

# 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.

KONE UltraRope®

## 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.

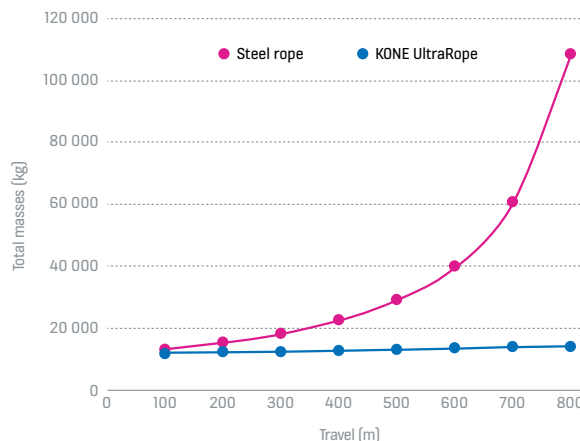
## UNPRECEDENTED RELIABILITY AND DURABILITY

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 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 el downtime during high winds