

SCC1500C Hydraulic Crawler Crane
SCC1500C 液压履带起重机





SANY

SCC1500C

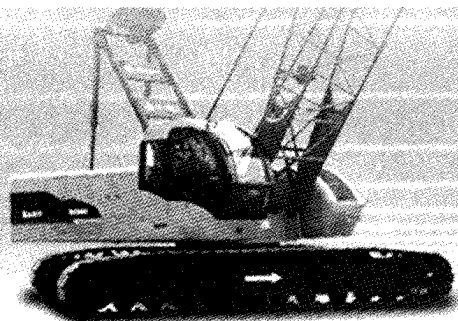
Hydraulic Crawler Crane



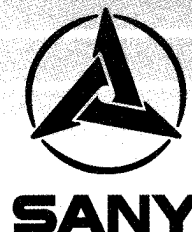
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SHANGHAI SANY SCIENCE & TECHNOLOGY CO.,LTD



SCC1500C Hydraulic Crawler Crane



Detail Introduction

Upperworks

Engine

Imported Cummins engine with the model of M11-C inline six-cylinder, water-cooled, four-stroke diesel engine with a rated power/rotational speed of 231kW/2100rpm. The maximum torque is 1424N • m and the maximum rotational speed at maximum torque is 1300rpm.

Fuel tank capacity: 400L.

Control

Fully hydraulic control system is able to control over main and auxiliary hoisting winches, luffing, swinging, traveling and braking precisely quickly and smoothly.

Hydraulic System

Hydraulic system consists of three parts: main hydraulic system, servocontrol system and auxiliary system.

The swing system is of closed circuit one with quick and smooth operation response.

The main pump is of variable displacement dual pump with power control, pressure 320bar open circuit.

Main and Auxiliary Hoisting Gear

The main and auxiliary hoisting gear are driven separately. The compact structure allows easy installation and low abrasion, and the free-maintenance wet type brake concealed ensures winch safe working.

Variable displacement hydraulic motor can realize maximum hoisting speed through automatic displacement adjustment according to the load.

Main and auxiliary winch drum:

Pitch diameter of first layer is 496mm

Speed of Third-layer Rope: 0~135m/min

Rated Line-pull: 13.1 t

Wire rope:

Imported from Germany with a specification of CASAR EUROLIFT

Diameter 26mm

Length 350m (main drum)

300m (auxiliary drum)

Ensured fracture tensile force: 66.52t

Swing Gear

Closed circuit and hydraulic cushion. Allowable swing angle: 360°.

Braking: normal state: closed. concealed, wet type, spring loaded, pressure released and band type spring brake.

Locking: locking gear is provided to ensure safe locking of crane after operation or during transportation.

Swing Speed: 0-2.1r/min

Luffing Gear

Dual luffing drum is equipped with ratchet pallet locking gear in intermediate bulkhead to ensure the safety of boom under shut-down conditions.

Luffing drum:

Pitch diameter of first layer is 460mm

Speed of Fifth-layer-rope: 0~31m/min

Rated Line-pull: 9.73t

Wire rope:

Specification: 20NAT6 x 29FI + IWR1870

Diameter 20mm

Length 320m

Ensured fracture tensile force is 25.1t

Counterweight

As shown in table below:

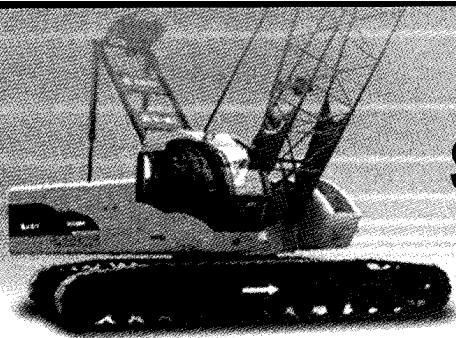
Name	Quantity	Unit weight (kg)	Gross Weight (kg)
Left counterweight block	3	7900	23700
Right counterweight block	3	7900	23700
Intermediate counterweight	1	1580	1580
Pallet counterweight	1	5968	5968
Gross Weight (kg)			54948

Driver's Cab

The novelty pattern of cab sliding door the following characteristics: allows easy and safe on-off; has the large window, the head light and rearview mirror; permits wider visual field and more comfortable operation in accordance with ergonomics. There are also air conditioner, joystick, seat and armrest box designed according to ergonomics.

Control Operation

Each action of track traveling gear is realized through traveling pedal (joystick). The left traveling pedal (joystick) drives the left track, and the right one (joystick) drives right track. Swing speed of engine is controlled by accelerator pedal or accelerator lever. On the right armrest box, there are: engine start switch; joysticks of luffing; main winch; slow speed control knob and hydraulic servo pressure gauge etc. On the left armrest box, there are: auxiliary winch; swing winch; the control panel of air conditioner and swing lock press button. Auxiliary control box is on the left front of the seat, and each switch on the control panel is manually controlled to achieve corresponding function.



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Lowerworks

Traveling Gear

Independent traveling gear is provided in each track frame. The hydraulic traveling motor drives planet gear reducer and achieves independent traveling through driving wheel transmission.

Traveling Brake

The normal state of the band type brake is closed (i.e. it's in braking status when the control pedal valve is not stepped). It is built in reductor and compensated automatically without regulation. When the operating pedal is stepped down, the brake is released and the crane travels.

Track Shoes

The left and right track traveling gear consists of 108 track shoes, the width of which is 1100mm. The tension of track assembly can be adjusted through hydraulic jack.

Base

The pin connected to the track frame is pushed with the hydraulic cylinder, and is easy to assemble and disassemble. Welded frame structure has high strength.

Traveling Speed

Low speed: 0.8 km/h
High speed: 1.3 km/h

Operation Device

Main Boom

The high-strength steel main chord pipe is imported from Germany. The boom is a space truss structure with uniform cross section in the middle and variable cross section at 2 ends. The pipes are welded and its end and foot are enforced by steel plates so as to transfer the load.

The boom combination: basic boom 18m, boom tip 7.5m, boom base 10.5m. With 3m as increasement, the length and quantity of booms are respectively as follows: 3m x 1, 6m x 3, 9m x 2 and 12m x 2.

Maximum boom length is 81m.

Jib

The main chord pipe, the high-strength steel pipe is imported from Germany. The jibs are space truss structure with uniform cross section in the middle and variable cross section at 2 ends. It is welded with steel pipes, and is enforced by steel plates at its ends and foot so as to transfer the load.

Fixed jib can be mounted on boom with a length between 27-75m. Both the jib tip and jib base are 5m, the jib insert length x numbers are: 3m x 1, 6m x 3. Lengths of usable jib are 13m, 19m, 25m and 31m respectively.

Longest boom + longest jib: 69m + 31m

Tower Attachment

Luffing jib with tower attachment: 34.79~55.79m

Luffing jib: 27~45m

Luffing jib composition: jib tip 9m, jib base 9m and jib insert 3m x 1, 6m x 1, 9m x 2.

Maximum lifting capacity: (55.79m luffing jib with tower attachment + 30m jib) 20t x 15.8m

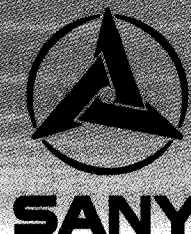
Hook Block

Standard configuration:

- 25t hook block
- 50t Hook block
- 150t Hook block

Optional parts:

- 9t Hook block
- 100t Hook block



Safety Device

Load Moment Indicator

Standard Configuration, optional manufacturers. There is an independent security operating system controlled by computer on the load moment indicator. It can automatically detect the mass hoisted by the crane and the angle of the boom and indicate the rated load, actual load, operating radius and angle of the boom.

Composition: Monitor, Host Machine Case, Angle Sensor, Force Sensor

Function: When the actual load is less than 90% of the rated load, the light "NORMAL" on the display will be lightened; when the actual load reaches 90% of the rated load, the light "90%" will be lightened and the buzzer on the load moment indicator will beep discontinuously for pre-warning; when the actual load reaches 100% of the rated load, the light "100%" on the screen will be lightened and the buzzer will beep discontinuously and quickly; when the actual load reaches 105% of the rated load, the light "105%" will be lightened and the buzzer will beep continuously, the relay will be activated, and the lifting and the operation of the boom to increase the operating radius will stop automatically.

Anti-overwinding Device for Main and Auxiliary Hooks

Limit switch is used to prevent the hook from being lifted overhigh. When the hook is lifted to a certain height, the limit switch is activated so as to make the buzzer on the auxiliary control board alarming by both electrical and hydraulic control and the hook lifting operation stopping automatically. On this occasion, no operation except the hook lowering is operable, so that the hook overwinding could be prevented.

Boom Limiting Device

When elevation angle of the boom is greater than 78° , the microswitch at the foot of the jib base will act to make buzzer alarming while the boom is in the stop status by electrical and hydraulic control. Meanwhile, the lifting and lowering of luffing winch drum does not work. When the angle of the main boom lowered is less than 30° , the operation will be limited. This function is controlled by the load moment indicator automatically.

Anti-tip-back Device for Boom

Anti-tilting bar with a spring on the foot is mounted at the top of the main boom base.

Swing Lock

The hydraulic-controlled pin could lock the crane at 4 positions: in the direction of fore-and-aft and the left-and-right.

Winch Drum Lock

Lock gear of main winch, auxiliary winch and luffing winch are all of pallet locking. Pallet locking control and built-in brake control of reductor are united i.e. they are controlled by the identical joystick simultaneously. Easy control and high safety.

Boom Angle Indicator

Pendulum-type angle indicator mounted at one side of the boom base

Hook Clamp

Each kind of lifting hook is equipped with baffle to prevent the wire rope from coming off.

Swing Warning Device

Mounted on the counterweight and flashing for warning.

Control Disarming

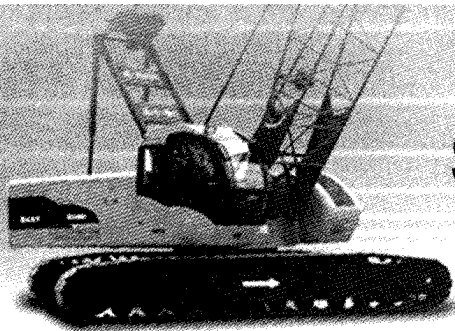
If the control disarming button is pressed down, all the control handles will be disarmed so as to avoid any misoperation caused by human body while getting in or off the crane.

Electronic Monitor

It is able to indicate the water temperature, amount of fuel, accumulated service hours, current time, pressure of engine oil, engine speed, charging situation and voltage of battery. It is also equipped with the functions such as warning for the main and auxiliary winch overwinding and main boom limiting warning, that are alarming by lightening the lamp and belling buzzer.

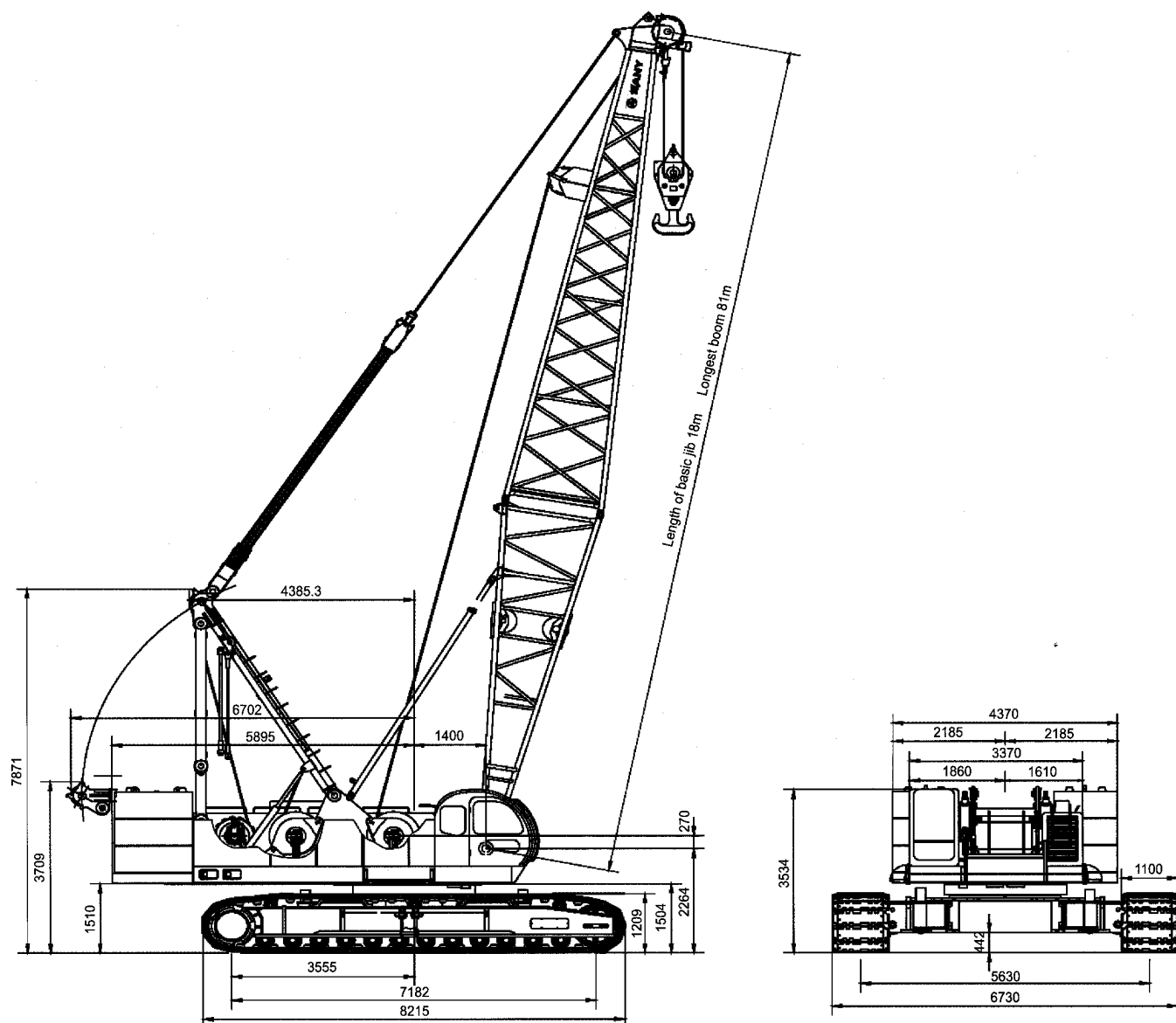
Rearview Mirror

Mounted in the front of the driver's cab.



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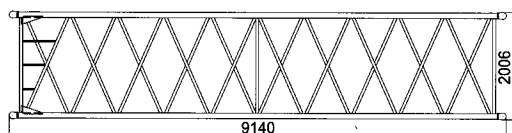
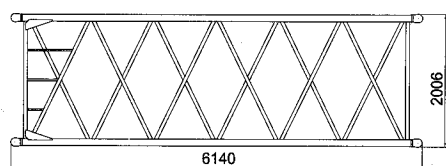
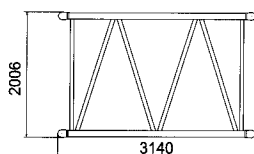
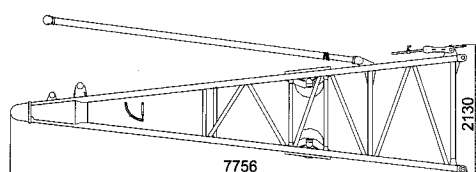
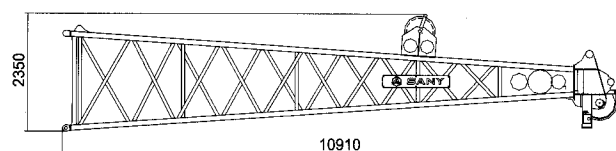
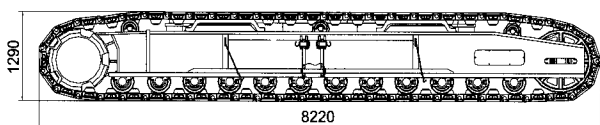
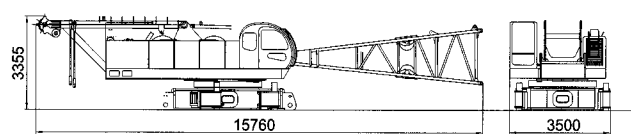
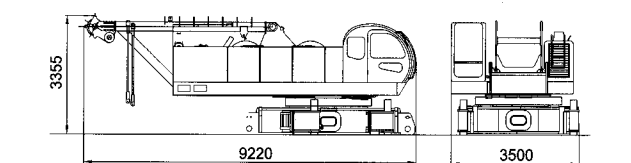
Dimension





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Transportation Dimension Of Main Parts



Main body	x1
Length	9.22m
Width	3.50m
Height	3.36m
Weight	45316 kg

Main body	x1
Length	15.76m
Width	3.50m
Height	3.36m
Weight	49156 kg

Track assembly	x2
Length	8.22m
Width	1.10m
Height	1.29m
Weight	20684 kg

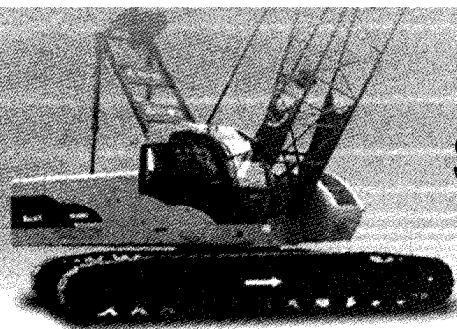
main boom tip	x1
Length	10.91m
Width	2.21m
Height	2.35m
Weight	2368.35 kg

main boom base	x1
Length	7.76m
Width	2.21m
Height	2.13m
Weight	3351.57 kg

Boom insert 3m	x1
Length	3.14m
Width	2.21m
Height	2.01m
Weight	432.439 kg

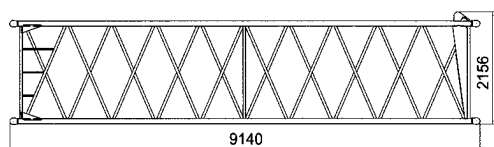
Boom insert 6m	x3
Length	6.14m
Width	2.21m
Height	2.01m
Weight	717.889 kg

Boom insert 9mA	x1
Length	9.14m
Width	2.21m
Height	2.01m
Weight	896.949 kg

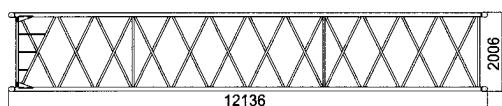


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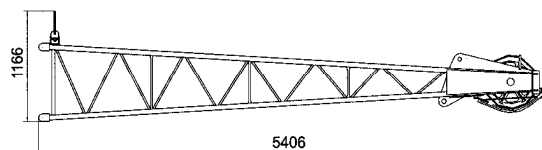
Transportation Dimension Of Main Parts



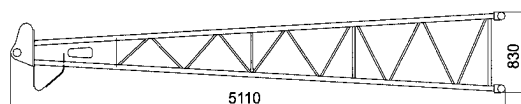
Boom insert 9mB	x1
Length	9.14m
Width	2.21m
Height	2.16m
Weight	1076.29 kg



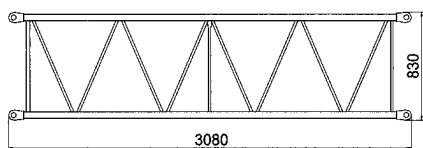
Boom insert 12m	x2
Length	12.14m
Width	2.21m
Height	2.01m
Weight	1284.31 kg



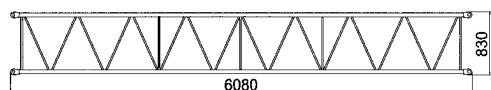
jib tip	x1
Length	5.41m
Width	1.01m
Height	1.17m
Weight	285.362 kg



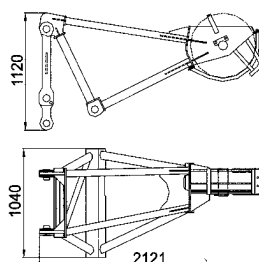
jib base	x1
Length	5.11m
Width	1.03m
Height	0.83m
Weight	251.194 kg



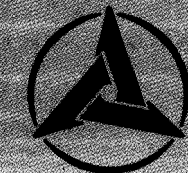
jib insert 3m	x1
Length	3.08m
Width	1.01m
Height	0.83m
Weight	112.97 kg



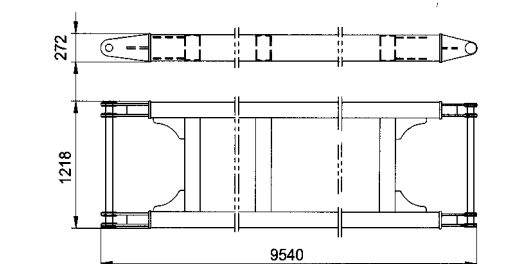
jib insert 6m	x3
Length	6.08m
Width	1.01m
Height	0.83m
Weight	240.03 kg



Extension Boom	x1
Length	2.12m
Width	1.04m
Height	1.12m
Weight	311.474 kg

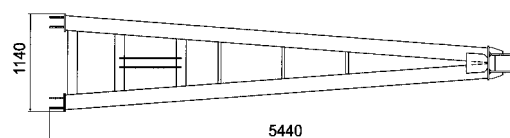


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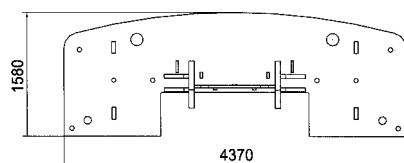
Pole bracket of main boom × 1

Length	9.54m
Width	1.22m
Height	0.27m
Weight	1178.73 kg



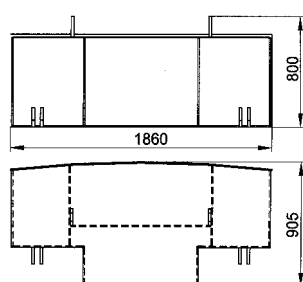
Pole bracket of jib × 1

Length	5.44m
Width	1.14m
Height	0.21m
Weight	332.89 kg



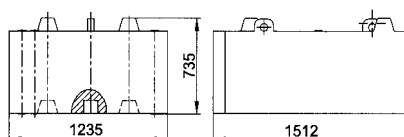
Pallet counterweight × 1

Length	4.37m
Width	1.58m
Height	1.14m
Weight	5968 kg



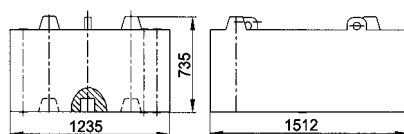
Intermediate counterweight × 1

Length	1.86m
Width	0.91m
Height	0.80m
Weight	1580 kg



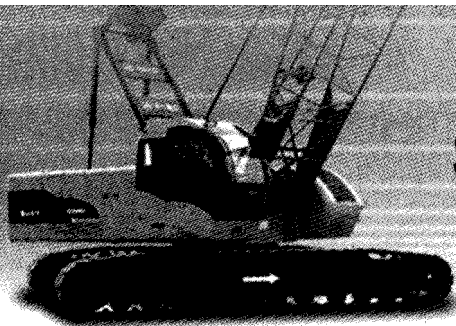
Left counterweight × 3

Length	1.51m
Width	1.24m
Height	0.74m
Weight	7900 kg



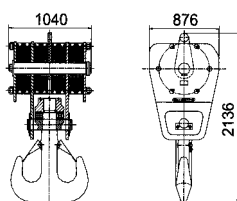
Right counterweight × 3

Length	1.51m
Width	1.24m
Height	0.74m
Weight	7900 kg

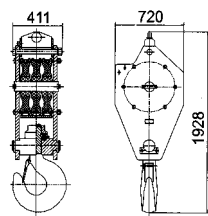


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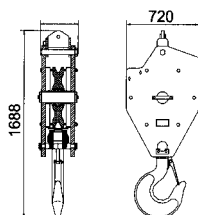
Transportation Dimension Of Main Parts



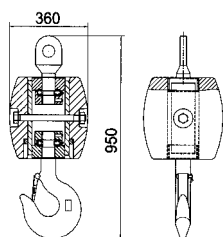
150t hook block	x1
Length	0.88m
Width	1.04m
Height	2.14m
Weight	2246 kg



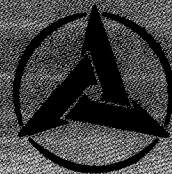
50t hook block	x1
Length	0.72m
Width	0.41m
Height	1.93m
Weight	685 kg



25t hook block	x1
Length	0.72m
Width	0.37m
Height	1.69m
Weight	463 kg



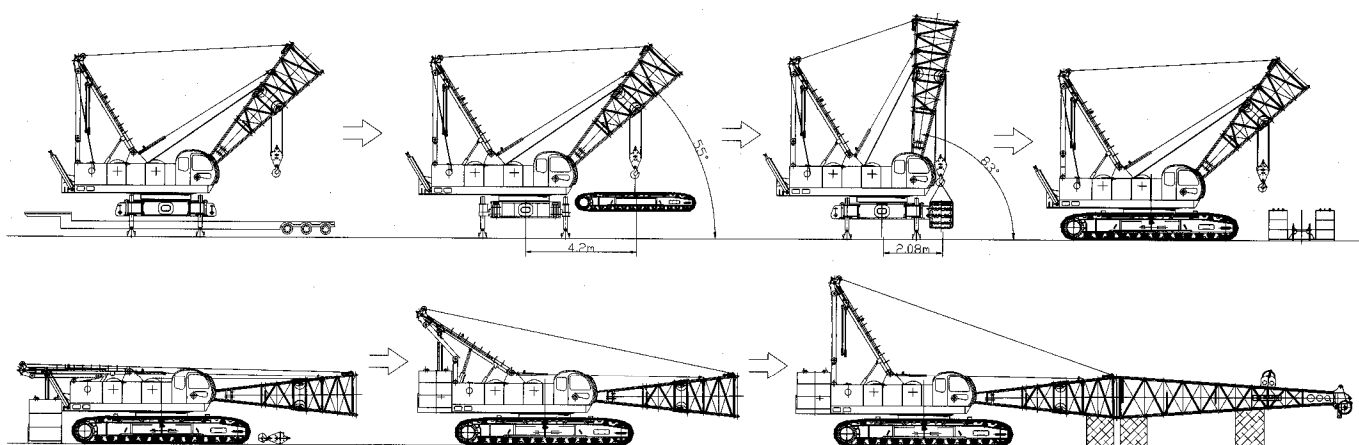
9t hook block	x1
Length	0.36m
Width	0.36m
Height	0.95m
Weight	246 kg



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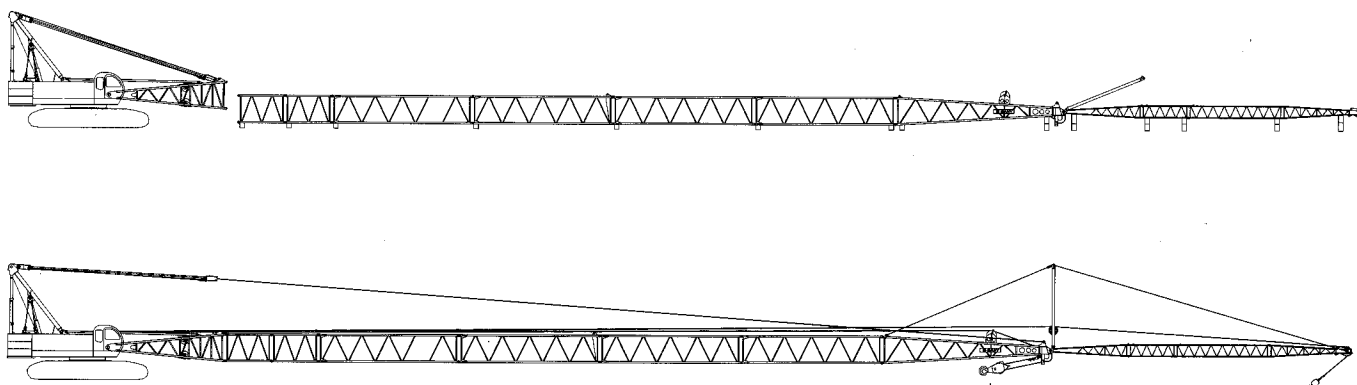
Self-assembly & Disassembly

This crane is equipped with the functions including the self-assembly and disassembly of the track traveling mechanism and the self-assembly and disassembly of the counterweight. In the course of assembly, the track traveling mechanism should be assembled firstly and then the counterweight. In the course of disassembly, the counterweight should be disassembled firstly and then the track traveling mechanism. See the figure below for detailed operation procedures.

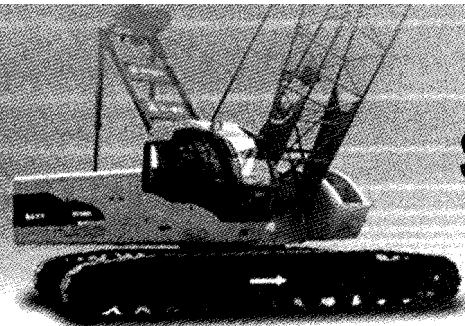


Schematic Diagram of Self-assembly (Perform Reverse Procedure for Disassembly)

Installation of Fixed Jib

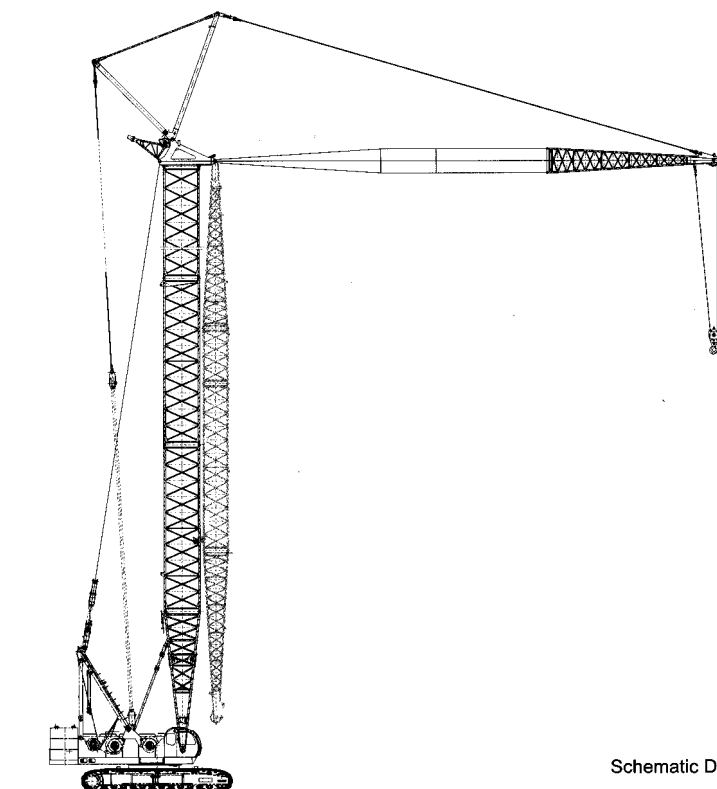
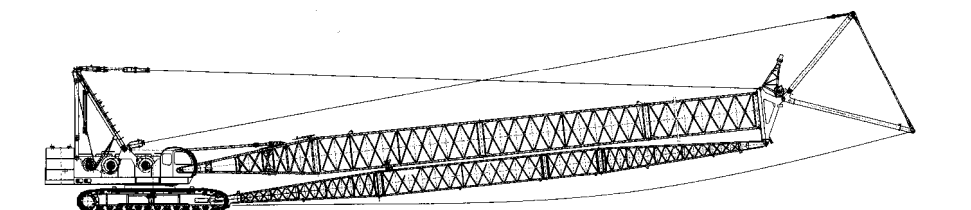
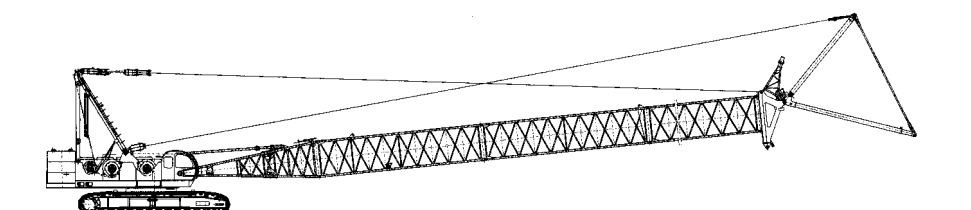
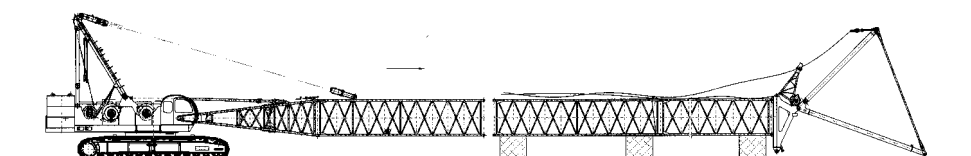


Schematic Diagram of Fixed Jib Installation



SCC1500C Hydraulic Crawler Crane

Installation of Luffing Jib (with tower attachment)



Schematic Diagram of Luffing Jib Installation