



A trading name of Amiata Holdings Pty Ltd ACN 006-366-552 ABN 44-006-366-552

PALLET ELEVATOR

USER MANUAL



1 Tonne



2 Tonne

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Introduction

Pallet Elevator is an Australian invention that makes manual loading and unloading of pallets safer, faster and easier. Pallet Elevator is designed to keep the active layer of the load at or above waist height. Its patented multi spring design eliminates bending and lifting, and is highly effective at reducing the risk of back strain and back injury – the most common of all work injuries.

The construction of Pallet Elevator is a scissor action with a varying number of springs. Depending on your pallet loads, our one tonne or two tonne unit is sure to meet your needs. A shock absorber is also incorporated into the design to minimize potential bouncing when the pallet is loaded.

Our unique Spring Relieving tool also makes removing or replacing springs safer and easier than any of its other competitors in a similar price range.

The turntable allows the operator to rotate the entire pallet for uniform unloading to minimize stretching or carrying. Tyne holes on all four sides allow easy access for forklifts and pallet trucks.

Pallet Elevator's sturdy construction means that maintenance is low and our lifetime warranty on specified parts ensures long-term and problem free use.

The instructions in this manual are not necessarily all inclusive as J & D Engineering cannot anticipate all situations the Pallet Elevator may be used in.

This manual is not intended to be, or create, any warranty other than that specified in the warranty section at the end of the this document.

All enquiries should be directed through the following sources

J & D Engineering
38 Kent St
Knoxfield Victoria 3810
Phone (03) 9720 7668
Fax (03) 9735 2345
Email sales@jdenengineering.com.au
Web <http://www.jdenengineering.com.au/index.html>

Safety

The safety of all personnel within the vicinity of the Pallet Elevator is of critical importance to everyone concerned.

IMPORTANT INFORMATION

Please read this instruction manual and follow all safety instructions and precautions carefully and completely before installing or using your Pallet Elevator for the first time.

Caution

- ⚠ To relocate your Pallet Elevator use only an appropriate Pallet Truck or Forklift.**
- ⚠ Never attempt to relocate a loaded Pallet Elevator.**
- ⚠ Pallet Elevator can not be lifted by using a forklift under top of table.**
- ⚠ Tyne Access Cavities at ends and sides of base must be used.**

Damage or injury could occur if these directions are not followed

Transit Damage

Visually inspect Pallet Elevator for signs of damage in transit.

Ensure that circlips and fasteners have not dislodged during transit.

Check the general condition of Pallet Elevator.

If there is evidence of damage, contact J & D Engineering before use.

When removing a pallet from the Pallet Elevator, a forklift is required. Ensure the pallet is lifted clear of the turntable before attempting to move.



Warning

Do not attempt to lock a Pallet Elevator in a compressed state, because when unloaded and released the potential energy of the springs could cause serious injury or damage.

Load Capacity – Spring Selection Chart

One tonne and Two tonne		Two tonne	
Number of springs	Load range	Number of springs	Load range
1	0-200	6	0-1400
2	0-480	7	0-1680
3	0-750	8	0-1950
4	0-1000	9	0-2200
5	0-1200	10	0-2400

When correct number of springs is used, as load is removed from pallet, the turntable raises to the ideal height for manual loading or unloading.

Spring Removal or Replacement

1. Ensure turntable is completely empty with no pallet on top
2. Locate the Spring Relieving Tool on the lower spring housing assembly. Remove from brackets and insert into position as shown in diagram
3. Loosen and remove lower bolt on shock absorber
4. Turn bolt on Spring Relieving Tool clockwise to raise pallet table until springs are decompressed and can easily be removed
5. Insert or remove desired number of springs
6. Ensure springs are seated correctly and in line with top spigots. Turn bolt in anti-clockwise motion until Spring Relieving Tool is loose enough to remove.
7. Replace Spring Relieving Tool to its position on lower spring housing assembly
8. Replace lower bolt on shock absorber
9. Position load and test for correct height

Spring Relieving Tool operation



Spring Relieving Tool located at base of springs



Ensure Spring Relieving Tool T-bar is positioned securely behind posts

HAZARD IDENTIFICATION & RISK ASSESSMENT

Crush and shearing injuries as a consequence of Pinch Points

The Pallet Elevator has pinch points where both the scissor legs meet and where its legs meet the platform base. A crush injury is possible if a person's body fouls these areas or is caught between the Pallet Elevator platform and the floor or other fixtures nearby.

Risk Assessment

The risk of such an injury is very slight. The Pallet Elevator only moves in response to pallet loading and unloading. The pinch points develop extremely slowly as the Pallet Elevator moves

There is no history of serious injury associated with Pallet Elevator in Australia. The passive nature of its operation means that any injuries would be minor.

Control Measures

Train operators to ensure that no persons are likely to be caught in the moving parts before loading the Pallet Elevator. Clear the area around the Pallet Elevator before operation.

Crushing through falling Plant or Loads

Unstable loads may fall off the Pallet Elevator on to the operator or other people.

Risk Assessment

If the load is placed centrally on the Pallet Elevator and is both properly stacked and located on a solid and level floor, the risk is very low.

Injuries that may occur could be serious.

Control Measures

Ensure that loads are stable and stacked securely on the Pallet Elevator and separate the Pallet Elevator work area and the pedestrian areas. Ensure the Pallet Elevator work area is clear of personnel before operation.

Do not exceed the load capacity of the Pallet Elevator and do not rotate the turntable rapidly.

Blow from Moving Plant

If a pallet is not properly unloaded from the Pallet Elevator, it could spring up with some force and speed and displace the load or strike a person in close proximity.

Risk Assessment

There is a low risk of such a blow. Removal of the load necessitates the use of a forklift which, in itself, protects the load from the force of the springs. It also means that personnel are less likely to be in very close proximity.

If suffered, injuries could be serious.

Control Measures

Ensure that operators and forklift drivers are aware of the correct procedure for the removal of a load from the Pallet Elevator and that personnel are trained to keep clear of a forklift in operation.

Descent due to Spring Breakage

In the event that a spring may break, the Pallet Elevator could descend and displace the load or strike a person in close in proximity.

Risk Assessment

There is a low risk if such an occurrence. The springs are designed to operate at relatively low stress levels, and if maintained, should not break. If a spring does break, it will likely occur when the Pallet Elevator is loaded. Therefore, the descent would be over a short distance and with little chance of becoming caught under the load or displacing the load.

If suffered, injuries could be quite serious.

Control Measures

Maintain the condition of the springs as per the Maintenance Guide. When loading or unloading the Pallet Elevator, take care to keep body parts clear of pinch points.

Consequential Damages

J & D Engineering and buyer agree that any claim made by the buyer which is inconsistent with warranty remedies provided with the product and equipment, and in particular consequential damages, are expressly excluded.

Merger

This warranty agreement constitutes a final written expression of all the terms and conditions of the warrant and is a complete and exclusive statement of those terms.

J & D Engineering excludes and limits liability.

J & D Engineering does not exclude or limit the application of any statutory provision including a provision of the Trade Practices Act 1974 where to do so would;

- (a) Contravene that statute or;
- (b) Cause any part of this clause to be void.

J & D Engineering excludes for itself and for any third party supplier of componentry or software incorporated in any product or equipment all liability for all claims, expenses, losses and damages made against or incurred or suffered by buyer of the product or equipment directly or indirectly, including without limitation lost profits arising out of;

- (a) Buyer misusing or using any product;
- (b) Buyer not being able to use any product;
- (c) Negligence of J & D Engineering or its employees, contractors or agents or of any supplier of componentry or software incorporated in the product in connection with the performance of J & D Engineering obligations.

Warranty

1.0 It is agreed that the product purchased is subject to the following LIMITED WARRANTY and no other.

1.1 J & D Engineering warrants product to be free from defects in material or workmanship for a period twelve months from the date of shipment. J & D Engineering's Pallet Elevator warranty is three years for the frame and lifetime of Pallet Elevator's springs.

1.2 This warranty shall not cover failure or defective operation caused by operation in excess of recommended capacities, misuse, negligence or accident, or alteration or repair of not authorised by J&D Engineering.

1.3 J & D Engineering's obligation under this warranty is limited to the replacement or repair of defective components at the factory, or at the discretion of J & D Engineering, at a location designated by J & D Engineering.

1.4 J & D Engineering will not be liable for any loss, injury or damage to persons or property or for damages of any kind resulting from failure or defective operation of any material or equipment furnished.

1.5 Components and accessories not manufactured by J & D Engineering are not included in this warranty as they are warranted separately by their respective manufacturers.

2.0 J & D Engineering and buyer agree that the implied warranty of merchantability is excluded from this transaction and shall not apply to the goods involved in this transaction.

3.0 J & D Engineering and buyer agree that the implied warranty of fitness for particular purpose is excluded from this transaction and shall not apply to the goods involved in this transaction

4.0 J & D Engineering's agents or dealer's agents or distributor's agents may have made oral statements about product and equipment described in this transaction. Such statements do not constitute warranties, and buyer acknowledges that it did not rely on and agrees not to rely on such statements. Buyer also agrees that such statements are not part of this transaction.

Trouble Shooting

Symptoms	Possible Cause	Solution
Pallet Elevator will not lower	Too many springs for load	Remove appropriate number of springs
	Pallet Elevator is mechanically damaged, causing mechanism to jam	Inspect moving parts – especially roller pathways, pivot pins and shock absorber
Pallet Elevator will not raise	Springs are broken	Replace springs. Springs are guaranteed for life
	Pallet Elevator is damaged, causing jamming	Inspect moving parts – especially roller pathways, pivot pins and shock absorber
	Not enough springs installed	Fit more springs as specified
Turntable is difficult to rotate	Seized or damaged bearings	Check lubrication and/or replace bearings
	Damaged turntable	Replace turntable

Patent Protection

Pallet Elevator has patent pending

Identification

All Pallet Elevators carry an identification plate showing the serial number. It is located on the side of one of the longitudinal members in the top frame. Please quote the serial number when ordering parts.

Maintenance

Maintenance schedules can vary with different applications. It is recommended services be carried out at least every six months or more frequently if Pallet Elevator is subject to heavy use or used in dirty environments.

- 1. Check that turn table bearings are not excessively worn or seized and replace as necessary.**
- 2. Check that all pivot pins and circlips are in place. Replace when necessary.**
- 3. Regularly inspect springs for damage to protective coating and for any rust in the vicinity. Exposed steel should be protected with metal primer. Your Pallet Elevator springs are for life provided these conditions are observed.**
- 4. Check roller pathways for debris and clean as necessary.**
- 5. Check running faces or bearings and turntable for caking of debris and clean as necessary.**
- 6. Visually inspect all pivot points for signs of wear. Check all weldments and moving parts for fatigue and wearing.**
- 7. Grease where necessary.**