

## SECTION 14100

### DUMBWAITERS

#### PART 1 GENERAL

##### 1.01 SUMMARY

A. The product described herein, manufactured by USM, is a dumbwaiter designed and dimensioned to provide material delivery to all levels to the home based on the individual's requirement.

##### 1.02 REFERENCES

A. Dumbwaiter shall be designed, manufactured and installed in accordance with the following standards:

1. American National Standards Institute (ANSI).
2. Society of Mechanical Engineers (ASME).
3. International Building Code (IBC).
4. National Electrical Code (NEC).
5. American Society for Testing Materials (ASTM)
6. American Welding Society (AWS).

##### 1.03 SYSTEM DESCRIPTION

- A. Drive System: Battery powered rack and pinion drive with 24VDC 1/3 hp motor with automatic operation.
- B. Number of Stops: *(specify:)* Two, three or four.
- C. Car Configuration: *(specify:)* Straight-thru, 90° side exit or enter/exit same side.
- D. Maximum Travel: *(specify:)* Up to 30'.
- E. Rated Load: 200 lbs.
- F. Rated Speed: 16 fpm.
- G. Car Size: *(specify:)* 20" wide x 20" deep x 30" high, 24" x 24" deep x 30" high (200 lbs capacity) or 30" x 30" x 36" (275 lbs capacity).
- H. Car Walls: *(specify:)* Powder coated steel panels or stainless steel panels with brushed finish.
- I. Car Ceiling: To match wall panels.
- J. Car Gate: Bi-parting vertical sliding panels.
- K. Operating Features:
1. Hall Stations: Push button, automatic operation *(specify option:)* key switch provided at each station.
  2. Hoistway Door Interlocks: Honeywell residential interlocks (RDI) *(specify option:)* commercial rated interlock.
  3. 24VDC brake on motor.
  4. Upper and lower terminal limits.
  5. Upper and lower final limit.
  6. Car gate switch.
  7. Machine access door switch.
  8. Overspeed governor.
  9. *(specify option:)* Automatic homing to predetermined floor.
  10. *(specify option:)* "Car Here" indicator.
  11. *(specify option:)* Automatic car lighting.
  12. *(specify option:)* Unfinished maple hoistway doors.

##### 1.04 QUALITY ASSURANCE

- A. Manufacturer: Provide dumbwaiter manufactured by a firm with a minimum of 5 years' experience in fabrication of lifting devices.
- B. All designs, clearances, workmanship and material, unless specifically accepted, shall be in accordance with all codes having legal jurisdiction.

- C. All load ratings and safety factors shall meet or exceed those specified by all governing agencies with jurisdiction and shall be certified by a professional engineer.
- D. All load ratings and safety factors shall be certified by a recognized independent third party testing laboratory.
- E. Dumbwaiter shall be subject to applicable state, local and city approval prior to installation and subject to inspection after installation. Determination of and adherence to these regulations is the responsibility of the dumbwaiter contractor.
- F. Substitutions: No substitutions permitted.
- G. Welders certified in accordance with requirements of AWS D1.1 shall perform all welding of all parts.

#### 1.05 WARRANTY

- A. Warranty: Manufacturer shall warrant component parts of the dumbwaiter for a period of two years and drive train for a period of 5 years after installation.

#### 1.06 MAINTENANCE

- A. The dumbwaiter must be maintained in accordance with manufacturer's instructions.

### **PART 2 PRODUCT**

#### 2.01 MANUFACTURER

- A. Provided USM dumbwaiter.

#### 2.02 MATERIAL

- A. Guide Rail: Extruded aluminum.
- B. Rack and Pinion: Steel.
- C. Car Frame: 7 and 11 ga. structural and formed steel plates.

#### 2.03 FINISHES

- A. Components shall be prepared with 1)alkaline detergent wash, 2)clear water rinse, 3)iron phosphate coating, 4)clear water rinse and finished with electrostatically applied and baked thermosstatic powder coat finish for indoor or outdoor use. Standard color is RAL 9002.

#### 2.04 ELECTRICAL SYSTEMS

- A. The electrical contractors shall provide:
  - 1. 110 VAC, single phase, 20 amp, 60 Hz power circuit in the bottom of the hoistway.

### **PART 3 EXECUTION**

#### 3.01 ACCEPTABLE INSTALLERS

- A. Installers shall be experienced in performing work of this section who have specialized in work comparable to that required for this project.
- B. Installers shall be certified and trained by the manufacturer.

#### 3.02 EXAMINATION

- A. Use field dimensions and approved manufacturer's shop drawings to examine substrates, supports and other conditions under which this work is to be performed. Do not proceed with work until unsatisfactory conditions are corrected.

#### 3.03 INSTALLATION

- A. The dumbwaiter shall be installed in accordance with manufacturer's instructions and as specified and approved by architect.
- B. Hoistway doors shall be installed by others.

3.04 DEMONSTRATION

- A. The dumbwaiter contractor shall make a final check of the dumbwaiter's operation with the Owner or Owner's representative present prior to turning the dumbwaiter over for use. The dumbwaiter contractor shall determine that operating and safety devices are functioning properly.

END OF SECTION