

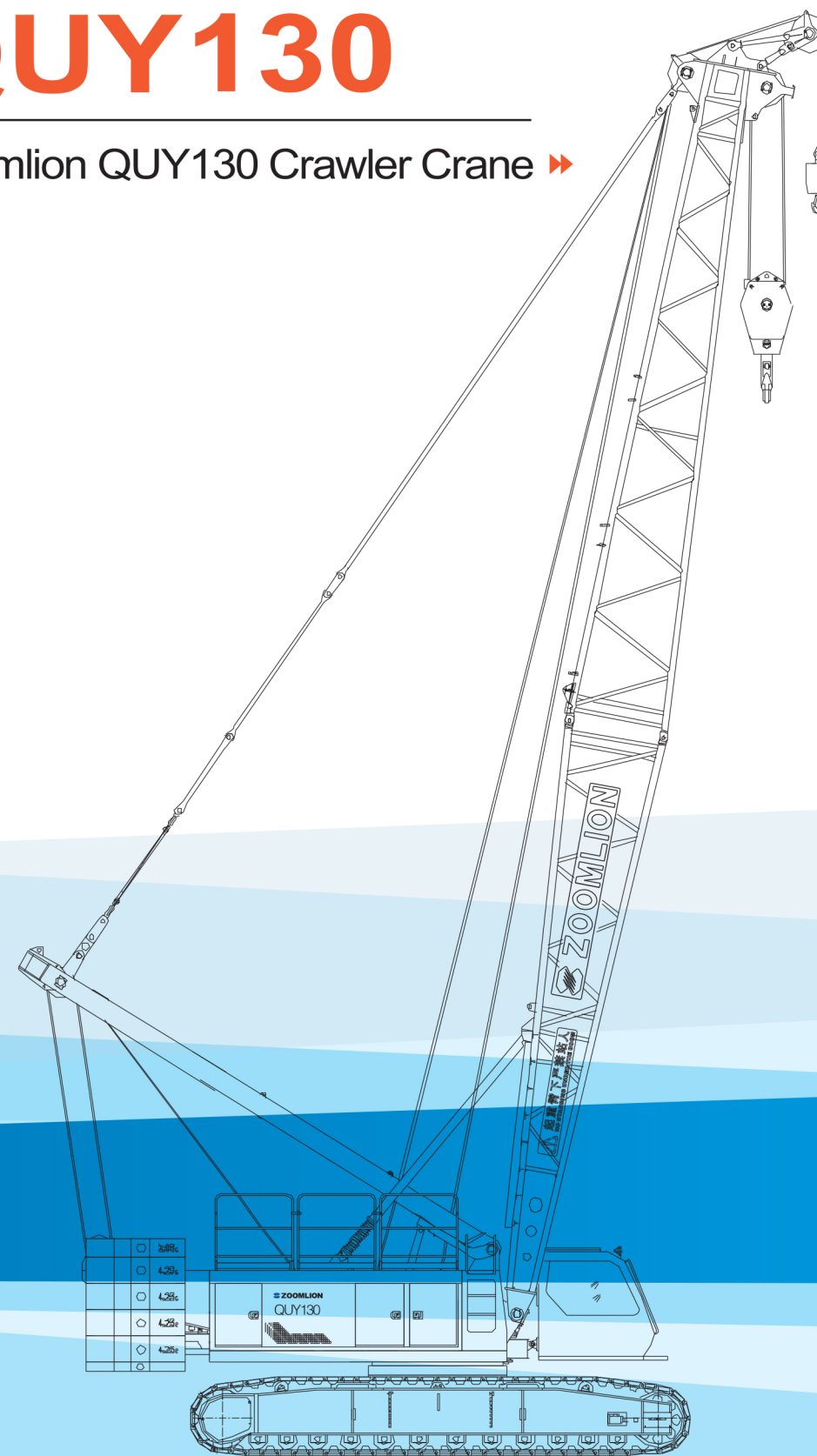


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+7(812) 955-77-20,  
[www.gruzomir.com](http://www.gruzomir.com)

[www.zoomlion.com](http://www.zoomlion.com)

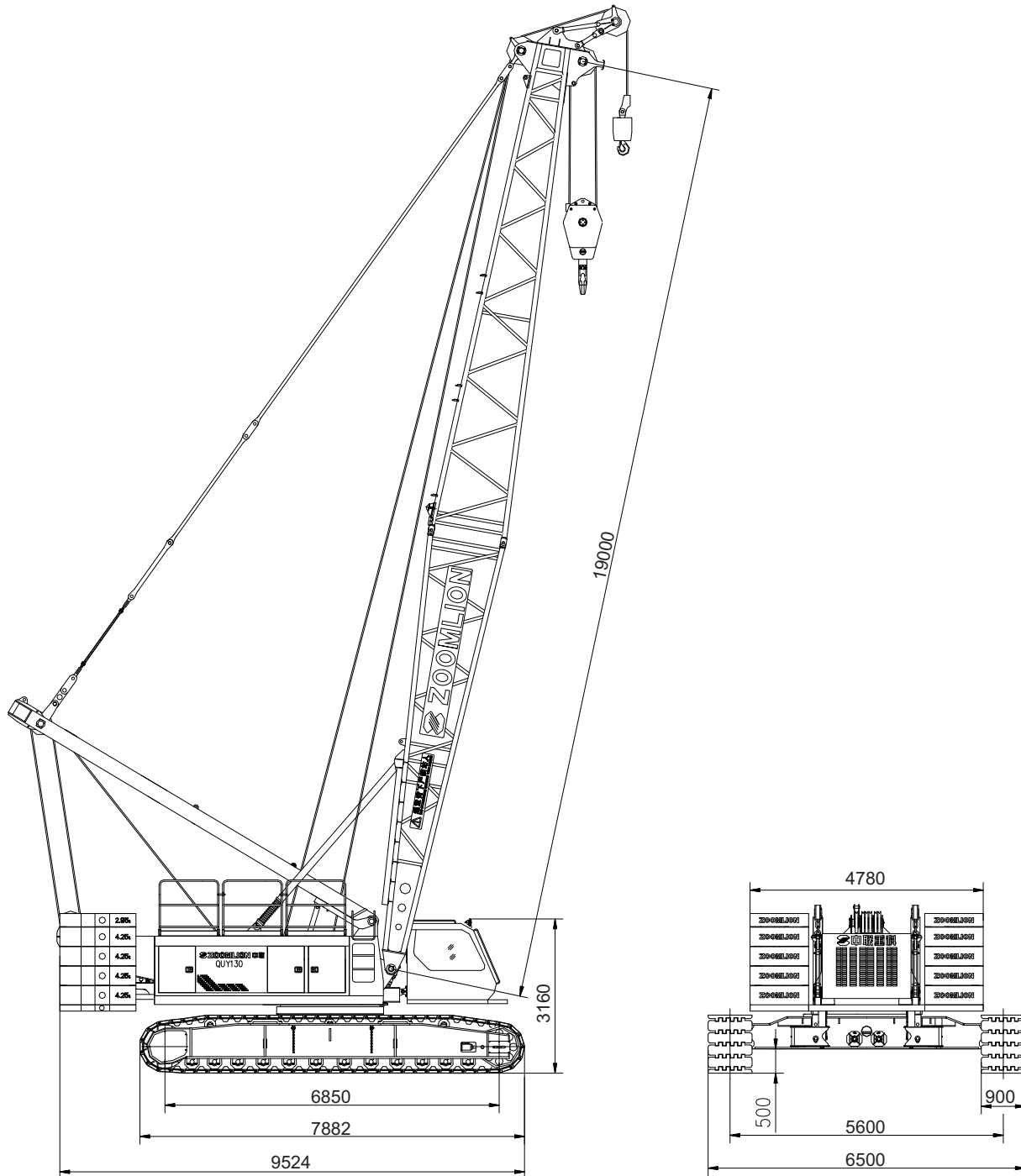
# QUY130

Zoomlion QUY130 Crawler Crane ▶



## I. External Dimensions and Main Parameters

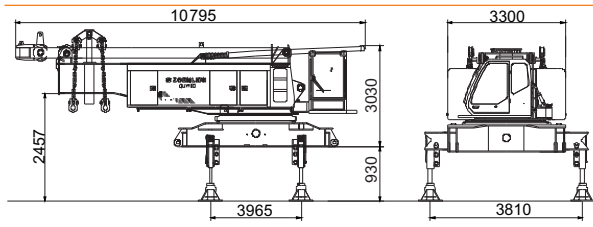
### 1. External Dimensions of Entire Crane, including Basic Boom



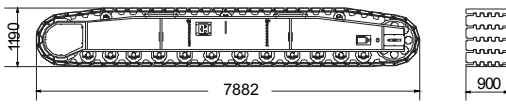
### 2. Main Performance Parameters

Items	Unit of measurement	Values	Remarks
Maximum lifting capacity × radius	t × m	130 × 4.5	
Maximum lifting moment	t × m	661.5	
Deadweight of crane with basic boom	t	113.8	
Length of main boom	m	19~73	
Length of fixed jib	m	13~31	
Maximum lifting capacity with fixed jib	t	13	
Setting angle of fixed jib	°	10, 30	
Maximum length of main boom + fixed jib	m	55 + 31, 58 + 25, 61 + 19	
Maximum single rope speed of drum	m/min	105	Outermost layer of drum
	m/min	93	Outermost layer of drum
	m/min	52	Outermost layer of drum
Swiveling speed	r/min	0~2.2	
Traveling speed	km/h	0~1.3	
Gradeability	%	30	
Ground pressure	MPa	0.1	
Overall dimensions L × W × H	m	9.55 × 6.5 × 3.2	Excluding mast boom
Rated power/rotational speed	kW/rpm	209/2000	
Engine Maximum output torque/rotational speed	Nm/rpm	1356/1400	
Emissions standard		U.S.EPA Tier III	
Distance between track centers × crawler contact length × crawler shoe width	mm	5600 × 6850 × 900	

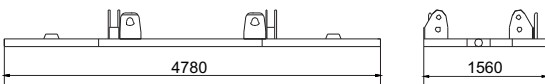
### 3. External Dimensions and Weight of Main Transport Components



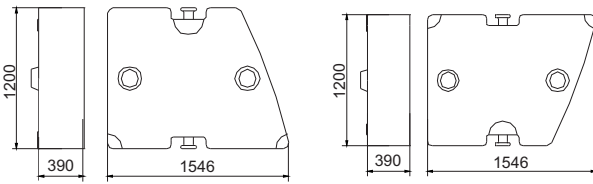
Name	Main machine
Weight	35t × 1



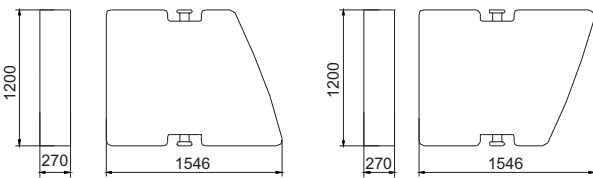
Name	Crawler assembly
Weight	14.5t × 2



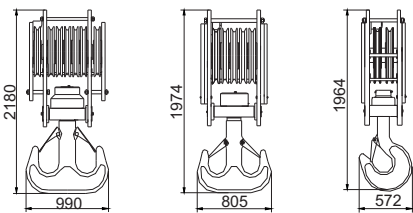
Name	Counterweight base
Weight	7.06t × 1



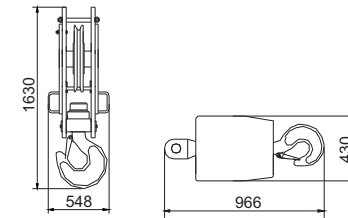
Name	Counterweight block
Weight	4.25t
Quantity	4 pieces each



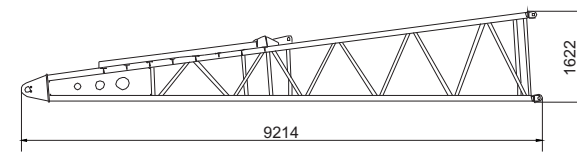
Name	Counterweight block
Weight	2.95t
Quantity	1 piece each



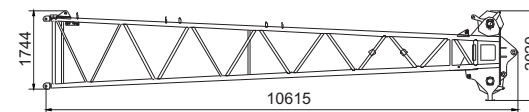
Name	Hook (160T hook)	Hook (100T hook)	Auxiliary hook (50T hook)
Weight	2.377t × 1	1.93t × 1	1.358t × 1



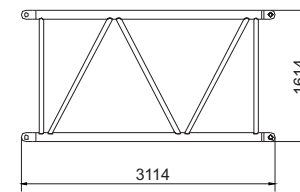
Name	Auxiliary hook (30T hook)	Auxiliary hook (12T hook)
Weight (t)	0.762t × 1	0.461t × 1



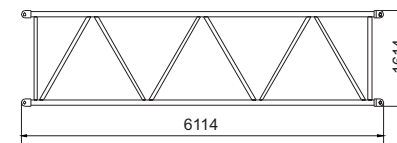
Name	Base section of main boom (width 1802)
Weight (t)	1.44t × 1



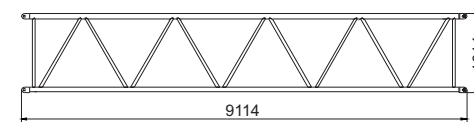
Name	Top section of main boom (width 1802)
Weight (t)	1.91 × 1



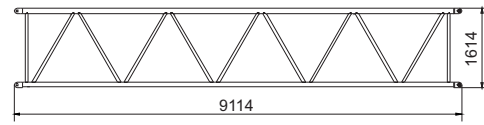
Name	3m section of main boom (width 1802)
Weight (t)	0.41t × 1



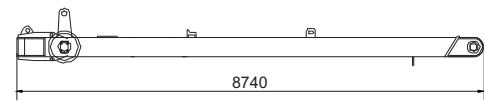
Name	6m section of main boom (width 1802)
Weight (t)	0.715t × 1



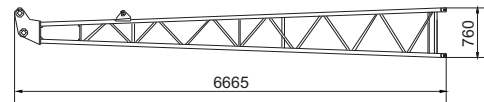
Name	9m section A of main boom (width 1802)
Weight (t)	1.02t × 2



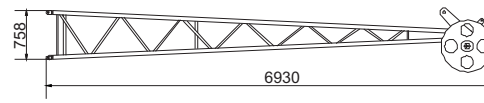
Name	9m section of main boom (width 1802)
Weight (t)	0.937t × 3



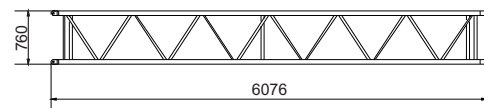
Name	Mast (width 1560)
Weight (t)	2.24t × 1



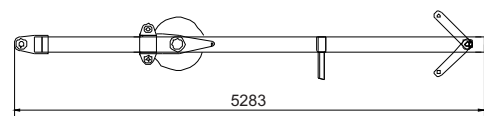
Name	Base section of fixed jib (width 960)
Weight (t)	0.324t × 1



Name	Top section of fixed jib (width 960)
Weight (t)	0.397t × 1



Name	6m section of fixed jib (width 960)
Weight (t)	0.233t × 3



Name	Bracing pole of fixed jib (width 812)
Weight (t)	0.479t × 1

## II. Technical Descriptions

### 4. Boom System

The boom system is based on a truss-type structure, the material used for the boom sections is high strength seamless steel tubing, and individual boom sections are joined using pins.

Main boom

Length of main boom: 19~73m

Length of intermediate section of main boom: 3m, 6m, and 9m

Table of Main Boom Lengths Configuration Combinations

Length of main boom (m)	Number of standard section kits for corresponding lengths of main boom (pieces)		
	3m section	6m section	9m section
19	0	0	0
22	1	0	0
25	2	0	0
28	1	1	0
31	2	1	0
34	1	2	0
37	1	1	1
40	2	1	1
43	1	2	1
46	1	1	2
49	2	1	2
52	1	2	2
55	1	1	3
58	2	1	3
61	1	2	3
64	1	1	4
67	2	1	4
70	1	2	4
73	1	1	5

### Fixed jib

Length of main boom: 40m~61m

Length of fixed jib: 13m~31m

Length of intermediate section: 6m

Setting angle: 10° and 30°

Table of Fixed Jib Length Combinations

Length of fixed jib (m)	Number of standard section kits for corresponding lengths of fixed jib (pieces)	
	6m section	
13	0	
19	1	
25	2	
31	3	

### 5. Mechanisms

#### Primary and secondary lifting mechanisms

Equipped with a planetary gear reducer with a normally closed internal dish brake, the primary and secondary mechanisms are powered by the hydraulic motor and offer two speed options, namely high speed and low speed; a concealed dual-range type drum and anti-rotation wire ropes are also incorporated into the mechanisms.

Main winch	Wire rope diameter	26mm
	Wire rope length	310m
	Single rope tension	130kN
	Maximum speed of outer layer	105m/min
Auxiliary winch	Wire rope diameter	26mm
	Wire rope length	200m
	Single rope tension	130kN
	Maximum speed of outer layer	93m/min

#### Luffing mechanism

Equipped with a planetary gear reducer with a normally closed internal dish brake, this mechanism is powered by the hydraulic motor and it incorporates a concealed dual-range type drum with an anti-reverse-rotation ratchet.

Luffing winch	Wire rope diameter	22mm
	Wire rope length	195m
	Single rope tension	114kN
	Maximum speed of outer layer	52m/min

### Slewing mechanism

The slewing mechanism is comprised of an internal variable displacement axial plunger hydraulic motor, gear reducer, normally closed slewing brake, pinions and slewing bearings; the pinion-driven swiveling bearing allows for full 360° slewing movements, thereby providing slewing functionality to the upper machinery.

The slewing mechanism is equipped with a controllable slip-turn function to reduce shock and allow for higher stability during initiation and braking.

The slewing mechanism adopts a closed-type slewing system to reduce shock and allow for higher stability during initiation and braking of slewing operations; the controllable free slip-turn function of the slewing mechanism more fully meets operational requirements.

The slewing mechanism offers stepless speed regulation within the range of 0~2.2r/min.

The slewing mechanism is lockable through a mechanical locking device located at the front of the rotating platform, thereby ensuring complete safety during the transportation process.

### Traveling mechanism

Each of the two crawlers is equipped with a hydraulic motor and speed reducer set. The speed reducer is a planetary gear reducer with a normally closed dish brake. The crawlers along each side can execute such traveling movements as straight line traveling, unilateral steering, differential steering, pivotal steering, driving with load, etc.

Traveling speed: 0~1.3km/h

Gradeability: 30%

Crawler tensioning: crawlers are tensioned through jacks, making adjustment is fast, easy and reliable.

### Mast jack-up mechanism

Comprised of the mast, mast jack-up oil cylinder, auxiliary hydraulic system, etc, this mechanism is used during self-assembling/disassembling (or relocating) of the whole machine.

Plate connection is employed between the oil cylinder and balance valve to ensure higher safety and reliability.

The anchoring rods can be connected, the boom can be assembled, and the crawler assembly and counterweight can be mounted by jacking the mast up beyond 90° perpendicular from its horizontal position.

### Control room swiveling and luffing mechanism

During transport, the control room remains at the front of the rotating platform; during operation, it rotates outwards to the outer left side and then is locked there using pins at two points; the control room can tilt upwards to an angle of 20°.

### Counterweight and counterweight loading/unloading mechanism

Lifting of the counterweight is accomplished through oil cylinders, the lifting process is guided automatically to allow for self-mounting and dismounting; once lifted to position, the pins are inserted manually; the total weight of the counterweight is about 46.96t.

### Outrigger lifting and crawler self-mounting and dismounting mechanism

The outrigger jacking mechanism is used for self-mounting and dismounting, the outriggers can oscillate and elevate, and the bottom outrigger plates are removable. The bearing capacity of a single outrigger is 18 tons. Dismounting of crawlers is carried out through self-lifting, and the pins for connecting the crawlers and main machine are mounted and dismounted through oil cylinders.

## 6. Systems

### Hydraulic system

The hydraulic system is a pump-operated system and is comprised of a main pump, control valve, hydraulic motor, hydraulic oil tank, and cooler, etc.; the pump, motor and main valves are imported from Germany. The main hydraulic pump is an electrical proportional control dual-variable plunger pump, the rotary pump is an electrical proportional control plunger pump, and the auxiliary pump is a gear pump. The main control valve is a pilot electrohydraulic control valve; the main circuit control method consists of variable displacement valve + main directional control valve of the variable displacement main pump, both of which are centrally controlled by two operating handles; the slewing circuit is a closed-type control system.

Capacity of hydraulic oil tank: 880L.

Cooler: aluminium radiator, where the fan is powered by the electric motor.

### Electrical system

The electrical system consists of DC 24V, negative ground, 2 × 195AH batteries, two PLC controllers, two monitoring displays, and a standalone, control system in the engine; the whole vehicle adopts CAN bus technology, which connects the engine, PLC controllers and digital displays together with fault detection and self-diagnosis functions.

### Power system

The engine is an original imported US Cummins electronic injection diesel engine with a CAN bus interface.

Rated output power/rotational speed: 209 kw/2000rpm

Maximum output torque/rotational speed: 1356Nm/1400rpm

Emissions standard: U.S. EPA Tier III

Capacity of fuel oil tank: 700L

### Centralized display system

The large-screen LCD monitor, with both Chinese and English display capabilities, can centrally display the various parameters of the engine and hydraulic system and can monitor working conditions in realtime; when the crane is working abnormally, the system will emit a yellow or red light alarm.

## 7. Safety Devices

### Load moment limiter

The load moment limiter is comprised of a load moment sensor and a digital LCD monitor. A sound and light alarm will send out when a single lifting load moment reaches 90% of the rated load moment; operation of the crane will stop automatically when the lifting load moment reaches the maximum rated load moment. The digital LCD monitor can display the following data:

Moment ratio

Main boom elevation angle

Length of main boom

Working radius

Actual hook load

Allowed lifting load

Maximum allowed lifting height

Wind speed at top of boom

### Various overflow valves in the hydraulic system

These valves can suppress abnormally high pressures in the circuit, preventing damage to the hydraulic oil pump and motor, and preventing system overload.

### Height limiter devices

The limit switch, movement weight and other components are mounted on the top section boom, and are used to prevent excessive lifting of the hook. When the hook is lifted to a certain height, the limit switch signals the electrical system to automatically stop the lifting of the hook, also setting off an acoustooptic warning through the buzzer and display screen in the control room to prevent overwinding of the hook.

### Angle indicator

The boom angle indicator is located along the lower rear part of the boom's bottom section (right side of control room), allowing the driver convenient, clear visibility of the elevation angle of the boom from the control room.

### Working boom limiting position alarm and protection system

This protection system has a load moment limiter and limit switch for dual-level control, enabling automatic termination of luffing movements of the boom's limited elevation angle position, while also simultaneously triggering an acoustooptic warning.

### Boom overturn protection device

The brace poles, which are of a nested steel tube and spring structure, are mounted at the base section of the main boom. They employ spring-loaded compression force to provide support and to prevent the main boom from overturning.

### Whole machine level sensor

This electronic level meter displays in realtime the inclination angle of the whole machine and sends an alarm to the digital display screen in order to ensure safe operation of the vehicle.

### Hook safety latch

This device prevents the load from unhooking when lifting heavy loads.

### Luffing winch ratchet locking mechanism

The luffing winch ratchet locking mechanism prevents luffing decline when the vehicle is parked for long periods of time.

### Wire rope overwinding and over-release protection device

When the wire rope in the drum has been released until only three single wound coils remain, this protection device signals the electrical system to automatically cut off the releasing of rope and the descending hook, also setting off an acoustooptic warning through the buzzer and display screen in the control room.

### Wind speed indicator

The electronic wind speed sensor can indicate wind speed levels on digital display screen in realtime, conveniently alerting workers of potentially dangerous working conditions.

### Emergency stop button

In case of emergency, press this button to switch off the engine and stop all operations.

### Tri-color warning light

With three different colors, red, yellow and green, the warning light can synchronously indicate overload status. Green indicates that the load factor is below 90%, yellow informs operators that the load factor is between 90% and 100%, while the red color warns that the load factor has exceeded 100% and that the crane is in danger of overloading.

### Monitoring system (optional)

This system includes two cameras for monitoring conditions at the rears of the winch mechanism and of the whole machine.

Monitor: with the press of a button you can toggle between different monitoring feeds.

### Remote GPS monitoring system (optional)

This system allows for GPS satellite positioning, GPRS data transmission, equipment use status inquiry, statistical information, remote fault diagnosis and other functions.

## 8. Control Room

The structure of the control room is made entirely of steel, is surrounded by reinforced glass on all four sides, and has laminated glass for its sunroof and windshield. The interior is equipped with a sun shield on the right side, an adjustable seat, windshield wipers, an electronic control handle, a load moment indicator, a digitalized display system, various switches, auxiliary remote control box operating assembly, air conditioners, electric fans, illuminating lamps, CD players (car DVD player optional), cigarette lighters, fire extinguishers, and more.

## 9. Hook

All hooks have a rotating hook and safety latch.

160t hook: equipped with 7 pulleys;

100t hook: equipped with 5 pulleys;

50t hook: equipped with 2 pulleys;

30t hook: equipped with 1 pulley;

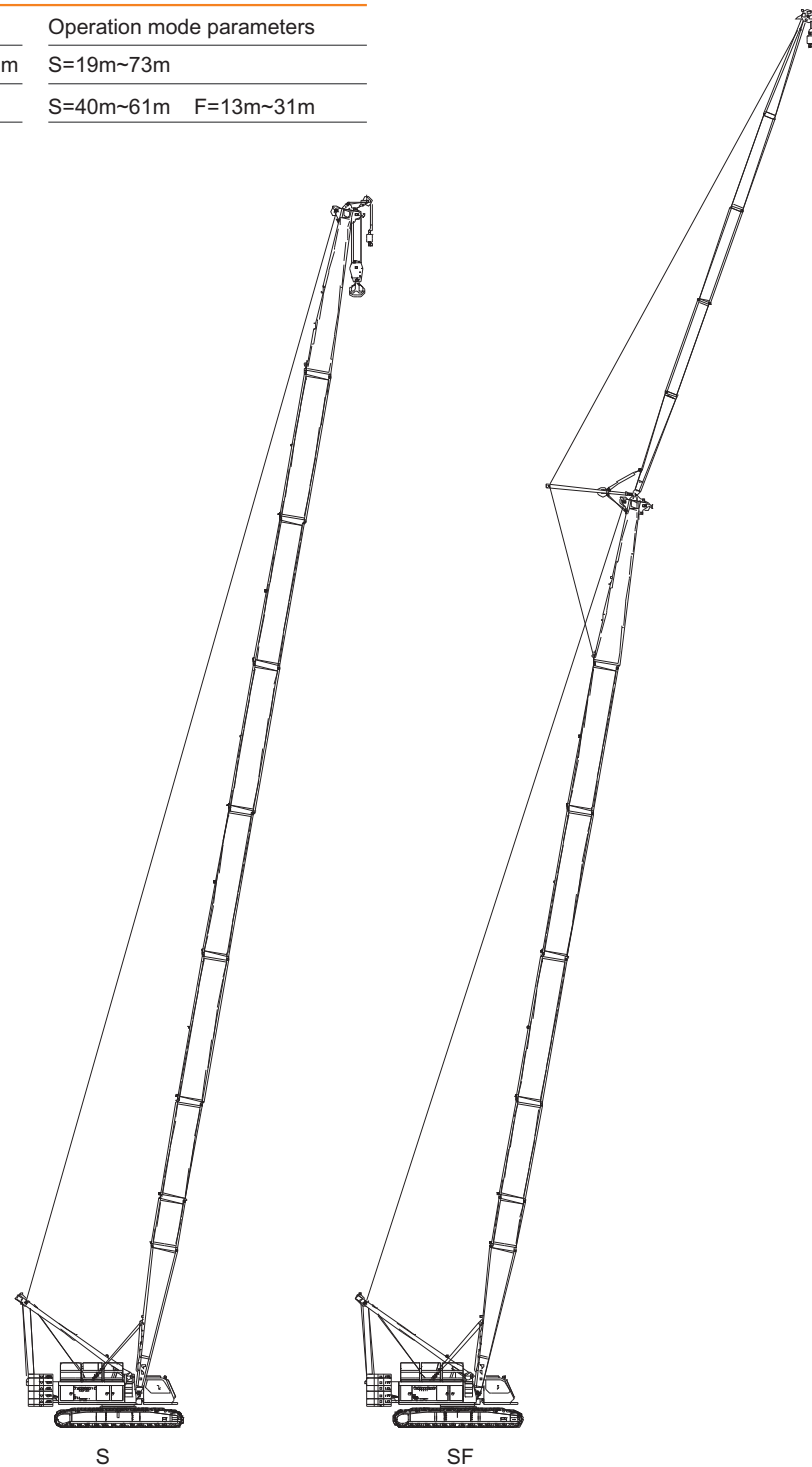
12t hook: without pulley.



### III. Description of Boom Assembly

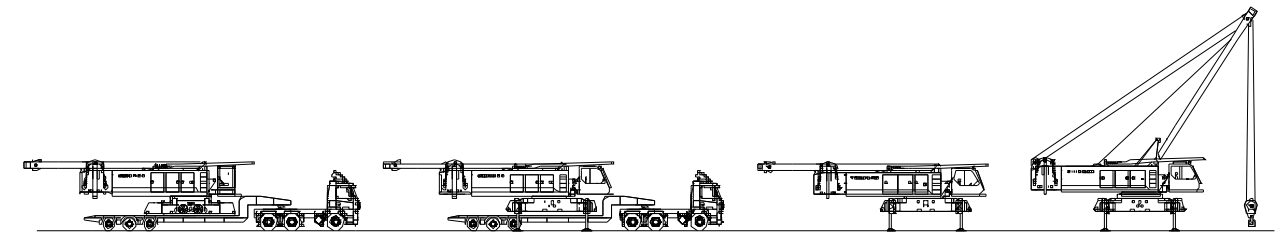
Descriptions of Boom Assembly Codes

Code	Type	Operation mode parameters
S	Main boom	S=19m~73m
SF	Fixed jib	S=40m~61m F=13m~31m

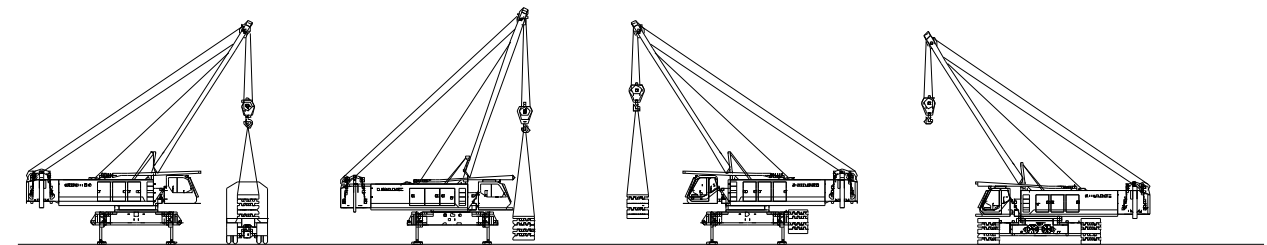


### IV. Self-Mounting and Dismounting Functions

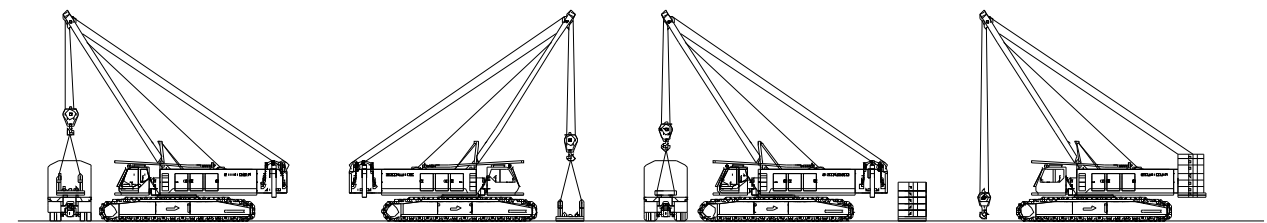
(Taking the self-mounting process following unloading as an example)



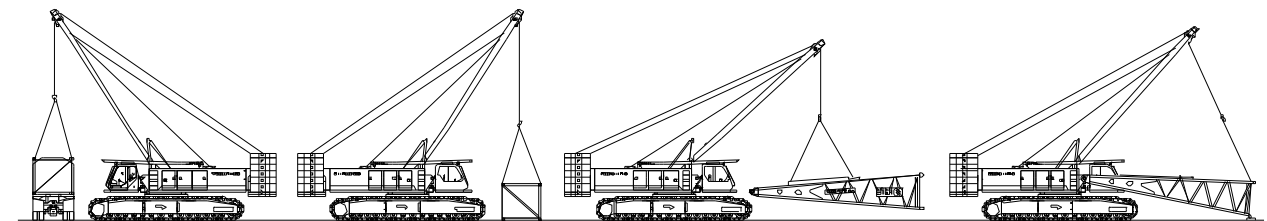
Unloading of main machine



Unloading and assembling of crawler carrier



Unloading and assembling of counterweight base plate and counterweight



Unloading and assembling of boom