



KONE TravelMaster™ 110

SMOOTH PEOPLE FLOW™ FOR COMMERCIAL ENVIRONMENTS
DATE / PRESENTER



KONE TravelMaster™ 110 escalator



Highlights:

- The new KONE Direct Drive is up to 20% more energy efficient than conventional drive solutions
- New safety options available that exceed international code requirements
- Wide range of design options available to create stunning visual effects

The KONE TravelMaster™ 110 range

Vertical rise: up to 13 meters

Horizontal steps : 2 or 3

Inclination: 30°, 35°

Step width: 600 mm, 800 mm, 1000 mm

Radius: 1.0/1.0, 1.5/1.0

People flow capacity: Medium (Up to 10,000 passengers/day)

ECO-
EFFICIENCY

SAFETY

DESIGN



Best in class eco-efficiency

THAT CUTS THE CARBON
FOOTPRINT OF YOUR
BUILDING

- **The new KONE Direct Drive** - up to 20% more energy efficient than conventional solutions
- **The direct handrail drive** saves energy and extends the lifetime of the handrail, reducing maintenance and operating costs
- **An all-new inverter and smart operational modes** optimize energy consumption under different load conditions



KONE eco-efficient solutions for escalators

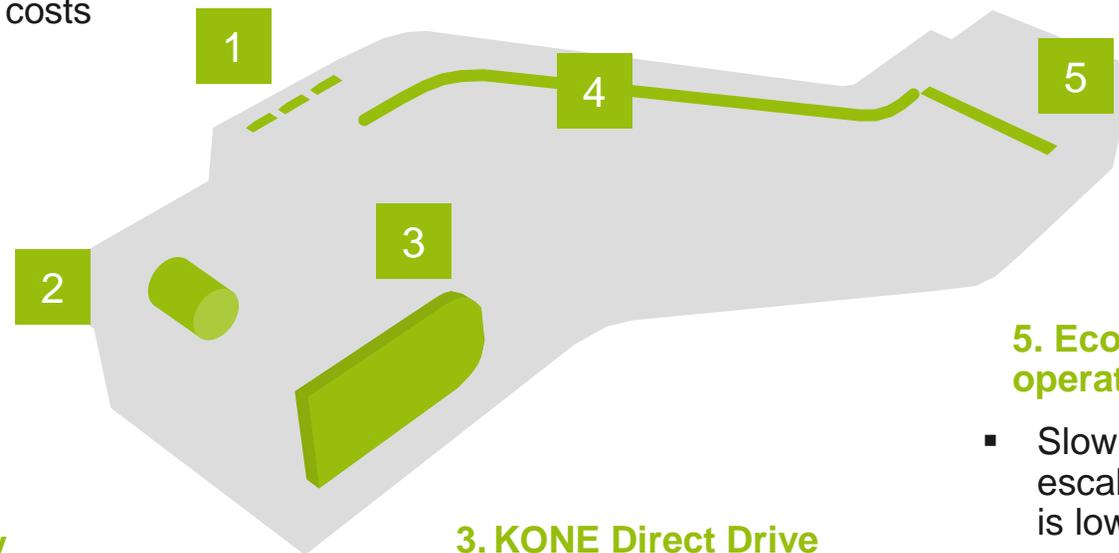


1. KONE direct handrail drive

- Up to 8% more energy efficient
- Longer life time for handrail
- Less maintenance and lower operating costs

4. Long-lasting LED lighting

- 80% more efficient than halogen lighting
- Lasts 10 times longer



2. All new energy efficient inverter

- Smooth speed regulation during standby operation
- Minimizes energy consumption at full speed

3. KONE Direct Drive

- Up to 20% more energy efficient
- Chainless design
- Direct connection to the main shaft

5. Eco-efficient operational modes

- Slow down / stop the escalator when traffic is low
- Regulates needed energy current based on load situations

The new KONE Direct Drive

THE ECO-EFFICIENT HEART OF OUR ESCALATOR SOLUTIONS



Efficient and energy-saving

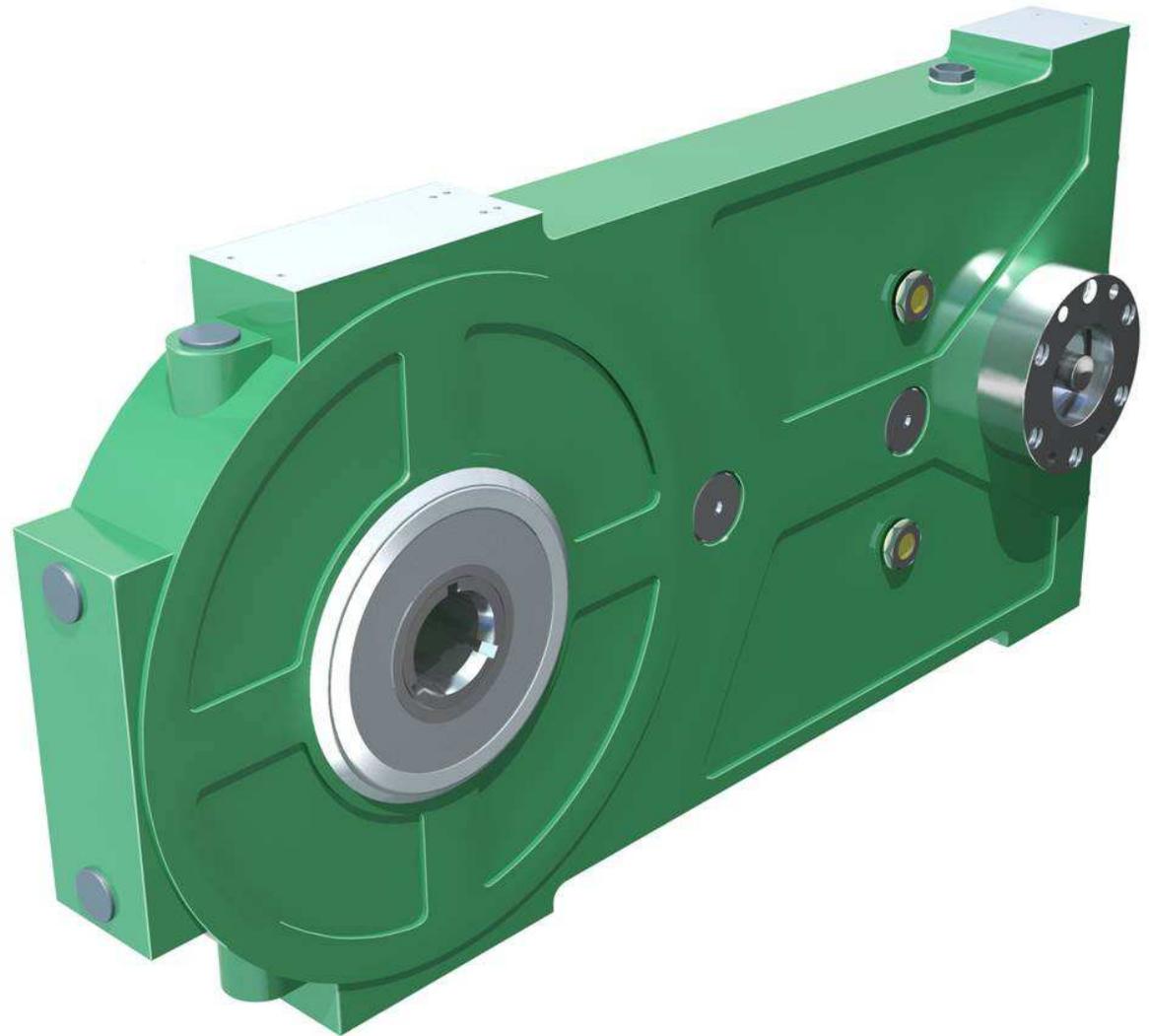
- Motor directly connected to main shaft by the gear for increased efficiency
- Lower input power needed

Safe and reliable

- Chainless design eliminates both the risk of chain failure and the need for oil

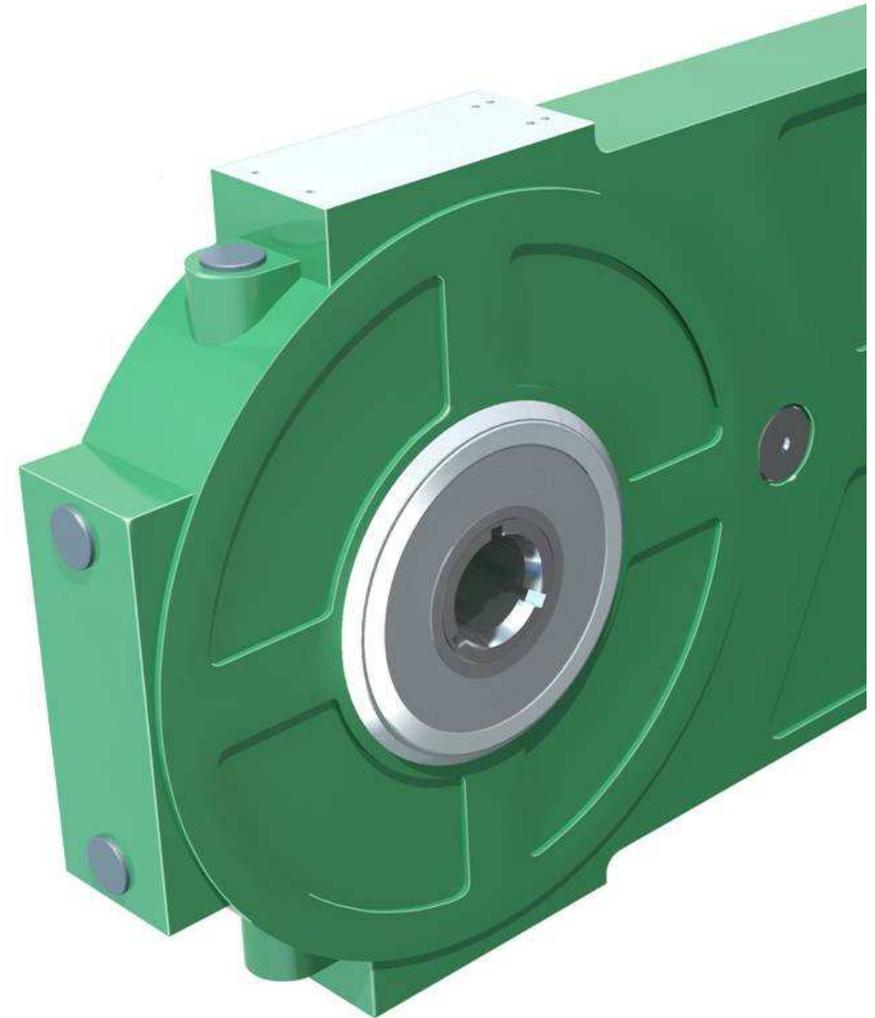
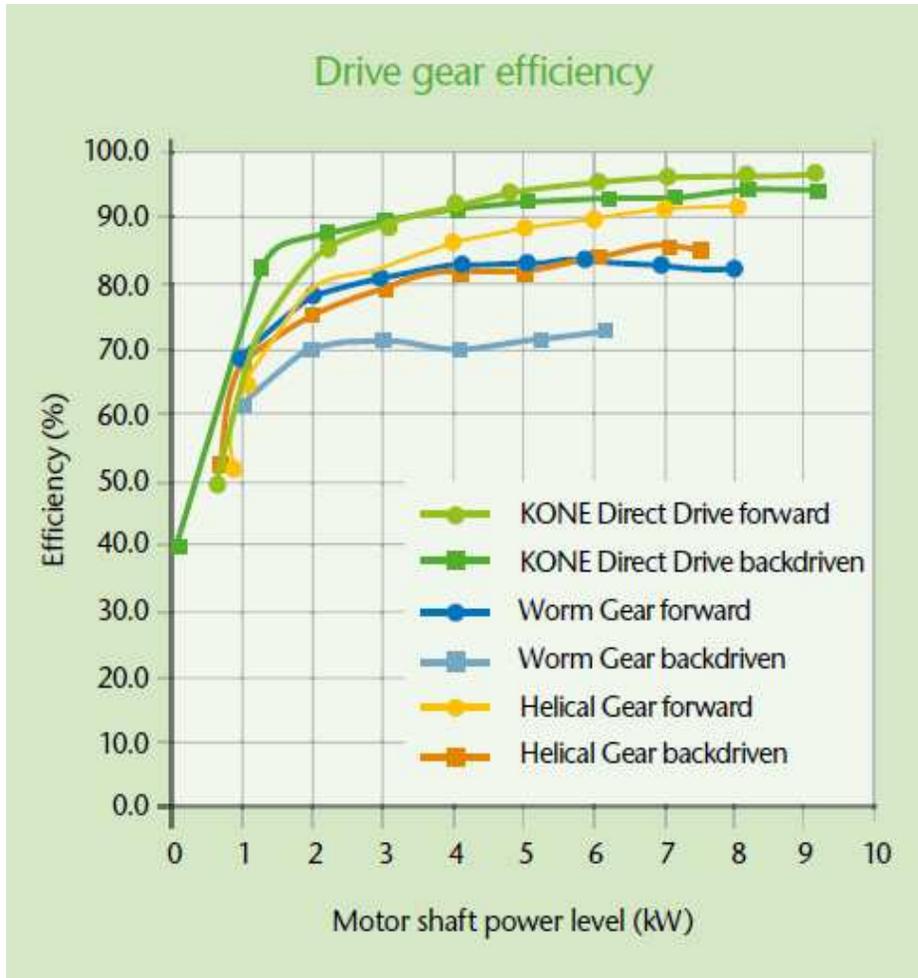
Easier to maintain

- External drive location means easier maintenance access
- Fewer spare parts needed due to simple configuration and chainless design



The most eco-efficient drive technology

KONE DIRECT DRIVE VS CONVENTIONAL TECHNOLOGY



Case: Helsinki Metro



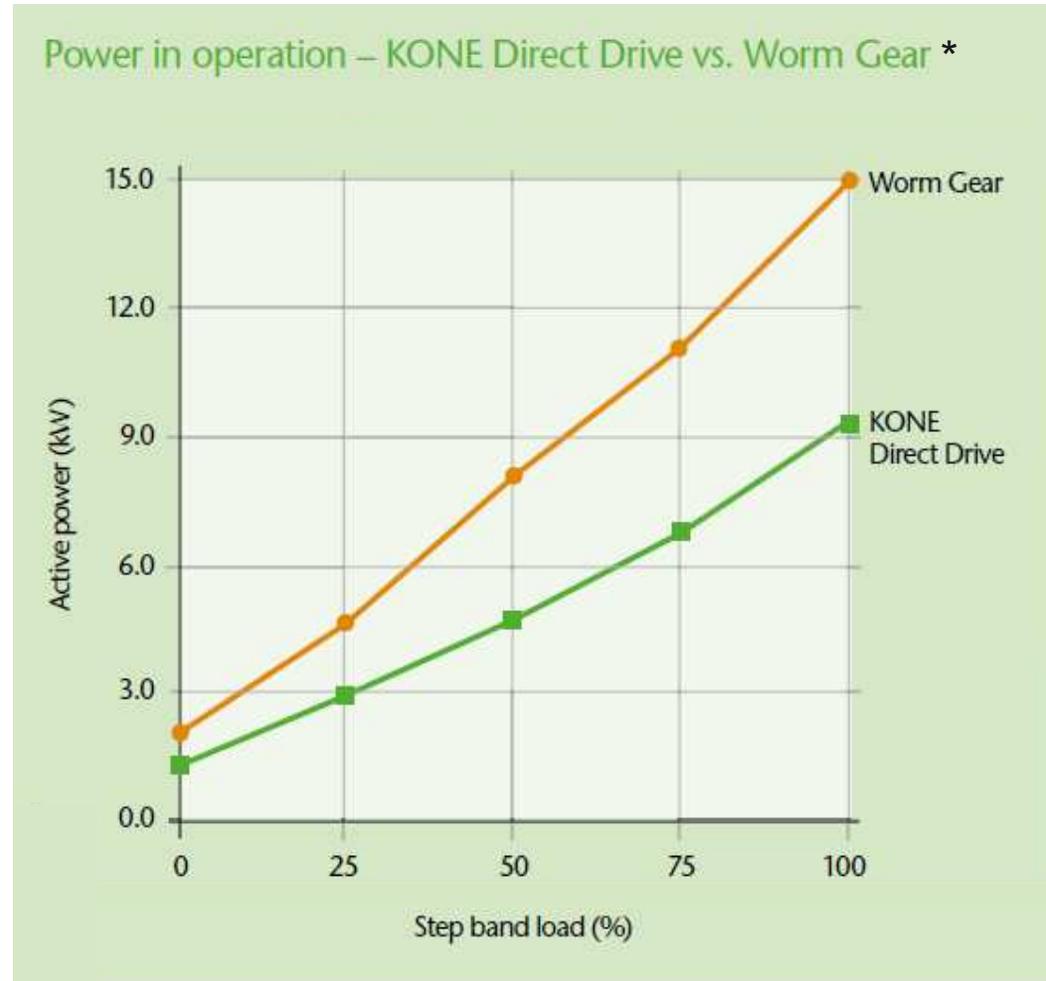
Measurements

Energy and People Flow® measurements conducted at Hakaniemi metro station, Helsinki.

Results

The achieved values for the KONE Direct Drive were even better than predicted.

Input power was only 60% of a standard worm gear (prediction 70%).



Green building certification

ESCALATOR CONTRIBUTION



Installing an eco-efficient KONE escalator solution can help in achieving green building accreditations such as LEED or BREEAM certification.

BREEAM certification. 1 credit can be achieved by fulfilling the following criteria*:

- A. Escalator is fitted with a load-sensing device that synchronizes motor output with passenger demand through a variable-speed drive
- B. Escalator is fitted with a passenger-sensing device for automated operation, so it operates in standby mode when there is no passenger demand

LEED certification. KONE solutions can also contribute to several LEED certification categories.



* 3 out of 4 features required to fulfill the criteria



Peace of mind

WITH THE LATEST SAFETY
TECHNOLOGY

- **Fiber-optic skirt monitoring** covers the entire length of the skirt
- **New traffic signalization solutions** and audible alarms provide clear guidance on escalator travel direction

Ensuring end-user safety



- **A starting point for KONE.** Safety is the starting point for every KONE solution. All our escalators are designed to meet and exceed all applicable safety standards, codes, and regulations
- **Innovative features.** We offer new and innovative features to ensure that KONE escalators are the benchmark whenever safety is concerned.
- **ISO certified manufacturing.** All KONE manufacturing units are ISO 14001 certified
- **Code compliant solutions.** KONE escalators comply with international codes such as EN115, as well as local codes

Standard safety features in KONE ESCALATORS



1. Complete impact devices
2. Handrail inlet switches (upper and lower)
3. Step sag switches (upper and lower)
4. Broken step chain switches
5. The speed sensor system
6. Motor thermal protection
7. The main supply isolator
8. Emergency stop buttons beside key switches for passenger use.

- 9-10 Stop switches
11. Handrail speed and breakage monitors
12. Access cover safety switches
13. The mechanical step band lock
14. The missing step detector
15. The brake lift monitoring switch
16. The broken drive chain device
17. The auxiliary brake
18. Skirt switches

Fiber-optic skirt monitoring

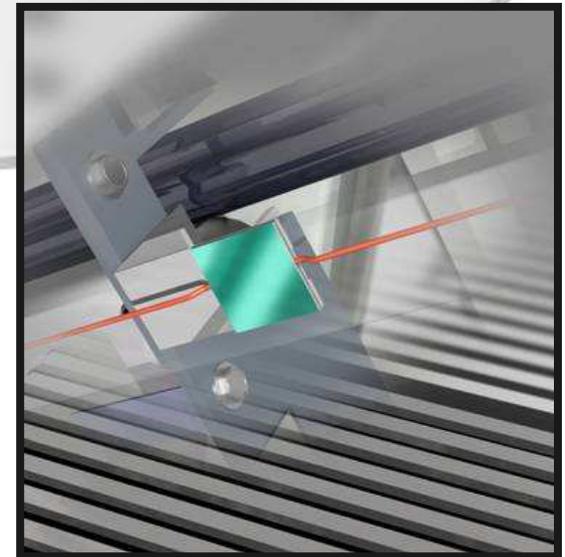
INNOVATIVE SAFETY FEATURES



Optical detection solution that runs along the entire length of the escalator's skirt, immediately stopping it when an obstruction is detected between the skirt and steps. The level of force needed to stop the escalator can be adjusted based on your building's requirements.

Benefit:

- Entire skirt monitored for obstructions
- Sensitivity is adjustable
- Fast activating
- Little or no maintenance required



Additional safety options

INNOVATIVE SAFETY FEATURES



KONE Direct Drive

- Chainless design eliminates risk of chain failure, while drive's location outside the step band means easier, safer maintenance

Alarm for travel direction

- Alarm sounds if passengers enter an escalator in the wrong direction

Visual guidance

- Traffic signalization, skirt lighting, yellow comb segment, and step demarcations for extra visual guidance

Fall-prevention features

- A fall-protection barrier and extended balustrades provide additional passenger protection

Other safety enhancing features

- Halogen-free cables and sprinkler piping for fire risk prevention and additional emergency stop buttons



High quality visual design

FOR THE BEST POSSIBLE
PASSENGER EXPERIENCE

- **Innovative and attractive** lighting solutions
- **Wide range** of design options
- **Attention to detail** and excellent finishing quality



What sets KONE design apart



1 Innovative and attractive lighting solutions

- New lighting solutions for signs, cladding, and traffic lights provide the final touch to your escalator's visual design
- Our traffic-light options – cube, road sign, and traffic pole – provide a simple, stylish approach to safety and passenger guidance

2 Attention to detail and excellent finishing quality

- High quality and attractive front plates, guards, and access covers.
- KONE product portfolio design is harmonized for a consistent look and feel in your building

3 Wide range of design options

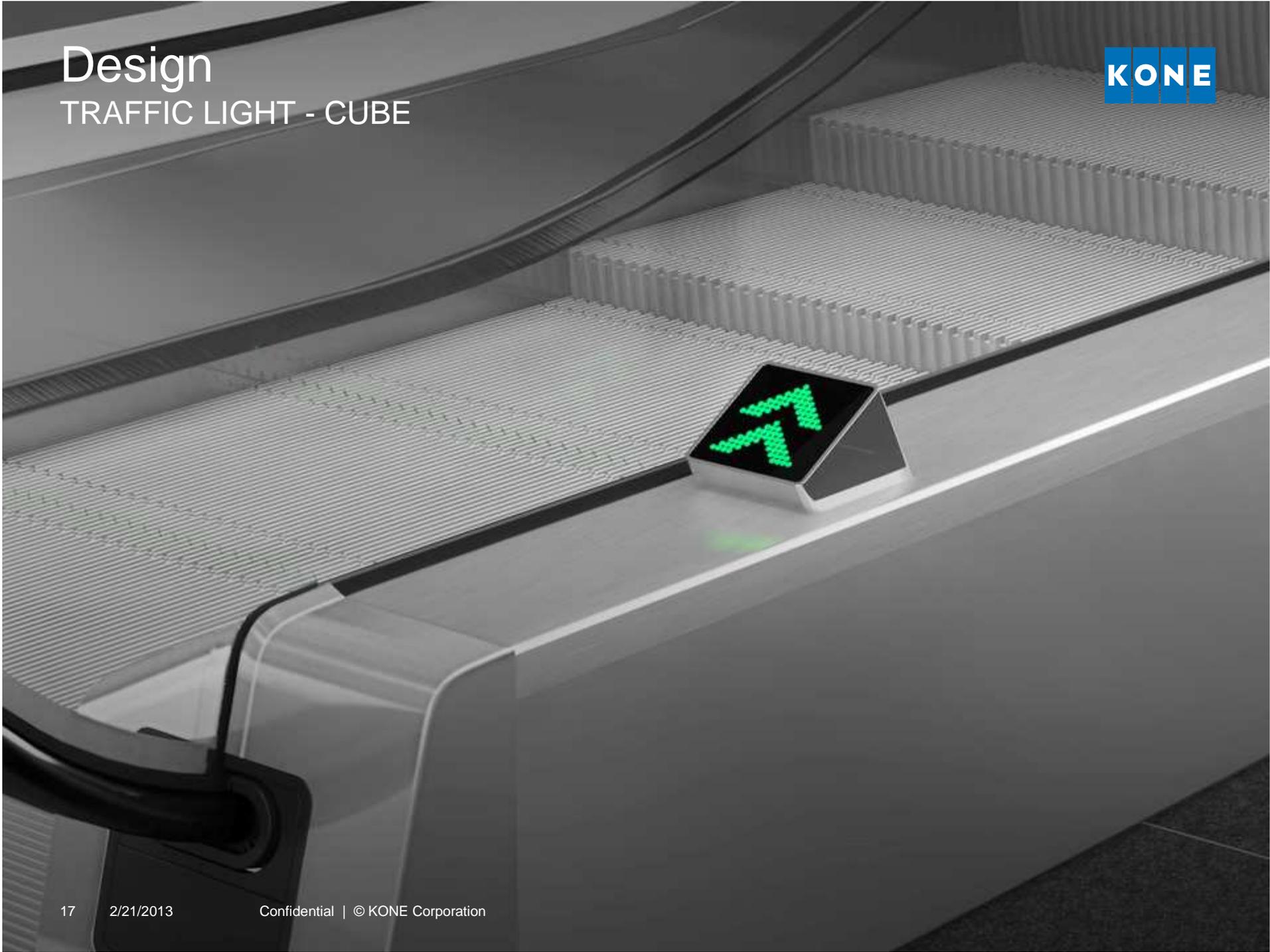
- Innovative materials and features
- Unique textured and patterned cladding materials

4 Tailor-made possibilities

- Benefit from KONE's world-class engineering capabilities

Design

TRAFFIC LIGHT - CUBE



Design

TRAFFIC LIGHT – ROAD SIGN



Design

CLADDING MATERIALS – SILVER BAMBOO



Design

CLADDING MATERIALS – SILVER HIGH-RISE



Design

ACCESS COVER

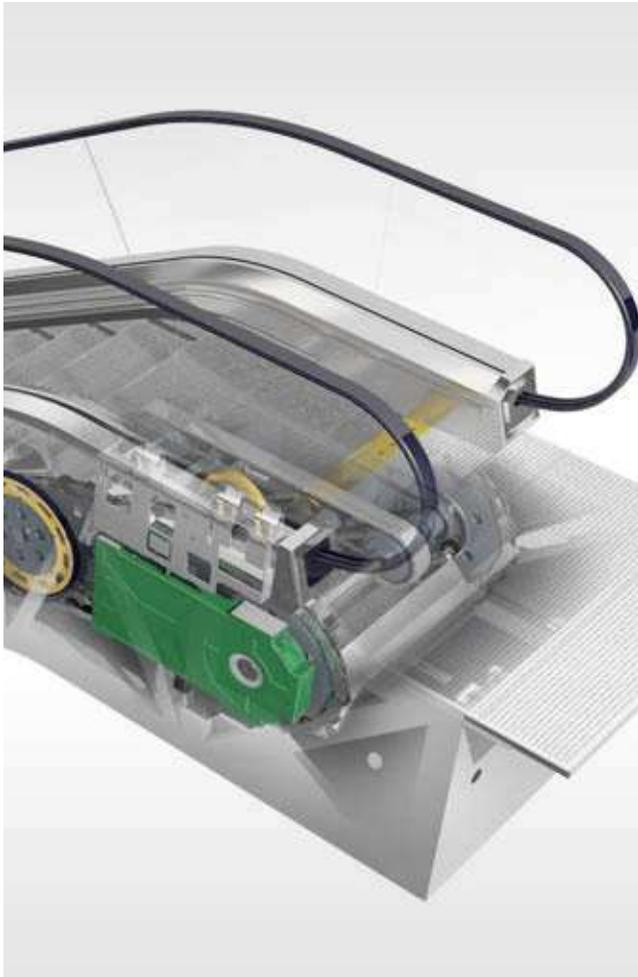


A great escalator is not enough.

You also need an expert partner.

KONE's services and tools
ensure that every
project is a success.

Full replacement

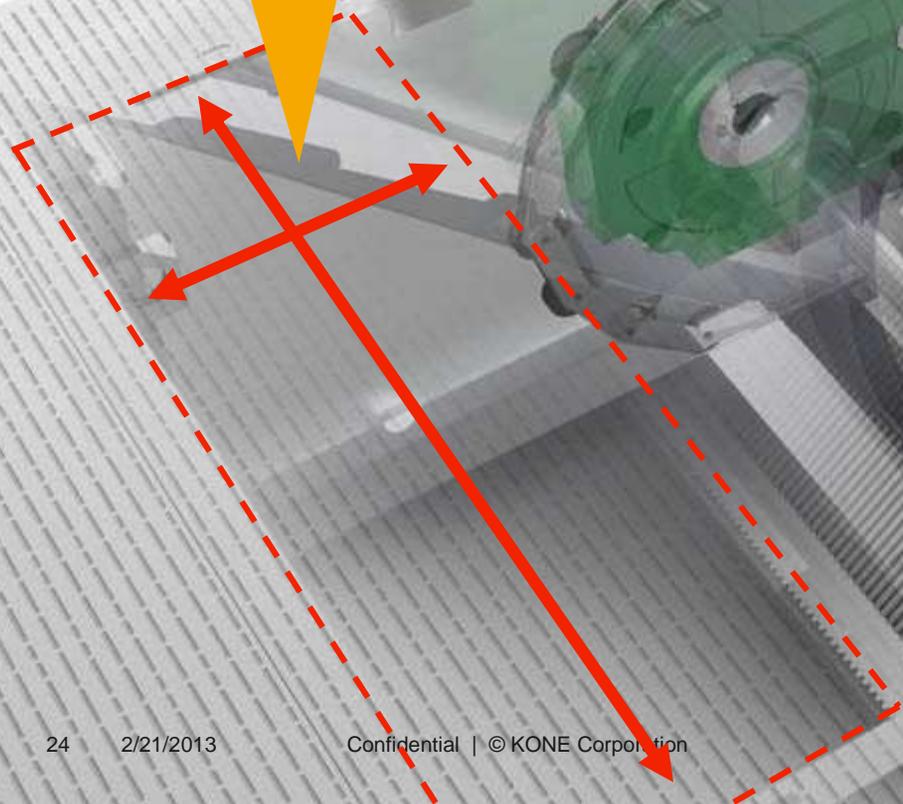


Vertical rise	up to 6 m
Inclination	30°, 35°
Step width	800mm and 1000mm
Step-band speed	0,5 m/s

The Direct Drive can be installed in any existing escalator equipment, regardless of manufacturer.

EN115 maintenance space requirement is fulfilled if the original escalator fulfilled the same requirement. If not, a risk analysis is required.

Flipped Direct Drive frees up space



A dedicated partner

SUPPORTING YOU EVERY STEP OF THE WAY



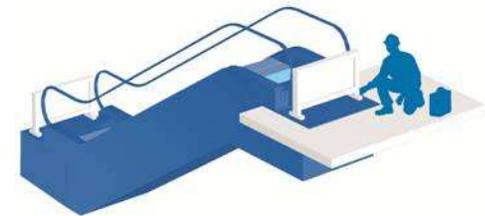
Planning

- Expert planning advice
- Easy-to-use online design tools
- Energy consumption calculations



Installation

- Strict quality criteria
- Maximum site safety
- Eco-efficient installation
- Clear site absolutes for customer



Handover

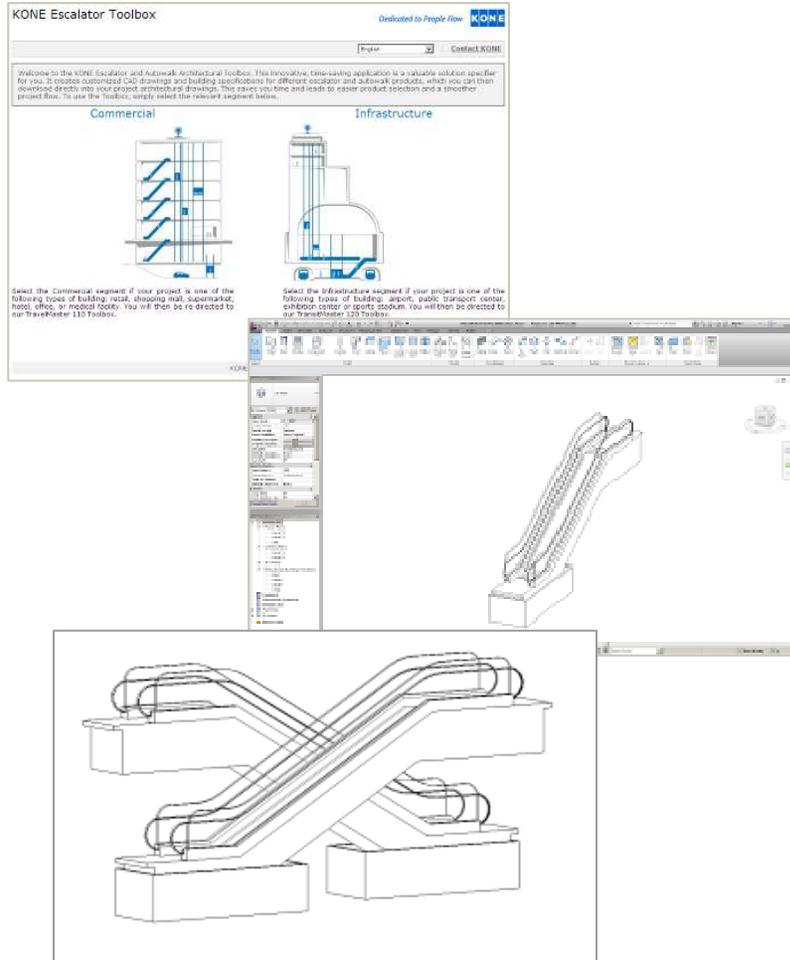
- Superb reliability after handover
- Excellent spare part availability
- Preventive KONE Care® maintenance solutions

Expert planning services and design tools



- **Expert planning advice** helps you specify the optimal escalator solution for your building
- **Easy-to-use online design tools** save you time and effort during the design process by allowing you to create CAD drawings and 3D BIM models
- **Energy consumption calculations** for every individual escalator solution

Escalator toolbox – now including BIM models



- **The KONE Escalator Toolbox** helps you to create a detailed escalator specification online and customized CAD drawings for preliminary planning
- **3D Building Information Modeling (BIM) models** make it easier and quicker for architects to prepare digital elevator and escalator designs
- Models are compatible with most common project documentation systems and include the latest KONE elevator and escalator specifications

<http://koneglobal.hostctb.com/>

Quality assurance and professional maintenance



- **Maximum reliability** – our own reliability laboratory tests and approves every component used in our escalator solutions
- **Excellent parts availability** – our global spares center stocks over 150,000 spare parts and offers 24-hour delivery for the most commonly requested parts
- **Easier maintenance monitoring and budgeting** – preventive KONE Care[®] maintenance solutions with a comprehensive new online reporting system

KONE Care[®] maintenance solutions

FOR ELEVATORS, ESCALATORS, AND AUTOMATIC DOORS



KONE Care Standard™

Voice Link Service
KONE Customer Care Center™
KONE Modular Based Maintenance™

KONE Care Plus™

KONE eOptimum™ notification
Partial service repair coverage
Partial Call-out service coverage
Entrapment Rescue Service
Voice Link Service
KONE Customer Care Center
KONE Modular Based Maintenance

KONE Care Premium™

Enhanced call-out response times
Authority Service
KONE eOptimum notification and online
Full Service repair coverage
Full Call-out service coverage
Entrapment Rescue Service
Voice Link Service
KONE Customer Care Center
KONE Modular Based Maintenance

- KONEs preventive maintenance solutions detect and fix faults before they can cause downtime
- A maintenance plan customized for each site and piece of equipment
- Maintenance performed for each technical module at correct intervals
- Ensures optimal performance and safety, and minimizes downtime
- Ensures that maintenance complies with all relevant regulations and standards

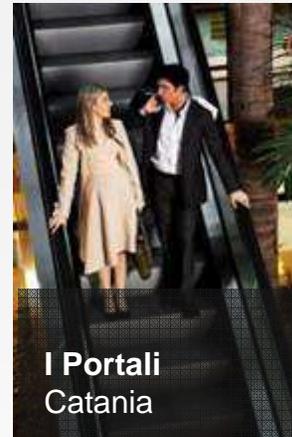
Reference cases



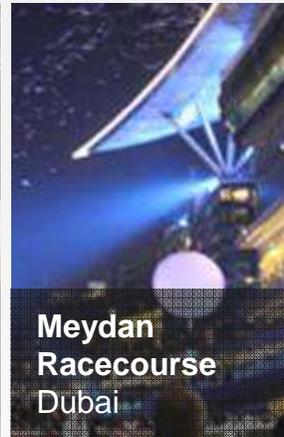
Saks 5th Avenue
New Orleans



National Grand Theater
Beijing



I Portali
Catania



Meydan Racecourse
Dubai



Somerset
Singapore



Debenhams
UK

Retail references:

- Debenhams retail chain, UK
- 313@Somerset, Singapore
- Vulcano Buono, Naples, Italy
- Galleries Lafayette, Paris, France
- I Portali, Catania, Italy
- Saks 5th Avenue, New Orleans, USA
- Cours Oxygène, Lyon, France

Other buildings:

- Meydan Racecourse, Dubai, UAE
- National Grand Theater, Beijing, China
- Marina Bay Sands™ Integrated Resort, Singapore
- Vichaiyut Hospital, Bangkok, Thailand

A reliable partner with a strong track record

- **9 out of 10** KONE customers recommend us as a partner
- More than **100** years of experience in the elevator & escalator industry
- Over **850,000** elevators and escalators in service
- **35,000** dedicated experts worldwide

A trusted partner for architects

HIGHLIGHTS OF KONE SERVICES AND PRODUCTS



VALUE-ADDING SERVICES

- 1 Quick and easy elevator planning**
CAD drawings, BIM models, and escalator design tools
→ **TIME AND COST SAVINGS**
- 2 Expert support** for escalator specification, dimensioning, and energy calculations
→ **FEWER RISKS, OPTIMAL SOLUTION FOR EACH BUILDING**
- 3 Quality testing** of all escalator components through the KONE reliability laboratory ensures superior ride comfort, reliability, and visual quality
→ **LONGER EQUIPMENT LIFETIME**

INDUSTRY-LEADING PRODUCTS

- 1 Attractive escalator designs** and a versatile selection of materials and components to suit all types of buildings
→ **IMPROVED BUILDING VALUE**
- 2 Energy-efficient solutions and features** such as the KONE Direct Drive, direct handrail drive, and smart operational modes
→ **GREEN BUILDING COMPLIANCE**
- 3 Smooth escalator operation** that doesn't create disturbance in the building
→ **NO COMPLAINTS, SATISFIED OWNERS**



A trusted partner for builders

HIGHLIGHTS OF KONE SERVICES AND PRODUCTS

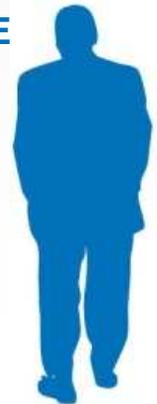


VALUE-ADDING SERVICES

- 1 Efficient installation methods and a simple building interface** mean less preparation work and minimal disruption on site
→ **COST AND TIME SAVINGS**
- 2 Quality testing** of all escalator components through the KONE reliability laboratory ensures superior ride comfort, reliability, and visual quality
→ **FEWER QUALITY ISSUES, PEACE OF MIND AT HANDOVER**
- 3 Excellent site safety and eco-efficiency** guaranteed through continuous training, site audits, and proven methods and processes
→ **FEWER RISKS ON SITE**

INDUSTRY-LEADING PRODUCTS

- 1 Excellent product quality** – 99% availability rates and excellent ride comfort
→ **VALUE FOR MONEY, FEWER REPAIRS**
- 2 Energy-efficient solutions and features** such as the KONE Direct Drive, direct handrail drive, and smart operational modes
→ **GREEN BUILDING COMPLIANCE**
- 3 Easy selection of design features** such as LED lighting and traffic signalization options, with superior durability and finishing quality
→ **CONVENIENCE AND TIME SAVINGS**



KONE TravelMaster™ 110

RIGHT SOLUTION FOR YOUR NEEDS

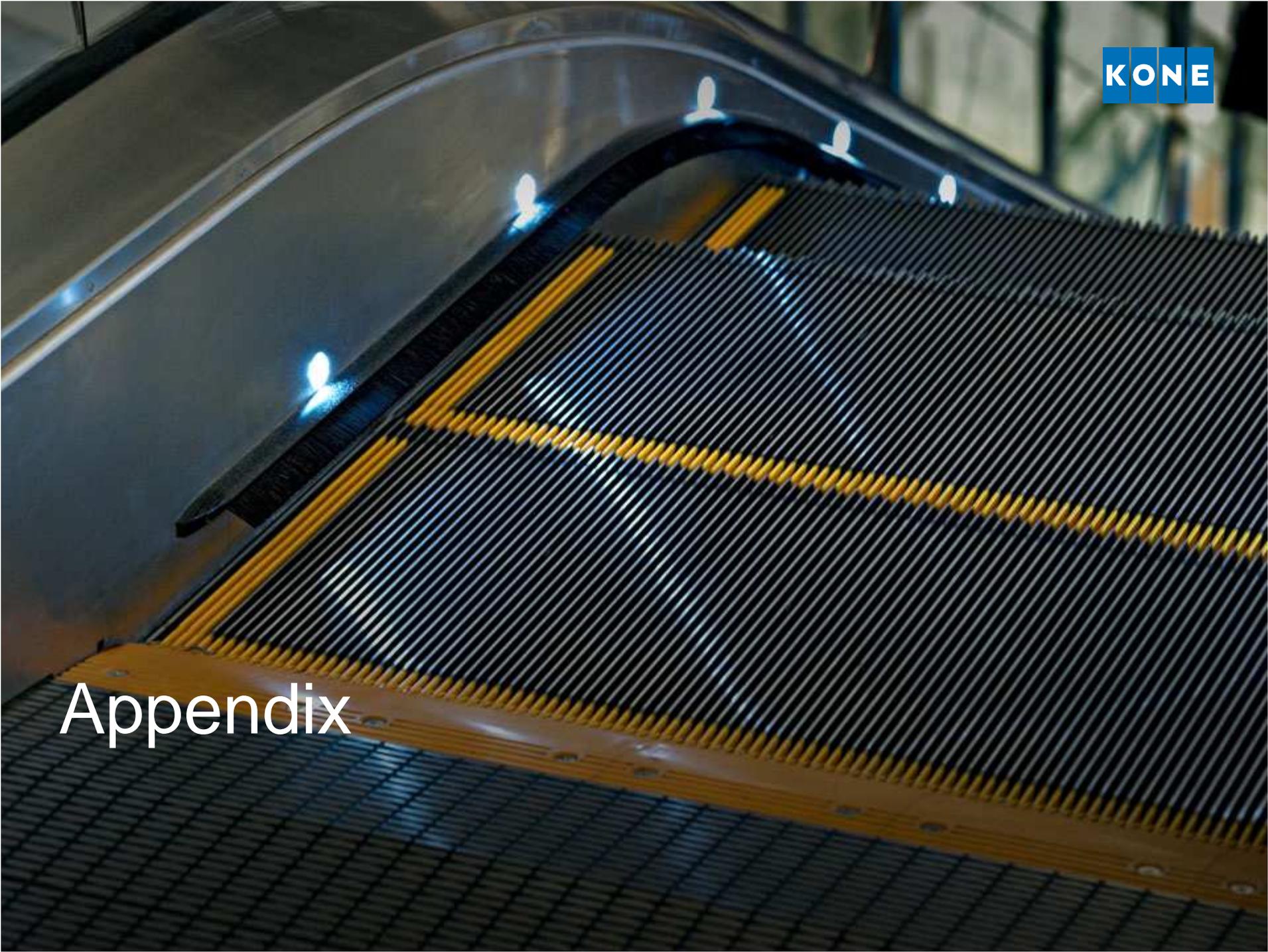


KONE TravelMaster 110 includes a worm gear drive combined with the smart star-delta operational mode which automatically regulates the current needed depending on the actual step load.

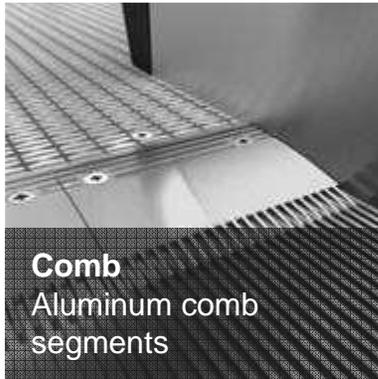
KONE TravelMaster 110 Eco includes the KONE Direct Drive, the industry's most efficient escalator drive, as well as the new direct handrail drive system which is more energy efficient and can extend the lifetime of a handrail.

KONE TravelMaster 110	KONE TravelMaster 110 Eco
Worm gear	KONE Direct Drive
Traditional friction wheel handrail drive	Direct handrail Drive
Energy efficiency enhancing options:	
<ul style="list-style-type: none"> ▪ New energy efficient inverter ▪ Multiple operational modes ▪ regenerative drive ▪ LED lighting options ▪ Traffic lighting solutions (pole, cube, road sign) ▪ Guidance lighting solutions (comb lighting, step demarcation lighting) 	
Safety enhancing options:	
<ul style="list-style-type: none"> ▪ Fiber optic skirt monitoring system ▪ Alarm for travel direction ▪ Fall protection barrier 	
Design enhancing options	
<ul style="list-style-type: none"> ▪ LED continuous lighting or RGB solution for skirt, handrail, side cladding and soffit ▪ LED spot lighting for skirt and soffit (basic and premium) ▪ New premium stainless steel access cover ▪ New KONE designed claddings (etched, honeycomb, colored glass or laminated) 	

Appendix



Design options 1/7



Comb
Aluminum comb segments



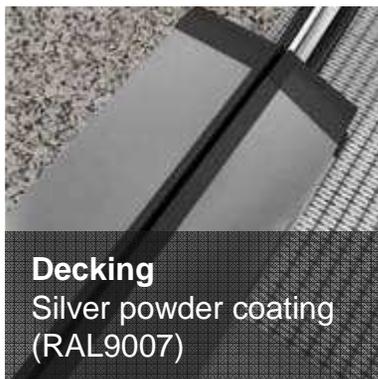
Comb
Aluminum comb with yellow coating



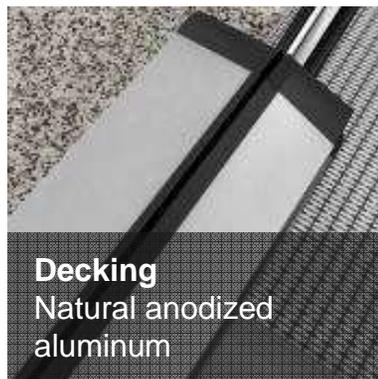
Comb
Yellow plastic comb segments



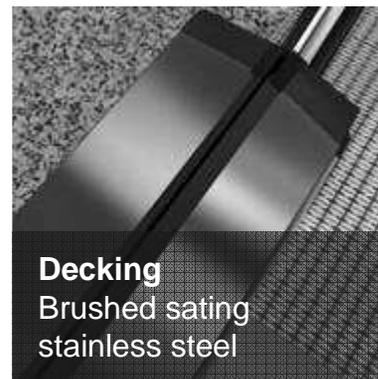
Comb
Black plastic comb segments



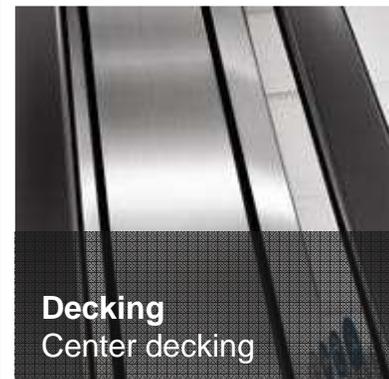
Decking
Silver powder coating (RAL9007)



Decking
Natural anodized aluminum



Decking
Brushed satin stainless steel



Decking
Center decking

Design options 2/7



Cladding
Grey powder coated
sheet steel (RAL7036)



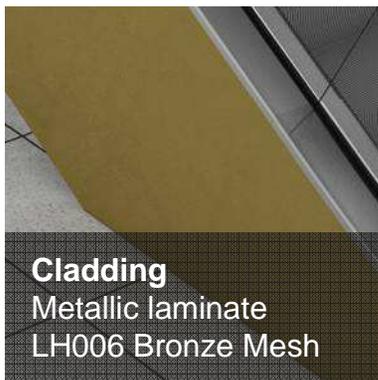
Cladding
Grey primed sheet
steel (RAL7036)



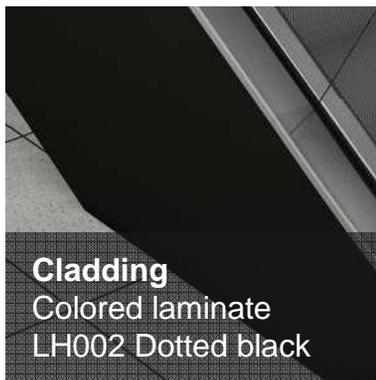
Cladding
Brushed satin
stainless steel



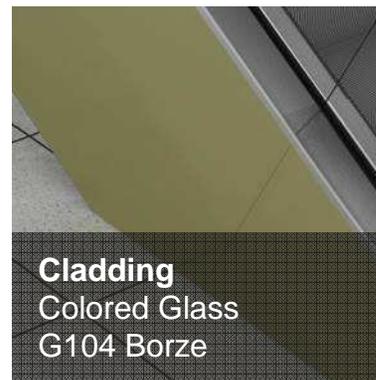
Cladding
Etched stainless steel
ST41S Silver Bamboo



Cladding
Metallic laminate
LH006 Bronze Mesh



Cladding
Colored laminate
LH002 Dotted black



Cladding
Colored Glass
G104 Borze



Cladding
Colored Glass
G105 Bright White

Design options 3/7



Cladding
Etched stainless steel
Silver Highrise



Cladding
Colored glass
G107 Black Pearl



Cladding
Colored laminate
LH003 Navy Blue



Cladding
Colored laminate
LH001 Dotted White



Cladding
Metallic laminate
LH005 Pearl Silver

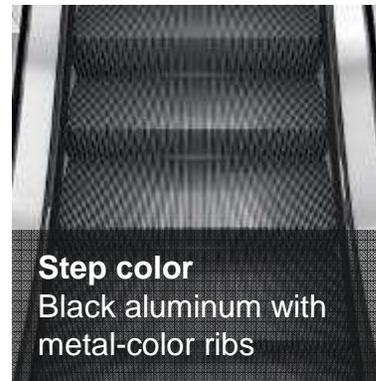
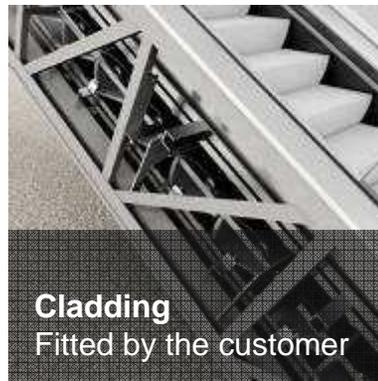


Cladding
Laminate
LH004 Pearl Steel

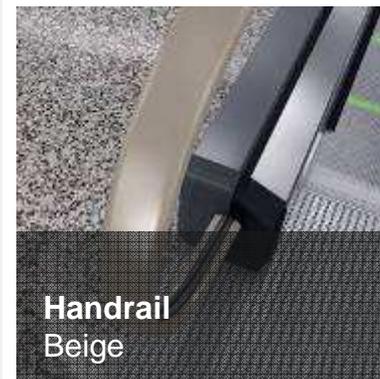
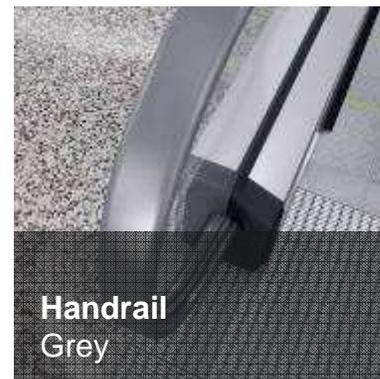
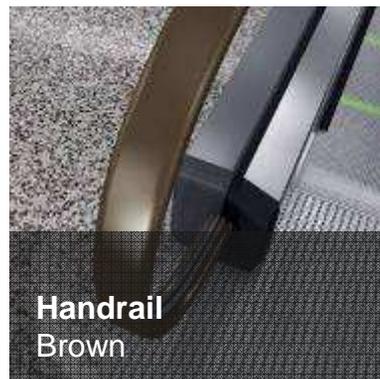
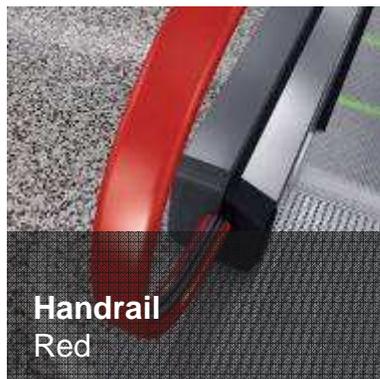
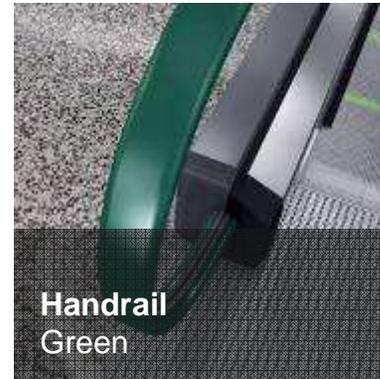
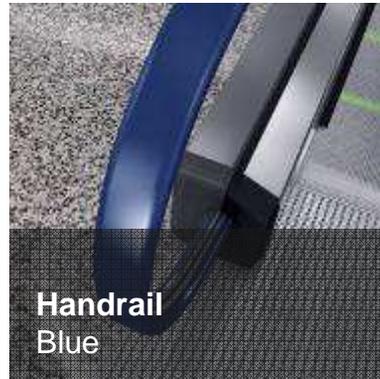
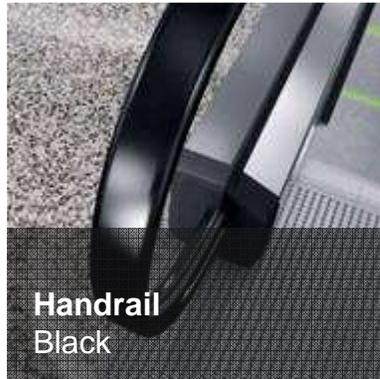


Cladding
Etched stainless steel
ST42S Silver Cloud

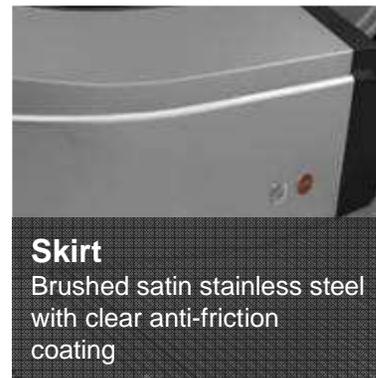
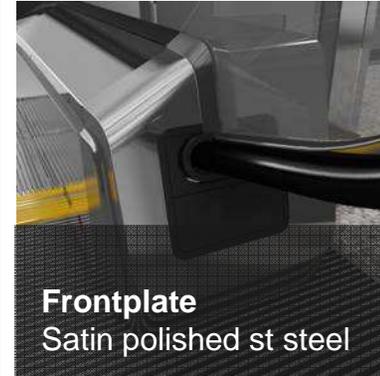
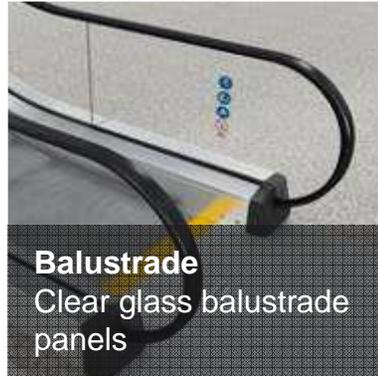
Design options 4/7



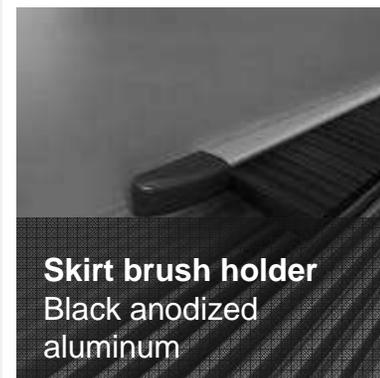
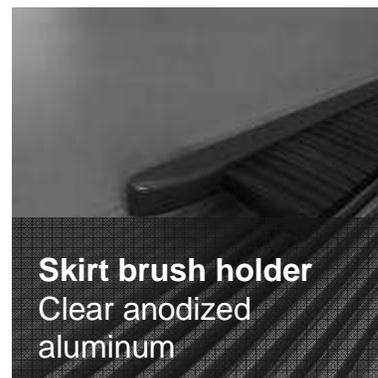
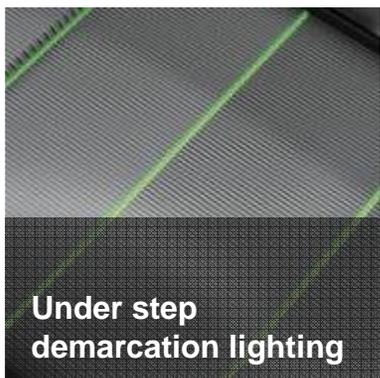
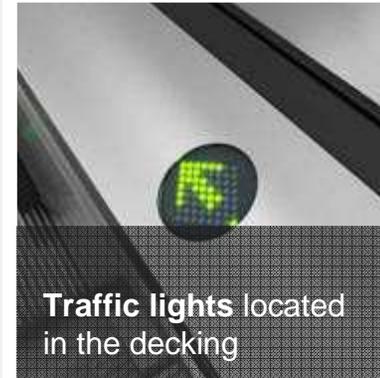
Design options 5/7



Design options 6/7



Design options 7/7



Features shared by the entire portfolio

HARMONIZED ACCESS-COVER PLATE DESIGN



Premium options

Ribbed aluminum with black grooves



Black painted stainless steel surface with punched diamond pattern (available in 304# and 443#)



Stainless steel surface with punched diamond pattern (available in 304# and 443#)

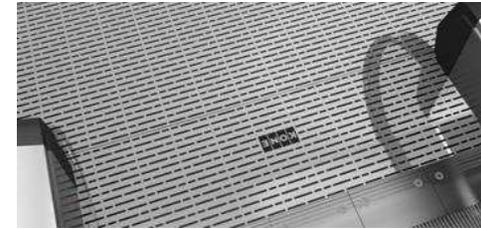


Basic options

Natural ribbed aluminum



Stainless steel surface



LED lighting options 1/2

ECO-EFFICIENT LED LIGHTING



Feature

LED handrail lighting (100 lux on the step)

- Static continuous lighting or RGB option
- Several color options available (white, blue, green, yellow, and red)
- Add-on solution for existing units
- Consumption: 10 W/m

LED skirt lighting

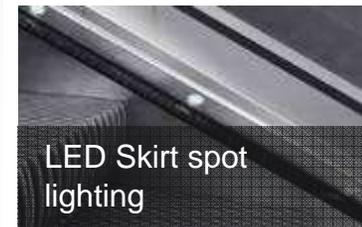
- Static continuous lighting or RGB option
- Several color options available (white, blue, green, yellow, and red)
- Consumption: 10W/m

LED skirt spot lighting

- Decorative lighting (standard or premium)
- White light
- Consumption: 3 W/spot, 1.5 spots/m

LED comb light (50 lux on the comb)

- Static or flashing option
- Several color options available (white, blue, green, yellow, and red)
- Consumption: 2.4 W



LED lighting options 2/2

ECO-EFFICIENT LED LIGHTING



Feature

LED cove lighting

- Static continuous decorative cove lighting or RGB option
- Can be installed to light up the soffit and/or the side cladding
- Several color options available (white, blue, green, yellow, and red)
- Decorative lighting
- Consumption: 10 W/m

LED soffit spot lighting

- Round spot lighting in various layouts (single row, double row)
- Decorative lighting
- White light
- Consumption: 3*1 W/spot

Benefits

- Enhanced safety
- Eco-efficient operation
- Improved visual design
- Low maintenance cost
- Low disposal cost
- LED's lifetime is more than double that of conventional lighting solutions



KONE MovingMedia™ Step

TURN YOUR ESCALATOR INTO A COMMUNICATIONS CHANNEL



- An innovative and unique system that displays messages within an enclosed recess in the escalator's step riser
- MovingMedia messages
 - are eye-catching, distinctive, and easily replaceable
 - can be used for guiding passengers and displaying safety messages
 - help increase brand and product awareness
- Halogen-free cover plate material
- Flexible distribution: full step band, one every six steps, or as specified

Product specifications (1)



KONE TravelMaster™ 110

Applications	Retail, office, hotel, airport, medical, and leisure facilities
Environment	Indoor, semi-outdoor, full outdoor
Inclination	30°, 35 °
Vertical rise	2.0–13 m
Step width	600 mm / 800 mm / 1,000 mm
Speed	0.4m/s with inverter; 0.5 m/s; 0.65 m/s and 0.75 m/s
Number of level steps	2 at upper end, 2 at lower end Option: 3/3 (>6.0 m)
Truss deflection	1/750
Gearbox type	KONE Direct Drive (96% efficiency) in IP21 & IP 55 Worm gear (87% efficiency) in IP21& IP55 Helical gear (93% efficiency) in IP21& IP55
Drive location	Outside step band
Controller	PCB (501) in IP21 and IP54
Power supply	50 Hz / 380 V / 220 V 50 Hz / 400 V / 230 V 50 Hz / 415 V / 240 V 60 Hz / 380 V / 110 V 60 Hz / 220 V / 110 V
Starting	Star-delta Option: inverter starting (when standby speed option is selected)
Operation mode	Continuous smart star-delta Option: standby speed with inverter or Stop & Go
Code compliance	EN115-1, GB (China), Taiwan and Australia, HKCOP

Product specifications (2)



KONE TravelMaster™ 110

Balustrade	<p>Slim-type clear glass, stainless steel sandwich panels</p> <p>Extensions: 1,000 mm</p> <p>Height: 900 mm / 1,000 mm / 1,100 mm</p> <p>Panel joints perpendicular to truss or floor, with even-length glass panels aligned with decking</p> <p>Additional fall-protection barrier</p>
Decking	<p>Hairline stainless steel (304#, 316# or 443#)</p> <p>Powder-coated sheet steel with silver color (RAL9007)</p> <p>Natural anodized aluminum</p>
Skirt	<p>Sheet steel with black powder-coating (China only)</p> <p>Sheet steel with black anti-friction coating</p> <p>Stainless steel with clear anti-friction coating (304#, 316# or 443#)</p> <p>Stainless steel (304# or 443#) (China only)</p>
Skirt brush	<p>Single or two row brush with plastic holder (black) or aluminum holder (black and silver)</p>
Access cover	<p>Ribbed aluminum with black grooves</p> <p>Natural ribbed aluminum</p> <p>Aluminum body with diamond-patterned stainless steel (304#) surface – with black paint</p> <p>Aluminum body with diamond-patterned stainless steel (443#) surface – with black paint</p> <p>Aluminum body with diamond-patterned stainless steel (304#) surface – without black paint</p> <p>Aluminum body with diamond-patterned stainless steel (443#) surface – without black paint</p> <p>New KONE pattern in stainless steel</p>

Product specifications (3)



KONE TravelMaster™ 110

Side and soffit cladding	Painted sheet steel (RAL7036) Powder-coated sheet steel (RAL7036) Stainless steel (304# or 443#) Glass cladding (transparent or colored) Etched stainless steel Colored laminate
Step	Aluminum in silver / black Natural aluminum Stainless steel (indoor use only)
Step demarcation	Yellow plastic insert / painted Center demarcation
Comb segment	Yellow / black plastic Aluminum Aluminum with yellow coating (RAL 123)
Lighting	LED continuous and RGB solutions for handrail, skirt, side cladding and soffit lighting LED spot light for skirt and soffit (basic and premium) LED static or flashing comb light LED traffic lights (standrad, cube, road sign, and Pole) Under-step demarcation lighting