

**PART 1- GENERAL****1.1 SCOPE**

To furnish all labor, materials and equipment necessary or required to complete the installation of the lift as indicated on the Drawings and Specifications. This specification is intended to cover the complete installation of the Concord P.A.L. S Vertical Wheelchair Platform Lift design.

**1.2 SYSTEM DESCRIPTION**

Lift assembly shall consist of a platform, guide system, panels and gates primarily constructed from 409 stainless steel and aluminum, 1:2 cable hydraulic lifting device, control system, signals and alarms, electrical wiring, and parts and accessories necessary to provide required performance operation and code and safety requirements.

**1.3 QUALITY ASSURANCE**

1.3.1 The lift shall meet or exceed the applicable regulations of all governing agencies and be in conformance with the applicable sections of the most current edition of the following codes and standards:

- a) ASME A18.1 "Safety Standard for Platform Lifts and Stairway Chairlifts. "Section 2 – Vertical Platform Lifts (Locations other than Private Residences)" – Commercial only. "Section 5 – Vertical Platform Lifts (Private Residence" - Residence only
- b) ICC/ANSI A117.1 "Accessible and Usable Buildings and Facilities".
- c) ANSI/NFPA 70 "The National Electric Code" (NEC).
- d) ADAAG "Americans with Disabilities Act Accessibility Guidelines" (where applicable).
- e) CSA B44.1/ASME A17.5 "Elevator and Escalator Electrical Equipment"
- f) Local codes and regulations, as applicable.

**1.3.2 Requirements of the Regulatory Agencies**

- a) Fabricate and install work in compliance with all applicable jurisdictional authorities.
- b) File shop drawings and submissions to local authorities as the information is made available. Company pre-inspection and jurisdictional authority inspections and permits are to be made on a timely basis as required. Work will include all inspections and re-inspections required to ensure licenses are issued.

**1.3.3 Subcontractor Qualifications**

- a) Execute work of this specification only by a contractor/company who has adequate product and public liability insurance in excess of one million dollars.
- b) Skilled tradesmen must be employees of the contractor and perform the work on a timely basis. Employees must be trained by the manufacturer and be supervised by the lift contractor.

**1.3.4. Substitutions**

No substitutions will be considered unless written request for approval has been submitted by the bidder and received by the architect at least 10 days before the date of receipt of bids. Each such request shall include a complete description of the proposed substitute including drawings, test data, photographs, and any other information needed for consideration.

## **PART 2 - PREPARATORY WORK BY OTHERS**

2.1 The following preparatory work to accommodate the lift is to be done by others:

- 2.1.1 Permanent 110 volt 15 amp power to operate the lift to be provided from a Lockable Fused Disconnect Switch, lockable in the off position with a secondary switch within the main Disconnect to disconnect emergency back-up during maintenance. Refer to architectural drawings for permanent power specifications and location of disconnect. Temporary power may be provided to expedite the installation of lift.
- 2.1.2 Provide clear access to lift installation location and remove all obstacles before lift delivery and installation.
- 2.1.3 Provide adequate overhead clearances as required by the applicable code and as per drawings.
- 2.1.4 Provide a substantial level floor (pit) slab as indicated on lift contractors' shop drawings.
- 2.1.5 Provide finish grouting, and masonry around walls, ceilings, and doors.
- 2.1.6 Provide adequate lighting at lift areas as required by the applicable code.

## **PART 3 - SUBMITTALS**

### **3.1 SHOP DRAWINGS**

The shop drawings shall show a complete layout of the lifting equipment detailing dimensions, clearances and location of lift equipment. Including the following:

- a) Drawings showing the dimensions including plans, elevations, and sections to show equipment locations and their relationship to surroundings.
- b) Anchorage and clearance requirements.
- c) Load and reaction drawings.

## **PART 4 - PRODUCT DATA**

### **4.1 MANUFACTURER / PRODUCT**

Lift shall be the CONCORD P.A.L. S Vertical Wheelchair Platform Lift manufactured by Concord Elevator Inc., Brampton, Ontario, Canada. (905) 791-5555 Fax (905) 791-2222

Installed by Dealer:

Name \_\_\_\_\_ Number \_\_\_\_\_

Rated Load: 750 lbs. (341 kg.)

Normal Speed: 15 fpm (0.08 m/s)

Clear Platform Dimensions: 36" W x 54" L (914 mm W x 1372 mm L) or

- 36" W x 48" L (914 mm W x 1220 mm L) or
- 36" W x 60" L (914 mm W x 15246 mm L) or
- 42" W x 60" L (1067 mm W x 15246 mm L)

Levels Served (Maximum 2) See drawings \_\_\_\_\_

Number of Openings (Maximum 3) See drawings \_\_\_\_\_

Travel Distance (14' (4.2m) max.) See drawings \_\_\_\_\_

Operation: Constant pressure, anti-creep

Power Supply: 110 Volts, 1 Phase, 15 Amps

Drive Type: 1:2 Cable hydraulic

Emergency Operation: Travel UP and DOWN Direction, 24 volt DC automatic recharging back-up battery system

Corrosion Resistance: All materials other than drive train will be 409 stainless steel, aluminum or other corrosion resistant material.

Paint: Baked Electrostatic Polyester Gloss Powder

## **4.2 SIGNAGE**

4.2.1 The lift will have all necessary signs, capacity plates, and data signs as per the Local and national Codes and Standards.

4.2.2 A capacity plate indicating the rated load in pounds and kilograms and operating instructions shall be furnished by the manufacturer and fastened in a conspicuous place at each landing and in the platform. The capacity plate and operating instructions will be engraved on non-glare, micro-surface, white letters on a blue background, self-adhesive, flexible plastic material. The letters and figures stating the capacity shall not be less than 1/4" in height.

## **4.3 LIFT PLATFORM (CAR)**

### **4.3.1 FRAME AND SIDE GUARD PANELS**

Aluminum platform frame 43 3/8" high (1100 mm) with aluminum insert.

### **4.3.2 FLOOR**

Formed stainless steel with non-skid surface.

### **4.3.3 HANDRAIL**

A single stainless steel painted handrail with both ends returned to the wall shall be located on the control wall of the carriage.

### **4.3.4 EMERGENCY OPERATION**

The car shall be equipped with a battery back up system which will provide emergency raising and lowering of the lift, and power an alarm in the event of a main power failure.

### **4.3.5 EMERGENCY LIGHT**

The car shall be equipped with an integral emergency light that will illuminate automatically in the event of a main power failure.

### **4.3.6 CAR OPERATING PANEL**

Shall consist of constant pressure illuminated buttons, an emergency stop switch, alarm button, and an ON/OFF key switch mounted on a removable panel. The key shall only be removable when the key is in the OFF position.

#### **4.4 REQUIRED OPTION - GATES/DOORS**

##### **4.4.1 TOP GATE**

Top gate will be 43 3/8" (1100 mm) high x 36" (914 mm) wide and manufactured from aluminum with a baked polyester gloss powder finish with a bronze color plexiglass insert. The gate section will be complete with hydraulic closer and interlock.

##### **REQUIRED OPTION - LOWER DOOR**

Lower door shall be 84" (2134 mm) high x 36" (914 mm) wide. Height of door frame to be 91 3/8" (2321 mm). The door section to be an aluminum frame with baked polyester finish with a bronze color plexiglass insert to provide clear unobstructed view of the car while in operation. Complete with hydraulic closer and interlock.

#### **4.5 PUMP UNIT AND CONTROLS**

The drive unit and controller shall be enclosed in a water resistant NEMA 3R enclosure. The controller and pump unit shall be pre-wired and tested before shipment. Control circuitry is to be conformally coated PCB and mounted as an integral unit. The pump unit shall include the following features:

4.5.1 Smooth stops at each landing shall be an inherent feature.

4.5.2 Adjustable pressure relief valve.

4.5.3 Manually operated DOWN valve to lower the lift in an emergency.

4.5.4 Pressure gauge with quick connect fitting.

4.5.5 Pressure gauge isolating valve (shut off valve) manually operated.

4.5.6 Gate valve to isolate cylinder from the pump unit.

4.5.7 Fixed pressure compensator flow control valve to set maximum DOWN direction speed regardless of load.

4.5.8 Electrical solenoid for DOWN direction control.

4.5.9 Emergency power raising and lowering by back-up battery power.

#### **4.6 CYLINDER AND PLUNGER**

4.6.1 The cylinder shall be constructed of steel pipe of a sufficient thickness and suitable safety margin. The top of the cylinder shall be equipped with a cylinder head with an internal guide ring and self-adjusting packing.

4.6.2 The plunger shall be constructed of a steel shaft of a proper diameter machined true and smooth. The plunger shall be provided with a stop electrically welded to the bottom to prevent the plunger from leaving the cylinder.

#### **4.7 LEVELING DEVICE**

4.7.1 The lift shall be provided with an anti-creep device which will maintain the carriage level within 1/2" (13 mm) of the landing.

4.7.2 All limit switches and leveling device switches shall be located in a position to be inaccessible to unauthorized persons.

**4.8 PIT SWITCH**

Switch to be located at the base of the mast that when tripped will remove electrical power to the control circuit and stop the operation of the car.

**4.9 CABLE**

Minimum two (2) 3/8" (10 mm) with a minimum breaking strength of 14,400 lbs. each.

**4.10 SAFETY DEVICE**

A slack/broken cable safety device shall be supplied that will stop and sustain the lift and its rated load, if either of the two hoisting cables become slack or fail. The safety device shall be resettable by the operating of the lift in the UP direction. A switch shall be mounted in such a position to sense the operation of the safety device and will open the safety circuit to the controller to prevent operation of the lift in either direction.

**4.11 GUIDE YOKE**

A 1:2 guide yolk/sheave arrangement shall be supplied with a sheave, guide shoes, roller bearings and adjustable cable guards. The sheave shall be furnished with rounded grooves to fit the cables.

**4.12 NORMAL TERMINAL STOPPING DEVICES**

Normal terminal stopping devices shall be electro-mechanically sensed at the top and bottom of runway to stop the car automatically.

**4.13 FINAL LIMIT SWITCH**

Provide a final limit switch that will be electrically sensed and stop the lift should the lift pass the upper normal terminal stopping device.

**4.14 GUIDE RAILS AND BRACKETS**

4.14.1 409 Stainless steel guide rails and brackets shall be used to guide the platform and sling.

4.14.2 Guide rail shall form part of the structural integrity of the unit and be integral to the mast enclosure, ensuring stability and minimum platform deflection when loaded.

**4.15 CAR SLING**

4.15.1 Car sling shall be fabricated from 409 stainless steel with honeycomb construction to support the platform and car.

4.15.2 Roller guides shall be mounted on the top and bottom of the car sling to engage the guide rails.

**4.16 WIRING**

All wiring and electrical connections shall comply with applicable Codes, insulated wiring shall have flame retardant and moisture proof outer covering and shall be run in conduit or electrical wire ways.

**4.17 FINISH**

Electrostatically applied baked polyester powder coating paint finish.

**PART 5 – EXECUTION****5.1 EXAMINATION**

All site dimensions shall be taken to ensure that tolerances and clearances have been maintained and meet local regulations.

**5.2 PREPARATION**

Pre-inspect the construction and service requirements for "Work by Others." These requirements will be included in drawings, diagrams, engineering data sheets and special instructions before the work commences.

**Part 6 – Warranty****6.0 WARRANTY**

Concord Elevator shall provide a Manufacturer's limited parts warranty as outlined in Appendix A.

**Part 7 – Owner's Instruction & Manual****7.0 OWNER'S INSTRUCTION & MANUAL**

After installation is completed, the contractor shall instruct the owner in the proper use, operation and maintenance requirements of the lift. Instructions to also include emergency procedures and safety rules and precautions. The contractor shall also supply the owner with an Owner's Manual detailing the operating, safety, and maintenance procedures of the elevator.

## Appendix A

### Concord Elevator Manufacturer's Limited Product Warranty

Term of warranty – this warranty is valid for a period of 26 months from the date that the product shipped from our factory. Purchase price for product must be paid in full for manufacturer to release parts under this warranty.

Coverage – this warranty applies to the repair or replacement, at Manufacturer's option, of parts that fail due to defective material or workmanship. Manufacturer may, at its option, provide factory reconditioned parts. This warranty is provided to the Authorized Concord Dealer on behalf of the final purchaser of the product and is not transferable. The Manufacturer's warranty does not cover labor charges for the removal, repair or replacement of warranty parts but such costs may be covered for a period of time by Authorized Dealer's warranty, which is provided to purchaser separately.

#### **Conditions:**

- 1) This warranty only applies to products installed and maintained by a Concord Elevator Authorized Dealer in conformance with all applicable local and national codes.
- 2) The warranty is void if regular inspection and maintenance of product is not being carried out by an Authorized Concord Dealer in accordance with the recommendations contained in the Owner's Manual. It is the Owner's responsibility to keep records of all such service.
- 3) This warranty does not apply to the following:
  - 1) Consumable items which include: light bulbs, batteries, oil seals, mechanical switches, guide shoe inserts, drive belts, hydraulic fluids, greases, oils etc.
  - 2) Structural or cosmetic components that are subject to normal wear and tear, external forces and/or misuse. This includes metal panels, glass, plexiglass, gates, doors, buttons, switches, upholstery, trim etc
  - 3) Items that require periodic assessment, maintenance and/or replacement. This includes paint, caulking, weather seals, etc
  - 4) Malfunction or damage to product caused by accident, misuse, abuse or vandalism, lack of proper maintenance, improper installation or placement of product, neglect, improper adjustment, modification or alteration, structural condition of building or hoistway, overloading, failure to follow operating instructions or acts of God.

#### **Standard Procedures:**

Required warranty parts will be shipped at Concord Elevator's expense by UPS ground. Expedited or air shipment of parts is available at Dealer's request and expense. Some parts covered under this warranty may be commercially available from a source close to the job site and Concord will reimburse Dealer for cost to purchase these items provided that approval is obtained from Concord's Technical Support Department in advance.

#### **Disclaimers:**

*Concord disclaims liability for any personal injury or property damage resulting from the operation of a product that has been modified from the original Concord design. No person or*



## P.A.L. S SPECIFICATIONS

*company is authorized to change the design of this product without written authorization by Concord.*

*Concord's obligation under this warranty is exclusively limited to the repair or exchange of parts that fail within the applicable warranty period.*

*Concord assumes no responsibility for expenses or damages, including incidental or consequential damages. Some states and/or provinces do not allow the exclusion or limitation of incidental or consequential damages so the above limitation may not apply to you.*

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*This Warranty supercedes all other published warranties in Owner's and Installation Manuals and applies to all Concord Elevators and Lifts shipped after July 1, 2004.  
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