ZOOMLION
ROUGH TERRAIN CRANE
ZRT700V532



ZOOMLION

PAMPA MAQUINARIAS S.A.

CONTENTS

HIGHLIGHTS 2

DEMENSIONS 2

WEIGHTS 3

LIFTING HEIGHT CURVE/LIFTING CAPACITY TABLES 3-7

NOTE 5-8

TECHNICAL DESCRIPTION 8-9

TECHNICAL PARAMETER 10

MAINPARTSTABLE 11

HIGHLIGHTS

Strong lifting performance

· The 45m main boom of U-shape cross section achieves stronger rated lifting capacity; Withtotal 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%.

Superior reliability and durability

· Golden power train: Cummins engine + ZF (Germany) transmission +Xuzhou Meritor/Kessler (Germany) axles, together with modular design and integrated main value, make it durable and reliable, easy to maintenance.

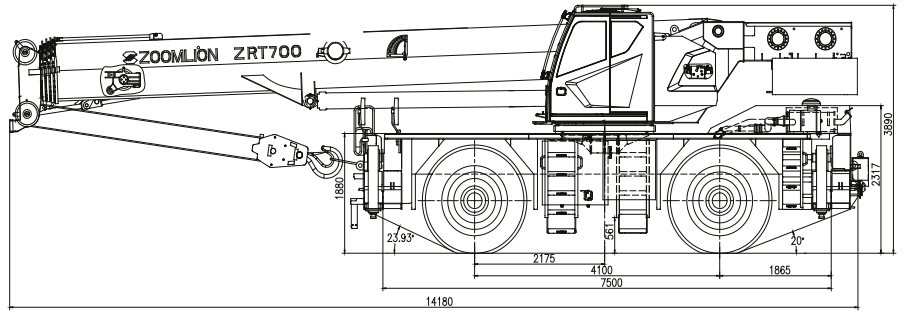
· The crane has passed reliability tests conducted in regions such as plateaus, deserts, mountains and hills, etc.

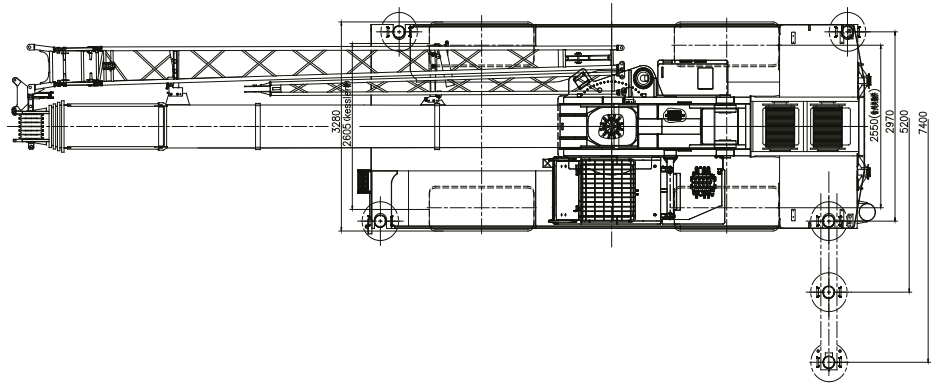
Great comfort and beautiful contour

· 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 cab can be tilted backward, thus reducing operational fatigue.

· The 12-inch large display and spatial arrangements of instruments in an ergonomic way enhance the operator's operational comfort.

DEMENSIONS





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	1	122	Standard

Axle load

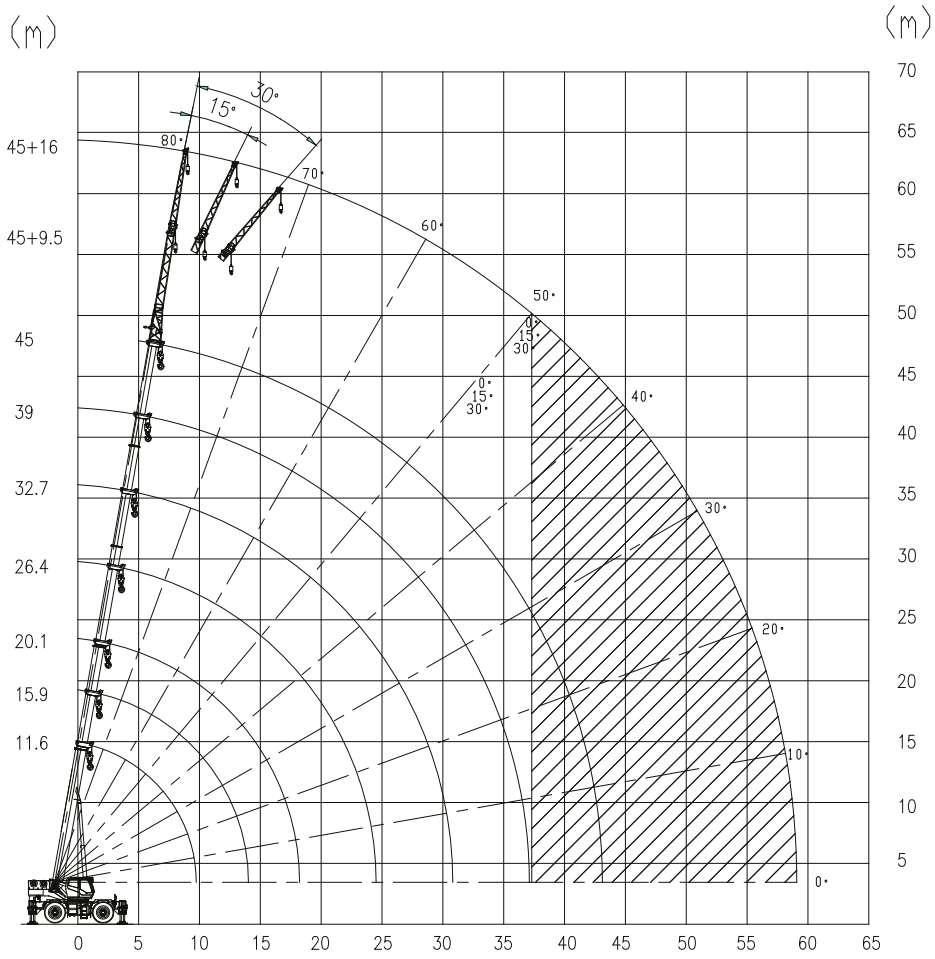
Shaft	Front axle	Rear axle	Total weight
Axle load/t	23.44	20.86	44.3
Note	Xuzhou Meritor/Kessler (Germany)		

Working speeds

	km/h min. MIN.	km/h max. MAX.		
26.5-25	0-1.44	40	75	6/R3

Drive	Operation Speed	Rope diameter/length	Max. single line pull
①	150m/min	Φ17mm/210m	5200kg
②	150m/min	Φ17mm/130m	5200kg
360	0～2.5r/min		
	45/75s		
	110s /100s		

LIFTING HEIGHT CURVE



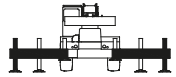
LIFTING CAPACITY TABLES

Rated capacity chart with boom only on outriggers fully extended



BOOM

360°
(UNIT: Kg)



OUTRIGGERS FULLY EXTENDED

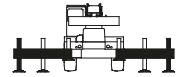
Working radius (m)	TELESCOPIC CYLINDER I FULLY EXTENDED, outriggers fully extended, 7.8t counterweight						
	11.6	15.9	20.1	26.4	32.7	39.0	45.0
2.5	70000*						
3.0	60000	46000	36000				
3.5	59000	46000	36000				
4.0	56000	46000	36000				
4.5	53000	44000	34000	27000			
5.0	47000	42000	33500	27000			
5.5	42000	40000	32500	27000			
6.0	37500	36500	32000	26000	19800		
6.5	35000	34300	30600	25000	19800		
7.0	30500	31000	29500	24000	19800		
7.5	29200	29000	27500	23000	19000		
8.0	26700	26500	26000	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	11000	11800	12200	11500	9200
14.0			7700	8800	9200	9600	8400
16.0			5500	6700	7100	7500	7600
18.0				5100	5600	6000	6200
20.0				3900	4400	4800	5000
22.0					3500	3800	4100
24.0					2750	3100	3400
26.0					2150	2400	2700
28.0						1900	2150
30.0						1500	1750
32.0						1100	1350
34.0							1050
36.0							750
I (m)	0	4.3	8.5	8.5	8.5	8.5	8.5
II (m)	0	0	0	6.3	12.6	18.9	24.9
Reeving	12	10	8	6	4	4	3
Hook	60t						

Rated capacity chart with boom only on outriggers fully extended



BOOM

360°
(UNIT: Kg)



OUTRIGGERS FULLY EXTENDED

Working radius (m)	TELESCOPIC CYLINDER I INTERMEDIATELY EXTENDED, outriggers fully extended, 7.8t counterweight					
	11.6	15.9	22.2	28.5	34.8	40.8
2.5	70000*					
3.0	60000	46000				
3.5	59000	46000	27000			
4.0	56000	46000	27000			
4.5	53000	44000	27000			
5.0	47000	42000	27000	24000		
5.5	42000	40000	27000	24000		
6.0	37500	36500	27000	24000		
6.5	35000	34300	27000	24000	16500	
7.0	30500	31000	27000	23000	16500	
7.5	29200	29000	26000	22000	16000	
8.0	26700	26500	25000	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 (m)	0	4.3	4.3	4.3	4.3	4.3
II (m)	0	0	6.3	12.6	18.9	24.9
Reeving	12	10	6	5	4	3
Hook	60t					

LIFTING CAPACITY TABLES

Rated capacity chart with boom only on outriggers fully extended



BOOM

360°
(UNIT: Kg)



OUTRIGGERS FULLY EXTENDED

Working radius (m)	TELESCOPIC CYLINDER I FULLY RETRACTED, outriggers fully extended, 7.8t counterweight				
	11.6	17.9	24.2	30.5	36.5
2.5	70000*				
3.0	60000	27000			
3.5	59000	27000			
4.0	56000	27000	24000		
4.5	53000	27000	24000		
5.0	47000	27000	24000		
5.5	42000	27000	23200	18600	
6.0	37500	27000	22500	17900	
6.5	35000	27000	21700	17200	
7.0	30500	27000	21000	16500	11500
7.5	28500	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
32.0					
34.0					
I (m)	0	0	0	0	0
II (m)	0	6.3	12.6	18.9	24.9
Reeving	12	6	5	4	3
Hook	60t				

NOTE

a)For Oms marked with *, they are for 360-degree working range; a 70 t hook should be used, and the reeving factor should be 14. An additional device should be installed.
b)Crane load ratings are based on the crane being leveled and standing on a firm and uniform supporting surface.
c)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.
d)CRANE LOAD RATINGS MUST NOT BE EXCEEDED. DO NOT ATTEMPT TO TIP THE CRANE TO DETERMINE ALLOWABLE LOADS.
e)Lift the load vertically. Do not pull the load at an angle.
f)When either radius or boom length, or both, are between listed values, the smaller of the two listed load ratings shall be used.
g)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.
h)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.
i)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.
j)Consult appropriate section of the Operator's Manual for more exact description of hoist line reeving.
k)Properly maintained wire rope is essential for safe crane operation. Consult the Operator's Manual and Maintenance Manual for proper maintenance and inspection requirements.
l)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.
m)When an anti-twist wire rope is used, unless otherwise specified, the permissible load of the wire rope should be a fifth of the tensile strength.
n)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 off 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.
o)Load ratings are dependent upon the crane being maintained according to the Operator's Manual and Maintenance Manual.

LIFTING CAPACITY TABLES

Rated capacity chart with boom + 9.5 m jib on outriggers fully extended



BOOM +9.5m JIB

360°
(UNIT: Kg)



OUTRIGGERS FULLY EXTENDED

Boom angle (°)	Outriggers fully extended, 7.8t 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
Reeving	1		
Hook	5.5t		

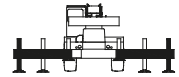
LIFTING CAPACITY TABLES

Rated capacity chart with boom + 16 m jib on outriggers fully extended



BOOM +16m JIB

360°
(UNIT: Kg)



OUTRIGGERS FULLY EXTENDED

Boom angle (°)	Outriggers fully extended, 7.8t 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		

NOTE

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 off 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.

LIFTS ON TIRES

Rated capacity chart for lift on tires

Boom length (m)	11.6		15.9		20.1		26.4	
Working radius (m)	360°	Travel with load over front	360°	Travel with load over front	360°	Travel with load over front	360°	Travel with load over front
3.0	21000	21000	20000	18000	20000			
3.5	20000	20000	19500	18000	19000	16000		
4.0	17500	18000	17000	17000	16500	15500	17000	
4.5	14500	16500	14000	16500	13500	15000	14300	11000
5.0	12500	14500	12000	14500	11500	14500	12300	11000
5.5	10800	13500	10000	13500	9500	13200	10500	11000
6	9400	12000	9000	11800	8800	11500	9200	11000
6.5	8000	10500	7600	10200	7400	10000	8100	10500
7	7000	9200	6600	9000	6300	8800	7100	9500
7.5	6000	8100	5600	8000	5300	7700	6200	8500
8	5300	7100	4800	7000	4500	6700	5400	7500
9			3500	5300	3200	5100	4100	5900
10			2500	4100	2200	3900	3200	4600
11			1600	3200	1400	3000	2400	3700
12			1000	2400	800	2200	1700	2900
14						1000		1800
16								1000
I (m)	0		4.3		8.5		8.5	
II (m)	0		0		0		6.3	
Reeving	12		10		8		6	
Hook	60t							

Note: 360° in the above chart is for the crane to stand still.

NOTE

a)Crane load ratings are based on the crane being leveled and standing on a firm and uniform supporting surface.
b)CRANE LOAD RATINGS MUST NOT BE EXCEEDED. DO NOT ATTEMPT TO TIP THE CRANE TO DETERMINE ALLOWABLE LOADS.
c)Lift the load vertically. Do not pull the load at an angle.
d)When either radius or boom length, or both, are between listed values, the smaller of the two listed load ratings shall be used.
e)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.
f)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.
g)Crane load ratings on tires depend on appropriate inflation pressure and tire condition. Caution must be exercised when increasing air pressures in tires. Consult the Operator's Manual for precautions.
h)Use of jib is not permitted for pick-and-carry operations.
i)For pick-and-carry operations, the boom must be centered over the front of the crane with the swing brake lock engaged. Use minimum boom point height and keep the load close to the ground surface. Travel must be on smooth level surface.
j)The load should be restrained from swinging.
k)Creep speed is crane movement of less than 200 ft (61 m) in 30-minutes period and not exceeding 1 mph (1.6 km/h).
l)Consult appropriate section of the Operator's Manual for more exact description of hoist line reeving.
m)The use of more parts of line than required by the load may result in having insufficient rope to allow the hook block to reach the ground. Choose the correct line parts to get a rope in the proper length. Refer to Table 1.1.
n)Properly maintained wire rope is essential for safe crane operation. Consult the Operator's Manual and Maintenance Manual for proper maintenance and inspection requirements.
o)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.
p)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 off 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.

q)Load ratings are dependent upon the crane being maintained according to the Operator's Manual and Maintenance Manual.

TECHNICAL SPECIFICATIONS

Superstructure

Boom and telescoping mechanism

- The box-shaped boom consists of 5 U-type boom sections made of high-strength steel.
- Min. boom length (with telescopic sections completely retracted): 11600m.
- Max. boom length (with telescopic sections completely extended): 45000 mm.
- Min. telescoping out time: about 110s.

Jib

- Jib angle: 0°, 15° and 30° .
- Jib length: 9.5m – 16 m.

Derricking mechanism

- Rear-mounted single derricking cylinder with derricking balance valve.
- Derrick angle: -2°- 80°.
- Derrick speed: -2°- 80°/45s.

Hoist mechanism

- Main and auxiliary winches

Main and auxiliary winches are equipped with the same spare parts, including Variable-displacement hydraulic motor with axial plunger and planetary reducer. The hydraulic motor drives the winch with a planetary reducer. When the winch turns (rotates), the wire rope reels off or spools on to the winch.

- Wire rope

High strength wire rope is used; twist resistant wire ropes are optional.

Max. hoist rope strength: 5200kg.
Max. hoist rope speed: 150 m/min (At the 4th layer).
Rope diameter: Φ17mm.
Main winch rope length: 210m.
Auxiliary winch rope length: 130 m.

- Hook block

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

TECHNICAL SPECIFICATIONS

Superstructure

Slewing mechanism

- It consists of hydraulic motor, planetary gear reducer, pinion gear and swing bearing etc.
- Slewing speed: 0 - 2.5 r/min.

Slewing platform

- The slewing platform adopts a wall structure.

Hydraulic system

- Capacity: about 800L
- A return oil filter is installedin the tank. It can eliminate bubbles inside the tank and is of a filtration accuracy of 12μm.

Crane controls

- The superstructure movements are controlled by two hydraulically controlled joysticks on both sides of operator's seat (comply with ISO standard requirements).
- The left joystick controls the swing and auxiliary winch movements .
- The right joystick controls the derricking and main winch movements.
- The hoist mechanism can carry out the derricking or telescoping movement simultaneously.

Cab

- Cab dimensions:
- Length: 1810 ± 5 mm.
- Width: 1050 ± 5 mm.
- Height: 1710 ± 5 mm.

Rated capacity indicator (RCI)

- If the actual load approaches the rated one, the buzzer sends out visual and audible warning.
- If the actual load reaches the rated one, all dangerous movements are switched off automatically.
- The rated capacity indicator also can limit the working range (including working radius, boom angle, lifting height and swing range etc.).

Outriggers

- H-type outriggers, hydraulically controlled, can be operated in the cab simultaneously or independently.
- The outriggers can be completely extended, intermediately extended or completely retracted for crane operation.
- Outrigger spread (Height): 7500 mm.
- Outrigger spread (Width): 7400 mm (fully extended).
  5200 mm (half extended).
  2970 mm (fully retracted).

Chassis

Type

- Rear mounted engine.
- Drive mode: 4 x 2 and 4 x 4.

Chassis frame

- Integral box-type construction welded by high-strength steel.

Engine

- CUMMINS QSB6.7
- Max. output power: Dongfeng Cummins: 194 KW / 2200 RPM.
  Cummins US: 194 KW / 2400 RPM.
- Max. output torque: 990 Nm / 1500 RPM.

Drive system

- Electrically controlled automatic hydraulic transmission, with transfer case.
- 6 forwards and 3 reverse speeds, electro-hydraulic power shift, and automatic locking mechanism.
- Working hydraulic oil pump and steering oil pump directly take off power from the transmission.

Axles

- Front axle: Steering and driving axle, rigidly mounted to chassis frame, with planetary reducer and brake.
- Rear axle: Full-floating steering and driving axle, with planetary reducer and brake.

Steering system

- 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.

Suspension system

- Front axle: rigidly mounted to chassis frame .
- Rear axle: oscillation axle, connecting to chassis frame via hydraulic suspension cylinder.

Brake system

- Service brake:Hydraulically controlled disc brake on 4 wheels .
- Parking brake:Hydraulic released parking brake, under the action of the spring mounted on the input shaft of front axle.

Electrical system

- 24 Volt DC.
- 2 batteries with 12 V rated voltage and 120 Ah rated current.

Fuel tank

- Capacity: 300 L.

Tire

- Size: 26.5-25.

TECHNICAL PARAMETERS

Type	Item		Value
Working performance	Max. rated lifting capacity × working radius	kg.m	70000×2.5
	Max. load moment of boom	kN.m	2337
	Max. load moment of boom (fully extended)	kN.m	1191
	Max. lifting height of boom (fully extended)	m	45.3
	Max. lifting height of jib	m	61.4
Dimensions	Overall dimensions (L × W × H)	mm	14180×3300×3890
	Outrigger spread(Height × Width)	mm	7500×7400
	Boom length (fully retracted – fully extended)	mm	11600-45000
	Jib length (fully retracted – fully extended)	mm	9500, 16000
	Boom angle	°	-2-80
	Swing range		360° unlimited swing (Full range)
Working speeds	Max. hoist rope speed (Main winch)	m/min	150
	Min. boom telescoping out time	s	110
	Min. boom telescoping in time	s	100
	Min. boom derricking up time	s	45
	Min. boom derricking down time	s	75
	Swing speed	r/min	0-2.5
Hydraulic system	Maximum working pressure	MPa	28
	Rate working flow	L/min	280
	Hydraulic oil tank capacity	L	800
Gross vehicle mass	Gross weight	kg	44300
	Front weight	kg	23440
	Rear weight	kg	20860
Driving	Max. driving speed	km/h	40/40
	Wheelbase	mm	4100
	Treads(Front / Rear)	mm	2550 (Meritor axles) /2605(KESSLER axles)
	Max. gradeability	%	75

MAINPARTSTABLE

Type	Item		Main configuration
Power system	Engine make & model		Cummins QSB6.7
	Fuel type		Diesel
	Intake system		Turbo-charged, air to air, inter-cooling
	Cooling system		Water-cooling
	Engine rated power	KW/r/min	194KW/2200rpm (Dongfeng Cummins)/194KW/2400rpm (Cummins US)
	Engine rated torque	N.m/r/min	990N.m/1500rpm
	Fuel tank capacity		300 L
Drive system	Transmission drive mode		4×2, 4×4
	Model or brand of transmission		ZF (Germany)
	Transmission gear stage		6 forward and 3 reverse speeds
Travel system	Suspension		Rigid (front) / Flexible (rear)
	Model or brand of axles		Xuzhou Meritor/Kessler (Germany)
	Steering mode		2-wheel steering (front wheel) 2-wheel steering (rear wheel) 4-wheel steering Crab steering
	Tire size		26.5-25
	Tire number		4
Hydraulic system	Model or brand of main valve		ZOOMLION
	Gear pump		Liyuan/Hi-Tech/Hengli
	Balance valve / hydraulic lock		NEM (Italy)/ZOOMLION
	Swing motor		HIGH-TECH/Liyuan (China)
Electrical system	Rated capacity indicator		ZOOMLION /HIRSCHMANN (Germany)
	Controller		ZOOMLION /HIRSCHMANN (Germany)
Emission			America TIII

VISIÓN QUE CREA FUTURO

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