



## Section 14 24 33 – BID SPECIFICATIONS RESIDENTIAL ELEVATOR – In-Line Geared Drive

### 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 – In-Line Geared Drive (IGD) 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 of 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'-6" (102")
- 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: In-Line Geared Drive (IGD)

- 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) #60 roller chain suspension means

- Inverter controlled variable speed geared assembly with in-line geared drive unit and 2 HP motor.

\*Code compliant electrical disconnects included

### **2.03 Safety Devices:**

- Slack chain safety device
- 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”)
- Uninterruptible Power Supply – (UPS) for car lowering and automatic gate operation (if auto gate operator provided) in the case of power failure.

### **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
- 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 ft<sup>2</sup>
- 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 ¾" (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 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  $\frac{1}{4}$ " 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 requirements (when necessary) will be shown on the shop drawings and must be coordinated with the various trades prior to fabrication.
- G. Pre-wire in the walls (if required) shall be coordinated with the builder prior to wall construction and drywall installation.

End of Section