

VSL Vertical Dock Leveler

Product Specifications



*Representative image. Digital Master Control Panel shown. Standard VSL ships with push button panel.

DESIGN HIGHLIGHTS

- Leveler powered down to working range via constant pressure push-button
- Unique factory provided rear embed with no pit floor attachment for easy cleaning. 5 factory-welded hinges. All hinge points minimum 2 inches off floor
- Dual acting lip cylinder powered both directions
- Remote-mounted power unit with mounting bracket & hydraulic hose
- Patented hinged bottom draft pad
- Terminals for interlocking door or restraint
- 4" high runoff guards
- Structural channel deck beams
- Integral maintenance locking bar with lock-out/tag-out capability
- Two VB420-11FF bumpers with riser brackets
- Standard 20" lip
- Arc lip taper standard on 7' wide

AVAILABLE OPTIONS

- Additional hose length over 20' standard length for remote mount power unit (includes all 3 hose assemblies) (Survey and dock pictures for bumper design required)
- Lip taper optional 6' and 6'6" wide _____ (specify)
- Maintenance pin locking handle
- Lip keepers
- Hot dip galvanized rear embed
- Hot dip galvanized deck, lip & embed
- Door opened/closed switches
- Deck mount power unit Control panel stanchion
- Other _____

CAPACITY

- 40K lb (18K kg) 45K lb (20.4K kg) 50K lb (22.7K kg)

ACCESSORIES

- SL Series Restraint _____
- SLP Recessed Restraint
- SAFETY-CHOCK® Wheel Restraint
- VERSACHOCK Wheel Restraint
- ALS light communication system MLS light communication system
- Digital master or combination control panel with HMI _____
- TKO doors _____
- APS guard rails & accessories

BUMPER OPTIONS

- VB420-11FF steel faced with riser brackets
- VB620-11FF steel faced with riser brackets

PROJECT INFORMATION

JOB NAME _____

ADDRESS _____

GENERAL CONTRACTOR _____

DISTRIBUTOR _____

MODEL _____ QUANTITY _____

VOLTAGE/PHASE _____

CERTIFIED FOR CONSTRUCTION

BY _____ DATE _____

COMPANY _____

ADDRESS _____

1. **General:** "VSL" Series hinged lip vertical storing dock leveler with hydraulic operated platform and hydraulic lip extension and retraction. 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 channel beam design construction. Structural members fully welded to front header. Deck to be ¼" thick on 40-45K capacity, ⅜" thick on 50K.
3. **Lip Assembly:** Lip to be 20" high tensile steel safety tread lip plate with beveled leading edge. Lip to be ⅝" thick on 40-45K capacities, ¾" thick on 50K capacity. 7" wide lip tapers to 6'-6" at leading edge (6'-0" taper optional). Lip hinge to have full width structural front header and heavy wall tubing with a minimum of ½" wall thickness on 40K-50K capacity units. Hinge tubes to have gussets on 45K & 50K capacity units. Lip hinge shaft is to be a minimum of 1 ¼" on 45K-50K capacity units.
4. **Rear Channel & Hinge:** Rear channel to be a minimum of 50K rated capacity and shall include five 1" diameter rear hinge pins. Rear hinges to include wear resistant bushings. Channel height is 10" for 5' long, 12" for 6' long and 15" for 8' long. Consult factory for other combinations of channel height to suit leveler length. Rear channel assembly eliminates horizontal structural members enabling full access to pit floor for easy clean out and maintenance.
5. **Power Unit:** Power unit is an electric/hydraulic motor pump and valve assembly.
6. **Product Finish:** Direct to metal enamel gray paint finish.
7. **Electrical:** Motor is 1 HP NEMA Standard T.E.N.V./56C frame. Standard motor voltages available are 120/208/240V single phase or 208/240V/480V and 575V three phase. RPM: 3450. Control panel has built-in motor overload protection as standard. Remote solenoid valves and power pack supplied with standard wall mount bracket.
8. **Hydraulic:** Main cylinder minimum 3 ¼" diameter bore. Lip cylinder to be a minimum of 2 ½" diameter bore. All weather hydraulic fluid with viscosity of 15 cSt at 40°C (100° F).
9. **Control Panel:** Solid state control panel (9"W x 20"H x 8"D) features a programmable logic controller and "real time" diagnostic capability, industrial quality push-buttons, integral LED visual safety warning system and printed operational instructions.
10. **Safety Stop System:** Hydraulic velocity fuse safety stop will arrest platform from free fall if truck pulls out while load is on platform. Velocity fuse safety system is reusable and non-adjustable.
11. **Mushroom-style Stop Button:** Stops the leveler instantly when depressed at any time to enhance safety. The "STOP" button is a maintained contact type which activates a solenoid on the leveler hydraulic system. The dock attendant does not have to continuously hold the "STOP" button to maintain the leveler in a stop position.
12. **Quick Cycle Lip:** Properly sized cylinders and the "LIP EXTEND/LIP RETRACT" buttons reduce cycle time by not having to fully raise the leveler to extend or retract the lip during endloading.
13. **Below-dock Control (Endloading):** Push-button control feature retracts lip from any deck position including stored, to handle end loads
14. **Out of Level Compensation:** Leveler platform on all capacities is designed to compensate for canted truck beds up to 4", and the rear of the deck remains flush with the pit to eliminate pinch points.
15. **Float Compensation:** Allows for vertical carrier deflection when lip is in contact with truck bed.
16. **Hinged Bottom Pad:** Patented hinged bottom pad attaches to leveler deck for added environmental control.
17. **Operation:** Serco's Vertical Storing Leveler will be supplied with a rear subframe assembly, a platform and lip assembly, an electrical power-pack assembly including motor and pump, hydraulic cylinders, hoses and valves. Platform and lip to be operated by independent hydraulic cylinders controlled by a remote push-button station. To operate leveler dock attendant pulls the "STOP" button (amber light indicates power on) on control panel. Attendant presses and holds the "LOWER" button to lower leveler on to truck bed. Audible alarm will sound anytime leveler is stopped between stored position and operating range. Above operating range, while motor is running, releasing the "LOWER" button will stop all leveler motion. Pressing the "STOP" button at any time will immediately stop all movement. When leveler lowers to near working range, (approximately 18" above dock level) the motor will stop and the platform will automatically float down to rest on the truck bed and float with truck movement. The green light will illuminate to indicate the leveler has reached the operating range. If truck departs when lip is extended, leveler descends under hydraulic control and lip falls to pendant position. Pressing the "LIP EXTEND/LIP RETRACT" button will extend or retract the lip at any point in the leveler cycle. Standard below-dock level operation allows for below-dock endloading with push-button control. Dock Leveler is restored by pressing the "RAISE" button and holding until the platform and lip are in their vertical storing positions. Dock attendant presses the "STOP" button on control panel to remove electrical power from the dock leveler (amber light off). Working range to be 6" above-dock and 6" below-dock for 5' and 6' units, 9" above and 9" below-dock for 8' units. The lip extends a minimum of 15" beyond the face of a 4" bumper.
18. **Installation:** Unit shipped partially assembled. Rear channel assembly supplied by Serco to be embedded in concrete by others. Unit to be assembled at site by mounting platform to hinge channel assembly and installing hydraulic power unit. Control panel furnished with unit to be electrically interconnected by others.
19. **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 hydraulic power unit and cylinders. Limited 10-year structural warranty available upon engineering approval of written application.
20. **Dock Bumpers:** Unit to include 2 model VB420-11FF (4" Thick x 11" W x 20" H) bumpers with riser brackets and load distributing back plate.

NOMINAL DIMENSIONS		
MODEL	LEVELER WIDTH	LEVELER LENGTH
VSL500	6'	5'
VSL5700	7'	5'
VSL600	6'	6'
VSL6700	7'	6'
VSL600	6'	8'
VSL8700	7'	8'



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