

Puyuan **QUY 160** Crawler Crane Technical Manual

ZOOMLION

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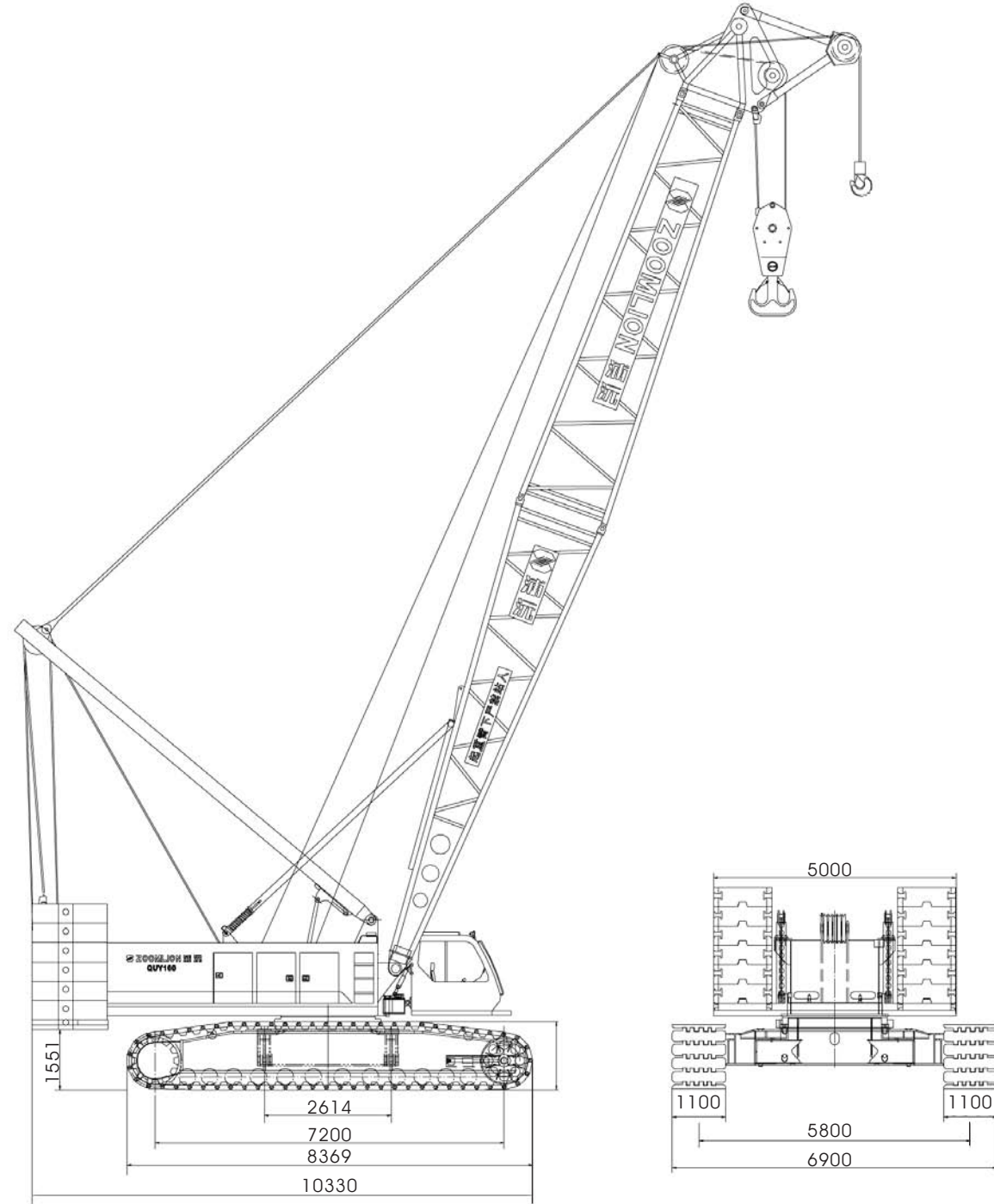
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1 Outline Dimensions and Weight of Complete Vehicle with Basic Boom

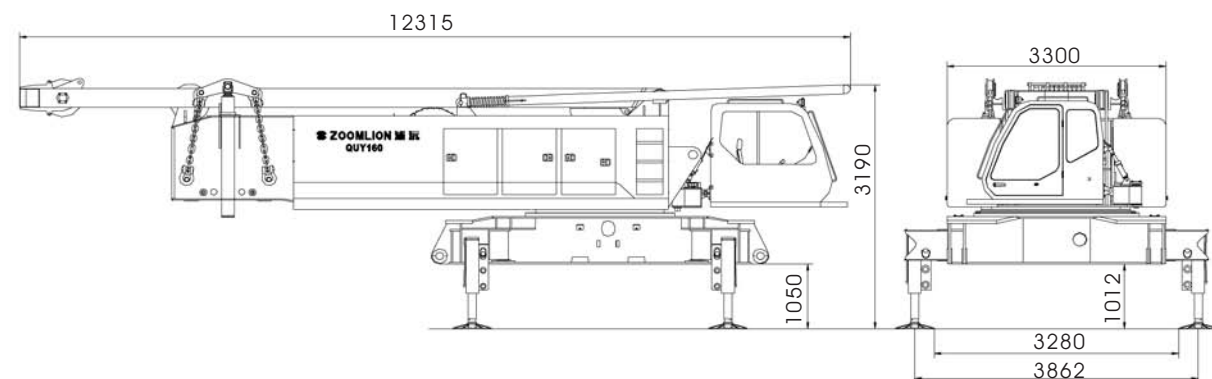


2 Main Performance Parameters

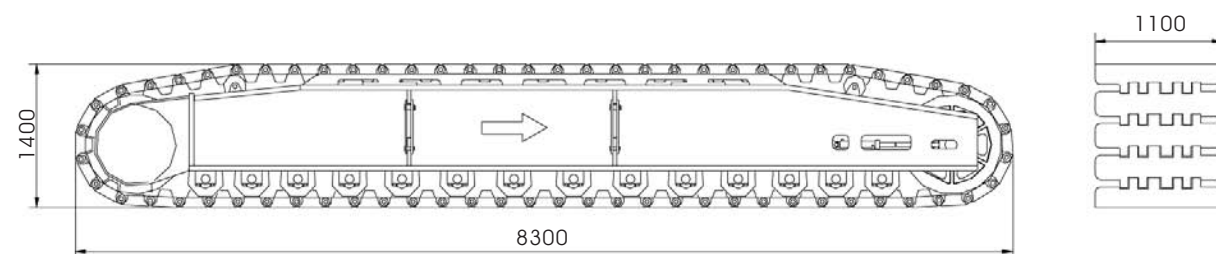
Item			Value	Remarks
Max. lifting load × working radius		t × m	160 × 5	
Deadweight when use basic boom		t	160t	
Main boom length		m	20~83	
Fixed fly jib length		m	13~31	
Max. lifting load of fixed fly jib		t	22	
Offset angle of fixed fly jib		°	10,30	
Main boom+longest length of fixed fly jib		m	71+31	
Luffing fly jib length		m	27~51	
Max. lifting load of luffing fly jib		t	22	
Main boom working angle under luffing fly jib operating condition		°	85、75、65	
Main boom+longest length of luffing fly jib		m	59+51	
Speed of drum single layer rope	Main winch	m/min	110	The 6th layer of a drum
	Auxiliary winch	m/min	110	The 6th layer of a drum
	Luffing gear	m/min	30	The 5th layer of a drum
Slewing speed		rpm	2.2	
Traveling speed		km/h	1.2	
Gradeability		%	30%	
Ground pressure		MPa	0.1	
Total outline dimensions L×W×H		mm	10.3×6.9×3.75	Exclude mast and boom
Engine	Rated power/rotational speed	kW/rpm	224/2100	
	Max. output torque/ rotational speed	Nm/rpm	1458/1200 ~ 1400	
	Emission standard		EU Stage 3	
Track space × ground contact length × track shoe width		mm	5800 × 7200 × 1100	

3 Outline Dimensions and Weight of Main Transport Components

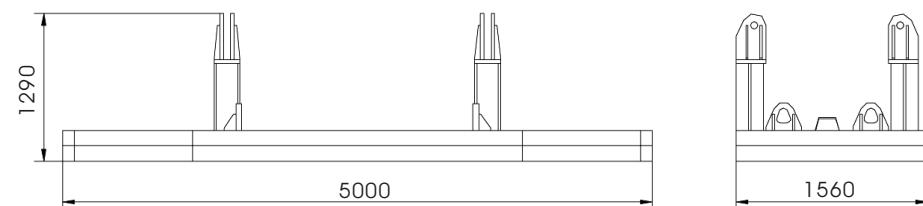
Basic machine---46t



Crawler side frame---18.4t×2



Base counterweight---11.8t×1



Counterweight---4.45t×12



1 Boom and Pendant Plate

The boom is lattice structure and made of imported high-strength tubular product. Pendant plate is made of imported high-strength plate material.

Main Boom

Main Boom length: 20m~83m

Adjusting lengthened boom section length for main boom: 3m, 6m or 9m

Fixed fly jib

Fixed fly jib length: 13~31m

Adjusting lengthened boom section length for fixed fly jib: 6m

Main boom + longest length of fixed fly jib: 71m+31m

Luffing fly jib

Luffing fly jib length: 27~51m

Adjusting lengthened boom section length for luffing fly jib: 3m, 6m or 9m

Main boom + longest length of luffing fly jib: 59m+51m

2 Mechanisms

Main and auxiliary hoist mechanisms

The hoist mechanism consists of concealed plunger axial variable hydraulic motor, balanced valve, reducer, closed brake and wire rope. It is independent of other mechanisms to be operated.

Wire rope is a kind of special torsion-resistant one imported from Germany.

The hoist mechanism is two-speed type, having two kinds of lifting speeds, which can improve working efficiency.

Boom hoist mechanism

It consists of hydraulic motor, balanced valve, reducer, closed brake and wire rope. It is independent of other mechanisms to be operated.

Wire rope is a kind of special torsion-resistant one imported from Germany.

It also has ratchet self-locking protecting mechanism, which can prevent luffing gear from slipping because of long time parking.

Slewing gear

It consists of hydraulic motor, gear reducer, slewing brake valve, brake, pinion gear and slewing ring. The superstructure can realize 360° slewing via slewing ring which is driven by pinion gear.

With controllable sliding control, slewing gear can reduce impact to ensure slewing start/ brake more stable.

With external gear and roller type slewing ring (triple row) and slewing reducer, slewing gear possesses the advantages of great load capacity and high accuracy to ensure the stability and accuracy of slewing. Slewing can realize stepless speed regulation varying from 0 to 1.5r/min.

The slewing gear can be locked mechanically by the locking devices in front of the slewing table.

Traveling mechanism

It adopts double-motor and double-reducer. Hydraulic motor, traveling reducer and balanced valve are all imported. Two sets of control levers respectively control two tracks' traveling to realize straight-line traveling, one-sided steering, differential steering, spot turn and traveling with load etc., which ensure the crawler crane has great mobility and flexibility.

Traveling speed: 0~1.2km/h

Gradeability: 30%

Tension degree of track can be adjusted by jack. It is very quick, convenient and reliable.

Mast raising mechanism

It consists of mast, mast raising cylinder and auxiliary hydraulic system etc. It is used for self-assembly/dismantling of the crane (or the change of working place). Before doing this work, the mast should be raised 90° over the horizontal level so as to connect pendant plate, assemble boom and install crawler side frame and counterweight.

Operator's cab rotary and pitching mechanism

Operator's cab can rotate 90° from the side of slewing table to the front of slewing table and then be fixed by positioning pin, which can reduce the width of complete vehicle to make it convenient for transporting.

Operator's cab is tilted by cylinder. When the lifting height is high, operator's cab can be raised upwards for 20° to broaden the driver's vision greatly.

Counterweight and counterweight assembly/dismantling mechanism

It is composed of base counterweight, counterweight, counterweight raising cylinder, bearing chain and fixed pin cylinder. It mainly realizes self-assembly/dismantling of counterweight to improve utilization ratio of crane and reduce danger of manual installation.

Outrigger raising mechanism and track self-assembly/dismantling mechanism

Outrigger raising mechanism and track self-assembly/dismantling mechanism consist of outriggers, outrigger cylinder, outrigger valve and track power pin etc. Outrigger raising mechanism is the main load bearing mechanism when self-assemble/dismantle track. Through mast and mast raising mechanism, track self-assembly/dismantling mechanism is used for lifting crawler side frame which is connected with frame by power pin. Outrigger raising mechanism and track self-assembly/dismantling mechanism can assemble/dismantle crawler side frame without auxiliary lifting equipment, which can improve working efficiency and reduce labor intensity and avoid danger of manual operation.

3 Systems

Hydraulic system

Hydraulic system consists of main pump, control valve, hydraulic motor, hydraulic oil tank and cooler etc. Hydraulic system adopts advanced pump control system in the world and its main components such as pump, motor, control loop and main loop valves are all imported from Germany and have advantages of high efficiency, energy-saving, high reliability and long service life.

Main hydraulic pump: plunger dual variable pump with tandem gear pump, driven by engine.

Oil source of auxiliary mechanism: gear pump.

Main control valve: pilot electro-hydraulic control valve

Control method of main loop: the variable quantity of variable main pump+ main reversing valve. They are both controlled by two operating handles.

Hydraulic oil tank capacity: 1000L.

Cooler: aluminium radiator with electric fan.

Electric appliance system

This system with 24V DC and earth negative, has two 195 AH accumulators.

Electric appliance of complete vehicle mainly includes power, engine start, engine shut-down, indicator light, annunciator, illumination, fan, wiper, horn, hoisting limiter, hydraulic oil cooling fan, digitized display, PLC controller, preheating device for engine and safety equipment etc, which ensure safe operation and excellent working environment of the crane. The complete vehicle adopts CAN-bus technology, which connects with engine, PLC controller and digitized display efficiently, and possesses trouble detecting and self-diagnosis function.

Power system

Engine: imported original Cummins electric spraying diesel engine

Rated output power: 224kw/1900r/min

Max. output torque: 1458Nm/1200-1400r/min

Emission standard: U.S. EPA Tier 3 and EU Stage III

Fuel tank capacity is 700L which ensures long working hours of engine.

Centralized display system

10.4 inch large LCD possesses the function of multilanguage display and can centralized display operating condition signals collected by PLC controller, such as revolutions of engine, water temperature, fuel pressure, hydraulic pump pressure, and operating level of basic machine etc. It can monitor working state in real time and give out a yellow or red warning signal when the working state of crane is abnormal.

4 Safety equipment

Load moment limiter

When actual load moment reaches 90% of rated load moment, the warning lamp lights up and the buzzer alarms; when it reaches rated load moment, the crane stops working automatically to prevent accidents from occurring due to overload during operation and ensure normal and safe work.

It displays following data:

Moment ratio

Elevation angle of main boom

Working radius

Actual load

Permissible lifting load

Max. permissible lifting height and so on.

Overflow valves of hydraulic system

It can restrain the abnormal high pressure in loop to prevent hydraulic oil pump and hydraulic motor from being damaged and prevent hydraulic system from overloading.

Hoisting limiter

Prevent hook from lifting excessively and avoid accidents occurring.

Boom angle indicator

It is mounted at the lower rear side of foot section (namely the right side of operator's cab). The driver can observe the elevation angle of boom clearly from the cab

Limit position alarm system for actuating arm

The system can ensure that the angle of actuating arm is within the specified range.

Level sensor of the complete vehicle

Detect the level state of the complete vehicle.

Anti-unhook device

Prevent load from falling off from the hook when lifting.

Ratchet locking mechanism of luffing gear

Prevent luffing gear from sliding down because of long time parking.

Over-wind and over-release protection device for wire rope

Anemoscope

5 Operator's cab

It adopts all-steel structure. Its four sides are made of hardened glass, and the roof and the front window are furnished with laminated glass. It is equipped with right sun visor, adjustable seat, wiper, electric control handles, AC device, load moment display, digitized display, auxiliary remote control box operation assembly of switches, air conditioner, fan, illumination lamp, radio (it can be equipped with CD player or DVD player), cigarette lighter, fire extinguisher etc. Wide vision and spacious room in the cab fully embody ergonomic design. When crane is lifting load, the operator can press the button to raise the cab upwards so as to extend his vision. The pitch angle of operator's cab can vary from 0° to 20°

6 Hook

160 t main hook: assemble 7 sheaves

100 t auxiliary hook: assemble 4 sheaves

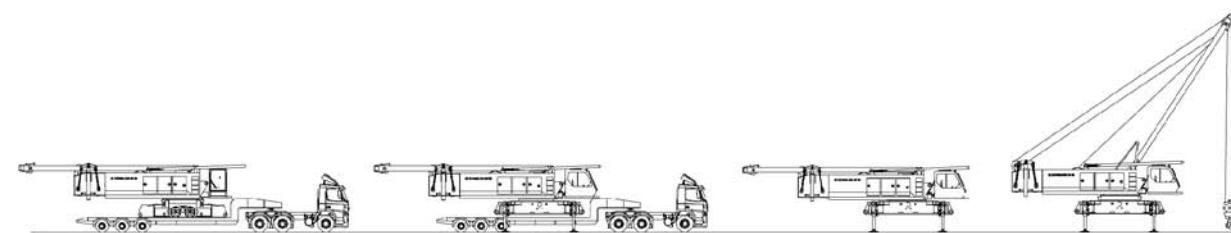
50 t auxiliary hook: assemble 2 sheaves

30 t hook: assemble 1 sheave

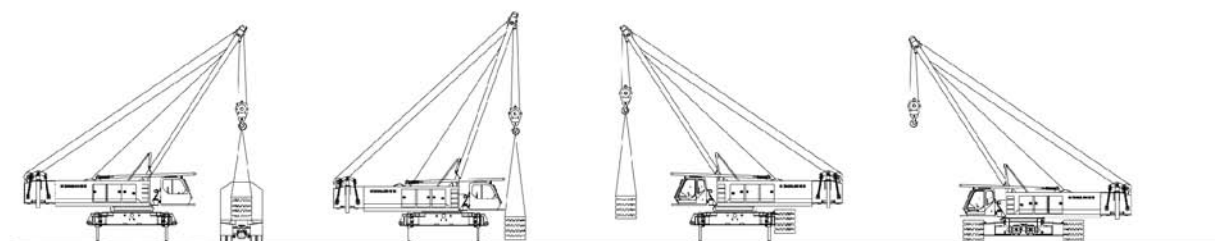
12 t hook: without sheave

Entire self-assembly & dismantling function

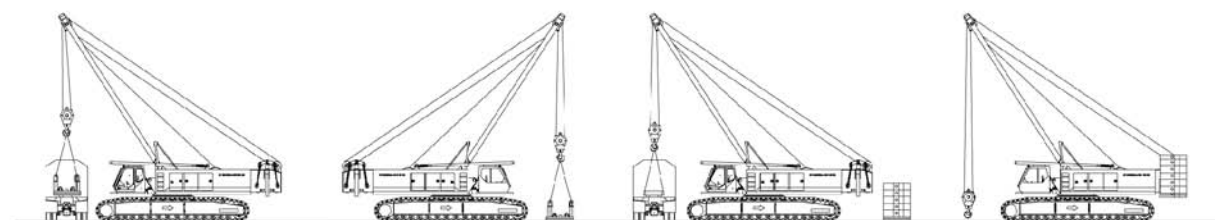
Take self-assembly/dismantling under luffing fly jib operating condition for example



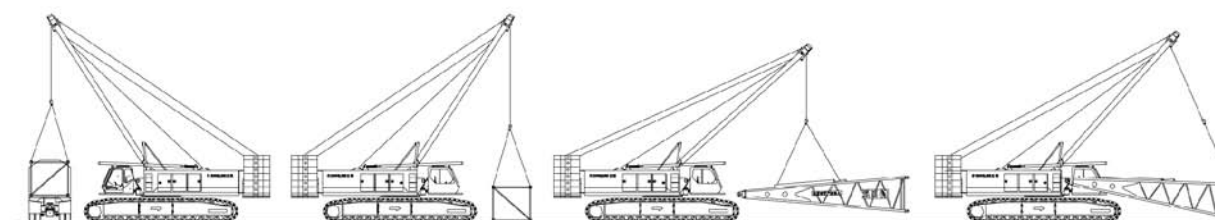
Unloading of basic machine



Unloading and assembly of crawlers

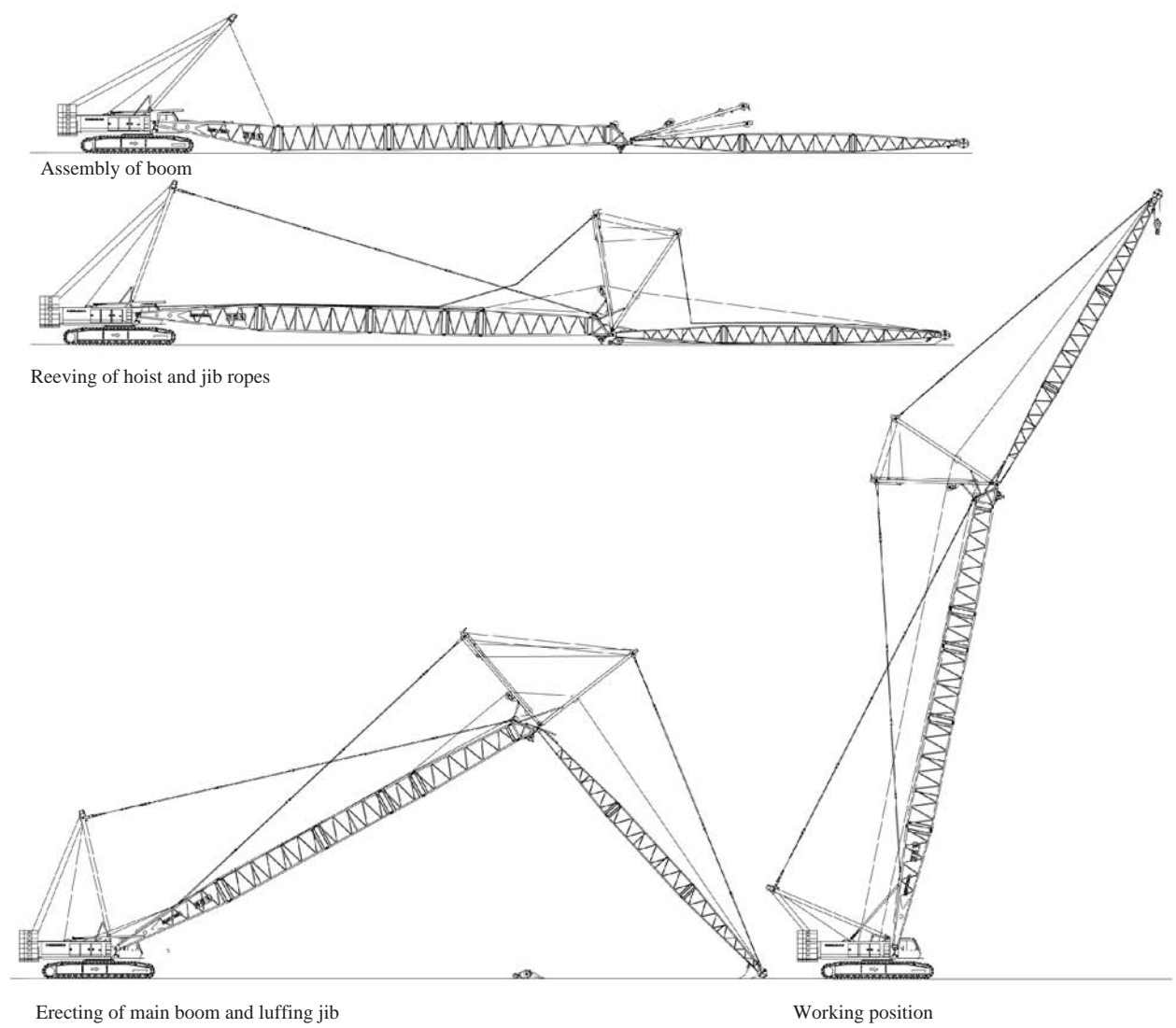


Unloading and assembly of base counterweight and counterweight



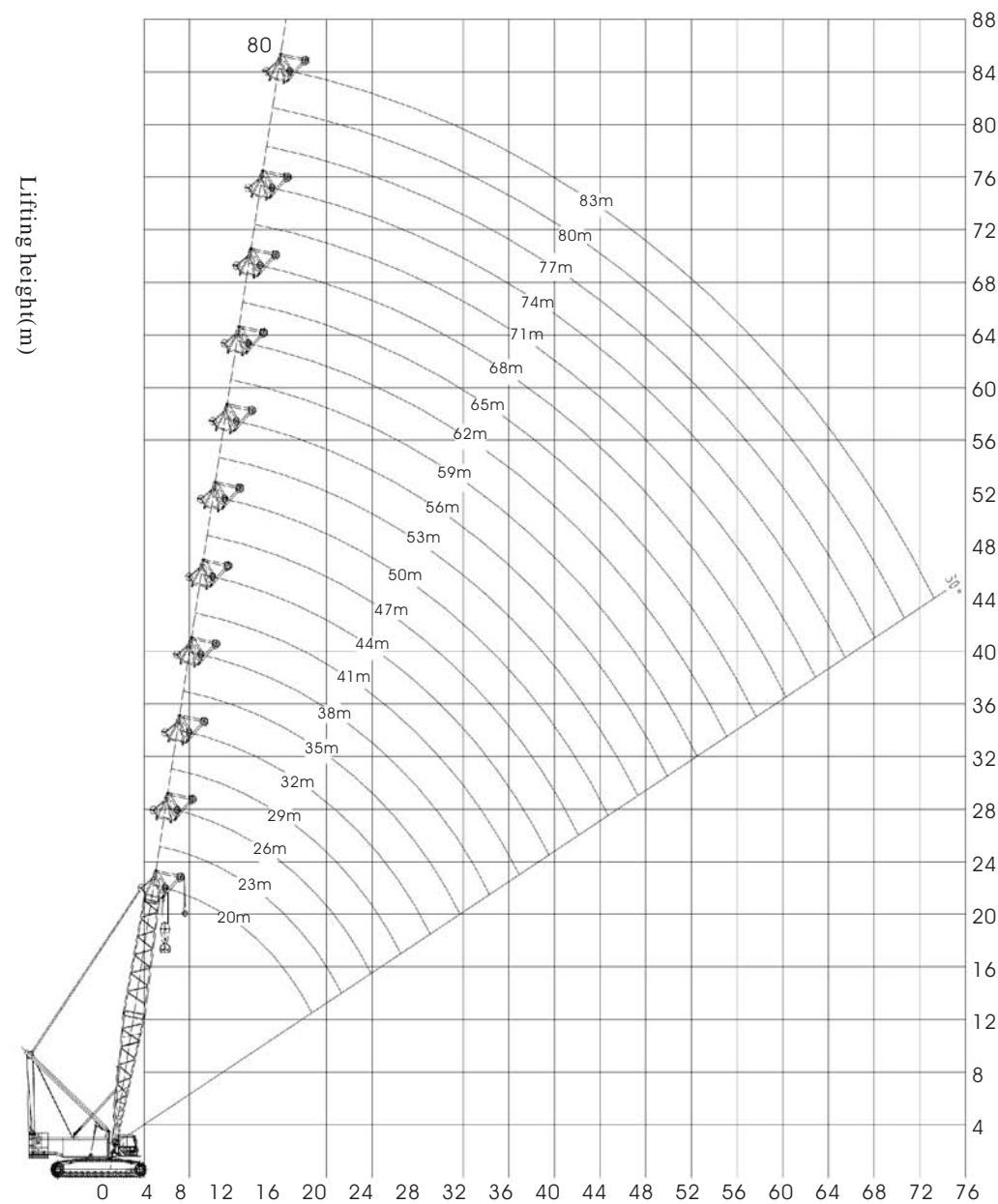
Unloading and assembly of boom

Entire self-assembly & dismantling function



1 Main boom lifting performance

Main boom lifting height curve



1 Main boom lifting performance

Main boom load rating chart(1)

Boom length(m) Working radius(m)	20	23	26	29	29	32	35	38	41	44	47	50	Boom length(m) Working radius(m)
5	160												5
6	142	140	130										6
7	123.8	123	115	110	110	105							7
8	105	102.5	99	95	95	92	90	85					8
9	90	88	85	84	84	83	80	77.2	72				9
10	80	76.5	75	73	73	72	71.6	70	66	63	62		10
12	62	59.5	59.5	59.2	59.2	58	57.4	57.2	55	53.5	53	51	12
14	50	48	50	50	50	49	49	48.8	46.7	45	45	44	14
16	42	42	42	41.5	41.5	41.2	41	40.6	40	38.5	37.8	37.5	16
18		36	36	36	36	35.2	35	35	34.4	34	33	32.5	18
20		31	31	31	31	30.6	30.5	30.5	30.5	30.2	29	29	20
22			28	27	27	27	27	26.8	27	26.6	26	26	22
24			24.5	24.2	24.2	24	23.8	23.8	23.8	23.6	23.5	23.4	24
26				22	22	21.6	21.5	21.5	21.5	21.2	21	21	26
28						20	20	19.3	19.2	19.2	19	19	28
30							18	17.5	17.5	17.5	17.2	17	30
32							16	16	16	16	15.7	15.6	32
34								14.8	14.5	14.5	14.2	14.2	34
36									13.5	13.3	13.2	13.1	36
38										12.2	12.1	12	38
40											11.2	11	40
42												10.5	42
44												9.8	44

Main boom load rating chart(2)

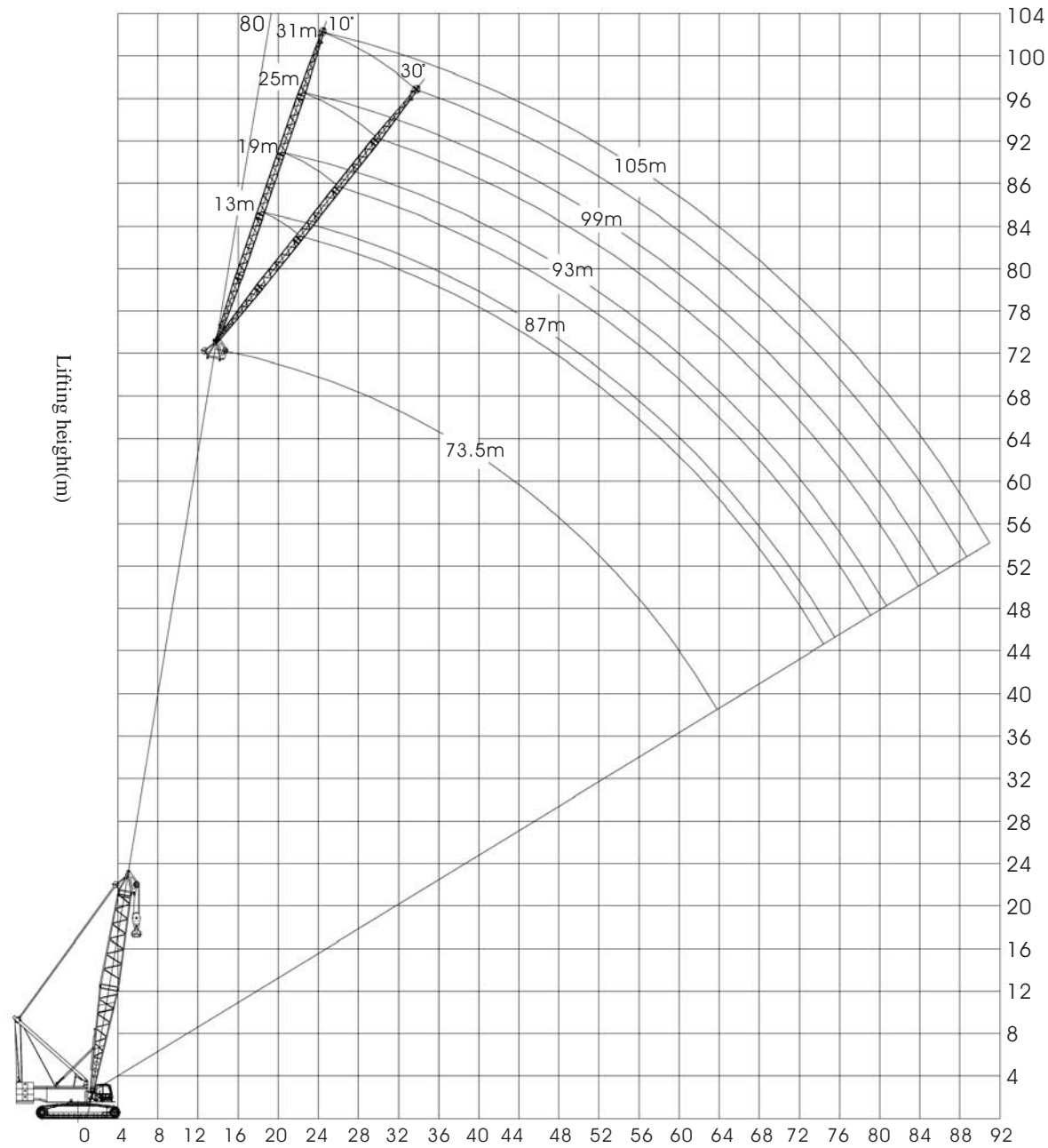
Boom length(m) Working radius(m)	53	56	59	62	65	68	71	74	77	80	83	Boom length(m) Working radius(m)	
12	49	48	47									12	
14	43	42	40.8	40	38	36.5	33					14	
16	36.8	36.2	35.5	35.5	34	33.5	31.7	30.5	28	24.6	22	16	
18	32	31.8	31.5	31.4	31.3	31.1	29.4	28	26.2	23.5	21	18	
20	28.5	28	27.5	27.2	27.1	27	26.5	25.5	24.5	22	20	20	
22	25	25	24.6	24.2	23.8	23.5	23.3	23.1	22.7	21	19	22	
24	23	22.6	22	21.8	21	20.8	20.6	20.5	20.2	20	18	24	
26	20.6	20.5	20	19.8	19	19	18.6	18.2	17.8	17.8	17	26	
28	18.8	18.6	18.2	18.1	17.3	17.3	16.8	16.6	16	15.8	15.6	28	
30	17	16.8	16.5	16.5	16	15.8	15.2	15.2	14.5	14.3	14.2	30	
32	15.5	15.3	15	15	14.8	14.5	14	13.9	13.6	13.2	12.5	32	
34	14	13.9	13.8	13.8	13.5	13.5	12.8	12.8	12.6	12.1	11.5	34	
36	13	12.8	12.6	12.5	12.2	12.2	11.8	11.8	11.2	11.1	10.8	36	
38	11.9	11.8	11.6	11.5	11.2	11.1	10.9	10.9	10.2	10.1	9.8	38	
40	11	10.8	10.5	10.5	10.2	10.2	10	10	9.5	9.3	9.0	40	
42	10.2	10	9.8	9.7	9.5	9.4	9.1	9.1	8.7	8.6	8.2	42	
44	9.5	9.3	9.1	9.0	8.6	8.5	8.3	8.2	8.0	7.5	7.3	44	
46	8.6	8.5	8.3	8.3	8.0	8.0	7.7	7.2	7.2	7.0	6.8	46	
48		8	7.6	7.6	7.3	7.3	7.0	7.0	6.7	6.3	6.2	48	
50			7	7	6.8	6.8	6.5	6.0	6.0	5.8	5.8	50	
55				6.1	6.1	6.0	5.6	5.4	5.2	5.0	4.8	4.6	55
60					5.2	4.9	4.7	4.2	4.2	3.9	3.8	3.4	60
65							3.8	3.5	3.3	3.1	3.0	2.7	65
70									2.6	2.4	2.2	2.1	70

Note:

1. The lifting loads in the table include the weight of hook and the weight of wire rope between boom head and hook.
2. When lifting load with runner, the lifting capacity is the same as that of main boom with the same length at the same working radius, but its max. lifting capacity should be no more than 13.5 t.

2 Main boom + fixed fly jib lifting performance

Main boom + fixed fly jib lifting height curve



Fixed fly jib load rating chart

Main boom length(m)	47							
Fly jib length(m)	13		19		25		31	
Offset angle of fly jib (°)	10	30	10	30	10	30	10	30
Working radius(m)								
14	22.0							
16	22.0		15.0		11.7		8.0	
18	22.0		14.9		11.6		7.6	
20	22.0	19.8	14.8		11.5		7.4	
22	21.5	19.4	14.7	13.2	11.4		7.3	
24	20.8	18.7	14.5	13.1	11.2	7.8	7.1	
26	19.8	17.8	14.3	12.9	11.1	7.5	6.8	
28	19.0	17.1	14.1	12.7	11.0	7.3	6.4	
30	17.8	16.0	13.8	12.4	10.9	7.1	6.1	4.2
32	16.8	15.1	13.5	12.2	10.8	6.9	5.8	4.0
34	15.4	13.9	13.1	11.8	10.6	6.7	5.5	3.9
36	14.1	12.7	12.7	11.4	10.2	6.7	5.2	3.9
38	12.9	12.2	12.2	11.0	9.8	6.5	4.9	3.8
40	11.8	11.6	11.6	10.4	9.5	6.3	4.7	3.7
42	10.8	10.8	10.8	9.7	9.2	6.2	4.5	3.6
44	9.8	9.8	9.8	8.8	8.4	6.1	4.3	3.6
46	8.8	8.8	8.8	7.9	7.5	6.0	4.1	3.5
48	8.0	8.0	8.0	7.2	6.8	5.9	4.0	3.4
50	7.3	7.3	7.3	6.6	6.2	5.8	3.9	3.4
52	6.7	6.7	6.7	6.0	5.7	5.4	3.8	3.3
54	6.2	6.2	6.2	5.6	5.3	5.0	3.7	3.3
56	5.8		5.8	5.2	5.0	4.7	3.6	3.2
58	5.3		5.3	4.8	4.5	4.3	3.5	3.2
60	5.0		5.0	4.5	4.3	4.1	3.5	3.2
62			4.8		4.1	3.9	3.4	3.1
64			4.5		3.9	3.7	3.3	3.1
66					3.6		3.3	3.1
68					3.4		3.2	3.1
70					3.3		3.2	3.1
72							3.1	3.1
74							3.1	

Fixed fly jib load rating chart

Main boom length(m)	53							
	13		19		25		31	
Fly jib length(m)								
Offset angle of fly jib (°)	10	30	10	30	10	30	10	30
Working radius(m)								
16	21.1		14.5					
18	21.1		14.5					
20	21.1	19.0	14.3		11.0		7.3	
22	20.6	18.6	14.1	13.4	10.9		7.2	
24	20.0	18.0	13.9	13.2	10.8		7.0	
26	19.0	17.1	13.7	13.0	10.7	7.2	6.7	
28	18.2	16.4	13.5	12.9	10.6	7.0	6.3	3.7
30	17.1	15.4	13.3	12.6	10.5	6.8	6.0	3.6
32	16.1	14.5	13.0	12.3	10.4	6.7	5.7	3.5
34	14.8	13.3	12.6	12.0	10.2	6.5	5.4	3.4
36	13.5	12.2	12.2	11.6	9.8	6.4	5.1	3.3
38	12.4	11.7	11.6	11.1	9.4	6.2	4.8	3.2
40	11.3	11.1	11.1	10.0	9.1	6.0	4.6	3.2
42	10.4	10.4	10.4	9.0	8.8	5.9	4.4	3.1
44	9.4	9.4	9.4	8.3	8.0	5.8	4.2	3.1
46	8.5	8.5	8.5	7.5	7.2	5.7	4.0	3.1
48	7.7	7.7	7.7	6.9	6.6	5.7	3.9	3.0
50	7.0	7.0	7.0	6.2	6.0	5.6	3.8	3.0
52	6.4	6.4	6.4	5.8	5.5	5.2	3.7	2.9
54	6.0	6.0	6.0	5.3	5.1	4.8	3.6	2.8
56	5.6	5.6	5.6	5.1	4.8	4.5	3.5	2.8
58	5.1	5.1	5.1	4.8	4.4	4.1	3.4	2.8
60			4.8	4.6	4.1	3.9	3.4	2.7
62			4.6	4.4	3.9	3.7	3.3	2.7
64					3.7	3.6	3.2	2.7
66					3.5	3.4	3.2	2.6
68					3.3	3.3	3.1	2.6
70							3.1	2.6
72							3.0	2.6
74							3.0	2.6
76							2.9	2.6

Fixed fly jib load rating chart

Main boom length(m)	56							
	13		19		25		31	
Fly jib length(m)								
Offset angle of fly jib (°)	10	30	10	30	10	30	10	30
Working radius(m)								
16	20.7		14.2					
18	20.7		13.9					
20	20.7	18.6	13.8		10.8		7.1	
22	20.2	18.2	13.6	13.1	10.7		7.0	
24	19.6	17.6	13.4	13.0	10.5		6.8	
26	18.6	16.8	13.2	12.8	10.4	7.1	6.5	
28	17.9	16.1	13.0	12.6	10.4	6.9	6.1	
30	16.8	15.1	12.8	12.3	10.3	6.7	5.9	3.5
32	15.8	14.2	12.5	12.1	10.2	6.5	5.6	3.4
34	14.5	13.0	12.1	11.7	10.0	6.3	5.3	3.3
36	13.3	11.9	11.7	11.4	9.6	6.3	5.0	3.2
38	12.1	11.3	11.3	10.9	9.2	6.1	4.7	3.1
40	11.1	10.8	10.8	9.8	8.9	5.9	4.5	3.1
42	10.2	10.2	10.2	9.0	8.7	5.8	4.3	3.0
44	9.2	9.2	9.2	8.1	7.9	5.7	4.1	3.0
46	8.3	7.5	7.5	7.4	7.1	5.6	3.9	3.0
48	7.5	6.9	6.9	6.9	6.4	5.5	3.8	2.9
50	6.9	6.2	6.2	6.2	6.0	5.5	3.7	2.9
52	6.3	5.7	5.7	5.6	5.4	5.1	3.6	2.8
54	5.8	5.3	5.3	5.2	5.0	4.7	3.6	2.7
56	5.5	5.2	5.2	5.0	4.7	4.4	3.5	2.7
58	5.0	5.0	5.0	4.7	4.3	4.1	3.4	2.7
60	4.7	4.6	4.6	4.5	4.0	3.8	3.4	2.6
62	4.6	4.3	4.3	4.3	3.9	3.7	3.3	2.6
64			3.9	3.9	3.7	3.5	3.2	2.6
66			3.7	3.6	3.4	3.4	3.2	2.5
68			3.3	3.3	3.3	3.3	3.1	2.5
70					3.2	3.2	3.1	2.5
72					3.1	3.1	3.0	2.5
74					3.0	3.0	3.0	2.5
76							2.9	2.5
78							2.8	2.6

Fixed fly jib load rating chart

Main boom length(m)	59							
	13		19		25		31	
Fly jib length(m)								
Offset angle of fly jib (°)	10	30	10	30	10	30	10	30
Working radius(m)								
16	20.3							
18	20.3		13.9					
20	20.3	18.3	13.6		10.6		7.0	
22	19.8	17.8	13.5		10.5		6.9	
24	19.2	17.3	13.3	12.7	10.3		6.8	
26	18.3	16.4	13.1	12.5	10.2	6.9	6.5	
28	17.5	15.8	12.9	12.4	10.1	6.7	6.1	
30	16.4	14.8	12.7	12.1	10.1	6.6	5.8	3.5
32	15.5	13.9	12.5	11.8	10.0	6.4	5.5	3.4
34	14.2	12.8	12.3	11.5	9.8	6.2	5.2	3.3
36	13.0	11.7	11.5	11.1	9.4	6.1	4.9	3.2
38	11.9	10.7	10.7	10.7	9.0	6.0	4.7	3.1
40	10.9	9.8	9.8	9.6	8.8	5.9	4.5	3.1
42	10.0	9.0	9.0	8.8	8.5	5.7	4.3	3.0
44	9.0	8.1	8.1	8.0	7.7	5.6	4.1	3.0
46	8.1	7.3	7.3	7.2	6.9	5.5	3.9	3.0
48	7.4	6.6	6.6	6.6	6.3	5.4	3.8	2.9
50	6.7	6.2	6.2	6.2	6.0	5.3	3.7	2.9
52	6.2	5.8	5.8	5.7	5.3	5.0	3.6	2.8
54	5.7	5.5	5.5	5.4	4.9	4.6	3.5	2.7
56	5.3	5.1	5.1	5.1	4.6	4.3	3.4	2.7
58	4.9	4.9	4.8	4.6	4.2	4.0	3.3	2.7
60	4.6	4.6	4.6	4.4	3.9	3.7	3.3	2.6
62	4.5	4.3	4.3	4.2	3.8	3.6	3.2	2.6
64	4.3	4.1	4.1	4.1	3.6	3.4	3.1	2.6
66			3.8	3.8	3.4	3.3	3.1	2.5
68			3.6	3.4	3.3	3.2	3.0	2.5
70			3.2	3.2	3.2	3.1	3.0	2.5
72					3.0	3.0	2.9	2.5
74					2.9	2.9	2.9	2.5
76					2.8	2.8	2.9	2.5
78							2.6	2.5

Fixed fly jib load rating chart

Main boom length(m)	62							
	13		19		25		31	
Fly jib length(m)								
Offset angle of fly jib (°)	10	30	10	30	10	30	10	30
Working radius(m)								
16.0	20.1		13.9					
18.0	20.1		13.8					
20.0	20.1	18.1	13.5		10.5		7.0	
22.0	19.6	17.7	13.4	12.8	10.4		6.9	
24.0	19.0	17.1	13.2	12.6	10.2		6.7	
26.0	18.1	16.3	13.0	12.4	10.1	6.9	6.4	
28.0	17.3	15.6	12.8	12.2	10.0	6.7	6.0	
30.0	16.3	14.6	12.6	12.0	10.0	6.5	5.7	3.5
32.0	15.3	13.8	12.4	11.7	9.9	6.3	5.5	3.4
34.0	14.1	12.7	12.1	11.4	9.7	6.2	5.2	3.3
36.0	12.9	11.6	11.4	11.0	9.3	6.1	4.9	3.2
38.0	11.8	10.6	10.6	10.5	8.9	6.0	4.6	3.1
40.0	10.8	9.7	9.7	9.6	8.7	5.9	4.4	3.1
42.0	9.9	8.9	8.9	8.8	8.4	5.8	4.2	3.0
44.0	8.9	8.1	8.0	8.0	7.7	5.7	4.0	3.0
46.0	8.0	7.3	7.3	7.3	6.9	5.6	3.9	3.0
48.0	7.3	6.7	6.7	6.7	6.4	5.4	3.8	2.9
50.0	6.7	6.2	6.2	6.2	6.2	5.3	3.7	2.9
52.0	6.1	5.8	5.8	5.8	5.8	5.2	3.6	2.8
54.0	5.7	5.4	5.4	5.4	5.4	5.1	3.5	2.7
56.0	5.3	5.0	5.0	5.0	4.5	4.3	3.4	2.7
58.0	4.8	4.8	4.8	4.6	4.1	3.9	3.3	2.7
60.0	4.6	4.6	5.5	4.3	3.9	3.7	3.3	2.6
62.0	4.5	4.3	4.3	4.2	3.7	3.6	3.2	2.6
64.0	4.3	4.1	4.2	4.1	3.6	3.4	3.1	2.6
66.0	4.0	3.9	3.8	3.8	3.3	3.3	3.1	2.5
68.0			3.6	3.3	3.2	3.2	3.1	2.5
70.0			3.2	3.0	3.1	3.1	3.0	2.5
72.0			2.9	2.9	3.0	3.0	3.0	2.5
74.0					2.9	2.9	2.9	2.5
76.0					2.8	2.8	2.8	2.5
78.0							2.3	2.3
80.0							2.0	2.0

Fixed fly jib load rating chart

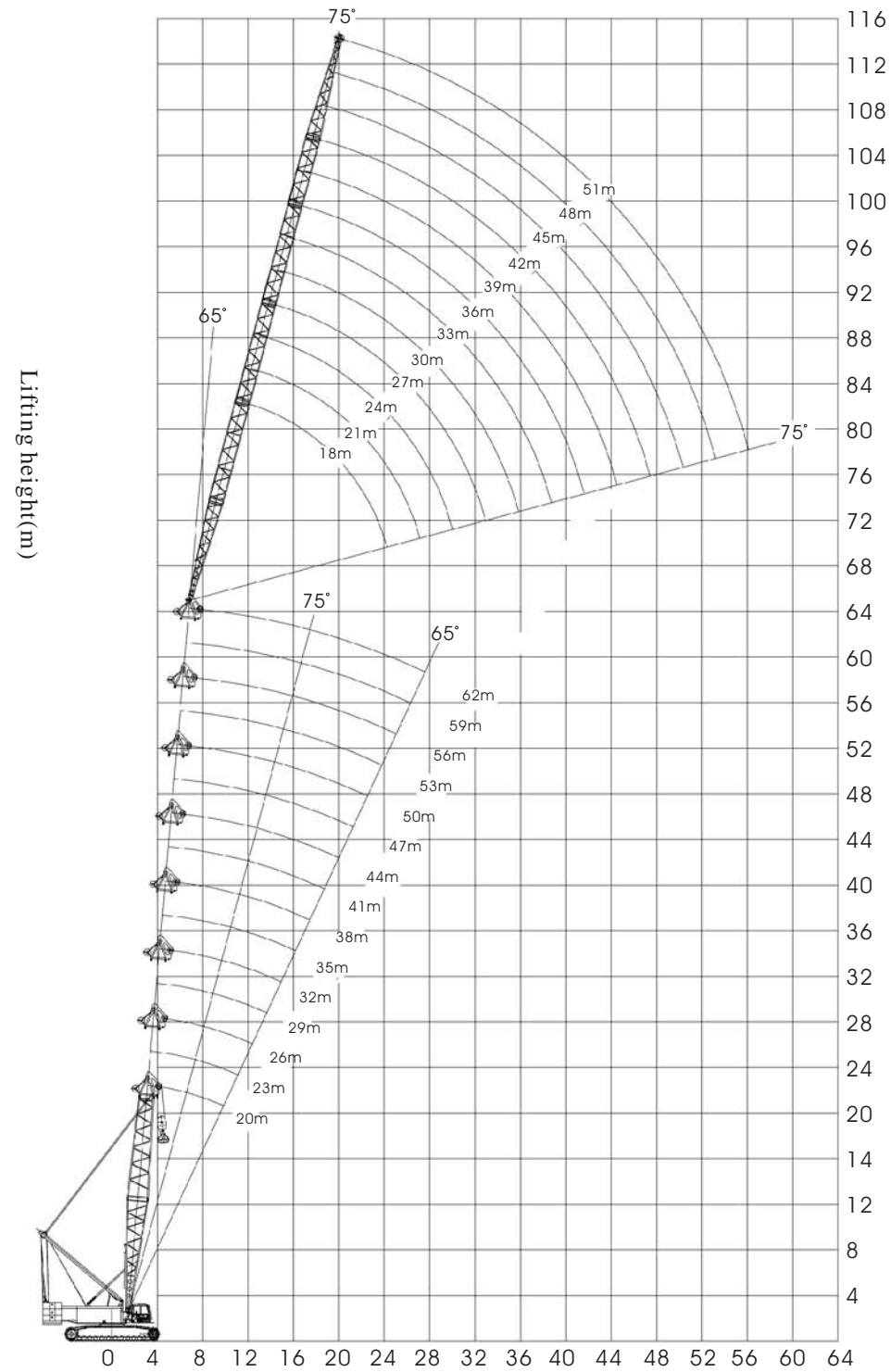
Main boom length(m)	65							
	13		19		25		31	
	Offset angle of fly jib (°)		Offset angle of fly jib (°)		Offset angle of fly jib (°)		Offset angle of fly jib (°)	
Working radius(m)	10	30	10	30	10	30	10	30
18	19.9							
20	19.9		13.4		10.4		6.9	
22	19.4	17.5	13.3		10.3		6.8	
24	18.8	16.9	13.1	12.5	10.1		6.6	
26	17.9	16.1	12.9	12.3	10.0	6.8	6.3	
28	17.2	15.5	12.7	12.1	9.9	6.6	6.0	
30	16.1	14.5	12.5	11.9	9.9	6.4	5.7	3.4
32	15.2	13.7	12.3	11.6	9.8	6.3	5.4	3.3
34	13.9	12.5	12.0	11.3	9.6	6.1	5.1	3.2
36	12.7	11.5	11.2	10.9	9.2	6.0	4.8	3.1
38	11.7	10.5	10.5	10.5	8.9	6.0	4.6	3.0
40	10.7	9.6	9.6	9.5	8.6	6.0	4.4	3.0
42	9.8	8.8	8.8	8.7	8.3	5.9	4.2	3.0
44	8.9	8.0	7.9	7.8	7.6	5.7	4.0	3.0
46	8.0	7.2	7.2	7.0	6.8	5.6	3.8	2.9
48	7.2	6.5	6.5	6.4	6.4	5.4	3.7	2.9
50	6.6	5.9	6.0	6.2	5.9	5.3	3.6	2.9
52	6.1	5.7	5.7	5.6	5.4	5.1	3.5	2.8
54	5.6	5.4	5.4	5.3	5.0	5.0	3.4	2.8
56	5.2	5.0	5.0	5.0	4.5	4.5	3.4	2.7
58	4.8	4.8	4.7	4.6	4.1	3.9	3.3	2.7
60	4.6	4.6	4.5	4.3	3.9	3.7	3.3	2.6
62	4.4	4.3	4.3	4.1	3.7	3.5	3.2	2.6
64	4.2	4.1	4.1	4.1	3.5	3.3	3.1	2.6
66	4.0	3.9	3.8	3.6	3.3	3.2	3.1	2.5
68	3.9	3.6	3.6	3.3	3.1	3.1	3.0	2.5
70			3.2	3.0	3.0	3.0	3.0	2.5
72			2.9	2.9	2.9	2.9	2.9	2.5
74			2.8	2.8	2.8	2.8	2.8	2.5
76							2.6	2.5
78							2.4	2.3
80							2.1	2.0

Fixed fly jib load rating chart

Main boom length(m)	71							
	13		19		25		31	
	Offset angle of fly jib (°)		Offset angle of fly jib (°)		Offset angle of fly jib (°)		Offset angle of fly jib (°)	
Working radius(m)	10	30	10	30	10	30	10	30
18	19.5							
20	19.5		13.1					
22	19.0	17.0	13.0		10.1			
24	18.4	16.4	12.8	12.2	9.9			
26	17.5	15.6	12.6	12.0	9.8	6.6	6.2	
28	16.8	15.0	12.4	11.9	9.7	6.5	5.8	
30	15.8	14.1	12.2	11.6	9.7	6.3	5.6	
32	14.9	13.3	12.0	11.4	9.6	6.1	5.3	3.3
34	13.6	12.2	11.8	11.0	9.4	6.0	5.0	3.2
36	12.5	11.1	11.0	10.7	9.0	6.0	4.7	3.1
38	11.4	10.2	10.3	10.3	8.7	6.0	4.5	3.0
40	10.5	9.4	9.4	9.0	8.4	6.0	4.3	3.0
42	9.6	8.6	8.6	8.1	8.0	6.0	4.1	3.0
44	8.7	7.8	7.8	7.5	7.4	5.8	4.0	3.0
46	7.8	7.0	7.0	6.9	6.9	5.6	3.9	3.0
48	7.1	6.4	6.4	6.4	6.4	5.4	3.8	3.0
50	6.5	5.9	5.9	5.9	5.9	5.2	3.7	2.9
52	5.9	5.6	5.6	5.6	5.3	5.0	3.6	2.8
54	5.5	5.2	5.3	5.2	4.8	4.8	3.4	2.8
56	5.1	4.8	4.9	4.7	4.4	4.4	3.3	2.7
58	4.7	4.5	4.6	4.4	4.0	4.0	3.2	2.6
60	4.4	4.4	5.0	4.2	3.8	3.6	3.2	2.5
62	4.3	4.3	4.5	3.8	3.6	3.4	3.1	2.5
64	4.2	4.0	4.0	3.4	3.5	3.3	3.0	2.5
66	3.8	3.8	3.7	3.0	3.2	3.2	3.0	2.4
68	3.5	3.5	3.5	2.7	2.9	2.9	2.9	2.4
70	3.2	3.2	3.1	2.4	2.6	2.6	2.6	2.3
72	2.9	2.9	2.9	2.3	2.3	2.3	2.3	2.3
74	2.6	2.6	2.6	2.0	2.0	2.0	2.0	2.0

3 Main boom + luffing fly jib lifting performance

Main boom + luffing fly jib lifting height curve



Luffing fly jib load rating chart

Main boom length(m)	38											
Fly jib length(m)	27			30			33			36		
Main boom angle												
Working radius(m)	85	75	65	85	75	65	85	75	65	85	75	65
12	22.0											
14	22.0			22.0			20.0			20.0		
16	22.0			22.0			20.0			20.0		
18	21.8			19.5			19.0			18.5		
20	20.0			18.8			17.5			17.5		
22	18.4			18.1			16.0			16.0		
24	17.5	17.5		17.5	16.4		14.5			14.5		
26	16.5	16.5		16.1	14.5		13.5	13.5		13.5	13.5	
28	13.6	13.5		13.5	13.0		12.8	12.8		12.8	12.8	
30	12.5	12.5		12.0	11.5		11.0	11.0		11.0	11.0	
32		11.2		11.2	10.6		10.0	10.0		10.0	10.0	
34		10.0	10.0	10.0	10.0		9.5	9.5		9.5	9.5	
36		9.3	9.2		9.2	9.2	8.7	8.7	8.7	8.7	8.7	
38			8.7		8.7	8.7		7.6	7.6	7.6	7.6	7.6
40			8.2		8.2	7.8		7.4	7.0		7.0	7.0
42			7.4			7.3		7.0	6.7		6.7	6.7
44						6.6			6.6		6.6	6.6
46						6.1			6.1		6.1	6.1
48									5.7			5.7
50												5.0

Luffing fly jib load rating chart

Main boom length(m)	38														
	39			42			45			48			51		
Fly jib length(m)															
Main boom angle															
Working radius(m)	85	75	65	85	75	65	85	75	65	85	75	65	85	75	65
16	18.5			14.8			14.0								
18	16.6			14.2			12.8			11.0					
20	15.9			13.4			12.3			10.5			9.1		
22	15.2			12.8			11.7			10.0			8.7		
24	14.3			12.2			11.2			9.5			8.2		
26	13.5			11.7			10.7			9.0			7.8		
28	12.8	12.8		11.2			10.3			8.5			7.4		
30	11.0	11.0		10.6	10.6		9.8			8.1			7.1		
32	10.0	10.0		10.0	10.0		9.4	9.4		7.8			6.7		
34	9.5	9.5		9.5	9.5		9.0	9.0		7.5	7.5		6.6	6.2	
36	8.7	8.7		8.7	8.7		8.5	8.5		7.2	7.2		6.1	5.9	
38	7.6	7.6	10.0	7.6	7.6		7.5	7.5		6.7	6.7		5.8	5.6	
40	7.0	7.0	9.2	7.0	7.0		7.0	7.0		6.1	6.1		5.3	5.3	
42	6.7	6.7	8.7	6.7	6.7	6.7	6.3	6.3		5.6	5.6		4.8	4.8	
44		6.0	8.2		6.0	6.0	5.8	5.8		5.1	5.1		4.4	4.4	
46		5.5	7.4		5.5	5.5	5.3	5.3	5.3	4.8	4.8		4.0	4.0	
48		5.0			5.0	5.0	5.0	5.0	5.0	4.3	4.3	4.3	3.6	3.6	3.6
50		4.5			4.5	4.5		4.5	4.5	4.0	4.0	4.0	3.3	3.3	3.3
52		4.2			4.2	4.2		4.2	4.2		3.9	3.9	3.0	3.0	3.0
54		4.1				3.7		3.7	3.7		3.6	3.6	2.8	2.8	2.8
56						3.6		3.4	3.4		3.3	3.2		2.7	2.7
58						3.5			3.2			3.0		2.6	2.6
60						3.4			3.1			2.9		2.4	2.4

Luffing fly jib load rating chart

Main boom length(m)	41											
	27			30			33			36		
Fly jib length(m)												
Main boom angle												
Working radius(m)	85	75	65	85	75	65	85	75	65	85	75	65
12	22.0											
14	22.0						20.0			18.2		
16	22.0			22.0			19.5			18.2		
18	21.8			22.0			19.0			18.0		
20	20.0			19.5			16.8			16.8		
22	18.4			18.8			15.4			15.2		
24	17.5	16.5		18.1			14.0			14.2		
26	16.2	15.4		16.5	14.5		13.2	13.2		12.8	12.7	
28	13.6	13.5		16.0	13.0		12.4	12.4		11.4	11.4	
30	12.5	12.5		13.5	11.5		11.0	11.0		10.9	10.7	
32		11.2		12.0	10.6		10.0	10.0		10.0	9.5	
34		10.0	10.0	11.2	10.0		9.0	9.0		9.0	8.5	
36		9.3	9.2	10.0	9.0	9.0		8.0		8.0	7.8	
38		8.4	8.4		8.0	8.0		7.6	7.6	7.6	7.4	7.4
40			7.7		7.0	7.0		6.6	6.6		6.6	6.6
42			7.0			6.8		6.4	6.4		6.4	6.4
44			6.3			6.3			6.3		6.0	6.0
46						5.9			5.8			5.4
48									5.6			5.2
50									5.1			5.0

Luffing fly jib load rating chart

Main boom length(m)	41														
	39			42			45			48			51		
Fly jib length(m)															
Main boom angle															
Working radius(m)	85	75	65	85	75	65	85	75	65	85	75	65	85	75	65
16	16.0			14.6											
18	15.5			14.0						12.7			11.0		
20	14.8			13.3						12.1			10.5		9.1
22	14.1			12.5						11.5			10.0		8.7
24	13.4			12.1						11.0			9.5		8.2
26	12.8			11.5						10.6			9.0		7.8
28	12.2	12.2		11.0						10.1			8.5		7.4
30	11.0	11.0		10.5	10.6					9.7			8.1		7.1
32	10.0	10.0		10.0	10.0					9.2	9.2		7.8	7.8	6.7
34	9.5	9.5		9.5	9.5					8.8	8.8		7.5	7.4	6.6
36	8.7	8.7		8.7	8.7					8.3	8.3		7.2	7.2	6.1
38	7.6	7.6		7.6	7.6					7.5	7.5		6.7	6.6	5.8
40	7.0	7.0		7.0	7.0					7.0	7.0		6.1	6.1	5.3
42	6.7	6.7	6.7	6.7	6.7					6.3	6.3		5.6	5.6	4.8
44		6.0	6.0	6.0	6.0	5.8	5.8	5.8		5.1	5.1		4.4	4.4	
46		5.5	5.5		5.5	5.3	5.3	5.3	5.3	4.8	4.8	4.8	4.0	4.0	
48		5.0	5.0		5.0	5.0	5.0	5.0	5.0	4.3	4.3	4.3	3.6	3.6	3.6
50		4.5	4.5		4.5	4.2		4.2	4.2	4.0	4.0	4.0	3.3	3.3	3.3
52			4.2		4.2	3.7		3.7	3.7		3.5	3.5	3.0	3.0	3.0
54			4.1			3.5		3.5	3.5		3.3	3.1	2.8	2.8	2.8
56			4.0			3.3			3.3		3.0	2.8	2.7	2.7	2.7
58						3.0				3.0		2.6	2.6		2.6
60											2.6			2.5	2.4
62												2.4			2.3
64													2.3		2.2

Luffing fly jib load rating chart

Main boom length(m)	44											
	27			30			33			36		
Fly jib length(m)												
Main boom angle												
Working radius(m)	85	75	65	85	75	65	85	75	65	85	75	65
12	22.0											
14	22.0			21.0					20.0			
16	22.0			21.0					19.5			18.2
18	21.8			19.5					19.0			18.0
20	20.0			18.8					16.8			16.6
22	18.4			18.0					15.4			15.2
24	17.5			16.5					14.0			14.2
26	16.2	15.4		15.8	14.5				13.2	13.2		12.8
28	13.6	13.1		13.1	13.0				12.4	12.4		11.4
30	11.6	11.6		11.6	11.5				11.0	11.0		10.9
32		10.5		10.5	10.5				10.0	10.0		10.0
34		10.0		10.0	10.0				9.0	9.0		9.0
36		9.0	9.0		9.0				8.0	8.0		8.0
38		8.2	8.2		8.0	8.0			7.6	7.6		7.6
40			7.5		7.0	7.0			6.6	6.6		6.6
42			7			6.8			6.4	6.4		6.4
44			6.3			6.3			6.3	6.3		6.0
46			5.9			5.9				5.8		5.8
48						5.6				5.6		5.2
50										5.1		5.0
52												4.8
54												4.6

Luffing fly jib load rating chart

Main boom length(m)	44														
	39			42			45			48			51		
Fly jib length(m)															
Main boom angle															
Working radius(m)	85	75	65	85	75	65	85	75	65	85	75	65	85	75	65
16	15.5			14.6											
18	15.0			14.0			12.7			11.0					
20	14.5			13.3			12.1			10.4			9.1		
22	14.0			12.5			11.5			10.0			8.7		
24	13.4			12.1			11.0			9.5			8.2		
26	12.8			11.5			10.6			9.0			7.8		
28	12.2			11.0			10.1			8.5			7.4		
30	11.0	11.0		10.5	10.5		9.7			8.1			7.1		
32	10.0	10.0		10.0	10.0		9.2	9.2		7.8			6.7		
34	9.5	9.5		9.5	9.5		8.8	8.8		7.5	7.4		6.6	6.2	
36	8.7	8.7		8.7	8.7		8.3	8.3		7.2	7.2		6.1	5.9	
38	7.6	7.6		7.6	7.6		7.5	7.5		6.7	6.6		5.8	5.6	
40	7.0	7.0		7.0	7.0		7.0	7.0		6.1	6.1		5.3	5.3	
42	6.4	6.3	6.3	6.3	6.3		6.3	6.3		5.6	5.6		4.8	4.8	
44		5.8	5.8	5.8	5.8	5.8	5.8	5.8		5.1	5.1		4.4	4.4	
46		5.3	5.3		5.3	5.3	5.3	5.3	5.3	4.7	4.7		4.0	4.0	
48		4.8	4.8		4.8	4.8	4.8	4.8	4.8	4.3	4.3	4.3	3.6	3.6	
50		4.5	4.5		4.5	4.2		4.2	4.2	4.0	4.0	4.0	3.3	3.3	3.3
52		4.2	4.2		3.7	3.7		3.7	3.7		3.5	3.5	3.0	3.0	3.0
54		4.1	4.1			3.5		3.5	3.5		3.3	3.3	2.8	2.8	2.8
56			4.0			3.3		3.3	3.3		3.0	3.0		2.7	2.7
58						3.0			3.0		2.6	2.6		2.6	2.6
60						2.6					2.6			2.5	2.4
62											2.4			2.4	2.3
64														2.3	2.2

Luffing fly jib load rating chart

Main boom length(m)	47											
	27			30			33			36		
Fly jib length(m)												
Main boom angle												
Working radius(m)	85	75	65	85	75	65	85	75	65	85	75	65
14	22.0			21.0			20.0					
16	22.0			20.6			19.5				18.2	
18	21.8			19.5			19.0				17.4	
20	20.0			18.8			16.8				16.6	
22	18.4			18.0			15.4				15.2	
24	17.3			16.5			14.0				14.2	
26	16.2	15.4		15.8	14.4		13.2				12.8	
28	13.6	13.1		13.1	13.0		12.4	12.4			11.4	
30	12.5	11.6		11.6	11.5		11.0	11.0			10.9	10.7
32		10.5		10.5	10.5		10.0	10.0			10.0	9.5
34		10.0		10.0	10.0		9.0	9.0			9.0	8.5
36		9.0			9.0		8.0	8.0			8.0	7.8
38		8.0	8.0		8.0			7.6			7.6	7.4
40			7.2		7.0	7.0		6.6			6.6	6.6
42			6.9		6.8	6.8		6.4	6.4		6.4	
44			6.5			6.3		6.3	6.3		6.0	6.0
46			6.0			5.9			5.8		5.8	5.4
48						5.6			5.6		5.4	5.2
50						5.1			5.1			5.0
52									4.8			4.8
54									4.6			4.6

Luffing fly jib load rating chart

Main boom length(m)	47														
	39			42			45			48			51		
Fly jib length(m)															
Main boom angle Working radius(m)	85	75	65	85	75	65	85	75	65	85	75	65	85	75	65
16	15.5														
18	15.0			14.0			12.7			11.0					
20	14.5			13.3			12.1			10.4			9.1		
22	14.0			12.5			11.5			10.0			8.7		
24	13.4			12.1			11.0			9.5			8.2		
26	12.8			11.5			10.6			9.1			7.8		
28	12.2			11.0			10.0			8.5			7.4		
30	11.0	11.0		10.5			9.7			8.1			7.1		
32	10.0	10.0		10.0	10.0		9.2			7.8			6.7		
34	9.5	9.5		9.5	9.5		8.8	8.8		7.5	7.4		6.4		
36	8.7	8.7		8.7	8.7		8.3	8.3		7.2	7.2		6.1	6.1	
38	7.6	7.6		7.6	7.6		7.5	7.5		6.7	6.6		5.8	5.8	
40	7.0	7.0		7.0	7.0		7.0	7.0		6.1	6.1		5.3	5.3	
42	6.4	6.3		6.3	6.3		6.3	6.3		5.6	5.6		4.8	4.8	
44		5.8		5.8	5.8		5.8	5.8		5.1	5.1		4.4	4.4	
46		5.3	5.3		5.3		5.3	5.3		4.7	4.7		4.0	4.0	
48		4.8	4.8		4.8	4.8	4.8	4.8	4.8	4.3	4.3		3.6	3.6	
50		4.5	4.5		4.5	4.2		4.2	4.2	4.0	4.0	4.0	3.3	3.3	
52			4.2		3.7	3.7		3.7	3.7		3.5	3.5	3.0	3.0	3.0
54			4.1			3.5		3.5	3.5		3.3	3.3	2.8	2.8	2.8
56			4.0			3.3		3.3	3.3		3.0	3.0		2.7	2.7
58						3.0			3.0		2.6	2.6		2.6	2.5
60						2.6					2.6			2.5	2.4
62											2.4			2.4	2.3
64											2.3				2.2

Luffing fly jib load rating chart

Main boom length(m)	50											
	27			30			33			36		
Fly jib length(m)												
Main boom angle Working radius(m)	85	75	65	85	75	65	85	75	65	85	75	65
14	22.0			21.0								
16	22.0			20.0			19.5			18.3		
18	21.0			19.5			19.0			17.4		
20	19.4			18.8			16.8			16.6		
22	18.4			18.0			15.4			15.2		
24	17.3			16.5			14.0			14.2		
26	16.0	14.4		14.4			13.2			12.8		
28	13.5	13.0		13.0	13.0		12.4	12.4		11.4		
30	12.0	11.5		11.5	11.5		11.0	11.0		10.9	10.7	
32		10.5		10.5	10.5		10.0	10.0		10.0	9.5	
34		10.0		10.0	10.0		9.0	9.0		9.0	8.5	
36		9.0			9.0		8.0	8.0		8.0	7.8	
38		8.0	8.0		8.0			7.6		7.6	7.4	
40		7.0	7.0		7.0	7.0		6.6		6.6	6.6	
42			6.8		6.8	6.8		6.4	6.4		6.4	
44			6.3			6.3		6.3	6.3		6.0	6.0
46			5.9			5.9		5.9	5.9		5.8	5.4
48			5.5			5.5			5.5		5.4	5.2
50						5.0			5.0			5.0
52										4.5		4.5
54										4.2		4.2
56												4.0

Luffing fly jib load rating chart

Main boom length(m)	50															
Fly jib length(m)	39			42			45			48			51			
Main boom angle Working radius(m)	85	75	65	85	75	65	85	75	65	85	75	65	85	75	65	
16	15.5															
18	15.0			14.0			12.7			11.00						
20	14.5			13.3			12.1			10.4			9.0			
22	14.0			12.5			11.5			10.0			8.0			
24	13.4			12.1			11.0			9.5			8.0			
26	12.8			11.5			10.6			9.0			7.8			
28	12.2			11.0			10.1			8.5			7.4			
30	11.0			10.5			9.7			8.1			7.0			
32	10.0	10.0		10.0	10.0		9.2			7.8			6.7			
34	9.5	9.5		9.5	9.5		8.8	8.8		7.5			6.5			
36	8.7	8.7		8.7	8.7		8.3	8.3		7.1	7.1		6.1	6.1		
38	7.6	7.6		7.6	7.6		7.5	7.5		6.5	6.5		5.8	5.8		
40	7.0	7.0		7.0	7.0		7.0	7.0		6.0	6.0		5.3	5.3		
42	6.4	6.3		6.3	6.3		6.3	6.3		5.5	5.5		4.8	4.8		
44		5.8		5.8	5.8		5.8	5.8		5.1	5.1		4.4	4.4		
46		5.3	5.3	5.3	5.3		5.3	5.3		4.7	4.7		4.0	4.0		
48		4.8	4.8		4.8	4.8	4.8	4.8	4.8	4.3	4.3		3.6	3.6		
50		4.5	4.5		4.5	4.5		4.5	4.2		4.0	4.0	3.3	3.3		
52		4.2	4.2		3.7	3.7		3.7	3.7		3.5	3.5	3.0	3.0	3.0	
54			4.1		3.5	3.5		3.5	3.5		3.3	3.3	2.8	2.8	2.8	
56			4.0			3.3		3.3	3.3		3.0	3.0		2.7	2.7	
58			3.0			3.0			3.0		2.6	2.6		2.6	2.6	
60				2.6			2.6			2.6		2.5	2.5		2.4	2.4
62										2.4			2.4		2.3	2.3
64										2.2					2.2	2.2

Luffing fly jib load rating chart

Main boom length(m)	53											
Fly jib length(m)	27			30			33			36		
Main boom angle Working radius(m)	85	75	65	85	75	65	85	75	65	85	75	65
14	22.0			21.0								
16	22.0			20.0			19.5			18.2		
18	20.0			19.0			19.0			17.4		
20	19.0			18.0			16.8			16.6		
22	17.6			17.0			15.4			15.2		
24	15.5			15.0			14.0			14.2		
26	13.4	13.4		13.4			13.0			12.8		
28	12.8	12.7		12.0	12.0		12.0			11.4		
30	11.4	11.2		11.0	11.0		11.0	11.0		10.8	10.7	
32	10.5	10.5		10.5	10.5		10.0	10.0		10.0	9.5	
34		10.0		10.0	10.0		9.0	9.0		9.0	8.5	
36		9.0			9.0		8.0	8.0		8.0	7.8	
38		8.0	8.0		8.0			7.6		7.6	7.4	
40		7.0	7.0		7.0			6.6		6.6	6.6	
42			6.7		6.7	6.5		6.4			6.4	
44			6.3		6.3	6.3		6.2	6.2		6.0	6.0
46			5.9			5.9		5.9	5.9		5.6	5.4
48			5.5			5.5			5.4		5.4	5.2
50						5.0			5.0		5.0	5.0
52						4.5				4.5		4.5
54									4.2			4.2
56												4.0

Luffing fly jib load rating chart

Main boom length(m)	53														
	39			42			45			48			51		
Fly jib length(m)															
Main boom angle															
Working radius(m)	85	75	65	85	75	65	85	75	65	85	75	65	85	75	65
18	15.0			14.0			12.7			11.0					
20	14.5			13.3			12.1			10.4			9.0		
22	14.0			12.5			11.5			10.0			8.0		
24	13.4			12.1			11.0			9.5			8.0		
26	12.8			11.5			10.6			9.0			7.5		
28	11.3			11.0			10.1			8.5			7.0		
30	10.3			10.2			9.7			8.1			6.5		
32	9.5	9.5		9.4			9.2			7.8			6.0		
34	8.8	8.8		8.7	8.7		8.6	8.6		7.5			5.5		
36	8.2	8.2		8.0	8.0		7.8	7.8		7.0	7.0		5.3		
38	7.6	7.6		7.4	7.4		7.3	7.3		6.5	6.5		5.1	5.1	
40	7.0	7.0		6.9	6.9		6.7	6.7		6.0	6.0		4.9	4.9	
42	6.4	6.3		6.3	6.3		6.3	6.3		5.5	5.5		4.5	4.5	
44		5.8		5.8	5.8		5.8	5.8		5.1	5.1		4.2	4.2	
46		5.3	5.3	5.3	5.3		5.3	5.3		4.7	4.7		3.9	3.9	
48		4.8	4.8		4.8	4.8	4.8	4.8		4.3	4.3		3.8	3.8	
50		4.5	4.5		4.5	4.5		4.5	4.5	4.0	4.0		3.5	3.5	
52		4.2	4.2		4.2	4.2		4.2	4.2	3.5	3.5	3.5	3.4	3.4	
54			4.1		4.1	4.1		4.1	4.1		3.3	3.3	3.2	3.2	3.2
56			4.0			4.0		4.0	4.0		3.0	3.0		3.0	3.0
58			3.0			3.0		3.0	3.0		2.6	2.6		2.6	2.6
60			2.6			2.6			2.6		2.5	2.5		2.5	2.5
62						2.4			2.4		2.4	2.4		2.4	2.4
64						2.2			2.2		2.2	2.2		2.2	2.2

Luffing fly jib load rating chart

Main boom length(m)	56											
	27			30			33			36		
Fly jib length(m)												
Main boom angle												
Working radius(m)	85	75	65	85	75	65	85	75	65	85	75	65
14	22.0			21.0								
16	20.1			20.0			19.5			18.0		
18	17.9			18.0			18.0			17.3		
20	16.5			17.0			17.0			16.6		
22	15.0			15.0			15.0			15.0		
24	14.0			14.0			14.0			14.0		
26	13.0			13.0			13.0			12.8		
28	11.5	11.5		11.3	11.3		11.3			11.3		
30	11.0	11.0		10.0	10.0		10.0	10.0		10.0		
32	9.5	9.5		9.2	9.2		9.2	9.2		9.2	9.2	
34		8.5		8.5	8.5		8.5	8.5		8.5	8.5	
36		7.8			7.8		7.8	7.8		7.8	7.8	
38		7.2			7.2		7.2	7.2		7.2	7.2	
40		6.7	6.7		6.7			6.6		6.6	6.6	
42			6.1		6.1	6.1		6.1			6.1	
44			5.8		5.8	5.8		5.8	5.8		5.8	
46			5.2			5.2		5.2	5.2		5.2	5.2
48			5.0			5.0			5.0		5.0	5.0
50			4.7			4.7			4.7		4.7	4.7
52						4.5			4.5			4.5
54						4.2			4.2			4.2
56									4.0			3.8

Luffing fly jib load rating chart

Main boom length(m)	56														
	39			42			45			48			51		
Fly jib length(m)															
Main boom angle Working radius(m)	85	75	65	85	75	65	85	75	65	85	75	65	85	75	65
18	15.0			14.0			10.6			8.8					
20	14.5			13.3			10.3			8.4			7.4		
22	14.0			12.5			10.0			8.2			7.0		
24	13.4			12.1			9.6			7.9			6.9		
26	12.8			11.5			9.3			7.6			6.6		
28	11.3			11.0			8.8			7.3			6.2		
30	10.0			10.0			8.0			7.1			6.0		
32	9.2	9.2		9.2			7.4			6.9			5.7		
34	8.5	8.5		8.5	8.5		6.8			6.7			5.5		
36	7.8	7.8		7.8	7.8		6.3	6.3		6.3	6.3		5.3		
38	7.2	7.2		7.2	7.2		5.8	5.8		5.8	5.8		5.1	5.1	
40	6.6	6.6		6.6	6.6		5.4	5.4		5.4	5.4		4.8	4.8	
42	6.1	6.1		6.1	6.1		5.0	5.0		5.0	5.0		4.6	4.6	
44		5.8		5.8	5.8		4.7	4.7		4.7	4.7		4.3	4.3	
46		5.2		5.2	5.2		4.4	4.4		4.4	4.4		4.0	4.0	
48		4.8	4.8		4.8		3.8			3.8	3.8		3.8	3.8	
50		4.5	4.5		4.5	4.5				3.6			3.6	3.6	
52		4.2	4.2		4.2	4.2				3.4	3.4		3.4	3.4	
54			4.1		4.1	4.1				3.1	3.1		3.1	3.1	
56			3.8		3.8	3.8				3.0	3.0		3.0	3.0	3.0
58			3.0			3.0				2.9	2.9		2.9	2.9	2.9
60			2.6			2.6				2.6	2.6		2.6	2.6	2.6
62			2.4			2.4				2.4	2.4		2.4	2.4	2.4
64						2.2				2.2	2.2		2.2	2.2	2.2

Luffing fly jib load rating chart

Main boom length(m)	59													
	27			30			33			36				
Fly jib length(m)														
Main boom angle Working radius(m)	85	75	65	85	75	65	85	75	65	85	75	65		
14	21.2			20.5										
16	18.2			18.0			18.0					16.6		
18	16.0			15.8			15.6					15.4		
20	14.2			14.0			13.7					13.5		
22	12.6			12.4			12.3					12.1		
24	11.3			11.2			11.0					10.9		
26	10.2			10.1			10.0					9.9		
28	9.4	9.4		9.2			9.0					8.9		
30	8.6	8.6		8.4	8.4		8.3	8.3				8.2		
32	8.0	8.0		7.7	7.7		7.6	7.6				7.5	7.4	
34		7.5		7.2	7.2		7.2	7.2				7.2	7.2	
36		7.3			7.1		7.1	7.1				7.1	7.1	
38		7.0			7.0		7.0	7.0				7.0	7.0	
40		6.5			6.5			6.5				6.5	6.5	
42		6.1	6.1		6.1			6.1				6.1		
44			5.8		5.8	5.8		5.8				5.8		
46			5.2			5.2		5.2	5.2			5.2	5.2	
48			5.0			5.0		5.0	5.0			5.0	5.0	
50			4.7			4.7		4.7				4.7	4.6	4.6
52			4.3			4.3		4.3				4.3		4.3
54						4.0						3.8		3.8
56												3.5		3.4
58												3.0		2.8

Luffing fly jib load rating chart

Main boom length(m)	59														
Fly jib length(m)	39			42			45			48			51		
Main boom angle Working radius(m)	85	75	65	85	75	65	85	75	65	85	75	65	85	75	65
18	14.2			12.6			10.6								
20	13.5			12.2			10.3			8.4			7.4		
22	12.0			11.7			10.0			8.2			7.0		
24	10.8			10.6			9.6			7.9			6.8		
26	9.7			9.6			9.3			7.6			6.5		
28	8.8			8.6			8.6			7.3			6.2		
30	8.0			8.0			8.0			7.1			6.0		
32	7.5			7.5			7.4			6.9			5.7		
34	7.2	7.2		7.2	7.2		6.8			6.7			5.5		
36	7.1	7.1		7.1	7.1		6.3	6.3		6.3			5.3		
38	7.0	7.0		7.0	7.0		5.8	5.8		5.8	5.8		5.1	5.2	
40	6.5	6.5		6.5	6.5		5.4	5.4		5.4	5.4		4.8	4.8	
42	6.0	6.0		6.0	6.0		5.0	5.0		5.0	5.0		4.3	4.3	
44	5.5	5.5		5.5	5.5		4.7	4.7		4.7	4.7		4.0	4.0	
46		5.2		5.1	5.1		4.4	4.4		4.4	4.4		3.7	3.7	
48		4.8	4.8		4.8		3.8	3.8		3.8	3.8		3.6	3.6	
50		4.5	4.5		4.5			3.6		3.6	3.6		3.5	3.5	
52		4.2	4.2		4.2	4.3		3.4	3.4	3.4	3.4		3.3	3.3	
54		4.0	4.0		4.0	4.0		3.1	3.1		3.1	3.1	3.1	3.1	
56			3.4		3.3	3.3		3.0	3.0		3.0	3.0		3.0	3.0
58			2.8		2.8			2.8	2.8		2.8	2.8		2.8	2.8
60			2.6		2.6			2.6	2.6		2.6	2.6		2.6	2.6
62			2.4		2.4			2.4		2.4	2.4		2.4	2.4	
64			2.2		2.2			2.2		2.2		2.2		2.2	2.2
66					2.0			2.0				2.0			2.0