




RIHA Industries

EASI MOVER

Operator Manual

SAFETY WARNING | Read this manual before using the unit and follow all instructions.

Congratulations on the purchase of your new Easi Mover. Please direct any queries to your nearest authorised RIHA Industries service agent quoting the details below:

AGENT DETAILS

Agent Name:

Agent Address:

Town/Suburbn:

State:

Postcode:

Contact Phone:

UNIT DETAILS

Unit Serial Number:

Unit Model Number:

Customer Name:

Date Commissioned:

Alternatively, visit our website at: www.rihaindustries.com



The information in this manual is current at time of printing. Under the Company's policy of continual product improvement, product specifications may change without notice.

Current Version – Issue A

RIHA Industries Pty Ltd

U3, 59 - 61 West Avenue

Edinburgh SA 5111

Australia

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ABN: 30 643 058 986

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1. IMPORTANT SAFETY INFORMATION

1.1. DEFINITIONS

This document contains important information relating to the safe and correct operation and maintenance of your Easi Mover. When reading this document, please be aware of the following definitions and conventions:



This symbol indicates useful or important information to be noted.



This symbol indicates important safety related information. Failure to comply with this information may result in personal injury.

Company:

Refers to RIHA Industries
U3, 59-61 West Avenue
Edinburgh, SA 5111, Australia
ABN: 30 643 058 986

Unit:

Refers to the Easi Mover.

Agent:

Refers to a person or organisation authorised by the Company to carry out training and servicing of the unit.

Trainer:

Refers to an Agent or facility personnel who has been trained by an Agent and is authorised to train others.

Manual:

Refers to this document and the associated training carried out by an Agent.

1.2. INTENDED USE

The Easi Mover is a transporting device that effectively and efficiently moves heavy wheeled objects such as trolleys. The Easi Mover is specifically designed for the transportation of trolleys over smooth and even floors.

1.3. SAFETY FIRST

The Unit must only be operated by persons who have been trained to use it by an Agent or Trainer, and who have read and understood this manual.



WARNING :

Failure to use the Unit in accordance with this Manual may result in personal injury or damage to property, and will invalidate the Unit's warranty (refer to Section 6.2).

TO ENSURE SAFE USE, ALWAYS:

- Use the Unit in the operation conditions specified in Section 3.1.
- Operate the Unit in accordance with Section 3.
- Always approach a slope with the Unit oriented parallel to the direction of the slope.
- Beware of the danger of crushing persons between the unit and walls when in drive mode.
- Wear closed shoes when operating the Unit.
- Keep hands and feet clear of the wheels.
- Keep hands and fingers clear of the lifting mechanism.
- Park the Unit in an area where it cannot cause a hazard (e.g. tripping).
- Charge the Unit in accordance with Section 2.16.
- Only connect the Battery Charger to a mains supply socket with protective earth.
- Use the correct Battery Charger supplied with the Unit, specified in Section 2.16.
- Clean and Decontaminate the Unit in accordance with Section 4.2.
- Dispose of components in accordance with Section 4.7.
- Only use accessories approved for the Unit by the Company.
- Read, understand and follow all instructions provided with the approved accessory.

TO PREVENT INJURY, **NEVER:**

- Operate the Unit whilst under the influence of drugs or alcohol.
- Operate the Unit without the protective guards attached and the safety devices connected.
- Operate the Unit in the vicinity (less than 25 cm) of anaesthetic gases.
- Operate the Unit in an oxygen-rich environment.
- Attempt to move objects in excess of 1500kg.
- Leave the Unit unattended in an area accessible to untrained persons.
- Place heavy items on the Unit.
- Let anything fall into the interior of the Unit.
- Expose the Unit to rain, moisture or other liquids.
- Place containers filled with liquids on to the Unit.
- Expose the Unit to excessive heat or naked flames.
- Attempt to repair the product by yourself. All servicing must be done by an Agent in accordance with Section 4.4.
- Attempt to manually handle or lift the Unit during assembly or normal operation. If the Unit cannot be moved under its own power, use appropriate lifting equipment with a Safe Working Load of at least 120 kg.
- Attempt to charge the Unit with another Battery Charger (other than the one supplied with the Unit) or attempt to use the supplied Battery Charger to charge any device other than the Unit.

1.4. EXPLANATION OF SYMBOLS

The following symbols are used on the Unit:



General warning sign. Read sign and follow instruction.



Refer to service/operator's manual.



Unit On/Off Key Switch. See section 2.4 for instructions.



Horn Button. See section 2.8 for instructions.



Driving speed adjustment, slower - faster.

2. UNIT INTRODUCTION

2.1. BASIC SPECIFICATIONS

- **Safe Moving Load:** 1500kg.

- **Duty Cycle:** Drive Mode: Continuous.

- **Classification:** Internally Powered Electrical Equipment (normal operation).

- **Device Life:** 7 to 10 years depending on usage and servicing

- **IP21**

2.2. KEY FEATURES

The Unit is a self-propelled device designed to move trolleys under the control of a trained operator. Other equipment may be moved with the use of approved accessories. The Unit has a number of key features which make moving trolleys faster, easier, and ergonomically safer than manual moving methods, including:

- Simple operation – a single throttle which controls forward, reverse and speed of machine.

- Quiet operation.

- Smooth start and stop functions.

- Automatic brakes that eliminate the possibility of free-wheeling.

- No user calibration required before use. All settings are factory set.

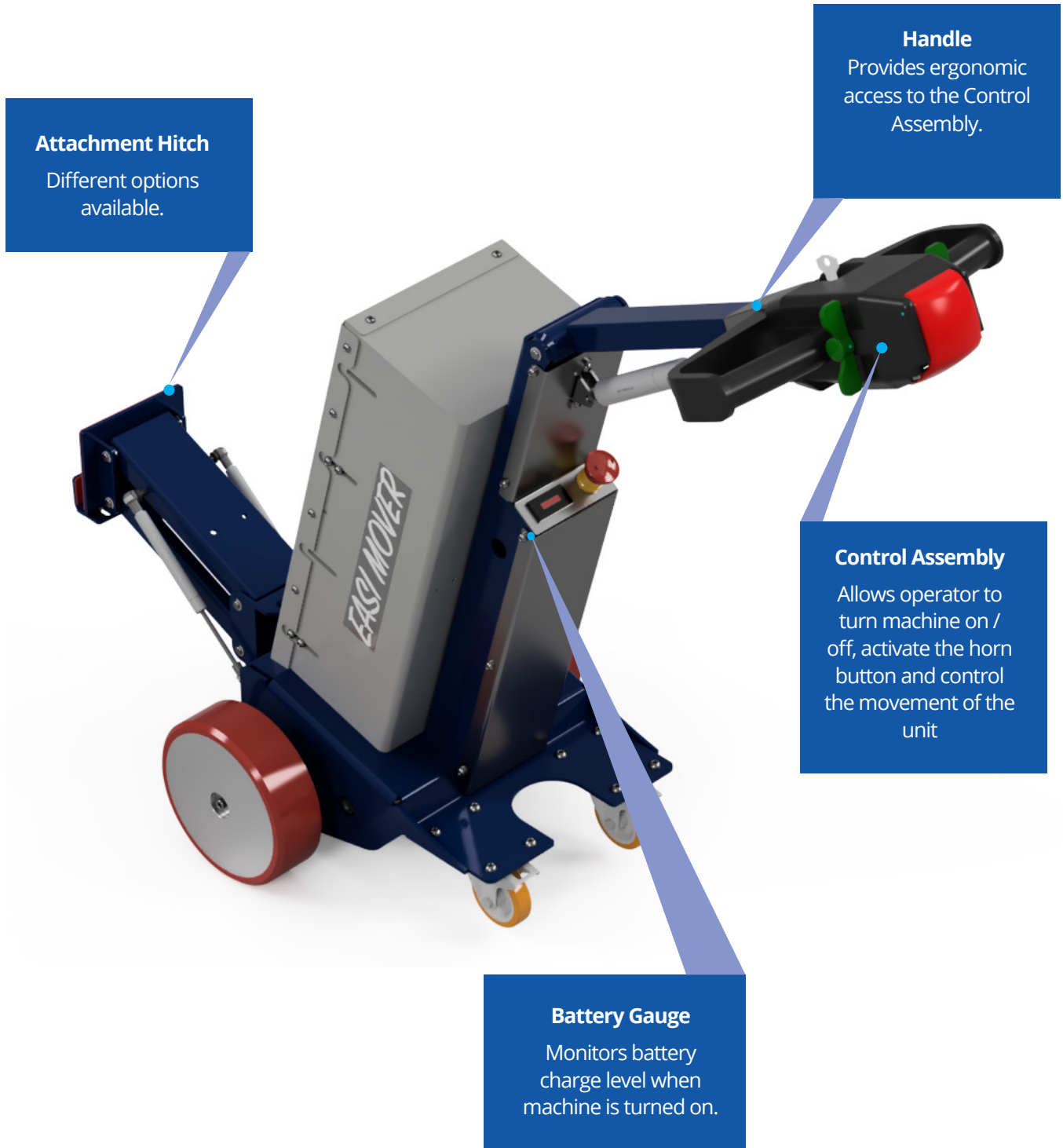
- A Jaw that locks onto the trolley to prevent inadvertent disengagement.

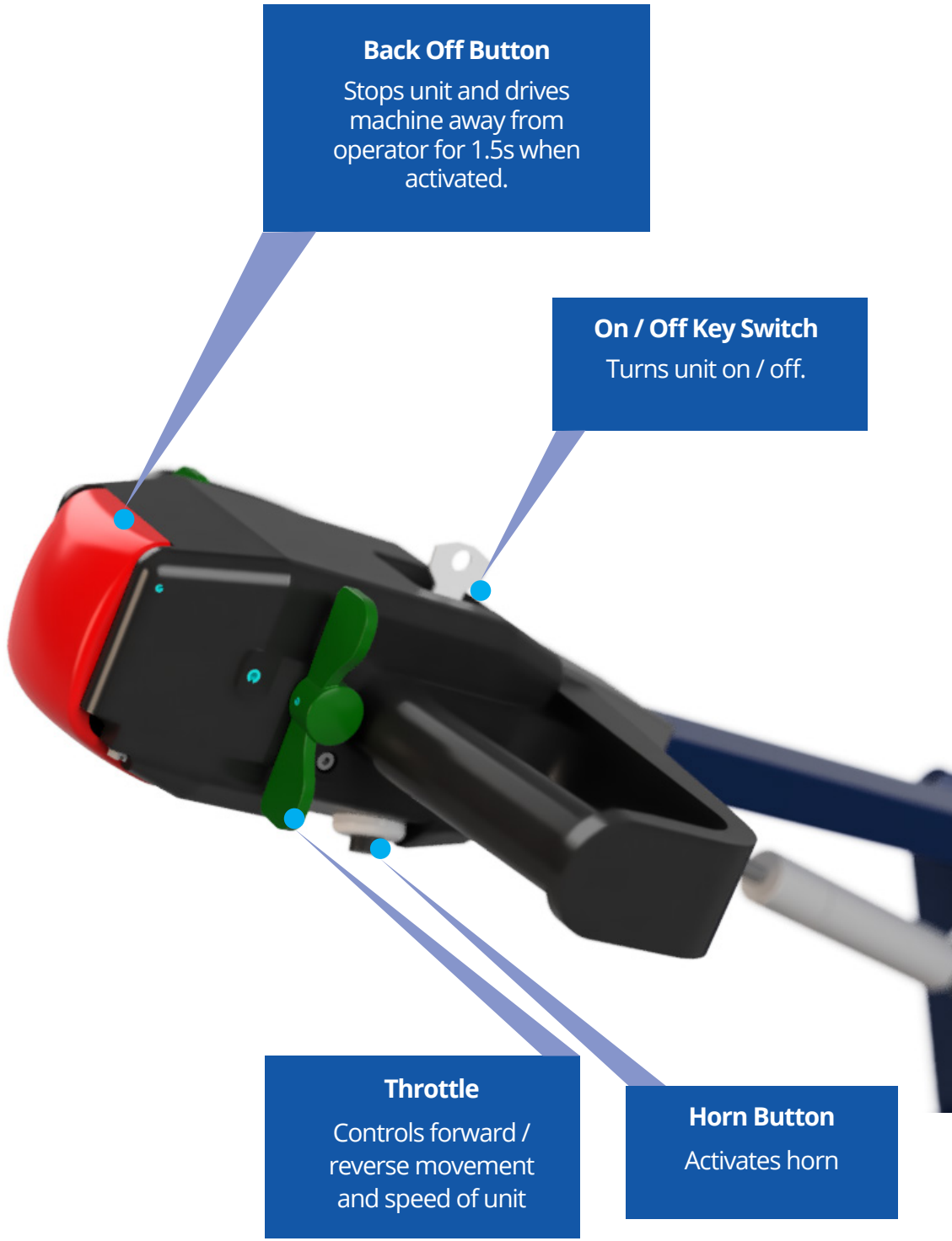
- Compact dimensions to allow access into standard elevators.

- Non-marking wheels to prevent damage to floor surfaces.

- Low maintenance.

2.3. UNIT OVERVIEW





Back Off Button
Stops unit and drives machine away from operator for 1.5s when activated.

On / Off Key Switch
Turns unit on / off.

Throttle
Controls forward / reverse movement and speed of unit

Horn Button
Activates horn

2.4. TURNING CONTROLLER ON AND OFF

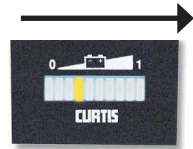
Turning on the Controller



Turn the on/off key switch

The Battery Gauge LEDs will turn on one by one.

After the controller has started successful the Battery Gauge shows the charge of the battery.



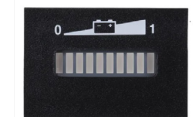
Turning off the Controller



Turn the on/off key Switch.

The Controller and Battery Gauge LEDs will turns off.

If the on/off button is pressed while the unit is moving the unit will perform an emergency stop before it turns off.



Out of Neutral at Power Up



If the unit is turned on while the throttle is not in the centre position, an “Out Of Neutral At Power Up” fault occurs.

During an OONAPU fault the Battery Gauge LEDs will not turn on until the throttle is in its neutral position.

As soon as the throttle is released back to the centre the unit will turn on and drive normally.

OONAPU is a feature that prevents sudden and unexpected movements if the throttle is not centred when the unit is turned on.

2.5. DRIVE MODE

Drive Mode is activated automatically when the controller is turned on.

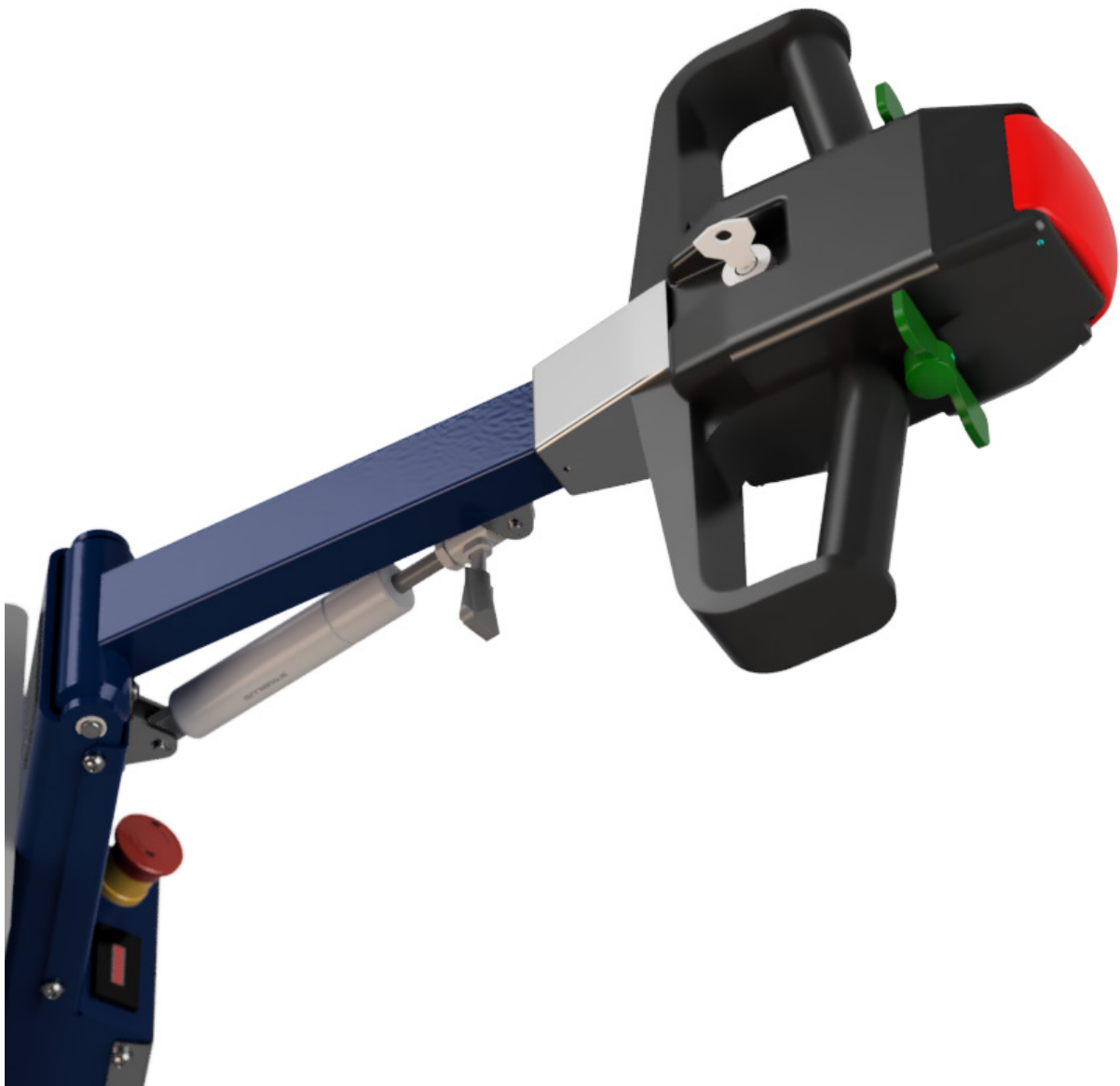
Operate the Drive Function

Move the Throttle.



The Unit starts to drive in the direction of the throttle movement.

The amount of throttle movement determines the speed of the Unit. If the throttle is moved further from the centre, the Unit will drive faster.



2.6. BRAKING



To stop the unit release the throttle. The brakes will be applied automatically.

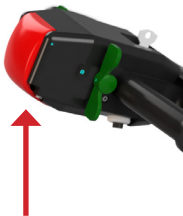
The brakes will safely stop the unit on a 7 degree slope.

*To ensure maximum braking performance do not use the unit on wet surfaces.

2.7. EMERGENCY STOP BUTTON

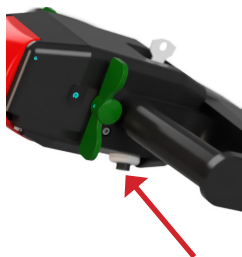


Press the Emergency Stop Button to activate it. When depressed the Emergency Stop will stop drive function. To release the Emergency Stop Button and re-activate the drive function, rotate the button clockwise.



When activating the Back Off Button, the Unit will stop reversing and drive for 1.5s in the opposite direction at a low speed.

2.8. THE HORN

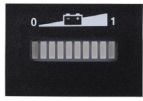


Press the horn button.

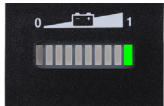
The horn will sound as long as the button is pressed



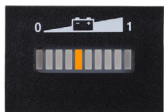
2.9. BATTERY GAUGE



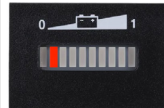
Power is off.



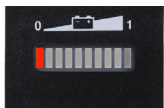
Power is on and batteries are fully charged.



Power is on and batteries are half charged. Recharge before undertaking a long trip.



Power is on and battery charge is low. Recharge as soon as possible.

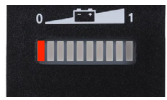


Battery charge is very low. Recharge immediately. Battery damage will occur if not recharged immediately.

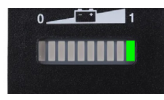


2.10. BATTERIES

The Unit uses sealed, maintenance free batteries to provide power for use. It is recommended that the Unit is charged at the end of each day's use.



8 HRS



When the battery gauge is in the red, the Unit will need to be charged for eight hours.

The batteries are only to be replaced by an agent. The battery cover can only be removed by trained service personnel.

2.11. BATTERY CHARGER



The batteries cannot be overcharged; frequent charging will prolong battery life.

The Drive function is disabled when the Battery Charger is connected.



Connect the Battery Charger to the Unit

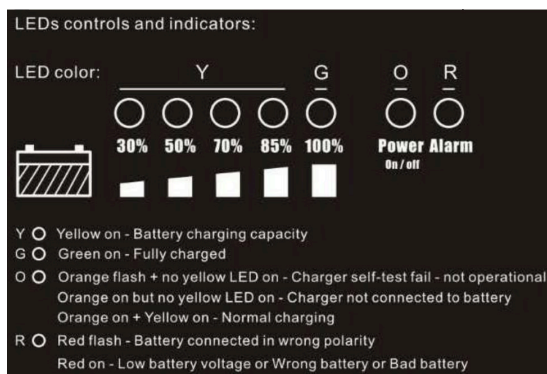


The charger plug connects in only one orientation. Align the connector with the arrow on the top.

When connecting or removing the plug always hold the connector, never pull on the cord.

Connect the Battery Charger to the mains power supply.

The Power LED will illuminate orange when the AC power is on and start charging automatically.



Charging shown by orange Power LED and orange Charge LEDs. The batteries are charged once the indicated LED shows 100%

Turn charger off at mains power supply then disconnect from Unit by holding connector and pulling gently. Carefully coil and store the cables so they do not present a hazard to others.



Secure the Battery Charger to a wall or shelf using the supplied bracket.

3. OPERATION

3.1. OPERATING CONDITIONS

The Unit is designed for operation and storage in a clean indoor environment with the following characteristics:

- **Operating temperature of +10 to +40°C.**

- **Operating relative humidity of 30% to 75%.**

- **Operating atmospheric pressure 80 – 120kPA**

- **Storage and transport temperature of -5 to +65° C.**

- **Storage and transport relative humidity of 10% to 90%.**

- **Storage and atmospheric pressure range: 50kPA to 102kPA**

- **Maximum slope of ± 7°.**

The Unit must only be operated on a solid smooth surfaces such as concrete or linoleum. It must not be used on gravel, sand or other loose uneven surfaces. Avoid wet surfaces as the unit may lose traction.

The Unit may be used, under cover, for brief periods outdoors, but must not be exposed to rain or parked in direct sunlight.

Slope / Weight Limitations

0 Degree Slope	=	1500kg Towing Weight
2 Degree Slope	=	900kg Towing Weight
5 Degree Slope	=	450kg Towing Weight
7 Degree Slope	=	300kg Towing Weight

3.2. PRE-OPERATION TESTS



PRECAUTION:

The Unit must only be operated by persons who have been trained to use it by a Trainer. No user calibration of the Unit is required prior to use.



WARNING:

If the Unit fails any of the tests it is Faulty, do not use the Unit. Immediately report the fault to the relevant person in your organisation who will arrange to have the Unit repaired by an Agent. Follow your Organisation's procedures to tag the Unit as faulty to ensure no other operators attempt to use it.

Faults may be identified by:

- **Visual inspection**
- **Failure to pass pre-operation tests.**



Before using the unit, review the general safety instructions in Section 1.3.

Ensure you are familiar with the key components and functions described in Section 2.

Emergency Stop Button Test

- **Depress the Emergency Stop Button. [Section 2.7](#)**
- **Turn the On/Off Key Switch. [Section 2.4](#)**

If the Unit turns on and can be operated the Emergency Stop Button is faulty. Do not use the Unit.

Brake Test

- **Adjust the drive speed to the minimum. [Section 2.5](#)**
- **Once the Unit has started moving release the throttle. The brakes should automatically apply and stop the Unit. [Section 2.6](#)**

If this does not happen the brakes are faulty; do not use the Unit.

Horn Test

- Press the Horn button. Listen for the warning tone. [Section 2.8](#)

If the Horn does not sound do not use the Unit.

Labelling Check

Ensure any loose, faded, or otherwise damaged warning labels are noted for repair immediately. Do not operate the unit unless the correct warning labels are present.

Damage Check

Carry out a visual inspection of the unit to ensure nothing is damaged or missing.

3.2.1. PREPARE THE UNIT FOR DRIVE

- Switch off the Charger and disconnect it from the unit's Charging Socket. Carefully coil and store the cables so they do not present a hazard to other people. [Section 2.11](#)

- Complete pre-operation tests. [Section 3.2](#)

- Turn Unit on. [Section 2.4](#)

- Check that the battery has adequate charge. If not, charge the Unit. [Section 2.11](#)

- Ensure Emergency Stop is released [Section 2.7](#)

- Drive the unit [Section 3.2.2](#)

3.2.2. DRIVE THE UNIT



Drive the unit by moving the throttle in the desired direction. In Order to stop the unit, let go of the throttle.



BE PREPARED FOR:

Persons stepping out of doorways.

Persons (especially small children) or objects behind you when reversing.

Hearing impaired persons not able to hear the horn.

Tight spaces, slopes and elevators.

Driving tips

- Push the throttle in the desired direction of travel.

- Remember that the Unit's speed will increase in proportion to the throttle's distance from the centre position. Be aware that there will be a slight "ramp up" time for the Unit to reach the desired speed.

- Release the throttle to stop movement.

- If at any stage the battery charge is low, recharge immediately.

- In tight spaces or busy areas operate the Unit at a low speed. Only increase the speed where it is safe to do so.

- Do not drive over foreign objects on the floor as this may damage the non-marking wheels.

- Where available, use corridor mirrors for checking around corners.

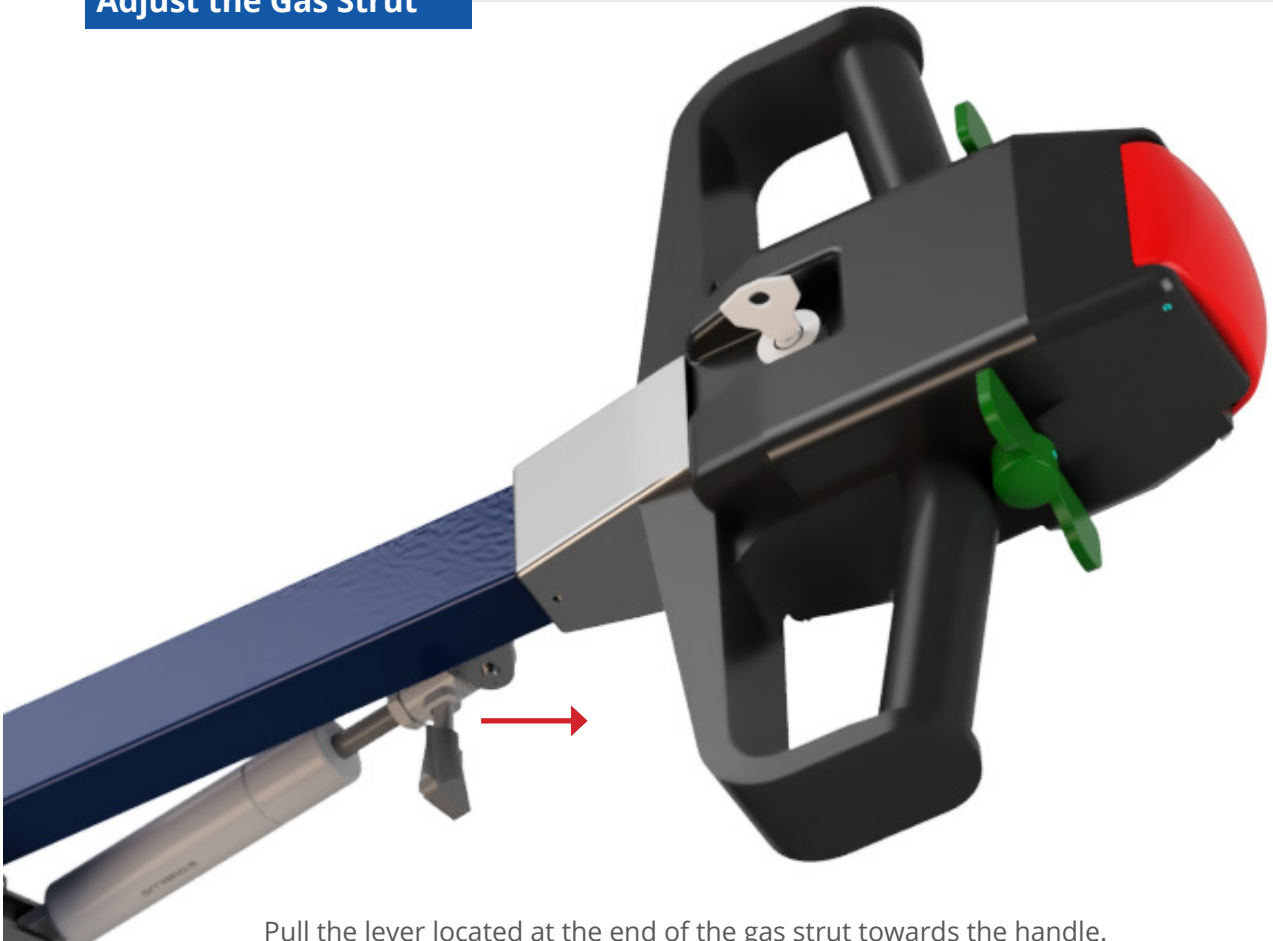
- When leaving the Unit, choose a location which is out of the way, depress the Emergency Stop Button and remove the On / Off Key, to prevent inadvertent operation.

3.3. ADJUSTING OF HANDLE HEIGHT



Before each usage of the unit, the operator shall adjust the handle height to ensure maximum ergonomics.

Adjust the Gas Strut



Pull the lever located at the end of the gas strut towards the handle.

Push the handle assembly down or up until the desired height is achieved. Let go of the adjustment lever.

Note: When pulling the adjustment lever and not holding the handle assembly, its natural behaviour is to push the handle assembly up.

3.4. STORAGE



Store the Unit in an area with restricted public access to avoid improper use.

Depress the Emergency Stop Button.

Turn the unit off and remove the key.

4. MAINTENANCE

4.1. UNPACKING AND COMMISSIONING

The Unit must only be unpacked and commissioned by an Agent.

4.2. DECONTAMINATION

Turn the Unit off at the Controller and push in the Emergency Stop Button before commencing cleaning to prevent inadvertent operation of any functions.

To ensure the Unit does not pose a risk of contamination, the covers must be cleaned thoroughly using standard hospital issue isopropyl alcohol wipes:

- **Immediately upon the spillage of any substance onto the Unit.**

- **At least weekly (i.e. as a regular preventative regime).**

- **The covers must be removed and the inside of the Unit must be cleaned (top-side and under-side) as part of a regular 6-monthly service carried out by an Agent.**

4.3. CLEANING THE BATTERY CHARGER

If the Charger becomes dusty, wipe with a soft, dry lint-free cloth. Ensure the Charger is disconnected from the mains supply before cleaning. Do not use liquid or abrasive cleaners.

4.4. SERVICING

A six months service by an authorized RIHA Industries service provider must be performed so as not to void the warranty.

4.5. REPLACEMENT OF PARTS

For part replacement, contact RIHA Industries. The mains power supply cord must be replaced (as per the specified power lead for the region in which the Unit is to operate) if faulty. It must not be serviced or repaired.

4.6. TRANSPORTATION

If the Unit needs to be transported (i.e. moved while not under its own power), observe the following:

- Ensure the Unit is switched off with the Emergency Stop Button depressed.
- If lifting of the Unit is required, use appropriate lifting equipment with a safe working load of at least 120kg.
- Orientation – Ensure the Unit is positioned on its wheels. Do not lie on its side.
- Stacking – Do not stack Units on top of each other.

4.7. DISPOSAL

The Unit contains sealed, maintenance free batteries and electronic components. Dispose of in accordance with local Regulations.



This product has been supplied by an environmentally aware manufacturer. Please recycle this product at the end of its life in accordance with your local regulations. This product may contain substances that could be harmful to the environment if disposed of in a landfill.

5. TROUBLESHOOTING

The Unit contains sealed, maintenance free batteries and electronic components. Dispose of in accordance with local Regulations.

Unit does not turn on	Has the Emergency Stop button been released?	Section 2.8
	Do the batteries have sufficient charge?	Section 2.13
	Is the Controller turned on?	Section 2.4
The unit will not drive	Is the Controller in Drive Mode?	Section 2.5
	Do the batteries have sufficient charge?	Section 2.13
	Is the Battery Charger connected?	Section 2.16
Battery Gauge LEDs flashing	Refer to the Battery Gauge codes or contact an Agent for assistance.	Section 2.13

5.1. WARRANTY CONDITIONS

The Unit is warranted by the Company to be free from faulty materials or workmanship for a period of twelve months or 1 year from date of purchase. If any defect is found within the warranty period, the company will repair without charge for materials or labour. Batteries which carry a 12 month warranty and have developed a faulty due to insufficient charge will not be warranted.

The Warranty is subject to the provisions that the Unit:

- **Has been used solely in accordance with this Manual.**

- **Has been properly charged in accordance with this Manual.**

- **Has the original serial number attached.**

- **Has not been subjected to misuse, abuse, improper operation, unauthorised modification, tampering, been involved in an accident, or been modified or repaired by any person other than an agent.**



Do not modify this equipment without authorisation from the manufacturer. Unauthorised modifications will void the warranty and can also result in serious injury or death.

5.2. GOVERNING LAW

Supply and use of the Unit is governed by the law in force in South Australia. The parties submit to the non-exclusive jurisdiction of the courts of that state and the South Australian Registry of the Federal Court of Australia in respect of all proceedings arising in connection with the Unit.

5.3. STANDARDS COMPLIANCE



The Unit is compliant with the Machine Directive 2006/42/EC.



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