighten the clutch with the key.

— Switch on the power and run the device to ensure that the gate is sliding smoothly.

— Adjust the magnet position until the gate opened and closed properly at the limited positions.

— The device is installed with a thermal protector, the thermal protector will switch off the motor automatically in case of the temperature of motor is higher than 120℃and switch on the motor automatically when the temperature of motor is lower than 85℃±5℃.

— The motor is only designed to work for occasionally use, the use frequency is 30 percent. If is runs continually for an extended period of time, a thermal protector will stop it because of the high temperature.

8. Maintenance:

— Please check and add transformer oil (DB25-GB2536) regularly, you may change the oil according the weather. If the temperature is lower than –20° C, you can select #45 oil.

— Parameters of DB25 transformer oil.

— Kinematic viscosity (20° C)	— Break down voltage	— Solidification point
— ≤30 Centistoke	— ≥35 kV	— ≤-25° C

— Ensure the operator is well earthed, and correctly terminated.

— Regularly grease the wheels and axles to ensure the gate moves smoothly.

— Ensure the power is switched off before removing the cover.

— Keep operator clean at all times.