

**Division 14 42 00 (14420)**

**California Enclosed Vertical Platform Lift Model BC 42" – 168" Lift Heights**

**Technical Specifications**

May 2010

**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. The lift shall be designed and tested in accordance with ICC/A117.1, NEC and ASME A18.1-2003 Guidelines.
- B. All designs, clearances, construction, workmanship and installation shall be in accordance with ASME A18.1-2003 as modified by California Title 8, Section 3142.1 and Title 24, Section 1116B. 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: 9 fpm (42-72 in lift height)  
30 fpm (over 72 in lift height)  
20 fpm (with chain hydraulic option)
  - 3. Lifting Height: \_\_\_\_\_
  - 4. Platform size: 36" x 54" clear, with non-skid surface.

1.04 SUBMITTALS

- A. 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 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. Section 3094.5 California Title 8 and Rule 10.2.1 of ASME A18.1 require 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 BC, as distributed by McKinley Elevator Corporation at (800) 229-7275.

- 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 1½" Steel or aluminum. Solid infill panels shall be a minimum of 18 gauge zinc clad steel.
- C. The mainframe support tubings shall be a combination of square and rectangular steel 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 ½" thick steel flat bar. Cam rollers shall be used for axial carriage guidance and camfollowers with wear pads shall be 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 an Acme screw design. The screw shall be a minimum 1" diameter. The Acme screw shall have a secondary safety nut.
- H. The motor shall be instant reversing with a minimum rating of ¾ HP for travel heights up to 72 inches. The motor shall be 3 HP, 230 volt, 3 phase, with inverter drive for lifts with travel height over 72 inches.
- 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 manufacturer's standard color, Pearl White Texture. Optional colors or Special colors are available.
- M. A constant pressure up/down control switch shall be installed at each landing level and on the platform.
- N. 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.
- O. A grab rail shall be provided on the platform.
- P. The main lift nut will be equipped with a continuous lube system to distribute lubrication between main lift nut and the Acme screw.
- Q. A gate with a min. height of 42" and a combination mechanical lock with a positive opening electric contact shall be provided at the upper landing.
- R. A door or gate with a minimum height of 42" above the upper landing, vertical clearance of 80" and a combination mechanical lock with a positive opening electric contact shall be provided at the lower landing. The inside face of the door or gate shall be smooth, unperforated and mounted within 3/8 to ¾ inch of the platform sill. (Title 8 and ASME A18.1-2003, Rule 2.1.1)
- 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.

U. Pit switch must be provided.

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

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

X. Unit shall be provided with standby raising and lowering capable of transporting rated load a minimum of five cycles. (1116B.3.4 Title 24)

**2.03 OPTIONS**

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

A. A CDP-1000 – Fire Rated (B Label) flush mounted steel door and frame shall be provided. Door shall include wire mesh vision panel with delay action door closure, dead latch, dummy trim door handle and electric strike. (If used at upper landing, delete 2.02 Q. If used at lower landing, delete 2.02 R )

B. A CDP-2000 – Low profile flush mounted steel door and frame shall be provided. Door shall include mesh vision panel with delay action door closure, dead latch, dummy trim door handle and an electric strike. (If used at upper landing, delete 2.02 Q. If used at lower landing, delete 2.02 R )

C. A CDP-3000 – Flush mounted, solid core oak laminated door and (oak) frame shall be provided. Door includes wire mesh vision panel with delay action door closure, dead latch, dummy trim door handle, lock plate cover and electric strike. (If used at upper landing, delete 2.02 Q. If used at lower landing, delete 2.02 R )

D. A CDP-4000 – Flush mounted, 42 inches high, solid core oak laminated gate and (oak) frame shall be provided at the upper landing. Gate includes spring hinges, dead latch, dummy trim gate handle, lock plate cover and electric strike. (At upper landing only. If used, delete 2.02 Q.)

E. 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 or delete 2.02 Q and R.)

F. 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 interior and exterior surfaces.
3. All gate/door framework shall be aluminum or HDZ treated steel to coat interior and exterior surfaces.
4. All sheet steel panels shall be changed to aluminum. (Add to 2.02.)

G. 90 degree, enter exit platform (42 x 60 clear). (Modify or delete 1.03B4) (Title 24, Rule 1116.B4 and ICC/ANSI A117.4-2003 Rule 410.)

H. Power door/gate operators are required on all but straight through layouts. When strike clearance is less than 18" (24" outdoor) or with reveals over 8" a power operator is required for that door or gate. (Title 24, Rule 1116B.4 and ICC/ANSI A117.4-2003 Rule 410.)

I. If building attendant is not continuously available to take action when emergency signal is activated, add remote alarm or ADA telephone. (Title 8 and ASME A18.1-2003, Rule 2.11.) Electrician to wire from junction box on lift to remote alarm.

J. Furnish emergency light for platform. Light to have 2 bulbs and backup power for 4 hours. (Title 8 and ASME A18.1-2003, Rule 2.6.6.3).

K. Drive mechanism shall be chain hydraulic with a Type A instantaneous slack chain safety device and a 1.5 KW motor and pump (Delete 2.02G & H)(Modify 2.02 C, D, & F)

L. Low Profile Carriage (LPC) option is available on all BC lifts installed in runways by others. 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.)

**PART 3 - EXECUTION**

**3.01 ACCEPTABLE INSTALLERS**

A. Subcontractor Qualifications: A company that is listed as an authorized National Wheel-O-Vator dealer and Certified by Cal/OSHA-Elevator Division..

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; ASME A18.1-2003, Section 2.1.1; and 3904 Title 8 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 lift.

OVERCURRENT PROTECTIVE DEVICE RATINGS			
HP	VOLTAGE (Single Phase)	DUAL ELEMENT FUSE TIME DELAY	INVERSE TIME BREAKER
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	12 to 14 A	20A
3 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.

**3.04 TRAINING**

Conduct training in accordance with 3094 Title 8 & furnish operating permit from the Elevator Division. Conduct owner training at time of inspection.

**For more details, call McKinley Elevator Company at 800-229-7225.**