

**LOADING DOCK EQUIPMENT SPECIFICATIONS**  
**(Dock Seals, Dock Levelers, Vehicle Restraints and Elevating Docks)**

**PART 1 GENERAL**

**1.7 SUMMARY**

- A. Section Includes:
1. Dock Seals
  2. Dock Bumpers
  3. Mechanical Dock Levelers
  4. Hydraulic Dock Levelers
  5. Vehicle (Truck) Restraints
  6. Edge-of-Dock Levelers (Flip Ramp)
  7. Elevating Docks

- A. Related Documents:

**1.8 REFERENCES**

- A. American National Standards Institute (ANSI):
1. ANSI MH14.1- 1987 Industrial Loading Dock Boards (Ramps).

**1.7 SUBMITTALS**

- A. Section 01330 – Submittals Procedures: Procedures for submittals.
1. Product Data:
    - a. Bumpers: Indicate unit dimensions, method of anchorage, and details of construction.
    - b. Levelers: Indicate materials and finish, installation details, roughing-in measurements, and operation of unit.
  2. Shop Drawings:
    - a. Indicate required opening dimensions, tolerances of opening dimensions, placement dimensions, and perimeter conditions of construction.
  3. Assurance/Control Submittals:
    - a. Certificates: Manufacturer's certificate that Products meet or exceed specified requirements.
    - b. Qualification Documentation: Submit documentation of experience indicating compliance with specified qualification requirements.

**1.7 QUALITY ASSURANCE**

- A. Dock Levelers: Conform to requirements of ANSI MH14.1 - 1987
- B. Qualifications:
1. Manufacturer: Company specializing in manufacturing Products specified with minimum 20 years documented experience.
  2. Manufacturer to be quality control certified
  3. Manufacturers welding procedure compliant with A.W.S.D1.1 98 specifications
  4. Installer: Company specializing in performing the Work of this Section with minimum 5 years documented experience.

**1.8 DELIVERY, STORAGE, AND HANDLING**

- A. Section 01600 – Product Requirements: Transport, handle, store, and protect Products.

**PART 2 PRODUCTS**

**2.1 DOCK BUMPERS**

- A. Manufacturers: Subject to compliance with project requirements, manufacturers offering Products, which may be incorporated in the Work, include the following:
1. MCF Equipment Inc., Lachine, Quebec (800-867-6515)
- B. Description:
1. Molded rubber
  2. Laminated tire tread
  3. Thickness from wall, vertical height, width, and profile of bumpers indicated on Drawings.
  4. Pre-drilled, countersunk mounting holes.

## 2.2 DOCK SEALS

A. Manufacturers: Subject to compliance with requirements, provide dock seals of one of the following:

1. SuperSeal Manufacturing Canada, Woodbridge, Ontario  
Supplied by MCF Equipment Inc., Lachine, Quebec (800-867-6515)

B. Models:

1. SuperSeal Fixed Head Pad Truck Dock Seal, **Model Series 0101**
2. SuperSeal Adjustable Curtain Truck Dock Seal, **Model Series 0201**
3. Other models available, consult MCF Equipment Inc. (800) 867-6515

A. Section 01600 – Product Requirements Substitutions: **None permitted.**

## 2.3 MECHANICAL DOCK LEVELERS

A. Manufacturers: Subject to compliance with project requirements, manufacturer's offering Products which may be incorporated in the Work include the following:

1. DOCK-RAMP, as supplied by MCF Equipment Inc. (800) 867-6515
2. Section 01600 –Substitutions: **None permitted.**

A. DOCK-RAMP Mechanical Dock Levelers:

1. DOCK-RAMP Mechanical 'C' Series Dock Leveler, **Model DRMD \_\_\_\_\_ C**
2. DOCK-RAMP Mechanical 'I' Series Dock Leveler, **Model DRMD \_\_\_\_\_**

C. Description:

1. Operation: Mechanical.

### **FUNCTION:**

**Vertical Travel:** Working range of 1" (25.4mm) above & below dock level for every 12" of nominal dock length (including lip length).

**Automatic Vertical Compensation:** Unit provides float of 12"(305mm) above and 12" (305mm) below dock level.

**Automatic Lateral Compensation:** Provides side-to-side deck tilt of up to 4"(101mm) to compensate for canted truck beds.

**Lip Operation:** Mechanically operated lip that automatically extends and locks into position. Lip will automatically drop pendant on truck's departure. Standard length of lip extension shall be 16" (406mm) from the ramp edge (gives 10" projection beyond normally mounted 4" bumpers).

### **OPERATION:**

**Mechanical Operating System:** No manual lifting involved. The platform is raised when the dock attendant pulls & holds the release chain located at the back of the platform. This activates the high performance mechanical hold-down float system that is designed to minimize cross traffic bounce and provide instant hold. The deck is driven up by heavy-duty lift springs, the hinge lip extends out during upward travel of the platform and locks into position. The attendant then releases the chain and walks the platform down onto the truck bed. When the truck departs, the lip releases, allowing the unit to be returned to the cross-traffic position.

## 2.4 HYDRAULIC DOCK LEVELER

A. Manufacturers: Subject to compliance with project requirements, manufacturer's offering Products which may be incorporated in the work include the following:

1. DOCK-RAMP, as supplied by MCF Equipment Inc. (800) 867-6515
2. Section 01600 – Product requirements: Substitutions: **None permitted.**

B. Models:

1. DOCK-RAMP Hydraulic 'C' Series Dock Leveler, **Model DRHD \_\_\_\_\_ C**
2. DOCK-RAMP Hydraulic 'I' Series Dock Leveler, **Model DRHD2X \_\_\_\_\_**
3. DOCK-RAMP Hydraulic 'I' Series Dock Leveler, **Model DRHD \_\_\_\_\_ FH**
4. DOCK-RAMP Hydraulic 'I' Series Dock Leveler, **Model DRHD \_\_\_\_\_**
5. DOCK-RAMP Hydraulic Vertical Storing Dock Leveler, **Model DRHD \_\_\_\_\_ VS**

- A. Description:  
1. Fully hydraulic operation

**FUNCTION:**

**Vertical Travel:** Working range of 1" (25.4mm) above and below dock level for every 12" of nominal dock length (including lip length).

**Automatic Vertical Compensation:** Unit provides float of 12" (305mm) above and 12" (305mm) below dock level.

**Automatic Lateral Compensation:** Provides side-to-side deck tilt of up to 4" (101mm) to compensate for canted truck beds.

**Lip Operation:** Hydraulically powered yealdable lip. Lip will yield under impact of incoming truck and will automatically drop pendant at truck's departure. Standard length of lip extension shall be 16" (406mm) from the ramp edge (gives 10" projection beyond normally mounted 4" bumpers).

**OPERATION:**

**Hydraulic Operating System:** Simple control operation of quiet and smooth Electro-hydraulic raising and hydraulic lowering of the dock ramp from a remote push button station (single or multi function depending on model). Includes means of lowering the dock ramp below platform level. The loaded ramp's free fall is limited to not over 3" (76mm) by a hydraulic velocity fuse. Unit shall come complete with a totally enclosed Electro- hydraulic powerpack with 1HP, fan cooled (TEFC) motor and equipped with overload protection. Powerpack is mounted underneath the deck ramp.

**Remote Control Station:** Provide a push button control station with constant pressure "UP", and thermal "RESET" button, Control station is NEMA4 ( water resistant) or NEMA12 (oil and dust resistant) rated.

## 2.5 VEHICLE (TRUCK) RESTRAINT

- A. Manufacturers: Subject to compliance with project requirements, manufacturer's offering Products which may be incorporated in the work include the following:
1. DOCK-RAMP, as supplied by MCF Equipment Inc. (800) 867-6515
  2. Section 01600 – Product requirements: Substitutions: **None permitted.**
- A. Models:
1. DOCK-RAMP Model DR85 Truck Restraint
- A. Description:
1. Hydraulic operation
  2. ½ HP remote mounted power pack
  3. Vertical restraining range: From 12" – 29" above grade
  4. Horizontal restraining range: From 0" – 12" from face of dock
  5. Communication System: Red and Green interior signal and exterior traffic lights with dual image driver's warning signs.
- A. Options:
1. Mechanical operation
    - a. DOCK-RAMP Model DR10 Manual Restraint
    - b. Automatically actuated Red and Green interior signal and exterior traffic lights with dual image driver's warning signs

## 2.6 HYDRAULIC EDGE-OF-DOCK DOCK LEVELERS (Flip Ramp)

- A. Manufacturers: Subject to compliance with project requirements, manufacturers offering Products, which may be incorporated in the Work, include the following:
1. DOCK-RAMP, as supplied by MCF Equipment Inc. (800) 867-6515.
  2. Section 01600 – Product Requirements: Substitutions: None permitted.
- A. Models:
1. DOCK-RAMP **Model HED**\_\_\_\_\_ Hydraulic Edge of Dock
- A. Options:
1. Mechanical operation.
    - a. DOCK-RAMP **Model MED**\_\_\_\_\_ Mechanical Edge of Dock

## 2.7 ELEVATING DOCKS

- A. Manufacturers: Subject to compliance with project requirements, manufacturers offering Products, which may be incorporated in the Work, include the following:
1. DOCK-RAMP, as supplied by MCF Equipment Inc. (800) 867-6515
  2. Section 01600 – Product requirements: substitutions: None Permitted
- B. Models:
1. DOCK-RAMP **Model DRLDS** \_\_\_\_\_ Stationary Elevating Dock
  2. DOCK-RAMP **Model DRLDSS** \_\_\_\_\_ Semi – Portable Elevating Dock
  3. Description:

### **OPERATION:**

**Standard Power unit:** Remote 1 HP, 120/1/60 power pack on 20' hydraulic hose. Includes all major components; continuous duty motor, high-pressure gear pump, manifold, oil filters and oil reservoir. Power unit includes a pressure relief valve, load holding check valve, factory set lowering flow control valve and poppet-type lowering solenoid valve. Oil filters located in the reservoir and valve manifold.

**NOTE:** A minimum 3 hp. 3phase powerpack is recommended for optimum performance.

**Standard push-button control station:** Remote on 10' electrical cord. NEMA4 (water resistant) rated, dual button control station, constant pressure type, complete with 'UP' and 'DOWN' buttons.

**Controller:** Components are installed in a "CSA" approved pre-wired NEMA 12 (oil & dust resistant) rated enclosure. Controller includes a three pole magnetic motor starter with adjustable overload and a fuse protected 120-volt control transformer. Terminals provided for incoming power connection.

### **RATED CAPACITY:**

All units are rated in compliance with ANSI MH29.1-1994. CSA approved electrical components. All units are rated for evenly distributed loads. Single axle rolling load capacities are 65% across the ends and 50% across the sides. Standard capacities range from 5,000 lbs. to 10,000 lbs. (2,273kg to 4,545kg).

- C. Capacity:
1. All units are rated in compliance with ANSI MH29.1-1994.

## **PART 3 EXECUTION**

### **3.1 EXAMINATION**

- A. Section 01700 – Execution Requirements: Verification of existing conditions before starting work.
- B. Verification of Conditions: Verify that field measurements, surfaces, substrates and conditions are as required, and ready to receive Work.

### **3.2 INSTALLATION**

- A. Install dock bumpers in accordance with manufacturer's instructions.
- B. Install dock leveler unit in prepared opening in accordance with manufacturer's instructions.
- C. Set square and level.
- D. Anchor unit securely, flush with dock. Weld back of leveling dock to pit frame. Touch-up weld with primer.

### **3.3 ADJUSTING**

- A. Adjust installed unit for smooth and balanced operation.

## **END OF SECTION**