

Section 14250

Part 1 - General

1.1 Section Includes

- A. Furnish and provide all materials and labor necessary for the complete installation of one Automatic conveyor system.
- 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. Suitable, legal, two-hour fire rated hoistway, if consistent with building construction.
- B. Hoistway door walls must not be erected until doors are set in place.
- C. Electrician shall furnish power supply with line disconnect switch immediately adjoining the controller cabinet.
- D. Hoistway free of all pipes and obstructions.
- E. All bracket fastening inserts and other steel required for support of guide rails and brackets.
- F. Painting of exterior walls and prime finished components which are exposed to view, including inside of car, car gates and doors.
- G. Machine area lighting and convenience outlet.

1.3 References

Design and installation shall be in compliance with regulations and all governing agencies. Lift shall be subject to local, city and state approval prior to installation, along with city and state inspection after installation. Special local requirements shall be determined and handled locally by distributor with manufacturer's agreement.

1.4 Submittals

Submit drawings or manufacturer's literature for approval. Drawings shall show rough-in requirements and wiring materials.

1.5 Substitutions

No substitutions will be considered unless written request for approval has been submitted by the bidder and was received by the architect 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 hoistway door locks
3. Operation of final terminal switches
4. Operation of push-button and key switches
5. Capacity load test. Operate conveyor for a period of twenty (20) minutes with a capacity load. Run conveyor from top terminal floor to bottom floor with one minute between starts after each stop.

PART 2 - PRODUCTS

2.1 Manufacturer

Matot Inc., Bellwood, Illinois

2.2 Product Type

- A. Model shall be the Automatic conveyor system. The vertical conveyor shall consist of vertical steel rails supporting a machine at the top and guiding a traveling carriage with a transfer conveyor.
- B. Overall lift capacity and the tote box and transfer capacity shall be a maximum of 100 lbs. Conveyor to serve _____ stops and _____ openings, located on () same, () opposite side(s) of the hoistway. The car shall stop at counter-height. The travel distance shall be _____ feet. Power supply shall be _____ volt, 3 phase, _____ hertz.
- C. All equipment shall be manufactured in accordance with the latest edition of the A.S.M.E.B.20.1 code for Conveyors and Related Equipment .

2.3 Fabrication

- A. Carriage: The carriage shall be minimum 16 gauge stainless steel frame, complete with transfer conveyor and transfer guides.
- B. Transfer Conveyor: Tote boxes shall be conveyed on and off the carriage and into or from the send-receive station using the motorized transfer conveyor. The transfer conveyor shall consist of twin timing belts driven by a 1/6 horsepower, 115 volt motor.
- C. Guide Rails: Steel tee rails or structural tube rails shall be furnished to guide the car. Guide rails shall be mounted to the floor slabs and hoistway wall with steel brackets.
- D. Machine: Machine shall be the winding drum type mounted on a steel frame connected to the rails at the top or bottom. Motor shall be of ample horsepower to lift the rated load at the rated speed, with a high starting torque and low starting current. It shall be equipped with a spring applied and electrically released brake. Vibration/sound isolators shall be provided at the mounting points of the machine to the rails. The drums shall

be semi-steel, with machine grooves designed to provide long cable life.

- E. Controller: Controller shall be wall mounted type with lockable door, located on hoistway outer wall in sight of machine access door. Controller shall be solid state programmable and Underwriter's Laboratories, Inc.
- F. Operational Control: Automatic Call and Send, with automatic loading/unloading at all openings. Central station control shall be at ____ floor. Other floors shall have call stations to return tote boxes to central station.

Dispatch stations: Dispatch stations at each landing shall include the following:

- An illuminating push-button for dispatching to each floor
- One "Send Confirmed" light
- One "Incoming Tote" light
- One "Alarm" light
- One "Stop" light

Note: If operation is dispatch from only one central station to other floors and other floors shall only return totes to the central station, specified operation should be entitled "Central Dispatch With Return". In this operation receiving floors would have a single "Return" pushbutton instead of pushbuttons for each floor.

- G. Leveling Accuracy: Car floor shall be no more than 1/4" above or below the level of the hoistway door sill.
- H. Hoist Ropes: Minimum, two, 3/16 " by 7 by 9 galvanized aircraft cable steel cable with a 10 to 1 safety factor.
- I. Final Limit Stopping Devices: Provide per code
- J. Guide Shoes: Guide shoes shall be adjustable, renewable dry type.
- K. Hoistway Doors: Door shall be vertical sliding bi-parting. Each door shall bear the Underwriters "B" label and shall be rated for application in (a) masonry shaft or (b) metal stud drywall shaft. Hollow metal door panels shall be 16 gauge stainless steel with satin polish & No.4 finish. Each hoistway door shall be operated by an individual 1/6 horsepower, 115 volt motor operator. .
- L. Machine Access Door: Hinged access door shall be 24" w x 24"h and shall be furnished at machine location for service and maintenance. Access door shall be 16 gauge stainless steel with satin polished No.4 finish.
- M. Transfer Tables: At each entrance furnish a motorized, one tote box capacity transfer table with container sensing switches. Table shall have neoprene continuous belt transfer surface. All trim and frame shall be #4 satin polished stainless steel.
- N. Tote Box Containers: Furnish ____molded fiberglass containers 17"wide x 20"long x 10"high which are compatible with transfer system.
D.A. MATOT INC. MUST APPROVE THE TOTE BOX CONTAINERS IF FURNISHED BY OTHERS.
- O. Manuals: Provide required instruction manuals, diagrams and parts lists necessary for operation and maintenance of system.

2.4 Performance

- A. Rated load 100lb. capacity
- B. Travel speed shall be 100 F.P.M.
- C. Drive and Control shall be variable voltage, variable frequency A.C.

Part 3 - Execution

3.1 Installation

- A. Coordinate work with General Contractor.
- 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 the is section, 20 amp circuit required.
- C. The installation of the conveyor system shall be made in accordance with the approves plans and specifications and manufacture's installation instructions.