

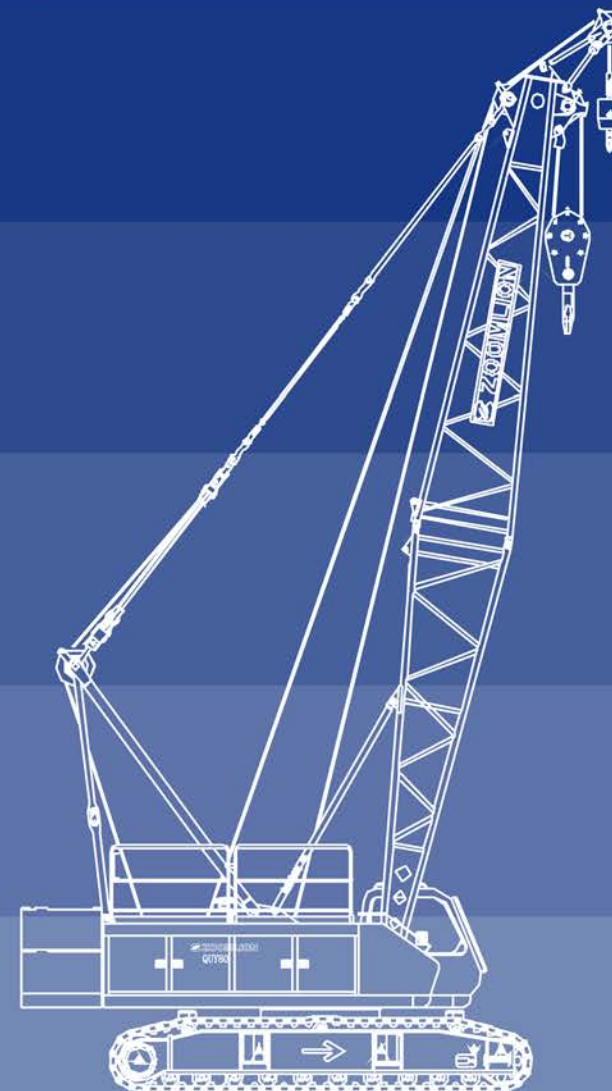
QUY80

CrawlerCraneTechnicalManual



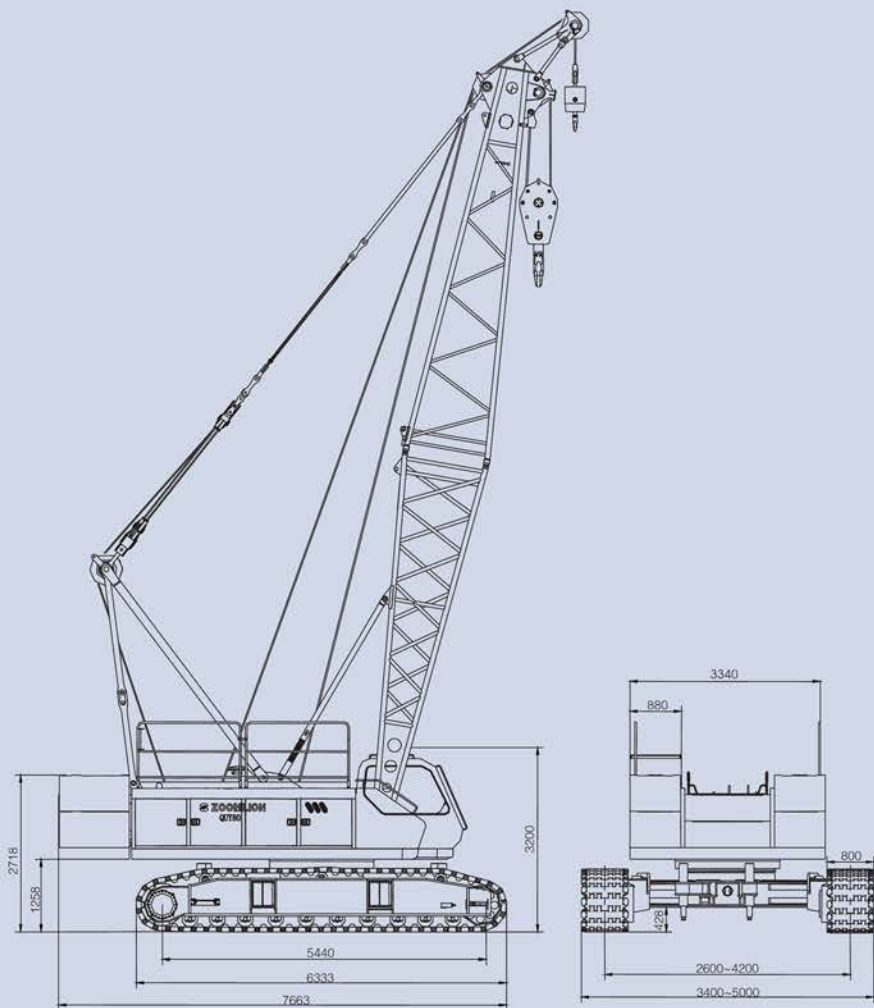
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1. Overall dimensions and main parameters

1. Overall dimensions of basic machine

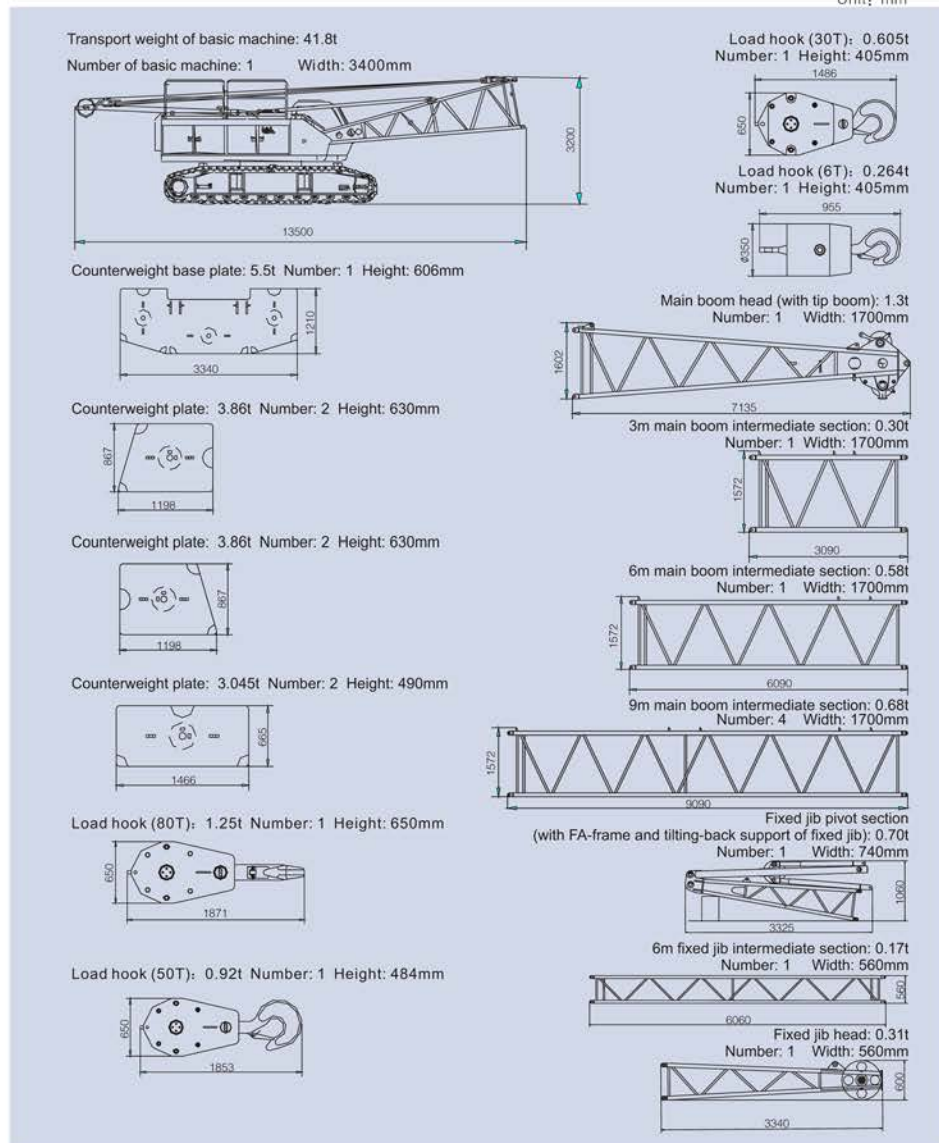


2. Main technical parameters

Item	Unit	Value	Remarks	
Max. lifting capacity × radius	t × m	80 × 4		
Deadweight with basic boom	t	70.8		
Main boom length	m	13~58		
Fixed jib length	m	6~18		
Max. lifting capacity on fixed jib	t	7		
Fixed jib angle	°	10,30		
Max. length of main boom with fixed jib	m	49 + 18		
Single rope speed of winches	Hoisting winch (free-fall function)	m/min	120	The 4 th rope layer
	Hoisting winch	m/min	120	The 4 th rope layer
	Derricking winch	m/min	61	The 4 th rope layer
Slewing speed	rpm	1~2		
Traveling speed	km/h	1~1.68		
Gradeability(with basic boom, the cab at the rear side of the crane)	%	30		
Ground pressure	MPa	0.083		
Overall dimensions (L × W × H)	m	13.5 × 3.4 × 3.2	With A-frame and boom pivot section	
Weichai Engine	Rated power/ rotational speed	kW/r/min	199/2200	
	Max. output torque/ rotational speed	Nm/ r/min	1100/1200~1600	
	Exhaust emission standard		EU Stage III	
Distance between track center × crawler contact length × crawler width	mm	4200 × 5440 × 800	Crawler carrier extended	
	mm	2600 × 5440 × 800	Crawler carrier retracted	
Noise	Noise level outside operator's cab during operation	dB	≤ 107	
	Noise level in operator's cab during operation	dB	≤ 85	

3. Transport dimensions and weights of main components

Unit: mm



|| . Technical instruction

4. Boom system

The Lattice boom is made of domestic, high-strength steel pipes

Main boom (S boom)

(S-main boom): 13 ~ 58m

Main boom intermediate section: 3m, 6m and 9m

Number of main boom intermediate section for S boom

Main boom length (m)	Number of main boom intermediate section		
	3m	6m	9m
13	0	0	0
16	1	0	0
19	0	1	0
22	1	1	0
25	1	0	1
28	0	1	1
31	1	1	1
34	1	0	2
37	0	1	2
40	1	1	2
43	1	0	3
46	0	1	3
49	1	1	3
52	1	0	4
55	0	1	4
58	1	1	4

Main boom with fixed jib (SF boom)

F-fixed jib: 6~18m

Fixed jib intermediate section: 6m

Max. length of main boom with fixed jib: 49+18m

S-main boom: 37m~49m

5. Working mechanism

Hoisting winch 1

The hoisting winch 1 is composed of concealed axial piston hydraulic motor, balance valve, reducer, normally closed brake as well as wire rope. It is controllable independently.

The hoisting winch 1 has two kinds of hoisting speed, which can improve the working efficiency dramatically.

Hoisting winch 1	Rope diameter	φ24mm
	Rope length	240m
	Single rope speed (on the 4 th rope layer)	120m/min
	Single rope force	80kN

Hoisting winch 2

The hoisting winch 2 is composed of concealed axial piston hydraulic motor, balance valve, reducer, normally closed brake as well as wire rope. It is controllable independently.

The hoisting winch 2 has two kinds of hoisting speed, which can improve the working efficiency dramatically.

Hoisting winch 2	Rope diameter	φ24mm
	Rope length	160m
	Single rope speed (on the 4 th rope layer)	120m/min
	Single rope force	80kN

Derricking winch

The derricking winch is composed of concealed axial piston hydraulic motor, balance valve, reducer and normally closed brake, pulley block as well as wire rope. It can be controlled independently.

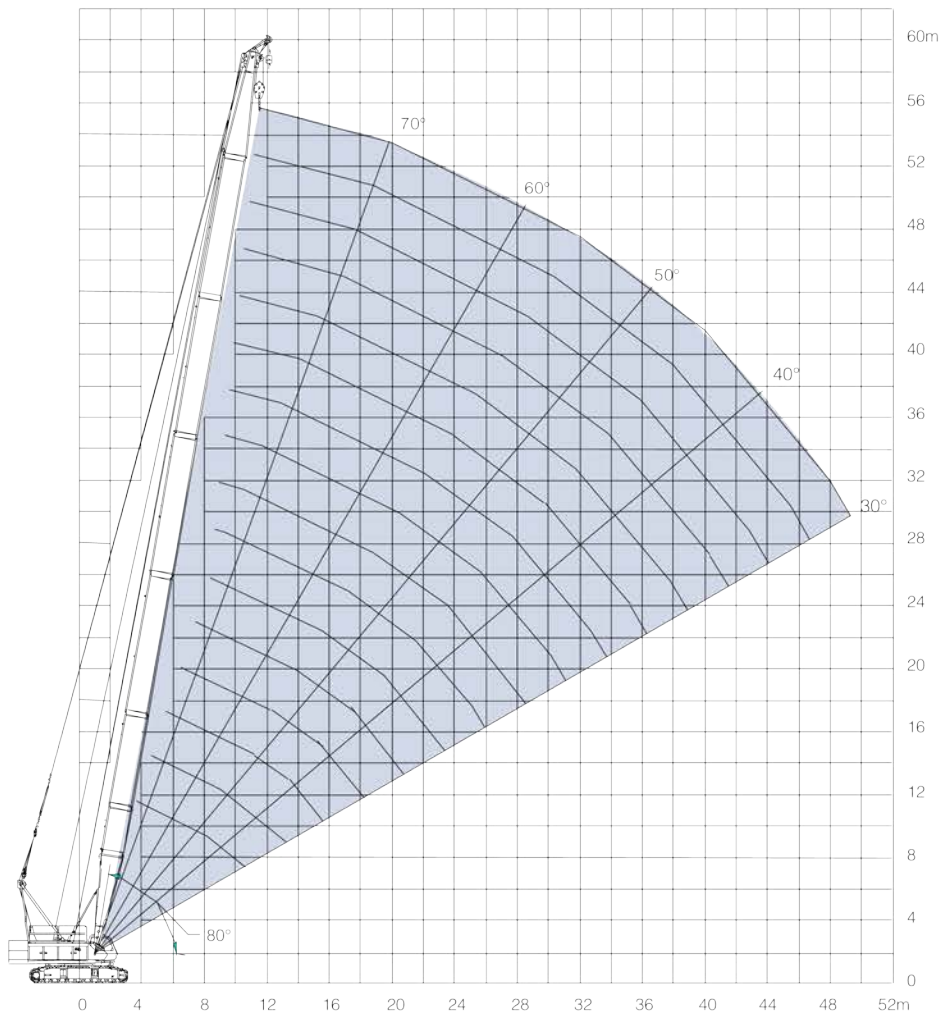
It is also equipped with a ratchet locking device to prevent the derricking winch from rotating during long time parking.

Derricking winch	Rope diameter	φ20mm
	Rope length	150m
	Single rope speed (on the 4 th rope layer)	61m/min
	Single rope force	71kN

IV. Lifting capacity

10. Lifting performance on S boom

Lifting height on S boom



Lifting capacity on S boom (1)

Rope Working radius (m)		Length of S (m)								
		13	16	19	22	25	28	31	34	37
4.3	80									
5	68	66.8								
6	52.3	52	51.8	51.7						
7	42.3	42	41.9	41.7	41.4	40.72				
8	35.5	35.2	35	34.8	34.6	33.97	33.8	33.5		
9	30.5	30.2	30	29.8	29.5	29	28.8	28.6	28.4	
10	26.7	26.4	26.2	26	25.7	25.3	25	24.8	24.6	
12	21.2	20.9	20.7	20.6	20.3	19.9	19.7	19.4	19.2	
14		17.2	17	16.9	16.6	16.2	16	15.8	15.5	
16			14.37	14.2	13.9	13.6	13.4	13.1	12.9	
18				12.2	11.9	11.6	11.4	11.1	11	
20					10.3	10	9.8	9.6	9.4	
22					9	8.8	8.6	8.3	8.1	
24						7.7	7.5	7.3	7	
26							6.7	6.4	6.2	
28								5.6	5.4	
30								4.9	4.7	
32									4.2	

Lifting capacity on S boom (2)

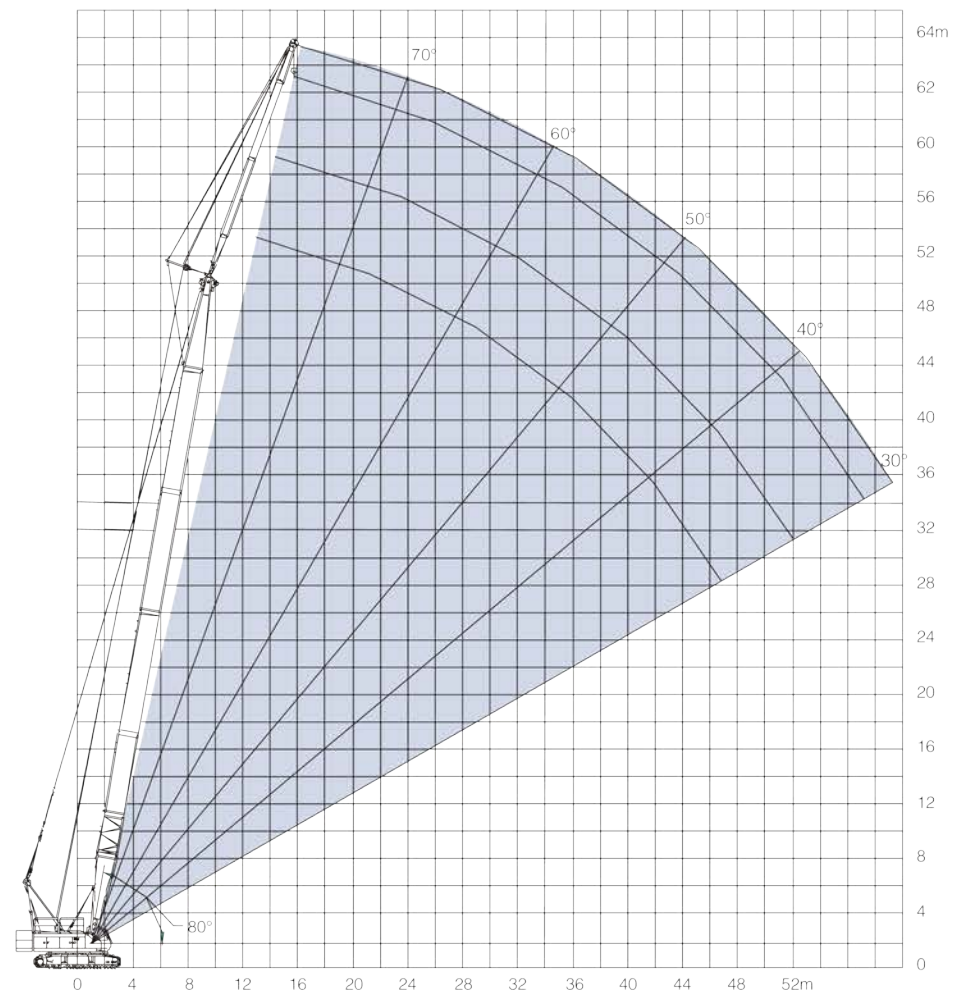
Working radius (m)	Length of S (m)						
	40	43	46	49	52	55	58
9							
10	23.8	23.2	22.6				
12	19	18.6	18.2	17.8	17.8		
14	15.5	15.2	15	14.75	14.5	14.3	14
16	12.8	12.7	12.5	12.3	12.1	12	11.5
18	10.9	10.7	10.5	10.3	10.2	10	9.9
20	9.4	9.3	9.2	9	9	8.8	8.6
22	8.5	8.3	8.1	8	8	7.7	7.5
24	7.4	7.2	7.1	7	7	6.8	6.6
26	6.6	6.5	6.5	6.2	6	6	5.7
28	5.8	5.7	5.6	5.6	5.5	5.4	5.1
30	5.3	5	5.1	5.1	4.8	4.6	4.5
32	4.8	4.7	4.6	4.5	4.3	4.1	3.8
34	4.1	4.1	4	4	3.8	3.7	3.4
36	4	3.8	3.7	3.5	3.4	3.2	2.9
38		3.2	3.2	3.2	2.9	2.9	2.6
40		3	3	2.7	2.6	2.5	2.3
42				2.5	2.3	2.3	2
44					2	2	1.6
46						1	1.3
48						1.5	1
50						1.2	0.8

Note:

1. The lifting capacity given in the above chart contains the weight of load hook and weight of wire rope between boom head and load hook.
2. When tip boom is used to lift the load, the lifting capacity on tip boom is the same as that on main boom of same length in the same working radius.

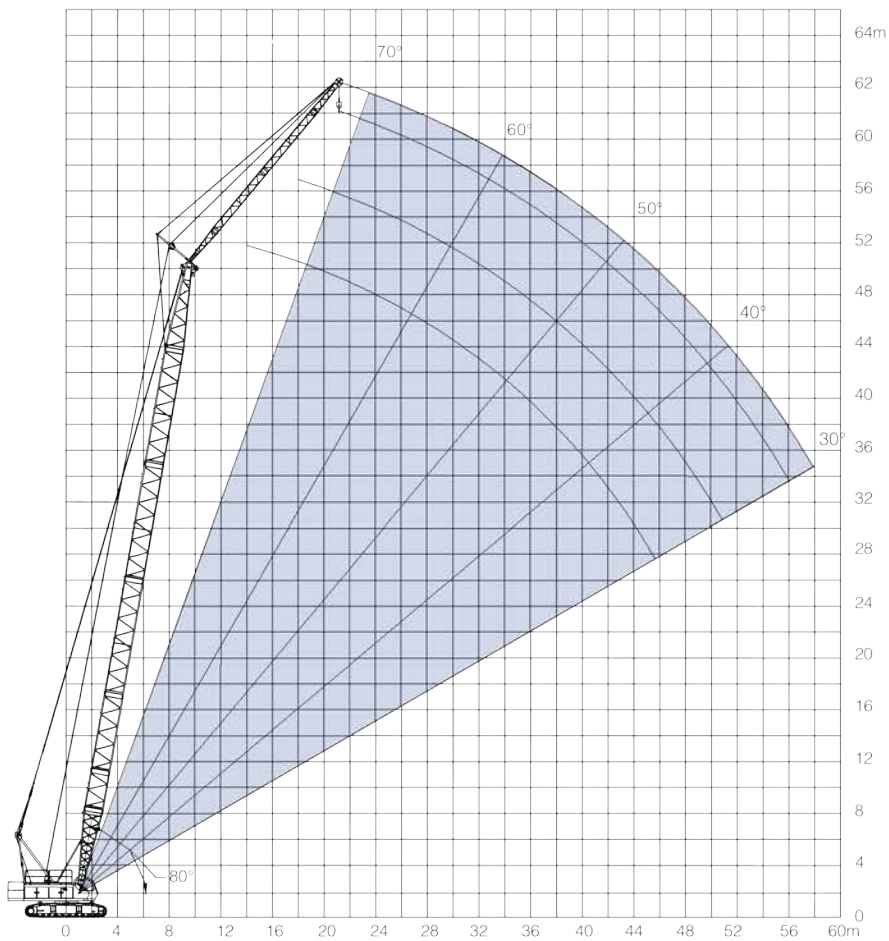
11. Lifting performance on SF boom

Lifting height on SF boom(1)



F-jib angle=10°

Lifting height on SF boom (2)



F-jib angle=30°

Lifting capacity on SF boom(3)

Length of S (m)	37						40					
	6		12		18		6		12		18	
Length of F (m)	F-jib angle (°)		F-jib angle (°)		F-jib angle (°)		F-jib angle (°)		F-jib angle (°)		F-jib angle (°)	
Radius (m)	10°	30°	10°	30°	10°	30°	10°	30°	10°	30°	10°	30°
10	7	6					7					
12	7	6	7				7	6	7			
14	7	6	7		5.5		7	6	7		5.5	
16	7	6	7	6	5.5		7	6	7	6	5.5	
18	7	6	7	6	5.5		7	6	7	6	5.5	
20	7	6	7	6	5.5	4	7	6	7	6	5.5	4
22	7	6	7	6	5.5	4	7	6	7	6	5.5	4
24	7	6	7	6	5.5	4	7	6	7	6	5.5	4
26	6.7	6	6.7	6	5.5	4	6.4	6	6.1	5.4	5.5	4
28	6.1	5.5	6.1	5.5	5.5	3.5	5.5	5.4	5.5	4.8	5	3.7
30	5.4	4.8	5.4	4.8	5	3.5	5.2	4.8	5	4.2	5	3.7
32	4.9	4.4	4.9	4.4	4	3.3	4.4	4.4	4.3	4	4.7	3.5
34	4.3	4	4.3	4	4	3.2	4	4	3.9	3.8	3.9	3.5
36			3.9	3.7	3.7	3.2	3.6	3.6	3.6	3.5	3.5	3.3
38			3.5	3.4	3.5	3.1		3.1	3.2	3	3.2	3.1
40				3.2	3.2	3			2.7	2.6	2.6	2.5
42										2.4	2.5	2.3
44												
46												
48												
50												
52												

Lifting capacity on SF boom (4)

Length of S (m)	43						46					
	6		12		18		6		12		18	
	10°	30°	10°	30°	10°	30°	10°	30°	10°	30°	10°	30°
12	7						7					
14	7	6	7				7	6	7			
16	7	6	7	6	5.5		7	6	7		5.5	
18	7	6	7	6	5.5		7	6	7	6	5.5	
20	7	6	7	6	5.5	4	7	6	7	6	5.5	
22	7	6	7	6	5.5	4	7	6	7	6	5.5	4
24	7	6	7	6	5.5	4	6.5	6	7	6	5.5	4
26	6.3	5.5	6.3	6	5.5	4	6	5.9	5.9	5.7	5.5	4
28	5.5	4.7	5.5	5.4	5.4	4	5	4.9	5	4.9	5	4
30	4.8	4.3	4.8	4.7	5	4	4.7	4.6	4.6	4.5	4.5	4
32	4.2	4.1	4.2	4.1	4.2	4	4	3.9	3.9	4	3.9	3.8
34	4	4	4	4	4	3.5	4	3.7	3.9	3.7	3.7	3.5
36	3.6	3.6	3.7	3.6	3.6	3.5	3.5	3.5	3.5	3.4	3.4	3.3
38	3.3	3.3	3.3	3.3	3.4	3.2	3.2	3.2	3.2	3.2	3.2	3.2
40			3.1	3	3.1	3	2.9	2.9	2.9	2.9	3	3
42			2.7	2.7	2.6	2.7		2.6	2.5	2.5	2.5	2.5
44				2.5	2.5	2.5				2.4	2.4	2.4
46												
48												
50												
52												
54												

Lifting capacity on SF boom (5)

Length of S (m)	49					
	6		12		18	
	10°	30°	10°	30°	10°	30°
12	7					
14	7	6	7			
16	7	6	7		5.5	
18	7	6	7	6	5.5	
20	7	6	7	6	5.5	
22	7	6	7	6	5.5	4
24	6.5	6	6.5	6	5.5	4
26	5.7	5.5	5.7	5.5	5.5	4
28	5.1	5	5	5	4.9	4
30	4.5	4.4	4.5	4.4	4.5	4
32	4	4	4	4	4	3.7
34	4	4	3.6	3.6	3.5	3.5
36	3.4	3.3	3.3	3.3	3.2	3.2
38	3	3	3	3	3	3
40	2.8	2.8	2.8	2.8	2.8	2.8
42	2.5	2.5	2.5	2.5	2.5	2.5
44		2.2	2.2	2.3	2.3	2.3
46			1.9	1.9	1.9	1.8
48						
50						
52						
54						
56						
58						