

# FREIGHT ELEVATOR PLANNING GUIDE





# OUR COMMITMENT TO YOU



## Dependable. Tough. Efficient.

The qualities you need in your freight elevators are the qualities we use to design and build them. We will build virtually any traction system to your specification. Our standard features include 14-gauge steel wall panels and specially reinforced car gates. TK Elevator freight applications are manufactured to handle any factory, warehouse or industrial project in the most economical and efficient manner possible. The controllers used in our freight elevators are the same advanced technology controllers used in our industry-leading passenger elevators.

## Servicing Your Freight Elevators.

With freight elevators, wear and tear makes maintenance and service crucial, since any interruption of service can disrupt material flow and processing. Our customers rely on the fact that our service is as dependable as our hardworking products. And even if your building is remotely located, no point in the U.S. is more than seventy-five miles from a TK Elevator service technician. TK Elevator's representatives will be glad to work with your building team, architect and general contractor to plan an installation that will ensure you years of rugged use and unbeatable service.

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# Freight Elevators

## Features and Loading Classifications

### Standard Features:

- 14-gauge steel wall panels to full car height
- Solid metal 14-gauge top with safety exit
- Vertical counter-balanced car gates of 10-gauge welded wire mesh, reinforced with bar stock (suitable for applications with manual door operation only). Manual gates include weight boxes of 11-gauge sheet steel with built-in guides and removable weight access panel
- Non-skid steel platform

Our custom capabilities enable us to construct practically any design you require, including special NEMA enclosures, hardwood flooring, special gauge walls and ceilings and special paints. We also offer vandal resistant fixtures for added durability. TK Elevator's design staff is ready to customize an elevator, from control system to fixtures, to meet the special demands of your project.

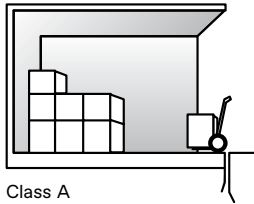
By integrating highly advanced digital technology, TK Elevator TAC controllers are ready to operate efficiently day in and day out, year after year. In our manufacturing facilities, components are tested after each stage of construction and then tested again as a complete unit before being shipped. This ensures consistent performance for years of dependable service.

### Capacity and loading requirements.

Your local TK Elevator representative will assist with determining your elevator's size, capacity and speed for the most efficient and economical operation possible. All TK Elevator applications are designed and manufactured strictly in agreement with ANSI A17.1 and the Canadian Standards Association (CSA/ CANB44-94) according to the following loading classifications:

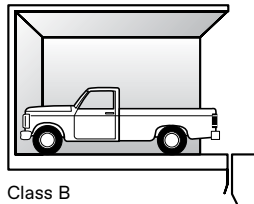
### Class A: General Freight Loading.

Where the load is distributed, the weight of any single piece is not more than 1/4 the capacity of the elevator and the load is handled on and off the car platform manually or by means of hand trucks.



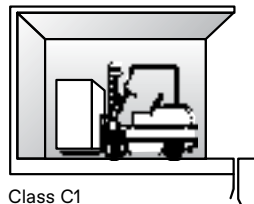
### Class B: Motor Vehicle Loading.

The freight elevator is used solely to carry automobile trucks or passenger automobiles up to the rated capacity of the elevator.



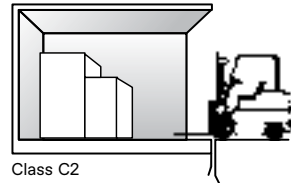
### Class C1: Industrial Truck Loading.

A four-wheeled vehicle may be used to load and unload the elevator. The combined weight of the vehicle and the load cannot exceed the rated capacity and may be rolled onto the platform as a single unit.



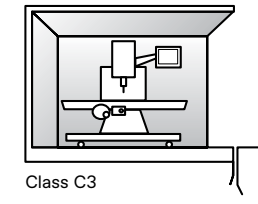
### Class C2: Industrial Truck Loading.

During loading and unloading, max load on the platform may be up to 150% of the rated capacity. This enables you to use a forklift to load a car with freight weighing up to the rated capacity.



### Class C3: Other forms of Industrial Truck Loading.

During the loading and unloading process, the rated capacity must never be exceeded.



The following requirements shall apply to Class C1, C2 and C3:

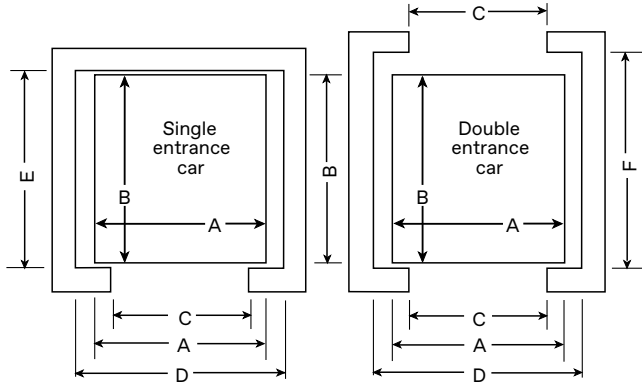
The capacity of the elevator shall be not less than the load (including any truck) to be carried and shall in no case be less than 50 lb/ft<sup>2</sup> (244.10 kg/m<sup>2</sup>) of the inside net platform area. The elevator shall be provided with two-way automatic leveling.

For Class C1 and C2, the following additional requirements shall apply:

For elevators with a capacity up to 20,000 lbs (9,072 kg), the car platform shall be designed for a loaded truck of weight equal to the capacity or for the actual weight of the truck to be used, whichever is greater. For elevators with a capacity exceeding 20,000 lbs (9,072 kg), the car platform shall be designed for a loaded truck of that weight or for the actual weight of the loaded truck to be used, whichever is greater.

# Oilraulic Elevators for Freight

## Common Sizes and Capacities



### Capacity in pounds

	2500 (1134 kg)	4000 (1814 kg) 5000 (2268 kg) 6000 (2722 kg)	8000 (3629 kg)	10,000 (4536 kg)
A	5'-4" (1626)	8'-4" (2540)	8'-4" (2540)	8'-4" (2540)
B	7'-0" (2134)	10'-0" (3048)	12'-0" (3658)	14'-0" (4267)
C	5'-0" (1524)	8'-0" (2438)	8'-0" (2438)	8'-0" (2438)
D <sup>1</sup>	7'-2" <sup>▲</sup> (2184)	10'-2" <sup>●</sup> (3099)	10'-2" <sup>●</sup> (3099)	10'-2" <sup>●</sup> (3099)
E <sup>2</sup>	7'-8" (2337)	10'-8" (3251)	12'-8" (3861)	14'-8" (4470)
F <sup>3</sup>	7'-11" (2413)	10'-11" (3327)	12'-11" (3937)	14'-11" (4547)

- 1 Subtract 6" (152) if manual doors are used.
- 2 Add 1 7/8" (44) if pass type doors are used.
- 3 Add 3 1/2" (89) if pass type doors are used.
- ▲ For seismic conditions add 4" (102) for manual gates.
- For seismic conditions add 4" (102) for power gates, add 6" (152) for manual gates.

### Minimum pit, overhead and machine room dimensions

	Speed feet per minute (fpm)		
	50 (0.25m/s)	75 (0.38m/s)	100 (0.5m/s)
Pit	4'-6" (1372)	4'-6" (1372)	4'-6" (1372)
Overhead	14'-9" (4496)	14'-9" (4496)	14'-9" (4496)

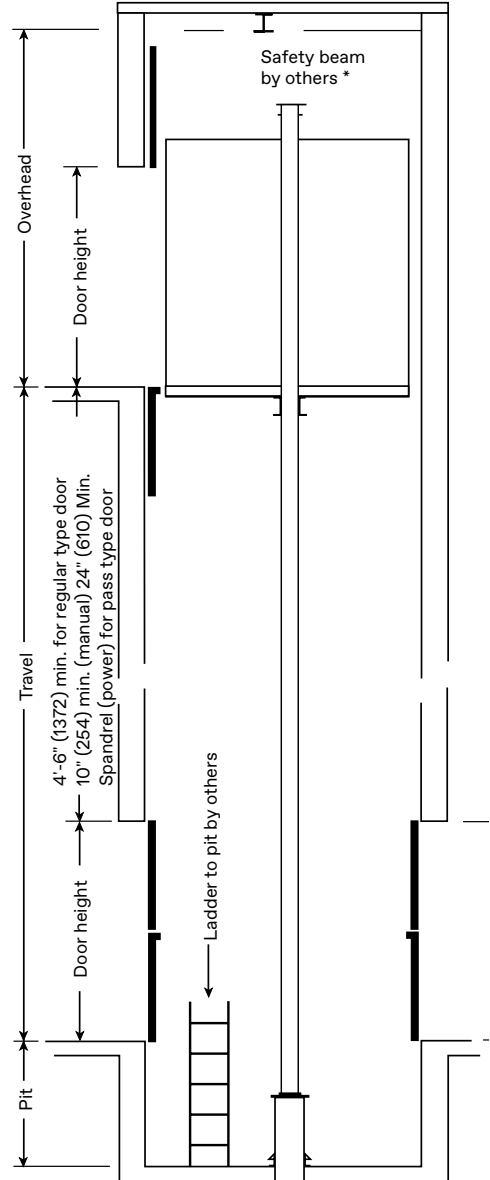
- 4 Subtract 12" (305) if 7'-0" (2134) clear opening height doors and cab height are used.
- Dimensions shown are for power operated doors of the regular type with 8'-0" (2438) clear opening height and enclosure height. Changes required if other than the above.

### Power unit (machine) location:

The most desirable machine room location is on the lowest landing, adjacent to the elevator hoistway. It may, however, be located remote from the hoistway if necessary. A larger area is required when two or more power units are used or for two elevators with a common machine room, etc. An enclosure to meet local code requirements must be provided. A sound-isolated machine room is recommended for quietest operation. Adequate heating and ventilation of machine spaces must be provided.

*Note: All dimensions in parentheses are in millimeters unless otherwise indicated. Dimensional data shown here complies with the current ASME A17.1 and CSA B44 Safety Code for Elevators. Local codes may vary from the national codes. Consult your local TK Elevator representative for details.*

TK Elevator manufactures freight elevators in all sizes and capacities to handle any factory, warehouse or industrial job economically and efficiently.



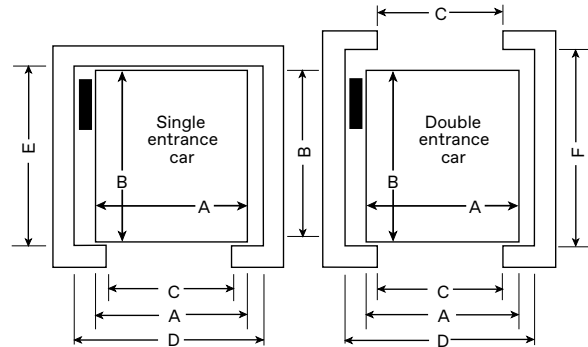
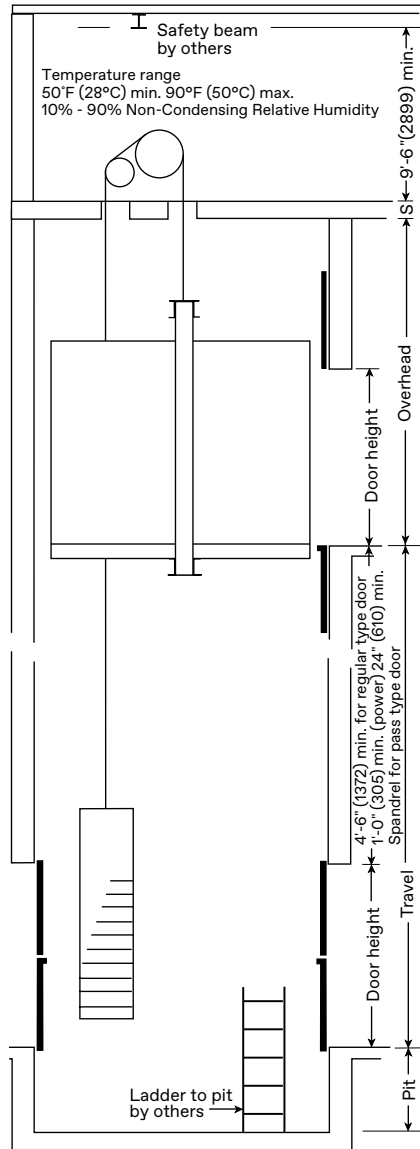
Safety beam required per OSHA 1926.502, provided and installed by others, as directed by TK Elevator local office. Clear overhead is shown to the bottom of the safety beam.

\* If safety beams (by others) are used, they must not encroach into required clear overhead dimensions.

# Traction Elevators for Freight

## Common Sizes and Capacities

Rugged, all-steel construction and custom engineering give our freight elevator the strength and power you need to get the job done day-after-day.



### Capacity in pounds

	2500 (1134 kg)	4000 (1814 kg) 5000 (2268 kg) 6000 (2722 kg)	8000 (3629 kg)	10,000 (4536 kg)
A	5'-4" (1626)	8'-4" (2540)	8'-4" (2540)	8'-4" (2540)
B	7'-0" (2134)	10'-0" (3048)	12'-0" (3658)	14'-0" (4267)
C	5'-0" (1524)	8'-0" (2438)	8'-0" (2438)	8'-0" (2438)
D	7'-10" (2388) <sup>1</sup>	10'-10" (3302) <sup>1</sup>	11'-0" (3353) <sup>2</sup>	11'-0" (3353) <sup>2</sup>
E <sup>3</sup>	7'-8" (2337)	10'-8" (3251)	12'-8" (3861)	14'-8" (4470)
F <sup>4</sup>	7'-11" (2413)	10'-11" (3327)	12'-11" (3937)	14'-11" (4547)

- 1 Add 2" (51) for seismic.
- 2 Add 4" (102) for seismic.
- 3 Add 1 7/8" (44) if pass type doors are used.
- 4 Add 3 1/2" (89) if pass type doors are used.

### Minimum pit, overhead and machine room dimensions

	Speed feet per minute (fpm)		
	100 (0.5m/s)	150 (0.75m/s)	200 (1.0m/s)
Pit	5'-6" (1676)	5'-6" (1676)	5'-6" (1676)
Overhead <sup>5</sup>	17'-2" (5232)	17'-2" (5232)	17'-2" (5232)

- 5 Subtract 6" (152) if 7'-0" (2134) clear opening height doors and cab height are used.

Hoistway dimensions are based on 1" (25) out of plumb and no occupied space below hoistway. If these conditions cannot be met, then consideration must be given for additional required space.

Dimensions shown are for power operated doors of the regular type with 8'-0" (2438) clear opening height and enclosure height. Changes required if other than the above.

Safety beam required per OSHA 1926.502, provided and installed by others, as directed by TK Elevator local office. Clear overhead is shown to the bottom of the safety beam.

\* If safety beams (by others) are used, they must not encroach into required clear overhead dimensions.

S = Concrete structural support slab by others. Machine room floor to support all elevator machine loads and floor loads per ASME A17.1.

Note: All dimensions in parentheses are in millimeters unless otherwise indicated. Dimensional data shown here complies with the current ASME A17.1 and CSA B44 Safety Code for Elevators. Local codes may vary from the national codes. Consult your local TK Elevator representative for details.

# Freight Elevators

## Door Details

TK Elevator has a wide choice of freight door options. Counterbalanced, vertical bi-parting doors are recommended to provide the greatest fire protection. All counterbalanced doors have a truckable sill to provide a smooth trucking surface from building sill to elevator platform. Power operation is desirable for doors and car gates in heavy traffic applications. Manual operation is suggested for economy where usage is infrequent. Door frames, power entrances and car gates, lintels and sills are to be furnished by the general contractor.

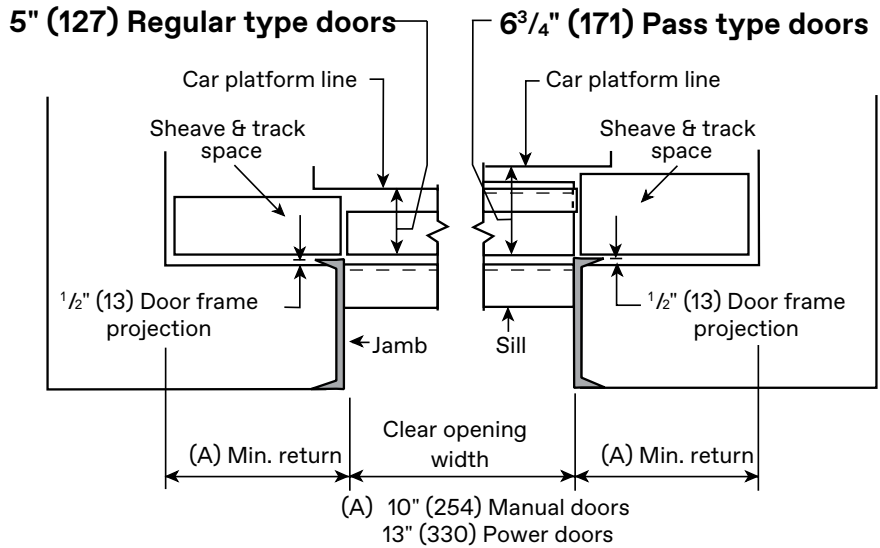
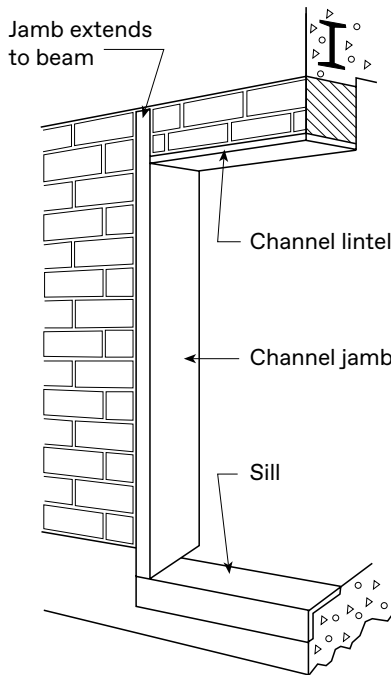
### Manual Car Gates For Dependable Service.

TK Elevator's all-steel manual car gates are counterweighted and fitted with ball bearings and nonmetallic sheaves for quiet, smooth effortless handling. Offset guideposts allow full car-width opening.

Manual gates are constructed of T-section frames with 1.5" mesh, 10 gauge-expanded metal panels and strength exceeding ANSI/ASME A17.1 specifications. Both single and double blade gates are offered, as well as motorized gates for elevators with heavy traffic flow. Hoistway doors and gates can have power or manual operation. Power car gates are provided by the general contractor.

Vertical bi-parting steel hoistway doors are counterbalanced. When opened, the lower door section forms a smooth trucking sill between hoistway floor and elevator car. This reinforced sill will support all wheel loads that the elevator is designed to handle.

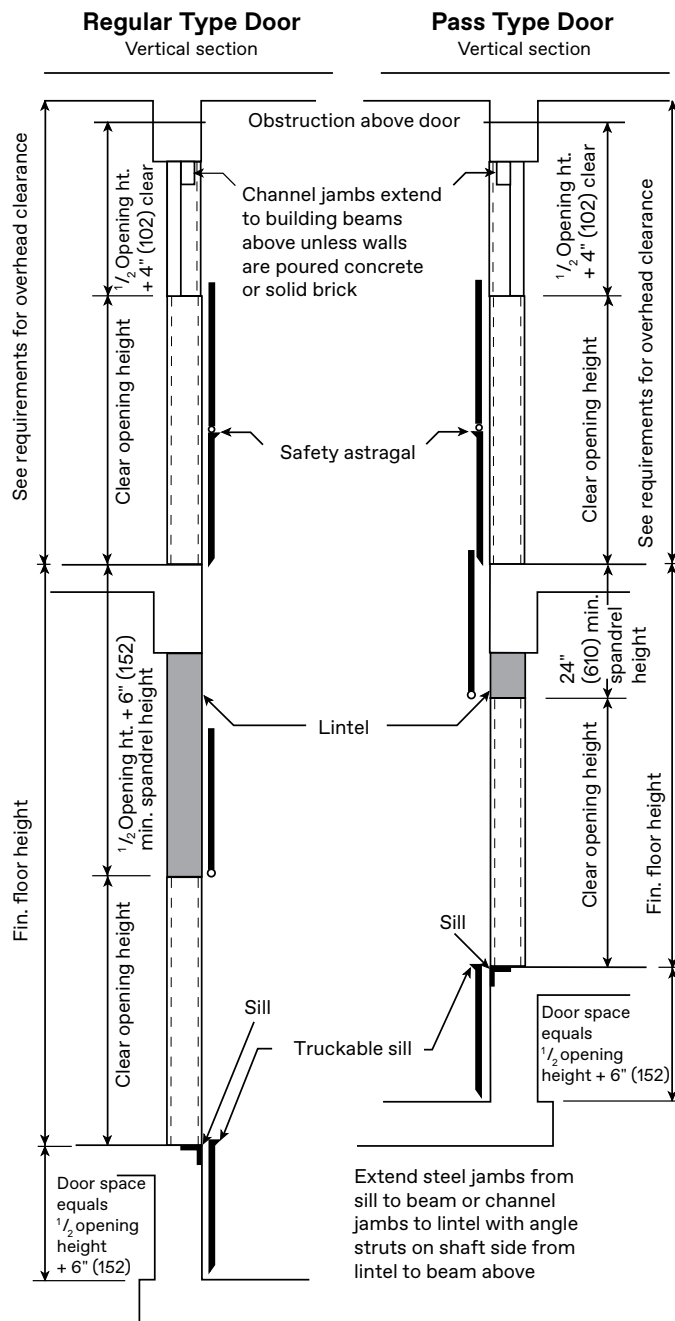
## Jamb and Sill Detail



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# Freight Elevators

## Entrance Details



Note: All dimensions in parentheses are in millimeters unless otherwise indicated. Dimensional data shown here complies with the current ASME A17.1 and CSA B44 Safety Code for Elevators. Local codes may vary from the national codes. Consult your local TK Elevator representative for details.

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