

Dedicated to People Flow™

KONE

THE MACHINE-ROOM-LESS ELEVATOR PLATFORM

KONE MonoSpace®

KONE – technology you can trust

Increased urbanization has had a tremendous effect on elevator development. With growing world population, the challenge is to provide the best people flow solution to transport people safely, smoothly and conveniently. The constant search for space-saving solutions has led to more compact elevator technology. KONE has always been a forerunner in this field.

Our elevator technology is among the most innovative in the industry, and it meets or exceeds today's requirements for design, safety, comfort, and performance. From our full range of platforms, designs, and options, you will find the best solutions for your needs.

We are committed to providing high quality to meet the needs of our customers and society. KONE People Flow™ solutions are providing reliable performance in e.g. the Beijing Capital Airport, the China National Stadium, Trump Tower, Beijing National Theater, Marina Bay Sands™ Integrated Resort in Singapore, and Swiss Re in London. KONE solutions are in many architectural landmarks, as well as in daily use in office buildings, shopping centers and residential buildings around the world.



KONE MonoSpace® – revolutionary elevator concept

In 1996, we assumed the technology leadership in the elevator industry by introducing the KONE MonoSpace®, the first elevator without a machine room. This patented innovation provides a smooth quiet ride for passengers, gives more design freedom for architects, lowers construction costs, reduces energy consumption, and frees up building space that can now be put to more profitable use.

Freedom in building design

KONE MonoSpace® requires only a single space – the shaft. The machine room is no longer needed. The elimination of the machine room gives architects and developers greater design freedom and saves construction costs. And elevators can now easily serve the penthouse, without unsightly equipment on the roof.

Substantial cost savings

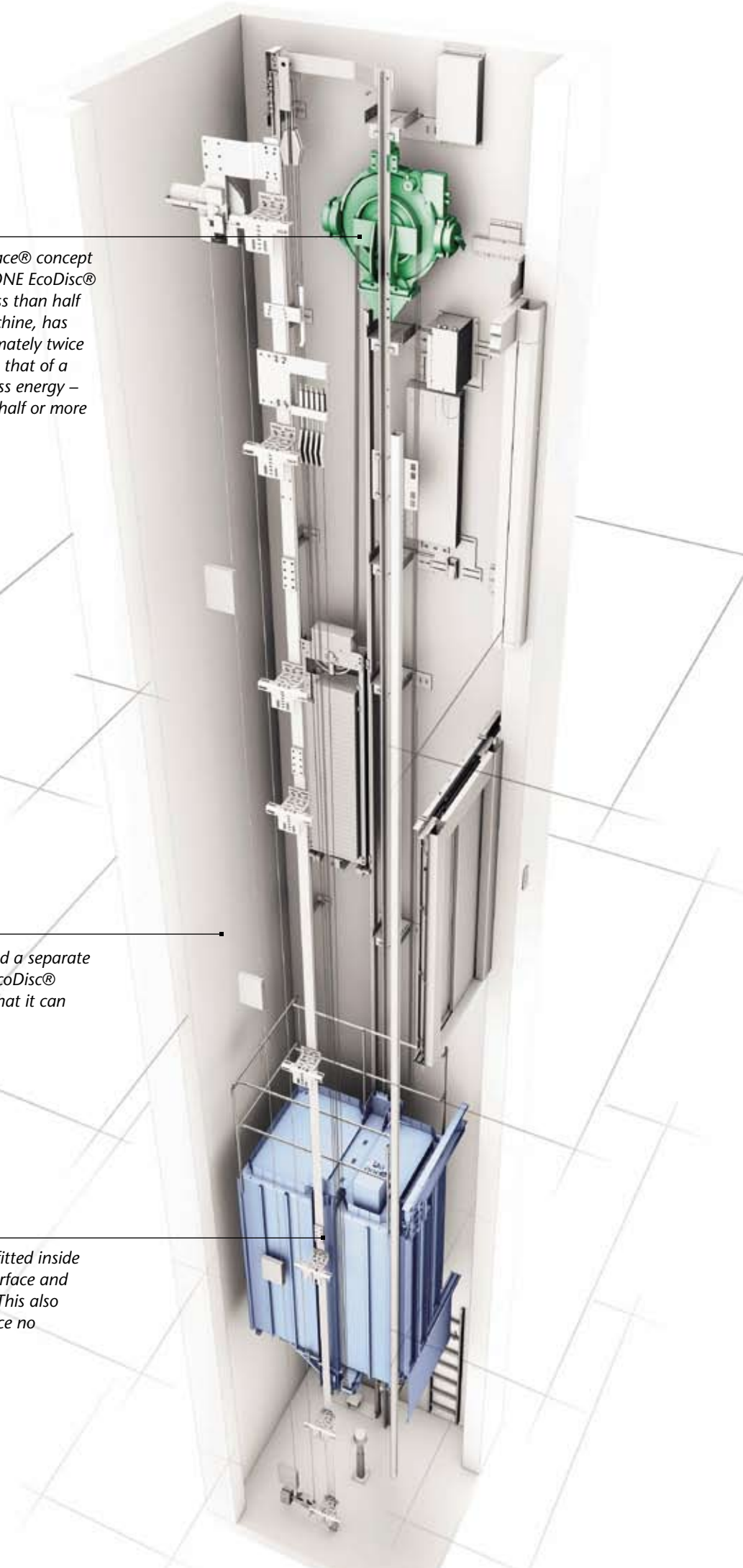
KONE MonoSpace® uses less space, so you can lease more space. It also saves construction time, materials and costs. Our streamlined delivery process and efficient installation method ensure that the project runs smoothly without delay.

Impressive track record

To date, over 200,000 KONE MonoSpace® elevators have been installed worldwide – transporting millions of people every day. This is the proof of our reliability, with years of dependable operation.

Wide range of applications

KONE MonoSpace® offers the widest range of machine-room-less solutions – up to 3.0m/s in speed for passenger applications and up to 5000kg for freight applications.



The secret behind the KONE MonoSpace® concept is the permanent magnet, gearless KONE EcoDisc® motor. The KONE EcoDisc® weighs less than half of a conventional geared traction machine, has only one moving part, and is approximately twice as efficient. Its efficiency is three times that of a hydraulic power unit and uses 60% less energy – a lifetime saving which can represent half or more of the initial cost of the equipment.

The KONE MonoSpace® does not need a separate machine room, thanks to the KONE EcoDisc® hoisting motor, which is so compact that it can be located in the shaft.

The whole elevator and machinery is fitted inside the shaft, simplifying the building interface and saving space for more profitable use. This also speeds up the installation process, since no scaffolding or cranes are needed.



KONE EcoDisc® – gearless energy miracle

In 1996, we became the leader in the elevator industry by developing the KONE EcoDisc® hoisting machine. The current 3rd generation KONE EcoDisc® has gone through 10 years of quality developments – constantly increasing the application range, reliability, and ride comfort.

The KONE EcoDisc® is the core technology of all our elevators. It employs a permanent magnet synchronous motor, frequency control, and low-friction gearless construction.

Very compact and cost-effective

The advanced axial flux permanent magnet motor weighs only half that of a conventional power unit. This saves construction costs by minimizing the elevator space requirements. In addition, the slim shape facilitates KONE's unique machine-room-less layout.

Typical data of different drives

Item	Hydraulic	Traction	EcoDisc®
Speed (m/s)	0.63	1.0	1.0
Load (kg)	630	630	630
Motor size (kW)	11	5.5	3.7
Main fuse (A)	50	35	16
Oil Contents (L)	200	3.5	-
Weight (kg)	650	430	230
Noise Level (Dba)	65-70	65-75	50-55
Estimated total annual energy consumption (kWh/year)	14005	8181	2649

Sturdy and dependable

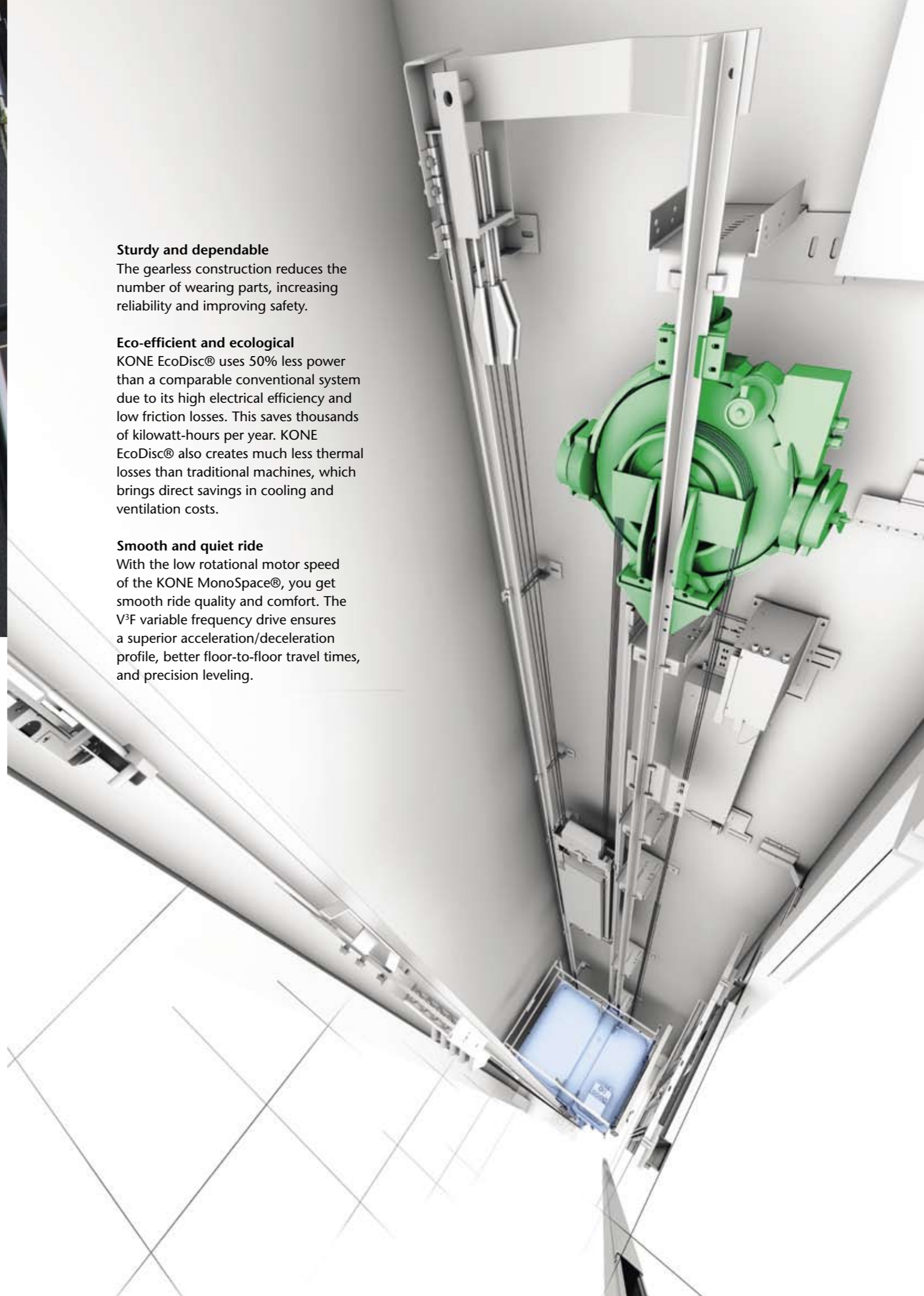
The gearless construction reduces the number of wearing parts, increasing reliability and improving safety.

Eco-efficient and ecological

KONE EcoDisc® uses 50% less power than a comparable conventional system due to its high electrical efficiency and low friction losses. This saves thousands of kilowatt-hours per year. KONE EcoDisc® also creates much less thermal losses than traditional machines, which brings direct savings in cooling and ventilation costs.

Smooth and quiet ride

With the low rotational motor speed of the KONE MonoSpace®, 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.



Savings in construction costs

The KONE MonoSpace® solution not only saves space and energy throughout its lifetime. It starts saving money during construction.

Due to the compact size of the KONE MonoSpace® machine-room-less solution, support is required only from wall-mounted brackets and a simple supporting structure on the guide rail. Installation is hassle free, since there is no need for extensive support.

The whole installation process of the compact KONE EcoDisc® motor is safer and faster. KONE has devised scaffold-less installation techniques using special tiraks to lift the motor into position.

Comparison of motor positioning

The ideal positioning of the motor can have a significant impact on reliability, safety and building costs.

Motor in lift pit

There is a risk of water seeping into the lift pit and damaging the motor. This positioning also increases energy consumption, since more hoisting force is required to lift the elevator car to the top.

Motor on structural beam

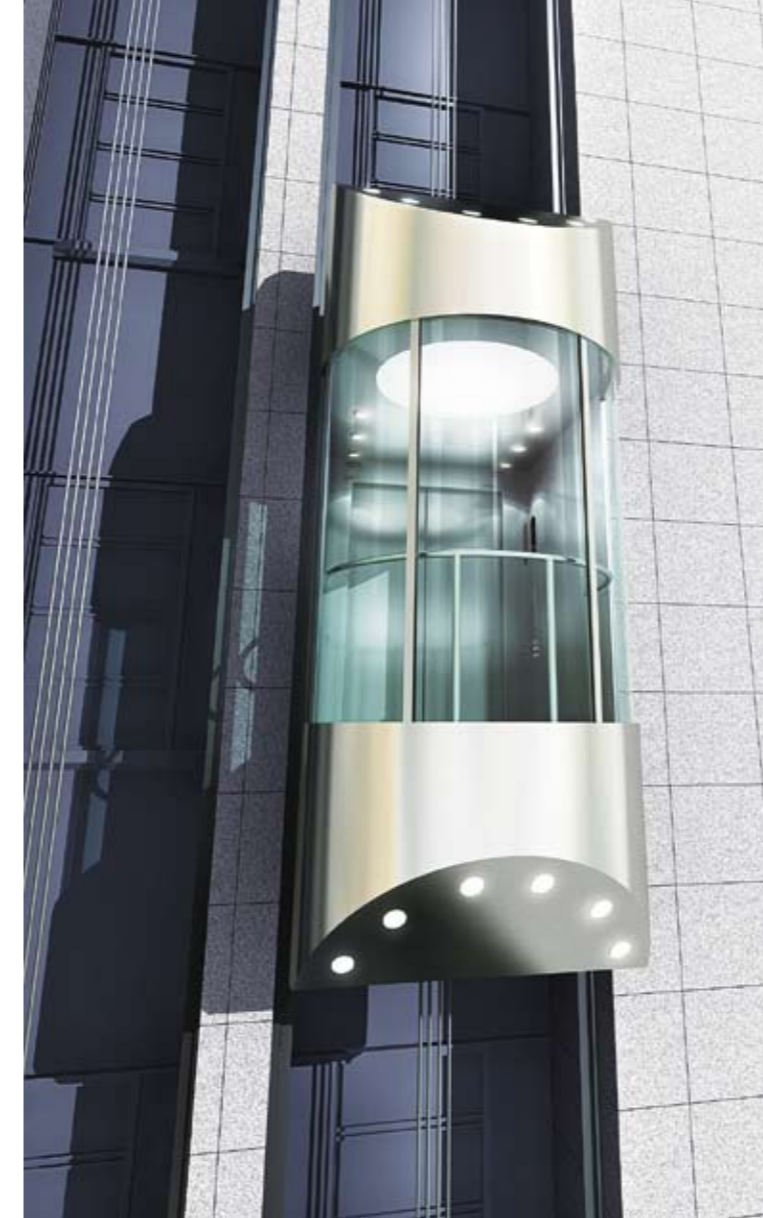
This increases construction costs because it increases the structural loading of your building. Installation techniques are more complex and there are more potential safety risks.

Motor between lift car and guide rail

Here the headroom requirement is often higher compared with the KONE MonoSpace®. With this positioning of the motor, there is a risk of a collision between the elevator car and the motor.

KONE EcoDisc® gearless motor is safely positioned between the guide rail and shaft wall, minimizing all of the risks involved and maximizing availability.





Easy to find the right solution

Residential buildings, offices, shopping centers, scenic or bed elevators – KONE MonoSpace® serves all your requirements. Furthermore, there are numerous design options.

Please check the designed solution brochure to help you select the right solution.

Scenic elevator

Since 1996 KONE has been continuously improving the design of KONE MonoSpace elevators, introducing, for example, new materials, interior designs and colors, and signalisation devices. A wide range is available for your selection, and the KONE MonoSpace® can also be customized for the individual needs of the building.

Freight elevator

The KONE Transys™ freight elevator solution, with all the advantages of the KONE EcoDisc® technology, extends the usage range of traditional freight elevators.

Extended lift solutions for healthcare

KONE MonoSpace® has solutions with soft light, deep cars and clear signalization, to serve the needs of hospitals and retirement homes.

Villa elevator

The KONE EcoDisc® and MonoSpace® require little space, making them easier to install in a luxury home. They provide a smooth, comfortable ride, combined with eco-efficient performance.

Platform selection

When selecting your elevator platform, KONE can offer you several solutions. We can help you analyze the transportation capacity requirements in each project and recommend the ideal elevator system. Standard KONE MonoSpace® platforms can serve up to 36 floors or 90 meters of travel, transporting up to 26 persons (2000 kg) per car at 3.0 m/s. Our freight elevator solution, KONE Transys™, can transport loads up to 5000 kg. One elevator group can have up to six elevators.

You can also choose KONE MiniSpace™ elevators with a small machine room. Beyond this range, you can find a suitable platform in the KONE MiniSpace™ High-Rise solutions.

KONE MonoSpace® provides a broad selection of car dimensions and shaft layouts, with both single entry or through type car arrangements. Please contact your nearest KONE sales specialist for more information.



Design selection



KONE – the builder's, owner's, and user's choice

KONE has long experience in offering various solutions for the most demanding applications worldwide. KONE takes safety, ease of use and eco-efficiency into account in the design of all of the features in its elevators.

Maintenance access panel

The interfaces for maintenance and rescue operations are integrated in a small cabinet, which is only 85mm thick. It is integrated in the wall of the topmost landing entrance. Without occupying any shaft space, this arrangement makes maintenance very safe and convenient. It is especially useful for fast and efficient emergency rescue.

Curtain of light

The advanced curtain of light system protects passengers when they are entering or exiting the elevator.

LED Light

LED lights last up to ten times longer than halogen lights, and consume up to 80% less energy.

Quality – value going up

KONE has achieved a position of technological leadership in the elevator industry. KONE's outstanding quality is the result of an open-minded approach to research and development, and a long-term commitment to investing in innovative technology.

High-quality materials

Quality comes from paying attention to details during production. We thoroughly examine our material suppliers, and we produce and test every part in special environments to ensure the reliability of our elevators.

Easy to install

The installation of our elevators is quick, easy and low-cost. We achieve this with our building interface solution and by focusing on all of the smallest details of the process.

Excellent quality

KONE's elevator products meet all elevator industry standards and requirements including GB7588-2003 (EN81-1:1998), GB16899-1993 (EN115:1995), Singapore CP2 Code and Korean Elevator Inspection Standards KIS 6831. No matter where they are made, the safety features of KONE elevators meet the EU CE standard. At the same time, KONE products meet requirements of Electromagnetic Compatibility Standard, and are ISO14001 certified.





Excellent service around the clock

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. Our maintenance programs take into account the type, age, and usage of your equipment to maximize reliability and safety and to minimize downtime and maintenance costs. Visit www.kone.com to find your nearest Service Centre. KONE maintenance is always near you.

An elevator needs regular maintenance to ensure its optimal performance. The correct maintenance plan can guarantee the reliable operation of your elevator. KONE maintenance focuses on preventive maintenance. As a company who is dedicated to the best people flow solution, KONE provides you with service excellence 365 days a year, 24 hours a day.



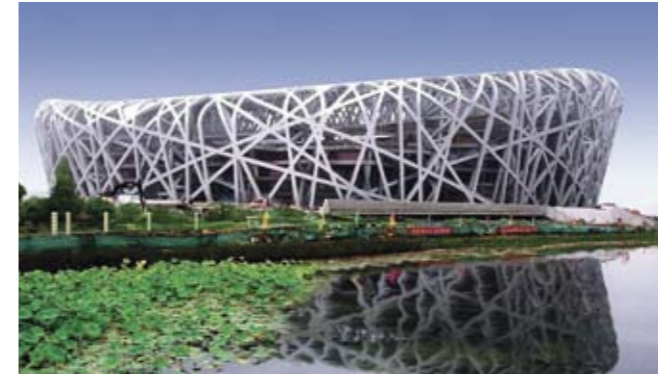
Awards and certifications

- 09/1996 Wins Grand Prix at Building Fair, Prague
- 06/1997 Wins the Grand Prix '97 at CONECO Fair, Bratislava, Slovakia
- 10/1997 Wins Top Prize for Innovation at SAIE '97 Fair, Bologna
- 03/1998 Wins Electrical Industry's (SET) Annual Award, Finland
- 02/1999 Chosen for "Eyecatcher", a Swissbau showcase green building, Switzerland
- 04/1999 Wins the Construmat 1999 Prize for Innovative Technology, Barcelona, Spain
- 03/2000 Chosen for Thermo-Staete, Netherland's most energy-efficient office building
- 07/2003 Wins Premio Quartrium Award for originality, Spain
- 06/2005 Congratulations on the 100,000th KONE MonoSpace® elevator installed in National Grand Theater, Beijing, China
- 12/2005 KONE MonoSpace was cited by Legambiente Lombardia (Environmental Coalition of Lombardy), the government of the Region of Lombardy, the Technical University of Milan and Bocconi University for environmental friendliness during their fifth annual "Friend of the Environment Awards for Innovation". The awards are given for "Efficiency in Consumption and Eco-design: solutions for sustainable development".
- 2006 KONE Elevator was recommended as "National Customer Satisfied Brand" by CFCP (CHINA FOUNDATION OF CONSUMER PROTECTION)
- 2002-2007 Named "Recommended Components & Products for National Demonstration projects of Housing" continuously by Housing Industrialization Center, MOC, China
- 2002-2007 In the survey organized by the customer committee of National construction Mechanic Equipment & Construction Machinery Branch of China Quality Association, being continuously recommended by customers with "Satisfied elevator", "Satisfied escalator", "Satisfied autowalks" and "Satisfied aftersales service"
- 12/2007 KONE was awarded 2007 Best Real Estate Supplier in China International Real Estate & Architect Fairs(CIHAF). KONE MonoSpace® was recommended as "2007 Recommended Components & Products for Energy-saving Construction"
- 1/2008 KONE was awarded as "2007 Annual Top 10 International Brands for China Energy-Efficient Buildings" by China Ministry of construction

Milestones

- 03/1996 KONE MonoSpace® announced to world press
- 1998 World's longest test shaft: 329m. Tytyri Elevator R&D Center, Finland
- 2000 1st to use genetic algorithms for elevator group control
- 2005 1st to sell double-decker elevator with destination control, KONE Polaris™
- 2007 Launches the first autowalk without a pit, the KONE InnoTrack™
- 01/2007 Additional speeds up to 3.0 m/s for KONE MonoSpace® Elevator. The latest KONE TranSys™ loads up from 2000kg to 5000kg
- 04/2008 KONE delivered the 200,000th KONE MonoSpace® elevator

KONE references



National Stadium, Beijing, China



National Grand Theater, Beijing, China



Capital International Airport Extension, Beijing, China



New Baiyun International Airport, Guangzhou, China



Conference & Exhibition Center, HK, China



Hongqiao airport Extension and Transportation Junction Project, Shanghai, China



National Conference Center, Beijing, China



Olympic Village, Beijing, China



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 32,500 dedicated experts to serve you in over 50 countries.

KONE Corporation
www.kone.com