



INDUSTRIAL APPLICATIONS

PRODUCT GUIDE

VERTICAL ACCESS SOLUTIONS

Access anytime, anywhere

ALIMAK

INDUSTRIAL APPLICATIONS

About Alimak

Alimak is a global leader and pioneer in the design and manufacture of vertical access solutions for industrial and construction industries. The company provides permanent and temporary high-quality elevators, construction hoists and work platforms built on rack and pinion and traction technologies.

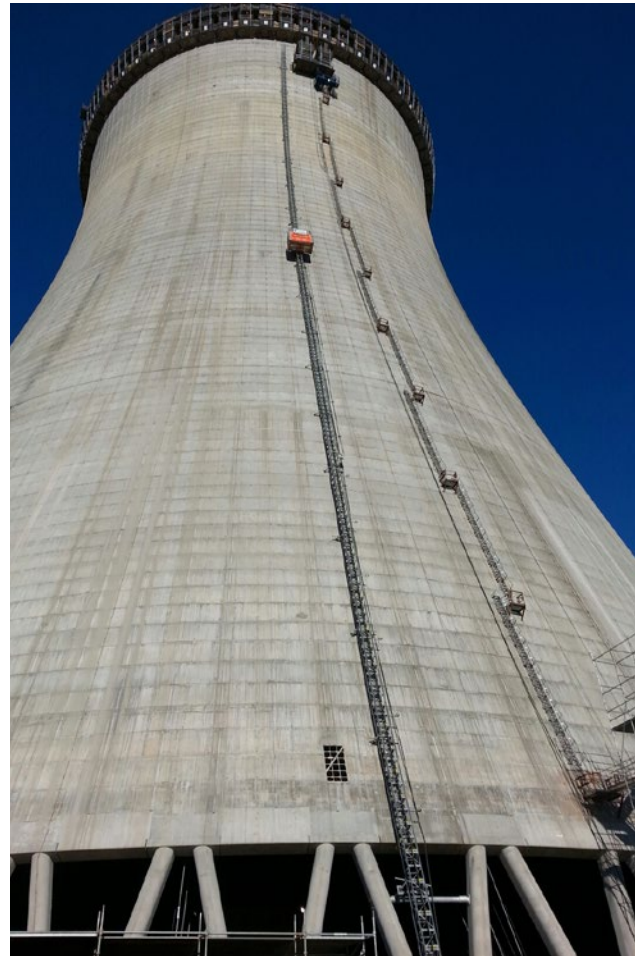
INDUSTRIAL VERTICAL ACCESS SOLUTIONS

Designed to enhance efficiency, Alimak has an installed base of over 23,000 vertical access solutions for a variety of industries worldwide. Sought after for their rugged and dependable design, Alimak industrial elevators provide a durable vertical access solution with models available to meet the specific needs of a range of industries and environments.

Alimak offers a broad product portfolio of both rack-and-pinion and traction elevators to suit a range of applications. Since the introduction of the first rack and pinion elevator more than 60 years ago, Alimak has pioneered the vertical access industry delivering far-reaching access solutions designed to meet the specific needs of a range of industries.

Alimak industrial elevators utilise tried and tested rack and pinion and traction technology to deliver prompt and reliable vertical access for passengers and materials in some of the world's most challenging environments.

For more information visit alimak.com.



Vogtle Electric Generating Plant, Georgia, United States



ALIMAK GROUP

Alimak Group is a world-leading provider of vertical access solutions for professional use, listed on Nasdaq OMX Stockholm. With presence in more than 100 countries, the Group develops, manufactures, sells and services vertical access solutions with focus on adding customer value through greater safety, higher productivity and improved cost efficiency. Alimak Group's products and solutions are sold under the brands Alimak, CoxGomyl, Manntech and Avanti. The Group has an installed base of around 70,000 elevators, hoists, platforms, service lifts and building maintenance units around the world. Founded in Sweden 1948, the Group has its headquarters in Stockholm, 10 production and assembly facilities in 8 countries and 2,100 employees around the world.

INDUSTRIAL

Product range



ALIMAK SE & SE-EX

Alimak SE passenger and freight elevators have payloads ranging from 300 kg up to 2000 kg making them ideal for the transportation of passengers and goods. Available in 30 car sizes, the Alimak SE features a modular design and is suitable for use across a range of industries. The Ex range, Alimak SE-Ex is fully compliant with EU and US regulations.



ALIMAK SE-H & SE-H EX

Optimised for high-performance in even the most challenging conditions, the Alimak SE-H with forklift truck loading functionality is available in a range of sizes varying from 4 m² floor space to a 6 m² area with a payload of 3300 kg on a single mast. The Ex range offers capacities of up to 2,800 kg and is fully compliant with EU and US regulations.



ALIMAK SE TM & SE-EX TM

Alimak SETM elevators are designed to transport materials weighing up to seven tonnes when required and are built for peak performance in hazardous areas. Two powerful drive units are located on the roof of the car, eliminating the need for a machine room and delivering a smooth ride.



ALIMAK FM

Designed specifically for the off-shore industry, the four-masted FM range cargo elevator has a capacity of up to 12,000 kg to support the loading and unloading of heavy-duty goods. Alimak FM elevators do not require a machine-room and are able to withstand the roll and pitch of the ocean for reliable and efficient operations.



ALIMAK SL

The Alimak SL service elevator range is designed for permanent installation in an array of industries. The range has payload capacities of up to 1,000 kg, providing the ability to carry personnel and materials. The Alimak SL service elevator enables access, monitoring and servicing of plants.



ALIMAK SL-H

The Alimak SL-H heavy duty elevator range provides durable and reliable vertical access in industrial settings. The SL-H range is available in three sizes and offers payload capacities from 1,000kg to 3,000kg. A unique dual solution is also available, featuring two independent elevator cars operating on a single guide mast column.

INDUSTRIAL

Product range



ALIMAK PL

The Alimak PL range of elevators are an ideal solution for the internal and external transportation of goods, particularly for warehouses. With capacities of up to 2,000kg and drive machinery located on the car, this goods elevator does not require a machine room and is ideal for operations in limited spaces.



ALIMAK TR

Utilising tried and tested traction technology, the Alimak TR is available in a range of car sizes with capacities of 300 kg up to 5000 kg. The Alimak TR industrial elevator features a durable design for reliable and efficient performance in a range of industrial settings.



ALIMAK TR-H & TR-H EX

The TR-H & TR-H Ex range is built on traction technology for optimal performance in industrial settings. With a surface treatment corrosion classification up to C5 and ingress protection rating up to IP54, this range of elevators is made for the world's most tough and hazardous environments.



ALIMAK ME

The Alimak ME marine elevator is specifically designed for marine vessel applications. The reinforced carbon steel car frame and safety gear are fully compliant with various European and U.S regulations for industrial elevators to meet safety requirements, withstand strong winds and ocean movements.



ALIMAK OS & OS-EX

Alimak OS traction elevators are designed to provide vertical access for heavy-duty goods and materials in tough industrial environments. Featuring a payload of up to 10,000 kg, this model is compliant with EN81-20/50, ISO 8383, 2014/33/EU and Norsok standard R-002 regulations and can be customised. This model is also available as explosion-proof.



CUSTOM SOLUTIONS

Alimak's range of industrial elevators can be customised to suit a large range of applications. Elevators can be tailored to almost any height or payload and can be installed on sites with inclinations and curves. The largest payload to date is 24,000 kgs and the greatest lifting height is currently at 645 m with the deepest underground application standing at 700 metres.

Bridges and tunnels

Bridges and tunnels often require flexible vertical access solutions capable of operating in restricted spaces to transport passengers for inspections, maintenance and emergency evacuations.

Alimak industrial elevators provide efficient and reliable access for the inspection, maintenance, and emergency access for a multitude of bridge, road, rail and metro tunnel applications around the world. The elevators are adaptable to inclinations and curves, tight spaces and often harsh environmental conditions.

Alimak's industrial elevators are ideal for bridges where they can be used inside pylons to provide access to cable stays and the aircraft warning lights at the top. Without the need for a machine room or shaft, Alimak elevators are also able to operate in tight spaces to transport passengers and tools underground to tunnel shafts. Alimak also supports in the construction of bridges and tunnels with temporary vertical access solutions.

TYPICAL APPLICATIONS:

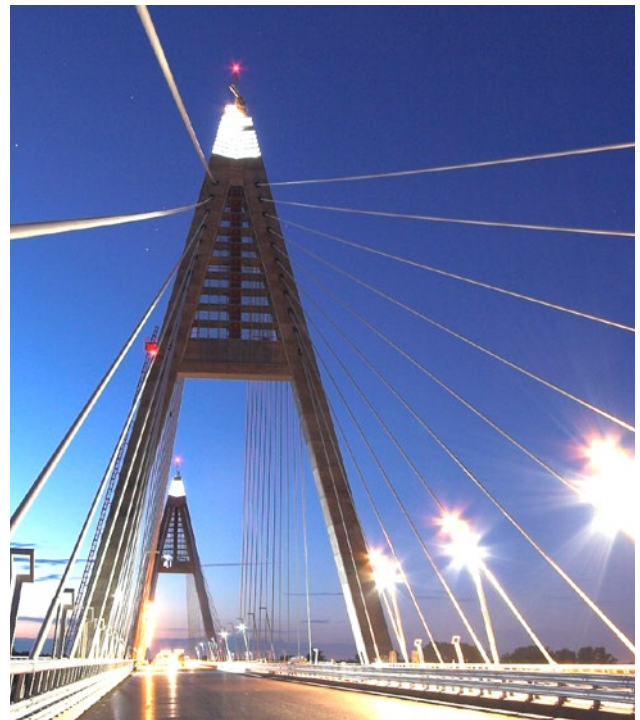
Bridge, pylons, road, rail and metro tunnel shafts.

CASE STUDY

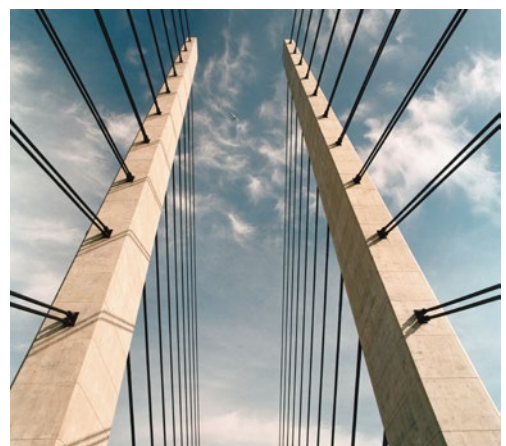
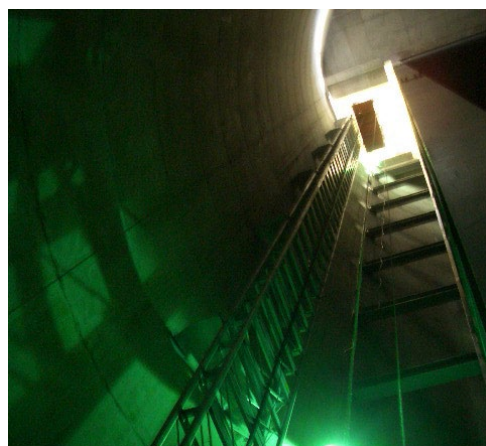
Inclined Alimak elevators provide access to the bridge pylons on the Megyeri Bridge in Budapest, Hungary.

Alimak took to the task of designing two custom Alimak rack and pinion elevators for the esteemed Megyeri Bridge in Budapest, Hungary. There are a number of challenges associated with construction bridge pylons. The 600m long steel superstructure was designed to be supported by the cables suspended on 2 reinforced 100m tall concrete pylons.

Alimak commissioned two elevators to provide assistance with the project. Each elevator had 6 landings and travelled up to heights of 53.5m. Most importantly, both elevators were built to negotiate the 13.2° incline when ascending the pylon. Moving at speeds of 0.6m per second, the elevators provided fast and efficient access to cable-stays, aircraft warning lights and other levels of the site for service and maintenance.



Megyeri Bridge, Danube, Budapest, Hungary



Cement

Industrial elevators can be utilised at cement plants for a range of inspection, maintenance, overhaul and monitoring operations by providing efficient access to various levels of the plant.

Durable and robust, Alimak industrial elevators are designed for optimal performance in the hot and dusty conditions often present at cement plants. The elimination of the elevator shaft provides a solution to the challenges presented by dust concentration and humidity and the rugged rack and pinion design prevents issues, allowing for a long and efficient operational life.

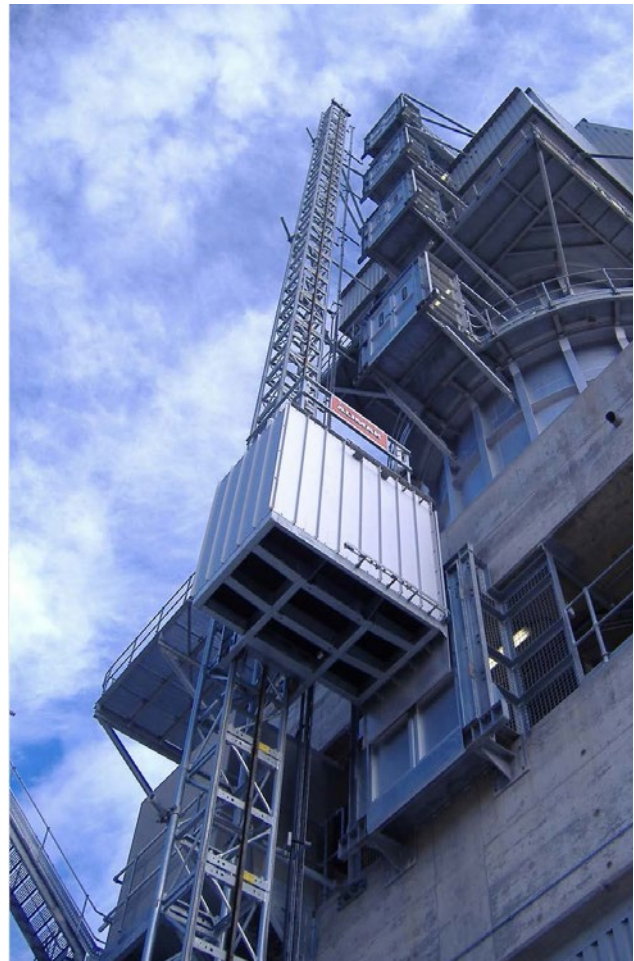
Alimak's range of industrial elevators are available in a range of car sizes and capacities to meet the access requirements of each individual cement plant.

Alimak elevators are often installed on the outside of Cement plants and can easily be adjusted to support expansions to plants.

Alimak also supports in the construction of cement plants with temporary vertical access solutions.

TYPICAL APPLICATIONS:

Silos, cyclone towers, wet scrubbers, preheaters, filter chambers, bagging facilities, stack calciners, mills and asphalt plants.



Chemical

Manufactured to withstand heat and abrasive atmospheres, Alimak industrial elevators are ideal for both indoor and outdoor applications at chemical plants due to the engineering of the robust design.

Alimak industrial elevators are used in chemical plants around the world for general maintenance on a daily basis and accommodates extra personnel and equipment during shutdown periods.

Alimak's industrial elevators are suitable for the harsh environments that chemical plants are often located in which create high demands for durability and reliability of access systems.

Alimak also supports in the construction of chemical plants with temporary vertical access solutions.

CASE STUDY

A robust external industrial elevator for an inclined chimney Shaanxi Changqing Energy Power and Chemical Plant.

As an industry pioneer of rack and pinion elevator technology, Alimak was the natural choice to provide vertical access at the Shaanxi Changqing Energy Power Plant. The continuous monitoring of emissions is key to the daily operations of this coal and chemical plant meaning vertical access is required to reach the chimney, however, the sloping geography of the structure presented a number of challenges.

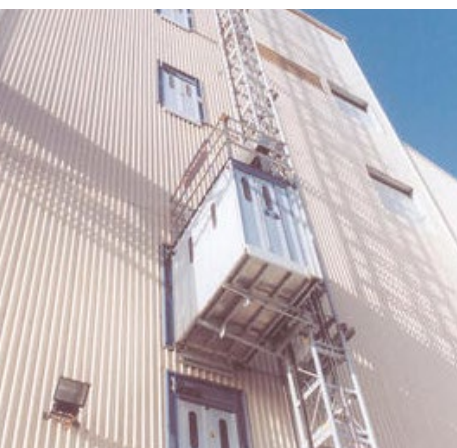
Alimak worked closely with the team at the plant to create a vertical access solution that was able to navigate the 2° inwards tapering surface of the chimney. The Alimak team used force calculations and technical installation techniques to install the elevator and ensure that it stayed level throughout its 65 meter ascent up the chimney as well as making landing platform modifications and training operators.

TYPICAL APPLICATIONS:

Boilers, chimneys, coke & sulphur structures, crackers, LNG & LPG tanks, and towers.



Shaanxi Changqing Power and Chemical Plant, China



Food and beverage

Alimak industrial elevators enable food and beverage facilities to make the most of limited indoor spaces for greater productivity.

Used predominantly to transport goods and materials vertically on-site, Alimak industrial elevators can also be utilised to provide fast access for maintenance and servicing operations on essential equipment, reducing the costs associated with downtime.

Industrial elevators also provide a safer alternative to manual handling and forklift use to create a safer working environment on site.



Grain

Providing a suitable alternative to wire rope elevators and the associated challenges with wear and tear, Alimak industrial elevators are suitable for use in all weather conditions to transport passengers and materials to the various parts of a grain facility.

River and rail terminals are used to transport large quantities of grain via conveyor belt technology for delivery to the grain storage silos.

These storage silos require vertical access for various purposes. Alimak's industrial elevators are a safe and reliable alternative to the small wire rope elevators and belt man lifts often used within the industry.

TYPICAL APPLICATIONS:

Storage silos, loading facilities, tall structures housing conveying systems and grain handling facilities with the capacity to transport.

Alimak elevators also provide a safer alternative to wire rope elevators, with the capability to be lowered to the ground safely for emergency evacuation following a power outage.

Alimak industrial elevators are often utilised to transport 2-3 or up to 25 passengers depending on the needs of a grain facility.

Alimak also offer industrial elevators for use in hazardous dust locations which comply with NEC standards.



Metal and steel

Alimak supplies industrial vertical access solutions for metal and steel industries around the world from South Australia to Northern Iceland and from Western Venezuela to Eastern Japan.

Alimak's industrial elevators deliver efficiency, reliability and enhanced productivity at aluminium refineries, smelters and steel mills whereby continuous operations are key.

Utilising industry knowledge and building on years of experience with leading manufacturers and engineering, procurement and construction entities, Alimak designs robust vertical access solutions to facilitate optimal performance in metal and steel.

Alimak also supports in the construction of chemical plants with temporary vertical access solutions.

TYPICAL APPLICATIONS:

Boiler houses, chimneys, smelters, precipitators, treatment plants, tanks, silos and towers.



Mining

Built to operate at peak performance in both aboveground and underground applications, Alimak industrial elevators provide the ideal vertical access solution for mines, smelters, processing plants and concentrators.

Removing the need for hazardous and inefficient stair climbing, industrial elevators provide economical means of transporting workers, tools and materials onsite for equipment maintenance on equipment or simply for daily access for mining operations.

Designed for durability, Alimak elevators can operate as low as 2,000 metres below ground withstanding abrasive conditions to deliver a high-performing access solution.

The Alimak rack and pinion elevator technology allows for a practically unlimited lifting height, with the deepest so far goes 700 meters deep in a mine in Mexico.

Alimak's industrial elevators can be installed easily and without the need for a machine room. In underground mines, Alimak rack and pinion elevators are ideally suited for providing the secondary, emergency vertical access required by mine safety regulations.

TYPICAL APPLICATIONS:

Pellet loading terminals, concentrating plants crushers, headframes, processing facilities, chimneys smelters, mine shafts and handling and preparation plants.



Oil and gas onshore

Alimak has provided vertical access solutions for an array of oil and gas facilities for decades, including oil refineries, natural gas processing plants, petrochemical plants and LNG storage tanks.

Alimak's industrial elevators are adaptable in size and capacity and come available in explosion proof models and without the requirement for a machine room or elevator shaft.

The range of industrial elevators provides reliable and convenient access in oil refineries, natural gas processing plants, petrochemical plants and LNG storage tanks.

Industrial elevators provide reliable and efficient access to save workers from climbing stairs which helps to increase safety and productivity, even at low lifting heights.

Alimak provides a full solution from concept design and manufacturing to comprehensive service and support to manage the maintenance of the elevator through its lifecycle.

TYPICAL APPLICATIONS:

Oil Refineries, Natural Gas Processing Plants, Chemical Plants and LNG Storage Tanks around the world.



Oil and gas offshore

Alimak offers a range of Industrial elevators suitable for various vertical access requirements within the offshore oil and gas industry.

Offshore and marine conditions present a unique set of challenges such as strong winds, harsh weather conditions and the roll and pitch of the ocean. Alimak's range of industrial elevators are built to operate at peak performance within tough offshore environments.

Since Alimak's offshore elevators first entered the oil & gas market in 1974, over 1,000 elevators have been delivered to the industry.

Typical applications for elevators include semi-submersible and jackup rigs, drill ships and offshore vessels, fixed platforms, swamp barges, gravity-based structures, FPSOs and TLPs around the world. Alimak's elevator capacities vary depending on the size and weight of the goods to be transported; ranging from the requirement of transportation of personnel to goods and shipping containers.

Elevators are primarily installed on derricks, inside hull columns, living quarters, utility areas and outside platform modules.

MARINE APPLICATIONS

Alimak also offers a dedicated range of Marine elevators. Elevators that are installed outdoors can be installed with a water-tight elevator shaft for additional protection against the elements.

Alimak's offshore elevators are fully compliant with American and European electrical and elevator code.

TYPICAL APPLICATIONS:

Semi-submersible and jack up rigs, drillships, industrial marine vessels, fixed platforms and swamp barges.



Ports and shipyards

Alimak elevators increase productivity, enhance efficiency, and foster safe environments in ports and shipyards.

Frequently used to transport passengers to the top of a crane in just two minutes, an Alimak port crane elevator eliminates the dangers associated with climbing ladders for maintenance and inspections and crane operations. In an industry where profits are dependent on a consistent flow of operations, the time-cost associated with climbing ladders can be excessive. Studies have shown that Alimak elevators can reduce crane downtime and maintenance by 25%.

CASE STUDY

Alimak replace old elevators on container cranes.

Alimak installed two Alimak SE industrial elevators on Ansaldo container handling cranes in Port Autonome Nantes-Saint-Nazaire, France to replace two elevators that were over ten years old.

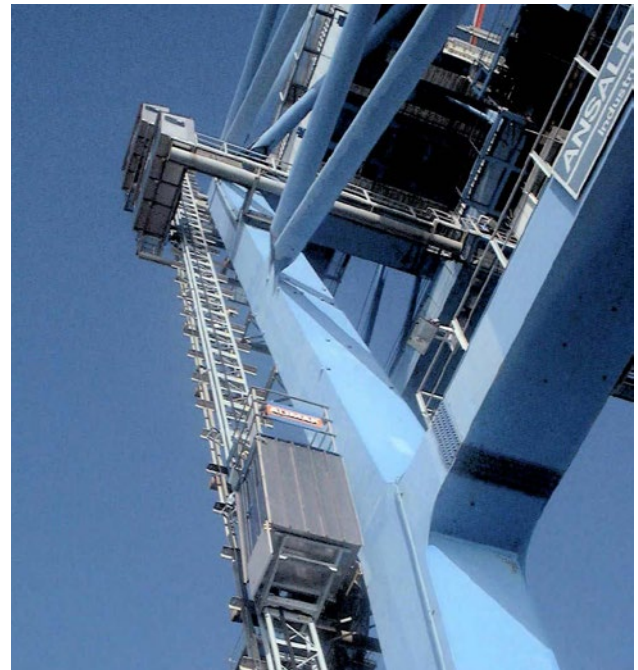
The Alimak SE industrial elevator range is the most extensive on the market. Offering small car sizes to provide access in restricted spaces and large heavy-duty goods elevators, the SE range boasts over 30 car sizes and loading capacities of up to 2000 kg.

With a loading capacity of 500 kg, the crane elevators installed on the Ansaldo cranes are able to travel 0.7 metres per second to provide swift and efficient access for personnel. As these elevators were retrofitted to a crane structure, the elevator masts were required to be installed at a 7° inclination which the cars were modified to fit so as to remain level throughout the 38.5 m journey.

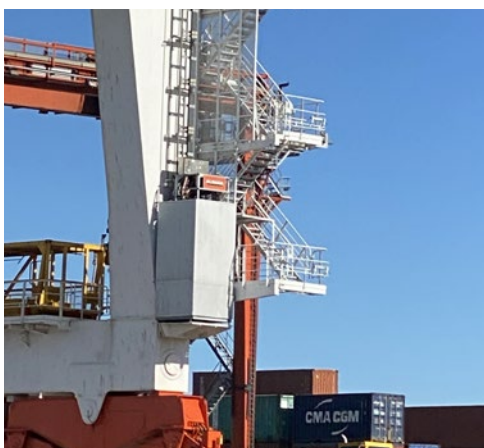
Harsh weather conditions are often present at ports and shipyards, meaning that all landings had to be equipped with an enclosed cabin to protect operators from bad weather and strong winds whilst boarding and disembarking the elevator.

TYPICAL APPLICATIONS:

Rubber-tired gantry cranes, ship-to-shore cranes, ship unloaders, rail-mounted gantry cranes, drydocks, goliath cranes, silos and warehouses.



Port Autonome Nantes-Saint-Nazaire, France



Power plants

By enhancing the efficiency and productivity of operations, Alimak customers enjoy a significant return on investment from their industrial elevator.

Built for optimal performance when faced with even the most challenging power plant conditions, Alimak industrial elevators are renowned throughout the industry for durability.

Alimak industrial elevators are designed to provide a flexible vertical access solution. In gas-fired, refused-fired, coal-fired, combined-cycle hydroelectric, solar and nuclear facilities, Alimak helps to overcome the previously insurmountable challenges associated with vertical access.

For over 50 years, Alimak has delivered efficient vertical access solutions from models able to operate in restricted spaces to heavy-duty elevators to meet the demands of the power industry.

CASE STUDY

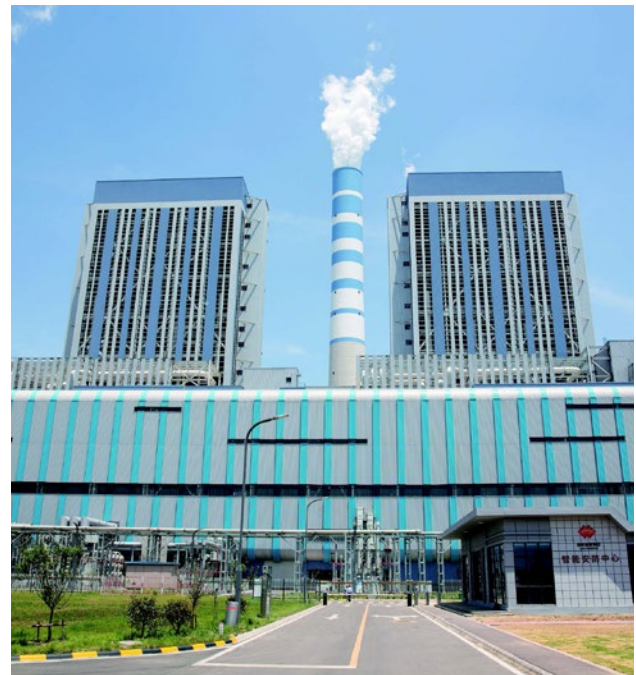
Alimak SL 600 FC elevator provides access inside the chimney of the power plant.

Based in Jiangsu Province, China, the Guodian Suqian Power Plants Units 3 and 4 are essential to the secondary reheating unit project. Stakeholders at the plant selected an Alimak SL rack and pinion elevator for units 3 and 4 to create access for the transportation of passengers and materials weighing up to 600 kg from the ground level to the two levels above. The flexible design of the Alimak SL 600 elevator eliminates the need for a machine room or shaft, meaning that the new Alimak industrial elevator was integrated easily into the existing structure using tie-ins to attach the elevator to the mast-tower.

Featuring speeds of up to 0.55 metres per minute, the industrial elevator quickly transports passengers to the Continuous Emission Monitoring System to take vital emissions measurements.

TYPICAL APPLICATIONS:

Chimneys, silos, transfer towers, boilers, scrubbers and absorbers, heat recovery steam generators, cooling towers, solar towers, dams and suspension electricity pylons.



Guodian Suqian Power Plant, Jiangsu Province, China



Pulp and paper

Like many industries, pulp and paper plants rely on a continual flow of operations to maintain productivity and enhance profitability.

To aid in the efficient and safe movement of people and materials on site, investing in reliable vertical access equipment that is capable of withstanding harsh conditions is vital. Designed to enhance productivity, Alimak's industrial elevators deliver a safe means of transportation across a range of pulp and paper facilities for inspections, servicing operations and maintenance.

Alimak industrial elevators are known for their durability and their ability to withstand the challenging environments present at pulp and paper mills including abrasive atmospheres and harsh chemicals for consistency and high-performance. Elevator masts feature a galvanised steel design and are resistant to corrosion and humidity, whilst the robust design of the elevator car protects passengers from challenging environmental conditions on site.

Industrial elevators are available in single and twin mast configurations and a range of capacities from 300 kg – 7000 kg to meet the unique needs of every pulp and paper mill. Alimak industrial elevators do not require a machine room or shaft and can be easily retrofitted onto existing structures on site providing for a truly flexible vertical access solution that thrives even in restricted spaces.

TYPICAL APPLICATIONS:

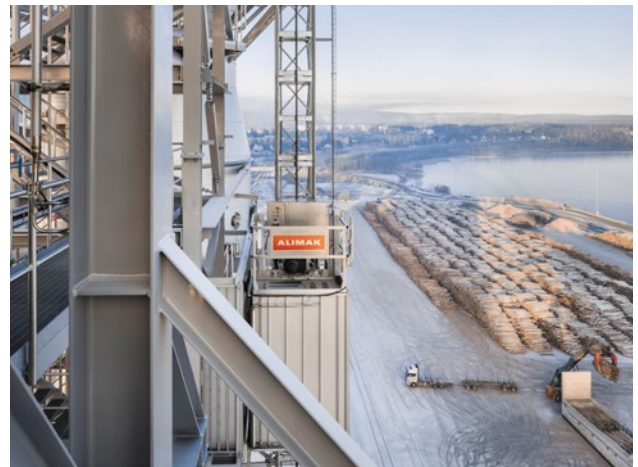
Digesters, boilers, processing towers, mills.

CASE STUDY

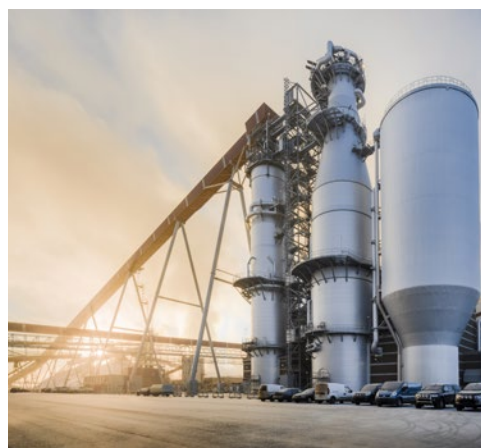
Alimak elevator at world's largest production line for bleached softwood kraft pulp.

As industry leaders in vertical access solutions, Alimak's range of industrial elevators are ideal for pulp and paper mills.

A newly installed Alimak industrial elevator creates efficient vertical access at the world's largest production line for bleached softwood kraft pulp at the Östrand pulp mill in Timrå, Sweden. The Alimak SE industrial elevator provides reliable and efficient vertical access to the boiler for inspections, servicing and maintenance. Installed on the outside of the structure, the stainless steel design of the Alimak SE is built to withstand corrosion and the abrasive atmospheres present on site. Engineered to enhance productivity, the industrial elevator utilises rack and pinion technology to transport passengers and materials to the boiler approximately 25 times per day.



Östrand pulp mill, Timrå, Sweden



Warehouse and logistics

Alimak offer a range of industrial elevator solutions which are ideal for data centres, warehouses and logistical facilities.

The dedicated range of Alimak warehouse elevators are designed to operate in restricted spaces to increase productivity and enhance efficiency.

Suitable for indoor and outdoor applications, the range of elevators are suitable to transport parcels, trolleys and pallets. Customised solutions are also available to transport extra large loads.

CASE STUDY

Alimak elevator provides access for Systembolaget logistics facility.

Systembolaget, a Swedish government-owned chain of liquor stores, recently chose an Alimak rack & Pinion elevator for a logistics facility in Brunna. The vertical access solution put forward required a small footprint and minimum preparation as there was no need to design or install an accompanying shaft for the elevator.

Using just one tie-in, the elevator was attached to a concrete beam in the warehouse where an elevator could help the owners make the most of the space available. With room for goods and personnel and a capacity of up to 1000 kg, the elevator is utilised for transport between the ground level and two mezzanine floors.

Without the need for a shaft or machine room, Alimak warehouse elevators are easily installed into existing buildings and create efficient vertical access at low lifting heights. Low headroom between the top landing and the roof is another great advantage.

TYPICAL APPLICATIONS:

Parcel elevator, trolley elevator and pallet elevator.



Systembolaget logistics facility, Brunna, Sweden



SERVICE AND SUPPORT

Service solutions

Alimak offers a comprehensive range of service solutions specifically tailored to meet the needs of our customers operating in demanding environments.

FULL SERVICE SUPPORT SOLUTION

Through our service centres in over 100 countries, Alimak offers a comprehensive range of services designed to care for your products and the people who operate them over the total lifecycle of the equipment. Alimak is committed to Safety. To ensure the safety and compliance of your products, Alimak offers a wide

range of inspections and certifications to support our customers in demonstrating that their equipment is compliant to the regulatory framework in which they operate, and that their people are competent in its use. To learn more about the inspection and certification programmes currently offered in your region, please contact Alimak.



SERVICE MAINTENANCE

Comprehensive range of service contracts, maintenance programmes and repair solutions to ensure maximum uptime



TRAINING

Training to support the safe operation, maintenance and installation of equipment



GENUINE SPARE PARTS

Genuine spare parts prolong machine life and maximise performance



INSPECTIONS, SAFETY AND COMPLIANCE

Routine inspection programmes to ensure equipment is kept safe and compliant



REFURBISHMENT SOLUTIONS

Bring new life to an aging machine with a cost effective refurbishment or upgrade



ASSET MANAGEMENT

A range of support solutions to manage the total life-cycle of equipment





Alimak is a global market leader and pioneer in the design and manufacture of vertical access solutions for industrial and construction industries. The company provides high quality rack and pinion and traction elevators, construction hoists and work platforms. Alimak has a well-established global sales, service and distribution platform across more than 100 countries with strong market presence. The company has a large global installed base of over 23,000 units which provides unique know-how of all industrial application areas. Alimak was founded in 1948 and is part of Alimak Group which is headquartered in Stockholm, Sweden.

www.alimak.com



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