



# Schindler Escalator Safety: State of the Art

## Enjoying a Safe Ride on Schindler Escalators



# At Schindler, safety comes first: This has been our company's mandate for 75 years-and it always will be!

## Schindler offers comprehensive system-relevant safety solutions:

Active and passive safety solutions guarantee a safe ride.

## Schindler cares about every single passenger:

We pay special attention to the needs of children, senior citizens and the disabled.

## Schindler delivers the highest standards in maintenance services:

Professional OEM maintenance and support services ensure safety in daily escalator operation.

Around the world, escalators help people move every day. And over 900 million of them do so on Schindler transportation systems.

So it comes as no surprise that escalators and moving walks are the most frequently used mode of transportation worldwide.

The Company's mandate has remained the same ever since Schindler installed its very first escalator 75 years ago: Safety first!

One goal will never change at Schindler: to transport every single passenger safely. That's why the bulk of Schindler's R&D efforts are focused on continuously enhancing the escalator safety system.

The leading global provider of escalators, no company has more experience or better expertise than Schindler when it comes to escalator safety. Our systems are equipped with safety features found only on Schindler escalators.

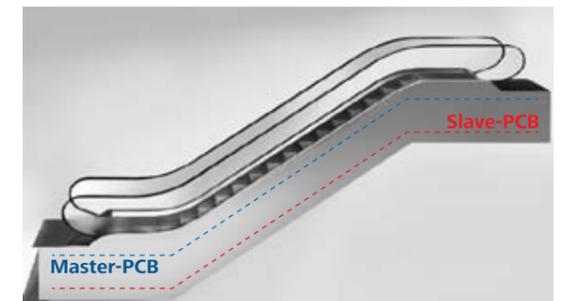
# Schindler offers comprehensive system-relevant safety solutions: Active and passive safety solutions guarantee a safe ride.

The design and engineering of Schindler escalators reflects the research conducted on all possible risk scenarios—and how to prevent those risks. System-relevant failures, such as inadvertent change of direction and overspeed, may cause passengers to lose their balance or get trapped.

Schindler prevents these risks through the intelligent design of its safety solutions. With the highest standards in the industry, we ensure that each passenger enjoys a safe ride:

## 1. MICONIC F-Intelligent Microprocessor Controller

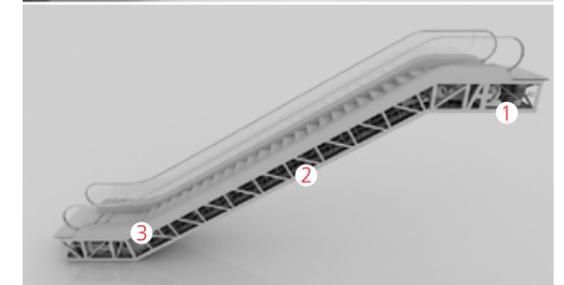
Two independent safety circuits control each safety device in real time. Double check means double safety. A unique safety feature from Schindler.



## 2. Anti-Unintentional Reversal Control

**Triple Speed Control:** speed and direction are monitored on the (1) motor shaft, (2) step band and (3) handrail.

**Electric Anti-Reversing Device and Phase Monitoring:** these unique features prevent inadvertent direction changes.



## 3. Intelligent Brake System

Thanks to the direction-dependent braking torque, Schindler's unique brake system minimizes the risk of falling in emergency stop situations.



## 4. Duplex Drive Chain

A proactive safety measure, two parallel chain strands guarantee safe form closure of the main escalator components.



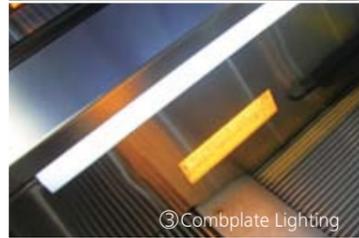
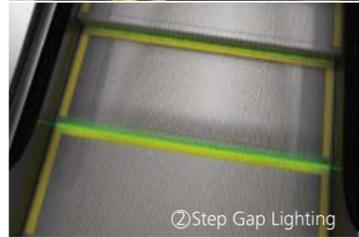
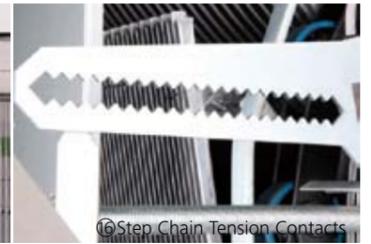
# Schindler-Our escalators have over 35 safety features in total, both mechanical and electrical



- Anti-Entrapment**
- ⑩ Step Upthrust Device
  - ⑪ Upthrust Contact
  - ⑫ Step Level Contact
  - ⑬ Combplate Contacts
  - ⑭ Skirt Contacts
  - ⑮ Handrail Entry Contacts

- Anti-Unintentional Reversal**
- ⑯ Speed Monitor
  - ⑰ Step Monitor
  - ⑱ Handrail Monitor
  - ⑲ Electric Anti-Reversing Device
  - ⑳ Phase Monitoring Relay

- Additional Safety Features**
- ㉑ Motor Protection
  - ㉒ Brake Lining Monitor
  - ㉓ Fire Contact
  - ㉔ Smoke Detector
  - ㉕ Water Level Contact
  - ㉖ Floor Cover Contact



## Fact Corner

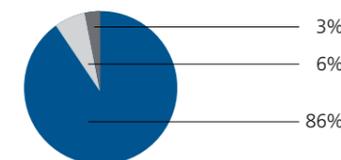
Recent studies indicate that 86% of all escalator incidents are falls attributed to passenger behavior.

The main causes include: distraction, multitasking, loss of balance (especially among senior citizens and children), visual impairment and other types of disabilities.

The key risk groups are passengers 65 years and older (51%) and females (67%) accompanying children (62%).

## Safe Use of Escalators and Moving Walks:

In addition to system-relevant safety devices, the key to the safe use of escalators and moving walks is passenger education about safe riding. On every Schindler escalator, we use clear and concise pictographs to provide passengers with the information they need to enjoy a safe and pleasant ride.



- Passenger Behavior
- Entrapment
- Device Malfunction



# Schindler cares about every single passenger: We pay special attention to the needs of children, senior citizens and the disabled.

Schindler takes a proactive approach to safety. We provide comprehensive solutions to ensure that every passenger rides safely—paying special attention to

those passengers who may have special needs: children, senior citizens and the handicapped.

**Step**

The strongest and safest step on the market. Guarantees safe rides even after years in operation.



**Yellow Plastic Safety Demarcations**

state of the art: fire resistant and oil resistant material.

**LED Step Gap Lighting, LED Comb Lighting**

Readily visible entry and exit points make it easy and safe to enter and exit the unit - a particular benefit for the older generation and the visually disabled.



**Skirt Gap Cover**

Although the gap between steps and skirting is already minimized, skirt brushes provide extra safety. This helps avoid entrapment, which is especially important for children's small feet and for passengers wearing rubber soles and flip flops.



**Handrail Entry Protection**

Brushes at the handrail entry point protect the little hands of curious children and prevent them from getting trapped. Additional safety contacts in these areas demonstrate how Schindler goes further than any other manufacturer to guarantee safety first.



**Deflectors and Wedging Guards**

All interfaces need to be protected—with the building, as well as the outside of the escalator balustrade. Schindler offers a complete range of protective measures.



# Schindler delivers the highest standards in maintenance services: Professional OEM main- tenance and support services ensure safety in daily escalator operation.

Schindler employs a well-trained professional maintenance team who puts a premium on safety. Our maintenance standards, which have been implemented globally, are the gold standard for the industry.

We proudly deliver excellent service to our EI clients, and are equally dedicated to providing the same quality to other property companies. Our rapid response and thorough follow-up policy means your needs are met.



**Schindler 24-hour hotline:**

- +86 21 5665 7110**
- +86 4008 880 110**
- +86 8009 880 110**

We are dedicated to excellent service to our EI clients as well as other property companies. We take fast response to you and follow up afterwards status.

You know where to find us.  
We look forward to seeing you.

For additional information and the location of  
your nearest Schindler branch, please contact:

**[www.schindler.com](http://www.schindler.com)**

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