



Non-retractable Powered 5th Wheel

Operating Manual

Non-retractable Powered 5th Wheel Operating Manual—OM0025E/1

This manual contains important safety, installation and operating instructions for this unit. Read this manual thoroughly and completely, and retain for future reference. This unit can cause serious injury to personnel or damage to property if used incorrectly, therefore do not use this machine for any other purpose apart from its intended use. Using this unit incorrectly may void warranty.

Any damage audible or visible to this unit should be addressed at the time of discovery. Electrodrive Pty Ltd can provide parts and service support on request through its service partner company:

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Introduction

Move your heavy equipment with the battery powered Non-retractable Powered 5th Wheel.

The Non-retractable Powered 5th Wheel converts your heavy equipment or manually-pushed trolleys into powered solutions. Productivity is greatly increased, and back or shoulder strain is eliminated.

The Non-retractable Powered 5th Wheel allows an operator to effortlessly move hospital beds:

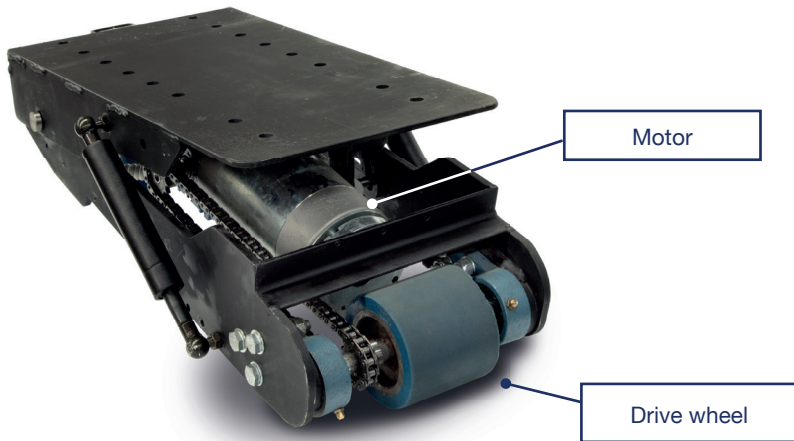
- Through long corridors, factory aisles, round tight corners.
- Up and down ramps.
- In and out of lifts.

Features

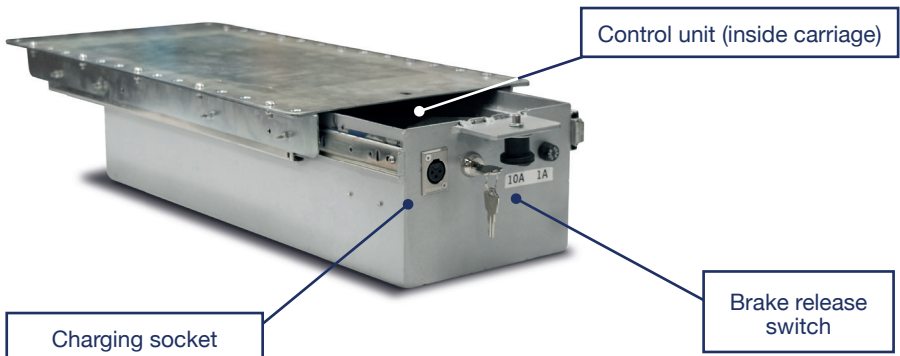
- Rated to tow up to 400 kg (dependent on slopes and speed).
- 24 Volt DC power.
- Variable speed drive unit.
- Electro-magnetic park brake.
- Travel speed—up to 5 kph.
- Robust steel chassis.
- Programmable motor controller.
- Automatic charger.

Operating instructions

Traction unit

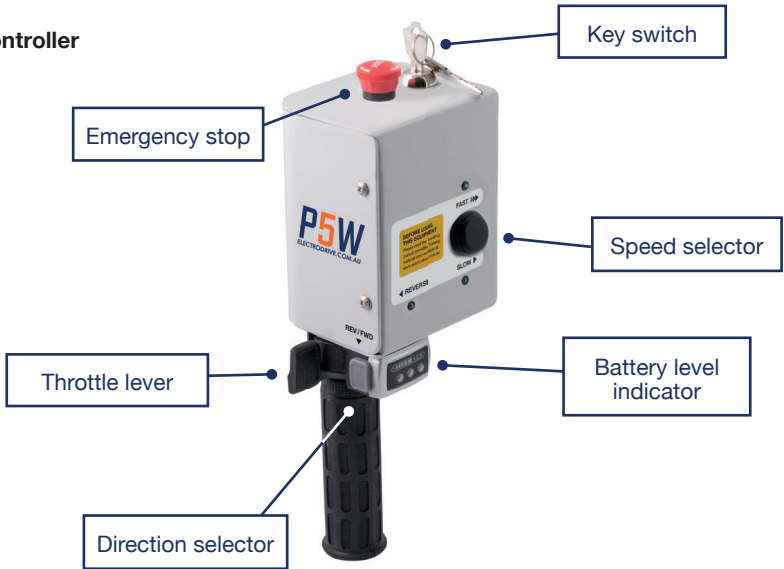


Slide-out battery carriage

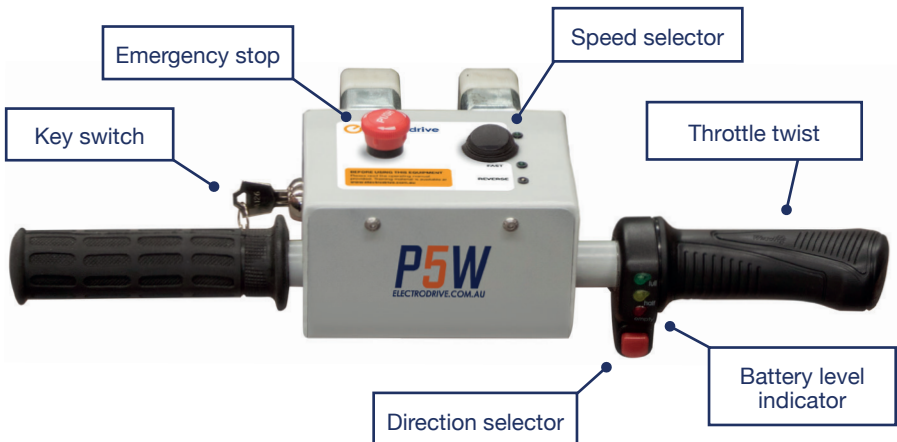


Controls

Vertical controller



Horizontal controller



Key switch

The key switch must be turned clockwise to switch the unit on. When ON, the LED battery indicator will be illuminated. It is important to note that the unit should be switched off and the key removed, whenever it is not in use. This eliminates the risk of unauthorised movement and also prevents an unnecessary use of battery power.

Emergency stop

The controls have an emergency button.

Emergency stop button—in an emergency, push this button to stop the unit. To release, slightly twist the button and it will pop back up.



Only use the emergency button in an emergency.

Direction selector

This determines the direction of travel. Push the button corresponding to the desired travel direction (forward/reverse).

Throttle

The throttle lever (on the vertical controller) or the throttle twist grip (on the horizontal controller) provide variable speed control from zero up to 100%. Releasing the lever stops the unit.

Speed selector

Select a speed that you are comfortable using. The speed can be changed whilst driving. It is advisable that you operate this unit at a slow speed when entering a confined area.

Battery level indicator

The battery level indicator indicates the amount of charge left in the batteries. When it appears to be running low, return the unit to the closest charging station to charge the batteries. Being aware of the level of charge of the batteries will eliminate the possibility of running low on power whilst away from the charging station. Red light only indicates no usable battery power remaining.

Charger socket

The charger socket is located on the slide-out battery carriage. However, depending on customer needs, the charger socket can be fitted into a preferred location. If needed, an extension loom can be provided.

Brake release

If for some reason the unit becomes inoperable, the brake to the motor can be released to allow manual movement. Release this brake by turning the brake release switch clockwise.

Depending on customer needs, the brake release can be fitted into a preferred location. If needed, an extension loom can be provided.

Capacity

Refer to the serial plate for the unit's safe working load, located on the slide-out battery carriage.



Driving instructions

Safety check

Before using The non-retractable Powered 5th Wheel the operator should complete the following check:

1. The battery charger is not connected.
2. The direction selector works.
3. The emergency stop button is released.
4. The brakes operate correctly when the throttle lever is released.
5. The battery indicator shows adequate charge.
6. There is no visible damage to the unit.

Steering

The handle provides easy steering. The Powered 5th Wheel can be manoeuvred through tight areas.



It is STRONGLY RECOMMENDED that the operator lead the Powered 5th Wheel, rather than “pushing” the Powered 5th Wheel.

This will ensure that the operator has a safe unobstructed view ahead. This will also make the Powered 5th Wheel easy to manoeuvre.

Charging

Ensure regular recharging of batteries (charging overnight after a day’s usage is recommended). Irregular charging may cause the batteries to prematurely fail.

Leaving a machine in storage without charge for periods greater than a month can also lead to premature battery failure. This is not covered under warranty.

For detailed charging procedures refer to Appendix 1.



Only use the battery charger supplied with this Non-retractable Powered 5th Wheel.

The automatic features of the supplied charger ensures that the sealed gel batteries are not overcharged, and only a minimum amount of gas, if any at all, are expelled during charging.

Maintenance

Batteries

If this unit is not being used for an extended period of time, it should be connected to the battery charger to check the battery level on a regular basis, and placed on charge overnight if required. This will ensure the batteries are kept in good condition.

The batteries are sealed and maintenance free. DO NOT attempt to open these batteries. If the unit is not charged as above, the batteries may be exhausted and have dropped below the charging threshold of the battery charger. The supplied charger cannot begin to charge the batteries unless they have a small amount of charge. If this occurs, contact Electrodrive or your local service agent.

A sign that the batteries need replacing is when they no longer hold charge.

Motor and transmission

The motor is a sealed unit and does not require regular maintenance.

Brakes

The dynamic braking system does not require regular maintenance.

Motor controller

This unit is not serviceable. Any difficulties experienced with speed control should be referred to Electrodrive.

Throttle lever

The throttle does not require maintenance. Only if the throttle suffers damage then it should be replaced.

Fuses

The control circuit is protected against inadvertent current over-loads. This fuse is located in the controller box.

Self-resetting circuit breaker

This Non-retractable Powered 5th Wheel is fitted with a self resetting circuit breaker in case of momentary over-load. This circuit breaker can be found beneath the battery carriage. If the unit repeatedly over-loads, test the machine, as the motor may be damaged, and continued use could damage the unit further.

Warranty

Electrodrive Pty Ltd warrants that this product is free from defects in materials and workmanship for a period of twelve months from the date of dispatch from the Electrodrive plant.

If a defect is reported, Electrodrive will repair or replace the defective part, at its own discretion. This warranty does not apply if this unit has been misused, damaged, or modified in any way.

Please be aware that modifications and misuse will void your warranty. The following activities (including, but not limited to) are examples of these:

Unauthorised maintenance

- The machine is re-wired by an unauthorized service agent.
- The motor controller is re-programmed by an unauthorized service agent. There are modifications to the body or frame of the machine.
- Use of non-specified parts.
- The machine is serviced by an unauthorized service agent.

Misuse

- Overloading the unit either during towing or lifting.
- Carrying people or other foreign objects.
- Exposed to rain or other precipitation, unless weatherproof option is installed.
- Exposed to a corrosive environment.
- Driven off road—potholes, gravel, etc.
- Driven on slopes with a steeper gradient than 1:12.
- Not being charged adequately.
- Using the emergency stop button as an ON/OFF button.

General wear items not covered under warranty

- Drive wheels, motors and motor brushes
- Hand grips

Appendix 1: Machine rating conditions

| Model | Safe Working Load | Max Load |
|--|-------------------|----------|
| Powered 5th Wheel (Non-retractable) | 400 kg | 400 kg |

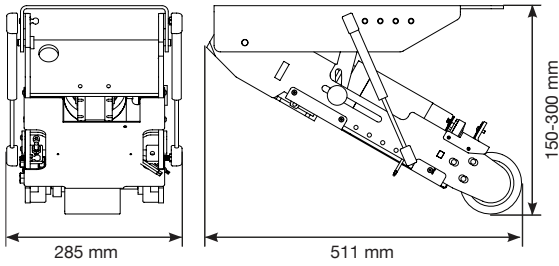
The non-retractable Powered 5th Wheel has been designed to move the rated weight capacity on a level firm surface. Variations in the working environment may impede the performance of the Powered 5th Wheel. Such parameters include (but are not limited to) the following:

- Ramps and sloped surfaces
- Soft surfaces (for example carpet)
- Slippery surfaces (gravel, water, oil on the ground, etc)

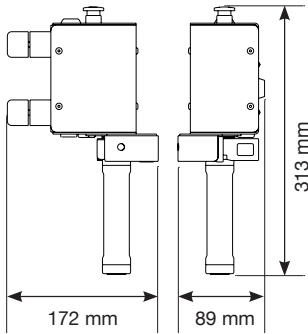


It is important that the Powered 5th Wheel NOT to be operated outside of the recommended conditions.

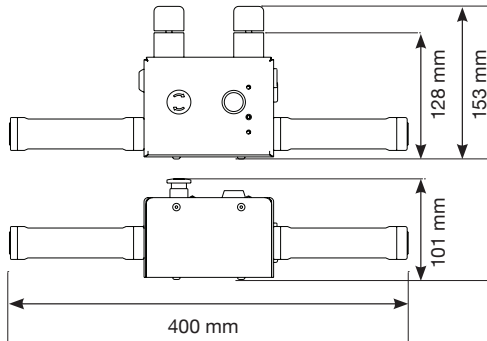
Drive wheel



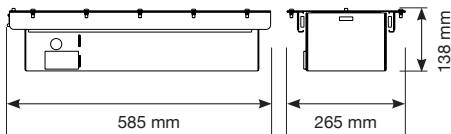
Hand controller (vertical)



Hand controller (horizontal)



Battery case



Appendix 2: Charging procedures for SLA batteries

- Always charge batteries when work is complete and the equipment is not required for use.
- Opportunity charging is NOT recommended. This can also shorten battery life.
- Never leave batteries in a discharged state as this will shorten the batteries life.
- For maximum battery life, a battery must be recharged to 100% capacity. Recharging less than 100% may result in premature battery failure. Batteries are not covered under warranty if they are not recharged properly.
- If batteries are disconnected from the machine and not used for lengthy periods of time, it is recommended to give them a maintenance charge once every two months.

Charging setup

- Ensure you have the correct charger for the batteries. The correct voltage and current is important to ensure the full life of the batteries.
- Check all connections are tight and in good condition.
- The green charger LED will illuminate to confirm charging is in progress.
- If charger lights do not come on, call your service technician.
- When charger is plugged in, drive function of machine is automatically inhibited.

During charging

- Ensure there is enough airflow to help keep the batteries as cool as possible.
- If the batteries are swollen turn off immediately and call your service technician.
- Always leave batteries on charge until the charge is COMPLETE. This is indicated when charger LED turns off.

Charger manual

Please read BA1105—Battery Charger Operating Manual for more information.

Appendix 3: Spare parts list

| Part (mechanical) | Description |
|--------------------------|---|
| EDGM1370 | Chain and link (06B) |
| EDGM1810 | Handgrip 7/8" x 5" – Handle |
| EDGM1635 | Gear box |
| EDGM1785 | Drive wheel shaft 192mm long |
| EDBRGUCFH204 | UCFH204 bearing |
| EDSP1040 | Sprocket 13T Bossed 06B, 18mm bore, 6mm Kw |
| EDSP1030 | Sprocket 13T Bossed 06B, 14mm bore, 5mm Kw |
| EDGM1680 | G/Box output shaft single end |
| EDWH1050 | GZ Drive wheel max 100mm diameter 90mm wide |
| EDACTGSTRUT90X300N | Gas strut 90mm stroke, 300N |

| Part (electrical) | Description |
|--------------------------|--|
| EDBA1105 | Battery charger 24V 7Amp |
| EDBAT12V33AHGEL | Batteries 2 x 33Ah gel batteries |
| EDCL1130 | Loom charger with socket |
| EDEL2110 | Controller 1228, blank ready to program |
| EDCL1140 | Controller box loom 12-way plug |
| EDEL1910 | Circuit breaker – 40Amp |
| EDEL2450 | Fuse 10 Amp (charger) (3AG) |
| EDEL2500 | Fuse holder panel mount |
| EDWIRP5WCTLHND | P5W handle loom |
| EDWIRP5WCTRL | P5W control loom |
| EDWIRP5WLINK | P5W link loom – battery to handle |
| EDSWTESTOP2NCTWIST | E-stop button 24mm mushroom (16mm mount) |
| EDSWTDPDTBLK21OD | DPDT IP56 push button switch |
| EDMO1102 | 300W motor |

Service log

Service recommendations

To ensure this equipment is kept in a safe and reliable condition, it is important to follow a preventative maintenance program. Maintain a log of the service work on the cards below, and always use an approved Electrodrive service agent to conduct the works. Approved service personnel will be provided with all necessary documents and components in service repair, including but not limited to, circuit diagrams, component part lists, descriptions, service checklists and spare parts.

6 month service

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|-----------------------|--|---------------|--|
| Date of service | | Service agent | |
| Machine serial number | | | |
| Summary of works | | | |
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| Next service due | | | |

12 month service

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| Date of service | | Service agent | |
| Machine serial number | | | |
| Summary of works | | | |
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| Next service due | | | |

18 month service

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| Date of service | | Service agent | |
| Machine serial number | | | |
| Summary of works | | | |
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| Next service due | | | |

24 month service

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| Date of service | | Service agent | |
| Machine serial number | | | |
| Summary of works | | | |
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| Next service due | | | |

30 month service

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| Date of service | | Service agent | |
| Machine serial number | | | |
| Summary of works | | | |
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| Next service due | | | |

36 month service

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|-----------------------|--|---------------|--|
| Date of service | | Service agent | |
| Machine serial number | | | |
| Summary of works | | | |
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| Next service due | | | |

42 month service

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|-----------------------|--|---------------|--|
| Date of service | | Service agent | |
| Machine serial number | | | |
| Summary of works | | | |
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| Next service due | | | |

48 month service

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|-----------------------|--|---------------|--|
| Date of service | | Service agent | |
| Machine serial number | | | |
| Summary of works | | | |
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| Next service due | | | |

54 month service

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|-----------------------|--|---------------|--|
| Date of service | | Service agent | |
| Machine serial number | | | |
| Summary of works | | | |
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| Next service due | | | |

60 month service

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| Date of service | | Service agent | |
| Machine serial number | | | |
| Summary of works | | | |
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| Next service due | | | |

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