

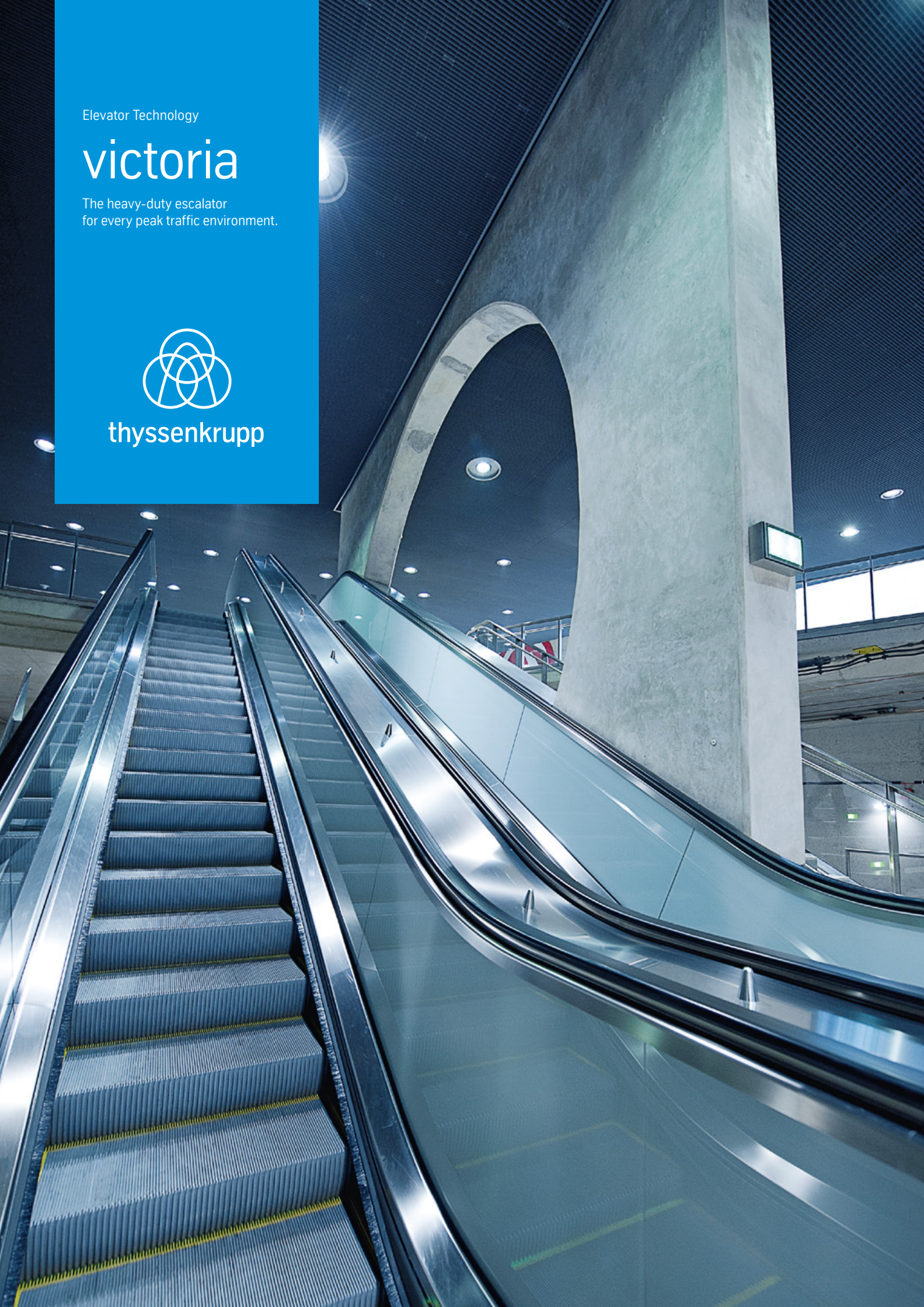
Elevator Technology

victoria

The heavy-duty escalator
for every peak traffic environment.



thyssenkrupp



Enhancing urban mobility: With escalators since 1906.

1

January 2018 marked the 125th anniversary of the first-ever escalator. It was more or less invented by accident. Jesse Reno had been trying to create New York's first double-decker subway but ended up with a moving stairway traveling at a 25° angle for a mere seven feet (2.13 m). But in just two weeks it carried some 75,000 passengers at the Old Iron Pier on Coney Island. A global success story was born.

In escalators since 1906.

We were soon into the escalator business with our first model installed at a department store as long ago as 1906. More than 110 years of engineering excellence go into all our escalator models.

Remarkable locations.

Metro systems on six continents trust our heavy-duty solutions – everywhere from Sao Paulo to Madrid, London to Moscow, and Beijing to Sydney. The escalators at Hamburg's Central Station have been doing sterling service for over half a century. And if Antarctica had enough traffic, one of our escalators would most likely be installed there as well.

As diverse as they come.

We build mobile escalators for boarding and disembarking aircraft, restaurant escalators with just one moving handrail for waiters with only one hand free, and eye-catching escalators accessing the world's deepest metro stations. You name it, we build it.

Myth debunked.

"Stand on the right, walk on the left" actually slows down passenger flow. Studies show that escalator capacity increases by about 30% if nobody walks. At thyssenkrupp we know the escalator business like the back of our hand and it's this expertise that makes our our escalators so special.



1 One World Trade Center's flying escalator, New York, USA
2 North Station, Shenzhen, China
3 + 4 Central Station, Hamburg, Germany



Contents

04	victoria benefits at a glance
06	Tailored to your needs
08	Operations you can trust
10	Protects your investment
12	Prioritizing sustainability
14	Safety first – it's in our DNA
16	Your service partner – always there
18	Design tools – making your life easier
19	About us



North Station,
Shenzhen, China

Masters the toughest requirements.

Our victoria is an escalator that is specifically designed for transport applications with exceptionally heavy-duty load conditions. Particularly at peak traffic times in metro or rail stations, this escalator comes into its own. The robust design and precisely manufactured components ensure victoria is ideally equipped to master the toughest requirements.

Base parameters victoria

Rise	75 m
Standard inclinations	23.2° 27.3° 30° 35°
Step width	600 800 1,000 mm
Speed	0.5 0.65 0.75 m/s
Environment	Indoor Outdoor

Designed for

Metro
Railways



Tailored to your needs:
Transport capabilities highly customizable.

No matter how challenging your requirements may be – rise, building restrictions or the challenge of combining aesthetical requests with technical needs – victoria enables all your demands to be met.



Operations you can trust:
Meaningful features for any peak traffic environment.

We leave nothing to chance by paying careful attention to all safety and maintainability details. As a result, you can fully trust victoria in your heavy-duty operations.



Protects your investment:
Robust components precisely manufactured.

victoria is designed to last. The critical guiding system in particular is built for many years of reliable service. That way, we make sure your investment pays off.

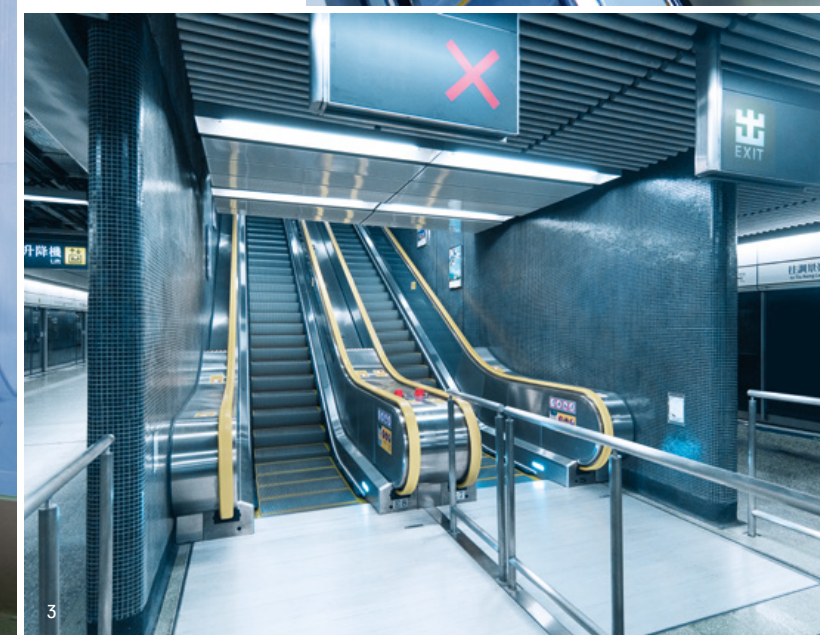


Tailored to your needs.

To meet your specific needs this heavy-duty escalator is highly customizable, conveying people to heights of up to 75 m, perfectly fitting your building requirements, and combining aesthetical requests and technical demands.



- 1+2 Heumarkt metro station, Cologne, Germany
- 3 Diamond Hill MTR station, Hong Kong, China
- 4 Amsterdam Central Station, Netherlands



Extraordinary heights.

victoria will safely convey people to all heights from a standard rise of up to 23 m to a design rise of up to 75 m. Moreover, this heavy-duty escalator can be tailored to perfectly fit your building requirements, e.g. with an outstanding maximum distance between supports of 23.8 m.

Aesthetic choices.

Choose a victoria escalator and you get a wide choice of customizable aesthetic features. We offer you three kinds of balustrade, all vandal-resistant and available in a wide variety of colors: the Metal balustrade made of beveled steel plates with different finishes to create a sturdy, industrial-style look; the Robust safety-glass balustrade for open design concepts; and the sleek Sandwich balustrade with a stainless-steel cover that is ideal for traffic applications. Moreover, our standard traffic lights leave no needs unanswered, with features adapted to today's passenger behavior. And if you want something very different, we will design a traffic light solution that is as unique as your project.

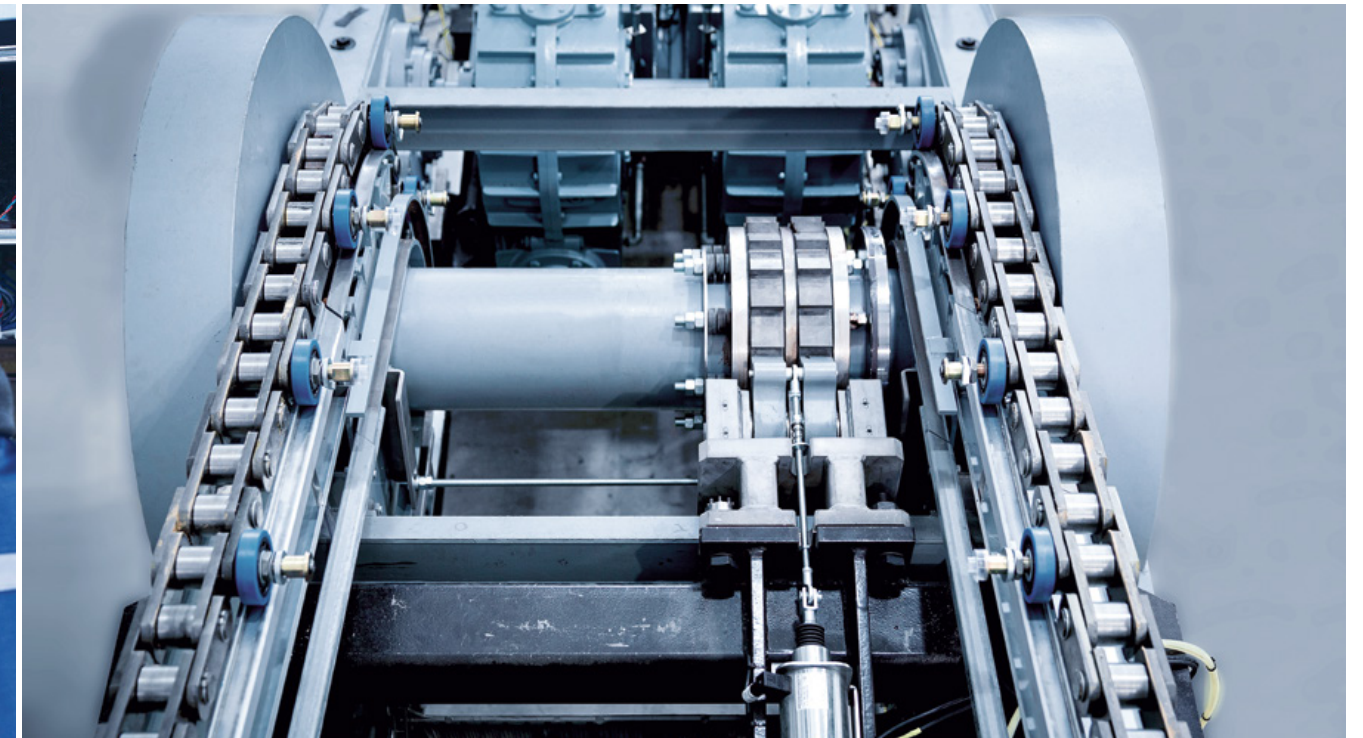
Technical options.

The V-shaped handrail drive located in the newel is a standard feature of victoria escalators all the way up to a 75 m rise. The location in the newel and outside the supporting structure ensures wear-free guiding, while offering convenient access for maintenance purposes. And whichever controller option you choose – a standard thyssenkrupp PC board or an individually programmable PLC controller – we will ensure it is perfectly integrated into your existing system.



Operations you can trust.

Robust features such as a purposefully designed truss and auto restart function help to deliver industry-leading reliability. So you can fully trust this escalator to operate reliably in peak traffic environments.



Truss design – operating benefits.

With a standard deflection of up to 1/1500 mm the victoria truss is designed to withstand any operational load. Moreover, open profiles prevent hidden corrosion while the overall design permits easy cleaning as well as reducing the fire risk by preventing oil and dust accumulation.

High ride comfort – less wear and tear.

The high ride comfort offered by victoria escalators and measured in line with ISO 18738-2 is not just appreciated by passengers. You will also profit from less wear and tear thanks to components manufactured to the highest standards.

✓ ISO 18738-2

Automatic restart* – empty step band.

The automatic restart function after every non-operational stop is designed to ensure the step board is empty before restarting.

MTBF 4,000 hours – outstanding reliability.

victoria escalators deliver an outstandingly reliable MTBF of around 4,000 hours, as calculated by the RAMS analysis method (Reliability – Availability – Maintainability – Safety). The main codes thyssenkrupp follows in this are EN 50126:1999 and DIN EN 60812:2006.

✓ EN 50126:1999

✓ EN 60812:2006

*availability dependent on local codes



Protects your investment.

Heavy-duty components, such as the outside chain roller, unloading curve, tensioning station and forced parallel run, are precisely manufactured to withstand years of peak traffic wear and tear. That will protect your investment in the long term.



- 1 Metro Line 4, Hangzhou, China
- 2 Metro Line 15, Beijing, China
- 3 Potsdamer Platz railway station, Berlin, Germany
- 4 Breslauer Platz metro station, Cologne, Germany



Step chain – tough on the outside.

The outside chain roller design allows the use of step bolts to guide the step chain. This reduces wear and tear on the rollers.

Unloading curve – increased lifespan.

The unloading curve reduces the load in the chain rollers and prevents a bending moment on the step bolt. This increases the lifespan of the step chain.

Forced parallel run – no unequal elongation.

The forced parallel run prevents unequal elongation of the step chains that may be caused by passenger behavior, e.g. people only standing on one side of the escalator.

Tensioning station – minimal wear and tear.

The tensioning station is equipped with a return shaft and chain wheel with mounted elastic dumpers. This minimizes wear and tear on the turned step chain.

Prioritizing sustainability.



Sustainability pays off – with energy-efficient escalator solutions.

Many people still think that green solutions are more expensive. Our victoria escalator proves that sustainability pays off. These escalators put energy efficiency into operational practice to lower your building's carbon footprint, improve your environmental image, and boost your bottom line.

Energy-efficient lighting.

State-of-the-art LED technology lasts longer than conventional lighting and is up to 80% more energy-efficient than halogen lighting.

Energy-saving operations.

Depending on your load cases, operational modes such as standby or sleep mode and the regenerative drive option can help make your escalator more energy-efficient.

Lower environmental impact.

By continuously improving our escalator solutions, we minimize their environmental impact in product lifecycle assessments.

Continuous operation



Save up to 15%*

Slow speed operation



Save up to 60%

Intermittent operation



Save up to 95%

Slow speed stop operation



Save up to 90%

Energy efficiency

A+++

ISO 25745-3

* Only applicable with Star-Delta

Safety first – it's in our DNA.



Since safety is a top priority in your building, we put safety first in designing the victoria. Around 50 standard or optional safety features mitigate the risk of incidents and injuries. Our portfolio includes an extensive range of motion safety devices and other important features to secure building interfaces. All this plays a key role in ensuring passenger safety – day in, day out.

Motion safety – going the extra mile.

A victoria escalator is designed with user behavior in mind. That is why our optional safety features go beyond the requirements of local codes. For example, the easy-to-maintain auxiliary brake impacts on the main shaft and stops the step band in the unlikely event of a disconnection between the motor and drive chain. In this way, it prevents any uncontrolled downward movement of the steps and reduces the risk of falls. This option will make your victoria escalator even safer in the event of servicing errors, vandalism or sabotage. Another option, the step up-thrust monitoring device, shuts down the escalator as soon as objects become trapped in the gap between two consecutive steps, thus reducing the risk of step breakage.

Proactive safety.

Fall protection is one of our proactive safety features. Safety curtains, which can be installed parallel to the balustrades and are even higher than them, further reduce the risk of passengers climbing over the side of an escalator.

Component safety.

We strive to enhance user safety and product reliability by building durable components that meet first-class manufacturing requirements. Our proprietary step design, for example, offers utmost reliability combined with minimal breakage risk.

Building interfaces.

To enhance the safety of the interfaces between an escalator and a building, we offer diverse solutions, e.g. deflectors for ceilings or criss-cross arrangements.



Your service partner.

Always there.



Whatever your commercial operation, you need an escalator that is installed on schedule and, once running, ensures people can get to where they want to go quickly and effortlessly. Our installation expertise will make sure your victoria starts operating on time. Our technical and service support will keep it running smoothly from then on.



More details about MAX
are available via this QR code.

Ensuring continuous people flow.

On-schedule installation.

Our expertise in planning and project management, the vigorous process we employ to select suitable installation teams, and the regular training all our personnel go through are the reasons why we can deliver installation on time – anywhere in the world and in any kind of commercial building.

Maximizing escalator uptime.

Our service goal is quite simple: maximize your escalator uptime. When you need support, our highly trained service technicians will be quickly on hand with the right spare parts and know-how to ensure your victoria stays running smoothly or is back operating again in the shortest possible time.

Tailor-made service packages.

Choose from a variety of service and maintenance packages ranging from basic maintenance to EN 13015 through to comprehensive support. As our service technicians are all specialists in specific application areas, we work closely with you to understand your needs and come up with a customized service concept. That will not only enable you to meet your reliability and safety goals but also give you cost transparency and budget security.

Interesting numbers

4,500,000,000
passengers per day

637,000
number of units worldwide

7,000
average number of passengers per unit per day

MAX – the game changer that keeps people moving.

Introducing MAX, the industry's first real-time, cloud-based predictive maintenance solution. Our smart, machine-learning, Internet of Things (IoT) solution dramatically increases elevator and escalator availability by reducing out-of-service situations through real-time diagnostics.



Data
gathering



Precise
diagnostics



Predictive
intervention

MAX is only available in selected markets.
Please consult your thyssenkrupp sales representative for further information.

Design tools: Making your life easier.

We supply you with a number of state-of-the-art tools so your architects, engineers and construction specialists can efficiently plan, design, construct and manage your building and infrastructure.



Escalator Planner: Easier preliminary planning.

This Escalator Planner provides architects and construction managers with the escalator-related data they need to design a building. By supplying all general product specifications, e.g. dimensions, net weight, potential energy efficiency and transport options, it enables exactly the right product to be found to match code requirements. Moreover, 2D or 3D CAD drawings can be uploaded into the preferred architecture software tool.

More details of the
Escalator Planner are
available via this QR code.



BIM: Seamless information flow.

BIM is an intelligent 3D model-based process that provides the insights and tools for a seamless information flow from design to execution. At thyssenkrupp we work with the world's leading BIM content platform, BIMobject®, where you can download our victoria BIM.

More details of the
BIM tool are available
via this QR code.



1,200,000
elevators and escalators under maintenance

Customers in
150
countries

50,000+
employees

Your
innovation
partner.

Our mission is to make cities the best ever places to live by being the driving force of an industry that moves more than 1 billion people every day.

Learn more
about us online.



1,000+
locations

24/7

24,000+
service technicians

Elevator Technology

info.elevator@thyssenkrupp.com
www.thyssenkrupp-elevator.com



Contact us.

engineering.tomorrow.together.