

SAFE I SIMPLE I SPECIALIZED Access equipment

Tower Climber

Tower crane access equipment

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3S LIFT profile

3S LIFT(605305.SH), founded in 2005, is a well known leading global provider of access equipment and service solutions for people working at height. Our products have been used in 15 industries and exported to 55 countries.

3S LIFT is headquartered in Beijing, with manufacturing in Tianjin, and wholly-owned subsidiaries in Plano, USA, Hamburg, Germany, Chennai, India, and Tokyo, Japan. Currently, 3S LIFT has more than 700 employees. We can achieve fast, stable, professional technical support, and provide customers with end-to-end one-stop service.

Delved into the field of high-altitude safety operation and technical standard of wind power industry for **17** years, 3S has now ranked the first all over the world in products such as service lift, climb auto system, offshore crane, auto descending device and fall protection system.



R&D Center in Beijing (Yizhuang)



Tianjin Intelligent Manufacturing Center



Business Development Center inNorth America



Climb auto system ranking

No.1 in global sales

No.1 in global sales

Frontier Technolo Center in Europe



Overseas (Service Cé

Auto descending device ranking No.1 in global sales

No.1 in global sales

Offshore crane ranking

150,000+

Products used in wind turbines

Global safety certifications

700 Patents applied for





Customer enter in India

02

Product introduction

3S LIFT tower climber is a lithium battery powered climb-aid equipment used on the tower crane. It can be installed within the tower section, or on the existing ladder within the tower. With the advantages of high safety, stable running, compact structure design, simple operation, easy installation and disassembly, the tower climber enables the tower crane operator to get on and off the crane with improved safety and efficiency.

The Tower Climber is designed and manufactured to the latest European standards and has passed the CE certification. It could be used in tower cranes, wind turbines, high-voltage towers and high-rise buildings.

More Usage Scenarios

Specifications

Self-weight	70kg
Rated load	150kg
Rated speed	18 m/min (2 minutes to reach the top of a 40 meter tower crane)
Battery range	≤1500 m (40 round trips on a 40 meter tower crane.)
IP rating	IP65
Operating temperature	-20°C-+55°C
Ambient wind speed	≤13m/s (Wind force: 6)
Service life	10 years
Rated voltage	Adapt to regional outlet

I Compliance

Directive 2006/42/EC EN 1495 Lifting platforms EN 12100-1 Safety of machinery ISO 13849-1 Safety of machinery-Safety-related parts of control systems





Upper-end Stop with Buffer

Upper-end Stop with Buffer is installed at the top of the guide rail. It prevents the lift from running off the guide rail in the case of operation failure.

Operation Handles (Two-hand Switch Control)

Personal Fall Arrester



The guide rail and the ladder are comprised of standard sections. Each section has the same length as a crane's tower section.

The 3S LIFT guide rail works as part of the rack and pinion drive system and is also part of the fall protection system.

The Tower Climber can be installed on the existing ladder or on a standard 3S LIFT ladder.

Car Fall Arrester

Battery



Lower-end Stop with Buffer

Lower-end Stop with Buffer is installed at the bottom of the guide rail. In the case of a malfunction where the car is not stopped by the lower limit switch, the bottom ultimate limit protection brings the car to a stop and prevents it from falling to the ground.



Value of product







No more physical fatigue. start-up switch system.

6 safety features

for the car and the operator) Upper/lower limit function Manual descent function Overload protection Two-hand switch control Low-power protection

Start your work in 2 minutes and increase your efficiency

The car runs at a speed of 18 m/min and takes only 2 minutes to reach the top of a 40 meter tower crane.



bottom of the ladder.

Easy to use

3S LIFT Tower Climber frees you from the physical exhaustion of climbing

- Access the working height without ladder climbing.
- Comfortable operation with ergonomic two-handle
- Dual fall protection system (independent fall arresters

- The Tower Climber is easy to operate with pressing two handle switches simultaneously.
- Upper/lower limit function ensures the Climber stops automatically when it reaches the top or the

Safety Features

Dual independent fall protection systems

Operator fall arrester is connected to the guide rail and full body harness. When an accidental fall occurs, the fall arrester will operate and its locking lever will engage on the guide rail mechanically to stop the operator from falling.

Car fall arrester is installed inside the guide rail and one end of it is connected to the pin roll of the car. When an accidental fall of the car occurs, the locking lever will engage on the guide rail and prevent the car from falling. Two fall arresters provide doubled fall protection.

Manual descent, overload protection and low-power protection function

Manual descent

The operator can manually pull up the mechanical releasing device at the right side of the car to descend the car safely and steadily.

Overload protection

If the system will trigger the alarm and cut off the power supply, tower climber should be overloaded. All operations are disabled unless the overload is removed.

Low-power protection function

The battery is programmed with a battery management system (BMS) which allows the car to travel down (but not up) in the event of low battery level (less than 15%). This enables the operator to return to the ground level even when the battery is low.



After sales service



Installation

3S LIFT provides professional training services on the installation and operation of the Tower Climber (including installation and operation guide and videos, as well as face-to-face training).



Delivery

One week production time after purchase order is signed. Global delivery arrives within 4 weeks.

Maintence and repair

3S LIFT provides a 1-Vear guarantee for the Tower Climber and its parts.

3S LIFT provides full life-cycle consultancies on maintenance and repair of the Tower Climber (including routine and annual maintenance guide, videos and face-to-face training). 3S LIFT also offers on-site annual inspection service upon customer request.

After-sales service

Respond within 24 hours from receiving a request.

Develop a solution within 72 hours hours.

We offer on-site after-sales service.

Application case

d on a Top OME tower crane

Background

To get into the cab, a crane operator needs to climb the special ladder fixed inside the mast of the tower crane. The climbing puts a lot of strain on the operator and entails high safety risks.

Solution

The use of the rack and pinion-guided Tower Climber frees the operator from climbing, making it much easier to access and exit the cab. It also improves safety and work efficiency.

Achievement

The height of the tower crane in this project is 40 m. After the erection and testing, the rack and pinion-guided rails were installed, then the Tower Climber was put into use. The Tower Climber perfectly meets the requirements of use on site. The simple installation and operation of the Tower Climber improve efficiency. Its safety and reliability features are much appreciated by the customer.

ou project by State Grid Corporation of China Customized version of the Tower Climber

Background

Conventional power line maintenance by human labor can hardly meet the operation and maintenance needs of modern power grids, and alternative means such as drones still have a long way to go in terms of replacing manpower for maintenance tasks. However, due to its smart technologies, the power line maintenance robot has the potential to fully substitute for human labor to perform power line inspection tasks.

Solution

To facilitate the power line maintenance robot to get on and off the tower lattice, the customer chose the 3S Lift Tower Climber. The use of the Tower Climber makes it easier for the robot to get on and off the power lattice.

Achievement

The tower lattice in this project is 48.5 m in height with an actual climbing height of 47 m. The guide rail sections of the Tower Climber are mounted into the tower, and the lift operates perfectly.

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