

# 55 ton capacity ZCC550V



**ZOOMLION**

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website:en.zoomlion.com 2021.01.19

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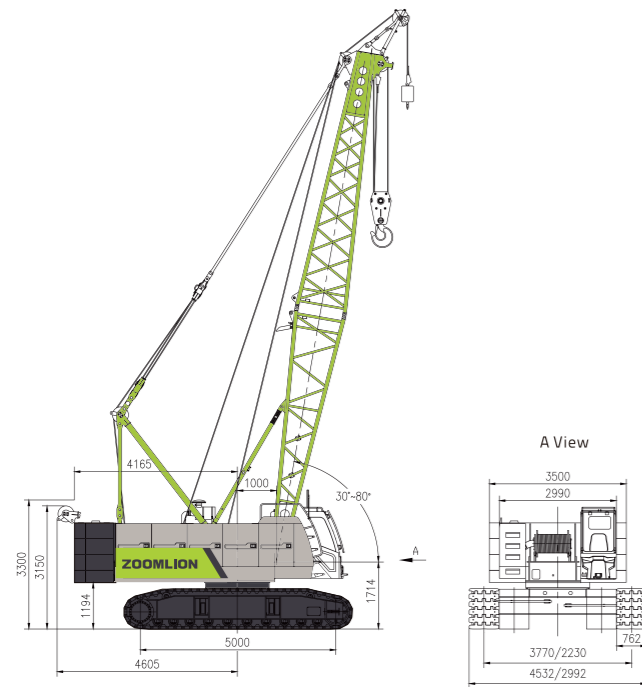
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## DIMENSIONS

Basic machine with undercarriage



### Operating weight

The operating weight includes the basic machine with crawlers, 2 main winches including wire ropes (185m and 130m) and 53m main boom, consisting of FA-frame, boom foot (6.5m), boom head(6.5m),16.8 t rear counterweight , and 60t hook block.

Total weight ----- approx.48.9t

### Equipment

Main boom Max. Length ----- 52m

Fixed jib ----- 7-15m

Max. combination ----- main boom43 m

----- fixed jib 15m

Max. lifting moment ----- 209t.m

Max. lifting capacity on fixed jib ----- 12t

## TECHNICAL FEATURE

### High working efficiency

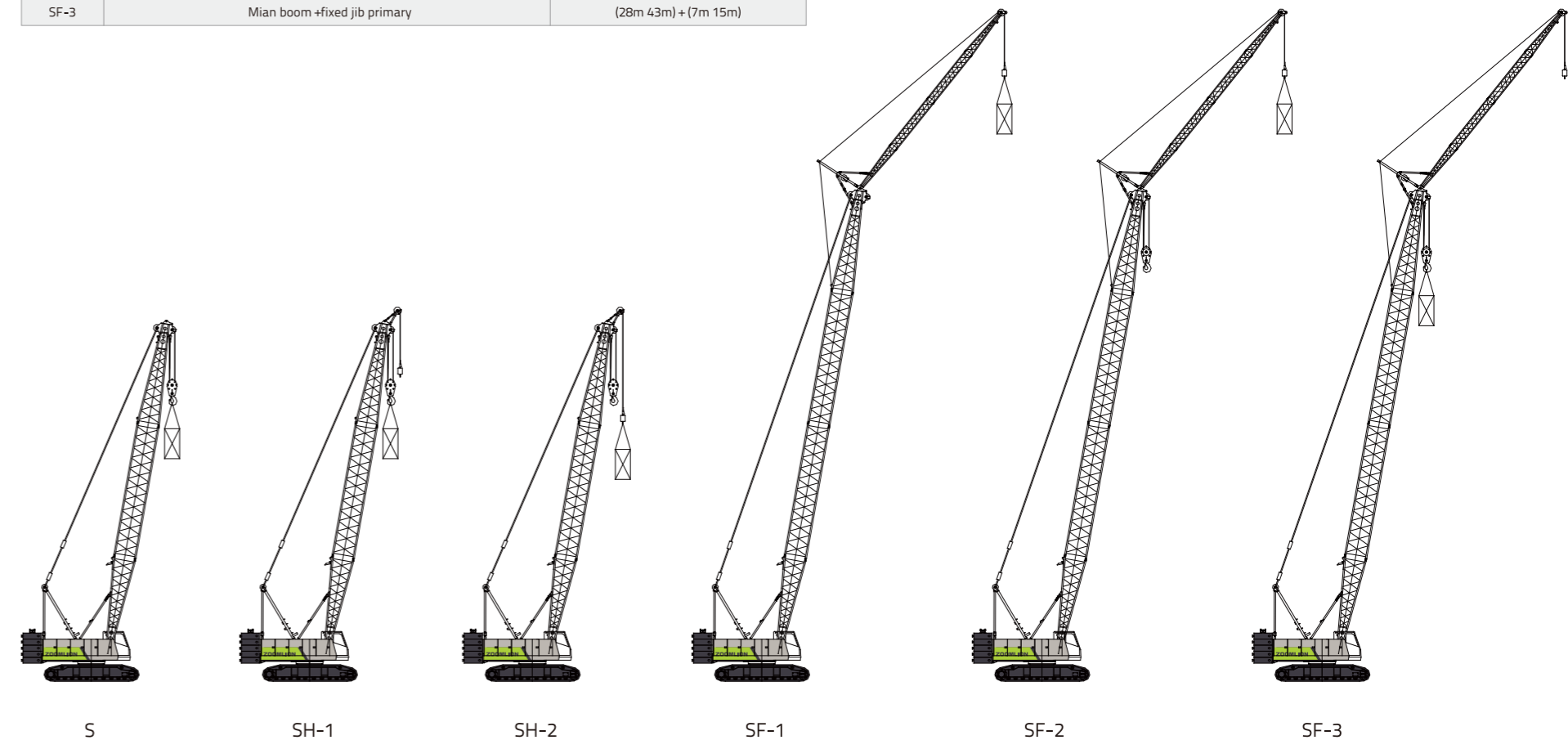
- Single rope speed of H1 and H2 reaches 145m/min (the 3<sup>rd</sup> layer).
- The optional free-fall winch helps to improve the efficiency of hoisting.

### Optimization in transport and dismantling

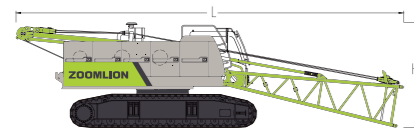
- Tracks are extendible. The maximum width in transport is 3m
- The weight of a single counterweight plate shall not exceed 4.5t. A small auxiliary crane can help to finish the assembly.

## BOOM COMBINATION

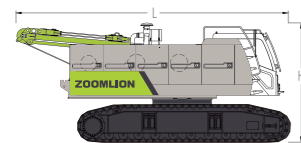
Code	Operating mode	Boom combination
S	Main boom	13m 52m
SH-1	Main boom+tip boom primary hook	13m 52m
SH-2	Main boom+tip boom auxiliary hook	13m 52m
SF-1	Main boom+fixed jib auxiliary hook,without primary hook	(28m 43m) + (7m 15m)
SF-2	Main boom+fixed jib auxiliary hook with primary hook	(28m 43m) + (7m 15m)
SF-3	Main boom +fixed jib primary	(28m 43m) + (7m 15m)



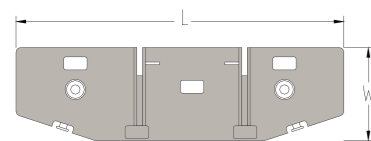
## TRANSPORT DIMENSIONS AND WEIGHTS



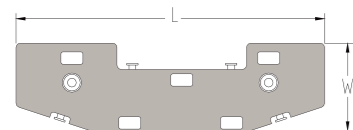
<b>Basic machine 1 (with pivot section)</b>	<b>1piece*</b>
Length(L)	12100 mm
Width (W)	2990 mm
Height (H)	3300 mm
Weight	30600 kg



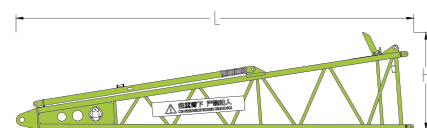
<b>Basic machine 2 (without pivot section)</b>	<b>1piece*</b>
Length(L)	7550 mm
Width (W)	2990 mm
Height (H)	3300 mm
Weight	29670 kg



<b>Counterweight base</b>	<b>1 piece</b>
Length(L)	3500 mm
Width (W)	1000 mm
Height (H)	560 mm
Weight	3300 kg

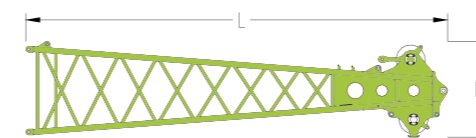


<b>Counterweight plate</b>	<b>3 pieces</b>
Length(L)	3500 mm
Width (W)	1000 mm
Height (H)	450 mm
Weight	4500 kg

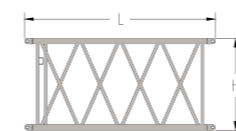


<b>Main boom pivot section</b>	<b>1 piece*</b>
Length(L)	6670 mm
Width (W)	1470 mm
Height (H)	1640 mm
Weight	930 kg

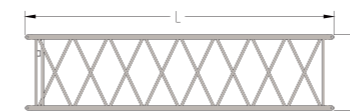
## TRANSPORT DIMENSIONS AND WEIGHTS



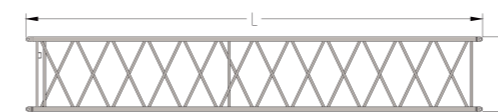
<b>Main boom head</b>	<b>1piece</b>
Length(L)	7130 mm
Width (W)	1430 mm
Height (H)	1630 mm
Weight	830 kg



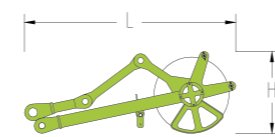
<b>Main boom intermediate section of 3m</b>	<b>2pieces*</b>
Length(L)	3080 mm
Width (W)	1430 mm
Height (H)	1310 mm
Weight	220 kg



<b>Main boom intermediate section of 6m</b>	<b>1 piece*</b>
Length(L)	6080 mm
Width (W)	1430 mm
Height (H)	1310 mm
Weight	351 kg

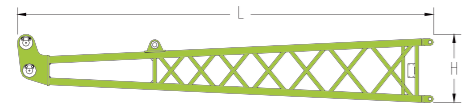


<b>Main boom intermediate section of 9m</b>	<b>3piece*</b>
Length(L)	9080 mm
Width (W)	1430 mm
Height (H)	1310 mm
Weight	551 kg

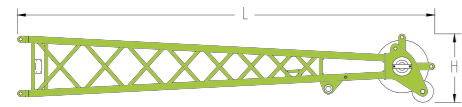


<b>Tip boom</b>	<b>1 piece</b>
Length(L)	1370 mm
Width (W)	590 mm
Height (H)	470 mm
Weight	120 kg

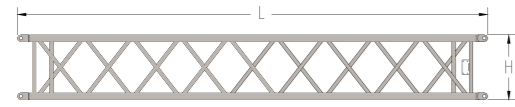
## TRANSPORT DIMENSIONS AND WEIGHTS



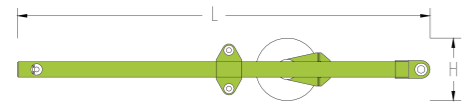
<b>Fixed jib pivot section</b>	1 piece*
Length (L)	3640 mm
Width (W)	570 mm
Height (H)	570 mm
Weight	160 kg



<b>Fixed jib head</b>	1 piece*
Length (L)	3820 mm
Width (W)	570 mm
Height (H)	570 mm
Weight	210 kg



<b>Fixed jib intermediate section of 4m</b>	3 piece*
Length (L)	4060 mm
Width (W)	570 mm
Height (H)	570 mm
Weight	120 kg



<b>FA-frame</b>	1 pieces*
Length (L)	3230 mm
Width (W)	730 mm
Height (H)	410 mm
Weight	255 kg

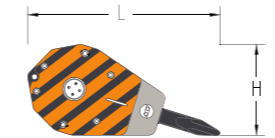


<b>Load hook of 60T</b>	1 piece*
Length (L)	1500 mm
Width (W)	660 mm
Height (H)	530 mm
Weight	655 kg

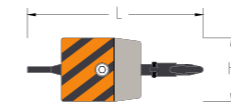
## TRANSPORT DIMENSIONS AND WEIGHTS



<b>Load hook of 40T</b>	1 piece*
Length (L)	1340 mm
Width (W)	490 mm
Height (H)	530 mm
Weight	400 kg



<b>Load hook of 20T</b>	1 pieces*
Length (L)	1180 mm
Width (W)	420 mm
Height (H)	560 mm
Weight	315 kg



<b>Load hook of 8T</b>	1 piece*
Length (L)	830 mm
Width (W)	320 mm
Height (H)	320 mm
Weight	155 kg

### Notes:

1. Components are presented in diagrammatic drawings that are not drawn to scale. Length is a boundary dimension.
2. Weight of packaging is not counted in the weight above, which might be different from the actual weight due to manufacturing error.
3. There might be improvements made on components listed above, resulting modifications in dimensions and weight. Actual products to be delivered shall prevail.
4. Numbers of components marked \* are determined by the actual need.

# TECHNICAL DESCRIPTION



## Engine

Engine type----WEICHAI WP6G190E301  
 Rated power----140kW/2000r/min  
 Maximum output torque----860N.m/1300r/min  
 Oil tank capacity-----400L  
 Exhaust emissions: China national 3 emissin standares



## Hydraulic system

Hydraulic pump: The main pump, a plunger pump, drives winches and the traveling mechanism. Dual gear pump is used for slewing and heat dissipation.  
 Control: pilot proportional control hydraulic system. The motor of hoisting winches is a variable plunger pump. Two cross-shaped hydraulic control levers and a dual foot-operated traveling control valve are used for controlling different executive components.  
 Hydraulic oil tank: 520L



## Hoisting winch

Both the primary and the secondary hoisting winches are driven by an axial hydraulic variable-displacement piston motor through a built-in planetary reducer. Braking of the spring on winch motor is controlled by the balancing valve. The drum with a double-rope groove guarantees that rope of multiple layers will not intertwine together.

Main winch  
 Line pull-----Max.7T  
 Rope diameter-----20mm  
 Rope speed -----0-145m/min  
 Rope length-----185m

Aux winch  
 Line pull-----Max.7T  
 Rope diameter-----20mm  
 Rope speed-----0-145m/min  
 Rope length-----130m



## Boom winch

The derricking winch is driven by an axial piston motor through a built-in planetary reducer and brakes through the spring on the motor end.  
 Cable drum lock: The winch is locked by ratchet wheel and ratchet pawl.  
 Boom winch  
 Line pull-----Max.71KN  
 Rope diameter-----20mm  
 Rope speed -----0-82m/min  
 Rope length-----100m

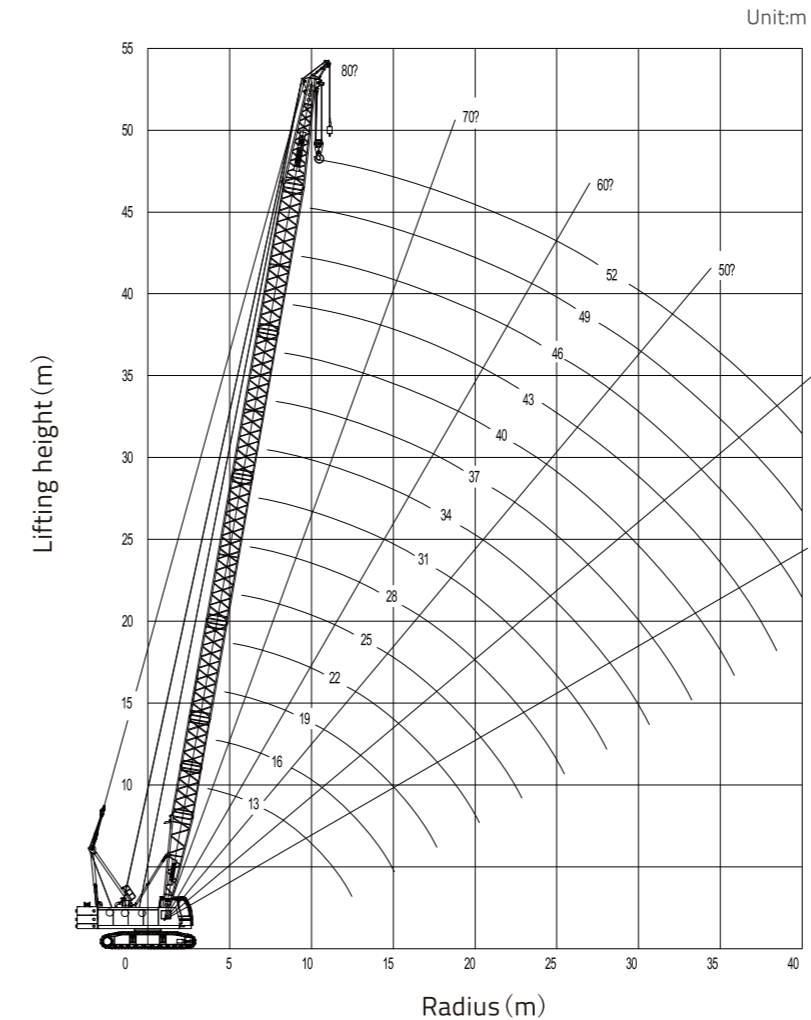


## Swing

Slewing mechanism is composed of slewing reducer, motor, normally-closed brake, slewing bearing, etc. The superstructure can be rotated for 360° via the slewing ring which is driven by the pinion gear.  
 Stepless speed regulation: 0-2.5r/min

# LIFTING PERFORMANCE

Lifting height curves of main boom



MAIN BOOM RATED LOADS														
16800kg CWT													360° (UNIT:T)	
Main boom length (m)														
Radius (m)	13	16	19	22	25	28	31	34	37	40	43	46	49	52
3.8	55													
4	52													
5	39.9	38.4	37.1											
6	30.1	29.6	29.1	28.3	27.5									
7	23.7	23.6	23.5	23.4	22.9	22.4	21.6							
8	19.9	19.6	19.5	19.4	19.3	18.8	18.3	18	17.5					
9	17	16.7	16.5	16.4	16.3	16.2	15.9	15.7	15.3	15	14.6			
10	14.6	14.5	14.4	14.3	14.2	14.1	14	13.9	13.4	13.2	12.9	12.6	12.1	
11	12.9	12.8	12.7	12.6	12.5	12.4	12.3	12.2	12.1	11.6	11.3	11.1	10.8	10.5
12	11.6	11.5	11.4	11.3	11.2	11.1	11	10.9	10.8	10.5	10.3	10	9.8	9.5
14		9.5	9.4	9.2	9.1	9	8.9	8.8	8.7	8.6	8.5	8.3	8	7.8
16			7.9	7.8	7.7	7.6	7.5	7.4	7.3	7.2	7.1	7	6.7	6.5
18				6.6	6.5	6.4	6.3	6.2	6.1	6	5.9	5.8	5.7	5.6
20				5.8	5.7	5.6	5.5	5.4	5.3	5.2	5.1	5	4.9	4.8
22					5	4.9	4.8	4.7	4.6	4.5	4.4	4.3	4.2	4.1
24						4.3	4.2	4.1	4	3.9	3.8	3.7	3.6	3.5
26							3.7	3.6	3.5	3.4	3.3	3.2	3.1	3
28								3.3	3.2	3.1	3	2.9	2.8	2.7
30									2.9	2.8	2.7	2.6	2.5	2.4
32										2.5	2.4	2.3	2.2	2.1
34											2.2	2.1	2	1.9
36												1.8	1.7	1.6
38													1.6	1.5
40														1.4
42														1.3
														1.2
														1.1
														1

## LIFTING PERFORMANCE

Lifting capacity SF-1 boom(1/3)												
16800kg CWT												360° (UNIT:T)
Main boom length	28m						31m					
Jib length	7m		11 m		15 m		7m		11m		15m	
Angle	10°	30°	10°	30°	10°	30°	10°	30°	10°	30°	10°	30°
9	12						12					
10	12		12				12					
11	11.9	12	12				11.9		7			
12	10.6	10.9	10.7			7	10.5	10.8	7		7	
14	8.6	8.8	8.7	8.4	7		8.5	8.7	7	7	7	
16	7.2	7.3	7.2	7.5	7	6.4	7.1	7.3	7	7	7	
18	6.1	6.2	6.1	6.4	6.2	6.1	6	6.2	6.1	6.3	6.1	6
20	5.2	5.3	5.3	5.5	5.4	5.6	5.2	5.3	5.2	5.4	5.3	5.6
22	4.6	4.6	4.6	4.8	4.7	4.9	4.5	4.6	4.5	4.7	4.6	4.8
24	4	4.1	4.1	4.2	4.1	4.3	3.9	4	4	4.1	4	4.3
26	3.5	3.6	3.6	3.7	3.6	3.8	3.5	3.5	3.5	3.7	3.6	3.8
28	3.1	3.2	3.2	3.3	3.2	3.4	3.1	3.1	3.1	3.2	3.2	3.3
30	2.8	2.8	2.9	2.9	2.9	3	2.7	2.7	2.8	2.9	2.8	3
32			2.5	2.6	2.6	2.7	2.4	2.4	2.4	2.5	2.5	2.6
34			2.3	2.3	2.3	2.4		2.1	2.2	2.3	2.3	2.4
36					2.1	2.1			2	2	2	2.1
38					1.9	1.9				1.7	1.8	1.9
40											1.6	1.6
42												1.4

## LIFTING PERFORMANCE

Lifting capacity SF-1 boom(2/3)												
16800kg CWT												360° (UNIT:T)
Main boom length	34m						37m					
Jib length	7m		11 m		15 m		7m		11m		15m	
Angle	10°	30°	10°	30°	10°	30°	10°	30°	10°	30°	10°	30°
10	12								7			
11	11.5		7						7			
12	10.3	10.8	7						7	7		
14	8.4	8.7	7			7			7	7	7	7
16	7	7.2	7	7	7				6.9	7	7	7
18	5.9	6.1	6	6.3	6.1	6			5.8	6	5.9	6.2
20	5.1	5.2	5.1	5.4	5.2	5.5			5	5.1	5.1	5.3
22	4.4	4.5	4.5	4.7	4.5	4.8			4.3	4.4	4.4	4.6
24	3.8	3.9	3.9	4.1	4	4.2			3.8	3.9	3.8	4
26	3.4	3.5	3.4	3.6	3.5	3.7			3.3	3.4	3.4	3.5
28	3	3	3	3.2	3.1	3.3			2.9	3	2.9	3.1
30	2.6	2.7	2.7	2.8	2.7	2.9			2.5	2.6	2.6	2.7
32	2.3	2.4	2.4	2.4	2.4	2.5			2.2	2.3	2.3	2.4
34	2	2.1	2.1	2.1	2.1	2.3			2	2	2	2.1
36	1.8	1.8	1.9	1.9	1.9	2			1.7	1.7	1.7	1.9
38			1.6	1.7	1.7	1.7			1.5	1.5	1.5	1.6
40			1.4	1.5	1.5	1.6					1.3	1.4
42					1.3	1.3					1.1	1.2
44						1.1						1

## LIFTING PERFORMANCE

Lifting capacity SF-1 boom(3/3)												
16800kg CWT												360° (UNIT:T)
Main boom length	40m						43m					
Jib length	7m		11 m		15 m		7m		11m		15m	
Angle	10°	30°	10°	30°	10°	30°	10°	30°	10°	30°	10°	30°
11	7						7					
12	7		7				7					
14	7	7	7		7		7	7	7		7	
16	6.8	7	6.8	7	6.8		6.7	6.8	6.7	7	6.7	
18	5.8	6	5.8	6.2	5.8	5.9	5.6	5.8	5.6	5.9	5.6	
20	4.9	5.1	5	5.3	5	5.4	4.8	5	4.9	5.2	4.9	5.3
22	4.2	4.4	4.3	4.5	4.4	4.7	4.1	4.3	4.2	4.4	4.2	4.6
24	3.7	3.8	3.8	3.9	3.8	4.1	3.6	3.7	3.7	3.8	3.7	3.9
26	3.2	3.3	3.3	3.5	3.3	3.6	3.1	3.2	3.2	3.4	3.2	3.5
28	2.8	2.9	2.9	3	2.9	3.1	2.7	2.8	2.7	3	2.8	3
30	2.4	2.5	2.5	2.6	2.5	2.8	2.4	2.4	2.4	2.5	2.4	2.7
32	2.1	2.2	2.1	2.3	2.3	2.4	2	2.1	2.1	2.3	2.1	2.4
34	1.9	1.9	1.9	2	2	2.1	1.7	1.8	1.8	2	1.9	2
36	1.6	1.7	1.7	1.7	1.7	1.9	1.5	1.6	1.6	1.7	1.6	1.8
38	1.4	1.4	1.5	1.5	1.5	1.6	1.3	1.3	1.3	1.5	1.4	1.5
40	1.2	1.2	1.2	1.3	1.3	1.4	1.1	1.1	1.1	1.2	1.1	1.3
42		1	1	1.1	1.1	1.2	0.9	0.9	1	1	1	1.1
44			0.9	0.9	0.9	1	0.8	0.8	0.8	0.9	0.9	0.9