

ZOOMLION

ZOOMLION ZTC800R TRUCK CRANE

TECHNICAL SPECIFICATIONS

ZTC800R542/27Y

Zoomlion Heavy Industry Science & Technology Co.,Ltd.

TECHNICAL SPECIFICATIONS

1. Product characteristics

ZOOMLION ZTC800R truck crane, which integrates our many years' experience in designing and manufacturing mobile cranes with advanced technology, is a new-generation and high-performance product developed to meet the market demands. Its performances, such as lifting height, main boom length, working speed and lifting capacity, have achieved advanced international level.

This product is a truck crane of full range slewing function, telescopic boom sections and pilot-operated proportional controlled systems. The crane adopts self-manufactured full-width 4-axle special purpose chassis (8x4 drive, offering convenient and flexible hydraulic power steering), providing wide vision, spacious cab and luxurious equipment.

The latest pilot-operated proportional directional control valve and variable pump + gear pump system ensure that each executive mechanism makes full use of its working capability. The easy-controlled, flexible, reliable and stepless speed regulated joysticks (L / R) can provide the crane with smooth simultaneous movements between "Spool winches up", "Reel winches off", "Derricking", "Slewing" and "Telescope boom in / out", which greatly improve the crane's working efficiency. The safety devices such as relief valve, balance valve, hydraulic lock and brake valve fitted in hydraulic system prevent the accidents caused by oil line overload and oil pipe ruptures.

The complete lighting systems and the safety devices such as load moment limiter ensure your safety during operation and are convenient for night work.

This crane has a novel style which makes it beautiful in figure, in form and in color.

2. Specifications, complete vehicle

2.1 Product model

Model in engineering industry: ZTC800R

Product code: ZTC800R542

2.2 Technical data

Item		Value	Remarks
Working performance	Max. rated lifting capacity	kg	80000
	Max. load moment of basic boom	kN.m	2646
	Max. load moment of max. length main boom	kN.m	1288
	Max. lifting height of basic boom	m	13.4
	Max. lifting height of main boom	m	47.7
	Max. lifting height of jib	m	63.8
			These parameters do not include deflection of boom and jib.
Working speeds	Max. hoist rope speed (main winch)	m/min	125
	Max. hoist rope speed (auxiliary winch)	m/min	110
	Boom derricking up time	s	55
	Boom telescoping out time	s	120
	Slewing speed	r/min	0 - 1.7
Driving	Max. driving speed	km/h	85
	Max. gradeability	%	46
	Min. turning diameter	m	≤ 24
	Min. ground clearance	mm	305
	Oil consumption per hundred kilometers	L	45
Mass	Deadweight in driving condition	kg	46000
	Complete vehicle kerb mass	kg	45805
	Front axle load	kg	20000
	Rear axle load	kg	26000
Dimensions	Overall dimensions (L×W×H)	mm	14500×2800×3850
	Outrigger spread (L)	m	6.05
	Outrigger spread (W)	m	Completely extended: 7.8 m
	Tail slewing radius	mm	4200
	Main boom length	m	12.1 - 47.0
	Main boom angle	°	-2 - 80
	Jib length	m	9.5, 16.0
	Offset	°	0, 15, 30

2.3 Rated lifting capacity tables

This crane is provided with 14 sheets of rated lifting capacity tables. The operator should select proper rated lifting load referring to resp. lifting capacity tables according to actual working conditions. For details, please refer to Table 2-1 to Table 2-14.

The values in column "I" refer to the extendable length of telescopic cylinder I.

The values in column "II" refer to 3 times extendable length of telescopic cylinder II, namely, the total extendable length of boom section 3, 4 and 5.

The working condition marked with asterisk (*) indicates over sides and rear working area and 80 t hook should be used.

Table 2-1

Unit: Metric kg

Working radius (m)	Main boom (m)						
	Telescopic cylinder I and outriggers completely extended, over sides and rear, with 5 T fixed counterweight assembled.						
	12.1	16.5	21.0	27.5	34.0	40.5	47.0
3.0	80000*	55000					
3.5	67000*	53000	43500				
4.0	57000	52000	43500				
4.5	54000	49000	42000	31000			
5.0	50000	46000	41000	31000			
5.5	47000	44000	39000	30000			
6.0	43000	41000	37000	29000	23000		
7.0	33000	32500	32000	27000	22000		
8.0	25000	24500	24000	24500	21000	16500	
9.0	19500	19000	18500	20500	19500	15500	
10.0		15000	14500	16500	17200	14500	11500
11.0		12500	12000	13500	14500	13500	11000
12.0		10500	10000	11500	12500	12500	10500
14.0			7000	8500	9200	10000	9300
16.0			5000	6200	7000	7600	8000
18.0				4700	5400	6000	6300
20.0				3500	4200	4700	5100
22.0				2500	3200	3700	4100
24.0					2400	3000	3300
26.0					1800	2300	2600
28.0					1200	1700	2100
30.0						1200	1600
32.0						1000	1200
34.0							1000
I	0	4.4	8.9	8.9	8.9	8.9	8.9
II	0	0	0	6.5	13.0	19.5	26
Reevings	12	10	8	6	5	4	3
Hook	60 t hook						

Table 2-2

Unit: Metric kg

Working radius (m)	Main boom (m)					
	Telescopic cylinder I intermediately extended and outriggers completely extended, over sides and rear, with 5 T fixed counterweight assembled					
	12.1	16.5	23.0	29.5	36.0	42.5
3.0	80000*	55000				
3.5	67000*	53000	31000			
4.0	57000	52000	31000			
4.5	54000	49000	31000			
5.0	50000	46000	31000	23000		
5.5	47000	44000	30000	23000		
6.0	43000	41000	29000	23000		
7.0	33000	32500	27000	22000	16500	
8.0	25000	24500	26500	21000	16500	12000
9.0	19500	19000	21000	19500	15500	11500
10.0		15000	17000	18000	14500	11500
11.0		12500	14200	15200	13500	11000
12.0		10500	12000	13000	12500	10500
14.0			8800	9700	10200	9300
16.0			6600	7500	8000	8100
18.0			5000	5800	6300	6700
20.0				4600	5000	5400
22.0				3600	4100	4400
24.0				2800	3300	3600
26.0					2600	3000
28.0					2100	2400
30.0					1600	1900
32.0						1500
34.0						1200
36.0						
I	0	4.4	4.4	4.4	4.4	4.4
II	0	0	6.5	13.0	19.5	26
Reevings	12	10	6	6	4	3
Hook	60 t hook					

Table 2-3

Unit: Metric kg

Working radius (m)	Main boom (m)				
	Telescopic cylinder I completely retracted and outriggers completely extended, over sides and rear, with 5 T fixed counterweight assembled				
	12.1	18.6	25.1	31.6	38.1
3.0	80000*	31000			
3.5	67000*	31000			
4.0	57000	31000	23000		
4.5	54000	31000	23000		
5.0	50000	31000	23000		
5.5	47000	30000	23000	16500	
6.0	43000	29000	23000	16500	
7.0	33000	27000	22000	16000	12500
8.0	25000	26500	21000	14500	12000
9.0	19500	21700	19500	13500	11500
10.0		17800	18000	12500	11500
11.0		15000	16000	11500	10500
12.0		12700	13500	10700	9700
14.0		9500	10200	9300	8400
16.0			8000	8200	7300
18.0			6400	6800	6400
20.0			5100	5500	5800
22.0				4500	4900
24.0				3700	4000
26.0				3100	3400
28.0					2800
30.0					2300
32.0					1900
34.0					
36.0					
I	0	0	0	0	0
II	0	6.5	13.0	19.5	26
Reevings	12	6	5	4	3
Hook	60 t hook				

Table 2-4

Unit: Metric kg

Working radius (m)	Main boom (m)						
	Telescopic cylinder I completely extended and outriggers intermediately extended, over sides and rear, with 5 T fixed counterweight assembled						
	12.1	16.5	21.0	27.5	34.0	40.5	47.0
3.0	62000*	52000					
3.5	52000	48000	42000				
4.0	45000	43000	40000				
4.5	40000	38000	37000	31000			
5.0	38000	36000	34000	31000			
5.5	30500	30000	29000	30000			
6.0	25000	24500	24000	25000	23000		
7.0	18000	17500	17000	19000	19500		
8.0	13500	13000	12500	14500	15500	16500	
9.0	10500	10000	9600	11300	12000	13000	
10.0		8000	7600	9000	9900	10500	11500
11.0		6200	5800	7300	8100	8700	9300
12.0		5000	4600	6000	6700	7300	7800
14.0			2700	4000	4700	5200	5700
16.0			1300	2500	3200	3700	4200
18.0				1500	2200	2700	3100
20.0					1300	1800	2200
22.0						1100	1600
24.0							1000
26.0							
28.0							
30.0							
I	0	4.4	8.9	8.9	8.9	8.9	8.9
II	0	0	0	6.5	13.0	19.5	26
Reevings	12	10	8	6	5	4	3
Hook	60 t hook						

Table 2-5

Unit: Metric kg

Working radius (m)	Main boom (m)					
	Telescopic cylinder I and outriggers intermediately extended, over sides and rear, with 5 T fixed counterweight assembled					
	12.1	16.5	23.0	29.5	36.0	42.5
3.0	62000*	52000				
3.5	52000	48000	31000			
4.0	45000	43000	31000			
4.5	40000	38000	31000			
5.0	38000	36000	31000	23000		
5.5	30500	30000	30000	23000		
6.0	25000	24500	26000	23000		
7.0	18000	17500	19500	20500	16500	
8.0	13500	13000	15000	16000	16000	12000
9.0	10500	10000	11800	12700	13500	11500
10.0		8000	9500	10400	11000	11500
11.0		6200	7700	8600	9200	9600
12.0		5000	6400	7200	7700	8100
14.0			4200	5100	5600	6000
16.0			3000	3700	4100	4500
18.0			1900	2600	3000	3400
20.0				1800	2200	2500
22.0				1100	1500	1900
24.0					1000	1300
26.0						1000
28.0						
30.0						
I	0	4.4	4.4	4.4	4.4	4.4
II	0	0	6.5	13.0	19.5	26
Reevings	12	10	6	6	4	3
Hook	60 t hook					

Table 2-6

Unit: Metric kg

Working radius (m)	Main boom (m)				
	Telescopic cylinder I completely retracted and outriggers intermediately extended, over sides and rear, with 5 T fixed counterweight assembled				
	12.1	18.6	25.1	31.6	38.1
3.0	62000*	31000			
3.5	52000	31000			
4.0	45000	31000	23000		
4.5	40000	31000	23000		
5.0	38000	31000	23000		
5.5	30500	30000	23000	16500	
6.0	25000	27500	23000	16500	
7.0	18000	20000	21500	16500	12500
8.0	13500	15500	16500	14500	12000
9.0	10500	12500	13500	13000	11500
10.0		10200	11000	11500	11500
11.0		8400	9200	9700	10500
12.0		7000	7700	8300	8600
14.0		5000	5700	6100	6500
16.0			4200	4600	4900
18.0			3100	3500	3800
20.0			2300	2600	2900
22.0				2000	2300
24.0				1500	1600
26.0				1000	1300
28.0					1000
30.0					
I	0	0	0	0	0
II	0	6.5	13.0	19.5	26
Reevings	12	6	5	4	3
Hook	60 t hook				

Table 2-7

Unit: Metric kg

Main boom angle (°)	Main boom + Jib					
	Outriggers completely extended, over sides and rear, with 5 T fixed counterweight assembled					
	47.0 m + 9.5 m			47.0 m + 16.0 m		
	0°	15°	30°	0°	15°	30°
80	5500	3500	3000	3500	2200	1500
78	5000	3500	3000	3500	2000	1500
76	5000	3300	2800	3200	2000	1500
74	4800	3300	2800	2800	2000	1500
72	4300	3100	2800	2800	1800	1400
70	4000	3000	2700	2600	1600	1400
68	3800	3000	2600	2400	1600	1400
66	3400	2900	2500	2300	1500	1400
64	2900	2600	2400	2200	1500	1300
62	2500	2300	2100	1900	1500	1300
60	2100	1900	1800	1700	1400	1300
58	1700	1600	1500	1400	1200	1100
56	1400	1300	1200	1100	1000	900
54	1200	1100	1000	900		
52	1000	900				
Reevings	1					
Hook	6 t hook					

Table 2-8

Unit: Metric kg

Working radius (m)	Main boom (m)						
	Telescopic cylinder I and outriggers completely extended, over sides and rear, with 5 T fixed counterweight + 3 T movable counterweight assembled						
	12.1	16.5	21.0	27.5	34.0	40.5	47.0
3.0	80000*	55000					
3.5	67000*	53000	43500				
4.0	57000	52000	43500				
4.5	54000	49000	42000	31000			
5.0	50000	46000	41000	31000			
5.5	48000	44000	39000	30000			
6.0	45000	41000	37000	29000	23000		
7.0	37000	36500	33000	27000	22000		
8.0	28000	27000	27500	24500	21000	16500	
9.0	22000	21500	21500	22000	19500	15500	
10.0		17000	17300	18800	17200	14500	11500
11.0		14000	14300	15500	16000	13500	11000
12.0		12000	11800	13200	14000	12500	10500
14.0			8500	9600	10300	10600	9300
16.0			6200	7300	8000	8600	8100
18.0				5600	6300	6900	7300
20.0				4300	5100	5500	6000
22.0				3300	4000	4500	4800
24.0					3100	3600	4000
26.0					2400	2900	3200
28.0					1800	2300	2600
30.0						1800	2100
32.0						1400	1700
34.0							1300
36.0							1000
I	0	4.4	8.9	8.9	8.9	8.9	8.9
II	0	0	0	6.5	13.0	19.5	26
Reevings	12	10	8	6	5	4	3
Hook	60 t hook						

Table 2-9

Unit: Metric kg

Working radius (m)	Main boom (m)					
	Telescopic cylinder I intermediately extended and outriggers completely extended, over sides and rear, with 5 T fixed counterweight + 3 T movable counterweight assembled					
	12.1	16.5	23.0	29.5	36.0	42.5
3.0	80000*	55000				
3.5	67000*	53000	31000			
4.0	57000	52000	31000			
4.5	54000	49000	31000			
5.0	50000	46000	31000	23000		
5.5	48000	44000	30000	23000		
6.0	45000	41000	29000	23000		
7.0	37000	36500	27000	22000	16500	
8.0	28000	27000	26000	21000	16500	12000
9.0	22000	21500	23500	19500	15500	11500
10.0		17000	19300	19000	14500	11500
11.0		14000	16200	17100	13500	11000
12.0		12000	13700	14600	12500	10500
14.0			10200	11000	10600	9300
16.0			7800	8600	9100	8100
18.0			6000	6800	7300	7300
20.0				5400	5900	6300
22.0				4400	4800	5200
24.0				3500	4000	4300
26.0					3200	3600
28.0					2600	2900
30.0					2100	2400
32.0						2000
34.0						1600
36.0						
I	0	4.4	4.4	4.4	4.4	4.4
II	0	0	6.5	13.0	19.5	26
Reevings	12	10	6	6	4	3
Hook	60 t hook					

Table 2-10

Unit: Metric kg

Working radius (m)	Main boom (m)				
	Telescopic cylinder I completely retracted and outriggers completely extended, over sides and rear, with 5 T fixed counterweight + 3 T movable counterweight assembled				
	12.1	18.6	25.1	31.6	38.1
3.0	80000*	31000			
3.5	67000*	31000			
4.0	57000	31000	23000		
4.5	54000	31000	23000		
5.0	50000	31000	23000		
5.5	48000	30000	23000	16500	
6.0	45000	29000	23000	16500	
7.0	37000	27000	22000	16000	12500
8.0	28000	26000	21000	14500	12000
9.0	22000	24000	19500	13500	11500
10.0		20000	18000	12500	11500
11.0		16800	17100	11500	10500
12.0		14300	15200	10700	9700
14.0		10800	11600	9300	8400
16.0			9100	8200	7300
18.0			7300	7300	6400
20.0			6000	6400	5800
22.0				5300	5200
24.0				4400	4600
26.0				3700	4000
28.0					3300
30.0					2800
32.0					2300
34.0					
36.0					
I	0	0	0	0	0
II	0	6.5	13.0	19.5	26
Reevings	12	6	5	4	3
Hook	60 t hook				

Table 2-11

Unit: Metric kg

Working radius (m)	Main boom (m)						
	Telescopic cylinder I completely extended and outriggers intermediately extended, over sides and rear, with 5 T fixed counterweight + 3 T movable counterweight assembled						
	12.1	16.5	21.0	27.5	34.0	40.5	47.0
3.0	62000*	52000					
3.5	52000	48000	42000				
4.0	45000	43000	40000				
4.5	40000	38000	37000	31000			
5.0	38000	36000	34000	31000			
5.5	34000	33500	31500	30000			
6.0	28000	27500	25000	26000	23000		
7.0	21000	20000	19500	21000	21500		
8.0	16000	15500	15000	16700	17500	16500	
9.0	12000	12000	11500	13200	14200	15000	
10.0		9500	9300	10700	11500	12200	11500
11.0		7700	7500	8700	9500	10200	10500
12.0		6200	6000	7200	8000	8600	9000
14.0			3800	5000	5700	6200	6600
16.0			2300	3400	4100	4600	5000
18.0				2300	3000	3400	3800
20.0				1400	2000	2500	2800
22.0					1300	1800	2100
24.0						1200	1500
26.0							1000
28.0							
30.0							
I	0	4.4	8.9	8.9	8.9	8.9	8.9
II	0	0	0	6.5	13.0	19.5	26
Reevings	12	10	8	6	5	4	3
Hook	60 t hook						

Table 2-12

Unit: Metric kg

Working radius (m)	Main boom (m)					
	Telescopic cylinder I and outriggers intermediately extended, over sides and rear, with 5 T fixed counterweight + 3 T movable counterweight assembled					
	12.1	16.5	23.0	29.5	36.0	42.5
3.0	62000*	52000				
3.5	52000	48000	31000			
4.0	45000	43000	31000			
4.5	40000	38000	31000			
5.0	38000	36000	31000	23000		
5.5	34000	33500	30000	23000		
6.0	28000	27500	26000	23000		
7.0	21000	20000	22000	22500	16500	
8.0	16000	15500	17200	18200	16000	12000
9.0	12000	12000	13700	14600	15000	11500
10.0		9500	11200	12000	12600	11500
11.0		7700	9200	10000	10500	11000
12.0		6200	7700	8500	9000	9500
14.0			5500	6200	6700	7100
16.0			3800	4600	5000	5400
18.0			2600	3300	3800	4100
20.0				2400	2900	3200
22.0				1600	2100	2400
24.0					1500	1800
26.0					1000	1300
28.0						1000
30.0						
I	0	4.4	4.4	4.4	4.4	4.4
II	0	0	6.5	13.0	19.5	26
Reevings	12	10	6	6	4	3
Hook	60 t hook					

Table 2-13

Unit: Metric kg

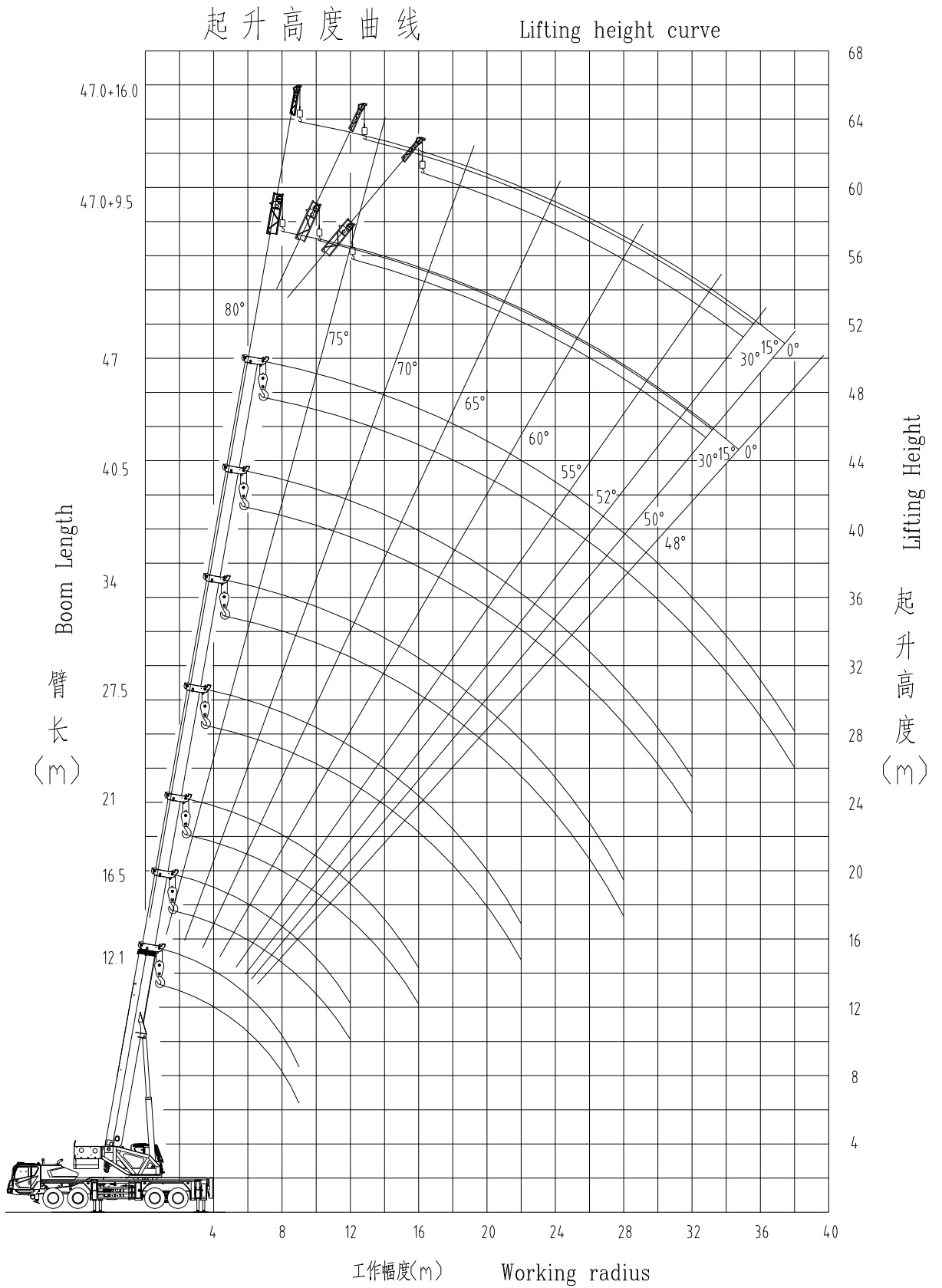
Working radius (m)	Main boom (m)				
	Telescopic cylinder I completely retracted and outriggers intermediately extended, over sides and rear, with 5 T fixed counterweight + 3 T movable counterweight assembled				
	12.1	18.6	25.1	31.6	38.1
3.0	62000*	31000			
3.5	52000	31000			
4.0	45000	31000	23000		
4.5	40000	31000	23000		
5.0	38000	31000	23000		
5.5	34000	30000	23000	16500	
6.0	28000	29000	23000	16500	
7.0	21000	23000	22500	16500	12500
8.0	16000	18000	19000	14500	12000
9.0	12000	14500	15300	13200	11500
10.0		11800	12600	12300	11500
11.0		9800	10500	11000	10500
12.0		8300	9000	9600	9300
14.0		6000	6700	7200	7500
16.0			5100	5500	5800
18.0			3900	4300	4500
20.0			2900	3300	3600
22.0				2600	2800
24.0				2000	2200
26.0				1400	1700
28.0					1300
30.0					1000
I	0	0	0	0	0
II	0	6.5	13.0	19.5	26
Reevings	12	6	5	4	3
Hook	60 t hook				

Table 2-14

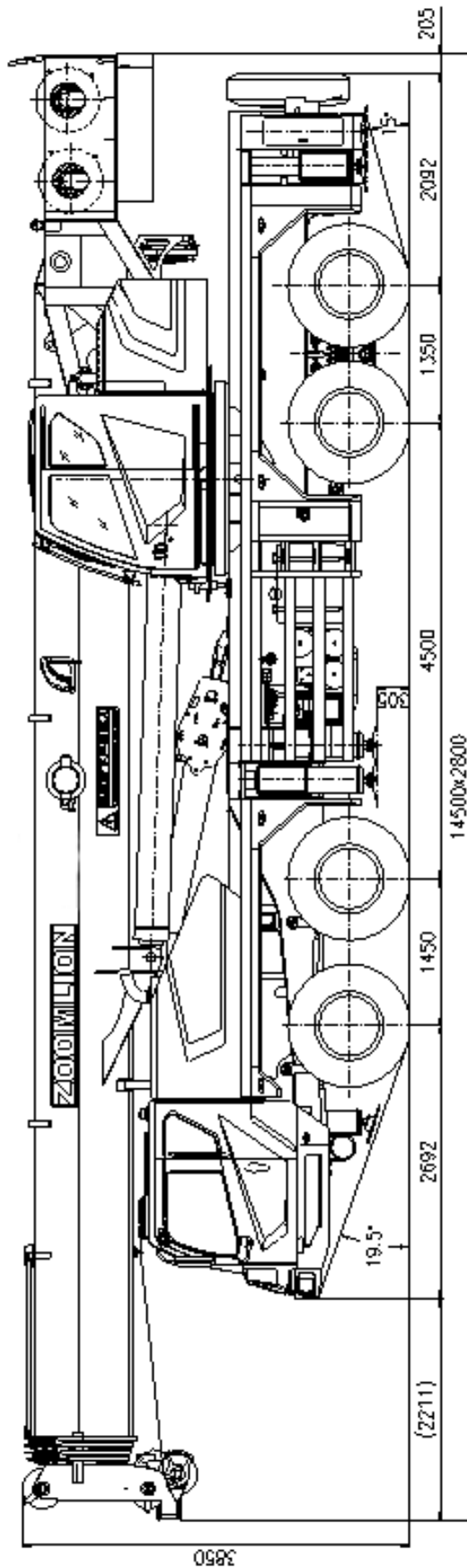
Unit: Metric kg

Main boom angle (°)	Main boom + Jib					
	Outriggers completely extended, over sides and rear, with 5 T fixed counterweight + 3 T movable counterweight assembled					
	47.0 m + 9.5 m			47.0 m + 16.0 m		
	0°	15°	30°	0°	15°	30°
80	5500	3500	3000	3500	2200	1500
78	5000	3500	3000	3500	2000	1500
76	5000	3300	2800	3200	2000	1500
74	4800	3300	2800	2800	2000	1500
72	4300	3100	2800	2800	1800	1400
70	4000	3000	2700	2600	1600	1400
68	3800	3000	2600	2400	1600	1400
66	3600	2900	2500	2100	1500	1400
64	3300	2700	2400	2000	1500	1300
62	2900	2500	2300	1900	1500	1300
60	2500	2300	2100	1800	1400	1300
58	2200	2100	1900	1700	1400	1200
56	1900	1800	1700	1500	1300	1200
54	1600	1500	1400	1200	1100	1000
52	1300	1200	1100	1000	950	900
50	1100	1000	950	900		
48	1000					
Reevings	1					
Hook	6 t hook					

2.4 Lifting height chart



2.5 Overall view (unit: Metric mm)



3 Components, superstructure

3.1 Main boom and telescoping mechanism

The box-shaped main boom consists of 5 U-type boom sections made of low-alloy high-strength steel plate, providing the boom with excellent bending-resistance capacity, super load bearing capacity, light deadweight, large lateral stiffness and small end deflection. Self-created built-in sliding block and optimized design make the deadweight of the boom greatly decreased and the stress on the boom evenly distributed to avoid partial distortion. Furthermore, the boom has good guidance quality and adjustability. Main boom head (excluding the telescopic section IV) adopts optimal plate structure and efficiently increases the boom length, and meanwhile ensures that the length of basic boom is minimal value.

The telescopic boom sections are telescoped in/out via 2 telescopic cylinders and 2 sets of boom extension / retraction wire rope. The 1st telescopic cylinder drives telescopic boom section 1 to telescope in/out; the 2nd telescopic cylinder drives telescopic boom sections 2, 3 and 4 to telescope in / out simultaneously via boom extension / retraction wire rope. This compact design makes the crane work reliably. Each cylinder is fitted with a balance valve.

3.2 Jib

It consists of two jib sections and is folded on the side of boom when it is not used and can be installed and removed by inserted pins.

Jib section I, reducing and lattice structured, has good load bearing capacity and well stress distribution.

Jib section 2, box-shaped, can be pulled out from jib section 1 to form 2 kinds of jib length (9.5 m and 16.0 m) as required.

Jib section I can be attached below 0°, 15° or 30° in relation to top boom section. The offset can be conveniently changed via the pin and pull bracket.

3.3 Slewing table

Single ribbed plate structured and optimized slewing table made of high-strength steel plate makes the layout of articulated points of main boom and derricking mechanism more reasonable. It also has a distinctive structure and beautiful appearance.

The engine hood is designed ergonomically.

The securing device installed in the front of the slewing table can prevent the superstructure from slewing during driving.

3.4 Rooster sheave

It is secured at the outside of the top boom section head when it is not used. It can be rotated around the shaft and pinned onto the boom head when it is used.

This option is set up for rapid hoists over the boom head to improve the working efficiency when the loads are light.

3.5 Derricking mechanism

1 front-mounted hydraulic cylinder with balance valve provides the boom with smooth derricking movements from -2° to 80° .

3.6 Slewing mechanism

Single slewing mechanism is adopted.

Via the planetary gear reducer, the hydraulic motor drives the pinion gear on the output shaft to rotate the exterior toothed ring of slewing ring fixed on chassis frame, providing superstructure with 360° unlimited slewing.

The slewing mechanism is of controllable aligning function, which can make the load be aligned automatically during operation. Slewing cushion valve and normally-closed brake can ensure stable and reliable slewing operation of the crane. 4-point contact ball-type slewing ring ensures the slewing table with super-strong load bearing capability and long service life.

3.7 Hoist mechanism

It consists of main and auxiliary hoist mechanisms.

The hydraulic motor drives the grooved drum to lift and lower the hook via planetary gear reducer. A brake is fitted between the motor and reducer.

The main winch and auxiliary winch can work independently.

Models of main and auxiliary winch reducers are the same.

Also, the main winch and auxiliary winch are driven by the variable displacement motor.

The main winch is also equipped with a lowering limit switch.

The built-in planetary reducer is of compact structure, light deadweight and high reliability.

Specifications for high-tensile torsion resistant hoist rope:

Diameter: $\varnothing 20.0$ mm

Strength grade: 1870 N/mm²

Length of main hoist rope: 220 m

Length of auxiliary hoist rope: 140 m

3.8 Main and auxiliary hooks

Many kinds of hooks are available for options. See the table below.

Model	Number of pulleys	Max. reeving	Weight	Remarks
80 t	6	12	580 kg	Straight shank with single hook (options)
60 t	6	12	550 kg	Straight shank with single hook (standard configuration)
35 t	3	7	380 kg	Straight shank with single hook (options)
6 t	—	1	150 kg	Standard configuration

Hook with pulley is with press nipple, rotatable hook and hook safety device.

Anti-rotating auxiliary hook is with anti-rotation device and hook safety device.

3.9 Operator's cab

It is of steel-structure welded with instrument console and adjustable seat with headrest. The instrument consoles are located in right hand side of operator's cab and right ceiling side of operator's cab. It is equipped with control joysticks, windshield wiper, washing system, air conditioning and heater. The arrangement provides spacious operating space, reasonable arrangement, human-based design, convenient and safe operation.

The operator's cab can be tilted upwards or downwards to broaden the operator's field of vision. It brakes steadily and is high reliable.

3.10 Outriggers

H-type outriggers, which are in box-shaped structure and welded of low-alloy and high-strength steel plate, are of good sectional performance and strong load bearing capability via Pro/E simulated design and actual-used calculation.

2-section horizontal sliding beam can be extended and retracted with a horizontal cylinder and a set of outrigger extension / retraction ropes. Large outrigger span ensures stability of the crane.

The outrigger pad which is mounted at the bottom of vertical cylinder can be pushed inwards (to avoid the complete vehicle from being over-wide during driving) and pulled outwards (for convenient operation) to greatly reduce the labor intensity. After the outriggers are completely extended or retracted, the outrigger pads can be locked with retaining pins.

Outrigger control levers are fitted on both sides of the vehicle for controlling the outriggers to extend or retract simultaneously or independently. Each vertical cylinder is equipped with a two-way hydraulic lock to ensure stable and reliable operation of the crane.

In addition, the crane also can work with outriggers intermediately extended for narrow area operation.

The 5th outrigger is installed beneath the driver's cab. When the 5th outrigger is set up, the crane can realize full range slewing operation.

3.11 Hydraulic system

The open-type hydraulic system adopts advanced pilot-operated proportional joysticks, hydraulic proportional control system and anti-pollution bite-type fitting to ensure the high reliability of the system. The main power element is the variable pump with gear pump. Among which, the variable pump supplies hydraulic oil for main winch, auxiliary winch, derricking mechanism and telescoping mechanism. The tandem gear pump is composed of two gear pumps. One supplies hydraulic oil for chassis hydraulic system, slewing mechanism, the other supplies hydraulic oil for air conditioning system.

The outrigger control valves are new-type manual chassis control valves to control the horizontal and vertical cylinders' movements. Each of them is fitted with a pressure limiting valve, thus, can prevent the piston rods of horizontal cylinders from bending. The 5th outrigger cylinder and vertical cylinder can be also controlled to retract simultaneously, so damage of the 5th outrigger cylinder can be avoided.

3.12 Electrical system

Single wire system, negative grounded, 24 Volt DC.

The electrical system consists of superstructure electrical system and chassis electrical system.

The superstructure electrical system includes the devices such as warning light "Main / auxiliary winch approaching upper limit", warning light "Main / auxiliary winch approaching lower limit", hoisting limit switch, lowering limit switch, overload protection device, emergency off control and signal indication etc. These devices ensure safe operation and provide good working environment.

The chassis electrical system includes the devices such as radio cassette, cab heater etc. These devices ensure excellent driving performance and comfortable driving environment.

3.13 Safety devices

This crane is equipped with an automatic load moment limiter whose display and warning devices are fitted in the operator's cab.

When the actual load approaches 90% of the rated one, the warning light will light up and buzzer will send out acoustic warning.

When the actual load reaches 100% of the rated one, the load moment limiter will send out a stop signal automatically and will cut off all dangerous crane movements via superstructure control circuit and control mechanism.

The basic parameters, such as moment ratio, boom angle, boom length, working radius, actual lifting capacity and rated lifting capacity will be displayed on the digital LCD.

This crane is also equipped with the following safety devices to ensure safety of the crane.

- a) Boom angle indicator
- b) Hoisting limit switch
- c) Hook safety device
- d) Lowering limit switch
- e) The 5th outrigger overpressure warning device
- f) Two-way hydraulic lock
- g) Balance valve
- h) Relief valve

3.14 Air conditioning and heater

A single-cooling air conditioning and heater special for auto are available.

3.15 Counterweight

The underslung fixing counterweights can be assembled according to different working conditions.

It is composed of 2 counterweights: 5T fixed counterweight, 3T fixed counterweight. They totally weigh 8T and are connected by bolts.

There are 2 options for counterweight assembly:

- 1) 5T fixed counterweight
- 2) 5T fixed counterweight + 3T fixed counterweight

4. Specifications, chassis

Chassis	Engine	Model	WP9H350E62
		Rated power kW/r/min	257/1900
		Max. output torque N.m/r/min	1700/1100~1400
		Manufacturer	Weichai Power Co., Ltd
	Model	ZLJ5460JQZ	
	Type	II	
	Code	ZTC800R	
	Limits for exhaust pollutants and smoke	GB3847-2005, GB17691-2005 (National Stage VI)	
	Manufacturer	Zoomlion Heavy Industry Science and Technology Co., Ltd.	

Appendix

Table – Main purchased parts and manufacturers

Ser. No.	Description	Manufacturer	Remarks
1	Main valve	Changde Zoomlion Hydraulic Co., Ltd.	
2	Plunger pump (variable pump)	Hi-tech Hydraulic Co., Ltd.	
	Gear pump	Sichuan Changjiang Hydraulic Element Limited Liability Company	
3	Winch motor	Avic Liyuan Hydraulic Co., Ltd.	
		Beijing Huade Hydraulic Industrial Co., Ltd.	
		Hi-tech Hydraulic Co., Ltd.	
4	Winch reducer	Xuzhou Keyuan Hydraulic Co., Ltd. Tongshan County Branch Company	
		Shanghai Wanhui Mechanical Manufacture Co., Ltd.	
5	Slewing motor	Avic Liyuan Hydraulic Co., Ltd.	
		Beijing Huade Hydraulic Industrial Co., Ltd.	
		Hi-tech Hydraulic Co., Ltd.	
6	Slewing reducer	Xuzhou Keyuan Hydraulic Co., Ltd. Tongshan County Branch Company	
7	Slewing ring	Xuzhou Rothe Erde Slewing Ring Co., Ltd.	
		Yantai Haoyang Mechanical Co., Ltd.	
8	Telescopic cylinder	Hunan Teli Hydraulic Co., Ltd.	
9	Derricking cylinder	Hunan Teli Hydraulic Co., Ltd.	
10	Horizontal cylinder	Hunan Teli Hydraulic Co., Ltd.	
11	Vertical cylinder	Hunan Teli Hydraulic Co., Ltd.	
12	Balance valve – telescoping mechanism	Changde Zoomlion Heavy Industry Science & Technology Hydraulic Co., Ltd.	
13	Balance valve – derricking mechanism	Germany Bucher Hydraulic	
14	Balance valve – hoist mechanism	Shenzhen Sangte Hydraulic Technology Co., Ltd.	
		Jiangsu Dingsheng Hydraulic Co., Ltd.	
15	Wire rope	Hubei Fuxing Science and Technology Co., Ltd.	
		Juli Sling Co., Ltd.	
		Jiangsu Safety Steel Rope Co., Ltd.	
16	Hook	Shangdong Hong Ruida Mechanical Co., Ltd.	
		Changsha Lanying Industry Co., Ltd.	

		Xuzhou Da Changshi Construction Mechanical Co., Ltd.	
17	Load moment limiter	Changsha WIDE Technology Development Co., Ltd.	
		Zoomlion Electric OEM supply Company	
18	Operator's cab assy.	Yangzhou Shenzhou Vehicle Interior Decorative Parts Ltd., Co.	

Note:

The equipment fitted in the crane is subject to changes due to design improvements or other reasons. Therefore, the above table is for reference only.