Section14420

Typical hydraulic vertical platform lift specifications

Savaria model V1504-LUX (Stainless-steel and tempered glass enclosure)

1.0 GENERAL

RELATED DOCUMENTS:

Drawings and general provisions of the Contract, including instructions to Bidders, Supplementary instructions to Bidders, General Conditions, and Specification Sections apply to work of this Section.

DESCRIPTION:

A. Work described in this section includes providing equipment, incidental material and labor required for complete, operable hydraulic platform lift installation. Where singular reference is made to lifts or lift components, such reference shall apply to number of lifts or components required to complete installation. This specification provides a broad outline of required equipment and does not describe the details of design and construction. Lifts shall be erected, installed, adjusted, tested and placed in operation by lift system manufacturer, or manufacturer's authorized installer.

B. Lifts shall be in accordance with the ASME A18.1.

C. The lift described here, manufactured by Savaria Corporation Inc., is a vertical platform lift consisting of a hydraulic tower with a lifting platform and an aluminum enclosure with plexiglass inserts. The platform can be customized to better accommodate a wheelchair user or a person with impaired mobility. The lift can be used indoors or outdoors and in commercial or residential applications.

1.2 PREPARATORY WORK BY OTHERS:

A. The following preparatory work to receive the lifts specified in this section is part of the work by others:

1. Permanent 120 VAC 20 amp single-phase power to operate lift to be provided from a lockable fused/cartridge type disconnect switch with auxiliary contacts for battery operation. Refer to drawings for permanent power specifications and location of disconnects. Temporary power may be provided to expedite installation of lift.
2. Provide a plumb and square hoistway with smooth interior surfaces, including fascias or furring of the hoistway interior.
3. Provide rough openings per lift contractor's shop drawings.
4. Provide substantial, level pit floor slab as indicated on the lift contractor's shop drawings.

1.3 QUALITY ASSURANCE:

A. MANUFACTURER:

Company with not less than 20 years of experience in the design, fabrication and assembly of vertical platform lifts.

B. SUBCONTRACTOR QUALIFICATIONS:

1. Execute work of this section only by a company that has adequate product liability insurance.
2. Skilled tradesmen must be employees of the installing contractor approved by the lift manufacturer, with demonstrated ability to perform the work on a timely basis.

C. REQUIREMENTS OF REGULATORY AGENCIES:

1. Fabrication and installation work in compliance with applicable jurisdictional authorities.
2. File shop drawings and submissions with local authorities as the information is made available. Company pre-inspection and jurisdictional authority inspections and permits are to be made on timely basis as required.

D. SUBMITTALS:

1. Shop drawings shall show a complete layout of lifting equipment detailing dimensions and clearances as required.

3. The lift contractor shall provide physical samples of all items requiring selection of color or finish.

1.4 MAINTENANCE:

A. The lift shall be cleaned regularly and inspected at intervals no longer than every 6 months.

1.5 WARRANTY:

A. Lift shall have a 30 month limited parts warranty.

2.0 PRODUCTS:

2.1 PLATFORM LIFT:

A. Basic specifications of Savaria hydraulic vertical platform lift model V1504-LUX, By Mobility Elevator & Lift Co.
tel: 800-441-4181, Fax: 973-618-9638 e: kamran@mobilityelevator.com

1. Rated Load…….750 lb (340 kg)
2. Rated Speed……25 f.p.m.(nominal) (0.13 m/s) up to 11’10” of travel
3. Usable Car Dimensions……..……34’’x 54’’ (864 X 1,372 mm)
4. Levels Serviced……..2,3,4
5. Number of Openings…….2
6. Car Access……Enter/Exit same side, 90^{o} exit, front/rear
7. Max. Travel……..……..……23 feet (7,000 mm)
8. Operations……..Constant pressure
9. Power Supply…….……110 volt, 20 amp, 1 phase, 60 Hz
10. Drive System…….2:1 Roller chain hydraulic
11. Emergency Power…….....Battery operation in down direction
12. Controller……..Electronic-free relay logic
13. Motor/Pump……..……..…….110VAC, 1.5HP
14. Manual lowering……..On the side of the drive tower
15. Finish…….Stainless steel 304 #4 finish

B. CAR ENCLOSURE:

1. Side guards of platform shall have a stainless steel cladding and shall be at a minimum of 42’’ (1,067 mm) above the upper landing.
2. No platform gate required, allowing for ease of operation.
3. Upper gate shall be 42’’ high x 36’’ wide, with stainless steel frame and tempered glass insert and shall be equipped with interlock, spring hinges and kick plate. Lower door shall be 80’’ high x 36’’ wide, with stainless steel frame and tempered glass insert and shall be equipped with interlock, hydraulic closer and kick plate. The inside kick plate shall be made of stainless steel.
ALTERNATE: Stainless steel and tempered glass enclosure extension at the upper landing with upper door 80” high x 36” wide, double ventilation system and dome.
4. Lift shall have manufacturer’s standard non-skid flooring..
5. Doors and gates shall be flush mounted to avoid pinch points and shear hazards.
6. A double ventilation system shall be provided when a dome is used.
7. Handrail: A single handrail, with a 1-1/2” Diameter and with both ends returned to the side guard shall be located on the control wall of the carriage.

2.2 CAR OPERATION:

A. Car Operating Panel shall consist of constant pressure buttons or rocker switches, emergency stop/alarm button, on/off key switch and emergency light mounted on a removable stainless steel panel (Type 304 #4 Stainless Steel Finish).

B. Emergency Operation — The car shall be equipped with a battery operated light fixture, emergency battery lowering device and alarm in case of normal building supply failure. The battery shall be the rechargeable type with an automatic recharging system. A manual lowering device shall be located on the side of the drive tower in a lockable box.

2.3 PUMPING UNIT AND CONTROL:

A. The pumping unit and control shall be enclosed in the tower. The controller and pump unit shall be pre-wired and tested prior to shipment. The controller is to be electronic-free with relay logic operation for ease of maintenance and service. Pump unit shall incorporate the following features :

1. Smooth stops at each landing.
2. Adjustable pressure relief valve.
3. Manually operable down valve to lower lift in the event of an emergency. This valve shall be activated through a keyed box.
4. Gate valve to isolate cylinder from pump unit.
5. Electrical solenoid for down direction control.
6. Emergency lowering by battery power, from the car control.

2.4 CYLINDER AND PLUNGER:

A. The cylinder shall be constructed of steel pipe of 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.

B. The plunger shall be constructed of a steel shaft of proper diameter machined true and smooth. The plunger shall be provided with a stop ring installed at the bottom to prevent the plunger from leaving the cylinder.

2.5 ROLLER CHAINS:

A. Two (2) No.50 roller chains with 5/8'' pitch. Minimum breaking strength 6100 lb (2773 kg) each

2.6 LEVELLING DEVICE:

A. The lift shall be provided with an anti-creep device which will maintain the carriage level within ½'' (12.69 mm) of the top landing.

B. All limit switches and leveling device switches shall be located in a position to be inaccessible to unauthorized persons. They shall be located within the drive tower and be accessible through removable panels.

2.7 GUIDE YOKE:

A. The 2:1 guide yoke/sprocket assembly shall be supplied with two (2) sprockets or pulleys, roller guide shoes, bearings and guards.

2.8 CALL STATIONS:

A. Provide doorframe mount key-controlled call stations for upper level and lower level on a stainless steel plate (Type 304 #4 stainless steel finish).

2.9 TERMINAL STOPPING DEVICES:

A. Normal terminal stopping devices shall be provided at top and bottom of runway to stop the car positively and automatically. Micro switches shall not be used.

2.10 GUIDE RAILS AND BRACKETS:

A. Steel ''C'' guide rails and brackets shall be used to guide the platform and sling. Guide rails shall form part of the structural integrity of the unit and be integral to the drive tower, ensuring stability and minimum platform deflection when loaded. Drive tower shall have a Stainless steel cladding (304, finish #4).

2.11 CAR SLING:

A. Car sling shall be fabricated from steel tubing 44'' (1,116 mm) high with adequate bracing to support the platform and car enclosure. Roller guide shoes shall be mounted on the top and bottom of the car sling to engage the guide rails. Guide shoes shall be roller type with 3'' diameter wheels.

2.12 WIRING:

A. 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 wireways if located outside the unit enclosure. Quick disconnect harnesses shall be used when possible.

2.13 DOOR LOCKS:

A. The door locks shall be GAL type "N" interlocks or fire rated electric door strikes compliant with ASME A18.1 b 2000.

2.14 DOORS AND GATES:

A. LOW-PROFILE STAINLESS STEEL AND TEMPERED GLASS DOOR (TOP OR/AND BOTTOM LANDING):
This door shall have a flush-mounted stainless steel doorframe, a hydraulic door closer, a vision panel and a handle. GAL interlocks or fire rated electric door strikes compliant with ASME shall be used.

B. TOP LANDING GATE:
This gate is installed on the top landing and shall be used with a GAL interlocks or electric door strikes. The size shall be 42" high and it shall be provided with tempered glass insert.

3.0 EXECUTION:

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

B. 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 begins.

C. INSTALLATION:

1. Install all the components of the lift system that are specified in this section to be provided, and that are required by jurisdictional authorities to license the lift.
2. Trained employees of the lift contractor shall perform all installation work of this section.
3. Adjust lift for proper operation and clean unit thoroughly.
4. Instruct users in operation procedures and Owner's maintenance person in trouble-shooting and maintenance procedures.

END OF SECTION.