## GUIDE

## SPECIFICATION

**MANUFACTURER:**

**4Front Engineered Solutions – Kelley**

**US Corporate Office**

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SECTION 11 13 19.23

rail lift – loading dock lifts

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This guide specification section has been prepared by 4Front Engineered Solutions - Kelley and is intended to assist the specifier in preparing a specification for a specialty dock equipment, including rail lifts, complete with all available options and accessories.

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 2010.

For specification assistance on specific product applications or information about other 4Front Engineered Solutions - Kelley products, please contact our offices above or any of our local product representatives throughout the country.

4Front Engineered Solutions - 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 Engineered Solutions - Kelley makes no expressed or implied warranties regarding content, errors, or omissions in the information presented.

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1. - GENERAL
   1. SUMMARY
      1. Related Documents: Provisions established within General and Supplementary Conditions of the Contract, Division 1 ‑ General Requirements and Drawings are collectively applicable to this Section.
      2. Related Sections:
         1. [Section 03 30 00 - Cast-In-Place Concrete: Concrete pit.]
         2. Section 05 50 00 - Metal Fabrications: [Perimeter guard rails and inserts.] [Dock slab and door protection edge angles.]
         3. [Division 16 - Electrical: Connections to dock equipment.]
   2. SYSTEM DESCRIPTION
      1. This Section describes the requirements for providing a Rail lift as shown on the Drawing and specified, to include:
         1. 1 Rail Lift
         2. Concrete work for rail Lift(s) as specified in Part 3.
   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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* + 1. General: Submit in accordance with Section 01 33 00.
    2. Product Data: Submit product data for dock equipment.
    3. Shop Drawings: Submit drawings indicating fabrication and erection of rail lifts including plans, elevations and large-scale details.
       1. Show anchorages, [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.
    4. Informational Submittals: Submit following:
       1. Test Reports: Submit certified test reports showing compliance of Rail Lift for indicated capacity.
       2. Manufacturer's instructions.
    5. Closeout Submittals: Submit following in accordance with Section 01 78 00.
       1. Maintenance data.
       2. Warranty: Specified warranty.
  1. QUALITY ASSURANCE
     1. Single Source Responsibility: Each component of dock equipment is required to be from same manufacturer.
     2. Manufacturer to hold current ISO 9002 certification
     3. Manufacturer Qualifications: Company specializing in manufacturing Products specified in this Section with minimum ten years documented experience.
     4. Installer Qualifications: Approved in writing by manufacturer with documented experience on at least five projects of similar nature in past five years.
     5. Certifications: Submit manufacturer's certification that products furnished for Project meet or exceed specified requirements.
  2. WARRANTY
     1. Special Warranty: Prepare and submit in accordance with Section 01 78 36.
        1. Manufacturer's standard one-year parts and labor warranty.

1. - PRODUCTS
   1. MANUFACTURERS
      1. Acceptable Manufacturers: Rail Lifts
         1. 4Front Engineered Solutions - Kelley, 1612 Hutton Drive, Suite 140, Carrollton, Texas, (972) 466-0707 voice, (972) 323-2661 facsimile
   2. RAIL LIFTS
      1. General: Provide manufacturer’s standard hydraulic Rail lift of capacity, size, and construction indicated, consisting of a nonslip steel platform with beveled toe guards on all four sides, , and hydraulic operating system, complete with controls, safety devices, and accessories required.
      2. Type: Provide stationary single-H rail type lift designed for top of ground installation
      3. Rated Capacity: Provide lifting capacity of not less than \_6000 lb with \_6000 lb axle load at ends and 6000lb axle loads at sides
      4. Vertical Travel: Provide maximum vertical travel of 60 inches from a lowered height of 4.5inches for a raised height of 64 inches.
      5. Travel Speed: Nominal raising speed of 12 fpm.
      6. Construction: Fabricate lift from solid H rail material welded and reinforced for maximum strength, safety, and stability. Design assembly to withstand deformation during both operating and stored phases of service. Provide mounting brackets and removable lifting eyes for ease of installation.
         1. Platform: Fabricate platform from heavy steel plate with beveled toe guards on all four sides Provide matching, hinged, throw-over bridges where indicated and removable handrails.
         2. Platform Surface: Nonskid, safety-tread deck plate.
         3. Platform Size;\_\_ 72 inches wide by \_\_ 96 inches long
         4. Hinged Bridge: Provide hinged, throw-over bridge, heavy-duty, piano-type hinge welded to toe guard at end of platform. Provide bridge complete with heavy-duty lifting chains. Chamfer edge of bridge to minimize obstructing wheels of material-handling vehicles.
         5. Bridge Material: Nonskid, safety-tread steel plate.
         6. Bridge Size: 18 inches long by 72 inches wide.
         7. 30” hinged ramp on one side
         8. Cylinders: Equip lift with not less than one heavy-duty, high-pressure, hydraulic, ram-style cylinder. Rams shall be direct-displacement plunger type with positive internal stops as standard by manufacturer. Cylinder rods shall be chrome plated and polished to prevent rusting.
         9. Bearings: Provide mast guide self-lubricating, antifriction bearings .
      7. Operation: Provide manufacturer’s standard, self-contained, electric, hydraulic power unit for raising and lowering rail lift, controlled from a remotely located push-button station.
         1. Electrical Requirements: Coordinate wiring requirements and current characteristics with building electrical system.
         2. Power Unit: Provide manufacturer’s standard, self-contained, remotely located power unit of size, type, and operation needed for capacity of lift indicated. Power unit shall consist of a TEFC motor, high-pressure gear pump, valve manifold and oil reservoir.
2. Manifold shall contain a relief valve, check valve, pressure-compensated flow-control valve and solenoid valve.
3. Speed control: Provide manufacturer’s standard pressure compensated flow control to maintain rated speed when the lift is loaded or unloaded.
4. Free-fall protection: Provide a hydraulic velocity fuse at each cylinder to prevent the lift platform from free falling in the event of a severed hydraulic hose or broken hydraulic fitting.
5. Oil sight gauge in the reservoir to determine oil level.
   * + 1. Remote located Control Station: Provide a weatherproof, multibutton control station of the constant-pressure type with NEMA 4x rated up and down push buttons. Controller shall consist of a magnetic motor starter with three pole-adjustable overloads and 115-VAC control transformer with a fused secondary prewired to terminal strips and enclosed in a NEMA , Type 12 box.
     1. Safety Devices: Provide manufacturer’s standard and original safety devices as follows:
        1. Removable Handrails: Provide removable handrails on one side of platform with a single, removable chain across each end. Handrails shall be 42 inches high with a midrail and 4-inch-high kick plate at bottom. Mount rail sockets flush with platform surface.
        2. Maintenance Leg: Provide manufacturer’s standard safety maintenance leg.
        3. Toe Protection: Provide manufacturer’s standard toe protection along entire unprotected side(s) of lift
     2. Finish and Color: Manufacturer’s standard paint applied to factory-assembled and tested dock lifts before shipping. Provide toe guards with yellow and black stripes to comply with ANSIZ535.1, and paint remainder of surfaces in manufacturer’s standard color.
6. - EXECUTION
   1. EXAMINATION
      1. Examine conditions and proceed with Work in accordance with Section 01 40 00

**3.2 RAIL-LIFT INSTALLATION**

1. Attach Rail lift securely, according to manufacturer’s written instructions.

**3.3 ADJUST AND CLEAN**

1. Make necessary adjustments for safe, efficient operation of loading dock equipment.
2. After installation, restore marred abraded surfaces to the original condition.