

90 ton capacity ZCT900V532.1

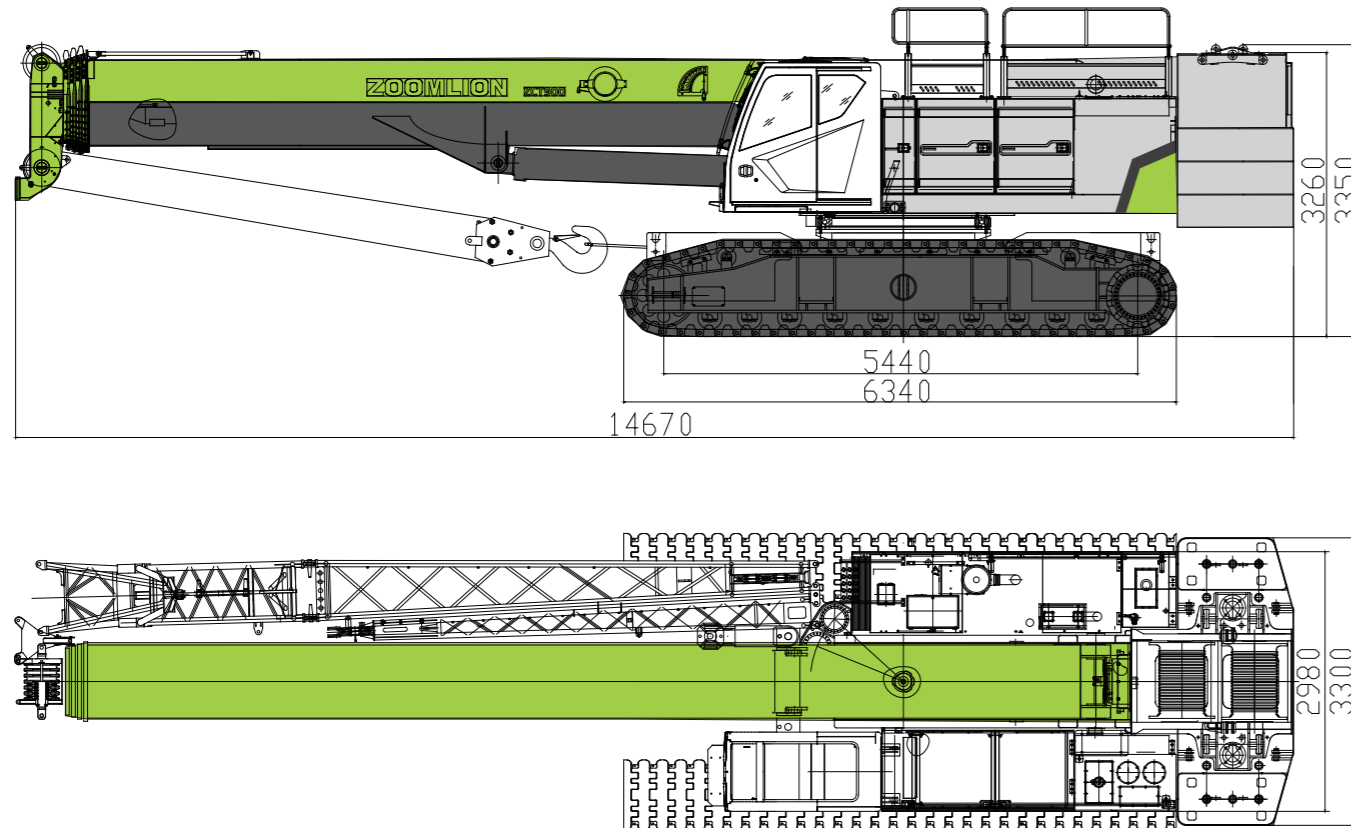


ZOOMLION

4.0
PRODUCTS

DIMENSIONS

Basic machine with undercarriage



TECHNICAL FEATURE

1.Stronger lifting capacity:

· The strongest 5-section 47m U shape boom; The maximum lifting torque is 3087kN. M, and the single rope tension is 8.6t; Full boom frontal load is 14T; The comprehensive lifting capacity is 10% more than that of the same level in the industry.

2.Higher reliability:

· Based on the mature modular design of truck crane and crawler crane of Zoomlion, the key parts are of first-class brand, and the whole machine has passed the strict operation reliability assessment and is stable and reliable.

3.Better adaptability:

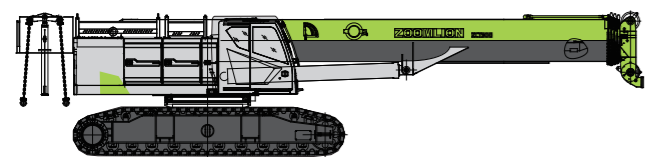
· large gauge telescopic crawler chassis structure, good vehicle stability; The traveling mechanism adopts built-in planetary reducer and large torque motor, which has large driving force and strong climbing ability.

4.More convenient transfer:

· The whole machine can be transported by removing the counterweight. The track beam can be removed to meet the 3m transportation condition; Counterweight and crawler can be self-loading and unloading function which is highly efficient.

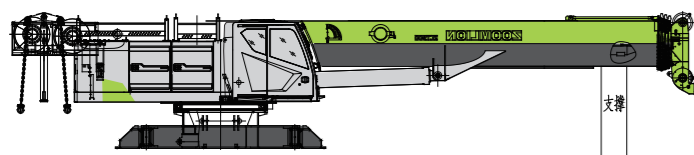


TRANSPORTATION DIMENSIONS AND WEIGHT



Superstructure (with boom)

Length (L)	14670 mm
Width (W)	3400 mm
Height (H)	3260 mm
Weight	50600 kg



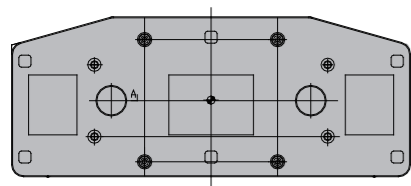
Superstructure (Without left and right assembly)

Length (L)	14670 mm
Width (W)	3400 mm
Height (H)	3260 mm
Weight	33500 kg



Track frame assembly x2

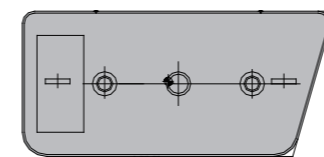
Length (L)	6340 mm
Width (W)	1120 mm
Height (H)	1130 mm
Weight	8560 kg



Lower counterweight x3

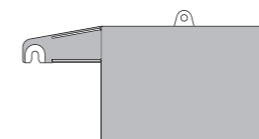
Length (L)	3300 mm
Width (W)	1335 mm
Height (H)	370 mm
Weight	7100 kg

TRANSPORTATION DIMENSIONS AND WEIGHT



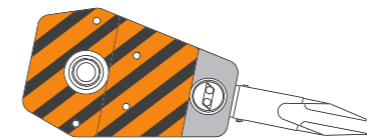
Left and right counterweight x2

Length (L)	1270 mm
Width (W)	600 mm
Height (H)	850 mm
Weight	2500 kg



Body weight x2

Length (L)	1840 mm
Width (W)	740 mm
Height (H)	800 mm
Weight	3500 kg



60t hook

Length (L)	1550 mm
Width (W)	550 mm
Height (H)	500 mm
Weight	640 kg



9t hook

Length (L)	770 mm
Width (W)	300 mm
Height (H)	300 mm
Weight	180 kg

Note:

1. Parts are only schematic diagram, and not drawn according to fixed scale;
2. The weight does not include the package, which may be slightly different from the mark due to manufacturing error;

TECHNICAL DESCRIPTION



Engine

Engine type---- Weichai WP7G270E301
 Rated power---- 199kW/2000rpm
 Maximum output torque---- 1200N.m/1300rpm
 Fuel tank----- 600L



Hydraulic system

The crane adopts a hydraulic system with hydraulic pilot proportional control. The high-speed hydraulic motor drives the planet reducer to realize movements of the mechanisms. The system has such advantages as high efficiency, energy-saving, smooth and safe simultaneous movements.
 Cooler: a radiator driven by a high-power hydraulic motor, 40 kW
 Hydraulic oil tank capacity-----1000L



Hoisting winch

It consists of a main hoist mechanism and an auxiliary hoist mechanism. The two hoist mechanisms are driven by an axial plunger hydraulic motor with a built-in planetary gear reducer to lift or lower the hook. A brake is fitted between the motor and reducer. The two winch mechanisms can be controlled independently and also can carry out simultaneous movements. The auxiliary hoist winch is of same model of the main winch;

Specifications for high-tensile torsion resistant hoist rope:
 Diameter: 20.0 mm Strength grade: 2160 N/mm²
 Length of main hoist rope: 260 m
 Length of auxiliary hoist rope: 140 m
 Single rope pulling force: 8.6 t

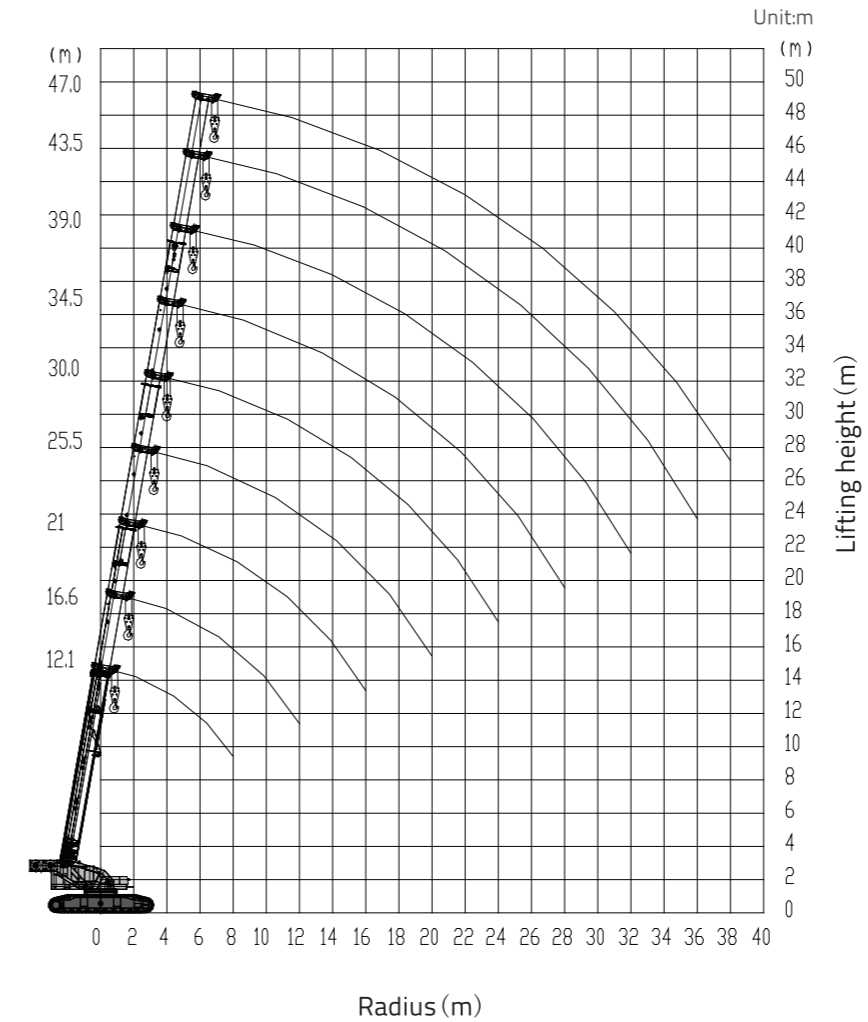


Swing

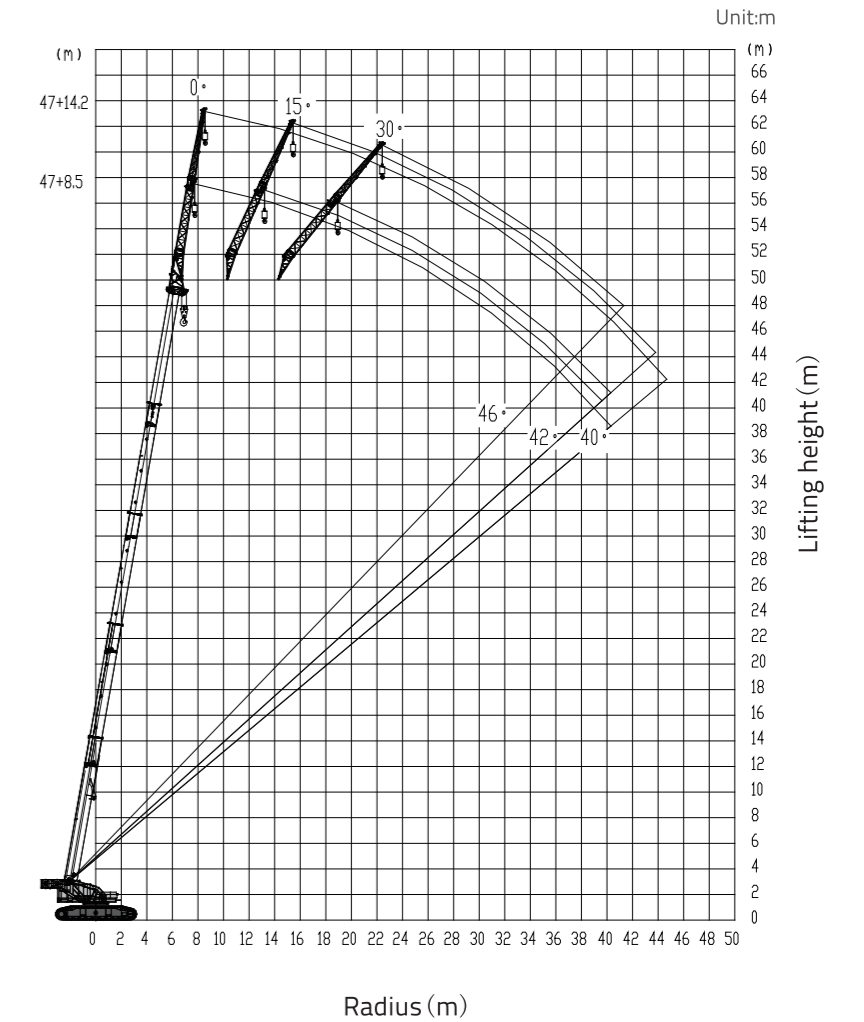
Driven by planetary gear reducer, the axial quantitative plunger hydraulic motor can realize 360 ° full rotation of the turntable. The free sliding function can effectively reduce the lateral tension on the boom.
 Slewing bearing:
 Single-row-roller and four-point-contact slewing bearing, internal gearing
 Slewing speed:
 The maximum slewing speed is 1.6 rpm.

LIFTING PERFORMANCE

Lifting height of the Main boom



Lifting height of the Main boom + Jib



LIFTING PERFORMANCE

Main Boom Lifting Performance Table

Unit: kg

Working Radius (m)	Main boom(m)								
	I cylinder fully extended, 360 ° operation, 26.5t counterweight, 0°								
	12.1	16.6	21.0	25.5	30.0	34.5	39.0	43.5	47
3.0	90000	70000							
3.5	84000	65000	50000						
4.0	76000	63000	50000	38000					
4.5	70000	62000	48000	38000					
5.0	62000	60000	48000	38000	36000				
5.5	56000	55000	46000	38000	36000				
6.0	51000	50000	44000	36000	34000	30000			
7.0	41000	39500	38000	34000	32000	29000			
8.0	33000	32500	32000	30000	29000	26000	22000		
9.0		26800	26500	25200	26000	24000	22000	19500	
10.0		22600	22300	22000	22500	22000	21000	18000	14000
11.0		19400	18800	19600	19500	20000	20000	17000	14000
12.0		16800	16000	17500	17000	18000	17100	16000	13500
14.0			12000	13400	13200	13500	14200	14000	12000
16.0			9300	10300	10600	11000	11500	11500	11000
18.0				8300	8600	9200	9500	9500	9800
20.0				6600	7100	7400	7600	8100	8500
22.0					5800	6300	6600	6800	7200
24.0					4600	5300	5400	5600	6000
26.0						4200	4500	4700	5000
28.0						3200	3700	4000	4300
30.0							3000	3200	3600
32.0							2500	2800	3100
34.0								2200	2700
36.0								1800	2200
38.0									
I	0	4.5	8.9	8.9	8.9	8.9	8.9	8.9	8.9
II	0	0	0	4.5	9	13.5	18	22.5	26
Reeving	12	10	10	8	8	6	6	4	4
Hook	90t								

Unit: kg

Working Radius (m)	Main boom(m)							
	I cylinder extended to 50%, 360 ° operation, 26.5t counterweight, 0°							
	12.1	16.6	21.1	25.6	30.1	34.6	39.1	42.6
3.0	90000	70000						
3.5	84000	65000	38000					
4.0	76000	63000	38000	36000				
4.5	70000	62000	38000	36000				
5.0	62000	60000	38000	36000	30000			
5.5	56000	55000	38000	36000	30000			
6.0	51000	50000	36000	35000	30000	22000		
7.0	41000	39500	35000	32000	30000	22000		
8.0	33000	32500	30000	30000	30000	22000	21000	
9.0		26800	26000	26000	28000	22000	20800	16000
10.0		22600	23000	23000	24000	21000	19200	16000
11.0		19400	19000	19800	21000	19000	17800	15000
12.0		16800	17200	17200	18000	17200	16200	14000
14.0			12800	13800	14500	14000	14000	12800
16.0			9800	10800	11500	11500	12400	11400
18.0				8800	9200	9400	9600	10200
20.0				7200	7400	7800	8000	9200
22.0					6200	6600	6800	7200
24.0					4800	5500	5800	6000
26.0						4600	5200	5200
28.0						3700	4200	4600
30.0							3400	4000
32.0							3000	3200
34.0								2800
36.0								2000
38.0								
I	0	4.5	4.5	4.5	4.5	4.5	4.5	4.5
II	0	0	4.5	9	13.5	18	22.5	26
Reeving	12	10	10	8	8	6	6	4
Hook	90t							

LIFTING PERFORMANCE

Main Boom Lifting Performance Table

Unit: kg

Working Radius (m)	Main boom(m)						
	I cylinder extended to 0%, 360 ° operation, 26.5t counterweight, 0°						
	12.1	16.6	21.1	25.6	30.1	34.6	38.1
3.0	90000	38000					
3.5	84000	38000	36000				
4.0	76000	38000	36000	30000			
4.5	70000	38000	36000	30000			
5.0	62000	38000	36000	30000	22000		
5.5	56000	38000	36000	30000	22000		
6.0	51000	38000	36000	30000	22000	21000	
7.0	41000	38000	35000	30000	22000	21000	
8.0	33000	32800	32000	28000	22000	21000	17500
9.0		27800	28800	26500	21000	19500	17000
10.0		23500	24500	24000	19500	17800	15800
11.0		20000	21000	22000	18000	16200	14500
12.0		17200	18200	18800	16800	15000	13400
14.0			14400	15000	14400	13000	11500
16.0			11000	11800	12600	11400	10200
18.0				9800	10200	10200	9100
20.0				8000	8500	9000	8300
22.0					7200	7200	7600
24.0					6000	6200	7000
26.0						5200	5800
28.0						4600	5000
30.0							4200
32.0							3600
34.0							
36.0							
38.0							
I	0	0	0	0	0	0	0
II	0	4.5	9	13.5	18	22.5	26
Reeving	12	10	10	8	8	6	4
Hook	90t						

Rated lifting capacity table for on load driving

Unit: kg

Working Radius (m)	Main boom(m)				
	I cylinder fully extended, 26.5t counterweight, front, on load driving (<0.4m/s), 0°				
	12.1	16.6	21.0	25.5	30.0
3.0	66500	49000			
3.5	58800	45500	35000		
4.0	53200	44100	35000	26600	
4.5	49000	43400	33600	26600	
5.0	44100	42000	33600	26600	25200
5.5	39900	38500	32200	26600	25200
6.0	37100	35000	30800	25200	23800
7.0	28700	28100	26600	23800	22400
8.0	23100	22800	22400	21000	20300
9.0		18800	18600	17600	18200
10.0		15800	15600	15400	15800
11.0		13600	13200	13700	13700
12.0		11800	11200	12300	11900
14.0			8400	9400	9200
16.0			6500	7200	7400
18.0				5800	6000
20.0					5000
22.0					4100
24.0					3200
26.0					
28.0					
30.0					
32.0					
34.0					
36.0					
38.0					
I	0	4.5	8.9	8.9	8.9
II	0	0	0	4.5	9
Reeving	12	10	10	8	8
Hook	90t				

LIFTING PERFORMANCE

Rated lifting capacity table for on load driving

Unit: kg

Working Radius (m)	Main boom(m)				
	I cylinder extended to 50%, 26.5t counterweight, front, on load driving (<0.4m/s), 0°				
	12.1	16.6	21.1	25.6	30.1
3.0	66500	49000			
3.5	58800	45500	26600		
4.0	53200	44100	26600	25200	
4.5	49000	43400	26600	25200	
5.0	44100	42000	26600	25200	21000
5.5	39900	38500	26600	25200	21000
6.0	37100	35000	25200	24500	21000
7.0	28700	28100	24500	22400	21000
8.0	23100	22800	21000	21000	21000
9.0		18800	18200	18200	19600
10.0		15800	16100	16100	16800
11.0		13600	13300	13900	14700
12.0		11800	12000	12000	12600
14.0			8960	9700	10200
16.0			6860	7600	8100
18.0				6200	6400
20.0				5000	5200
22.0					4300
24.0					3400
26.0					
28.0					
30.0					
32.0					
34.0					
36.0					
38.0					
I	0	4.5	4.5	4.5	4.5
II	0	0	4.5	9	13.5
Reeving	12	10	10	8	8
Hook			90t		

Unit: kg

Working Radius (m)	Main boom(m)				
	I cylinder extended to 0%, 26.5t counterweight, front, on load driving (<0.4m/s), 0°				
	12.1	16.6	21.1	25.6	30.1
3.0	66500	26600			
3.5	58800	26600	25200		
4.0	53200	26600	25200	21000	
4.5	49000	26600	25200	21000	
5.0	44100	26600	25200	21000	15400
5.5	39900	26600	25200	21000	15400
6.0	37100	26600	25200	21000	15400
7.0	28700	26600	24500	21000	15400
8.0	23100	23000	22400	19600	15400
9.0		19500	21000	18600	14700
10.0		16500	17200	16800	13700
11.0		14000	14700	15400	12600
12.0		12000	12700	13200	11800
14.0			10000	10500	10000
16.0			7700	8300	8800
18.0				6900	7100
20.0				5600	6000
22.0					5000
24.0					4200
26.0					
28.0					
30.0					
32.0					
34.0					
36.0					
38.0					
I	0	0	0	0	0
II	0	4.5	9	13.5	18
Reeving	12	10	10	8	8
Hook			90t		

LIFTING PERFORMANCE

Main Boom + Jib Lifting Performance Table

Boom angle (°)	Main boom (m) + Jib (m)					
	360 ° operation, 26.5t fixed counterweight					
	47.0+8.5			47.0+14.2		
	0°	15°	30°	0°	15°	30°
80	6500	4600	4200	4000	2500	1800
78	6300	4500	4200	3800	2400	1800
76	6000	4400	4100	3500	2300	1700
74	5500	4300	4000	3300	2200	1700
72	5200	4200	3800	3100	2100	1600
70	4800	4000	3700	3000	2000	1600
68	4600	3800	3500	2800	2000	1600
66	4400	3600	3300	2700	1900	1500
64	4200	3500	3000	2600	1900	1500
62	4000	3200	2800	2500	1900	1400
60	3600	3000	2600	2400	1800	1400
58	3300	2800	2400	2300	1800	1400
56	3000	2500	2200	2200	1700	1300
54	2600	2200	2000	2100	1700	1300
52	2300	2000	1800	2000	1700	1200
50	2000	1800	1700	1900	1600	1200
48	1800	1650	1500	1600	1500	1100
46	1600	1500	1300	1500	1400	1000
44	1300	1200	1100	1400	1200	
42	1200	1100	1000	1300	1100	
40	1000			1200		
Reeving				1		
Hook				9t		

MIAN TECHNICAL PARAMETERS

Item		Unit	Value	Remarks
Maximum lifting capacity		t	90	
Maximum lifting moment of basic boom		KN·m	3087	
Maximum lifting moment of the boom (full extended)		KN·m	1728	
Main boom length		m	12.1~47.0	
Jib length		m	8.5~14.2	
Main Boom angle		°	-1~80	
Jib mounting angle		°	0, 15, 30	
Maximum speed of single rope (main winch)		m/min	140	at the fourth layer
Maximum speed of single rope (auxiliary winch)		m/min	140	at the fourth layer
Boom derricking time		s	60	
Boom extension time		s	120	
Slewing speed		rpm	0~1.6	
Walking speed		km/h	0~2.5	
Gradeability		%	45	
Weight		t	85	
Dimension (L × W × H)		mm	14670X3400X3260	Track frame retraction
		mm	14670X5100X3260	Track frame extended
Engine	Model		WP7G270E301	
	Rated power / speed	kW/rpm	199/2000	
	Maximum output torque / speed	Nm/rpm	1200/1300	
	Emission	/	Non road China standard III	

Note:

1. The single rope speed, slewing speed and traveling speed of the winch vary with the load;