

Elevator Technology

evolution 200

Low- to mid-rise elevator



thyssenkrupp



engineering.

tomorrow.

together.

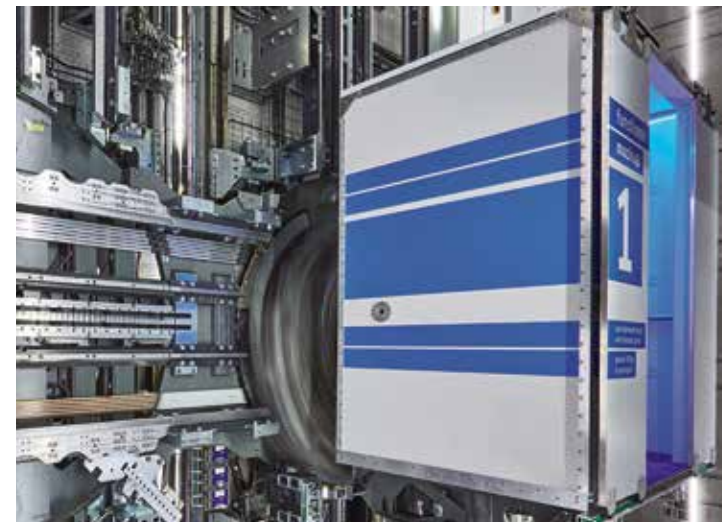
Making cities better.

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 world's first multidirectional elevator, and MAX, our predictive maintenance solution.

To help customers and cities grow, we introduce evolution 200. It's a low- to mid-rise elevator that's been developed for you.



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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Don't compromise. Choose evolution 200.

You know the routine. You need an elevator for your low- to mid-rise building. But it seems like there are always compromises.

These could be speed and capacity limitations or complex workarounds leading to additional construction, longer schedules and frustration.

Now there's an evolved solution: an elevator that meets your job specs, arrives on time and gives you more for your money.



→ When we say machine room-less, we mean it. Everything fits in the hoistway.

We didn't do it first.

We did it right.

We've engineered an MRL elevator for up to 35 stops that's not only competitive, it's better.

You don't have to sacrifice size for speed.
You can have a 5000-pound capacity elevator and still go 600 feet per minute.

You get an extra safe elevator without paying extra.
Our auto-rescue feature, which prevents passengers from being trapped during a power outage, comes standard.

You get a controller that fits into an 8-inch door jamb.
There is no need for a control closet, which means one less thing to build.

You don't have to waste space.
Using belts means our equipment uses less space.

You get a super quiet ride.
Our design makes it the industry's quietest, inside and out.

You get a hassle-free installation.
No crane needed and everything fits into the hoistway.

You can gain LEED credits.
Material and Resources credits, that is. We have material transparency certifications, declarations plus a regenerative drive that saves energy.



→ The controller is located in the door jamb at the top landing.



We engineered
solutions for everyone.

Hey architects...

Stop stressing over elevator space. We've got you covered.

When we say machine room-less, we mean it. Literally everything fits into the hoistway.

- It has belts, so major components like the machine and sheaves take up less space. You've got more room to design that masterpiece.
- Our elevator is supported from the guide rails — so no more overhead steel or beam pockets. Scratch that off your list.
- The controller is built right into the door jamb. So don't worry about building that closet.

Your lobby design doesn't have to stop at the elevator door.

- evolution 200 has lots of design choices for your cabs.
- If those don't work, you can choose custom finishes, even heavy ones, so throw your weight around. Design with granite, marble, glass, barn doors — you name it.

Hey building owners...

Just because it's for low- to mid-rise buildings does not mean you can't get some high-quality features.

This elevator uses belts, not ropes. It's quiet and doesn't have jerky stops and starts.

- Belts are better. They weigh less than steel ropes, so the major components don't have to move as much weight, making them smaller and lighter.
- Shhh... this elevator car is super quiet, just 50 decibels — like a conversation at home after the kids are in bed.
- It's all about suspension and a finely tuned electronic drive that gives you a smooth, smooth ride.

You really get more for your money. These advantages are standard.

- We've got the power. Our auto-rescue feature means tenants won't get stuck between floors in case of power failure.
- Remember that awesome regenerative drive? It captures unused energy produced by the elevator and feeds it back in your building grid. We'll throw that in, too.
- MAX, our predictive maintenance solution, helps your technician see the future. It's practically magic.

Hey contractors...

You don't need to dedicate so much time to getting your elevators installed. And since time is money, you can put your checkbook away.

evolution 200 has a simple design for a simple installation. So go ahead and accelerate your schedule.

- Everything you need arrives at the job site in a single shipment, crates sequentially ordered. Even the electrical disconnects. How easy is that?
- It's an MRL. It truly is. All the components fit in the hoistway.

- The controller is in the door jamb at the top landing.
- It's engineered so you can install the roof early. We won't need to use your crane.
- You don't need remote runs of wires from the elevator machine to the controller.
- The elevator supports itself. No need for overhead support steel.

We designed, so you could customize.

evolution 200 has increased cab weight allowances, so you don't have to sacrifice style for function.

Choose from our options or create your own custom cab design.



Cab weight allowance is increased to around 1500 pounds, depending on car capacity and speed choice. So choose heavy finishes such as marble — without sacrificing speed.

➔ Breathe easy.

We use wood with no added urea-formaldehyde, and powder coat instead of stinky solvent-based paint. Our cabs are third-party validated (UL Underwriters Laboratories) to be low-emitting.



Finally, an elevator
that comes without
compromises.

Are you ready to see why?

It's been developed for you.

Controller

Fits into a tiny 8-inch door jamb and is fully digital. This saves space and helps reduce elevator noise.

Regenerative drive

Captures unused energy generated by the elevator and feeds it back into your building grid. It's more compact, faster to install, easier to maintain and replaces motor and brake contactors with SIL3 solid-state devices for a quieter and more reliable drive.

Auto-rescue

In a power outage, passengers are automatically transported to the next available floor and doors open so they can get out.

Absolute positioning system

Precisely measures your elevator's speed and positioning. This promotes accurate floor stopping, so floors are level and passengers are safe.



Belts

Belts have a longer life span than ropes. They also help provide a quieter and smoother ride.

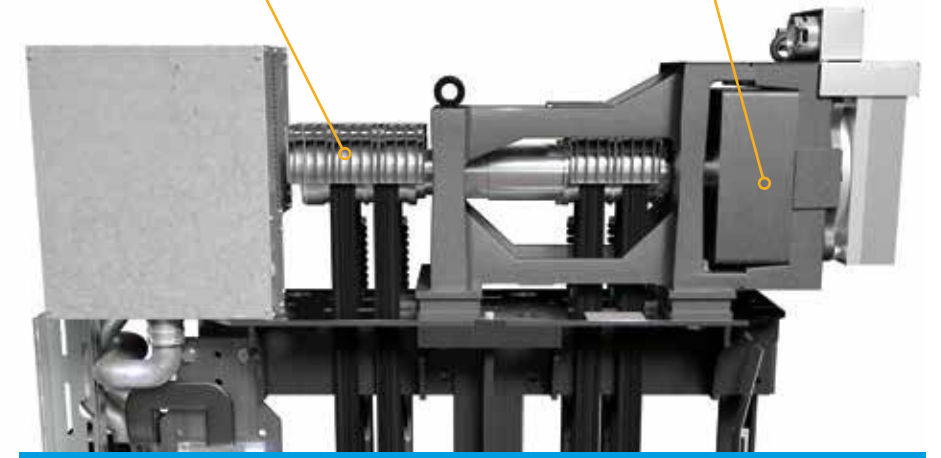


Sheaves

The smaller sheaves in evolution 200 have a tighter turning radius, allowing for a compact motor that takes up less overhead space.

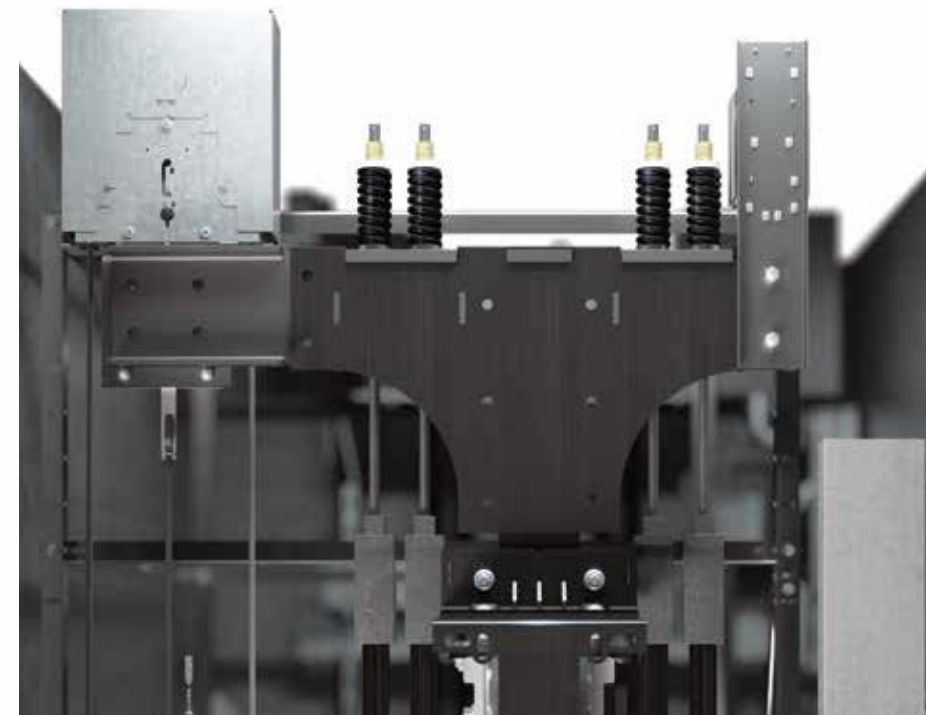
Permanent magnet gearless system

Improves ride quality while increasing energy efficiency.



1 Machines

Our machines transport elevators up to 600 feet per minute. There's no machine room, so you have more leasable building space.



2 Rail-supported

evolution 200 is supported by its rails rather than your building. That means your installation requires less coordination between trades.



3 Universal door operator

Malfunctioning doors are the leading cause of elevator service calls. This new technology improves elevator door reliability while providing a quick and smooth door operation.



4 Underslung design

Helps evolution 200 offer a smaller hoistway and reduced overhead space.

Start planning now.

The numbers at a glance



Travel
350'-0"



Speed
200 – 600 fpm



Capacity
2100 – 5000 lbs



Technology
Gearless traction



Type
Self supported



Fit
Machine room-less

Hoistway efficiency

Everything fits into the hoistway, giving you more leasable building space.

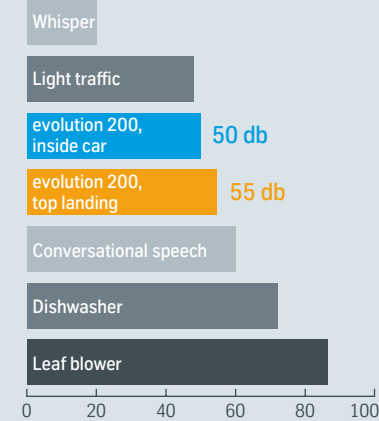


Reduced hoistway width, depth and height are due to the compact machine with small components and underslung design. This results in a smaller building footprint.



A quiet ride

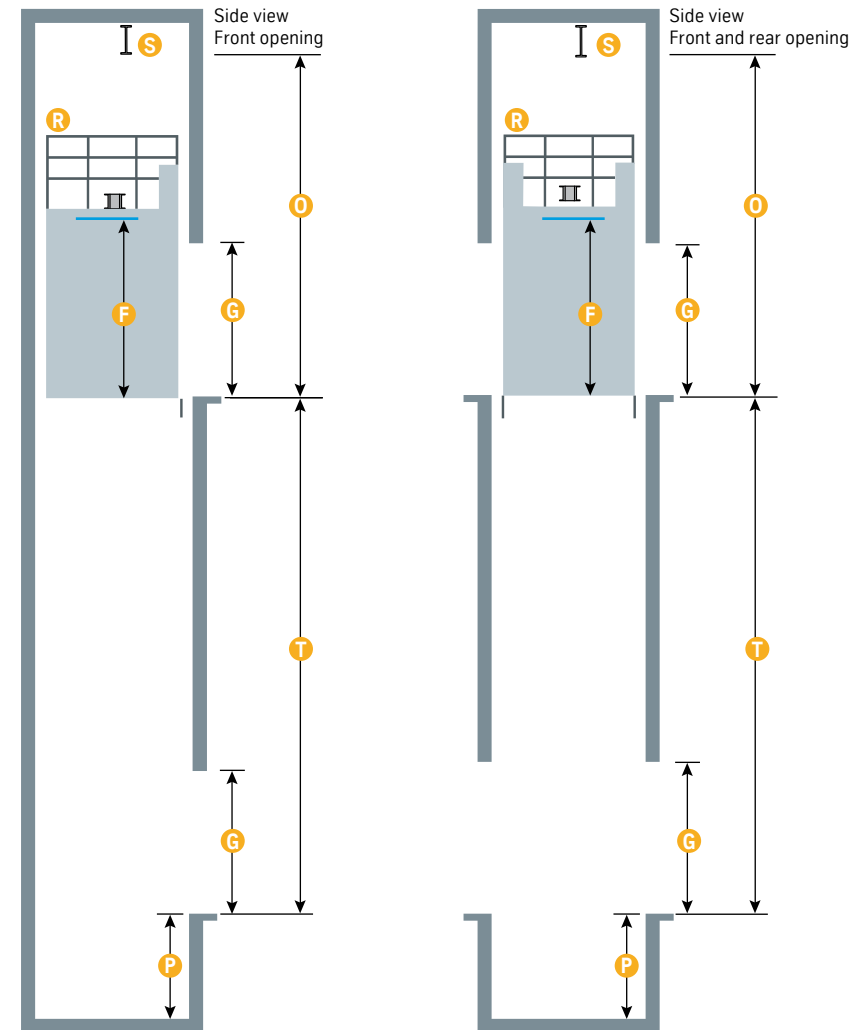
This elevator is very quiet. It emits fewer decibels than a normal conversation at home.*



*Source: Decibel comparison values from E•A•RCAL Laboratory, 3M Occupational Health and Environmental Safety Division

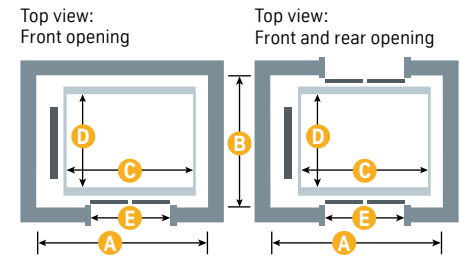
➔ You've got options and simplicity. Planning is easy.

Passenger elevators

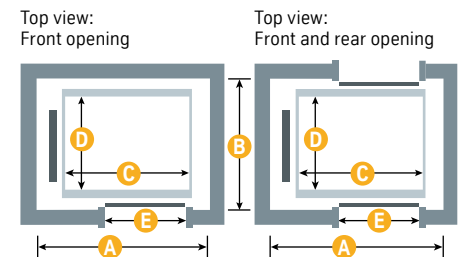


- A Hoistway width
- B Hoistway depth
- C Inside clear width
- D Inside clear depth
- E Door clear width
- F Inside clear height
- G Door clear height
- O Minimum overhead
- P Minimum pit depth
- R Car top railing
- S Safety beam
- T Travel

One-speed center opening doors



One-speed side opening doors



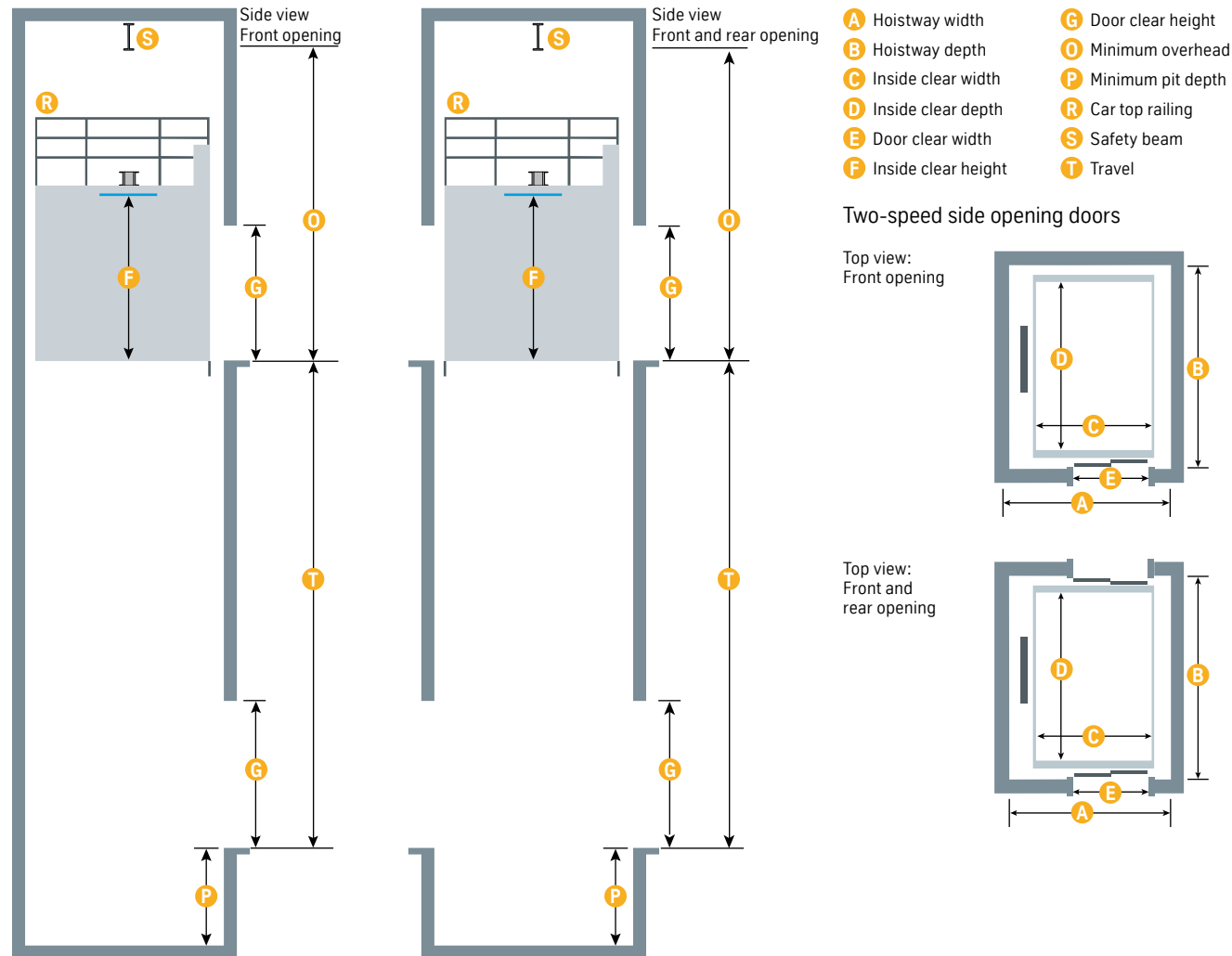
Capacity (lbs)	Hoistway ³ A x B	Front/rear	Inside clear ⁷ C x D	Door type	Door width E
2100 ²	7'-6" x 5'-9"	F	5'-8" x 4'-3 ³ / ₈ "	One-speed	3'-0"
2500	8'-6" x 5'-9"	F	6'-8" x 4'-3 ³ / ₈ "	One-speed	3'-6"
2500	8'-6" x 6'-8 ³ / ₈ "	F/R	6'-8" x 4'-3 ³ / ₈ "	One-speed	3'-6"
3000	8'-6" x 6'-3"	F	6'-8" x 4'-9"	One-speed	3'-6"
3000	8'-6" x 7'-2"	F/R	6'-8" x 4'-9 ¹ / ₂ "	One-speed	3'-6"
3500 ⁴	8'-6" x 6'-11"	F	6'-8" x 5'-5"	One-speed	3'-6"
3500 ⁴	8'-6" x 7'-10"	F/R	6'-8" x 5'-5 ¹ / ₂ "	One-speed	3'-6"
4000 ⁴	9'-6" x 6'-11"	F	7'-8" x 5'-5"	One-speed	3'-6"/4'-0"
4000 ⁴	9'-6" x 7'-10"	F/R	7'-8" x 5'-5 ¹ / ₂ "	One-speed	3'-6"/4'-0"

- F Inside clear height: 7'-4" ¹
- G Door clear height: 7'-0" ⁹
- S 8" safety beam (2" clear above) required capable of holding 7500 lbs ⁶
- O Minimum overhead: ^{5,6}
200 fpm: 12'-8" 500 fpm: 13'-11"
350 fpm: 13'-4" 600 fpm: 15'-0"
- P Minimum pit depth: ^{8,11}
200 fpm: 5'-0" 500 fpm: 6'-6"
350 fpm: 5'-6" 600 fpm: 7'-2"

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

See endnotes on page 19.

Service elevators



Capacity (lbs)	Hoistway ³ A x B	Front/rear	Inside clear ⁷ C x D	Door type	Door width ¹⁰ E
4500	7'-6" x 9'-6½"	F	5'-8" x 7'-9½"	Two-speed	4'-0"/4'-6"
4500	7'-6" x 10'-8½"	F/R	5'-8" x 7'-10"	Two-speed	4'-0"/4'-6"
5000	7'-6" x 10'-2"	F	5'-8" x 8'-5"	Two-speed	4'-0"/4'-6"
5000	7'-6" x 11'-4"	F/R	5'-8" x 8'-5½"	Two-speed	4'-0"/4'-6"
5000H	7'-6" x 10'-9"	F	5'-8" x 9'-0"	Two-speed	4'-0"/4'-6"
5000H	7'-6" x 11'-11"	F/R	5'-8" x 9'-0½"	Two-speed	4'-0"/4'-6"

- F** Inside clear height: 7'-4" ¹
- G** Door clear height: 7'-0" ⁹
- S** 8" safety beam (2" clear above) required capable of holding 7500 lbs ⁶
- O** Minimum overhead: ^{5, 6}
200 fpm: 12'-8" **500 fpm:** 13'-11"
350 fpm: 13'-4" **600 fpm:** 15'-0"
- P** Minimum pit depth: ⁸
200 fpm: 5'-0" **500 fpm:** 6'-6"
350 fpm: 5'-6" **600 fpm:** 7'-2"

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

See endnotes on page 19.

Technical specifications

Capacities (lbs)	2100, 2500, 3000, 3500, 4000, 4500, 5000, 5000H
Speeds (fpm)	200, 350, 500, 600 feet per minute
Maximum landings	Up to 35
Power characteristics	480 volts, 3 phase, 60 hertz at 400 fpm or up (if 200 fpm, lower voltage options are available). Isolation transformer may be required on jobs with less than 480 VAC, 3 phase
Brakes	Dual braking system (main and emergency)
Solid state brake controls	Contactless components for emergency and normal brakes as well as motor that reduces noise
Number of belts	Four, on cars up to 3500 lbs capacity; Six, over 3500 lbs capacity
Suspension means	Flat belt: 44 mm belt width and 3.8 mm thickness; 12 internal steel cords encased in FT1 rated PU material
Belt monitoring	Monitored by residual life span, traction loss detection device, belt member loss and a trip count
Machines	Permanent magnet gearless machine
Absolute position system	Elgo, sensor reads position data off of magnetic tape
Drive	Fully regenerative digital drive with automatic rescue included
Controller	TAC32T (in the wall or in optional control space if required by local jurisdictions, building constraints, and job-specific performance)
Door operator	Universal door operator (LD16 plus)
Car guides	Slide guides standard at 200 fpm; Roller guides standard at 350 – 600 fpm
Counterweight guides	Slide guides standard at 200 – 600 fpm
Counterweight	Side only
Governor	Wittur, remote resetting governor
Finished floor height	3/8" or 3/4" standard

Endnotes

Dimensional data shown is for non-seismic zones 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 Inside clear heights of 8'-4" and 9'-4" are also available. Dimension shown is the distance between the suspended ceiling and a maximum ¾" finished floor. If ½" finished floor, the inside clear height increases to 7'-4¾".

² This capacity is not available with center opening doors.

³ For non-seismic installations, add 1" to hoistway width when travel exceeds 100'.

For seismic Zone 2 or greater or IBC equivalent, add 2" to hoistway width if travel is less than or equal to 100'. For seismic Zone 2 or IBC equivalent, add 3" to hoistway width if travel exceeds 100'.

For seismic Zone 3 or greater or IBC equivalent, add 3" to the hoistway width if travel is between 100-250'. For seismic Zone 3 or greater or IBC equivalent, add 6" to hoistway width if travel is greater than 250'.

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.

⁵ For areas enforcing ASME A17.1 2010 code or greater, the minimum overhead requirement is the same for simplex/multicar/seismic/non-seismic. For areas enforcing pre-2010 ASME A17.1 code and speed is equal to 200 fpm, the minimum overhead is still the same, but if speed increases to 350 fpm or more, the minimum overhead is greater than what is shown. Contact your local representative for overhead requirements.

⁶ Provided and installed by others, as directed by the local office. Minimum overhead is shown to the bottom of the safety beam.

⁷ Clear inside cab is based on maximum ½" applied wall panel.

⁸ No occupied space allowed below pit.

⁹ Door clear height of 8'-0" is also available for taller cabs but contact your local representative for additional details.

¹⁰ For 54" (4'-6") doors, hoistway width increases to 8'-3" for non-seismic and seismic. For 48" (4'-0") doors, see note 3.

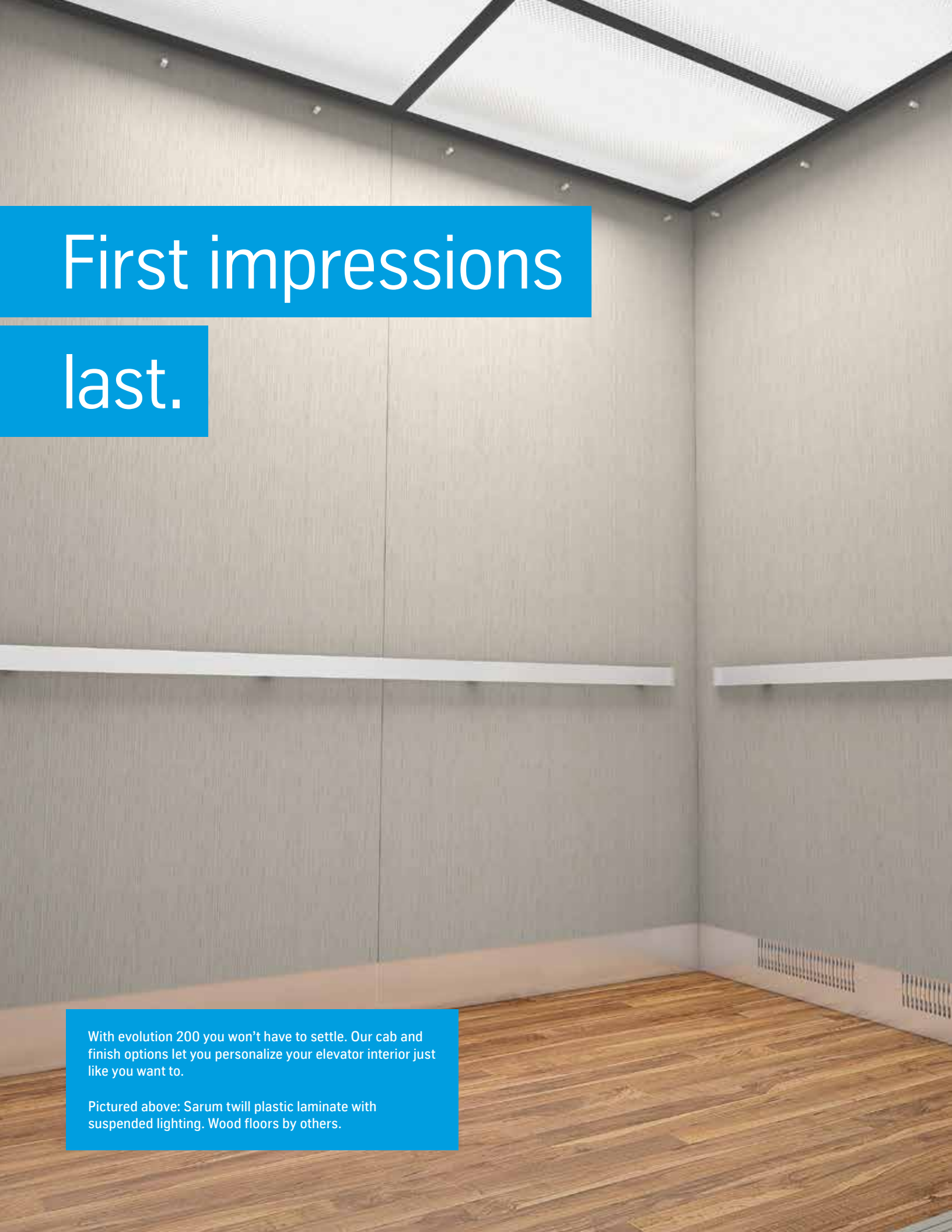
¹¹ Minimum pit depth increases to 6'-6" on a 4000 lbs capacity car, 350 fpm when it exceeds 225 feet of travel because it needs a compensation wheel for balancing the car.

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

You made it. Did you know we manufacture enough elevators each year to fill a building 8000 floors high? That's 16 miles up, enough to reach the stratosphere.

First impressions

last.



With evolution 200 you won't have to settle. Our cab and finish options let you personalize your elevator interior just like you want to.

Pictured above: Sarum twill plastic laminate with suspended lighting. Wood floors by others.

Ceilings



Suspended¹
White translucent diffusers for LED lighting are available with ceiling frames in a powder coated or stainless steel finish.

¹ Comes standard. Finishes may vary based on your project selections.



Downlight²
Metal pan downlight ceiling features LED lighting. Lights are mounted in your choice of powder coated or stainless steel ceiling panels.

² Lighting options may vary depending on cab size.

Wall finishes

Elevator cab interiors are a blank slate. Create an impressive design with our wide variety of standard options. We can help you customize to tastefully complement your building's décor.



Applied panels and plastic laminates
Options include wood, solids and pattern finishes. All are urea-formaldehyde free. Free is good, right?



Powder coats
Instead of solvent-based paints, you can color your interior by choosing powder coats. These are free of volatile organic compounds and have a lifetime of more than 10 years.



Metals
Simply want a polished interior? Choose one of our four metals.

Handrails



Cylindrical
1½" cylindrical handrail is a continuous metal form with ends turned toward the wall. We also offer straight endcaps in lieu of the returned ends. Comes in brushed stainless steel.



Flat bar
Metal bar handrail is available in ¼" thickness and 2", 4" or 6" widths. Comes in brushed stainless steel.

Sills



Our cab sill finishes allow you to match your sills to other design components inside the cab. The standard sill design is aluminum. You can upgrade the finish to nickel silver for maximum durability.

You've got options galore.

FIREFIGHTERS' OPERATION



Passengers need to quickly understand how to use your elevator. Our fixtures and cab accessories make it simple.

Whether it's choosing LED buttons or sturdy handrails, you can easily accessorize evolution 200 into a passenger-friendly ride.

Signa4 fixtures

- Product details**
- Satin stainless steel finish with charcoal trim
 - Allows for renovation of metal finish without requiring removal of box or frame

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. We hate vandalism.



Combo hall lantern and position indicator with directional arrows



Combo hall lantern and position indicator with directional arrows



Combo hall lantern and position indicator with directional arrows



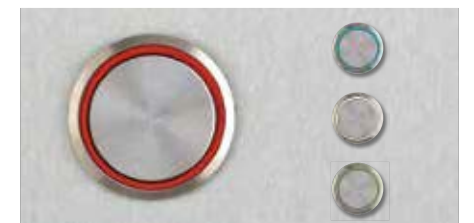
Push button available in blue and white LED lighting



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



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



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



Upgrade
with AGILE.

Make your elevator even better with AGILE. It offers four intelligent elements that improve your elevator's efficiency, aesthetics and security.



AGILE – Destination Controls
Better passenger experiences
Groups passengers traveling to similar floors together. The result? Shorter ride times, fewer stops and less building congestion. Tenants will love it.



AGILE – Management Center
Make data-driven decisions to manage performance
Collects data from evolution 200. You can use this data to make smarter decisions and adapt to tenant requests. It's all about optimization.



AGILE – Design Center
Touchscreens direct passengers to destinations
Lets you customize the touchscreen kiosks passengers use to select their floor. You can choose our graphics and backgrounds or use your own. No design skills needed.



AGILE – Security Access
Increase your elevator and building security
Safety matters. Integrates evolution 200 with your building security system or functions as a stand-alone system. You can meet your desired security by controlling access to specific floors. And you save money because you do not have to rewire.



MAX:
predictive maintenance

Our simple design was engineered to need less maintenance.

But over time, component wear and tear can't be completely avoided. Smart maintenance and service is critical for the life of your elevator. That's where MAX comes in...

MAX prevents problems before they occur
Combining the power of cloud computing, big data and machine learning, MAX monitors evolution 200 in real-time.

We call this predictive maintenance. It's revolutionary and can reduce your elevator downtime by up to 50 percent.

Like a 24/7 digital partner, it continuously collects data about your elevator's components and systems, and sends it to the cloud. The data is analyzed, and algorithms determine when your elevator will require maintenance from our technicians.

MAX is like having a digital partner
A standard feature with evolution 200, MAX uses cutting-edge technology to help you avoid the frustration and inconvenience of out-of-service elevators.

We're continuously improving MAX, so you can expect its benefits to get bigger and better over time.

MAX in action:



Data collected



Precise diagnoses



Predictive intervention

evolution 200 and the environment.



Whether it's sustainability, passenger health or LEED points, you're in good hands.

thyssenkrupp Elevator is the first elevator company to share what's in our products and materials, and we're proud to lead our industry in material transparency.

Even better, we're the only elevator company that can help with the tough new material credits in LEED v4, which now includes elevators. evolution 200 has Health Product Declarations, Cradle to Cradle Material Health Certifications and Environmental Product Declarations to help with four more LEED points on your project.

The elevator also comes with energy-saving features for no extra charge, saving you money up front and for the life of your building.

Regenerative drive

In the old days, energy created by elevator movements ended up heating the machine room. And then you needed AC. Now, this energy is captured and stored in your building grid. That's so cool.

Efficient power management

Why waste power? evolution 200 switches into standby mode when not in use, reducing the controller's energy consumption. In addition, automatic fan and light shutoff can reduce cab energy use by up to 90 percent.

LED lights

These come standard. LEDs last up to 25 times longer than traditional lights while using 75 percent less energy. They also produce barely any heat, helping keep your cab cool.



Sustainability is in our DNA

We create environmentally friendly solutions for ourselves, our customers and the planet.

Our 12-acre Tennessee factory is certified LEED Gold for Existing Buildings. We're the first elevator company to achieve this.

When doing business with us, you can be confident that everything we create keeps both you and the environment in mind.




You've got the support you need.








evolution 200 was designed to make your life easier. But it takes some steps to plan an elevator installation.

Relax. We support you throughout your entire elevator life cycle, from design through end of life. In the meantime, you can use our online support tools.

 Try our online support tools at www.thyssenkruppelevator.com/tools

Online tools:

-  **Elevator Finder**
Learn which elevator is right for you.
-  **Elevator Specification Generator**
Get elevator specifications based on your requirements and design features.
-  **Create-A-Cab**
Build your cab interior with our simple configuration tool.
-  **Energy Calculator**
Learn your potential energy consumption and costs.
-  **Service Portal**
Access your service account using our portal.

Our core principles.

We deliver.

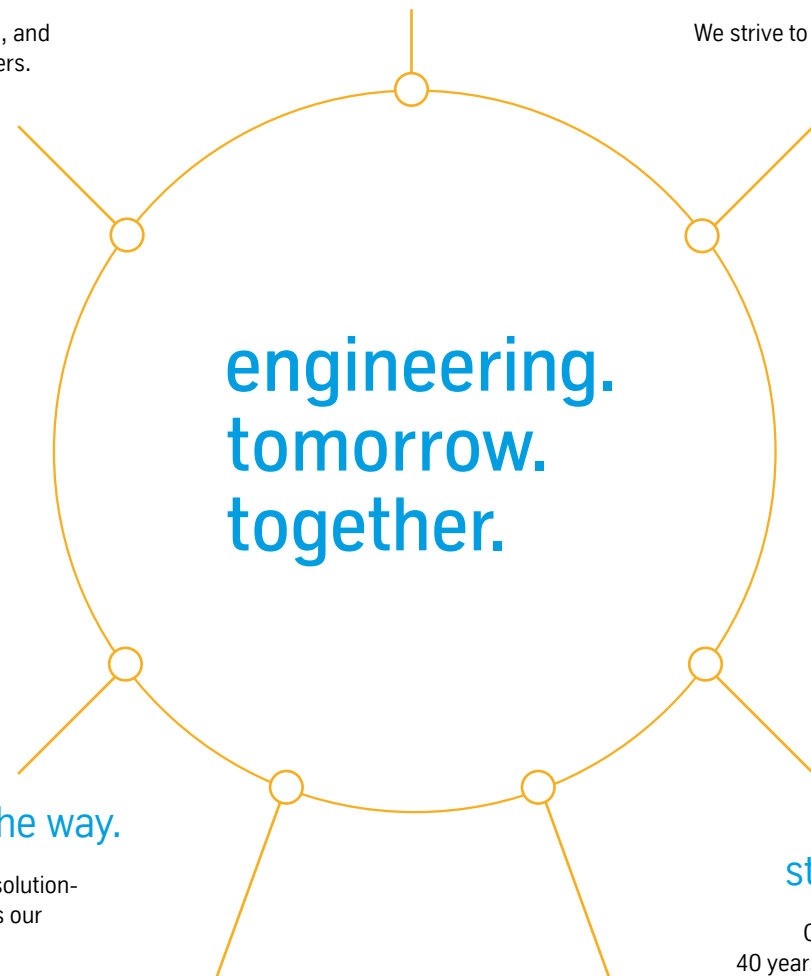
Reliable and high-quality products, services and solutions with precision and a superior cost-benefit ratio.

We innovate.

We strive to find technology and business solutions that cater to future customer needs.

We understand.

We listen, make suggestions, and co-develop with our customers.



We are leading the way.

We act with foresight and a solution-oriented mindset to progress our customers, employees and other stakeholders.

We build on strong experience.

Our expertise is based on over 40 years of engineering competence.

We act as a reliable partner.

We act in an honest, authentic and responsive manner towards customers, employees and other stakeholders.

We empower our employees.

We live an innovation culture based on respect and efficient collaboration.

1,100,000

elevators and escalators under maintenance

customers in

150

countries

50,000+ employees

Always there.

Our passionate goal is to always be there to secure the reliability of mobility equipment, ensuring it provides each passenger with the safest and most comfortable travel experience, thereby helping to make cities the best ever places to live.

900

locations

24/7

service available for customers

27,000+ service technicians

Elevator Technology

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INTERNATIONAL
LIVING FUTURE
INSTITUTE™

engineering. tomorrow. together.

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