

# ESCALATOR MODERNISATION PACKAGES

A quick win for your business



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Modernising an escalator or moving walk does not mean replacing it. It means sensibly extending its operating life so that the full potential of the product lifecycle is realised. TKE's escalator modernisation packages are the best means to effortlessly achieve this: a comprehensive set of clearly defined packages, that are quick and easy to install to immediately improve safety, boost energy efficiency, enhance aesthetics or increase functionality. Applied individually or in combination, each one is a quick win for your building – and your business!

## ESCALATOR MODERNISATION PACKAGES OVERVIEW

|                             |                                                                                                                                                                                                                                                                                                                                          |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>SAFETY</b>               | Safety standards evolve over time, and older escalators and moving walks may no longer provide the level of protection expected today. With our modernisation packages approach, safety upgrades can be adapted to the condition of your equipment, the needs of your building and tenants, and your investment priorities.              |
| <b>ENERGY EFFICIENCY</b>    | Energy costs add up over the lifetime of an escalator or moving walk. With the solutions available within TKE's escalator modernisation packages, you can adapt your equipment to today's performance expectations. These targeted upgrades help reduce energy consumption, lower operating costs and support your sustainability goals. |
| <b>COMFORT / AESTHETICS</b> | First impressions matter. Our modernisation packages offer comfort and aesthetic upgrades to be adapted to your building, user expectations and corporate image.                                                                                                                                                                         |
| <b>FUNCTIONALITY</b>        | As technology advances, older controllers can limit performance, reliability and upgrade options. Functionality upgrades from our escalator modernisation packages can be adapted to the requirements of your equipment and building.                                                                                                    |



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## More that might interest you



### Get in touch with TKE in your region

Interested in TKE products  
and services? Contact our  
office in your region.

# WHY MODERNISE?

Escalators and moving walks are built for long-term reliability, but as they age, challenges inevitably arise. Modernisation is the smartest way forward, balancing performance, energy efficiency, and safety while transforming existing systems into reliable, sustainable, future-ready solutions – all at a fraction of the cost of a new installation.

## Typical indications for modernisation



### **Rising costs**

Older systems need more frequent repairs. Over time, this also leads to higher energy consumption, and reduced reliability.



### **Safety risks**

Evolving standards can leave outdated equipment non-compliant, increasing the risks of incidents.



### **Obsolescence**

Ageing components require frequent replacement and become harder to source, causing disruptions and limiting compatibility with modern technologies.



### **Declining comfort**

Ageing escalators also effect how a building is perceived. Tired, worn-out appearance, poor ride quality, noise or jerky operation can reduce user confidence and negatively impact your building's image.

**Full replacement instead of modernisation solves these issues, too – but it comes at higher costs, longer disruption, and greater environmental impact.**



## Benefits of modernising



### Reliability and performance

Smoother, quieter, and more stable operation improves confidence and reduces unplanned downtime through easier maintenance and diagnostics.



### Safety and compliance

Modernisation upgrades help meet current regulations, close safety gaps, and reduce overall risk and liability.



### Cost efficiency and asset value

Extending equipment lifespan improves overall cost efficiency, can reduce maintenance and repair costs, and requires less upfront investment than a full replacement.



### Energy efficiency and sustainability

Up-to-date components and controls lower energy consumption and emissions, while reusing existing structures reduces waste and supports sustainability goals.



### Less disruption, faster execution

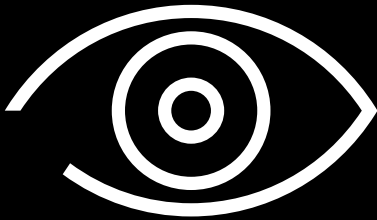
Modernisation significantly shortens shutdown time and requires minimal structural changes, keeping buildings operational during upgrades.



### Aesthetics and building image

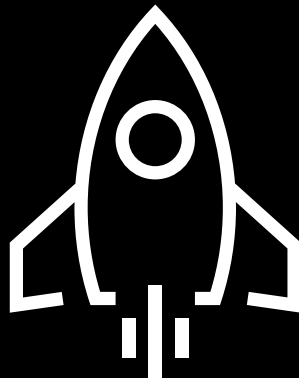
Refreshed design improves visual appeal, aligns with building architecture, and strengthens overall perception and user acceptance.

# Modernisation is more than just maintenance



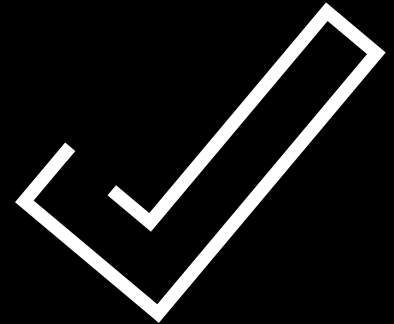
## Protecting your asset

Modernisation renews critical components before failures occur, protecting the long-term value of your escalator or moving walk. By addressing this upfront, you reduce safety risks, unplanned shutdowns, and costly corrective repairs – keeping your asset reliable.



## Improving performance

Targeted upgrades deliver immediate gains in reliability, safety, and energy efficiency. Downtime and performance issues are eliminated at their root, resulting in smooth operation that meets today's expectations – without the disruption of a full replacement.



## Value that lasts

Modernisation significantly extends the service life of your installation while reducing environmental impact. With a refreshed, modern appearance and optimised operation, your escalator or moving walk performs like a new system – for many more years.



# TKE means Made in Europe

Today's supply chains are global, but TKE products for Europe still bear the label "Made in Europe". At our factories and product competence centres in Germany and Spain we engineer and produce the full range of our escalators and moving walks products for both new installation and modernisation.

The history of our largest European factory in Hamburg, Germany dates back to 1908. In Asturias, in the north of Spain, we started to produce escalators and moving walks in 1991. Tens of thousands of units have since then shipped from both sites to shopping centres, department stores, airports and public transportation hubs. They keep people on the move in virtually all of Europe's major cities and are valued worldwide for their quality and reliability.



Aerial image of TKE's factory premises in Hamburg, Germany



A production and assembly line at the TKE factory in Asturias, Spain

Our crews of experienced engineers and highly-skilled workers are known for their impeccable craftsmanship and the passion they put in everything they produce – whether it's a light department store moving walk or a customised heavy-duty escalator for a busy railway station. But they are not resting on their laurels: TKE's track record as one of our industry's innovation leaders on energy efficiency and digitalisation proves that "Made in Europe" is primarily to the benefit our customers – they continue to get the best product from right next door.

# Modernisation packages at a glance

| SAFETY                     |                                      |                                    |                               |
|----------------------------|--------------------------------------|------------------------------------|-------------------------------|
| Mats on cover plates       | Missing step indicator               | Comb plate safety device           | Emergency stops               |
| Non-slipping surfaces      | Broken/sagging step/pallet indicator | Main drive speed monitoring        | Comb plate lighting           |
| Skirt brushes              | Continuous step/pallet monitoring    | Handrail speed monitoring          | Step gap lightning            |
| Skirt micro-switches       | Brake function indicator             | Handrail break indicator           | Step/pallet demarcation edges |
| Safety curtain             | Brake wear monitoring                | Additional brake in the main shaft | Flood switch                  |
| Protection deflectors      | Electronic braking                   | Floor plate switches               | Audio messaging               |
| Access restriction devices | Braking distance monitoring          | Front skirt safety devices         |                               |

| ENERGY EFFICIENCY         | COMFORT / AESTHETICS        | FUNCTIONALITY                         |
|---------------------------|-----------------------------|---------------------------------------|
| Star-delta                | Skirt band lighting         | Controller upgrade to GEC             |
| Slow speed operation      | Balustrade lighting         | Handrail sanitisation                 |
| Intermittent operation    | Truss and soffit lighting   | Lubrication                           |
| Slow speed stop operation | Traffic lights              | Heating devices                       |
|                           | Travel direction indicators | Building Management Systems interface |
|                           |                             | MAX Monitoring (powered by Insight)   |
|                           |                             | MAX Smart Maintenance                 |

If what you are looking for is not on this list (yet), please contact the closest TKE branch in your region.

# SAFETY UPGRADES

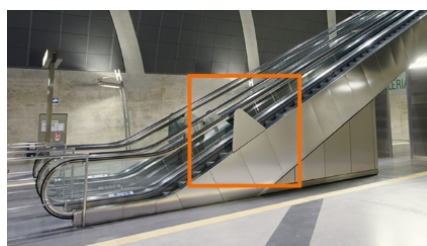
Modernisation is a smart lifecycle decision. Reviving your escalators and moving walks with new components and technology delivers immediate safety improvements.



# Give your passengers a safe ride

Older escalators and moving walks are at higher risk of incidents, so safety is always the first priority when considering an upgrade. At TK Elevator we are constantly adding to global best practices and adapting to customer feedback to reduce the risk of incidents.

## Hardware-related safety devices



### Building interfaces

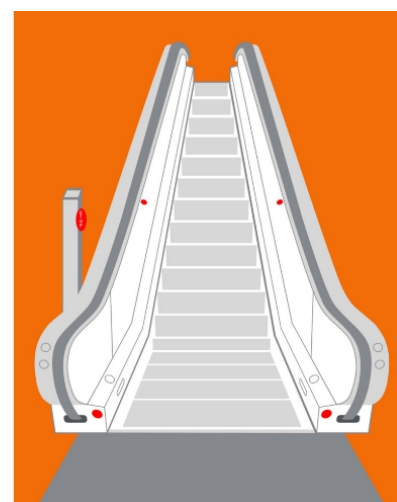
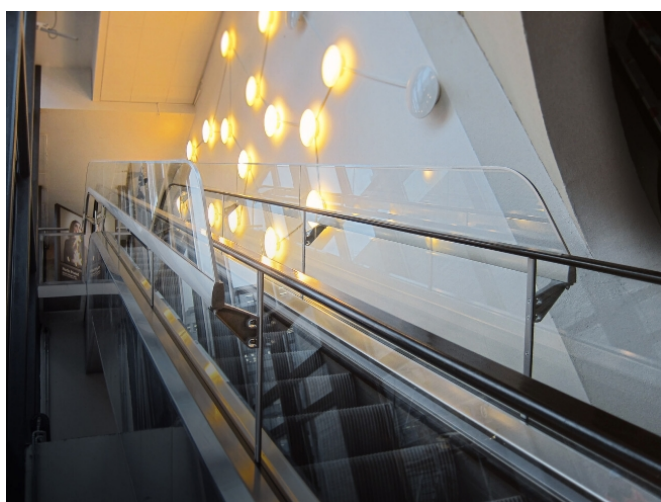
The gaps between an escalator and the building are a potential accident risk. Integrating devices like deflectors and barriers helps to mitigate that risk.

### Anti-climbing deflectors

Anti-climbing deflectors installed at the bottom of an escalator. These structures safely impede anyone trying to climb on the outside of the balustrade.

### Skirt band brushes

Retrofitting skirt band brushes reduces the risk of people or objects becoming trapped in the gap between the steps and the skirting profile.



### Anti-falling safety curtain

These are installed outside the balustrade and are higher than the handrail. They deter passengers from climbing over the side of the escalator and falling.

### Safety signalling and emergency stops

Clear safety signals guide users, reduce the risk of accidents and ensure confident escalator use. They can also enable a quick response in critical situations by ensuring emergency stops are always within reach, enhancing passenger safety.



## Controller-related safety devices

### Safety & Performance Monitoring

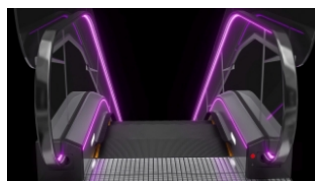
Bring your escalator up to current safety standards by integrating new safety features on the controller side. Continuous monitoring of key escalator safety functions – such as handrail speed, drive speed, missing step or braking distance performance – ensures reliable and safe operation at all time. TKE's manufacturer-independent replacement controller GEC supports all of these monitoring functions and many more.



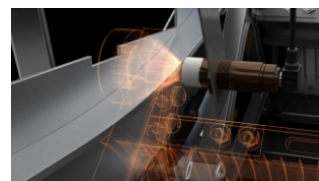
Main drive speed monitoring



Handrail speed monitoring



Braking distance monitoring



Missing step indicator

## TKE-exclusive safety devices



### Mats on cover plates

Escalators become even safer for users when anti-slip mats are integrated on the cover plates. The risk of slipping or falling is significantly reduced.



### Continuous step/pallet monitoring

The collapse of an escalator step or moving walk pallet is a very rare accident, but its consequences can be severe. Our continuous monitoring solution that runs along the full length of the escalator prevents it from continuing to operate with a faulty step or pallet.

# Upgrade and ensure brake safety

Braking mechanisms on older escalators can be described as “rustic” when compared to modern standards. Thankfully, modernisation can bring seasoned equipment up to today’s levels of safety, comfort and wear. These two options are worth considering:

## Electronic braking

### How does it work?

It’s like “one pedal driving” on electric cars: Instead of the mechanical brake, primarily the frequency-controlled motor slows down the escalator. The mechanical brake is then only engaged to secure the escalator in place.

### What are the benefits?

Electronic braking makes for smoother stops as it allows to reach the defined braking distance independently of the escalator load. It also means less wear on the mechanical brake, especially in combination with energy-saving operating modes.

### For which escalator?

TKE and other brands in the course of a controller upgrade.

## Additional brake

### How does it work?

It’s an additional brake that directly acts on the main shaft in case of an emergency.

### What are the benefits?

Avoid a freewheeling escalator in case of disconnection between motor and main shaft. Highly recommended modernisation upgrade for high-traffic escalators that originally lack a brake on the main shaft.

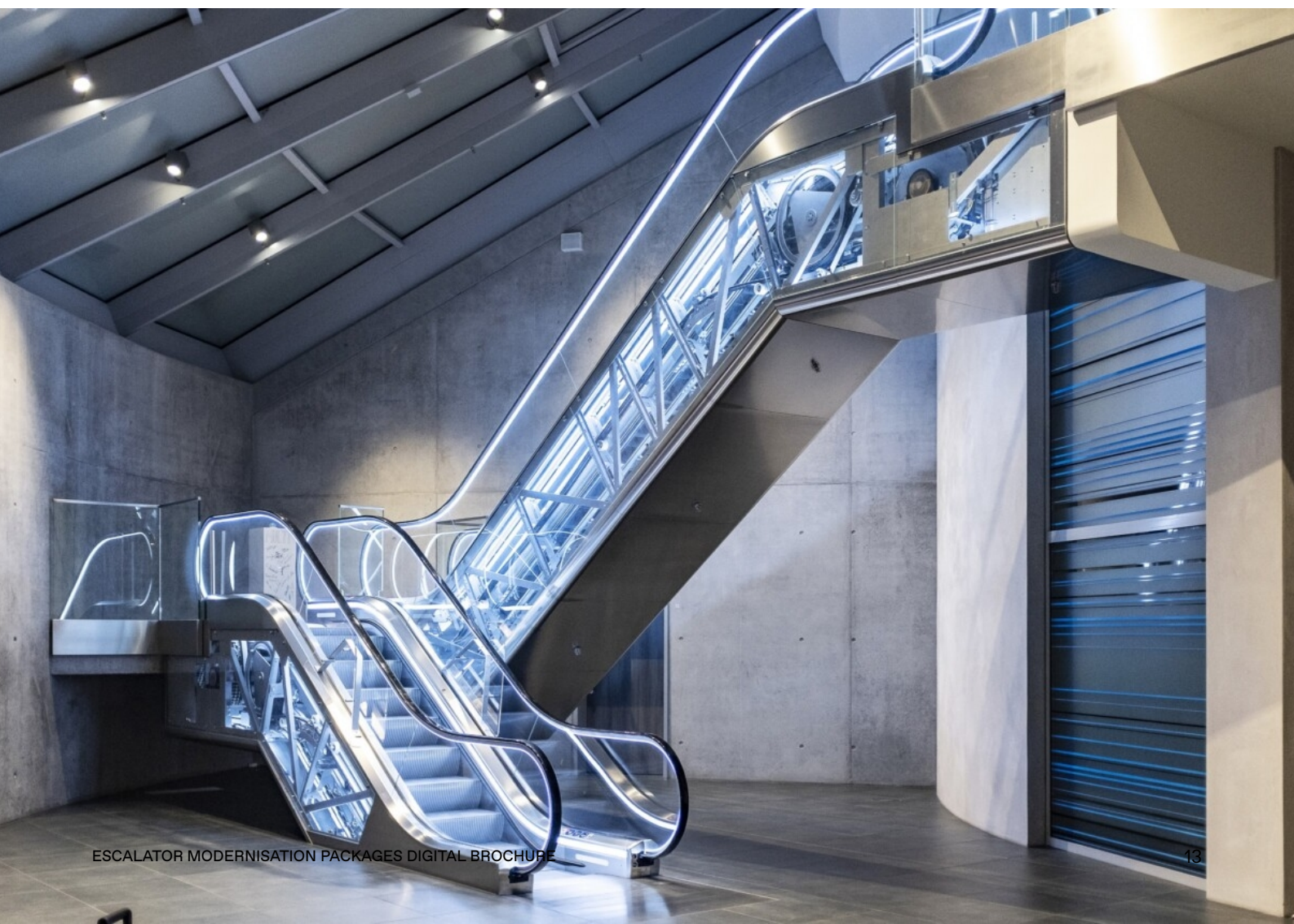
### For which escalator?

Any escalator from any manufacturer. TKE’s patented solution does not require welding components to the truss or upgrading the main shaft itself. The installation can be done by just two technicians and requires little downtime.



# IMPROVE ENERGY EFFICIENCY

When your current escalators or moving walks were first installed, sustainability probably wasn't the priority it is today, and therefore they may not have any energy-saving features. Upgrading older escalators with today's energy-saving options improves efficiency and makes a significant contribution towards green building certification.



# Save energy in your day-to-day operations

Enabling energy-saving operating modes on your escalators or moving walks is the most effective route towards energy-efficiency. Learn about the four most common modes, how they work and what's required.

## Star-delta operation

Star-delta runs an escalator in two different modes at unchanged speed. During the start, and if no load is detected, the escalator runs in star operation to reduce the current. If a load is detected, the motor switches to delta operation.

SAVE UP TO 15% 

## Slow speed operation

Up to 60% energy savings in no-load drive with a frequency converter that runs the escalator at two different speeds: an energy-saving lower speed when no one is on the escalator, and the nominal speed as soon as someone enters.

SAVE UP TO 60% 

## Slow speed stop operation

Like slow speed operation, a frequency converter runs the escalator at two different speeds: nominal speed as soon as someone enters, and a lower speed when no one is on the escalator. Additionally, it stops if empty for a defined period.

SAVE UP TO 90% 

## Intermittent operation

Intermittent operation is an energy-saving option for infrequently used escalators. It will only start to move if a passenger approaches. If nobody is on the escalator, it stops entirely. Traffic lights indicate its direction.

SAVE UP TO 95% 

|                           | ADDITIONAL EQUIPMENT |                |                | MODE OF OPERATION |            |                | SAVING METHOD |              | DIRECTIONS        |                  |
|---------------------------|----------------------|----------------|----------------|-------------------|------------|----------------|---------------|--------------|-------------------|------------------|
|                           | Frequency converter  | Sensors needed | Traffic lights | Full stop         | Idle speed | Constant speed | No load       | Partial load | Up- and downwards | Up- or downwards |
| Star-delta operation      |                      | ■              |                |                   |            | ■              | ■             |              |                   | ■                |
| Slow speed operation      | ■                    | ■              |                |                   | ■          |                | ■             | ■            |                   | ■                |
| Slow speed stop operation | ■                    | ■              | ■              | ■                 | ■          |                | ■             | ■            | ■                 | ■                |
| Intermittent operation    |                      | ■              | ■              | ■                 |            | ■              | ■             |              | ■                 | ■                |

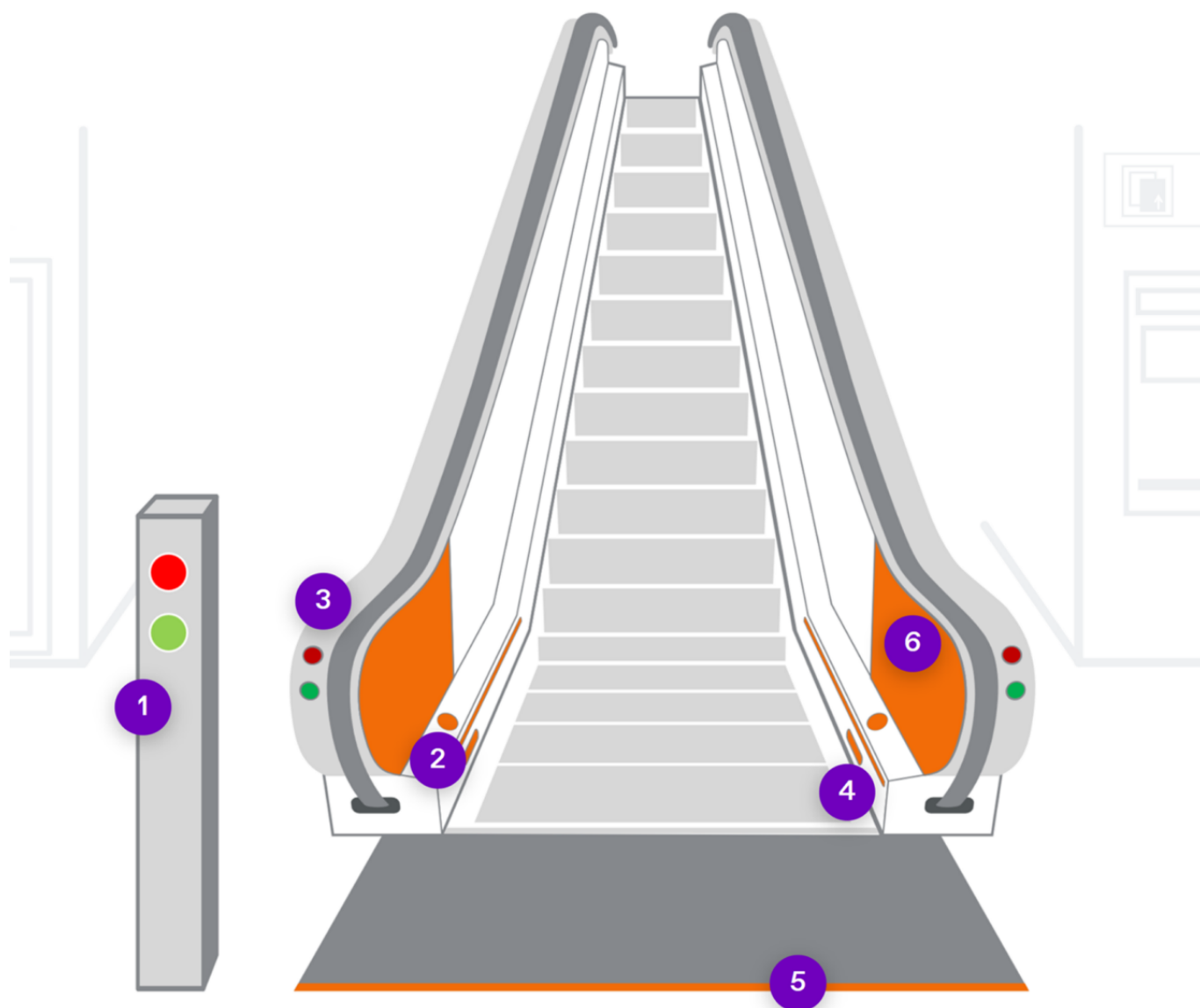
# MAKE YOUR BUILDING MORE APPEALING

Vibrant new lighting for your escalator or moving walk is a perfect choice for improving the passenger experience in your building, as well as making a vital contribution to safety, accessibility and efficient traffic flows.



# Traffic lights

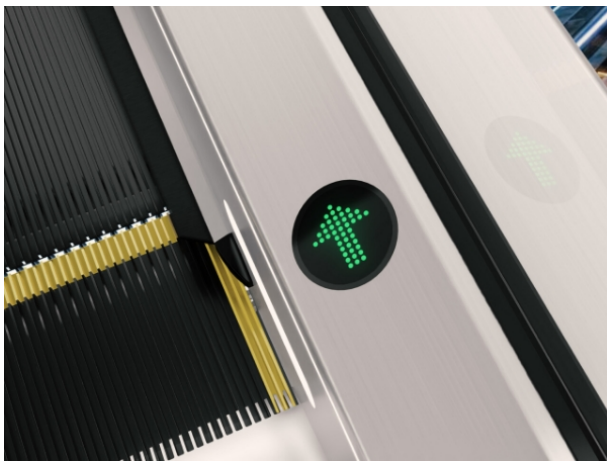
Traffic lights indicate the travel direction to approaching passengers. They are essential for escalators and moving walks with intermittent operation. Various types are available: The most common traffic lights feature a green arrow for entry and a red “no entry”-symbol for the exit. They can be installed on columns at the landings ❶, or embedded in the inner decking ❷ or outer decking ❸. For greater visibility, LED skirt and comb plate lighting ❹ can be specified with an integrated traffic light function to elegantly steer traffic flow. Floor plate traffic lights ❺ and illuminated glass newels ❻ are visible well before passengers board the escalator.



**1 Column traffic lights**



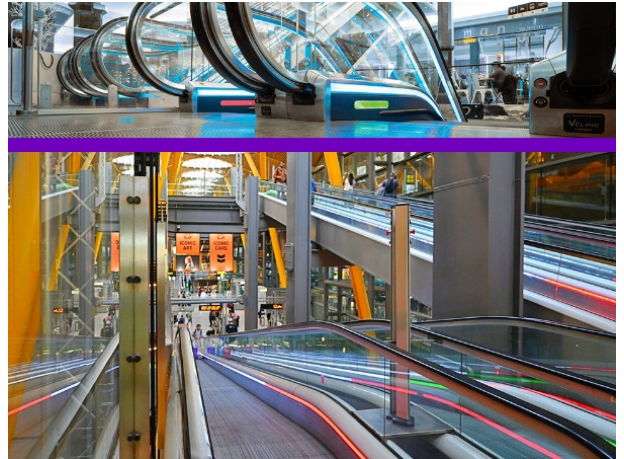
**2 Inner decking traffic lights**



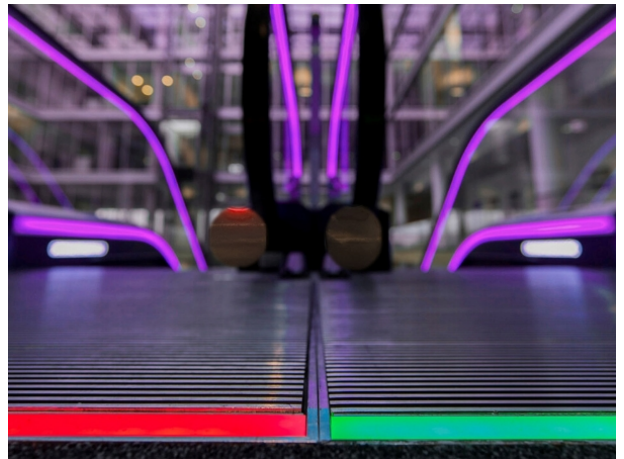
**3 Outer decking traffic lights**



**4 Comb plate and skirt lighting with integrated traffic lights**



**5 Floor plate traffic lights**



**6 Glass newel traffic lights**



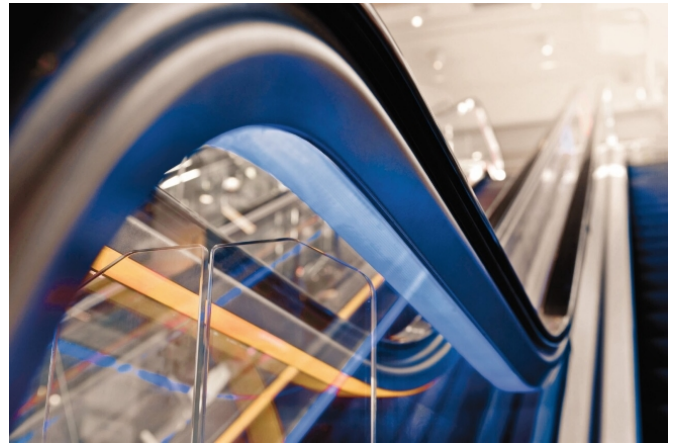
# Aesthetic & comfort lighting

An attractive lit and smoothly running escalator is not only aesthetically appealing but also offers passengers a more comfortable ride.



## Skirt lighting

A continuous light strip installed between the interior skirt decking profile and the skirt panel. These LED strips can be changed quickly and easily.



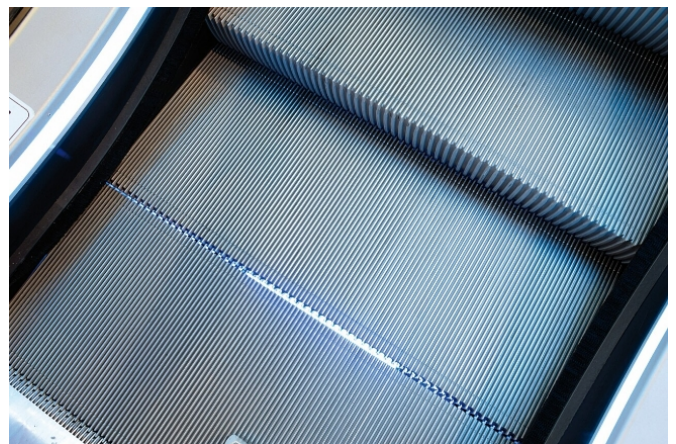
## Balustrade lighting

With a beautiful appearance and low cost, an LED strip can be installed under the handrail of the slim (glass) balustrade.



## Comb plate lighting

Required when ambient light does not provide sufficient illumination on the escalator, a white LED lights the comb plate.



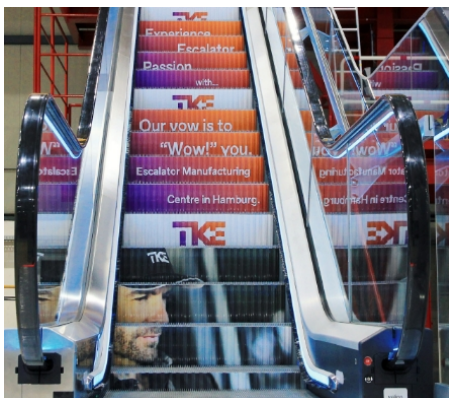
## Step gap lighting

A green LED illuminates the step band to outline step demarcation and guide foot positioning on the step tread.

# Bring colour to your escalator

## Step branding

Whoever said escalator steps can only come in grey or black clearly did not know about the possibility of step branding! An individual design is applied with a special foiling technique on the step risers, durable enough to withstand even high-traffic situations for several years. Application scenarios range from applying special colour schemes and displaying safety instructions to turning escalators into an exclusive advertising space.



Demo escalator @ TKE factory showroom in Hamburg, Germany

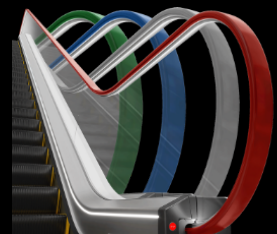


TKE escalator with colourful steps at a railway station in Freiburg, Germany



## Customise claddings, handrails & more

Splashes of colour can be applied to almost any area of an escalator, including even some components. Claddings made from a wide variety of materials, right through to coloured glass, can be combined with coloured handrails, for example. Your TKE modernisation expert will gladly advise you on customisation options.



# ENHANCING YOUR ESCALATOR'S FUNCTIONALITY

Our escalator modernisation packages enable you to add brand new functionality to your escalator or moving walk and incorporate the latest technology. Enhancing your equipment with additional state-of-the-art functions will help to make it more efficient and, ultimately, more economical.



# GEC Controller: The intelligent choice for your escalators and moving walks

GEC is TKE's latest-generation replacement controller. It's a new brain for any escalator or moving walk, no matter which brand or who it was originally manufactured by. Upgrading to the GEC controller will boost the safety, energy efficiency and operational reliability of your escalators and moving walks while providing enhanced diagnostics, monitoring and future upgrade capabilities.

## Key benefits of modernising to our GEC controller



### Upgraded compliance

Seasoned escalators and moving walks again meet current code requirements, including integration of new safety devices.



### 3rd party compatibility

The GEC controller is designed for seamless integration with both TKE escalators/moving walks and products with a different original manufacturer.



### Enhanced maintenance

Improves serviceability with extended diagnostic capabilities and over 600 unique error codes for faster troubleshooting.



### Future-ready flexibility

Your escalator is ready for future enhancements thanks to GEC-included compatibility with features found in the latest escalator technologies, for example connectivity to TKE's MAX IoT cloud.



### Increased reliability

Boosts operational dependability by replacing aging electrical and electronic components with robust, modern alternatives.



### Standards and certifications

EN 115-1 (TÜV certificate)  
SIL2 (acc. To IEC 61508)  
UL certificate  
GB16899  
ASME A17.1 / CSA B44  
Korea ESTI



# Connect to TKE's MAX cloud

Connecting escalators and moving walks opens the door to a smarter, more sustainable way of managing mobility systems. By integrating the latest digital technologies, modernisation enables reliable performance, improved energy efficiency, and reduced environmental impact. Connected systems provide valuable insights through real-time diagnostics and predictive maintenance, supporting informed decisions and faster issue resolution – while enhancing safety, comfort, and the overall passenger experience.

## MAX Smart Maintenance

The first-ever cloud-based, real-time escalator maintenance solution. This intelligent IoT-learning tool performs real-time diagnostics, significantly increasing escalator/moving walk availability.



## MAX Monitoring

Remote control of escalators and moving walks from anywhere. With MAX Monitoring you can view the status of your system including visual detection, perform remote tasks and obtain statistics on usage.



**Note:** MAX is only available in selected markets. Please consult your TK Elevator sales representative for further information.

# Special function upgrades

## Heated components

If your escalator is outdoors, the winter months can be a real challenge, with step chains possibly freezing up or cover plates blanketed in snow. Heating systems in these components allow you to operate your equipment even in the coldest weather conditions.



## Handrail sanitisation

Frequently touched surfaces, escalator and moving walk handrails, can be carriers of bacteria and virus transmission. With continuous sanitisation through UV-C light, passengers will have the confidence to hold on to handrails and travel in safety.

# ADAPTIVE MODERNISATION BY TK ELEVATOR

Escalators and moving walks are extremely repair-friendly and predestined for technology upgrades throughout their decades of operational life. At TKE, we make modernisation an adaptive process attuned to the product lifecycle and your needs as an owner, striving for the perfect balance between maintenance, smaller upgrades and the renewal of main components. Easy-to-grasp products such as our modernisation packages and our customer-focused processes make modernisation less complex, with minimal interference in your everyday operations.

This is how a typical adaptive modernisation project with TKE works...



## 1 | Examination

Our specialists examine your escalator or moving walk, take precise measurements, and check its condition.



## 2 | Proposal

We develop a modernisation proposal based on the health status of your equipment and the flexibility of the modernisation packages.



## 3 | Alignment

We align with your vision and propose an execution plan tailored to your needs and budget, incorporating multi-year planning and phased implementation strategies.



## 4 | Modernisation

We minimise disruption while upgrades are implemented, ensuring business continuity and smooth transitions through efficient and well-coordinated execution.



# Advancing mobility and eco-transparency

The commitment to sustainable mobility is an integral part of TK Elevator. It determines how we work – starting with product design, and extending to improved transparency and greater commitment along the entire value chain, including in production, installation, operations and maintenance. Being one of the world's leading elevator companies, we are dedicated to driving innovation and continuous improvement, all in close partnership with our stakeholders.



# Our efforts are recognised by ...



## CDP A-list

TK Elevator is recognised in the acclaimed A-list published by the global non-profit organisation CDP.



## EcoVadis

We were awarded the EcoVadis gold medal, with TK Elevator now ranking among the top 5% of all companies currently assessed by the sustainability rating agency.



## Supplier Engagement Leader

We were recognised by CDP as a "Supplier Engagement Leader" for taking action to measure and reduce environmental risks within our supply chain.



## Global Elevator Safety Forum

TK Elevator is a co-founder of the Global Elevator Safety Forum to pursue a safe industry without accidents.



## Member of RE100

We joined the worldwide RE100 (Renewable Electricity) initiative and committed to only use renewable electricity across our global operations by 2030.



## The Science Based Targets

The Science Based Targets initiative approved TK Elevator's emission reduction targets as being consistent with the levels required to meet the goals of the Paris Climate Agreement.



## UN Global Compact

TK Elevator is a signatory of the UN Global Compact.

## We put our ESG commitments in writing

TK Elevator's sustainability report provides an overview of our progress as well as the clear commitments we have made with regard to environmental protection, social responsibility, and governance (ESG). We embrace the challenges of sustainability and are committed to leading the way in creating environmentally friendly mobility solutions. Find the TK Elevator Sustainability Report on our website.



**TKE**

SUSTAINABILITY  
REPORT 2023/24



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