



## VPL-3100 Residential Vertical Platform Lift Technical Specifications

rev: (4) 10-17-2013  
ILS-00834

**MODEL NUMBER:** VPL-3100 Series: Models VPL-3153 and VPL-3175 (AC-powered units)  
Models VPL-3153B and VPL-3175B (DC-powered units)

**U.S. F.D.A. CLASSIFICATION:** Class II, 510(K) exempt

**CLASSIFICATION NUMBER:** 890.3930

**PRODUCT CODE:** PCE

**ETL-Intertek C-US Listed:** Control Number: 4004689

**PERFORMANCE STANDARDS:**

ASME A18.1-1999 (Sec. 5) Safety Standards for Platform Lifts and Stairway Chairlifts  
ASME A18.1-2003 (Sec. 5) Safety Standards for Platform Lifts and Stairway Chairlifts  
ASME A18.1-2005 (Sec. 5) Safety Standards for Platform Lifts and Stairway Chairlifts  
ASME A18.1-2008 (Sec. 5) Safety Standards for Platform Lifts and Stairway Chairlifts  
ASME A18.1-2011 (Sec. 5) Safety Standards for Platform Lifts and Stairway Chairlifts  
CSA B613-00 (R2012) Private Residence Lifts for Persons with Physical Disabilities  
CSA B44.1-11/ASME A17.5-2011 Elevator and Escalator Electrical Equipment

**RATED LOAD:** 750 lb (340 kg) maximum

**NUMBER OF PASSENGERS:** 1 passenger with mobility device

**DRIVE:**

- **AC-powered units:** 1 hp motor; 1750 rpm, single phase, 120VAC, 60 Hz, 13.4 full load amps, 1.15 service factor, continuous duty
- **DC battery-powered units:**
  - **primary drive:** ½ hp motor, 1750 rpm, 24VDC permanent magnet, 20 full load amps, continuous duty
  - **5A, 24VDC output internal battery charger, 120VAC, 60 Hz, 3A maximum input power required**

**INTERMEDIATE REDUCTION:** dual 4L style poly-V belts and pulleys, 3.94:1 pulley reduction

**FINAL DRIVE:** 1" (24.5 mm) diameter Acme screw with bronze nut and bronze safety back up nut

**MOTOR CONTROLLER:**

- **AC-powered units:** 24VAC relay control with 15A circuit breaker
- **DC battery-powered units:** 24VDC relay control with 35A circuit breaker

**BRAKING:**

- **AC-powered units:** Precision landing control with solenoid-actuated screw braking
- **DC battery-powered units:** Precision landing control

**STANDARD CONTROL:** separate up and down pushbutton switches or paddle controls, continuous operation, key switch control

**EMERGENCY STOP SWITCH:** (standard) red, sealed, 1.55" (39 mm) diameter mushroom head, push to stop, pull to reset; (Optional) red, sealed, 1.55" (39 mm) diameter mushroom head, illuminated with audio alarm, push to stop, pull to reset

Bruno Independent Living Aids, Inc., 1780 Executive Drive, Oconomowoc, WI 53066  
Phone (800) 882-8183 Fax (262) 953-5501

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**SPEED:**

- **AC-powered units:** 9 ft/min (0.04 m/s) maximum
- **DC battery-powered units:** 10 ft/min (0.05 m/s) maximum

**LIFTING HEIGHT:** model VPL-3153: 53" (1346 mm) maximum floor-to-floor height and 11" (279 mm) minimum floor-to-floor height;  
model VPL-3175: 75" (1905 mm) maximum floor-to-floor height and 32" (813 mm) minimum floor-to-floor height

**NUMBER OF LANDINGS:** 2-Stop

**MAIN FRAME CONSTRUCTION:** welded steel tubular guide construction with formed sheet steel guarding

**CARRIAGE CONSTRUCTION:** welded carriage with 2" (51 mm) diameter front and back sealed dual ball bearing wheels and adjustable low friction plastic side stabilizer guide pads

**PLATFORM CONSTRUCTION:** totally enclosed side walls consisting of 1" (24.5 mm) tubular framing and sheet metal siding

**UNDER CARRIAGE SAFETY:** totally enclosed bottom formed steel safety pan

**AUTOMATIC LOWER RAMP:** 16" (406 mm) long self-lowering ramp

**MANUAL LOWER DEVICE:** optional; manual hand crank to lower device available; access to adaptive shaft via safety interlocked top cap

**FINISH:** exterior grade powder coat paint

**LIMIT SWITCHES:** adjustable upper and lower limit switches and upper final limit switch

**REMOTE CONTROL:** optional; station includes separate landing call and send pushbutton switches or paddle controls and a keyed on/off switch

**TOP LANDING GATE:** optional; includes Bruno mechanical interlock which releases door, only when platform is at upper landing; electronic sensors stop platform from operating unless door is closed; also includes call/send pushbutton switches or paddle controls and keyed on/off switch mounted into gate frame

**PLATFORM GATE:** optional; includes Bruno mechanical interlock which releases door, only when platform is at lower landing; electronic sensors stop platform from operating unless door is closed

**WEIGHT OF UNIT:**

- **AC-powered units:**
  - Model VPL-3153: 777 lb (352 kg)
  - Model VPL-3175: 850 lb (386 kg)
- **DC battery-powered units:**
  - Model VPL-3153B: 777 lb (352 kg) (without batteries) (with batteries +40 to 80 lb /18 to 36 kg)
  - Model VPL-3175B: 850 lb (386 kg) (without batteries) (with batteries +40 to 80 lb /18 to 36 kg)
- **All Models:**
  - Platform Gate Option: 80 lb (36 kg)
  - Top Landing Gate Option: 99 lb (45 kg)
  - Top Landing Wide Gate Option: 108 lb (49 kg)

**TESTING PERFORMED:**

- 1) life cycle test performed at manufacturer's location
- 2) ASME A18.1/CSA B613-00 code tests performed at manufacturer's location

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# VPL Job Site Preparation

The following is a list of general operations designed to prepare the job site for installation of the VPL. This list is provided as a guide to help the installer. For a complete list of requirements check the installation site's applicable local codes.

## Electrical Requirements:

- **AC-powered units:** require a dedicated GFI 120V, 15A, 60 Hz single phase circuit to operate. Check applicable local codes for all electrical and wiring requirements.
- **DC battery-powered units:** *require a dedicated GFI 120V, 3A (max.), 60 Hz single phase circuit to operate the internal battery charger. Check applicable local codes for all electrical and wiring requirements.*

## Platform Pathway Requirements:

Make sure the pathway that the platform runs in is clear of any electrical conduit and wire ways. Make sure no liquids, steam or gas piping discharge into the pathway, and make sure that there is sufficient headroom clearance (minimum of 80") throughout floor to floor travel. Make sure the area is sufficiently lit.

## Floor Recommendations:

4" thick, 3500 PSI minimum compressive strength, reinforced concrete slab. Refer to technical drawings for minimum slab dimensions. If the temperature can fall below freezing, it is recommended that you insert an insulation sheet between the concrete slab and the compacted rock.

## Floor Attachment:

VPL must be fastened to concrete slab using four (4) 1/2" (3/8" bolt) x minimum 2 1/2" long concrete anchors suitable for the environment. Refer to technical drawings for mounting hole locations. Follow selected concrete anchor manufacturer's guidelines and applicable codes.

## Housing Attachment:

None required. Can use 5/16-18 tapped holes on tower frame work to fasten the tower housing to a vertical wall for additional stability. Note: Housing must remain intact.

## Top Gate Attachment:

Refer to VPL gate technical drawing (see below).

## Space Requirements:

Refer to VPL-3100 technical drawing (see below).

## Platform-to-Top Landing Sill Clearance:

ASME code indicates the platform floor-to-sill clearance at the upper landing shall not be less than 3/8" (9.5 mm) nor exceed 3/4" (19 mm). Follow applicable local codes.

## Fascia Wall Requirements:

ASME code indicates that fascia should be smooth and non-perforated that guards the full length and width of the platform. The fascia shall be securely fastened from the upper landing sill down to the lower landing sill. It should also be able to withstand a 125-pound side load over any 4-inch square area. Follow applicable local codes.

## Technical Drawings (*available at [www.bruno.com](http://www.bruno.com)*):

- ILS-00932 Straight-Through Platform (No Pit)
- ILS-00933 Straight-Through Platform With Platform Gate (Pit Application)
- ILS-00934 90°/Adjacent Exit Platform (No Pit)
- ILS-00935 90°/Adjacent Exit Platform With Platform Gate (Pit Application)
- ILS-00938 Top Landing Gate Detail

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