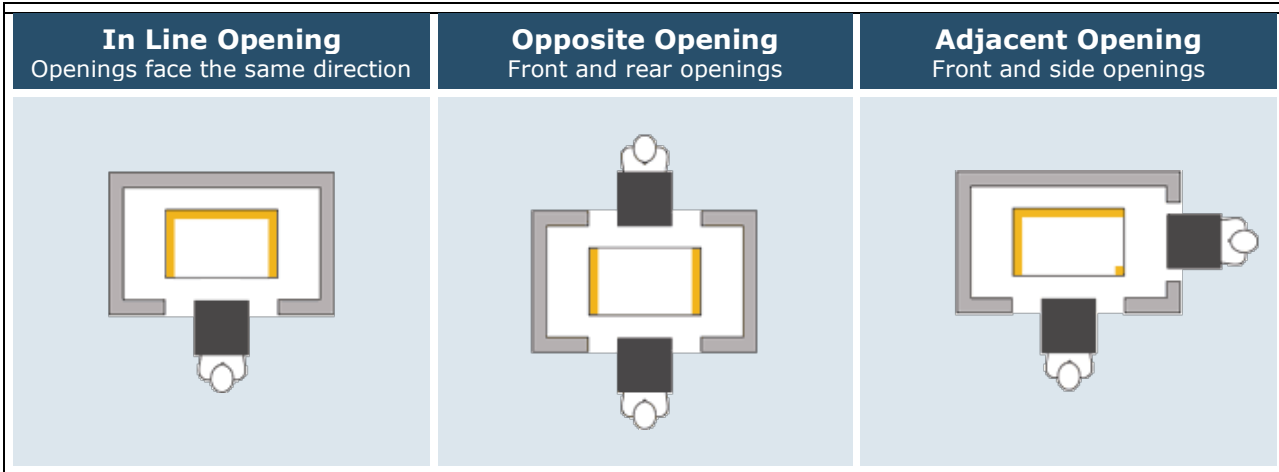


INSTRUCTIONS FOR FILLING OUT SPECIFICATION

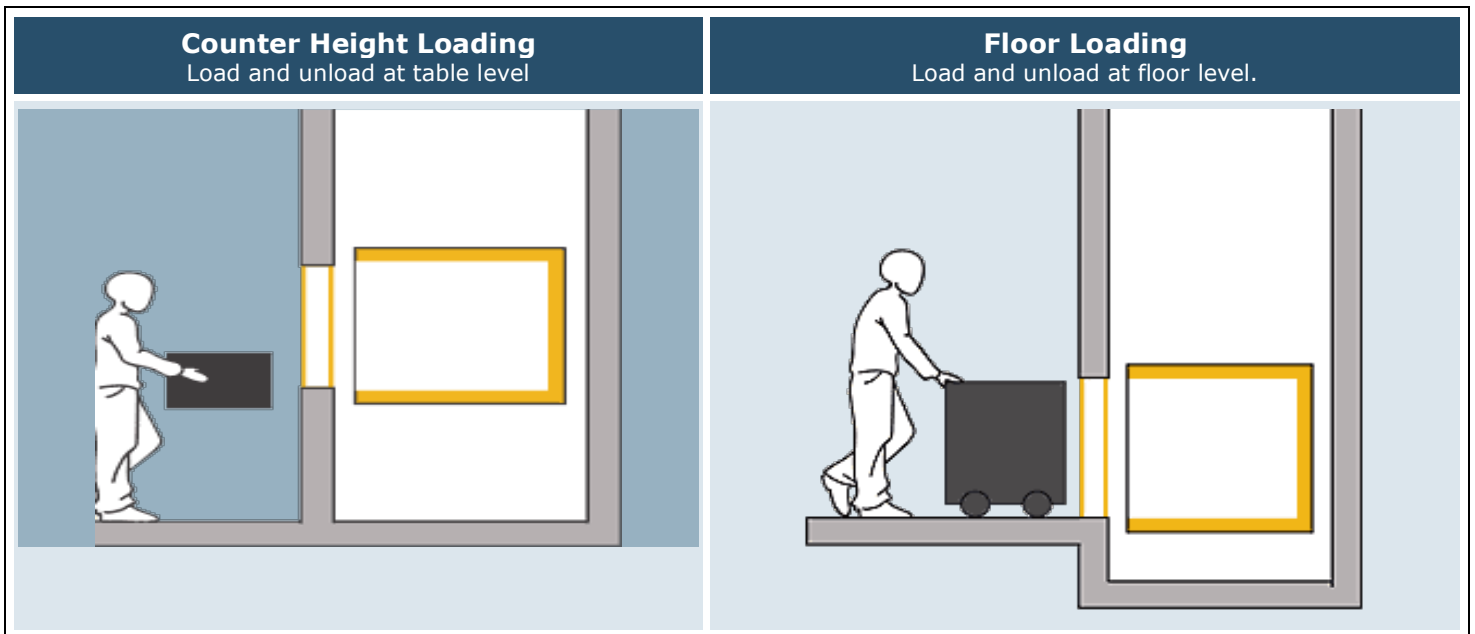
- 1) Notes in red are instructions only. Delete the instructions when complete.
- 2) Fill out the specification by tabbing to shaded boxes and filling in answers or choosing from drop down boxes.
- 3) You can edit other areas of the specification, but you must unprotect the document first.

Below are some graphics that will help you to answer specification questions

2.02 F Opening configuration of the hoistway



2.02 G The car shall stop at



DUMBWAITER / TOTE LIFT SPECIFICATIONS FOR

Section 14100 Dumbwaiters

Part 1 - General

1.01 Section Includes

This section includes all labor and materials necessary for the furnishing and installing of an electrically operated dumbwaiter as indicated on the drawing and/or specified herein.

1.02 Related Sections

- A. A suitable, legal two-hour fire rated hoistway shall be provided on a concrete slab. The hoistway shall be plumb and hold its clear dimensions with no obstructions such as pipes or ductwork. Note: Hoistway door walls shall NOT be erected until Dumbwaiter doors are set in place.
 - 1. Section 03300 – Cast-In-Place Concrete
 - 2. Section 04300 - Unit Masonry System
 - 3. Section 06112 - Wood Framing and Sheathing
 - 4. Section 09260 - Gypsum Board System

- B. All bracket fastening inserts and other steel required for support of guide rails and brackets.
 - 1. Section 05500 – Metal Fabrications

- C. Painting of exterior walls and prime finished components that are exposed to view, including inside of car, car gates and doors.
 - 1. Section 09900 – Finish Painting

- D. A power line from the source to an approved 30 ampere fused disconnect switch located immediately adjoining the controller cabinet must be provided. A 110V single phase machine area lighting and convenience outlet must also be provided.
 - 1. Section 16010 - Electrical

1.03 References

- A. Comply with applicable building codes and elevator codes at the project site, including but not limited to the following;
 - 1. ASME A17.1/CSA B44 - Safety Code for Elevators and Escalators.

 - 2. ASME A17.2/CSA B44 - Inspector's Manual for Electric Elevators.
 - 3. ASME A17.5/CSA B44 - Elevator and Escalator Electrical Equipment.
 - 4. NFPA 70 - National Electrical Code.
 - 5. ASME/UL - 10B Fire Tests of Door Assemblies

MATOT

6. ASME/UL - 508 Industrial Controllers

1.04 Submittals

- A. The shop drawings will indicate physical and nominal dimensions, capacities, sizes, speeds, performances, operations, safety features, controls and finishes of equipment and accessories.
- B. The shop drawings will indicate dimensions, attachments, reinforcing and location of hoistway and other fixed building components and amount of loads and reactions on building structure and will identify coordination required by other sections.

1.05 Quality Assurance

- A. Manufacturer has been engineering and producing Dumbwaiter and Dumbwaiter related products for a minimum of twenty five years.
- B. Manufacturers unit will be subject to city and state approval before installation and city and state inspection after installation.
- C. Installer Qualifications: Company specializing in performing Work of this section and approved by dumbwaiter manufacturer.

1.06 Delivery, Storage, and Handling

- A. The Dumbwaiter and its components will be contained in wooden crates or cardboard boxes made of sufficient strength to ensure the safety of its contents during reasonable transportation and storage conditions.
- B. The Dumbwaiter and its components under no time during transportation or storage should be subjected to harsh weather conditions such as rain or snow.

1.08 Project/Site Conditions

- A. The area and conditions in which the Dumbwaiter is to be installed will be checked by the installer and will meet their satisfaction. Installation will not proceed until the conditions and area the Dumbwaiter will be installed meet the satisfaction of the installer.

1.09 Sequencing/Scheduling

- A. Prior to installation of the dumbwaiter the hoistway must be complete except no hoistway walls should be erected where Dumbwaiter entrances occur until after Dumbwaiter doors are set in place.
- B. Prior to installation of the dumbwaiter a power line from the source to an approved 30 ampere fused disconnect switch must be provided. The disconnect must be located immediately adjoining the intended location of the controller cabinet. A 110V single phase machine area lighting and convenience outlet must also be provided.

MATOT

1.10 Warranty

- A. Manufacturer agrees to repair or replace components of the dumbwaiter that fail in materials or workmanship for a period of one year after delivery, other than that caused by normal wear and tear or misuse.

1.11 Maintenance Service

- A. Furnish service and maintenance for dumbwaiter system and components for one year from the Date of Substantial Completion.
- B. Include systematic examination, adjustment, and lubrication of dumbwaiter equipment. Repair or replace parts whenever required. Use parts produced by manufacturer of original equipment. Replace wire ropes when necessary to maintain required factor of safety.
- C. Provide emergency call back service for this maintenance period.
- D. Perform maintenance work using competent and qualified personnel approved by dumbwaiter manufacturer or original

PART 2- PRODUCTS

2.01 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by the following:
 - 1. Matot Inc, 2501 Van Buren, Bellwood, Illinois 60104
Phone: 800-369-1070 Fax: 708-547-1608
Email: sales@matot.com Web Site: www.matot.com
- B. Substitutions: Choose One:

2.02 MATERIALS

- A. General: Provide manufacture's standard pre-engineered dumbwaiters. Where not otherwise indicated, provide manufacture's product as indicated in published product literature and as required for complete dumbwaiter systems.
- B. Systems and Machinery
 - 1. Model shall be the Matot Dumbwaiter
 - 2. Car shall have clear inside dimensions of
 - a. Width: 24 inches wide

Left to right looking into the car

Depth: 30 inches deep

Front to back

Height: 36 inches high.

Note: Maximum car size for a dumbwaiter is 1 square meter x 48" high per ANSI A17.1.

- C. Lift capacity to be 200 pounds. Tote transfer capacity is 50 lbs.

Note: Minimum capacity is 13.9 lb per cubic feet of car size.

MATOT

D. Dumbwaiter to serve stops.

How many floors will it serve?

E. Dumbwaiter to have openings.

How many landing entrances will it have?

F. Opening configuration of the hoistway Choose One:

G. The car shall stop at counter height

H. The travel distance shall be feet inches.

Total Floor to floor height of the floors served

I. Nominal travel speed shall be 50 F.P.M.

Note: travel speeds up to 300 fpm are available for distances exceeding 50 feet.

J. Power supply shall be volt, Choose one:3 Phase Preferred) and 60 hertz.

2.03 Fabrication

A. Car Enclosure: The car shall be constructed of 16 gauge:Choose One:.

B. An electrical light fixture shall be recessed in the ceiling.

C. Car Gates: The car shall be equipped on each open side with a gate matching the car construction and finish.

1. The gate shall be vertical sliding design.
2. Car gate(s) operation shall be power operated.
3. Gates shall be provided with a reversing edge on the bottom of the upper panel. Motorized gates shall operate the outer hoistway doors.

D. Machine: Machine shall be Choose One:

Winding Drum type is Ideally suited for heavy-duty use in low rise applications with 50 feet of maximum travel. Traction type is used in higher-rise or higher-speed applications

1. Motor shall be of ample horsepower to lift the rated load at the rated speed, with a high starting torque and low starting current.
2. It shall be equipped with a spring applied and electrically released brake.
3. Machine shall be mounted on structural steel base and located at the top of the hoistway.

E. Hoistway Doors:

1. Vertical two panel bi-parting doors will be used
2. Door(s) operation shall be power operated.

(NOTE: power operation cannot be furnished on dumbwaiter cars less than 24" wide x 28" front to back and adjacent opening cars)

3. Door finish shall be Choose one:
4. Each door shall bear the Underwriters "B" label for 1 ½ hours.
5. Hollow metal door panels and welded unit wall frame, including jambs, trim and sill shall be manufactured with 16 gauge material

MATOT

6. A door lock and contact or true interlock shall be provided on each door.

F. Machine Access Door: Hinged access door shall be 24" wide x 24" high and shall be furnished at machine location for service and maintenance.

1. Access door shall be 16 gauge Choose one:

G. Self-Supporting Tower Choose One: **(Optional)**: Components shall be carried on a self-contained, rigidly braced, structural steel angle tower extending full height of the hoistway.

Note: If the supporting angle tower is provided, the tower must be installed before the hatch walls are erected.

H. Guide Rails: Steel "Tee" rails or extruded aluminum rails shall be furnished to guide the car. Guide rails shall be mounted to the floor slabs and hoistway wall with steel or aluminum brackets.

I. Controller: Controller shall be a wall-mounted type with lockable door.

1. Location: On hoistway outer wall in sight of machine access door.

2. Characteristics: The controller shall be a solid state programmable and Underwriter's Laboratories, Inc. listed.

J. Operational Control: Microprocessor controlled two program dispatch and return, 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 station: Central dispatch station shall include the following:

- An illuminating push-button for dispatching to each floor
- One dispatch canceled push-button
- One non-operating indicator light
- One reset push-button
- One full table indicating light to prevent dispatch to a floor with a full table
- One key switch marked automatic-manual with indicating light
- One key switch marked dispatch-return with indicating light
- One horizontal transfer indicating light
- One key switch marked maintenance on-off
- Door open push-button and Door close push-button
- Pushbuttons shall have stainless steel faceplates.

Return station: Return stations shall include the following:

- An illuminating push-button to call the car
- One return program indicator light
- Pushbuttons shall have stainless steel faceplates.

K. Signals Devices:

1. "Door Open" call buzzer - shall sound when a pushbutton is pressed and a hoistway door or car gate is open.

2. "Car Here" light and chime - shall be located in each pushbutton station. Chime shall indicate car arrival. Light shall indicate car presence.

MATOT

3. Combination "Door Open" and "In-Use" light - shall be located in each pushbutton station. Light will illuminate when car is in transit and when a pushbutton is pressed and a hoistway door or gate is open.
 4. Door open/door close button shall be furnished if power operated hoistway doors are furnished.
- L. Hoist Ropes. Minimum of one galvanized aircraft cable with safety factor per code.
- M. Final Limit Stopping Devices: Provide per code
- N. Guide Shoes: Guide shoes shall be adjustable, renewable dry type.
- O. Counterweight: If the machine selected is a traction type a counterweight shall be provided and shall be equal in weight to that of the car plus 40% of the rated capacity.
- P. Transfer Tables: At each entrance furnish a Choose 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.
- Q. Tote Box Containers: Furnish molded fiberglass containers 17" wide x 20" long x 10" high which are compatible with transfer system.

2.04 Performance

- A. The car and machine will have the ability to lift the rated load at a factor of 125% of capacity.
- B. The car will travel within 10% +/- of the rated speed regardless of load or direction.
- C. Leveling Accuracy: Car floor shall be no more than ¼" above or below the level of the hoistway door sill.

Part 3 - Execution

3.01 Inspection

- A. Verify hoistway and openings are of correct size and within tolerance. Verify electrical power is available and of correct characteristics.
- B. If preliminary work is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.02 Preparation

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the **best** result for the substrate under the project conditions.

3.03 Installation

- A. Install in accordance with ASME A17.1 Part 7 and the manufacturer's instructions including the following.
 - 1. Leave manufacturers electrical connection drawings with electrical contractor to make final electrical connection.
 - 2. The installation of the dumbwaiter shall be carried out in accordance with the approved plans and specifications and manufacture's installation instructions.
 - 3. Do not begin installation until preliminary work including hoistway, landings and machine space has been properly prepared.
 - 4. Coordinate installation of hoistway wall construction.
 - 5. Check hoistway for plumb and square.

3.04 Field Quality Control

- A. Perform tests required by ASME A17.2.
- B. Supply instruments and execute specific tests.
- C. Perform tests in presence of Architect:
 - 1. Test dumbwaiter system by transporting the rated load up from main floor during thirty minute period.
 - 2. At an agreed time during contract warranty period, and with building normally occupied using normal building traffic, conduct tests to verify performance.
 - 3. Time dumbwaiter travel between typical floors at not more than the rated travel time.

3.05 Field Services

- A. Obtain required permits to perform tests. Perform tests required by regulatory agencies. Schedule tests with agencies and Architect and Contractor present.
- B. Submit tests and approval certificates issued by jurisdictional authorities.

3.06 Adjusting and Cleaning

- A. Adjust for smooth and quiet movement of car and doors. Adjust for consistent stopping at landings.
- B. Remove protective coverings from finished surfaces. Clean surfaces and components ready for inspection.

3.07 Protection

- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Substantial Completion.

3.08 Demonstration

MATOT

- A. Engage a factory-authorized service representative to train Owner's maintenance personnel to operate the dumbwaiter.

END OF SECTION