

*Dedicated to People Flow™*



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.

## **KONE MiniSpace™ – 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.

## **The benefits of KONE MiniSpace**

- 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

### **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**

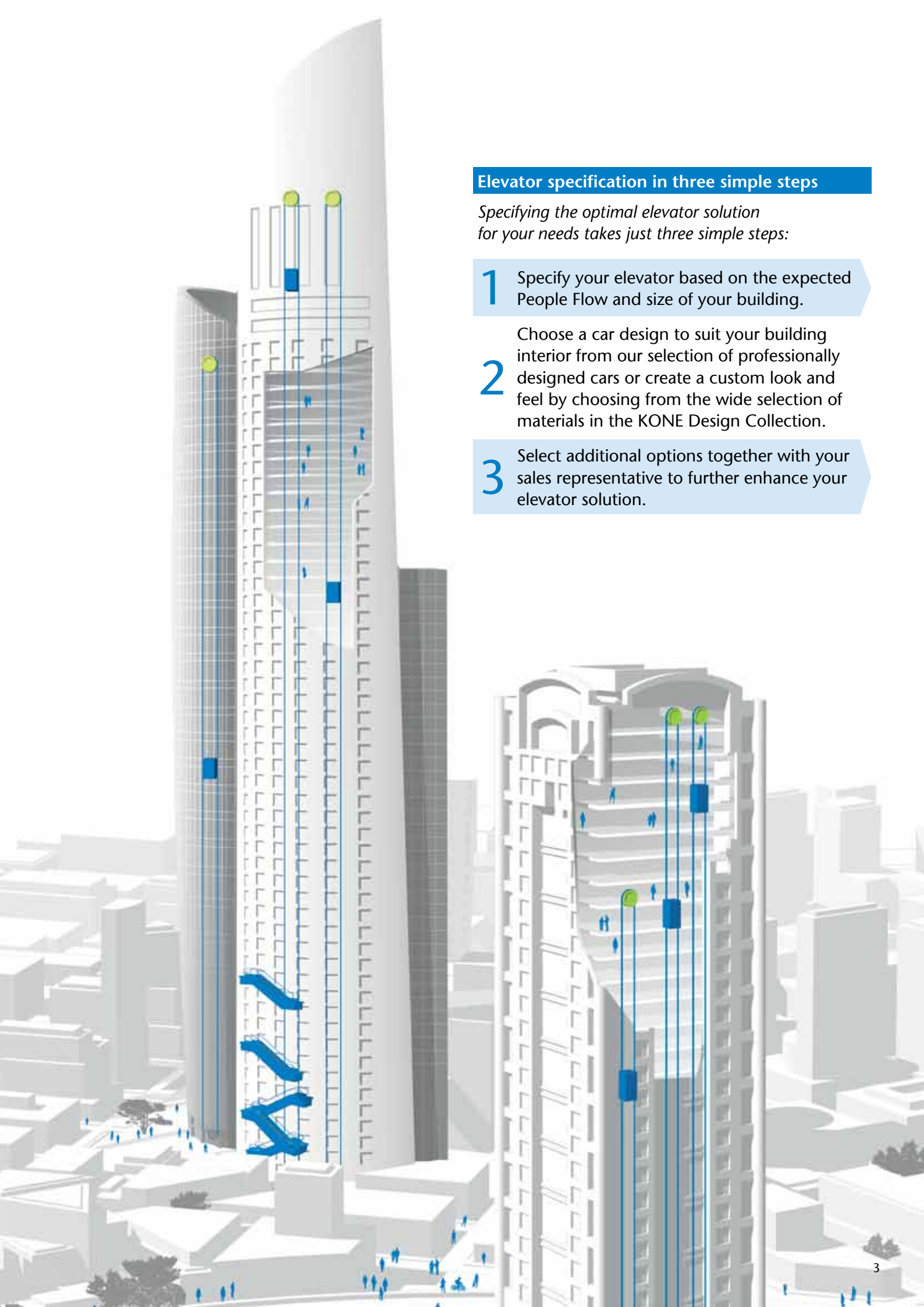
KONE MiniSpace elevators consume less energy and result in lower thermal losses than traditional machines. *Find out how on page 6.*

### **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™ maintenance solutions and modernisation services to keep things running smoothly. *Read more on page 12.*



## Elevator specification in three simple steps

*Specifying the optimal elevator solution for your needs takes just three simple steps:*

- 1** Specify your elevator based on the expected People Flow and size of your building.  
Choose a car design to suit your building interior from our selection of professionally designed cars or create a custom look and feel by choosing from the wide selection of materials in the KONE Design Collection.
- 2**
- 3** Select additional options together with your sales representative to further enhance your elevator solution.



# 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 maximise 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:

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

## KONE MiniSpace elevator range

Max travel: up to 63 floors and 180 metres of travel

Max load: transport up to 1800 kg

Max speed: up to 4.0 m/s

Group size: up to 8 cars in 1 elevator group

# Taking eco-efficiency to new heights

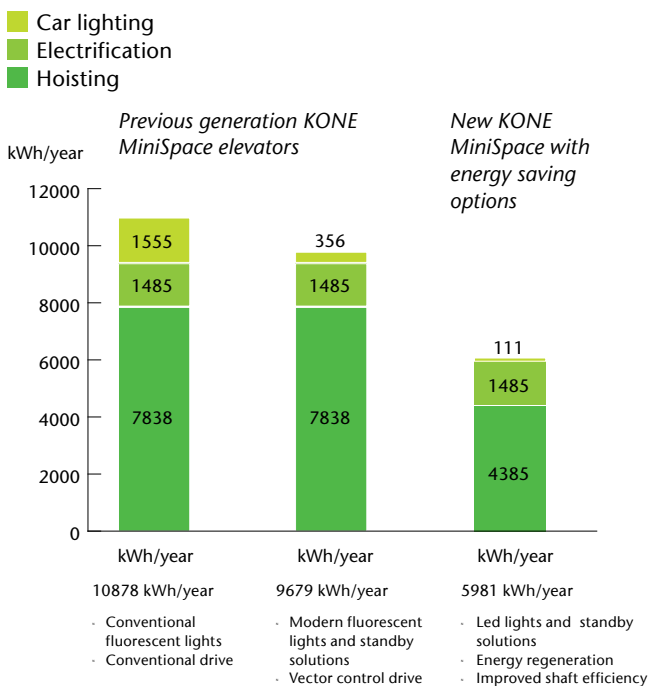
Save energy and costs. It is a simple calculation with impressive results. KONE MiniSpace™ elevators, powered by the KONE EcoDisc® hoisting motor, consume less energy than other gearless elevators. KONE EcoDisc also creates less thermal losses than traditional machines, which brings direct savings in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

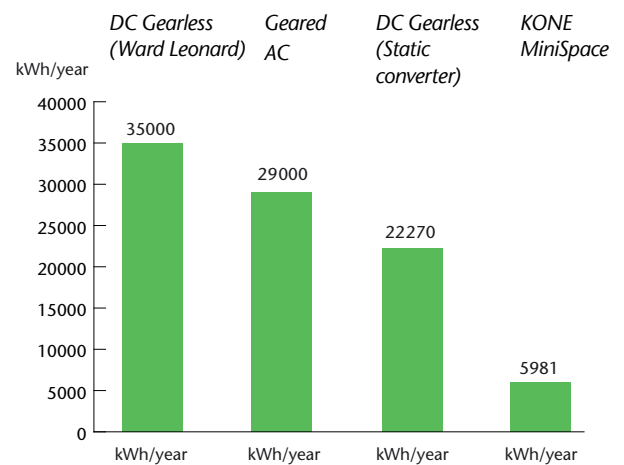


The eco-efficient KONE EcoDisc hoisting system

## MiniSpace energy consumption



## Energy consumption compared to previous technologies



\* The basis for the calculations is: an elevator speed of 2.5 m/s, a load of 1000 kg, 400,000 starts/year, 1000 running hours, a travel height of 99 m and 33 floors.

### 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 minimises both mechanical and electrical losses.

### Further energy savings with standby mode

Lights, signalisation 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 minimise energy consumption:

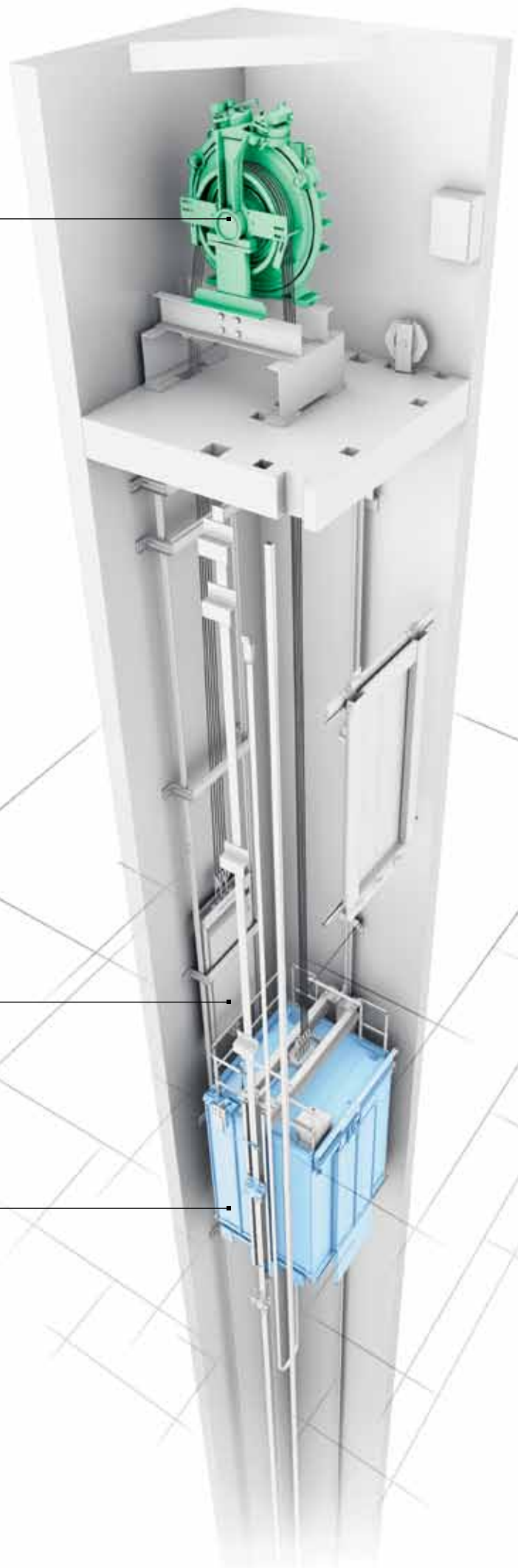
1. Automatic car light operation turns off the lights when the car is not in use and on again when the car is called.
2. Corridor illumination control automatically controls the light on the destination floor.
3. The power stage of the drive is set to sleep mode when not in use.
4. Signalisation displays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



KONE DESIGN COLLECTION

# Professionally designed or customised interiors



## Award-winning design

**Good Design  
award 2008**

Granted by the Chicago Athenaeum and The European Centre for Architecture Art Design and Urban Studies to honor KONE's global design concept, KONE FourSeasons.



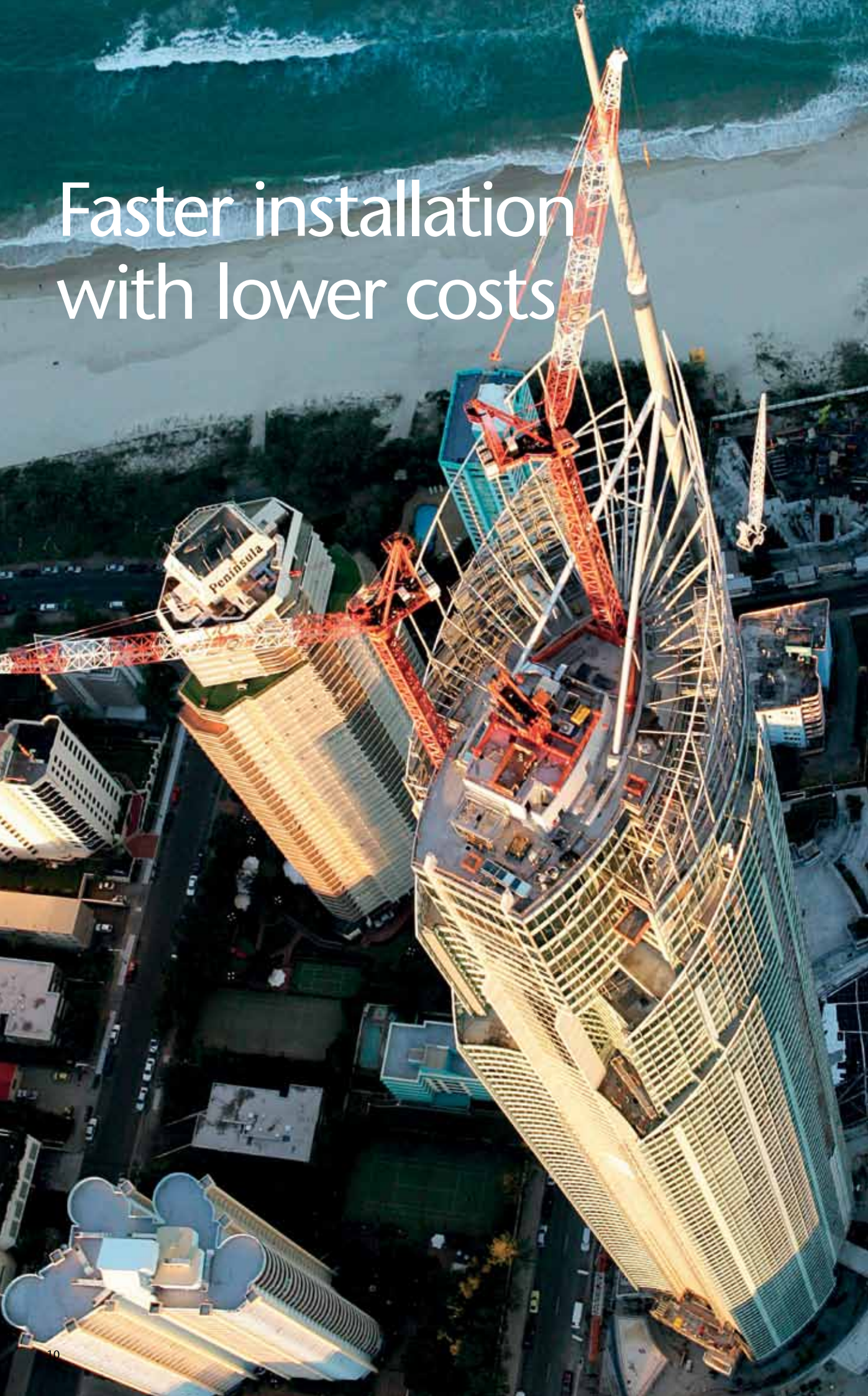
At KONE, we see design as an essential part of research and development. With our MiniSpace™ elevators, design and technology work together to create the best possible passenger experience in medium- to high-rise buildings.

**A perfect match for your building**

KONE brings a new dimension to advanced elevator technology: design that turns an elevator ride into an elevator experience. With appealing lighting and quality materials in various colors and patterns you can create a unique elevator ambience. You can continue the building's architectural appearance from the façade, through the lobby and into the elevators. A unique elevator provides more than just a ride – it provides an experience that stays in passengers' minds and adds value for the building and its users.

You can select from a set of professionally designed elevator cars or customise the elevator cars to match your building. *To see the full range of options, please see the KONE Design Collection catalogue.*

Faster installation  
with lower costs



The KONE MiniSpace™ 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 Time 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 signalisation and protective materials so they can be used during construction. They can save hundreds of man-hours 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 switchover to use as the permanent elevator can be done quickly by installing the final machinery, signalisation, 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 weather-proof transportation

# Intelligent features that improve your building's People Flow™

KONE helps you to deliver smarter people flow in your building. Our solutions optimise your elevator traffic while our systems monitor equipment in real time.

## **Intelligent group controls that learn**

KONE's group control solutions are the best in the industry. PC-based group controls increase handling capacity during peak times and save energy when traffic is light. Artificial intelligence detects call and passenger information over a period of time, anticipates traffic, and adapts elevator operations accordingly.

## **KONE Polaris™ DCS – taking elevator group performance to a new level**

The KONE Polaris Destination Control System (DCS) can improve the handling capacity of the elevator group during peak times without extending the waiting times during quieter periods. The KONE Polaris system contains new solutions that enable easier access and simpler usage, with access control solutions such as PIN codes and access cards.

## **The KONE E-Link™ monitoring solution**

KONE E-Link provides a real-time view of the transportation status, demand, performance and availability of elevators and escalators in the building. Large building complexes or geographically remote buildings can be monitored and managed from a single location. This helps you ensure that the equipment delivers the best possible performance at all times. KONE E-link aids troubleshooting and allows you to respond more quickly to malfunctions or possible misuse. The solution has an open interface to allow integration with other facility management systems.



# 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 maximise reliability and safety and minimise 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 and automatic building doors. We support our customers every step of the way; from design, manufacturing and installation to maintenance and modernisation. 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 MaxiSpace™, and KONE InnoTrack™. You can experience these innovations in architectural landmarks such as the Trump Tower in Chicago, the 30 St Mary Axe building in London, the Schiphol Airport in Amsterdam and the Beijing National Grand Theatre in China.

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