

MATERIAL

> Assembly & Operation Guide

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Lightweight. Portable. **Safe.**

Please read the following instructions and guidance notes carefully, before using or operating the system.

They contain important information about how to handle and use the system in a safe and efficient way, avoiding danger, reducing repair costs and downtime, and increasing the reliability and lifespan of the system.

They apply for:

- Operation, including preparation, troubleshooting during operation and cleaning
- > Maintenance, inspection, repair
- > Transportation

It is the responsibility of the end user to adhere to the Health & Safety and accident prevention standards and legislation valid in their respective countries and any regions in which the system is being used. It is also incumbent on the user or competent person to ensure that anyone working with the equipment has the necessary medical and physical capabilities. This document should form part of the overriding Risk Assessment and Method Statement required for each lift.



Any pages with a yellow warning symbol must be carefully read otherwise there may be risks of serious injury or death.

> Parts and Components

Warning: It is the operator's responsibility to follow all the safety rules and instructions in the operator's manual. Using the system for anything other than lifting material is unsafe.



MATERIAL





MATERIAL LIFT Counterbalance





MATERIAL LIFT' Stowed



Correct Operation

Intended Use

This product is intended to be used for the lifting of goods only.

It is expected that all users of this product have the necessary medical and physical capabilities, are fully trained and competent in its safe assembly and use.

Each operator must carry out the following prior to beginning any lift

- > Pre-operation inspection
- > Function Tests
- > Workplace inspection

Inspection Prior to Initial Operation

Each product must be inspected prior to initial operation by a competent person to ensure that the structure is safe and that it has not been damaged by incorrect assembly, transport or storage.

Inspection Before Starting Work

Before starting work, the product assembly and all load-bearing components should be checked for visual defects as per the inspection checklist on page 11.

Maximum Capacity

Goods Lifting: This product is designed to lift and lower loads up to its rated capacity. Ensure you have measured the Centre of Gravity correctly and do not exceed the maximum weight of lift, as per the load chart. Refer to Load Capacity section, page 32.

Warnings

All load handling attachment information is for REID products only. For any third party attachments you must refer to their specific operations manual or instructions.

> Safety Hazards

MATERIAL



Be aware of all potential hazards listed in this document, ensuring correct operation throughout system usage.

Fall Hazards

- > Do not attempt to use the system as a platform for lifting personnel, as a step or a ladder
- > Do not stand on the load handling attachments
- > Do not climb on the mast

Lifting Hazards

- Always use proper lifting techniques to load the system
- Always maintain proper lifting techniques when installing or removing load handling attachments
- Never leave the REID Material Lift unattended with a load attached

Electrocution Hazards

- The system is not electrically insulated and will not provide protection from contact with or proximity to electrical current
- If the system comes into contact with energised power lines you must stop work and step away from the system immediately
- Power lines must be shut off before any attempt to move or operate the system following any contact incident
- Be aware of and allow for mast movement and sway or sag of electrical lines, particularly in windy conditions
- Maintain safe distances away from electrical power lines and apparatus in accordance with applicable governmental or local regulations

Bodily Injury Hazard

- > Do not grasp the winch cable
- > Be aware of all pinch points on the system

Crushing Hazards

- > The load must be properly centred and balanced on the load attachment before raising
- > Do not stand or allow others to stand under the load or system at any time
- Maintain a firm grasp on the stabiliser leg when the lock plates are released to ensure smooth lowering. The stabiliser leg will drop if allowed which could cause harm or damage



Tip-over Hazards

- Ensure the castors on the outriggers and stabiliser legs (if equipped) are fully in contact with the ground before attempting any lift.
- Do not raise the load unless the outriggers are properly inserted and the retention pin is fully engaged (see assembly instructions page 14)
- > Ensure the surface is firm, level and supportive with all castors on the ground before raising the load
- Ensure the load handling attachment is fully engaged before beginning any lift
- Do not use blocks or any other kind of temporary fixings to level the system
- The system must not be moved with a raised load, except for minor adjustments
- The system must not be used in adverse weather conditions, such as strong or gusty winds
- Do not cause side-load on the system by attempting to raise a fixed or unbalanced load.
- Do not lean any tools or equipment against the system under any circumstances.
- Do not exceed the rated load capacity. See Load Capacity section
- Only use approved REID components when replacing parts

Collision Hazards

- > Ensure the work area is clear of any overhead obstructions or hazards
- > Take care when transporting the system on an incline or slope
- Refer to the stowage and transportation section (page 36) to ensure correct and safe loading of the system into a vehicle.

Damaged System Hazards

- > Ensure system is fully operational and in working order before use
- > Ensure there are no defects to the winch cable
- Do not use a system with less than 4 wraps of cable on the winch drum when the carriage is fully lowered
- Conduct a thorough pre-operation inspection prior to each use (refer to the checklist on page 11)
- > Ensure that all decals and warnings are in place and legible prior to use
- Ensure that the Operations & Assembly Guide is complete, legible and stored correctly on the system after reading
- Maintain proper lubrication on the winch. Do not allow oil or grease on braking surfaces

> Inspection & Maintenance

MATERIAL LIFT

Before operating the RML, you must learn and practice the principles of safe system operation contained in this document.

The following information is based on REID Lifting's recommendations and does not remove the responsibility of the user to comply with the relevant regulations and standards that are valid in the respective countries and regions where the system is being used.

You must complete the following before beginning work of any kind:

- > Pre-Operation Inspection
- > Workplace Inspection
- > Function tests (see page 30)

Pre-operation inspection

A visual pre-operation check must be completed by each operator prior to use of the system. If there are any defects or damages the operator must cease work immediately and not use the system.

Read and carefully follow the steps below to properly prepare for a visual pre-operation inspection.

- Ensure that the system does not have any modifications, obvious damage, loose or missing parts. The system must be quarantined and removed from service if there are any defects present.
- Only competent service technicians may make repairs to any Material Lift system
- > Be sure that all decals are legible and in place

Check the following parts, components and areas for modifications, damages, loose or missing parts.

- > Winch and related components
- > Cable (kinks, frays, abrasions)
- > Cable anchor
- > Pulleys
- > Base including outriggers storage housing
- > Outriggers
- > Stabilisers and latch plates (if equipped)
- > Castors
- > Mast columns
- > Mast supports
- > Mast brake
- > Load handling attachments (if equipped)
- > Nuts, bolts and other fasteners

Check the whole system for the following problems

- > Damages, defects, deterioration or dents
- > Corrosion or rust
- > Cracks in welds or structural components
- Ensure that all structural and critical components, including pins, bolts and nuts, are in place correctly
- Be sure there is a minimum of 4 wraps of cable around the winch drum when the carriage is fully lowered

> Inspection & Maintenance





Correct PPE

The follow Personal Protective Equipment must be worn prior to beginning the function tests.

- > Hard Hat
- > Goggles
- Gloves
- > Work Boots with steel toe caps

Workplace Inspection

The workplace inspection is essential for the integrity of any lifting work with any RML model. It is the responsibility of each operator of the system to carry out a risk assessment of the workplace prior to each lift.

Be sure to check the following potentially hazardous situations and circumstances and any others that may be specific to each work site.

- > Holes, drops or steep declines
- > Bumps and raised floor obstructions
- > Debris
- > Sloped surfaces
- > Unstable or slippery surfaces
- Overhead obstructions and high voltage conductors
- > Hazardous or perilous locations
- Inadequate surface support to withstand all load forces imposed by the system
- > Wind and weather conditions

Storing the System

When storing the system, you must ensure that the location meets the following requirements.

- > Protected from weather conditions
- > Firm, level surface without risk of falling
- > Nothing is being leaned onto the system
- > Clear of obstructions and traffic or potential collision areas



> Assembly Instructions | Forward Facing

It is the responsibility of the operator to follow this section in it's entirety, failure to do so could result in serious malfunction or failure of the machine.

Warning: Using the system for anything other than lifting material is unsafe.

- 15 Removing the Mast Brake
- 15 Securing the Outriggers
- 16 Securing the Forks
- 17 Lowering the Stabilisers

Appropriate PPE should be worn: > Gloves > Protective Footwear > Hard Hat

Removing The Mast Brake



> Pull the mast break away from the mast and rotate to the rear of the mast.



> Mast break is now disengaged ready to begin the set up.

Securing the Outriggers



Release the first outrigger from the storage point by operating the retention pin and removing from the housing.



 Insert the outrigger into the base at the front (mast side), ensuring that the retention pin is securing the leg. The pin should click into place with the red/green decals aligned correctly. (See product labelling section, Page 49)



 Repeat the process for the second outrigger, ensuring it is fully secured by the retention pin clicking into place with the decals correctly positioned.

> Assembly Instructions | Forward Facing

Securing the Forks | Down Position



Insert the forks into the carriage from below (raise the carriage to a high enough position by using the winch).



> Insert the retention pin to secure.



 Rotate the pin retention mechanism to a vertical position to prevent accidental pin removal.

See page 24 for the instructions for other attachment options and accessories.

MATERIAL LIFT

Lowering the Stabilisers



> Hold the stabiliser leg and press locking tabs to release the leg.



> Keep pressing the locking tabs and lower the stabiliser leg until the castor touches the floor.



> Repeat the previous steps for the other stabiliser leg.

The **Forward Facing** configuration is now set up and complete, go to page 30 to begin the Unloaded function test.

> Assembly Instructions | Counterbalance

It is the responsibility of the operator to follow this section in it's entirety, failure to do so could result in serious malfunction or failure of the machine.

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Warning: Using the system for anything other than lifting material is unsafe.

- 19 Removing the Mast Brake
- 19 Securing the Outriggers
- 20 Securing the Forks
- 21 Lowering the Stabilisers
- 22 Counterbalance Basket

Appropriate PPE should be worn: > Gloves > Protective Footwear > Hard Hat

MATERIALLIFT[®]

Removing The Mast Brake



> Pull the mast brake away from the mast and rotate to the rear of the mast.



 Mast brake is now disengaged ready to begin the set up.

Securing the Outriggers



> Release the first outrigger from the storage point by operating the retention pin and removing from the housing.



Insert the outrigger into the base at the rear (winch side), ensuring that the retention pin is securing the leg. The pin should click into place with the red/green decals aligned correctly. (See product labelling section, Page 49)



 Repeat the process for the second outrigger, ensuring it is fully secured by the retention pin clicking into place with the decals correctly positioned.

> Assembly Instructions | Counterbalance

Securing the Forks | Down Position



 Insert the forks into the carriage from below (raise the carriage to a high enough position by using the winch).



> Insert the retention pin to secure.



Rotate the pin retention mechanism to a vertical position and push the pin out to lock the forks in position.

See page 24 for the instructions for other attachment options and accessories.

MATERIAL LIFT*

Lowering the Stabilisers



> Hold the stabiliser leg and press locking tabs to release the leg.



> Keep pressing the locking tabs and lower the stabiliser leg until the castor touches the floor.



> Repeat the previous steps for the other stabiliser leg.

> Assembly Instructions | Counterbalance

Counterbalance Basket



 Ensure the outriggers are secured in the correct counterbalance position with the stabiliser legs (if present) in the down position.



> Fit the counterbalance basket to the outriggers and secure with supplied pins.



 Fill the basket with the recommended counterbalance weight of 200kg



The Material Lift is ready to be used in the Counterbalance configuration. Proceed to carry out the Unloaded function test.

The **Counterbalance** configuration is now set up and complete, go to page 30 to begin the Unloaded function test.

> Assembly Instructions | Accessories

It is the responsibility of the operator to follow this section in it's entirety, failure to do so could result in serious malfunction or failure of the machine.

Warning: Using the system for anything other than lifting material is unsafe.

- 25 Fork Extensions
- 26 Load Platform
- 27 Pipe Cradle
- 28 Boom Arm

SEE MATERIAL IST

Appropriate PPE should be worn: > Gloves > Protective Footwear > Hard Hat

MATERIALLIFT^{*}

Forks Inverted



> Insert the forks into the carriage from above.



> Insert the retention pin to secure.



> Rotate the pin retention mechanism to a vertical position to prevent accidental pin removal.

Fork Extensions



> Slide the extensions onto the forks and secure with the pins provided.



> The extensions can be positioned either in position 1 or 2 as shown.



> To remove, take out the pins and slide the extensions off the forks.

> Assembly Instructions | Accessories

Load Platform



> Place the load platform onto the forks.



> Secure using the pins provided.



MATERIAL LIFT*

Pipe Cradle



> Slide each pipe cradle bracket over the forks.



> Tighten each wingnut to secure in position.



> The pipe cradle is ready to use.



> To remove, loosen all wingnuts and slide the brackets off the forks.

> Assembly Instructions | Accessories

Boom Arm



> Raise the carriage to an ergonomic position and slide the boom arm into the carriage from the top.



> Insert the retention pin to secure.



Rotate the pin retention mechanism to a vertical position and push the pin out to lock the forks in position.



> Secure the hook if necessary using the pin provided and the boom arm is ready to use.



> To remove the arm, start by removing the pin to release the hook.



> Remove the retention pin and slide the boom arm from the carriage.



> Function Test

It is the responsibility of the operator to follow this section in it's entirety, failure to do so could result in serious malfunction or failure of the machine.



Warning: Using the system for anything other than lifting material is unsafe.

Appropriate PPE should be worn: **) Gloves) Protective Footwear) Hard Hat**

MATERIALLIFT[®]

Unloaded Function Test



> Ensure the loading wheels are fully lowered - remove the pin and lower the wheel position.



> Once lowered, reinsert the pin to secure in position.



> Operate the dual-handle winch clockwise (forwards) to begin raising the unloaded carriage.



Warning: If the sections do not raise sequentially, do not place a load on the forks. Stow the machine and report the machine as requiring service.

Continue to operate the winch until all mast sections have reached their maximum height of lift. Each mast section should reach it's highest point before the next begins to rise - check for any operational inconsistencies or damages.



Once at the highest point, operate the winch in the reverse direction to lower the mast sections until the carriage returns to the lowest point, ensure all sections lower sequentially.



> The function test is complete and the unit is ready to be used.

Load Capacity and Positioning



Failure to follow the position steps and load chart limitations where it refers to centre of gravity can cause catastrophic failure of the system or dangerous crushing hazards which could result in highly expensive damages, serious injuries or even death.



Load Capacity and Positioning

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Before beginning any lift, the following points must be considered with regards to load capacity and balance:

- Failure to position the load in a safe orientation and position may result in death or serious injury
- Raising a load which does not comply with the Centre of Gravity Zone or the maximum capacity could result in death or serious injury
- The centre of gravity is defined as the balancing point of a load and must be positioned within the appropriate zone
- It is the responsibility of the operator to ensure all correct operation, safety hazards, inspections and tests are complete prior to beginning the lift.



- 1. Calculate the total weight of the load and establish the centre of gravity
- Measure the distance to the centre of gravity from the edge of the load which will be closest to the carriage
- Refer to the relevant load centre table on page 34
- Place the load onto the forks so that it rests comfortably within the centre of gravity zone, as close to the carriage as possible
- 5. Ensure the load is balanced and stable
- 6. Secure the load and begin the lift



Load Capacity and Positioning



	Forward Facing Load centre [cm]							
	0 - 40	50	60	70	80	90	100	107
Model	Max [kg]							
RML 30	450	450	450	370	295	265	240	225
RML 45	360	360	360	325	295	265	240	225
RML 60	360	330	270	235	200	185	165	155
RML 75	300	260	200	180	155	140	120	110



	Counterbalance Load centre [cm]							
	0 - 40	50	60	70	80	90	100	107
Model	Max [kg]							
RML 30	450	370	300	250	200	165	135	120
RML 45	360	295	240	200	165	130	105	100
RML 60	360	295	240	200	165	130	105	100
RML 75	300	245	200	165	135	110	90	80

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The Centre of gravity is not always the centre of the load. Sometimes loads are unbalanced, and should be measured accordingly as per the example diagram below.













Example Load

- 1. A 250kg load needs to be lifted to a height of 3 metres using and RML30
- 2. The load needs to be positioned 50cm from the back of the forks to allow the load to be installed when raised
- 3. Measuring from the back of the forks to the centre of gravity, we determine the load centre will be 50cm
- 4. In this instance, the RML30's capacity at the 50cm load centre is 450kg when used in the forward facing configuration, we can proceed with the lift.



Stowage and Transportation

It is the responsibility of the operator to follow this section in it's entirety, failure to do so could result in serious malfunction or failure of the machine.

MATERIAL

Warning: Using the system for anything other than lifting material is unsafe.

- 29 Warning
- 30 Removing the Forks
- 31 Applying the Mast Brake
- 31 Raising the Stabilisers
- 32 Removing the Outriggers
- 33 Loading the RML

Appropriate PPE should be worn: > Gloves > Protective Footwear > Hard Hat




WARNING

Take care when moving any RML in the stowage position. If the outriggers are in the storage position and any of the castors hit debris the machine is at risk of toppling.

To avoid this, ensure that the machine is only moved while the outriggers remain in the working position, do not place them in the stowed position.





Stowage and Transportation

Removing the forks



> Rotate retention mechanism to a horizontal position.



> Support the forks and remove the retention pin.



> Remove the forks from the carriage.



> Place the loading wheels in the upright position and secure using the retention pin.



> Place forks in stowage area.



> The forks are now correctly stored.

Applying the Mast Brake



> Ensure all sections and carriage are in the lowest, stowed position.



> Rotate and push mast brake ensuring it engages above the carriage



Mast brake is now engaged and sections will not move.

Raising the Stabiliser Legs



 Press locking tabs to unlock the stabiliser leg brake system



> Keep pressing the locking tabs and raise the stabiliser leg up to storage position.



 Repeat the previous steps for the other stabiliser leg.

Stowage and Transportation

Removing the Outriggers



> Disengage the retention pins and remove each outrigger one at a time.



> Disengage retention pin and insert outriggers.



> Repeat previous step for the second outrigger.

The following points must be considered before attempting to store or transport the system.

- > The transport vehicle must be parked on an even, level surface clear of debris or hazardous terrain
- > The transport vehicle must be secured to prevent rolling while the system is being loaded
- Ensure that the system weight (see weight label decals on system) is not too great for the transport vehicle capacity, loading surfaces or load securing assembly such as straps or chains
- Sufficient straps or chains must be used to secure the system to the vehicle base to ensure no damages or breakages happen while in transit
- > Follow manual handling guidelines when loading/unloading RMLs into vehicles

Loading RML | Without Machinery



> With the machine in stowed configuration (with the exception of the outriggers), lift onto the surface of the vehicle using the outriggers.

Loading RML | With Crane Assistance



> Ensure all castors on the machine are locked.



Secure the crane to the lifting bar at the rear of the mast and raise the RML into the transportation vehicle, securing when in position using straps or similar.



Present the material lift to the van using the transport wheels and load into a safe position, securing with straps or similar.





All dimensions in mm. *Increase height of lift by 550mm by inverting the forks.

3000*





All dimensions in mm. *Increase height of lift by 550mm by inverting the forks.





*Increase height of lift by 550mm by inverting the forks.





*Increase height of lift by 550mm by inverting the forks.



Regulations, Standards & Directives

This product complies with the following:

- Machinery Directive 2006/42/EC
- The Provision and Use of Work Equipment Regulations 1998 (S.I. 1998 No. 2306)
- The Lifting Operations and Lifting Equipment Regulations 1998 (S.I. 1998 No. 2307)

It is essential to adhere to the safety regulations of the respective country for using manual lifting equipment.

Accreditations

Quality and safety are key themes throughout this document and the REID Lifting ethos. It is with this in mind that we have undertaken external accreditations to ensure we stay focused on what is important to our clients and users, and ahead of market trends and developments.

REID Lifting is continuously audited by Lloyds Register Quality Assurance (LRQA) for approval of its Integrated Management System combining quality systems management, environmental issues and the health and safety practices within the company.

- > ISO 9001:2015 Specifies requirements for a quality management system for any organization that needs to demonstrate its ability to consistently provide products that meet customer and applicable regulatory requirements and aims to enhance customer satisfaction
- ISO 14001:2015 Specifies the requirements for implementing environmental management systems throughout all areas of the company
- > ISO 45001 Health & Safety Management System

LEEA Membership - REID Lifting is a full member of the Lifting Equipment Engineers Association (LEEA membership 000897). REID Lifting conforms to the main aims of the association which is to achieve the highest standards of quality and integrity in the operations of members. Entry qualifications are demanding and strictly enforced through technical audits based on the Technical Requirements for Members

Conformité Européenne [CE] & UK Conformity Assessed [UKCA]

REID Lifting's products have been designed, tested to meet the demands of the European and UK Directives and Regulations regarding Health and Safety requirements.

Testing

Testing and technical file review are integral parts of our design and manufacturing process. External verification of products is undertaken where appropriate, using government approved Notified Bodies.

All products have been thoroughly tested. Each product is supplied with a certificate of conformance and individual record of thorough examination or test.

Language

It is essential for the safety of the user that if this product is re-sold outside of the original country of destination, the reseller shall provide instructions for use, maintenance, inspection and repair in the language of the country where it will be used.

Product IPR

Intellectual property rights apply to all REID Lifting Ltd products. There are patents in place, or pending, for:

PORTAGANTRY" | PORTAGANTRY MARDE" | PORTADAVIT (MANTUM" | TDAVIT"

All product names are trademarks of REID Lifting Ltd:

PORTAGANTRY" | PORTAGANTRYEMEE" | Portadavit" | portabase" | tdavit" | Portaquad" | portx"

Product Labelling Key

Safety Labels

A	-fha	١
Ч		

Insert and secure the bolt before loading the system.



Insert the detent pin and fully engage before loading the system.



Insert the clevis pin and secure with the clip before loading the system.



Restraint point only.



Read the operational manuals before using the system.



Ensure the pin is fully engaged.

Serial Labels

- 1. Product Number
- 2 Serial Number
- 3. WLL
- 4. Year of Manufacture
- 5. Standards
- 6. ATEX
- 7. Max Moment



The system is not suitable for fall arrest applications.



The system is suitable for fall arrest applications. Specify number of users. Max weight of 150kg.

Product Labelling

MATERIAL LIFT*

Number	Item (Not to scale)	Quantity Per Product
1	Control of the second sec	1
2		1
3		1
4		1

Number	Item (Not to scale)	Quantity Per Product
5	REID MATERIAL LIFT	2
6	RML 60 (Variable sizing)	1
7		1
8	×	4
9		4













> Product Identification & Inspection Record



Marking

The serial labels indicate:

- > The product identification number
- > The product's unique serial number
- > The goods' capacity (WLL) of the device
- > The year of manufacture
- > CE Marking

Insert data from serial numbers found on product into table here:



Periodic Examination & Repair History

Date	Inspected by	Pass/Fail	Corrective Action	Comments







2	

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