

# GUIDE SPECIFICATION

## MANUFACTURER:

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## SECTION 11 13 19.13 VSL - VERTICAL LEVELERS

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This guide specification section has been prepared by 4Front Entrematic - Kelley, and is intended to assist the specifier in preparing a specification for vertical storing levelers

Edit entire section to suit project requirements. Modify or add items as necessary. Delete items, which are not applicable. Words and sentences within brackets [ ] reflect a choice to be made regarding inclusion or exclusion of a particular item or statement. This section may include performance, proprietary and descriptive type specifications. Edit to avoid conflicting requirements.

This guide specification is written around the Construction Specifications Institute (CSI), Section Format, and standard references to section names and numbers are based on the CSI MasterFormat 2004.

For specification assistance on specific product applications or information about other Kelley products, please contact our offices above or any of our local product representatives throughout the country.

4Front Entrematic - Kelley reserves the right to modify these guide specifications at any time. Updates to this guide specification will be posted to the manufacturer's web site and/or in printed matter as they occur. 4Front Entrematic - Kelley makes no expressed or implied warranties regarding content, errors, or omissions in the information presented.

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## PART I - GENERAL

### I.1 SUMMARY

- A. Related Documents: Provisions established within General and Supplementary Conditions of the Contract, Division 1 - General Requirements and Drawings are collectively applicable to this Section.
- B. Related Sections:
  - 1. Section 11 13 19.33: Loading Dock Truck Restraints]
  - 2. [Section: 11 13 16: Seals and Shelters]
  - 3. [Section: 11 13 13: Loading Dock Bumpers]

## **I.2 SYSTEM DESCRIPTION**

- A. Design Requirements: Provide fixed-in-place adjustable loading and unloading platform for difference in height and gap between truck bed and building loading dock.
- B. Provide loading dock equipment, which has been manufactured, fabricated, and installed to withstand loads specified and to maintain performance criteria stated by manufacturer without defects or failure.
- C. Comply with ANSI MH14.1-1987.

## **I.3 SUBMITTALS**

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Include submittal requirements below, which are consistent with the scope of the project and extent of work of this section. Only request submittals, which are necessary for review of design intent.

Do not request submittals if drawings sufficiently describe the products of this section or if proprietary specifying techniques are used. The review of submittals increases the possibility of unintended variations to drawings.

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- A. General: Submit in accordance with Section 01 33 00.
- B. Product Data: Submit product data for dock equipment.
- C. Shop Drawings: Submit drawings indicating fabrication and erection of dock equipment including plans, elevations and large scale details.
  - 1. Show anchorage, [pit sizes,] critical installation clearances, connections, and accessory items.
  - 2. Provide location template drawings for items supported or anchored to permanent construction.
  - 3. Provide rough-in drawings for electrical service in advance of concrete work.
- D. Closeout Submittals: Submit following in accordance with Section 01 78 00.
  - 1. Maintenance data.
  - 2. Warranty: Specified warranty.

## **I.4 QUALITY ASSURANCE**

- A. Single Source Responsibility: Each component of dock equipment is required to be from same manufacturer.
- B. Manufacturer Qualifications: Company specializing in manufacturing Products specified in this Section with minimum ten years documented experience.
- C. Installer Qualifications: Approved in writing by manufacturer with documented experience on at least five projects of similar nature in past five years.
- D. Regulatory Requirements: In compliance with ANSI MH14.1-1987 and the safety and labeling requirements of ANSI MH30.1-2007.
- E. Certifications: Submit manufacturer's certification that products furnished for Project meet or exceed specified requirements.
- F. Manufacturer to hold current ISO 9001 certification

## **I.5 WARRANTY**

- A. Special Warranty: Prepare and submit in accordance with Section 01 78 00.
  - 1. Manufacturer's standard ten-year warranty for structural components upon approval of written application.

Parts include Lip: Lip hinge, and shaft: deck plate and beams: rear frame and rear hinges

- 2. Manufacturer's standard 1-year base parts & labor warranty plus additional 4-year parts only warranty for hydraulic power units and cylinders.

## PART 2 - PRODUCTS

### 2.1 VERTICAL STORING DOCK LEVELERS

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The following description is for a vertical storing hydraulic dock leveler using premium hydraulics to insure low maintenance and reliable performance. These specialty levelers are hinged and store in a vertical condition behind the overhead door, limiting the energy lost through a conventional pit leveler and also protecting the door from damage. All options are included within brackets. Select each option and choice according to project need.  
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#### A. General:

1. Capacity: [40K] [45K] [50K] (per ANSI MH14.1-1987).
2. Platform Width: [6] [6.5] [7] feet.
3. Platform Length: [5] [6] [8] feet.
4. Platform Deck Thickness: [1/4" high tensile steel safety tread plate for 40K – 45K] [with abrasive non-skid finish] [3/8" thick high tensile steel safety tread plate for 50K] [with abrasive non-skid finish]
5. Lip: [16] [18] [20] inch extension, [5/8 inch thick high tensile steel safety tread plate on 40K – 45K] [with abrasive non-skid finish] [3/4 inch high tensile steel safety tread plate for 50K] [with abrasive non-skid finish]
6. Vertical Compensation: Floating travel up and down to compensate for loading and unloading of truck.
7. Service Range: 6" above and below dock level on 5' & 6' units. 9" above and below on 8' units.
8. Side to Side Cross-Tilt: 4 inches maximum over width of ramp.
9. Identification: Attach to dock leveler in conspicuous place stating:
  - a. Capacity.
  - b. Name of Manufacturer.
  - c. Model Number.
  - d. Serial Number.
10. Standard Features:
  - a. Built-in maintenance locking bar.
  - b. Remote mount power unit and solenoids
  - c. Yieldable lip under impact of incoming vehicle.
  - d. Hydraulic safety stop.
  - e. Hinged bottom draft pad
  - f. Leveler to power down to loading position via constant pressure push-button.
  - g. Provide rear-mounting channel equipped with engineered concrete anchoring devices and factory attached leveler hinge points. Embed and leveler structure to have no attachment to the pit floor and a minimum 2" clearance from structure to pit floor at any point for easy cleaning.
  - h. Hydraulic lip extension to be dual acting type, powered both on extension and retraction.
  - i. Run-off guard on the leveler deck to be 1/2" thick by 4" high minimum.
  - j. Main hydraulic cylinder to have adjustable stroke mounting point.
  - k. Provide vertical style, laminated rubber bumpers with riser brackets designed for both the door size and to raise top of bumper from shelf or pit floor level with finished floor.

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See manufacturer's comparative chart for standard and optional features of each device. Power unit mounted in remote location inside dock (mounting under deck is optional).  
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11. Options:

- a. [Master control panel with combination device controls.]\*See Master Control Panel specs.  
Master control panel to be 100% UL listed (not just components).
- b. [Galvanized rear channel.]
- c. [Special notched lip design.]
- d. [Under deck mounted pump and motor.]

B. Motor (Hydraulic) Operation:

1. Electrical power pack (includes motor, pump and valve assembly) of 1 HP, [120] [208] [240] volt [1 phase motor], or [208] [240] [480] [575] volt [3 phase motor]
2. Remote Control Station: Constant pressure push button station complying with NEMA 12. Controls to include the following separate buttons: Raise, lower, lip extend, lip retract, and a momentary contact "mushroom" style emergency stop.
  - a. Operator pushes "lower" button to power leveler by motor to loading position.
  - b. Constant Pressure on Control Button: Raise unit.
  - c. Control box to be equipped with two-light system to include green & amber LED light system.
3. Platform and lip operated by hydraulic cylinders.
4. Lip automatically extends and holds.
5. Engineer unit to "free float" with truck bed.
6. Provide drop-safe hydraulic safety stop.
7. Electrical solenoids and junction boxes in pit or on leveler deck unacceptable on remote-mounted power unit applications.

C. Acceptable Model and Manufacturer: Kelley model VSL: 4Front Entrematic, 1612 Hutton Drive, Suite 140, Carrollton, TX 75006 (P)972-466-0707

## 2.2 FABRICATION

A. Dock Equipment:

1. Welded base frame construction.
2. Unit supplied completely assembled, ready for use.

## 2.3 FINISHES

A. Dock Equipment Finish:

1. Preparation: Clean surfaces free from slag and splatter, loose mill scale, oil, grease, or rust.
2. Dock Leveler: Factory apply manufacturer's standard rust-inhibitive primer.
3. Color: Manufacturer's standard color.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine conditions and proceed with Work in accordance with Section 01 40 00.

### 3.2 PREPARATION

A. Coordinate forming of pit to receive dock leveler.

1. Manufacturer of Leveler to provide pit curbing and anchors, rough-in sizes and templates to appropriate trade for installation into pit.
2. Ensure curb angles are square, level and flush with pit surfaces.
3. Ensure that curb angles are in proper place and pit is of adequate size to receive leveler.
4. Ensure that power accessories have been installed and made ready for installation.]

### 3.3 INSTALLATION

A. Dock Leveler: Install in accordance with Section 01 60 00.

1. Install dock levelers in pits provided in loading dock.
2. Attach leveler hinge points to hinges on embedded channel or weld plate supplied by 4Front Entrematic - Kelley (installed and poured in place by others).
3. Touch-up welds with primer and apply finish to match leveler finish.

4. Connect motors and electrical leads with control units.
5. Remote Control Station: Locate where indicated.

### **3.4 ADJUSTING AND CLEANING**

- A. Adjust installed unit for smooth, safe, efficient and balanced operation.
- B. Remove temporary labels and coverings and protection of adjacent work areas.
- C. Repair or replace damaged products.
- D. Remove construction debris from site and dispose.

### **3.5 INSTRUCTION OF OWNER'S PERSONNEL**

- A. Instruct Owner's personnel in operation and maintenance of installed units. Provide bound copy of manufacturer's operation and maintenance manual at time of instruction.

**END OF SECTION**