

Specifications:

Commercial Hydraulic Accessible Lift - Model Freedomlift

1.0 GENERAL:

1.1 SCOPE:

To furnish all labour, materials and equipment necessary or required to fully complete the installation of the lift as indicated on the drawings and the specifications. The specification is intended to cover the complete installation of a **Global Tardif "Freedomlift"** Vertical Wheelchair Lift design.

1.2 SYSTEM DESCRIPTION:

The lift shall consist of a power unit, car, rail guide system, 1:2 cable hydraulic system, hoistway doors, control systems, signals and alarms, electrical wiring and parts and accessories deemed necessary to provide the required performance, operation code and safety requirements.

1.3 QUALITY ASSURANCE:

- 1.3.1 The lift shall meet or exceed the applicable regulations of all governing institutions and be in compliance with the applicable sections of the following codes and standards:
- a) CAN/CSA B355-00 "Lifts For Persons With Physical Disabilities.
 - b) Ontario Electrical Code consisting of CSA C22.1-02 and the Canadian Electrical Code Part 1.
 - c) Local codes and regulations as required.
- 1.3.2 Requirements of the Regulatory Agencies:
- a) Fabricate and install work in compliance with all jurisdictional authorities.
 - b) File drawings and submissions with local authorities as they are made available. Company and jurisdictional authority inspections are to be made on a timely basis.
 - c) Work will also include inspections by local authorities.
- 1.3.3 Subcontractor Qualifications:
- a) Work of this specification to be done by a contractor/company who has adequate product and public liability insurance.
 - b) All work to be handled by skilled tradesmen and is to be performed on a timely basis.
- 1.3.4 Substitutions:
No substitutions will be considered unless a written request for approval has been submitted by the bidder and is received by the architect 10 days before the bid closing date. Each request shall include all data required by the architect to fairly evaluate the product offered.

2.0 PREPARATORY WORK BY OTHERS:

- 2.1 The following is a list of preparatory work to be performed by others to prepare for the lift installation.
- 2.1.1 Permanent power to operate the lift to be provided to a lockable fused/cartridge type disconnect with elevator rated auxiliary contact for emergency battery lowering. Provide 110v lighting supply and disconnect. Refer to architectural drawings for permanent power specifications and locations of disconnects.
 - 2.1.2 Provide GFI Duplex Receptacle, Pit Light and Switch in the hoistway.
 - 2.1.3 Provide enclosed plumb and square hoistway with smooth interior surfaces. Include for fascias or furring of hoistway interior surfaces where applicable.
 - 2.1.4 Suitable lintels over landing entrances are to be provided over rough openings sized to as per the lift companies shop drawings.
 - 2.1.5 Provide a level pit floor slab to support the loads specified on the lift shop drawings.
 - 2.1.6 Provide adequate support for lift guide rail fastenings.
 - 2.1.7 Provide for a dry pit by providing waterproofing or sump pump as allowed by code.
 - 2.1.8 Provide a pit ladder for pits 914mm (36") or deeper.
 - 2.1.9 Provide finish grouting and masonry around door frames.
 - 2.1.10 Provide finished painting of landing entrances as required.

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3.0 SUBMITTALS:

- 3.1 The shop drawings shall show a complete layout of the lift equipment detailing dimensions, clearances and location of machinery. Including but not limited to the following:
 - 3.1.1 Drawings showing the dimensions including plans, elevations sections and equipment locations.
 - 3.1.2 Load and reaction calculations shall be provided on the drawings.
- 3.2 Provide samples as required for melamine panels, paint and bright metal finishes.

4.0 PRODUCT DATA:

- 4.1 The lift shall be the Freedom lift as manufactured by:
Global Tardif Elevator Manufacturing Group
120 De Naples
Saint-Augustin-de-Desmaures, Quebec G3A 2Y2

Dealer: Canada Custom Elevator Inc. 2660 Meadowvale Blvd., Mississauga, Ontario L5N 6M6
Ph:905.286.4444 Fx:905.286.4355 Toll Free 888.283.1112

- 1. Rated Load: 340kg (750lbs.)
- 2. Rated Speed: 0.13m/s (25fpm)
- 3. Car Dim.: 890mm W x 1524mm D (35" x 60")
- 4. Operation: Constant Pressure Floor Selective Pushbutton
- 5. Power Req.: 575,460,240,208/3/60 30A or 240/1/60 30A
- 6. Travel Dist.: 7000mm (275.6" or 22.966')
- 7. Levels Served: Maximum 6
- 8. Cab Openings: Maximum 2
- 9. Lighting Req.: 120/1/60 15A
- 10. Door Opening: 851mm x 2030mm (33.5" x 80")
- 11. Jack Type: Conventional or 1:2 Cable Hydraulic
- 12. Pump Type: Hydraulic connected via flexible coupling to a continuous rated motor.
- 13. Hoistway Door: Flush mounting swing type with hydraulic closer.

4.2 SIGNAGE:

- 4.2.1 As per national codes and standards the lift shall have all necessary signs, capacity plates and data signs.
- 4.2.2 A capacity plate indicating the rated load in both kilograms and pounds with operating instructions shall be furnished by the manufacturer and fastened in a prominent place at each landing and in the cab. The capacity plate and operating instructions will be printed on a label that will fasten to the cab by a self adhesive backing.

4.3 CONSTANT PRESSURE OPERATION:

- 4.3.1 The operation shall be by floor selective constant pressure pushbutton. Each landing shall be equipped with a single pushbutton and key switch. The key switch is arranged through control circuitry to effectively stop the hall landing stations from being operable. Upon constant pressure of the landing or car button, the car shall travel to it's requested landing.

4.4 CAR ENCLOSURE:

- 4.4.1 Walls shall be 12mm (1/2") melamine panels from Global Tardif standard selection.
- 4.4.2 Ceilings shall be plastic egg crate with with 2 down lights.
- 4.4.3 Floor shall be plywood on steel framing. Flooring by others.
- 4.4.4 Handrail shall be tubular stainless steel located on the control wall of the cab.
- 4.4.5 Emergency Operation will be provided by battery power for lowering, and automatic alarm when building power is lost. The battery will recharge automatically.
- 4.4.6 Emergency cab lighting will be provided by the battery backup system.
- 4.4.7 Car Operating panel shall be #4 stainless Steel and consist of mushroom push buttons for each floor, emergency alarm, keyed stop switch.

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- 4.4.8 All car components, including panels are bolted together for ease of repair and removal.
- 4.4.9 The platform edge on the door side is equipped with an apron extending below the platform floor.
- 4.4.10 Car Lighting will consist of two (2) incandescent down lights. Failure of one lamp will not cause the remaining lamp to extinguish.
- 4.4.11 Automatic Lights Car lights will automatically turn on when the lift door is opened and stay on while the lift is in use. The lights will turn off when the lift is not in use.

4.5 PLATFORM TOE GUARD:

A platform toe guard shall be provided for safety at each car entrance opening to extend below the car entrance opening.

4.6 LEVELING DEVICE:

- 4.6.1 The lift shall be provided with a 2 way levelling device which will maintain the car within 13mm (.5") of the landing.
- 4.6.2 Leveling device switches shall be located in a position, inaccessible to unauthorized persons.
- 4.6.3 Hoistway car position shall be designed for quiet operation.

4.7 LANDING ENTRANCE DOORS:

- 4.7.1 Each landing entrance is supplied as an integral door/frame assembly and carries labels certifying it that it has been laboratory tested and listed for a minimum fire separation rating of 1.5 hrs. Standard hardware included and mounted in the door frame assembly is as follows.
 - a) Two (2) speed adjustable hydraulic door closer.
 - b) Three (3) sets of heavy duty hinges and plates.
 - c) Door vision panel approximately 127mm x 229mm (5" x 9") of clear wired glass.
 - d) A certified lock maintains the door in the closed and locked position when the lift is not at the landing.
 - e) Subject to site limitations the standard entrance is a 914mm x 2019mm (36" x 79.5") swing door available with 1.5 hr. fire rating.
 - f) The door is supplied with a 890mm x 150mm x 1mm stainless steel kick plate and a 125mm x 300mm x 1mm stainless steel push plate.
 - g) The frame is supplied with a 50mm x 150mm x 3mm landing sill.
 - h) the operating controls consist of floor designated button and key switch. The buttons are the "Mushroom Head" type and suitably marked as to their function. The key switch is an on-off type and the key is removable only in the off position. The buttons are mounted either on a 3mm stainless steel plate or directly to the door frame.

4.8 HYDRAULIC POWER UNIT:

- a) The pump is connected through a flexible coupling to a continuous rated motor of a voltage required by site conditions.
- b) The controller shall be located in the mast and integrally mounted on the power unit frame.
- c) The circuitry to be Relay Logic Controls and be located on the pump unit.
- d) The power unit control valve shall be a speed proportional valve type that includes all hydraulic control valving inherently. This valve shall incorporate the following features:
 - i) Up and down acceleration speed adjustment for smooth starts and stops.
 - ii) Smooth stops at each landing shall be an inherent feature of the valve.
 - iii) Adjustable pressure relief valve.
 - iv) Manually operating DOWN valve for emergency elevator lowering.
 - v) Pressure gauge indicating BARS and PSI.
 - vi) Gate Valve to isolate cylinder from pump unit.
 - vii) Negative pressure switch.

4.9 NEGATIVE PRESSURE SWITCH:

In addition to the above, there shall be a pressure sensitive check valve that will activate when negative pressure is sensed in the hydraulic system. The check valve will close and stop the hydraulic cylinder from descending immediately upon sensing a negative pressure.

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4.10 CYLINDER AND PLUNGER:

- 4.10.1 The cylinder shall be constructed of steel pipe of a thickness and suitable safety margin. The cylinder top shall be equipped with a head, internal guide ring and self adjusting packing.
- 4.10.2 The plunger shall be constructed of steel, machined true and smooth to a proper diameter. The plunger will have a stop welded to the bottom to prevent it from leaving the cylinder.

4.11 CABLE: When used a minimum of two (2) 6mm (.250") diameter cables.

4.12 SAFETY DEVICE: A slack/broken cable safety device shall be supplied which will stop and hold the elevator at it's rated load if either of the hoisting cables becomes slack or is broken. It will be reset by the moving of the car in the upward direction. The switch shall be mounted in such a position to sense the operation of the safety device and will open the circuit to the controller to prevent operation of the car in either direction.

4.13 GUIDE YOKE: The 1:2 guide yoke shall be supplied with sheave, guide shoes, bearings, and cable guards. The sheave will have rounded groves to fit the cables.

4.14 NORMAL TERMINAL STOPPING DEVICES: Shall be sensed at the top and bottom of the runway to stop the car automatically.

4.15 CAR SLING:

- 4.15.1 Car sling shall be fabricated from steel, with adequate bracing to support the car assembly.
- 4.15.2 The underside car buffers must stop the car before the plunger reaches it's down limit of travel.
- 4.15.3 Roller guides are to be used to provide superior ride and control.

4.16 WIRING: All wiring and electrical connections shall comply with applicable codes. Wire shall have a insulated, flame retardant and moisture proof covering and shall be run in electrical conduit or wire ways. Travelling cables to be suitably suspended to relieve strain.

4.17 FINISH: All metal surfaces to be suitably painted for protection.

5.1 EXAMINATION: All site dimensions shall be taken to ensure tolerances and clearances are maintained to meet local codes.

5.2 PREPARATION: Pre-inspect construction and service requirements of "Work by Others" which is included on the drawings, diagrams, engineering data sheets and special instructions.

6.0 WARRANTY: The entire elevator shall carry a LIMITED WARRANTY for a period of one (3) years. The warranty shall be for the replacement at no cost of defective but shall not include labour costs to replace the defective part or parts.

7.0 OWNER'S INSTRUCTION AND MANUAL: After installation is complete, the contractor shall instruct the owner in the proper use, operation, emergency procedures, safety rules, precautions and maintenance requirements of the elevator. After instruction, the contractor will leave an "Owners Manual" detailing the above procedures.

END OF SECTION.