



PENTALIFT EQUIPMENT CORPORATION

Ultima Hydraulic Dock Levelers

PROVIDING THE ULTIMATE VALUE IN FUNCTION AND STRUCTURE
AVAILABLE IN A DOCK LEVELER

Structural Features (45,000 lb Capacity Models)

- High-strength safety checker plate deck assembly, 55,000 psi yield.
- "I" beam deck support 6" structural "I" beams @ 12 lbs per foot.
- Central deck support beam for added support of three wheeled vehicles.
- High-strength safety checker plate lip assembly, 1" rear laminated, c/w 3/8" x 6" reinforcing plate, 55,000 psi yield.
- Full-width, self-cleaning, heavy wall hinge tube, 2-1/2" OD x 1-1/2" ID Lip shaft: 1-3/8" OD.
- 3/8" thick gussets on lip and headboard hinge maximize strength.
- 3/8" thick, 50,000 psi yield, headboard with bridged gaps.
- Full-width rear channel tailboard and one piece, full-width rear hinge, complete with heavy steel gussets provide box section for superior strength.
- Rear frame assembly features five vertical structural members with eight points of support for full-width rear hinge. Wrap around hooks on pivot point to further increase strength of rear frame.
- Heavy-duty front frame provides full-width cross traffic support and superior building aesthetics. Night lock prevents unauthorized entry when overhead door is locked on top of dock leveler.



HU6845 Model Shown

Operating Features

- Dual Deck Lift Cylinders, installed at the front of the dock leveler result in the ultimate support in a fallsafe situation (See back page for more details).
- Self-retracting fully hydraulic lip activation for the ultimate in reliability (See back page for more details).
- Hydraulic power unit features, Pentalogic hydraulic manifold and totally enclosed motor for extremely reliable operation.
- Push button operation for simple, reliable operation.
- Full-range telescopic toe protection; upper and lower sections feature a "bend relief" to increase strength.
- Fixed rear hinge remains flush with the rear of the pit to eliminate potential pinch points while allowing 4" of lateral deck compensation.
- Ability to "Interlock" operation to other equipment such as Overhead Doors, Vehicle Restraints and Inflatable Dock Seals to maximize safety and reliability at the loading dock. Master control panel available for multiple equipment control.

Other Capacities of Ultima Dock Levelers

The following models have all the same features of the 45,000 lb capacity model shown on the front page with the exception of the following individual component changes;

35,000 lb Capacity Models

- “I” beam deck support 6” structural “I” beams @ 9 lbs per foot.
- High-strength safety checker plate lip assembly, 5/8” thick, 55,000 psi yield.
- Full-width, self-cleaning, heavy wall hinge tube, 2” OD x 1-1/4” ID
Lip shaft: 1-1/8” OD.

30,000 lb Capacity Models

- “I” beam deck support 6” structural “I” beams @ 9 lbs per foot.
- High-strength safety checker plate lip assembly, 5/8” thick, 55,000 psi yield.
- Full-width, self-cleaning, heavy wall hinge tube, 1-3/4” OD x 1-1/8” ID
Lip shaft: 1” OD.

Lift Cylinder Placement

Fallsafe is a situation in which a hydraulic velocity fuse locks the cylinder and deck in position should a truck prematurely depart while a forklift is still positioned on the dock leveler.

Other Manufacturers Fallsafe Hydraulic System

Other manufacturers position their lift cylinder as illustrated in (Fig. 1). During a fallsafe condition, with the front tires of the forklift past the upper cylinder support point, a dangerous “teeter-totter” situation occurs. The back of the deck is forced upwards and out of the rear frame. In addition, the positioning creates a mechanical disadvantage during fallsafe (1” stroke = 4” deck drop). Other cylinders, with the chrome-plated ram facing downward, are prone to surface damage and chipping, leading to hydraulic seal failure. Single cylinder offers less lateral stability than double cylinder design. Other manufacturers yieldable lip circuits utilize an “in line” pressure relief valve, maintaining the lip in the extended position. Once a vehicle departs, the deck lowers with the lip remaining in the extended position. The next incoming vehicle will impact the extended lip and any excessive force will push the lip assembly back into the pendant position. In addition, a conventional hydraulic circuit can cause the lip to get “caught on” a portion of the incoming truck (Fig. 2), resulting in extensive damage to the vehicle, dock leveler and cargo.



Fig. 1

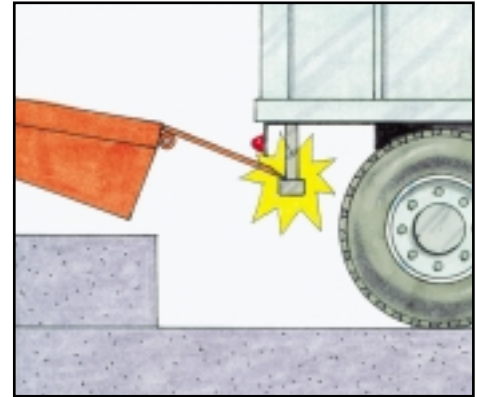


Fig. 2



Fig. 3

Pentalift Fallsafe Hydraulic System

For most effective support, Pentalift’s lift cylinder is securely positioned at the junction of the deck and the structural headboard (Fig.3). The base of the cylinder is connected to a structural cross member. During a hydraulic fallsafe situation (incorporating non-adjustable velocity fuse) the forklift will be completely supported between the cylinder position and the rear frame. All generated forces are downward, in the manner all dock levelers are designed to accept load forces. Additionally, the dual lift cylinders provide significant increase in lateral support in relation to single lift cylinder designs. The Pentalift lift cylinder arrangement is positioned correctly, away from debris found in the pit. Its position provides a superior mechanical advantage when raising the deck. On truck departure, the Pentalogic hydraulic manifold allows the lip assembly to gently retract into the pendant position prior to the arrival of the next incoming vehicle. The Pentalogic hydraulic manifold assures that the lip is always pendant behind the protective bumpers. Units equipped with automatic return-to-stored-position, work in conjunction with the self-retracting lip (eliminating false signals common with other makes), to return the deck to the safe, stored position.

Consult a Pentalift Sales Representative for additional or equipment recommendations.

Note: Some photos may reflect products with optional features. All Pentalift Equipment Corporation products are subject to design improvement through modification without notice.

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