

85 ton capacity ZCC850H



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

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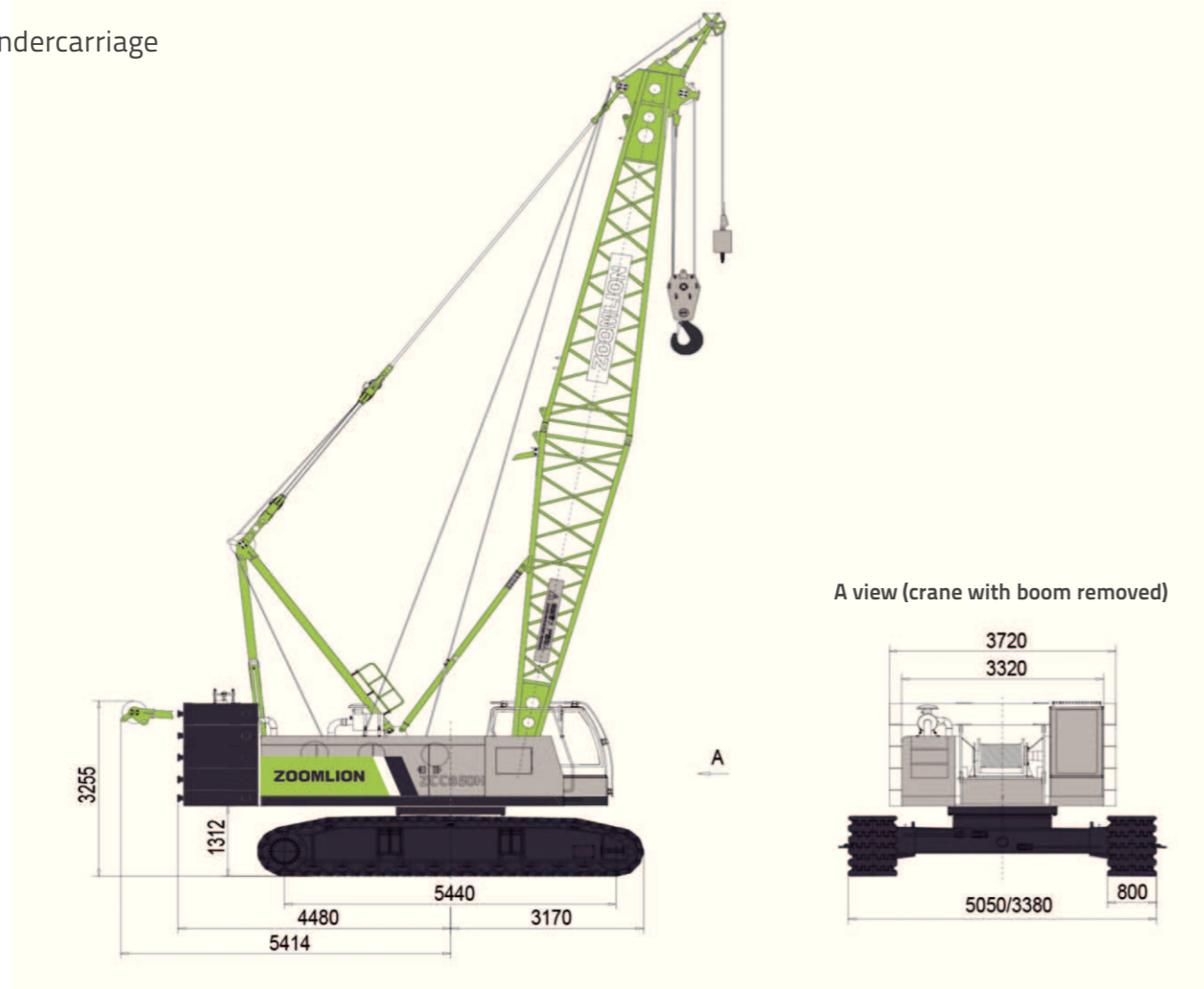
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DIMENSIONS

Basic machine with undercarriage



Operating weight

The operating weight includes the basic machine with crawlers, 2 main winches including wire ropes (260m and 160m) and 13m main boom, consisting of FA-frame, boom foot (6.5m), boom head (6.5m), 29t rear counter weight, and 85t hook block.
Total weight-----approx. 68.5t

Equipment

Main boom Max. Length -----61m
Fixed jib -----7-19m
Max. combination-----main boom 49m
-----fixed jib 19m
Max. lifting moment-----357t.m
Max. lifting capacity on fixed jib-----12.5t

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

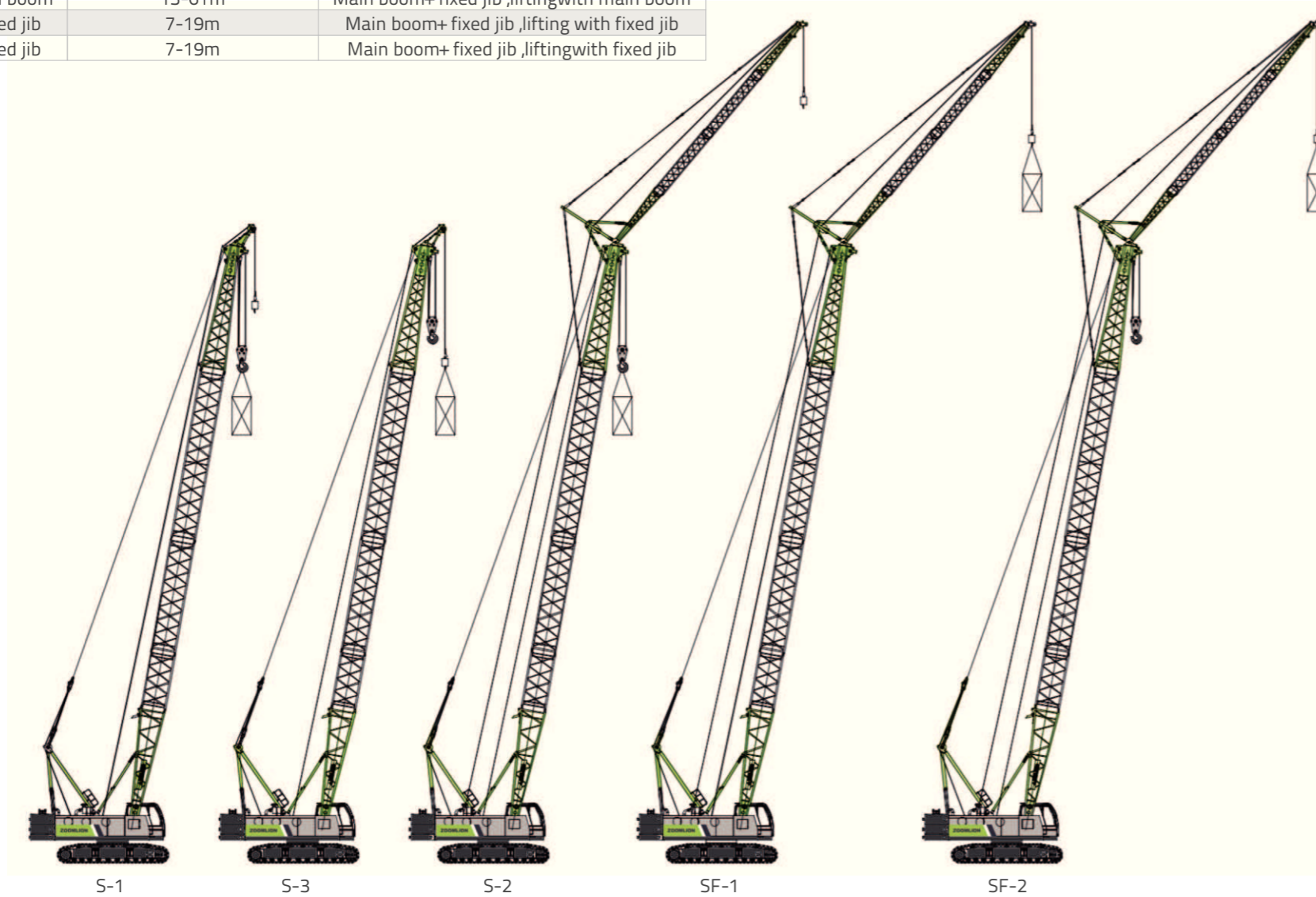
- Series-connected multiple valve-controlled hydraulic system is applied, so that all simultaneous movements can be achieved and no deceleration will occur during the switching of crane movements.
- Single rope speed on the outmost layer of hoisting winch I is 137m/min.
- To improve lifting efficiency, hoisting winch I 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 6.0t, 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 3.38m.

BOOM COMBINATION

Description of Boom Assembly Codes			
Code	Type	Operation mode parameters	Mode description
S-1	Main boom	13-61m	Main boom, lifting with main boom
S-3	Main boom	13-61m	Main boom, lifting with tip boom
S-2	Main boom	13-61m	Main boom+ fixed jib ,liftingwith main boom
SF-1	Fixed jib	7-19m	Main boom+ fixed jib ,lifting with fixed jib
SF-2	Fixed jib	7-19m	Main boom+ fixed jib ,liftingwith fixed jib



S-1

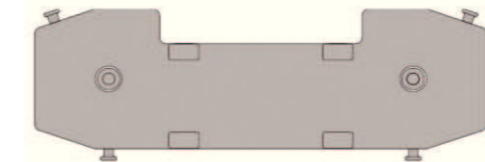
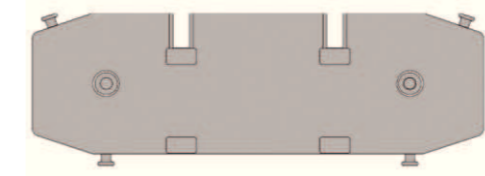
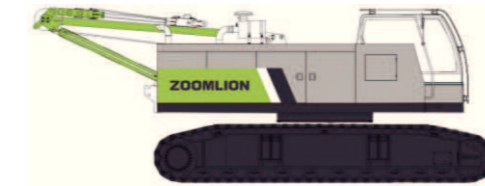
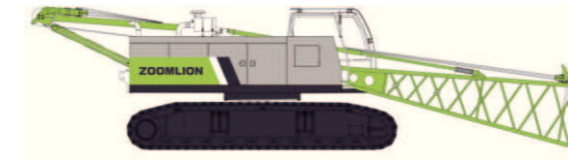
S-3

S-2

SF-1

SF-2

TRANSPORT DIMENSIONS AND WEIGHTS



Basic machine (with main boom pivot section)

Length	13100mm
Width	3380mm
Height	3270mm
Weight	37300kg

Basic machine (without main boom pivot section)

Length	8590mm
Width	3380mm
Height	3270mm
Weight	36200kg

Crawler carrier assembly

Length	6340mm
Width	1120mm
Height	1130mm
Weight	8560kg

Counterweight base plate

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

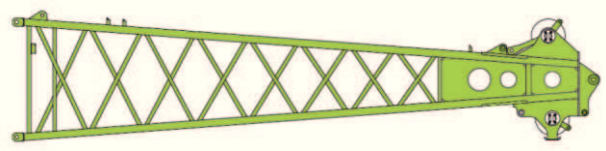
Counterweight plate

Length	3720mm
Width	1320mm
Height	450mm
Weight	6000kg

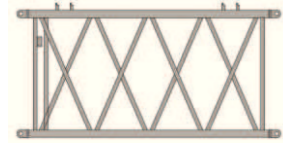
Main boom pivot section

Length	6650mm
Width	1690mm
Height	1860mm
Weight	1070kg

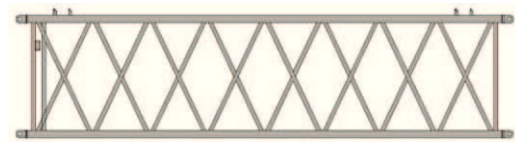
TRANSPORT DIMENSIONS AND WEIGHTS



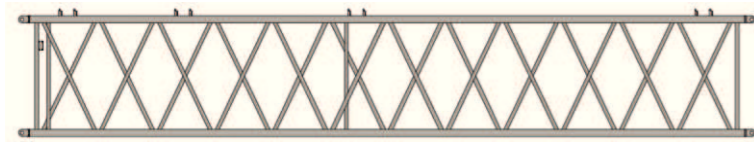
Main boom head	
Length	7130mm
Width	1690mm
Height	1590mm
Weight	1050kg



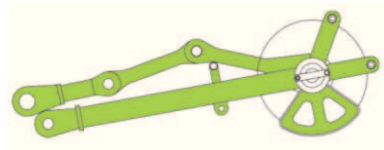
3m main boom intermediate section	
Length	3090mm
Width	1430mm
Height	1580mm
Weight	260kg



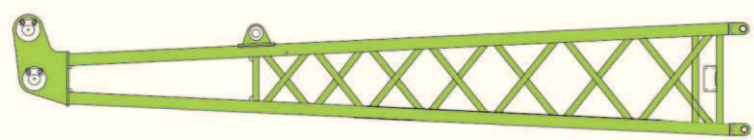
6m main boom intermediate section	
Length	6090mm
Width	1690mm
Height	1580mm
Weight	440kg



9m main boom intermediate section	
Length	9090mm
Width	1690mm
Height	1580mm
Weight	640kg

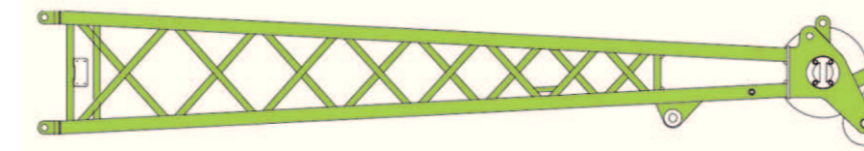


Tip boom	
Length	1370mm
Width	590mm
Height	470mm
Weight	120kg



Fixed jib pivot section	
Length	3640mm
Width	570mm
Height	570mm
Weight	160kg

TRANSPORT DIMENSIONS AND WEIGHTS



Fixed jib head	
Length	3820mm
Width	570mm
Height	570mm
Weight	210kg



4m fixed jib intermediate section	
Length	4060mm
Width	570mm
Height	570mm
Weight	120kg



FA-frame	
Length	3230mm
Width	730mm
Height	410mm
Weight	270kg



85t load hook	
Length	1790mm
Width	830mm
Height	680mm
Weight	1135kg



16t load hook	
Length	1230mm
Width	420mm
Height	530mm
Weight	310kg



55t load hook	
Length	1440mm
Width	660mm
Height	530mm
Weight	640kg



6t load hook	
Length	695mm
Width	300mm
Height	300mm
Weight	185kg



30t load hook	
Length	1330mm
Width	490mm
Height	530mm
Weight	380kg

TECHNICAL DESCRIPTION



Engine

Engine type----WEICHAH WP7G270E301
 Rated power----199KW/2000rpm
 Maximum output torque----1200N.m/(1200-1500)rpm
 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-----40kW
 Hydraulic oil tank capacity-----480L



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.69KN
 Rope diameter-----20mm
 Rope speed -----0-137m/min
 Rope length-----260m

Aux.winch

Line pull----- Max.69KN
 Rope diameter----- 20mm
 Rope speed----- 0-121m/min
 Rope length-----160m

Hoisting winch 1 with 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.58KN
 Rope diameter-----20mm
 Rope speed ----- 0-109m/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- 2.0 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-----800mm
 Drive speed-----0-1.51km/h

TECHNICAL DESCRIPTION



Main boom

Main boom length: 13m – 61m;
 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 section	6m main boom section	9m main boom 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
55	1	1	1	2	3
58	1	1	1	1	4
61	1	1	2	1	4



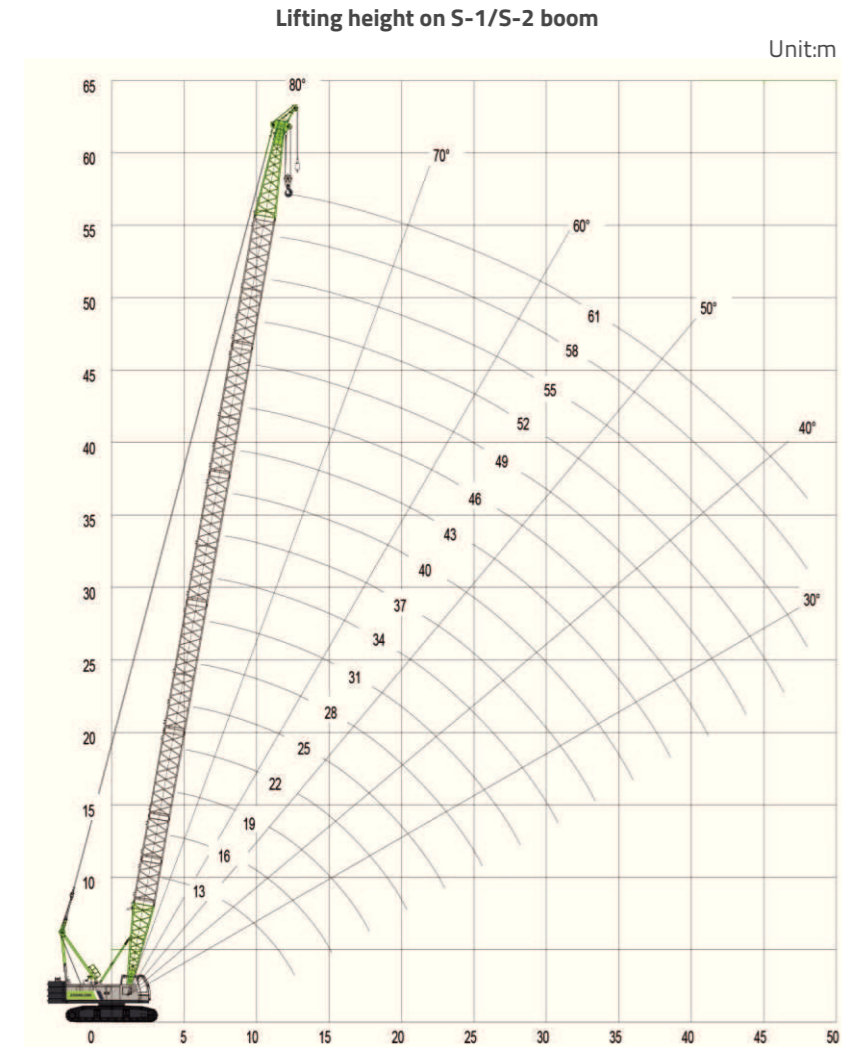
Fixed jib

Fixed jib length: 7m – 19m;
 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 section
7	1	1	0
11	1	1	1
15	1	1	2
19	1	1	3

LIFTING PERFORMANCE

Main boom configuration

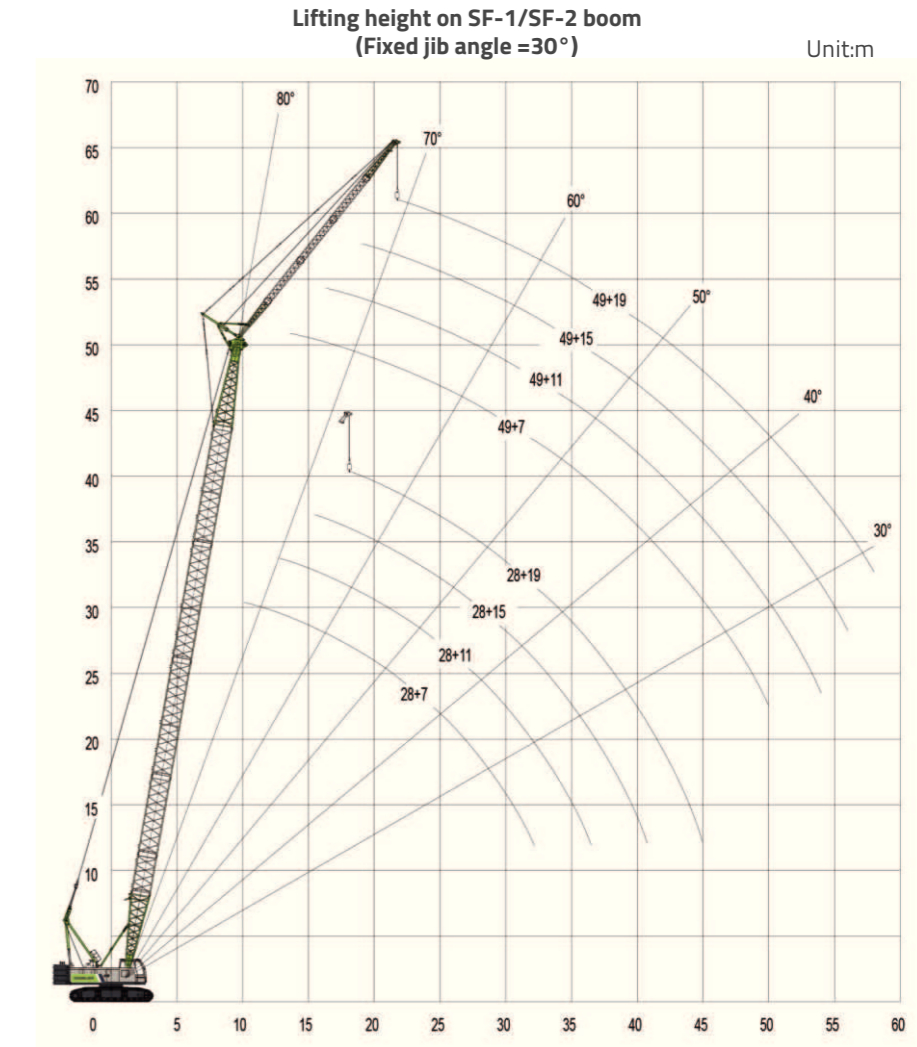
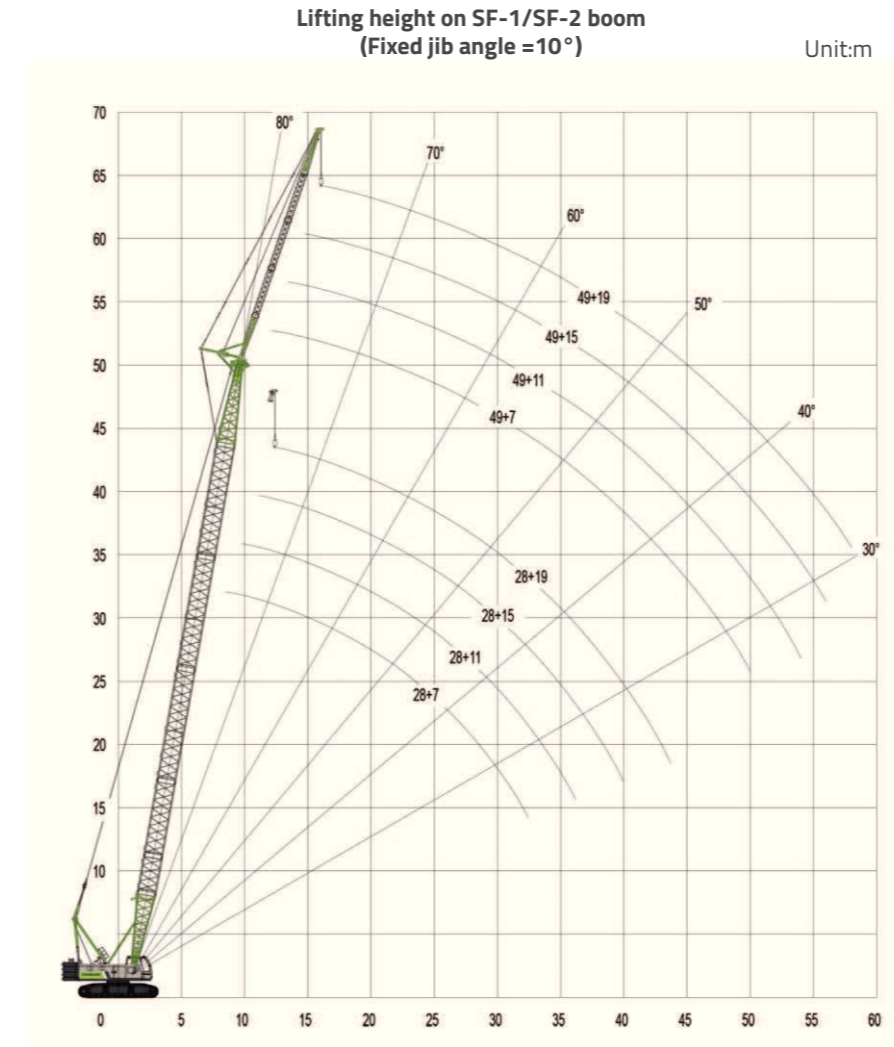


Lifting capacity on S-1 boom																					
	Rear cwt.:29000kg				75%				360°				(UNIT:KG)								
MAIN BOOM RATED LOADS																					
Boom Length(m)	13	16	19	22	25	28	31	34	37	40	43	46	49	52	55	58	61				
Load Radius(m)	13	16	19	22	25	28	31	34	37	40	43	46	49	52	55	58	61				
4.2	85																				
5	68.3	67.2	62.5																		
6	54.5	53.5	53.5	53.2	53.2																
7	44.9	44.9	44.9	44.6	43.7	43.1	40.4														
8	37.9	37.9	37.2	37.2	36.5	36.1	35.4	34.3	30.5												
9	31.8	31.8	31.8	31.8	31.8	31.3	30.7	30.2	29.5	28.8	27.2										
10	27.7	27.7	27.7	27.7	27.3	27.3	27	26.6	25.9	25.5	24.8	24.5	22.1								
12	21.9	21.9	21.9	21.6	21.6	21.2	21.2	21	20.8	20.5	20.1	19.6	19.4	18.9	18.2	15.8					
14		17.8	17.8	17.8	17.6	17.6	17.6	17.1	17.1	17.1	16.6	16.4	16	15.8	15.3	14.9	13.6				
16			14.9	14.9	14.9	14.6	14.6	14.2	14.2	14.2	14.1	13.8	13.6	13.4	13.1	12.8	12.4				
18				12.8	12.8	12.7	12.4	12.2	12.1	12.1	11.8	11.7	11.6	11.3	11.1	11	10.9				
20					11.3	11	11	10.9	10.5	10.4	10.2	10.1	10	9.9	9.8	9.7	9.5	9.2			
22						9.9	9.7	9.6	9.2	9.1	9	8.8	8.7	8.6	8.5	8.4	8.3	8.2			
24							8.6	8.6	8.1	8	7.9	7.7	7.6	7.5	7.4	7.3	7.2	7			
26								7.7	7.4	7.1	7.1	6.8	6.8	6.7	6.5	6.4	6.3	6			
28									6.9	6.6	6.4	6.3	6.1	6	6	5.9	5.7	5.6	5.2		
30										5.9	5.7	5.6	5.5	5.4	5.3	5.2	5	4.9	4.7		
32											5.1	5	4.9	4.8	4.7	4.6	4.5	4.3	4.2		
34												4.6	4.4	4.4	4.2	4.1	4	3.8	3.7		
36													4.3	4	3.9	3.8	3.7	3.5	3.1		
38														3.5	3.5	3.4	3.3	3.1	2.7		
40															3.2	3	2.9	2.7	2.3		
42																2.7	2.6	2.5	1.9		
44																	2.3	2.2	1.6		
46																		2	1.9	1.6	1.3
48																			1.6	1.3	1
50																				1.1	0.9

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.:29000kg 75% 360° (UNIT:KG)																
FIXED JIB RATED LOADS																
Main boom length (m)	28		31		34		37		40		43		46		49	
Fixed jib angle (°)	10	30	10	30	10	30	10	30	10	30	10	30	10	30	10	30
10	12.5		12.5		12.5											
12	12.5	12.5	12.5	12.5	12.5	12.5	12.5		12.5		12.5		6.8			
14	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	6.8	6.8	6.8	
16	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	6.8	6.8	6.8	6.8
18	12.4	12.4	12.2	12.4	12.1	12.2	11.8	12.1	11.6	11.8	11.4	11.6	6.8	6.8	6.8	6.8
20	10.7	10.9	10.7	10.8	10.5	10.7	10.2	10.5	10.0	10.2	10.0	10.0	6.8	6.8	6.8	6.8
22	9.5	9.5	9.3	9.5	9.3	9.3	9.1	9.3	8.9	9.1	8.7	8.9	6.8	6.8	6.8	6.8
24	8.4	8.4	8.3	8.4	8.2	8.3	8.2	8.2	8.0	8.2	7.7	8.0	6.8	6.8	6.8	6.8
26	7.6	7.6	7.5	7.6	7.3	7.5	7.2	7.3	7.0	7.2	7.0	7.0	6.8	6.8	6.6	6.8
28	6.8	6.9	6.6	6.8	6.6	6.6	6.5	6.6	6.3	6.5	6.2	6.3	6.1	6.2	5.9	6.1
30	6.2	6.2	6.1	6.1	5.9	5.9	5.7	5.9	5.7	5.7	5.6	5.7	5.5	5.6	5.2	5.5
32	5.6	5.6	5.5	5.5	5.4	5.4	5.2	5.4	5.0	5.2	5.0	5.0	4.9	5.0	4.8	4.9
34			4.9	4.9	4.9	4.9	4.8	4.8	4.7	4.7	4.5	4.6	4.3	4.5	4.3	4.3
36					4.4	4.4	4.3	4.3	4.2	4.2	4.1	4.2	3.9	4.1	3.9	3.9
38							3.9	3.9	3.8	3.8	3.6	3.7	3.6	3.6	3.5	3.5
40							3.5	3.5	3.5	3.5	3.4	3.4	3.2	3.3	3.1	3.2
42									3.1	3.1	3.1	3.1	3.0	3.0	2.8	2.9
44											2.8	2.8	2.7	2.7	2.5	2.5
46													2.4	2.4	2.3	2.3
48														2.2	2.1	2.1
50															1.8	1.8

Lifting capacity on SF-1 boom Fixed jib length = 11m																	
Rear ctwt.:29000kg 75% 360° (UNIT:KG)																	
FIXED JIB RATED LOADS																	
Main boom length (m)	28		31		34		37		40		43		46		49		
Fixed jib angle (°)	10	30	10	30	10	30	10	30	10	30	10	30	10	30	10	30	
10	12.5																
12	12.0		12.1		12.2		12.4										
14	11.5	9.5	11.6	9.6	11.8		12.0		12.1		6.8		6.8		6.8		
16	11.0	8.9	11.2	9.1	11.4	9.3	11.5	9.4	11.7	9.6	6.8	6.8	6.8		6.8		
18	10.6	8.5	10.8	8.7	11.0	8.8	11.2	9.0	11.4	9.1	6.8	6.8	6.8	6.8	6.8	6.8	
20	10.2	8.1	10.4	8.3	10.6	8.5	10.2	8.6	10.2	8.8	6.8	6.8	6.8	6.8	6.8	6.8	
22	9.5	7.7	9.4	7.9	9.3	8.1	9.3	8.3	8.9	8.4	6.8	6.8	6.8	6.8	6.8	6.8	
24	8.4	7.4	8.4	7.6	8.2	7.8	8.2	8.0	8.0	8.1	6.8	6.8	6.8	6.8	6.8	6.8	
26	7.6	7.1	7.5	7.3	7.3	7.5	7.3	7.5	7.2	7.3	6.8	6.8	6.8	6.8	6.6	6.8	
28	6.9	6.9	6.8	6.9	6.6	6.8	6.5	6.6	6.3	6.6	6.3	6.5	6.2	6.3	5.9	6.2	
30	6.2	6.3	6.1	6.2	5.9	6.1	5.9	6.1	5.7	5.9	5.6	5.7	5.5	5.7	5.4	5.5	
32	5.6	5.7	5.5	5.6	5.4	5.5	5.2	5.5	5.2	5.4	5.0	5.2	4.9	5.2	4.8	5.0	
34	5.0	5.2	5.0	5.0	4.9	5.0	4.8	4.9	4.7	4.8	4.5	4.7	4.5	4.7	4.3	4.5	
36	4.7	4.7	4.5	4.7	4.5	4.5	4.3	4.4	4.2	4.3	4.1	4.2	4.1	4.2	3.9	4.1	
38			4.2	4.2	4.1	4.1	3.9	4.1	3.8	3.9	3.7	3.8	3.6	3.8	3.5	3.6	
40					3.7	3.7	3.6	3.6	3.5	3.5	3.4	3.5	3.3	3.4	3.2	3.3	
42							3.3	3.4	3.2	3.2	3.1	3.1	3.0	3.1	2.9	3.0	
44									3.1	2.9	3.0	2.8	2.9	2.7	2.8	2.5	2.7
46										2.6	2.7	2.5	2.6	2.4	2.5	2.4	2.4
48											2.3	2.4	2.2	2.3	2.1	2.1	
50													2.0	2.0	1.8	1.9	
52														1.8	1.7	1.7	
54															1.5	1.5	

LIFTING PERFORMANCE

Lifting capacity on SF-1 boom Fixed jib length = 15m																		
Rear ctwt.:29000kg 75% 360° (UNIT:KG)																		
FIXED JIB RATED LOADS																		
Main boom length (m)	28		31		34		37		40		43		46		49			
Fixed jib angle (°)	10	30	10	30	10	30	10	30	10	30	10	30	10	30	10	30		
12	7.4		7.5															
14	7.1		7.2		7.3		6.8		6.8		6.8							
16	6.8	5.2	6.9		7.0		6.8		6.8		6.8		6.8		6.8			
18	5.9	5.1	6.7	5.1	6.8	5.2	6.8	5.2	6.8	5.2	6.8	5.2	6.8		6.8			
20	5.7	5.0	5.8	5.0	5.9	5.1	6.7	5.1	6.8	5.1	6.8	5.2	6.8	5.2	6.8	5.2		
22	5.5	4.9	5.7	5.0	5.8	5.0	5.9	5.0	5.9	5.0	6.7	5.1	6.8	5.1	6.8	5.1		
24	5.3	4.8	5.5	4.9	5.6	4.9	5.7	5.0	5.8	5.0	5.9	5.0	5.9	5.0	6.7	5.0		
26	5.2	4.7	5.3	4.8	5.4	4.8	5.5	4.9	5.6	4.9	5.7	5.0	5.8	5.0	5.9	5.0		
28	5.0	4.6	5.1	4.7	5.3	4.7	5.4	4.8	5.5	4.8	5.6	4.9	5.6	4.9	5.3	5.0		
30	5.0	4.5	5.0	4.6	5.1	4.6	5.2	4.7	5.1	4.8	5.0	4.8	5.0	4.8	4.9	4.9		
32	4.8	4.3	5.0	4.5	5.0	4.5	4.9	4.6	4.7	4.7	4.5	4.7	4.5	4.7	4.3	4.5		
34	4.6	4.2	4.5	4.3	4.4	4.4	4.3	4.5	4.2	4.4	4.1	4.3	4.1	4.3	3.9	4.2		
36	4.2	4.1	4.1	4.2	4.1	4.1	3.9	4.1	3.8	4.0	3.8	3.9	3.7	3.8	3.5	3.8		
38	3.9	3.9	3.8	3.8	3.7	3.8	3.6	3.7	3.5	3.6	3.4	3.5	3.2	3.4	3.2	3.3		
40		3.6	3.4	3.5	3.3	3.4	3.2	3.3	3.2	3.2	3.1	3.2	3.0	3.2	2.9	3.1		
42			3.2	3.2	3.1	3.2	3.0	3.1	2.9	3.0	2.8	2.9	2.7	2.8	2.6	2.8		
44							2.8	2.9	2.8	2.8	2.7	2.7	2.5	2.7	2.4	2.4		
46									2.5	2.5	2.4	2.4	2.3	2.4	2.2	2.2	2.2	
48										2.3	2.2	2.2	2.1	2.2	2.0	2.1	1.9	2.0
50											2.0	2.1	1.9	2.0	1.8	1.9	1.6	1.8
52													1.7	1.7	1.6	1.6	1.5	1.5
54															1.4	1.5	1.4	1.4
56																1.4	1.2	1.3

Lifting capacity on SF-1 boom Fixed jib length = 19m																				
Rear ctwt.:29000kg 75% 360° (UNIT:KG)																				
FIXED JIB RATED LOADS																				
Main boom length (m)	28		31		34		37		40		43		46		49					
Fixed jib angle (°)	10	30	10	30	10	30	10	30	10	30	10	30	10	30	10	30				
14	4.7		4.7		4.8															
16	4.5		4.5		4.6		4.7		4.7		4.8		4.8							
18	4.3		4.4		4.4		4.5		4.6		4.6		4.7		4.7					
20	4.1	3.5	4.2	3.5	4.3	3.6	4.3	3.6	4.4		4.5		4.5		4.6					
22	4.0	3.4	4.0	3.5	4.1	3.5	4.2	3.5	4.2	3.5	4.3	3.5	4.4	3.6	4.4	3.6				
24	3.8	3.4	3.9	3.4	4.0	3.4	4.0	3.5	4.1	3.5	4.2	3.5	4.2	3.5	4.3	3.5				
26	3.7	3.3	3.8	3.4	3.8	3.4	3.9	3.4	4.0	3.4	4.0	3.4	4.1	3.5	4.2	3.5				
28	3.6	3.3	3.6	3.3	3.7	3.3	3.8	3.4	3.9	3.4	3.9	3.4	4.0	3.4	4.1	3.4				
30	3.5	3.2	3.5	3.3	3.6	3.3	3.7	3.3	3.8	3.3	3.8	3.4	3.9	3.4	3.9	3.4				
32	3.4	3.2	3.5	3.2	3.5	3.3	3.6	3.3	3.7	3.3	3.7	3.3	3.8	3.3	3.8	3.4				
34	3.3	3.2	3.4	3.2	3.5	3.2	3.5	3.2	3.6	3.3	3.6	3.3	3.7	3.3	3.8	3.3				
36	3.3	3.1	3.3	3.2	3.4	3.2	3.4	3.2	3.5	3.2	3.6	3.3	3.6	3.3	3.7	3.3				
38	3.2	3.1	3.3	3.1	3.3	3.2	3.4	3.2	3.4	3.2	3.5	3.2	3.5	3.2	3.5	3.3				
40	3.2	3.0	3.2	3.1	3.3	3.1	3.3	3.1	3.4	3.2	3.4	3.2	3.4	3.2	3.2	3.2				
42	3.1	3.0	3.2	3.0	3.3	3.1	3.3	3.1	3.2	3.1	3.1	3.1	3.2	3.1	3.1	3.1				
44		3.0	3.2	3.0	3.1	3.0	3.1	3.1	3.0	3.1	3.1	3.0	3.1	2.8	3.0	2.7	2.9	2.6	2.8	
46			3.0	3.0	2.9	3.0	2.8	2.9	2.7	2.8	2.5	2.7	2.4	2.5	2.3	2.4	2.4	2.1	2.3	
48											2.3	2.4	2.2	2.3	2.1	2.2	2.0	2.1	1.8	2.0
50																				