OMNIA E-BIKE MANUAL

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WELCOME

First off, welcome to the Wattwheels family. We're so happy to have you on board! You have picked a great model and, in this manual, we're going to break down the basics to make sure that your bike remains in top shape and performs to the highest standard.

You're about to experience the ride of your life. To get you out and having fun as quickly and as safely as possible please read the entire manual carefully, paying close attention to the safety section.
Also, we highly recommend familiarizing yourself with local regulations for e-bikes and the components of the model that you have before your first ride.

Please also ensure that the bike is regularly serviced as per the instructions outlined later in this document. Failure to get the bike serviced can result in warranty claims being void if they are required. A bike is a vehicle, and like a car needs to be serviced regularly. See our instructional video located in the video section of our website to learn the basics before having your first ride

PLEASE KEEP A NOTE OF THE BIKE SERIAL NUMBER LOCATED ON THE FRONT HEAD TUBE (UNDER THE LOGO) WRITE THIS ON YOUR INVOICE

Wattwheels assumes that all persons involved in using, repairing, maintaining, cleaning, or disposing of this or any Wattwheels product have fully read and understood the content and meaning of these operating instructions.
Wattwheels will not be held liable for any injury or damage as a result of using any electric bike/ trike.

USING THIS MANUAL

This manual contains details of the electric bike, its equipment, and information on its operation and maintenance. Read it carefully and familiarize yourself with the Omnia before using it to ensure safe use and prevent accidents. This manual contains many warnings and cautions concerning the safe operation and consequences if safe setup, operation, and maintenance are not performed. All information in this manual should be carefully reviewed and if you have any questions, you should contact your local retailer immediately.

Because it is impossible to anticipate every situation or condition which can occur while riding, this manual makes no representations about the safe use of bicycles under all conditions. There are risks associated with the use of any bicycle which cannot be predicted or avoided, and which are the sole responsibility of the rider. You should save this manual, along with any other documents that were included with your bicycle, for future reference, however all content in this manual is subject to change or withdrawal without notice. Visit www.wattwheels.co.nz to download the latest version. Wattwheels makes every effort to ensure accuracy of its documentation and assumes no responsibility of liability if any errors or inaccuracies appear within.

INSTALLATION IF REQUIRED:

1. COMPLETLEY CHARGE THE BATTERY BEFORE THE FIRST USE
(Red light is on when battery is charging, green when fully charged. Approx. time is around 4-5 hours)

2. ATTACH THE HANDLEBARS

3. ATTACH THE PEDALS
(Beware: The left-hand pedal has a reverse thread. To tighten, please turn anti-clockwise, right-hand pedal is clockwise))

4. GREASE THE SEAT TUBE THEN INSERT THE SEAT POST

6. INSERT THE FRONT WHEEL AND TIGHTEN WHEEL NUTS WITH A 15mm SPANNER

(PLEASE BE CAREFUL NOT TO PRESS THE BRAKE LEVERS WHILE THE WHEELS ARE NOT INSTALLED. DOING SO WILL RESULT IN THE BRAKES PADS CLAMPING TOGETHER, AND YOU WILL NOT BE ABLE TO INSERT THE FRONT WHEEL WITHOUT RESETTING THE BRAKE PISTONS IN WHICH YOU WILL NEED A BIKE SHOP TO PERFORM)

7. CHECK ALL SCREWS AND BOLTS ARE TIGHT, SEAT POST THE CORRECT HEIGHT AND BRAKES WORKING PROPERLY

LCD DISPLAY

The image shows the various features and information displayed on the LCD display. The display is controlled using the buttons located on the display.

TRIP/ODO & TIME

To toggle between the various modes short press the M key to switch between them.

BATTERY DISPLAY CAPCITY

The LCD readout on the handlebar of your Omnia features a battery capacity gauge (much like the fuel gauge on a car). It is recommended that users stop operating the bike on electric assist once the indicator starts flashing on the last bar and recharge. Remember you can still ride without using the motor or display.

PAS (Pedal Assist Modes)

Pedal assist modes (shown at the top of your display) start from 1 and goes up to 4. PAS level 1 is the first pedal assist level and will give you slight assistance. Press the up and down arrows on the control panel to toggle between the levels. As you select the higher levels, the assistance will increase with level 4 basically doing all the work for you. Using higher levels of PAS will drain the battery faster. The recommended level is PAS 1-3 to ensure good battery life. Note- PAS 0 means no assistance from the motor and you would have this on if you wanted to ride without assistance but measure distance/speed etc.

If the bike is stationary for a period of 5 minutes or longer without any movement it will automatically turn off. This is safety a feature employed on the bike. If transporting the bike on the back of a vehicle, please ensure the display is covered with a waterproof cover. Although they are designed to be ridden in wet conditions traveling at high speeds in wet weather can cause water to get past the display seals.

WALK MODE

To activate the walk mode, hold down the ﹀ key for two seconds. This will propel the bike forward at around 6km/h. This can be used if you need to walk the bike up a hill and need some assistance in doing so.

TRIP 1- Distance ridden. This can be reset each time you ride the bike if you wish.

TIME - Displays the total time ridden on each ride.

AVG – Average riding speed.

MAX – Displays the maximum speed you have reached.

ODO - Displays total distance ridden on the bike. This cannot be reset and keeps accumulating.

SPECIAL FUNCTIONS

Hold down the M key for 2 seconds to get to the special menu. Here there are four functions that can be changed.

Trip Reset- Turn on the display and wait 10sec. While the bike is stationary press the M key for two seconds. Highlight the data clearance menu and press M to select. Toggle to Yes using the arrows and confirm with a press of the M button

SET 2 – Wheel Size. Please make sure the wheel size is correct, otherwise the bikes information it records may be incorrect.

The size for the Omnia should read 700c

SET 3 – Km/h or Mph. Here you can select either option. Default is KM/h

SET 4 – Speed limit. Here you can restrict the speed if needed. Default is 40km/h although the bike will assist over this in some cases. If you need to limit the speed, then press the - key and you can set at 34km/h or lower if required.

Please contact your local retailer if you need any assistance on this. Alternatively, you can check Wattwheels website for up-to-date instructional videos.

BRAKES

The Omnia electric bikes are equipped with Tektro hydraulic disc brakes. Please be aware the hydraulic disc brakes are very strong, so care is to be taken when braking while getting familiar with the bike. The front wheel brake is located on right hand side with the rear wheel brake on the left. For riders which prefer the brakes the other way around please get your nearest bike shop to switch over if required.

TYRE PRESSURE

To avoid flats, keep tyre pressure at the recommended PSI. You will find the pressure range written on the side of the tyre. For good all round use we recommend 60-70PSI

Gates Carbon Belt Drive

Your Omnia is equipped with a Gates CDX carbon belt drive system. Unlike a normal bike with a chain, The Gates carbon belt does not have any moving parts and does not require any form of lubrication. It is important to get familiar with the instructions and care details of the Gates carbon belt for proper use and maintenance.
Instructions can be found here: *https://www.gatescarbondrive.com/resources/manuals-and-tech*

Shimano Nexus Hub

The Omnia is fitted with a Shimano Nexus 3 speed hub gearing system. Unlike a regular derailleur system, the gears are on the inside of the rear hub shell and does not require a derailleur. To change gear on a Shimano Nexus gearing system requires you to stop pedalling, use the grip shifter to change gear then resume pedalling again. Failure to do this may cause the gears to “clunk” and wear prematurely.
More info can be found here*: https://bike.shimano.com/en-EU/product/component/nexus-inter3/SG-3D55.html*

RIDING RANGE

The range of your Omnia is the distance the bike will travel on a single full charge of the battery pack. Some of the factors which effect range include changes in elevation, speed, payload, and acceleration, number of starts and stops and ambient air temperatures. Tyre pressure and terrain are also important variables to consider.
We suggest that you ride conservatively when you first receive your Omnia to get to know your bike and travel routes.
Once you become familiar with the range requirements of your travel routes, and the capabilities of your Omnia Bike you can then adjust your riding characteristics if you so desire.

RANGE EXTENDERS

Range extenders are available for purchase to extend the range of your Omnia. The range extenders are battery packs that look like drink bottles and fit inside of a bottle cage on the seat tube and plug into the frame near the charging port. The range extenders will double the battery capacity of your Omnia. The range extenders are easy to install and only require plugging in and can be taken with you and used as a battery bank if you wish.

With the battery gauge located on the bottom of the display please take note on new bikes the gauge can drop quite quickly initially. If this happens don't be alarmed as this is normal and is due to the BMS (battery management system) we use in the bikes, and it will take a few charges for the cells to balance out. There will also be instances of voltage sag where the voltage drops when using a high level of PAS, riding up hills or under a heavy load which again is normal. As mentioned, it is good to do a few smaller rides first to get familiar with the bike and the range you can get depending on what settings you have the bike on. Pay close attention to the section in looking after your battery to prolong and maximise its life.

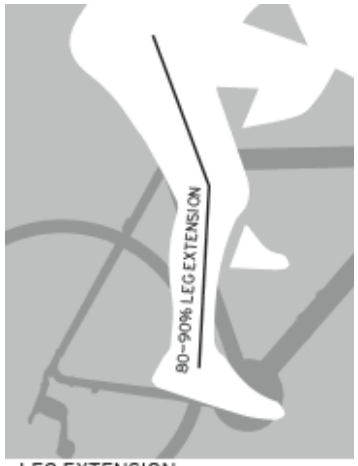
ADJUSTING THE SEAT HEIGHT

Loosen the seat clamp using a 5mm hex key to raise or lower the seat height to the required position.

*Ensure the seat post and seat are properly adjusted before riding. Do not raise the seat post beyond the **MINIMUM INSERTION** marking etched onto the seat post. If your seat post extends from the frame beyond these markings, the seat post or frame may break, which could cause you to lose control and fall. Prior to first use, be sure to tighten the seat clamp properly. A loose seat clamp or seat post binding bolt can cause damage to the bicycle or can cause you to lose control or fall. Periodically check to make sure the seat clamp is properly tightened.*

RIDER COMFORT

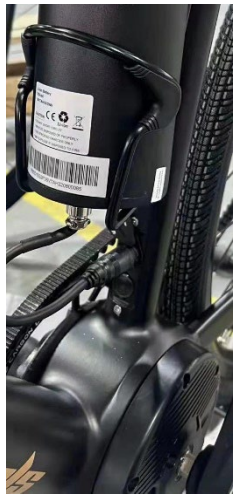
To obtain maximum comfort, the rider should not overextend his or her arms reach when riding. To obtain the most comfortable riding position and offer the best possible pedalling efficiency, the seat height should be set correctly in relation to the rider's leg length. The correct saddle height should not allow leg strain from over extension, and the hips should not rock from side to side when pedalling. While sitting on the bicycle with one pedal at its lowest point, place the ball of your foot on that pedal. The correct saddle height will allow the knee to be slightly bent in this position.



LEG EXTENSION

BATTERY & CHARGING

To charge the battery first open the rubber cap located on the seat tube above the motor and plug the charging pin into the port, then plug the charger into the wall socket. It is **important to always plug the charger into the bike first and then the wall socket.**



The charge left in the battery should be 50%-75% if storing for long periods of time (two months or longer). Periodically check the charge of the battery
Cleaning the battery and battery housing should only be done while disconnected and powered off. Use a dry rag or if needed a lightly damp rag.

DO NOT *spray with high-pressured water as it may cause damage or possible short-circuiting. Only charge the battery with the supplied charger as others may not function properly, and this increases the possibility of fire or explosion.*
Do not store the charger or battery in a wet/damp place or in direct sunlight.
Lithium-ion batteries can last longer if you recharge with 10-15% of the charge remaining to prevent damage to the cells. Keep both the battery and charger out of the reach of children and if there appears to be an issue with the charger or battery, stop use immediately and contact either the manufacturer or Wattwheels at admin@wattwheels.co.nz

BEST PRACTISES FOR EXTENDING BATTERY LIFE

o Avoid sudden starts and stops
o Use low levels of PAS
o Keep within the recommended weight limit (130kg total load)

CHARGING

•Firstly, insert plug of the charger into charging socket on the bike/ battery.

•Second, Insert the charger into the socket of the home power supply. It shows the power has already been put through when the indicator lamp of the charger is on.

•It is charging when the indicator light is red. When the light turns from red to green, it indicates that the battery is fully charged.

•After the green light is on, the charger is in “fill slowly mode". It will not be harmful to the battery if left to charge for a longer period or overnight. We do recommend not leaving for longer than 48hours if possible

DO NOT *use the charger of other brands to charge. The charger may not be compatible with some brands*
Always *plug the charger into the bike before the power supply.* ***DO NOT*** *plug the charger into the power supply before inserting the charger into the bike*

USEFUL TIPS

• This specified load of the Omnia is 130kg total, please don't exceed this otherwise it will void the warranty

• While riding, if the level of charge shows only one bar flashing it is recommended to ride without power, in PAS 0 and charge as soon as you can.

• Turn off the display while parking or storing the bike.

• Inspect the bolts on a regular basis, to ensure that they are tight, and all components are secure. Pay close attention to crank bolts, stems, front, and rear wheel nuts.
This is especially important if you are riding in demanding conditions.

• Regularly check the brake pads. The provided pads should be replaced if they have:
- Been contaminated
- Have less than .8mm of material
- Cracks or deformation

• To replace the brake pads or perform other maintenance please take it to a qualified bicycle mechanic at your local bike shop.

• Properly inflate your tyres according to riding conditions. Under-inflated tyres are prone to get flats, especially if riding off-road.

• Please don't dismantle and repair parts by yourself. Please go to your local bike shop. This bike comes with a manufacturer's warranty (document included) so for warranty claims please contact Wattwheels and we will arrange a service agent close to you to look at the bike. We carry spare parts so anything electrical that a standard bike shop doesn't have we will ship to your nearest retailer

PARKING, STORAGE & TRANSPORT

Please follow these basic parking, storage, and transport tips to ensure your bike is well cared for on and off the road.

o When pushing the bike manually, turn off the power to avoid accidental acceleration from the motor.

o It is recommended to park indoors.

o Switch off the power to conserve battery. Remove the range extender battery (if installed) from the bike and take with you for security if needed.

o in public places, your Omnia Bike must be parked in accordance with local rules and regulations.

o If you must park outdoors in rain, or wet conditions you should only leave your Omnia Bike outside for a few hours and proceed to park the bike in a dry location afterwards to allow all the systems to dry out. It is recommended to dry the bike off with a towel prior to storage. Never put your Omnia away wet. Much like a regular bike, using in wet conditions mandates a more regular maintenance schedule to ensure your bike does not become rusty, corroded and to ensure all systems are always working safely.

o Do not park, store, or transport your Omnia Bike on a rack that is not designed for the size and weight of the bike.

o Locking up your bike is recommended to ensure your bike is secure and the chance of theft is reduced. Wattwheels makes no claims or recommendations on the proper lock, hardware, or procedures to secure your bike, but we do recommend you take the appropriate precautions to keep your Omnia bike safe from theft. Consult your local Wattwheels dealer for their lock recommendations.

SAFETY CHECK	BASIC STEPS
1. Brakes	o Ensure front and rear brakes work properly. o Ensure brake pads/ discs are not overly worn and are correctly positioned. o Ensure brake hoses are correctly bleed and display no obvious wear.
2. Wheels and Tyres	o Ensure tyres are inflated to within the recommended limits displayed on the tyre sidewalls. o Ensure tyres have tread and have no BULGES OR EXCESSIVE WEAR. o Ensure rims run true and have no obvious wobbles or kinks. o Ensure all spokes are tight and not broken. o Check axle nuts and quick releases to ensure they are tight. If your bicycle is fitted with quick release axles, ensure the locking levers are correctly tensioned and in the closed position.
3. Steering	o Ensure the handlebar and stem are correctly adjusted and tightened and allow proper steering. o Ensure the handlebars are set correctly in relation to the forks and the direction of travel.
4. Belt	o Ensure the belt is correctly tensioned runs smoothly. o Make sure there are no missing teeth or obvious wear and tear on the belt.
5. Bearings	o Ensure all bearings are lubricated, run freely, and display no excess movement, grinding or rattling. o Check headset, wheel bearings, pedal bearings, and bottom bracket bearings.
6. Cranks and Pedals	o Ensure pedals are securely tightened to the cranks. o Ensure the cranks are securely tightened and are not bent.
7. Derailleurs	o Check that the derailleur is adjusted and functioning properly. o Ensure shift and brake levers are attached to the handlebar securely. o Ensure shift cables are properly lubricated.
8. Frame and Fork	o Check that the frame and fork are not bent or broken. o If either are bent or broken, they should be replaced.
9. Accessories	o Ensure all reflectors are properly fitted and not obscured. o Ensure all other fitting on the bike are properly secured and functioning. o Ensure rider is wearing a helmet and any other required riding safety gear.
10. Motor Drive Assembly and Throttle	o Ensure mid-motor is spinning smoothly and the motor bearings are in good working order.
11. Battery Pack	o Ensure battery is charged before use. o Ensure there is no damage to battery pack.

BASIC TROUBLESHOOTING

Symptoms	Possible Causes	Most Common Solutions
It does not work	1. Insufficient battery power 2. Faulty Connections 3. Battery not fully seated in tray 4. Improper turn on sequence 5. Brakes are applied	1. Charge the battery pack 2. Clean and repair connections 3. Install battery correctly 4. Turn on bike with proper sequence 5. Disengage brakes
Incorrect distance, speed readings and/or reduced top speed	1. Insufficient battery power 2. Speed sensor is not centred or missing	1. Charge or replace battery 2. Check on the rear wheel that the spoke magnet matches up in the front centre of the black sensor. May need to slide around.
When powered on the motor does not respond	1. Loose wiring 2. Loose or damaged throttle 3. Loose or damaged motor plug wire 4. Damaged motor	1. Repair and or reconnect 2. Tighten or replace 3. Secure or replace 4. Repair or replace
Reduced range	1. Low tyre pressure 2. Low or faulty battery 3. Driving with too many hills, headwind, braking and/or excessive load 4. Battery discharged for long period of time without regular charges, aged or damaged.	1. Adjust tyre pressure 2. Check connections or charge battery 3. Assist more with pedals or adjust route 4. Replace the battery
The battery will not charge	1. Charger not connected properly 2. Charger damaged 3. Battery damaged 4. Wiring damaged	1. Adjust the connections 2. Replace 3. Replace 4. Repair or replace
Wheel or motor makes strange noises	1. Damaged motor bearings, cogs, or seals 2. Damaged wheel spokes or rim 3. Damaged motor wiring	1. Repair or Replace 2. Repair or replace 3. Repair or replace motor.

ERROR DECTECTION

Your Omnia Bike is equipped with an error detection system integrated into the LCD display and motor controller. In the case of an electronic control system fault an error code should appear on the display. The error codes are listed below and can help detect what the issue is with the bike. If your bike has an error code displayed at any time it is recommended that you cease operation and contact your local dealer or Wattwheels.

ERROR CODES

Error code	Error description
"04" shown at speed	throttle doesn't turn back to zero position (stays on the high position)
"05" shown at speed	throttle failure
"07" shown at speed	overvoltage protection
"08" shown at speed	failure of motor's hall signal wire
"09" shown at speed	failure of motor's phase wire
"10" shown at speed	motor temperature is too high, and reaches the protection point
"11" shown at speed	failure of the motor's temperature sensor
"12" shown at speed	failure of the current sensor
"13" shown at speed	failure of the temperature of the battery
"14" shown at speed	Controller temperature is too high, and reaches the protection point
"15" shown at speed	failure of the controller's temperature sensor
"21" shown at speed	failure of the speed sensor
"23" shown at speed	failure of the light
"24" shown at speed	failure of the light sensor
"25" shown at speed	torque signal failure of the torque sensor
"26" shown at speed	speed failure of torque sensor
"30" shown at speed	communication failure
"--" shown at speed	BMS communication failure

SERVICING

To ensure your bike remains in great shape just like a car it requires regular servicing. Failure to do so may void any potential warranty claims. Please retain your receipts for proof of service

2-3 MONTHS:

DATE:

STORE/MECHANIC:

SIGNATURE:

12 MONTHS:

DATE:

STORE/MECHANIC:

SIGNATURE:

6 MONTHS:

DATE:

STORE/MECHANIC:

SIGNATURE:

24 MONTHS:

DATE:

STORE/MECHANIC:

SIGNATURE:

WARRANTY

To activate your warranty please go to https://www.wattwheels.co.nz/warranty. A link is located at the bottom of our webpage.

Wattwheels Ltd warrants that all new products are warranted to the original purchaser against manufacturing defects in materials and/or workmanship for the following periods:

Motor/Battery	24 months
Frame	60 months (Folding bikes & trikes is 36months)
Additional Components	12 months

For commercial operations where the bikes are being used a hire bike then the following applies:

Motor/Battery	12 months
Frame	24 months (Folding bikes is 18months)
Additional Components	6 months

The warranty period is calculated from the point of delivery. The original receipt of purchase is required to establish proof of purchase and must be provided to Wattwheels for all warranty claims. Wattwheels will require the customer to complete a MANDATORY standard procedure for warranty claims that will involve media such as photos and videos to help Wattwheels after sales staff establish the fault with the product.

Goods we sell are subject to a full comprehensive warranty. The costs/inconvenience caused by the loss of use of the product, is not covered whilst the warranty procedure takes place. The warranty for replacement components will be based on the date of delivery. Under no circumstance will a replacement component have a warranty date different than the original date of delivery. If a replacement is necessary due to a defect in materials and/or workmanship, then upon return to Wattwheels, the component will be replaced during the warranty period.

Wattwheels will have no obligation under this warranty in the event the product is damaged or destroyed as a result of any of the following events: components used on a non Wattwheels product, damage or destruction by abuse; collision; theft; improper maintenance or mishandling of the product; natural forces such as wind, lightning, hail, etc.; any wilful or negligent act; penetration, or opening of the product casings in any manner. Replacement will be honoured only by Wattwheels.

This is Wattwheels exclusive warranty. No party is granted express or implied authority to change or annul this warranty in any manner. Implied warranty including that of merchantability and fitness for a particular purpose are expressly limited in duration to the duration of this warranty. Wattwheels disclaims any liability for special, incidental, or consequential damages.

This warranty is not meant to suggest or imply that the products cannot be broken or will last forever. It does mean that the product is covered subject to the terms of the warranty. This warranty applies only to the original buyer of the product and is not transferable to subsequent owners or any other party. This warranty is void if the product is subjected to abuse, neglect, improper repair, improper maintenance, alteration, modification, an accident or other abnormal, excessive, or improper use, this is at the sole discretion of Wattwheels.

Warranty Exclusions

This warranty does not cover:

- normal wear and tear
- damage or failure from abuse, neglect, misuse, or accident
- damage from stunt riding, ramp jumping, acrobatics, competitive events, such as bicycle racing, bicycle motocross racing, or similar activities or any activity that is not consistent with the intended use of the product
- damages resulting from improper charging of the battery pack or use of any charger not supplied by Wattwheels
- installation of any parts, accessories, or electrical component(s) not originally intended for or compatible with the product as sold, or any modification of the frame or any component(s) originally supplied; tires, brake pads, chains, lights, motors, battery packs, displays, or vehicle controllers that have been opened for any purpose whatsoever, other than by Wattwheels
- All warranties are void if the product is used for any purpose other than the reasonable intended use of the product. Additionally, this warranty does not cover damage associated with commercial use.
- Aftermarket components or modifications

All implied warranties, including the warranties of merchantability and fitness for a particular purpose, are limited in duration to that of the express warranties stated above.

Warranty Procedure

Proof of purchase must be provided. The original purchaser must contact the place of purchase or a Wattwheels representative to discuss the problem with the product. The original purchaser is responsible for the return of the product, undamaged in transit, to Wattwheels for warranty work and for the costs associated with shipping the component(s) when returning them. If Wattwheels determines a warranty claim is valid and conforms with this warranty, Wattwheels will replace component(s). For valid warranty claims hereunder, Wattwheels will reimburse the original purchaser for shipping costs incurred because of returning the product to Wattwheels for warranty work at standard ground shipping rates, and Wattwheels will pay for shipping costs to return the product to the original purchaser. You must retain and send us the receipts for shipping.

Limited Liability

Unless otherwise provided, the sole remedy under the above warranty, or any implied warranty, is limited to the replacement of defective parts at the sole discretion of Wattwheels. In no event shall Wattwheels be responsible for direct, incidental, or consequential damages, including, without limitation,

damages for personal injury, property damage, or economic losses, whether based on contract, warranty, negligence, product liability, or any other theory.

Cancellation

Buyer has a 14-day period to cancel an order for a full refund. After the cancellation period, no refunds will be awarded. The Goods will be delivered with no returns.

Returns

Our extensive quality control means that our products are thoroughly tested and ultra-reliable by industry standards. All products are warranted to work as described on arrival and for the warranty period. If there is a warranty claim, it will be assessed by Wattwheels, and new parts will be delivered upon claim's approval. Wattwheels will accept the return of warranted components. If there is a major fault with the product, contact Wattwheels immediately. Wattwheels will not accept returns for change of mind.

Questions

Please contact us at admin@Wattwheels.co.nz