

# THE ELEVATOR WITH A COMPACT MACHINE ROOM

KONE MiniSpace™

## 100 YEARS OF ELEVATOR EXPERTISE AT YOUR SERVICE

KONE is the industry leader in elevator and escalator innovation. We have a long history of improving our customers' businesses and are Dedicated to People Flow™, creating the optimal solution to move people in your buildings efficiently, safely, and in comfort for generations to come.

### KEY BENEFITS

- Machine room needs only 40% of the space of a conventional traction elevator's machine room
- Lower construction costs
- Impressive energy savings
- High-quality interior designs
- Full service throughout your building's lifecycle

### KONE MiniSpace<sup>™</sup> – a versatile elevator with a compact machine room

KONE elevators continue to set the industry standard. KONE MiniSpace elevators combine the KONE EcoDisc® motor with a compact machine room. KONE MiniSpace is ideal for passenger transportation in offices, hotels, and residential buildings of up to 63 stories.

KONE MiniSpace is versatile and reliable. Excellent ride comfort, a power-saving gearless drive, compact size, high efficiency, and low heat loss are the key features that have made this elevator the solution of choice in many of today's most prominent tall buildings. In addition, group control solutions meet the intense traffic demands of modern commercial buildings.

### Less space, faster construction

With KONE MiniSpace, the machine room is simply an extension of the elevator shaft, making it easier and more cost-efficient to install. The compact KONE EcoDisc motor can even be lifted inside the elevator shaft. For more information, turn to page 10.

#### Impressive energy savings

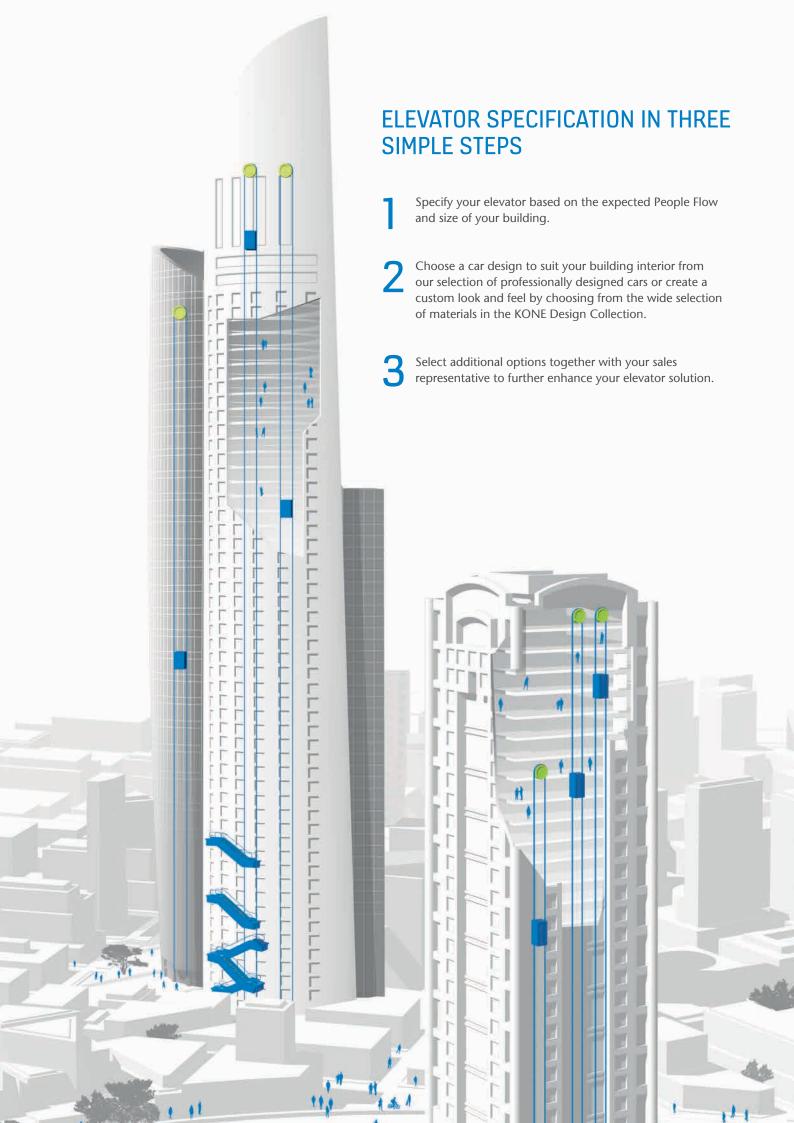
KONE MiniSpace elevators consume less energy and result in lower thermal losses than traditional machines. Find out how on page 6.

### Attractive interior design

Our elevator design concepts are the work of renowned professionals and designers, who unite attractive interiors with practical durability. See examples on page 8.

### Excellent service throughout your building's lifecycle

KONE offers full service throughout your building's lifecycle. Our expertise in traffic analysis means your building will have the right elevator capacity to ensure smooth People Flow. We also offer flexible KONE Care<sup>TM</sup> maintenance solutions and modernization services to keep things running smoothly. Read more on page 12.





### THE KONE MINISPACE™ ADVANTAGE

The secret behind the KONE MiniSpace solution is the permanent magnet, gearless KONE EcoDisc® motor. KONE EcoDisc weighs less than half of a conventional geared traction machine and is approximately twice as efficient.

The compact KONE EcoDisc hoisting motor needs only 40% of the space compared with a conventional traction elevator machine room.

### A smooth and quiet ride

With the low rotational motor speed of KONE MiniSpace you get smooth ride quality and comfort. The V3F variable-frequency drive ensures a superior acceleration/ deceleration profile, better floor-to-floor travel times, and precision leveling. The end result is a ride experience that will set your building apart.

### A focus on quality and safety

Quality is one of the key drivers at KONE. High quality people flow solutions enable people to move smoothly, safely, comfortably, and efficiently. Reliable products maximize the performance of our customers' buildings. Our commitment to quality covers the entire product lifespan, from manufacturing and installation to ongoing maintenance.

### Industry standards and requirements

All KONE manufacturing units are ISO 14001 certified and meet all elevator industry standards and requirements, including:

- EN81-20
- GB7588-2003 (EN81-1:1998)
- Singapore CP2 Code

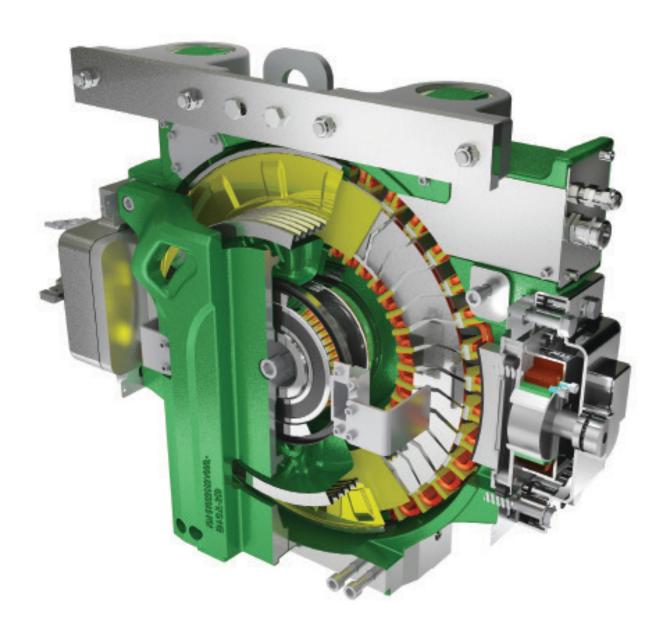


KONE MINISPACE ELEVATOR RANGE		
Maximum travel	Up to 63 floors and 210 meters of travel	
Maximum load	Up to 2000 kg transport	
Maximum speed	Up to 4.0 m/s	
Group size	Up to 8 cars in one elevator group	

### TAKING ECO-EFFICIENCY TO NEW HEIGHTS

Save energy and costs. It is a simple calculation with impressive results. KONE MiniSpace™ elevators, powered by the KONE EcoDisc® hoisting motor, consume less energy than other gearless elevators. KONE EcoDisc also creates less thermal losses than traditional machines, which brings direct savings in cooling and ventilation costs.

But the hoisting motor is not the only thing that can reduce the total energy consumption of an elevator. KONE has analyzed every function and option in order to reduce the total energy consumption.



### A green hoisting system

The KONE EcoDisc® hoisting machine made DC gearless and energy-hungry geared hoisting machines obsolete. The KONE EcoDisc permanent magnet synchronous machine, together with a vector-controlled drive system and energy regeneration options, provides the highest total efficiency and minimizes both mechanical and electrical losses.

### Further energy savings with standby mode

Lights, signalization and ventilation can consume a considerable amount of energy even when the elevator is not moving. In a residential elevator this can represent a considerable portion of yearly energy costs. KONE offers the following options to minimize energy consumption:

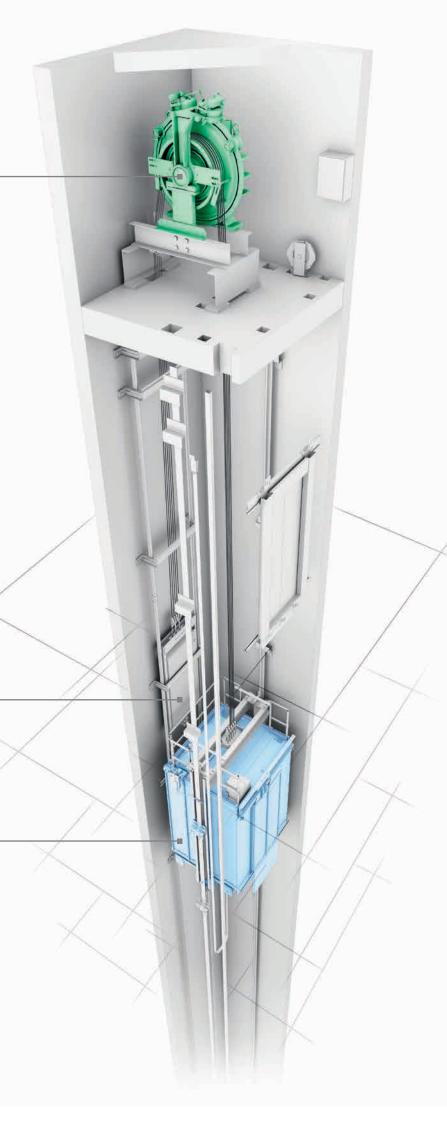
- 1. Automatic car light operation turns off the lights when the car is not in use and on again when the car is called.
- 2. Corridor illumination control automatically controls the light on the destination floor.
- 3. The power stage of the drive is set to sleep mode when not in use.
- 4. Signalization displays are dimmed when not juse.
- 5. The car fan is turned off when the elevator is not in use.

### Regenerative drive

When the car is descending with a heavy load (or ascending with a light load), it contains potential energy. The regenerative drive recovers this energy, saving up to 30% of the total energy consumed by a typical 13-person KONE elevator.

### Eco-efficient car lighting

Surprisingly, the car lighting can account for up to 40% (1100 kWh) of an elevator's energy consumption. Halogen spots have been replaced with eco-efficient, long-lasting LED and modern fluorescent lighting technology. The lights are optimized for maximum efficiency and natural color saturation. LED lights last up to 10 times longer than traditional halogen bulbs and use up to 80% less energy.



### AWARD-WINNING DESIGN

THAT HELPS YOUR BUILDING STAND OUT

### WHAT SETS KONE DESIGN APART

- **Easy selection of car interiors**A collection of 28 functional and visually appealing designs created by KONE's award winning design professionals.
- The most flexible and versatile offering

80 different materials and accessories that can be combined freely and used in all elevator products, for both new buildings and modernization projects.

- The most innovative materials
  The combination of unique textured,
  patterned, and 3D-effect wall materials
  with novel lighting solutions creates a
  stunning visual effect.
- Award-winning design
  KONE's elevator and signalization design
  concepts have received both Red Dot
  and Good Design awards.









### KONE DESIGN COLLECTION

When you're designing a building that people will call home, the elevator you choose should complement your building's look and feel, and make your building attractive to potential residents. Your elevator also needs to be functional – it should be accessible for all, well lit, user-friendly, easy to clean, and resistant to wear and tear.

The new KONE Design Collection – created by our award-winning design team – offers you a versatile set of contemporary, themed interiors to choose from.

You can also create your own unique look and feel by mixing and matching our wide range of materials and accessories.

For more design inspiration take a look at the complete KONE Design Collection and use the KONE Car Designer tool together with a KONE sales representative.



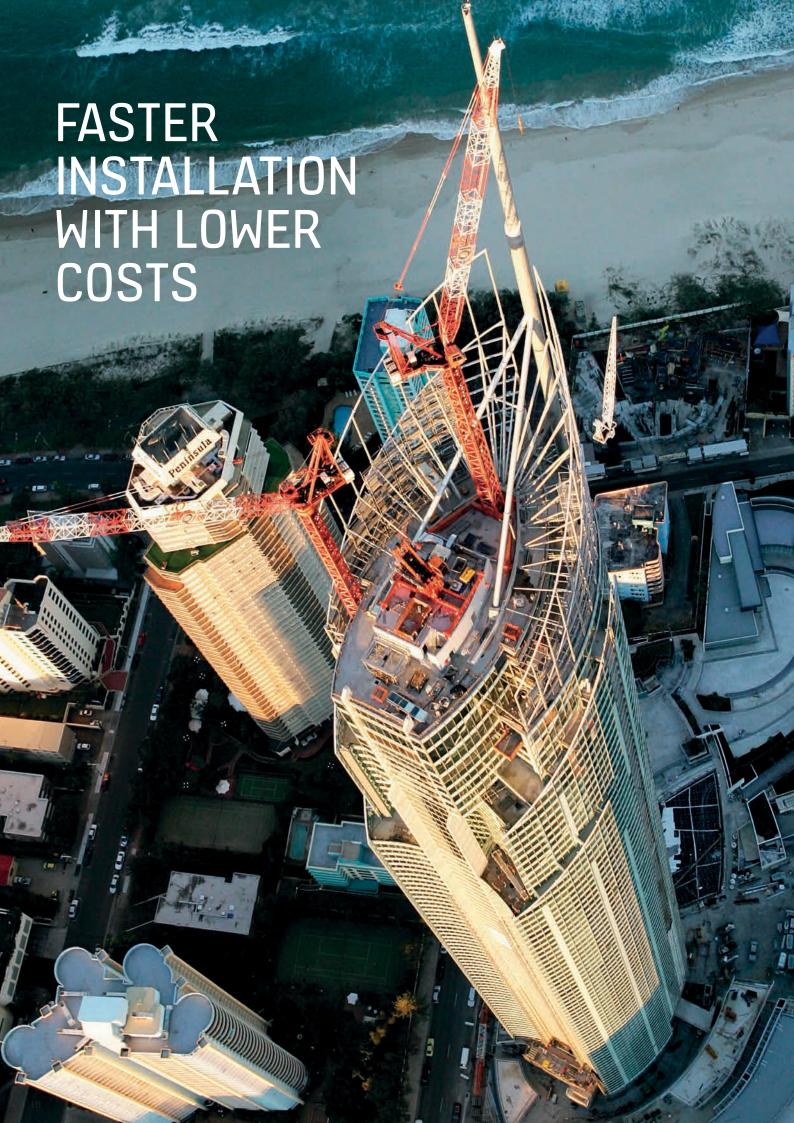
### SIGNALIZATION DESIGNED TO IMPROVE USER EXPERIENCE IN RESIDENTIAL BUILDINGS



Our wide range of signalizations are designed to give passengers a great elevator experience with every trip. As well as adding the finishing touches to your elevator's interior, they make using the elevator even easier and more convenient for passengers.

KONE signalizations available for KONE MiniSpace are KDS 50, KDS 290, KDS 300, KDS 330 and KDS D.

Partial-height COP KSC D20



### The KONE MiniSpace<sup>™</sup> solution not only saves space and energy throughout its lifetime, but it also saves money during construction.

### Easy and eco-efficient installation

The whole installation process is both safer and faster than with a traditional elevator installation. KONE has devised scaffold-less installation methods using special tools to erect the elevator. KONE has defined 5 Site Absolutes for what needs to be done on the building site before elevator installation can begin. When these requirements are met, the installation is uninterrupted and requires minimal or no assistance from the builder.

#### **Construction Time Use elevators**

KONE's Construction T ime Use elevators (CTUs) enable safer, more weatherproof, and faster transportation of people and goods on building sites during the construction phase compared with an exterior hoist. CTU elevators are simply the permanent elevators equipped with temporary signalization and protective materials so they can be used during construction. They can save hundreds of manhours every day. After completion of your project, KONE CTU elevators can be quickly converted into the building's permanent elevators.

### Groundbreaking KONE JumpLift concept

Exterior hoists have been used for over 40 years on construction sites, but there are growing concerns about their safety and efficiency. To overcome these concerns, KONE has developed an advanced elevator, the KONE

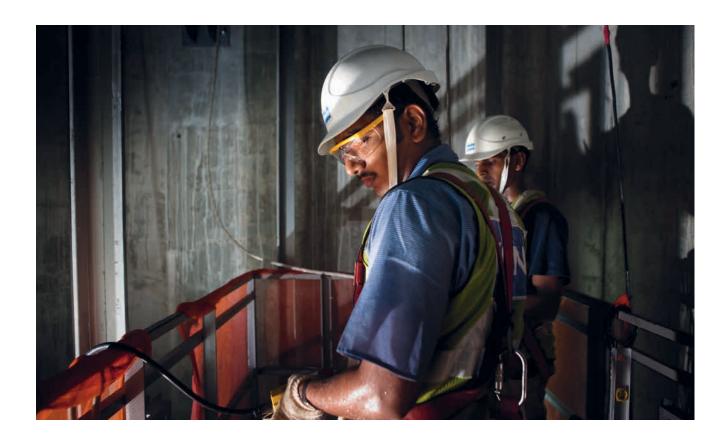
JumpLift, which increases safety on the construction site, improves cost-efficiency, and speeds up construction work.

The KONE JumpLift uses the building's permanent shaft during construction as soon as the first floors have been completed. It has a temporary machine room that moves upwards in the shaft as construction work progresses.

When the building's structure is finished, the switch over to use as the permanent elevator can be done quickly by installing the final machinery, signalization, and the material surfaces of the elevator car and landing doors.

### HOW KONE MINISPACE SPEEDS UP CONSTRUCTION

- Minimal or no support required from builder during lift installation (this is subject to completion of the Site Absolutes)
- Scaffold-less installation
- Construction Time Use elevators and the KONE JumpLift provide fast and safe weatherproof transportation



### SOLUTIONS FOR SMARTER AND SMOOTHER PEOPLE FLOW

KONE's comprehensive and flexible People Flow Intelligence solutions are designed to ensure smooth people flow in and around buildings while simultaneously providing improved security and access control. They are based on industry-leading technology that can be adapted according to your changing needs, adding real value to your property.

KONE People Flow Intelligence comprises solutions for access and destination control, as well as information communication and equipment monitoring.

### **Destination**

Destination control systems for increased elevator performance and passenger comfort.

### Access

Access control systems for increased building security.

### Information

Systems for information sharing inside elevators and in lobby areas.

### Monitoring

Systems for monitoring and managing elevator and escalator operation.



### KONE CARE™ MAINTENANCE

An elevator needs regular maintenance to ensure optimal performance. Our global network of service specialists ensures that even the most complex technical challenge is resolved quickly and effectively. We provide flexible maintenance options to meet your specific needs.

### Excellence in service around the clock

Our KONE Care maintenance programs take into account the type, age, and usage of your equipment to maximize reliability and safety and minimize downtime and maintenance costs. KONE provides you with service excellence 365 days a year, 24 hours a day.

### **KONE CARE SOLUTIONS**

**KONE Care Standard** is a cost-effective solution for reliable and top-quality maintenance that ensures compliance with safety laws and standards.

- KONE Care Plus simplifies maintenance management by making maintenance expenditure more predictable and providing real-time information on maintenance work.
- KONE Care Premium is the recommended solution if disruptions to people flow would have a major impact on your business. The solution provides a first-class level of service and rapid response times. Maintenance costs are also fully predictable.



### **KONE REFERENCES**



Millennium Residence, Bangkok, Thailand



Ashok Towers, Mumbai, India



Interchange 21, Bangkok, Thailand



Capital Plaza, Abu Dhabi, UAE



Princess Tower, Dubai



The MET, Bangkok, Thailand



Financial Street, Beijing, China



Shanghai IFC, Shanghai, China



Shanghai Golden Landmark, Shanghai, China



Skyline Mansion, Shanghai, China



National Grand Theatre, Beijing, China



Nokia Headquarters Business Building, Beijing, China



Al Dar Headquarters, Abu Dhabi, UAE



KONE provides innovative and eco-efficient solutions for elevators, escalators, automatic building doors and the systems that integrate them with today's intelligent buildings.

We support our customers every step of the way; from design, manufacturing and installation to maintenance and modernization. KONE is a global leader in helping our customers manage the smooth flow of people and goods throughout their buildings.

Our commitment to customers is present in all KONE solutions. This makes us a reliable partner throughout the life cycle of the building. We challenge the conventional wisdom of the industry. We are fast, flexible, and we have a well-deserved reputation as a technology leader, with such innovations as KONE MonoSpace®, KONE NanoSpace<sup>™</sup> and KONE UltraRope<sup>®</sup>.

KONE employs close to 50,000 dedicated experts to serve you globally and locally.

### KONE OFFICES IN SOUTH EAST ASIA

Indonesia	-	PT.	KONE	Indo	Elevator
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Jakarta (main office)	+61 21 6570 3990
Bali	+62 361 895 7806
Bandung	+62 22 8606 0804
Makassar	+62 411 466 2780
Surabaya	+62 31 855 6383
Yogyakarta	+62 274 284 0089

#### www.kone.co.id

### Malaysia - KONE Elevator (M) Sdn Bhd

Kuala Lumpur (main office)	+603 7494 7500
Johor Bahru	+607 559 0885
Penang	+604 656 3222
Sahah	+6015 4818 9128

#### www.kone.my

### Philippines - KPI Elevators, Inc.

Makati City (main office)	+632 811 2929
Cebu	+63 32 233 5790

### www.kone.ph

### Singapore - KONE Pte Ltd

#### www.kone.sg

### Thailand - KONE Public Company Limited

#### www.kone.co.th

### Vietnam - KONE Vietnam LLC

Ho Chi Minh (main office)	+84	8 3997	5373
Hanoi	+84	4 3974	9445

#### www.kone.vn

### DISTRIBUTORS IN SOUTH EAST ASIA

#### Brunei

Yusoki Sdn Bhd	+673 2790037
Cambodia	
Comin Khmere	+855 23 885 640
Laos	
Comin Asia	+856 30 777 4777
Myanmar	
Octagon Automobile & Machinery Services Co., Ltd	+95 9 8631438
Sarawak(Malaysia)	
Elebest Engineering Sdn Bhd	+60 82 365836

**KONE Corporation** www.kone.com