



The world is changing, and our elevators are evolving with it. TK Elevator is at the forefront of urban mobility and solutions for rapid growth.

In addition to half of the global population, it has been predicted that another 2.8 billion people will reside in cities by 2050. As these cities and skylines rise to unreachable heights, the urgent need to provide sustainable options while adapting to new infrastructure developments is ever-present.

At TK Elevator, we strive to exceed expectations for residential and commercial buildings by offering elevators that reflect our pursuit of innovation. That's why we are proud to present our hydraulic elevator for low-rise buildings, endura.

Being the standard in reliability for over seven decades, endura is the perfect choice for any low-rise building. Customizable and sleek with a smooth performance, endura also gives peace of mind when it comes to sustainability. enviromax® fluid is 100% recyclable, 95% petroleum-free and available on all endura elevators.





TK Elevator has a goal to move beyond and grow cities by providing safety and efficiency with our elevators.

This goal is only made possibly through our enhanced engineering and intelligent technologies that will allow for contemporary methods of moving 2.3 billion people globally each day.



MAX: real-time predictive maintenance

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Contractors

With endura, installation is easy. Our MRL application guarantees that there's less to build and manage as it removes the need for framing, electrical, HVAC, fireproof doors, and the locks and signage necessary for machine rooms.

You no longer have to provide disconnects and wiring chases, or assign coordination and installation tasks to partnering trades. Permanent power and a hoistway with a hoisting beam as well as required safety protection are all you need, and we do the rest.

Architects

There is no longer a need to worry about designing extra space for a machine room as endura is a machine-room less (MRL) application. The power unit is located in the elevator pit and the controller fits in the door jamb. A machine room application is available for locations that require them or customers interested in a stronger lifting power.

With biodegradable fluid, endura is energy-efficient. This elevator that has reduced environmental impact also comes standard with LED lighting that lasts for years. Since the cab is from TK Elevator, it's the industry's only UL-validated, 01350 CA-compliant, low-emitting interior.





Building owners

This hydraulic elevator has fewer moving parts and lower maintenance costs than low-rise traction MRLs. It comes with MAX – our predictive maintenance solution that can lower elevator downtime by up to 50 percent. An electronic valve makes floor leveling adjustments automatically, decreasing unexpected service visits. A battery-lowering operation (included with our MRL application) ensures tenants don't become trapped during a power failure. Nonproprietary user interface tools allow for unrestricted access for on-board adjusting and troubleshooting.

All this simplicity and reliability means fewer headaches for you — and your tenants.

CHOOSE ENDURA

endura is perfect for low-rise buildings.

Whether you want the architectural design freedom provided by machine room-less applications, or if you're in an area that requires a machine room — our hydraulic elevator has it all. Tenants will appreciate its smooth, quiet and reliable performance. The simplified design has fewer moving parts than traction MRL elevators. This means an easier installation and reduced maintenance costs.

Machine room application.

Offering smooth and quiet performance, our hydraulic elevator is ideal for small offices, shops, schools, apartments and worship facilities.



Fit Machine Room



Up to 33'-61/2" with above-ground jack*
Up to 60'-0" with below-ground jack







Machine room-less application.

With our MRL application, all equipment fits in the hoistway and you no longer need a machine room.





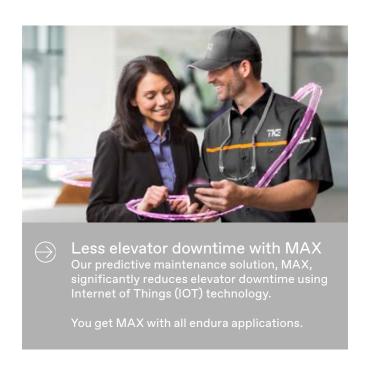
Travel

Up to 33'-61/2" with above-ground jack*

* with standard overhead and pit depth

SIMPLY MORE SPACE

Because our MRL application doesn't have a machine room, you have more leasable building space. Here are some of its key components.







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Universal door operator

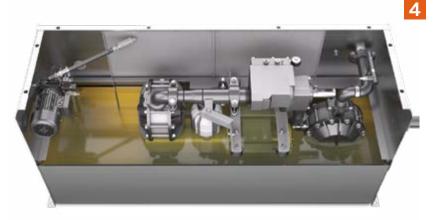
The new linear door operator technology provides enhanced door reliability as well as quick, smooth door operation. This reduces the number of service calls due to malfunctioning doors.

Disconnects

You no longer need to provide disconnects and wiring chases, or assign coordination and installation tasks to partnering trades. Permanent power and a hoistway are all you need to provide.

Controller

Fits into a tiny 8½-inch wall and is fully digital. This saves space and helps reduce elevator noise.





Power unit

The power unit, located in the pit, is designed to reduce noise in the hoistway. It's sealed with a hardtop and sound-deadening material. Inside, the submersible design and dual muffler devices ensure a quiet ride.

It also features a new electronic valve. The valve is virtually adjustment-free and allows for improved leveling accuracy.

Jack unit (holeless design)

Our MRL application uses a holeless jack that requires no drilling.

SMOOTH AND RELIABLE

In our machine room application,
the power unit and controller are
located outside the hoistway. You'll
choose from four applications based on
required travel distance and project site
conditions. All options are configurable
to any building design.





Universal door operator

It's all about the doors. This new linear door operator technology improves elevator door reliability while providing a quick and smooth door operation.



Jack unit

Our telescopic above-ground and below-ground conventional holed jacks provide a smooth elevator ride along with accurate leveling.



Controller

Our powerful 32-bit microprocessor controller uses solid-state technology, boosting reliability. The mounted user interface tool (UIT) provides easy access to adjustments and parameters for maintenance and service.

Maintenance costs are reduced because of nonproprietary equipment, fewer testing requirements and fewer components.



Power unit

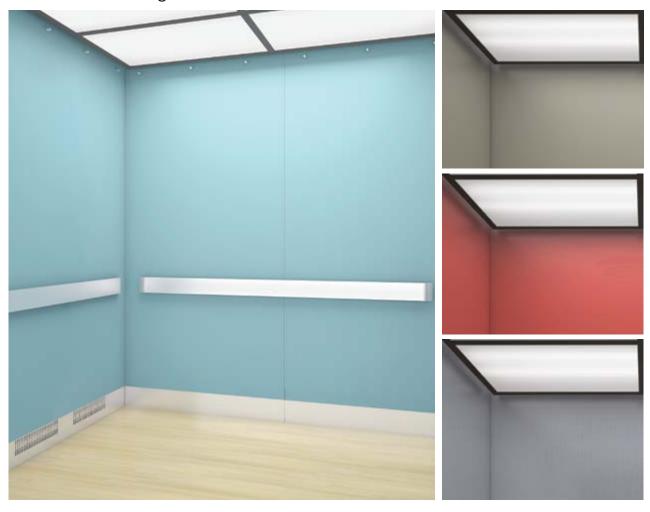
Enables smooth stops and starts along with precise leveling. You'll appreciate the low maintenance requirements.

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Steel shell

Standard cab designs



Steel shell wall design

Clean and modern flat cab interior designs convey quality. Our durable formed steel shell cab is available in a variety of powder coat options or can be upgraded to stainless steel.

Wall finish options



Metals



Applied panels

Upgraded cab



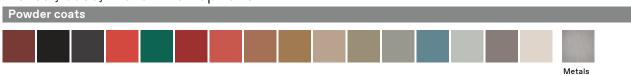
Steel shell wall with applied panel design

Mix beauty and practicality with this decorative and durable cab. The panel design is constructed with a high-quality steel shell and vertical raised panels made with a core of urea formaldehyde-free particle board.

Panel finish options



Reveal, base, frieze finish options



¹ Contact your local representative for detailed availability on our metal options.

Finishes

Plastic laminates Woods















Fiberwood



Fiberwood

Deluxe Pear Solids

6206

Planked







8795 Matrix Blue

Patterns





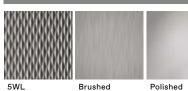


Powder Coats



Metals

Stainless Steel 1



Stainless Steel

Colors may vary. We recommend examining a large color selector sheet before making a selection.

Stainless Steel ¹

¹ Limited application. Contact your local representative for details.

Cab accessory options

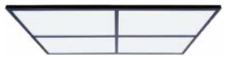


Ceilings



Basic flat 1

Exposed cab top with optional recessed lighting.



Suspended

White translucent diffusers with ceiling frames.



Downlight ²

Metal pan downlight ceiling features LED lighting with six or nine lights (based on cab size.)

Braille plates

Option 1: Resin braille plate

Option 2: Surface mount

cast braille plate

Option 3: Flush (inlaid) mount cast braille plate



Sills

Our cab sill finishes allow you to match your sills to any other design component inside the cab.



Handrails

Cylindrical

11/2" cylindrical handrail



Metal bar handrail is available in



Fixtures

Traditional fixtures

Product details

- Faceplates in brushed or polished stainless steel
- Position indicator displays car location with matrix of red or blue LED-illuminated dots



Vandal-resistant fixtures

Product details

- Faceplates in brushed or polished stainless steel
- Metal push buttons and durable car riding lanterns
- Pry-resistant hall jamb symbols and buttons
- Position indicator displays car location with matrix of red or blue LED-illuminated dots



Push button available in red, blue, white and green LED lighting

Car operating panel



Fixtures shown above are for representation only. Your project-specific application may vary.

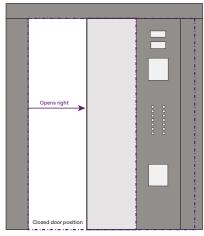
Door configurations

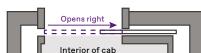
Door orientation options offer a range of benefits to accommodate different project needs.

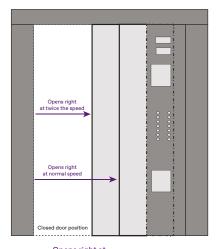
One-speed The most economical door offering, available with either right- or left-hand opening. (right-hand shown)

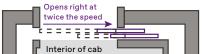
Two-speed Provides a wider opening without compromising door cycling time. Two doors move in the same direction, one sliding faster than the other. Available with either right- or left-hand opening. (right-hand shown)

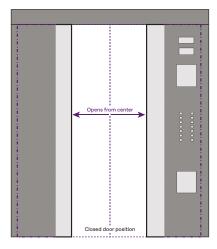
Center opening Best for high-traffic buildings. Permits the quickest entry and exit, improving elevator service while giving an attractive, symmetrical appearance.











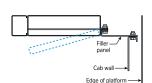


Front returns



Column returns

This return features a hinged car operating panel secured to the filler panel and aligned vertically with the column.

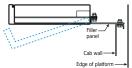


Front returns include the car station, return panel, signal fixtures and head jamb.



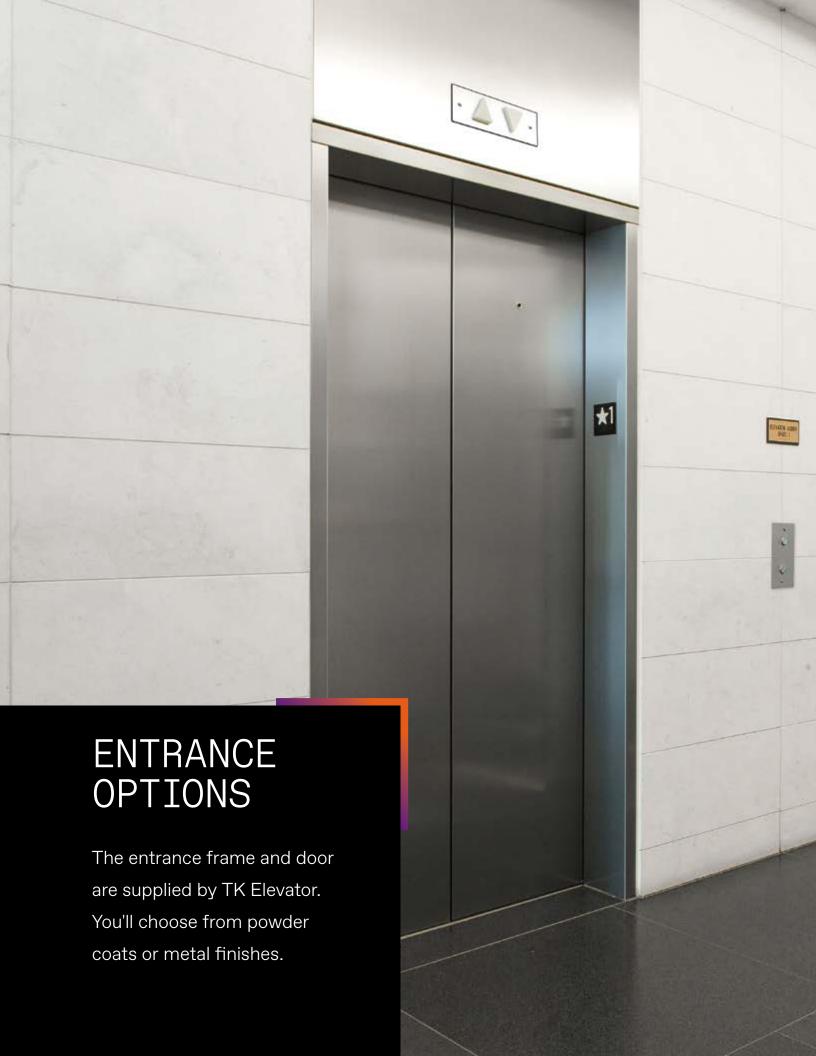
Wrap-around returns*

This return features a hinged car operating panel and separate filler panel. Comes standard.



Images above represent return types in brushed stainless steel. * Comes standard

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Entrance finishes

Hoistway and door entrance finishes

Typically, the entrance frame would match the door selection, but nothing says you have to. Choose from a limited selection of powder coat color or brushed stainless steel finish.



Powder coat finish
T-style entrance frame in Chalk
Board powder coat.

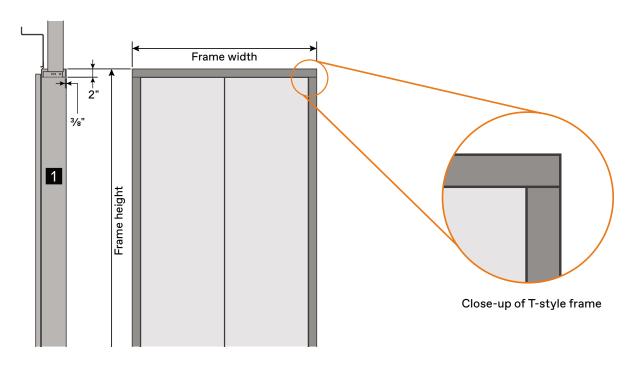


Metal finish T-style entrance frame in Brushed Stainless Steel.



Hoistway entrance frame

Face of frame is a standard two inches.



PLANNING

Above-ground jack applications





The numbers at a glance



Type Above-ground jack



Travel Up to 33'-61/2"



Capacity 2100 – 5000 lbs



Speed 80 – 150 fpm

Holeless above-ground technical specifications					
Speeds in fpm	80, 100, 110, 125, 150 feet per minute (dependent on project-specific conditions, such as capacity, machine room location, etc.)				
Maximum travel	33'-6½" with standard overhead and pit depth; serves up to six floors with additional pit and overhead				
Jack types	Single, Two-stage, Three-stage (telescoping)				
Power characteristics	200–480 VAC, 3 phase, 60 hertz; (single-phase application is available as an option)				
Controller	TAC32				
Door operator	Universal Door Operator				
Manual lowering	Standard				
Battery-lowering operation	Standard on machine room-less application. Available as an option on machine room application.				

Below-ground jack applications



The numbers at a glance



Type Below-ground jack



Travel Up to 60'-0"



Capacity 2100 – 5000 lbs

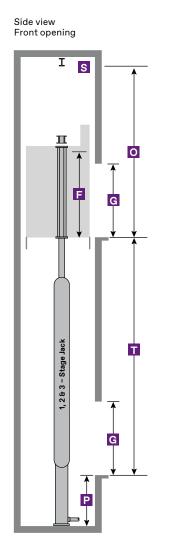


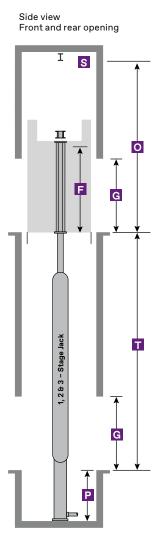
Speed 80 – 200 fpm

Holed below-ground technical specifications					
Speeds (fpm)	80, 100, 110, 125, 150, 175, 200 feet per minute				
Maximum travel	Below-ground jack: 60'-0"				
Jack types	Below-ground: conventional				
Power Characteristics	200–480 VAC, 3 phase, 60 hertz; (single-phase application is available as an option)				
Controller	TAC32				
Door Operator	Universal Door Operator				
Manual Lowering	Standard				
Battery-lowering operation	Available as an option				

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Passenger elevators - twinpost above-ground



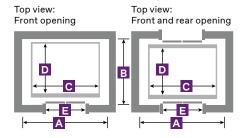


Passenger elevator						
Capacity (lbs)	1-and 2-Stage Hoistway ^{2,9} A x B	3-stage Hoistway ⁹ A x B	Front / rear	Inside clear C x D	Door type	Door width E
2100 ³	7'-4" x 5'-9"	7'-8" x 5'-9"	F	5'-8" x 4'-3"	One-speed	3'-0"
2100 ³	7'-4" x 6'-8¾"	7'-8" x 6'-83/4"	F/R	5'-8" x 4'-3½"	One-speed	3'-0"
2500	8'-4" x 5'-9"	8'-8" x 5'-9"	F	6'-8" x 4'-3"	One-speed	3'-6"
2500 4	8'-4" x 6'-8 ³ / ₄ "	8'-8" x 6'-83/4"	F/R	6'-8" x 4'-3½"	One-speed	3'-6"
3000 4	8'-4" x 6'-3"	8'-8" x 6'-3"	F	6'-8" x 4'-9"	One-speed	3'-6"
3000 4	8'-4" x 7'-2¾"	8'-8" x 7'-2 ³ / ₄ "	F/R	6'-8" x 4'-9½"	One-speed	3'-6"
3500 4	8'-4" x 6'-11"	8'-8" x 6'-11"	F	6'-8" x 5'-5"	One-speed	3'-6"
3500 4	8'-4" x 7'-10 ³ / ₄ "	8'-8" x 7'-10 ³ / ₄ "	F/R	6'-8" x 5'-5½"	One-speed	3'-6"
4000 4	9'-4" x 6'-11"	9'-8" x 6'-11"	F	7'-8" x 5'-5"	One-speed	3'-6"/4'-0"
4000 4	9'-4" x 7'-103/4"	9'-8" x 7'-10¾"	F/R	7'-8" x 5'-5½"	One-speed	3'-6"/4'-0"

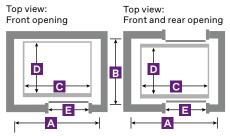
- A Hoistway width
- G Door clear height
- B Hoistway depth
- O Minimum overhead
- C Inside clear width
- P Minimum pit depth
- D Inside clear depth
- S Safety beam
- E Door clear width

 Inside clear height
- T Travel

One-speed center opening doors



One-speed side opening doors



- Inside clear height: 7'-4"5
- G Door clear height: 7'-0"
- Minimum overhead:

Up to 100 fpm: Over 100 fpm: 1-Stage - 12'-2" 1-Stage - 12'-5" 2-Stage - 12'-8" 2-Stage - 12'-11" 3-Stage - 12'-11"

- P Minimum pit depth: 4'-0"6
- Max travel possible: 1

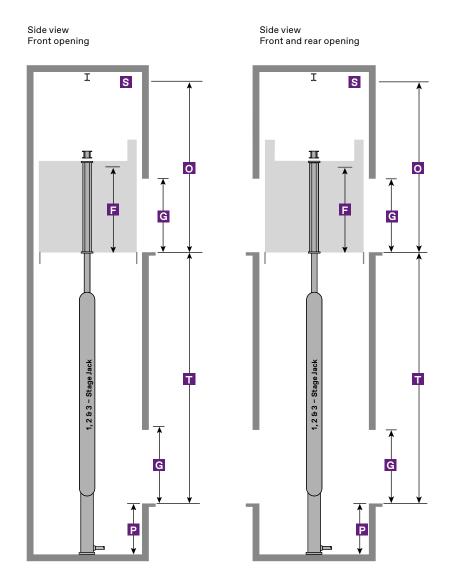
1-Stage: Up to 100 fpm – 18'-11" Over 100 fpm – 18'-8"

2-Stage: 28'-6" 3-Stage: 48'-31/2"

S Safety beam required per OSHA 1926.5027

Contact your local representative for various code or jurisdictional exceptions, or alterations required.

Service elevators - twinpost above-ground

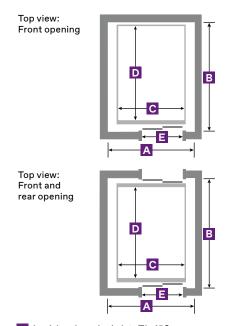


Service 1-and 2-Stage 3-Stage						
Capacity (lbs)	Hoistway ^{2,8,9} A x B	Hoistway ^{8,9} A x B	Front/ rear	Inside clear C x D	Door type	Door width ⁸ E
4500	7'-4" x 9'-6½"	7'-8" x 9'-6½"	F	5'-8" x 7'-9½"	Two-speed	4'-0"/4'-6"
4500	7'-4" x 10'-91⁄4"	7'-8" x 10'-91⁄4"	F/R	5'-8" x 7'-10"	Two-speed	4'-0"/4'-6"
5000	7'-4" x 10'-2"	7'-8" x 10'-2"	F	5'-8" x 8'-5"	Two-speed	4'-0"/4'-6"
5000	7'-4" x 11'-4¾"	7'-8" x 11'-4¾"	F/R	5'-8" x 8'-5½"	Two-speed	4'-0"/4'-6"
5000H	7'-4" x 10'-9"	7'-8" x 10'-9"	F	5'-8" x 9'-0"	Two-speed	4'-0"/4'-6"
5000H	7'-4" x 11'-11 ³ / ₄ "	7'-8" x 11'-11 ³ / ₄ "	F/R	5'-8" x 9'-0½"	Two-speed	4'-0"/4'-6"

A Hoistway width
B Hoistway depth
C Inside clear width
D Inside clear depth
D Door clear width
D Door clear width
D Door clear width
T Travel

Two-speed side opening doors

F Inside clear height



- F Inside clear height: 7'-4"5
- G Door clear height: 7'-0"
- Minimum overhead:

Up to 100 fpm: Over 100 fpm: 1-Stage - 12'-2" 1-Stage - 12'-5" 2-Stage - 12'-8" 3-Stage - 12'-11" 3-Stage - 12'-11"

- P Minimum pit depth: 4'-0"6
- Max travel possible: 1

1-Stage: Up to 100 fpm – 18'-11" Over 100 fpm – 18'-8"

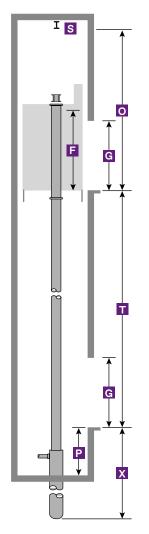
2-Stage: 28'-6" 3-Stage: 48'-31/2"

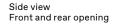
S Safety beam required per OSHA 1926.5027

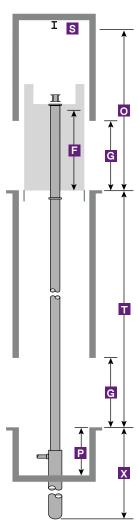
Contact your local representative for various code or jurisdictional exceptions, or alterations required.

Passenger elevators - below-ground





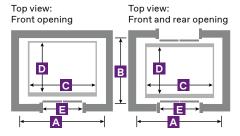




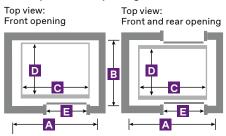
Passenger						
Capacity (lbs)	Hoistway ^{2,9} A x B	Front/ rear	Inside clear C x D	Door type	Door width E	
2100 ³	7'-4" x 5'-9"	F	5'-8" x 4'-3"	One-speed	3'-0"	
2100 ³	7'-4" x 6'-8 ³ / ₄ "	F/R	5'-8" x 4'-3½"	One-speed	3'-0"	
2500	8'-4" x 5'-9"	F	6'-8" x 4'-3"	One-speed	3'-6"	
2500 4	8'-4" x 6'-83/4"	F/R	6'-8" x 4'-3½"	One-speed	3'-6"	
3000 4	8'-4" x 6'-3"	F	6'-8" x 4'-9"	One-speed	3'-6"	
3000 4	8'-4" x 7'-2 ³ / ₄ "	F/R	6'-8" x 4'-9½"	One-speed	3'-6"	
3500 4	8'-4" x 6'-11"	F	6'-8" x 5'-5"	One-speed	3'-6"	
3500 4	8'-4" x 7'-10¾"	F/R	6'-8" x 5'-5½"	One-speed	3'-6"	
4000 4	9'-4" x 6'-11"	F	7'-8" x 5'-5"	One-speed	3'-6"/4'-0"	
4000 4	9'-4" x 7'-103/4"	F/R	7'-8" x 5'-5½"	One-speed	3'-6"/4'-0"	

- A Hoistway width
- G Door clear height
- B Hoistway depth
- Minimum overhead
- C Inside clear width
- P Minimum pit depthS Safety beam
- D Inside clear depth
- Safety
- E Door clear width
- Travel
- F Inside clear height
- X Jack hole depth

One-speed center opening doors



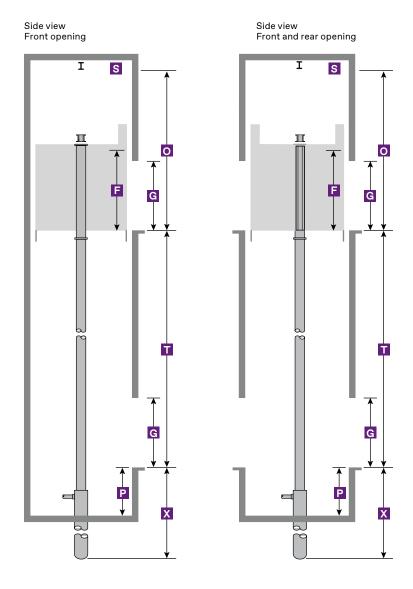
One-speed side opening doors



- F Inside clear height: 7'-4" 5
- G Door clear height: 7'-0"
- Minimum overhead:Up to 100 fpm 12'-0"Over 100 fpm 12'-3"
- P Minimum pit depth: 4'-0"6
- S Safety beam required per OSHA 1926.5027
- Max travel possible: 60'-0"
- X Standard jack hole depth: Travel + 6'-0"

Contact your local representative for various code or jurisdictional exceptions, or alterations required.

Service elevators - below-ground

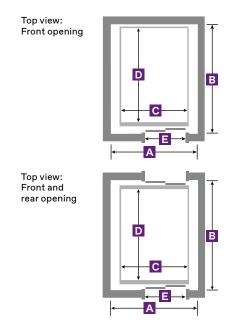


Service					
Capacity (lbs)	Hoistway ^{2,8,9} A x B	Front/ rear	Inside clear C x D	Door type	Door width ⁸ E
4500	7'-4" x 9'-6½"	F	5'-8" x 7'-9½"	Two-speed	4'-0"/4'-6"
4500	7'-4" x 10'-91/4"	F/R	5'-8" x 7'-10"	Two-speed	4'-0"/4'-6"
5000	7'-4" x 10'-2"	F	5'-8" x 8'-5"	Two-speed	4'-0"/4'-6"
5000	7'-4" x 11'-4¾"	F/R	5'-8" x 8'-5½"	Two-speed	4'-0"/4'-6"
5000H	7'-4" x 10'-9"	F	5'-8" x 9'-0"	Two-speed	4'-0"/4'-6"
5000H	7'-4" x 11'-11¾"	F/R	5'-8" x 9'-0½"	Two-speed	4'-0"/4'-6"

A Hoistway width
B Hoistway depth
C Inside clear width
D Inside clear depth
E Door clear width
F Inside clear height

G Door clear height
O Minimum overhead
P Minimum pit depth
S Safety beam
T Travel
F Inside clear height
X Jack hole depth

Two-speed side opening doors



- Inside clear height: 7'-4"5
- G Door clear height: 7'-0"
- Minimum overhead:Up to 100 fpm 12'-0"Over 100 fpm 12'-3"
- P Minimum pit depth: 4'-0" 6
- S Safety beam required per OSHA 1926.5027
- Max travel possible: 60'-0"
- X Standard jack hole depth: Travel + 6'-0"

Contact your local representative for various code or jurisdictional exceptions, or alterations required.

endura MRL controllers



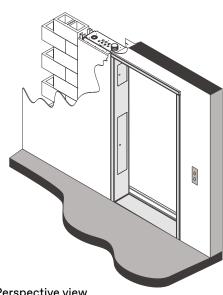
Our endura MRL maximizes space because the controller is in the entrance jamb.

A minimum 81/2-inch wall thickness is required at the floor the controller is located. The controller must be located at the landing directly above the lowest landing served by the elevator.

If that's not possible, the location must be coordinated with your TK Elevator representative.

Controller installation

The wall construction can be done with drywall or masonry block. For installation purposes, however, the entire wall at the controller level must be left out until the elevator frame and controller are in place.



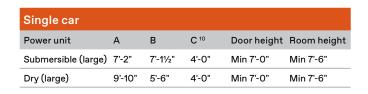
Perspective view

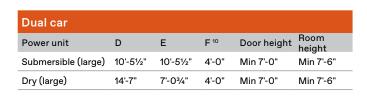
endura with machine room

Your endura MR system determines the machine room you'll need.

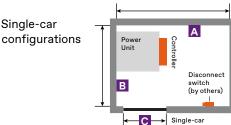
The most desirable machine room location is on the lowest floor served, next to the elevator hoistway. At an additional cost, the machine room can be located remotely from hoistway.

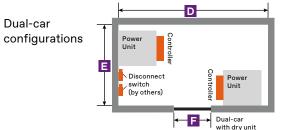
Smaller or custom-sized machine rooms are available in some cases. Contact your TK Elevator representative to help determine your needs, as machine room arrangements may vary from those shown.











Endnotes

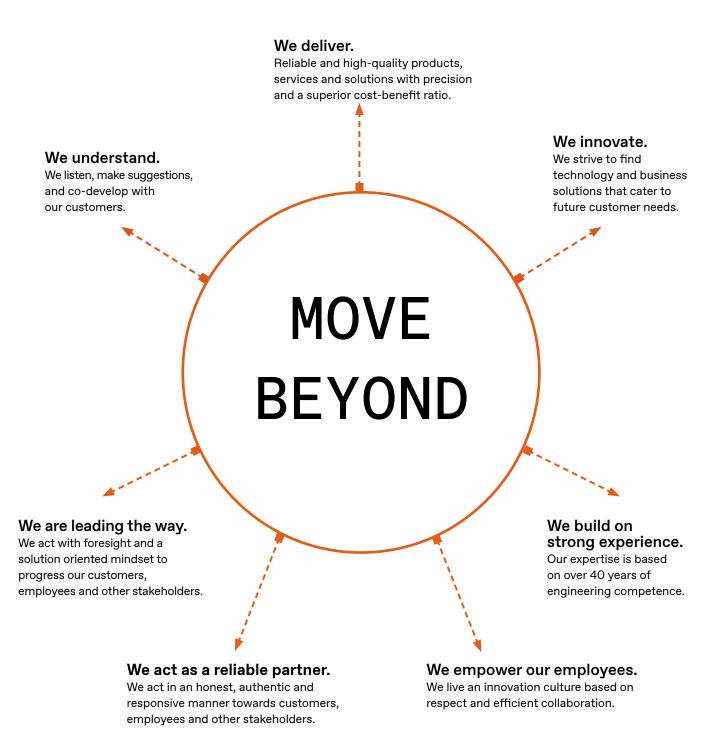
Dimensional data shown is for both seismic and nonseismic conditions and complies with current ASME A17.1 and CSA B44 Safety Code for Elevators. Local codes may vary from the national codes. Consult your TK Elevator representative for details.

- ¹A 5'-0" min. pit is required for additional travel. Travel above 12'-8" (1-Stage) or 23'-2½" (2-Stage) or 33'-6½" (3-Stage) requires additional pit and/or overhead by adding 1" for every 1" (1-Stage) or 2" (2-Stage) or 3" (3-Stage) of additional travel. Max increase 2'-0" allowed in overhead. Max travel can be limited by gross load on jack. Local codes may impact pit depth minimum that will affect extended travel. Contact your local representative for max and min travel details.
- ² In areas where a 7" deep pit ladder is required, additional hoistway width or wall pocket will be required.
- ³ This capacity is not available with center opening doors.
- ⁴ To meet the requirements of IBC code for 84" stretchers, a 4'-0" center opening (for 4000 lbs capacity only) or 3'-6" side opening (for 3500 lbs or 4000 lbs capacity) door is required. If a smaller capacity car needs to be the stretcher capable car, contact your local representative for more information.
- ⁵ Dimension shown is based on suspended ceiling design. An increase in cab height will result in an increase in overhead requirements. For above-ground, front and rear opening applications, the cab height is limited to 7'-4".

- ⁶ Local codes may impact pit depth minimums.
- ⁷ Provided and installed by others, as directed by your TK Elevator representative. Clear overhead is shown to the bottom of the safety heam
- 8 For service cars (4500 and 5000 lbs capacity) with optional 4'-6" two-speed side opening door, the hoistway width becomes 8'-2" for below-ground and 1- and 2-stage above-ground jack types and increases to 8'-4" for a 3-stage above-ground jack type. The hoistway width must increase an additional 10" if front and rear configuration with the same hand doors (catty-corner) are used.
- ⁹ For multiple elevators: Add 4" for a divider beam between hoistways.
- 10 Clear opening

Illustrations and images in this brochure may differ from the installed product. Consult your local representative for more information.

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TK Elevator Corporation 788 Circle 75 Parkway SE Suite 500 Atlanta, GA 30339 P: +1 844 427 5461 www.tkelevator.com/us





