



CRANE SPECIFICATION

SANY

SCC1000C

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Quality Changes the World



SCC1000C HYDRAULIC CRAWLER CRANE

Engine

The imported Cummins QSC8.3 (Tier 3) inline 6-cylinder, electronic fuel injection, water-cooled and turbocharge diesel engine with a rated power of 183kW and a rated speed of 2000rpm; the maximum output torque is 1268N·m and the rotation speed at maximum output torque is 1400rpm.

And optional allocation Cummins 6CTAA-250 inline 6-cylinder, water-cooled and turbocharge diesel engine with a rated power of 186kW and a rated speed of 2200rpm; the maximum output torque is 1219N·m and the rotation speed at maximum output torque is 1300rpm.

The engine is equipped with a diesel oil tank with a capacity of 400L as well as an air prefilter.

Control

Fully-hydraulic control system allows precise control over main and auxiliary winch, luffing, swinging and traveling. Control process is smooth.

Hydraulic System

Hydraulic system consists of three parts: main circuit, control circuit and auxiliary circuit. Most hydraulic parts are imported.

The main pump is of variable displacement dual pump with constant power control, forming an open circuit with system pressure 30MPa.

Main and Auxiliary Hoisting Mechanism

The variable displacement hydraulic motor drives planet gear speed reducer to control the hoisting and lowering of main and auxiliary winches devices, and the variable displacement hydraulic motor adjust displacement automatically according to the load to achieve the maximum winch speed.

Main and Auxiliary Winch Drum

Main luffing devices	Drum diameter	560mm
	Outermost cable speed	0~110m/min
	Diameter of steel wire	24mm
	Length of steel wire for main winch	290m
	Rated single-line pull	9t
Auxiliary luffing devices	Drum diameter	560mm
	Outermost cable speed	0~110m/min
	Diameter of steel wire	24mm
	Length of steel wire for auxiliary winch	210m
	Rated single-line pull	9t

Luffing Device

Luffing winch drum is equipped with ratchet pallet locking gear to ensure the safety of boom under non-operating conditions.

Luffing devices	Drum diameter	420mm
	Outermost cable speed	0~73m/min
	Diameter of steel wire	20mm
	Length of steel wire for luffing winch	240m
	Rated single-line pull	7t

Swing Mechanism

Swing gear: it is driven by swing motor, allowing 360°revolution.

Swing brake: it is spring loaded; hydraulic pressure released and band type spring brake.

Swing lock: the locking gear is provided to protect the upperworks revolution from the impact during hoisting traveling or transportation.

Swing bearing: three-row-roller bearing in the type of 131.32.2000; the diameter of the roller is 32mm and the diameter of the roller track is 2000mm.

Speed of swing: 0—1.9r/min (idling)

Swing Table

Swing table is steel structured, and consists of left and right traveling table and main platform. The entire swing table is connected with chassis through swing bearing. Main hoisting mechanism, auxiliary hoisting mechanism, luffing mechanism, hydraulic system, engine system and cab are all mounted on the swing table. A-frame, operation equipment and counterweight are connected with different parts of the swing table respectively.

A-frame

It is three-section telescopic design. A-frame stretches out during operation while retract back during transportation so as to reduce the transportation height.

Counterweight

Standard counterweight is 42t except one 3t additional counterweight block. Each block of counterweight is 6t and there are 6 blocks, and one 6t counterweight tray in all. The counterweight3 can achieve fully self-assembly and disassembly to facilitate transportation.

Classified Load Chart (optional)

The additional counterweight is optional allocation. When the length of the boom is over 39m, we can adopt additional counterweight. In order to prevent retroversion, the boom frame must be connected before installation. During disassembling, the procedures shall be counter action with that of assembling. The hoisting load shall be increased along with the adoption of counterweight. (See the load chart)

Upperworks

Cover

Left cover: toolbox is below the first step in the front part. Handle for getting on is equipped in the front part, and the water tank inlet is on the top. Five access doors, which are equipped with silencing sponge, are provided outside of the cover; the shutter is mounted inside.

Right cover: there is an access door with built-in silencing sponge.

Driver's Cab

The novelty pattern sliding door of cab allows easy and safe opening and closing of door and windows, the large window, together with head light and rearview mirror, permits wider visual field; the perfect sealing and dust-proof and shock absorption can reduce the noise inside as well as improve air quality.

Seat: It is of standard configuration and adjustable.

Air conditioner: with heating and cooling functions.

Am/Fm radio: it is of standard configuration with clock.

Dry powder fire extinguisher: it is of standard configuration with a capacity of 6kg.

Control Operation

Levers and traveling pedals are in the front lower part of manipulator position. The left traveling pedal (lever) drives left crawler and the right traveling pedal (lever) drives right one. Foot accelerator is at the right side of right traveling pedal.

The control handles of main and auxiliary winch are mounted on the right armrest box, so is the start switch of engine.

Luffing auxiliary control handle, revolution control handle, lighter and control panel of air-conditioner are on the left rest box.

Switch panel of auxiliary control box is in the left front of manipulator, through which the corresponding functions can be achieved manually. Screen of load moment indicator and digital monitoring meter are beside the auxiliary control box to display relevant real-time information.

Alarm Display

When error occurs, all warning information including wind speed, hydraulic oil temperature, servo pressure, water temperature, oil amount, oil pressure, working hours and engine speed will be displayed on the screen inside driver's cab. It will alarm under the condition that the A-frame was not completely hoisted under operation mode.

Lowerworks

Traveling Drive

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

Traveling Brake

The normal state 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 Shoe

The left and right track traveling device consists of 126 track shoes, width of which is 950mm. Tension of track shoe can be adjusted through hydraulic jack. The perfect tensity can be achieved through adjustment of gasket position.

Chassis

The power pin connected with the track frame is driven by the hydraulic cylinder, and easy to assemble and disassemble. The chassis is high strength welded frame structure.

Traveling Speed

The variable displacement motor can realize double speeds traveling with low speed of 0~0.68km/h and high speed of 0~1.0km/h.

Main Boom

The main chord pipe is made of high-strength steel. The boom frame is a space truss type structure welded by steel tube with constant section in the central part and variable cross section on both ends. The tip and base of the boom frame are strengthened with steel plate for easy transmission of load.

Standard configuration of booms: boom base 7.5m, boom tip 10.5m, boom insert 3m X 2, boom insert 6m X 2, boom insert 9mA X 3 and boom insert 9mB X 1.

Length of boom is between the length of basic boom (18m) and maximum length (72m).

The boom frame adopts nonmetal pedal to reduce weight. The guy rope can be imported opening and closing steel curb wire.

Jib

It is made of high strength main chord pipe. The boom frame is a space truss structure with constant section in the central part and variable cross section on both ends. It is welded with steel pipes and is enforced by steel plates at tip and base so as to improve the performance of load transmission.

The basic jib length is 13m (5m jib tip 3mX1 jib insert and 5m jib base), and the jib insert of 6mX2 can be mounted on booms with following length: 39m, 42m, 45m, 48m, 51m, 54m, 57m, 60m and 63m. Available jib lengths are 13m, 19m and 25m.

Hook Block

Standard configuration:

- 9 t hook block
- 50 t hook block
- 100 t hook block

Optional parts:

- 15 t hook block
- 35 t hook block

Note: the equipments mentioned above are full set of configurations. The detailed equipments shall be in accordance with the order.

Safety Device

Load Moment Indicator

There is an independent security operating system controlled by computer in the load moment indicator. It can automatically detect the weight 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: main frame, monitor, angle sensor and force sensor etc.

Function: instantaneously display the rated load, actual load, operation radius, angle and height of the working device under the current situation of the crane. Automatically detect the dynamic data of the angle over-limitation and load over-limitation and alarm immediately and stop the operation.

Anti-overwinding Device for Main and Auxiliary Hooks

The limit switch and heavy punch fixed on the upper boom are used to prevent the hook from being lifted over high. When the hook is lifted to a certain height, the limit switch is activated so as to make the buzzer on the control board alarm by both electronic and hydraulic control and the hook lifting operation stop automatically. On this occasion, the hook overwinding could be prevented.

Anti-overloosening device for main and auxiliary hooks

It is composed of the motion trigger device fixed inside of the drum and proximity switch. It shall send signal when the steel wire was loosened close to the last 3 circles and the electronic controlling system shall automatically stop the hooks and alarm through buzzer and monitor.

Commutator for Assembling Mode/ Operation Mode

The anti-overwinding device, caging device of boom, A-frame alarming device and moment limiter are all out of commission under the assembling mode so as to make it easier to install the crane.

Under the operation mode, all the safety devices can be operated.

A- frame Alarming Device

Under operation mode, the system shall alarm through buzzer and monitor in case the A-frame was not lifted to the right position.

Safety Device

Caging Device for Boom

When the elevation angle of the boom is over 78° , the buzzer shall alarm and the boom shall be stopped. Synchronously, the lifting operation of luffing drum is out of commission and only lowering operation is allowed. This protection function shall be controlled by both of the moment limiter and the two-stage control of travel switch.

When the angle of the boom is less than 30° , the buzzer shall alarm and the boom shall be stopped. Synchronously, the lowering operation of the luffing drum is out of commission and only the lifting operation is allowed. This function shall be controlled by moment limiter.

Anti-retroversion Device for Boom

The anti-retroversion rod is made in nested steel pipe and spring structure fixed on the top of the lower boom, which is equipped with the function of support through the spring pressure so as to prevent the main boom retroversion.

Swing Lock Device

It is composed of swing braking electromagnetic valve and swing lock releasing electromagnetic valve. Only to open the swing locking electromagnetic valve first, the swing operation can be fulfilled.

Drum Lock Device

Electronic controlled locking device is set all the winch drums, which means it is essential to release the pallet switch before the winding operation so as to prevent the misoperation caused by lever and to guarantee the safety when the winding is under non-operation mode.

Boom Angle Indicator

Pendulum-type angle indicator mounted at the side close to the driver's cab of the lower boom.

Hook clamp

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

Acousto-optic Alarm

It can send acousto-optic alarm within 5 seconds after the engine starts and during swing and traveling. And the left and right lights shall flicker during swinging.

Gradienter

Electronic gradienter can indicate the inclining angle of the upperworks on the monitor of the control system.

Relief Switch

When the operator is not at seat or draws back the relief handle, the relief valve shall be closed and all the operations are out of commission so as to prevent misoperation.

Emergency Stopping Button

When emergency occurs, press this button to cut off the electricity and stop all the operations.

Tricolor Load Alarming Light

The load alarming light includes 3 colors, which can display the instantaneous load synchronously. Namely, the green color means the load rate is less than 90%, the yellow color means the load rate is between 90% to 100% and the red color means the load rate is over 100%, which is in overload situation.

Monitor System

Camera: 2 PCS, respectively monitor the winch mechanism and the situation of the back portion for the complete appliance.

Monitor: the monitored images can be switched from one camera to the other through switches.

Whenever failure appears, the monitor shall show the information through words and symbols.

Anti-lightening Stroke Protection Device

It includes grounding devices and surge-protect device, which can prevent the damage of the electronic components and the hurt of the staff from lightening.

Optional Remote Monitoring System

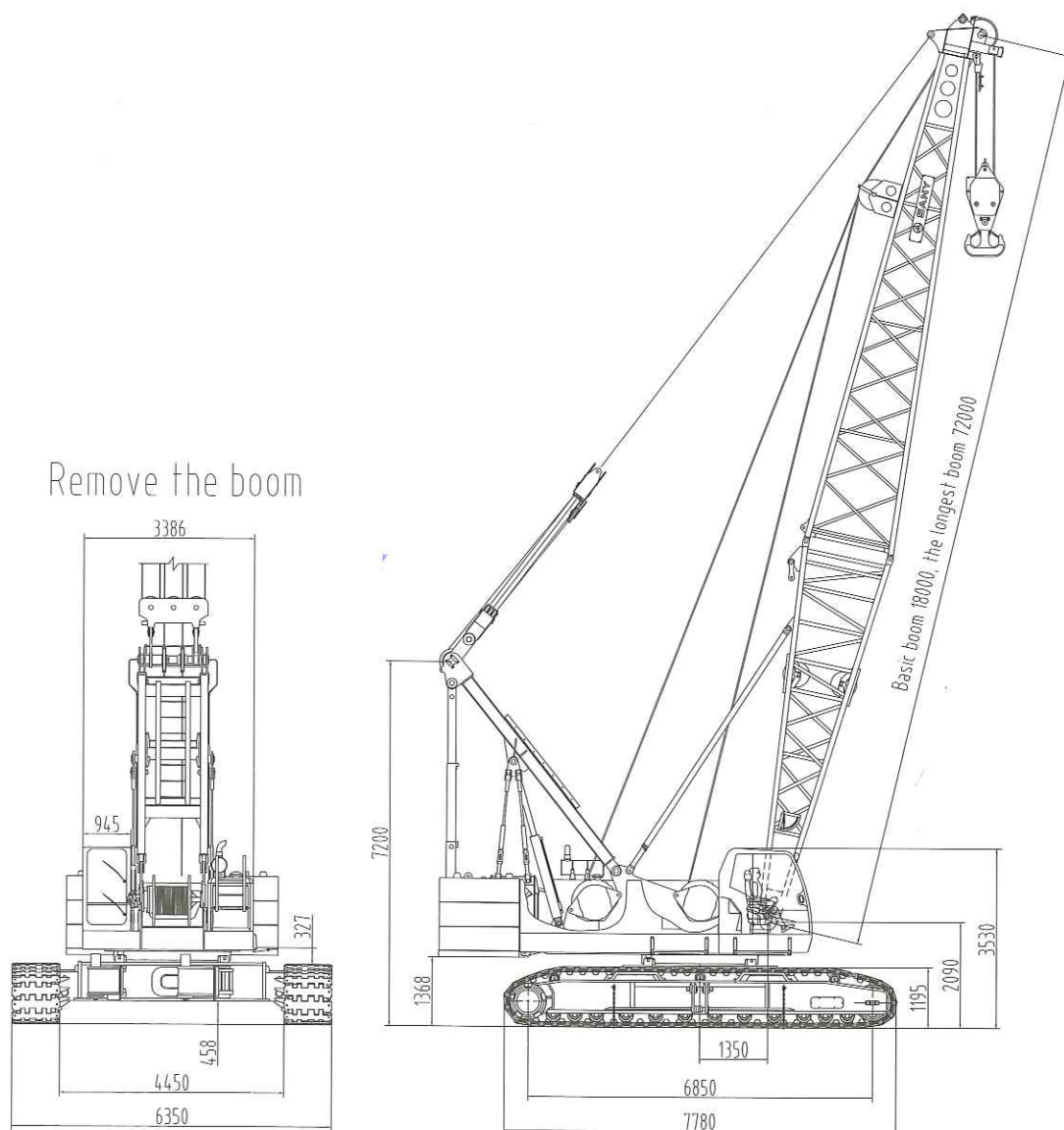
The functions of GPS satellite positioning, GPRS data transmission, inquiry of the operation of the equipments, statistic and remote failure diagnosis is available.

Illuminator

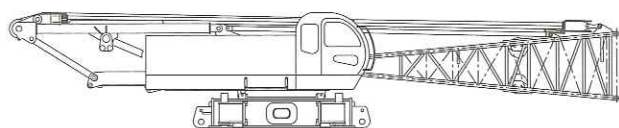
Night lighting devices such as winch illuminator, dipped light in front of the driver's cab, angle adjustable high beam and head lamp in driver's cab shall be set so as to improve safety for construction during night.

Rearview Mirror

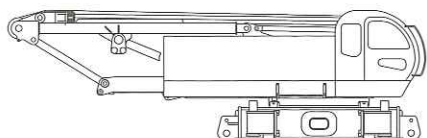
The mirrors shall be respectively set at the right side of the driver's cab and the front handrail of the left cover.



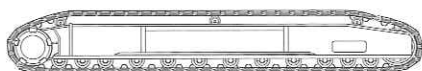
Transportation Dimension of Main Parts



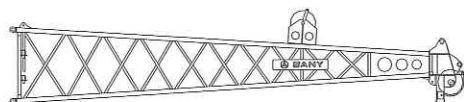
Main Body	×1
Length	16.08m
Width	3.40m
Height	3.05m
Weight	44.8 t



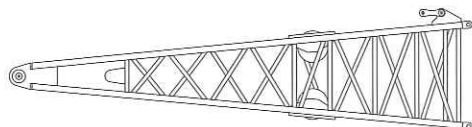
Main Body	×1
Length	9.65m
Width	3.40m
Height	3.05m
Weight	42.3t



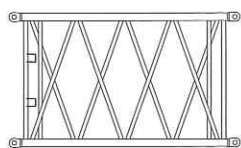
Track Assembly	×2
Length	7.81m
Width	0.95m
Height	1.19m
Weight	16.5t



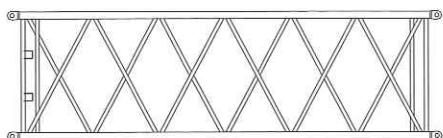
Boom tip	×1
Length	10.92m
Width	1.81m
Height	2.24m
Weight	2.1 kg



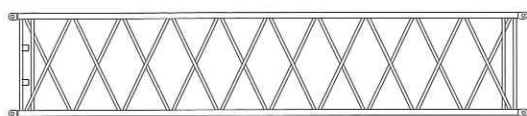
Boom base	×1
Length	7.73m
Width	1.81m
Height	2.03m
Weight	2.47t



Boom insert 3m	×2
Length	3.14m
Width	1.81m
Height	1.83m
Weight	0.6t

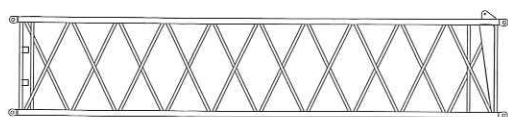


Boom insert 6m	×2
Length	6.14m
Width	1.81m
Height	1.83m
Weight	0.95t

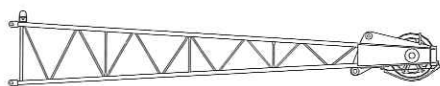


Boom insert 9mA	×3
Length	9.14m
Width	1.81m
Height	1.83m
Weight	1.3t

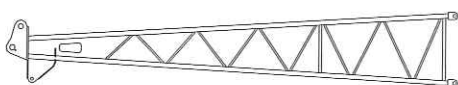
Transportation Dimension of Main Parts



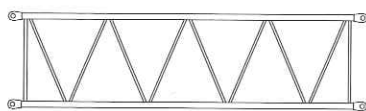
Boom insert 9mB	×1
Length	9.14m
Width	1.81m
Height	1.83m
Weight	1.5t



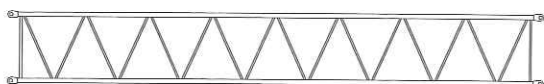
Jib tip	×1
Length	5.36m
Width	1.01m
Height	1.17m
Weight	0.3t



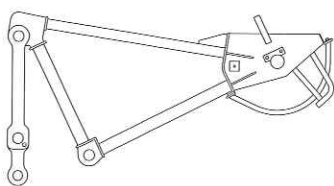
Jib base	×1
Length	5.11m
Width	1.03m
Height	0.83m
Weight	0.2t



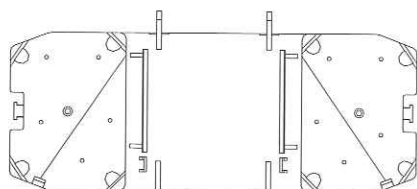
Jib insert 3m	×1
Length	3.08m
Width	1.01m
Height	0.83m
Weight	0.1t



Jib insert 6m	×2
Length	6.08m
Width	1.01m
Height	0.83m
Weight	0.2t



Extension boom	×1
Length	2.12m
Width	1.04m
Height	1.12m
Weight	0.3t



Counterweight tray	×1
Length	4.20m
Width	1.82m
Height	0.5m
Weight	6.6t

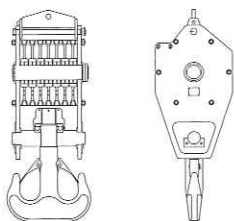


Counterweight	×6
Length	1.60m
Width	1.19m
Height	0.55m
Weight	6t

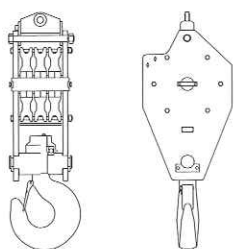
Transportation Dimension of Main Parts



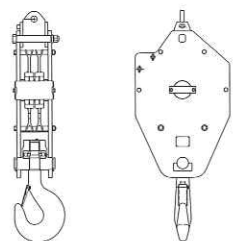
Additional counterweight	×3
Length	0.93m
Width	0.665m
Height	1m
Weight	3.03t



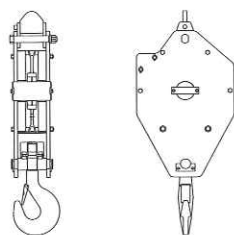
100t hook block	×1
Length	0.81m
Width	0.74m
Height	2.03m
Weight	1.6t



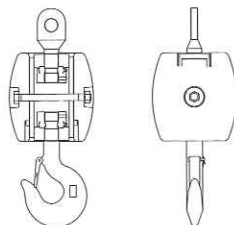
50t hook block	×1
Length	0.72m
Width	0.41m
Height	1.93m
Weight	0.7t



35t hook block	×1
Length	0.72m
Width	0.32m
Height	1.75m
Weight	0.6t



15t hook block	×1
Length	0.72m
Width	0.26m
Height	1.68m
Weight	0.5t



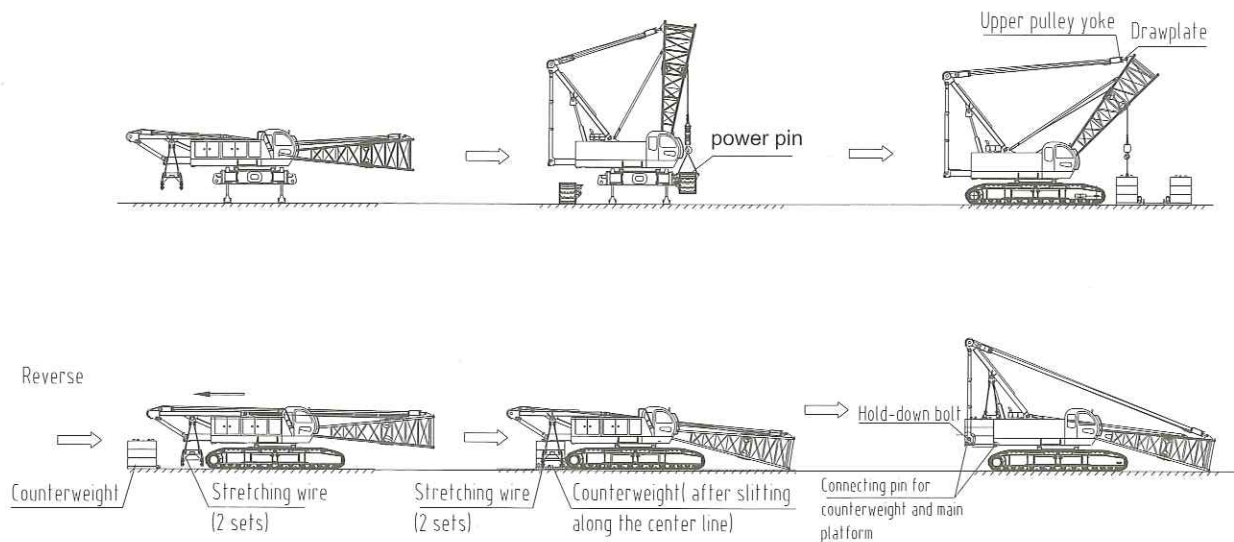
9t hook block	×1
Length	0.36m
Width	0.36m
Height	0.95m
Weight	0.3t

Note:

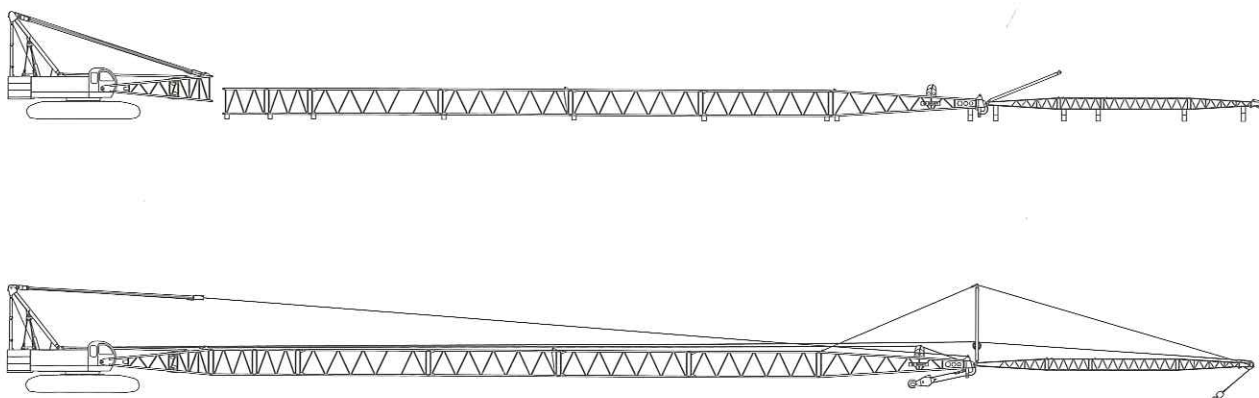
- 1、The transportation dimension of main parts is sketch map, which was not drawn according to the rate. The dimension in the sketch is design value excluding package.
- 2、The weight is design value and there may be difference caused manufacture.

Self and jib assembly and disassembly

This crane is equipped with functions including the self-assembly and disassembly of track traveling mechanism and 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 for detailed operation procedures.



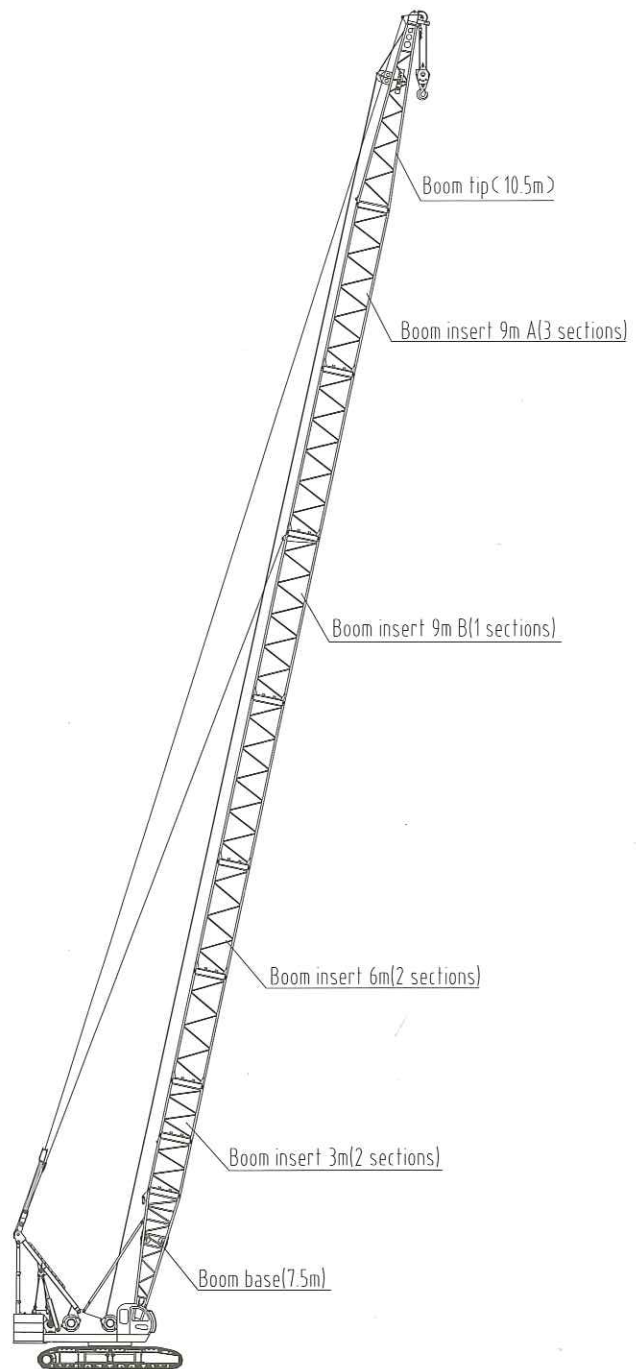
Schematic diagram of self assembly of track frame and counterweight (perform reverse procedure for disassembly)



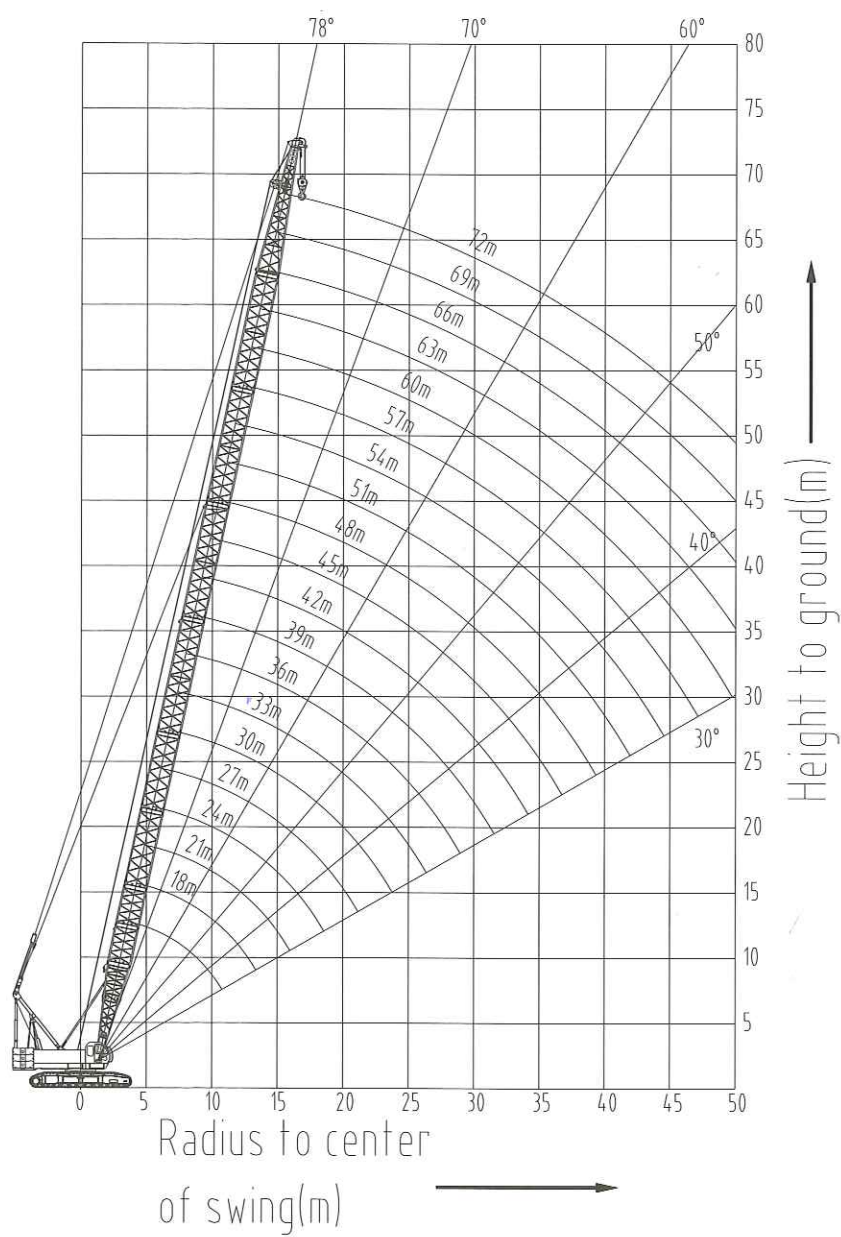
Schematic diagram of jib assembly

Main boom combination

Boom Length	Main boom insert			
(m)	3 m	6 m	9mA	9mB
18	-	-	-	-
21	1	-	-	-
24	-	1	-	-
	2	-	-	-
27	1	1	-	-
	-	-	1	-
30	1	-	1	-
	-	2	-	-
33	1	2	-	-
	-	1	1	-
36	1	1	1	-
	-	-	2	-
39	2	2	-	-
	2	1	1	-
	1	-	2	-
42	-	2	1	-
	2	-	2	-
	-	1	2	-
45	1	1	2	-
	-	-	3	-
	2	2	1	-
48	1	-	3	-
	2	1	2	-
	-	2	2	-
51	-	1	3	-
	2	-	3	-
54	2	2	2	-
	1	1	3	-
57	2	1	3	-
	-	2	3	-
60	1	2	2	1
	2	-	3	1
63	2	2	2	1
66	2	1	3	1
69	1	2	3	1
72	2	2	3	1



Main boom range diagram



Curve of Lifting Height Scope

Main Boom Load Chart

It is standard counterweight with 42t weight as well as including a 6t counterweight pallet and 6 pieces of 6t counterweight.

Job	Main boom length (m)																		
radius (m)	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60	63	66	69	72
5.1	105.0																		
5.5	100.0	90.9																	
6.0	92.5	90.0	80.8	70.8															
7.0	79.5	78.7	77.5	70.0	60.5	57.3													
8.0	66.0	65.7	65.5	64.6	60.0	56.6	50.5	46.6											
9.0	55.2	55.1	54.9	54.8	54.7	54.2	50.0	46.2	44.2	41.2									
10.0	47.5	47.3	47.2	47.1	46.9	46.8	46.6	44.7	42.4	40.4	35.6	32.8	28.7	26.3					
12.0	36.9	36.7	36.5	36.4	36.3	36.1	36.0	35.9	35.8	35.7	33.7	30.3	28.2	26.2	24.5	22.9	19.4		
14.0	30.1	29.8	29.6	29.5	29.3	30.2	29.1	28.9	28.8	28.7	28.6	28.5	26.9	25.3	23.7	21.8	19.2	17.8	16.0
16.0	25.2	25.0	24.8	24.7	24.5	24.3	24.2	24.0	23.9	23.8	23.7	23.5	23.4	23.2	22.1	20.2	18.3	17.0	15.4
18.0	21.7	21.5	21.2	21.1	20.9	20.8	20.7	20.5	20.4	20.2	20.1	20.0	19.8	19.6	19.5	19.4	17.5	16.2	14.6
20.0		19.4	18.6	18.4	18.2	18.0	17.9	17.7	17.6	17.5	17.4	17.2	17.1	16.9	16.8	16.7	16.5	15.5	13.9
22.0		17.1	17.0	16.3	16.1	15.9	15.8	15.6	15.5	15.3	15.2	14.9	14.8	14.6	14.5	14.4	14.2	14.0	13.0
24.0			14.7	14.5	14.2	14.1	14.0	13.7	13.6	13.5	13.3	13.2	13.0	12.8	12.7	12.6	12.4	12.2	12.0
26.0				12.8	12.7	12.6	12.5	12.3	12.2	12.0	11.9	11.7	11.5	11.3	11.2	11.1	10.9	10.7	10.5
28.0					11.1	11.4	11.3	11.0	10.9	10.8	10.6	10.5	10.3	10.1	10.0	9.9	9.7	9.5	9.3
30.0						10.5	10.3	10.0	9.9	9.7	9.6	9.4	9.3	9.0	8.9	8.8	8.6	8.4	8.2
32.0						9.7	9.4	9.1	9.0	8.8	8.7	8.5	8.4	8.1	8.0	7.9	7.7	7.5	7.3
34.0							8.6	8.4	8.2	8.1	7.9	7.7	7.6	7.3	7.2	7.1	6.9	6.7	6.5
36.0								7.4	7.3	7.2	7.1	7.0	6.9	6.6	6.5	6.4	6.2	6.0	5.8
38.0									6.8	6.7	6.5	6.4	6.3	6.0	6.0	5.8	5.6	5.4	5.1
40.0									6.5	6.2	6.1	5.9	5.7	5.5	5.4	5.2	4.9	4.6	4.3
42.0										5.6	5.5	5.4	5.2	4.9	4.8	4.6	4.3	4.1	3.8
44.0											4.7	4.6	4.5	4.4	4.3	4.1	3.8	3.5	3.2
46.0												4.4	4.3	4.0	3.8	3.6	3.3	3.1	2.8
48.0												3.9	3.6	3.5	3.4	3.2	2.9	2.6	2.3
50.0													3.3	3.1	3.0	2.8	2.5	2.3	2.0
52.0														2.7	2.6	2.4	2.1	2.0	1.8

Note: 1. the actual hoisting duty is the value that rated hoisting duty in the table deducts the weight of hook block and other lifting tools.

2. Rated hoisting duty in this table is the weight lifted from level and hard ground.

Main Boom Load Chart

It is standard counterweight with 45t weight as well as including a 6t counterweight pallet and 6 pieces of 6t counterweight. The additional counterweight is 3t.

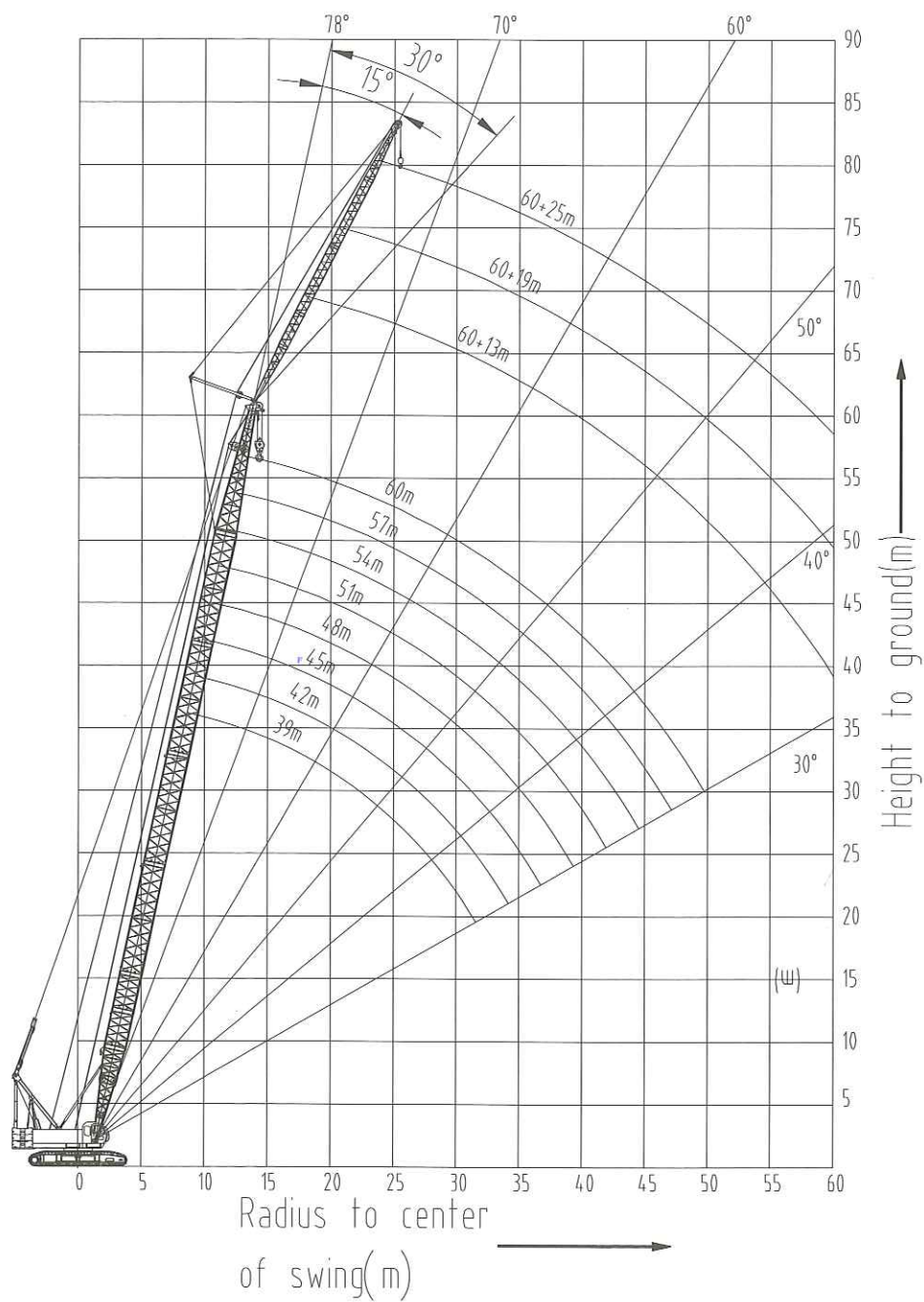
Job radius (m)	Main boom length (m)																		
	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60	63	66	69	72
5.1	○																		
5.5	○	○																	
6.0	○	○	○	○															
7.0	○	○	○	○	○	○													
8.0	○	○	○	○	○	○	○	49.4											
9.0	○	○	○	○	○	○	○	49.0	46.9	43.7									
10.0	○	○	○	○	○	○	○	47.4	44.9	42.8	37.7	34.8	30.4	27.9					
12.0	○	○	○	○	○	○	○	38.1	37.9	37.8	35.7	32.1	29.9	27.8	26.0	24.3	20.6		
14.0	○	○	○	○	○	○	○	30.6	30.5	30.4	30.3	30.2	28.5	26.8	25.1	23.1	20.4	18.9	17.0
16.0	○	○	○	○	○	○	○	25.4	25.3	25.2	25.1	24.9	24.8	24.6	23.4	21.4	19.4	18.0	16.3
18.0	○	○	○	○	○	○	○	21.7	21.6	21.4	21.3	21.2	21.0	20.8	20.7	20.6	18.6	17.2	15.5
20.0		○	○	○	○	○	○	18.8	18.7	18.6	18.4	18.2	18.1	17.9	17.8	17.7	17.5	16.4	14.7
22.0		○	○	○	○	○	○	16.5	16.4	16.2	16.1	15.8	15.7	15.5	15.4	15.3	15.1	14.8	13.8
24.0			○	○	○	○	○	14.5	14.4	14.3	14.1	14.0	13.8	13.6	13.5	13.4	13.1	12.9	12.7
26.0				○	○	○	○	13.0	12.9	12.7	12.6	12.4	12.2	12.0	11.9	11.8	11.6	11.3	11.1
28.0					○	○	○	11.7	11.6	11.4	11.2	11.1	10.9	10.7	10.6	10.5	10.3	10.1	9.9
30.0						○	○	10.6	10.5	10.3	10.2	10.0	9.9	9.5	9.4	9.3	9.1	8.9	8.7
32.0						○	○	9.6	9.5	9.3	9.2	9.0	8.9	8.6	8.5	8.4	8.2	8.0	7.7
34.0							○	8.9	8.7	8.6	8.4	8.2	8.1	7.7	7.6	7.5	7.3	7.1	6.9
36.0								7.8	7.7	7.6	7.5	7.4	7.3	7.0	6.9	6.8	6.6	6.4	6.1
38.0									7.2	7.1	6.9	6.8	6.7	6.4	6.4	6.1	5.9	5.7	5.4
40.0									6.9	6.6	6.5	6.3	6.0	5.8	5.7	5.5	5.2	4.9	4.6
42.0										5.9	5.8	5.7	5.5	5.2	5.1	4.9	4.6	4.3	4.0
44.0											5.0	4.9	4.8	4.7	4.6	4.3	4.0	3.7	3.4
46.0												4.7	4.6	4.2	4.0	3.8	3.5	3.3	3.0
48.0												4.1	3.8	3.7	3.6	3.4	3.1	2.8	2.4
50.0													3.5	3.3	3.2	3.0	2.7	2.4	2.1
52.0														2.9	2.8	2.5	2.2	2.1	1.9

Note—Rated load of the crane

- 1、The rated loads in the table represent the values when slowly and smoothly hoisting a weight on a horizontal and hardy soil surface under non-traveling hoisting working state.
- 2、The rated loads in the table were calculated under the condition that the wind speed was 9.8m/s and according to 75% of the tilting load.
- 3、The rated load includes the mass of hook block and other comments. Actual hoisting weight is the value of rated load in the table deducing weight of all hoisting implements such as hoisting hook block etc.
- 4、All values in the load table apply to 360° rotation.
- 5、The counterweight (42t+3t) is an optional operation mode, but not standard operation mode. The length of main boom for the allowed additional counterweight is 39m-72m.

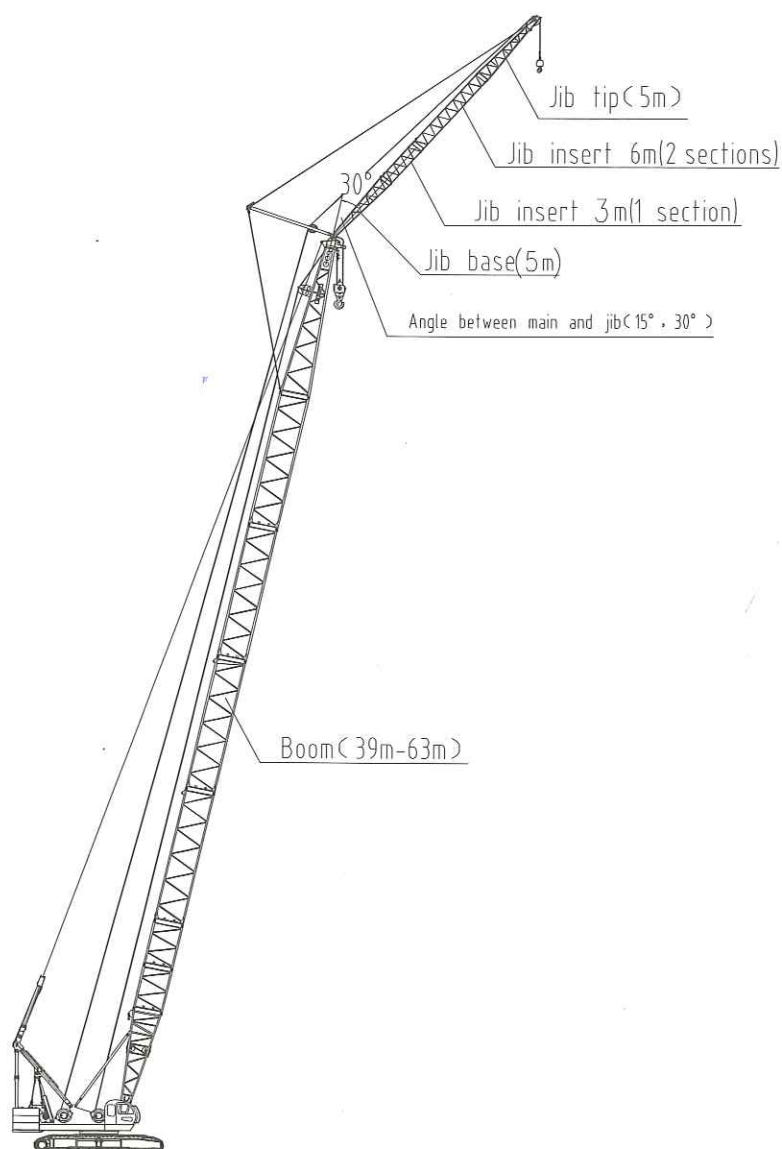
Note: To prevent retroversion, it is essential to connect a 39 meters long boom frame and then install the additional counterweight.

Jib range diagram



Jib combination

Jib Length (m)	Jib insert		Main boom Length(m)	Angle between Main Boom and Jib
	3 m	6 m		
13	1	-	39~63	15°, 30°
19	1	1	39~63	15°, 30°
25	1	2	39~60	15°, 30°



Jib load chart

Basic boom 39m:

Jib Length	13m		19m		25m	
Angle of jibs	15°	30°	15°	30°	15°	30°
Radius						
14m	14.3/11.0					
16m	11	17.2/8.0	17.2/7.2			
18m	11	8	7.2		19.5/4.6	
20m	11	8	7.2	21.1/5.7	4.6	
22m	11	8	7.2	5.7	4.6	
24m	11	8	7.2	5.7	4.6	25.1/3.9
26m	11	8	7.2	5.7	4.6	3.9
28m	29.0/11.0	8	7.2	5.7	4.6	3.9
30m	10.6	8	7.2	5.7	4.6	3.9
32m	10	8	7.2	5.7	4.6	3.9
34m	9.4	8	7.2	5.7	4.6	3.9
36m	34.7/9.4	34.7/8.0	34.7/7.2	34.7/5.7	34.7/4.6	34.7/3.9
38m						
40m						

Basic boom 42m:

Jib Length	13m		19m		25m	
Angle of jibs	15°	30°	15°	30°	15°	30°
Radius						
14m	14.9/11.0					
16m	11		17.6/7.2			
18m	11	18.2/8.0	7.2			
20m	11	8	7.2	21.5/5.7	20.1/4.6	
22m	11	8	7.2	5.7	4.6	
24m	11	8	7.2	5.7	4.6	25.4/3.9
26m	11	8	7.2	5.7	4.6	3.9
28m	11	8	7.2	5.7	4.6	3.9
30m	11	8	7.2	5.7	4.6	3.9
32m	10.3	8	7.2	5.7	4.6	3.9
34m	9.3	8	7.2	5.7	4.6	3.9
36m	8.4	8	7.2	5.7	4.6	3.9
38m	37.1/8.2	37.1/8.0	37.1/7.2	37.1/5.7	37.1/4.6	37.1/3.9
40m						

Basic boom 45m:

Jib Length	13m		19m		25m	
Angle of jibs	15°	30°	15°	30°	15°	30°
Radius						
14m	15.1/11.0					
16m	11					
18m	11	18.2/8.0	18.1/7.2			
20m	11	8	7.2		20.7/4.6	
22m	11	8	7.2	22.3/5.7	4.6	
24m	11	8	7.2	5.7	4.6	25.9/3.9
26m	11	8	7.2	5.7	4.6	3.9
28m	11	8	7.2	5.7	4.6	3.9
30m	30.3/11.0	8	7.2	5.7	4.6	3.9
32m	10.2	8	7.2	5.7	4.6	3.9
34m	9.2	8	7.2	5.7	4.6	3.9
36m	8.4	36.8/8.0	7.2	5.7	4.6	3.9
38m	8.1	7.8	7.2	5.7	4.6	3.9
40m	7.5	7.4	7.2	5.7	4.6	3.9
42m	40.3/7.4	40.3/7.3	40.3/7.2	40.3/5.7	40.3/4.6	40.3/3.9
44m						
46m						

Basic boom 48m:

Jib Length	13m		19m		25m	
Angle of jibs	15°	30°	15°	30°	15°	30°
Radius						
14m						
16m	15.9/11.0					
18m	11	18.4/8.0	18.2/7.2			
20m	11	8	7.2		21.2/4.6	
22m	11	8	7.2	22.7/5.7	4.6	
24m	11	8	7.2	5.7	4.6	
26m	11	8	7.2	5.7	4.6	26.5/3.9
28m	11	8	7.2	5.7	4.6	3.9
30m	30.1/11.0	8	7.2	5.7	4.6	3.9
32m	10.1	8	7.2	5.7	4.6	3.9
34m	9.1	8	7.2	5.7	4.6	3.9
36m	8.2	8	7.2	5.7	4.6	3.9
38m	8	7.4	7.2	5.7	4.6	3.9
40m	7.3	7.3	7.2	5.7	4.6	3.9
42m	7.1	7.1	7	5.7	4.6	3.9
44m	42.8/6.9	42.8/6.8	42.8/6.7	42.8/5.7	42.8/4.6	42.8/3.9
46m						

Note: 1. the actual hoisting duty is the value that rated hoisting duty in the table deducts the weight of hook block and other lifting tools.

2. Rated hoisting duty in this table is the weight lifted from level and hard ground.

3. Rated hoisting duty is the weight in standard counterweight (42t) operation mode.

Jib load chart

Basic boom 51m:

Jib Length	13m		19m		25m	
Angle of jibs	15°	30°	15°	30°	15°	30°
Radius						
16m	16.3/11.0					
18m	11	19.1/8.0	18.7/7.2			
20m	11	8	7.2			
22m	11	8	7.2	23.4/5.7	21.9/4.6	21.5/3.9
24m	11	8	7.2	5.7	4.6	3.9
26m	11	8	7.2	5.7	4.6	3.9
28m	11	8	7.2	5.7	4.6	3.9
30m	29.6/11.0	8	7.2	5.7	4.6	3.9
32m	9.9	8	7.2	5.7	4.6	3.9
34m	9	8	7.2	5.7	4.6	3.9
36m	8.1	36.2/8.0	7.2	5.7	4.6	3.9
38m	8	7.3	7.2	5.7	4.6	3.9
40m	7.2	7.1	40.9/7.2	5.7	4.6	3.9
42m	6.9	6.9	6.8	5.7	4.6	3.9
44m	6.7	6.7	6.6	5.7	4.6	3.9
46m	44.6/6.2	44.6/6.2	44.6/6.1	44.6/5.7	44.6/4.6	44.6/3.9

Basic boom 54m:

Jib Length	13m		19m		25m	
Angle of jibs	15°	30°	15°	30°	15°	30°
Radius						
16m	17.1/11.0					
18m	11					
20m	11	20.1/8.0	20.0/7.2			
22m	11	8	7.2		22.3/4.6	
24m	11	8	7.2	25.2/5.7	4.6	
26m	11	8	7.2	5.7	4.6	
28m	11	8	7.2	5.7	4.6	28.1/3.9
30m	11	8	7.2	5.7	4.6	3.9
32m	9.8	8	7.2	5.7	4.6	3.9
34m	8.9	8	7.2	5.7	4.6	3.9
36m	8.1	8	7.2	5.7	4.6	3.9
38m	8	7.2	37.8/7.2	5.7	4.6	3.9
40m	7.1	7	7	5.7	4.6	3.9
42m	6.7	6.6	6.5	5.7	4.6	3.9
44m	6.6	6.5	6.4	5.7	4.6	3.9
46m	6.1	6.1	6.1	5.7	4.6	3.9
48m	5.8	5.8	5.7	5.7	4.6	3.9
50m	48.1/5.7	48.1/5.7	48.1/5.7	48.1/5.7	48.1/4.6	48.1/3.9

Basic boom 57m:

Jib Length	13m		19m		25m	
Angle of jibs	15°	30°	15°	30°	15°	30°
Radius						
14m						
16m						
18m	18.3/11					
20m	11	20.6/8.0	20.4/7.2			
22m	11	8	7.2		23.1/4.6	
24m	11	8	7.2	24.6/5.7	4.6	
26m	11	8	7.2	5.7	4.6	
28m	29.3/11.0	8	7.2	5.7	4.6	28.2/3.9
30m	9.7	8	7.2	5.7	4.6	3.9
32m	9.5	8	7.2	5.7	4.6	3.9
34m	8.7	8	7.2	5.7	4.6	3.9
36m	8	37.1/8.0	7.2	5.7	4.6	3.9
38m	7.8	7.2	38.7/7.2	5.7	4.6	3.9
40m	7	6.8	7	5.7	4.6	3.9
42m	6.5	6.4	6.2	5.7	4.6	3.9
44m	6.4	6.3	6.1	5.7	4.6	3.9
46m	6	6	6	47.1/5.7	4.6	3.9
48m	5.7	5.7	5.6	5.5	4.6	3.9
50m	5.5	5.4	5.3	5.2	4.6	3.9
52m	50.5/5.1	50.5/5.0	50.5/4.9	50.5/4.8	50.5/4.6	50.5/3.9
54m						

Note: 1. the actual hoisting duty is the value that rated hoisting duty in the table deducts the weight of hook block and other lifting tools.

2. Rated hoisting duty in this table is the weight lifted from level and hard ground.

3. Rated hoisting duty is the weight in standard counterweight (42t) operation mode.

Jib load chart

Basic boom 60m:

Jib Length	13m		19m		25m	
Angle of jibs	15°	30°	15°	30°	15°	30°
Radius						
14m						
16m						
18m	18.2/11.0					
20m	11	21.2/8.0	21.0/7.2			
22m	11	8	7.2		23.5/4.6	
24m	11	8	7.2	24.4/5.7	4.6	
26m	11	8	7.2	5.7	4.6	
28m	29.7/11.0	8	7.2	5.7	4.6	29.1/3.9
30m	9.6	8	7.2	5.7	4.6	3.9
32m	9.4	8	7.2	5.7	4.6	3.9
34m	8.5	8	7.2	5.7	4.6	3.9
36m	8	36.3/8.0	7.2	5.7	4.6	3.9
38m	7.6	7.2	38.2/7.2	5.7	4.6	3.9
40m	6.9	6.7	6.6	5.7	4.6	3.9
42m	6.4	6.3	6.2	5.7	4.6	3.9
44m	6.2	6.1	6	5.7	4.6	3.9
46m	5.8	5.7	5.7	46.8/5.7	4.6	3.9
48m	5.5	5.4	5.3	5.2	4.6	3.9
50m	5.4	5.2	5.1	5	4.6	3.9
52m	5	4.9	4.8	4.6	4.6	3.9
54m	52.8/4.4	52.8/4.3	52.8/4.3	52.8/4.3	52.8/4.2	52.8/3.9
56m						

Basic boom 63m:

Jib Length	13m		19m			
Angle of jibs	15°	30°	15°	30°		
Radius						
14m						
16m						
18m	18.7/11.0					
20m	11		21.3/7.2			
22m	11	8	7.2			
24m	11	8	7.2	24.2/5.7		
26m	11	8	7.2	5.7		
28m	29.9/11.0	8	7.2	5.7		
30m	9.4	8	7.2	5.7		
32m	9.1	8	7.2	5.7		
34m	8.2	35.1/8.0	7.2	5.7		
36m	7.8	7.7	7.2	5.7		
38m	7.4	7.2	7.2	5.7		
40m	6.7	6.5	6.4	5.7		
42m	6.2	6.1	6.1	5.7		
44m	6	5.7	5.7	45.3/5.7		
46m	5.6	5.5	5.4	5.2		
48m	5.3	5.1	5	4.9		
50m	5.2	5	4.9	4.7		
52m	5	4.7	4.7	4.6		
54m	4.3	4.1	4.1	4		
56m	55.7/3.8	55.7/3.7	55.7/3.6	55.7/3.5		

Note: 1. the actual hoisting duty is the value that rated hoisting duty in the table deducts the weight of hook block and other lifting tools.

2. Rated hoisting duty in this table is the weight lifted from level and hard ground.

3. Rated hoisting duty is the weight in standard counterweight (42t) operation mode.

Jib load chart

Basic boom 39m:

Jib Length	13m		19m		25m	
Angle of jibs	15°	30°	15°	30°	15°	30°
Radius						
14m	14.3/11.5					
16m	11.5	17.2/8.4	17.2/7.5			
18m	11.5	8.4	7.5		19.5/4.8	
20m	11.5	8.4	7.5	21.1/6.0	4.8	
22m	11.5	8.4	7.5	6.0	4.8	
24m	11.5	8.4	7.5	6.0	4.8	25.1/4.1
26m	11.5	8.4	7.5	6.0	4.8	4.1
28m	29.0/11.5	8.4	7.5	6.0	4.8	4.1
30m	11.1	8.4	7.5	6.0	4.8	4.1
32m	10.5	8.4	7.5	6.0	4.8	4.1
34m	9.8	8.4	7.5	6.0	4.8	4.1
36m	34.7/9.8	34.7/8.4	34.7/7.5	34.7/6.0	34.7/4.8	34.7/4.1
38m						
40m						

Basic boom 45m:

Jib Length	13m		19m		25m	
Angle of jibs	15°	30°	15°	30°	15°	30°
Radius						
14m	15.1/11.5					
16m	11.5					
18m	11.5	18.2/8.4	18.1/7.5			
20m	11.5	8.4	7.5		20.7/4.8	
22m	11.5	8.4	7.5	22.3/6.0	4.8	
24m	11.5	8.4	7.5	6.0	4.8	25.9/4.1
26m	11.5	8.4	7.5	6.0	4.8	4.1
28m	11.5	8.4	7.5	6.0	4.8	4.1
30m	30.3/11.5	8.4	7.5	6.0	4.8	4.1
32m	10.7	8.4	7.5	6.0	4.8	4.1
34m	9.6	8.4	7.5	6.0	4.8	4.1
36m	8.8	36.8/8.4	7.5	6.0	4.8	4.1
38m	8.5	8.2	7.5	6.0	4.8	4.1
40m	7.8	7.7	7.5	6.0	4.8	4.1
42m	40.3/7.7	40.3/7.6	40.3/7.5	40.3/6.0	40.3/4.8	40.3/4.1
44m						
46m						

Basic boom 42m:

Jib Length	13m		19m		25m	
Angle of jibs	15°	30°	15°	30°	15°	30°
Radius						
14m	14.9/11.5					
16m	11.5		17.6/7.5			
18m	11.5	18.2/8.4	7.5			
20m	11.5	8.4	7.5	21.5/6.0	20.1/4.8	
22m	11.5	8.4	7.5	6.0	4.8	
24m	11.5	8.4	7.5	6.0	4.8	25.4/4.1
26m	11.5	8.4	7.5	6.0	4.8	4.1
28m	11.5	8.4	7.5	6.0	4.8	4.1
30m	11.5	8.4	7.5	6.0	4.8	4.1
32m	10.8	8.4	7.5	6.0	4.8	4.1
34m	9.7	8.4	7.5	6.0	4.8	4.1
36m	8.8	8.4	7.5	6.0	4.8	4.1
38m	37.1/8.6	37.1/8.4	37.1/7.5	37.1/6.0	37.1/4.8	37.1/4.1
40m						

Basic boom 48m:

Jib Length	13m		19m		25m	
Angle of jibs	15°	30°	15°	30°	15°	30°
Radius						
14m						
16m	15.9/11.5					
18m	11.5	18.4/8.4	18.2/7.5			
20m	11.5	8.4	7.5		21.2/4.8	
22m	11.5	8.4	7.5	22.7/6.0	4.8	
24m	11.5	8.4	7.5	6.0	4.8	
26m	11.5	8.4	7.5	6.0	4.8	26.5/4.1
28m	11.5	8.4	7.5	6.0	4.8	4.1
30m	30.1/11.5	8.4	7.5	6.0	4.8	4.1
32m	10.6	8.4	7.5	6.0	4.8	4.1
34m	9.5	8.4	7.5	6.0	4.8	4.1
36m	8.6	8.4	7.5	6.0	4.8	4.1
38m	8.4	7.7	7.5	6.0	4.8	4.1
40m	7.6	7.6	7.5	6.0	4.8	4.1
42m	7.4	7.4	7.3	6.0	4.8	4.1
44m	42.8/7.2	42.8/7.1	42.8/7.0	42.8/6.0	42.8/4.8	42.8/4.1
46m						

Note: 1. the actual hoisting duty is the value that rated hoisting duty in the table deducts the weight of hook block and other lifting tools.

2. Rated hoisting duty in this table is the weight lifted from level and hard ground.

3. Rated hoisting duty is the weight in standard counterweight (42t) and additional counterweight(3t) operation mode.

Jib load chart

Basic boom 51m:

Jib Length	13m		19m		25m	
Angle of jibs	15°	30°	15°	30°	15°	30°
Radius						
16m	16.3/11.5					
18m	11.5	19.1/8.4	18.7/7.5			
20m	11.5	8.4	7.5			
22m	11.5	8.4	7.5	23.4/6.0	21.9/4.8	21.5/4.1
24m	11.5	8.4	7.5	6.0	4.8	4.1
26m	11.5	8.4	7.5	6.0	4.8	4.1
28m	11.5	8.4	7.5	6.0	4.8	4.1
30m	29.6/11.5	8.4	7.5	6.0	4.8	4.1
32m	10.3	8.4	7.5	6.0	4.8	4.1
34m	9.4	8.4	7.5	6.0	4.8	4.1
36m	8.5	36.2/8.4	7.5	6.0	4.8	4.1
38m	8.4	7.6	7.5	6.0	4.8	4.1
40m	7.5	7.4	40.9/7.5	6.0	4.8	4.1
42m	7.2	7.2	7.1	6.0	4.8	4.1
44m	7.0	7.0	6.9	6.0	4.8	4.1
46m	44.6/6.5	44.6/6.5	44.6/6.4	44.6/6.0	44.6/4.8	44.6/4.1

Basic boom 54m:

Jib Length	13m		19m		25m	
Angle of jibs	15°	30°	15°	30°	15°	30°
Radius						
16m	17.1/11.5					
18m	11.5					
20m	11.5	20.1/8.4	20.0/7.5			
22m	11.5	8.4	7.5		22.3/4.8	
24m	11.5	8.4	7.5	25.2/6.0	4.8	
26m	11.5	8.4	7.5	6.0	4.8	
28m	11.5	8.4	7.5	6.0	4.8	28.1/4.1
30m	11.5	8.4	7.5	6.0	4.8	4.1
32m	10.2	8.4	7.5	6.0	4.8	4.1
34m	9.3	8.4	7.5	6.0	4.8	4.1
36m	8.5	8.4	7.5	6.0	4.8	4.1
38m	8.4	7.5	37.8/7.5	6.0	4.8	4.1
40m	7.4	7.3	7.3	6.0	4.8	4.1
42m	7.0	6.9	6.8	6.0	4.8	4.1
44m	6.9	6.8	6.7	6.0	4.8	4.1
46m	6.4	6.4	6.4	6.0	4.8	4.1
48m	6.1	6.1	6.0	6.0	4.8	4.1
50m	48.1/6.0	48.1/6.0	48.1/6.0	48.1/6.0	48.1/4.8	48.1/4.1

Basic boom 57m:

Jib Length	13m		19m		25m	
Angle of jibs	15°	30°	15°	30°	15°	30°
Radius						
14m						
16m						
18m	18.3/11.5					
20m	11.5	20.6/8.4	20.4/7.5			
22m	11.5	8.4	7.5		23.1/4.8	
24m	11.5	8.4	7.5	24.6/6.0	4.8	
26m	11.5	8.4	7.5	6.0	4.8	
28m	29.3/11.5	8.4	7.5	6.0	4.8	28.2/4.1
30m	10.1	8.4	7.5	6.0	4.8	4.1
32m	9.9	8.4	7.5	6.0	4.8	4.1
34m	9.1	8.4	7.5	6.0	4.8	4.1
36m	8.4	37.1/8.4	7.5	6.0	4.8	4.1
38m	8.2	7.5	38.7/7.5	6.0	4.8	4.1
40m	7.3	7.1	7.3	6.0	4.8	4.1
42m	6.8	6.7	6.5	6.0	4.8	4.1
44m	6.7	6.6	6.4	6.0	4.8	4.1
46m	6.3	6.3	6.3	47.1/6.0	4.8	4.1
48m	6.0	6.0	5.9	5.8	4.8	4.1
50m	5.7	5.6	5.5	5.5	4.8	4.1
52m	50.5/5.3	50.5/5.2	50.5/5.1	50.5/5.1	50.5/4.8	50.5/4.1
54m						

Note: 1. the actual hoisting duty is the value that rated hoisting duty in the table deducts the weight of hook block and other lifting tools.

2. Rated hoisting duty in this table is the weight lifted from level and hard ground.

3. Rated hoisting duty is the weight in standard counterweight (42t) and additional counterweight(3t) operation mode.

Jib load chart

Basic boom 60m:

Jib Length	13m		19m		25m	
Angle of jibs	15°	30°	15°	30°	15°	30°
Radius						
14m						
16m						
18m	18.2/11.5					
20m	11.5	21.2/8.4	21.0/7.5			
22m	11.5	8.4	7.5		23.5/4.8	
24m	11.5	8.4	7.5	24.4/6.0	4.8	
26m	11.5	8.4	7.5	6.0	4.8	
28m	29.7/11.5	8.4	7.5	6.0	4.8	29.1/4.1
30m	10.0	8.4	7.5	6.0	4.8	4.1
32m	9.8	8.4	7.5	6.0	4.8	4.1
34m	8.9	8.4	7.5	6.0	4.8	4.1
36m	8.4	36.3/8.4	7.5	6.0	4.8	4.1
38m	7.9	7.5	38.2/7.5	6.0	4.8	4.1
40m	7.2	7.0	6.9	6.0	4.8	4.1
42m	6.7	6.6	6.5	6.0	4.8	4.1
44m	6.5	6.4	6.3	6.0	4.8	4.1
46m	6.1	6.0	6.0	46.8/6.0	4.8	4.1
48m	5.7	5.6	5.5	5.5	4.8	4.1
50m	5.6	5.4	5.3	5.3	4.8	4.1
52m	5.2	5.1	5.0	4.9	4.8	4.1
54m	52.8/4.6	52.8/4.5	52.8/4.5	52.8/4.6	52.8/4.4	52.8/4.1
56m						

Basic boom 63m:

Jib Length	13m		19m			
Angle of jibs	15°	30°	15°	30°		
Radius						
14m						
16m						
18m	18.7/11.5					
20m	11.5		21.3/7.5			
22m	11.5	8.4	7.5			
24m	11.5	8.4	7.5	24.2/6.0		
26m	11.5	8.4	7.5	6.0		
28m	29.9/11.5	8.4	7.5	6.0		
30m	9.8	8.4	7.5	6.0		
32m	9.5	8.4	7.5	6.0		
34m	8.6	35.1/8.4	7.5	6.0		
36m	8.2	8.0	7.5	6.0		
38m	7.7	7.5	7.5	6.0		
40m	7.0	6.8	6.7	6.0		
42m	6.5	6.4	6.4	6.0		
44m	6.3	6.0	6.0	45.3/6.0		
46m	5.9	5.7	5.6	5.4		
48m	5.5	5.3	5.2	5.1		
50m	5.4	5.2	5.1	4.9		
52m	5.2	4.9	4.9	4.8		
54m	4.5	4.3	4.3	4.2		
56m	55.7/4.0	55.7/3.9	55.7/3.8	55.7/3.7		

Note: 1. the actual hoisting duty is the value that rated hoisting duty in the table deducts the weight of hook block and other lifting tools.

2. Rated hoisting duty in this table is the weight lifted from level and hard ground.

3. Rated hoisting duty is the weight in standard counterweight (42t) and additional counterweight(3t) operation mode.

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