Performance is not a question of consumption.
The Schindler $E^3$ approach on energy, efficiency and ecology for escalators and moving walks.
Responsibility & Sustainability
At Schindler, we design products which are as energy-efficient as possible, contain no harmful substances and are highly recyclable. Reduced power consumption means lower utility bills and less environmental impact associated with power plant greenhouse gas emissions. We are an ecologically aware company oriented to ensuring a better, greener future.

Lowering the impact
Around 85% of the greenhouse gas emissions associated with the life cycle of an escalator are emitted during the escalator’s lifetime (the power plant that supplies electricity for the escalator’s drive unit, control unit and lighting produces greenhouse gases). Using efficient drive systems, intelligent power management systems and low-power components helps minimize power consumption and thus greenhouse gas emissions.

Sustainable Materials
We place particular emphasis on using environmentally friendly materials in the manufacture of our escalators. The components and materials used in our escalators do not contain any hazardous materials. Schindler escalators are mainly made of ferrous metals (steel and cast iron) and nonferrous metals (mainly aluminum and copper). Once an escalator reaches the end of its service life, about 90% of these metals can be recycled.

Use the power when its needed
There are three ways to reduce the power consumption of escalators and moving walks: Use more efficient drive systems, use components that require less power, and use intelligent power management software. Schindler employs all three of these methods to reduce power consumption.

E³ – One objective and three ways to increase energy efficiency
While some competitors address the challenge of gearbox efficiency only, Schindler focuses on total drive efficiency, namely efficiency in the gearbox as well as the motor.

**Choose our Premium Power Package for optimized environmental performance**
By opting for our Premium Power Package, you’ll be able to lower your utility bills. And by consuming less power, you’ll also reduce the environmental impact (greenhouse gas emissions) of the power plants which generate your power.

**Maintenance by Schindler**
Choose Schindler to service and maintain your escalator using Schindler-manufactured spare parts, and you can be confident it will stay in excellent working order.

**E1 – Total drive efficiency within all details**

**E2 – Smart power management with clever eco-options**

In commercial applications such as shopping malls, periods with low or no passenger traffic are common.

**MICONIC F 5 power management system comes as standard**
Schindler has been using microprocessor-controlled power management systems for over 20 years, significantly longer than some competitors. Our MICONIC F controller is now in its fifth generation and comes as a standard feature.

**ECOLINE power management packages, including customizable operating mode**
Schindler’s goal is to optimize energy efficiency without compromising passenger flow. Depending on the power management package, power consumption can be reduced by up to 36% relative to continuous operation.

![Market Standard](image)

Standard escalators on the market:
68% efficiency

**Schindler Standard**
Optimized standard motors and worm gears with Cavex technology, for 74% total drive efficiency

+11%

**Schindler Premium Power Package**
The very latest drives designed in accordance with IEC 60034
Drives and high-efficiency gearboxes for total drive efficiency of 85%

+23%

Remarkable power-saving due to Schindler’s smart power management
E2 – Premium in efficiency for low cost in operation

<table>
<thead>
<tr>
<th>ECOLINE Power Management Packages*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ECOLINE</strong></td>
</tr>
<tr>
<td>Energy Consumption*</td>
</tr>
<tr>
<td>Operation Mode</td>
</tr>
<tr>
<td>Application</td>
</tr>
</tbody>
</table>
| Benefit | - Maintains passenger flow
- Power consumption reduced by up to 25%
- Reduced power plant CO₂ emissions
- Short amortization period | - Power consumption reduced by up to 36%
- Reduced power plant CO₂ emissions
- Increased escalator lifespan | - Passenger flow maintained, as escalator is in motion when passengers are approaching it
- Power consumption reduced by up to 32%
- Reduced power plant CO₂ emissions
- Reduced wear & tear on components |
| CO₂ Footprint | Minus 4500 kg per year | Minus 6410 kg per year | Minus 5830 kg per year |
| Amortization | 3 months | 16 months | 24 months |

*) Values based on theoretical calculations for one Schindler 9300AE-10 escalator. Average value for up and down operated escalator pair: 4.5 m. Step width: 1000 mm. Speed: 0.5 m/s. Load profile: 11 hours per day, 365 days per year. 2.5 hrs – 0%. 7 hrs – 25%. 1 hr – 50%. 0.5 hrs – 75%. 0 hrs – 100%.

E3 – Low power components for increased environmental performance

**Schindler Aluminum Steps**
At 10.5 kg, Schindler’s aluminum steps are the lightest in the industry. Using aluminum steps results in a total weight reduction of 40% relative to steel steps, and an improvement of 5% in total escalator efficiency.

Aluminum steps have a longer lifetime than steel steps and a lower CO₂ footprint.

They also have a superior safety record, 2 times above the less economical sheet metal compound steps.

**Schindler LED lighting**
Using LED lights reduces power consumption by up to 80% relative to conventional light sources. LED lights have up to 100% longer lives than conventional alternatives.

Schindler offers attractive LED design options for balustrade, skirt, comb, step and truss lighting.

**ECOLINE Power Management Packages**

<table>
<thead>
<tr>
<th>Operation Mode</th>
<th>Application</th>
<th>Benefit</th>
<th>CO₂ Footprint</th>
<th>Amortization</th>
</tr>
</thead>
</table>
| Continuous operation with ECO power feature: Motor power adjusts based on passenger load | for continuous medium to heavy passenger traffic | - Maintains passenger flow
- Power consumption reduced by up to 25%
- Reduced power plant CO₂ emissions
- Short amortization period | Minus 4500 kg per year | 3 months |
| Stop &-go operation with ECO power feature: Escalator stops when no passengers are on it | Intermittent flow including periods of zero passenger flow | - Power consumption reduced by up to 36%
- Reduced power plant CO₂ emissions
- Increased escalator lifespan | Minus 6410 kg per year | 16 months |
| Slow-speed operation with ECO power feature: Escalator slows down when no passengers are on it | Non-commercial applications | - Passenger flow maintained, as escalator is in motion when passengers are approaching it
- Power consumption reduced by up to 32%
- Reduced power plant CO₂ emissions
- Reduced wear & tear on components | Minus 5830 kg per year | 24 months |
When vision meets discipline
Schindler partners with Solar Impulse

Schindler has delivered many industry benchmarks in innovation, including a state of the art 2-channel safety circuit, short-pallet moving walks, and the very latest development, a comprehensive energy-efficiency concept for escalators and moving walks.

Schindler is supporting the Solar Impulse, a project to fly a zero-fuel airplane around the world propelled by solar energy only.

By embedding its engineers in this challenge, Schindler remains at the cutting edge of technology for clean and sustainable mobility.

www.solarimpulse.com

Read more on Schindler’s sustainability efforts:
www.schindler.com

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