



SECTION 14 24 33 – BID SPECIFICATIONS RESIDENTIAL ELEVATOR – 1:2 Roped Hydraulic

Part 1 General

1.01 Scope

The scope of this section of work is the provision of and installation – residential elevator and all the necessary equipment required to fully complete the installation and coordinate between the other associated work required by other trades. The equipment specifications are based on the Symmetry Elevating Solutions product design – Hydraulic 1:2 roped drive system with cantilever sling.

1.02 References

- A. Elevator equipment shall be designed, manufactured, installed and maintained in compliance and accordance with the following National and local Standards: Verify with local AHJ.
 - 1. American National Standards Institute – ANSI / ASME A17.1 Part 5.3 Private Residence Elevators.
 - 2. American Society of Mechanical Engineers – ASME
 - 3. ICC / IBC – International Building Codes A117.1
 - 4. NFPA 70–1999 National Electrical Code – NEC

1.03 Quality Assurance

- A. Elevator equipment shall be designed and tested to meet or exceed the above standards and provide the following specific components. All load ratings and safety factors shall meet or exceed those specified by local AHJ and be certified by an independent professional engineer.
- B. Elevator Installer/ contractor shall be certified to install the equipment by the Manufacturer and have the appropriate Local, State or National certifications to install this specific style of equipment. A minimum of 10 years industry experience is required to perform this type work including product and public liability insurance. Copies of current Certificates of Insurance shall be provided with the contract prior to the start of work.

- C. Elevator Inspection shall be performed prior to turn over to owner. Inspection shall be performed by the local AHJ or a competent person trained to perform this type inspection to comply with AMSE A17.2 as it relates to part 5.3 Private Residence Elevators.

1.04 Warranty

- A. The Manufacturer shall warranty component parts of the Symmetry Elevating Solutions equipment for a period of three (3) years from completion of elevator installation. (Submit Warranty details with Owners Manual)
- B. A qualified Maintenance Program, complying with the manufacturer's recommended maintenance schedule, is required during the three (3) year period in order to sustain the warranty.

2.01 Product

General:

- Travel: _____feet_____inches (Maximum of 50'; minimum 12" between stops)
- Speed: 40 FPM
- Load Capacity: 950# (up to 44' of travel)
- Overhead: Minimum of 8' (96")
- Pit depth: 6" minimum
- Floors Served ____2____3____4____5____6
- Cab entrance_____Single opening_____Opposite openings_____90 degree/adjacent openings
- Three year limited parts warranty

2.02 Mechanical Equipment

Mechanical Equipment and Drive: 1:2 Roped Hydraulic

- Modular 6 1/4# T-rail structure
- Car frame assembly: Cantilever
- 208/230VAC, 60Hz, 30 amp single phase power supply for motor controller
- 120 VAC, 60Hz, 15 amp single phase power supply for lighting
- (2) 3/8" 7X19 galvanized aircraft cable (14400# breaking strength) with wedge rope shackles
- 80mm diameter piston/102mm diameter cylinder incl. 1"-3/4" reducer bushing
- 208/230, 3HP submersed motor with 2-speed valve assembly

(1750RPM,17FL Amps)–Manual down valve for emergency lowering

- Screw pump (300 micron screen)
- Positive pressure switch

*Code compliant electrical disconnects included

2.03 Safety Devices:

- Slack rope safety device
- Rupture valve (type “C” safety)
- Motor controller supply disconnect (located in controller)
- Car light supply disconnect (located in controller)
- Pit stop switch
- Car top stop switch
- In-car emergency stop switch and alarm
- Safety switch for car gate(s)
- Battery back up emergency car lights and alarm
- Electromechanical hoistway door interlocks (doors “by others”)

2.04 Controls :

- Programmable Logic Controller (PLC)
- Non-selective collective automatic operation
- Self Diagnostic System with digital display
- Car Operating Panel (COP) with LED floor position indicator – Finish selections, see section 2.05
- Hall stations with call button and car arrival indicator. – Finish selections, see section 2.05
- Recessed phone box in above same finish (phone jack included) – Finish selections, see section 2.05
- Automatic car lighting• Single floor designated car homing
- Low oil run timer
- Uninterruptible Power Supply (UPS) for car lowering and automatic gate operation (if provided), in the event of power failure

2.05 Metal Finishes

- Car Operating panel, Hall call stations & phone box are available in _____brushed stainless steel_____Brushed Brass_____Black ____Vintage Bronze Powder coat – Standard finishes
- Optional Finish selections: _____Polished Stainless Steel_____Polished Brass_____Nickel___Oil Rubbed bronze. Custom finish request_____

2.06 Car Features:

- Cab size up to 18 ft²

• 7'0" interior standard car height; ___7' 11" optional interior car height at "no charge"; ___Custom car heights_____ up to 9'0"

• Interior Car Wall styles

A. Flat veneer interior walls with matching ceiling and matching wood car sill_____

B. Shaker style interior walls with matching ceiling and matching wood car sill_____

C. Victorian Flat style interior walls with matching ceiling and matching wood car sill_____

D. Victorian Raised style interior walls with matching ceiling and matching wood car sill_____

E. Custom design interior wall panels, ceiling & sill_____

(Select one style interior wall panel from above.)

• Unfinished plywood floor with sill set for $\frac{3}{4}$ " (flooring by others)

Custom flooring_____

• 2 energy saving recessed overhead lights with black trim rings

• 7'0" vinyl accordion gate (taller gates provided with taller cab selections) in ___light oak, ___dark oak, ___white, or ___antique white;

Optional real hard wood veneer accordion gate panels _____

(choose from sample kit).

All accordion gates except white have bronze hardware; white gates have aluminum hardware.

2.07 Optional Features:

• Recessed panel car with matching ceiling ___

• Raised panel car with matching ceiling ___

4 recessed LED lights with black trim rings ___

• Factory finished car wall panels _____Stain#;
_____Finish

• COP with integrated phone box ___

• Custom wood interiors

Custom factory finishes (___antiqued, ___distressed, & crackle)

• Green material alternatives and finishes for car interiors

• Scissor gate___

• Hardwood veneer accordion gate___

• Clear panel accordion gate _____all panels or_____3 center panels

• Auto-gate operator (available for use with accordion gate only)

• $\frac{3}{4}$ " finished or unfinished, factory installed, hardwood car flooring

• Factory flooring insert for $\frac{1}{4}$ " flooring "by others"

- Buffer springs (requires minimum of 10" pit depth)
- Upper and lower final limits, in addition to Normal up and down limits
- Key switch for COP and hall stations
- 750# car capacity

3.01 Preparatory Work "By Others":

The installation of the elevator and its' hardware is the responsibility of the Elevator Contractor. The installation and preparation of a suitable hoistway, main power, door installation, pit construction and structural support are Work by Others

- A. Hoistway shall be constructed from dimensional lumber, concrete or concrete block to support loads listed in the shop drawings with elevator rail reaction and pit loading consideration "by others". The hoistway must be plumb and square within ¼" top to bottom and side to side.
- B. All structural member locations in the hoistway walls are per the manufacturer's shop drawings.
- C. Door centerlines are listed on the shop drawings and are NOT the Center of the hoistway.
- D. Main power from the main breaker panel to the elevator location shown in the shop drawings is "by others". Equipment disconnects are included with the controller.
- E. Installation of a live phone line and outlet to the elevator location, as shown on the shop drawings, is work "by others".
- F. Machine Space of approx. 4'x5' (or as required by local AHJ) shall be provided on a lower floor to contain the controller and pump unit. The requirements for this room will be shown on the shop drawings and coordinated with the various trades prior to fabrication. (See shop drawings for layout)
- G. Pre-wire in the walls (if required) shall be coordinated with the builder prior to wall construction and drywall installation.

End of Section