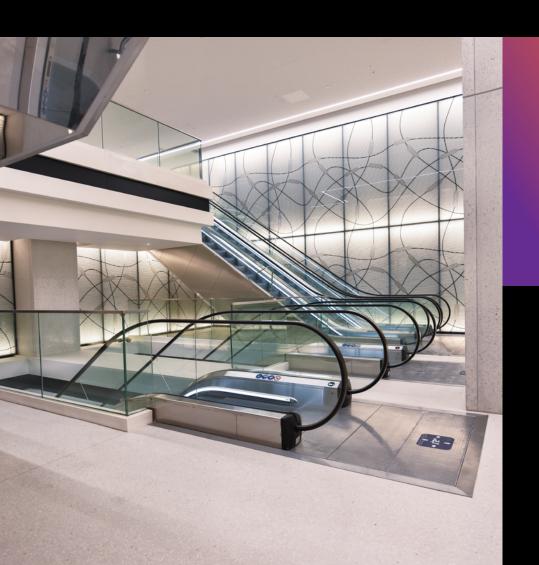


## VELINO

The commercial escalator that caters to your needs.



# ENHANCING URBAN MOBILITY: WITH ESCALATORS SINCE 1906

The first ever escalator was invented more than 125 years ago. 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 escalator business 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 a century of engineering excellence is built into our velino escalators.

#### 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 suspended escalators that crisscross the open space of an atrium. You name it, we build it.

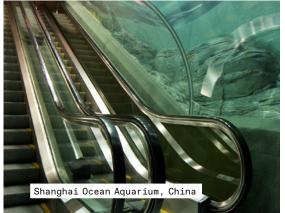
#### Remarkable locations.

Our underwater installation at Shanghai's Ocean Aquarium ensures visitors enjoy spectacular sights. The One World Trade Center in New York has 12 of our escalators and 71 elevators. We also equipped the world's largest department store in Busan. Higher, bigger, better – escalators from TK Elevator.

#### 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 velino escalators special.









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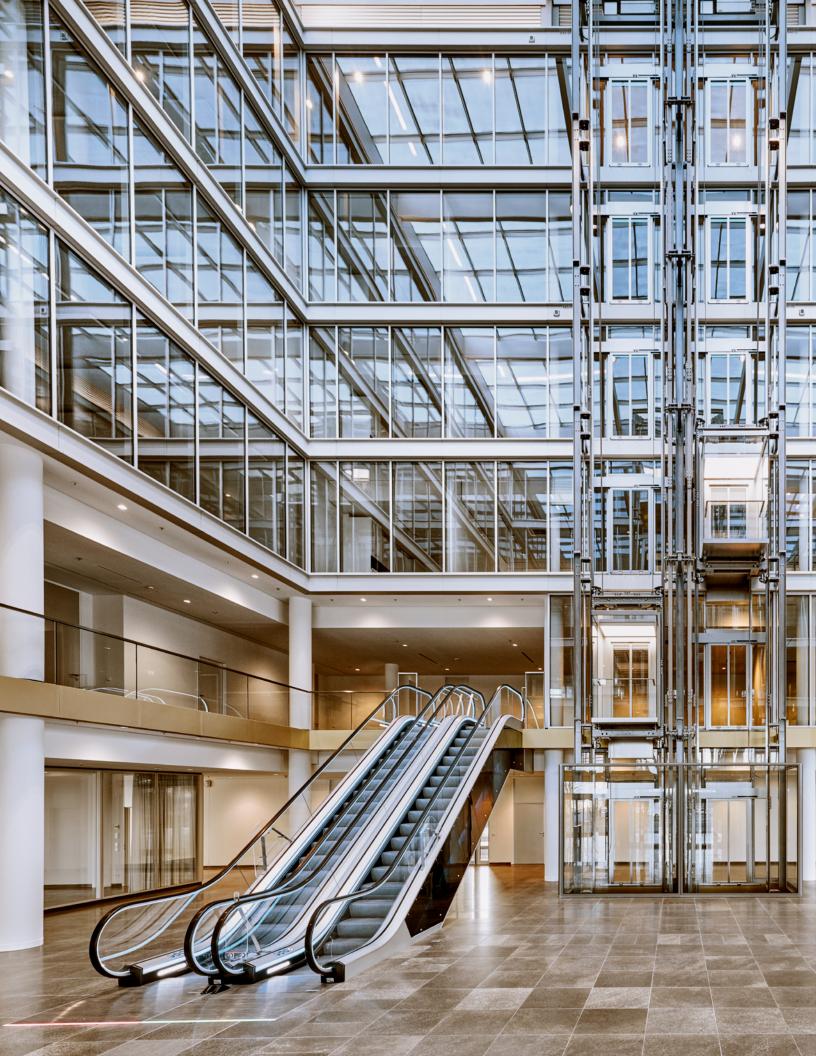
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## Catering to your needs

Our velino escalators fit the whole bandwidth of commercial applications. Whether it's for standard commercial applications, designoriented applications or tailored projects, velino offers flexible designs and includes more than 50 safety-enhancing features.

#### Designed for:









Retail







Airport

Transport Entertainment

Base parameters velino escalator	
Rise	Up to 49'-21/2" (15 m)
Inclination	27.3° or 30°
Step width	24" (600 mm)   32" (800 mm)   40" (1000 mm)
Speed	100 fpm (0.5 m/s)
Environment	Indoor   Outdoor



#### Makes sound business sense

High-quality technology based on German engineering expertise and components, built for reliably sustainable operations make the velino escalator a great investment.



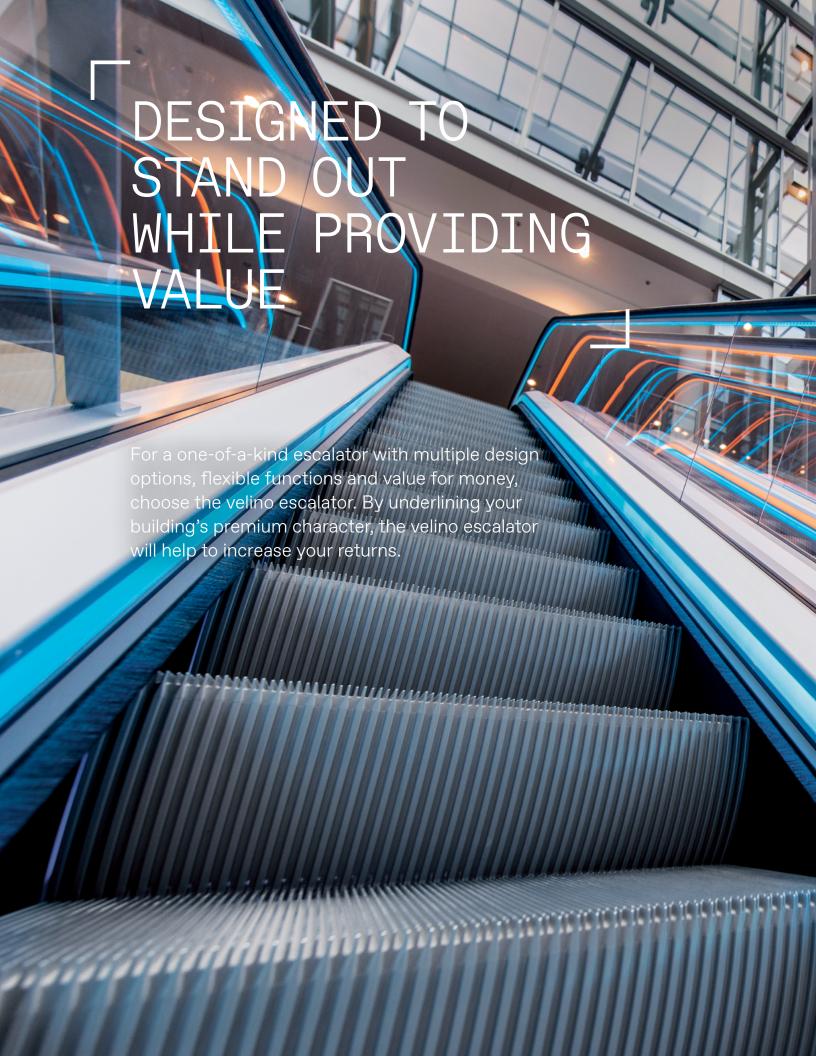
#### Aesthetic appeal

Heighten your building's premium appeal with multiple design options and flexible functions. With a velino escalator you can be proud of giving your users a standout escalator experience while promoting a well-running business.



#### **Custom engineering**

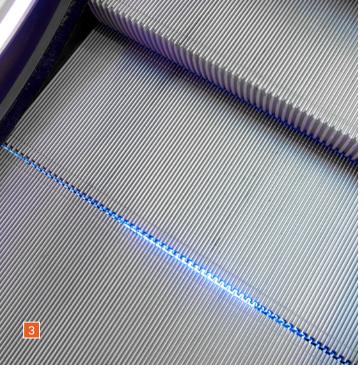
By tailoring our market-leading engineering to fit any project, we can work with you to create something very special. Then you'll enjoy the thrill of giving your users an entirely new sense of aesthetic motion.











#### Outstanding durability.

Durability comes from intelligent design and first-class manufacturing standards. Our proprietary robust step design exceeds international code requirements and offers utmost reliability with a minimal risk of breakage. The truss is made of top-quality steel. It's assembled with the help of lasers to align key elements and ensure a perfect fit.

#### Smooth operations.

With its precisely aligned guide rails, guiding rollers and smooth run rails for a perfectly even, reliable and jolt-free step run, the velino's superior guiding system ensures exceptional passenger comfort in line with ISO 18738-2. The unique handrail inlet with its two-door release mechanism opens wide to lower the risk of entrapment while the absence of brushes and rubber guards gives the velino escalator a pleasingly modern look.



ISO 18738-2

#### Sustainable performance.

Sustainability is now a hot topic in building design. The velino escalator can help to improve your building's carbon footprint by giving you the choice of different operating modes delivering significant energy savings. Measured against the ISO 25745-3 standard, the velino escalators are capable of achieving an A+++ energy efficiency rating.



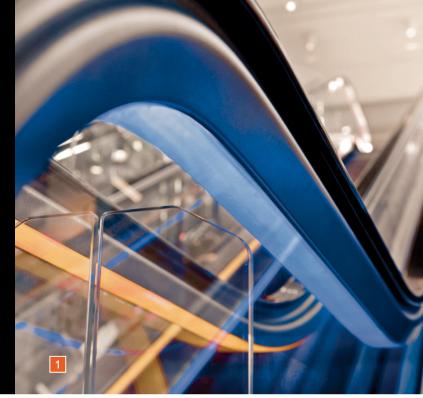
ISO **25745-3** 

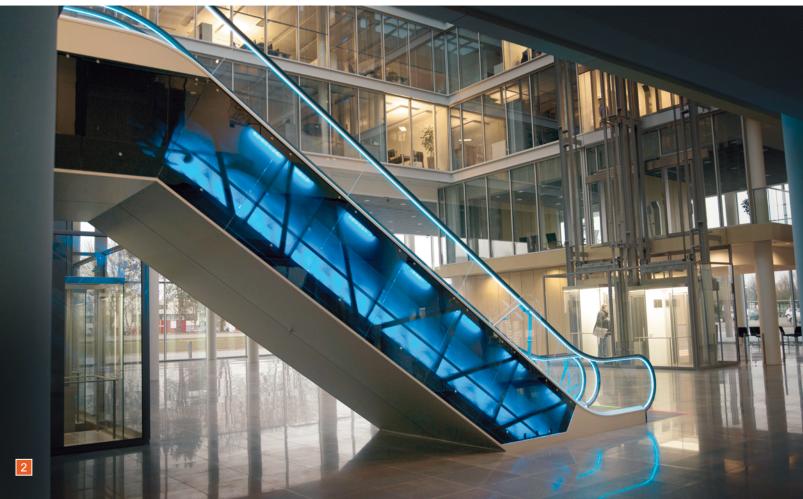
- Designed to reduce travel to higher heights by situating the escalator exit near the entrance.
- 2 Designed for increased people flow at convention centers some use escalator and other use stairs.
- 3 Step gap lighting for increase safety by illuminating the potential trip hazard.



#### Underlining building premium

Dynamic lighting, designer cladding, and attractive traffic lights come together for an escalator that creates an exquisite passenger experience.







#### Enlightening experience.

Decorative lighting is a powerful design element that can radically enhance space. Our many lighting options offer you numerous possibilities to improve the aesthetic appeal of your entire building. Attractive features such as skirt band lighting, truss lighting, balustrade lighting, soffit light stripes, illuminated soffit cladding and soffit spotlights will light the way to higher returns.

#### Designer cladding.

Your velino escalator can feature a unique cladding concept with almost invisible joints and a wide variety of colors and finishes to give your escalator a one-of-a-kind look and feel. And that will most certainly enhance your building's aesthetic appeal.

#### Leading the way.

Traffic lights indicate to users the direction and availability of your escalator. Different symbols, signs or colors tell an approaching user that the escalator is running in the desired direction, in the opposite direction or temporarily out of order. Inner decking, floor plate and front skirt traffic lights, and in-newel traffic lights are not just helpful for users but attractive design elements in themselves.

- 1 Handrail lighting makes the product an even more enlightening experience.
- Aesthetic appeal of the unique cladding enhances your building.
- Traffic lights provide the directional guidance needed for approaching users, especially in buildings that require frequent changing of escalator direction like convention centers.











### Easy coordination with building interiors.

The flexible escalator designs allow for easy coordination and integration with your building interior. Passengers will appreciate the heightened aesthetics.

#### Long transition radius.

Provides a smoother passenger experience, including safer entering and exiting.

#### Special truss engineering.

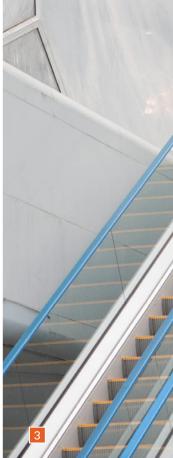
Our truss is manufactured according to rigorous quality standards and exceeds code requirements for deflection limits. This high-rise escalator eliminates intermediate supports. Special cladding prevents dust accumulation and allows for easy cleaning. Truss extensions or reductions accommodate existing building supports on escalator replacement projects.

- 1 Easy coordination with building interiors.
- 2 Long transition radius.
- 3 Special truss engineering.

Whatever requirements you have, we will fulfill them.
This is a promise only
TK Elevator can keep, as these eye catching escalators in iconic buildings prove.











#### Athletic Club Museum, Bilbao.

Situated on the ground floor of the award-winning San Mamés Stadium in Bilbao, Spain, this landmark sports facility has won many awards, including "Best Sports Building" in 2015. The Museum's iconic architecture called for matching aesthetics in two velino escalators custom-designed to mimic the players' tunnel at this soccer stadium and painted in the distinctive red of the team, Athletic Club de Bilbao.

#### Breuninger Flagship Store, Düsseldorf.

velino escalators are an eye-catching feature of Breuninger's five-floor boutique-style department store, a landmark building in Düsseldorf's chic shopping heartland. The design of this conceptually driven flagship store was inspired by the neighboring Hofgarten Parkland. The velino escalators were tailored to perfectly fit in with the store's inspiring interior architecture.

#### Beijing National Aquatics Center.

The award-winning National Aquatics Center (aka "Water Cube") was built for the swimming competitions at the 2008 Summer Olympics. The Center's breath-taking architecture, inspired by the natural formation of soap bubbles, is matched by innovative fabrication, material and environmental engineering. velino escalators are part and parcel of the Center's continuing appeal as a water park complex.

- 1 Athletic Club Museum, Bilbao, Spain
- 2 Breuninger Flagship Store, Düsseldorf, Germany
- 3 National Aquatics Center, Beijing, China

## PRIORITIZING SUSTAINABILITY AND SAFETY

## Sustainability pays off – with energy-efficient escalator solutions.

Many people still think green solutions are more expensive. Our velino 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 percent 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

15%\*

Slow speed operation

60% Save up to

Energy efficiency

A+++

ISO **25745-3** 

Usage factor

18-20 hours per day

Average life span

20 years

<sup>\*</sup> 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 velino escalator. 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.

A velino escalator is designed with user behavior in mind. That is why our optional safety features go beyond the requirements of local codes. These features include brake wear monitors, drive chain monitoring and skirt switches along the incline.

#### Proactive safety.

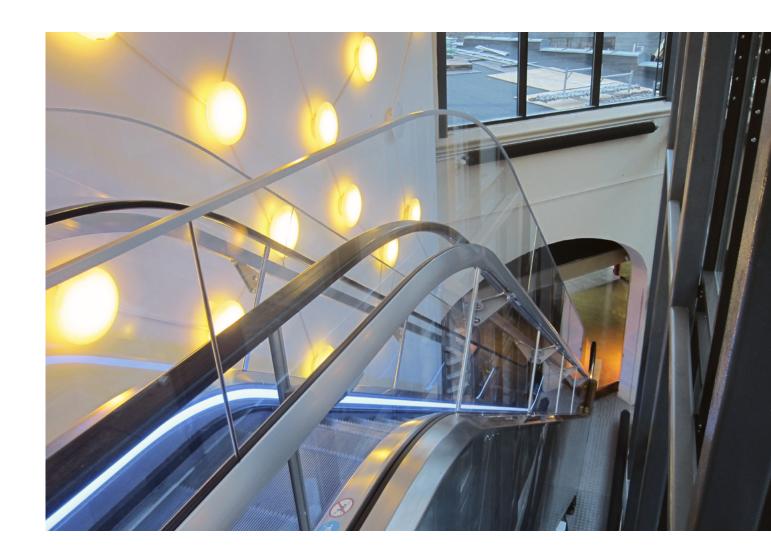
If you're installing an escalator in an atrium, certain environmental conditions, including passenger behavior, could cause a passenger to fall over the balustrade and experience serious injuries. To reduce this risk, we strongly recommenced adding safety curtains as a fall protection solution. These can be installed parallel to the escalator and higher than the balustrades.

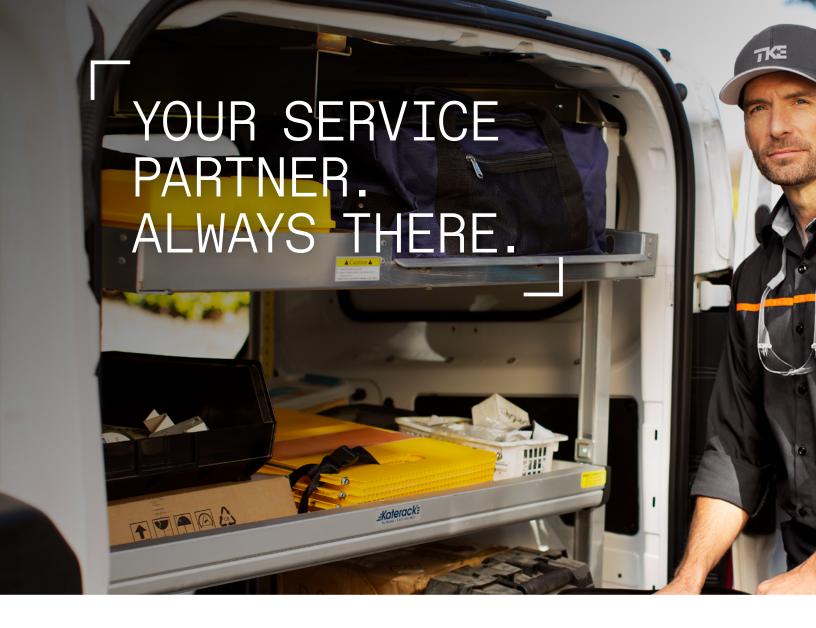
#### Component safety.

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 crisscross arrangements.





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 velino starts operating on time. Our technical and service support will keep it running smoothly from then on.

#### MAX - the game changer that keeps people moving.

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

011001 10 01 10





Data gathering

Precise diagnostics

Predictive intervention

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.

#### 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 velino 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 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

passengers per day

4,500,000,000

number of units worldwide

average number of passengers per unit per day

637,000 7,000

## OUR CORE PRINCIPLES

#### We deliver.

Reliable and high-quality products, services and solutions with precision and a superior cost-benefit ratio. We understand. We innovate. We listen, make suggestions, We strive to find technology and and co-develop with business solutions that cater to our customers. future customer needs. **MOVE BEYOND** We build on strong experience. We are leading Our expertise is based the way. on over 40 years of We act with foresight and engineering competence. a solutionoriented mindset to progress our customers, employees and other stakeholders. We act as a We empower our employees. reliable partner. We act in an honest, authentic We live an innovation culture and responsive manner towards based on respect and

efficient collaboration.

customers, employees and

other stakeholders.

## 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.

elevators and escalators under maintenance

1,100,000 10

customers in countries

employees

50,000+

locations

service available for customers

service technicians

24/7 27,000+

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