



**CiiLOCK** Engineering Pty Ltd

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# User Operation Manual

*VOLTA Powered Sliding Door System*

**CiiLOCK Engineering**



## **Revision Sheet**

<b>Release No.</b>	<b>Date</b>	<b>Revision Description</b>
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# USER'S MANUAL

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## 1.0 GENERAL INFORMATION

### 1.1 System Overview

#### *Design and Purpose:*

- The VOLTA sliding door drive system is an **aid** for opening and closing a sliding door. It is not an automatic opening system and will not drive the door open and closed independently.
- The purpose of the drive system is to power assist door operator by reducing the force required to open and close the sliding door.
- Power assist door system is not only designed for use of ordinary people but also to help people with physical disabilities or difficulty with mobility to open and close doors.

### 1.2 System Configuration

#### *Key Units/ Power Assist System Kit:*

- VOLTA Motorized Roller (1x unit for single roller kit/ 2x units for double roller kit)
- Volta Control Box/ Unit
- Battery Pack/ Unit (14.8V/ 3000mAh Li-ion battery)
- Charging Unit (Male and Female)
- Power Supply Unit (INPUT: AC 100-240V 50/60Hz 0.5A/ OUTPUT: DC 16.8V 1.0A 16.8W)
- Handle Adaptor Kit (2x units/ 1x with – VOLTA activation switch)

#### *Main Characteristics of the System:*

- User impact and electrical safety.
- At 18VDC the VOLTA system is categorized as extra-low voltage which carries low risk of electrical shock.
  - Fully concealed in extrusion. No exposure of any part (except handles for user).
  - Water Exposure – All components of the VOLTA system which are designed to be installed within 150mm of the finished floor level are sealed against water ingress and are capable of full submersion. All other components installed within the frame of the system are not exposed to rain fall, however are resistant to incidental water exposure.
  - System is equipped with Self-charging unit.
  - Battery is replaceable.
  - Roller Height adjustment range is up to 12mm.
  - Fail-safe function (door still operable when power outage or roller breakdown).
  - Handle has stops to avoid over-pressing of switch buttons.



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- System Operation force <20N
  - System Noise level <60dB



## 2.0 SYSTEM USAGE/ INTENDED USE

### 2.1 Operating VOLTA Sliding Door System

*Intended use (Controlling VOLTA Powered Door):*

- The operator can open and close the door by pulling on the existing handle in the direction of travel.
- When the operator applies a moving force to the door (via the handle), the drive system must operate instantaneously reducing the force required to move the door.
- The drive system can determine the direction of travel of the door when the operator starts to push/pull the door and drive the door in that direction.
- The force required to move the door from its closed position will be the largest force through the process of opening the door. This is due to the vertical seal in the door frame resting against the door and inertia.
- When the operator stops applying a moving force to the door (via the handle), the driving system must also stop. This applies in both directions.

### 2.2 Door Handles Configuration

*Additional hardware to a pair of internal and external door handles:*


- Each handle contains 2 micro button switches for 2 direction motions.
- Handle has a small freedom of movement to press and depress the button. Freedom can be sliding or pivoting.
- The handle has 3 positions: left, right and neutral.
- Handle is at neutral position (no button is depressed): when no force is applied on handle.
- Handle is at left/right position (left/right button is pressed): when there is a force applied on handle towards the left/right direction respectively.



## 2.3 Starting and Stopping VOLTA Sliding Door System

*Turning ON/ OFF motorized roller:*

- Apply a force on the handle installed on a sliding door (internal or external) in the direction of desired door motion, the motorized roller will run to support door motion in the chosen direction.
- When the user releases applied force, the motorized roller will be deactivated, and the door will stop eventually.
- Push on handle to activate the motorized roller to the selected direction should be smooth and with low effort (force) required by user.

	<b>ATTENTION</b>
	To be functional VOLTA Sliding Door System requires power supply and Control Box/ Unit must be ON (turn Control Box Switch ON).



## 3.0 SYSTEM MAINTENANCE

### 3.1 Maintenance General Information

*System Maintenance Consideration:*

- The VOLTA system is designed to function with a minimum or no maintenance required by the end user.
- If the VOLTA (the drive system or any other unit of system power assist kit) requires maintenance this should be performed by a fabricator (supplier), builder, locksmith and alike.

### 3.2 User Maintenance Best Practice

*Sliding Door Track and Roller Maintenance:*

Do the things below.

- Always keep the track clean and free of debris or liquids.
- Cover the door track with a plank or cloth until building maintenance job is completed.
- If there are debris or sand in the track, sweep the loose dirt from the door track with a soft broom, or toothbrush or vacuum.
- If using a hose to clean the framing or glass, wipe off water from the rail with a damp cloth.
- Always get advice from a professional (builder, fabricator) first if in doubt.

Don't things below.

- Delay removing debris, as it may make scraping necessary, potentially damaging the rollers or the rail surface finish.
- Use any corrosive liquid like acid or methylated spirits to loosen and remove the debris or dirt from the rail.
- Scrape with sharp edges to clean the door as it may potentially damage the rail or the surface finish.
- Use lubricants to ease the rolling as it may attract more dirt/ sand, making matters worse




## 4.0 SYSTEM TROUBLESHOOTING

### 4.1 Instructions for VOLTA Malfunction Correction

*VOLTA Not Running:*

#### 4.1.1 Power Supply Issue

- Check if the power supply is plugged in and power switched ON.
- Reset Control Unit (turn Switch OFF and back ON).
- Follow procedure explained in item 2.2 to start VOLTA and move sliding door.

	<b>ATTENTION</b>
	In case when power goes down, <u>Control Unit must be RESET</u> after electricity is back ON.


#### 4.1.2 Battery Issue

*Battery Discharged or doesn't have enough charge to run VOLTA:*


- Check battery charge level.
- Reset Control Unit (turn Switch OFF and ON) and monitor LED light status (ref. below).

*LED light status on Control Unit when switch is turned ON:*

- GREEN light will flash twice when Battery is full.
- GREEN light will false once when Battery is 70% full.
- RED light will flash if battery is fully discharged or not charged enough to run VOLTA.

	<b>ATTENTION</b>
	In case when power goes down, <u>Control Unit must be RESET</u> after electricity is back ON.




	<b>ATTENTION</b>
	To recharge battery properly keep sliding door closed when not in use. If the door is not closed (battery not charged) for longer than 30h, battery will discharge below VOLTA operation level.

### 4.1.3 Dead Battery Instructions

*Battery not charging or won't hold a charge:*


- All rechargeable batteries are consumables and have a limited lifespan — eventually capacity of VOLTA battery and its performance will decline such that battery need to be replaced.

	<b>ATTENTION</b>
	If you experienced problems with battery charging or have any other issue, <b><u>DO NOT attempt</u></b> to replace the battery by yourself. Contact supplier customer support (ref. to A. Annex for contact details).

### 4.1.4 VOLTA Wheel Slipping

*VOLTA Wheel Slips when Turning (Loose of Power Assistance or System often Stopping):*

- Inspect the track for obstructions, accumulated dirt, damage, water, or other liquid over the track or excessive lubrication present. Clean the track of the sliding Door and try to engage VOLTA again.
- If a problem still exists move the Sliding Door left or right from the existing position and try to engage VOLTA.
- If unsuccessful repeat previous step, but before you try to engage VOLTA first reset Control Unit (turn switch OFF and ON) and then try to use VOLTA power assistance.

	<b>ATTENTION</b>
	If you fail to engage the sliding door power assistance system or experience any other difficulty using VOLTA system, report any defects to your installer or system supplier (ref. for contact details in A. Appendix section of this Manual).