

Part II
Division 14
Conveying Systems

SECTION 14 42 00

ENCLOSED VERTICAL WHEELCHAIR PLATFORM LIFT

1 PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Enclosed, self-contained vertical platform wheelchair lift.

1.2 RELATED SECTIONS

- A. Section 03 30 00 - Cast-In-Place Concrete: Concrete shaftway and anchor placement.
- B. Section 06 10 00 - Rough Carpentry: Blocking in framed construction for lift attachment.
- C. Section 09 21 16 - Gypsum Board Assemblies:
- D. Division 16 - Electrical: Dedicated telephone service and wiring connections.
- E. Division 16 - Electrical: Lighting and wiring connections at top of shaft.
- F. Division 16 - Electrical: Electrical power service and wiring connections.

1.3 REFERENCES

- A. ASME A17.1 - Safety Code for Elevators and Escalators.
- B. ASME A17.5 - Elevator and Escalator Electrical Equipment.
- C. ASME A18.1 - Safety Standard for Platform Lifts and Stairway Chairlifts.
- D. CSA B44 - Safety Code for Elevators and Escalators.
- E. CSA B355 - Lifts for Persons with Physical Disabilities.
- F. ICC/ANSI A117.1 - Accessible and Usable Buildings and Facilities.
- G. NFPA 70 - National Electric Code.
- H. CSA - National Electric Code.
- I. IBC 2006 – International Building Code, 2006 Edition.

1.3 SUBMITTALS

- A. Submit under provisions of Section 01 00 00.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Submit manufacturer's installation instructions, including preparation, storage and

- handling requirements.
- 2. Include complete description of performance and operating characteristics.
- 3. Show maximum and average power demands.

C. Shop Drawings:

- 1. Show typical details of assembly, erection and anchorage.
- 2. Include wiring diagrams for power, control, and signal systems.
- 3. Show complete layout and location of equipment, including required clearances and coordination with shaftway.

D. Selection Samples: For each finished product specified, provide two complete sets of color chips representing manufacturer's full range of available colors and patterns.

E. Verification Samples: For each finish product specified, two samples, minimum size 150 mm (6 inches) square, representing actual product, color, and patterns.

1.5 QUALITY ASSURANCE

A. Manufacturer Qualifications: Firm with minimum 10 years experience in manufacturing of vertical platform lifts, with evidence of experience with similar installations of type specified.

B. Installer Qualifications: Licensed to install equipment of this scope, with evidence of experience with specified equipment. Installer shall maintain an adequate stock of replacement parts, have qualified people available to ensure fulfillment of maintenance and callback service without unreasonable loss of time in reaching project site.

1.6 REGULATORY REQUIREMENTS

A. Provide platform lifts in compliance with:

- 1. ASME A18.1 - Safety Standard for Platform Lifts and Stairway Chairlifts.
- 2. ASME A17.1 - Safety Code for Elevators and Escalators.
- 3. ASME A17.5 - Elevator and Escalator Electrical Equipment.
- 4. NFPA 70 - National Electric Code.

B. Seismic Design: In accordance with Seismic Design Category B based on IBC 2006 (reference: ASCE 7-05)

1.7 DELIVERY, STORAGE, AND HANDLING

A. Store products in manufacturer's unopened packaging until ready for installation.

B. Store components off the ground in a dry covered area, protected from adverse weather conditions.

1.8 PROJECT CONDITIONS

A. Do not use wheelchair lift for hoisting materials or personnel during construction period.

1.9 WARRANTY

- A. Warranty: Manufacturer shall warrant the wheelchair lift materials and workmanship for one year following completion of installation.
- B. Extended Warranty (Preventive Maintenance Agreement Required): Provide an Alternate Price for an extended manufacturer's warranty for the entire warranty period covering the wheelchair lift materials and workmanship for the following additional extended period beyond the initial one year warranty:
 - 1. One additional year.

2 PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Garaventa Lift; or equal
Toll Free: 1-800-663-6556
- B. Requests for substitutions will be considered in accordance with provisions of Section 01 00 00.

2.2 ENCLOSED VERTICAL WHEELCHAIR LIFT

- A. Capacity: 340kg (750lbs) rated capacity.
- B. Mast Height:
 - 1. Model GVL-EN-96; 2515 mm (99 inches) maximum lifting height (actual +/- 6'-5" lifting height).
- C. Clear Platform Dimensions:
 - 1. Standard: 914 mm x 1370 mm (36 inches x 54 inches).
- D. Platform Configuration:
 - 1. Straight Through Entry/Exit: Front and rear openings.
- E. Landing Openings:
 - 1. Lower Landing: Door. (Swing: LH, Position: 3)
 - 2. Upper Landing: Gate. (Swing: LH, Position: 2)
- F. Doors and Gates: Doors and gates shall be self closing type.
 - 1. Door Height: Flush mount, 2032 mm (80 inches)
 - 2. Gate Height: Flush mount, 1070 mm (42-1/8 inches).
 - 3. Width: 1067 mm (42 inches).
 - 4. Door Construction: Aluminum frame with:
 - a. Panels of 16 gauge (1.5 mm) painted galvanized steel.

5. Power Door/Gate Operator: Automatically opens the door/gate when platform arrives at a landing. Will also open at landing by pressing call button or gently pulling the door.
 - a. ADA Compliant and obstruction sensitive.
 - b. Low voltage, 24 VDC with all wiring concealed.
 - c. Location:
 - 1) Lower Landing: Door.
 - 2) Upper landing: Gate.

- G. Lift Components:
 1. Machine Tower: Custom aluminum extrusion.
 2. Base Frame: Structural steel
 3. Platform Side Wall Panels: 1070 mm (42-1/8 inches) inches high. 16 gauge (1.5 mm) galvanized steel sheet. Custom aluminum extrusion tubing frame.
 4. Enclosure Panels
 - a. 16 gauge (1.5 mm) painted galvanized steel sheet.

- H. Enclosure Height Above Upper landing:
 1. Enclosure shall extend 1070 mm (42-1/8 inches) above the upper landing level

- I. Infill Panel Kit: Provide 16 gauge (1.5 mm)-galvanized panels and mounting hardware to cover void between side of enclosure, drive mast and adjacent wall at the following locations:
 1. Lower landing.
 2. Upper landing.

- J. Base Mounting and Access to Lift at Lower Landing:
 1. Pit Mount: Lift to be mounted in pit with dimensions to meet manufacturers requirements for the platform size specified. Pit construction shall be in accordance to Section 03300.

- K. Leadscrew Drive:
 1. Drive Type: Self-lubricating acme screw drive.
 2. Emergency Operation: Manual handwheel device to raise or lower platform.
 3. Battery Powered Emergency Lowering: Battery powered platform lowering device that automatically activates in the event of power failure. Allows passenger to drive platform downward to lower landing. Does not operate lift in up direction.
 4. Safety Devices:
 - a. Integral safety nut assembly with safety switch.
 5. Travel Speed: 3.0 m/minute (10 fpm)
 6. Motor: 2 HP
 7. Power Supply:
 - a. 120 VAC single phase; 60 Hz on a dedicated 20 amp circuit.
 - b. Powered by continuous mains converted to 24 VDC, equipped with auxiliary battery backup capable of running lift up and down for a minimum of 5 trips with rated load. Required for high use lifts and lifts equipped with a fan and ventilation system

- L. Platform Controls: 24 VDC control circuit with the following features.
 - 1. Direction Control: Constant pressure rocker switch.
 - 2. Keyless operation.
 - 3. Emergency Telephone: Platform shall be equipped with Autodialer telephone (ADA compliant) with a stainless steel faceplate. Telephone shall operate in the event of power failure. A telephone line shall be supplied to the lift site as specified under Division 16. (if required by authority having jurisdiction)
 - 4. Arrival Gong and Digital Floor Display.

- M. Call Station Controls: 24 VDC control circuit with the following features.
 - 1. Direction Control: Constant pressure rocker switch.
 - 2. Keyless operation.
 - 3. Call Station Mounting:
 - a. Lower:
 - 1) Frame mounted.
 - b. Upper:
 - 1) Frame mounted.

- N. Safety Devices and Features:
 - 1. Grounded electrical system with upper, lower, and final limit switches.
 - 2. Tamper resistant interlock to electrically monitor that the door is in the closed position and the lock is engaged before lift can move from landing.
 - 3. Pit stop switch mounted on mast wall.
 - 4. Electrical disconnect shall shut off power to the lift.

- O. Finishes
 - 1. Aluminum Extrusions: Champagne anodized finish.
 - 2. Ferrous Components: Electrostatically applied baked powder finish, fine textured.
 - a. Color: As selected by owner from MFR's standard colors.
 - 3. Lift Finish: Baked powder finish any color as selected by owner from optional RAL color chart.

3 PART 3 EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. Verify shaft and machine space are of correct size and within tolerances.
- C. Verify required landings and openings are of correct size and within tolerances.
- D. Verify electrical rough-in is at correct location.
- E. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

- A. Install platform lifts in accordance with applicable regulatory requirements including ASME A 17.1, ASME A 18.1 and the manufacturer's instructions.
- B. Install system components and connect to building utilities.
- C. Accommodate equipment in space indicated.
- D. Startup equipment in accordance with manufacturer's instructions.
- E. Adjust for smooth operation.

3.4 FIELD QUALITY CONTROL

- A. Perform tests in compliance with ASME A 17.1 or A18.1 and as required by authorities having jurisdiction.
- B. Schedule tests with agencies and Architect, Owner, and Contractor present.

3.5 PROTECTION

- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Substantial Completion.

...END OF SECTION