

PART 1 GENERAL

1.01 SUMMARY

- A. Limited Use /Limited Application Commercial Direct Acting Hydraulic Elevator.
- B. All terms of this specification are defined by the American Society of Mechanical Engineers Safety Code for Elevators A17.1 (ANSI A17.1 2004)

1.02 RELATED WORK BY OTHERS

- A. The General Contractor shall provide the following in accordance with the requirements of the ANSI A17.1 2004 Codes plus applicable Model Building codes.
 - 1. Clear, plumb hoist way as per submittals by elevator contractor and within the tolerances specified. 2 Hour Fire Resistant rating required for hoist way walls.
 - 2. 75° bevel guards shall be provided over any projection or recesses of over 2" into the hoist way.
 - 3. Supports for all rail brackets in the walls shall be provided in the form of concrete, cement block, or micro-laminate wood running the full height of the hoist way for other types of construction. Wall anchors or thru-bolt system for attaching rail brackets to wall will be provided by Elevator Company.
 - 4. Light fixtures with guards and switch and service outlets with GFI Protection shall be located in the pit and the machine room. Switch shall be located adjacent to the access door.
 - 5. Recesses, supports and patching as required accommodating hall buttons and door frames etc.
 - 6. All barricades outside elevator hoist ways as required maintaining a safe work site.
 - 7. Dry pit reinforced to sustain normal vertical forces from rails, jacks and buffers. Pit floor to be debris free and level.
 - 8. Enclosed and protected machine area. Access to machine areas to comply with the standards set by the authorities having jurisdiction.
 - 9. Where pit depth exceeds 35" a pit ladder is to be provided. Ladder is to be of a non-combustible material and to extend a minimum 48" above sill level or handgrips to that height to be provided. Pit ladder available thru elevator Installation Company for install by General Contractor as per submittals.
 - 10. Heating, cooling and ventilation of machine room or area. Machine room to be maintained between 55 and 90 Degrees F.
 - 11. 240/208vac Power source with a lockable, fused 240vac, 40A, single phase disconnect switch with auxiliary contact located in machine room as per submittal drawings.
 - 12. 120vac Power source with a lockable fused 120vac, 15A, single phase disconnect switch located in the machine room as per submittal drawings.



LULA Architect Specifications Section 14240

13. Clear access above ceiling or metal/concrete raceway in the floor, for oil line and wire troughing from remote machine room to elevator hoist way.
14. Telephone outlet with a 4' tail and male RJ11 plug to be located in machine room adjacent to controller as per submittal drawing.
15. (2) 4" diameter cut-outs in machine room wall common to the hoist way as shown in drawing.
16. All conduit and wire runs remote from either the machine room or the hoist way.
17. Heat and smoke detectors where required shall provide a set of dry contacts to terminate in the machine room.
18. Furnish and install finish flooring in elevator cab
19. Painting of doors and door frames by others.
20. Sump pumps where required by others located as per authorities having jurisdiction.
21. Entrance walls and finished floors are not to be constructed until after the door frames and sills are in place.
22. Where drywall or sheet rock construction is used for hoist way entrances, it shall be of sufficient strength to maintain the doors in true alignment as well as maintaining the fire resistant rating of the hoist way.
23. For masonry construction; Doorframes are to be anchored and grouted in place to maintain fire rating.
24. Filling and grouting around the hoist way entrance to be completed by General Contractor as required.
25. For sill support, the hoist way must be capable of accepting anchor or stud type fasteners.
26. All walls and sill supports must be plumb and square as detailed in submittals.

1.03 QUALITY ASSURANCES

- A. The Vertechs Dealer is a company employing qualified, trained technicians, specializing in the installation of LULA elevator equipment.
- B. All designs, clearances, construction, workmanship and material, unless specifically excepted, shall be in accordance with Federal and State codes and ordinances and the requirements of the Americans with Disabilities Act (ADA), American Society of Mechanical Engineers/American National Standards Institute publications ASME/ANSI A17.1 2004, ICC/ANSI A117.1 and NFPA 70 National Electric Code. Any requirements specific to local Authorities Having Jurisdiction must be addressed at the local level.



LULA Architect Specifications Section 14240

1.04 SUBMITTALS

- A. The elevator Dealer shall, after being furnished the architectural information, submit complete working drawings, detailing the position of all equipment and the loads to be imposed upon the hoist way structure and the minimum hoist way dimensions including pit and overhead.
- B. The elevator Dealer shall provide all necessary color charts and sample selection sheets required for choosing the interior color and finish of the cab.
- C. The elevator Dealer shall provide electrical and communication requirements as well as door detail sheets.

1.05 WARRANTY

- A. *The elevator contractor shall guarantee the material and the workmanship of the equipment installed by them for a period of 24 months from the date of shipping.*

1.06 MAINTENANCE

- A. The elevator included in these specifications shall receive regular maintenance as defined by ASME A17.1 2004. Regular maintenance for this elevator is defined as once every six (6) months.
- B. Regular maintenance will include necessary adjusting, greasing, oiling and replacing parts to keep the elevator operational except for parts that require replacement because of accident, vandalism, negligence or misuse.
- C. Maintenance as well as minor adjustment emergency call back will be conducted during regular work hours as defined by the elevator Dealer.
- D. Any work requested to be performed outside the normal elevator Dealer normal work day will be billed at the overtime rate, including travel time and expense.



PART 2 PRODUCT

2.01 ACCEPTABLE MANUFACTURERS

- A. Provide products manufactured by Vertechs Industries Inc.
- B. Substitutions shall not be considered without written request for approval having been received by the architect at least ten (10) days prior to the bid date.

2.02 ELEVATOR SYSTEMS AND COMPONENTS

- A. Elevator Equipment Summary
 - Service: Limited Use/Limited Application
 - Application: Cantilevered Direct Acting
 - Drive: 1:1 Direct Acting Fluitronic System
 - Capacity: 1400 lbs.
 - Speed: 30 fpm.
 - Max. Travel: 25 ft.
 - Landings: Maximum 3 inline, and 4 front and rear
 - Entrances: 3'-0" x 7'-0" formed steel powder coated primer finish or Stainless Steel
 - Openings: Front or Front & Rear
 - Cab size: 42" x 60" or 48" x 54"
 - Cab Height: 7'-0" interior
 - Operation: CSA and TSSA approved, Microprocessor Single Car Diagnostic Operation, Selective/Collective

- B. Material
 - Rails: 8# T-rails
 - Sling: Structural formed and welded steel with rollers
 - Platform: Structural formed and welded steel with unfinished plywood sub floor and fire barrier

- C. Additional Features and Options
 - Braille and Audible Signals
 - Digital Floor Indicator inside Car
 - Door Open and Close Button
 - Emergency Lighting
 - Emergency Battery Lowering
 - Anti-Creep Levelling
 - Infrared Light Curtain
 - Low Oil Return (Pump Timer)
 - Fire Service Phase I (option – US only)
 - Fire Service Phase II (option – US only)
 - Current Overload Sensor
 - Low -pressure switch
 - Line rupture valve
 - Hands Free Telephone (ADA Compliant)
 - Automatic on /off Lighting
 - Two (2) Speed Pressure Compensated Control Valve
 - Submersible 3.5HP motor

Two (2) Speed Side Slide Automatic Doors
Illuminated Pushbuttons
Formica Laminate Cab
1½ Hour Fire rated Hoist way Doors and Landing Frames
Hoist way Access (option)
Solid Pit Stop
Solid Overhead Stop (option)
Certificate Frame (option)
Keyed Hall Call Buttons (option)
Elastomeric Buffers
Spring Buffers (option)
Pit Switch
Top of Car Station
Independent Service Switch

2.03 MATERIALS AND COMPONENTS

- A. Stainless Steel shall have a #4 Satin finish.
- B. Aluminum sill shall be clear anodized.
- C. Plastic laminates shall be of the general-purpose type and meet the flame spread requirements of the applicable code.
- D. Plastic laminates shall be selected from the elevator company's standard selections.
- E. Power Unit including motors, pumps, valve, controllers, pushbuttons and wiring shall be UL or CSA or equivalent certified.
- F. All anchors, mounting hardware, nuts and bolts shall be designed and sized to handle the loads imposed upon them plus safety factors as specified in the code
- G. Pump shall be of the positive displacement screw type.
- H. A hole less directing acting 1:1 system shall be provided. A 2:1 Roped system shall not be permitted. The system shall include a direct mechanical synchronization to ensure a smooth, steady elevator ride.

2.04 CAB

- A. Cab shall be 7'-0" high as measured from finished floor to underside of ceiling.
- B. The elevator cab interior shall be constructed of black epoxy coated preformed steel walls with plastic laminate, hang on panels.
- C. Door surrounds shall be stainless steel.
- D. The ceiling shall be suspended black frame and aluminum egg-crate diffusers with fluorescent lights.
- E. Cab doors shall be of a smooth flush design and painted a primer beige with #4 SS option
- F. Infrared light curtain protection of the doors shall be included. The devise shall utilize multiple infrared beams to detect obstructions within the path of the doors. Once the obstruction is detected the infrared light curtain will cause the door to open and remain open until obstruction is removed. The infrared beams shall offer substantial coverage of the entrance way as per code.
- G. A brushed #4 Stainless Steel flat hand rail measuring ½" X 2" X 46" shall be provided.
- H. The threshold/sill shall be of extruded aluminum.
- I. The cab finish floor shall be furnished and installed by others.

2.05 HOISTWAY ENTRANCES

- A. Hoist way doors and frame construction shall be UL fire rated.
- B. Hoist way doors shall be fully automatic.
- C. Hoist way doors to be of rigid design and absent of pinch points.
- D. Hoist way doors and frames to be painted a primer powder coat.
- E. Sills shall be of extruded aluminum.

2.06 CAB FIXTURES

- A. The Cab Operating Panel (COP) shall be located in the sidewall of the cab.
- B. Lighted Pushbuttons with Braille Markers shall be provided and located as per the requirements established in the ADA Guidelines.
- C. Other features of the COP include: ADA compliant Telephone, digital position indicator, door open button, door close button and stop key switch.
- D. Automatic on/off light control shall be provided.

2.07 HALL FIXTURES

- A. A single hall pushbutton shall be provided at all terminal floors and located at a height in compliance with ADA guidelines.
- B. Intermediate floors shall be provided with an up button and a down button at a height in compliance with ADA guidelines.
- C. Pushbuttons shall illuminate.
- D. Hall fixtures shall be made of #4 Stainless Steel and located in compliance with ADA Guidelines.
- E. Signage and Braille Jamb Plates shall be provided and located in accordance with ADA Guidelines.

PART 3 EXECUTION

3.01 GENERAL

- A. Prior to commencing elevator installation, an inspection of the hoist way, its openings, pit and overhead and machine room space shall be performed. Verification that all openings, machine room, hoist way and pit are of the correct size and within tolerances and ready for work to be performed. Pit is to be dry and absent of debris. Proper disconnects, telephone line, smoke alarm wires (where required), machine room lighting, service receptacles, pit lighting and service receptacles shall be in place and with power available. Notify the General Contractor in writing of any deficiencies in shaft dimensions, deficiencies in electrical requirements or other conditions detrimental to the proper installation and performance of the elevator system.
- B. Do not proceed with the elevator installation until unsatisfactory conditions have been remedied in an acceptable manner to the elevator installer.

3.02 INSTALLATION OF ELEVATOR SYSTEM

- A. Coordinate elevator work with other trades, for proper time and sequence to avoid construction delays
- B. Entrances shall be set in a vertical alignment with car openings and aligned with plumb hoist way lines
- C. Adjust for smooth acceleration and deceleration of car. Adjust doors to prevent opening of doors at any landing unless the car is at rest at that landing or within the landing zone of selected landing. Adjust automatic levelling to maintain a car floor level $\pm \frac{1}{4}$ " of the landing.



LULA Architect Specifications Section 14240

3.03 PERMITS AND TESTING

- A. The elevator contractor shall obtain and pay for all necessary Municipal and State permits relating to the installation of the elevator at his expense. The elevator contractor shall make all tests as required by the authorities having jurisdiction and to the codes in affect at the time of the award. The elevator contractor shall be reimbursed for any permits, tests or equipment necessitated by authorities having jurisdiction after the date of the award.

END OF SECTION 14240