



Robotic  
Mobilization Device

# USER MANUAL

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**CAUTION:** Federal law restricts this device to sale by or on the order of a licensed healthcare practitioner.

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**DO NOT** use this device without first carefully reading and understanding the instructions contained in this manual. If you are unable to understand any part of the warnings, cautions, or instructions, contact the dealer, healthcare practitioner, or technical personnel before attempting to use this device. Otherwise, damage or injury may occur. The device is not intended for users under 22 years of age.

**SUPPLIER:** This user manual **MUST** be given to the user of the device.

**USER:** Please read this user's manual carefully before using your Tek RMD as it contains important information necessary for the safe and successful use of your Tek RMD. Before using the Tek RMD, the potential user should consult with their trained physicians to ensure that they are a good fit for the Tek RMD.

**Indications for Use:** The Tek RMD (Robotic Mobilization Device) is an electric lift and mobile stander and brings the user from a seated position to a passive standing position.

All of the information and specifications contained in this user manual are current at the time of printing. However, because it is the policy of Matia Robotics to continually improve the reliability and quality of all our products, we reserve the right make any changes at any time without notice. Before using this device, check all parts for shipping damage.

**In case of difficulty contact:**

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**Agent:**

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**Foreword**

Thank you for choosing a Matia Robotics product. The Tek Robotic Mobilization Device (RMD) is a device intended to afford mobility to disabled persons in daily life for indoor and some outdoor activities, as it gives them the ability to safely navigate in both environments.

Please read this user’s manual carefully before using your Tek RMD. It contains important information necessary for successful use of your Tek RMD. If you are visually impaired, you can request the PDF or large text format of this document from Matia Robotics at [info@matiarobotics.com](mailto:info@matiarobotics.com)

**Device description**

The Tek RMD (Robotic Mobilization Device) is an electric lift and mobile stander. It brings persons from a seated position to a passive standing position.

The main components of the Tek Robotic Mobilization Device are; standard wheels, standard back wheels, large wheels, large back wheels, foot plate, knee supports, main body, main arm, chest plate, handle arms, foldable transfer board, lifting mechanism (gas spring or linear motor).

The Tek RMD has an electronic control unit and also a remote control, which control the operation of the system. The required energy is supplied by two serial connected 12 V Valve Regulated Lead Acid Batteries which can be recharged with a battery charger included with the Tek RMD device. The safety precautions have been embedded to the control unit functions.

The Tek RMD has 3 add-on modules. These modules enable the device to have different capabilities. 7 additional model options may be created with combinations of these 3 modules.

The first is a linear motor module, which replaces the gas spring module, and enables motorized standing / sitting functions for users with limited strength in their upper body.

The second module consists of front and back large wheels and associated hardware. This module enables a more comfortable drive in some outdoor environments. The standard wheels can be replaced with the larger wheels easily by the user or care giver. This module includes a separate lifting jack that lifts the Tek RMD off of the ground to enable changing the wheels.

The third module is a foldable transfer board used for getting on / off the device. This module enables the users to transfer themselves to Tek RMD from its side.

The models and their configuration are summarized on the below table:

Model Number	Lifting Mechanism	Foldable Transfer Board	Wheel Type
TEKRMD01	Gas Spring	Not included	Standard wheel
TEKRMD02	Linear Motor	Included	Standard & Large wheel (Dual drive)
TEKRMD03	Linear Motor	Not included	Standard & Large wheel (Dual drive)
TEKRMD04	Gas Spring	Included	Standard & Large wheel (Dual drive)
TEKRMD05	Gas Spring	Not included	Standard & Large wheel (Dual drive)
TEKRMD06	Linear Motor	Included	Standard wheel
TEKRMD07	Linear Motor	Not included	Standard wheel
TEKRMD08	Gas Spring	Included	Standard wheel

**Field of Application**

Before using the Tek RMD, potential users should consult with their trained physicians to see if they are a good fit to use the Tek RMD. The device is intended as a custom-prescription device. Some features can be adjusted according to user size in order to enable better utility and comfort. The device can be used as defined within the user manual by patients who have a body weight between 88.1 – 264.5 lbs. (40 -120 kg) and body height between 4.6 - 6.2 feet (140 - 190 cm).

**NOTE:** Users must fit all the categories below before using the device:

- Body Weight - Minimum: 88lbs (40Kg) Maximum: 265 lbs. (120Kg).
- Body Height - Minimum: 4ft 7in (140cm) Maximum: 6ft 3in (190cm).
- Difference in leg length: less than 2in (5 cm).
- No severe restrictions in trunk control (**Note:** user should be able to stabilize her/himself in standing position with abducted arms).
- Should not have restrictions in hand function that interfere with operation/control of the device.
- Should not have severe contractures at hip, knee, or ankle joint that prevent verticalization in the device (> 30% of normal range of movement).
- Should not have instable fractures, wounds, or acute pressure ulcers at back or lower extremities.
- Should not have severe spasms or unfatiguable colons.
- Should not have history of epilepsy.
- Should not have cognitive restrictions that interfere with the safe use of the device.
- Should not be pregnant.
- Should not be visually impaired (blind).
- Should not have osteoporosis in lower legs or spine.
- Should not have autonomic dysreflexia, hypotension, or dizziness.

Candidate users with other disabilities or illnesses which are not listed above should inform their physician before using the device.

Matia Robotics reserves the right to make changes to the device. Pictures and illustrations used throughout this manual may differ from the actual device.

### Technical Service

Tek RMD technical service and repair must be performed by an authorized Matia representative as specified within the technical service manual. Any attempts to service or repair the device by an unauthorized person may lead to forfeiting the warranty as well as device malfunction, resulting in injury or death as well as damage to the device. Always contact your supplier regarding any questions or problems.

### General Information

As the Tek RMD was constructed using your personal measurements, it should fit your personal constitution at the time of delivery. Before using the Tek RMD, however, your authorized Matia representative must fine-tune the device to ensure a proper fit. Please listen carefully to his / her instructions on the safe operation of your device. It is also highly recommended that your first use of the Tek RMD be performed in the presence of your personal physician.

If there are any changes in your measurements, please contact your authorized Matia representative for further instructions for adjusting your Tek RMD.

### Specifications

**Weight (empty) min-max:** 260 lbs. (118 kg) - 354.5 lbs. (160,8 kg)

**Total width of wheelbase min-max:** 16.5 inch (42 cm) - 23.5 inch (60 cm)

**Total length of wheelbase min-max:** 30.3 inch (77 cm) - 40.3 inch (102.5 cm)

**Total height min-max:** 44.5 inch (113 cm) - 58,6 inch (149 cm)

**Total height (stowage) min-max:** 31.5 inch (80 cm) - 38.2 inch (97 cm)

**Max safe slope:** Standard wheel: 5°; Large wheel: 6° at safe driving height position

**Obstacle climbing ability:** Standard wheel: 0.98 inch (25 mm); Large wheel: 1.57 inch (40mm)

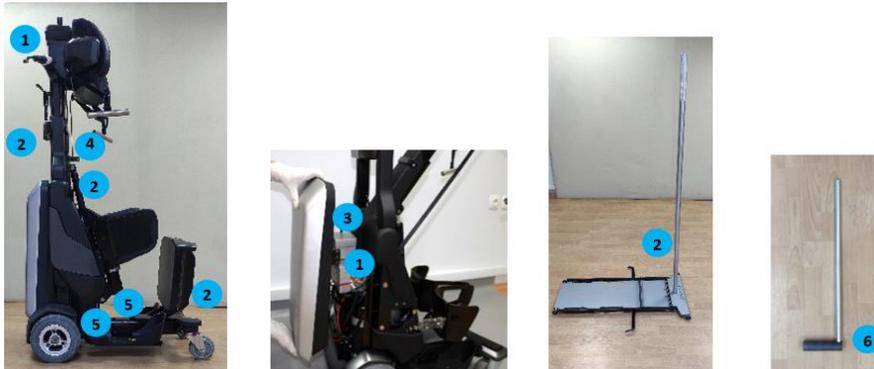
**Type of tires:** Breakdown safe, without air / pneumatic (standard wheel), air filled (large wheel)  
**Tire size Front/ Rear:** Standard wheel: 7.9 inch (20 cm) / 3.9 inch (10 cm)  
**Large wheel:** 10.2 inch (26 cm) / 9 inch (23 cm)  
**Driving distance range:** 4.68 miles (7.72 km)  
**Breaking distance and time flat surface min-max:** Standard wheel: 49 inches (1,24 m) at 1.8 seconds  
Large wheel: 59 inches (1,49 m) at 1.8 seconds  
**Breaking distance down a 5° slope at maximum speed:** Standard wheel: 68.8 inches (1,74 m)  
Large wheel: 102.3 inches (2,59 m)  
**Battery type:** 12V Valve Regulated Lead Acid  
**Power:** DC 24 V (2x12V) 22Ah  
**Charger:** 24V 4A Charger  
**The mass of the test dummy used in the performance test:** 264.5 lbs. (120 kg)  
**Maximum speed:** Standard wheel: 2.9 mph (4,66 km/h); Large wheel: 3.5 mph (5,63 km/h)  
**Turning diameter min-max:** Standard wheel: 58.3 inch (148 cm); Large wheel: 62 inches (157,5 cm)  
**Water ingress protection:** IPX4

This device meets the strength requirements of ANSI RESNA WC-1 Section 8  
 The test methods have been used as specified in RESNA WC-1:2009 Sec. 15.

**Explanation of Symbols**

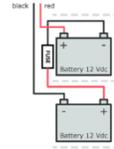
**Warning Symbols and Type Plates**

On the Tek RMD, you will find the following symbols and labels attached:



1. **Warning:** Warning indicates a potentially hazardous situation which, if not avoided, could result in death or injury. There are 3 warning signs, 1 on each electronic box. Opening the electronic boxes will expose the device to mishandling and damage, resulting in device malfunctioning and possibly injury or death. Contact an authorized Matia representative regarding any problems or issues with the device. The 4<sup>th</sup> warning sign is on the gas spring brake lock (if applicable). The user should remove this lock every time they would like to activate the gas springs and place it on when the device is not in use. 
  
2. **Risk of pinching:** Careless placement of body parts or other items in and around the handle arm, main arm, the linear motor, gas springs, foldable transfer board and lifting jack may cause pinching resulting in serious injury. Make sure all body parts and items are clear of any moving parts of the device (indicated by the danger zone symbol) when using the Tek RMD. For other pinching points refer to the General Safety Instructions & Warnings. 

3. **Battery wiring diagram:** Shows how to wire the batteries. Located inside the front cover.



4. **Main Label:** Placed at the main arm's user side.



5. **Brake release levers:** To release the brakes manually turn the levers left and right.



6. **Maximum safe driving height indicator:** Shows the correct driving angle of the user, the furthest position that the main arm should be, when driving with large wheels. Driving on a steeper angle than the indicator is only allowed when driving on flat surfaces with the standard wheels. Operating the device with standard wheel mode with a standing height above the maximum safe driving height indicator while outside or on a slope may cause instability and tipping, resulting in injury or death, property damage, and damage to the device.



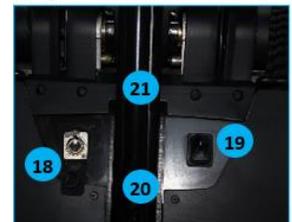
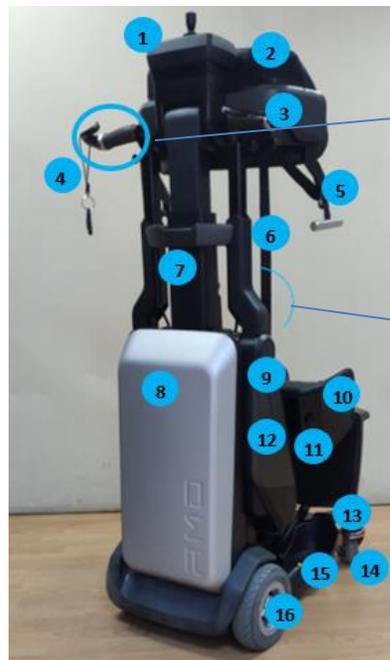
7. **Lock/ Unlock direction tool:** Shows which direction to drive the wheels to lock and unlock the nut.



## The Tek RMD

### Main Components

1. User Panel
2. Chest Plate
3. Handle Lever-Left<sup>1</sup>
4. Handle Lever- Right<sup>1</sup>
5. Hip adjustment bars
6. Handles
7. Main Arm
8. Front Cover
9. Main Body
10. Knee Supports
11. Knee Support Hooks
12. Small Side Covers
13. Indoor Tail
14. Standard Casters
15. Foot Plate
16. Standard Front Wheels
17. Gas Spring Brake Lock<sup>2</sup>
18. Charger plug
19. Main Switch
20. Gas Springs<sup>2</sup>
21. Shock Absorber<sup>2</sup>
22. Linear Actuator<sup>3</sup>
23. Foldable Transfer Board<sup>4</sup>
24. Large Tail<sup>5</sup>
25. Large Casters<sup>5</sup>
26. Large Front Wheels<sup>5</sup>
27. Lifting Jack
28. Wheel Nut Tool



<sup>1</sup> Handle levers have different functions in Gas Spring and Linear Motor units.

Gas spring units:

- Handle Lever- Left: To move the handle arms
- Handle Lever- Right: To activate the spring mechanism to move the main arm

Linear motor units:

- Handle Lever- Left: To sit down
- Handle Lever- Right: To stand up

<sup>2</sup> Gas spring units

<sup>3</sup> Linear Motor units

<sup>4</sup> Foldable transfer board

<sup>5</sup> Dual Drive



### User Panel

- 1. User Panel Activation Button:** This button activates the Tek RMD.
- 2. Joystick:** The joystick controls the direction and motion of the Tek RMD. It is a 360-degree, proportional joystick. The user can push the joystick half-way or full way, depending on how fast they would like to travel. The user can also fine tune the direction they would like to travel by pushing the joystick a few degrees to the left or right. When the user lets go of the joystick, the device will stop, and the drive motor's brakes will engage.
- 3. Horn:** Activates the horn when pressed.
- 4. Speed buttons:** + Increases and - decreases the maximum speed level.
- 5. Speed Indicator:** Shows how fast the device is going on a scale of 1 (slowest) to 5 (fastest).
- 6. Belt / Linear Motor Activation Button:** Activates the belt motors and Linear motor (for linear motor units only) simultaneously, when the light is on, the Belts and Linear motor are activated. Do not activate when the device is moving.
- 7. Left & Right Belt Buttons:** ▲ Tightens and ▼ loosens the right & left belt separately.
- 8. Battery Indicator:** The battery indicator displays the amount of power left in the device's batteries.
- 9. Remote Control Activation Button:** Activates the remote control.



When pressed speed up and down buttons simultaneously the device mode turns from standard wheel mode to large wheel mode. The mode is displayed on the User Panel by the way speed lights are lit. Speed Indicator and drive mode selection display indicates maximum speed level of led bars. Depending on the drive mode selection the speed indicator either shows a solid bar graph or a single point led display.



Drive mode switch



Standard wheel mode display:  
Solid bar graph



Large wheel mode display:  
Single point led display

## Chest Plate

1. Chest Plate Cushion
2. Hip Adjustment bars
3. Sling cushion safety bar



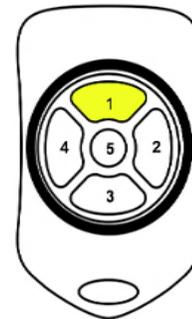
## Sling Cushion

While using the sling cushion the metal rings on the cushion should always face away from the body. The cushion's interior should always face towards the body of the user. There are two Spring Belts located at the bottom of the sling cushion which are designed to be attached to the device's Knee Support Side Hooks. These Spring Belts are used as supplemental safety belts, also when used without the foldable transfer board, they help the user to pull the sling cushion under the hips. There are holes on both sides of the Sling Cushion for the Safety Bars to pass through, in order to secure the Sling Cushion to the device. These Safety bars are tied into the device with a motorized belt mechanism. To pass the safety bars comfortably through the sling cushion holes, the user can loosen the belts by activating the belt mechanism on the User Panel. For detailed information on how to use the Safety bar hole, please see User Manual's Operation section.



## Remote Control

The Remote Control allows the user to remotely maneuver the Tek RMD once the Remote Control has been activated via the User Panel. The Remote Control's use is limited to positioning the device for boarding and storage. It is not intended to drive the device while the user is on the device. Controls on the User Panel will always override the Remote Control. An alert will sound if the Remote Control is not deactivated from the User Panel via the Remote Control Activation Button after 30 seconds. In this case to the user must maneuver the device to himself and shut it down from the main switch.



1. **Go Forward:** (Yellow Button) The device moves straight ahead.
2. **Turn Right:** The device turns right.
3. **Go Back:** The device moves backward.
4. **Turn Left:** The device turns left.
5. **Horn:** The horn will sound when pushed.

To move the device in an angle, simultaneously press the 2 directions you would like to move the device (e.g., front and left).



**Wrist band:** The user can place the band over their wrist to secure the Remote Control.

## Operation



### **WARNING:**

- Failure to read and follow all instructions located on the device and in the user manual may lead to device malfunction, misuse, and tipping, resulting in injury or death, property damage, and damage to the device. Read all instructions before operating the Tek RMD.

- Do not transfer onto or off the Tek RMD while parked on an uneven or sloped surface. Moving on and off the device while on an uneven or sloped surface may cause tipping resulting in injury or death, property damage, and damage to the device. Always ensure the device is parked on a level surface with wheel locks engaged before transferring on and off the device.
- The Tek RMD is designed for one user at a time. Operating the Tek RMD with more than one person on the device will shift the center of mass and may increase the user weight above the max user weight, causing device malfunctions, imbalance, instability, and tipping, resulting in injury or death, property damage, and damage to the device. Never allow more than one person on the device at one time.
- Do not move the device via the joystick or the remote control while transferring onto or off the Tek RMD. Moving the device during transfer may cause an unstable transfer process resulting in injury or death, property damage, and damage to the device. Always confirm that the remote control is deactivated, ensuring that the red light on the user control panel is off and confirm that the joystick is in the neutral position when transferring onto the Tek RMD.
- Linear motor or the gas spring mechanism should not be used while on an unstable, uneven, or sloped surface. When the user is changing positions, the device should not be moving and should be clear of any interfering objects and obstacles. Changing positions while on an unstable, uneven, or sloped surface, while the device is moving, or with obstacles in the way may cause instability and tipping resulting in injury or death, property damage, and damage to the device. Before changing positions, always ensure the device is parked on a stable and level surface with the wheel locks engaged. Ensure that the device is clear of any interference during the entire adjustment process.
- Before operating the device in the standing configuration, ensure that the sling cushion, back belt, chest cushion, and knee attachments are in the correct position. Incorrect position of device elements may lead to improper user position, which may cause discomfort, injury, or tipping which can result in injury or death, property damage, and damage to the device. If device elements are incorrectly positioned, reposition immediately. Transfer off the device if necessary to ensure elements are correctly positioned.
- Do not use the Tek RMD on stairs or escalators. Operating the device on stairs or escalators will cause tipping, resulting in injury or death, property damage, and damage to the device. Always use an elevator.
- Regular inspection is mandatory for proper device performance. Using the Tek RMD without ensuring that all device parts and safety functions are in safe and proper working condition may lead to device malfunction, misuse, and tipping, resulting in injury or death, property damage, and damage to the device. Perform regular careful inspection of the Tek RMD before operating the device and use only if all parts and safety features are functioning properly.
- Any abnormal movements or unusual noises from the device while in operation should be reported immediately to an authorized Matia representative. Failure to report any abnormalities may lead to further device malfunction which could result in damage to the device, property damage, and injury or death.
- The Tek RMD can only be used with the accessories mentioned in the user manual or web site. Matia Robotics assumes no liability if the device is used with accessories from other manufacturers. Matia Robotics is not liable for any personal injury or damage to property resulting from improper use; in such cases, the user has sole liability.
- Do not activate the belts or the linear motor when the device is moving. Activating the belts or the linear motor while moving the device may cause distraction, a dangerous shift in center of mass location, or device instability and tipping, resulting in injury or death, property damage, and damage

to the device. Ensure that the device is parked on a level surface before making any adjustments to the device.

- When the battery indicator displays only a red light, charge the batteries as soon as possible.
- Do not use the Tek RMD if the joystick is broken, absent, or sluggish. Do not use the Tek RMD if the joystick boot is torn, damaged, broken, or absent. Do not use the Tek RMD if the joystick does not spring back to the neutral position when released. Operating the Tek RMD with a defective or missing joystick may cause a loss of control of the device, resulting in injury or death, property damage, and damage to the device. Always monitor joystick performance and contact an authorized Matia representative regarding any joystick problems.
- Do not activate the Remote Control if the remote is out of the user's reach. Failure to deactivate the remote may cause dangerous unintended movements of the device, resulting in accidents, tipping, injury or death, property damage, and damage to the device.
- Do not leave the remote control activated when the Tek RMD is not in use. Failure to deactivate the remote may cause dangerous unintended movements of the device, resulting in accidents, tipping, injury or death, property damage, and damage to the device. Always deactivate the remote control, ensuring that the red light on the user control panel is off, when the device is not in use.
- Check the gas spring cable on the devices with gas spring system before every use and make sure that it is not jammed or kinked.
- Do not use the Tek RMD with flat or damaged tires. Operating the Tek RMD with a defective tire may cause a loss of control of the device, resulting in injury or death, property damage, and damage to the device. Always control the tires, contact an authorized Matia representative regarding any problems.

## Getting on/off The Tek RMD

### Regular transfer (for Tek RMD01, Tek RMD04, Tek RMD05, Tek RMD07)

#### *Getting onto the Tek RMD / Mounting the device*

1. Before mounting the Tek RMD, ensure that the main arm is lowered enough so that the user can comfortably get on the device.
2. Switch on the device via the Main Switch. Activate the User Panel via the User Panel Activation Button. If necessary, activate the Remote Control.
3. Maneuver the device so that the rear of the Tek RMD is positioned in front of you using either the Remote Control or User Panel.
4. Remove the Sling Cushion from the device. While in a seated position, move slightly forward so that you can leave enough space to position the cushion behind you. Place the sling cushion behind your back.
5. Place your feet on the foot plates with the help of your hands. Secure your feet with Velcro bands if necessary. Always use the device with your shoes on.
6. Make sure the device's speed is set to level 1. Position the device in front of you using joystick.
7. Hook the Sling Cushion's Bottom Side Spring Belts to the Knee Support Side Hooks.
8. Gently lift your body up with your hands. The Spring Belts will automatically pull the Sling Cushion under your hip until it touches your hands. Gently lift your body up few more times, if needed, until the Sling Cushion is placed at the correct position. Before getting on the device, make sure that you are sitting correctly on the Sling Cushion with the holes of the cushion at the sides of your body.
9. Press the belt activation button on the user panel (red led will light up). Loosen the belts with the help of the belt loosening buttons. Pass a Sling Cushion Safety bar through the hole in the Sling

- Cushion. Follow the same instruction on the opposite side. Maneuver the device to yourself using the joystick until the chest plate lightly touches your stomach and the knee pads lightly touch your knees.
- 10.** Place the back belt on. Adjust the back belt and make sure that the Velcro is securely tightened to the chest supports.
  - 11.** Tighten the belts until you are securely held against the chest plate from both sides (right and left) with the help of the belt tightening buttons. Make sure that you are moving the belts in the desired direction (tighter or looser). Adjust the back belt if needed.

ATTN:

- Continue to **12** if your unit has **Gas spring** (for Tek RMD01, Tek RMD05)
- Continue to **15** if your unit has **Linear Motor** (for Tek RMD04, Tek RMD07)

Gas spring system:

- 12.** Remove the Gas Spring Brake Lock.



**WARNING:**

The Gas Spring Brake Lock must be placed back on the handle whenever the Tek RMD is not in use. Failure to place the lock on may lead to inadvertent operation of the device, causing unintentional and unwanted movement resulting in injury or death, property damage, and damage to the device.

- 13.** Press the Left handle lever and push the handle arms upwards with your both hands at your arm’s length. Release the handle lever, move the handle arms slightly to make sure its locked.
- 14.** Press the Right handle lever and pull yourself up towards the handles, release the gas spring handle lever. Repeat these two steps until you are on a fully upright position. Once you are fully upright, adjust your posture using a mirror if necessary.

Linear motor system:

- 15.** Press the right handle brake to stand up. Once you are fully upright, adjust your posture using a mirror if necessary.

All units:

- 16.** Make sure that you are standing correctly and that the belts are neither too loose nor too tight. If needed, adjust them with the belt tightening and loosening buttons. Make sure that you are adjusting the belts in the desired direction. Once you are firmly secured into the device, press the belt activation button to deactivate the belt tightening system (red led light will be off). Belt activation button also activates and deactivates the linear motor in the motorized version.





Different methods for Placing the Sling Cushion under Your Hips

The users can place the sling cushion on their bottom in a couple of ways:

**A. Using your hands to place the sling cushion**

1. While in a seated position, move forward so that you can leave enough space to place the sling cushion horizontally behind you.
2. Place the sling cushion behind you.
3. Lift your body up with your arms and place your body on the sling cushion.
4. While gently bending to the sides, and holding your body with one hand, gently move the other side of the sling cushion to the front or back.
5. Hook the sling cushion’s bottom side spring - belts to the knee support side hooks.
6. Before getting on the device, make sure you are sitting correctly on the sling cushion.

**B. Rolling on the sling cushion**

1. While on a bed, place the sling cushion where you would like to get on the device.
2. Move your body next to the sling cushion.
3. With the help of your hands, gently move your body onto the sling cushion.
4. Hook the sling cushion’s bottom side spring - belts to the knee support side hooks.
5. Before getting on the device, make sure that you are sitting correctly on the sling cushion.

***Getting off the Tek RMD / Dismounting the device (for Tek RMD01, Tek RMD04, Tek RMD05, Tek RMD07)***

During the dismounting process do not use the joystick or remote control and do not drive the device, other than as instructed below:

1. Move backwards until you are right in front of a chair or a bed. Set the speed level to Level 1.

**ATTN:**

- Continue to **2** if your unit has **Gas spring** (for Tek RMD01, Tek RMD05)
- Continue to **3** if your unit has **Linear Motor** (for Tek RMD04, Tek RMD07)

**2. For gas spring system:**

- a. Make sure that both the belt activation and remote-control activation buttons are switched off (red led will be off).
- b. Remove the gas spring brake lock, press the Right handle lever, and gently push yourself backwards until you are sitting down at your preferred location.
- c. Release the Right lever and press the Left lever.
- d. Pull down the handles and Left lever at your preferred position and make sure its locked.
- e. Repeat the steps until the sling cushion touches the chair or bed.
- f. Place the gas spring brake lock on.
- g. Press the belt activation button.

3. For Linear Motor system:
  - a. Activate the linear motor by pressing the belt / linear motor activation button.
  - b. Press the left handle lever to lower the Main Arm until the sling cushion touches the chair or bed. Make sure the chest shield or hip adjustment bars are not pressing to your body.

All units:

4. Remove the back belt.
5. Loosen the belts until you fully sit on your preferred spot, then further loosen the belts so the sling cushion safety bars are loose. Do not press the buttons in the wrong direction.
6. Take one of the sling cushion safety bars and untie it from the sling cushion by passing it back from the sling cushion hole. Follow the same instruction on the opposite side.
7. Remove the straps that are hooked into the knee supports.
8. If necessary, untie your feet by removing the Velcro band.
9. Using the joystick, slowly move the device forward until you have enough space to remove your legs. With the help of your hands, remove your legs out of the device.
10. Using your hands, remove the sling cushion from under your hips, place the sling cushion back on the device by passing a Sling Cushion Safety bar through the hole in the Sling Cushion.
11. Activate the remote control (red LED will light up)
12. With the use of either the remote control or the joystick, move the device to a safe spot where you can reach to switch it off.
13. Switch the device off.



**WARNING:**

- Do not press simultaneously to both levers on the linear motor version of the Tek RMD. Pressing both levers simultaneously will cause the linear motor to stop. In this case the user needs to stop pressing both levers and re-operate the motor pressing only to the desired direction.
- When sitting down to a chair or a bed or the transfer board with the device make sure the chest shield, the hip adjustment bars or any other part of the unit is not pressing your body or legs or pressing your body to the seat. Placing pressure to the body may cause pressure sores, serious injury or death. Always control with your hands and make sure there is no unwanted pressure on your body.

**Foldable transfer board (for Tek RMD02, Tek RMD03, Tek RMD06, Tek RMD08)**

***Getting on the Tek RMD / Mounting the device***

1. Before mounting the Tek RMD, ensure that the device is in start-up position.
2. Switch on the device via the Main Switch.
3. Activate the User Panel via the User Panel Activation Button. If necessary, activate the Remote Control.
4. Maneuver the device so that the rear of the Tek RMD is positioned next to you using either the Remote Control or the Joystick.
5. Pull the transfer board to up and back to open.
6. Remove the Sling Cushion from the device, place the sling cushion on the board, the Bottom Side Spring Belts should face the unit.
7. Pass the knee springs from the side of the sling cushion to hold the side plates and sling cushion together.
8. Place one foot on the foot plate with the help of your hands. Move your body on the transfer board, until the Sling Cushion is placed at the correct position, you may use the main arm for support. Place

your other foot on the footplate. Gently move your body, if needed, make sure that you are sitting correctly on the Sling Cushion with the holes of the cushion at the sides of your body.

9. Secure your feet with Velcro bands if necessary. Always use the device with your shoes on.
10. Press the belt/linear motor activation button on the user panel (red led will light up) and loosen the belts.
11. Pass a Sling Cushion Safety bar through the hole in the Sling Cushion. Follow the same instruction on the opposite side.
12. Move your body to front until the chest plate lightly touches your stomach and the knee pads lightly touch your knees. Place the knee springs on. Place the back belt on securely. Adjust the back belt and make sure that the Velcro is securely tightened to the chest supports.
13. Tighten the belts until you are securely tied to the chest plate from both sides (right and left) with the help of the belt tightening buttons. Make sure that you are pulling the belts on in the desired direction. If necessary, adjust the back belt and make sure that the Velcro is securely tightened to the additional chest supports.

**ATTN:**

- Continue to **14** if your unit has **Gas spring** (for Tek RMD03, Tek RMD08)
- Continue to **19** if your unit has **Linear motor** (for Tek RMD02, Tek RMD06)

Gas spring system:

14. Remove the Gas Spring Brake Lock.
15. Press the left handle lever and push the handle arms upwards with your both hands at your arm's length. Release the handle lever. Make sure it is locked.
16. Press the right gas spring lever and pull yourself up towards the handles, release the gas spring handle lever. Repeat these two steps until stand up until the sling cushion is no longer touching the transfer board.
17. Reach back to the transfer board. Slightly pull the plate up from the handle arms. Release it to go down to the folded position.
18. Press the left handle lever and push the handle arms upward. Press the gas spring handle lever and pull yourself up towards the handles until you are on a fully upright position.

Linear motor system:

19. Press the right handle brake to stand up until the sling cushion is no longer touching the transfer board, release the lever.
20. Reach back to the transfer board. Slightly pull the plate up from the handle arms. Release it to go down to the folded position.
21. Press the right handle brake to stand up until you are on a fully upright position.

All units:

22. Once you are fully upright, adjust your posture using a mirror if necessary. Make sure that you are standing correctly and that the belts are neither too loose nor too tight. If so, adjust them with the belt tightening and loosening buttons. Make sure that you are adjusting the belts in the desired direction. If needed reattach the back belt comfortably.
23. Press the belt/ linear motor activation button to deactivate it.



**WARNING:**

The foldable transfer board should be attached to the device by an authorized Matia technical service representative. Do not attempt to remove or attach the board mechanism. Due to the weight of the transfer board, removal or attachment may cause difficulty resulting in injury or damage to the device.



4



5



6



8



10



17 & 20



22

### Getting off the Tek RMD

During the getting off process do not use the joystick or remote control and do not drive the device, other than as instructed below:

1. Move near the desired seating spot. Decrease the speed to Level 1.

**ATTN:**

- Continue to **2** if your unit has **Gas spring** (for Tek RMD03, Tek RMD08)
- Continue to **4** if your unit has **Linear motor** (for Tek RMD02, Tek RMD06)

Gas spring system:

2. Make sure that the belt activation and remote-control activation buttons are switched off (red led will be off).
3. Press the gas spring handle lever and gently push yourself down until you reach the foldable transfer board.

Linear motor system:

4. Press the belt/linear motor activation button.
5. Press the left handle lever until you are down low enough to reach the foldable transfer board.

All units:

6. Hold one of the handles on the transfer board covers. Pull up and back to open. Move further down until the sling cushion touches the transfer board.
7. Remove the back belt.
8. Loosen the belts until they are very loose. Do not press the buttons in the wrong direction.
9. Take one of the sling cushion safety bars and untie it from the sling cushion by passing it back from the sling cushion hole. Follow the same instruction on the opposite side.
10. Remove the straps that are hooked into the knee supports.
11. If necessary, release your feet by removing the Velcro footband.
12. With the help of your hands, remove your body and legs out of the device.
13. Place the sling cushion back on the device.
14. Activate the remote control (red led will light up).
15. With the use of either the remote control or the joystick, move the device to a safe position where you can reach to switch it off and switch the device off.

## Driving

1. Make sure to be at the correct standing position.
2. When the device is initially turned on it defaults to speed 1.
3. Adjust the speed of the device with speed up and down buttons. Speed 1 is not meant for driving, it is to maneuver the device while mounting / dismounting or storing the device.
4. Joystick is a 360-degree joystick. The user can choose the direction they would like to go and manipulate the joystick to go to the chosen direction.
5. The standard wheels are to be used in indoor environments only. The Large wheels can be used both indoor and some outdoor environments (Tek RMD2, Tek RMD3, Tek RMD6, Tek RMD8)



### **WARNING:**

- This device is designed for use in temperatures between -25° to 50° C (-13° to 122° F). Do not operate the Tek RMD beyond this temperature range. Using the device in temperatures above or below this range may lead to device malfunctioning and possibly injury or death. Contact an authorized Matia representative regarding any problems or issues with the device.
- Driving the Tek RMD over mats, cables, debris or any material which might entangle the wheels may cause instability and tipping, resulting in injury or death, property damage, and damage to the device. Only operate the Tek RMD over stable and clear surfaces.
- Protruding objects can obstruct access routes. When driving too close to obstructions, the Tek RMD user may unintentionally hit the protruding object, causing injury and leading to instability and tipping. Leaning to avoid protruding objects may also cause tipping, which may result in injury or death, property damage, and damage to the device. When navigating narrow clearances or areas with protruding objects, always move the device along the safest path of travel away from any potential obstructions. Also avoid leaning and shifting weight and balance to one side of the device. Remain in the normal seated or standing position. Ask for assistance if navigating a difficult and narrow pathway.
- Operating the Tek RMD with improper foot protection, such as flip flops or socks, will expose feet to injury as well as slipping, which may result in injury or property damage, and damage to the device. Always wear comfortable and stable shoes with support, adequate foot protection and surface grip in order to avoid injury or slipping.
- Operating the Tek RMD without clothing may lead to injury from the device or surrounding objects. Always wear sufficient and comfortable clothing to protect body from harm.
- Operating the Tek RMD with loose and free-flowing clothing can cause clothing to get caught in the certain parts of the device. Always wear tight fitting clothing when operating or in proximity to the device.
- The Tek RMD standard wheel mode is designed for use on slopes no greater than 3 degrees (5% slope). Navigating slopes above 3 degrees (5% slope) using the standard wheel mode will cause instability and tipping, resulting in injury or death, property damage, and damage to the device. Always drive the device along the safest path of travel with the smallest slope, avoiding any suspicious slopes. If in doubt, always ask a qualified individual regarding any necessary slopes.
- Operating the Tek RMD while in standard wheel mode outside or on an unstable, wet, icy, or slippery surface is prohibited and will cause instability, slipping, and tipping, which may result in injury or death, property damage, and damage to the device. Always drive the device on dry, firm, and stable surfaces indoors only while the device is adjusted to the standard wheel mode. Do not attempt to travel with the Tek RMD outside while in standard wheel mode.
- Traversing obstacles higher than 0.47 inches (12 mm) while using the Tek RMD standard wheel mode on level surfaces is prohibited and will cause instability and tipping, resulting in injury or death,

property damage, and damage to the device. While using the small wheel configuration, always drive the device along the best path of travel, avoiding any transitions higher than 0.47 inches (12 mm).

- The Tek RMD large wheel mode is designed for use on slopes no greater than 6 degrees. Navigating slopes above 6 degrees using the large wheel mode will cause instability and tipping, resulting in injury or death, property damage, and damage to the device. Always drive the device along the best path of travel with the smallest slope, avoiding any suspicious slopes. If in doubt, always ask a qualified individual regarding any necessary slopes.
- Traversing obstacles higher than 1.5 inches (40 mm) while using the Tek RMD large wheel mode is prohibited and will cause instability and tipping, resulting in injury or death, property damage, and damage to the device. While using the large wheel mode, always drive the device along the best path of travel, avoiding any transitions higher than 1.5 inches (40 mm).
- When traversing obstacles, the Tek RMD must be driven perpendicular over the obstacle without stopping. Failure to drive the device perpendicular to the obstacle, as well as stopping over the obstacle may cause tipping, resulting in injury or death, property damage, and damage to the device. Always make a direct and full approach to and over any obstacle which meets the 1.5 in (40 mm) maximum transition height. Any transition above the maximum transition height must be avoided.

**Dual Drive mode**

Dual drive kit enables the device to be used in some outdoor environments.



**WARNING:** If not factory ordered at the time of initial purchase, a Large wheel retrofitting kit needs to be installed by an authorized Matia service representative. Any attempt by the user to install the retrofitting kit will forfeit the warranty and may lead to damage to the device, leading to malfunction and possibly resulting in injury or death, property damage, and damage to the device.

The dual drive kit has 5 parts.

1. Lifting jack (1 unit).

Lifting jack parts: Main body, 2 lever arms, 2 side stoppers, fasteners.

- Assembling the Lifting mechanism.
  - Screw the 2 stoppers on the sides of the body. The bended tips should be pointing the device.
  - Screw the first arm in the hole on the main body. Screw the second arm on top of the first arm. The knurled side should come on top.
  - After replacement of wheels, unassembled parts can be placed on the jack for storage.



2. Large front wheels (1 pair)

- When installed the flat side of the rim will be outside.
- The screw head on the rim should coincide with the keyhole on the rim.



3. Large tail (1 unit)

- Tail mill has a locking pin. To bring it to resting position pull the knob up, turn slightly to a side and release it. The knob will stay up. To bring it back to locking position pull the knob up, turn slightly to a side and release it.



Locked position



Resting position

4. Front wheel nut (3 pairs)

- 1 pair comes on the device and 2 extra pairs in the accessory box.
- It is a custom-made nut with a square side and a fiber side.
- It is used to lock both the small and the large wheels.
- When screwed on the shaft the square part faces the motor and the fiber side stays outside.



**WARNING:** The fiber on the nut prevents the nut from getting loose once its locked. Check the nut periodically by trying to further tighten it after driving. If you can, it means the fiber wore out and the nut is getting loose while driving the device. In this case, please dispose both nuts and use a new pair.

5. Wheel nut tool (1 unit)

- It is a custom-made tool with a metal handle and a plastic ranch. There is a magnet in the plastic so when placed in, the nut stays inside.
- When placing the nut in the tool the fiber side goes in first.
- Look inside the tool to make sure nut is there.
- The nut is locked/unlocked by placing the tool on the nut, holding it still and turning the wheels by driving via remote control. There is a label on the back side of the tool to show the direction to drive to lock and unlock the nut.
- The wheels should be driven to reverse directions than each other to be locked and unlocked.
  - Right wheel:
    - Lock: Drive backward
    - Unlock: Drive forward
  - Left wheel:
    - Lock: Drive forward
    - Unlock: Drive backward



Placing the nut



Nut inside



No nut inside



Driving direction label

The user can do the Standard - Large wheel switch by himself while on a wheelchair or a caregiver can do the switch when the user is on the device.

1. When the device is initially turned on it defaults to small wheel mode.
2. By pressing the speed up and down buttons simultaneously the user can change the Drive Mode to the correct mode.
3. Maximum safe driving height indicator shows the correct driving height of the user when driving with different wheel modes. It indicates the correct main arm positioning.
4. When driving outdoors reduce the driving speed when travelling downhill (e.g., set the device to speed level 2 instead of 3). Slightly tilt your position to the rear when driving downhill.

Switching Standard wheel - Large wheel (Tek RMD2, Tek RMD3, Tek RMD6, Tek RMD8).

#### Lifting Tek RMD off the ground

1. Place the lifting jack under Tek RMD until the bumper cover touches the metal stopper.
2. Push the lever arm down. Tek RMD will lift off the ground.



1 (i)



1 (ii)



2

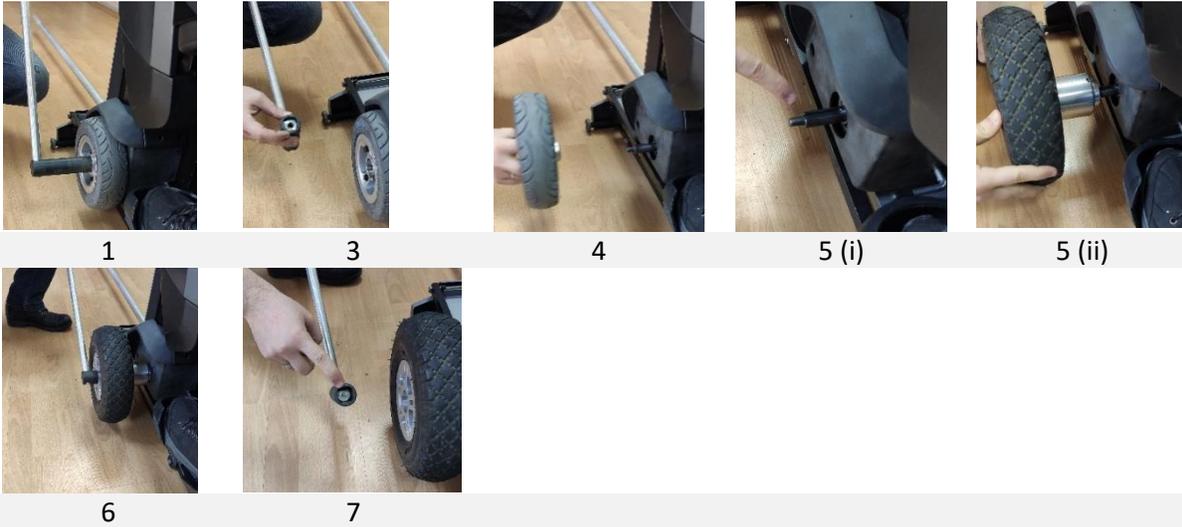


**WARNING:** The lifting jack has moving parts which can easily pinch an object with severe force. Placing fingers or other body parts near the lifting jack while on the floor or while being carried can lead to serious injury. To avoid pinching, always keep all body parts away from the lifting jack. Do not place any body part in between the small spaces of the jack. Always detach the lever from the lifting jack when not in use.

#### Switching the front wheels

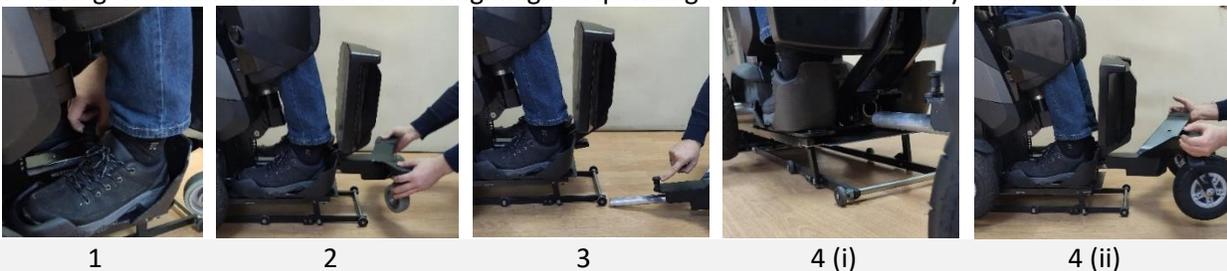
1. Place the Wheel nut tool in the hub of the wheel on the wheel nut.
2. With the help of the remote control move the wheels to unscrew the nut. The wheels should be driven to reverse directions than each other to be locked and unlocked. Follow the driving direction sticker.
3. Pull the tool out. Look inside the tool to make sure nut is there.
4. Pull out the wheel out of the shaft.

5. Place the new wheel on the shaft and push. The shaft has a keyhole, and both the Small and Large wheels have a screw heads marked with red holding the key on the rim. The keyhole and the screw head should coincide each other for the wheel to go in.
6. Place the wheel nut tool inside the hub of the wheel. Push inside until the nut reaches the shaft. With the help of the remote control drive the wheels to screw the nut. Feel the resistance to make sure it is fully secured. Turn the wheel by hand with the wheel nut tool to be sure.
7. Pull the tool out, look inside to make sure the nut is not there. Try pulling the wheel to control.
8. Repeat for the other side.



### Changing the tail

1. Reach to the tail lock knob between the footplates. Pull the knob up, turn slightly to a side and release it so it stays at the resting position.
2. Pull the tail until the tail mill is completely out of the tail guide.
3. Take the other tail. Make sure the lock is in rest position.
4. Place the tail mill in the tail guide. Slightly lift the tail up and push until the tail lock is on the desired hole.
5. Pull the knob up, turn slightly to a side and release it so it is back on the locked position. Try pulling the tail out to make sure it is locked.
6. Lower the device back on the floor and remove the lever.
7. Switch the drive mode from the User Panel.
8. Bring the main arm to correct driving height depending on the environment you like to drive.





5



6



7

**Maximum safe driving height indicator:**

Shows the correct driving angle of the user, the furthest position that the main arm should be, when driving with large wheels on varying surfaces. Driving on a steeper angle than the indicator is only allowed when driving on flat surfaces with the standard wheels. Operating the device with standard wheel mode with a standing height above the maximum safe driving height indicator while outside or on a slope may cause instability and tipping, resulting in injury or death, property damage, and damage to the device.



Configuration 1 - Height for Driving Indoors ONLY

This is the height that must only be used for driving Indoors in environments meeting ADA built environment accessibility standards. When the main arm is adjusted for indoor driving, the handle arm will align with the Indoor portion of the Safe Driving Height Indicator label on the shroud to the left of the handle arm. Operation of the device outdoors in this position can cause instability and tipping, resulting in injury or death.



**WARNING:**

Operating the Tek RMD outdoors with the main arm fully upright or anywhere indoor only label is strictly prohibited. Operation of the device outdoors in this position can cause instability and tipping, resulting in injury or death.



Safe driving height indicator position



Correct standing position



Configuration 2 - Height for Safe Driving Outdoors in the Outdoor Mode

This height is the height for safe driving indoors and outdoors in ADA accessible environments in the outdoor mode. When the main arm is adjusted for indoor and outdoor driving, the handle arm will align with the Indoor & Outdoor portion of the Safe Driving Height Indicator label on the shroud to the left of the handle arm.



Safe driving height indicator position



Correct standing position



**WARNING:** Operating in non-ADA accessible environments can cause instability resulting in injury or death. Always use the Tek RMD in ADA accessible environments.

**Configuration 3 – Transfer Height ONLY**

This height must only be used when transferring to or from the Tek RMD. When the main arm is adjusted for transfer only height, the Blue line on the main arm will align with the No driving Transfer only portion of the Safe Driving Height Indicator label on the shroud to the left of the main arm. Operation of the device in this position can cause instability and tipping, resulting in injury or death.



Safe driving height indicator position



Transfer position



**Emergency Shutoff**

In emergency situations, the Tek RMD can be turned off at any time using the device’s Main Switch. Once the switch is flipped, the Tek RMD’s brakes will immediately engage, and all electric functions will cease.

Tek RMD is equipped with brakes that release when voltage is applied. During operation, the control unit first applies voltage to brakes to release them before applying energy to the drive motors to propel the Tek RMD. In the case of a power failure the brakes automatically resume applied position bringing the device slowly to a halt.

If any malfunctions occur, such as an excessive supply of energy to the system or a communications disruption, the software will disengage the Tek RMD and trigger the platform’s emergency brake system. After each emergency stop, the controls of the Tek RMD must be reactivated. If the driving function is still not available after switching the controls on, a caregiver must unlock the brakes to push the device. In this circumstance, contact a specialist dealer as soon as possible. If the batteries are fully discharged, the platform’s automatic motor brake system will activate.

In such circumstances,

1. A caregiver must reach the motors, release the motor release arms on both sides.
2. Push the Tek RMD to a chair or a bed that the user wants to sit down on.
3. Locks the motor release arms and removes the spring belts and back belt. If the device has foldable transfer board the caregiver opens the board.

ATTN:

- Continue to **4** if the unit has **Gas spring** (Tek RMD01, Tek RMD03, Tek RMD05, Tek RMD08)
- Continue to **6** if the unit has **Linear motor** and the user is **standing** (Tek RMD02, Tek RMD04, Tek RMD06, Tek RMD07)
- Continue to **9** if the unit has **Linear motor, Foldable transfer board** and the user is **sitting** (Tek RMD02, Tek RMD06).

Gas spring system:

4. Make sure that the handle lever is locked into position. Hold the device firmly, while the right lever is engaged, push the Main Arm downward until the user is in a seated position. Release the right lever and remove the back belt after the user is seated.
5. Once seated, unscrew the short end of the safety bar and pull out. Spin the remaining bar until the short side comes up to the center of the hole. Push the bar out from the hole. Repeat for the opposite side.

Linear motor system- The user is standing:

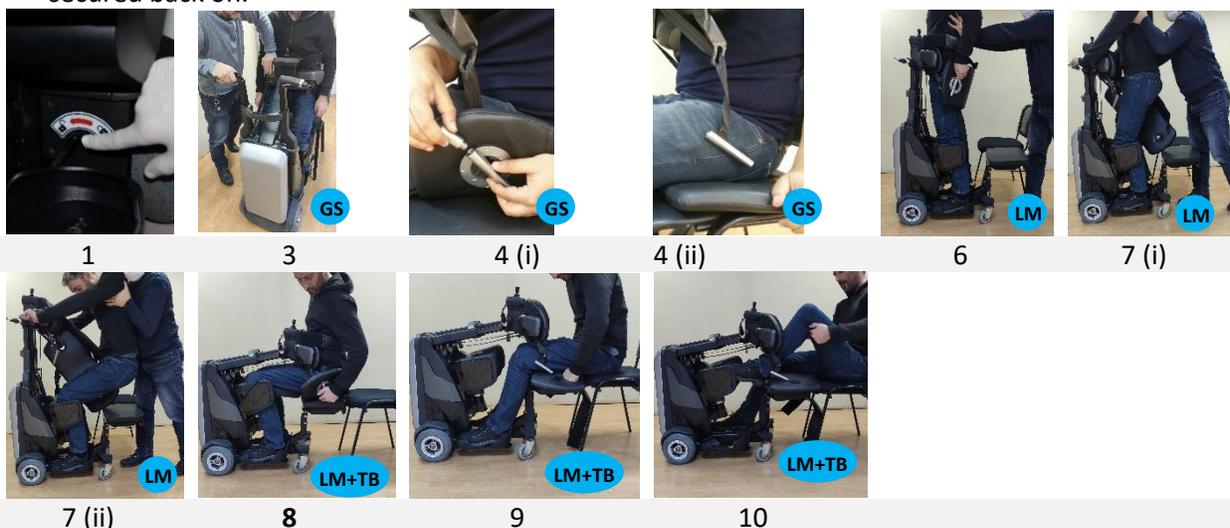
6. The caregiver makes sure the back belt is securely holding the user. Caregiver holds the user firmly in standing position.
7. The user unscrews the short end of the safety bar and pulls out. Spins the remaining bar until the short side comes up to the center of the hole and pushes the bar out from the hole. The sling cushion falls to the side.
8. The caregiver removes the back belt and helps the user to safely sit down.

Linear motor system and foldable transfer board- The user is sitting:

9. Unscrew the short end of the safety bar and remove. Spin the remaining portion of the bar until the short side comes up to the center of the hole. Push the bar out from the hole. Repeat for the opposite side.
10. Moves his body back on the chair.
11. Once the user is sitting on the chair securely, he moves his legs out of the device with his hands.

All units:

12. After an emergency stop / dismant, please ensure that the Sling Cushion's Safety bars are snugly secured back on.



 **WARNING:**

- When batteries are fully discharged, the Tek RMD automatic brake system will activate. Operating the Tek RMD in isolation with low battery power may result in stranding. Always operate the Tek RMD with charged batteries and available assistance.
- Attempting to exit the device without battery power may cause instability, tipping, or falling, resulting in injury or death, property damage, and damage to the device. Always ensure that a caregiver is available if an emergency exit is necessary.
- If batteries are discharged and the automatic brake system is activated, a caregiver must disengage the brakes by moving the motor release levers on both sides of the device. Do not attempt to disengage the brakes while secured in the Tek RMD. Attempting to reach the levers will cause instability and tipping, resulting in injury or death, property damage, and damage to the device.

### Charging the Batteries

Before using charger, please read the user manual of the charger. The battery indicator on the device display's the current charge of the platform's batteries. The battery indicator has 5 levels. A single red-light blinking indicates that the batteries need charging, 1 red and 4 white lights indicate that the batteries are fully charged.

The battery charger is compatible with 115V and 230V outlets. To charge the Tek RMD, turn the device off from the User Panel and insert the main plug of the charger into the correct socket. Connect the other end of the charger plug to the Tek RMD and charge fully.

The device can only be charged when the device main power is switched on. When the battery charger plugged in, the charger has multicolor indicator and it will show the following conditions:



- Power
  - Red: Power on
- Charge
  - Red: Disconnect
  - Orange: Charging
  - Green: Charged (For fully charging the unit keep charging it for 2 hours after the green light is lit.)
  - Orange blink: Error

The lifetime of batteries are maximum 12 months of typical operation. To make your batteries last longer please see the tips below.

- Fully recharge the new batteries prior to initial use to avoid reduced battery life.
- Recharge your batteries daily to extend battery life and reduce charge time.
- Charge batteries monthly if the Tek RMD will not be used for an extended period of time.
- Avoid draining batteries to low or empty levels. If the batteries becomes fully drained, fully charge battery before use.



### **WARNING:**

Batteries can develop explosive gases during charging. To prevent injuries to the user/device, the following precautions must be followed when charging the batteries.

- Ensure sufficient ventilation when charging the batteries in closed rooms.
- Only charge the Tek RMD using the original Tek RMD battery charger provided with the device. Using a different charger other than the supplied charger will void the warranty and may lead to damage to the device. Contact an authorized Matia representative for any battery charger replacements.

- Operating the Tek RMD or sitting and standing while simultaneously recharging the batteries can lead to damage to the device and malfunctioning. Always charge the device when not in use. Ensure that the charging cord is unplugged from the chair before operating.
- Attempting to recharge the batteries by attaching cables directly to the battery terminals may cause sparks, leading to explosion and resulting in injury or death, property damage, and damage to the device. When charging the batteries, only use the battery charger supplied with the Tek RMD. If a charger replacement is needed, contact an authorized Matia representative.
- Using extension cords with the battery charger while charging the Tek RMD can lead to fire or electric shock, resulting in damage to the device and injury or death. Use only the equipment provided by Matia to charge the device.
- Connecting a different charging plug into the Tek RMD may damage the device. Always ensure that the charger used is the charger supplied by Matia. Check that plug pins are the same in number, size, and shape as those on the plug-in port.
- Cutting or removing the grounding plug from the charger's AC cable plug or the extension cord plug may lead to fire or electric shock, resulting in injury or death. Keep all Matia equipment in the original working condition.

## Maintenance, Cleaning and Disinfection

### Maintenance Intervals

The Tek RMD should be periodically serviced by qualified Matia service personnel. Please contact your supplier with any questions regarding servicing of the Tek RMD.

- Please check the Tek RMD's belts, cushions, screws, wheels, wheel nuts, transfer board, gas spring and linear motor systems on a weekly basis to ensure that they are in good condition.
- Please check brakes before every use by moving the device forward with the joystick and then allowing the joystick to return to a resting position. The brakes should activate, and the device should quickly stop. Repeat this test for each direction.
- Check the tires visually before every use. Contact your authorized service personnel if you see a deformation.
- Check the safety bars before every use to make sure they are tightly screwed together.
- Matia Robotics highly recommends that users replace the tires every two years.



### **WARNING:**

- Any assembly, disassembly, or modification of the Tek RMD parts by the user will void the warranty and may increase the risk of injury, property damage, and damage to the device. Matia assumes no liability for any problems arising from user modification. Contact an authorized Matia representative for any service necessary.
- Adjusting the knee pads or the chest plate without the supervision of a physician and an authorized Matia representative may lead to an improper configuration, resulting in injury. Always consult both your physician and your Matia representative in order to make any adjustments to the knee pads and chest plate.
- Permanent damage may occur to the tires if the Tek RMD is left unused and unmoved for a long period of time. In order to prevent damage, occasionally move the device or park the device lifted off of the tires using the lifting jack.
- Uncontrolled movements or defects may result in injury or death, property damage, and damage to the device. In case of malfunctions, stop using the Tek RMD immediately and contact an authorized Matia service representative. Do not attempt to repair the device.

- Overheating the tires, whether by sunlight or other heat sources, can cause permanent damage to the tires. Always park the Tek RMD away from heat sources such as radiators or heating vents. Do not expose the Tek RMD to direct sunlight for long periods of time.
- Prolonged exposure to extreme temperatures may affect surface temperature and cause burning or discomfort. Use caution when beginning operation of the device. Also use clothing to protect from extreme temperatures on the device surfaces.

**Cleaning and Care Instructions**

- Immersing the Tek RMD in water or cleaning the device with water, whether hose, pressure washer, bucket, or other, may cause malfunctioning of and / or damage to the device, resulting in voiding of warranty. Do not allow liquids to come in contact with the Tek RMD. Always clean the Tek RMD and remote control with soft, damp cloths. Use mild detergent or disinfectant if needed, but not bleach. Dry with a towel.
- Contact with moisture of any kind, such as urine, vomit, water, or juice will damage the electrical parts of the Tek RMD, resulting in malfunction or device failure. Keep any moisture or liquids away from the electrical parts. Do not store the device in a damp, wet room. Store the device in a dry area.

**Changing the Batteries**

The device’s batteries can only be changed once the device has been switched off.

The batteries should only be serviced or replaced by a Matia Robotics Service Provider or a qualified technician.

Only use batteries supplied by Matia Robotics. These are sealed non-spillable batteries that meet DOT CFR 173.159 (d), IATA Packing Instructions 806, and IATA Provision A67 shall be installed in this device.

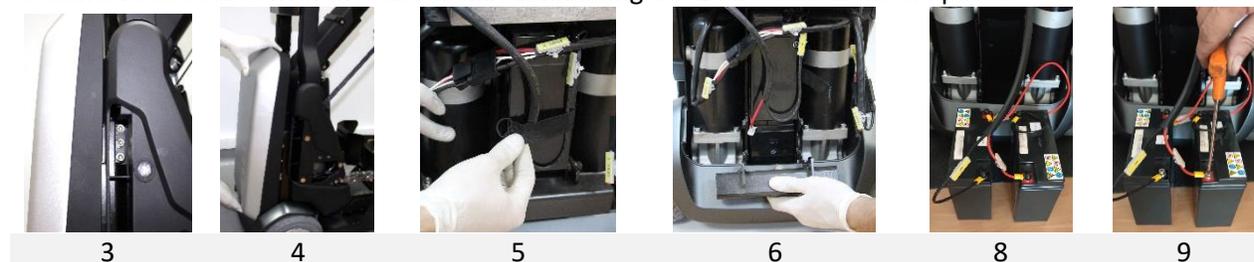
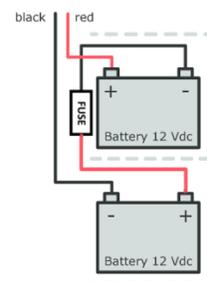
The batteries are type MK Powered (ES22-12) Maintenance-Free Valve Regulated Lead Acid. The battery size is 7.13 x 2.99 x 6.57 inches (181 x 76 x 167 mm). The 5 hour capacity of the battery is 18.7 ampere hours.

To change the batteries:

Tools: 5mm Allen wrench, 6mm Allen wrench, Phillips screwdriver

1. Switch of the device from the main switch.
2. Remove the small side Lid covers on the two sides of the device as shown below.
3. Unscrew the 3 screws seen at each side.
4. There is a small opening at the bottom where you can grab the front cover. Push the front cover up a few centimeters and pull it to yourself.
5. Remove the elastic band that holds the battery and cables.
6. Unscrew the screws of the metal bumper and take it out.
7. Pull out first the top battery, then the bottom battery.
8. Pull the plastic safety cover up and remove the cable from the post with the help of a screwdriver.
9. Remove the cable with the fuse socket connecting the 2 batteries from the posts.

Battery Wiring Diagram



While placing the batteries back on:

1. Fasten the cable with the fuse socket connecting the 2 batteries to the posts.
2. Fasten the connectors with correct colors, place the plastic safety cover back on the device.
3. Place the new batteries in the lower and upper compartment. With the battery to which the red color cable is connected is at the top.
4. Screw the metal bumper back on.
5. Fasten the elastic band which is holding the upper battery.



**WARNING:**

- Smoking, open flames (candles, lighters, etc.) and sparks are not permitted near the batteries. They may lead to explosion and resulting in injury or death, property damage, and damage to the device. Always wear safety glasses and protective gloves while working with batteries.
- Always use two batteries of the exact same type, chemistry, and amp-hour (Ah) capacity. Refer to the specifications table in this manual and in the manual supplied with the battery charger for recommended type and capacities.
- Batteries are heavy. If you are unable to lift that much weight, be sure to get help. Use proper lifting techniques and avoid lifting beyond your capacity. Do not mix old and new batteries. Always replace both batteries at the same time.

**Changing the Standard Back Wheels (casters)**

Only use wheels supplied by Matia Robotics.

Tools: Socket wrench size 19mm, Open-end wrench size 19mm

1. Remove the tail off the unit or lift the unit up with the lifting jack or tilt the device to the other side with the help of a support person.
2. Remove the tail rubbers by unscrewing the screws.
3. Unscrew the fiber nut.
4. Remove the caster by pulling it down.
5. Apply Loxal 55.03 to the fiber nut.
6. Assemble the casters to the Tail with the fiber nut.



**Changing the Standard Front wheels**

Only use wheels supplied by Matia Robotics.

Tools: Socket wrench size 17mm

1. Make sure the motor brakes are locked, and wheels are not freely turning.
2. Lift the unit up with the lifting jack or tilt the device to the opposite side by the help of a support person. Make sure the support person holds the device on the tilted position for the steps after this.
3. Unscrew the nut and washers in the center of the wheel.
4. Remove the front wheel by pulling it out.
5. If the wedge falls off, put it on the motor shaft.
6. Place the new wheel back on
7. Put the washer and nut back on and screw it tightly.
8. Repeat for the other side.



**WARNING:**

When changing the standard front wheels, free-moving wheels may cause pinching or movement of the device, resulting in injury. Always lock the motor brakes so that the wheels do not rotate when removing or replacing wheels.

### Changing Large Back Wheels

Only use wheels supplied by Matia Robotics.

Tools: 5mm Allen wrench, Socket wrench size 17mm, open-end wrench size 17mm

1. Make sure the tail is not connected to the unit. Unscrew the center nut holding the wheels. Take the wheel shaft out. May need to give extra push with a plastic hammer. Remove the wheel by pulling it.
2. Change the inner tube.
  - a. Deflate the tire
  - b. Unscrew the 5 screws holding the rim
  - c. Remove the upper rim
  - d. Remove the bearing
  - e. Remove the tire
  - f. Remove the inner tube off the outer tire
  - g. Place the new inner tube in
  - h. Place the tire on the on the first half of the rim, the pressure relive valve on the tire should come to the rim's channel
  - i. Place the bearing on its place
  - j. Place the second half of the rim on its place.
  - k. Screw the 5 screws holding the rim
  - l. Inflate the tire
3. Place the new wheel, place the shaft in the wheel make sure the nut is present on one end.
4. Place the nut on, screw the bolt back on, tighten with the Allan wrench.
5. Repeat for the other side. Recommended tire pressure for all pneumatic wheels of Tek RMD are 50 psi (345 kPa)

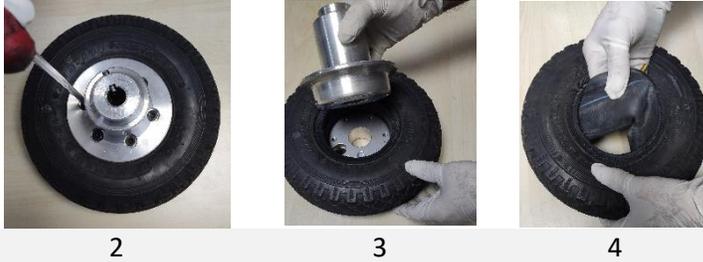


### Changing the Large Front Wheels

Only use wheels supplied by Matia Robotics.

Tools: 5mm Allen wrench, flat screwdriver

1. Make sure the tire is not connected to the unit. Deflate the tire by pressing pressure relief valve.
2. There are 6 pins inside of the wheels rim. Place an Allan wrench in the hole of the pin and unscrew it. If the nut on the other side turns with the pin making it hard to unscrew, place your finger on the nut to keep it stable. Remove all 6 pins.
3. Separate the 2 half of the rim. Remove the inner tube from outer wheel.
4. Change the inner tube. Remove the inner tube off the outer tire. Place the new inner tube in.
5. Place the new inner wheel in. Put the 2 sides of the of the rim together.
6. Screw the 6 pins back tightly. Do not forget to place the spring washer and the nut on the other side.
7. Inflate the tire.
8. Repeat it for the other side. Recommended tire pressure for all pneumatic wheels of Tek RMD are 50 psi (345 kPa).



**Safety**

**This section contains important information for the safe use and operation of this device.**

Always follow the safety instructions provided in this user manual. Failure to do so could cause severe injury to you or people around you or damage to your device. Where safety is concerned, only an excellent condition of the device is acceptable.

Safety calls for the constant attention of the user. Matia Robotics strongly recommends that you learn and employ safe methods of carrying out basic daily activities. Always consult your physician to determine the methods most suitable for your personal abilities. Protect your device and yourself by having your Tek RMD serviced on a regular basis. Contact your Matia Representative immediately whenever any part of your Tek RMD fails to function properly as a hazardous situation could cause damage to your device and/or personal injury.

With regular inspection, adjustment, and replacement of worn parts the device will provide many years of excellent performance. Safety precautions contained in this manual are general warnings meant to be used only as safety guidelines. Do not hesitate to contact your personal physician for advice on safety and/or assistance. The expected service life of this product is 5 years. Spare parts and accessories must be ordered through Matia Robotics. Only Matia Robotics authorized technical service operators may change parts on the device or perform repairs of the device.

**Standards and Directives**

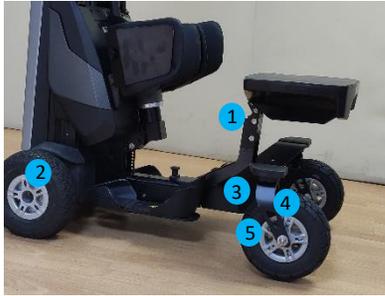
Tek RMD complies with the applicable requirements of ISO 7176 series standards and ANSI RESNA WC-1 and WC-2 standards.

**General Safety Instructions & Warnings**

- The Tek RMD is a prescription only (Rx) use device. Any sale of the device apart from a licensed healthcare practitioner is forbidden and will result in legal repercussions as well as voiding the warranty. In the case of user sale, the user assumes all liability related to the use of the device. Do not sell the device to an unauthorized user.
- This product is not intended for use by persons under the age of 22 years. Use of the device by any person under the age of 22 years will forfeit the warranty and, in the case of children, may lead to improper use and could lead to instability or tipping, resulting in injury or death, property damage, and damage to the device.
- Prior to use of the Tek RMD, the user should be evaluated by a RESNA certified ATP or RET or a RESNA certified Seating and Mobility Specialist SMS. Matia Robotics assumes no liability until the user is evaluated by the proper RESNA certified representative. Failure to consult the proper RESNA certified representative prior to use of the Tek RMD may lead to incorrect use of the device, resulting in injury or death, property damage, and damage to the device.
- Failure to consult a licensed physician prior to use of the Tek RMD may lead to incorrect use of the device, resulting in injury or death, property damage, and damage to the device. Consult a physician before operating the Tek RMD. Matia recommends all users to perform the initial operation of the Tek RMD in the presence of a personal physician. The physician should establish

and regularly supervise a user standing program. A caregiver should be present at all times until the user is familiar with operation of the device.

- Operating the Tek RMD before initial training by an authorized Matia representative may lead to incorrect use of the device, resulting in injury or death, property damage, and damage to the device. Do not use the Tek RMD prior to authorized training. All users of the Tek RMD must read and understand all instructions in the manual and be trained by an authorized Matia representative.
- All safety instructions contained in this manual and all other applicable documents must be carefully read and followed. Instructions for use of the device must be readily available to the user at all times. Matia Robotics does not assume any liability for injuries or damage caused by improper use by the owner of the device or a third-party user. Using the device in a manner contrary to any of the instructions will void the warranty and may result in injury or death, property damage, and damage to the device. Carefully read and review all of the Matia Robotics Tek RMD instructions before operation of the device.
- The initial setup of the Tek RMD, as well as all authorized procedures specifically mentioned in this manual, must be carried out by an authorized Matia representative. Attempting to perform the initial setup or any procedure reserved for Matia Robotics personnel will void the warranty and may lead to device malfunctions, resulting in injury or death, property damage, and damage to the device. Do not use the Tek RMD until all necessary procedures have been carried out by an authorized Matia representative.
- All packaging materials are hazardous to children and could result in injury or death. Keep all packaging materials out of reach of children.
- Operating the Tek RMD in cases of exhaustion, cognitive limitations, or under the influence of alcohol or medication, may restrict attentiveness and judgement while driving and may lead to improper use of the device or instability leading to tipping, resulting in injury or death, property damage, and damage to the device. Only use the device under healthy and sober conditions.
- The Tek RMD may only be used with Matia Robotics accessories mentioned in this user manual or on the Matia Robotics website. Matia Robotics assumes no liability if the device is used with any non-approved accessories. Using the device with non-approved accessories may lead to device malfunction, resulting in injury or death, property damage, and damage to the device.
- In the case of skin allergies, do not allow the device to touch any areas of skin. Wear clothing to cover all areas of exposure to the device to prevent allergic reaction.
- Always check for rashes or pressure sores after exiting the Tek RMD. Failure to inspect user's body for any marks may lead to prolonged irritation and may lead to more serious injury.
- Sitting on the sling cushion while sitting on a chair or surface for prolonged periods of time may lead to the development of pressure ulcers and decrease cushion effectiveness when operating the Tek RMD. Always remove the sling cushion when the device will not be in use for a long period of time.
- Users changing any parts of the device (other than changing the standard/large wheel configurations, changing batteries, or replacing tires) will void the warranty and may lead to damage to the device or improper functioning, leading to injury or death. Contact an authorized Matia Robotics representative for assistance with parts and service.
- Openings and places where pinch may occur.



- Location 1: Between the seat frame assembly and the support arms. Only for units with transfer board.
- Location 2: Between the drive wheel(s) (that is attached to the gear assembly) and the fender(s) around the top portion of the wheels. Both sides of the device. For all front wheels.
- Location 3: Between the top portion of the rear caster(s) and the caster fork(s). For all back wheels.
- Location 4: Between the rear caster(s) and the caster arm(s). For all back wheels.
- Location 5: Between the spoke of the rear caster(s) and the caster fork(s). For all back wheels.

Pinch point locations are only marked on the right side of the chair. Pinch point locations are symmetrically identical on the left side of the chair.



- Location 1: Between the forward part of the linear motor and the main body. For all units.
- Location 2: Between the rearward part of the linear motor assembly and the leg support(s). For all units.
- Location 3: Between the front of the lower part of the main arm and the fixed shroud. For all units.
- Location 4: Between the lower part of part of the main arm and the main body. For all units.
- Location 5: Between the main arm and the sit-to-stand handle arm bridge. For all units.
- Location 6: Between the main arm and under the drive control module. For all units.
- Location 7: Between the top of the linear motor rod and the linear motor mount on the main arm when lowering to sit. For all units.
- Location 8: Between the top of the linear motor rod and the linear motor mount on the main arm when raising to stand. For all units.
- Location 9: Between the sling cushion safety bar(s) and the safety bar belt guide(s). For all units.
- Location 10: Between the main arm and handle arm reverse bridge. Only for units with linear motor.

Some pinch point locations are only marked on the right side of the chair. Pinch point locations are symmetrically identical on the left side of the chair.

**Transportation**

Users must always dismount the TEK RMD, transfer to the seats installed in the motor vehicle, and tie the Tek RMD into the vehicle with a proper tie-down system. Under no circumstances shall the user transport the Tek RMD using a motor vehicle while remaining on the device. During transport, the device must be turned off via the main switch. The main arms must be folded down when transporting the device in a motor vehicle. During transport on lifting platforms or in lifts, ensure that the Tek RMD is centered on the lifting platform and take necessary safety precautions.



**WARNING:**

- Tek RMD is not designed as a car seat and cannot offer the same degree of safety that is offered by a standard car seat.
- The Tek RMD is not designed for use while in a motor vehicle. Operating the device while riding in a motor vehicle may cause instability and tipping, resulting in injury or death, property damage, and damage to the device. For transportation in a motor vehicle, always transfer onto a motor vehicle seat.
- The Tek RMD may only be transported unoccupied by approved transport securement solutions. An improper device securement may cause tipping and free movement of the device, resulting in an accident, serious injury or death to persons in the vehicle, damage to the device, or damage to the vehicle. Also ensure that the wheel locks are not disengaged.

**Spare parts**

Matia Robotics supplies individual parts or modules to Distributors. Your distributor can provide all spare parts for your Tek RMD. Matia Robotics does not provide any replacement units.

**Storage**

Make sure the device is turned off from the main switch. We recommend charging the batteries at least monthly if the chair is not used. The device shall be stored between -40 F<sup>0</sup> and 149 F<sup>0</sup> (-40 C<sup>0</sup> and +65 C<sup>0</sup>).

**Disposal**

If the device (all or part of the device) is not being used, it must be disposed of according to national environmental regulations. Components of The Tek RMD and the batteries must not be disposed of like regular domestic waste. Old and/or defective batteries must be disposed of according to national environmental regulations.

**Limited Warranty**

This warranty is only for the original buyer of the Tek RMD, who purchases this device new from Matia Robotics or its authorized dealer. The warranty becomes void with the resale or the transfer of the device.

Matia Robotics warrants the Tek RMD for a period of one (1) year from the purchase date through Matia Robotics or its authorized dealer. The buyer may also have other legal rights based on the country of purchase. If the device is proven defective within the warranty period, Matia Robotics will repair or replace the device.

This warranty does not cover devices:

- Defective / removed serial numbers
- Devices subject to improper use or maintenance or modifications
- Devices subject to storage or accident or damaged due to reasons beyond Matia Robotics' control
- Devices used with unauthorized accessories or parts



**WARNING: Radio wave sources may affect TEK RMD control**

Radio wave sources, such as radio stations, TV stations, amateur radio (HAM) transmitters, two-way radios, and cellular phones, can affect powered wheelchairs. Following the warnings listed below should reduce the chance of unintended TEK RMD movement which could result in serious injury.

- 1) DO NOT turn ON hand-held personal communication devices, such as citizens band (CB) radios and cellular phones, while TEK RMD is turned ON;
- 2) Be aware of nearby transmitters, such as radio or TV stations or known sources of electromagnetic disturbance such as diathermy, electrocautery, radio-frequency identification (RFID) and security systems (e.g., electromagnetic anti- theft systems or metal detectors) and try to avoid coming close to them;
- 3) If unintended movement or brake release occurs, turn off TEK RMD as soon as it is safe;
- 4) Be aware that adding accessories or components, or modifying TEK RMD, may make it more susceptible to interference from radio wave sources (Note: There is no easy way to evaluate their effect on the overall immunity of TEK RMD);
- 5) Report all incidents of unintended movement or brake release to TEK RMD manufacturer and note whether there is a radio wave source nearby.

**Important Information**

- 1) 20 volts per meter ( V / m ) is a generally achievable and useful immunity level against interference from radio wave sources ( as of May 1994 ) ( the higher the level, the greater the protection )
- 2) This product is in compliance with the specified requirements of ISO 7176-21:2009
- 3) The operation range of Tek RMD remote controller is approximately 5 meters (16 feet)

**Note**

“Tek RMD” might disturb the operation of devices in its environment that emit electromagnetic fields (e.g. alarm systems of shops, automatic doors etc.)

**Specification sheet**

**Tek RMD model designation**

Model Number	Lifting Mechanism	Foldable Transfer Board	Wheel Type	Tek RMD Model (select the model)
TEKRMD01	Gas Spring	Not included	Standard wheel	
TEKRMD02	Linear Motor	Included	Standard & Large wheel (Dual drive)	
TEKRMD03	Linear Motor	Not included	Standard & Large wheel (Dual drive)	
TEKRMD04	Gas Spring	Included	Standard & Large wheel (Dual drive)	
TEKRMD05	Gas Spring	Not included	Standard & Large wheel (Dual drive)	
TEKRMD06	Linear Motor	Included	Standard wheel	
TEKRMD07	Linear Motor	Not included	Standard wheel	
TEKRMD08	Gas Spring	Included	Standard wheel	

**Mass of the test dummy used in the test:** 265 lbs.

**Specification Table:**

Standard Ref.	Disclosure information (RESNA)	Tek RMD (All Models)	
		Standard Wheel Mode	Large Wheel Mode
Resna WC-1 Section 1-9.2	Static stability forward - wheels unlocked	13.5 degrees	14.2 degrees
Resna WC-1 Section 1-9.3	Static stability forward - wheels locked	12 degrees	12 degrees
Resna WC-1 Section 1-10.2	Static stability rearward - wheels unlocked	Min. 5.2 / Max. 24.2 degrees	Min. 14.5 / Max. 29.1 degrees
Resna WC-1 Section 1-12.1	Static stability lateral orientation	Min. 5.6 / Max. 8.7 degrees	Min. 10.2 / Max. 13.4 degrees
Resna WC-2 Section 2 Clauses 8.2, 8.3, 8.4, 9.2, 9.3, 10.2	Maximum slope on which the device remains upright after testing during all applicable tests (score of 2 or greater)	5 degrees	6 degrees at safe driving height position
Resna WC-2 Section 2 Clauses 8.5, 8.6, 9.4, 9.5, 10.5	Maximum step/transition height across which device remains stable during all applicable tests	25 mm	40 mm
Resna WC-2 Section 3-7.3	Running brakes, normal operation	49 inches	59 inches

Resna WC-2 Section 3-7.4	Running brakes, operation by reverse command	45.17 inches	56.17 inches
Resna WC-2 Section 3-7.5	Running brakes, emergency operation	36.33 inches	49.33 inches
Resna WC-2 Section 4-7.1	Continuous theoretical driving range	4.68 miles	4.68 miles
Resna WC-2 Section 4-7.2	Maneuvering theoretical range	1.30 miles	1.30 miles
Resna WC-1 Section 5-8.2	Full overall length	38.8 inches	40.3 inches
Resna WC-1 Section 5-8.3	Overall width	19.7 inches	23.5 inches
Resna WC-1 Section 5-8.5	Stowage length	33.3 inches	33.3 inches
Resna WC-1 Section 5-8.6	Stowage width	19.3 inches	19.3 inches
Resna WC-1 Section 5-8.7	Stowage height	38.2 inches	38.2 inches
Resna WC-1 Section 5-8.11	Pivot width (Diameter)	54.5 inches	62 inches
Resna WC-1 Section 5-8.13	Turning diameter	58.3 inches	62 inches
Resna WC-1 Section 5-8.14	Ground clearance	1.8 inches	3 inches
Resna WC-1 Section 5-8.15	Required width of angled corridor	29.9 inches	38 inches
Resna WC-1 Section 5-8.16	Required doorway entry depth	40 inches	44.3 inches
Resna WC-1 Section 5-8.17	Required corridor width for side opening	28 inches	35.6 inches
Resna WC-1 Section 5-8.9	Total Mass - TEKRMD01	260 lbs.	N/A
	Total Mass - TEKRMD02	324 lbs.	354.5 lbs.
	Total Mass - TEKRMD03	304.5 lbs.	335 lbs.
	Total Mass - TEKRMD04	289 lbs.	319.5 lbs.
	Total Mass - TEKRMD05	269.5 lbs.	300 lbs.
	Total Mass - TEKRMD06	329 lbs.	N/A
	Total Mass - TEKRMD07	294 lbs.	N/A
	Total Mass - TEKRMD08	309.5 lbs.	N/A
Resna WC-2 Section 6-6.1	Maximum speed forward – horizontal surface	2.9 mph	3.5 mph
Resna WC-2 Section 6-6.4	Maximum speed forward – inclined to the maximum safe slope	2.3 mph	2.7 mph
Resna WC-1 Section 7-7.3.2	Seat plane angle	2 degrees	2 degrees
Resna WC-1 Section 7-7.3.3	Effective seat depth	7.8 inches	7.8 inches
Resna WC-1 Section 7-7.3.4	Seat width	16.4 inches	16.4 inches

Resna WC-1 Section 7-7.3.6	Seat surface height at front edge	16.9 inches	16.9 inches
Resna WC-1 Section 8	Static, impact and fatigue testing requirements (pass/fail)	PASS	PASS
Resna WC-2 Section 9 Clauses 7.3, 7.4, 7.5, 7.6, 7.7	Climatic testing - rain, hot and cold operation and storage - pass/fail	PASS	PASS
Resna WC-2 Section 10 Clauses 7.1, 7.2, 7.3, 7.4, 7.5, 7.6	Maximum obstacle height the device can both climb and descend with the technique used.	25 mm	40 mm
Resna WC-2 Section 14	Electrical systems - meets all requirements - pass/fail	PASS	PASS
Resna WC-2 Section 14-6.18	Maximum thermal drive test results - total distance traveled uphill and reason for stopping the test	1246.7 feet / 60 minutes	1246.7 feet / 60 minutes
Resna WC-2 Section 21 Clauses 8, 9	Electromagnetic compatibility - pass/fail	PASS	PASS

**Maximum occupant mass:** 264.5 lbs.

**Information Related to IEC 60601-1-2 Medical electrical equipment – Part 1-2: General requirements for basic safety and essential performance – Collateral Standard: Electromagnetic disturbances – Requirements and tests.**

**IEC 60601-1-2 Table 1 – Power input voltages and frequencies during the tests**

Test	Power input voltage	Line frequency
Mains terminal disturbance voltage (conducted EMISSIONS) CISPR 11	230 Vac	50 hz
Electromagnetic radiation disturbance (radiated EMISSIONS) CISPR 11	230 Vac	50 hz
Harmonic current EMISSIONS IEC 61000-3-2	230 Vac	50 hz
Voltage changes, voltage fluctuations and flicker EMISSIONS IEC 61000-3-3	230 Vac	50 hz
ELECTROSTATIC DISCHARGE IMMUNITY IEC 61000-4-2	230 Vac	50 hz
Radiated RF electromagnetic field IMMUNITY IEC 61000-4-3	230 Vac	50 hz
IMMUNITY to proximity fields from RF wireless communications equipment IEC 61000-4-3 (interim method)	230 Vac	50 hz
Electrical fast transient/burst IMMUNITY – a.c. mains IEC 61000-4-4	230 Vac	50 hz
Electrical fast transient/burst IMMUNITY – I/O SIP/SOP PORTS IEC 61000-4-4	230 Vac	50 hz
Surge IMMUNITY IEC 61000-4-5	230 Vac	50 hz
IMMUNITY to conducted DISTURBANCES induced by RF fields (conducted RF DISTURBANCE IMMUNITY) –	230 Vac	50 hz

a.c. mains IEC 61000-4-6		
IMMUNITY to conducted DISTURBANCES induced by RF fields (conducted DISTURBANCE IMMUNITY) – SIP/SOP PORTS IEC 61000-4-6	230 Vac	50 hz
Power frequency magnetic field IMMUNITY IEC 61000-4-8	230 Vac	50 hz
Voltage dips, short interruptions and voltage variations IMMUNITY IEC 61000-4-11	230 Vac	50 hz

**IEC 60601-1-2 Table 2 – EMISSION limits per environment**

Phenomenon	Professional healthcare facility environment	HOME HEALTHCARE ENVIRONMENT
Conducted and radiated RF EMISSIONS	CISPR 11	CISPR 11
Harmonic distortion	See IEC 61000-3-2	See IEC 61000-3-2
Voltage fluctuations and flicker	See IEC 61000-3-3	See IEC 61000-3-3

**IEC 60601-1-2 Table 4 – ENCLOSURE PORT**

Phenomenon	Basic EMC standard or test method	IMMUNITY TEST LEVELS	
		Professional healthcare facility environment	HOME HEALTHCARE ENVIRONMENT
ELECTROSTATIC DISCHARGE	IEC 61000-4-2	+/- 8 kV contact +/-2 kV, +/-4 kV, +/-8 kV, +/-15 kV air	
Radiated RF EM fields	IEC 61000-4-3	3 V/m 80 MHz – 2,7 GHz 80 % AM at 1 kHz	10 V/m 80 MHz – 2,7 GHz 80 % AM at 1 kHz
Proximity fields from RF wireless communications	IEC 61000-4-3	See 8.10. of IEC 60601-1-2	
RATED power frequency magnetic fields	IEC 61000-4-8	30 A/m 50 Hz or 60 Hz	

**IEC 60601-1-2 Table 6 – Input DC power port**

Phenomenon	Basic EMC standard	IMMUNITY TEST LEVELS	
		Professional healthcare facility environment	
Electrical fast transients /bursts	IEC 61000-4-4	+/-2 kV 100 kHz repetition frequency	
Surges Line-to-line	IEC 61000-4-5	+/-0,5 kV, +/-1 kV	
Surges Line-to-ground	IEC 61000-4-5	+/- 0,5 kV, +/- 1 kV, +/- 2 kV	
Conducted disturbances induced by RF fields	IEC 61000-4-6	3 V 0,15 MHz – 80 MHz 6 V in ISM bands between 0,15 MHz and 80 MHz 80 % AM at 1 kHz	3 V 0,15 MHz – 80 MHz 6 V in ISM and amateur radio bands between 0,15 MHz and 80 MHz 80 % AM at 1 kHz
Electrical transient conduction along supply lines	ISO 7637-2	Not applicable	As specified in ISO 7637-2

The logo consists of the letters 'TEK' in a stylized, white, blocky font. The 'T' and 'E' are connected at the top, and the 'K' is positioned to the right of the 'E'.

**Robotic  
Mobilization  
Device**

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**MATIA** ROBOTICS

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[www.matiarobotics.com](http://www.matiarobotics.com)