



SECTION 14 20 00

HYDRAULIC LU/LA ELEVATOR

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**** NOTE TO SPECIFIER **** Garaventa Lift; Elvora LU/LA (Limited Use Limited Application) Elevator.

This section is based on the products of Garaventa Lift, which is located at:
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[\[click Here\] for additional information.](#)

Garaventa Lift is an international company specializing in the manufacturing of wheelchair lifts and elevators. A world leader in the accessibility industry with a reputation for reliability, safety and innovation, Garaventa Lift has over 50,000 installations worldwide.

PART 1 GENERAL

SECTION INCLUDES

**** NOTE TO SPECIFIER **** Delete items below not required for project.

Hydraulic Passenger Elevator.

RELATED SECTIONS

**** NOTE TO SPECIFIER **** Delete any sections below not relevant to this project; add others as required.

Section 03300 - Cast-in-Place Concrete: Concrete for elevator machine foundation, and pit and required sleeves for service penetrations.

Section 06100 – Rough Carpentry.

Section 05500 - Metal Fabrications: Miscellaneous supports, lintels, etc.

Section 07724 - Roof Hatches: Smoke venting hatch at top of hoistway.

Section 07100 - Waterproofing: Pit waterproofing.

Section 08310 - Access Doors and Panels: Fire rated access doors into hoistway.

Section 09260 - Gypsum Board Assemblies: Gypsum shaft walls.

Section 09650 - Resilient Flooring: Floor finish in cab.

Section 09686 - Carpet: Floor finish in cab.

Section 13850 – Detection and Alarm: Fire and smoke detectors and interconnecting devices.

Section 15440 - Sump Pumps.

Division 16 - Electrical:

Electrical characteristics and wiring connections.

Electrical service to lockable fused disconnect in elevator machine room.

Electrical service for machine room, machine room convenience outlets, machine room lighting and lighting in elevator pit.

Telephone service.

REFERENCES

**** NOTE TO SPECIFIER **** Delete references from the list below that are not actually required by the text of the edited section.

ASME A17.1 /CSA B-44 – Section 5.2 Safety Code for Elevators and Escalators, Limited-Use/Limited Application Elevators.

NFPA 70 - National Electric Code.

CSA - Canadian Electric Code.

ADAAG - Americans with Disabilities Act, Architectural Guidelines.

REGULATORY REQUIREMENTS

**** NOTE TO SPECIFIER **** Verify local regulatory requirements. Delete one of the two following paragraphs as required to suit local requirements. First paragraph is for installations in the United States as applicable. Second paragraph is for installations in Canada as applicable.

Provide passenger elevator in compliance with:
ASME A17.1 - Safety Code for Elevators and Escalators,
Limited-Use/Limited Application Elevators.
NFPA 70 - National Electric Code.

Provide passenger elevator in compliance with:
CSA B-44 - Safety Code for Elevators and Escalators,
Limited-Use/Limited Application Elevators.
CSA - Canadian Electric Code.

**** NOTE TO SPECIFIER **** Include the following paragraph as required for ADA requirements. Delete if not required.

ADA: Provide passenger elevator in accordance with the requirements of Americans with Disabilities Act.

SUBMITTALS

Submit under provisions of Section 01300.

Product Data: Manufacturer's data sheets on elevator, including:
Preparation instructions and recommendations.
Storage and handling requirements and recommendations.
Installation methods.

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

**** NOTE TO SPECIFIER **** Delete selection samples if colors have already been selected.

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

Manufacturer's Certificates: Certify products meet or exceed specified requirements.

Closeout Submittals: Provide manufacturer's maintenance instructions that include recommendations for periodic checking and adjustment of cable tension and periodic cleaning and maintenance of all railing and infill components.

PRE-INSTALLATION MEETINGS

Convene minimum two weeks prior to start of work of this section.

Review shaftway, electrical, fire alarm and other requirements with appropriate representatives.

DELIVERY, STORAGE, AND HANDLING

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

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

PROJECT CONDITIONS

Do not use elevator for hoisting materials or personnel during construction period.

WARRANTY

**** NOTE TO SPECIFIER **** The manufacturer's basic warranty is a limited 2 year warranty for the replacement at no cost of defective parts but does not include the labor costs required to replace the defective parts. Delete if not required.

Standard Warranty: Provide a two year limited warranty covering replacement of defective parts and excluding labor. Preventive maintenance agreement required.

Extended Warranty: Provide an additional five year limited warranty covering replacement of defective parts and excluding labor for a total of seven years. Preventive maintenance agreement required.

**** NOTE TO SPECIFIER **** Include the following paragraph if required and delete if not required. Adjust to match extended warranty period above.

MAINTENANCE SERVICE

Furnish service and maintenance for elevator system and components for the following period from Date of Substantial Completion.

One year.

Two years.

Three years.

Four years.

Five years.

Six years.

Seven years.

Include systematic examination, adjustment, and lubrication of elevator equipment. Repair or replace parts whenever required. Use parts produced by manufacturer of original equipment. Replace wire ropes when necessary to maintain required factor of safety.

Provide emergency call back service for this maintenance period.

Perform maintenance work using competent and qualified personnel approved by elevator manufacturer or original installer.

PART 2 PRODUCTS

MANUFACTURERS

Acceptable Manufacturer: Garaventa Lift; United States - P.O. Box 1769, Blaine, WA 98231-1769. Canada - 7505 134A St., Surrey, BC V3W 7B3. Toll Free Phone: 800-663-6556 Email: productinfo@garaventlift.com. Web www.garaventlift.com.

**** NOTE TO SPECIFIER **** Delete one of the following two paragraphs; coordinate with requirements of Division 1 section on product options and substitutions.

Substitutions: Not permitted.

Requests for substitutions will be considered in accordance with provisions of Section 01600.

HYDRAULIC PASSENGER ELEVATORS

Garaventa Elvoron LU/LA Hydraulic Elevator, 1,400 pounds (635 kg) capacity cable hydraulic elevator:
Capacity: 1,400 pounds (635 kg).

**** NOTE TO SPECIFIER **** Select one of the following car size paragraphs and delete the ones not required.

Car Size: Maximum of 18 SF (1.67 sm).

Style 1L: 48 inches by 54 inches (1220 by 1372 mm) with one side right sliding doors.

Style 1L: 42 inches by 60 inches (1067 by 1524 mm) with one side right sliding doors.

Style 1R: 48 inches by 54 inches (1220 by 1372 mm) with one side left sliding doors

Style 1R: 42 inches by 60 inches (1067 by 1524 mm) with one side left sliding doors.

Style 2: 48 inches by 54 inches (1220 by 1372 mm) with sliding doors at each end.

Style 2: 42 inches by 60 inches (1067 by 1524 mm) with sliding doors at each end.

Style 3: 51 inches by 51 inches (1295 by 1295 mm) with sliding doors on two sides.

Style 4: 51 inches by 51 inches (1295 by 1295 mm) with sliding doors on two sides.

**** NOTE TO SPECIFIER **** Select one of the following two travel paragraphs and delete the one not required. Enter total travel in feet as required. This series has a standard travel of 25 feet (7.6 m) and an optional maximum travel of 50 feet (15.2 m) contact Garaventa for additional information.

Travel:

_____ inches.

As indicated on the Drawings.

**** NOTE TO SPECIFIER **** Select one of the following stop paragraphs and delete the one not required. Enter total number of stops as required. This series has a maximum of 6 stops with automatic operation.

Stops:

2 stops.

3 stops.

4 stops.

5 stops.

6 stops.

As indicated on the Drawings.

Speed: Nominal 30 feet per minute (0.15 m/sec).

Pit Depth: Minimum 14 inches (355 mm) required.

Overhead: Total overhead clearance (Refuse Space) 135 inches (3330 mm) above the finished upper landing floor. This space allowance can be reduced to 114" (2896 mm) with the use of a car top prop.

Drive System: 1:2 Cable Hydraulic, Heavy Duty car sling with roller guide shoes running on 8 lb. per foot steel T-rails, Quiet submersed pump and motor (5 HP), Factory pre-set and tested 2-speed valve for smooth start and stop.

Power Requirements:

**** NOTE TO SPECIFIER **** Select one of the following two power paragraph and delete the one not required.

Per manufacturer's shop drawings

A Separate 115-Volt, 15 Amp Circuit is required for car lighting.

Controls:

Garaventa-Design PLC Controller with integrated self diagnostics.

Fully automatic push button at car and landings with Braille markings.

Automatic car light switch upon entry.

Digital floor indicator in Car.

Car arrival lanterns in car door jamb.

Arrival Gong

Car and Hoistway Doors: Nominal 36 inch by 80 inch (914 by 2032 mm) two-speed horizontal sliding hoistway and car doors.

Safety Features:

Emergency back-up power with a manual lowering device.

Safety brake system.

Car operator with integral gate switch.

Automatic bi-directional floor leveling.

Emergency alarm button in car, Emergency keyed stop switch in car.

Overspeed valve.

Final limit switch.

Low oil protection timer circuit.

Standard Features:

Car direction lantern comes with audio and visual signals.

Full height photo-electric door sensors.

Automatic home park feature (can be disengaged during installation if desired).

Options:

***** NOTE TO SPECIFIER **** Select the options required from the following paragraphs and delete the ones not required.

Integrated hands free telephone.

Fireman service (Phase 1).

Car top prop (required where overhead clearance < 135")

Buffer springs (increases your pit depth).

Keyed hoistway access

**** NOTE TO SPECIFIER **** Various arrangements are available to accommodate most machine room configurations but must be within 10 feet of the elevator hoistway and hydraulic jack. Coordinate the machine room size and location with the manufacturer.

Machine Location:

As indicated on the Drawings.

CAB DESIGN

**** NOTE TO SPECIFIER **** Edit the following cab design paragraphs as required. Delete those not required. Floors are wood construction, provided unfinished with finishes provided by others.

Cab Design:

Interior Walls: Laminate panel sections.

** NOTE TO SPECIFIER ** Select one of the following color paragraphs and delete the ones not required.

Designer White

Dove Gray

Cloud Nebula

Kensington Maple

New Age Oak

Empire Mahogany

Silver Array

Bronze Array

Custom as selected by the Architect

Cab Frame:

** NOTE TO SPECIFIER ** Select one of the following finish paragraphs and delete the ones not required.

Mild steel powder coated black

Mild steel powder coated white

Stainless Steel

Mild steel powder coated in a custom color as selected by the Architect.

Custom as selected by the Architect.

Ceiling Finish:

** NOTE TO SPECIFIER ** Select one of the following handrail finish paragraphs and delete the ones not required.

White.

Stainless Steel, brushed finish.

Custom as selected by the Architect.

Handrail Finish:

** NOTE TO SPECIFIER ** Select one of the following handrail finish paragraphs and delete the ones not required.

Stainless Steel, brushed finish.

Bronze, oil-rubbed finish.

Car Operating Panel Finish:

** NOTE TO SPECIFIER ** Select one of the following operating panel finish paragraphs and delete the ones not required.

Stainless Steel, brushed finish.

Bronze, oil-rubbed finish.

Floor: Unfinished plywood.

Lighting: Four recessed L.E.D. down lights.

** NOTE TO SPECIFIER ** Select one of the following finish paragraphs and delete the one not required.

White Trim.

Black Trim.

Optional Chrome Trim.

Car Direction Lantern: Car direction lantern complete with auto and visual signaling device indicating direction of travel and arrival at selected floor.

Car Doors: When open the doors provide a 36 inch (915 mm) by 80 inch (2032 mm) clear opening.

Two Speed Horizontal Sliding equipped with full height photo-electric door sensors, color as follows:

**** NOTE TO SPECIFIER **** Select one of the following finish paragraphs and delete the ones not required.

Matching cab wall finish.

Stainless steel, brushed finish.

HOISTWAY ENTRANCES

Hoistway Entrances: When open the doors provide a 36 inch (915 mm) by 80 inch (2032 mm) clear opening.

**** NOTE TO SPECIFIER **** Select one of the following gate and color paragraphs and delete the ones not required. Solid vinyl accordion gate is standard.

Two Speed Horizontal Sliding equipped with full height photo-electric door sensors, finish as follows:

Primed painted.

Stainless Steel, brushed finish.

Hall Call Stations:

Hall Station Type:

**** NOTE TO SPECIFIER **** Select one of the following paragraphs and delete the one not required.

Keyless Push Button.

Keyed Push Button.

Finish:

**** NOTE TO SPECIFIER **** Select one of the following finish paragraphs and delete the ones not required.

Stainless Steel, brushed finish.

Bronze, oil-rubbed finish.

PART 3 EXECUTION

EXAMINATION

Do not begin installation until preliminary work including hoistway, landings and machine space has been properly prepared.

Verify shaftway is constructed in accordance with ASME17.1 /CSA B-44 and all local codes.

Verify shaftway and machine room environment is designed to have maintainable temperatures between 50 degrees F (15 degrees

C) and 90 degrees F (32 degrees C) and between 5% and 90% non-condensing.

Verify machine room if required provided with lighting, light switch and convenience outlet and conforms to CEC and clear space requirements and local codes.

Verify shaftway shaft and openings are of correct size and within tolerance.

Verify electrical power is available and of correct characteristics.

If preliminary work is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

PREPARATION

Clean surfaces thoroughly prior to installation.

Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

INSTALLATION

Install elevator in accordance with applicable regulatory requirements including ASME A17.1 /CSA B-44 and the manufacturer's instructions.

Install system components and connect to building utilities.

Accommodate equipment in space indicated.

Startup equipment in accordance with manufacturer's instructions.

Adjust for smooth operation.

FIELD QUALITY CONTROL

Perform tests in compliance with ASME A17.1 /CSA B-44 and as required by authorities having jurisdiction.

Schedule tests with agencies and Architect, Owner, and Contractor present.

FIELD SERVICES

Obtain required permits to perform tests. Perform tests required by regulatory agencies.

Schedule tests with agencies and Architect and Contractor present.

Submit test and approval certificates issued by jurisdictional authorities.

ADJUSTING

Adjust for smooth acceleration and deceleration of car so not to cause passenger discomfort.

Adjust automatic floor leveling feature at each floor to provide stopping zone of 1/4 inch (6 mm).

CLEANING

Remove protective coverings from finished surfaces.

Clean surfaces and components ready for inspection.

PROTECTION

Protect installed products until completion of project.

Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION