



SPACEPAC

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Instruction Handbook



Multi-Tip



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Congratulations on your purchase of a Simpro **Multi-Tip** bin-tipping machine.

The **Multi-Tip**[®] bin-tipper's tipping action is one of the safest, most efficient, and easiest to use systems in the world, whereby bins are lifted straight up, and then rolled forward around the lip of the skip or hopper being emptied into. Benefits of this design include:

- A very small 'footprint'.
- A weight capacity of up to 150kg.
- Standard tipping heights of 1200mm and 1600mm
- The basic design can be easily modified to suit a wide range of bin sizes, shapes, and weights.
- Standard drums and bins do not require clamping – simply place on the cradle and press the 'Raise' button.

The **Multi-Tip** comes standard with a powder-coated mainframe, and zinc-plated cradle and guards, and is virtually maintenance-free. They are available in stainless steel for critical hygiene areas. **Multi-Tip** bin-tippers are highly versatile and can be used in numerous applications, ranging from emptying rubbish bins into skips to pouring food ingredients into hoppers or mixers.



General Instructions for Use

**Read and understand the following instructions
before attempting to use the machine.**

Before use ensure that:

1. The machine is stable and on level ground.
2. The wheel brakes are applied.
3. All personnel other than the operator are well clear of the machine.
4. All covers and safety guards are in place.

To empty bins:

1. Place the drum or bin on the cradle, ensuring that it is properly positioned.
2. Press the single button under the left side of the shroud and the 'RAISE' (↑) button simultaneously, holding down until the bin reaches the inverted position, then release.
3. When the contents of the bin have emptied, press the left button and the 'LOWER' (↓) button simultaneously, holding until the cradle rests on the ground.
4. The bin may be stopped at any point of the cycle, by simply releasing either or both buttons.

Caution!

**Keep feet and hands well clear of bin and cradle
when operating.**

- NEVER** allow other persons to stand near the machine when operating, or to hold onto the bin, or to stand on the cradle.
- NEVER** operate with any covers or guards removed.
- NEVER** operate with a broken or damaged electrical supply lead.
- NEVER** operate on uneven or sloping ground.



Charging the Battery

Multi-Tip bin-tippers are fitted with a sealed 12-volt 18 amp/hr. battery and an automatic battery charger. As a general rule a full charge is sufficient to empty up to 5 tonnes of product, but this will vary depending on the tipping height and age of the battery. The battery status LED turns from green to red when there is approximately 40% charge remaining, then starts flashing when the charge drops to approximately 20%. Ideally, the battery should be recharged whenever the LED turns red. No harm whatever will be caused if it is recharged every night.

To recharge the battery, simply lift the flap on the side of the main box, plug the charging lead into the socket, and into a standard 240 volt outlet. The switch below the charging socket should be down ('I' pressed in). A full recharge will take around 3 hours.

Battery Life

The standard AGM-type batteries as supplied have a life expectancy of 1 - 3 years depending on the amount of use and the frequency of charging. Frequent charging will give the best life and overall performance. The battery requires no regular maintenance.

Maintenance and care

Multi-Tip[®] bin-tippers are designed to give years of service with minimal maintenance. An occasional coat of silicon spray inside the masts and around the roller on the tip arm will ensure that friction is kept to a minimum.



Trouble Shooting Guide

Problem	Possible Causes	Remedy
Cradle will not go up	Flat Battery	Recharge battery
	Faulty switch or wiring	Check and rectify
	Faulty raise relay	The relay contactor should click when 'up' button is pressed. If not, check and repair/replace.
	Bin too heavy	Reduce bin weight
Machine will not lift heavy bins, although the motor runs	Pressure-relief valve set too low	Consult manufacturer or agent
Cradle will not come down from the inverted position	Cradle sticking in masts	Spray inside of mast. Lubricate roller on arm at top of cradle.
	Lift ram jamming	Consult manufacturer or agent.
	Faulty switch, wiring, or lowering valve	The lowering valve should click when the button is pressed. If not, check the switch, wiring and electro-magnetic coil.
Cradle jams part-way down	Mast bent or damaged	Check and repair

A more detailed Service Manual giving specific testing and repair instructions is available on request from the manufacturer.



Hazard and Risk Assessment for ***Multi-Tip*** Bin Tippers

Risk Ranking Method

Risk is the combination of the likelihood of a specific unwanted event and the potential consequences if it should occur. For each event, the probability of it occurring is matched to a letter A to E from the list below, and the probable consequence if it did occur is matched to a number 1 to 5.

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

Based on AS / NZ 4360: 1995 Risk Management



Risk Ranking Table

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.

			PROBABILITY OF EVENT OCCURRING				
			COMMON ←-----→ UNLIKELY				
			A	B	C	D	E
CONSEQUENCES IF EVENT DOES OCCUR	MINOR ↔ SERIOUS	1	1	2	4	7	11
		2	3	5	8	12	16
		3	6	9	13	17	20
		4	10	14	18	21	23
		5	15	19	22	24	25

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



Construction

Multi-Tip bin-tippers have a steel frame comprising a vertical mast and stabilising legs, usually fitted with 4 castors. A bin cradle moves vertically in the mast, and is inverted at the appropriate height by a roller running in a track.

Operation

A hydraulic ram provides the force to lift and empty the bin. The ram is supplied by a battery-powered hydraulic power pack. Electrical, hydraulic, and/or mechanical control mechanisms allow the operator to raise or lower the bin in a controlled manner.

Guarding

Guard panels prevent access to moving parts.



Potential Hazards

Risk Ranking

- 1. Use by unauthorized or untrained personnel**

**C4 = 18
(Low)**

Control Method: Only allow trained and authorized operators to use the machine. If machine will be in an area where unauthorized persons have access, fit a key - operated isolating switch. Operators must read and obey the instructions displayed on the machine.

- 2. Trapping of hands or feet by moving bin-cradle.**

**C3 = 13
(Moderate)**

Control Method: All persons other than the operator must keep well clear while the machine is in use. The operator must stand at the 'control' side, and must not attempt to hold the bin or cradle while it is moving. Do not put feet under the machine.

A pendant control, if fitted, must only be used while the operator is standing well clear of the machine. It must not be used if any part of the operator's body could come into contact with any moving part of the machine.

NOTE: Unlike many other bin-tippers, the cradle on a **Multi-Tip** comes down by gravity alone, and speed is controlled hydraulically. Except where a bin does not empty, or is lowered with product still in it, there is little chance of injury being caused by the cradle coming down under its own weight.



3. Machine being tipped over

D4 = 21
(Very Low)

Control Method: Never operate on uneven or sloping ground. Engage the wheel brakes before use. Engage the Bin-retainer hooks if these have been fitted to the machine. If there is a perceived risk that the machine could top over, fit and use a Bin-retainer kit.

4. Electrocution

D1 = 7
(High)

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.

Conclusion

Multi-Tip Bin Tippers are designed and manufactured to be safe to operate. A significant safety margin is built in to all load-bearing parts. Guarding prevents access to moving parts.

Safety features include:

- Safety screens shield the operator from moving parts.
- A pressure-compensating lowering valve which automatically regulates the lowering speed regardless of the weight of the bin.
- The machine stops instantly if the raise or lower button is released.



Warranty

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

Multi-Tip bin-tippers 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 his 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.



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Also available from Spacepac Industries:

***DUMPMASTER* heavy-duty bin-tipping machines**



For all sales or service enquiries, call:



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