ZOOMLION

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website:en.zoomlion.com 2023.12.15

100 ton capacity
ZCT1000V532

ZOOMLION

40 PRODUCTS

VISION CREATES FUTURE

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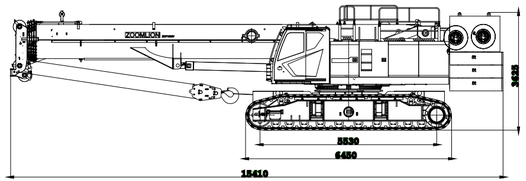
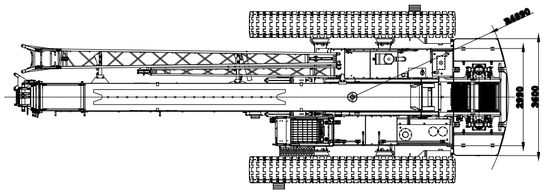
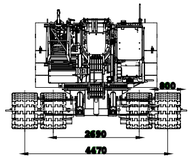
DIMENSIONS







TECHNICAL FEATURE

Strong lifting capacity

- The boom consists of 5 U-shaped boom sections which can extend to a maximum length of 50 m, contributing to the crane's superior comprehensive lifting capacity and securing Zoomlion's leadership in the industry. The independently designed plate-type boom head and compact boom end realize optimal overlapping ratio as well as stronger lifting capacity of the main boom. The second generation of free boom telescoping technology, which is novel in the industry, increases stability during telescoping and brings the overall vehicle with higher anti-tipping capacity.

High work efficiency

- A hydraulic pilot control joystick is installed in the crane, which is capable of compounding movements of the main and auxiliary winches, the derricking mechanism, the slewing mechanism and the telescoping mechanism, therefore greatly increasing the crane's lifting efficiency.
- The crane is characterized in its convenient, flexible, stable and reliable operations which can be adjusted in a stepless way.
- Single rope speed of the hoisting winch 1 and 2 can reach 142 m/min (at 4th layer on the drum).

Stronger single wire rope pulling force

- The main and auxiliary winches use a standard φ20 anti-twisting wire rope, whose single rope pulling force can reach 8.6 t.

Optimization of transportation, assembly and dismantling

- Easy for transfer between working sites; the whole vehicle can be transported in one truck after its counterweight is removed.
- The movable counterweight plates can be installed and removed conveniently by a counterweight handle. Therefore they are also convenient for transportation.
- The crawler carriers can be extended and retracted, and the maximum transport width of the crane is 3.49 m.
- Vertical outriggers are installed to provide convenience during crawler carrier dismantling process.

TECHNICAL DESCRIPTION

Engine

Engine model: Weichai WP7G270E301.
Type: six-cylinder in-line, intercooling turbo-charged diesel engine.
Rated power: 199kW/2000r/min.
Max. torque: 1200N.m/1500r/min.
Emission standard: Chinese National Stage Ⅲ.
Fuel tank capacity: 450L.

Hoisting mechanism

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, and both of them adopt a variable motor. The main winch is installed with an overlowering protection device which gives alarm when there are only 3 wraps of wire rope left on the drum.
The sealed-in planetary reducer is of a compact structure, light deadweight and high reliability.
Specifications for high-tensile torsion resistant hoist rope:
Diameter: φ20.0 mm.
Strength grade: 2160 N/mm2.
Length of main hoist rope: 280 m.
Length of auxiliary hoist rope: 160 m.
Single rope pulling force: 8.6 t.

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.
The oil cooler for hydraulic system: a radiator driven by a high-power hydraulic motor, 40 kW.
Hydraulic oil tank capacity: 1400 L.

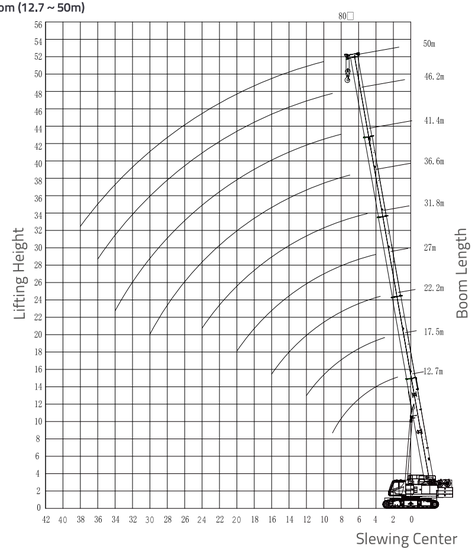
Slewing mechanism

The slewing mechanism installs a single reducer. Via the planetary gear reducer, the axial plunger hydraulic motor of constant displacement drives the pinion gear on the output shaft to rotate the toothed ring of the slewing bearing fixed on chassis frame, providing a 360° unlimited slewing range.
The crane is capable of conducting controllable free swing during lifting operation where the crane is automatically aligned to the slewing center relative to the load.
A slewing cushion valve and a normally-closed brake are installed to ensure stable and reliable slewing.
The slewing bearing is a single-row ball, four-point contact type, which provides strong bearing capacity and long service life.

WORKING CONDITIONS AND RATED CAPACITY CHARTS

LIFTING HEIGHT CHART

Boom (12.7 ~ 50m)



RATED CAPACITY CHART WITH BOOM

Unit: kg

Working Radius (m)	360-degree working range, 32t counterweight, 7t balance counterweight TELESCOPIC CYLINDER I FULLY EXTENDED								
	Boom length (m)								
	12.7	17.5	22.2	27	31.8	36.6	41.4	46.2	50
2.5	100								
3	90	76							
3.5	80	74	54						
4	76	72	54	39.5					
4.5	73	70	53	39.5					
5	70	65	51	38	36				
5.5	64	60	48	38	36				
6	58	55	46.5	37	36				
7	47	46	42	36	35	31			
8	37.5	37	36.8	34	33	30	24		
9	31	30.5	30	31.2	30	28	24	20.5	
10		25.7	25.2	26.3	27.5	26	24	19.5	15.6
11		21.8	21.5	22.6	23.4	24	21	17.8	15
12		18.7	18.5	19.6	20.3	20.9	20	15.8	14.5
14			14.1	15.2	15.8	16.4	16.8	14	12.9
16			10.9	12	12.7	13.2	13.6	13.5	11.8
18				9.6	10.2	10.8	11.2	11.5	10.7
20				7.8	8.4	8.9	9.4	9.4	9.2
22					7	7.4	7.8	7.8	8
24					5.8	6.2	6.5	6.6	6.8
26						5.2	5.5	5.7	5.8
28						4.4	4.6	4.9	5
30						3.6	3.9	4.2	4.3
32							3.3	3.6	3.7
34							2.8	3.1	3.1
36								2.6	2.6
38									2
40									
42									
I	0	4.8	9.5	9.5	9.5	9.5	9.5	9.5	9.5
II	0	0	0	4.8	9.6	14.4	19.2	24	27.8
II	0	0	0	17%	35%	52%	69%	86%	100%
Reeving	12	11	8	7	6	5	4	3	3
Hook	100t		60t			35t			

MAIN TECHNICAL PARAMETERS

Item		Unit	Value	Remarks
Max. lifting capacity		t	100	
Max. lifting moment		t×m	352	
Main boom length		m	12.7 ~ 50	
Jib length		m	9.5 ~ 16	
Max. length of main boom with fixed jib		m	50+16	
Main boom angle		°	-1 ~ 80	
Jib angle		°	0、15、30	
Max. single rope speed of the main hoisting winch		m/min	142	Unloaded, the 4th drum layer
Max. single rope speed of the auxiliary hoisting winch.		m/min	142	Unloaded, the 4th drum layer
Boom derricking up time		s	65	
Slewing speed		rpm	0 ~ 1.6	
Traveling speed		km/h	0 ~ 2.0	
Max. gradeability		%	45	
Ground pressure		MPa	0.1	
Deadweight		t	90	With the main hook installed
Counterweight		t	32	
Overall dimensions (L × W × H)		mm	15410×5270(3490)×3375	
Engine	Model		Weichai WP7G270E301	
	Rated power / rotational speed	kW/rpm	199/2000	
	Max. output torque / rotational speed	Nm/rpm	1200/1500	
	Exhaust emission	/	Chinese National Stage Ⅲ	
Distance between track center × crawler contact length × crawler width		mm	2690×5530×800	Crawler carrier retracted
		mm	4470×5530×800	Crawler carrier extended
Noise	Noise level outside the operator's cab during operation	dB	≤107	
	Noise level in the operator's cab during operation	dB	≤85	

Note:
1.The single rope speed of the winch, slewing speed and traveling speed vary with the load.
2.The ground pressure is an average value, and the actual maximum ground pressure should be determined according to actual lifting conditions.