

**Section 14555 Vertical Reciprocating Conveyor****PART 1 - GENERAL****1.1 Section Includes**

- A. Furnish and provide all materials necessary for the complete installation of one Matot Model [ ] 870V [ ] 880V [ ] 890V Vertical Reciprocating Conveyor.
- B. Obtain information on conditions affecting work at jobsite. Including verification of dimensions, field material for anchoring, accessibility and storage space. Verify voltages and outlets on electrical drawings.

**1.2 Work Done By Others**

- A. Electrician shall furnish a properly protected power supply of sufficient capacity.
- B. Provide support and bracing for the framework and enclosure.

**1.3 References**

Design shall be in compliance with the A.S.M.E. B.20.1 standard. Special local requirements shall be determined and handled locally by dealer with manufacturer's agreement.

**1.4 Submittals**

Submit drawings or manufacturer's literature for approval. Drawings shall show equipment dimensions and clearance requirements.

**1.5 Substitutions**

No substitutions will be considered unless written request for approval has been submitted by the bidder and was received by the specifier at least ten (10) days prior to the date of receipt of bids. Each such request shall include the name of the materials for which it is to be substituted and a complete description of the proposed substitute including drawings, cuts, performance and test data, a list of projects of similar scope, photographs of existing installations and any other information necessary for evaluation.

**1.6 Testing**

The conveyor shall be tested after installation to demonstrate:

1. Accuracy of stops
2. Operation of door locks

3. Operation of push-button and key switches
4. Capacity load test
5. All safety devices and circuits are functional.

## **PART 2 - PRODUCTS**

### **2.1 Manufacturer**

Matot Inc., Bellwood, Illinois

### **2.2 Product Type**

- A. Model shall be the Matot Model 800 Series Conveyor. The Vertical Reciprocating Conveyor shall consist of a structural steel framework complete with machined vertical steel guide rails and expanded metal guard barriers at each landing to 8 feet high on all sides. The structure shall support a winding cable drum machine at the top. Overall lift capacity shall be \_\_\_\_ lbs. The carriage shall have platform dimensions of \_\_\_\_ inches wide x \_\_\_\_ inches front-to-back. The loading height of the carriage enclosure shall be \_\_\_\_ inches. Conveyor to serve \_\_\_\_ levels and \_\_\_\_ openings, with a ( ) C configuration or a ( ) Z configuration. Stops will be at \_\_\_\_ inches above the floor level. The travel distance shall be \_\_\_\_ feet \_\_\_\_ inches. Power supply shall be \_\_\_\_\_ volt, 3 phase, \_\_\_\_\_ hertz.
- B. All equipment shall be manufactured in accordance with the latest edition of the National Electrical Code and A.S.M.E. B.20.1 code for Conveyors and Related Equipment.

### **2.3 Fabrication**

- A. **Carriage:** The carriage shall be of fabricated steel construction.
- B. **Guide Rails:** Precision machined steel rails shall be furnished to guide the carriage.
- C. **Machine:** Machine shall be the winding drum type mounted on a steel frame at the top of the structure. Motor shall be of ample horsepower to lift the rated load at the rated speed. It shall be equipped with a spring applied and electrically released brake. The drum shall have precision machined grooves designed to provide long cable life.
- D. **Controller:** NEMA 12 Controller enclosure shall be equipped with lockable door and electrical disconnect. Controller shall be solid state, programmable and Underwriter's Laboratories, Inc. listed.
- E. **Operational Control:** Operation shall be automatic call and send. A pushbutton station with one button for each landing served shall be furnished at each door. It shall be possible at each landing to call the car or send it to any other landing. Pushbuttons shall be inoperative while car is in transit and for a few seconds after arrival at the selected landing.
- F. **Leveling Accuracy:** Carriage platform shall be no more than 1/2" above or below the landing door sill.
- G. **Hoist Ropes.** Provide aircraft type steel hoist cable with a minimum 7 : 1 safety factor.

- H. Entrance Guard Doors:** Doors shall be vertical sliding bi-parting or single panel slide-up. Each door shall be equipped with an interlock to prevent the carriage from moving unless the door is closed and locked. Metal door panels shall be expanded metal.
- I. Manuals:** Provide required instruction manuals, diagrams and parts lists necessary for operation and maintenance of system.

## **2.4 Performance**

- A.** Rated load \_\_\_\_lb. capacity
- B.** Travel speed shall be \_\_\_\_ F.P.M.

## **2.5 Options**

- A.** Fire Rated Entrance Doors: Entrance doors shall bear the Underwriter's Laboratory "B" label and shall be rated for installation in masonry or stud and drywall shaft.
- B.** Power Operated Entrance Doors: Entrance doors shall be power operated. The door shall open automatically upon arrival of the carriage at a landing. The door shall automatically close when the carriage is dispatched to another landing.
- C.** Automatic Load and Unload: The carriage shall be equipped with a motorized transfer module for automatic loading and unloading of material at the landings. A motorized in-feed / receive conveyor station shall be located at each landing door for the automated dispatch and receiving of materials.
- D.** Automatic Unload Only: The carriage shall be equipped with a motorized transfer module for automatic unloading of material at the landings. A gravity roller conveyor station shall be located at each landing door for the automated receiving of materials.
- E.** Touch screen control console.
- F.** Inverter or vector drive allows smooth acceleration and deceleration and for speeds over 50 FPM.

## **PART 3 - EXECUTION**

### **3.1 Installation**

- A.** Coordinate work with appropriate trades.
- B.** Leave standard electrical connection drawings with electrical contractor to make final electrical connection. Wiring within unit shall be done as part of work of this section.
- C.** The installation of this conveyor shall be made in accordance with the approved plans and specifications and manufacture's installation instructions.