

## *Doorlec SGOH Slide Gate Opener Operator*

heavy duty, Commercial sliding gate Operator pad mount or post mount

### GENERAL INFORMATION

DOORLEC'S most powerful sliding gate operator for industrial installation. The model SGOH is specially designed for sliding gates, overhead, cantilever or roller V track type up to 85 ft. (25.9m) wide and weighing up to 2,100 lbs (952.5 kg). Heavy gauge steel base for concrete pad mounting or post mounting (optional, at extra cost) with 500 watts thermostatically controlled heater and weather-resistant lockable cover, removable for easy service and maintenance. Will accept, when specified, any optional equipment for fully-automatic operation (see catalogue # E113)

#### **Reduction:**

Worm-gear reducer, single stage, running in oil bath, 40:1 ratio, C flange design, cast iron alloy housing, No. 50 roller-chain and sprockets from operator drive shaft to gate brackets. Gate speed: 7" (18cm) per second approximately.

#### **Adjustable Torque Limiter:**

Will protect gate and operator in case of obstruction. (Optional at extra cost).

#### **Reversing Contactor:**

Heavy-duty type.

#### **Three-Button Control:**

Momentary-contact type for open, close, stop. Operator may be stopped in any position and gate opened or closed from that position. Close button can be wired for constant pressure when specified. Control circuit: 24V. A.C. for user's protection.

#### **Safety Interlock:**

Electrical interlock switch automatically cuts power of operator control when hand-crank is in operation.

**Solenoid Brake:**

To secure locking of gate in closed position.

**Manual-Overload Relay:**

For overcurrent and under-voltage protection. Manual reset.

**Motor:**

3/4 H.P. (560W), 1 H.P. (746W), 1-1/2 H.P. (1119W) or 2 H.P. (1493W). 120V. or 240V. single phase, 208V., 230V., 416V., 460V. or 600V. three phase.

2 H.P. (1492W) not recommended in single-phase motors.

**Finish:**

Primed with rust-proof primer and spray-painted in blue hammertone baked enamel.

**SPECIFICATIONS**

**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: 24V. A.C. Load contact amps: resistive: 15 amps @ 120V. A.C., 10 amps @ 240V. A.C., 5 amps @ 600V. A.C.; Inductive: 2 H.P. (1492W) max. Terminals: .25" (.6cm) quick connect. Mechanical life: over 10 million cycles.

**Reduction:**

Worm-gear reducer, single stage, running in an oil bath, with 40:1 ratio, C flange design, cast iron-alloy housing. Hardened and ground steel worm and alloy bronze worm-gear for greater wear life. High-speed taper roller bearings, double-lip, spring-loaded seals to keep lubricant in and dirt out. Alloy steel shafting hardened and ground for greater strength. Input RPM 1750, max. 2 H.P. (1492W). Output torque: 1380 in.lbs (1590cm. Kg). Overhang load: 1100 lbs (500kg). Output shaft: 1" (2.54cm) D. Speed: 44 RPM. Gate speed: 7" (18cm) per second approx.

**Unit Chassis:**

Heavy steel channel-frame assembly reinforced with steel gusset plates, bolted together for greater strength.

**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 26.88cm) 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. Operating force on limit-switches: 4oz. (113.4g) maximum. Contact separation: .020" (.05cm).

Terminations: .250" (.625cm) quick connect.

**Electrical Control Cabinet:**

Factory pre-wired, made of sheet metal, construction of suitable rigidity designed to meet EEMAC and CSA classifications type 12. Size 8" x 16" x 5" (20cm x 41cm x 13cm) with removable cover for easy service and maintenance. Mounted to unit chassis with four zinc-plated steel bolts.

**Heater:**

Thermostatically-controlled 500 watts heater is provided to prevent freezing of oil in reducer and eliminate humidity on electrical components.

**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 lbs. To 1500 lbs. (11.4 to 682 kg) must be adjusted in the field, as required, depending on gate weight. (Optional at extra cost).

**Manuel Crank:**

With safety electrical interlock. When manual mode lever is pulled, the operator brake assembly is released, permitting manual-crank operation of gate without having to remove the main drive chain. When manual-crank is in operation a switch cuts the 24V. control circuit of operator automatically. This safety electrical interlock will protect operator and gate when power is restored and push-button is pressed accidentally.

**Power Head Base:**

Made of 11 ga C.R. steel, reinforced with steel braces and welded together for greater strength. Lockable cover for total weatherproof assembly. The SGOH operator is primarily designed for concrete base mounting installation. Can be modified to suit post-mounting when specified. (Optional at extra cost).

**Motor:**

Rated for continuous duty (capacitor starting on single-phase models) 3/4 H.P. (560W), 1 H.P. (746W), 1-1/2 H.P. (1119W) or 2 H.P. (1493W), 120V. or 240V. single-phase, 208V., up to 600V. three-phase, 1725RPM. Ball bearings permanently lubricated. Frame : rigid type 56C. Shaft: 5/8" (1.56cm) or 7/8" (2.22cm) diameter. 2 H.P. (1493W) not recommended in single-phase motors.

Unit factory pre-wired, colour-coded and tagged.

Wiring diagrams, installation instructions are enclosed with each operator.

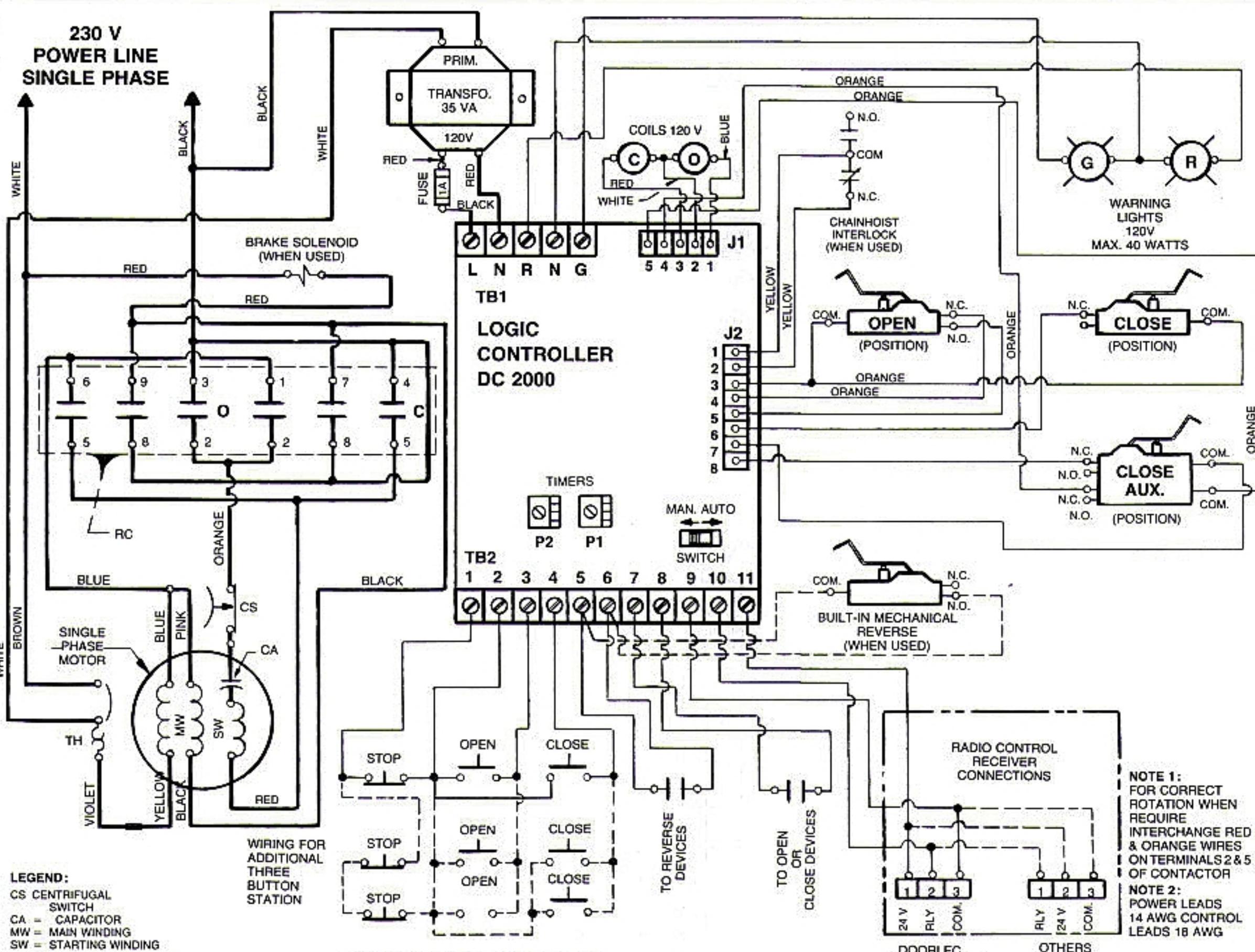
Operator is pre-run and tested before shipment.

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# MODEL SGOH

## HORSEPOWER SELECTION GUIDE

MOTOR	GATE TRAVELLING SPEED	MAXIMUM GATE WEIGHT	MAXIMUM OVERHEAD GATE OPENING	MAXIMUM CANTILEVER GATE OPENING	MAXIMUM ROLLER/V-TRACK GATE OPENING
$\frac{3}{4}$ H.P. 560W	45 ft./min. (13.7 m/min.)	1250 lbs. (567 kg)	46 ft. (14 m)	26 ft. (8 m)	36 ft. (11 m)
1H.P. 746W	45 ft./min. (13.7 m/min.)	1550 lbs. (70.3 kg)	58 ft. (18 m)	32 ft. (10 m)	48 ft. (15 m)
1 $\frac{1}{2}$ H.P. 1119W	45 ft./min. (13.7 m/min.)	1600 lbs. (726 kg)	70 ft. (21 m)	38 ft. (12 m)	60 ft. (18 m)
2H.P. 746W	45 ft./min. (13.7 m/min.)	2100 lbs. (953 kg)	85 ft. (26 m)	44 ft. (13 m)	72 ft. (22 m)



**LEGEND:**  
 CS = CENTRIFUGAL SWITCH  
 CA = CAPACITOR  
 MW = MAIN WINDING  
 SW = STARTING WINDING  
 TH = THERMAL PROTECTION  
 RC = REVERSING CONTACTOR

WIRING FOR ADDITIONAL THREE BUTTON STATION

WHEN PUSH BUTTONS STATION IS NOT USED  
 INSTALL JUMPER BETWEEN 1 & 2 ON TERMINAL BLOCK TB2

**FIELD CONNECTIONS TO DC 2000 LOGIC CONTROLLER**

- PUSH-BUTTONS:  
1, 2, 3, 4 on terminal block TB-2
- REVERSING DEVICES:  
5, 6 on terminal block TB-2
- OPEN OR CLOSE DEVICES:  
7, 8 on terminal block TB-2
- RADIO CONTROL RECEIVER:  
9, 10, 11 on terminal block TB-2

**NOTE:** Radio control and open or close devices will open or close door, gate, barrier if slide switch is on MANUAL MODE only. If slide switch is on AUTO MODE, these devices will only open door, gate, barrier and reset timer. Timer will close door, gate, barrier at preset time (adjustable)

**AUTO-MANUAL SLIDE SWITCH:**  
 MANUAL-MODE: Automatic closing and warning lights "OFF"; all other functions "ON".  
 AUTO-MODE: Automatic closing and warning lights "ON", including all other functions.

- ADJUSTING AUTO CLOSING AND WARNING LIGHTS TIMERS**
- A) When closing timers are in used without warning lights, adjust timer P1 to zero and adjust timer P2 for the duration you desire door, gates or barrier to stay open.
  - B) When closing timers are in use with warning lights RED & GREEN, adjust timer P1 for the duration you wish the GREEN light to stay "ON" and adjust timer P2 for the duration you wish the RED light to stay "ON".
  - C) The time delay duration between P1 & P2 is the total time delay door, gate, barrier will stay open.
  - D) When door, gate, barrier is in motion, RED light is always "ON".
- Turning knob clock wise increases time delay 180 sec. maximum on each A & B.

**NOTE 1:**  
 FOR CORRECT ROTATION WHEN REQUIRE INTERCHANGE RED & ORANGE WIRES ON TERMINALS 2 & 5 OF CONTACTOR

**NOTE 2:**  
 POWER LEADS 14 AWG CONTROL LEADS 18 AWG

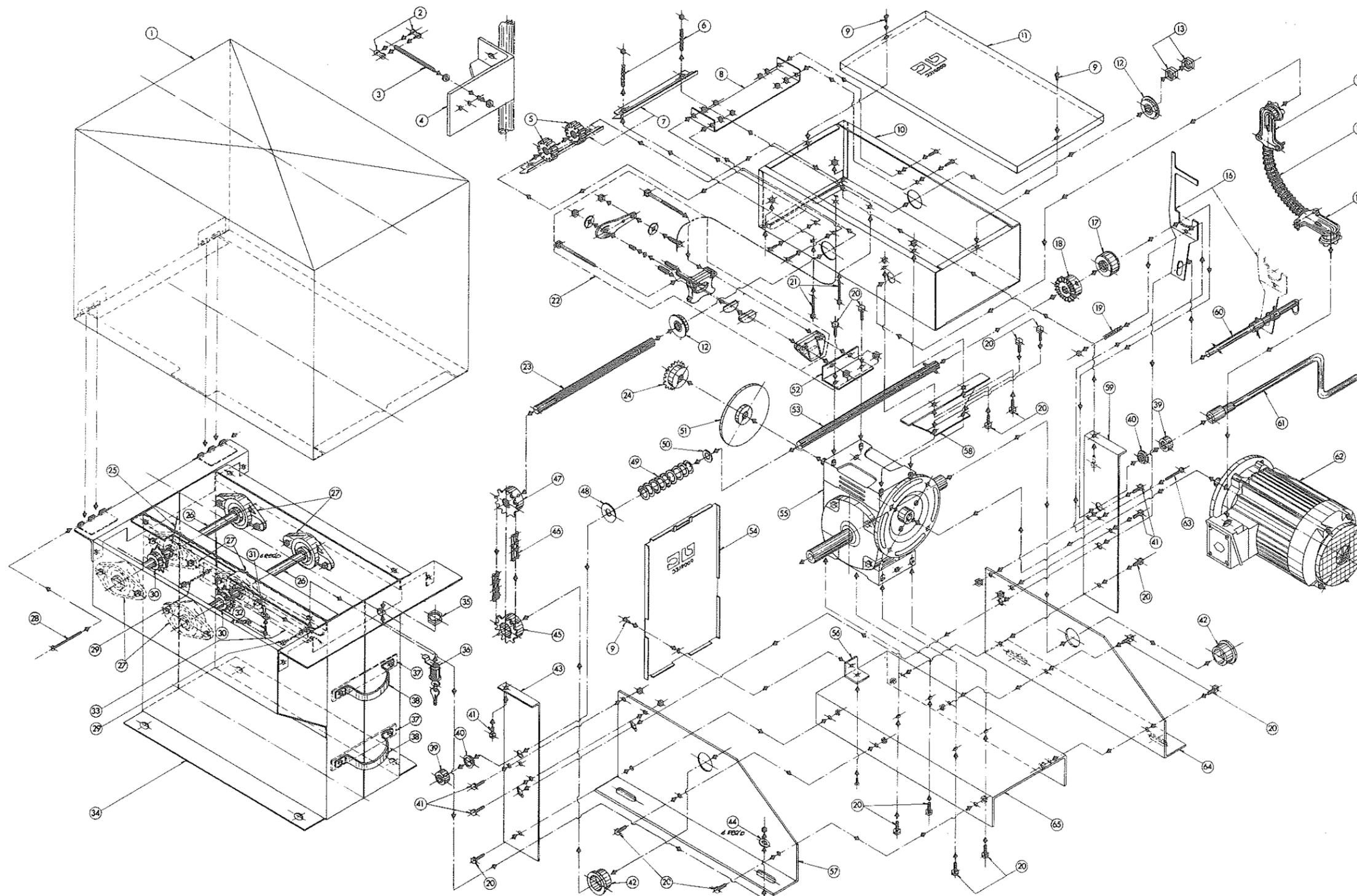
**DC** DOORLEC CORPORATION  
 CORPORATION DOORLEC  
 225 LARROSSE AVE., MONTE-CLAIRE  
 MONTRÉAL, QUÉBEC, CANADA H9R 1A3

**WIRING DIAGRAM FOR  
 MANUAL OR FULLY AUTOMATIC  
 FUNCTIONS**

**LOGIC CONTROLLER DC 2000**

DRAWN BY: BS	APPROVED BY: PGS	DATE: 6/7/92	REV: NO	41A
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**PARTS LIST**  
**MODEL SGOH**  
**Drawing no 1076**  
**MECHANICAL**



PART NO.	DRAWING NO.	CODE NO.	DESCRIPTION
1	1076	42505	Housing SGOH
2	1076	24051	Connecting link #50
3	1076	11701	Rod, threaded 1/2" x 3 1/2"
4	1076	14870	Gate L Bracket
5	1076	11801	Oilite cam, grooved 3/8" (1.59 cm) - 24 x 3/8" (9.5 cm) wide
6	1076	20111	Cam retainer plate springs
7	1076	26117	Cam retainer plate
8	1076	14505	Control cabinet brace
9	1076	11099	Truss head Bolt 10-32 x 3/8"
10	1076	42421	Base, control cabinet GH
11	1076	42422	Cover, control cabinet GH
12	1076	28002	Flange bearing F-360-13 3/8" (1.59 cm) hole
13	1076	11091	Nut, fine 3/8"-24 for cam shaft (1.56 cm) (not shown)
14	1076	40001	BX Connector 3/8" (.94 cm) 90 degrees
15	1076	44522	Flexible conduit BX
16	1076	14128	Hoist Disconnect Lever GH
17	1076	26104	Thrust bearing spacer
18	1076	31270	Mitre gear B1020
19	1076	20111	Cam retainer plate springs
20	1076	11262	Cap screw, hex 3/8" x 3/4" (.94 x 1.88 cm)
21	1076	11251	Washer SAE 1" (2.5 cm) hole
22	1076	12141	Caliper disc brake assembly
23	1076	26140	Cam shaft, threaded 3/8" (1.59 cm) - 24 x 10 1/4" (26.88 cm) long
24	1076	31270	Mitre gear B1020
25	1076	14871	SGOH Base Support
26	1076	26135	Shaft keyway 1" x 12"
27	1076	28404	Flange bearing, cast iron 1" (2.5 cm) bore
28	1076	14879	Cover Hinged Pins SGO
29	1076	11231	Stove bolts 1/4" (.63 cm)-20 x 3 1/2" (8.75 cm)
30	1076	31117	Sprocket 41B12 - 1" KW/SS
31	1076	11263	Cap screw, hex 3/8" x 1 1/2" (.94 x 3.8 cm)
32	1076	11268	Cap screw, hex 3/8" x 1" (.94 x 2.5 cm)
33	1076	14872	SGOH Channel Base Shafts Support
34	1076	42425	Base, housing SGOH
35	1076		Ring (see item 36)
36	1076	22600	Lock assembly
37	1076	14873	Post Mounting Brace Plate
38	1076	14874	Post Mounting Straps
39	1076	26180	Shaft collar 3/8" (1.56 cm) bore
40	1076	28412	Flange bearing 3/8" (1.59 cm) bore Oilite bushing
41	1076	11376	Cap screw 1/4" (.63 cm) - 20 x 3/4" (1.9 cm)
42	1076	28411	Flange bearing 1" (2.5 cm) bore Oilite bushing
43	1076	14410	Control cabinet support, right
44	1076	11265	Cap screw, hex 3/8" x 1" (.94 x 2.5 cm)
45	1076	31117	Sprocket 41B12 - 1" KW/SS
46	1076	24041	Roller chain RC41
47	1076	31118	Sprocket 41B12 - 3/8" (1.59 cm) bore KW/SS
48	1076	11254	Spacer washer SAE 3/8" (1.59 cm)
49	1076	20110	Hoist spring 3/8" (1.59 cm) - GH
50	1076	11839	Washer spacer 3/8" bore special
51	1076	12131	Brake disc 4" (10 cm) x 3/8" (1.59 cm) keyway
52	1076	14296	Brake mounting bracket
53	1076	26130	Hoist shaft, threaded 3/8" x 12" (1.59 cm x 30 cm)
54	1076	31272	Front hoist cover GH/GHW
55	1076	18007	Reducer BHC - 63 - 3/8" (1.59 cm) or 7/8" (2.22 cm) input
56	1076	14025	L Bracket Mitre Gear Cover
57	1076	26601	Gusset plate GH, right
58	1076	14134	Control Cabinet Mounting Bracket
59	1076	14409	Control cabinet support, left
60	1076	14876	Manual Disconnect Assembly SGOH
61	1076	14877	Manual Crank SGOH
62	1076		Electric motor (see name plate for H.P. and voltage)
63	1076	11261	Cap screw, hex 1/4" x 1 1/2" (.63 x 3.8 cm)
64	1076	26602	Gusset plate GH, left
65	1076	14102	Main Channel Frame

FOR SUGGESTED INSTALLATION  
 SEE DRAWING NO. 3026

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		<b>MODEL SGOH EXPLODED VIEW</b>		
		Date: April 1987	Approved P.G.S.	Drwg. No. 1076

