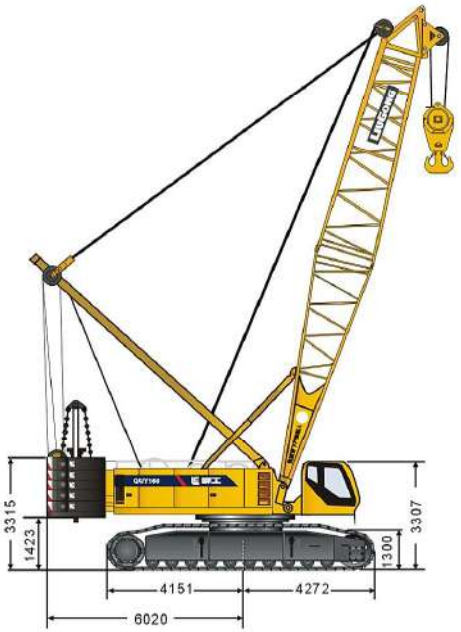
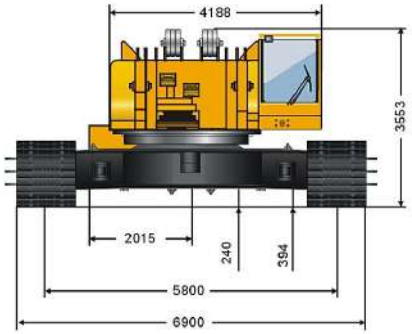
Overall Dimension





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Guangxi Liugong Machinery Co.,Ltd.
广西柳工机械股份有限公司
No.1 Liutai Road, Liuzhou, Guangxi 545007, PR China P.C:545007
Sales Tel:0552-4928847 Fax:0552-4928427
Service Tel:0552-4926594 Fax:0552-4927100
Www.liugong.com

LiuGong 柳工

QUY160 Crawler Crane

QUY160 Crawler Crane Eights Characters

1 Powerful Lifting Capacity

□ The Crane supports combination of five working conditions, which is able to meet various working condition requirements and to provide more selection for the users.

□Its lifting capacity is larger than that of the same type products in China, the maximum capacity of working condition of main boom is 160t; the maximum capacity of the working condition of fixed jib is 24t; the maximum capacity of the working condition of tower jib is 40t; the maximum capacity of the working condition of ultra short jib is 35t; the maximum capacity of the working condition of boom point is 13t.

2 Top System Configured

□Cummins Type QSL9 diesel engine of 6-cylinder water cooled electric-controlled high pressure common rail is adopted for power system, achieving Tier 3 discharge and strong power.

□The advantages of current international top hydraulic pressure manufacturers and of various products are combined, the world advanced pump controlled system is configured for the hydraulic system of which components are imported; the system is highly efficient, reliable and has a long service life.

□The advanced electric-controlled system is adopted for control system, Comparing with other control systems, the whole operation is more convenient; and the system responds much faster and operate more smoothly and has a better jogging; the CAN bussing technique is used, which improves the reliability of the system greatly.

3 Unique Boom System

□With the longest main boom of 84m, it has the longest main boom among the crawler cranes with the same tonnage in China.

□The booms are of truss frame structure, the imported pipes with high strength are used for the main cords; the imported boards with high strength are adopted for pulling plates which are tolerant, flexible, light and have strong bearing ability, as well as are assembled and disassembled easily; mast luffing structure is adopted for the main boom, which is able to improve its tolerance efficiently and is good to increase its lifting capability.

□It owns national patent and the unique ultra short jib structure at domestic.

4 Optimally Designed Structures

□ Applying the design tools such as professional design software, finite element?analysis?software and 3D virtual assembly software, the Product is manufactured inside the PLM system, which not only guarantees the design quality, but also optimizes structure greatly, thus ensuring the strength and reliability of the structures.

5 Self –Assembly and Disassembly System

□Without the aid of any crane equipment, the self– assembly and disassembly of the whole crane is able to be achieved.

6 Originally Designed Sliding-door Driver Cab

□With broad vision, it is spacious and comfortable inside.

□Large areas of the glass windows is installed, there are sunscreen shade, adjustable seat, windscreen wiper, electric-controlled handle, torque display, digital indicator, various rocker switches, headlamps, rear view mirror and air conditioner equipped inside the cab.

□The cab is rotatable (which is able to reduce the width of the crane and is convenient for transportation) and is able to turn 20? upwards (which can broaden the drivers? vision and can effectively fatigue caused by long operation).

□ The layout of all the operation handles and various control buttons are designed according to ergonomics, making the operation more comfortable.

7 Efficient Stringing Mechanism

□ All the steel wire ropes use for main/auxiliary lifting and luffing are imported from Germany, the steel wire ropes used for main/auxiliary lifting are bagged rope heads which are able to achieve self stringing by stringing mechanism; there is no need of dragging and dropping by manpower, which can reduce the workers' labor intensity and can be operated conveniently and fast.

8 Overall Safety Device

□The safety and alarm devices such as mechanical, electric and hydraulic modes are adopted for the Crane, guaranteeing the safe operation of the equipment.

Hook

- Five kinds of hooks in total: 160t. 100t. 50t. 35t. 16t.

Main Boom

- The truss frame structure is welded with the pipes with high strength, and the joints are connected by pins.
- Basic boom: 15m, 7.5m bottom boom+7.5m top boom
- Insert joint: 3m *1,6m *1,12m *5
- Length :15 ~ 84m

Fixed Jib

- The truss frame structure is welded with the pipes with high strength, and the joints are connected by pins.
- Basic boom: 9m, 4.5m bottom jib+4.5m top jib
- Insert joint: 3m *1、6m *3.
- Length : 9 ~ 30m
- Angle of installation:10° .30°
- The max.capacity is up to 24t.
- The longest main boom +fixed jib: 72m+30m fixed jib.

Tower Jib

- The truss frame structure is welded with the pipes with high strength, and the joints are connected by pins.
- Basic boom: 24m, 9.5 m bottom boom +6m insert join+8.5m top boom.
- Insert join:3m *1,6m *1,12m *2
- Length: 24 ~ 51m
- The max.capacity is up to 40t.
- The longest main boom +fixed jib: 57m+51m tower jib.

Ultra Short Jib

- The truss frame structure is welded with the pipes with high strength, and the joints are connected by pins.
- Length:4.8m
- Angle of installation: 20° .
- The max.capacity is up to 35t.
- The longest main boom +ultra short jib: 72m+4.8m ultra short jib.
- The longest main boom +fixed jib: 57m+51m tower jib.

Boom Point

- The truss frame structure is welded with the pipes with high strength, and the joints are connected by pins and main boom heads.
- Single pulley is used for speedy operation.

Counter Weight

- The superposed installation way is adopted, which is convenient for installation and can achieve self assembly and disassembly completely.
- The counter weight of upper part is made of three components:

Counter weight tray	12t×1
Left-right counter weight Ⅰ	5t×10
Left-right counter weight Ⅱ	1.25t×2

- Welding box weight of understructure 10t×2

Optimally Designed Structures

Guarantee Reliability and Durability of the Complete Machine

Under chassis

- The frame, is X type box structure, is articulated connection with crawler frame by pins and pivots, and the pins and pivots are installed through hydraulic cylinders.
- The crawler frame is composed of track beam and four-wheel and one-track, on each side there are 13 balancing wheel and 68 track shoes of 1.1m wide assembled, and the self assembly and disassembly function of mast of the crane can lift and assemble the crawler frame.
- The independent travel drive unit is adopted for the crawler fame on both sides, and the travel reducer is driven by travel motor to achieve travelling and tuning of the whole crane, which can realize infinitely variable speeds, and maximum speed is 1.32km/h.

Hydraulic System

- The hydraulic system is composed of main pump, main valve, control valve, hydraulic motor, hydraulic oil tank and cooler etc.
- The electric proportion control is adopted, both on and off loop is combined, and it is constant power variable pump control system with high efficiency and energy conservation, high reliability and long service life.
- Characters: It is a closed system with stable operation, little heat and with free slewing function, and rotation controls fast start and slow stop. The load sensitive control enables the flow output by the pump to be adaptable to the executive mechanism; the proportion control with good micro control performance guarantees fine work requirements; with pressure compensation, the system is able to realize multi-mechanism compound control action.

Lifting Mechanism

- The mechanism is made up of imported variable axial piston pump, motor, balance valve, reducer, constant closed brake and steel wire ropes.
- The lifting mechanisms is divided into main and auxiliary lifting mechanisms, for which non-rotating anti-torsion wire ropes and bagged rope heads imported from Germany are use, which is able to cooperate with stringing mechanist to string verywell.

Main/auxiliary lifting &hoisting	Max. single line speed	106m/min(the 4th layer)
	Rated tension of single line	142KN
	Diameter of wire rope	26mm
	Length of wire rope used for main/auxiliary lifting	440m/200m

Power System

- The world famous brands are used and are purchased globally with strong power and excellent configuration.
- Cummins Type QSL9 diesel engine of 6-cylinder water cooled electric-controlled high pressure common rail is adopted for power system, its rated power/rotating speed: 242kW/2100rpm, maximum torque: 1424N · m/1500rpm, which meets Tier 3 discharge.

Electrical System

- The electrical systems of the crane mainly include power source, motor start and stop, indicator, alarm, lights, fans, windshield screeners, horn, height limiter, cooling fans of hydraulic oil, digital display, PLC controller, moment limiter system, preheating unit of motors and safety device, and all of them guarantee the safety operation and sound working environment of the crane.
- The CAN bussing technique is applied among remote monitor modes of controller, display, motor and torque limiter to conduct data communication, and the system has friendly human machine interface and hes default self-diagnosis function, which is highly reliable and is convenient for maintenance.
- The hoist and back monitor surveillance camera unit are equipped with the system as well; in consideration of the convenience of loading and uploading, the outdoor remote devices are used for jacking cylinder of counter weight, oil cylinder of radical axis of main boom and jacking cylinder of mast, further strengthening the flexibility and safety of the whole system.

Luffing Mechanism

- The main lifting luffing mechanism and tower luffing mechanism (auxiliary lifting) are composed of imported variable axial piston pump, motor, balance valve, reducer, constant closed brake and steel wire ropes. The special anti-torsion wire ropes imported from Germany are used for luffing wire ropes with a long service life.

Main/auxiliary lifting and hoisting	Max. single line speed	2 × 32m/min (the 4th layer)
	Rated tension of single line	120KN
	Diameter of wire rope	26mm
	Length of wire rope used for main/auxiliary lifting luffing	2/40m

Slewing Mechanism

- The slewing mechanism is composed of imported closed slewing pump, hydraulic motor, gear reducer, brake and small gear and slewing bear.
- The oil is supplied by a separate quantitative pump, it is a closed pump, which can realize infinite speed regulation of 0 ~ 1.25r/min and 360° slewing.

Travel Mechanism

- The hydraulic motor of the travel mechanism is imported from abroad, and the travel of two crawlers is controlled by two operation handles, which is able to achieve actions of straight line travel, one-side, differential and pivot steering, and drive with loading, and the mechanism is highly mechanism and flexible.
- Driving speed:0 ~ 1.32km/h, which can realize switch between upshift and downshift.
- Grade ability:30%.
- Crawler tension: The tension action is carried out by controlling oil cylinder of crawler tension, which is fast, convenient and reliable.

Jacking Mast Mechanism

- The mechanism is composed of mast, jacking cylinder of mast, and self assembly and disassembly cylinder and auxiliary hydraulic system. It is used when the crane assemble and dissemble(or transfer) by itself, the jacking cylinder will jack the mast over 90° from horizontal position so as to connect with the pulling plate end to assemble boom frames.
- The self assembly and disassembly cylinder can assemble the left and right crawler and dissemble boom frames.

Cab Rotation and Elevation Mechanism

- The mechanism is composed of cab rotary oil cylinder, cab elevation cylinder and auxiliary hydraulic system etc.
- The cab rotary oil cylinder enables the cab to rotate 90° to the front of rotary table from the back, which reduces the width of the crane and is convenient for transportation.
- The cab elevation cylinder is able to control the elevation of the cab, when the lifting is very high, the cable is able to elevate by 20° upward, expanding the drivers' vision greatly.

Support Jacking and Crawler Self Assembly and Disassembly Mechanism

- The support jacking and crawler self assembly and disassembly mechanism is composed of support of lower part, support oil cylinder, support valve and crawler power pin. The support jacking mechanism is the major bearing mechanisms when crawler is assembled or dissembled by itself.
- The crawler self assembly and dissemble mechanism lifts and hoists crawler assembly through mast and its self assembly and disassembly oil cylinder to connect or separate frame and crawler assembly by power pin.
- Without auxiliary lifting and hoisting equipment, the support jacking and crawler self assembly and dissemble mechanism is able to assemble and disassembly crawler assembly, which increases working efficiency, decreases labor intensity and avoids risk of manual operation.

Safety Device

■Safety Device

The safety and alarm devices such as mechanical, electric and hydraulic modes are adopted for the Crane, guaranteeing the safe operation of the equipment.

■Moment Limiter

The Moment limiter is composed of Moment display and digital LCD. When lifting torque is up to 90% of the rated torque, alarm light is on, and buzzer sounds, when it is up to the rated torque, the crane is stopped automatically, thus prevents the crawler crane from causing accident due to overloading under construction and guaranteeing its normal and safe working.

■Relief Valves in the Hydraulic System

The valves can prohibit the abnormal pressure in the loop so as to prevent the hydraulic pumps and motors from being damaged and to stop the system from being overloaded.

■Height Limiter unit

The units installed on the top arm such as limiter switch and weights are used to prevent the hooks from being over lifted. When the hooks are lifted to a certain height, the limitation switch sends out signal, the electrical system will cut off the lifting automatically, and the buzzer and display will send out sound and light alarm inside the cab, thus preventing the hooks from being over lifted and hoisted.

■Angle Indicator

The angle indicator of the boom is set up below and behind the bottom boom, so that the divers can see the revelation angle of the boom inside the cab.

■Alarm and Protection System for Extreme Position of the Booms

The system is controlled by torque limiter and position limitation switch. The luffing is stopped automatically when the luffing of the boom reaches to the elevation angle of extreme limit, and the system will send out sound and light alarm.

■Mousing-hook Uni

It prevents the weights from mousing.

■Wind Speed Sensor

The electrical wind speed sensor can display wind speed grade at real time on the digital display screen, which is convenient for warning dangerous working environment.

■Wire rope anti-releasing Protection Device

When the wire ropes inside the drum are released to the last three rolls, the protection device will send out signal, and the electrical system will cut off the releasing automatically, and the buzzer and display will send out sound and light alarm inside the cab.

■Emergency Stop Button

In case of emergency, to press the button is able to stop the motor and all the operation as well.

■Three-color Warning Light

The warning lights are divided into red, yellow and green, which is able to display overload status simultaneously, that is, green shows the overload rate is below 90%, yellow shows the overload is between 90% ~ 100% , and red shows the overload rate has been over 100% and under overload status.

■Monitoring System

Cameras: They monitor the lifting and hoisting of main and auxiliary lifting and main and luffing as well as the situation at the behind of the crane.

Exceptional Service Support

- The LiuGong Product Support Team provides partsand service solutions for the owning and operatingneeds of our customers. Be assured that with everymachine purchased a dedicated team of LiuGong specialists are ready to provide exceptional support.For all your machine support needs from warrantyand service repairs, planned maintenance, training,and getting the right genuine LiuGong part, contact your local LiuGong dealer and experience our service support promise.

Parts Support

- Genuine LiuGong Parts are only available through the LiuGong Dealer Network. Keep your machines running at its highest levers by using only Genuine LiuGong Parts. LiuGong maintains an extensive inventory in its 11 Parts Distribution Centers around the world to bring the parts closer to the customer.

Machine Inspection

- Before every busy season, your LiuGong dealer can thoroughly inspect your machines and perform proper maintenance service to make sure every machine will run at top productivity with minimal downtime as well as ensuring the best fuel economy and lower operating costs.

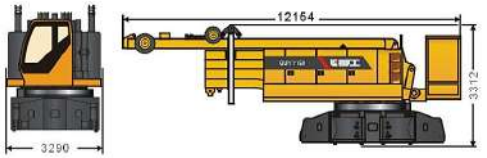
Maintenance Support

- Your local LiuGong dealer will arrange a factory-trained service expert to perform all maintenance on your equipment to the precise specs and schedules required to keep your machine at top productivity.

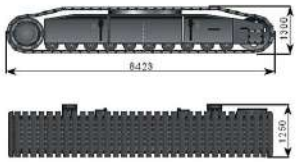
Training

- LiuGong dealers provide training to help you efficiently operate your LiuGong equipment for top productivity, long machine life and low maintenance costs.

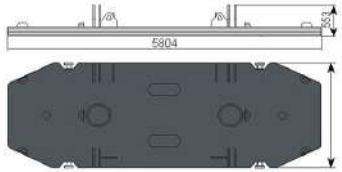
Technical Specification



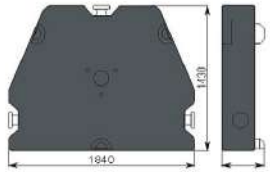
Body	×1
L	12154
W	3290
H	3312
Weight	38t



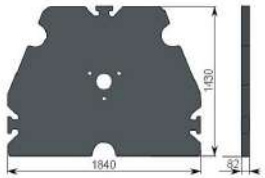
Crawler Assembly	×2
L	8423
W	1250
H	1300
Weight	21.8t



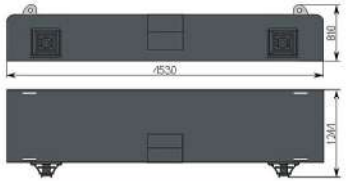
Counter Weight Tray	×1
L	5804
W	1840
H	553
Weight	12t



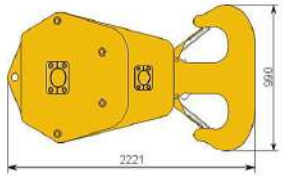
Counter Weight of Upper Part Ⅰ	×10
L	1840
W	1430
H	415
Weight	5t



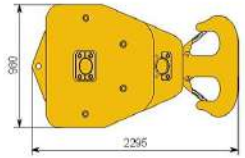
Counter Weight of Upper Part Ⅱ	×2
L	1840
W	1430
H	82
Weight	1.25t



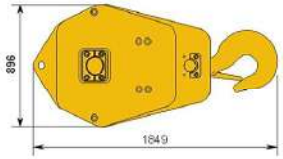
Weight of Lower Part×2	×2
L	4530
W	1244
H	810
Weight	10t



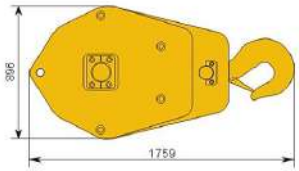
160t Hook	×1
L	2221
W	990
H	923
Weight	2.7t



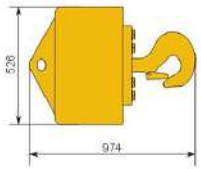
100t Hook	×1
L	2195
W	980
H	790
Weight	1.8t



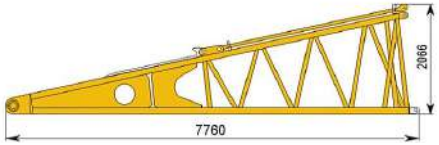
50t Hook	×1
L	1849
W	896
H	543
Weight	1.6t



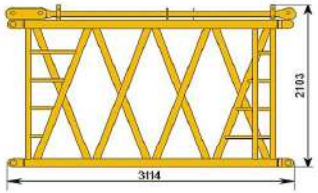
35t Hook	×1
L	1759
W	896
H	421
Weight	1.21t



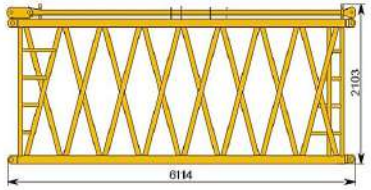
16t Hook	×1
L	974
W	526
H	526
Weight	0.63t



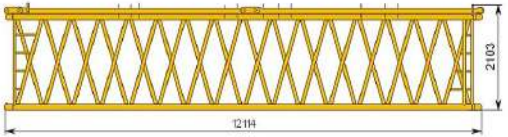
Bottom Joint of Main Boom	×1
L	7760
W	2160
H	2066
Weight	1.89t



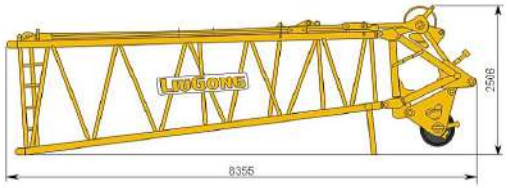
3mJoint of Main Boom	×1
L	3114
W	2130
H	2103
Weight	0.64t



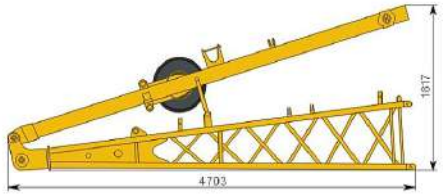
6m Joint of Main Boom	×1
L	6114
W	2130
H	2103
Weight	1.33t



12m Standard Joint of Main Boom	×5
L	12114
W	2130
H	2103
Weight	2.02t



Top Joint of Main Boom(including boom head and pulley block)	×1
L	8355
W	2130
H	2506
Weight	3.11t



Bottom Joint of Fixed Jib(including jack stay)	×1
L	4703
W	1302
H	1817
Weight	0.77t

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Major Performance Parameters

Item		Unit	Parameter	Remark
Max. lifting capacity × scope		t×m	160×5	Working condition of main boom
Elevation angle of main boom		°	82	Working condition of tower jib
			85	
Length of main boom		m	15~84	
Length of fixed jib		m	9~30	
Max. lifting capacity of fixed jib		t	24	
Angle of installation of fixed jib		°	10, 30	
length of Main boom+ fixed jib		m	42~72+9~30	
Length of tower jib		m	24~51	
Max. lifting capacity of tower jib		t	40	
Angle of installation of tower jib		°	65, 75, 85	
length of Main boom+ tower jib		m	36~57+24~51	
Length of ultra short jib		m	4.8	
Max. lifting capacity of ultra short jib		t	35	
Angle of installation of ultra short jib		°	20	
length of Main boom+ ultra short jib		m	42~72+4.8	
single line speed of drum	Main lifting	m/min	0~116	The 4th layer
	Auxiliary lifting	m/min	0~116	The 4th layer
	Main luffing	m/min	2×32	The 4th layer
Slewing speed		rpm	1.25	
Travel speed		km/h	1.32	
Grade ability			30%	
Ground pressure		MPa	0.1	
Multiplying power of main hoisting			12	
Motor	Motor type No.	kW/rpm	242/2100	
	Rated power/rotating speed Maximum output torque/rotating speed	Nm/rpm	1424/1500	
	Discharge standards		EU stage 3	
Ground length of crawler track distance width of track shoe		mm×mm×mm	7200×5800×1100	
Dimension for transportation: length width height		mm×mm×mm	12154×3290×3312	Including mast
Slewing radius at the end		m	6.36	
Wight including basic boom		t	166	

Major Performance Performance

Working Range of Main Boom

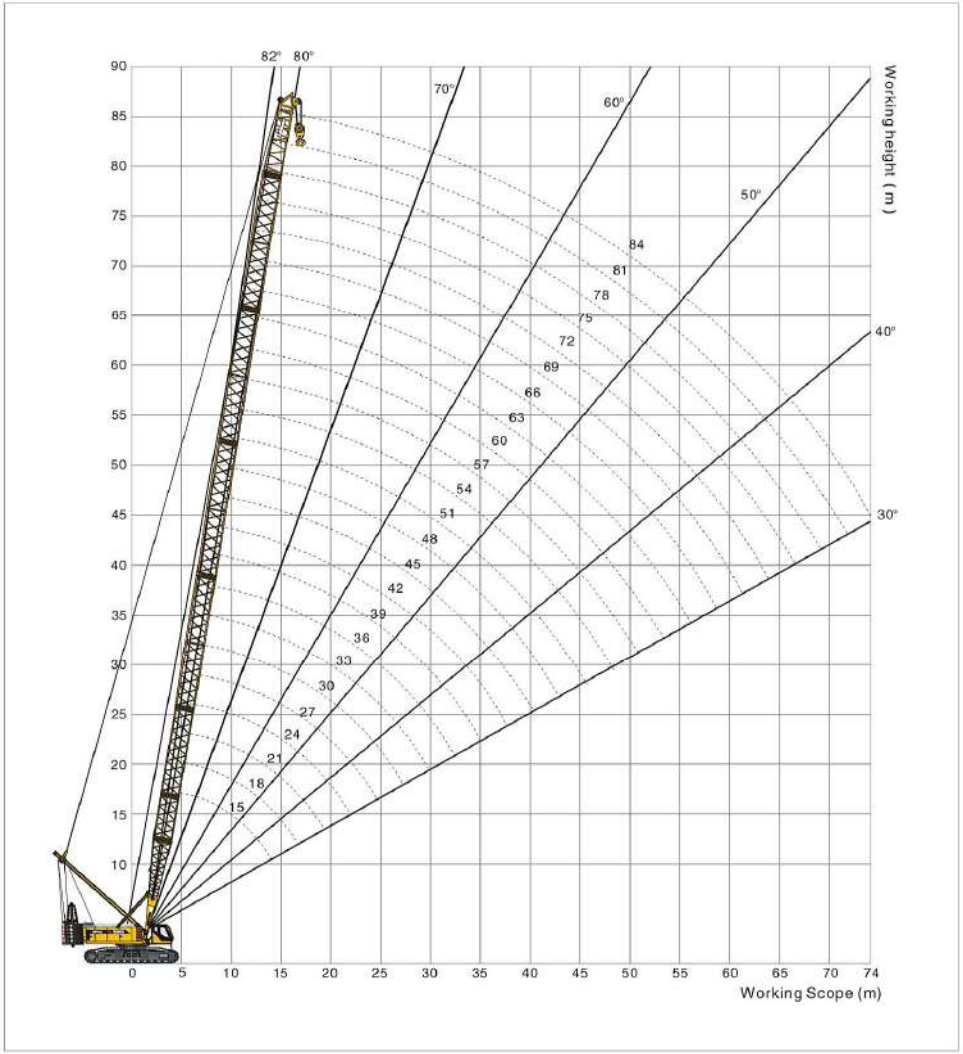


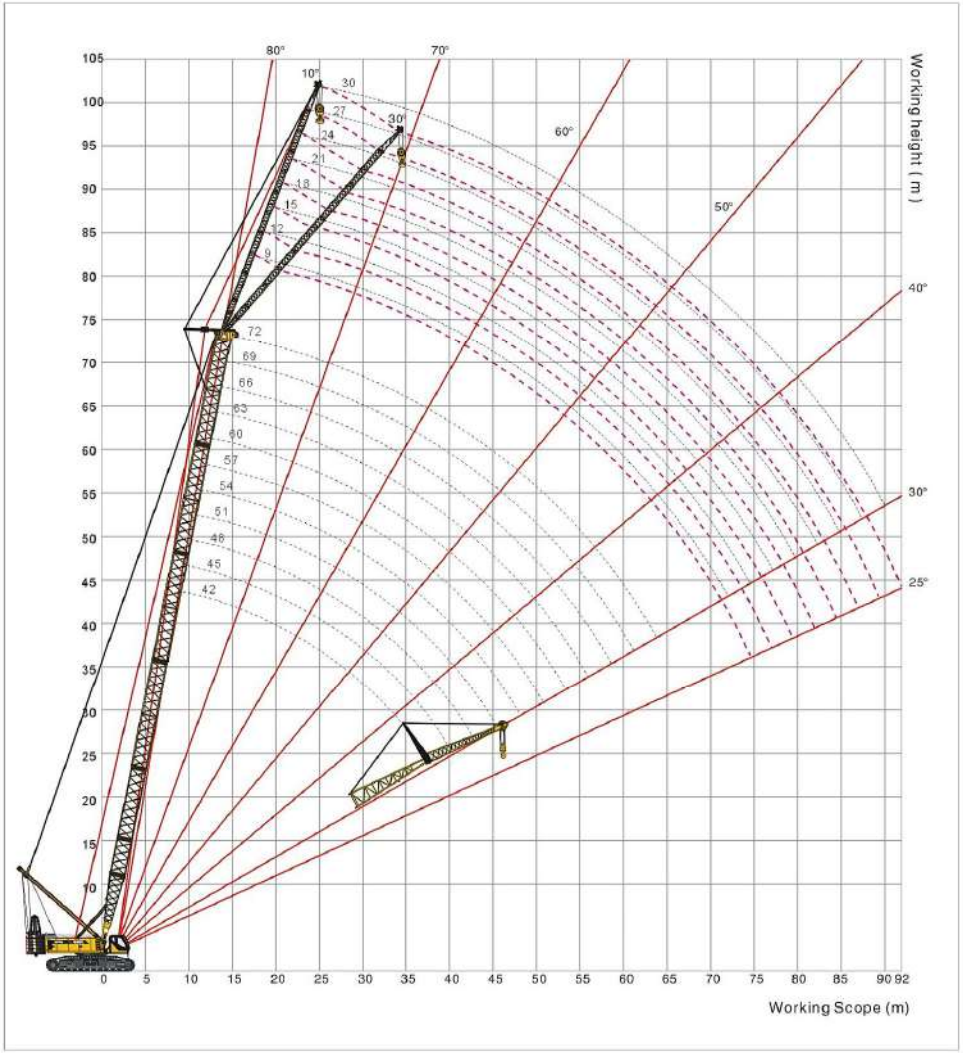
Table of Lifting Performance of Main Boom unit t

Scope/Length of main boom	15m	18m	21m	24m	27m	30m	33m	36m	39m
5	160	160	160						
6	143.2	140.5	138	135.4	132.9				
7	121.6	119.6	117.7	115.7	113.8	111.8	110.1	108	
8	105.7	104.1	102.6	101	99.3	97.7	96.3	94.6	93.2
9	93.2	92	90.7	89.5	88	86.8	85.5	84.1	82.9
10	83.4	82.3	81.3	80.2	79	77.9	76.8	75.5	74.5
12	67.9	67.9	67.1	66.2	65.4	64.5	63.7	62.7	61.8
14	55.3	55.3	55.1	55.1	54.9	54.6	54	53.2	52.4
16		45.9	46	46	45.9	45.7	45.7	45.1	44.5
18			39.1	39.1	39.1	39	39	38.8	38.5
20			36.5/19	34	34	33.8	33.8	33.7	33.5
22				29.9	29.9	29.8	29.8	29.5	29.5
24					26.5	26.5	26.5	26.2	26
26						23.7	23.7	23.5	23.4
28						22.4/27	21.3	21.2	21
30							20.4/29	19.1	19
32								17.4	17.3
34									15.9
36									15.1/35

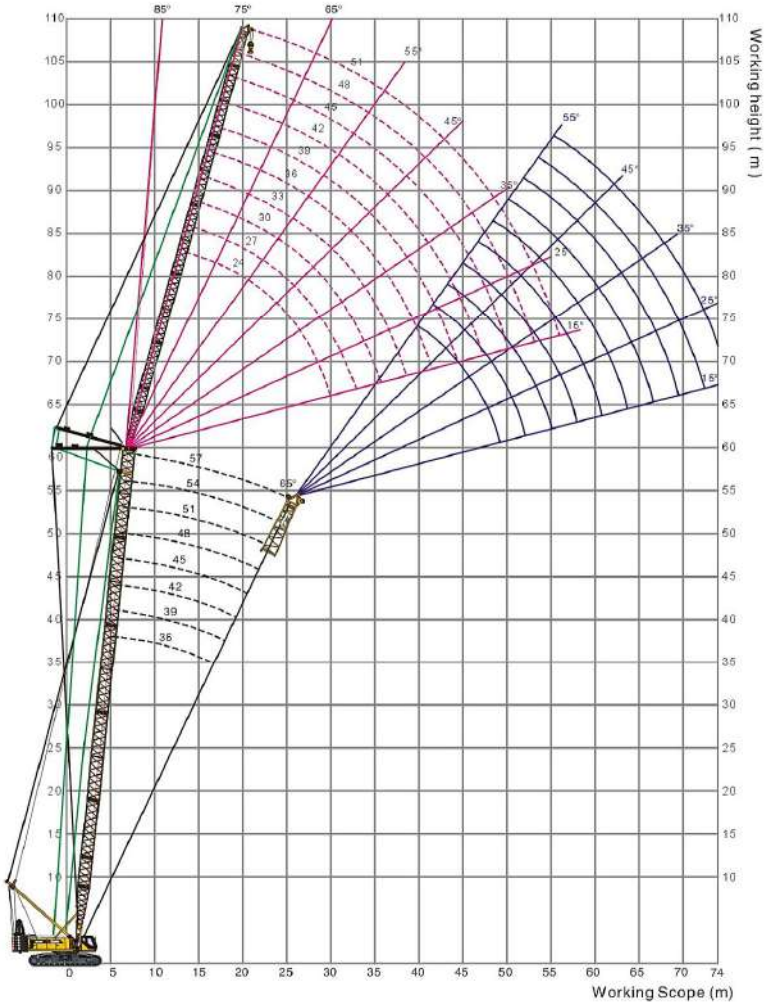
Scope/Length of main boom	42m	45m	48m	51m	54m	57m	60m	63m	66m
8	91.6								
9	81.5	80.2	79	72.5					
10	73.4	72.3	71	70.9	62.2	55	47.5/11	42.2/11	
12	60.9	59.9	59	59	58	53.8	46.6	41.6	35.8
14	51.6	51	50.2	50.2	49.5	48.8	45.3	40.3	34.7
16	43.8	43.2	42.6	42.6	42	41.3	40.9	38.8	33.6
18	37.9	37.3	36.8	36.8	36.2	35.7	35.2	34.8	32.5
20	33.2	32.7	32.3	32.3	31.6	31.3	30.7	30.4	29.8
22	29.1	29	28.5	28.5	28	27.6	27.3	26.8	26.3
24	25.9	25.7	25.5	25.2	25.1	24.6	24.3	23.8	23.4
26	23	22.9	22.7	22.6	22.3	22.1	21.8	21.3	21
28	20.9	20.5	20.4	20.2	19.9	19.8	19.6	19.3	18.8
30	18.8	18.7	18.5	18.2	18	17.9	17.6	17.4	17.1
32	17.1	17	16.8	16.5	16.3	16.2	15.9	15.7	15.4
34	15.5	15.4	15.2	15.1	14.8	14.6	14.5	14.1	14
36	14.3	14.1	14	13.7	13.5	13.4	13	12.9	12.6
38	13.7/37	12.9	12.7	12.6	12.3	12.1	12	11.6	11.5
40		11.8	11.6	11.5	11.3	11.2	10.9	10.7	10.4
42			10.7	10.5	10.4	10.2	9.9	9.8	9.5
44				9.8	9.5	9.3	9.1	8.8	8.7
46				9.3/45	8.7	8.5	8.4	8.2	7.9
48					8	7.9	7.7	7.6	7.3
50						7.3	7.1	7	6.6
52							6.5	6.3	6.2
54							6.2/53	5.9	5.5
56								5.5/55	5.1
58									4.6

Scope/Length of main boom	69m	69m	72m	72m	75m	75m	78m	78m	81m	81m	84m	84m
Counter Weight Weight	62t	64.5t	62t	64.5t	62t	64.5t	62t	64.5t	62t	64.5t	62t	64.5t
12	31.9	31.9	28.4	28.4	25.5/13	25.5/13	22.5/13	22.5/13				
14	30.8	30.8	27.5	27.5	23.2	23.2	21.3	21.3	18	18	15.8	15.8
16	29.8	29.8	26.3	26.3	22.2	22.2	20	20	17.3	17.3	15	15
18	28.8	28.8	25.5	25.5	21.4	21.4	18.8	18.8	17.1	17.1	14.3	14.3
20	27.8	27.8	23.3	23.3	20.5	20.5	18	18	16	16	14.1	14.1
22	25.9	26.6	22.5	22.5	19.8	19.8	17.3	17.3	15	15	13.4	13.4
24	23	23.7	21.7	21.7	19.1	19.1	16.5	16.5	14.3	14.3	12.5	12.5
26	20.5	21.3	20.2	20.9	18.3	18.3	15.8	15.8	13.7	13.7	11.6	11.6
28	18.5	19.1	18.2	18.7	17.5	17.5	15.2	15.2	13	13	10.1	10.1
30	16.8	17.3	16.3	17	16	16.6	14.5	14.5	12.3	12.3	9.7	9.7
32	15.2	15.7	14.8	15.4	14.5	15.1	13.9	13.9	11.8	11.8	9.3	9.3
34	13.7	14.1	13.5	14	13.2	13.7	12.7	13.3	11.3	11.3	8.9	8.9
36	12.4	12.9	12.1	12.6	12	12.4	11.6	12.1	10	10	8.5	8.5
38	11.2	11.6	11	11.5	10.9	11.2	10.5	11	9.7	9.7	8.2	8.2
40	10.2	10.5	9.9	10.4	9.8	10.2	9.6	9.9	9.3	9.4	7.9	7.9
42	9.3	9.6	9.1	9.5	9	9.3	8.7	9.1	8.4	8.8	7.7	7.7
44	8.5	8.8	8.4	8.7	8	8.5	7.9	8.2	7.6	8	7.3	7.3
46	7.7	8	7.6	7.9	7.4	7.7	7.3	7.6	7	7.3	6.5	7
48	7.1	7.4	7	7.3	6.8	7.1	6.5	6.8	6.3	6.6	5.9	6.2
50	6.5	6.8	6.3	6.6	6.2	6.5	5.9	6.2	5.7	6	5.2	5.5
52	6	6.3	5.7	6	5.5	5.9	5.4	5.7	5.1	5.4	4.8	5.1
54	5.4	5.7	5.2	5.5	5.1	5.4	4.9	5.1	4.6	4.9	4.3	4.6
56	4.9	5.2	4.8	5.1	4.6	4.9	4.5	4.6	4.1	4.5	3.8	4
58	4.5	4.8	4.3	4.6	4.1	4.5	4	4.1	3.7	4	3.4	3.7
60	4.1	4.3	3.8	4.1	3.7	4	3.5	3.8	3.2	3.5	2.9	3.2
62	3.8/61	4.1/61	3.5	3.7	3.4	3.5	3.2	3.4	2.9	3.2	2.6	2.7
64			3.4/63	3.5/63	3	3.2	2.7	3	2.6	2.7	2.1	2.4
66					2.6	2.9	2.4	2.7	2.1	2.4	1.8	2.1
68							2.1	2.3	1.8	2.1	1.5	1.8
70									1.5	1.8	1.2	1.5
72									1.3/71	1.6/71	0.9	1.2
74											0.7	0.9

Working Range of Fixed Jib



Working Range of Tower Jib



Working Range of Ultra Short Jib