

**Division 14 42 00 (14420)**

**Vertical Platform Lift Model PCDE 96"-168" Lift Heights**

**Technical Specifications**

January 2009

**PART 1 - GENERAL**

**1.01 SECTION INCLUDES**

- A. All materials and labor necessary to complete the installation of the vertical platform lift.
- B. Obtain all information affecting work at job site. Include verification of field dimensions, anchoring and storage. Verify voltages and outlets on electrical drawings.

**1.02 REFERENCES**

- A. Unit shall be designed and manufactured in accordance with the ICC/A117.1, NEC and ASME A18.1 Guidelines for vertical platform lifts in public places.
- B. All designs, clearances, construction, workmanship and installation shall be in accordance with the requirements and code adopted by the authority having jurisdiction. The platform lift shall be subject to local city and state approval prior to and following installation.

**1.03 SYSTEM DESCRIPTION**

- A. The product described herein manufactured by National Wheel-O-Vator, is a Vertical Platform Lift consisting of a machine tower with lifting platform, selected and dimensioned to provide adequate lifting height to suit the individual building requirements. The lift can be used either indoors or outdoors to vertically transport a wheelchair user or mobility-impaired person up and over a barrier thus creating access to or within a building.
- B. Performance
1. Rated Load: 750 pound capacity
  2. Travel Speed: 30 feet per minute
  3. Lifting Height: \_\_\_\_\_
  4. Platform Size: 37" x 51", with non-skid surface

**1.04 SUBMITTALS**

Submit drawings or manufacturers literature for approval. Drawings shall show dimensional and wiring requirements.

**1.05 QUALITY ASSURANCE**

- A. Manufacturer: Company with not less than twenty (20) years of experience in the design and fabrication of vertical platform lifts.
- B. Technical Services: Manufacturer and authorized dealer shall work with architects, engineers and contractors to adapt the platform lift product to the design and structural requirements of the building, site, and code requirements.

**1.06 WARRANTY**

A. Unit shall have a four (4) year limited parts warranty on the basic unit, including all electrical and drive system components.

**1.07 MAINTENANCE**

A. Maintenance of the platform lift unit shall consist of regular cleaning of the unit and regular inspection at intervals not longer than every 6 months. Rule 10.2.1 of ASME A18.1 requires all Vertical Platform Lifts be inspected every six (6) months.

**PART 2 - PRODUCT**

**2.01 MANUFACTURER**

A. National Wheel-O-Vator a division of ThyssenKrupp Access, Model PCDE as distributed  
By \_\_\_\_\_

B. No substitution shall be considered unless written request for approval has been submitted and received by the architect at least ten (10) days prior to the bid date.

Each substitution request shall include the name of the material for which it is to be substituted and a complete description of the proposed substitutions including drawings, performance and test data, a list of projects similar in scope, photographs of existing installation, design differences and other information necessary for evaluation.

**2.02 FABRICATION**

- A. Platform shall be constructed of 12-gauge minimum zinc clad steel. If unit is not installed in a 3-inch pit, a stationary ramp shall be provided that extends under the lower landing gate/door.
- B. Platform side panels must be 42" high. Side panel framework shall be a minimum of 1" x 1 1/2" x .065 steel tubing for indoor units and 1 x 1 1/2 x .125 aluminum tubing for outdoor units. Solid infill panels shall be a minimum of 24-gauge zinc clad steel.
- C. The mainframe support tubing shall be a combination of square and rectangular tubing with a minimum .120 wall thickness.
- D. Carriage platform supports shall be a minimum of 1" x 2" steel flat bar and carriage uprights shall be a minimum of 1/2" thick steel flat bar. Cam rollers shall be used for axial carriage guidance and cam-followers with wear pads used for horizontal stability.
- E. Loaded fasteners shall be grade five or higher. Locking fasteners shall be used in all critical locations.
- F. The machine tower structural side plates shall be of 12-gauge steel and front and back covers shall be 18-gauge zinc clad steel minimum.
- G. The drive mechanism shall be a rotating nut on a stationary 1 1/2" diameter Acme screw with a secondary safety nut.
- H. The motor shall be 3 HP, 230V, 3 phase, with inverter drive
- I. The operating control circuit shall be 24 volts.
- J. Finish shall be electro statically applied powder coating, oven baked to cure.
- K. An upper final limit switch shall be provided.
- L. Color shall be selected from manufacturer's standard color or optional colors.
- M. A constant pressure up/down control switch shall be installed at each landing level and on the platform.
- N. Lift shall have an enclosure framework of 1 1/2" square steel tubing for indoor units, 1 1/2" square aluminum tubing for outdoor units and shall have enclosure panel infill of 1/4" clear or smoked acrylic panels. The enclosure shall extend a minimum of 42 inches above the actual lifting height of the unit, which prevents access to the underside of the platform. (See accessories part G. for more enclosure options.)
- O. Lift shall be equipped with a 42" minimum high upper landing gate and a lower landing gate, which remains at lower

level to prevent access to the underside of the platform while in the raised position. Gate framework is steel tubing for indoor units, with panel infill of ¼” clear or smoked Acrylic panels. All gates shall have combination mechanical lock with positive opening electrical contacts.

P. An emergency stop / illuminated alarm switch shall be provided on the car as a means of signaling for assistance in the event of an emergency.

Q. A grab rail shall be provided on the platform.

R. The main lift nut will be equipped with a continuous lube system to distribute lubrication between main lift nut and the Acme screw.

S. Unit to be equipped with the “simplex” base and carriage design, which allows the carriage to be folded to reduce the shroud and carriage width to 19”, for ease of installation, without removal of any carriage attaching bolts.

T. Unit must be assembled and tested in factory before shipment.

### 2.03 ACCESSORIES

*SPECIFIER PLEASE NOTE – Due to different applications of Vertical Platform Lifts, please strike the optional items shown if not used.*

A. A 24V DC, fail secure electric strike that contains electric contacts to insure the door is both closed and locked shall be provided. (This option is required when flush mounted door and frames are provided by others. Modify 2.02 O.)

B. A Severe Atmospheric Condition (SAC) package for highly corrosive environments consists of the following:

1. Platform side panel framework shall be aluminum or Hot dipped Zinc (HDZ) treated steel to coat interior and exterior surfaces.
2. All structural steel members shall be treated with HDZ process to coat exterior and interior surfaces.
3. Enclosure framework shall be aluminum or HDZ treated steel to coat interior and exterior surfaces.
4. All gate/door frameworks shall be aluminum or HDZ treated steel to coat interior and exterior surfaces.
5. All sheet steel panels shall be changed to aluminum. (Add to 2.02.)

C. Optional platform configurations

90 deg; enter/exit same side; 3 level. Power operators required by A117.1. Larger platforms may be required by A.H.J. (Modify or delete 1.03 B4.)

D. Low Profile Carriage (LPC) option is available on all enclosed installations. This option will shorten the required ramp from 30” to 10” in existing construction or to 16” in new construction. If pitted, reduce pit depth from 3” to 1.5”. (Modify 2.02 D.)

E. Standby Power. Battery raising & lowering with a min. of 5 cycles at rated load.

F. An optional hand crank may be provided as a means of raising & lowering the platform.

G. Extruded aluminum enclosure package includes:

1. Extruded aluminum modular enclosure.
2. Extruded aluminum platform side rail tubing.
3. Stainless steel grab rail.
4. Stainless steel main control.
5. Stainless steel in-frame stations

## PART 3 - EXECUTION

### 3.01 ACCEPTABLE INSTALLERS

A. Subcontractor Qualifications: A company that is listed as an authorized National Wheel-O-Vator dealer.

B. Electrical devices, services and final connections shall be by a qualified electrician.

### 3.02 INSTALLATION

A. Unit shall be installed and operated in accordance with the ICC/A117.1, NEC and ASME A18.1 Guidelines.

B. A dedicated electrical circuit with a lockable service disconnect switch rated per Table 1 shall be supplied by the electrical contractor at job site. (Depending on local electrical codes, a G.F.I. device may be required.) Please confer with lift contractor to determine appropriate motor for specified applications.

Table 1

OVERCURRENT PROTECTIVE DEVICE RATINGS			
HP	VOLTAGE (Single Phase)	DUAL ELEMENT FUSE TIME DELAY	INVERSE TIME BREAKER
3 HP.	230V	30A	30A
3/4 HP.	115V	20A	30A
1 HP.	115V	30A	30A
1 1/2 HP.	115V	30A	30A
3/4 HP.	230V	12 to 14 A	20A
1 1/2 HP.	230V	15A	20A

C. Coordinate work with general contractor.

D. Leave standard electrical connection drawings with electrical contractor to make final electrical connection.

E. The installation of the vertical platform lift shall be made in accordance with the approved plans and specifications and the manufacturers installation instructions.

### 3.03 FIELD QUALITY CONTROL

A. Load the vertical lift to rated capacity and test for several cycles to insure proper operation. No mechanical failures shall occur and no wear that would affect the reliability of the unit shall be detected.

**For more details, call National Wheel-O-Vator’s Design Line 800-968-5438.**