VPL-3210B Residential Vertical Platform Lift Technical Specifications

MODEL NUMBER: **VPL-3210B *(DC-powered)***
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
ASME A18.1-2020 (Sec. 5) Safety Standards for Platform Lifts and Stairway Chairlifts
ASME A18.1-2023 (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 B355-19 Platform Lifts and Stair Lifts for Barrier-Free Access (Residential Application)
CSA B355-24 Platform Lifts and Stair Lifts for Barrier-Free Access (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
CSA B44.1-19/ASME A17.5-2019 Elevator and Escalator Electrical Equipment
CSA B44.1-25/ASME A17.5-2025 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:

- DC battery-powered unit:
  - primary drive: 1 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 1/4” (32 mm) diameter Acme screw with bronze nut and bronze safety back up nut

***MOTOR CONTROLLER*:**

- DC battery-powered unit: 24VDC relay control with 60A circuit breaker and disconnect

BRAKING:

- DC battery-powered unit: precision landing control

STANDARD CONTROL: up and down rocker switch or paddle controls, continuous pressure, 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

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SPEED: DC battery-powered unit: 10 ft/min (0.05 m/s) maximum

LIFTING HEIGHT: 123" (3124 mm) maximum floor-to-floor height
Note: For pit applications, maximum floor-to-floor is measured from the bottom of the pit to the upper landing.

NUMBER OF LANDINGS: 2-Stop

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

CARRIAGE CONSTRUCTION: welded carriage with 2.25" (57 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

EMERGENCY LOWERING: external lockable keyed switch for lowering platform by means of a separate battery located inside the electrical enclosure

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; upper final limit switch

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

REMOTE CONTROL: optional; station includes a 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 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

WEIGHT OF UNIT:

- DC battery-powered unit:
  - Model VPL-3210B: 1190 lb (540 kg) (with batteries)
- All Models:
  - Platform Gate Option: 68 lb (31 kg)
  - Top Landing Gate Option (36" High): 70 lb (32 kg)
  - Top Landing Wide Gate Option (36" High): 93 lb (42 kg)
  - Top Landing Gate Option (42" High): 99 lb (45 kg)
  - Top Landing Wide Gate Option (42" High): 108 lb (49 kg)

TESTING PERFORMED:

1) life cycle test performed at manufacturer's location
2) ASME A18.1 (Sec. 5) and CSA B355 (Residential Application) code tests performed at manufacturer's location

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OPTIONS:

1) tool for manual lowering device
2) cold-weather package [recommended if operating temperature is below 20ºF (-7ºC)]
3) gate operator (used for power-assisted top landing gate)
4) platform gate operator (used for power-assisted platform gate)
5) pit switch
6) flood zone tower (electronics and batteries located on top section of tower)
7) flood sensor kit
8) platform handrail

Technical Drawings (*available at www.bruno.com*):

- ILS-00804 42” High - Gate Installation Framing
- ILS-00938 42” High - Top Landing Gate Detail

- ILS-01562 36” High - Gate Installation Framing (Res)
- ILS-01561 36” High - Top Landing Gate Detail (Res)

- ILS-01557 Unenclosed Straight-Through Platform (No Pit)(Res)
- ILS-01559 Unenclosed Straight-Through Platform with Platform Gate (Pit Application)(Res)

- ILS-01558 Unenclosed 90º/Adjacent Exit Platform (No Pit)(Res)
- ILS-01560 Unenclosed 90º/Adjacent Exit Platform with Platform Gate (Pit Application)(Res)

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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:

- **DC battery-powered unit:** 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:

Use 5/16-18 tapped holes on tower framework to fasten the tower housing to a vertical wall near or above the upper landing (200 lb/91 kg wall loading). Mounting brackets are supplied with unit.

Top Gate Attachment:

Refer to VPL gate technical 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.

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