# Selection Guide

# Commercial & Industrial Door Operators



# **General** Features



### **Built To Last**

- Rugged frames designed with computer-aided stress analysis to optimize rigidity.
- Precision ball bearings on output and clutch shafts to increase lifetime.
- Baked on, long-lasting enamel finish
   Yellow chromate-coated shafts are used on most models,
   which last longer than white chromate-coated shafts.
- Indestructible rotary-type limit switch system Oil-impregnated steel cams (instead of plastic cams) and commercial-grade switches prevent breakage. Design prevents any lever breakage when limits have been exceeded during manual operation.
- Lifetime tested and 100% controlled in production
   All operators are designed and qualified on our lifetime testing benches to exceed the requirements of the industry.
   Quality Control Tests are performed on every operator at the end of the production line.

### **Installer Friendly**

The **Opera** range has been specially designed to meet the needs of installers. It features numerous innovations which make **installation and maintenance easier, quicker and safer**.

### ■ Easy to install and maintain

The compact, rigid and lighter design makes mounting easier. The rounded angles of the frame, a **built-in carrying handle** and an **enlarged control box cover** provide easy and safe handling during installation. The control box may be lifted and kept out of the way, allowing easy access to extended mounting holes and mechanical parts.

### ■ Easy to adjust

The **Accu-cam** feature allows precise and quick one-handed adjustments. The **clutch** is easily **accessible** for adjustment.

### Easy to wire

The cover of the control box is hinged and stays in the open position. The terminal strip is angled for easy connection. Fuse protected 24VAC is available on the terminal strip for easier accessory power supply connection.



# **User Friendly**

- The patented Hoist-a-Matic allows for easy manual operation Hoist-a-Matic is a self-engaging chain hoist with one-step operation. No floor level disconnect is needed, which simplifies operation and installation.
- Safety: UL325 approved by a recognized laboratory
  All operators in all horsepower categories are protected against overload. On most models, a slip clutch protects the operator and the door should a problem arise.
- Multi-function Hardwired 24V Safety Control Circuit
  All Manaras operators are equipped with a 24V safety control circuit. They are pre-wired for connection of 3 button stations, safety sensing edges, photo cells, radio control receivers, and other auxiliary control equipment. C2 wiring, open override and safety reverse are standard. B2 control can be field-set very easily. The low voltage transformer is CLASS II.

### ■ Mechanical Brake

The mechanical reduction system is designed to function as both a stopping and a holding brake. This system does not require any maintenance or adjustment during the entire operator lifetime.

### ■ Electronic Control Board

The ECB may be installed on most Manaras operators. Thanks to a programmable micro-processor, this full-featured controller provides most control options required for commercial door openers, resulting in improved inventory management and quicker response to customers needs. On-board LED monitoring and plug-in socket for easy connection to limit switches and radio control devices. Options included: B2, E2, D1, wiring, timer to close, mid-stop and maximum run timer. Features a programmable advance close system, test buttons, delay on reverse, and door lock sensor.



# ackshaft Operators

Jackshaft operators are used on any door with a shaft, sprockets and chain as a driving element. They can be installed on high or vertical lift doors but also on specially-adapted standard lift sectional doors or rolling doors and grilles. They are usually mounted on either side of the door.

### Medium Duty

14 CYCLES/HOUR, 50 CYCLES/DAY

### Opera-MJ



FLOOR LEVEL DISCONNECT

### **Opera-MH**



SELF-ENGAGING HOIST

#### Standard Features

- Instant reverse limited duty 1/2 HP motor
- 5L/B V-belt, chain and sprocket reduction
- # 41 chain on final drive
- Output shaft speed: 36 rpm
- Adjustable friction clutch
- Mechanical brake
- Wall, hood or shelf mounted on either side of the door
- Clearance: side room required is 15"
- Maximum recommended door height: 14'

Main options: Hoist on left (OMH), Spreader, Double limits, Delay on reverse, Timer to close.

# **Heavy Duty Commercial**

25 CYCLES/HOUR, 100 CYCLES/DAY

### Opera-J



**Opera-H** 



**SELF-ENGAGING HOIST** 

#### **Standard Features**

- Continuous duty motor up to 1 HP
- 5L/B V-belt, chain and sprocket reduction
- # 50 chain on final drive
- Output shaft speed: 41 rpmAdjustable friction clutch
- Mechanical brake
- Heavy-duty reversing contactor
- Wall, hood or shelf mounted on either side of the door
- Clearance: side room required is 15"

Main options: ECB, Hoist on left (OPE), Spreader, Double limits, Delay on reverse, Timer to close, TEFC motor (OPJ), NEMA 4/12, 4X. For NEMA 7/9 consult factory.

Opera-HJ: This model incorporates a self-engaging chain hoist, floor level disconnect for emergency egress and ECB.

# Heavy Duty Industrial 25 CYCLES/HOUR

Opera-SH

> 100 CYCLES/DAY

SUPER



Opera-GH



> 80 CYCLES/DAY



> 80 CYCLES / DAY

**GEAR HEAD WITH SELF-ENGAGING** HOIST

### **Standard Features**

- Continuous duty motor up to 1 HP
- Chain hoist with electrical cut-out
- 5L/B V-belt, chain and sprocket reduction
- # 50 chain on final drive
- Cast iron pillow block bearings on in/output shafts
- Output shaft speed: 41 rpm
- Solenoid brake
- Adjustable friction clutch
- Heavy-duty reversing contactor
- Wall, hood or shelf mounted on either side of the door
- Clearance: side room required is 16"

Main options: ECB, Hoist on left, Spreader, Double limits, Delay on reverse, Timer to close, NEMA 4/12, 4X. For NEMA 7/9 consult factory.

### Standard Features

- Continuous duty motor up to 2 HP
- Worm gear in oil bath
- # 50 chain on final drive
- Full overload protection
- Output shaft speed: 38 rpm
- Solenoid brake
- Heavy-duty reversing contactor
- Wall, hood or shelf mounted on either side
- Clearance: side room required is 15"

Main options: ECB, Adjustable friction clutch, Hoist on left - can be changed on field, Spreader, Double limits, Delay on reverse, Timer to close, TEFC motor. For NEMA 4/12, 4X, 7/9 consult factory.

### **Standard Features**

- Continuous duty motor up to 5 HP
- Chain hoist with electrical cut-out
- Worm gear in oil bath
- Gear box enclosed in a reinforced steel frame
- Cast iron flanged pillow block bearings on output shaft
- Output shaft speed: 43 rpm
- Solenoid brake
- Heavy-duty reversing contactor
- Wall mounted on either side of the door
- Clearance: side room required is 17"

Main options: ECB, Adjustable friction clutch, Hoist on left, Spreader, Double limits, Delay on reverse, Timer to close, TEFC motor, NEMA 4/12, 4X, 7/9.

# **Trolley** Operators

Trolley operators are designed to open and close standard lift doors as the carriage is driven back and forth on the horizontal operator track. They are usually mounted on the centerline of the door and parallel to the floor. They require a clearance above the high arc of the door and back room.

### **Medium Duty**

14 CYCLES/HOUR, 50 CYCLES/DAY



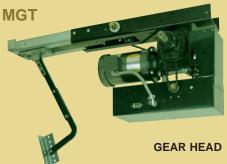
#### **Standard Features**

- Instant reverse limited duty 1/2 HP motor
- 4L/A V-belt, chain and sprocket reduction
- # 410 (48) drive roller chain
- Door speed: 11"/second
- Adjustable friction clutch
- Dual heavy-gauge pre-drilled galvanized tracks
- Quick release disconnect arm for manual operation
- Hinged cover
- Back room: door height + 3'11"
- Head room for tracks: 4"

Main option: Solenoid brake.

# **Heavy Duty Industrial**

25 CYCLES/HOUR, > 80 CYCLES/DAY



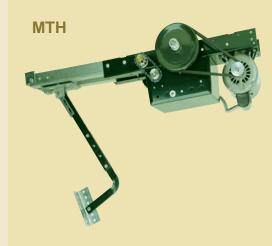
### **Standard Features**

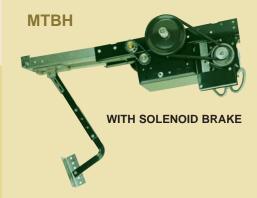
- Continuous duty motor up to 1.5 HP
- Worm gear reduction in oil bath
- Solenoid brake
- # 41 drive roller chain
- Door speed: 10"/second
- Adjustable friction clutch
- Dual heavy-gauge pre-drilled galvanized tracks
- Quick release disconnect arm for manual operation
- Heavy-duty reversing contactor
- Back room: door height + 4'6"
- Head room for tracks: 4"

Main options: ECB, Dual trolley drive, Double limits, Delay on reverse, Timer to close, TEFC motor, NEMA 4/12, 4X, 7/9.

### **Heavy Duty Commercial**

25 CYCLES/HOUR, 80 CYCLES/DAY





### **Standard Features**

- Continuous duty motor up to 1 HP
- 5L/B V-belt, chain and sprocket reduction
- # 410 (48) or # 41 drive roller chain
- Door speed: 12"/second
- Adjustable friction clutch
- Dual heavy-gauge pre-drilled galvanized tracks
- Quick release disconnect arm for manual operation
- Heavy-duty reversing contactor
- Back room: door height + 4'5"
- Head room for tracks: 4"

Main options: ECB, Apartment application, Trolley hoist, Dual trolley drive, Double limits, Delay on reverse, Timer to close, TEFC motor, NEMA 4/12, 4X, 7/9.

# Slider **Operators**

## **Heavy Duty Commercial**

25 CYCLES/HOUR, 80 CYCLES/DAY



#### **Standard Features**

- Continuous duty motor up to 1 HP
- 5L/B V-belt, chain and sprocket reduction
- Solenoid brake
- # 41 drive roller chain
- Door speed: 12"/second
- Adjustable friction clutch
- Dual heavy-gauge pre-drilled galvanized tracks
- Manual disconnect device
- Heavy-duty reversing contactor

Main options: ECB, Bi-parting doors, Double limits, Delay on reverse, Timer to close, TEFC motor, NEMA 4/12,

# **Heavy Duty Industrial**

25 CYCLES/HOUR, > 80 CYCLES/DAY



### **Standard Features**

- Continuous duty motor up to 1.5 HPWorm gear reduction in oil bath
- Solenoid brake
- # 41 drive roller chainDoor speed: 10"/second
- Adjustable friction clutch
- Dual heavy-gauge pre-drilled galvanized tracks
- Manual disconnect device
- Heavy-duty reversing contactor

Main options: ECB, Bi-parting doors, Double limits, Delay on reverse, Timer to close, TEFC motor, NEMA 4/12, 4X, 7/9.

# Selection Charts

# **Operator Type Selection**

The first step in the selection process is to choose the Manaras operator model you need. Use the chart below to choose the operator according to the type of door you want to motorize, the type of usage the door will perform and the mechanical reduction required.

| Door Type  |              | Standard Lift<br>Sectional<br>Doors | High Lift &<br>Full Vertical Lift<br>Sectional Doors<br>Multiblade Doors | Rolling Doors<br>& Grilles | Sliding Doors |  |
|--|--------------|-------------------------------------|--|----------------------------|---------------|--|
| Operator Type                                      |              | Trolley                             | Jacks  | haft <sup>(2)</sup>        | Slider        |  |
| Medium Duty<br>Cycles: 14/hour, 50/day             | Chain        | MLT                                 | Opera-MJ <sup>(1)</sup><br>Opera-MH <sup>(1)</sup>                       | Opera-MH                   |               |  |
| Heavy Duty Commercial<br>Cycles: 25/hour, 80/day   | ංජ           | MTH<br>MTBH                         | Opera-J <sup>(1)</sup><br>Opera-H  | Opera-H<br>Opera-HJ        | MSLD          |  |
| Heavy Duty Industrial<br>Cycles: 25/hour, >100/day | V-Belt       |                                     | Opera-SH   | Opera-SH                   |               |  |
| Cycles: 25/hour, >80/day                           | Gear<br>Head | MGT                                 | Opera-GH <sup>(1)</sup> (+ clutch)<br>MGH (Multiblade doors)             | Opera-GH MGH               | MGSLD         |  |

<sup>(1)</sup> Not recommended for Multiblade Doors (2) Jackshaft operators can be used on specially adapted Standard Lift Sectional Doors

# **Motor Horsepower Selection**

Now that you have selected the type of operator you need, you can select the motor required for your installation. Use the chart below to select the horsepower of your operator. Identify the door type (sectional or rolling). Refer to the door material and size (sq.ft) to define the horsepower required for your installation, taking into account the operator duty.

**Maximum Area in Square Feet** 

|   |                    | Horse<br>Power |                    | Ro              | olling Doc                          | ors                          |                                    | Sectional Doors        |                                  |  |                                  |                |  |  |  |
|---|--------------------|----------------|--------------------|-----------------|-------------------------------------|------------------------------|------------------------------------|------------------------|----------------------------------|--|----------------------------------|----------------|--|--|--|
|   |                    |                | Insulated<br>Steel | 16 ga.<br>Steel | Steel<br>Grilles<br>20 ga.<br>Steel | Alu. Door<br>22 ga.<br>Steel | Alu.<br>Grilles<br>24 ga.<br>Steel | Steel<br>18 ga.<br>ins | Steel<br>18 ga.<br>20 ga.<br>ins | Wood<br>Steel 20 ga.<br>22 & 24 ga.<br>ins | Aluminum<br>Steel<br>22 & 24 ga. | Fiber<br>Glass |  |  |  |
|   | Medium<br>Duty     | 1/2            | -                  | 160             | 200                                 | 275                          | 320                                | 120                    | 160                              | 250  | 275                              | 290            |  |  |  |
|   |                    | 1/3            | -                  | -               | -                                   | -                            | -                                  | 124                    | 172                              | 255  | 280                              | 294            |  |  |  |
|   | <u>s</u>           | 1/2            | 157                | 236             | 260                                 | 319                          | 358                                | 196                    | 245                              | 314  | 343                              | 392            |  |  |  |
| 1 | Other              | 3/4            | 206                | 294             | 358                                 | 451                          | 515                                | 270                    | 319                              | 441  | 490                              | 549            |  |  |  |
|   | Other<br>Operators | 1              | 255                | 358             | 446                                 | 574                          | 613                                | 294                    | 392                              | 490  | 564                              | 613            |  |  |  |
|   | Ö                  | 1-1/2          | 353                | 486             | 633                                 | -                            | -                                  | 373                    | 466                              | 549  | 613                              | -              |  |  |  |
|   |                    | 2              | 451                | 613             |                                     | -                            |                                    | -                      |                                  |  |                                  |                |  |  |  |

Note: This chart is given as a general guideline for properly installed, balanced, aligned doors and when the recommended hardware is used.

# Operator Range (60Hz) and Current Consumption (Amps)

The motor is also selected according to the power supply available in the building. It is defined in terms of frequency, voltage & phase. The chart below indicates which horsepower and voltage categories are available, as well as the current consumption for each operator type.

**Current Consumption (Amps)** 

| Horse<br>Power | Opera-MJ<br>Opera-MH<br>MLT | ,            | Opera<br>ITH/N |     |     |     | MGT - MGSLD |     |     |              |     | Opera-GH - MGH |     |              |              |              |
|----------------|-----------------------------|--------------|----------------|-----|-----|-----|-------------|-----|-----|--------------|-----|----------------|-----|--------------|--------------|--------------|
|                | 115V 1 Ph                   | 115V<br>1 Ph | 230V<br>1 Ph   |     |     |     |             |     |     | 460V<br>3 Ph | -   | -              |     | 208V<br>3 Ph | 460V<br>3 Ph | 575V<br>3 Ph |
| 1/3            | -                           | 6.6          | 3.3            | -   | -   | -   | -           | -   | -   | -            | -   | -              | -   | -            | -            | -            |
| 1/2            | 5.5                         | 8.0          | 4.0            | 2.1 | 1.0 | 0.8 | 9.0         | 4.5 | 2.2 | 1.1          | -   | 9.0            | 4.5 | 2.2          | 1.1          | -            |
| 3/4            | -                           | 11.2         | 5.6            | 3.2 | 1.5 | 1.2 | 11.2        | 5.6 | 3.2 | 1.5          | 1.2 | 11.2           | 5.6 | 3.2          | 1.5          | 1.2          |
| 1              | -                           | 13.6         | 6.8            | 4.4 | 2.1 | 1.6 | 13.6        | 6.8 | 3.7 | 1.7          | 1.4 | 13.6           | 6.8 | 3.7          | 1.7          | 1.4          |
| 1-1/2          | -                           | -            | -              | -   | -   | -   | 19.6        | 9.8 | 5.3 | 2.5          | 2.0 | 19.6           | 9.8 | 5.3          | 2.5          | 2.0          |
| 2              | -                           | -            | -              | -   | -   | -   | -           | -   | -   | -            | -   | -              | -   | 6.5          | 3.1          | 2.5          |

Note: Model MGH is also available in 3 and 5 HP. Model MTH is not available in 1 HP. Model Opera-SH is not available in 1/3 HP.

### Canimex,

has been a leading force in the Access Systems industry by offering OEM customers worldwide a broad range of premium hardware components for over 35 years. Canimex's diverse operations include three distinct divisions: Mechanical Power Transmission, Fluid Power and Torque Force garage door hardware.





Canimex St-Georges, Quebec Head Office

Canimex Laferté, Quebec Plant



Backed by their unrivalled experience, vast production capabilities and a global manufacturing network, the Canimex name is synonymous with innovation, performance and superior quality.





# For Inquiries

136 Oneida Drive Pointe-Claire, Quebec Canada H9R 1A8

Toll free number: 1-800-361-2260 www.manaras.com







Manaras reserves the right to make specification or design changes without prior notice.



Manaras has one of the most comprehensive, reliable and innovative product lines on the market: jackshaft, trolley, gear head, and slider operators for medium and heavy duty applications, as well as a very wide range of modifications, safety equipment and control accessories to provide solutions for most commercial and industrial projects.



# Manaras, a division of Canimex,

has been designing, assembling and marketing operators for commercial and industrial garage doors, commercial grilles and shutters for more than 25 years. The Manaras head office and manufacturing facility is located in Montreal, Quebec, Canada. Offering an expanded distribution network across North America and a dedicated sales force and inside sales team, we're driven to provide our customers with the best possible service now and into the future.



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