

# MODEL SGP DOORLEC

## GENERAL INFORMATION

The model SGP GATE-MASTER sliding gate operator is one of the most advanced units in today's industry. Engineered for post mount installation, and designed to be used with overhead, cantilever and V roller, industrial type sliding gates. This unit is powerful enough to handle gates up to 85 ft. (25.91m) and weighing up to 2,500 lbs. (1134kg). Heavy gauge steel cabinet EEMAC 4 weatherproof with padlockable hinged door, offers great durability, simple installation, service and maintenance. It can also be adapted to steel mounting stand as an option, for concrete base application.

Dc 2000 Dedicated Logic Controller state of the art is used to accept, when specified any optional equipment for fully automatic operation (see catalogue #E113 & E116).

### Heater:

175 watts thermostatically controlled and adjustable to prevent freezing of oil in reducer and to eliminate humidity on electrical components.

Adjustable Torque Limiter will protect gate and operator in case of obstruction.

### Reversing Contactor:

Heavy-duty type.

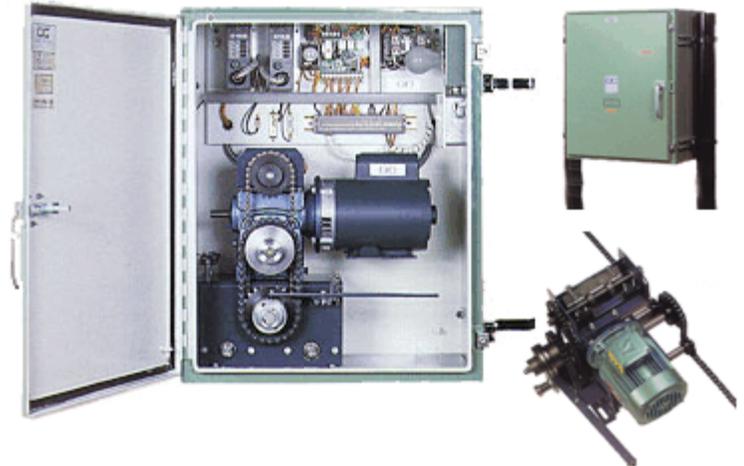
MASTER/SLAVE wiring modification available at no extra cost.

### Weatherproof Three Button Control:

momentary contact type for open, close, stop. Operator may be stopped in any position, and gate may open or close from that position. Control circuit: 24V A.C. for user's protection.

### Manual-Overload Relay:

For overcurrent and under-voltage protection. Manual reset.



## SPECIFICATIONS

Power Head Drive Base is constructed of 3/16" (4.763mm) gauge CR steel and reinforced with 3/16" (4.763mm) steel plate for the full width of the operator cabinet, which is bolted to the bottom with (4) 3/8" (9.525mm) bolts.

### Reduction:

Occurs with a single stage worm gear reducer (40:1 ratio) running in an oil bath, C flange design cast iron alloy housing. The worm gear itself is an alloy bronze for greater life. The worm is made of hardened and ground steel. The high-speed bearings are tapered, double-lipped, with spring loaded seals to keep lubricant in and dirt out. Alloy steel shafting, hardened and ground for greater strength; is standard. Input RPM 1750 max. 2HP (1492W).

Output torque: 1380 in.lbs. (1590cm.kg). Overhand load: 1100 lbs. (499kg).

Output shaft: 1" (2.54cm), speed: 44 RPM. Gate speed: 7" (18cm) per second approximately.

### Gatedrive System:

The output shaft of the reducer is connected to a 1" (25.4mm) stretch-proof shaft by No. 50 roller chain and 50B23 sprockets. This shaft rotates on two cast iron high-speed flanged bearings for the final drive of the gate. In addition there are two 1" (25.4mm) idler shafts rotating on four cast iron high-speed flanged bearings for greater strength and longer life. The gate will open and close by means of No. 50 roller chain and sprockets, which are mounted to the operator drive system and connected to the end posts of the gate by two heavy duty "L" brackets and chain tensioners provided by DOORLEC. The main sprocket and roller chain drive are protected with sheet metal guard for safety.

### Torque Limiter:

Will protect gate and operator in case of obstruction. Limits will not go out of adjustment when torque limiter is activated. Torque limiter consists of a steel hub with two 4" (10.2cm) diameter clutch plates, a 50B23 sprocket, two 4" (10.2cm) diameter non-flammable friction-discs and spring-washer with adjustable pressure cup.

Adjustable holding force from 25 to 1,500 lbs. (11 to 680kg) must be adjusted in the field, depending on gate weight.

### Manual Disconnect Lever:

When the manual mode lever is pushed, the operator drive coupling assembly is disengaged, permitting manual operation of gate in the event of power failure without having to remove main chain drive. When gate is pushed or pulled manually to open or close, the limit switch adjustments will not go out synchronization, therefore when the power is restored and the disengage lever is released to electrical mode, the gate will stop in both directions without any further adjustments.

### **Electrical Control Panels:**

Factory prewired, made of steel metal construction and formed to suitable rigidity, mounted above power head drive to cabinet interior body with zinc plated steel bolts, incorporating all electrical components, terminal block and marking as required.

### **Motor Control:**

Heavy-duty reversing contactor, two sets of three-pole contacts on a common frame, mechanically interlocked to prevent simultaneous closure. Clapper-type armature with three-point suspension, auxiliary contacts SPDT or DPDT (as required) on each armature. Coils 120V A.C. Load contact amps: resistive: 15 amps @ 600. A.C.; Inductive: 10 H.P. (7460W) max. Terminals: .25" (.635cm) quick connect. Mechanical life over 10 million cycles.

### **Limit Switches:**

Rotary type, friction free, oilite bronze cams, grooved and lock guided in a spring-loaded, formed galvanized steel plate. Cams are fitted on 5/8" x 10-3/4" (1.59cm x 27.31cm) C.R. steel-shaft, rotating on lubricated high-speed ball bearings. Cams on their preset travel, activate the micro switches to cut power of motor control in both open and close directions, and ensure accurate gate position. Operating force on limit switch: 4 oz. (113.4g) maximum. Contact separation: .020" (.05cm). Terminals: .25" (.635cm) quick connect.

### **Motor:**

Rated for continuous duty (capacitor starting in single-phase models) 3/4 H.P. (560W), 1 H.P. (746W), 1-1/2 H.P. (1119W), or 2 H.P. (1492W), 120V or 240V single-phase, 208V up to 600V three-phase, 1725 RPM. Ball bearings permanently lubricated. Frame: rigid type 56C. Shaft: 5/8" (1.59cm) or 7/8" (2.22cm) diameter.

### **Operator Cabinet Finish:**

Primed with rustproof primer and electrostaticly spray painted in baked enamel.

Exterior of cabinet: GREEN #503114

Interior (control panels): WHITE #513101

## **DC2000 DEDICATED LOGIC CONTROLLER**

The model SGP GATE-MASTER is equipped with the DC2000 dedicated logic controller which has been designed to accept, and operate with, any automatic or manual activators without the need of programming. A slide switch has been provided to select manual or automatic mode.

If manual mode is selected the following controls can be used to activate the gate:

- Push button open/close/stop
- Reversing activator
- Open/close activator
- Remote radio control system

If automatic mode is selected, in addition to the manual mode activators, an automatic closing timer adjustable from 10 to 180 seconds is in effect when the gate is in the full open position, ready to signal the closing cycle after a predetermined time delay. Connections for red and green warning lights are provided as well. When an activator is selected for the desired operation, simply connect it to the appropriate terminal on the DC2000 dedicated logic controller, making each gate a custom installation while the logic controller remains standardized to simplify troubleshooting.

Model SGP "GATE-MASTER" is factory pre-wired color coded to terminal block strip and properly identified according to wiring diagram provided.

Installation instructions and wiring diagrams are enclosed with each operator.

Each model SGP "GATE-MASTER" operator is pre-run and tested before shipment.

## **AVAILABLE OPTIONS**

Mounting channels, with "U" clamps for 3-1/2 pipe post, including spring-nuts bolts and reinforced steel metal straps.

Lock handle, padlockable.

Light switch ON-OFF, with 60 watt bulb and socket inside cabinet for maintenance and service.

Push button station open/close/stop inside cabinet for troubleshooting and testing.

ON/OFF switch on cabinet to signal operator door is open to remote location or control centre.

Adjustable over run timer as additional protection to the torque limiter, will cut-off power to motor and controls if gate is obstructed on either open or close cycle.

### **Electromagnetic lock:**

in addition to reduction system, will lock gate in closed position and ensure further security.

### **Safety edge:**

in case of obstruction, this ultra-sensitive device, mounted on the edge of leading gate post, will stop gate for 1.5 second and reverse its direction to open position, preventing damage to vehicles, gate and protect pedestrians.