

OPTIONS FOR ELEVATORS

KONE Eco-efficient™ solutions

The power behind our eco-efficient solutions is the KONE EcoDisc® hoisting machine, which can save half or more of the energy consumed by an elevator. Our solutions not only save energy when the elevator is moving. We also provide solutions that reduce standby energy consumption when the elevator is standing still. Working together, these solutions can save as much as three quarters of the elevator's total energy consumption. Over the lifetime of the equipment, the energy savings can amount to more than the original cost of the elevator.

1 KONE ECODISC®*

- Permanent magnet synchronous hoisting machine
- Consumes 70% less energy than a hydraulic drive and 50% less than a traction drive
- Due to variable frequency drives used in our solutions, the peak starting current is 30–40% of that of equivalent hydraulic and traction units, reducing energy consumption and size of fuses
- Thin and lightweight, requires less raw material and space compared to traditional hoisting machines
- Energy saving:
 - 4000 kWh/year compared to hydraulic elevator
 - 2000 kWh/year compared to traction 2-speed elevator
- Carbon footprint reduction (based on OECD electrical energy mix)**
 - 2240 kg CO₂/year compared to hydraulic elevator
 - 1120 kg CO₂/year compared to traction 2-speed elevator

2 REGENERATIVE SYSTEM***

- Recovers excess braking energy from the elevator and converts it for use e.g. in lighting the building
- The counterweight or elevator car becomes the motor and KONE EcoDisc® becomes a generator and converts the power into current
- Can recover up to 25% of the total energy used by an elevator
- Produces clean and safe energy that does not damage the network
- Energy saving:
 - 13,250 kWh/year compared to a non-regenerative drive
- Carbon footprint reduction:
 - 6,400 kg CO₂/year compared to a non-regenerative drive

3 HALOGEN-FREE CABLES

- Plastics used in cables for electrification do not contain halogens
- In case of fire they do not produce toxic gas and do not release corrosive acids



LED LIGHTS

- Last up to 10 times longer than halogen lights
- Reduce energy consumption by up to 80%
- Energy saving: 560 kWh/year
- Carbon footprint reduction: 270 kg CO₂/year compared to halogen spotlights



CAR LIGHT / FAN SAVING MODE

- Standby mode for the light and fan: after the last call and after a predetermined time, car light and fan switch off automatically
- Reduces heat in car and the amount of cooling needed in warm climates
- When the elevator is used again, a welcome light switches on and gradually intensifies
- Energy saving: up to 350 kWh/year
- Carbon footprint reduction: 170 kg CO₂/year



SIGNALISATION DIMMING

- Stand-by mode for signalisation: 15 minutes after the last call, signalisation automatically starts switching to standby mode
- Can reduce the energy consumption of signalisation by up to 30%
- Energy saving: up to 20 kWh/year
- Carbon footprint reduction: 10 kg CO₂/year



CORRIDOR ILLUMINATION CONTROL

- Automatically illuminates the floor where the car is stopping
- Reduces overall energy consumption in the building
- Energy saving: depends on application



SOLAR POWERED LIGHTING

- The car ceiling LED lights' energy consumption can be further reduced by enabling the use of solar energy
- KONE supplies a kit that connects the car light supply to a small stand-alone solar panel system
- A specialised supplier provides the solar panel system, including: charge regulator, solar panels and a battery



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*The basis for the calculations for EcoDisc is: an elevator speed of 1.0 m/s (0.63 for hydraulic), a load of 630 kg (8 persons) and 200,000 starts/year.

**The average OECD electrical energy mix is defined as 13% gas, 16% hydro, 23% nuclear, 7% oil, 33% stone coal, 6% lignite coal, 1.5% bio mass & waste and 0.5% other.

***The basis for the calculations for regenerative systems is: an elevator speed of 3.5 m/s, load of 1600 kg, travel distance of 150 m, and 600,000 starts/year.