

INSTRUCTION HANDBOOK FOR *Quikstak 'smart-stacker'*



KEEP THIS BOOKLET WITH THE MACHINE FOR READY REFERENCE

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Introducing....

Quikstak 'smart-stackers'

Welcome to the new levels of efficiency and back care afforded by the ***Quikstak*** 'smart-stacker'. To ensure that you get the maximum benefit from your 'smart-stacker', please carefully read through this booklet and familiarise yourself with the various controls and features before using the machine.

The ***Quikstak*** 'smart-stacker' is a battery-powered mini-forklift, especially designed to **reduce back injuries** and **improve productivity** in manual loading/unloading operations. An adjustable infra-red sensor inside the ***Quikstak*** signals the forks to raise or lower as product is removed or added, thus **maintaining a constant working level** for the operator.

Every effort has been made to ensure that the ***Quikstak*** is easy and safe to use, economical to operate and able to give years of hard work with minimal maintenance.

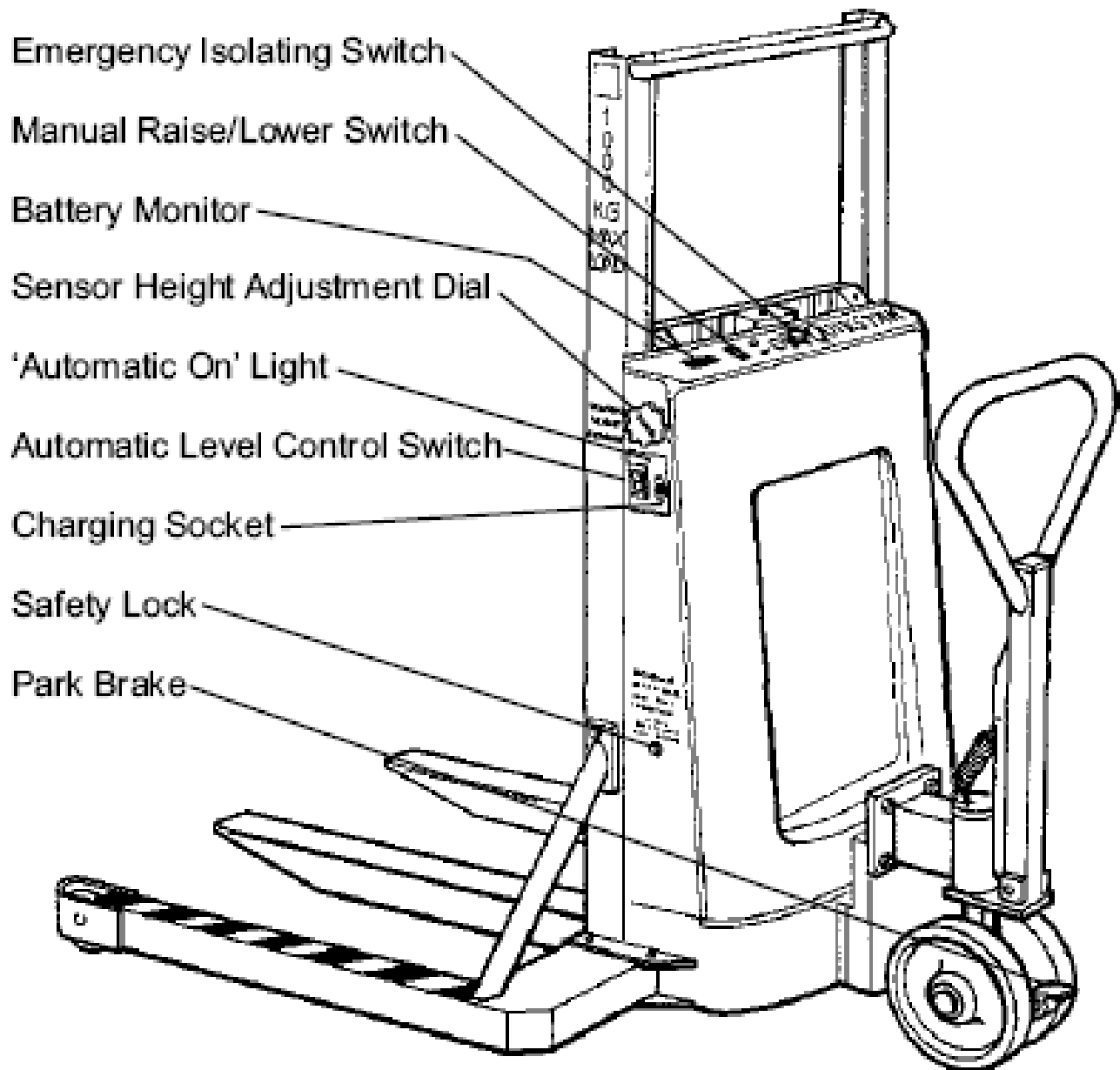
For example, all steel components are zinc-plated prior to assembly, custom-made heavy-duty wheels allow full loads to be moved with little effort, and recharging the batteries is the only regular task required.

This manual covers only standard models of the ***Quikstak*** range. Other models are covered by their appropriate manuals.

These include:

- Self-propelled ***Quikstak***, with electronic variable speed, for effortless movement of heavy loads over long distances.
- Compressed air powered ***Quikstak*** for use in hazardous areas.
- Custom-built versions for specific applications. Options available include higher lift, 2-stage masts, increased weight capacity, hand pumped models and basic stackers.

Location of Controls



Operation and Function of the Controls

Referring to the accompanying diagram, identify and familiarise yourself with the operation of the various switches and controls.

BATTERY MASTER SWITCH:

This switch completely disconnects the batteries from the machine. It is for emergency use only, and should not be turned off during charging.

EMERGENCY ISOLATING SWITCH:

Pressing this switch cuts off the power to the control circuit, stopping the forks from raising or lowering. Turn the button clockwise to reset.

MANUAL RAISE / LOWER SWITCH:

This switch has 3 positions – UP/OFF/DOWN. It returns to the 'OFF' position when released.

SENSOR HEIGHT ADJUSTMENT DIAL:

Turning this dial clockwise raises the sensor and thus the working level; one full turn covers the full 250mm adjustment range.

SENSOR RANGE ADJUSTMENT: (See page 5)

A small screw on top of sensor unit adjusts the horizontal detection range of the sensor from 0-700mm.

AUTOMATIC LEVEL CONTROL SWITCH:

This switch has 3 positions – AUTO-UP/OFF/AUTO-DOWN. The red LED above it glows when the switch is on.

CHARGING SOCKET:

Plug the lead supplied into this socket and into a 240v outlet. For detailed charging instructions refer to the section on page 8.

PARK BRAKE:

Always engage while loading or unloading. Press the pedal down to release it, and flick it up to lock the wheels.

OPERATING INSTRUCTIONS

STACKING PRODUCT ONTO A PALLET

1. Pick up an empty pallet with the forks and place the **Quikstak** in a suitable position, bearing in mind whether you will be loading from the front or side, or both. Apply the park brake.
2. Turn the sensor Adjustment Dial fully clockwise so the height sensor is at its maximum height.
3. Select 'AUTO-UP' by pressing the top of the Automatic switch. The pallet will rise to approximately 1 metre above the floor level. Then select 'AUTO-DOWN' by pressing the bottom of the Automatic switch.
4. Place the first carton of package immediately in front of the sensor. The pallet will drop until the sensor 'sees' the top of the carton. Finish stacking this layer, then place the first item of the next layer in front of the sensor. Repeat one layer at a time, until complete.
5. If necessary, use the Sensor Adjustment Dial to reduce the working height to a more comfortable level. In some cases, you may be able to set the working height to just a little lower than the feed conveyor, and slide the cartons onto the stack, entirely eliminating the need to lift.
6. A safety cut-out switch stops the pallet sufficiently above floor level to prevent the operator's feet being trapped. The Manual switch must be used to lower the load fully to the floor.
7. When supplied, the sensor's horizontal range is normally set to a maximum detection range of 700mm. In some cases, it is advisable to reduce this range to just beyond the fork backplate. To reduce the range, lower the sensor fully and using a small flat-bladed screwdriver, turn the screw on top of the sensor anti-clockwise. Check the range using sample product. (Note that white or light coloured objects are more easily detected than dark objects). The main reasons for reducing the range are:
 - To prevent the operator's hands triggering the sensor while completing a layer; or
 - Where slats of timber are being stacked and each piece is used to push the previous pieces nearer the backplate until the layer is complete.

REMOVING PRODUCT FROM A STACK

1. Pick up the pallet and put the **Quikstak** in a suitable position. Apply the park brake.
2. Select 'AUTO-UP' by pressing the top of the Automatic switch.
3. If the load is higher than 1 metre, it will not rise until one or more layers of product have been removed. When the top of the stack is below the sensor height, the load will be automatically raised to the same pre-set level.
4. Generally speaking, the last item removed from each level should be the one immediately in front of the sensor.
5. Adjust the working level if required, by turning the Sensor Adjustment Dial.

WHEN FINISHED, RETURN THE AUTOMATIC SWITCH TO THE 'OFF' POSITION.



RECHARGING THE BATTERIES

A standard **Quikstak** has two deep cycle 12 volt gel batteries and a built-in automatic charger. How frequently recharging is necessary depends on the type of work being done.

Raising full pallets requires considerably more energy than merely lowering as product is stacked on the pallet. Generally, a full charge should enable at least 80 1-tonne pallets to be unloaded; or several hundred pallets to be loaded, using the AUTO-DOWN mode.

As the charger automatically goes into 'float' mode when the batteries are charged, it is impossible to overcharge the batteries. The type of batteries fitted to a **Quikstak** will give the best service, and maximum life if they are recharged frequently.

RECOMMENDED PROCEDURE FOR RECHARGING THE BATTERIES

1. Apply the parking brake
2. Connect the charging lead into the charging socket on the side of the machine and then into a 240 volt outlet.
3. The charger is fully automatic and can be safely left connected over weekends or every night without damaging the batteries.
4. Unless the batteries are very flat, a full recharge will take around 15 hours.
5. Machines manufactured after mid-2009 may be used while charging; the circuit on earlier machines did not allow this.

Please also refer to the notes on pages 12 and 16.

BATTERY CHARGE STATUS LED

The battery charge status LED has 3 states:

- Green – The machine is OK to use
- Red, steady – The batteries should be recharged as soon as possible.
- Red, flashing – The batteries should be recharged immediately.

Once the LED has turned to red, it will stay red until the batteries reach approximately 90% of full charge, then change back to green. Although the machine may be used at this point, we recommend that the charger be left plugged in for at least a further hour after the LED turns green, to ensure that the batteries receive a full charge.

The approximate charge levels indicated when the LED changes state are shown below:

FROM:	----->	TO:	
Green		Red Steady	40%
Red Steady		Red Flashing	20%
Red Flashing		Red Steady	40%
Red Steady		Green	90%

NOTE: Maximum battery life will be attained by frequent recharging; allowing the batteries to deeply discharge before recharging will greatly shorten their life.

BATTERY LIFE

Even with regular maintenance and charging, batteries do have a limited life. The sealed gel batteries can give up to five years’ service before needing replacement, and require no maintenance whatever during that time. Ensure the top of the batteries is kept clean and dry.

MAINTENANCE AND CARE OF THE QUIKSTAK

The **Quikstak** has been designed to give years of service with minimal maintenance. With a little care and common sense, it should retain its 'new look' for a long time.

An occasional coat of silicon spray inside the masts will keep the forks running smoothly and minimize wear of the self-lubricating Nylon mast blocks.

The lenses of the sensor should be kept clean.

All metal parts of the **Quikstak** are zinc-plated before painting and assembly. The fibreglass cover has a very hard outer surface designed to be hard wearing, and the clear safety screen is unbreakable polycarbonate sheet. To keep your **Quikstak** looking like new, we recommend an occasional wipe over with a damp rag and a mild cleaning agent.

FORK HEIGHT ADJUSTMENT

The forks are fitted with a 'stop bolt', which determines the height above the floor at which they rest when right down. If you are experiencing difficulty pushing the forks into a pallet, the height may need adjusting. When the forks are right down, check to see whether they are touching the top boards, or the bottom boards, or both. (The forks do normally have an upward tilt with no load, and come down level with a full load. The amount of tilt can be simply reduced if necessary. Please contact Simpro or your agent)

The stop bolt is threaded into the steel angle section between the forks, just beside the centre upright member. To adjust it, raise the forks fully, loosen the top locknut (13mm ring spanner) and turn the bolt head from beneath. Wind it down to raise the fork height, or up to lower the height.

Lower the forks and check the clearance. Adjust further if necessary.

TROUBLE SHOOTING GUIDE

PROBLEM	POSSIBLE CAUSE	REMEDY
Forks do not go down with no load on	Sticking in masts	Spray inside the masts with silicon spray
Forks do not go down even with a load on	Faulty lowering solenoid valve	Contact your agent or the manufacturer for instructions or service
	Blockage in lowering orifice	
	Wire broken or disconnected from lowering solenoid	
Forks will not go up, even with no load	Faulty 'Raise' solenoid	
	Wire broken or disconnected from Raise solenoid	
Battery goes flat overnight or when not in use	'AUTO-DOWN' switch left on	<p>Leaving 'AUTO-DOWN' switch on can result in the 'down' solenoid operating continuously, which will drain the battery in a few hours.</p> <p>Always turn the automatic switch to 'OFF' position when not in use.</p>
Machine will not work at all, even though the batteries are charged	Blown fuse	Remove the access panel & check fuse. If blown, try to ascertain cause and rectify before replacing fuse
	Wiring fault	Contact Manufacturer or agent.

A more detailed trouble-shooting guide and Service Manual is available on request from the manufacturer.

OWNER'S RESPONSIBILITIES

OPERATOR'S QUALIFICATIONS

Only trained and authorised operators shall be permitted to operate powered industrial trucks.

RATED CAPACITY

The manufacturer's rated capacity of the truck shall not be exceeded.

Any design modifications and additions liable to influence capacity and operating safety shall be effected only after approval of the manufacturer.

Modifications arising from application of ancillary attachments shall be performed in such a manner that safety is not reduced and in accordance with the provisions of this safety code. Capacity, operation and maintenance instruction plate, tags, or decals shall be changed accordingly.

The user shall ensure that all name-plates and markings are in place and are maintained in a legible condition.

DEFECTIVE OR DAMAGED TRUCKS

If a powered industrial truck is found to be in any way unsafe or to contribute to an unsafe condition, it shall be removed from service until restored to a safe operating condition.

BATTERY CHARGING AND CHANGING

It is recommended that battery charging installations be located in areas designated for that purpose. Facilities should be provided for flushing and neutralising spilled electrolyte, for fire protection, for protecting charging apparatus from damage by trucks, and for adequate ventilation for dispersal of fumes from gassing batteries.

Smoking shall be prohibited in charging areas: this shall be indicated by signs.

Only trained and authorised personnel shall change or charge batteries. Personnel maintaining batteries shall wear protective clothing.

All battery changing shall be carried out in accordance with manufacturer's instructions. Tools and other metallic objects shall be kept away from the top of uncovered batteries.

The battery of an electric truck shall not be replaced by another battery having different voltage, weight or size, without specific authorisation (by the original manufacturer of the truck, if possible).

Only batteries meeting the truck manufacturer's specifications shall be used.

OPERATING CONDITIONS

Operating surfaces shall have sufficient load-carrying capacity and shall be maintained in such a manner as not to affect adversely the safe operation of the truck.

Transport aisles for trucks shall be arranged to provide good visibility and ease of truck cornering and shall avoid inclines, steep ramps, narrow passages and low ceilings. Aisles shall be clearly outlined or defined.

In aisles where pedestrian traffic is likely to be encountered, aisle width shall be adjusted accordingly.

ACCIDENTS

The operator shall be required to report any accident involving injury, damage to building structures or equipment to be appropriate person at once.

LIGHTING

Lighting of adequate intensity shall be provided in operating areas.

When lighting in the operating area is less than 32 lux, auxiliary lighting shall be provided on the truck.

SLINGING OF TRUCKS

Slings shall be attached only at the points indicated by the truck manufacturer.

SIMULTANEOUS USE OF TRUCKS

The simultaneous use of two trucks for handling heavy or cumbersome loads is a dangerous operation requiring special precautions. It shall be done only in exceptional circumstances, under the supervision of the person responsible for handling operations.

LIFTS (ELEVATORS)

It shall be ensured that lifts (elevators) used in transport powered industrial trucks will support the total weight of the truck, load and operator. Such lifts, (elevators) shall be designated and operators instructed to use only designated lifts (elevators).

RULES FOR THE OPERATOR

The safe operation of powered industrial trucks is dependant to a large extent on the manner in which the personnel operate the truck. The rules for the operator are laid down in the following major categories:

- General rules
- Handling the load (lifting and stacking)
- Travelling (driving)
- Operator care of the truck

Failure to observe these rules may result in:

- A serious risk of injury to the operator or others;
- Material damage.

GENERAL

Only trained and authorised personnel shall operate a powered industrial truck.

Operators shall pay particular attention to the operating environment, including other persons and fixed or movable objects in the vicinity, and shall safeguard pedestrians at all times.

No person shall be allowed to stand or pass under the elevated portion of any truck, whether loaded or unloaded

Any accidents involving personnel, buildings, structures or equipment shall be reported at once to the appropriate person.

The operator shall not modify, add or remove parts from the truck in a manner that will affect its functioning, without authorisation.

Operators shall use trucks only for those purposes for which they are equipped.

LOADS

Only loads shall be handled which are within the rated capacity of the industrial truck or, when attachments are used, the combination of the truck and attachment. The capacity of the truck and the attachment may be less than the capacity shown on the identification plate of the attachment.

No means shall be used to increase the capacity of the truck, for example additional personnel or counter weighting.

At all times, and particularly when attachments are being used, care shall be taken in securing, manipulating, positioning and transporting the load. Trucks equipped with attachments should be operated as though partially loaded, when not carrying a load.

Only stable or safely arranged loads shall be handled. Particular care shall be taken when handling extra long or high loads. When handling loads which cannot be centred, the truck shall be operated with special caution.

TRAVELLING (DRIVING)

When manoeuvring with the load in elevated position, the steering and braking controls shall be operated in a moderate and smooth manner.

The operator shall avoid running over loose objects which might cause damage or injury.

Arms, legs or head shall not be put between the uprights for the mast or other working parts of the truck.

All signs and other instructions concerning floor loadings shall be complied with.

CLEARANCE

It shall be ensured that there is sufficient clearance under overhead installations, for example light fixtures, pipes and fire protection systems.

Before traversing passages or doorways, it shall be ensured that there is sufficient clearance for the truck, operator and load.

PARKING

When a powered industrial truck is left unattended, the forks shall be fully lowered, the power shut off, the parking brake applied, and the truck secured against unintentional or unauthorised movement.

Note: The definition of 'unattended' resides with the national governing body having jurisdiction.

When the truck is being parked, fire aisles, access to stairways and fire equipment shall be kept clear.

OPERATOR CARE OF THE TRUCK

Before operating the truck, its operating condition shall be checked.

If the truck is found to be in need of repair, or if it develops a defect during operation, the matter shall be reported immediately to the designated superior. Operators shall not make repairs or adjustments unless specifically authorised to do so.

BATTERY CHARGING AND CHANGING

All battery charging and changing shall be carried out by trained and designated personnel in accordance with the battery or truck manufacturer's instructions. This can usually be the authorised operator.

The truck shall be correctly positioned and the brake applied before attempting to change or charge batteries.

Precautions shall be taken to prevent naked flames, sparks or electric arcs in battery charging areas. Smoking is prohibited.

Tools and other metallic objects shall be kept away from the top of uncovered batteries.

It is important that the cell tops be kept dry and that battery terminals be kept clean, lightly covered with petroleum jelly and correctly tightened.

MAINTENANCE PRACTICES

GENERAL

The satisfactory operation of powered industrial trucks depends on careful maintenance. When maintenance is neglected, trucks can become a source of danger to personnel and property.

MAINTENANCE ITEMS

Preventative maintenance, lubrication and inspection of all powered industrial trucks shall be performed according to a scheduled system in conformity with the following items. Only qualified and authorised personnel shall be permitted to maintain, repair, adjust and inspect industrial trucks.

Brakes, steering mechanisms, control mechanisms, warning devices and lift overload devices shall be maintained in a safe operating condition.

All parts of lift mechanisms and frame members shall be carefully and regularly inspected and maintained in a safe operating condition.

Safety guards and safety devices shall be inspected regularly and shall be maintained on the truck in a safe operating condition.

All hydraulic systems shall be regularly inspected and maintained.

Cylinders, valves and other similar parts shall be checked to ensure that neither internal nor external leakage has developed to the extent that it would create a hazard.

Batteries, motors, controllers and contactors, limit switches, protective devices, electrical conductors and connections shall be inspected and maintained in accordance with general accepted good practice. Special attention shall be paid to the condition of electrical insulation.

All information and instruction plates and tags (decals) shall be maintained in a legible condition.

Any design modifications and additions liable to influence capacity and operating safety shall be effected only after approval of the manufacturer. Applicable identification plates and instructions shall be changed.

All replacement parts shall be original parts or be of a quality at least equal to that provided in the original equipment.

Industrial trucks shall be kept in a clean condition to prevent fire hazards and ensure the detection of loose or defective parts.

INSPECTION

If, during an inspection, any fault, wear or damage is observed that can cause a safety hazard, effective measures for correction shall be taken before the truck is placed into operation again.

A scheduled preventative maintenance, lubrication and inspection procedure should be followed. Those records determined to be necessary (or required by national authority) shall be maintained.

QUIKSTAK MAINTENANCE

Quikstak 'smart-stackers' have been designed to require a minimum of regular scheduled maintenance.

Every 3 – 4 months:

- Spray inside the masts with a silicon spray.
- Check operation of the brake, switches, Emergency Stop button, sensor function, top and bottom cut-out switches.
- Visually check for hydraulic oil leaks
- Clean the machine, including the sensor lenses.

HAZARD AND RISK ASSESSMENT FOR QUIKSTAK 'SMART-STACKERS'

SCOPE

- Manually propelled and self-propelled models
- With or without infra-red height-sensing
- Lift heights up to 2.4 metres

DESCRIPTION

A stacker truck using battery-power to lift loads, and, on self-propelled models, to provide forward and reverse traction. Most models also feature infra-red load-height sensing, which automatically maintains a pre-set working level when loading or unloading pallets.

CONSTRUCTION

A steel frame comprising main structure (chassis and masts), fork assembly which moves vertically in masts, outrigger load stabilisers, and rear steering wheel assembly. Electrical and hydraulic control mechanisms, batteries and motors, allow the operator to raise, lower, and move loads.

RISK RANKING METHOD

Based on AS/NZ 4360: 1995 Risk Management

Risk is the combination of the likelihood of a specific unwanted event and the potential consequences if it should occur.

PROBABILITIES

- A common or repeating occurrence
- B known to occur or 'it has happened'
- C could occur, or 'I've heard of it happening'
- D unlikely to occur
- E practically impossible

CONSEQUENCES FOR PEOPLE

- 1 fatality or permanent disability
- 2 serious lost time, injury or illness
- 3 moderate lost time, injury or illness
- 4 minor lost time, injury or illness
- 5 no lost time

RISK RANKING METHOD

For each event the appropriate probability (a letter A to E) and consequence (a number 1 to 5) is selected.

			PROBABILITY OF EVENT OCCURING				
			Common ←		→	Unlikely	
			A	B	C	D	E
CONSEQUENCES IF EVENT DOES OCCUR	Serious	1	1	2	4	7	11
		2	3	5	8	12	16
		3	6	9	13	17	20
	Minor	4	10	14	18	21	23
		5	15	19	22	24	25

The consequences (loss outcomes) are combined with the probability of those outcomes in the risk ranking table to identify the risk rank of each loss event, (e.g. a consequence of 3 with a probability of B yields a risk rank from of 9. A rank of 1 is the highest magnitude of risk for a highly likely, very serious event. A rank of 25 represents the lowest magnitude of risk, an almost impossible, very low consequence event.

1 – 3	Extreme	13 – 16	Moderate
4 – 6	Serious	17 – 19	Low
7 – 9	High	20 – 22	Very Low
10 – 12	Significant	23 – 25	Insignificant

Potential Hazards Risk Ranking

1. Use by unauthorised or untrained personnel.
C4 = 18 (LOW)

Control Method: Never allow anyone except a trained operator to use the stacker. Operators must read the booklet supplied with the machine. Press in the 'Power Isolation Switch' when not in use.

2. Colliding with other persons or products.
C3 = 13 (MODERATE)

Control Method: Have separate designated lanes for lift trucks and pedestrians. Install end-of-aisle mirrors. Do not allow laden trucks to go down ramps (if manually propelled).

Potential Hazards

Risk Ranking

3. Stacker being tipped over.

C2 = 8 (HIGH)

Control Method: Travel with the load just above floor level whenever possible. Avoid travel on inclined surfaces, and never turn on a gradient. Slow down before turning. Watch for low doorways or other structures that the top of the machine could collide with.

4. Objects falling off pallet, injuring operator or other personnel.

C3 = 13 (MODERATE)

Control Method: Ensure the load is stable before lifting. Never attempt to lift more than the rated load, nor exceed the rated load centre. Move the vehicle with the load raised just off the ground, whenever possible. Slow down before turning.

5. Load being put down on operators or other person's feet.

C2 = 8 (HIGH)

Control Method: Ensure that all other people are well clear before lowering load. Operators must stand behind the machine to operate the controls, not reach around from the side.

6. Operator's feet being nipped by the rear wheels, while reversing. **D3 = 17 (LOW)**

Control Method: The tiller handle should be pulled down while reversing, to increase the distance between the operator and the machine.

7. Flammable gases generated during charging of the batteries.

D4 = 21 (VERY LOW)

Control Method: Charge machines only in well-ventilated areas, preferably a designated area displaying signs stipulating 'No Smoking' and 'No Sources of Ignition'.

8. Acid burns sustained while maintaining the batteries (not applicable if the machine is fitted with sealed gel batteries) **D3 = 17 (LOW)**

Control Method: PVC gauntlets and face shield must be worn while checking fluid levels in batteries.

9. Electrocution

D1 = 17 (LOW)

Control Method: Ensure the charging lead is in good condition. Replace the lead if the insulation is damaged. Keep dry, and charge in dry areas. Fit an RCD to the supply socket.

Potential Hazards

Risk Ranking

10. Load coming down if the sensor is unintentionally activated

C5 = 22 (VERY LOW)

Control Method: Reduce the sensor range to just beyond the fork backplate, or to the minimum required to operate effectively (see page 5 for more details). Engage the safety catch before reaching underneath the load (to retrieve a dropped object, for example).
Consider having a 'Time Delay' option fitted.

11. Load being tipped off the pallet if the 'Automatic Raise' switch is left on, a full pallet put down on the floor, and the stacker withdrawn from the pallet. When the forks are nearly right out, the sensor may signal the forks to raise, lifting one side of the pallet.

C3 = 13 (MODERATE)

Control Method: Always turn off the Automatic switch when not in use. Reduce the sensor range to the minimum required to operate effectively. Use the Emergency Stop button to instantly stop all functions, if necessary.

Conclusion

Quikstak 'smart-stackers' are manufactured to meet the design and safety standards of AS 2359 (Powered Industrial Trucks) and ANSI B56.1.

Safety Features Include:

- A battery isolation switch.
- An Emergency Stop button.
- A Booklet detailing full instructions for safe operation and maintenance procedures is provided with each machine.
- A Safety screen preventing operator access to most moving parts.
- A positive-action park brake which locks both rear wheels. (Manually propelled models).

Self-propelled models also feature:

- A Park-brake which is automatically applied when the control handle is released.
- A Key switch for restricting use to authorised operators.

Warranty

The conditions detailed below are a brief summary only. A full 'Warranty Terms and Conditions' document is available on request.

Quikstak 'smart-stackers' are warranted by the manufacturer against faulty workmanship and defective materials for a period of 12 months from the date of purchase.

Such warranty is subject to the following conditions:

- 1.** Under the terms of this warranty, the manufacturer agrees to repair or replace, at its own discretion, any parts that fail due to poor workmanship or faulty materials. It does not extend to any other loss or damage including consequential loss or damage or loss to other property or persons.
- 2.** Without limiting the generality of paragraph 1 above, this warranty does not cover the following:
 - a) Travel expenses or freight.
 - b) Damage caused by accident, misuse or abuse.
 - c) Damage to any goods which have been altered or modified by someone other than the manufacturer or its authorised agent.
 - d) Damage or loss to the goods due to their unsuitability for any particular use.
- 3.** Faults or breakdowns should be reported to the dealer who supplied the machine. No claims will be recognised unless authorisation is obtained from the manufacturer before any repairs are done.

This warranty shall be interpreted according to the laws of New Zealand and the parties agree to submit to the jurisdiction of the Courts of New Zealand.

Also available

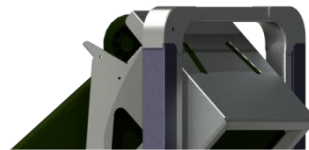


Multi-Tip® bin-tipping machine

- 150kg capacity
- Battery or mains-powered
- Cradles to suit all common bins

Dumpmaster bin-tipping machines

- 250kg capacity
- Models available to tip at virtually any height
- Cradles to suit most common bins



MegaDumper bin-tipping machines

- Up to 750kg capacity
- Models available to tip at virtually any height
- Cradles to suit most common bins

