

## **VPL-3100 Residential Vertical Platform Lift Technical Specifications**

**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  
ASME A18.1-2014 (Sec. 5) Safety Standards for Platform Lifts and Stairway Chairlifts  
ASME A18.1-2017 (Sec. 5) Safety Standards for Platform Lifts and Stairway Chairlifts  
CSA B613-00 (R2012) Private Residence Lifts for Persons with Physical Disabilities  
CSA B355-15 Lifts for Persons with Physical Disabilities (Residential Application)  
CSA B44.1-11/ASME A17.5-2011 Elevator and Escalator Electrical Equipment  
CSA B44.1-14/ASME A17.5-2014 Elevator and Escalator Electrical Equipment

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

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

**APPLICATIONS:** Residential, Indoors, Outdoors

### **DRIVE:**

- AC-powered units:
  - primary drive: ½ hp motor; 1750 rpm, 90VDC permanent magnet, 12 full load amps, continuous duty
  - 120 VAC, 60 Hz, 8A maximum input power required
- 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: Solid-state control with 15A circuit breaker
- DC battery-powered units: 24VDC relay control with 35A circuit breaker

### **BRAKING:**

- AC-powered units: Precision landing control
- DC battery-powered units: Precision landing control

**STANDARD CONTROL:** up and down rocker switch 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

### **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) max. floor-to-floor height and 11" (279 mm) minimum floor-to-floor height;  
model VPL-3175: 75" (1905 mm) max. 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" (25 mm) tubular framing and sheet metal siding

**UNDER CARRIAGE SAFETY:** totally enclosed bottom formed steel safety pans for unenclosed applications only

**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 (standard color is champagne with anti-skid graphite gray platform floor and ramp) E-coated legs, platform and landing gate parts

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

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

**TOP LANDING GATE:** optional; includes Bruno electrical mechanical interlock (EMI) or electric strike interlock (ESI) which releases door, only when platform is at upper landing; electronic sensors stop platform from operating unless door is closed; also includes call/send rocker switch or paddle controls and keyed on/off switch mounted into gate frame; steel, clear Plexiglas, or bronze Plexiglas insert panels

**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

**FLUSH MOUNT DOOR:** optional; includes electric strike interlock (ESI) which releases door only when platform is at door landing; electronic sensors stop platform from operating unless door is closed; offered as an oak door with steel frame (no fire rating) or a steel door with steel frame (90 min. fire rating including a viewing window); delay action hydraulic closer; keyed ESI for bypass entry; also available in an aluminum frame and door with clear or bronze panels

**STATIONARY RAMP:** optional. 24" L x 36" W x 3" H (610 mm L x 914 mm W x 76 mm H) aluminum stationary ramp with anti-skid graphite gray powder coat

**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 A18.1-2017 (Sec. 5) and CSA B355-15 (Residential Application) code tests performed at manufacturer's location

**OPTIONS:**

- 1) tool for manual lowering device
- 2) battery package upgrade – 34 AH battery package (VPL-3153B and VPL-3175B)
- 3) cold-weather package [recommended if operating temperature is below 20°F (-7°C)]
- 4) door/gate operator (used for power-assisted landing door/gate)
- 5) platform gate operator (used for power-assisted platform gate on unenclosed models)
- 6) single timer (used with electric strike interlocks)
- 7) second handrail
- 8) hardwire kit

## 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:** Check applicable local codes for all electrical and wiring requirements. If it is determined that a GFI (Ground Fault Interrupter) outlet is required; use a GFI 120V, 15A, 60 Hz single phase circuit to operate the internal battery charger (charger draws 3A max.). National Electrical Code requires a GFI is used in all outdoor or wet environment applications.

### 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" – 2032 mm) throughout floor to floor travel. Make sure the area is sufficiently lit.

### Floor Recommendations:

4" (102 mm) 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).

### Flush Mount Door Attachment:

Refer to VPL flush mount door detail drawing (see below).

### Space Requirements:

Refer to 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
- ILS-00980 Hoistway Straight-Through Platform (No Pit)
- ILS-00981 Hoistway Straight-Through platform (Pit Application)
- ILS-00982 Hoistway 90°/Adjacent Exit Platform (No Pit)
- ILS-00983 Hoistway 90°/Adjacent Exit Platform (Pit Application)
- ILS-01027 Flush Mount Door Detail with a Wood or Steel Door
- ILS-01194 Flush Mount Aluminum Door Detail with Clear or Bronze Panels