

4 Seestern

Floor	Room	Area
15	Deck	Deck
14	Deck	Deck
13	Deck	Deck
12	Deck	Deck
11	Deck	Deck
10	Deck	Deck
9	Deck	Deck
8	Deck	Deck
7	Deck	Deck
6	Deck	Deck
5	Deck	Deck
4	Deck	Deck
3	Deck	Deck

FOR A MEMORABLE ONBOARD EXPERIENCE

KONE Elevator Solutions for Passenger Vessels



QUALITY AND EXPERTISE YOU CAN COUNT ON

On board passenger vessels, smooth people flow is the key to ensuring that journeys are pleasant, reliable, and safe for everyone on board. KONE solutions combine industry-leading elevator and escalator technologies with world-class lifecycle support, backed up with an impressive track record of on-time, on-budget delivery for shipbuilders the world over.

PEOPLE FLOW THAT DELIVERS A GREAT EXPERIENCE FOR ALL

Every passenger vessel has unique requirements in terms of how people and goods move around. On board ferries, elevators and escalators should enable efficient embarking and disembarking, as well as safe and comfortable travel between decks. On board cruise ships they also play an important role in enhancing the overall passenger experience, and should combine efficient service and clear guidance with appealing design.

PROFESSIONAL SUPPORT FOR YOUR VESSEL'S ENTIRE LIFE CYCLE

Our team of marine experts is with you from the drawing board to the dry dock and beyond. We develop the optimal solution for your vessel using our comprehensive planning, design, engineering, and installation services, and once she sets sail our world-class maintenance and modernization solutions will keep things running safely and reliably.

ON BUDGET, ON TIME – EVERY TIME

Our track record working with shipbuilders the world over speaks for itself. We have marine experts located in the world's major shipyards, ensuring smooth project management, clear communication, and timely delivery and installation. When you choose KONE, you are choosing a partner that is committed to delivering high-quality solutions on budget and on time – every time.

PROFESSIONAL SUPPORT FOR YOUR VESSEL'S ENTIRE LIFE CYCLE



1 DESIGN AND PLANNING THAT DELIVERS YOUR OPTIMAL SOLUTION

Using TrafCal™ traffic flow analysis we can work with you to create the ideal solution for your onboard requirements based on a thorough analysis of people and goods flows in different situations.

KONE's experienced project management teams guarantee smooth coordination with all parties, providing cost calculations and control, technical support, and easy-to-use design tools.



2 INSTALLATION AND COMMISSIONING THAT SAVES TIME AND COSTS

Our site teams are at your service at every major shipyard to ensure smooth and on-time installation, while our efficient installation methods save time and costs. We offer three different installation methods according to your shipyard requirements: modular plug-in, conventional, and intermediate wall.

Through safety and performance testing, our dedicated marine commissioning engineers ensure that your equipment will be in perfect condition at handover. Crew training and start-up support are provided during the vessel's first sailings.



3 MAINTENANCE AND SPARE PARTS SERVICES YOU CAN COUNT ON

KONE also offers qualified preventive maintenance support in major ports through its global network. Customized on-board spare parts packages are available on request.

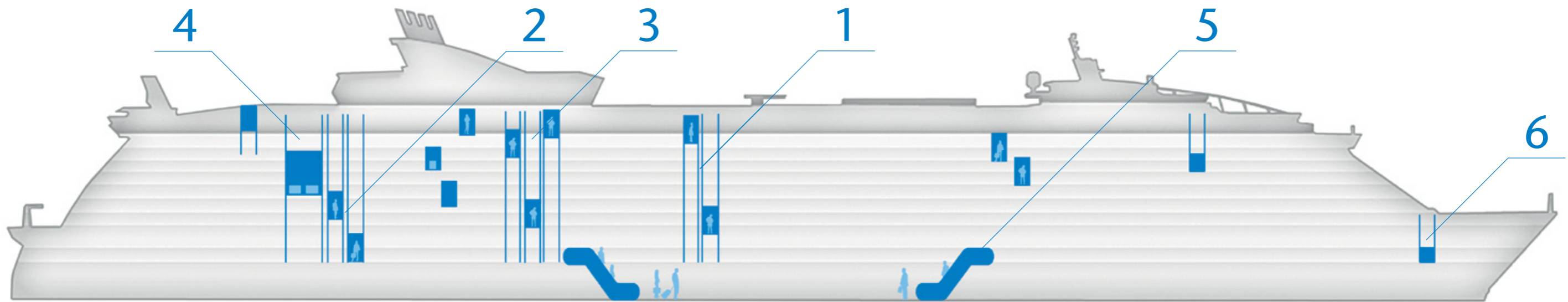
Our global spare parts service ensures the maximum availability of your equipment. All key components are produced in-house, and we stock a wide range of spare parts in order to ensure their fast delivery. We can also provide spare parts for other suppliers' equipment. Service stations in all major ports provide full product care under service agreements, and repairs on a routine or emergency basis.



4 MODERNIZATION THAT MEETS ALL YOUR VESSEL'S LIFECYCLE NEEDS

We first establish the state of your current installation using four comprehensive measurement criteria – performance, safety, accessibility, and aesthetics. Based on this analysis, we develop an action plan to bring your equipment and components up-to-date.

KONE modernization keeps your elevators and escalators operating safely and reliably for the lifetime of your ship. Our modular solutions cover everything from replacement of a single component to full replacement of the entire installation to allow faster, smoother modernization with minimal impact on the ship's operation.



SOLUTIONS FOR AN UNBEATABLE PEOPLE FLOW EXPERIENCE ON BOARD

1 KONE MONOSPACE® ELEVATOR

The revolutionary KONE MonoSpace requires only a single shaft, eliminating the need for a machine room and giving naval architects greater design flexibility, while saving construction costs and weight. It provides energy-efficient vertical transport in a compact space, and as there is no machine room, it can even serve the topmost deck.

2 KONE MINISPACE™ ELEVATOR

The compact machine room of the KONE MiniSpace is simply an extension of the elevator shaft, with only a small additional space needed for the control panel. This makes it easy and cost-efficient to construct.

3 KONE SCENIC ELEVATORS

Scenic elevators can include glass car walls and a glass shaft, making the elevator ride a highlight for passengers as well as being an eye-catching architectural feature in its own right.

The panoramic view over the promenade deck from a KONE scenic elevator, the feeling of light and space, and the excitement of being in a luxury environment all create a great first impression of the ship.

4 KONE TRANSYS™ GOODS ELEVATORS

The KONE TranSys is a heavy-duty freight elevator available in different car sizes to transport freight of up to 5,000 kg. Exceptionally space-efficient, it needs no machine room, making it easy to position and reducing construction time and costs.

5 KONE ESCALATOR SOLUTIONS

Our escalators and autowalks set the standard for safety, eco-efficiency, and design. They are high quality, reliable, have a low total cost of ownership, and provide continuous, efficient people flow between decks. They are also ideal for solving bottlenecks during ship embarkation and disembarkation and, when the galley is below the restaurant, they can help waiters move smoothly between decks.

6 KONE ACCESSIBILITY PLATFORMS

Our space-efficient platform solutions can make any area accessible for people with limited mobility, where a conventional lift may not be practical. These solutions have a self-supporting construction, meaning they can be installed in a stairwell without major structural alterations.

TECHNICAL SPECIFICATIONS

KONE MONOSPACE ELEVATORS

KONE MonoSpace elevators are designed and built to cope with the tough demands of a vessel at sea. Our marine equipment:

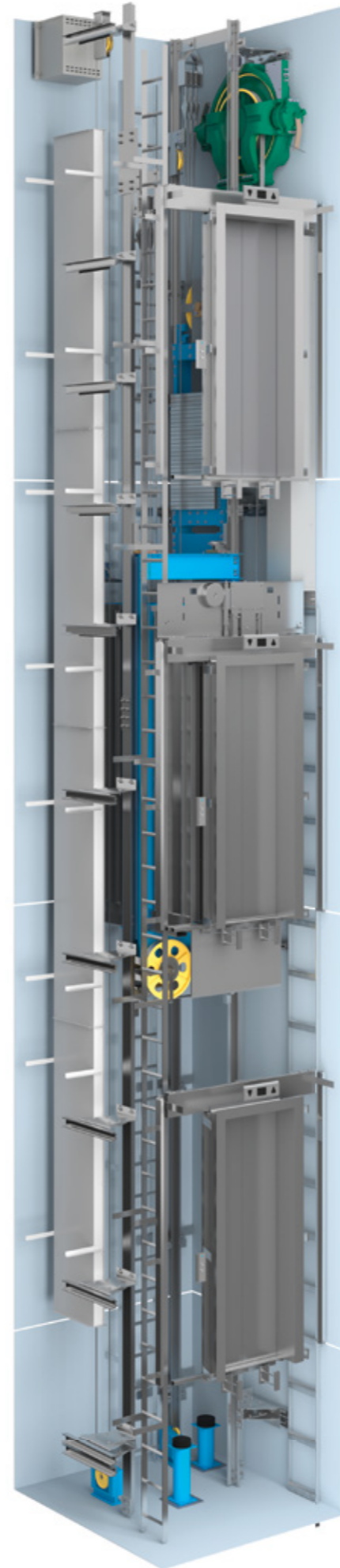
- Withstands rough weather conditions and ship movements, shocks, and vibrations – for example up to $\pm 10^\circ$ rolling for a period of 10 s, or up to $\pm 5^\circ$ pitching for a period of 7 s
- Has high-quality electrification and components that meet international marine safety standards
- Includes advanced control and monitoring systems
- Features cars and landing doors that are approved and certified by major classification bodies

They also feature a wide range of innovations that help cut running costs, boost goods transportation efficiency, and provide smooth, safe travel for crew.

KEY BENEFITS

KONE MonoSpace and MiniSpace are designed to deliver industry-leading ride comfort year after year and comply with our strict ride-comfort standards. Our elevators also have a number of eco-efficient features and options.

- Enhanced KONE EcoDisc[®] hoisting machinery, regenerative drive technology, and standby solutions make elevator operation more energy efficient.
- Automatic landing doors ensure smooth operation and people flow.
- Enhanced machinery and brakes ensure smooth acceleration and deceleration, accurate leveling, and a comfortable ride.
- Optimized hoisting system and robust car structure with noise isolation features result in remarkably quiet operation.



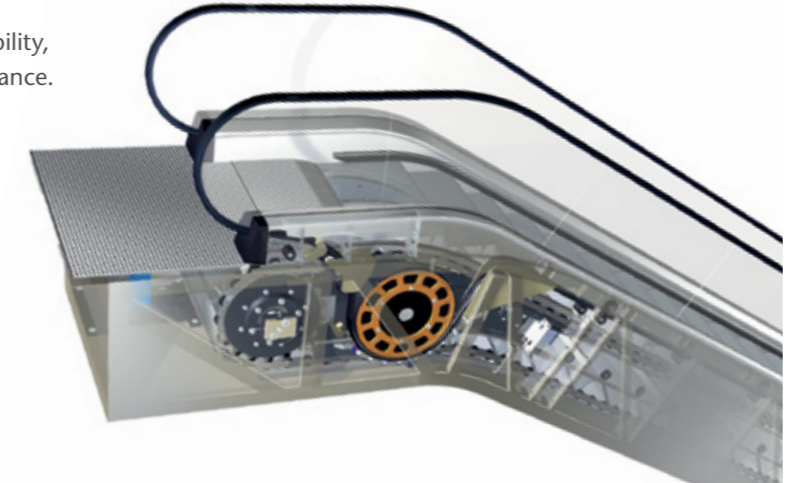
KONE MonoSpace

KONE ESCALATORS

KONE Marine escalators set the standard for safety, reliability, visual design, space savings, and environmental performance.

- Height / vertical rise between landings: 2-6 m*
- Inclination: 30° or 35°
- Step width: 600, 800, or 1000 mm
- Number of level steps on upper and lower landings: 2 or 3
- Speed: 0.5 m/s

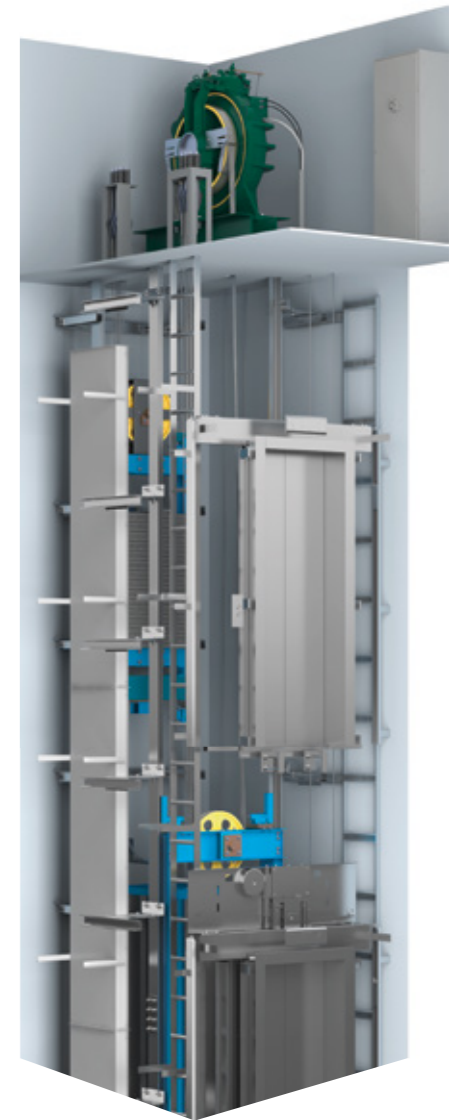
* for vertical rise over 6 m, please contact KONE Marine sales



KONE TravellMaster

KONE MINISPACE ELEVATORS

KONE MiniSpace elevators save space and simplify construction. They comply with all rules and regulations and incorporate special materials and operation modes for marine environments.



KONE MiniSpace

KONE MARINE ELEVATOR SPECIFICATIONS

	KONE Marine MonoSpace	KONE Marine MiniSpace
Rated load (kg)	630–2000	630–2500
Number of persons	8–26	8–33
Rated speed (m/s)	1.0 or 1.6	1.0 or 1.6
Max. travel (m)	60	60
Max. number of decks	24	24–36
Max. number of elevators in group	6	6
Location of counterweight	Side	Side or back
Door type	Center opening	Center opening
Door width (mm)	900–1200, step 100	800–1400, step 100
Door height (mm)	2000, 2100	2000, 2100
Car depth (mm)	1200–2700, step 50	1100–2700, step 50
Car width (mm)	1100–2350, step 50	1100–2350, step 50
Car height (mm)	2100, 2200, 2300	2100, 2200, 2300

These drawings are intended as a guideline only. Precise elevator dimensions and specifications for individual projects will be determined by KONE specialists.

INNOVATIONS FOR PASSENGER VESSELS

We have developed a full range of innovative and eco-efficient solutions for managing people flow on your vessel.



KONE INFOSCREEN

The KONE InfoScreen is a quick and easy way to deliver information to passengers and improve guidance on your ship. Screens can be fitted inside elevators, next to escalators, in a lobby, or on a landing. They can display elevator-related data as well as news, weather, advertising, and on-board announcements.



KONE E-LINK™

With KONE E-Link the crew can monitor the elevators and escalators throughout the ship for an accurate view of transportation demand, performance, and availability. Maintenance personnel are quickly alerted to malfunctions and can address them before they inconvenience passengers.



HYBRID DESTINATION CONTROL SYSTEM (DCS)

A DCS significantly increases the handling capacity of elevators on board passenger vessels – particularly during peak periods – by grouping people traveling to the same destination into the same elevator. The KONE hybrid DCS combines all the performance

advantages of a traditional DCS with the ease of use of a standard collective control system. Passengers can select their desired floor on a standard car operating panel, avoiding any confusion, while people flow on public decks is significantly improved.



INTELLIGENT SOFTWARE

KONE Group Controller

The KONE Group Controller is an intelligent control system that significantly improves the operational efficiency of elevators. It uses real traffic data to adapt group movements based on traffic flow. Compared to standard control systems it can cut passenger waiting times by 15% and maximum waiting times by 30-40%, and increase transportation capacity by 5%. Ride comfort is also improved as cars are less crowded.

Customizable operating modes

To ease people flow, improve safety, and make maintenance even easier, we have worked with customers to develop a wide range of customizable elevator operating modes:

- Gangway
- Boarding and dining
- Dynamic boarding
- Medical
- Priority
- Room service
- USPH clean, USPH dirty
- Stores handling
- Emergency power/Fire
- Cleaning
- Luggage handling
- Secondary feeding

ECO-EFFICIENT TECHNOLOGIES THAT CUT COSTS AND REDUCE YOUR CARBON FOOTPRINT

Over the lifetime of the equipment, the energy efficiency of KONE solutions can really add up – the money you save on energy can be more than the initial cost of the equipment itself.

KONE ECODISC® HOISTING MACHINE

Our elevator solutions are all powered by the compact KONE EcoDisc hoisting machine. The gearless KONE EcoDisc reduces space demands and ensures greater reliability. It is designed for a long operational lifespan while in daily operation and consumes significantly less energy than a comparable geared traction machine.

REGENERATIVE DRIVE

KONE is a pioneer in developing regenerative systems that recover elevators' braking energy, which would otherwise be lost as heat. These solutions transfer up to 90% of this energy back to the network, where it can be used immediately, for example to power lighting. The regenerative drive is included as standard with all KONE MonoSpace and KONE MiniSpace elevators.

ELEVATOR AND ESCALATOR STANDBY MODES

KONE has developed several ways to reduce standby energy consumption, including automatic power-down of lights, fans, and signalization when elevators are not in use. KONE escalators can also slow to stand-by speed when no one is on board, adjust power usage depending on the passenger load, and minimize startup energy consumption.

LED LIGHTING

LED lights last up to 12 times longer than halogen lights and reduce the energy consumption of the car lighting by up to 80%.



SAFETY AND CERTIFICATIONS

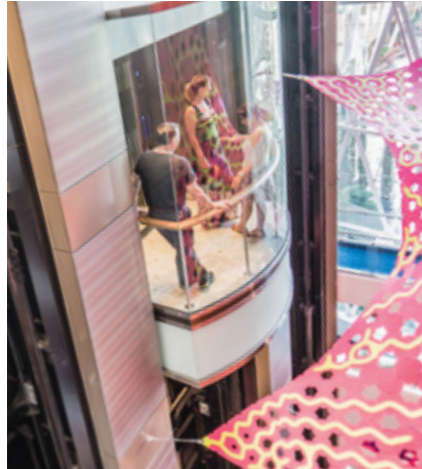
Safety is the number one priority in all our processes: design, manufacturing, installation, and maintenance. We also actively participate in industry-wide initiatives to develop codes and standards. KONE holds the following certifications:

- ISO 9001 certification
- ISO 14001 certification
- Achilles JQS

We also comply with the rules set by various classification societies registered under the IACS, for example DNV, Lloyds, and RINA.

SELECTED REFERENCES

Our track record in the passenger vessel segment is second to none. We count world-leading cruise lines and ferry companies among our customers. Read about how we've helped them create the best possible people-flow experience on board their vessels.



OASIS-CLASS CRUISE SHIPS, ROYAL CARIBBEAN INTERNATIONAL STX EUROPE AND STX FRANCE

KONE has partnered with Royal Caribbean International to supply customized elevator and escalator solutions for all four of its luxury Oasis-class vessels, the world's largest cruise ships: Oasis, Allure, Harmony, and Oasis 4, each of which can carry in excess of 5,000 passengers.

Key solutions

- KONE MiniSpace™ passenger, scenic passenger, and service elevators
- KONE MonoSpace® service elevators
- KONE escalators
- KONE accessibility platforms
- KONE E-Link monitoring system
- Energy-saving regenerative drives for elevators



GENTING DREAM, DREAM CRUISES MEYER WERFT

KONE undertook extensive consumer behavior studies to better understand what was expected from vessels in the Asian market. Based on our results, we adapted the interior design, locations, and car size of elevators to offer the most efficient and pleasant people flow solution possible.

Key solutions

- KONE MonoSpace elevators
- KONE MiniSpace elevators
- KONE escalators
- KONE E-Link monitoring system
- KONE InfoScreen



MEIN SCHIFF 3, 4, AND 5, TUI CRUISES MEYER TURKU SHIPYARD

KONE's state-of-the-art solutions ensure reliable, energy-efficient people flow aboard TUI Cruises' Mein Schiff 3, 4, and 5 cruise ships. These identical 295-meter-long vessels serve the German cruise market, and KONE solutions play an important role in creating unique and personalized experiences for passengers across 15 decks. KONE was involved from the early stages of the design phase, collaborating with the shipyard, ship owner, and the architects.

Key solutions

- KONE MiniSpace passenger elevators
- KONE MiniSpace service elevators
- KONE accessibility platforms
- KONE escalators
- KONE E-Link monitoring system



SELECTED PASSENGER FERRY REFERENCES

KONE has delivered solutions for many cargo vessels during the last decades. Here are some of our most recent projects.

Viking Azure and Viking Osfrid	ENVC shipyard, Portugal	Viking River Cruises
Spirit of Britain and Spirit of France	STX Europe, Finland	P&O Ferries
Viking Grace	STX Turku, Finland	Viking Line
HSC Condor Liberation	Austal shipyard, Australia	Condor Ferries
Stena Hollandica and Stena Britannica	Nordic Yards shipyard, Germany	Stena Line

Discover more of our projects at marine.kone.com

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

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 and vessels.

Our commitment to customers is present in all KONE solutions. This makes us a reliable partner throughout the life cycle of the building or vessel. 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® and KONE UltraRope®.

KONE employs close to 52,000 dedicated experts to serve you globally and locally.

[KONE ELEVATORS LTD](#)

Myllykatu 3
P.O. Box 602
FI-05801 Hyvinkää
Finland
Tel. +358 [0]204 75 2300
Fax. +358 [0]204 75 3450

marine.kone.com