

## Section 14100 - DUMBWAITERS

### 1.1 PART 1 GENERAL

- A. Drawings and general provisions of the contract, including general and supplementary conditions and division 1 specification sections, apply to this section.

### 1.2 SUMMARY

- A. This section includes power dumbwaiters and self supporting dumbwaiter structures.
- B. Related sections include the following.
  - 1. Division 9 painting sections for field painting of hoistway entrances.
  - 2. Division 16 sections for electrical service to dumbwaiters, including disconnect switches.

### 1.3 PERFORMANCE REQUIREMENTS

- A. Speed: 30 fpm. Optional 50 fpm
- B. Capacity: 250 lbs.
- B. Car size: 30 inches wide by 30 inches deep by 36 inches high.

### 1.4 SUBMITTALS

- A. Product Data: Include capacities, sizes, performances, operations, safety features, Controls, finishes for dumbwaiters.
- B Shop Drawings: Include plans, elevations, sections, details and attachments to other work.
- C. Samples for initial selection: For units with factory-applied color finishes.
- D. Product certificates for each type of dumbwaiter, signed by product manufacturer.
- E. Qualification Data: for installer.
- F. Operation and Maintenance data: for dumbwaiters to include in emergency, operations and maintenance manual.

## 1.5 QUALITY ASSURANCE

- A. Installer Qualifications: Dumbwaiter manufacturer or qualified installer approved by dumbwaiter manufacturer.
- B. Regulatory Requirements: Comply with ASME A17.1
- C. Fire Rated Door Assemblies: Door and frame assemblies comply with NFPA 80 that are listed and labeled by a testing and inspection agency acceptable to authorities having jurisdiction, for the fire-protection ratings indicated, based on testing at as neutral pressure as possible according to NFPA 252.
  - 1. Hoistway Door Rating: One hour with 30-minute temperature rise of 450degree F.
  - 2. Access Door Rating: One hour with 30-minute temperature rise of 450 deg. F.
- D. Electrical Components, Devises and Accessories: Listed and labeled as defined in NFPA 70 article 100, by a testing agency acceptable to authorities having Jurisdiction and marked for intended use.

## 1.5 MAINTENANCE SERVICE

- A. Initial Maintenance Service: Beginning at substantial completion, provide one year's full maintenance service by skilled employee of dumbwaiter installer. Include monthly preventive maintenance, repair or replace worn or defective components, lubrication, cleaning and adjusting as required for proper dumbwaiter operation at rated speed and capacity. Provide parts and supplies same as those used in the manufacturer and installation of original equipment.

## PART 2 – PRODUCTS

### 2.1 MANUFACTURERS

- A. Available manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the work include, but are not limited to, the following:
  - 1. Elevation Innovation Inc. (877) 345-4387 [www.eilifts.com](http://www.eilifts.com)

### 2.2 MATERIALS AND COMPONENTS

- A. General: Provide manufacturer's standard pre-engineered dumbwaiters. Where not otherwise indicated, provide manufacturer's products as indicated in published product literature as required for complete dumbwaiter system.

- B. Systems and machinery:
1. Driving Machine Type: Manufacturer's standard – winding drum.
  2. Hardware: Attachments required for fastening guide-rail and other dumbwaiter Components to structural building framing.
  3. Machine Location: Unless otherwise indicated, locate dumbwaiter machine inside shaft at bottom of hoistway.
- C. Control system: Provide Manufacturers standard fully automatic call-and-send control system that responds to momentary push-button signals at each landing as follows:
1. Car shall not respond to calls for service while in transit, for a predetermined time after arrival at a landing, and when doors are open.
  2. Noninterference Timer: Provide a limited period of time for receiving for receiving station to gain access to car before it responds to next station call for service.
- C. Leveling tolerance: Provide car stopping system with ½ - inch (13mm) leveling Tolerance, regardless of load or direction of travel.
- E. Provide the following materials and finishes for exposed surfaces of dumbwaiter car, Enclosures, car doors, hoistway doors and frames and signal equipment.
1. Steel Sheet: Cold-rolled steel sheet, ASTM A 1008/A 1008M; or hot rolled steel sheets, ASTM A 1011/A 1011M.  
A: Finishes: Manufacturer's standard prime-coat finish ready for field painting.  
b: Color: Match architects sample.
- F. Car construction: Manufacturer's standard.
1. 12 ply Russian birch with dove-tail joints and two cotes of factory clear coat.
  2. Shelves: Removable.
  3. Glazed port through hoistway door sufficient for observation that car is landing (optional).
- G. Hoistway Doors and Frames: Manufacturer's standard
1. Frames: Flush hollow metal frames
    - a: Frames of depth and profile indicated to coordinate with hoistway wall construction.
    - b: Formed metal sill members of not less than 0.0598-inch(1.5mm) thickness.
    - c: Frame material: Sheetmetal.

- 2. Doors: Flush hollow metal doors.
  - a: Side hinged doors, same width and height as car.
  - b: Door finish material: Steel sheet.
  
- H. Signal Equipment: Manufacturer's standard signal equipment at each landing push-button station; include call / send button for each landing served, and illuminated "car- in-use" and arrival flashing signal

## 2.3 FINISHES GENERAL

- A. Comply with NAAMM's "Metal finishes manual for architectural and metal products" for recommendations for applying and designating finishes.

## PART 3 – EXECUTION

### 3.1 EXAMINATION

- A. Examine conditions, with installer present, for compliance with requirements for hoistway installation tolerances and other conditions affecting performance at work.
  - 1. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 INSTALLATION

- A. Comply with manufacturer's written instructions.
- B. Alignment: Coordinate hoistway doors with dumbwaiter travel and car positioning for accurate alignment and minimum clearance between car, hoistway doors, sills, and door frame at each level.
- D. Set sills flush finished surface of floors or counters. Fill space under sills solidly with non shrink, non metallic grout.
- E. Lubricate operating parts of dumbwaiter to manufacturer's recommendation. Elevation Innovation Inc. Intelli-Lift guide rails come pre-lubricated.

### 3.3 FIELD QUALITY CONTROL

- a. Test-operate dumbwaiter continuously between lowest and highest landings served, hoisting full rated capacity load for a minimum of 30 minutes. Re- adjust car stops and other devices and signal equipment for accurate landings and operation of systems after completing test.

### 3.4 DEMONSTRATION

- A. Engage a factory-authorized service representative to train Owners maintenance personnel to operate, adjust and maintain dumbwaiters.

END OF SECTION 14100