

ZOOMLION ROUGH TERRAIN CRANE ZRT600E



ZOOMLION

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ZOOMLION

4.0
PRODUCTS



CONTENTS

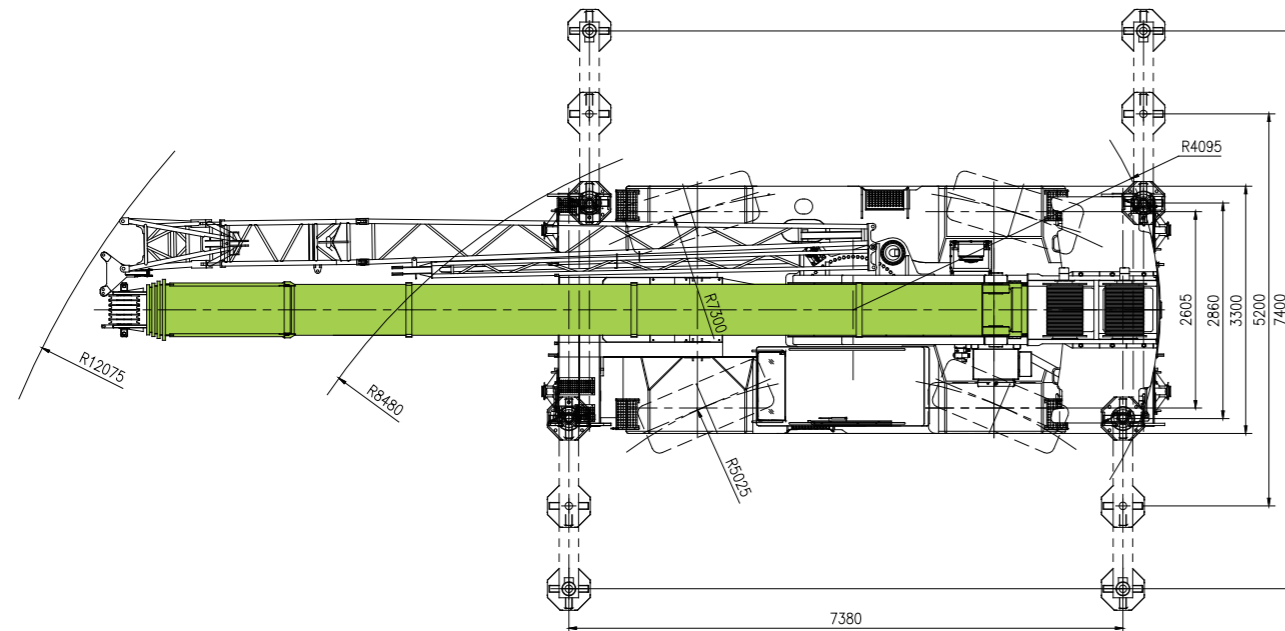
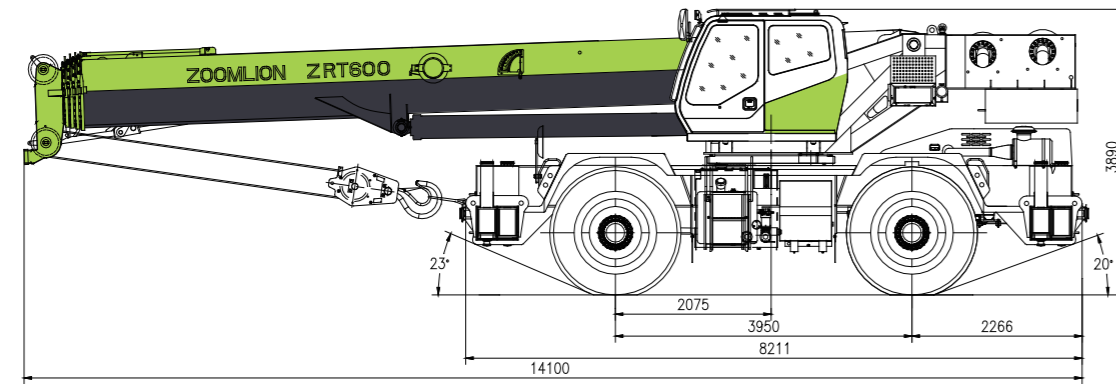
HIGHLIGHTS	2
DIMENSIONS	3
WEIGHTS	4
LIFTING CAPACITY TABLES/LIFTING HEIGHT CURVE	4-8
TECHNICAL DESCRIPTION	9-11
TECHNICAL PARAMETER	12

HIGHLIGHTS

- 1.Strong lifting performance**
 - The 45m main boom of super large U-shape cross section achieves stronger rated lifting capacity; with total 7.8t counterweights, its comprehensive lifting capacity surpasses other competing products of the same tonnage level in the industry.
 - Four-wheel drive, four-wheel multi-mode steering, flexible and high maneuverability, maximum driving speed reaches 40Km/h and gradeability 75%.
- 2.Superior reliability and durability**
 - Golden power train: Cummins (DF) engine + DANA (US) transmission, together with modular design and integrated main valve, make it durable and reliable, easy to maintenance.
 - The crane has passed reliability tests conducted in regions such as plateaus, deserts, mountains and hills, etc., Equipped with standard ZOOMLION moment limiter.
- 3.Great comfort and beautiful contour**
 - New generation of driver's cab is equipped with a push front window and a panoramic sunroof, providing better field of vision for the operator.
 - The 10-inch large display and spatial arrangements of instruments in an ergonomic way enhance the operator's operational comfort.



DIMENSIONS



WEIGHTS

Hook block and hook ball

Rated load/t	Number of sheave	Reeving	Hook block weight/kg	Standard/Optional
60T	6	12	510	standard
5.5T	-	1	130	standard

Axle load

Shaft	Front axle	Rear axle	Total weight
Axle load/t	25	20	45
Note	With main and auxiliary hooks		

Working speeds

Gear	km/h min. MIN.	km/h max. MAX.	Swing %	Gear
26.5-25-32PR	0-1.6	40	75	6/R6

Drive	Operation Speed	Rope diameter/length	Max. single line pull
	130m/min	Φ 17mm/210m	5600Kg
	0-2.2r/min		
	45/105s		
	95s/110s		

LIFTING CAPACITY TABLES



LOAD RADIUS (M)	Outriggers and telescoping cylinder I fully extended, over sides and rear, 7.8 t counterweight						
	11.6	15.9	20.1	26.4	32.7	39.0	45.0
3.0	60000	46000	36000				
3.5	57000	46000	36000				
4.0	54000	46000	36000				
4.5	48000	44000	34000	27000			
5.0	43000	42000	33500	27000			
5.5	39000	38500	32500	27000			
6.0	35600	35000	32000	26000	19800		
6.5	32600	32200	30600	25000	19800		
7.0	30100	29800	29500	24000	19800		
7.5	28000	27600	26500	23000	19000		
8.0	26000	25200	24000	22000	18400	14400	
9.0	20200	20000	19500	20000	17000	13600	
10.0		16000	16000	16500	15800	12800	10000
11.0		13200	13000	13600	14000	12000	9600
12.0			11000	11600	12200	11500	9200
14.0				7700	8600	9200	8400
16.0				5500	6500	7100	7600
18.0					5000	5600	6200
20.0					3900	4400	5000
22.0						3500	4100
24.0						2750	3400
26.0						2150	2700
28.0							1900
30.0							1500
32.0							1100
34.0							
36.0							
I	0	4.3	8.5	8.5	8.5	8.5	8.5
II	0	0	0	6.3	12.6	18.9	24.9
Reeving	12	10	8	6	4	4	3
Hook				60t			

LIFTING CAPACITY TABLES

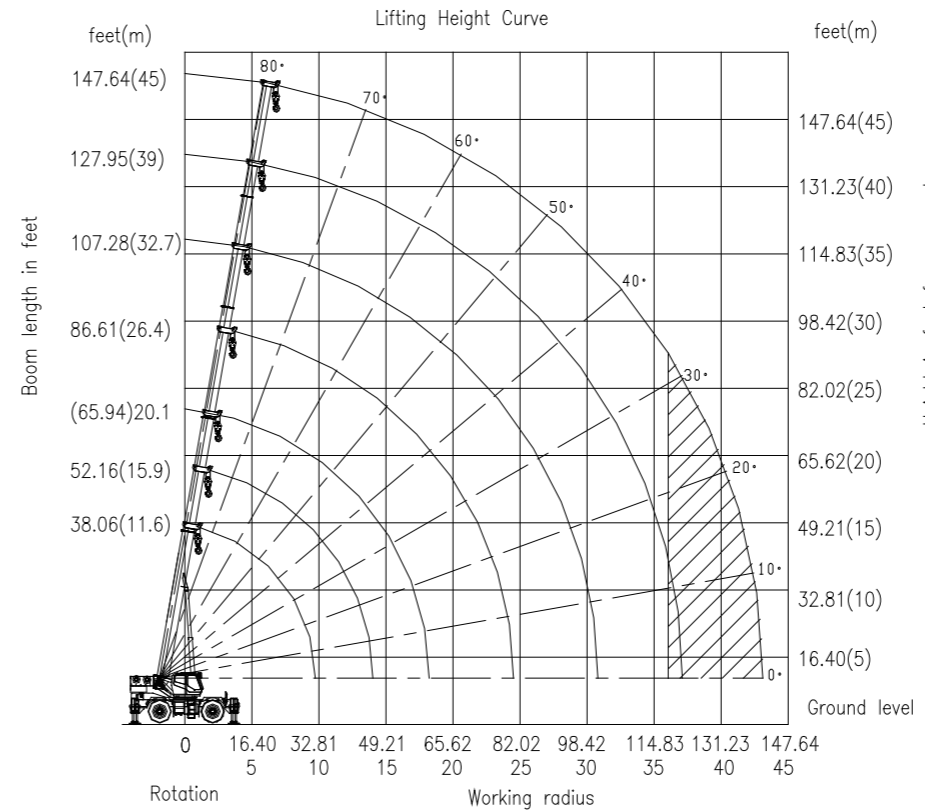


LOAD RADIUS (M)	Outriggers fully extended and telescoping cylinder I intermediately extended, over sides and rear, 7.8 t counterweight					
	11,6	15,9	22,2	28,5	34,8	40,8
3.0	60000	46000				
3.5	57000	46000	27000			
4	54000	46000	27000			
4.5	48000	44000	27000			
5.0	43000	42000	27000	24000		
5.5	39000	38500	27000	24000		
6.0	35600	35000	27000	24000		
6.5	32600	32200	27000	24000	16500	
7.0	30100	29800	27000	23000	16500	
7.5	28000	27600	25500	22000	16000	
8.0	26000	25200	24000	21000	15500	10800
9.0	20200	20000	20500	19000	14500	10400
10.0		16000	17000	17200	13500	10000
11.0		13200	14200	15000	12500	9600
12.0		11000	12300	13000	11600	9200
14.0			9000	9700	9800	8400
16.0			6900	7500	7800	7600
18.0			5300	5900	6200	6700
20.0				4700	5000	5500
22.0				3800	4100	4500
24.0					3300	3700
26.0					2700	3100
28.0					2200	2500
30.0						2100
32.0						1700
34.0						1400
I	0	4,3	4,3	4,3	4,3	4,3
II	0	0	6,3	12,6	18,9	24,9
Reeving	12	10	6	5	4	3
Hook	60 t					



LOAD RADIUS (M)	Outriggers fully extended and telescoping cylinder I fully retracted, over sides and rear, 7.8 t counterweight				
	11,6	17,9	24,2	30,5	36,5
3.0	60000	27000			
3.5	57000	27000			
4	54000	27000	24000		
4.5	48000	27000	24000		
5.0	43000	27000	24000		
5.5	39000	27000	23200	18600	
6.0	35600	27000	22500	17900	
6.5	32600	27000	21700	17200	
7.0	30100	27000	21000	16500	11500
7.5	28000	25500	20200	15700	11500
8.0	26000	24000	19500	15000	11500
9.0	20200	22000	18000	13800	11000
10.0		18000	16500	12800	10500
11.0		15000	15500	11800	9800
12.0		12800	13600	11000	9200
14.0		9600	10300	9500	8200
16.0			8100	8300	7200
18.0			6500	6700	6400
20.0				5500	5600
22.0				4600	4800
24.0				3800	4000
26.0					3400
28.0					2900
30.0					2400
I	0	0	0	0	0
II	0	6,3	12,6	18,9	24,9
Reeving	12	6	5	4	3
Hook	60t				

LIFTING HEIGHT CURVE

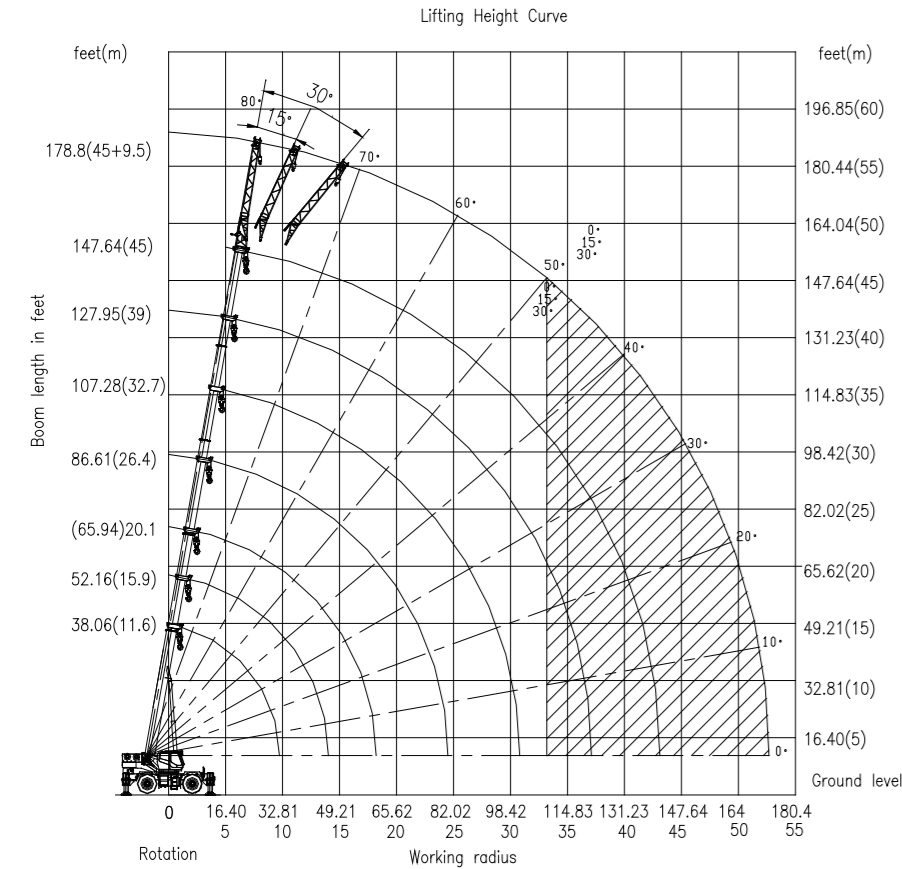


LIFTING CAPACITY TABLES



BOOM ANGLE (°)	Outriggers fully extended, over sides and rear, 7.8 t counterweight		
	0°	15°	30°
80	5000	3300	2500
78	5000	3300	2500
76	4800	3200	2500
74	4500	3100	2500
72	4200	3000	2400
70	3900	2800	2300
68	3600	2700	2200
66	3300	2600	2100
64	2800	2500	2000
62	2400	2200	1900
60	2100	2000	1800
58	1800	1600	1600
56	1500	1400	1300
54	1200	1200	1200
52	1000	1000	900
50	800	700	700
48			
Reeving	1		
Hook	5,5t		

LIFTING HEIGHT CURVE



LIFTING CAPACITY TABLES

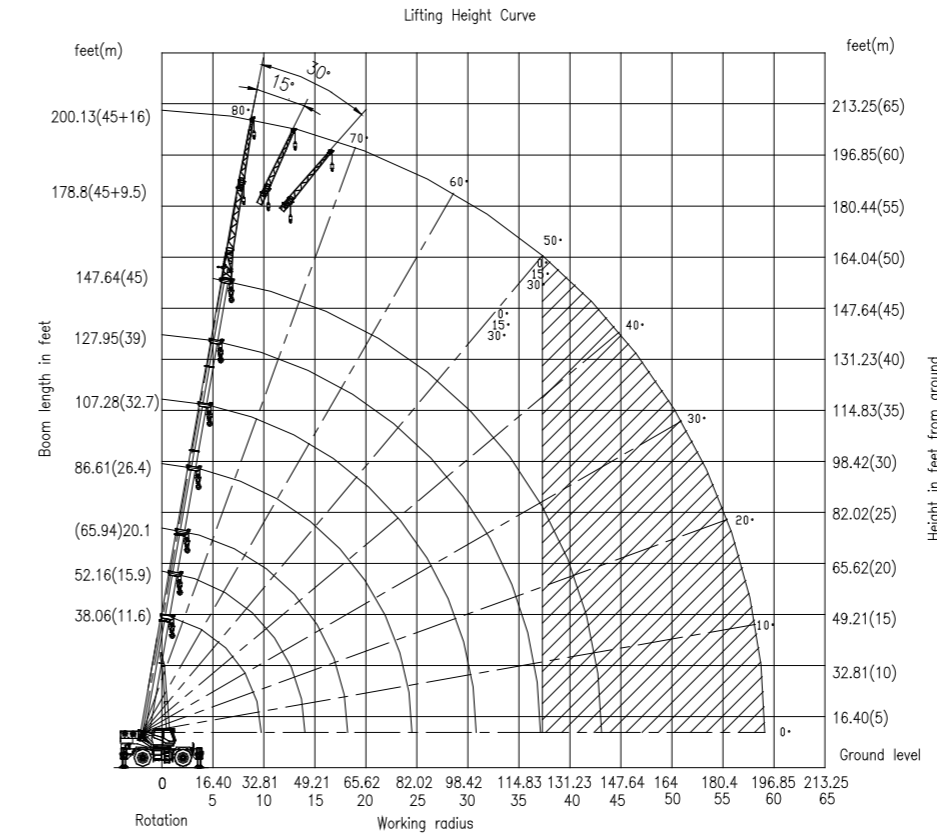
MAIN BOOM + 16 M JIB

360° (UNIT: KG)

OUTRIGGERS FULLY EXTENDED

BOOM ANGLE (°)	Outriggers fully extended, 10.5 t counterweight		
	0°	15°	30°
80	3000	2000	1400
78	3000	2000	1400
76	2900	1800	1300
74	2700	1700	1300
72	2500	1600	1200
70	2300	1500	1200
68	2100	1400	1100
66	2000	1300	1100
64	1900	1300	1100
62	1800	1200	1000
60	1700	1200	1000
58	1400	1100	1000
56	1200	1100	900
54	1000	900	800
52	800	700	650
50	650	600	550
Reeving	1		
Hook	5.5t		

LIFTING HEIGHT CURVE



NOTES

- a) Crane load ratings are based on the crane being leveled and standing on a firm and uniform supporting surface.
- b) Crane load ratings on outriggers are based on all outrigger beams being positioned according to the applicable lift chart and the tires raised free of the supporting surface.
- c) CRANE LOAD RATINGS MUST NOT BE EXCEEDED. DO NOT ATTEMPT TO TIP THE CRANE TO DETERMINE ALLOWABLE LOADS.
- d) Lift the load vertically. Do not pull the load at an angle.
- e) When either radius or boom length, or both, are between listed values, the smaller of the two listed load ratings shall be used.
- f) Do not operate at longer radii than those listed on the applicable lift chart (cross hatched areas shown on range diagrams) as tipping can occur without a load on the hook.
- g) The boom angles shown on the lift charts give an approximation of the operating radius for a specified boom length. The boom angle, before loading, should be greater to account for boom deflection.
- h) Rated loads include the weight of hook block, slings, and auxiliary lifting devices. Their weights shall be subtracted from the listed rated load to obtain the net load that can be lifted.
- i) Consult appropriate section of the Operator's Manual for more exact description of hoist line reeving.
- j) Properly maintained wire rope is essential for safe crane operation. Consult the Operator's Manual and Maintenance Manual for proper maintenance and inspection requirements.
- k) When the rotation-resistant wire rope is used, the allowable rope loading shall be the breaking strength divided by five (5), unless otherwise specified by the wire rope manufacturer.
- l) The user shall operate at reduced ratings to allow for adverse job conditions, such as: soft or uneven ground, out of level conditions, high winds, side loads, pendulum action, jerking or sudden stopping of loads, hazardous conditions, experience of personnel, two-machine lifts, traveling with loads, electric wires, etc, (side pull on boom or jib is hazardous). If the wind speed is higher than the maximum permissible value (45 ft/s (13.8 m/s), grade 6) or it is fulminous during crane operation, stop the work, fully retract the boom and correctly stow the boom.
- m) Load ratings are dependent upon the crane being maintained according to the Operator's Manual and Maintenance Manual.

TECHNICAL DESCRIPTION



Engine

Engine type---- DF CUMmins QSB 6.7
Rated power---- 194KW/2200RPM
Oil tank capacity-----300L
Exhaust emissions: Non-road Emission Standard III



MAIN BOOM

The box-shaped main boom consists of 5 U-type boom sections made of high-strength steel. The main boom head is equipped with 6 sheaves, which is convenient for changing reeving factors without removing the wedges. The rooster sheave and a dismountable pulley block are included in the standard configuration.
Min. main boom length (with telescopic sections completely retracted): 11600 mm
Max. main boom length (with telescopic sections completely extended): 45000 mm
Min. telescoping out time: about 95 s
Derrick angle and speed: -2° - 80° / 45 s



JIB

It consists of two jib sections of lattice structure. The jib section II is secured into the jib section I, and can be extended outward from one side of the section I. The whole jib is side stowed with the main boom via moveable pins during driving.
A sheave is assembled at the jib head.
Offset: 0° , 15° and 30°
Jib length: 9.5m, 16 m



MAIN AND AUXILIARY WINCHES

The main and auxiliary winches are equipped with the same spare parts.
Max. hoist rope strength: 5600 kg
Max. hoist rope speed: 130 m/min (At the 4th layer)
Rope diameter: 17 mm
Main winch rope length: 210 m

TECHNICAL DESCRIPTION



MAIN HOOK

Rotatable main hook: 60 t, with 6 sheaves and hook latch, secured at the chassis frame in front of the slewing table.
Rotatable auxiliary hook: 5.5 ton, with hook latch, used with the rooster sheave and jib, secured at the auxiliary hook holder on the chassis frame.



SLEWING MACHENISM

It consists of a hydraulic motor, planetary gear reducer, a pinion gear and a slewing bearing, etc. Via the planetary gear reducer, the hydraulic motor drives the pinion gear to rotate and makes the slewing bearing outer ring rotate around its inner toothed ring fixed on chassis frame, providing superstructure with 360° unlimited slewing.
Hydraulically controlled usually-closed brake, capable of free slewing function, and installed with a slewing lockout device.
Swing speed: 0 – 2.2 r/min.



HYDRAULIC SYSTEM

The dual variable plunger pumps supply oil to the telescoping, derricking and hoist mechanisms.
A gear pump supplies oil to the outrigger, braking system, oil radiator of the torque converter and air conditioner.
Another gear pump mounted on the engine supplies oil to the slewing, steering system.
Hydraulic oil tank capacity: 850 L



OPERATOR CAB

The cab is side-mounted and adopts left-hand drive. A single seat is installed inside the cab. There are two control boxes on the both sides of operator's seat. The left / right control box can be pulled up. The controls of the superstructure are arranged according to the requirements of ASME B30.5-2007 standard and comply with ISO (International Organization for Standardization) standard.
Length: 1810 ± 5 mm
Width: 1050 ± 5 mm
Height: 1710 ± 5 mm

TECHNICAL DESCRIPTION

OUTRIGGER SYSTEM

4 H-type outriggers, hydraulically controlled, can be operated in the cab simultaneously or independently.

Each vertical jack cylinder is equipped with a two-way hydraulic lock to ensure that outriggers are secured reliably during working or driving.

Outrigger boxes are directly welded onto the chassis frame.

The outriggers can be completely extended, intermediately extended or completely retracted for different crane operations.

Outrigger spread (L): 7380 mm

Outrigger spread (W): 7400 mm (fully extended)
5200 mm (half extended)
2860 mm (fully retracted)

AXLES

Front axle: A rigidly connected steering and driving axle, installed with a planetary reducer and a brake.

Rear axle: A full-floating steering and driving axle, installed with a planetary reducer and a brake.

STEERING

Fully-hydraulic power steering gear, The cylinder of steering and driving axle is controlled by the steering wheel to realize crane steering.

4 steering modes:

2-wheel steering – front wheel steering

2-wheel steering – rear wheel steering

4-wheel steering – all-wheel steering

4-wheel steering – crab steering

BRAKES

Service brake: Hydraulically controlled disc brake on 4 wheels

Parking brake: Hydraulically released parking brake, under the action of the spring mounted on the input shaft of front axle.

ELECTRIC SYSTEM

2 batteries with 12 V rated voltage and 120 Ah rated current

SAFETY DEVICE

Rated capacity indicator (RCI)	Hydraulic safety valve
Rotating beacon and horn	Swing brake
Hoisting limit switch	Swing lockout device
Lower limit switch	Boom angle indicator
Balance valve	Outrigger beam retaining pin
Hydraulic lock	Emergency stop button

SUSPENSION SYSTEM

Front axle: rigidly mounted to the chassis frame

Rear axle: oscillation axle, connecting to chassis frame via a hydraulic suspension cylinder

COUNTERWEIGHT

Counterweights: 7800kg (17196lbs)

Length.....3000mm

Width.....1447mm

Height..... 450mm

TECHNICAL PARAMETERS

Type	Item	Value	
Working performance	Max. rated lifting capacity × working radius	kg.m	60000×3
	Max. load moment of main boom	kN.m	2116.8
	Max. lifting height of main boom (fully extended)	m	45.1
	Max. lifting height of jib	m	61.2
Dimensions	Overall dimensions (L × W × H)	mm	14100×3300×3890
	Outrigger spread(Height × Width)	mm	7380×7400
	Main boom length	mm	11600-45000
	Jib length	mm	9500 ,16000
	Boom angle	°	-2-80
	Slewing range		360°
Working speeds	Max. hoist rope speed (Main winch)	m/min	130 (4 th layer)
	Min. boom telescoping out time	s	95
	Min. boom telescoping in time	s	110
	Min. boom derricking up time	s	45
	Min. boom derricking down time	s	125
	Slewing speed	r/min	0-2.2
	Hydraulic oil tank capacity	L	850
Gross vehicle mass	Gross weight	kg	45000
	Front weight	kg	25000
	Rear weight	kg	20000
Driving	Highest driving speed (forward/backward)	km/h	40/37
	Wheelbase	mm	3950
	Treads(Front / Rear)	mm	2605
	Max. gradeability	%	75