

# WS Mechanical Dock Leveler

## Product Specifications



4Front Engineered Solutions reserves the right to change specifications and designs without notice and without incurring obligations.

### DESIGN HIGHLIGHTS

- Patented SafeTFrame™ design
- Patented split box beam construction
- Exclusive POSI-TRAC® unlimited float hold down
- Unique HYDRA CAM™ automatic lip extension
- CLEAN FRAME® design
- Single adjustment point extension spring counterbalance
- High tensile steel lip, deck & beams
- Structural steel safety legs
- Working range toe guards
- Below-dock endloading capability
- 16" lip standard (406 mm)
- Grease fittings
- Integral maintenance strut & lip support latch
- Heavy-duty B410-14F dock bumpers
- Reduced lip crown/extended lip chamfer

### AVAILABLE OPTIONS

- |  |   |
|--|---|
| <input type="checkbox"/> Factory installed brush weatherseal           | <input type="checkbox"/> Full operating range toe guards  |
| <input type="checkbox"/> Factory installed neoprene weatherseal        | <input type="checkbox"/> High lip crown   |
| <input type="checkbox"/> ENERGY GUARD® perimeter weatherseal system    | <input type="checkbox"/> Lip taper _____ (specify)  |
| <input type="checkbox"/> 18" lip (457 mm)                              | <input type="checkbox"/> Box option: For installation without pre-formed concrete pits, dock leveler supplied with integral pre-formed steel box for pour-in-place construction. Leveler shall be in an enclosed steel box structure complete with its own six-piece, welded structural curb angles and concrete anchors. The leveler is to be concreted in place as the floor is poured. |
| <input type="checkbox"/> 20" lip (508 mm)                              | <input type="checkbox"/> Other _____  |
| <input type="checkbox"/> 24" pit conversion (610 mm)                   |   |
| <input type="checkbox"/> Spray foam insulated deck                     |   |
| <input type="checkbox"/> Galvanized finish (deck, lip & subframe only) |   |
| <input type="checkbox"/> Special paint color                           |   |

### AVAILABLE ACCESSORIES

- |  |   |
|--|---|
| <input type="checkbox"/> SL Series restraint _____           | <input type="checkbox"/> VERSACHOCK® wheel restraint            |
| <input type="checkbox"/> SLP recessed restraint              | <input type="checkbox"/> Universal Truck-Chock® wheel restraint |
| <input type="checkbox"/> Manual SAFETY-CHOCK wheel restraint | <input type="checkbox"/> ALS light communication system         |
| <input type="checkbox"/> SAFETY-CHOCK® wheel restraint       | <input type="checkbox"/> MLS light communication system         |

### BUMPER OPTIONS

- |   |                                    |                                      |
|---|------------------------------------|--------------------------------------|
| <input type="checkbox"/> B410-14              | <input type="checkbox"/> VB420-11F | <input type="checkbox"/> B610-11F    |
| <input type="checkbox"/> VB420-11 steel faced | <input type="checkbox"/> B610-14F  | <input type="checkbox"/> Other _____ |

### CAPACITY

- |   |   |
|---|---|
| <input type="checkbox"/> 40K lb (18 Kg) | <input type="checkbox"/> 45K lb (20.4 Kg) |
|---|---|

### PROJECT INFORMATION

JOB NAME \_\_\_\_\_  
 ADDRESS \_\_\_\_\_  
 GENERAL CONTRACTOR \_\_\_\_\_  
 DISTRIBUTOR \_\_\_\_\_  
 MODEL \_\_\_\_\_ QUANTITY \_\_\_\_\_

### CERTIFIED FOR CONSTRUCTION

BY \_\_\_\_\_  
 COMPANY \_\_\_\_\_  
 ADDRESS \_\_\_\_\_  
 DATE \_\_\_\_\_

1. **General:** "WS" Series hinged lip dock leveler with extension spring counterbalance assembly. Unit conforms to ANSI/MH14.1-1987 performance requirements. Unit to be manufactured by Serco.
2. **Construction, Platform Assembly:** Platform constructed of high tensile steel safety tread deck plate supported by unique high tensile steel split box beam construction. Structural members fully welded to front header. Deck to be ¼" (6 mm) thick.
3. **Lip Assembly:** Lip to be 16" (406 mm) high tensile steel safety tread lip plate with beveled leading edge. Lip to be ⅝" (16 mm) thick on 40K & 45K lb (18 & 20.4 Kg) capacity units. 7' (2.13 m) wide lip tapers to 6'-6" (2.01 m) at leading edge (6'-0" (1.83 m) taper optional). Lip hinge to have full width structural front header and heavy wall tubing with a minimum of ½" (12 mm) wall thickness. Hinge tubes to have gussets on 45K lb (20.4 Kg) capacity. Lip hinge shaft to be a minimum of 1 ¼" (31 mm) solid steel.
4. **Lip Extension:** Patented HYDRA CAM™ lip assist mechanism provides gentle lip activation and reduced walk-down loads.
5. **Rear Subframe & hinge:** Rear structural frame consists of a welded structure constructed from 4 structural angle vertical members connecting two horizontal members. The upper rear angle has longitudinal support gussets & additional deck supports to promote structural stiffness. The hinge system consists of four ½" (13 mm) thick lugs allowing 4" (100 mm) of side to side deck twist.
6. **SafeTFrame™:** Adjustable shim system consisting of four independently operated leveling feet capable of 1 ½ inches (37.5 mm) of vertical adjustment each. System eliminates the need for installer to place and weld steel shim stock under the vertical uprights providing more consistent installation thus preventing a gap or (bump) between the rear transition angle and curb angle.
7. **Counterbalance:** Oil-tempered chromium silicon steel extension spring counterbalance with single adjustment point for high strength, durability, and easy walk-down.
8. **Product Finish:** Enamel gray finish.
9. **CLEAN FRAME®:** Unique design allows access for easy pit clean out and routine maintenance.
10. **"Nite-Lock":** Permanent "Nite-Lock" to prevent unauthorized entry beneath locked overhead door is standard.
11. **Structural Center Deck Support:** Standard center beam support (5" (127 mm) structural channel) to reinforce leveler for 3-wheel lift truck traffic.
12. **Toe Guard Protection:** Working range toe guard protection is provided on both sides of the leveler. Yellow OSHA required markings IAW ANSI Z535.1 provided on the sides of the dock leveler.
13. **Safety Legs:** Structural safety legs provide emergency support should a truck depart with a load on the leveler platform. Design incorporates cam mechanism to limit interference from truck float.
14. **Integral Maintenance Strut & Lip Support Latch:** A permanently mounted, hinged, lockout capable maintenance strut and lip support latch are provided to support the lip and leveler during routine maintenance and pit cleaning.
15. **Below-dock Control (Endloading):** Front mounted pull-chain facilitates below-dock endloading.
16. **Out of Level Compensation:** Leveler platform is designed to compensate for canted truck beds up to 4" (100 mm) and rear edge remains flush with the pit to eliminate pinch points.
17. **Float Compensation:** Allows for vertical carrier deflection when lip is in contact with truck bed.
18. **Operation:** Serco's "WS" mechanical leveler shall be supplied completely assembled with platform and lip mechanism and ready for use. Leveler to be operated by pulling release ring at rear of ramp; unit will raise, and lip will extend and hold. No manual lifting required. Unit shall be powered by extension springs with a single adjustment point. Operator to walk ramp down to truck bed. POSI-TRAC® hold down shall hold unit in position. Unit will float with truck movement. Working range to be 12" (305 mm) above-dock and 12" (305 mm) below-dock for 6' (1.83 m), 8' (2.44 m), and 10' (3.05 m) long units. The lip extends a minimum of 11" (279 mm) beyond the face of a 4" (100 mm) bumper. After loading/unloading is complete, operator pulls and holds release chain until lip clears the truck bed. As leveler raises, lip will descend in a smooth, controlled manner. In stored position, ramp is fully supported by lip keepers.
19. **Installation:** Unit shipped completely assembled and ready for installation in pre-formed concrete pit. Pit depth is 20" (508 mm) for 6' (1.83 m) and 8' (2.44 m) long units, 24" (610 mm) for 10' (3.05 m) long units. Pit construction to be in accordance with certified Serco pit detail drawings. Contact Serco for current cost and nearest distributor.
20. **Limited Warranty:** Limited parts & labor warranty on all components under normal use for a 1-year "Base Warranty Period" beginning on the completion of installation or the sixtieth (60th) day after shipment, whichever is earlier. Additional limited 4-year parts only warranty on main springs. Limited prorated 10-year structural warranty available upon engineering approval of written application.
21. **Bumpers:** Unit to include two model B410-14F (4" Thick x 14" W x 10" H) (100 mm x 356 mm x 254 mm) heavy-duty bumpers.

NOMINAL DIMENSIONS		
MODEL	LEVELER WIDTH	LEVELER LENGTH
WS600	6' (1.83 m)	6' (1.83 m)
WS66.500	6'6" (2.01 m)	6' (1.83 m)
WS6700	7' (2.13 m)	6' (1.83 m)
WS800	6' (1.83 m)	8' (2.44 m)
WS86.500	6'6" (2.01 m)	8' (2.44 m)
WS8700	7' (2.13 m)	8' (2.44 m)
WS1000	6' (1.83 m)	10' (3.05 m)
WS106.500	6'6" (2.01 m)	10' (3.05 m)
WS10700	7' (2.13 m)	10' (3.05 m)



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