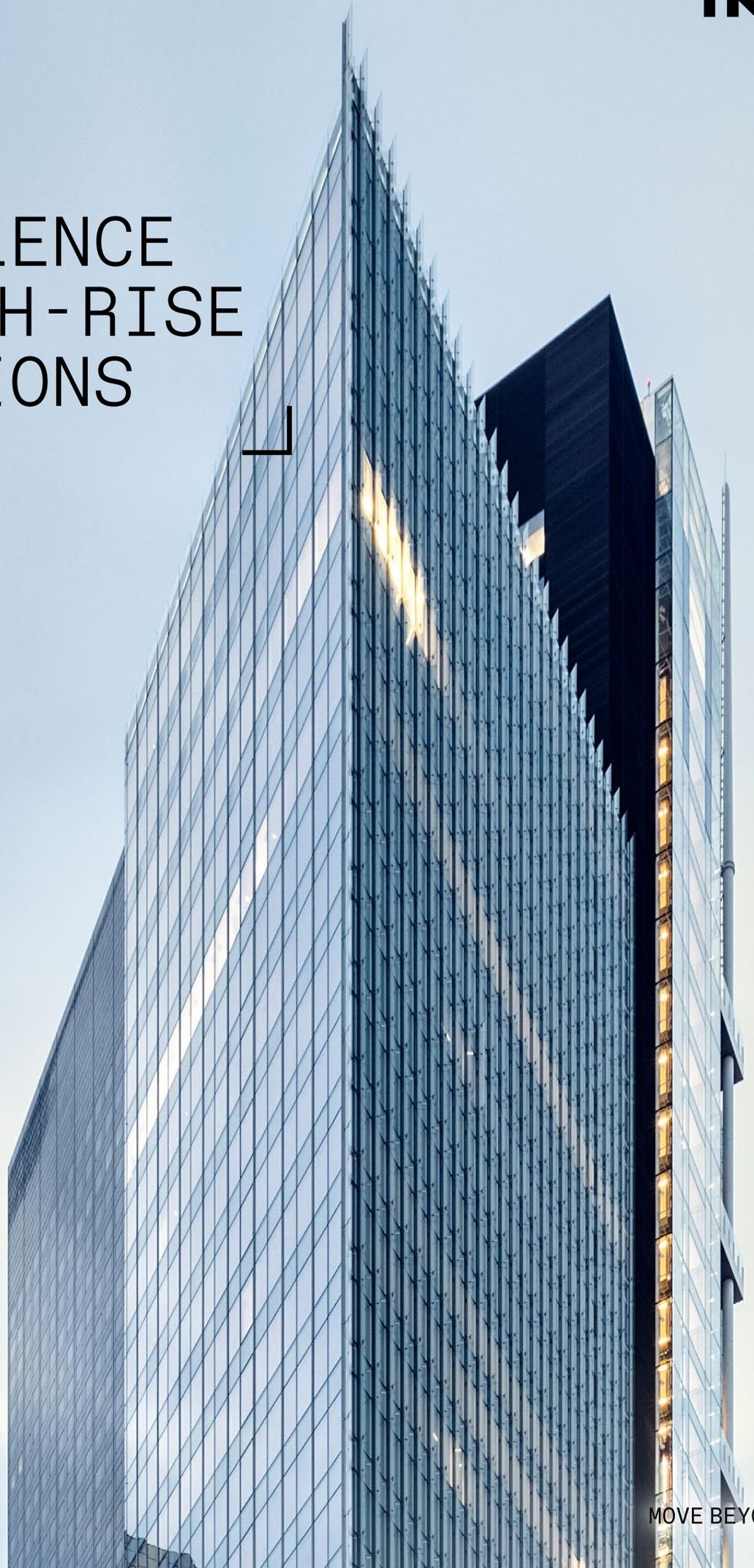




EXCELLENCE
IN HIGH-RISE
SOLUTIONS





Cover and inside: Trinity Tower, Paris

CONTENT

04

The global high-rise segment

18

Seamlessly integrated cabin and interface design

06

Planning, consulting and analysis: our contribution to the architectural design process

20

At your side from start to finish and in sync with your building

10

Economy and ecology: harmonious co-existence between cost and sustainability

24

Service and modernisation for high-rise buildings

12

Our unique product portfolio

26

Global high-rise references





THE GLOBAL HIGH-RISE SEGMENT IS CHANGING

Working from home is here to stay – and with it, the demand for city-center office space seems to be falling significantly. But that won't put an end to skyscrapers. They'll just be different.

Existing buildings will be modernised, with office space converted to other uses. New architectural designs will integrate a mix of uses.

The sophisticated elevator technology that made vertical transportation practical and pleasant will continue to enable high-rise mobility. And our industry's products will increasingly be judged by the amount of flexibility they bring to the future high-rise building that is bound to blur usage categories.

TK Elevator has been delivering holistic high-rise mobility solutions for decades. Our unique and innovative product portfolio enables future-proof mobility concepts. Our solutions are based on lifecycle partnerships with our customers – in everything from competent consulting and planning to project management, smart service and preventive maintenance.

IT ALL STARTS HERE: SMART PLANNING OF MOBILITY SOLUTIONS



Supporting you from A to Z

For several decades we have been helping customers realise their high-rise visions. We are in the vertical transportation business to take people wherever they need to go efficiently, conveniently, comfortably and reliably. TK Elevator's holistic approach enables increased rentable space, facilitates seamless passenger flow and allows for highly flexible configurations and architectural design possibilities.

Our local experts and TK Elevator's global high-rise consulting team are here for you. Involving them right from the beginning of the structural design process is sure to achieve the best possible outcome and save you costly changes at its later stages. We help you make the right decisions to optimise travel and keep waiting times to the minimum while at the same time achieving the most efficient elevator footprint.

By the year 2050

84%

of Europe will live in urban areas

As of 2021, there are already

>300

buildings over 150 m in Europe

With another

100+

in the planning stages

To help you realise your vision we provide unparalleled consulting and planning support right from the start, before even the first outline is drawn. The importance of involving experienced elevator experts at the earliest possible phase of the architectural design process cannot be overstated.



Smart planning = transparency

Modern mixed-use high-rise buildings may contain hotel, residential, retail and office spaces. Co-working areas or special-purpose floors (for restaurants or sky gardens) might soon replace traditional office levels.

In all these challenges, the experience, expertise and creative flexibility of TK Elevator's consultants and planners will ensure you get the best possible high-rise mobility solution to suit your needs.

But for us, to plan smart is also to be fully transparent towards our customers, especially when it comes to putting mobility concepts through a performance and reality check. That's why our tools and methods in elevator traffic analysis consider ISO 8100-32 standards and are 100% open to scrutiny. We operate solely with reliable and realistic input data for our calculations and traffic simulations.

Globally, building spaces totalling

87 km²

– the size of Copenhagen – are put up per year

200 k

people move to urban areas each day

900 k

elevators are installed worldwide per year

ETA – the science of passenger flow

As the centerpiece of a serious planning endeavour, we carry out an elevator traffic analysis (ETA) to predict the future performance of a given elevator layout.

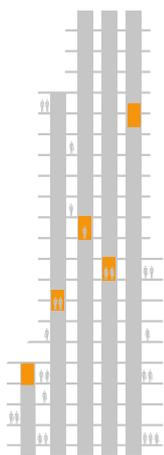
An ETA enables each iteration of an elevator to be refined for the best possible outcome – the optimum number of shafts, energy savings, system efficiency, passenger comfort and budgetary considerations, for example. A thorough ETA forms the basis of an architectural design that takes building mobility into account.

With our unique product portfolio, which is the industry's broadest thanks to pioneering technology such as TWIN, we are capable of freeing up rentable space while at the same time increasing transportation performance.

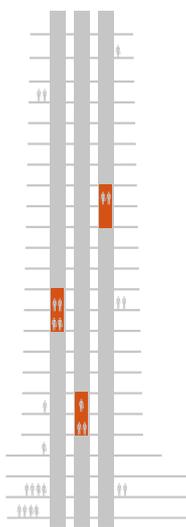
To put it in numbers: Smart planning can result in up to 50% less space needed for elevators.

We understand the ways people move through a building by day and night, and how to cater for specific design requirements. The factors we analyse during the planning process include the type of building and its elevation, its (multiple) space(s) and capacity, floor plans and entrance layer, the garage position and number of vehicles to be catered to and also any specific requests, e.g. freight, service or firefighter elevators.

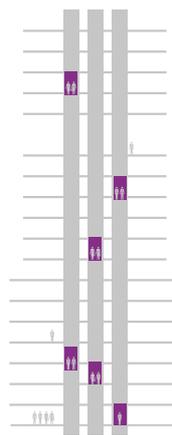
The outcome will be a flexible and future-proof, customised high-rise mobility solution that is tailored to your building's interior design and optimises user convenience.



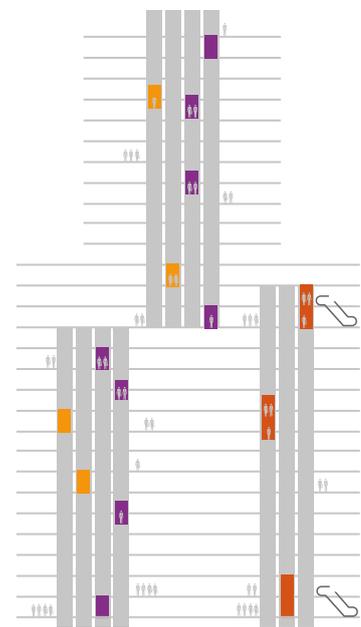
Traditional **single-deck elevators** require one shaft per cab. With a certain building height and volume, that can sum up to a large footprint that occupies otherwise leasable space.



Double-deck elevators move people by fixing two cars on top of the other. They are rarely used as a building's exclusive means for vertical transport but as shuttle elevators e.g. from ground floors to sky lobby floors.



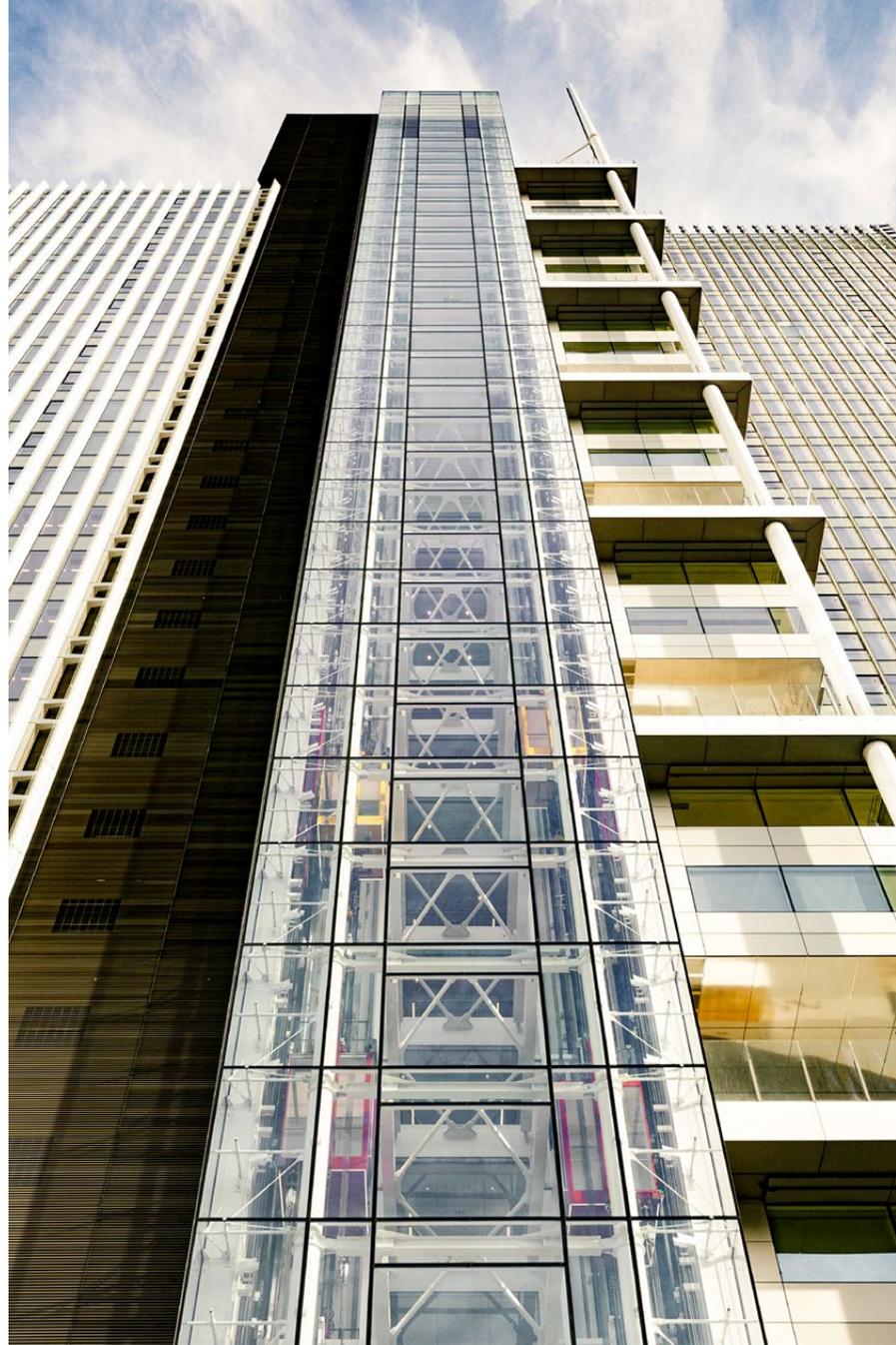
TK Elevator's totally flexible **TWIN** moves two cabins independently in one shaft. It requires less space (= shafts) and is the most efficient inter-floor distributor for tall buildings, ensuring a natural and comfortable passenger flow.



Ideally, **the combination of all three elevator types plus escalators** form the most efficient mobility concept. TWINs and single-decks complementing each other in mid-rise and inter-floor traffic, with the double decks as shuttles to the higher floors.

An elevator enthusiast's building

Architect Jean-Luc Crochon's Trinity Tower in Paris' La Défense district puts its elevators on display like no other high-rise building. It is almost as if it were built around TK Elevator's innovative TWIN lifts.



Trinity Tower exemplifies how essential mobility solutions are in high-rise buildings. The TWIN elevators moving within the glass facade provide a dynamic view for passers-by, while the occupants enjoy an unparalleled view over the city's business district.

Moving between the 33 floors of this skyscraper, the colourful, customised cabins are a statement within the building, and more importantly, will reduce waiting times for passengers by up to 30% as compared to regular elevators.



Learn more about our products and services on our website. Scan the QR code or visit tkelevator.co.uk

Saving energy = saving costs

As a building owner or operator, you need to have the bottom line in mind. That's why we invest in economical elevator technology, e.g. through AC gearless machinery and minimising the number of empty or phantom stops.

At the same time, we prioritise sustainable mobility solutions, e.g. through regenerative drive technology that feeds generated power back into the building's grid and thus reduces energy costs.

70%

According to the energy efficiency guidelines for elevators established by the Association of German Engineers in 2009 (VDI 4707), the most efficient elevator technology configurations can save up to 70% on energy consumption of a building.



Our products reduce the energy, space, resources, and on-site maintenance your elevators or escalators require – clear proof that economy and ecology can co-exist in perfect harmony.

Certifiable solutions

It is no exaggeration to say that sustainability is embedded in our core business. After all, our climate targets include developing products that contribute to reducing the carbon footprint of buildings and entire cities. In that context, we specifically promote mobility solutions that comply with green building certification systems, such as LEED, BREEAM and DGNB.

Our elevators contribute to a better “green” building rating through their energy-saving functions like regenerative drives, LED lighting, sleep mode and other efficient features. You can be sure of our support in going green and ensuring your high-rise achieves the highest possible LEED classification and BREEAM conformity.



Eco-friendly elevator systems

In 2017, we achieved the first-ever Environmental Product Declaration (EPD) for an elevator. Since then, most of our elevator systems, such as evolution, have obtained EPDs in line with the product category rules of the International EPD® system.

Furthermore, our elevator solutions can make positive contributions to a building’s carbon footprint based on lifecycle assessments that are subject to critical third-party reviews.



Our efforts in climate protection were recognised by the global non-profit CDP, which put us on their A List for tackling climate change for 2020. TK Elevator’s commitment is to reduce our carbon footprint by 25% until 2030.



TK Elevator publishes Environmental Product Declarations to communicate the results of Life-Cycle Assessments to the public and ensure transparency regarding the environmental impact and performance of our products.

OUR UNIQUE RANGE OF PRODUCTS



1 TWIN

Providing two independently moving cars in the same shaft, TWIN maximises lettable floor space and minimises the average travel time to destination, reducing passenger waiting times by 30%.

3 momentum

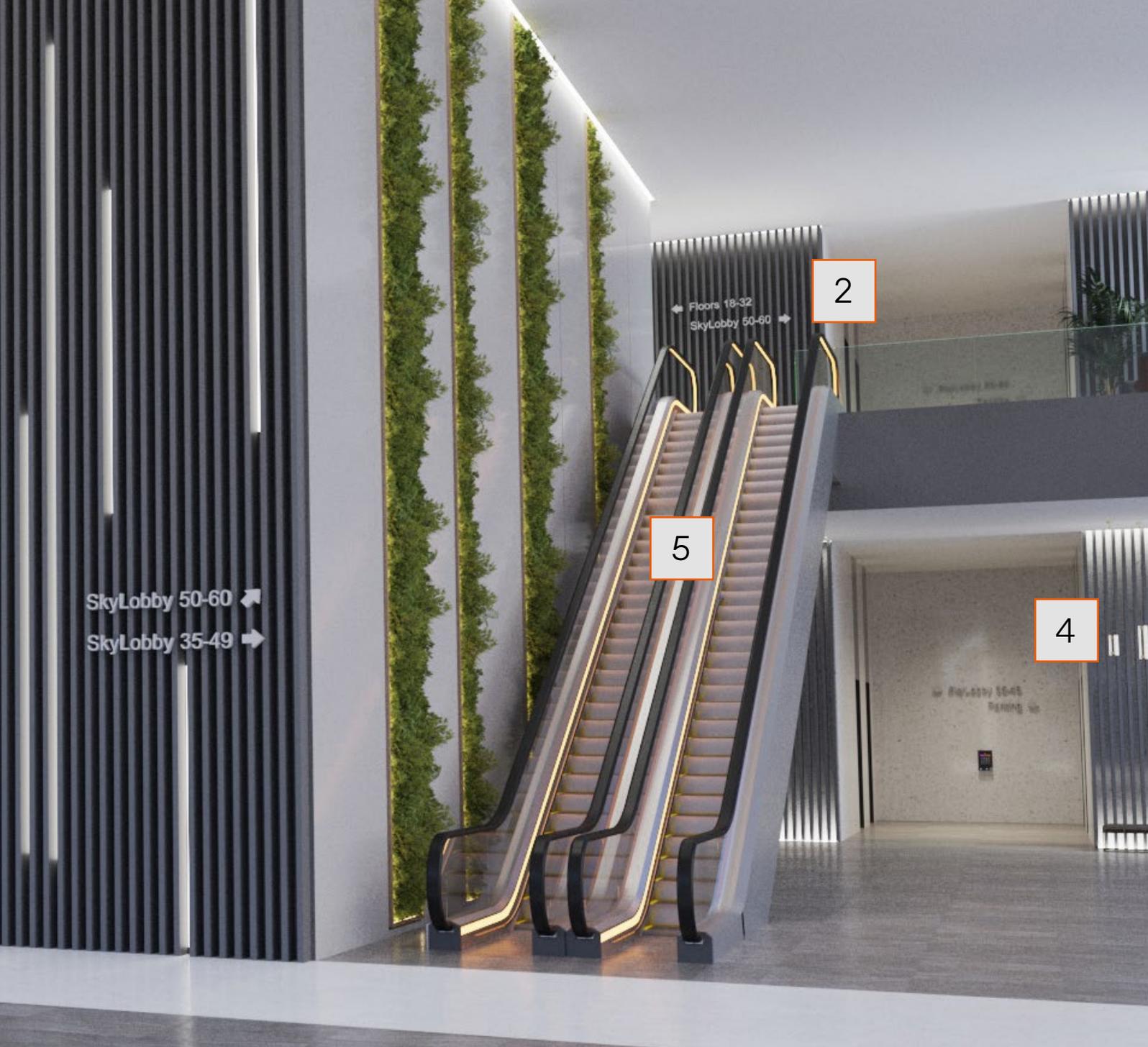
The best speedy solutions in high-rise buildings of up to 600 metres, travelling up to 12 m/s: our momentum 200 and momentum 300 single-deck elevators.

2 double deck

As the name suggests, our double deck elevator is a workhorse solution for quickly shuttling more people between two locations (e.g. a main lobby and a sky lobby) with the help of two adjoining cars.

4 evolution

Whether they are put to use as a service elevator or a lobby-to-garage-carrier, our evolution 200 and evolution 300 will perform reliably and integrate seamlessly into your building's mobility concept.



5 velino

Our velino series escalators offer a range of design and functionality options as unique as your project.

6 AGILE

Our AGILE people experience solutions start at the security access turnstiles and extend to customised destination selection terminals, as well as open connectivity to building management systems, make managing passenger traffic as easy as can be.

7 MAX

MAX, our cloud and IoT-based solution for optimising building operations takes elevator availability, reliability and efficiency to new heights by significantly increasing uptime and minimising breakdowns with its predictive maintenance capabilities.



TWIN

2 cabins. 1 shaft. 0 crowds.

Our one-of-a-kind TWIN passenger elevator is the industry's first system with two independent cars, one on top of the other, in one shaft. It gives you the same conveyance capacity in 25% less space. It also lets you introduce brand-new traffic concepts while setting a new standard in high performance.

With TWIN, both cabins use the same guide rails and landing doors. Each car is equipped with its own traction drive, controller, ropes, counterweight and governor. An intelligent destination selection control system gets people to their destination faster by grouping together individuals travelling to the same floor. TWIN also boasts a TÜV-tested safety concept to satisfy even the most stringent requirements.



PERFORMANCE SPECIFICATIONS

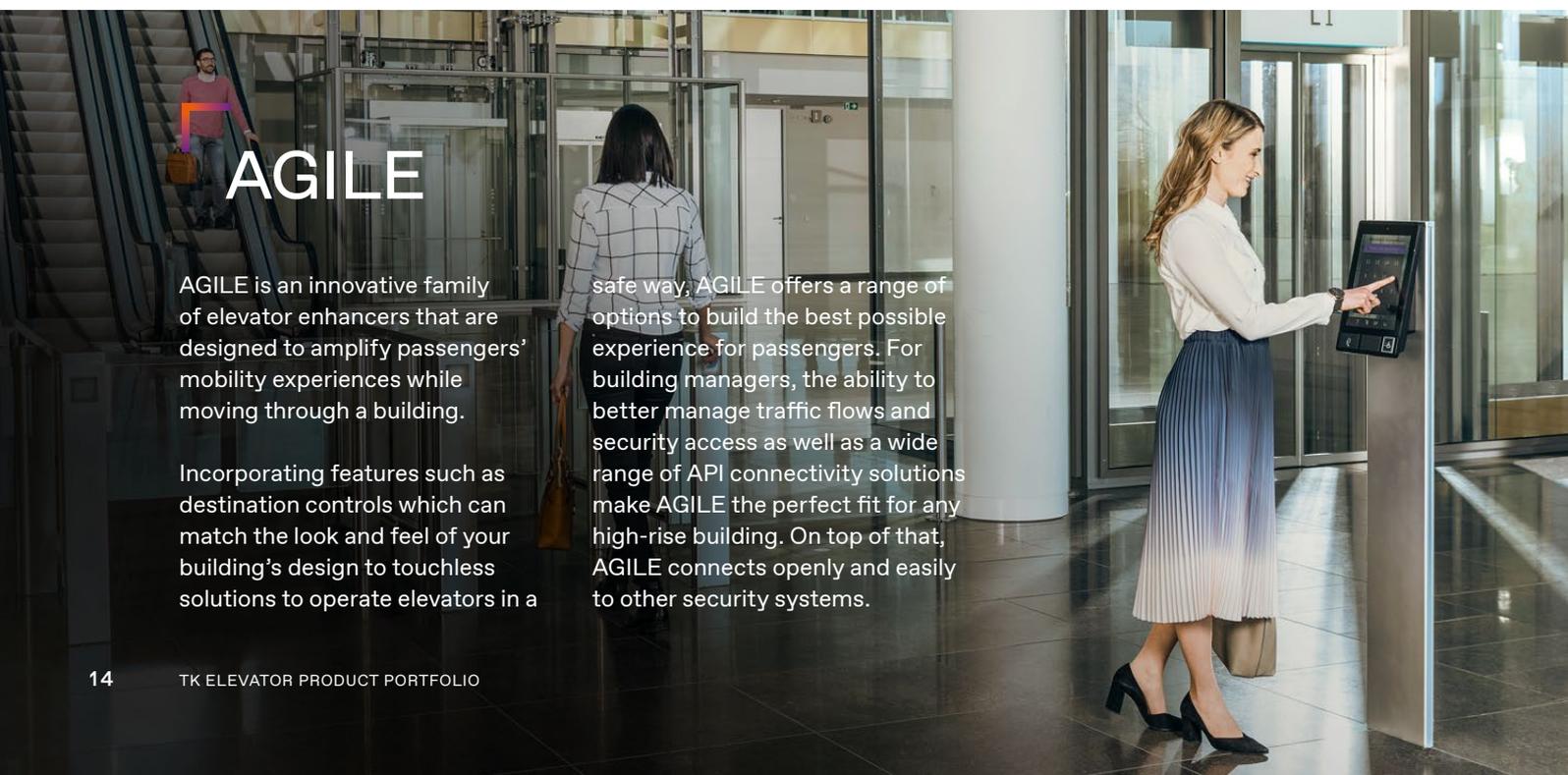
speed	up to 7 m/s
load per cabin	up to 2x 1,800 kg
travel height	max. 250 m
max. stops	45
cabin design	custom

AGILE

AGILE is an innovative family of elevator enhancers that are designed to amplify passengers' mobility experiences while moving through a building.

Incorporating features such as destination controls which can match the look and feel of your building's design to touchless solutions to operate elevators in a

safe way, AGILE offers a range of options to build the best possible experience for passengers. For building managers, the ability to better manage traffic flows and security access as well as a wide range of API connectivity solutions make AGILE the perfect fit for any high-rise building. On top of that, AGILE connects openly and easily to other security systems.





momentum

Our single deck powerhouse.

Offering a winning combination of performance, energy efficiency and customisation possibilities, our high-speed single-deck momentum elevators are the perfect complement to TWIN.

momentum 200 is designed for premium residential, office, commercial and mixed-use high-rise buildings up to 300 metres. Covering loads up to 2,500 kg and a maximum speed of 7.0 m/s, its versatility makes it ideal for high passenger traffic as well as for use as service or firefighter elevators.

For even higher demands, momentum 300 offers the perfect fit. It provides premium precision and performance for buildings up to 600 metres. With a travel speed of up to 12.0 m/s, this elevator is built for complex and very high traffic performance requirements, and its extensive customisation options enable the creation of a truly one-of-a-kind design.

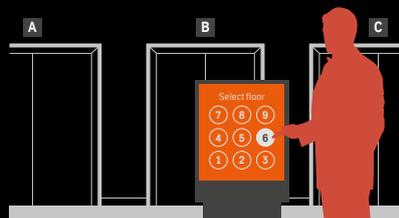


PERFORMANCE SPECIFICATIONS

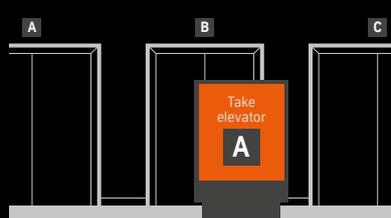
speed	up to 12 m/s
load per cabin	up to 5,000 kg
travel height	max. 600 m
max. stops	79
cabin design	standard / custom

AGILE Destination Controls in operation

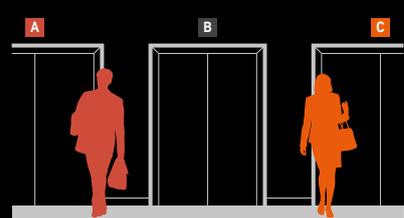
STEP 1 All passengers use the customisable AGILE touchscreen terminal to select their floor.



STEP 2 Via the terminal AGILE clearly directs each passenger to an assigned elevator, grouping them for most efficient travel.



STEP 3 Passengers board the assigned elevator that transports them to their destination with the minimum of stops in between.





double deck

The double load express shuttle.

Our double deck elevator has two connected cabins in the same shaft, and is ideal for buildings with high-passenger volumes and peak traffic times. Working as a shuttle system, it is an especially efficient solution for buildings with sky lobbies.

PERFORMANCE SPECIFICATIONS

speed	up to 10 m/s
load per cabin	up to 2,000 kg
travel height	max. 500 m
max. stops	60
cabin design	custom

evolution

An industry standard in passenger elevators.

evolution elevators form another integral part of our high-rise portfolio, delivering to a wide range of requirements – from solid functionality to the highest degree of performance and customisation.

PERFORMANCE SPECIFICATIONS

speed	up to 2.5 m/s
load per cabin	up to 4,000 kg
travel height	max. 100 m
max. stops	40
cabin design	standard / custom



velino

Our complementing range of escalators.

As buildings get taller, multi-floor lobbies and foyers become the norm. velino escalators seamlessly integrate into the mobility concept of your building, and can easily extend from standard specifications to design-oriented applications to match the look and feel of the architecture around them.



PERFORMANCE SPECIFICATIONS

speed	0.5 to 0.65 m/s
rise	1.35 to 15 m
inclination	30° and 35°
step width	600 800 1000 mm

MAX

MAX was an industry first for the predictive maintenance of elevators, and has now grown into a full-fledged cloud-and IoT-based platform solution for optimising building operations.

Throughout its evolution, the goal has remained the same - to maximise the uptime of your elevators and escalators. In a MAX-connected building, elevator owners, users, and facility managers get increased uptime, more transparency, and prolonged lifetime of their units due to enhanced maintenance services. Most importantly, they are assured of improved reliability and safety for passengers.

The combination of cloud technology, Big Data and advanced machine learning makes MAX an invaluable asset for high-rise buildings, and the benefits MAX brings get bigger and better over time.

How smart maintenance works with MAX



Data gathering



Precise diagnostics



Predictive intervention

MAX is only available in selected markets. Visit our website or consult your TK Elevator sales representative for further information.



SEAMLESSLY INTEGRATED DESIGN

From the elevator lobby to the top floor, the design of modern high-rise buildings is a composition of ambiances. Elevators connect these different atmospheres fluidly, not just by facilitating the actual travel, but also by their own design.



Modern material technology imposes few limits on achieving the desired look & feel every architect and interior design expert strives for in an elevator cabin. That's why all of our high-rise products allow for design customisation. We apply our technical know-how to your team's concept, making sure that your vision is fulfilled 100% while conforming to regulations such as fire safety.

But it's not just the cabin, the various digital user interfaces along your passenger's journey are ready to be tuned to your requirements as well. From the AGILE terminal screen, that allows for a customised look and welcome messages, to the in-car multimedia displays that improve passenger guidance and provide entertainment to enhance every ride.

Our joint design process

1

Ideation. Our ideation process focuses on the needs of your building's future inhabitants, and brings together our German engineering expertise with the creativity we've come to be known for as an industry innovator.

2

Sketch. Based not only on visual aspects, but also on our objective Elevator Traffic Analysis, we 'sketch' the mobility concepts that fit your building's architecture, design, and most importantly – its mobility requirements.

3

Materials. Materials selection for high-rise elevators and escalators is an exercise in partnership – our sole goal is to reflect the vision that you have for your building and ensure conformity with building regulations, local laws and industry standards.

4

Design. It's time to see how it comes together – the last step is to review and select the one proposal that perfectly fits your building's architectural concept and interior design.

An interconnection of atmospheres



At Moscow's tallest high-rise building, the 374 m Federation Tower, elevators not only link 95 floors, but also several unique design environments.



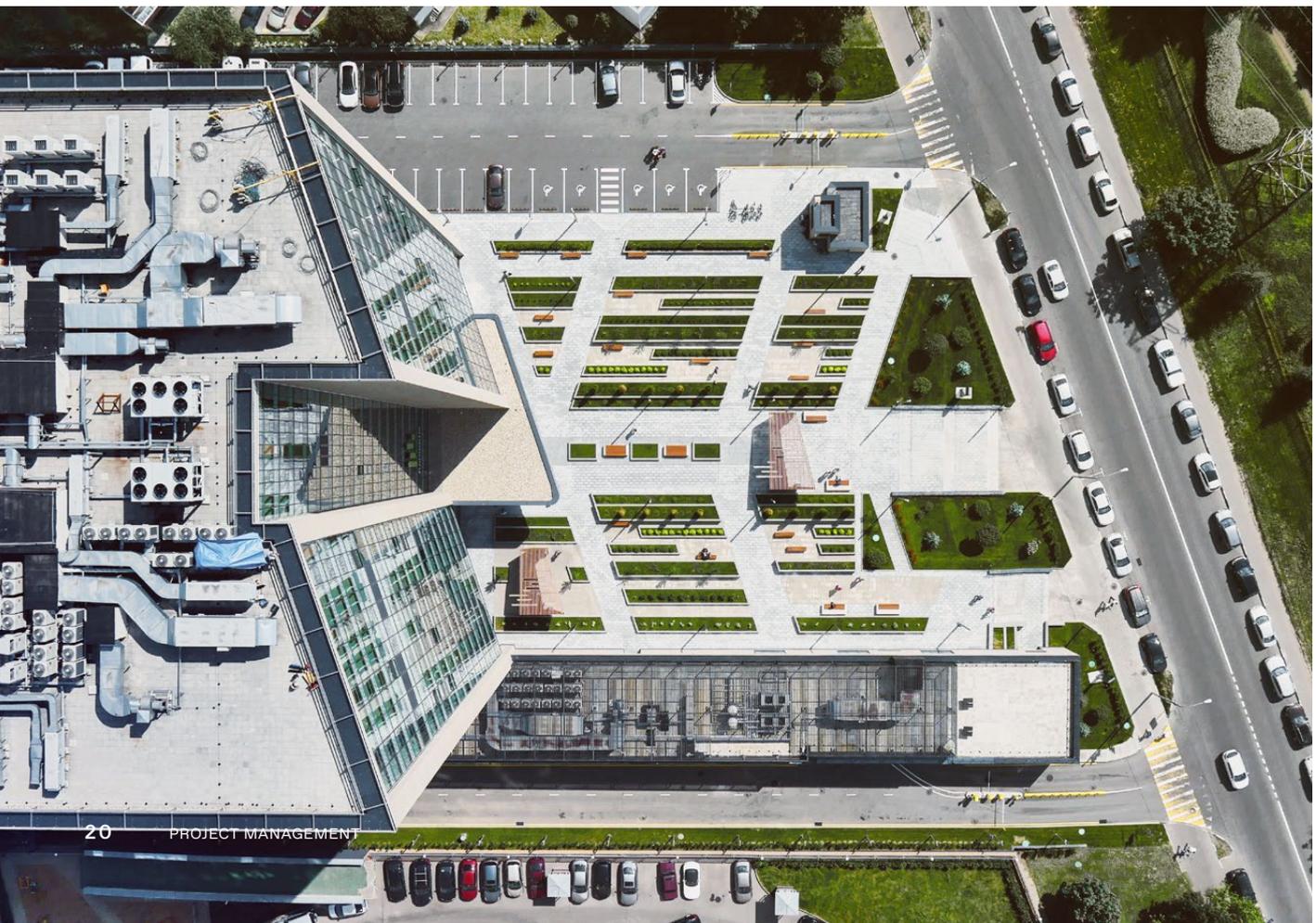
From copper to exposed concrete and wood, Federation Tower offers many different materials and atmospheres. Elevators move through all of them, calling for constant alignment on design direction and choices during construction. Or in the words of architect Sergei Tchoban himself: "Our architecture endures as well as your elevators. Both are valuable, aesthetic and user-friendly, just like contributing to a livable and secure environment."



Learn more about our products and services on our website. Scan the QR code or visit tkelevator.co.uk

AT YOUR SIDE FROM START TO FINISH

In our growing cities, the demand for convenience is increasing. Add in renovation activities, large-scale infrastructure and urban living projects, and it becomes clear why we orient and engineer our products towards efficient and speedy installation processes.



On-site expertise

Leveraging several decades of experience, our global high-rise expertise and highly developed local organisations, we guarantee reliable delivery and flexible logistics, state-of-the-art installation techniques that keep pace with construction, and on-site project management that ensures operational precision and work safety.

For us, partnership means supporting you with a dedicated, expert project management team that closely coordinates every phase of your project.



On time, just in time

During the construction phase our experienced on-site team will ensure smooth, just-in-time logistics planning and operational oversight. We manage the development of the project in time, cost and quality, maintaining smooth coordination between installation teams on site and our factory and engineering, who always remain tied-in.

The outcome is trouble-free system installation and commissioning, for example with state-of-the-art laser technology used to align the elevator shaft with millimetre precision for standard-setting travel comfort.

State-of-the-art installation

Our Shaft Climber® system installed in the building core during the construction phase drives site progress faster, enables earlier facade closing and reduces the assembly time.

With us at your side you can be sure of a high-rise elevator that is completed on schedule and budget.





Why to go with TK Elevator



“Safety first” culture

The safety of our customers, employees, and those who use our products is paramount at every step.



Expert consultants

We offer a dedicated team of experts with extensive experience in international high-rise consulting and project management.



Certified installation teams

Our installation experts are trained, experienced, and certified to the highest standards.



Shaft Climber® system

We can start installation and provide vertical mobility while the building and the elevator shafts are still growing.



Flexible logistics planning

We know plans can change, so we organise our mobility solutions around your building planning to always be just-in-time.



Remote commissioning

Usually, our technical support team is on-site to commission newly installed elevators. But when the situation demands it, we can also provide remote commissioning.



A new landmark for New York and everything that is TK Elevator

Hudson Yards is the largest private real estate development in U.S. history and the largest development in New York City since Rockefeller Center. The site will include more than 18 million square feet of commercial and residential space, state-of-the-art office towers, more than 100 shops and approximately 4,000 residences. TK Elevator will supply 16 TWiNs, 9 double-deck and 54 single-deck elevators as well as 12 escalators.

SERVICE AND MODERNISATION

On par with our innovative elevators engineered and manufactured in Europe, the provision of high-quality maintenance and repairs is a core priority at TK Elevator.



Dedicated service experts

TK Elevator's service concept is built on the basis of ensuring maximum passenger comfort, convenience and safety at all times, while protecting the long-term value of your investment. These are our key offerings for our customers in the high-rise segment:

- Rapid 24/7 service through our 1000+ local branches
- Individualised service contract packages, optionally with MAX, our cloud-based predictive maintenance and monitoring system
- Expert service technicians backed by a global network of service centers
- Designated service technician(s) and engineers for your high-rise building and connected mobility solutions
- Large stock of spare parts for all major lift brands on demand, and efficient logistics capable of swift delivery
- Optional on-site stocking of spare parts for your elevator units



We also care for 3rd party products

Service is at the heart of our business, and our expertise extends beyond our own products. Regardless of make and model, we can cover all your maintenance and service requirements, which is an invaluable advantage for our customers.

Our expert service technicians are backed by a global network of service centers, which are dedicated to third-party equipment and provide real-time support.

For our high-rise customers, we also offer designated and even on-site based service technician(s) and engineers to ensure that any downtime is minimised – that includes of course any 3rd party equipment that TK Elevator is contracted to maintain and repair.

Modernisation

Elevators and escalators age like the rest of us. This means, one day you'll face the challenge of modernising your system to meet legal safety requirements, increase carrying capacity or comfort, reduce energy costs or upgrade equipment in line with current standards.

When that happens, we'll be there. Combining our extensive know-how with high-quality components, we'll transform your existing system to a next-generation installation that meets current standards and regulations and your requirements – all while increasing the value of your building.

Whether it's a partial modernisation, upgrade of your digital mobility solutions, or a full-replacement of your elevator or escalator system – in the long run, modernisation lowers repair costs, reduces faults and increases energy savings while improving comfort, efficiency, safety and aesthetics.



OUR GLOBAL REFERENCES



One World Trade Center New York, USA

Boasting the fastest elevators in the western hemisphere, One World Trade Center in New York stands 541 metres high and has 102 floors served by 71 elevators and 12 escalators installed by TK Elevator. Our elevators feature destination control technology, which uses intelligent software and kiosks to group people into elevators and move them to their destination at a speed of 10 m/s.



Main Triangel Frankfurt, Germany

The 9 elevators installed at the Main Triangel building include 2 TWIN systems, which have the distinction of being the first panoramic TWIN elevators installed worldwide.



Tour D2 Paris, France

D2 remains a landmark building in Paris' La Défense business district. TK Elevator installed 9 elevators, including 7 TWINS, and 2 escalators for passengers to move between its 37 floors.





Shanghai World Financial Center Shanghai, China

With 101 floors and 492 metres in height, the Shanghai World Financial Center is the second-tallest building in China's industrial capital. Its 40 passenger and service elevators include 4 ultra-fast double deck shuttles to the sky lobby, situated at levels 52 and 53. With a maximum speed of 10 m/s, they are among the world's fastest. The mixed-use building houses offices, a hotel and restaurants and can accommodate up to 12,000 people.



Mercury City Tower Moscow, Russian Federation

Mercury City Tower is part of the new Moscow City district which offers residential, office, retail, and leisure space for the local community. TK Elevator supplied 10 TWIN systems, 19 conventional elevators, and three escalators for the 380-metre-tall multi-functional building. The TWINS transport passengers to a height of 185 metres at speeds of up to 7 m/s.



Incity Tower Lyon, France

At 202 metres, Incity Tower is one of the tallest towers in France and is green building certified with BREEAM 4 stars. TK Elevator installed 10 elevators, including several TWIN systems.



Birmann 32 São Paulo, Brazil

At the time of commissioning, the 7 m/s elevators installed in the 125-metre Birmann 32 were the fastest in the country, travelling to the building's 29th floor in just 30 seconds. In total, TK Elevator installed 27 units across several areas of the tower.



Trianon Frankfurt, Germany

TK Elevator installed 15 elevators at this building, which is an icon in the Frankfurt skyline. The elevators are also equipped with Destination Selection Control and got a whole new look during a modernisation in 2014.





ENGINEERING THAT KEEPS THE WORLD MOVING

World Finance Center, Shanghai

We are moved by what moves people. By what moves the world. In ever-growing cities. We provide better access. And new ways to travel longer distances. With clear solutions for increasingly complex infrastructures. We define service by always putting our knowledge to our customers' advantage. We are always dedicated to doing better. Day by day. This is who we are. This is TK Elevator.

YOUR INNOVATION PARTNER

elevators and escalators under maintenance

countries of customers

1,200,000 100+

employees

50,000+

service available for customers

locations

24/7 1,000+

service technicians

24,000+



WWW.TKELEVATOR.CO.UK

High-rise Overview Brochure UK 05369-05/2021
The details quoted in this brochure can only be viewed as binding when confirmed
expressly in writing. Reproduction, reprint and storage only with authorisation of the publisher.