



# Schindler Escalators in Public Transportation

When moving mass means individual comfort







# When a multitude means each one counts

## Schindler heavy-duty escalators

### ▶▶▶ The world's number one supplier of heavy-duty escalators

Schindler is the world's major supplier of escalators for public transportation solutions. The most demanding underground and railway systems in cities such as New York, London, New Delhi, Hong Kong, Beijing, Guangzhou, Tokyo and more rely on the reliability and durability of Schindler escalator solutions.

### ▶▶▶ A complete product range for all requirements

Central metro stations, main railway stations, light rail or small stations all require different product solutions. Schindler provides the expertise and the full product range to cover these requirements with high-performance and efficient product application solutions.

### ▶▶▶ Reliability and safety

With a more than 140-year history, Schindler has extensive experience in the design, installation and operation of public transportation applications. Careful component design and system engineering guarantee long-lasting component reliability with top safety performance.

### ▶▶▶ Availability and durability for decades of operation

The appropriate components are selected based on the customer's specific duty and lifetime requirements. Chains, steps, drives and all other components are designed to provide high availability. They are built to last for many years under heavy-duty operation.

# The world's number one supplier of heavy-duty escalators



## Worldwide footprint

Schindler escalators are the first choice for many of the world's metro and railway systems. The units are designed for heavy-, medium- and light-duty requirements. Every customer need is met with tailored design solutions.





# A complete product range for all requirements

Product characteristics need to be balanced carefully to meet customer requirements in terms of performance, lifetime, initial investment and product lifecycle cost. The Schindler 9300AE and Schindler 9700 product lines are customized for the specific customer specification.

**Inclination**  
23.2°, 27.3°, 30°

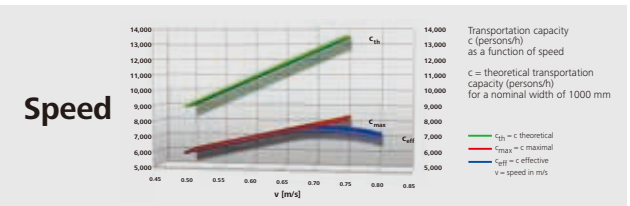
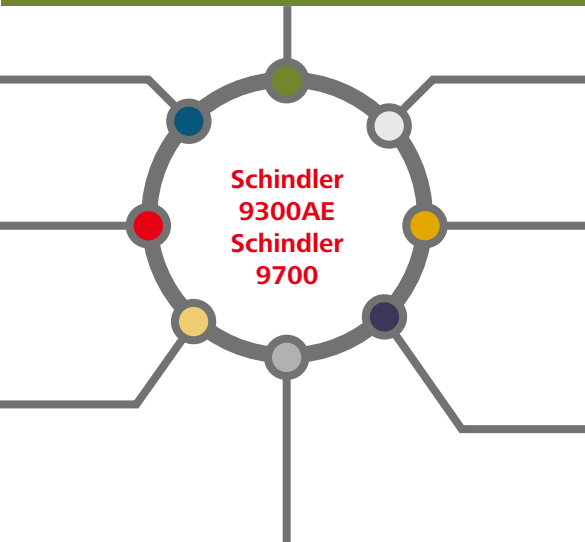
**Component lifetime**  
70,000–200,000 hrs

**Passenger load**

Operation time/year	Passenger load in 3-hr interval	Passenger load acc. to
< 4000 h	< 85%*	EN 115
< 7300 h	< 70%*	GB 16899
> 7300 h	< 60%*	ANSI

\* based on 120kg/step

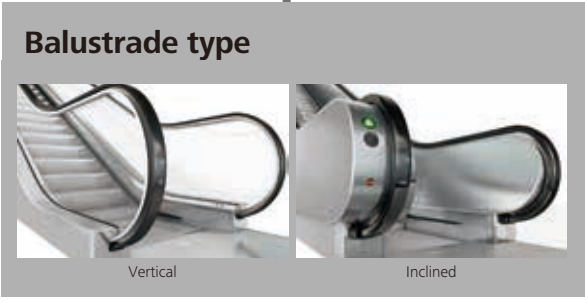
**Vertical rise**  
3–50 m



**Transition radius**

Transition radius	Top	Bottom
Low rise, low speed	1.5 m	1.0 m
Mid rise, mid speed	2.7 m	2.0 m
High rise, high speed	4.0 m	3.0 m

**Horizontal step run**  
2, 3, 4, 5 steps



# Meeting diverse requirements and applications









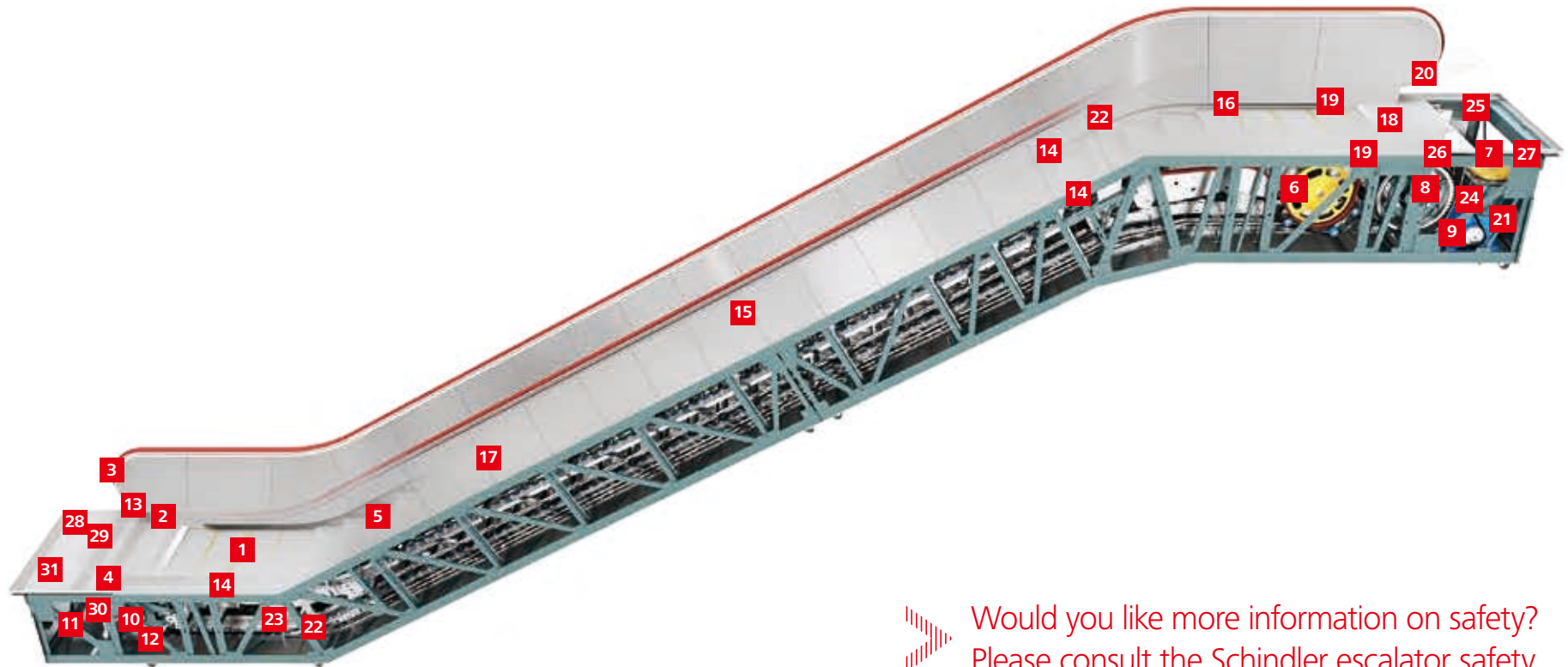
# Protection and support

Schindler's high-availability component design and system engineering guarantee long-lasting component reliability and top safety performance. Chains, steps, drives and all other components can consistently protect and support passengers for many years of heavy-duty operation.



## Safety first

"Safety first" is the main target in product design as well as in installation and operation. All Schindler products are designed to comply with this objective.

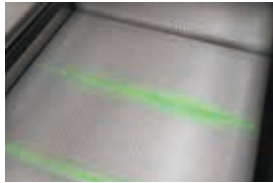


Would you like more information on safety?  
Please consult the Schindler escalator safety  
brochure "State of the Art."

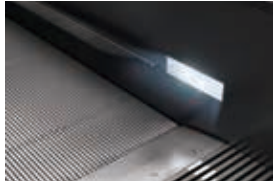


## Safety indicators

- 1 Step gap lighting



- 2 Combplate lighting



- 3 Direction indicators



- 4 Emergency stop button\*



## Safety components

- 5 Gap cover with anti-slide knob
- 6 Safety brake on drive shaft



- 7 Service brake\*



- 8 Duplex chain\*
- 9 Drive chain monitor



- 10 Step chain tension contacts\*
- 11 Guard plates\*
- 12 Counter track\*

## Anti-entrapment

- 13 Handrail entry protection\*



- 14 Skirt brushes\*
- 15 Step upthrust device\*
- 16 Upthrust contact
- 17 Step level contact\*
- 18 Combplate contacts\*
- 19 Skirt contacts
- 20 Handrail entry contacts\*

## Anti-reversal

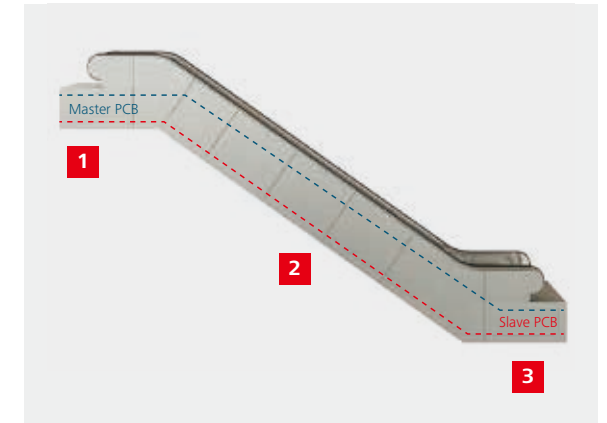
- 21 Speed monitor\*
- 22 Step monitor\*
- 23 Handrail monitor\*
- 24 Electric anti-reversing device\*
- 25 Phase monitoring relay\*

## Additional safety features

- 26 Motor protection\*
- 27 Brake lining monitor
- 28 Fire contact
- 29 Smoke detector
- 30 Water level contact
- 31 Floor cover contact\*

## Built-in system safety

The MICONIC F escalator controller double-checks each safety device in real time. Speed and direction are monitored on the motor shaft **1**, step band **2** and handrail **3**. By monitoring three separate components, a failure-free anti-reversal check is ensured.



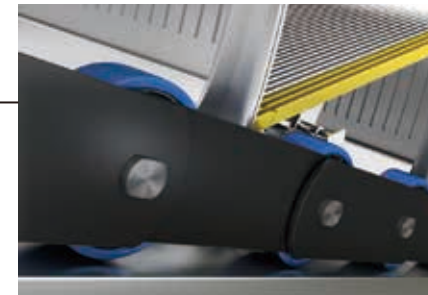
### Note:

The safety feature list includes optional extras that go beyond the requirements of national safety standards.

\* Schindler standard features

## Reliability and efficiency

European component and system design for global applications. Schindler's global setup, supply chain qualification and total quality approach ensure component quality.

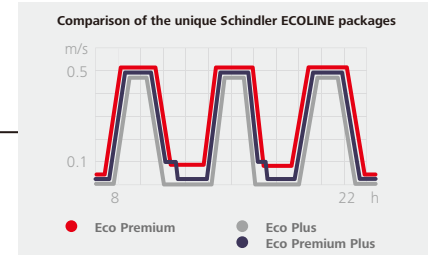


Heavy-duty chains with extended safety factors.

Hydrolysis-resistant step rollers with a lifetime of over 150,000 hours.



Energy efficient worm and helical gear solutions



Frequency converters for up to three different speeds.



## Durability

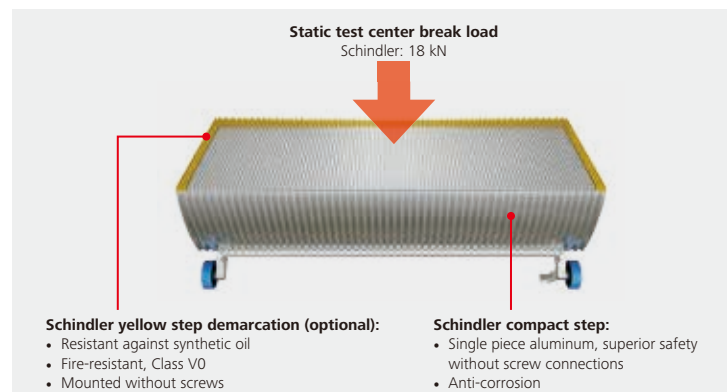
With a more than 140-year history, Schindler has extensive experience in the design, installation and operation of public transportation applications. Careful component design and system engineering ensure nearly 100% availability and long-lasting component reliability with top safety performance.

### Anti-corrosion reinforced truss

The Schindler truss design with open profiles and rust-proof treatment is fully applied on the entire steel structure, providing long-lasting corrosion resistance for up to 40 years. The vibration-isolated end supports eliminate sound transmission to the building.

### Break-resistant aluminum compact steps

Steps are the most important safety component. The Schindler monoblock step provides significantly higher break resistance at substantially lower step weight compared to multi-part compound steel steps.



Break resistant Aluminum compact steps

### High-strength, low-resistance guide rail system

The Schindler guide rail system features a high-strength structure and large turning radius to reduce vibration and running resistance. Relieving curves are provided in the upper and lower transition curves as standard. The step chain is positioned outside the rollers to release roller stress.

### Optimized handrail drive system

Schindler provides reliable handrail drive system for all vertical rise. C-shaped or V-shaped handrails are configured for different types of handrail drive systems. The handrail has a breaking load of up to 25 kN.



Optimized handrail drive system







## Sound production quality

Schindler escalators are produced in the world's biggest and most modern factory. The Shanghai plant started up production in 2014 and produces heavy-duty escalators for the whole world. The production record is over 13,000 units in 2016.



# Diverse product application solutions



Metro station Enkplatz, U3 in Vienna, Austria





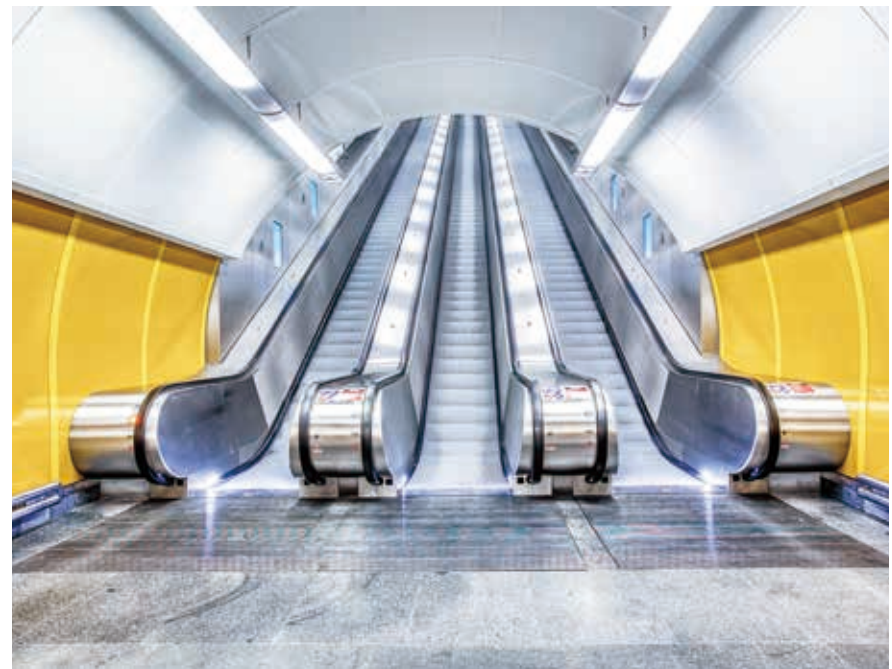
Metro station Università in Naples, Italy



Light rail line 3 in Shanghai, China



Metro station in Torino, Italy



Metro station Národní třída in Prague, Czech Republic



## Project support from A to Z

Schindler's extensive experience in public transportation will help you specify and implement your vertical and inclined passenger transportation solutions. Special expert teams are available to support you with planning and product configuration expertise.

The expert teams will support you in all parts of the product lifecycle, from planning to installation, from operation and maintenance to modernization and product replacement.

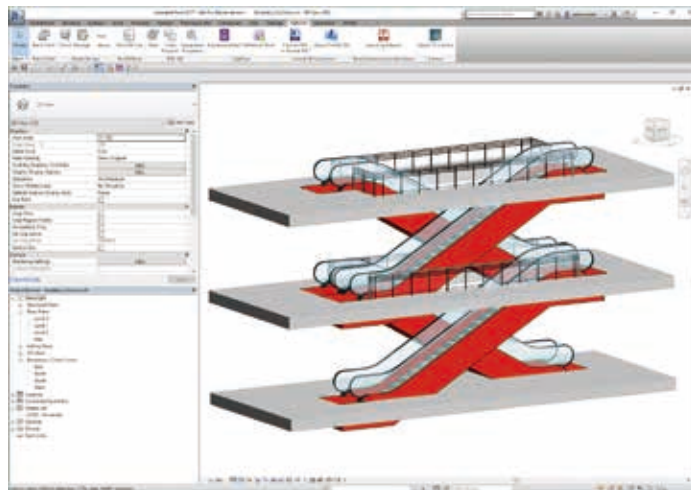
The scope of our support includes:

- Planning and design tools; 2D 3D and BIM modelling
- Energy consumption optimization and calculation
- Qualified project management
- Prototype testing
- Efficient installation methods
- Fitter training in factory training centers
- Consistent project-specific maintenance and repair instructions
- Remote monitoring and control solutions
- Global spare parts stock management

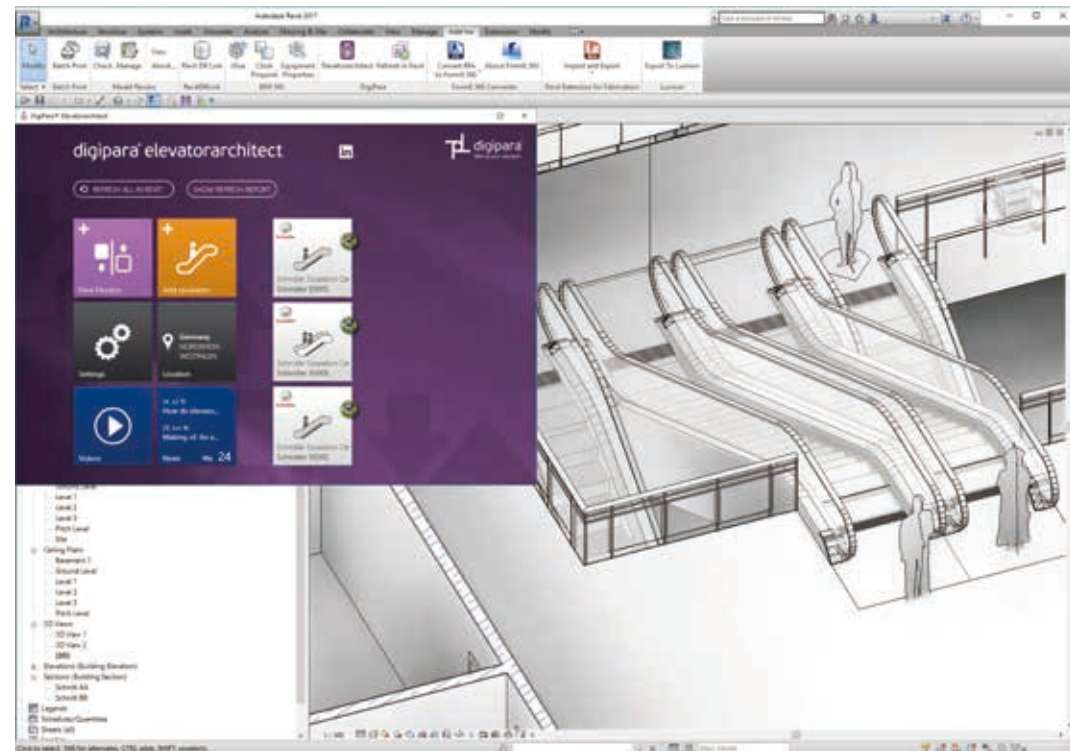


## Value-added tools

Schindler's Revit Building Information Modeling (BIM) tool provides 3D object data. The models can be used by architects for their drawings.



Please go to <https://www.digipara.com/downloads/free-digipara-elevatorarchitect> to download the plugin for your ACAD system.







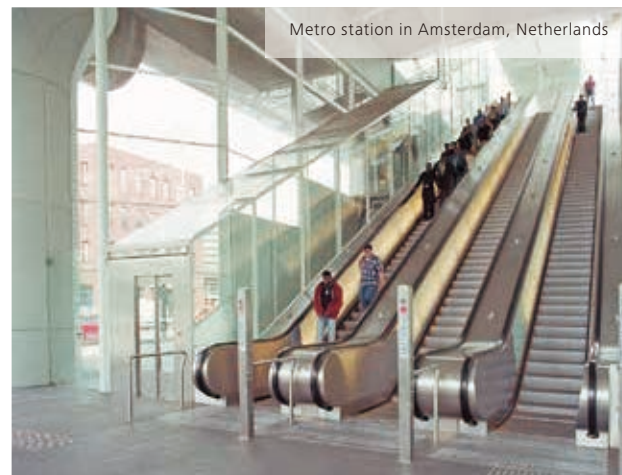




Maglev station in Shanghai, China



Tseung Kwan O Line extension, Hong Kong



Metro station in Amsterdam, Netherlands



Metro line M1 in Ankara, Turkey



For more project references,  
go to  
[www.schindler.com](http://www.schindler.com)

# From the subway to the skyline. Providing urban mobility.

Mobility is an essential requirement in the world in which we live and work. Schindler stands for urban mobility and is recognized as a hallmark of quality and safety. Every day, one billion people worldwide place their trust in Schindler products and services.

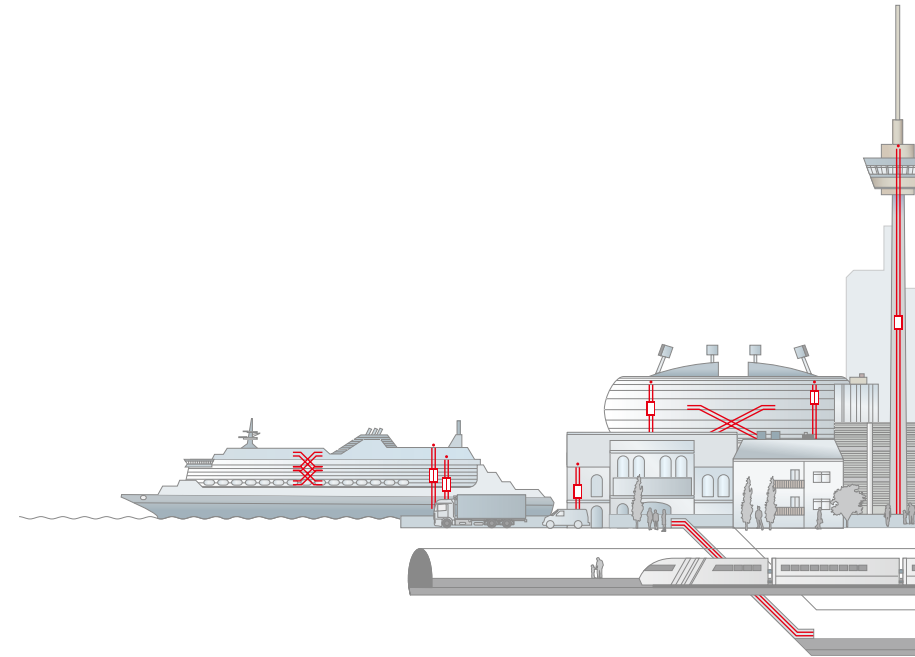
Schindler provides urban mobility with elevators, escalators and moving walks as well as services that are engineered for efficiency and sustainability. Schindler accompanies the development of buildings from planning and construction to daily operation, thus safeguarding their lifetime value.

## Ingenious planning

Selecting the right mobility solution means analyzing the building requirements and calculating the potential traffic patterns. This is at the core of Schindler's planning support to ensure efficient mobility and a convenient journey for passengers. Bringing together global know-how for each individual project.

Schindler planning services:

- Expert consultants for traffic and product planning
- Traffic analysis and calculation service
- Specialized engineering centers for customized configurations
- Planning guidelines and tools to expedite shaft planning, building layout and product selection/configuration

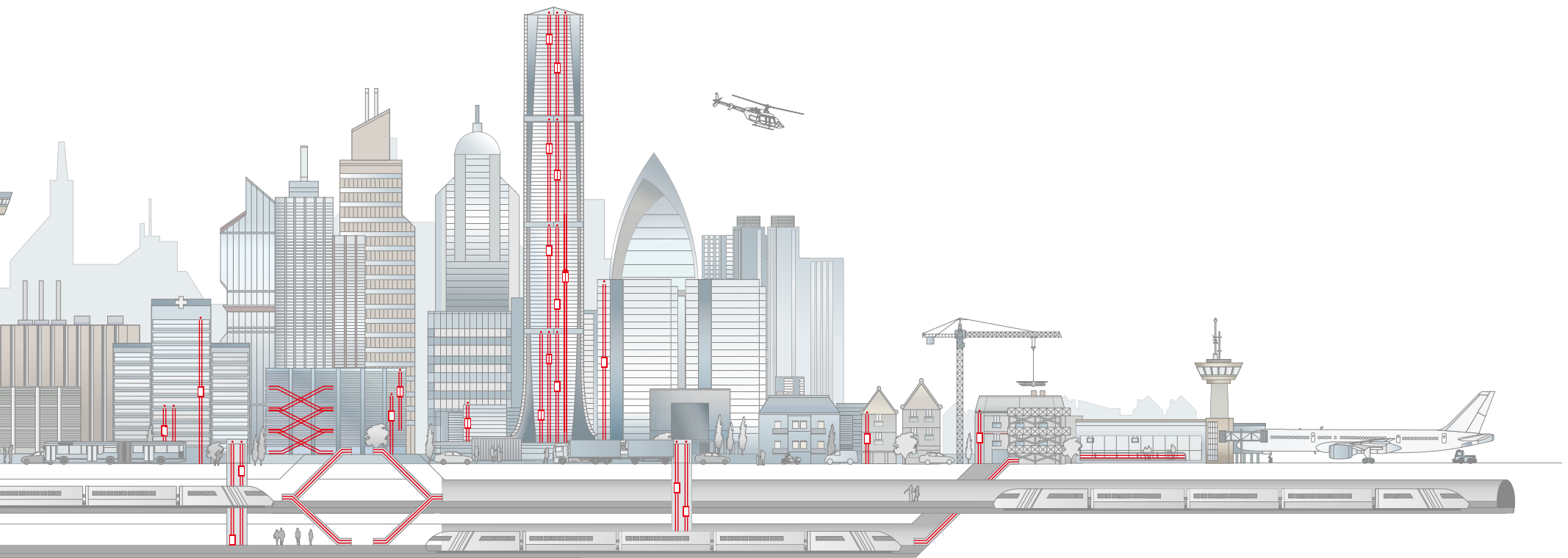


## Seamless delivery

With a full-range portfolio of elevators, escalators and moving walks, Schindler provides mobility solutions for any building application. Schindler customers can rely on sustainable technology, excellent project management and proven installation methodologies. It's always the perfect fit.

Technology for all building types and mobility needs:

- Residential and office buildings
- Commercial towers, retail environments
- Hospitals and public buildings
- Heavy-traffic environments
- High-rise buildings
- Cruise liners



## Efficient operation

Smooth, hassle-free operation and very high availability are the result of professional maintenance and modernization. Environmental and operational efficiency add value to the investment. Reliability and sustainability – all day, every day.

The maintenance, repair and modernization portfolio:

- Global network of branches and service points
- Skilled and certified technicians and fitters
- Service solutions for all building types and requirements
- Availability and fast delivery of spare parts
- Quickly responding call-center services
- E-monitoring diagnostic tools
- Replacement and step-by-step modernization solutions

## Continuous enhancement

Schindler constantly develops new products and features to set new benchmarks and increase efficiency. Technological milestones that provide mobility to the urban society – conveniently, safely and ecologically. Progress needs innovation.

The cutting-edge developments:

- PORT technology – traffic, building communication and access-control management that calculates the swiftest route through the building
- Schindler regenerative PF1 clean drive technology
- Space-saving, weight-optimized designs
- Flexible modernization concepts from full replacements to partial retrofits
- Eco-mode options for elevators, escalators and moving walks



# You know where to find us. We look forward to seeing you.

For additional information and the location of your nearest Schindler branch, please contact:

**[www.schindler.com](http://www.schindler.com)**

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