

55 ton capacity ZCC550H



ZOOMLION

Zoomlion Heavy Industry Science & Technology Co.,Ltd.

Add: No.677, Lugu Road, Zoomlion Industrial Park, Changsha, Hunan, China, 410205

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PRODUCTS

Vision Creates Future

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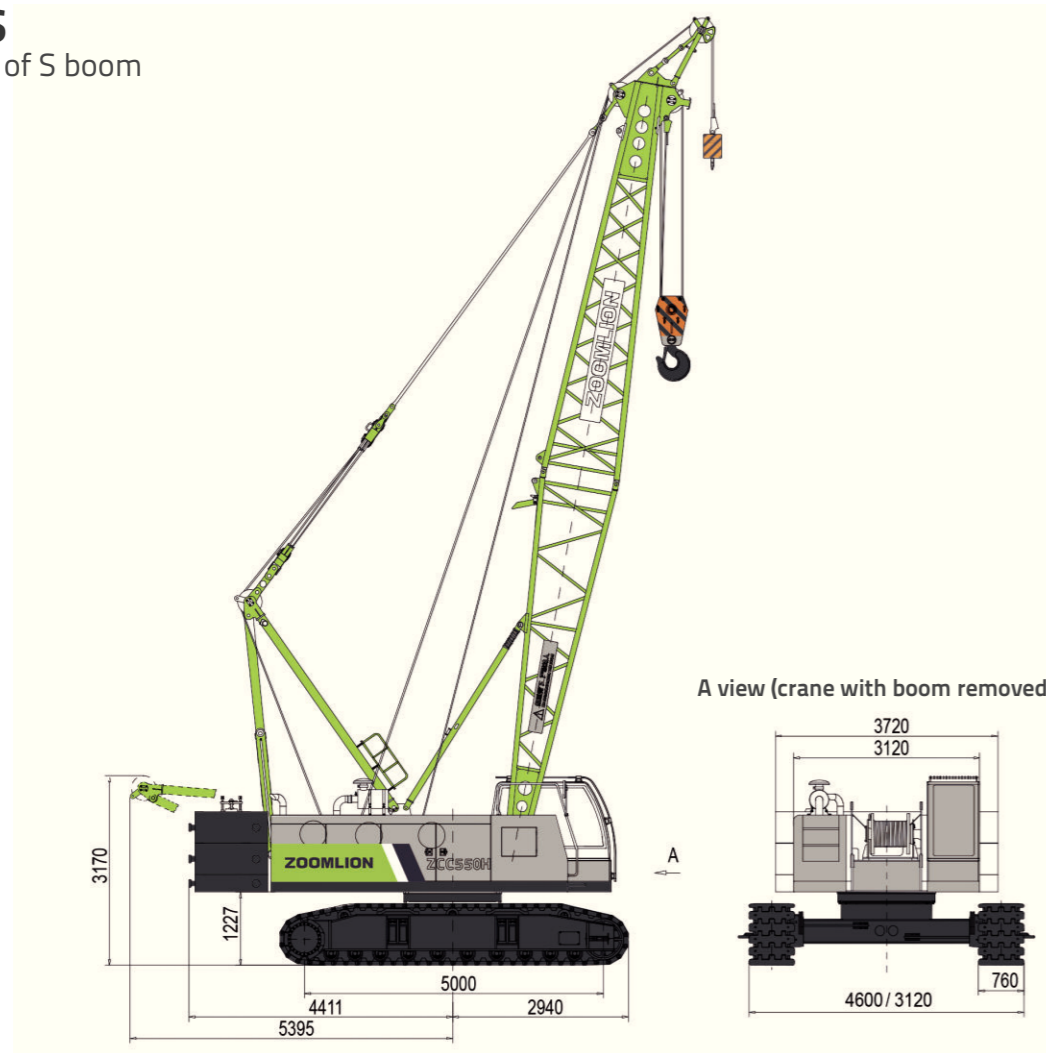
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DIMENSIONS

Overall dimensions of S boom



Operating weight

The operating weight includes the basic machine with crawlers, 2 main winches including wire ropes (185m and 130m) and 13m main boom, consisting of FA-frame, boom foot (6.5m), boom head (6.5m), 17.5 t rear counterweight, and 55 t hook block.
Total weight-----approx. 48.7t

Equipment

Main boom Max. Length -----52m
Fixed jib -----7-15m
Max. combination-----main boom 43m
-----fixed jib 15m
Max. lifting moment-----209t.m
Max. lifting capacity on fixed jib-----12t

TECHNICAL FEATURE

Excellent interchangeability of the components

- As to the products produced in the same platform, in addition to most of the electrical and hydraulic components, majority of structural parts are also interchangeable, such as a set of fixed jib (including fixed jib pivot section, fixed jib intermediate sections, FA-frame, front tilting-back support of fixed jib, rear tilting-back support of fixed jib, fixed jib front anchoring rods and fixed jib rear anchoring rods), load hook, derricking mechanism, tip boom, rear counterweight base plate and so on, so as to reduce the operating costs of the users.

High work efficiency

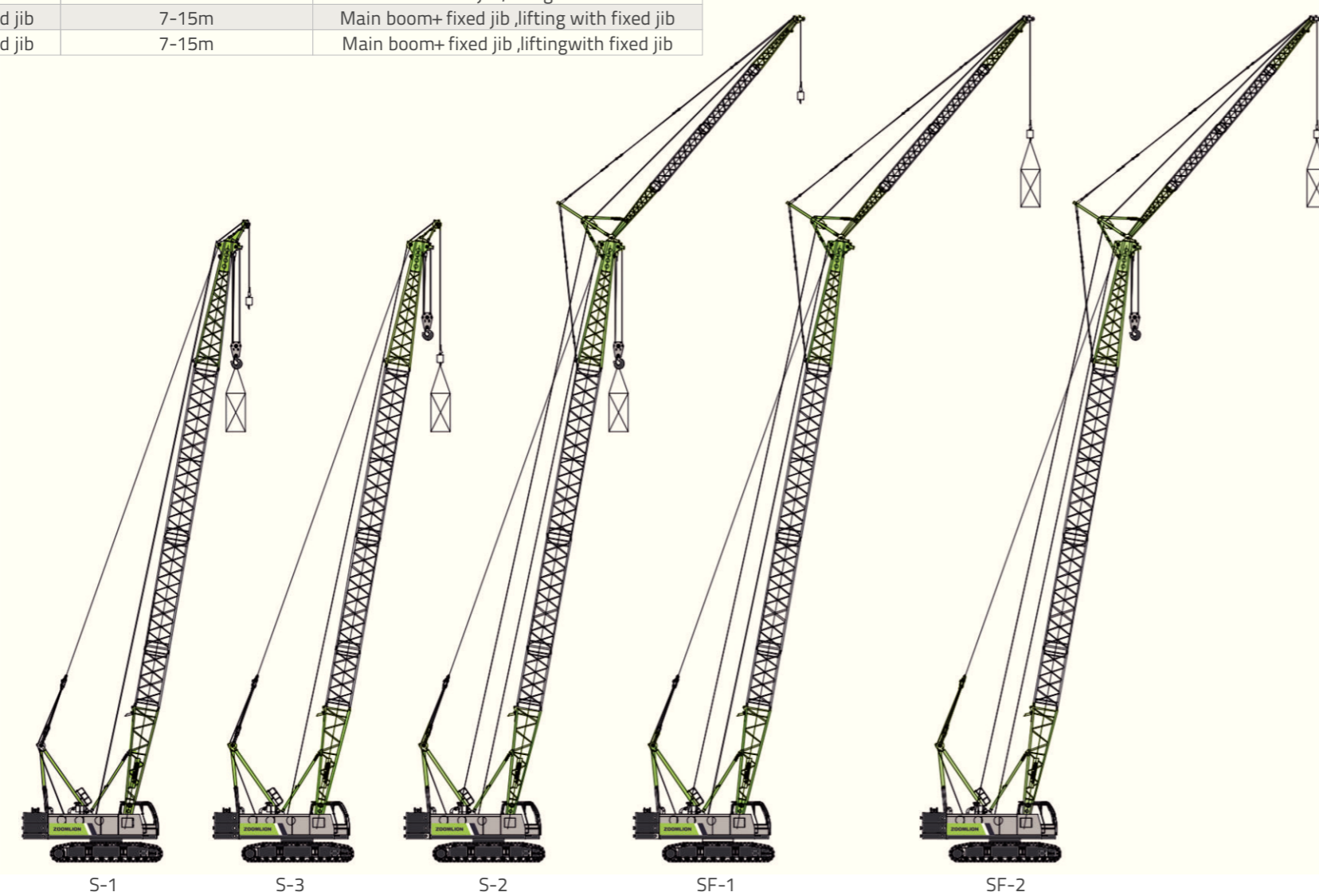
- Series-connected multiple valve-controlled hydraulic system is applied, so that all simultaneous movements can be achieved and no deceleration will occur during the switching of crane movements.
- Single rope speed on the outmost layer of hoisting winch 1 is 132m/min.
- To improve lifting efficiency, hoisting winch 1 with free-fall function is available for an option.

Optimization of transportation, assembly and dismantling

- A-frame can be erected by itself without the help of oil cylinder, thus achieving rapid assembly of the crane.
- The weight of single counterweight plate is less than 6.25t, so that the counterweight can be assembled by use of a small-sized auxiliary crane.
- The crawler carriers can be extended and retracted, and the maximum transport width of the crane is 3.12m.

BOOM COMBINATION

Description of Boom Assembly Codes			
Code	Type	Operation mode parameters	Mode description
S-1	Main boom	13-52m	Main boom, lifting with main boom
S-3	Main boom	13-52m	Main boom, lifting with tip boom
S-2	Main boom	13-52m	Main boom+ fixed jib ,liftingwith main boom
SF-1	Fixed jib	7-15m	Main boom+ fixed jib ,lifting with fixed jib
SF-2	Fixed jib	7-15m	Main boom+ fixed jib ,liftingwith fixed jib



S-1

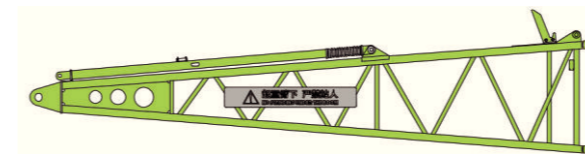
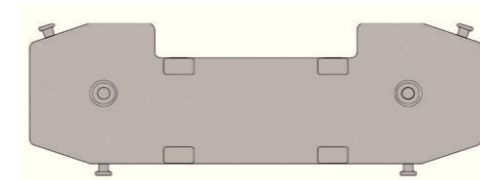
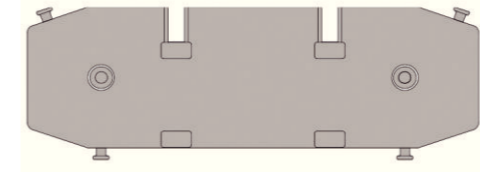
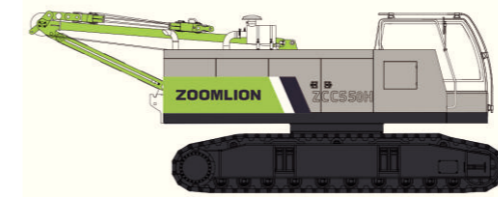
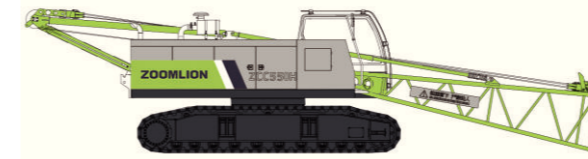
S-3

S-2

SF-1

SF-2

TRANSPORT DIMENSIONS AND WEIGHTS



Basic machine (with main boom pivot section)

Length	13000mm
Width	3120mm
Height	3180mm
Weight	29740kg

Basic machine (without main boom pivot section)

Length	8330mm
Width	3120mm
Height	3180mm
Weight	28800kg

Counterweight base plate

Length	3720mm
Width	1320mm
Height	550mm
Weight	5000kg

Counterweight plate

Length	3720mm
Width	1320mm
Height	570mm
Weight	6250kg

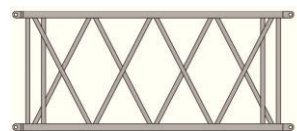
Main boom pivot section

Length	6650mm
Width	1470mm
Height	1690mm
Weight	930kg

Main boom head

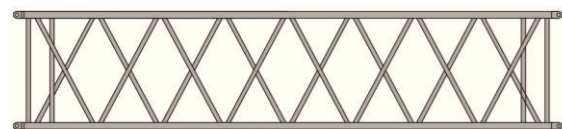
Length	7020mm
Width	1450mm
Height	1440mm
Weight	820kg

TRANSPORT DIMENSIONS AND WEIGHTS



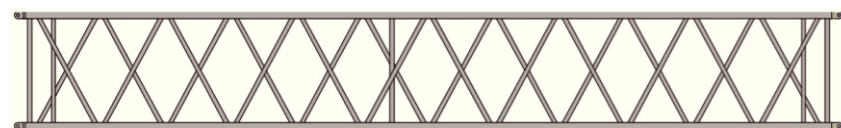
3m main boom intermediate section

Length	3080mm
Width	1430mm
Height	1310mm
Weight	255kg



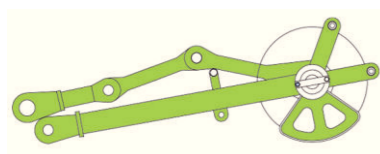
6m main boom intermediate section

Length	6080mm
Width	1430mm
Height	1310mm
Weight	351kg



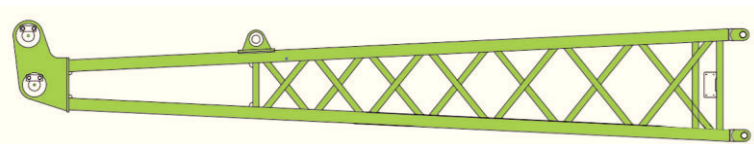
9m main boom intermediate section

Length	9080mm
Width	1430mm
Height	1310mm
Weight	551kg



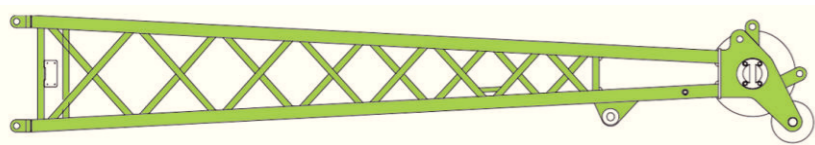
Tip boom

Length	1370mm
Width	590mm
Height	470mm
Weight	120kg



Fixed jib pivot section

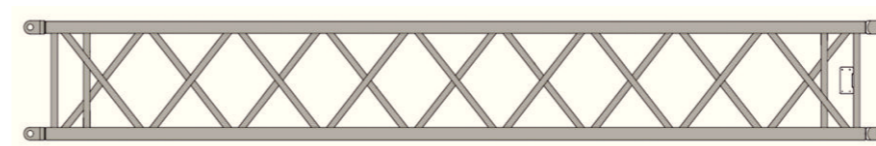
Length	3640mm
Width	570mm
Height	570mm
Weight	160kg



Fixed jib head

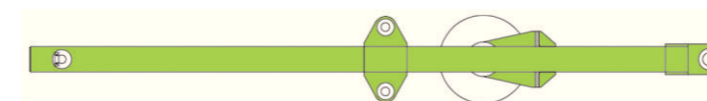
Length	3820mm
Width	570mm
Height	570mm
Weight	210kg

TRANSPORT DIMENSIONS AND WEIGHTS



4m fixed jib intermediate section

Length	4060mm
Width	570mm
Height	570mm
Weight	120kg



FA-frame

Length	3230mm
Width	730mm
Height	410mm
Weight	270kg



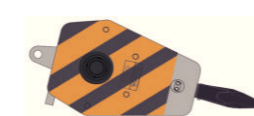
55t load hook

Length	1440mm
Width	660mm
Height	530mm
Weight	640kg



30t load hook

Length	1330mm
Width	490mm
Height	530mm
Weight	380kg



16t load hook

Length	1230mm
Width	420mm
Height	530mm
Weight	310kg



6t load hook

Length	695mm
Width	300mm
Height	300mm
Weight	185kg

TECHNICAL DESCRIPTION



Engine

Engine type-----WEICHAI WP6G190E301
 Displacement-----6.75L
 Rated power-----140KW/2000rpm
 Maximum output torque-----860N.m/1300rpm
 Fuel tank-----300L
 Exhaust emission complies with China national 3 Emission Standards.



Hydraulic system

The crane adopts a series-connected hydraulic system with hydraulic pilot proportional control. The high-speed hydraulic motor drives the planet reducer to realize the movements of the mechanisms.
 The system has the advantages of high efficiency, energy-saving, smooth and safe simultaneous movements.
 Oil cooler for hydraulic system-----40 kW
 Hydraulic oil tank capacity-----480 L



Hoisting winch

The axial piston variable displacement motor drives hoisting winches 1 and 2 via a built-in planet reducer. Brake the winch via the spring on the winch motor, which is controlled by balance valve. The winding drum is a kind of cast drum with LEBUS groove, which can ensure that the multi-layer wire rope will not be wound disorderly.

Main winch

Line pull-----Max.65KN
 Rope diameter-----20mm
 Rope speed -----0-132m/min
 Rope length-----185m

Aux.winch

Line pull----- Max.65KN
 Rope diameter----- 20mm
 Rope speed----- 0-124m/min
 Rope length-----130m

Hoisting winch 1with free-fall function is available for an option, and the single rope force on the 3rd rope layer can reach 7.5t.



Boom winches

The axial piston motor drives the boom winch via a built-in planet reducer.
 Brake the winch via the spring on the winch motor. The winding drum can be locked by the ratchet wheel and ratchet pawl.

Boom winch

Line pull-----Max.65KN
 Rope diameter-----20mm
 Rope speed ----- 0-100m/min
 Rope length----- 150m



Swing

The axial piston constant displacement motor drives the slewing mechanism via a planet reducer. Free-swing function can effectively reduce the lateral force of the boom.

- Slewing ring
 Single-row ball, four-point contact, internal geared.
- Slewing brake

The slewing mechanism is braked via the spring on the slewing motor, which is controlled by balance valve.

- Slewing speed
- Slewing speed-----0- 2.45 rpm.



Crawler

Both left and right crawler carriers are fitted with an independent hydraulic driving system. Each hydraulic driving system has a hydraulic motor, which can drive the drive sprocket via planet reducer.

Track pad-----760mm
 Drive speed-----0-1.65 km/h

TECHNICAL DESCRIPTION



Main boom

Main boom length: 13m – 52m;
 Consisting of 6.5m main boom pivot section, 6.5m main boom head, and main boom intermediate sections of 3m, 6m and 9m as well as tip boom.

Main boom length (m)	Main boom pivot section	Main boom head	3m main boom intermediate section	6m main boom intermediate section	9m main boom intermediate section
13	1	1	0	0	0
16	1	1	1	0	0
19	1	1	0	1	0
22	1	1	1	1	0
25	1	1	2	1	0
28	1	1	1	2	0
31	1	1	1	1	1
34	1	1	2	1	1
37	1	1	1	2	1
40	1	1	1	1	2
43	1	1	2	1	2
46	1	1	1	2	2
49	1	1	1	1	3
52	1	1	2	1	3



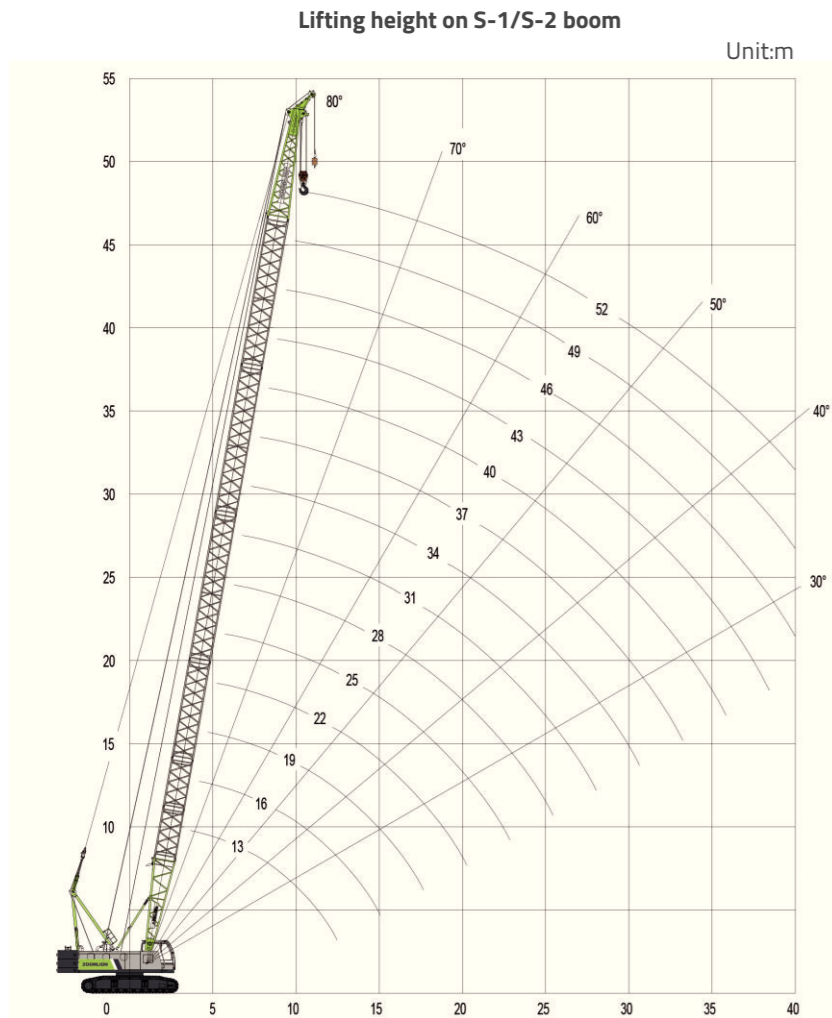
Fixed jib

Fixed jib length:7m – 15m;
 Consisting of 3.5m fixed jib pivot section, 3.5m fixed jib head and 4m fixed jib intermediate sections.

Fixed jib length (m)	Fixed jib pivot section	Fixed jib head	4m fixed jib intermediate section
7	1	1	0
11	1	1	1
15	1	1	2

LIFTING PERFORMANCE

Main boom configuration



Lifting capacity on S-1 boom

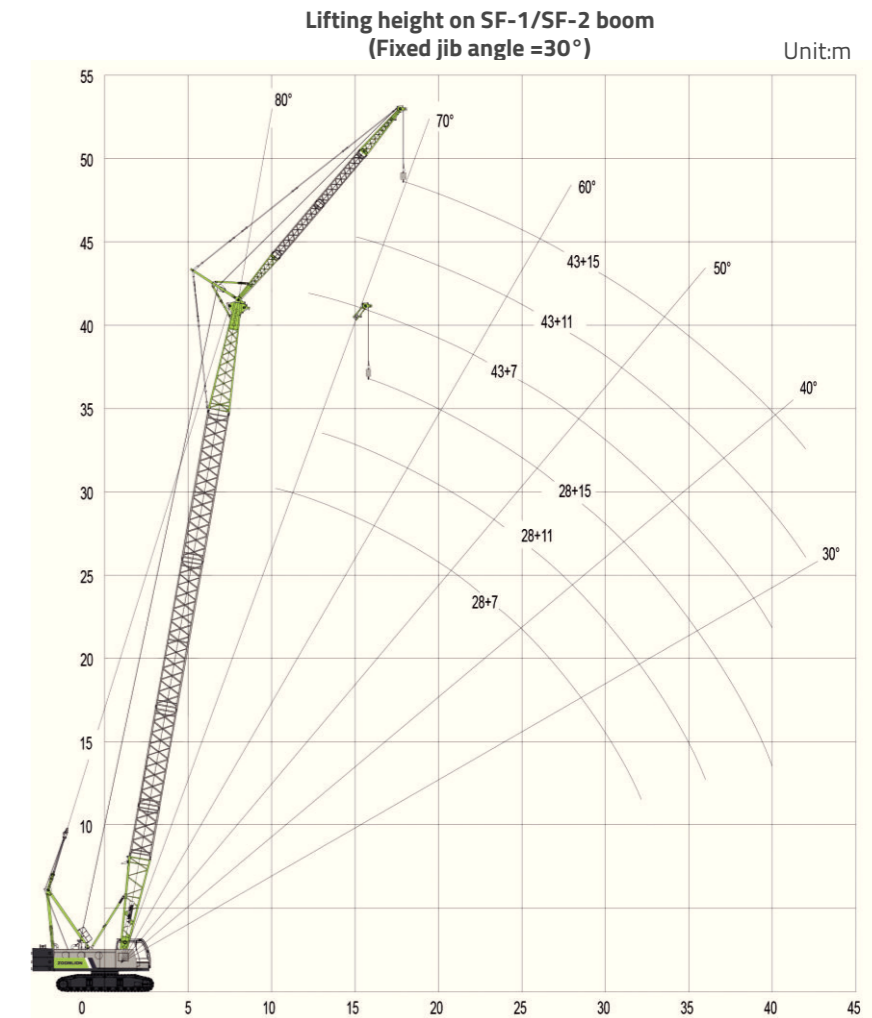
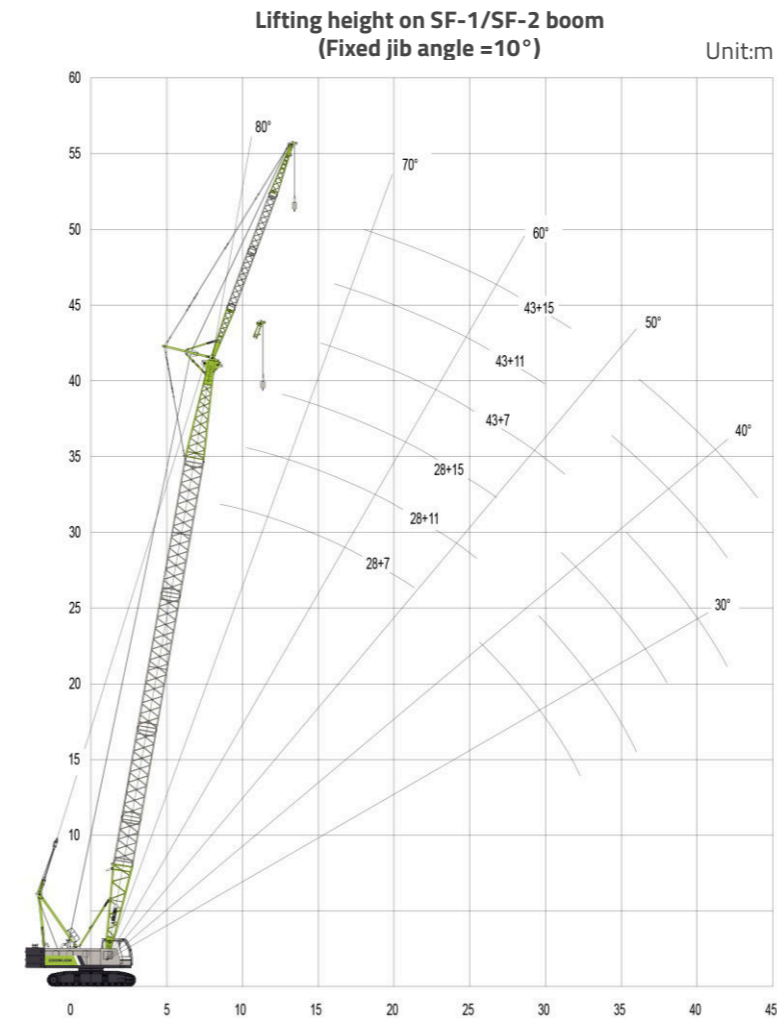
Rear cwt.:17500kg 75% 360° (UNIT: KG)

Radius (m)	MAIN BOOM LENGTH (M)																
	13	16	19	22	25	28	31	34	37	40	43	46	49	52			
3.8	55																
4	50.5	48.5															
4.5	44.5	43.5	40.8														
5	39	39	37	33.3													
5.5	35.3	34.5	33.5	32.2	30.5												
6	31.6	30.5	29.5	30	28.5	27.3											
7	25.1	25.1	25	24	23.8	23.2	22.5										
8	20.8	20.8	20.7	20.6	20.2	19.5	19.2	18.6	18.2								
9	17.7	17.7	17.6	17.5	17.5	16.8	16.6	16.1	15.7	15.1	14.6						
10	15.4	15.4	15.3	15.2	15.1	15.1	14.8	14.5	14	13.6	13.3	12.8	12.3				
12	12.2	12.1	12	12	11.9	11.8	11.7	11.6	11.3	11.1	10.7	10.4	10.1	10			
14		9.9	9.9	9.8	9.7	9.6	9.6	9.3	9.2	9.1	8.9	8.5	8.2	8.1			
16			8.3	8.2	8.2	8.1	8	7.9	7.7	7.6	7.5	7.1	6.9	6.8			
18				7.1	7	6.9	6.8	6.7	6.6	6.4	6.3	6.1	5.8	5.8			
20					6	6	6	5.9	5.7	5.6	5.5	5.3	5.2	5	5		
22						5.4	5.2	5	4.9	4.8	4.7	4.6	4.5	4.4	4.2		
24							4.6	4.4	4.2	4.1	4	3.9	3.8	3.7	3.6		
26								3.9	3.7	3.6	3.5	3.4	3.3	3.3	3.1		
28									3.3	3.3	3.2	3.1	3	2.9	2.8	2.6	
30										3	2.8	2.7	2.6	2.5	2.4	2.3	
32											2.5	2.4	2.3	2.2	2	1.9	
34												2.1	2.1	1.9	1.7	1.6	
36													1.7	1.6	1.5	1.4	
38														1.5	1.4	1.3	1.2
40															1.2	1.1	1

Note:
In S-1 boom configuration, main boom can be fitted with tip boom, whose rated load is the same as that on main boom. But the maximum lifting capacity on tip boom cannot exceed 6.0t.

LIFTING PERFORMANCE

Main boom with fixed jib configuration



LIFTING PERFORMANCE

Lifting capacity on SF-1 boom Fixed jib length = 7m												
Rear ctwt.:17500kg 75% 360° (UNIT: KG)												
FIXED JIB RATED LOADS												
Main boom length (m)	28		31		34		37		40		43	
Fixed jib angle (°)	10	30	10	30	10	30	10	30	10	30	10	30
10	12		12									
12	11.6	10.4	11.4	10.3	11.1	10	6.4		6.4		6.4	
14	9.5	9.3	9.3	9.2	9.1	9	6.4	6.4	6.4	6.4	6.4	6.4
16	8	7.8	7.9	7.8	7.7	7.7	6.4	6.4	6.4	6.4	6.4	6.4
18	6.9	6.4	6.8	6.4	6.6	6.3	6.3	6.3	6.2	6.2	5.9	6.2
20	5.9	5.5	5.8	5.4	5.7	5.3	5.5	5.2	5.4	5.2	5.2	5.1
22	5.1	4.9	5	4.7	4.9	4.7	4.8	4.6	4.7	4.6	4.5	4.5
24	4.5	4.4	4.4	4.2	4.3	4.2	4.2	4.1	4.1	4.1	3.9	4
26	4	4	3.9	3.9	3.8	3.9	3.6	3.7	3.5	3.6	3.4	3.5
28	3.5	3.5	3.4	3.5	3.4	3.4	3.2	3.3	3.1	3.2	3.1	3.1
30	3.1	3.1	3.1	3.1	3	3	2.9	3	2.8	2.8	2.7	2.7
32	2.8	2.8	2.7	2.7	2.6	2.7	2.5	2.5	2.4	2.5	2.4	2.4
34			2.4	2.4	2.4	2.4	2.3	2.3	2.1	2.2	2	2.1
36					2.1	2.1	2	2	1.8	1.9	1.7	1.8
38							1.7	1.7	1.7	1.7	1.6	1.6
40							1.5	1.5	1.4	1.5	1.3	1.4
42									1.2	1.2	1.1	1.1

Lifting capacity on SF-1 boom Fixed jib length = 11m												
Rear ctwt.:17500kg 75% 360° (UNIT: KG)												
FIXED JIB RATED LOADS												
Main boom length (m)	28		31		34		37		40		43	
Fixed jib angle (°)	10	30	10	30	10	30	10	30	10	30	10	30
10	12											
12	11.6		6.4		6.4		6.4		6.4			
14	9.5	8.4	6.4	6.4	6.4		6.4		6.4		6.4	
16	8.2	7.1	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4
18	6.9	6.2	6.4	6.1	6.4	6	6.3	6	6.2	6	6.1	6
20	5.9	5.4	5.9	5.4	5.7	5.4	5.5	5.4	5.4	5.2	5.2	5.2
22	5.2	4.7	5	4.7	4.9	4.6	4.8	4.6	4.7	4.5	4.5	4.4
24	4.5	4.4	4.4	4.2	4.3	4.2	4.2	4.1	4.1	4	3.9	4
26	4	4	3.9	3.9	3.8	3.8	3.7	3.7	3.5	3.6	3.4	3.5
28	3.5	3.6	3.5	3.5	3.4	3.4	3.2	3.3	3.1	3.3	3.1	3.2
30	3.1	3.2	3.1	3.1	3	3.1	2.9	3	2.8	2.9	2.7	2.8
32	2.8	2.9	2.7	2.8	2.6	2.7	2.5	2.6	2.4	2.5	2.4	2.5
34	2.5	2.5	2.4	2.5	2.4	2.4	2.3	2.3	2.1	2.3	2.1	2.2
36	2.3	2.3	2.2	2.2	2.1	2.1	2	2.1	1.9	2	1.8	1.9
38			1.9	1.9	1.8	1.9	1.7	1.8	1.7	1.7	1.6	1.6
40					1.6	1.7	1.5	1.6	1.4	1.5	1.3	1.4
42							1.4	1.4	1.2	1.3	1.1	1.2
44								1.2	1.1	1.1	1	1

LIFTING PERFORMANCE

Lifting capacity on SF-1 boom Fixed jib length = 15m												
Rear ctwt.:17500kg 75% 360° (UNIT: KG)												
FIXED JIB RATED LOADS												
Main boom length (m)	28		31		34		37		40		43	
Fixed jib angle (°)	10	30	10	30	10	30	10	30	10	30	10	30
12	6.4		6.4									
14	6.4		6.4		6.4		6.4		6.4		6.4	
16	6.4	5.7	6.4		6.4		6.4		6.4		6.3	
18	6.2	5.2	6.1	5.2	5.9	5.1	5.7	5.1	5.6	5.1	5.5	
20	5.3	5	5.3	4.9	5.1	4.9	5	4.9	4.9	4.8	4.7	4.6
22	4.7	4.6	4.5	4.4	4.4	4.4	4.3	4.2	4.2	4.2	4.1	4.1
24	4.1	4	4	4	3.9	3.8	3.8	3.7	3.7	3.6	3.6	3.5
26	3.6	3.5	3.5	3.4	3.4	3.4	3.3	3.2	3.2	3.1	3.1	3.3
28	3.2	3.1	3.2	3.1	3.1	3.1	2.9	3.1	2.8	3.1	2.8	3.1
30	2.8	2.7	2.8	2.8	2.7	2.7	2.6	2.8	2.5	2.5	2.4	2.7
32	2.5	2.5	2.4	2.5	2.3	2.3	2.3	2.5	2.2	2.1	2.2	2.3
34	2.3	2.3	2.2	2.3	2.1	2.1	2.1	2.2	1.9	1.8	1.8	2
36	2.1	2.1	2	2.1	1.9	2	1.8	1.8	1.6	1.6	1.6	1.6
38	1.8	1.9	1.7	1.8	1.6	1.7	1.5	1.6	1.5	1.5	1.4	1.4
40		1.6	1.5	1.5	1.4	1.5	1.4	1.4	1.3	1.4	1.2	1.2
42			1.4	1.4	1.3	1.4	1.2	1.3	1.1	1.2	1	1.1
44					1.1	1.2	1	1.1	1	1	0.9	1