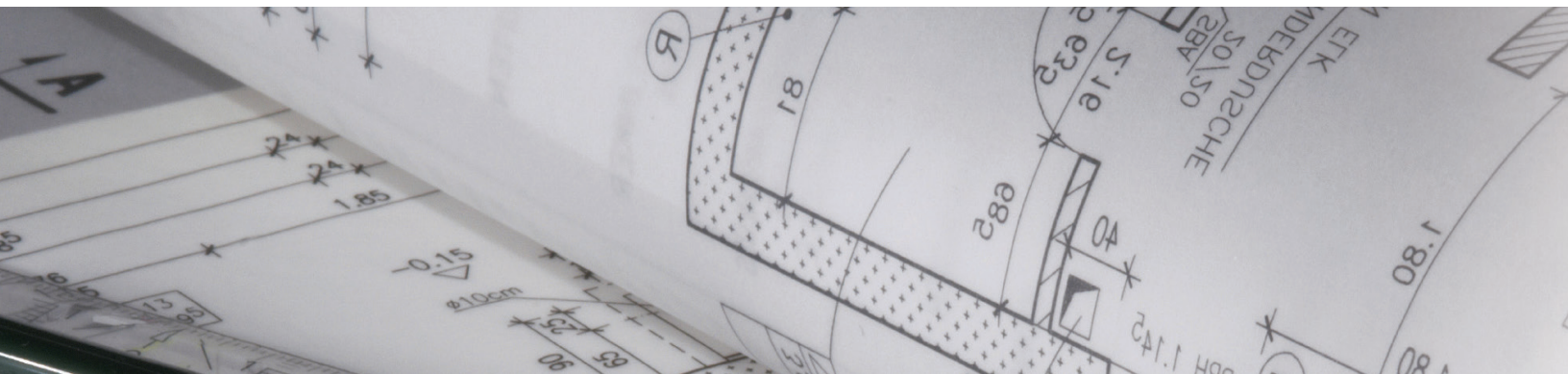




# Mechanical Loading Dock Levelers



With over 30 years of experience manufacturing quality loading dock equipment, Pentalift is your single-source supplier for loading dock levelers, dock lifts, dock seals & shelters, vehicle restraints, and much more.



Engineered for Safety

# Pentalift Company Information



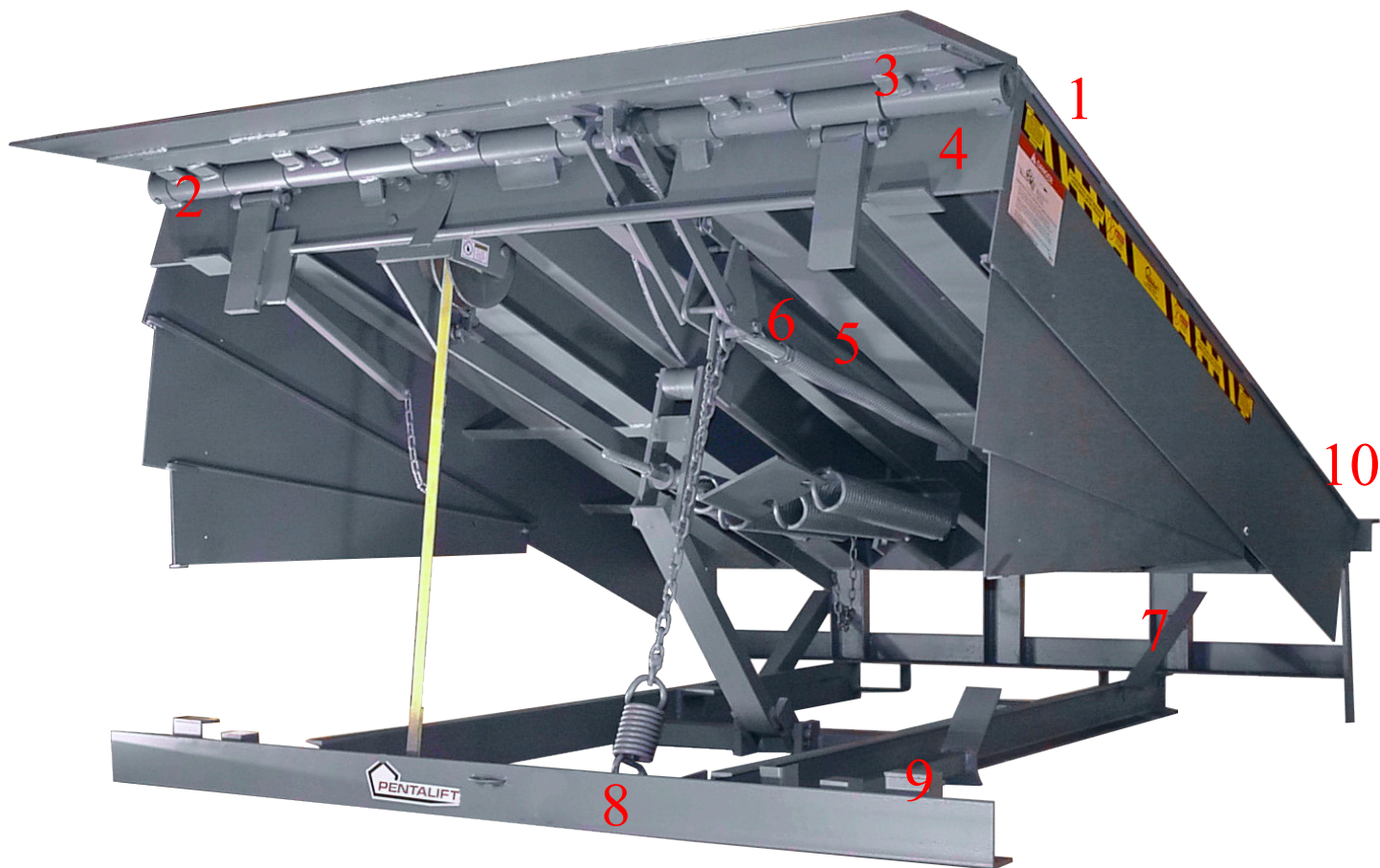
Since 1983 Pentalift has grown to be recognized as one of North America's premier manufacturers of loading dock and dock lift equipment. The simple business philosophy of manufacturing a quality product with user safety in mind continues to be our approach in the marketplace. Pentalift's continuing success in designing, engineering, and manufacturing loading dock solutions has gained Pentalift an excellent reputation within the materials handling industry.



Pentalift has a team of industry experts with extensive experience that stands ready to assist you with your most complicated applications.

# Series MU Mechanical Dock Leveler

The MU series mechanical dock leveler is designed and built to provide prolonged, trouble free performance in extremely heavy duty, high use applications. Structural "I" beams support the deck.



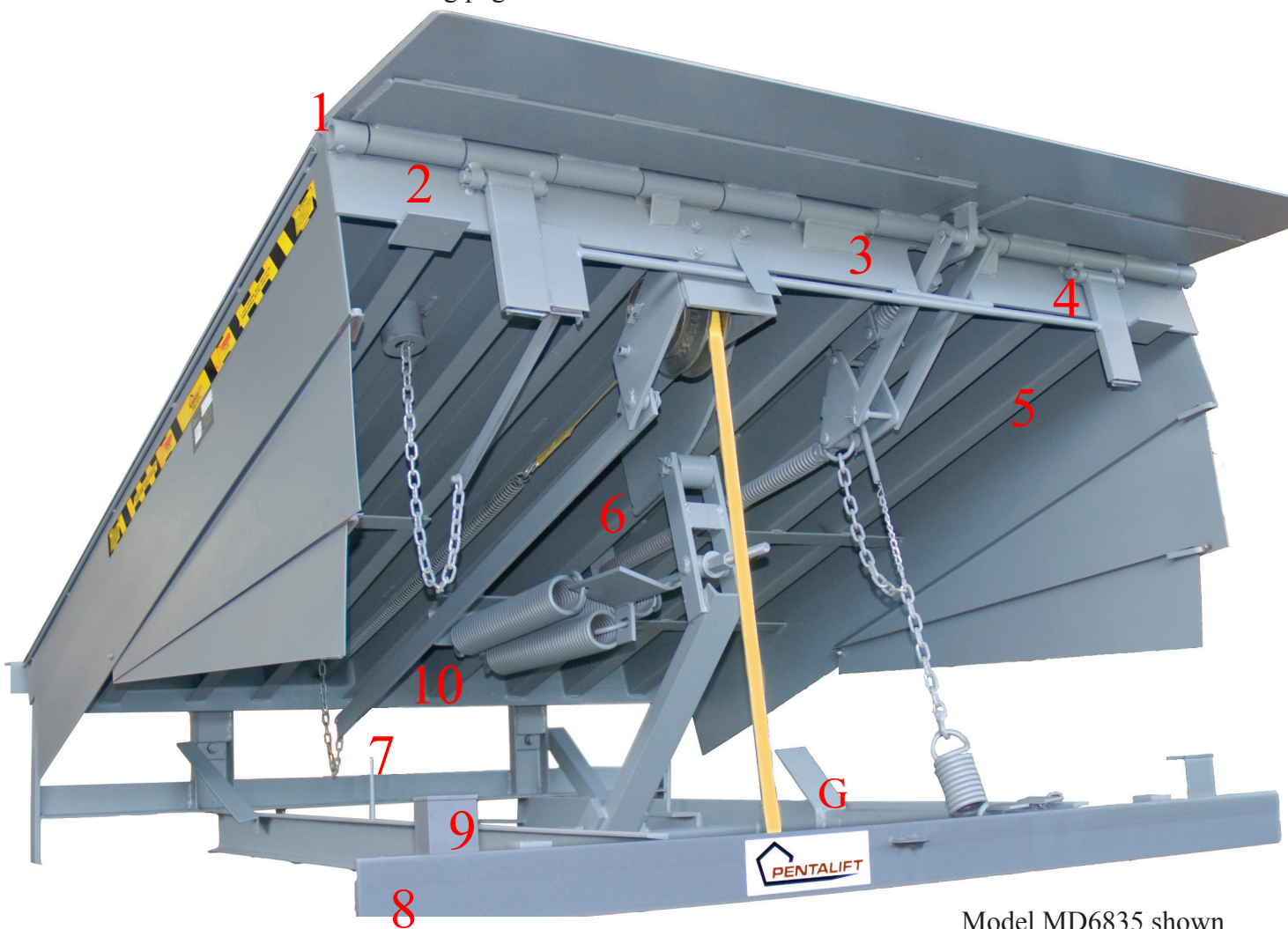
Model MU6845 shown

## Series MU Mechanical Dock Leveler Structural Features

- 1 High-strength, 4-way safety tread plate, deck and lip assembly: 55,000 psi yield.
- 2 Full-width self cleaning, heavy-wall hinge tube: 70,000 psi yield.
- 3 Gussets on lip and headboard hinge maximize support.
- 4 3/8" thick, 50,000 psi yield, headboard with bridged gaps.
- 5 Heavy duty 6 inch structural "I" beams provide deck support with very high structural safety factor.
- 6 Central deck beam for added support of three wheeled vehicles.
- 7 Rear frame assembly features five vertical structural members with eight points of even support for the full width of the rear hinge.
- 8 Heavy-duty front frame provides full width, cross traffic support and superior building aesthetics.
- 9 Night locks prevents unauthorized entry when overhead door is locked on top of dock leveler.
- 10 Full width, structural channel tail board and one piece, full width rear hinge, complete with heavy steel gussets. Pentalift's unique welded assembly provides a box section for superior support and strength.

# Series MD Mechanical Dock Leveler

The Pentalift series MD mechanical dock leveler offers many beneficial operational and safety features. These features are shown on the following pages.



Model MD6835 shown

## Series MD Mechanical Dock Leveler Structural Features

- 1 High-strength, 4-way safety tread plate, deck and lip assembly: 55,000 psi yield.
- 2 Full-width self cleaning, heavy-wall hinge tube: 70,000 psi yield.
- 3 Gussets on lip and headboard hinge maximize support.
- 4 3/8" thick, 50,000 psi yield, headboard with bridged gaps.
- 5 Structural, precision-formed "C" beams; 65,000 psi yield. Specially designed beams allow Pentalift to create and build the deck support with optimal strength-to-weight ratio for a dock leveler. Utilizing 10 beams assures an even load distribution and maximum deck support.
- 6 Central deck beam for added support of three wheeled vehicles.
- 7 Rear frame assembly features four vertical structural members with six points of even support for the full width of the rear hinge.
- 8 Heavy-duty front frame provides full width, cross traffic support and superior building aesthetics.
- 9 Night locks prevents unauthorized entry when overhead door is locked on top of dock leveler.
- 10 Full width, structural channel tail board and one piece, full width rear hinge, complete with heavy steel gussets. Pentalift's unique welded assembly provides a box section for superior support and strength.

# Pentalift Series MD Mechanical Dock Leveler Operating Features

The Pentalift series MD mechanical dock leveler incorporates unique and important operating features to achieve the most safe and reliable operation available in a mechanical dock leveler. These operating features are described in more detail below.

## A Easy Float™ Hold-down (See following page for more details)

The patented Pentalift Easy Float™ Hold-down represents the best design for addressing dock leveler hold-down concerns. Refer to the following page for a more detailed description of how it works and the benefits it provides over competitive designs.



## B Posilock™ Lip Lock Mechanism

The patented Pentalift Posilock™ Lip Lock Mechanism is an all in one design that always allows the dock attendant to deploy the dock leveler in a safe and controlled manner. Other competitive designs take away control from the dock attendant by using hydraulic shocks to control the decent of the lip. This forces the dock attendant to rush walking down the dock leveler platform. The Pentalift mechanism maintains extension of the lip, then automatically retracts once the truck departs. The lip is yieldable if contacted in the extended position during truck/trailer positioning.

## C Lifting Assembly

Computer optimized cam profile and lifting arm geometry result in extremely efficient lifting forces and lower walk down weight requirements. These reduced forces also result in reduced wear on the dock leveler. Spring adjustment is made at a single point that is easily accessible from the front of the dock leveler. There is no requirement to crawl under the dock leveler to adjust it.

## D Fixed Rear Hinge

Fixed rear hinge remains flush with the rear of the pit to eliminate pinch points and surface obstructions. Small gap at deck plate and frame conjunction reduces impact or bump for fork lift operator compared to competitive designs.

## E Mechanical Safety Legs

Mechanical Safety Legs limit platform free fall in the event of premature truck departure; includes below level control.

## F Full Range Toe Protection

Full range telescopic toe protection; upper and lower sections feature a "bend relief" to increase strength.

## G Integral Maintenance Stand (See opposite page for photo in dock leveler & shown in stored position)

Integral Maintenance Stand facilitates support during routine support and maintenance. Pentalift maintenance stand supports the lip as well the dock leveler deck assembly.

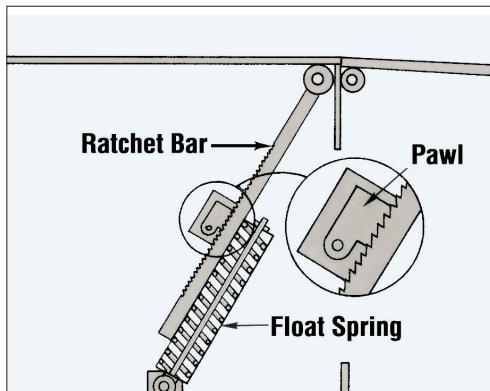
# Pentalift Easy Float™ Hold-down compared to Competitors

## Easy Float™ Hold-down represents a major advancement in the most important component of a mechanical dock leveler

The hold-down assembly in a mechanical dock leveler holds the dock leveler in position in the back of the truck during loading / unloading and to allow the dock leveler to "float " up and down with the suspension of the truck as it rises and lowers during loading and unloading operations. In some instances the floating movement is over 12". Every time a fork lift truck drives in and out of the truck, a tremendous shock load is delivered to conventional ratchet and pawl type hold-downs. This is why conventional hold-downs are a continual source of break down problems with broken teeth on both the ratchet and pawls. Pentalift was the first in the industry to incorporate a brake band and high strength nylon strap to eliminate the extreme stresses and impact forces that cause conventional hold-downs to fail. Here's how Pentalift's "Easy Float" hold-down operates compared to conventional ratchet and pawl type hold-down assemblies.

### Ratchet and Pawl Hold-down

A float spring compensates for the truck bed movement. The spring's resistance becomes progressively greater as the deck raises. Once the float spring is fully compressed, the severe upward force results in substantial Hold-down damage. Accumulated over-working weakens

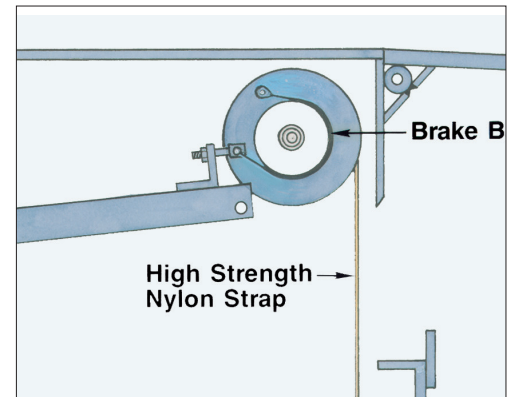


the spring creating bounce during rollover. The shock load stresses during float bear directly on the hardened metal ratchet bar and the rigid pawl teeth. These damaging conditions, common during normal usage, cause aggravating ratchet and pawl

teeth failure. Some designs release the pawl from the ratchet once the float spring has been compressed. The teeth automatically release and reset under spring pressure, causing premature ratchet and pawl failure.

### Pentalift Easy Float™ Hold-down

Controlled automatic compensation of the brake assembly, under a light upwards force (approximately 200 lb.), allows Pentalift's dock leveler deck to float gently upwards and maintain



positive lip contact with the truck bed. The brake band design assures that automatic compensation force will remain constant throughout the entire operating range of the dock leveler. The high strength nylon strap absorbs shock loads due to its semi-elastic properties.

### Operator Pull Ring Release Force Requirements



Hold-downs are released manually to allow the deck of the dock leveler to rise for use or to be restored to the parked position, when the truck is still at the dock. This is done by pulling a hold-down release ring installed in the dock leveler deck. The pull force required to release the hold-down is always a concern. The release forces for the ratchet and pawl hold-down can be up to 100 lb. when it is compensating for upward deck float; even under best case conditions 20 - 30 lb of pull force is required. The Easy Float™ hold-down only requires pull force of approximately 8 lb throughout the entire operating range of the dock leveler. Proven benefits of the Pentalift Easy Float™ hold-down design result in maximum component life and minimized risk of injury to the dock attendant.

# Pentalift Mechanical Dock Leveler Options

## Pour In Place



This option simplifies installation and reduces costs in new construction applications. A metal frame and pan encloses the dock leveler. This allows the dock leveler to be placed into a recess in the foundation and to have concrete poured around it during the floor pour of the building. Installation welding is completed at the factory. Overall costs of installing the dock leveler are reduced substantially. See [www.pentalift.com/PDF/1207D011.pdf](http://www.pentalift.com/PDF/1207D011.pdf) Pentalift Loading Dock Design Guide pg. 20 for more details.

## Weatherseal



This option provides a rubber or brush weatherseal along the sides and rear of the dock leveler. The weatherseal reduces the passing of outside elements (cold, heat or debris) from outside into the facility by sealing the edges of the dock leveler against the dock leveler pit. In addition, brush weatherseal is effective in reducing the entry of vermin into the facility as well. The weatherseal is provided with metal carriers. As wear results to the seal, replacement seals can be simply slid into the metal carriers.

## Steel Face Dock Bumpers



This option provides a very durable dock bumper. The bumper is comprised of laminated bumper sections behind a plate steel bumper face. The laminated rubber sections absorb the impact of the truck and trailer as it backs into the facility. The steel facing prevents the trailer from cutting or overly compressing the rubber absorption material, as the trailer backs into the loading dock and scrapes up and down on the bumpers as it raises and lowers with the suspension. The combination of the two components makes the steel face dock bumper an excellent solution for harsh loading dock environments.

## Other available options for Series MD Mechanical Dock Levelers

Longer Lip Lengths

Hot Dip Galvanized or Epoxy Paint Finishes

Weatherseal Rubber or Brush (shown above)

Shim Kits (To fit dock leveler to deeper pits)

Upgraded Capacities

Pour In Place Installation (shown above)

Spray Foam Insulation

Easy Sweep Frame

# Other Loading Dock Equipment

Pentalift also provides a wide variety of equipment to create an efficient, secure, and safe loading dock environment. In addition to the products shown in the photographs below Pentalift also offers the following products; including, edge of dock levelers, safety barriers, wheel chocks, dock lights, and dock bumpers, making Pentalift your ideal, single-source, loading dock supplier.

**Pentalift Hydraulic Dock Levelers**



**Pentalift Vehicle Restraints and Dock Shelters**



**Pentalift Roll Off Stop Lip Dock Levelers**



**Pentalift Vertical Storing Dock Levelers**



**Pentalift Dock Lifts**



**Pentalift Truck Levelers & Dock Seals**



*"Our Primary Goal is to engineer and build the best products to ensure the ultimate in user safety and product reliability"*

*Paul Pedersen  
President  
Pentalift Equipment Corporation*

Individual Product Catalogs are available and can also be found on our website. Pentalift also manufactures a complete line of lift tables for your in plant material handling needs.

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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