VICTORIA: THE HEAVY-DUTY ESCALATOR FOR EVERY PEAK TRAFFIC ENVIRONMENT

MOVE BEYOND

ENHANCING URBAN MOBILITY: WITH ESCALATORS SINCE 1906

One World Trade Center’s flying escalator, USA

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 115 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 TK Elevator, we know the escalator business like the back of our hand and it’s this expertise that makes our escalators so special.

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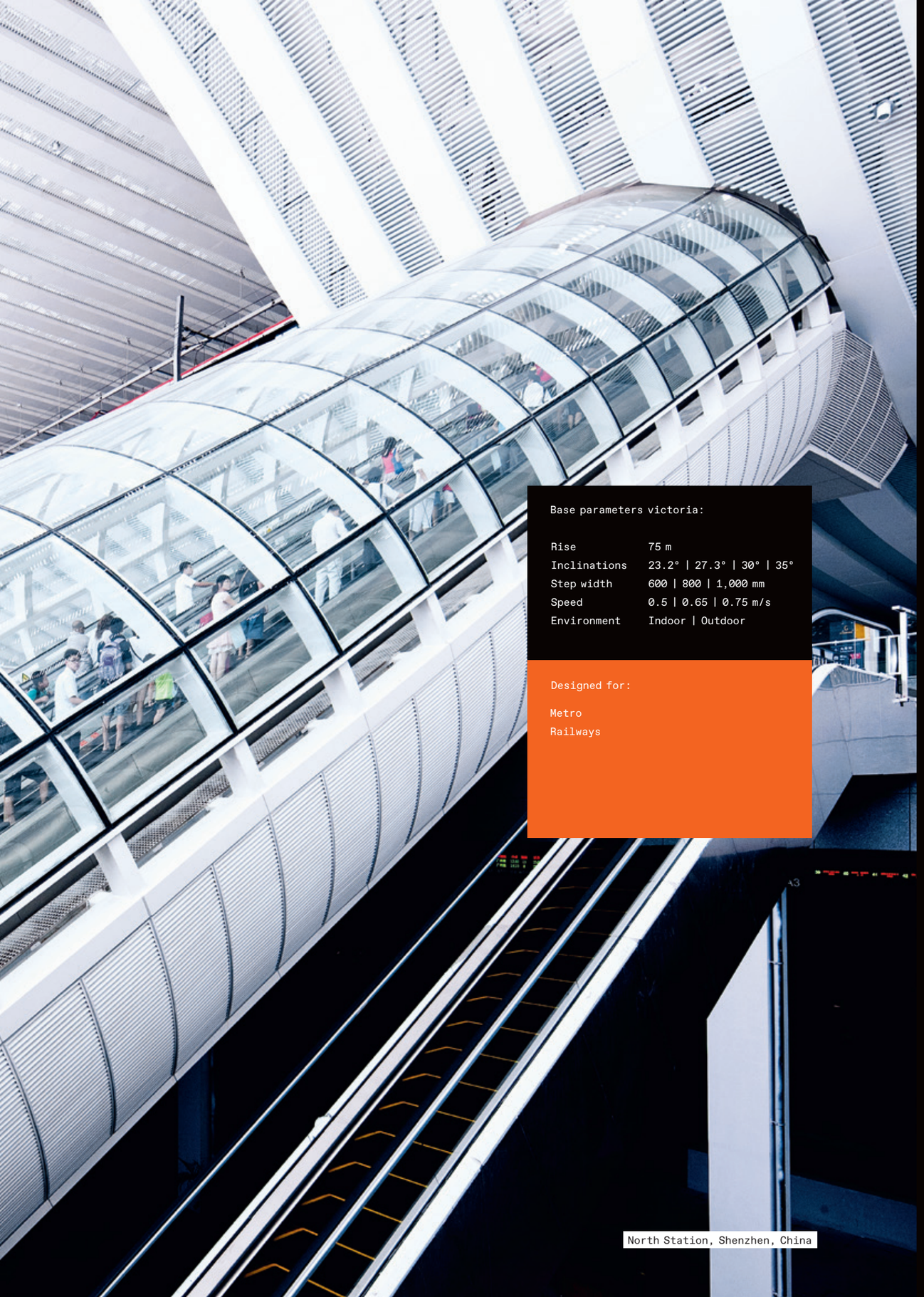
North Station, Shenzhen, China

Central Station, Hamburg, Germany



Base parameters victoria:

Rise	75 m
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

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.

Tailored to your needs: Transport capabilities highly customisable

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 customisable, conveying people to heights of up to 75 m, perfectly fitting your building requirements, and combining aesthetical requests and technical demands.

Diamond Hill MTR station,Hong Kong, China

Amsterdam Central Station, Netherlands

Heumarkt metro station, Cologne, Germany

Heumarkt metro station, Cologne, Germany

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

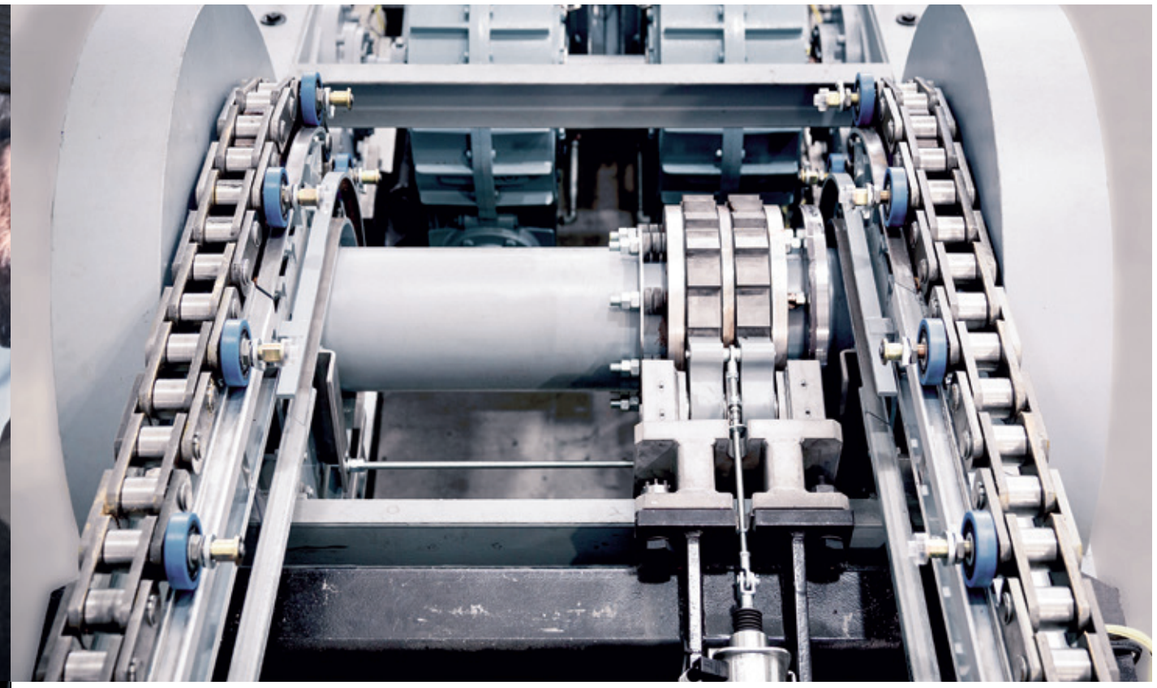
Choose a victoria escalator and you get a wide choice of customisable aesthetic features. We offer you three kinds of balustrade, all vandal-resistant and available in a wide variety of colours: the Metal balustrade made of beveled steel plates with different finishes to create a sturdy, industrial-style 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 TK Elevator 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 1/1,500 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 ISO18738-2 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 TK Elevator follows in this are EN 50126:1999 and DIN EN 60812:2006.

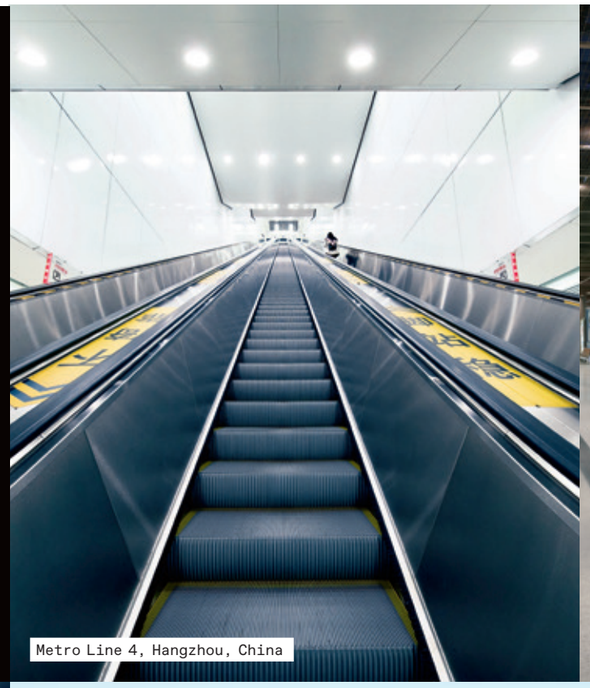
✓ 50126:1999

✓ 60812:2006

*availability dependent on local codes

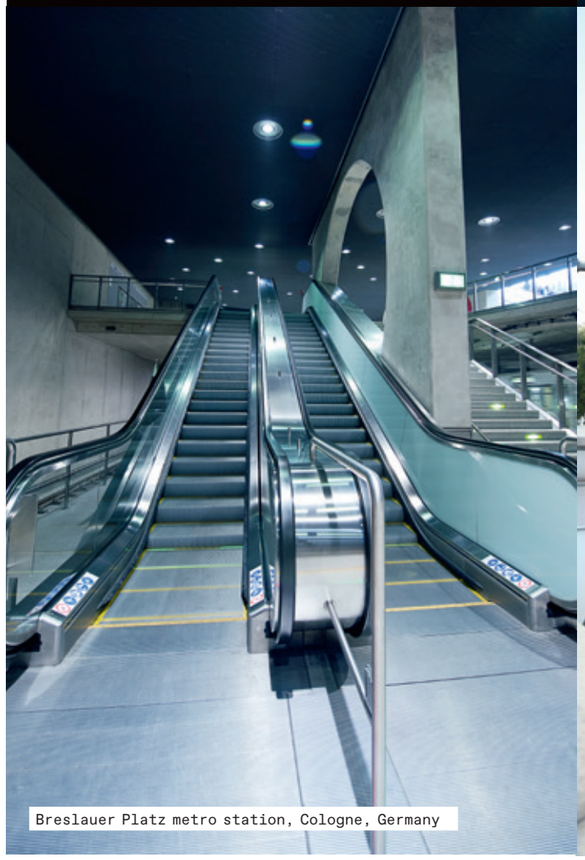
Protects your investment

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.



Metro Line 4, Hangzhou, China

Potsdamer Platz railway station, Berlin, Germany



Breslauer Platz metro station, Cologne, Germany

Metro Line 15, Beijing, China

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 minimises wear and tear on the turned step chain.

PRIORITISING 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 minimise their environmental impact in product life cycle assessments.

Continous operation

Save up to 15 %*

Slow speed operation

Save up to 60 %

Slow speed stop operation

Save up to 90 %

Intermittent operation

Save up to 95%

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.

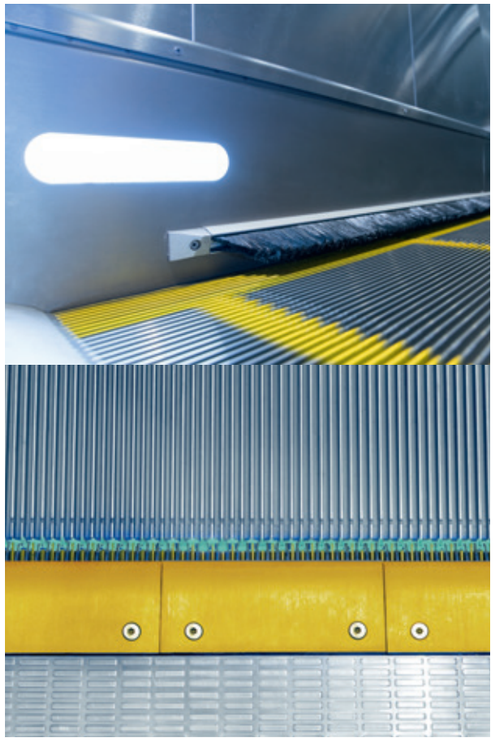
For example, the easy-to-maintain auxiliary brake impacts on the main shaft and stops the step band in the unlikely event of a disconnection between the motor and drive chain. In this way, it prevents any uncontrolled downward movement of the steps and reduces the risk of falls. This option will make 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. The collapse of an escalator step or moving walk pallet is very rare; but the consequences can be severe. Our continuous step monitoring device provides extra protection for passengers in highly demanded installations.

Proactive safety
Fall protection is one of our proactive safety features. Safety curtains, which can be installed parallel to the balustrades and are 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 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.

MAX – the game changer that keeps people moving

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

MAX is only available in selected markets. Consult your TK Elevator sales representative for further information.

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.

Maximising escalator uptime
Our service goal is quite simple: maximise 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 customised 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
numbers of units worldwide

7,000
average number of passengers per unit per day

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 eSlider tool are available via this QR code.

BIM: Building Information Modeling

BIM is an intelligent 3D model-based process that provides the insights and tools for a seamless information flow from design to execution.

At TK Elevator 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.

YOUR INNOVATION PARTNER

elevators and escalators under maintenance

1,200,000

countries of customers

100+

employees

50,000+

service available for customers

24/7

locations

1,000+

service technicians

24,000+

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