Schindler CLIMB Lift

Improved site logistics and productivity

We Elevate

Schindler


IBM
HAPPINESS

Today’s high-rise buildings are growing not just taller and more complex, but their construction speed is also rising to suit market expectations. Innovative and efficient mobility solutions even during the construction phase are in high demand.

Schindler CLIMB Lift contributes to a higher productivity and can later serve as a permanent elevator. Efficiency, safety, and flexibility, all in one package.

Common challenges in high-rise projects
Why efficiency and flexibility matter

The jobsite of every project is unique and has its own challenges. Therefore, the mobility products and solutions need to be as flexible as possible. Below are challenges that workers and contractors face on construction sites across the globe.

Ensuring work safety at all times
Work safety is always the most important thing on a construction site. Ensuring the safety of workers is easier when using a tried and tested installation and transportation solution.

Moving hundreds of people daily
Often workers would wait in long queues to use external hoists, wasting valuable time and crowding the jobsite, even creating safety hazards.

Transporting thousands of kilograms of material every day
The sheer tonnage of material that needs to be transported around site on a daily basis is often staggering. The capacity and speed of external hoists often create bottlenecks and material is left outside, exposed to the elements.

Severe weather conditions
Around the world, workers are often exposed to severe weather conditions. Heat, snowstorms, or a long wet season can all have a huge impact on construction progress and crew morale. Protecting your workforce and materials from adverse weather is difficult with traditional exterior hoists.

Tight deadlines to complete the building
Tight deadlines are often imposed to try and reduce the costs of construction, which means it is essential to sustain a productive jobsite at all times. Time saved during construction can ultimately lead to earlier building completion and a faster return on investment.

Limited space and limited working hours
Space is almost always in short supply on a construction site, and it is paramount to use the available space as efficiently as possible. In densely populated areas, often construction work is restricted to certain hours due to the noise it would create: another reason to manage time effectively.

Schindler CLIMB Lift
The cutting-edge solution

Schindler CLIMB Lift can perform as a permanent elevator for the building. In this way, it can bring the numerous benefits of a permanent elevator from the beginning of the construction.

Strengthened work safety
Schindler CLIMB Lift is as safe as a permanent elevator. It fulfills all the latest international elevator standards and guarantees safe and reliable transportation.

Reduced waiting times
Schindler CLIMB Lift allows faster transportation of people and material to the desired destination. This means the number of hours wasted in moving workers using the slower external temporary transportation hoists will be reduced significantly (please see p. 8).

Improved site logistics
Schindler CLIMB Lift can operate up to 5 m/s, 5000 kg of nominal load and 500 m of travel height, providing smooth vertical transportation. Since Schindler CLIMB Lift is located at the center of the building, movement of people and material is optimized and cost-effective from the beginning.

All-weather operation
Exposure to external weather conditions is reduced by having a vertical transportation system in a dry and windproof hoistway located at the core of the building. Work will not be affected by disturbing weather conditions.

Earlier facade closing
The building facade can be closed much earlier than with traditional exterior hoists. Your specific building shape and facade design will not affect the transportation system, as Schindler CLIMB Lift is located at the center of the building.

Increased productivity
The elevator can be used in a 24/7 mode, so materials could also be transported during night shifts. Improved transportation and reduced waiting times lead to a more productive construction pace, earlier building completion, and ultimately, a quicker return of investment.

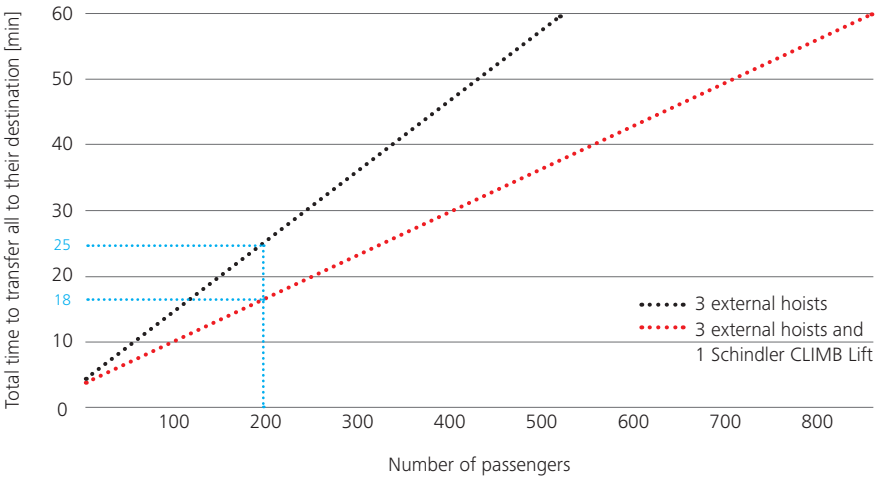
Excellent performance illustrated
Faster and safer

Let us look at how Schindler CLIMB Lift performs in a practical situation and how it helps the construction to proceed faster and safer.

Comparison of typical performance statistics between an external hoist and a Schindler CLIMB Lift*

Kilograms moved per hour	People moved per hour	Travel speed
External hoist 20800 kg	External hoist 260	External hoist 1 m/s
Schindler CLIMB Lift 48000 kg	Schindler CLIMB Lift 600	Schindler CLIMB Lift 3 m/s
» loading capacity more than doubled	» more than 2 times as many people	» 3 times as fast

Example of efficiency-gain*



Reading example (see blue lines):
If 200 workers enter the building at the same time, then the time to transport them with 3 external hoists (black line) is 25 min. By adding 1 Schindler CLIMB Lift (red line), the time drops to 18 min.

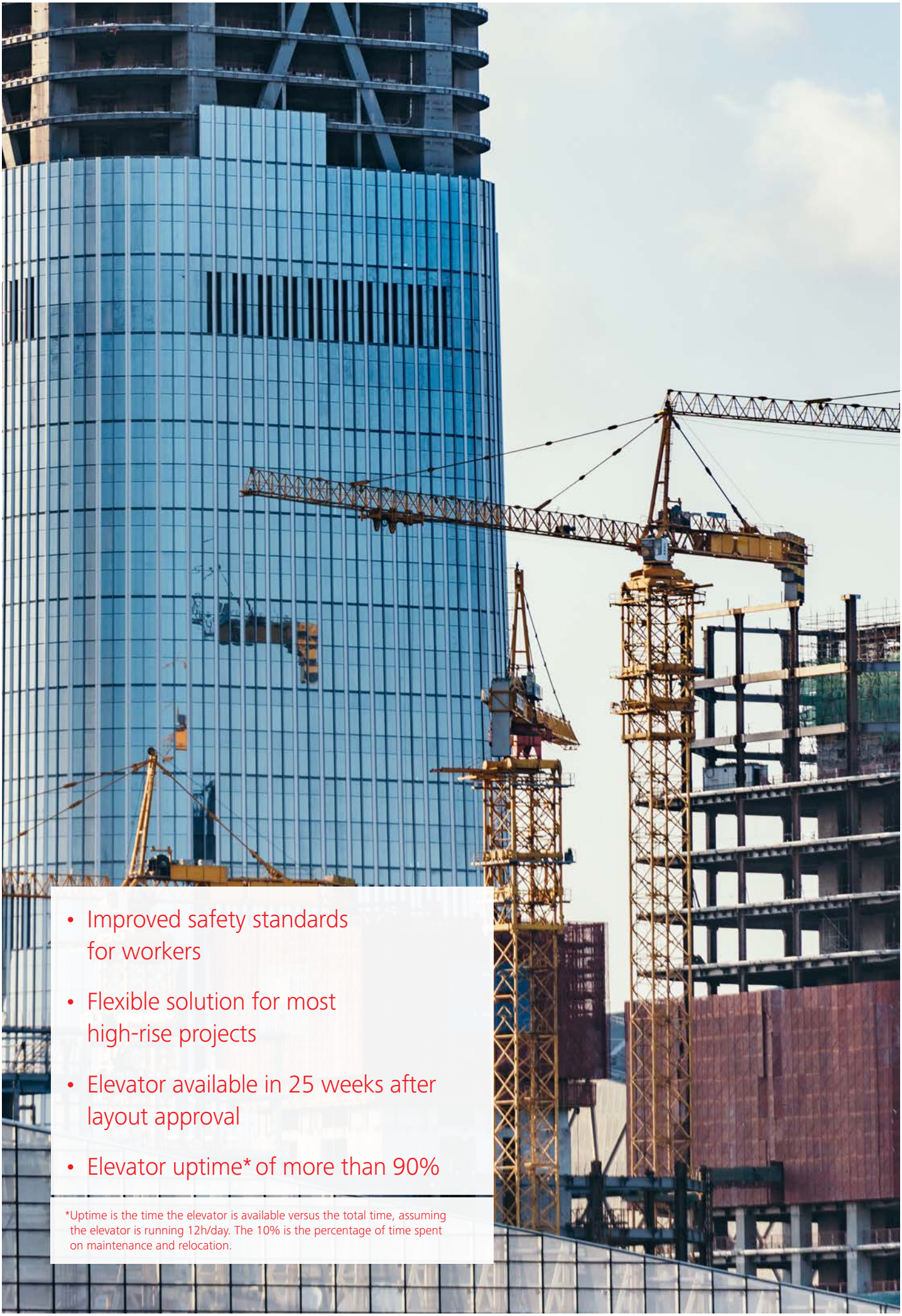
*** Premises for the comparison and the diagram:**

Assuming there are already 3 external hoists, and 1 Schindler CLIMB Lift can be added.

For both the external hoists and the Schindler CLIMB Lift, the following variables remain the same:
Travel height = 150 m, GQ = 2000 kg (26 persons), fill grade = 80%, intermediate stops: 5

For the Schindler CLIMB Lift, we assume:
Speed = 3 m/s, unloading / loading time = 1 min

For the external hoists:
Speed = 1 m/s, unloading / loading time = 1.5 min



- Improved safety standards for workers
- Flexible solution for most high-rise projects
- Elevator available in 25 weeks after layout approval
- Elevator uptime* of more than 90%

*Uptime is the time the elevator is available versus the total time, assuming the elevator is running 12h/day. The 10% is the percentage of time spent on maintenance and relocation.

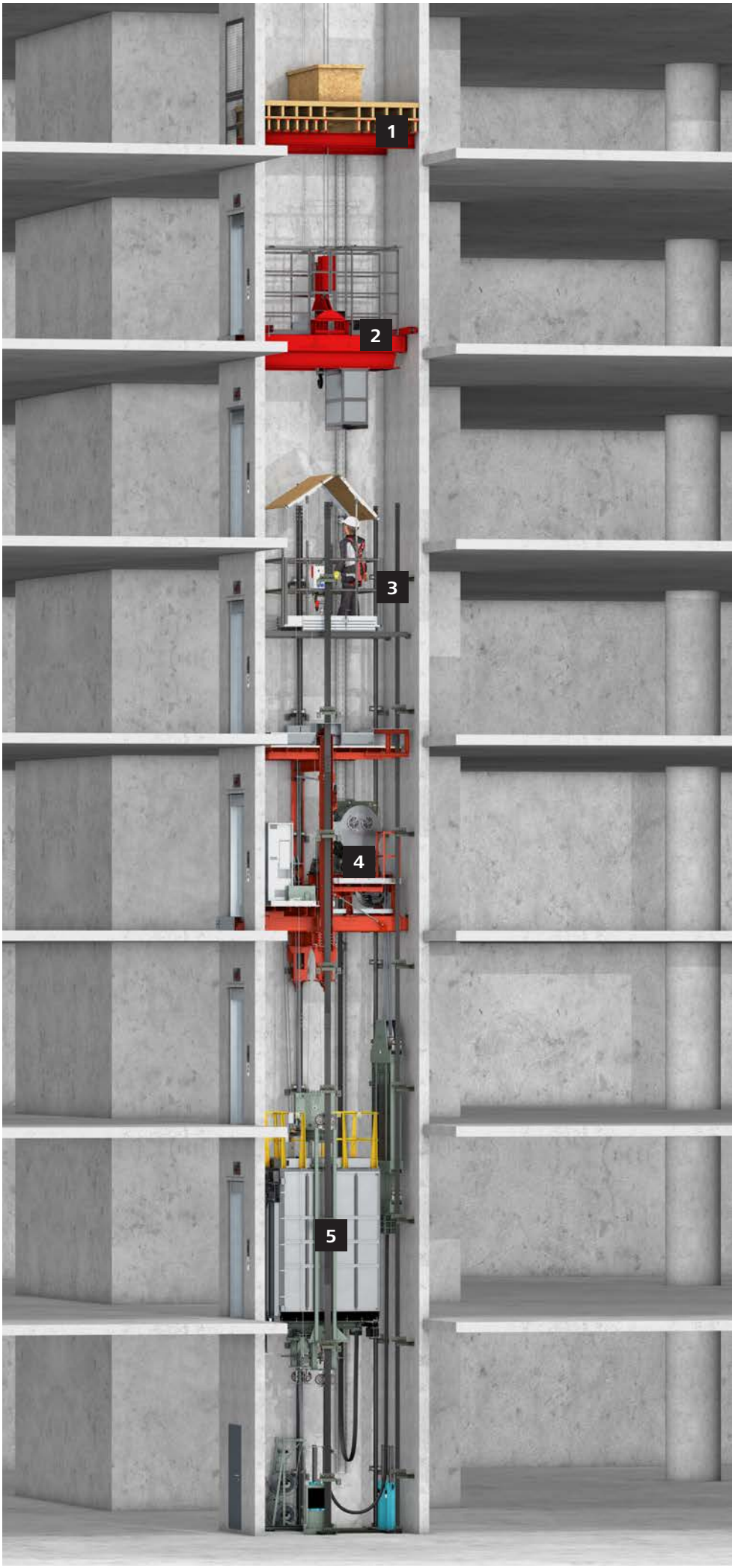
Self-climbing system
Its installation and operation

Schindler has more than 20 years of successful experience in high-rise installation with Schindler CLIMB Lift. During this period, over 120 Schindler CLIMB Lifts had helped elevate building construction.

Schindler CLIMB Lift is a certified self-climbing vertical transportation system which is used during the construction phase of the building. Directly installed in the final elevator hoistway, Schindler CLIMB Lift allows the permanent machine room and permanent elevator cars to be operational in considerably less time, increasing productivity and site progress, allowing the building to be opened much sooner.

Schindler CLIMB Lift is located at the core of the building, offering optimized site logistics for people and material transportation. The enhanced working environment allows 24/7 service and a better cost efficiency from the beginning.

In pace with the construction progress, Schindler CLIMB Lift also has the additional advantage of using permanent elevator components. The temporary protective cladding used inside the car during construction is easily removed, thereby saving the time for refurbishment.



Schindler CLIMB Lift key performance figures

Max. load	5000 kg
Max. travel height	500 m
Max. travel speed	5 m/s

01	**Crash deck** The waterproof crash deck provided by the main contractor protects the Schindler CLIMB Lift and people working underneath from falling objects.
02	**Lifting Platform** When in the self-climbing mode, the lifting platform can transport people and goods, operating independently from the tower crane. It hoists itself up using a dedicated suspension point at the crash deck.
03	**Installation platform (optional)** In between the lifting platform and the machine platform, a protected platform is used for the installation of guide rails, landing doors, and other elevator hoistway components.
04	**Machine platform** The machine platform contains the elevator machine and control. It is hoisted up either with the tower crane or with the optional lifting platform.
05	**Elevator** Below the machine platform, the permanent elevator car is in operation, fitted with a temporary protective cladding.

An iconic reference project in Germany
OMNITURM, Frankfurt

Facts

- No rack and pinion hoists on or inside the building
- 350 - 450 construction workers on site
- Building height: 182 m
- Swing platform: 1 lifting platform serves 2 Schindler CLIMB Lifts
- Schindler PORT during construction
- One temporary elevator serving uppermost floors (430 trips per day)

Key figures

1st climb: November 2017
Residential and office
3 x S7000 Schindler CLIMB Lifts
1 x temporary elevator
GQ (rated load) = 2000 kg
HQ (travel height) = 182 m
VKN (rated speed) = 2.0 m/s (final 7.0 m/s)
3 x S7000 Schindler CLIMB Lifts; each with 11 climbs

Solution

Our client, Tishman Speyer, planned to build the most innovative and modern building in Europe, perhaps even in the world, within a very short building time. Schindler CLIMB Lift's promising contribution in construction progress immediately won the client's attention.

"We scored with our Schindler CLIMB Lifts in the area of building logistics, and with Schindler myPORT to digitalize the building."

Jürgen Blank
Head of Project Business and New Technologies at Schnindler Germany

Schindler CLIMB Lift reference projects
Elevating construction worldwide

Crown Plaza

Sydney, Australia
1st climb: December 2018
Office, Hotel
2 x S7000 Schindler CLIMB Lifts
Self-climbing*
10 climbs
GQ = 1350 kg / 2175 kg
HQ = 260 m
VKN = 3.0 m/s (final 6.0 m/s)

Roche Bau 2

Basel, Switzerland
1st climb: November 2019
Office
5 x S7000 Schindler CLIMB Lifts
Self-climbing
6 climbs
GQ = 2000 kg
HQ = 212 m
VKN = 3.0 m/s (final 7.0 m/s)

Skytower

Brisbane, Australia
1st climb: August 2017
Residential
1 x S7000 Schindler CLIMB Lift
Self-climbing
9 climbs
GQ = 2600 kg
HQ = 270 m
VKN = 3.0 m/s (final 4.0 m/s)

Xujiahui Center

Shanghai, China
1st climb: August 2019
Office
4 x S7000 Schindler CLIMB Lifts
Self-climbing
9 climbs
GQ = 1800 kg / 4000 kg
HQ = 340 m
VKN = 3.0 m/s (final 7.0 m/s)

*for explanation, see page 11/02

GQ: Rated load
HQ: Travel height
VKN: Rated speed

Glory Tower

Singapore
1st climb: August 2019
Office
2 x S7000 Schindler CLIMB Lifts
Self-climbing
5 climbs
GQ = 1090 kg / 2600 kg
HQ = 270 m
VKN = 3.0 m/s (final 4.0 m/s)

Bay Adelaide

Toronto, Canada
1st climb: April 2014
Office
2 x S7000 Schindler CLIMB Lifts
Self-climbing
8 climbs
GQ = 2720 kg
HQ = 198 m
VKN = 3.5 m/s (final 4.0 m/s)

Norra Tornen 1

Stockholm, Sweden
1st climb: November 2017
Residential
2 x S5500 Schindler CLIMB Lifts
Self-climbing
8 climbs
GQ = 1000 kg / 1600 kg
HQ = 121 m
VKN = 3.0 m/s (final 3.0 m/s)

Tour M2

Paris, France
1st climb: November 2017
Mixed-use
1 x S7000 Schindler CLIMB Lift
Self-climbing
8 climbs
GQ = 1800 kg
HQ = 198 m
VKN = 2.5 m/s (final 4.0 m/s)

We Elevate...
Construction site logistics

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