



# 3S LIFT Offshore Davit Crane

Wind turbine cranes specially designed for the harsh marine environment

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# **Company Introduction**

Ficont Industry (Beijing) Co., Ltd. is a China-based leading provider of equipment and services for people working at height. Our products have been applied in 17 different industries and exported to more than 70 countries. Our core business is the wind industry. With our strong focus on R&D, we have been granted for more than 600 patents and obtained over 100 global safety qualification certificates. We strive to support our customers and makes a better future in the field of working at height.

With more than **900** employees, including more than **100** foreigners, 3S LIFT has a head office in Beijing, factory in Tianjin, and wholly-owned subsidiaries in Dallas (USA), Hamburg (Germany), Chennai (India), Tokyo (Japan), and Jaraguá do Sul City (Brazil). It has after-sales service networks around the world, and has global equipment installation and maintenance capability, achieving quick, stable, and professional technical support, and providing end-to-end one-stop service.



Beijing Headquarters



Factory in Tianjin



North America Branch in Texas







**600**<sup>+</sup> Global Patents





Europe Branch in Hamburg



India Branch in Chennai



Japan Branch in Tokyo

# 02/Product Introduction

## Product Usage

The 3S LIFT offshore crane is a special lifting device intended for transferring materials (spare parts, maintenance materials, etc.) between a service vessel and outside platform of the WTG tower. It significantly reduces labor intensity, and improves maintenance efficiency and operation safety.

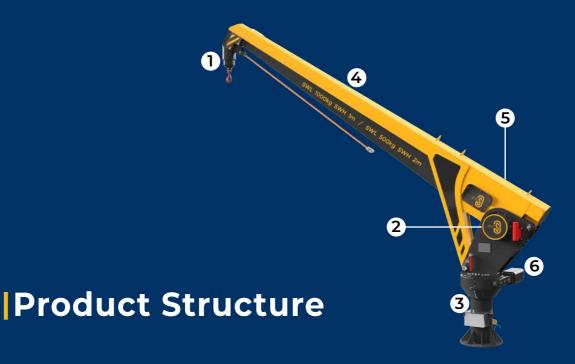
Equipped with high-quality components, the crane has a strong and reliable life cycle and adapts to the harsh marine environment. Meanwhile, it is sturdy and durable, with high safety, reliability and lasting corrosion resistance. It has a high level of shock resistance and bearing capacity, even in harsh conditions, and is designed with more than 35 years of service life.

The crane adopts an ergonomic design structure, which is highly comfortable and can easily lift and transport heavy objects, ensuring efficient supply and maintenance of spare parts for maximum efficiency.

## Industrial Advantage

3S LIFT is one of the earliest manufacturers in China engaged in development and applications of offshore cranes. In 2012, we successfully installed a crane in the offshore project of an internationally renowned OEM. This crane serves offshore wind turbines with more than 12 GW in capacity. 3S LIFT also has more than 13 years of experience in lifting and transporting solutions for offshore davit cranes, an industry-leading scientific research team of more than 100, and more than 3,000 offshore davit crane applications, ranking first in the Asia-Pacific market.







## Lifting Hook Limit Switch

The top limit switch enables the hook to slowly stop after reaching the intended position.

It has a special wire rope outlet space and the position is highly adaptable. It has a special design to reduce abrasion caused by wire ropes, extending its service life.



### **Lowering Limit Switch**

The lowering limit switch enables the hook to slowly stop after reaching the intended position.

It can record the position and stop reverse rolling.



### **Supporting Column**

A component supporting the whole equipment, designed with high strength. It is installed on the base of outer tower platform. The column flange can be customized.



### **Boom Assembly**

A hexagon variable cross-section structure design with high strength.

CX-class corrosion resistance (ISO12944-9).

The slewing radius can be customized as required.



### **Drive Unit**

The wire rope storage position and power source of the whole device.

Designed with a winch drum inside, the gearbox has a simple and compact structure.

Its LEBUS rope groove has a special wire rope pressure mechanism and slack rope limiter mechanism.



### **Slewing Bearing Assembly**

The high-precision slewing bearing ensures smooth operation.

The self-locking design resists gusts up to 70 m/s.

The electric and manual slewing bearings are easy to use and convenient.



### Wireless remote control

Start and operate the device through a wireless remote control. The remote control is equipped with a display screen, which can display real-time load and height information, and provide a visual operating experience, making the operation more conveniently and efficiently.

## **Product Feature**





CE Certification (by SGS) EMC Certification China Classification Society (CCS) Certification DNV-GL Certification **Standards** MD 2006/42/EC EMC 2014/30/EC EN 13852-1

EN 13852-3 EN ISO 12100 EN 60204-1 ISO 12944 DNV GL-ST-0378





### Ultra-high anti-corrosion protection

The crane has CX-class corrosion resistance, making it suitable for all-weather marine environment.

#### Customizable safe working load

The safe working load can be customized according to customers' needs to facilitate lifting and transporting large WTG components.

### Self-locking protection function

The self-locking slewing bearing is an independent mechanical locking mechanism and can resist gusts up to 70 m/s.

### Anti-twisting wire rope

The anti-twisting wire rope can stop rotation of the lifting object and reduce wire rope damage and breakage, with excellent corrosion resistance at the same time.

### **Overload protection function**

When a load between 100% and 110% of the rated load is applied, the winch drum will stop running automatically to ensure the safety of the operator and equipment.

## Unique wire rope pressure mechanism and slack rope limiter mechanism

The unique wire rope pressure mechanism and slack rope limiter mechanism keep the wire rope in order. The lifting hook stops immediately when reaching the ground, making the crane safe and reliable.

### Automatic Overload Protection System (AOPS)

When the crane's hook becomes entangled with the vessel, leading to an overload, the AOPS is automatically activated. As this occurs, the winch drum releases the rope, accompanied with an audible and visual alarm. This system prevents significant damage to the crane in the event of an overload.

### **Emergency Load Lowering Function (ELL)**

The ELL function is activated by the operator, and is used to slowly and safely lower the suspended load to the supporting level in case of sudden power failure or crane failure.

### **Distributed sealing protection design**

The crane uses distributed sealing for its key parts. The wire rope, hoisting motion limiter, lifting motor and slewing bearing are all equipped with sealing housing, improves the waterproofing and corrosion resistance of the entire crane, and prolonging the service life.

### Wireless remote control

The wireless remote control is equipped with a screen, which can display real-time load and height information during the operation, so that it can provide a convenient and efficient visualization experience for users.

### **Obstacle avoidance function**

By preset the position of obstacles, ensure that the hook reaches sufficient height to safely cross the obstacles before turning. The crane will stop slewing when the height requirement is not met, so that the crane will avoid collision risks effectively and make operation safer.

## Star Product Offshore Davit Crane

OC-5010	
Safe working load	500kg/1,000kg
Lifting speed	20m/min or 36m/min
Slewing radius	5m
Max. slewing angle	350°
Max. lifting height	30m
Wire rope diameter	llmm
Power supply	400V/690V
Rated power	8kW
Service life	35 years
Operating temperature	-20°C to 45°C
Max. wind speed	18m/s
Max. significant wave height	2m



## Product Range

Standard model						
Product model	Slewing radius	Safe working load	Lifting speed	Lifting height	Wire rope diameter	Operating temperature
OC-2	2.1m	1,000kg	18m/min	≤25m	φllmm	-20°C to 45°C
OC-2516	2.5m	1,600kg	24m/min	≤28m	φ12mm	-20°C to 45°C
OC-3010	3m	1,000kg	24m/min	≤25m	φllmm	-20°C to 45°C
OC-4010	4m	1,000kg	24m/min	≤25m	φllmm	-20°C to 45°C
OC-5010	5m	1,000kg	36m/min	≤25m	φllmm	-20°C to 45°C
OC-5016	5m	1,600kg	24m/min	≤28m	φ12mm	-20°C to 45°C
OC-7010	7m	1,000kg	36m/min	≤25m	φllmm	-20°C to 45°C
OC-8010	8m	1,000kg	40m/min	≤30m	φllmm	-20° <b>C</b> to 45° <b>C</b>

NAMING CONVENTIONS

(using the OC-5010 as an example)

OC - 5010

→ 10: Safe working load 1,000 kg
→ 50: Slewing radius 5.0 m
→ OC: Offshore Crane

The above specifications can all be customized.





## Product Value

## Safe

 $\cdot$  AOPS and ELL functions meet the EN13852-3 standard

· Lowering limit switch and slewing motion limiter

 $\cdot$  Obstacle avoidance function to avoid collisions with obstacles during lifting operations.

 $\cdot$  Several emergency stop buttons in various locations which cannot be reset automatically

- · Power-off brake works in case of power-off
- $\cdot$  Slewing mechanical lock function
- · Automatic speed change function for lifting
- $\cdot$  The column is equipped with an anchor point.

### Easy-to-use

- · Plug-and-play design is easy and convenient.
- $\cdot$  Ergonomic wired remote control and easily operated interface.
- · Manual/automatic slewing design for ease of operation.

• The wireless remote control is equipped with a screen, which can display real-time load and height information during the operation, so that it can provide a convenient and efficient visualization experience for users.

## **More efficient**

 $\cdot$  Lifting speed up to 40m/min and automatic speed change design, improving working efficiency.

 $\cdot$  The strict FEMA analysis and quality control system ensure good product quality and low failure rate.

## **Environmental protection design**

 $\cdot$  With a pure electric design, the crane achieves zero carbon emissions, fulfilling green commitments and promoting sustainable development.

· The low-noise design is friendly to operators and the marine environment.

• The general AC/DC contactor conforms to the Green Premium™ ecological certification.

 $\cdot$  Components meet the RoHS and REACH EU environmental protection standards.

# 03 / Application Cases

The 3S LIFT offshore davit crane ranks first in domestic market share and has been widely applied in many provinces and municipalities in China, such as Guangdong, Fujian, Jiangsu, Liaoning, Shanghai and Hunan. It is also ranked first in Asia-Pacific market and been widely applied in Vietnam, Japan and other countries.

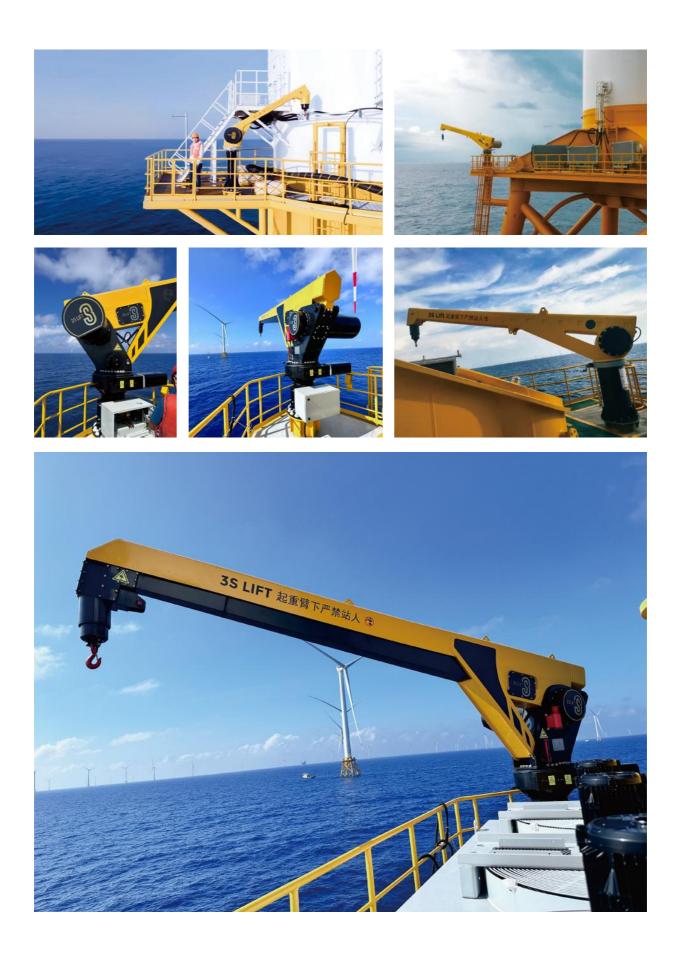












# O 4/ After-Sales Service



3S LIFT has factories in Beijing, Tianjin, China and Germany. The product will be delivered to the designated place within 8-12 weeks after the contract signing.



# Installation

3S LIFT provides professional guidance on installation and operation (including an installation and commissioning manual, operation manual, and operation and usage video).





Video training course Indoor online video training Outdoor on-site training



## Maintenance

3S LIFT provides maintenance and guidance service and parts and components during the entire service life of the crane (it can also provide on-site annual inspections and regular maintenance).







# **Global Services**



32 provincial administrative regions



72 countries







# Service Standard





Solutions in 24 hours



Arrival at the task site in 48 hours







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