



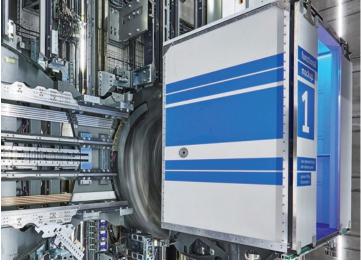
Making cities better.

Half of the world's population now lives in cities. And urban populations are expected to grow by another 2.8 billion people by 2050.

To meet changing resident and business demands, cities need to adopt efficient urban planning and infrastructure development. They also need to create solutions for keeping people mobile in the midst of rapid growth.

As your urban mobility leader, thyssenkrupp Elevator is reshaping the elevator industry and transforming cities. We're constantly evolving, with new products like MULTI, the first rope-less and horizontally moving elevator and MAX, our predictive maintenance solution.

To help our customers and cities grow, we present endura, our hydraulic elevator for low-rise buildings. Combining smooth, quiet and efficient performance, endura has been the standard for more than four decades.



MULTI: our award-winning multidirectional elevator

At thyssenkrupp Elevator, our aim is to make cities the best ever places to live: to move people safely, comfortably and efficiently, today and tomorrow.

We do this by intelligently applying existing technologies and developing next-generation solutions – working closely with you to advance an industry that moves more than 1 billion people per day, worldwide.



MAX: real-time predictive maintenance

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Hey architects...

endura easily fits into your low-rise building design. With our machine room-less (MRL) application, you don't have to worry about designing for a machine room's additional space. The power unit is located in the elevator pit. Since the controller fits in the elevator door jamb, there's even more space savings. We also have a machine room application for locations that require them, as well as for customers wanting more lifting power.

endura is energy-efficient, has reduced environmental impact and uses biodegradable hydraulic fluid. LED lighting comes standard, so the lights won't have to be changed for years. Since the cab is from thyssenkrupp Elevator, it's the industry's only UL-validated, 01350 CA-compliant, low-emitting interior. That's one less thing to worry about.

Hey 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.

Hey contractors...

With endura, installation is easy. With our MRL application, you'll spend less time thinking about the elevator because there's less to build and manage. You can eliminate framing, electrical and HVAC, fireproof doors, as well as the locks and signage required for typical 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.



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.

endura elevators

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.



Less elevator downtime with MAX Our predictive maintenance solution, MAX, significantly reduces elevator downtime using Internet of Things (IOT) technology.

You get MAX with all endura applications.





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



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.



3 Universal door operator

Malfunctioning doors are the leading cause of elevator service calls. This new technology provides door reliability as well as quick and smooth door operation.



4 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.

8 endura elevators

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.



endura elevators

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 non-proprietary equipment, fewer testing requirements and fewer components.





2 Universal door operator

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

6 Power unit

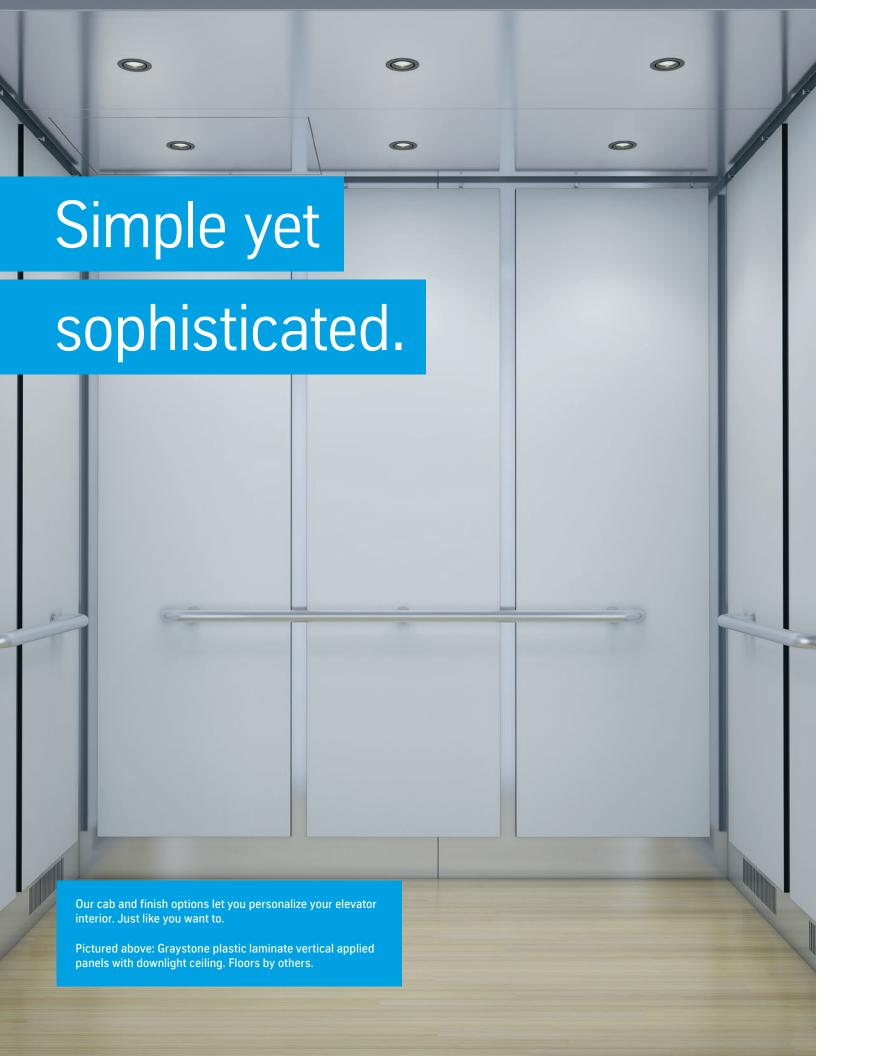
Enables smooth stops and starts along with precise leveling. You'll appreciate the low maintenance requirements.





4 Jack unit

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



Laminate

Standard cab



Wood core laminate wall design

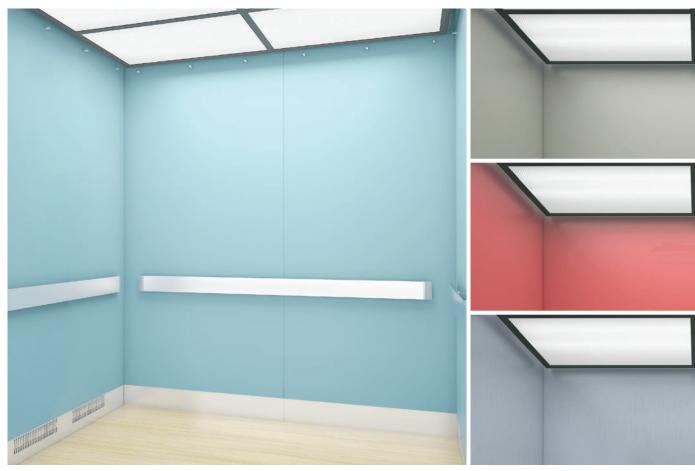
Create an impressive design with our wide variety of standard options. Walls include a laminate finish on a quality wood core. This cost-conscious choice is practical and durable.

Wall finish options



Steel shell

Standard cab



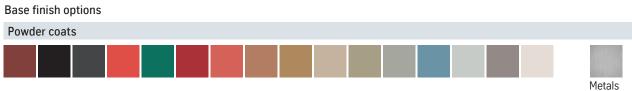
Steel shell wall design

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.

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

Wall finish options





Applied panel

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 wood.



Metals



representative for detailed availability on our metal options.

Reveal, base, frieze finish options

Powder coats



Finishes

Plastic laminates

Woods



Deluxe Pear

Select

8902 Cherry

Painted Wood











Solids

7197 464 Dover White

Graystone

8792 Sky Matte

Stop Red

Matrix Blue

Enamel

Teakwood

Patterns



Neutral Twill

8827

8958

Bubble Art

Powder coats



Metals



Stainless Steel¹







Polished Stainless Steel¹

Stainless Steel

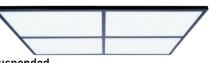
Cab accessory options





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.)



Option 1: Resin braille plate Option 2: Surface mount cast braille plate

Braille plates

Option 3: Flush (inlaid) mount cast braille plate



Flat bar Metal bar handrail is available in 2", 4" or 6" widths.

Aluminum

Our cab sill finishes allow you to match

inside the cab.

your sills to any other design component

¹ Limited application. Contact your local representative for details.

Fixtures

Traditional fixtures

Product details

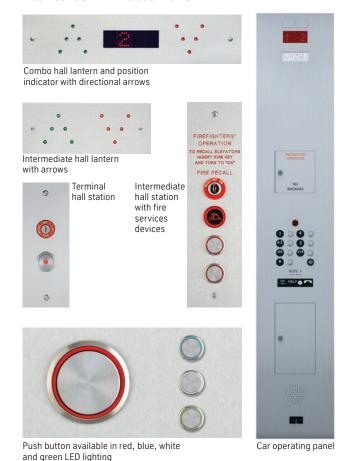
- Faceplates in brushed or polished stainless steel
- Position indicator displays car location with matrix of red LED-illuminated dots



Vandal-resistant fixtures

Product details

- · Faceplates in brushed or polished stainless steel
- Extra level of protection in challenging environments
- Pry-resistant hall jamb symbols and buttons are mounted flush with the door frame



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

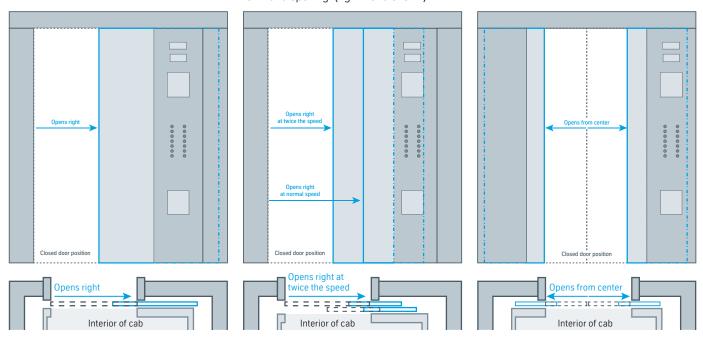
The most economical door offering, available with either right- or left-hand opening. (right-hand shown)

Two-speed

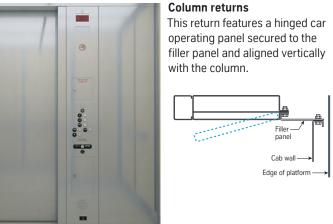
Provides a wider opening without compromising door cycling time. Two doors move in the same direction, one sliding faster than the other. Available with either right- or left-hand opening. (right-hand shown)

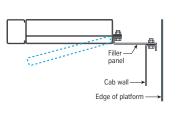
Center opening

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



Front returns

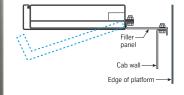




This return features a hinged car

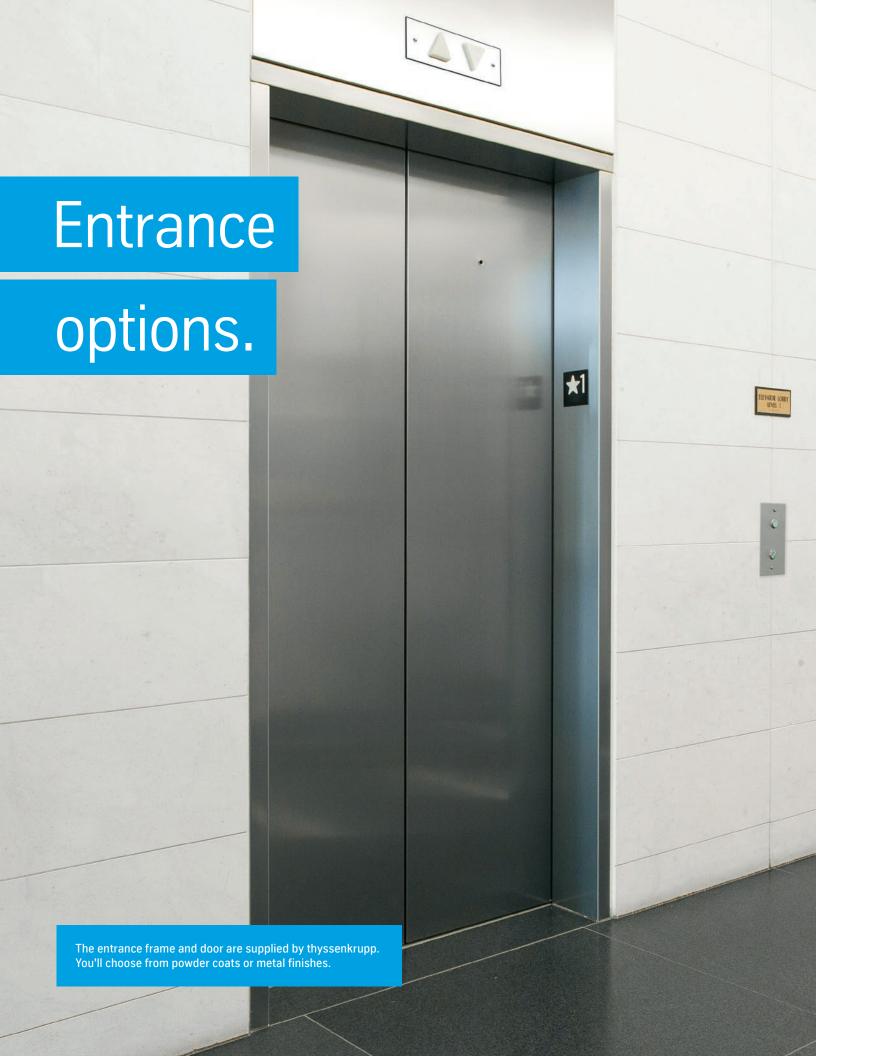
Wrap-around returns*

operating panel and separate filler panel.



Front returns include the car station, return panel, signal fixtures and head jamb. Images above represent return types in brushed stainless steel.

* Comes standard



Entrance finishes

Hoistway and door entrance finishes

Typically, the entrance frame would match the door selection, but nothing says you have to. Choose from any powder coat color or metal finish.







Powder coat finish

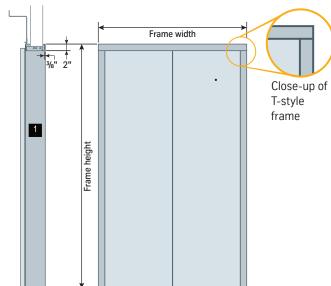
T-style entrance frame in Blue Patina powder coat.

Metal finish

T-style entrance frame in #4 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'-6½"



Capacity 2100 – 5000 lbs



Speed 80 – 150 fpm





Holeless above-ground technical specifications

Speeds (fpm)	80, 100, 110, 125, 150 feet per minute (dependent on project-specific conditions, such as capacity, machine room location, etc.)
Maximum travel	33'-61/2" 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 (in the second landing wall jamb)
Door operator	Universal Door Operator (LD16)
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



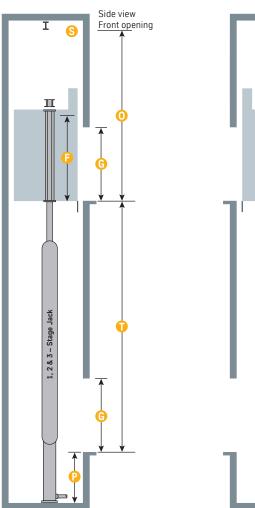
Speed 80 – 200 fpm

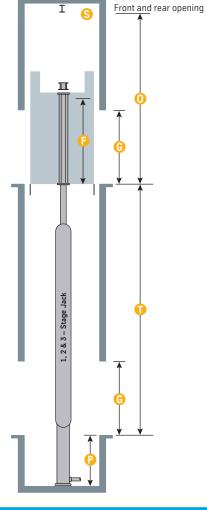


Holed below-ground technical specifications

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 (LD16)
Manual lowering	Standard
Battery-lowering operation	Available as an option

Passenger elevators – twinpost above-ground



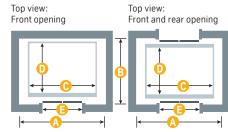


Passenger	1- and 2-Stage	3-Stage				
Capacity (lbs)	Hoistway ^{2,9} A x B	Hoistway ⁹ A x B	Front/ rear	Inside clear C x D	Door type	Door width E
2100 3	7'-4" x 5'-9"	7'-8" x 5'-9"	F	5'-8" x 4'-3"	One-speed	3'-0"
2100 ³	7'-4" x 6'-8¾"	7'-8" x 6'-8¾"	F/R	5'-8" x 4'-3½"	One-speed	3'-0"
2500	8'-4" x 5'-9"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

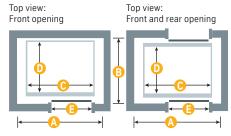
A Hoistway width (c) Door clear height

- B Hoistway depth Minimum overhead
- (Inside clear width P Minimum pit depth Safety beam Inside clear depth
- Door clear width Travel
- [] Inside clear height

One-speed center opening doors



One-speed side opening doors



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

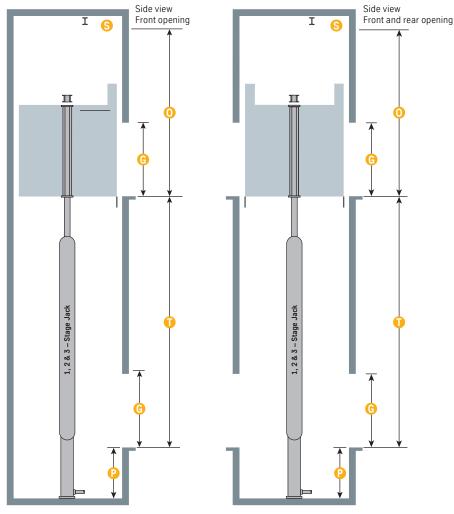
Up to 100 fpm:	Over 100 fpm:
1-Stage - 12'-2"	1-Stage - 12'-5"
2-Stage - 12'-8"	2-Stage - 12'-8"
3-Stane - 12'-11"	3-Stane - 12'-11"

- 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'-61/2" 3-Stage: 48'-31/2"
- Safety beam required per OSHA 1926,5027

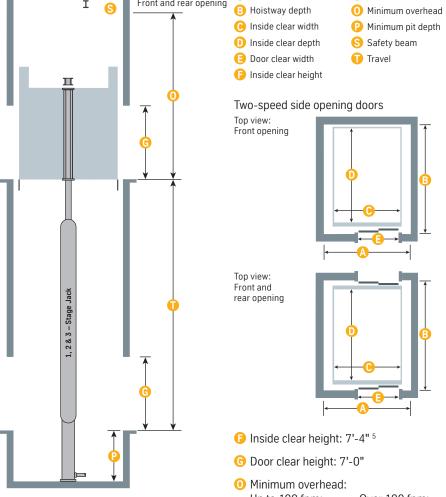
Contact your local representative for various code or jurisdictional exceptions, or alterations required.

See endnotes on page 27.

Service elevators – twinpost above-ground



Service	1- and 2-Stage	3-Stage				
Capacity (lbs)	Hoistway ^{2,9} A x B	Hoistway 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'-9 ¹ / ₄ "	7'-8" x 10'-9 ¹ / ₄ "	F/R ⁸	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'-4 ³ / ₄ "	7'-8" x 11'-4¾"	F/R ⁸	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 ⁸	5'-8" x 9'-0½"	Two-speed	4'-0"/4'-6"



A Hoistway width

(c) Door clear height

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

2-Stage - 12'-8" 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'-61/2" 3-Stage: 48'-31/2"

Safety beam required per

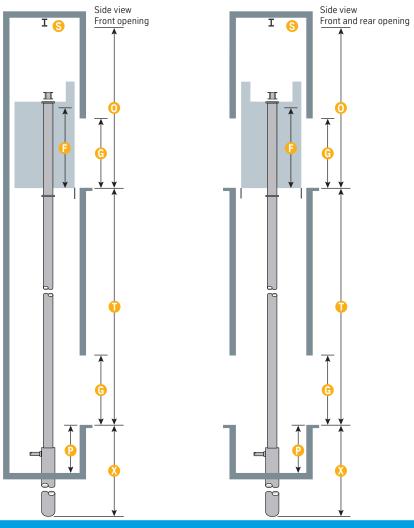
OSHA 1926.5027

jurisdictional exceptions, or alterations required.

Contact your local representative for various code or

See endnotes on page 27.

Passenger elevators – below-ground



				<u> </u>	<u> </u>	
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'-8 ³ / 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'-10 ³ / ₄ "	F/R ⁸	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'-10 ³ / ₄ "	F/R	7'-8" x 5'-5½"	One-speed	3'-6"/4'-0"	Т

- A Hoistway width
- B Hoistway depth
- (Inside clear width Inside clear depth
- Door clear width
- [] Inside clear height
- Travel Jack hole depth

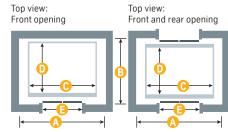
(c) Door clear height

Minimum overhead

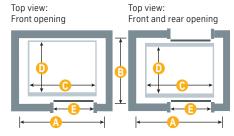
P Minimum pit depth

Safety beam

One-speed center opening doors



One-speed side opening doors

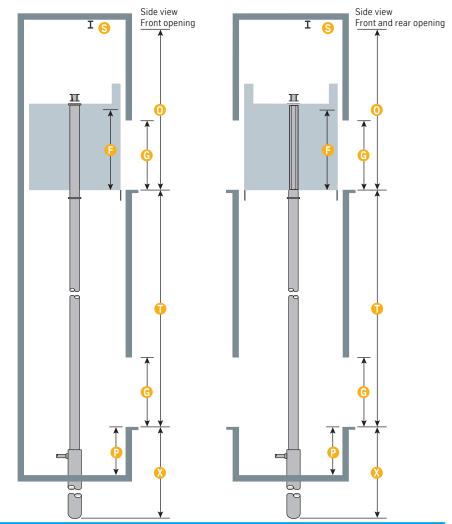


- Inside clear height: 7'-4"5
- G Door clear height: 7'-0"
- Minimum overhead: Up to 100 fpm - 12'-0" Over 100 fpm - 12'-3"
- P Minimum pit depth: 4'-0"6
- Safety beam required per OSHA 1926.5027
- Max travel possible: 60'-0"
- Standard jack hole depth: Travel + 6'-0"

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

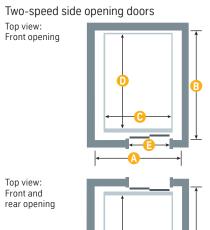
See endnotes on page 27.

Service elevators – below-ground



Capacity (Ibs)	Hoistway ^{2,9} 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'-9 ¹ / ₄ "	F/R ⁸	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'-4 ³ / ₄ "	F/R ⁸	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'-11³⁄4"	F/R ⁸	5'-8" x 9'-0½"	Two-speed	4'-0"/4'-6"

- A Hoistway width (c) Door clear height Minimum overhead
- B Hoistway depth
- () Inside clear width P Minimum pit depth Safety beam
- Inside clear depth Door clear width
- Travel Jack hole depth [] Inside clear height



- 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
- Safety beam required per OSHA 1926.5027
- Max travel possible: 60'-0"
- Standard jack hole depth: Travel + 6'-0"

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

See endnotes on page 27.



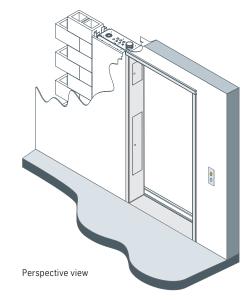
Our endura MRL maximizes space because the controller is in the entrance jamb.

A minimum 8½-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 thyssenkrupp 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.



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.

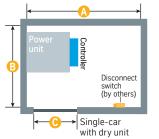
Smaller or custom-sized machine rooms are available in some cases. Contact your thyssenkrupp Elevator representative to help determine your needs, as machine room arrangements may vary from those shown.

Single car					
Power unit	Α	В	C 10	Door height	Room height
Submersible (large)	7'-2"	7'-1½"	4'-0"	Min 7'-0"	Min 7'-6"
Dry (large)	9'-10"	5'-6"	4'-0"	Min 7'-0"	Min 7'-6"

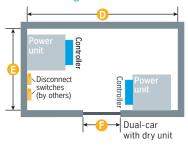
Power unit D E F ¹⁰ Door height Room h	
	eight
Submersible (large) 10'-5½" 10'-5½" 4'-0" Min 7'-0" Min 7'-6	j"
Dry (large) 14'-7" 7'-0¾" 4'-0" Min 7'-0" Min 7'-6	j"







Dual-car configurations



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 thyssenkrupp Elevator representative for details.

- ¹ Travel above 12'-8" (1-Stage < 100 fpm) and 12'-5" (1-Stage > 100 fpm) 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. A 5'-0" minimum pit depth is required for additional travel on machine room less (MRL) applications. 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 thyssenkrupp Elevator representative. Clear overhead is shown to the bottom of the safety beam.
- 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.
- $^{\rm 9}$ 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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