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100 ton capacity ZCT1000V552.1



VISION CREATES FUTURE

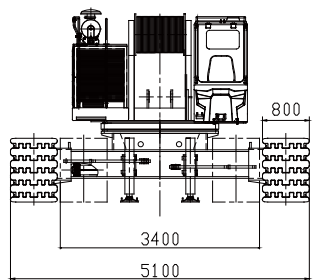
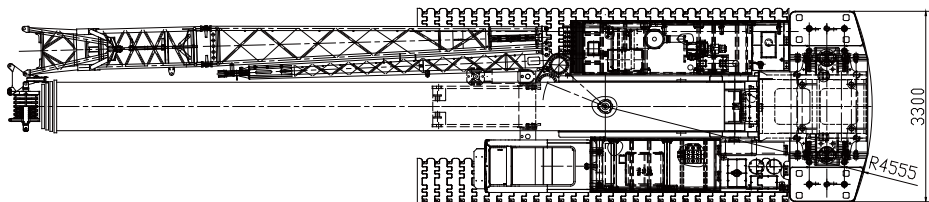
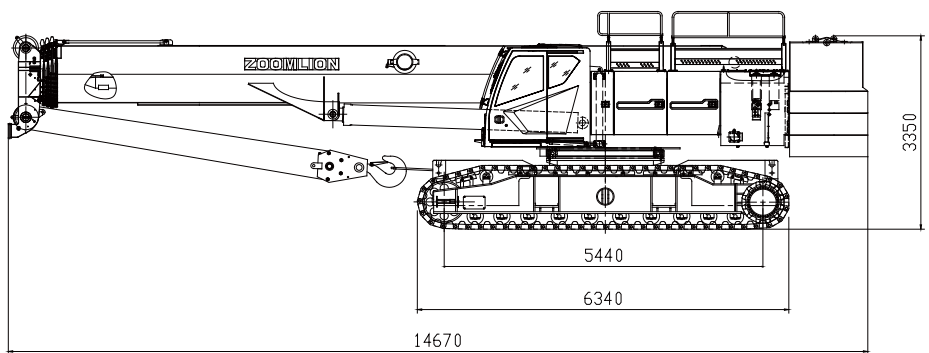
ZOOMLION

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DIMENSIONS



TECHNICAL FEATURE

Strong lifting capacity

- The main boom consists of 5 U-shaped boom sections which can extend to a maximum length of 47m, 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 140 m/min (at 4th layer on the drum).

Stronger single wire rope pulling force

- The main and auxiliary winches use a standard 20 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 3.4 m.
- Vertical outriggers are standard configuration, which provide convenience during crawler carrier dismantling process.

TECHNICAL DESCRIPTION



Engine

Engine: Cummins L9.
Rated power / rotational speed: 246kW/2000r/min.
Maximum output torque / rotational speed: 1636N■m/1100r/min.
Emission standard: Off-road emission standards of EU .
Stage VVolume of fuel oil tank: 600L .



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: 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.



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: 1000 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.

WORK CONDITIONS AND POINTS FOR ATTENTION

Rated lifting capacity with the main boom

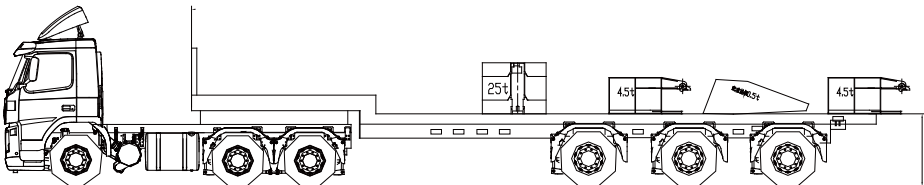
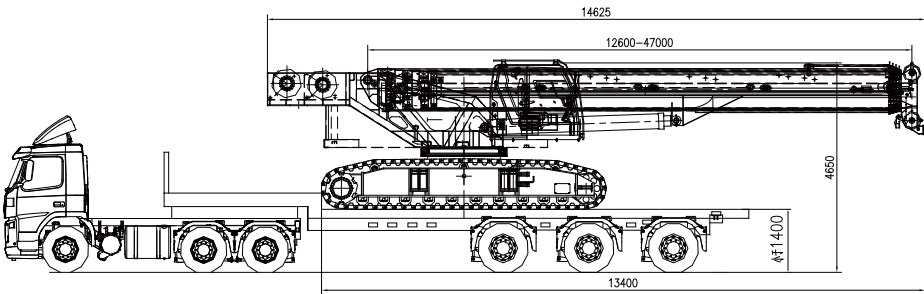
Unit: Kg

Working radius (m)	Boom length (m)								
	Telescopic cylinder I fully extended, 360° working range, 26.5t counterweight + 7t fixed balancing counterweight								
	12.1	16.6	21	25.5	30	34.5	39	43.5	47
2.5	100000								
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
I	0	4.4	8.9	8.9	8.9	8.9	8.9	8.9	8.9
II	0	0	0	4.4	8.8	13.2	17.6	22	26
Reeving	12	10	8	8	6	5	4	4	3
Hook	100t		60t			35t			

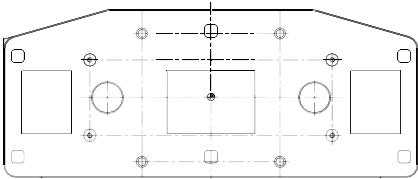
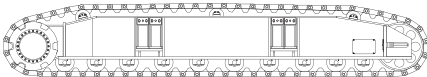
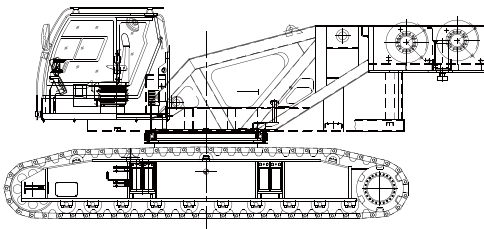
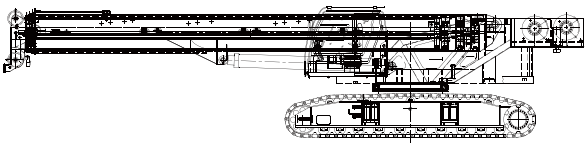
TRANSPORT DIMENSIONS

Based on a common dismantling principle, this crane can be dismantled into two large parts for transportation. The first part includes the crane body, i.e. the boom, slewing platform and crawler chassis, etc. of approx. 50 t in weight, while the other part includes the counterweight, fixed balancing counterweight and hook, etc. of approx. 35t in weight.

Transportation plan and dimensions:



TRANSPORT DIMENSIONS



Crane body (with the boom)

Length (L)	14670 mm
Width (W)	3400 mm
Height (H)	3260 mm
Weight	50000 kg

Crane body (without the boom)

Length (L)	7690 mm
Width (W)	3400 mm
Height (H)	3260 mm
Weight	35000 kg

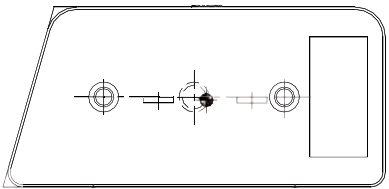
Crawler carrier assembly X2

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

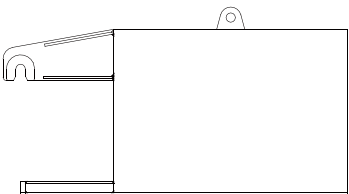
Bottom counterweight X3

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

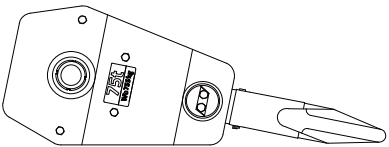
TRANSPORT DIMENSIONS



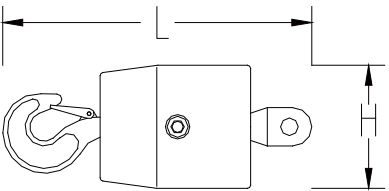
Left and right counterweight X2		
Length (L)		1270 mm
Width (W)		600 mm
Height (H)		850 mm
Weight		2500 kg



Fixed balancing counterweight X2		
Length (L)		1840 mm
Width (W)		740 mm
Height (H)		800 mm
Weight		3500 kg



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



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

MIAN TECHNICAL PARAMETERS

Item		Unit	Value	Remarks
Max. lifting capacity		t	100	
Max. lifting moment		t×m	315	
Main boom length		m	12.1-47.0	
Jib length		m	8.5-14.2	Optional
Max. length of main boom with fixed jib		m	47 14.2	
Main boom angle		°	-1 ~ 80	
Jib angle		°	0, 15, 30	
Max. single rope speed of the main hoisting winch		m/min	140	Unloaded, the 4th drum layer
Max. single rope speed of the auxiliary hoisting winch.		m/min	140	Unloaded, the 4th drum layer
Boom derricking up time		s	60	
Slewing speed		rpm	0-1.6	
Traveling speed		km/h	0-2.5	
Max. gradeability		%	45	
Ground pressure		MPa	0.09	
Deadweight		t	85	With the main hook installed (excluding jib)
Counterweight		t	26.5	
Overall dimensions (L × W × H)		mm	14670×5100(3400)×3260	
Engine	Model		US Cummins QSB6.7-C280	
	Rated power / rotational speed	kW/rpm	209/2000	
	Max. output torque / rotational speed	Nm/rpm	1152/1500	
	Exhaust emission	/	Euro V	
Distance between track center × crawler contact length × crawler width		mm	2600×5440×800	Crawler carrier retracted
		mm	4300×5440×800	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:
2.The single rope speed of the winch, slewing speed and traveling speed vary with the load.
3.The ground pressure is an average value, and the actual maximum ground pressure should be determined according to actual lifting conditions.