

THE NEXT LEAP

# KONE high-rise solutions

## Introducing the high-rise solutions of the future

High-rise buildings are towering achievements that indicate the future of urban living. Every single day, millions of people move around these impressive structures – working, living, and visiting. Tenants expect the best in comfort, security, and convenience. Building owners and managers require cutting-edge technology and integrated systems that enable efficient building management and add real value to the property.

Meeting the demands of ever-higher buildings and their huge, growing populations requires setting new benchmarks in elevator and building intelligence technology, design, and project solutions. Once again, KONE leads the way.

## Setting new standards for high-rise buildings

### 1 The benchmark in high-rise technology and innovation

The super-light KONE UltraRope™ technology provides unrivalled elevator eco-efficiency, reliability and durability, while also improving elevator performance. In the future, KONE UltraRope can enable travel heights up to 1,000 meters.

### 2 Smooth, smart, scalable – KONE People Flow Intelligence

Our comprehensive range of user-friendly, customizable solutions ensures smooth people flow from front door to final destination, and is fully scalable to meet the changing needs of high-rise buildings. KONE People Flow Intelligence comprises solutions for access and destination control, as well as information communication and equipment monitoring.

### 3 World-class design expertise that makes your vision a reality

KONE has consistently set new standards for design in the elevator industry. Many of the world's landmark high-rise projects have benefited from our award-winning design expertise and peerless custom elevator design capabilities, which can help you turn your ambitious architectural vision into a breathtaking end result.

### 4 A partnership that adds real value – every step of the way

Our expertise in project execution covers everything from the design, planning, and construction processes to operations support, including tailored equipment maintenance and modernization solutions. When you partner with KONE, you benefit from world-class project management delivered by our team of local and global experts.

# The benchmark in high-rise technology and innovation

High-rise construction requires creative architectural vision, watertight planning, and cutting-edge elevator technology. KONE has continually set new standards for innovation in high-rise projects, and is proud to introduce the latest in a long line of technological breakthroughs. Our pioneering new solutions will take buildings higher while making elevators even more energy efficient and reliable, all while delivering an unforgettable passenger experience.

## Ultimate performance

Our new KONE UltraRope™ technology sets a new benchmark for elevator performance. In an elevator traveling 500 meters, the lightweight carbon fiber core cuts elevator moving masses by up to 60% compared to steel ropes. When elevator travel heights increase, even larger reductions can be achieved. In the future, KONE UltraRope can enable travel heights up to 1,000 meters.

## Best in class eco-efficiency

Our lightweight hoisting system, powered by the eco-efficient KONE EcoDisc®, enables huge energy efficiency gains. With the significant reduction in elevator moving masses, lower acceleration currents, and a reduced need for machine-room cooling, KONE high-rise elevator solutions are more efficient than conventional technologies. KONE UltraRope cuts energy consumption by 15% for a 500 meter elevator. When elevators travel higher in the future, an energy savings as much as 45% can be achieved for an 800 meter elevator.

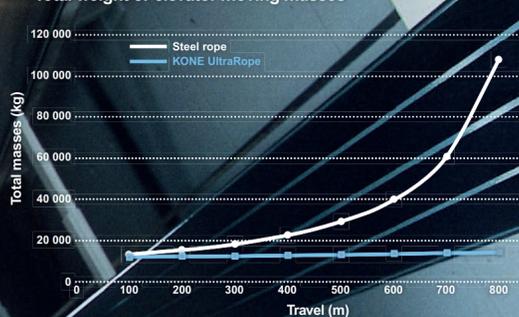
## Unprecedented reliability and durability

The carbon fiber core of KONE UltraRope has an exceptionally long lifetime – twice as long as the lifetime of conventional steel ropes. And, unlike steel, the solid structure does not densify and stretch, while the special coating means no lubrication is required. All of this adds up to a significant reduction in elevator downtime.

## Industry-leading ride comfort

KONE's advances in ride comfort guarantee a passenger experience like no other. As well as the KONE UltraRope, which helps to reduce noise levels, and our innovative new car structure that ensures excellent noise isolation, our hoisting system also ensures smooth acceleration and deceleration, and accurate leveling. We monitor quality at every stage of the installation process and carry out comprehensive ride-comfort testing on every single elevator before handover.

## Total weight of elevator moving masses



## KONE UltraRope – ultra light, ultra durable, ultra efficient

Our new rope technology eliminates the disadvantages of existing steel ropes – high energy consumption, rope stretch, large moving masses, and downtime caused by building sway.

- Ultra-light rope with carbon fiber core surrounded by high-friction coating
- Carbon fiber has excellent strength properties
- The coating is highly resistant to wear and abrasion
- Less sensitive to building sway frequencies that can cause elevator downtime during high winds

# Smooth, smart, scalable – KONE People Flow Intelligence



A typical high-rise building sees thousands of people moving around every day. Tenants expect security, comfort, and convenience, while building managers require technologies and integrated systems that will help them manage the building efficiently. KONE's comprehensive People Flow Intelligence solutions comprise smart, scalable solutions for access and destination control, as well as information communication and equipment monitoring.

## Access solutions

- Integrated access control and elevator solutions for smooth, secure people flow
- Scalable solutions that are easily adaptable if your needs change
- Easier planning, installation, and operation with one system from one partner
- Full flexibility with a choice of KONE's complete access solution or integration of the elevators with any other access control system

## Destination solutions

- Industry-leading performance with improved elevator handling capacity
- Increased comfort and convenience, shorter travel times, and minimized number of stops through clear guidance and intelligent passenger grouping
- Durable, user-friendly signalization and accessory offering with award-winning visual design

- Smooth, non-disruptive modernization of existing elevators brings immediate performance and efficiency gains

## Information solutions

- Fast, easy communication with tenants via the stylish information screen for elevators and lobbies
- Flexible, customizable channel for displaying information, advertisements, and other online content
- Effective solution for communicating safety and other building-related information
- Stylish design matches KONE signalization equipment, for a consistent look and feel
- Quick, convenient content management, with remote updating for multiple displays

## Monitoring solutions

- Real-time overview of elevator and escalator status across multiple locations
- Accurate data available instantly on transportation demand, traffic performance, and elevator capacity
- Faster identification of potential technical faults helps minimize downtime
- Comprehensive reporting, including archiving of performance data for analysis and troubleshooting
- Remote shutdown of equipment enables energy saving during low-demand periods

# World-class design expertise that makes your vision a reality

Successfully realizing an architectural vision demands creativity, design expertise, and cross-functional collaboration. Our elevator car design, engineering, and manufacturing capabilities can be seen in the custom solutions we have created for iconic buildings all around the world. KONE has also consistently set new industry benchmarks with our award-winning elevator designs, developed by our team of in-house professionals.

## From vision to reality

Our experts work closely with your team throughout the design process, right from the initial planning stage, to ensure the delivered elevator solution is the perfect fit for your building. Our unrivalled expertise in custom car design has helped us deliver solutions for some of the world's most iconic high-rise projects.

## Award-winning design collection

The KONE Design Collection combines eye-catching patterns, innovative finishes, and attractive lighting options. Choose from our wide range of inspiring themed elevator car interiors, or mix and match to create your own unique design.

Our elevator and signalization design concepts have received both Good Design and red dot awards.



# A partnership that adds real value – every step of the way

Our industry-leading planning services ensure your elevator system delivers optimal performance and eco-efficiency, while a dedicated team of experts ensures successful project execution. During construction, KONE JumpLift and our scaffoldless installation method deliver significant efficiency gains. Our tailored maintenance and modernization solutions ensure optimal people flow for the entire life cycle of your building.



## Industry-leading planning services

- Industry-leading traffic planning services and tools, including full building traffic simulation, define the optimal amount and layout of elevator and escalator equipment.
- Advanced calculation tools provide accurate estimates of equipment energy consumption.
- Design professionals collaborate with the architectural team to develop customized elevator cars and car interior designs.

## World-class project execution

- Dedicated team of local and global experts with world-class project management capabilities ensures the best and most appropriate competencies for your project.
- Methodical step-by-step processes ensure the project scope, schedules, deliverables, and responsibilities are clearly defined and communicated to all parties.
- Project management processes ensure with your own construction processes, for optimal synchronization and smooth, efficient project execution.

## Efficient, safe construction solutions

- KONE JumpLift delivers significant efficiency gains by speeding up the construction process while ensuring safe transport of people and materials.
- Proven, highly efficient scaffoldless installation method reduces installation time and minimizes disruption to other construction work, while dramatically improving site safety.
- Continuous training, site audits, and installation safety passports help to ensure maximum site safety.
- Strict quality criteria are followed during installation and comprehensive ride comfort testing is carried out on every single elevator before handover.

## Tailored operations support

- Preventive maintenance solutions are tailored to the specific needs of your building, for minimized downtime and maximized equipment performance and efficiency.
- Online access to equipment performance, maintenance, callout, and repair data is available for budgeting and reporting purposes.
- In-depth on-site equipment analysis and expert consultation services are provided to support equipment modernization projects.

## KONE JumpLift – saves time and costs during construction

- An advanced self-climbing elevator that uses the building's permanent elevator shaft to transport people and materials.
- The temporary machine room is moved upwards as construction progresses, allowing the elevator to serve floors as soon as they are ready.
- As shaft installation work moves up, other construction work can continue undisturbed below.
- Lower floors can be enclosed and finished much more quickly, saving hundreds, even thousands, of hours during high-rise construction.
- Once construction is completed, protective materials are removed and permanent signalization installed, and the elevator is ready to receive its first passengers.