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<td>Activation</td>
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<td>Opening</td>
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<td>Force and Kinetic Energy</td>
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<tr>
<td>15.1.5</td>
<td>Signage</td>
<td>48</td>
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1 Revision

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<tr>
<td>9, 10</td>
<td>Changed weight notes</td>
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<tr>
<td>21, 25</td>
<td>Changed fastener specifications</td>
</tr>
<tr>
<td>39, 43</td>
<td>Changed app images</td>
</tr>
<tr>
<td>44</td>
<td>Changed configuration parameters</td>
</tr>
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2 Instructions for safe operation

• Failure to observe the information in this manual may result in personal injury or damage to equipment.
• To reduce the risk of injury to persons - use this operator with single swinging only.
• Do not use the equipment if repair or adjustment is necessary.
• Disconnect power when cleaning or other maintenance is to be carried out.
• The operator can be used by children only when supervised by a person responsible for their safety.
• The operator can be used by persons with impaired physical, sensory or mental capacity if they have been instructed by a person in charge of their safety.
• Cleaning and user maintenance shall not be made by children.
• Do not let anyone climb on or play with the door or the fixed/remote controls.
• In all instances, where work is being done, the area is to be secured from pedestrian traffic, and the power removed to prevent injury.
• The doorset can be operated automatically or manually by activators. It can also be used manually as a door closer.
3 Important information

3.1 Intended use

The Ditec HA7 is an automatic swing door operator developed to facilitate interior entrances to buildings and within buildings through swing doors. The Ditec HA7 is an electromechanical operator approved for fire door applications. It is to be installed indoors where it is suitable for almost all types of internal swing doors. This widely-used operator can be found in applications ranging from handicapped-access in private homes to commercial establishments.

Door operator used in escape routes shall be installed so that the door opens in the escape direction unless the system allows break-out in this direction.

The motor and gear box are combined into a compact unit mounted alongside the control unit within the cover. The operator is connected to the door leaf with arm systems.

The door is designed to offer continuous use, a high degree of safety and maximum lifetime. The system is self-adjusting to the effects caused by normal variations in the weather conditions and to minor friction changes caused by e.g. dust and dirt.

For escape in emergency situations the doorset is opened manually.

This manual contains the necessary details and instructions for the installation, maintenance and service of the Swing Door Operators Ditec HA7.

Make sure that the connection to the source of supply by a flexible cord shall not be allowed to become entrapped in moving parts of the operator or door system.

The glazing material in unframed swinging doors and/or framed swinging doors except that glazing material is less than 1 ft² (0.9 m²) and having no dimension greater than 18" (457 mm) shall be comply with the requirements of ANSI Z97.1.

Please use the adaptor provided with the operator in the packaging, other adaptor may result in risk of fire.

For use see User manual 1020879.

Save these instructions for future reference.

3.2 Safety precautions

To avoid bodily injury, material damage and malfunction of the product, the instructions contained in this manual must be strictly observed during installation, adjustment, repairs and service etc. Factory authorized training is required to carry out these tasks safely. Only Entrematic-trained technicians should be allowed to carry out these operations.
3.3 Electronic equipment reception interference

The equipment generates and uses radio frequency energy and if not installed and used properly, it may cause interference to radio, television reception or other radio frequency type systems.

If other equipment does not fully comply with immunity requirements, interference may occur.

There is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Re-orient the antenna.
- Relocate the receiver with respect to the equipment.
- Move the receiver away from the equipment.
- Plug the receiver into a different outlet so that equipment and receiver are on different branch circuits.
- Check that protective earth (PE) is connected.

If necessary, the user should consult the dealer or an experienced electronics technician for additional suggestions.

3.4 Environmental requirements

Entrematic products are equipped with electronics and may also be equipped with batteries containing materials which are hazardous to the environment. Disconnect power before removing electronics and battery and make sure it is disposed of properly according to local regulations (how and where) as was done with the packaging material.
## Technical specifications

Ensure that the door operator with technical specification below is suitable for the installation.

<table>
<thead>
<tr>
<th>Manufacturer:</th>
<th>Entrematic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address:</td>
<td>221A Racco Parkway Vaughan Canada</td>
</tr>
<tr>
<td>Type:</td>
<td>Ditec HA7</td>
</tr>
<tr>
<td>Power supply:</td>
<td>120 VAC(\pm10%), 50/60 Hz, mains fuse max 10A (building installation)</td>
</tr>
<tr>
<td>Power consumption:</td>
<td>Max. 90 W</td>
</tr>
<tr>
<td>Auxiliary voltage:</td>
<td>24 V DC, max. 400 mA (max. 1000 mA including lock)</td>
</tr>
<tr>
<td>Max. weight/width:</td>
<td>200 Lbs.</td>
</tr>
</tbody>
</table>

**Note!** Refer to section 4.1 and the appropriate standard (ANSI/BHMA A156.19) for door forces and speeds as related to door weight and width.

| Door width: | 762 - 1219 mm (30 - 48") |
| Electro-mechanical locking device: | Selectable: 12V DC, max. 1200 mA or 24 V DC, max. 600 mA |
| Door opening angle: | PUSH arm: 80° - 110°, with reveal 0 - 130 mm (0 - 5 1/8")  
| | PULL arm: 80° - 110°, with reveal 0 - 51 mm (0 - 2") |
| Opening time (0° - 80°): | Variable between 4.5 - 9 s |
| Closing time (90° - 10°): | Variable between 4.5 - 9 s |
| Impulse time delay: | 2 s - 6 h |
| Ambient temperature: | -4 °F to +133 °F (-20 °C to +45 °C) |
| Relative humidity: | Max. 95% |
| Drive unit weight: | 7.5 lb. (3.4 kg) |
| Class of protection: | IP20 |
| Approvals: | Third party approvals from established certification organizations valid for safety in use, see Declaration of Conformity. |
| Complies with: | UL 10C, ANSI/BHMA A156.19 and UL 325 |
This product is to be installed internally.

4.1 Permitted door weight and door width for Ditec HA7:

Push arm: 150 Lbs. / 48” or 266 Lbs. / 36”
Pull arm: 112 Lbs. / 48” or 200 Lbs. / 36”

Note: Complies with UL 325.
5 How the Ditec HA7 works

The swing door operator Ditec HA7 uses a motor which is connected to the output shaft. The push or pull arm system that is connected to the output shaft opens the door in a surface mounted application.

5.1 Control switch

5.1.1 HOLD/AUTO/OFF switch

<table>
<thead>
<tr>
<th>Function</th>
<th>Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>HOLD</td>
<td>The door can be held at any position when opening or closing.</td>
</tr>
<tr>
<td>AUTO</td>
<td>Impulses from activation units connected to IIMP or OIMP are forwarded into inner impulse.</td>
</tr>
<tr>
<td>OFF</td>
<td>Only KEY Impulse can open the door.</td>
</tr>
</tbody>
</table>

5.2 Modes and functions on app

5.2.1 Off / Closed

The door is closed. The door cannot be opened with the inner / outer wall or jamb-mounted contact switches. The door is locked if an electromechanical locking device has been fitted.

5.2.2 Exit only

Passage from inside only. The door is normally locked if an electromechanical locking device has been fitted. The door can only be opened with the inner wall or jamb-mounted contact switches (if fitted).

5.2.3 Auto

The door can be opened with the inner / outer wall or jamb-mounted contact switches.

5.2.4 Hold

The door can be held at any position when opening or closing.

5.2.5 Opening

When an opening signal is received by the control unit, the door is opened at the operator-adjusted opening speed. Before the door is fully open at back check, it slows automatically to low speed. The motor stops when the selected door opening angle has been reached. The open position is held by the motor.

If the door is obstructed while opening, it will stop on stall which can be selected with the app (see page 35).
5.2.6 Closing
When the hold open time has elapsed, the operator will close the door automatically, using spring force and motor. The door will slow to low speed at latch check before it reaches the fully closed position. The door is kept closed by spring power or combined with extended closing torque by the motor.

5.2.7 Wireless controlling
The door can be controlled by the app on a smartphone or a tablet.

5.2.8 Log
Events and errors can be displayed.

5.2.9 Extended closing torque
The motor will increase the closing torque when the door is closed or during closing. If the parameter is set to "0", the door will close with normal spring power.

5.2.10 Power assist
The motor will give/increase power assist when the door is opened manually. If the parameter is set to "Off", the door will give no power assist.

5.2.11 Push and go
When the door is manually pushed it will perform an open / close cycle. Push and go is not active in mode "Off/Closed".

5.2.12 Function of locks
- The control unit has an available output of DC for external locks
- The lock output is short circuit proof and can supply a lock with 12 V DC, max. 1200 mA or 24 V DC, max. 600 mA. Lock function is active in mode "Off / Closed" and "Exit Only".
- Select 12 V DC or 24 V DC, locked with or without power
- Lock release and opening delay
- Lock kick to overcome binding in the locking device during closing

5.2.13 Impulses
- Input for INNER / OUTER / KEY impulse.

5.2.14 Statistics
- Record data of the action for the door.

5.2.15 Factory reset
- Will restore all settings with factory default settings.
6 Part identification
<table>
<thead>
<tr>
<th>Item No.</th>
<th>Art. No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>W7-331020157</td>
<td>Ground wire</td>
</tr>
<tr>
<td>2</td>
<td>W7-330000828</td>
<td>Back plate with power cable</td>
</tr>
<tr>
<td>3</td>
<td>W7-331020445BK</td>
<td>Spindle cover kit (Black)</td>
</tr>
<tr>
<td></td>
<td>W7-331020445PD</td>
<td>Spindle cover kit (Grey)</td>
</tr>
<tr>
<td>4</td>
<td>W7-331019785</td>
<td>Bracket power plug</td>
</tr>
<tr>
<td>5</td>
<td>W7-331020704BK</td>
<td>Endplate with control switch (Black)</td>
</tr>
<tr>
<td>6</td>
<td>W7-331020393BK</td>
<td>Endplate (Black)</td>
</tr>
<tr>
<td>7</td>
<td>W7-331018537</td>
<td>Control unit (CU)</td>
</tr>
<tr>
<td>8</td>
<td>W7-330000841</td>
<td>Transmission unit kit</td>
</tr>
<tr>
<td>9</td>
<td>W7-330000829</td>
<td>Lock kick for PUSH &amp; PULL</td>
</tr>
<tr>
<td>10</td>
<td>W7-331020253</td>
<td>Adaptor holder</td>
</tr>
<tr>
<td>11</td>
<td>W7-331704236</td>
<td>Extension power cable</td>
</tr>
<tr>
<td>12</td>
<td>W7-331020396DB</td>
<td>Cover (Black)</td>
</tr>
<tr>
<td></td>
<td>W7-331020396NA</td>
<td>Cover (Silver)</td>
</tr>
<tr>
<td>13</td>
<td>W7-331018859</td>
<td>Power cord</td>
</tr>
<tr>
<td>14</td>
<td>W7-331703711</td>
<td>Power adaptor</td>
</tr>
<tr>
<td>15</td>
<td>W7-331020293</td>
<td>Power box adaptor kit (internal components only, box not included)</td>
</tr>
<tr>
<td>16</td>
<td>W7-330000830BK</td>
<td>PULL arm service kit (Black)</td>
</tr>
<tr>
<td></td>
<td>W7-330000830PD</td>
<td>PULL arm service kit (Grey)</td>
</tr>
<tr>
<td>17</td>
<td>W7-331020226BK</td>
<td>PULL arm kit (Black)</td>
</tr>
<tr>
<td></td>
<td>W7-331020226PD</td>
<td>PULL arm kit (Grey)</td>
</tr>
<tr>
<td>18</td>
<td>W7-331020857BK</td>
<td>PUSH arm kit (Black)</td>
</tr>
<tr>
<td></td>
<td>W7-331020857PD</td>
<td>PUSH arm kit (Grey)</td>
</tr>
<tr>
<td>19</td>
<td>W7-330000831BK</td>
<td>Drive shaft kits for PUSH arm (Black)</td>
</tr>
<tr>
<td>20</td>
<td>W7-330000832BK</td>
<td>Drive shaft kits for PULL arm (Black)</td>
</tr>
</tbody>
</table>
7 Arm systems

7.1 Pushing installation with PUSH arm

<table>
<thead>
<tr>
<th>Part No.:</th>
<th>Reveal</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 68mm (0 - 2 11/16&quot;)</td>
<td>0 - 68mm (0 - 2 11/16&quot;)</td>
</tr>
<tr>
<td>56 - 130mm (2 1/4 - 5 1/8&quot;)</td>
<td>56 - 130mm (2 1/4 - 5 1/8&quot;)</td>
</tr>
</tbody>
</table>

7.1.1 Drive shaft extension kits for PUSH arm

<table>
<thead>
<tr>
<th>20mm (3/4&quot;)</th>
<th>35mm (1 3/8&quot;)</th>
</tr>
</thead>
</table>

Part No.: H-W7-1020924
7.2 Pulling installation with PULL arm

Part No.: W7-331020226BK

7.2.1 Drive shaft extension kits for PULL arm

- 28mm (1 1/8")
- 43mm (1 3/4")

Part No.: H-W7-1020925
8 Options

8.1 Push plates

For ADA compliance, center of push plate(s) must be 34”-48” above finished floor or height required by local AHJ.

8.1.1 Push plates

P/N: W6-115
P/N: W6-124-1
P/N: W6-110
P/N: W6-110-2
P/N: W6-105

8.1.2 Remote transmitter push plates

P/N: W6-114
P/N: P-CM-45/4
### 8.2 Labels

<table>
<thead>
<tr>
<th>Push side “PUSH TO ACTIVATE”</th>
<th>Pull side “PULL TO ACTIVATE”</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ACTIVATE</strong></td>
<td><strong>SWITCH TO OPERATE</strong></td>
</tr>
<tr>
<td><strong>Dual Side “Activate Switch to Operate”</strong></td>
<td><strong>Dual Side “AUTOMATIC DOOR / CAUTION”</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>&quot;Certified Inspector&quot;</th>
<th>&quot;AAADM safety&quot;</th>
</tr>
</thead>
</table>

---

**ANNUAL COMPLIANCE INSPECTION**

Inspected for and complies with ANSI A156.

**DATE:**

by AAADM Certified Inspector

**Number:** #US24-0542-01

"Certified Inspector" "AAADM safety"
9 Pre-installation

9.1 General tips/Safety concerns

In all instances, where work is being done, the area is to be secured from pedestrian traffic, and the power removed to prevent injury.

- Make sure that the power is off before installing.
- If there are sharp edges after drilling the cable outlets, chamfer the edges to avoid damage to the cables.
- For enhanced security and vandalism protection, always mount the operator access in the interior of a building whenever possible.
- Make sure the ambient temperature is in the range specified in section Technical specifications.
- Make sure that the door leaf and the wall are properly reinforced at the installation points.
- Unpack the operator and make sure that all parts are delivered in accordance with the packing note and that the operator is in good mechanical condition.
- Ensure proper material is being used for the door leaves and that there are no sharp edges. Projecting parts shall not create any potential hazards. If glass is used bare glass edges shall not come in contact with other glass. Toughened or laminated glass are suitable glasses.
- Ensure that entrapment between the driven part and the surrounding fixed parts due to the opening movement of the driven part is avoided. The following distances are considered sufficient to avoid entrapments for the parts of the body identified;
  - for fingers, a distance greater than 25 mm (15/16") or less than 8 mm (5/16")
  - for feet, a distance greater than 50 mm (1 15/16")
  - for heads, a distance greater than 200 mm (7 7/8")
  - and for the whole body, a distance greater than 500 mm
- Danger points shall be safe guarded up to a height of 2.5 m (98 7/16") from the floor level.
- The operator shall not be used with a offset pivot door.
9.2 Installation examples

1. Aluminum profile system
2. Plasterboard wall
3. Reinforced concrete wall and brick wall
4. Plasterboard wall

A. Steel reinforcement or rivet nut
B. Wood reinforcement
C. Expansion-shell bolt (for brick wall min. M6x85, UPAT PSEA B10/25)

9.3 Fastening requirements (but not included)

<table>
<thead>
<tr>
<th>Base material</th>
<th>Minimum requirements of wall profile*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steel</td>
<td>5mm (3/16&quot;)**</td>
</tr>
<tr>
<td>Aluminum</td>
<td>6mm (1/4&quot;)***</td>
</tr>
<tr>
<td>Reinforced concrete</td>
<td>min. 50mm (2&quot;) from the underside</td>
</tr>
<tr>
<td>Wood</td>
<td>50 mm (2&quot;)</td>
</tr>
<tr>
<td>Brick wall</td>
<td>Expansion-shell bolt, min. M6x85, UPAT PSEA B10/25, min. 50mm (2&quot;) from the underside</td>
</tr>
</tbody>
</table>

* Entrematic minimum recommended requirements. Building Codes may give different specifications.

** Thinner wall profiles (3-5 mm) must be reinforced with rivet nuts.

*** Thinner wall profiles (4-6 mm) must be reinforced with rivet nuts.
The operator is mounted on either side of the door header depending on type of doors. The door is controlled with a push or pull arm system.

**Note!** Consider all power wire entry locations and signaling wires before preparing back plate.

### 10.1 PUSH arm system

#### 1. Determine the Door Hand (push instructions)
2. Mount the Backplate

Note! Screw head must be flush with back plate surface.

Note! The back plate should be electrically grounded, if not, you have to use the ground wire to make it grounded.

3. Mount the Lock kick (Optional)

⚠️ Note! Install lock kick for all fire-rated doors.
4. Mount the Operator

Unscrew this screw to move the lock kick and adjust angle of lock kick.

Max.  Min.

Lock kick

Note! The direction of the arrow on the operator should be same as the direction of the door opening.

5 N·m / 44 lbf-in
5. Mount the Arm

The flat face of the extend shaft should be aligned to groove flat face on the arm.

90°

20 N·m / 177 lbf·in

Note! Do not remove jumper unless lock kick installed.

90°

5 N·m / 44 lbf·in
2. Mount the Backplate

- Screw head must be flush with back plate surface.

- Note! The back plate should be electrically grounded, if not, you have to use the ground wire to make it grounded.

3. Mount the Lock kick (Optional)

- Note! Install lock kick for all fire-rated doors.
10 Mechanical installation

4. Mount the Operator

Note! The direction of the mark on the operator should be the same as the direction of the door opening.

M5x55 (4x)

5 N·m / 44 lbf·in
5. Mount the Arm

The flat face of the extend shaft should be aligned to groove flat face on the arm.

20 N·m / 177 lbf-in

5 T5.5 x 32 Wood
M6 x 20 Metal (2x)

Note! Do not remove jumper unless lock kicker installed.
10.2 PULL arm system

1. Determine the Door Hand (pull instructions)
2. Mount the Backplate / Operator

**Note!** Screw head must be flush with back plate surface.

**Note!** The back plate should be electrically grounded, if not, you have to connect the ground wire with the screw on the back plate.

**Note!** Hinge must be in line with the mark on the back plate.

The direction of the mark on the operator should be the same as the direction of the door opening.
10 Mechanical installation

Refer to the picture for recommended location of lock kick.

Unscrew this screw to move the lock kick and adjust angle of lock kick.

4. Mount the Operator

M5x55 (4x)

Note! The direction of the arrow on the operator should be same as the direction of the door opening.

5 N·m / 44 lbf·in

30 Issue 2020-08-31 1021444-2.0
5. Mount the Arm

Push the arm with angle 2 - 3° to get pre-tension, but don’t exceed. Please check spring pre-tension and lock kick.

When arm against door frame, do following steps to get pre-tension.

Turn the adaptor relative the splins in the arm.

20 N·m / 177 lbf·in

Note! If pre-tension exceeds, it will cause this pin to be below the line and lock kick will not work.

When reveal = 0

Note! Do not remove jumper unless lock kick installed.
2. Mount the Backplate / Operator

Note! Screw head must be flush with back plate surface.

Note! Hinge must be in line with the mark on the back plate.

Note! The back plate should be electrically grounded, if not, you have to connect the ground wire with the screw on the back plate.

Note! The direction of the mark on the operator should be the same as the direction of the door opening.
4. Mount the Operator

Note! The direction of the mark on the operator should be the same as the direction of the door opening.

Refer to the picture for recommended location of lock kick.

Unscrew this screw to move the lock kick and adjust angle of lock kick.
5. Mount the Arm

Push the arm with angle 2 - 3° to get pre-tension, but don't exceed. Please check spring pre-tension and look kick.

Note! Do not remove jumper unless lock kick installed.

When arm against door frame, follow these steps to get pre-tension.

Turn the adaptor relative the spline in the arm.

Encoder
Motor
Lock kick (Optional)

20 N·m / 177 lbf·in

Note! If pre-tension exceeds, it will cause this pin to be below the line and lock kick will not work.

When reveal = 0
11 Electrical connection

Note! The installation shall be made according to local codes. During any work with the electrical connections the mains must be disconnected.

- Place the electric switch easily accessible from the operator. If a plug contact is used in the installation the wall socket shall be placed easily accessible from the operator.

- If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.

11.1 Mains connection

Alt. 1

- Disconnect the mains power.
- Connect the adaptor to the CU. (Use the power adaptor holder or the extension power cord if needed.)
- Connect mains power to the adaptor.
Alt. 2

a Disconnect the mains power.
b Fix the adaptor in the box.
c Disconnected the power wire (1) from the terminal (3), and protect the power with insulated tapes.
d Connect the adaptor wire (2) to the terminal (3).
e Connect mains power to the adaptor.

Note: This setup must be performed by a licensed electrician.

1 Power wire
2 Adaptor wire
3 Terminal
11.2 Control unit (CU)

Note 1! +24V input power should be 22.8 - 26V.

Note 2! The two power connectors should not be plugged into electrical power at the same time.
12 Start-up

Note: An external door stop is to be installed to prevent the door from over travel.

12.1 Spring pre-tension

The spring pre-tension is factory set to either size #2 PUSH / PULL or size #4 PUSH. Adjust the spring according to the following information.

<table>
<thead>
<tr>
<th>Door closer power size according to ANSI 156.4</th>
<th>Closing force between 13mm (1/2&quot;) and 76mm (3&quot;)</th>
<th>Door weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size #1 PUSH / PULL</td>
<td>2 - 3</td>
<td>9 - 13</td>
</tr>
<tr>
<td>Size #2 PUSH / PULL</td>
<td>3 - 5</td>
<td>13 - 22</td>
</tr>
<tr>
<td>Size #3 PUSH</td>
<td>5 - 8</td>
<td>22 - 36</td>
</tr>
<tr>
<td>Size #4 PUSH</td>
<td>8 - 11</td>
<td>36 - 49</td>
</tr>
</tbody>
</table>

Spring shall not be over pre-tensioned. Make sure that the spring does not exceed the red line on the sticker.
12.2  App

Connect mains power (the operator will find its closed position) and make sure the LED is on.
Before the learning procedure starts, make sure that the door has been properly closed i.e., not by force.

12.2.1  Install the app

Download the app Entrematic Swing Door Manager at App Store or Google Play.

![App Store and Google Play icons]

12.2.2  Log in to the app with owner

![Images of app interface showing the setup process and pin creation]

Please create a 6 digits pin
You need to choose a pin code which you will later use to access the application and control your door.

Please confirm your pin:

```
1 2 3
4 5 6
7 8 9
* 0 #
```
12.2.3 Learn

Connect mains power (the operator will find its closed position).

Press Learn button for 4 seconds

Scan QR code on product

Note! If any of the parameters SPRING PRE-TENSION are changed after performing a learn, a new learn must be carried out.

The back-check will be automatically adjusted to 10° and 1 second before open position. The latch-check will be automatically adjusted to 10° and 1.5 seconds before closed position.
12.2.4  Test

12.2.5  Settings
12.2.6 Add user

12.2.7 Remove user
12.2.8 Log into app with user

At the same time, owner should select “Add user” and show the QR code. User scan the QR code from owner.
### 12.2.9 Configuration parameters

<table>
<thead>
<tr>
<th>Parameter name</th>
<th>Default settings</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hold open time</td>
<td>5s</td>
<td>2s- 6h</td>
</tr>
<tr>
<td>Opening time</td>
<td>4.5s</td>
<td>4.5s - 9s</td>
</tr>
<tr>
<td>Closing time</td>
<td>4.5s</td>
<td>4.5s - 9s</td>
</tr>
<tr>
<td>Arm system</td>
<td>Push</td>
<td>Push / Pull</td>
</tr>
<tr>
<td>Push and go</td>
<td>Not active</td>
<td>Not active / Active</td>
</tr>
<tr>
<td>Power assist</td>
<td>Off</td>
<td>Off / Low / Medium / High</td>
</tr>
<tr>
<td>Extend closing torque</td>
<td>0 (Lowest)</td>
<td>0 (Lowest) - 10 (Highest)</td>
</tr>
<tr>
<td>Stop on stall</td>
<td>Active</td>
<td>Not active / Active</td>
</tr>
<tr>
<td>Select lock voltage</td>
<td>12V</td>
<td>12V / 24V</td>
</tr>
<tr>
<td>Select lock power</td>
<td>Lock with power</td>
<td>Lock with power / Lock without power</td>
</tr>
<tr>
<td>Push and close</td>
<td>Not active</td>
<td>Not active / Active</td>
</tr>
<tr>
<td>Key impulse hold open time</td>
<td>5s</td>
<td>2s - 25s</td>
</tr>
<tr>
<td>Number of lock retries</td>
<td>1 time</td>
<td>0 - 2 times</td>
</tr>
<tr>
<td>Lock kick</td>
<td>Not active</td>
<td>Not active / Active</td>
</tr>
<tr>
<td>Reverse upon obstruction</td>
<td>Active</td>
<td>Not active / Active</td>
</tr>
<tr>
<td>Lock release time</td>
<td>0.5s</td>
<td>0s- 5s</td>
</tr>
<tr>
<td>Ratchet function</td>
<td>Not active</td>
<td>Not active / Active</td>
</tr>
</tbody>
</table>
13 Cover

- Secure cover with screw.
- Apply the Ditec/Entrematic logotype to the cover, see below.
- Apply the labels to the underside of the cover, see below.
## Troubleshooting

<table>
<thead>
<tr>
<th>Fault</th>
<th>Possible reasons why</th>
<th>Remedies/Explanations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>The door does not open</strong></td>
<td>Control switch or is set to OFF</td>
<td>Change the setting of the control switch</td>
</tr>
<tr>
<td>The motor does not start</td>
<td>Mains power is missing</td>
<td>Check the mains power and fuse in the building</td>
</tr>
<tr>
<td>The motor starts but the door does not open</td>
<td>Mechanical lock is locked</td>
<td>Unlock the lock</td>
</tr>
<tr>
<td></td>
<td>Something jammed beneath the door</td>
<td>Remove object</td>
</tr>
<tr>
<td></td>
<td>Electric striking plate is binding</td>
<td>Select lock release</td>
</tr>
<tr>
<td></td>
<td>Arm system has come loose</td>
<td>Adjust striking</td>
</tr>
<tr>
<td><strong>The door does not close</strong></td>
<td>Control switch is set to HOLD</td>
<td>Change the setting of the control switch</td>
</tr>
<tr>
<td></td>
<td>Something jammed beneath the door</td>
<td>Remove object</td>
</tr>
</tbody>
</table>
15 ANSI / BHMA A156.19 (LOW ENERGY APPLICATION)

15.1 REQUIREMENTS FOR POWER OPERATED DOORS

The following texts are excerpts from American National Standard for power-operated doors. Please refer to the full standard if necessary.

15.1.1 Activation

The operator shall be activated by a knowing act.

15.1.2 Opening

Doors shall open from closed to back check, or 80 degrees which ever occurs first, in 3 seconds or longer as required in Table I. Backcheck shall not occur before 60 degrees opening. Total opening time to 90 degrees shall be as in Table II. If the door opens more than 90 degrees, it shall continue at the same rate as backcheck speed. When powered open, the door shall remain at the open position for not less than 5 seconds.

15.1.3 Closing

Doors shall close from 90 degrees to 10 degrees in 3 seconds or longer as required in Table I. Doors shall close from 10 degrees to fully closed in not less than 1.5 seconds.

15.1.4 Force and Kinetic Energy

The force required to prevent a stopped door from opening or closing shall not exceed 15 lbf (67 N) measured 1” (25 mm) from the latch edge of the door at any point during opening or closing. The kinetic energy of a door in motion shall not exceed 1.25 lbf-ft (1.69 Nm). Table I provides minimum times for various widths and weights of doors for obtaining results complying with this kinetic energy.

Table I

Minimum Opening Time to Back Check or 80 degrees, which ever occurs first, and the Minimum Closing Time from 90 degrees to Latch Check or 10 degrees.

<table>
<thead>
<tr>
<th>“D” Door Leaf Width - Inches (mm)</th>
<th>“W” Door Weight in Pounds (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>100 (45.4)</td>
</tr>
<tr>
<td>*30 (762)</td>
<td>3.0</td>
</tr>
<tr>
<td>36 (914)</td>
<td>3.0</td>
</tr>
<tr>
<td>42 (1067)</td>
<td>3.5</td>
</tr>
<tr>
<td>48 (1219)</td>
<td>4.0</td>
</tr>
</tbody>
</table>

* Check applicable Building Codes for clear width requirements in Means of Egress.
Table II

Total Opening Time to 90 Degrees

<table>
<thead>
<tr>
<th>Backcheck at 60 degrees</th>
<th>Backcheck at 70 degrees</th>
<th>Backcheck at 80 degrees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table I plus 2 seconds</td>
<td>Table I plus 1.5 seconds</td>
<td>Table I plus 1 second</td>
</tr>
</tbody>
</table>

If the door opens more than 90 degrees, it shall continue at the same rate as backcheck speed.

**Note!** To determine maximum times from close to full open, the operator shall be adjusted as shown in the chart. Back check occurring at a point between positions in Table II shall use the lowest setting. For example, if the backcheck occurs at 75 degrees, the full open shall be the time shown in Table I plus 1.5 seconds.

15.1.5 Signage

Doors shall be equipped with signage visible from either side, instructing the user as to the operation and function of the door. The signs shall be mounted 50" +/- 12" (1270mm +/- 305mm) from the floor to the center line of the sign. The letters shall be 5/8 inch (16 mm) high minimum.

Doors All doors shall be marked with signage visible from both sides of the door, with the words “AUTOMATIC CAUTION DOOR” (see illustration below). The sign shall be a minimum of 6 " (152 mm) in diameter with black lettering on a yellow background. Additional information may be included.

Additionally one of the following knowing act signs shall be applied:

When a Knowing Act Switch is used to initiate the operation of the door operator, the doors shall be provided with signs on both sides of the door with the message “ACTIVATE SWITCH TO OPERATE”. The lettering shall be white and the background shall be blue.

When push/pull is used to initiate the operation of the door operator, the doors shall be provided with the message “PUSH TO OPERATE” on the push side of the door and “PULL TO OPERATE” on the pull side of the door. The lettering shall be white and the background shall be blue.