

*The heart of your building™*



THE ELEVATOR PLATFORM WITH A SMALL MACHINE-ROOM

**KONE MiniSpace™**

# KONE

## – technology you can trust

Increased urbanization has had a tremendous effect on elevator development. The constant search for space-saving solutions has led to the development of more compact elevator technology. KONE has always been a forerunner in this field. Our elevator technology is among the most innovative in the industry, whether it is for efficient people flow management, advanced hoisting technology, energy and space efficiency, or passenger convenience and aesthetics. You are sure to find the best solutions for your needs from our full range of platforms, designs and options.

We are committed to providing high quality to our customers and the general public, and we have numerous well-known and demanding references to prove it. For example, Beijing International Airport, Trump Tower in Chicago, 30 St Mary Axe and Broadgate Tower in London, Delhi Metro in India and many other prominent landmarks around the world have all trusted KONE.



# KONE MiniSpace™ - gearless hoisting machine in a compact machine room

KONE set the industry standard once again by creating KONE MiniSpace™ – the elevator range with a very small machine room. It is ideal for all kinds of passenger and freight transportation – from standard offices, hotels, and residential buildings to super high-rise buildings.

The KONE MiniSpace™ platform solution is available up to 63 floors and 180 m travel. It can transport up to 1800 kg and run up to 4 m/s speed. KONE MiniSpace™ solutions are available for up to 8 car groups. The group control solutions meet the intense traffic demands of modern commercial buildings.

Powered by the revolutionary KONE EcoDisc®, it guarantees reliable operation, low noise level, and outstanding performance.

## **Space-Saving Concept**

In the KONE MiniSpace concept the machine room is only an extension of the elevators shaft, which makes it very easy and cost-efficient to construct. The compact KONE EcoDisc® leaves plenty of room inside the machine room. The lightweight machinery is easy to handle on site and can even be lifted up inside the elevator shaft.

## **No Construction Delays**

KONE MiniSpace™ technology enables you to enclose the building earlier. This ensures that everything runs smoothly, and the elevators are out of the critical path of the construction project.

## **Proven Technology**

KONE MiniSpace™ is based on the same proven KONE EcoDisc® technology used in hundreds of thousands MonoSpace® elevators around the world.

## **KONE MiniSpace™, a Versatile Solution**

This workhorse is a versatile solution that can be customized to meet the demands of your building. Many prominent towers in the world today run the KONE MiniSpace solution proudly. Excellent ride comfort, power-saving gearless machine, compact space requirement, high efficiency and low heat loss, these are but a few of the key features that have made this marvel the first choice for many great projects.

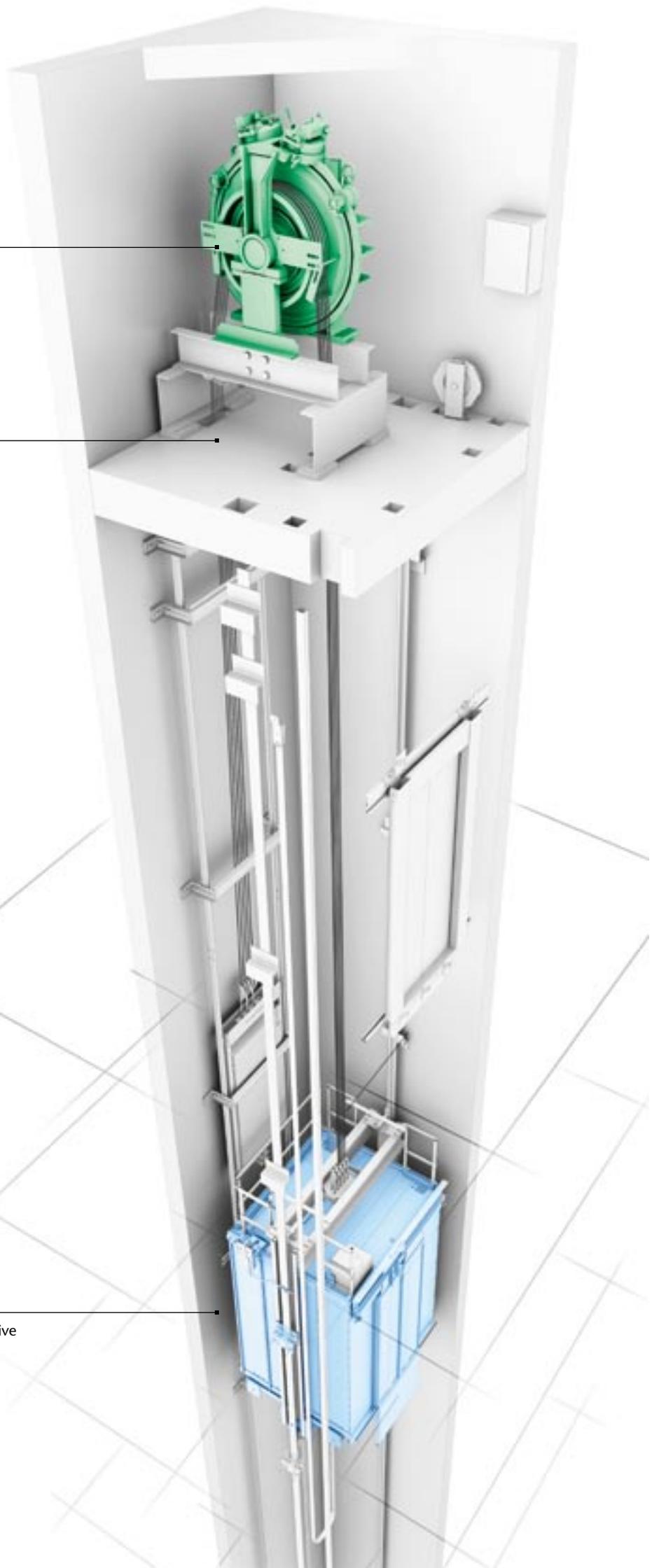
\* for speeds above 4m/s and higher travel please contact KONE sales organization, [www.kone.com](http://www.kone.com).



Excellent ride comfort, power-saving gearless machine, high efficiency and low heat loss. The compact KONE EcoDisc® leaves plenty of room inside the machine room.

The compact machine room is only an extension of the shaft.

The fast response of the gearless motor and V3F drive assures a smooth and quiet ride, accurate starting, stopping and leveling to improve passenger safety and comfort.





# KONE EcoDisc® – gearless energy miracle

In 1996, KONE took the technology leadership in the elevator industry by developing the KONE EcoDisc® hoisting machine for KONE MonoSpace® machine-room-less elevators. Over the years KONE has constantly increased the application range of KONE EcoDisc® hoisting technology thanks to its energy and space efficiency, reliability and excellent ride comfort.

Today the KONE EcoDisc® is the core technology for all KONE gearless elevators. It employs a permanent magnet synchronous motor, frequency control, and low-friction gearless construction, with only one moving part, the rotor.

## **More efficient than traditional machines**

In traditional machines the worm gear typically has less than 60% efficiency, which results in the use of a higher KW motor, so more power is consumed for every trip. The KONE EcoDisc® needs less starting current, consumes less power and needs no oil. The KONE EcoDisc® means savings in running energy costs. Less starting current means a smaller back-up generator is needed, which saves total costs.

### **The cost-saver**

Significant cost savings are also achieved by the use of lower duty risers and fuses, made possible by a peak starting current of just 30 to 40 percent of equivalent traction units.

### **A smooth ride**

The KONE EcoDisc's low rotational motor speeds and lack of a gearbox, combined with the V3F Drive system, offer unrivalled quiet operation and smooth acceleration and deceleration, providing better ride comfort and passenger convenience.

### **A space-saving elevator design**

Due to the compact gearless machine, the space required for the machine room is much smaller, equal to the shaft area.

### **Safe travel**

The fast response of the gearless motor and V3F drive assures smooth and accurate starting, stopping and leveling to improve passenger safety and comfort.

### **Dependable LCE control system**

A modular control system design, using serial communication with self-diagnostic capability, offers excellent reliability.

### **Energy Saving**

The KONE MiniSpace™ solution for higher speeds and loads uses machines with 90% efficiency, which means that losses are almost half compared to conventional machines. This results in electricity savings, and the air conditioning load is also reduced.





Through effective research and development, KONE continuously strives to improve the eco-efficiency of its solutions.

#### **Minimizing the carbon footprint**

The carbon footprint can be lowered by reducing the energy consumption of an elevator over its life cycle. KONE's solutions are energy-efficient thanks to a wide variety of features that combine both energy and space savings in the customer's premises.

KONE set the trend with KONE EcoDisc®, a lightweight, highly efficient hoisting machine. KONE EcoDisc® consumes 70 percent less energy than a hydraulic drive and 50 percent less than a geared traction elevator drive. KONE has also been the pioneer in introducing inverter drives and regenerative systems for elevator use. These can recover up to 25 percent of the total energy consumed, which can be converted for example in lighting the building.

#### **Focusing on Eco-efficiency**

The biggest environmental impact of an elevator is generated by its use. Consequently, reducing the environmental impact of an equipment is most effective when the product is being developed and the optimal solution for each building is being planned. For example, solutions such as the destination control system, where the passenger chooses his destination floor before entering the elevator, can significantly save energy by increasing handling capacity and decreasing the number of trips.

#### **Reducing Standby Energy Consumption**

When the elevator is idle, it still consumes energy. The standby energy is mostly consumed by the car lights, control devices, car ventilators, elevator drives and control systems. This standby energy consumption can account for 25 to 80 percent of the total energy consumed by the elevator, depending on its design and usage. Less frequent usage, for example in a small apartment building, means that a higher percentage of the electricity can be saved by reducing standby energy consumption.

KONE has developed various ways to save standby energy: After the last car call, the car lights and the car fan are switched off automatically; they come on again the next time the car is called.

The usage of LED lights reduces the energy consumed in car lighting by up to 80 percent and they last up to 10 times longer than halogen lights.

A few minutes after the last car call, the signalization automatically switches to standby mode. This can reduce up to 80 percent of the energy consumed by signalization.

When the car reaches the floor, corridor illumination control automatically illuminates the floor, thus reducing overall electricity consumption for the building.



# KONE

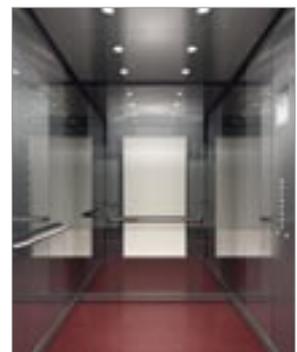
## – the user's choice

The value of your building depends on the impression it gives visitors and users. Whether you are moving in or coming for a visit, the first impression is the one that lasts. The elevator plays an important role in this.

When it comes to elevator car design, you are often given a choice to select the wall colors, patterns, materials, lighting and signalization without knowing how these all fit together, what mood they will evoke and how they will blend with the building. Not any more.

KONE's global design team, for the first time in the industry, has created a series of cars symbolizing the four seasons of spring, summer, autumn and winter. This gives you the opportunity to select from a designer's collection while still allowing you to mix and match components as you like.

(Ask for a catalogue of the complete range of cars and signalization).



New KONE FourSeasons™ cars provide an opportunity to select the right ambience to match your building.



KONE can also provide custom designs to meet your unique requirements.

# Platform selection



When selecting your elevator platform, KONE can offer you several alternatives. We can help you analyze the transportation capacity requirements in each project and recommend an ideal elevator system. Standard KONE MiniSpace™ platforms can serve 63 floors or 180 meters of travel, transporting up to 26 persons per car at up to 4.0 m/s.

For most buildings with nominal speed less than 2.5m/s, you can also choose the machine-room-less KONE MonoSpace® or KONE MonoSpace® Special platforms. Above this range, you can find a suitable platform among the KONE Alta™ High-Rise solutions.

Within the selected performance range, KONE MiniSpace™ provides a broad selection of car dimensions, single entry or through type car arrangements, and shaft layouts. For more detailed information on dimensioning, please contact the KONE sales office or refer to the planning instructions at [www.kone.com](http://www.kone.com)

# KONE MiniSpace™

## – easy to find the right solution

The KONE MiniSpace™ technical planning allows you to enhance the core solution with innumerable options needed in demanding medium- to high-rise buildings. From the choice of signalization, special car designs and monitoring solutions, KONE MiniSpace™ offers a wide range to choose from.

### **Glass and Scenic Cars**

Elevators are not just a means of transport. They are also part of the aesthetics and character of the building. This often demands special car solutions and KONE can offer complete Glass cars with frameless glass doors or Scenic cars.

### **Special Signalization**

Full color LCD displays, colorful and prominent Hall Lanterns, and multifunction displays for passenger guidance or advertising are some of the special high-end signalization options that KONE can offer to enhance passenger guidance and the image of the building.

### **Monitoring Solutions**

Whether you require information for your Building Management System or sophisticated monitoring including traffic, status and diagnostics, KONE offers several solutions for monitoring and supervising the elevators in the building.

KONE E-Link™ can collect data from many elevators and escalators in real-time and display it on one screen or make it available on your LAN. The system has configurable screens to enable usage by standby operators, maintenance personnel or management, providing essential information like alarms, position, status, fault data, starts etc.



# Execution is the key

The KONE Scaffold-less Installation method and the KONE JumpLift™ are examples of solutions that match the safety, speed and staging requirements of medium- to high-rise projects. Many times the elevators are a critical component of the building project, since many construction phases can be dependant on the progress of the elevator installation.

KONE JumpLift™ is a revolutionary concept that allows the elevators to serve the lower floors even while the building is still going up. When the higher levels are finished, it takes a very short time to move the elevators up and get them serving the site traffic. Time is money and KONE has solutions to save both.





# Managing people flow

Modern medium- to high-rise towers need efficient people flow solutions. Car parks, restaurants, coffee shops, gymnasiums, meeting rooms, and conference halls all make demands on the people flow solution. KONE offers assistance in traffic planning from the very early stages and has many tools to maximize the traffic performance of the elevators and escalators in the building.

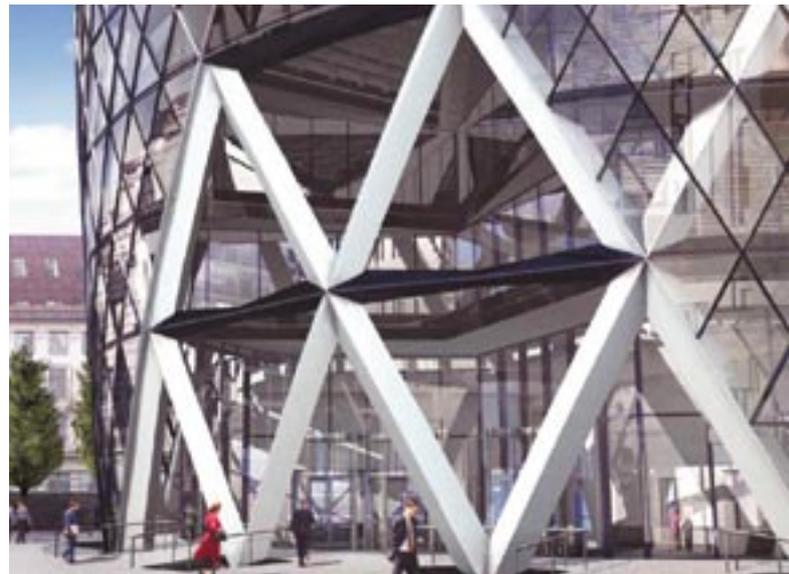
## **Intelligent Group Controls that learn**

KONE's group control solutions are the best in the industry. PC-based group controls like the TMS9900GA feature a Genetic Algorithm to enable Multi Target Optimization. The system increases handling capacity during the up peak, while during light traffic it can save energy. At other times it can provide the shortest journey times or have fewer people in the car for greater comfort. The artificial intelligence in the group control with its Traffic Forecaster is able to detect call and passenger information over a period of time, anticipate people flow and adapt accordingly.

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

The KONE Polaris™ Destination Control System can improve the handling capacity of the elevator group during rush hours without extending the waiting times during quieter traffic.

The KONE Polaris™ series contains new solutions that enable easier access and simpler usage, with access control solutions like PIN codes and access cards.



# Excellent service around the clock

The elevator, like all technical equipment, requires regular maintenance to keep it running nonstop. With dedicated maintenance personnel, the right maintenance program, and original spare parts, your elevators will retain their value year after year.

When developing our products, we always pay attention to serviceability. Our maintenance programs emphasize preventive maintenance. KONE maintenance is always near you, wherever you build.

Our global network of service specialists ensures that even the most complex technical challenge is resolved quickly and effectively. We provide tailored KONE Care™ maintenance packages to meet your specific needs. Our maintenance programs take into account the type, age, and usage of your equipment to maximize its reliability and safety and to minimize downtime and maintenance costs.

Welcome  
to  
KONE



[www.kone.com](http://www.kone.com)



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 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 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.

KONE employs over 30,000 dedicated experts to serve you globally and locally in 49 countries.

**KONE Corporation**  
**[www.kone.com](http://www.kone.com)**