

# ZOOMLION ROUGH TERRAIN CRANE ZRT1100V552



**ZOOMLION**

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website:en.zoomlion.com 2024.01.09

**ZOOMLION**

**4.0**  
PRODUCTS



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## PRODUCT INTRODUCTION

ZRT1100V552 rough terrain crane is adapted to narrow work space through its wide tread, high stability, short wheelbase and small turning radius.

It provides a 360° slewing function, 'on-tires' lifts and pick-and-carry operations.

It can be widely used in construction building sites, oil fields, warehouses, freight yards and logistics bases etc., to carry out lifting work, short distance transportation and pick-and-carry operations in narrow working areas.

ZRT1100V552 rough terrain crane consists of a superstructure and a special purpose chassis, including a power system, drive system, suspension system, steering system, braking system, hoist mechanism, derricking mechanism, slewing mechanism, boom system, turntable, chassis frame, outrigger, hydraulic system, electric system and cab etc.

Its distinguishing characteristics include:

Four steering modes:

2-wheel steering (front wheels), 2-wheel steering (rear wheels), 4-wheel steering and crab steering.

Max. rated lifting capacity: 110 ton at 2.5 m working radius.

Max. lifting height: 66.1m.

Max. driving speed: 37 km/h.

Overall dimensions: 15130 mm x 3400 mm x 3970mm.

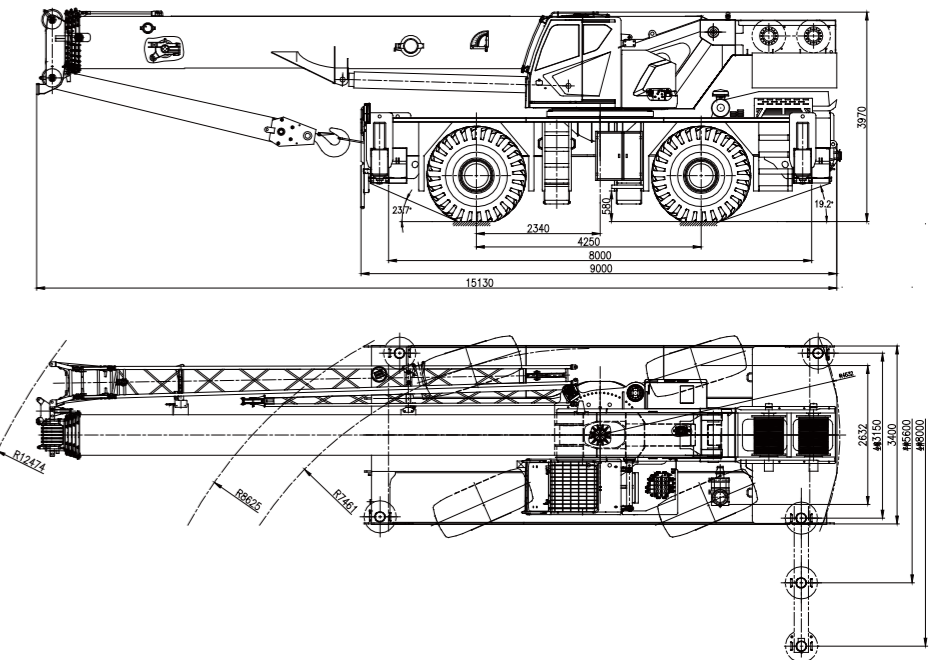
Deadweight: 55.8 tons.

Ability to pick-and carry loads.

Ability to travel on rough terrains .

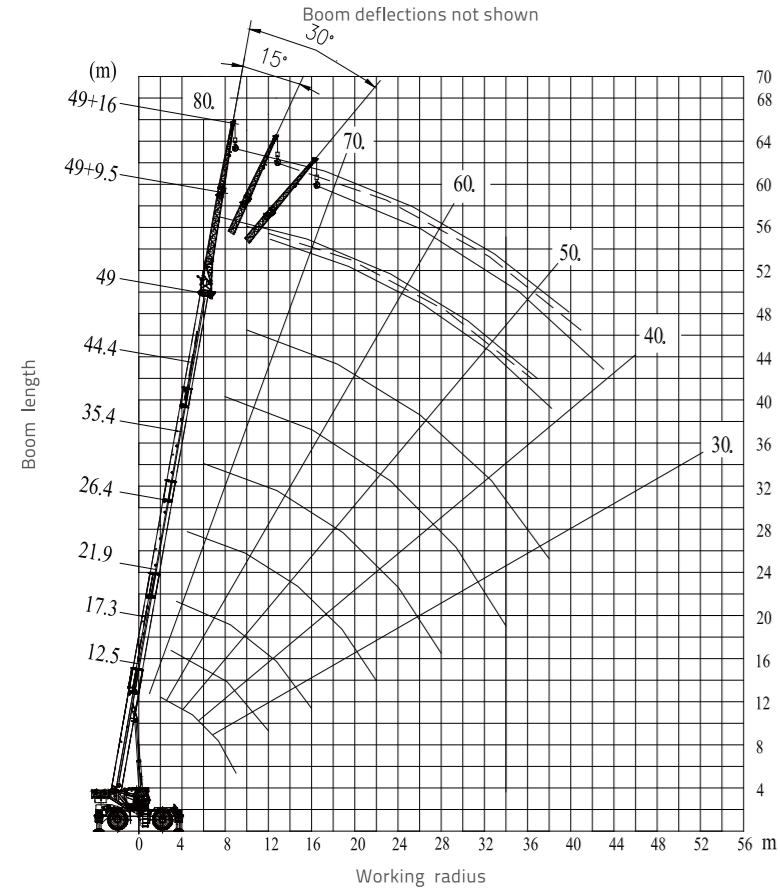
## DIMENSIONS

Unit: mm




# LIFTING HEIGHT CURVE

LIFTING HEIGHT CHART ON OUTRIGGERS FULLY EXTENDED WITH JIB INSTALLED



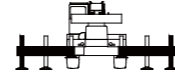
# LIFTING CAPACITY TABLES

RATED CAPACITY CHART WITH BOOM ON OUTRIGGERS FULLY EXTENDED



BOOM

360° slewing  
(UNIT: KG)




OUTRIGGERS FULLY EXTENDED

Working radius (m)	TELESCOPIC CYLINDER I FULLY EXTENDED, outriggers fully extended, 12t counterweight								
	12.5	17.1	21.7	26.2	30.7	35.2	39.7	44.2	49.0
2.5	110000*								
3.0	100000*	66000							
3.5	85000*	66000							
4.0	78000*	66000	50000						
4.5	72000*	63000	48000	32000					
5.0	68000	59000	46000	32000					
5.5	60000	54000	43000	32000	30000				
6.0	54300	51000	40500	32000	30000	26000			
7.0	45500	44000	36500	32000	29000	26000			
8.0	39000	38000	33000	29000	27000	25000	21000		
9.0	30000	29500	29000	26500	25000	22500	19700	16500	
10.0		23500	23600	24600	23000	20600	18200	16000	12400
11.0		19500	19300	20500	21000	18600	17000	15000	12200
12.0		16300	16200	17200	18000	17600	15800	14200	12000
14.0			11700	12600	13300	14000	13500	12500	11500
16.0			8800	9600	10300	10800	11300	11000	10400
18.0			6600	7500	8100	8600	9000	9400	9400
20.0				5900	6500	7000	7300	7700	8200
22.0				4600	5200	5800	6100	6300	6700
24.0					4200	4700	5000	5200	5500
26.0					3300	3800	4100	4400	4700
28.0						3100	3400	3700	3900
30.0						2500	2800	3100	3300
32.0						1900	2300	2600	2800
34.0							1800	2100	2300
36.0								1700	1900
38.0								1300	1600
40.0									1200
I	0	4.6	9.2	9.2	9.2	9.2	9.2	9.2	9.2
II	0	0	0	4.5	9.0	13.5	18.0	22.5	27.3
Reeving	12	12	8	6	5	4	4	3	3
Hook									70t

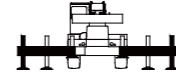
# LIFTING CAPACITY TABLES

RATED CAPACITY CHART WITH BOOM ON OUTRIGGERS FULLY EXTENDED



BOOM


360° slewing  
(UNIT: KG)



OUTRIGGERS FULLY EXTENDED


Working radius (m)	TELESCOPIC CYLINDER I INTERMEDIATELY EXTENDED, outriggers fully extended, 12t counterweight							
	12.5	17.1	21.6	26.1	30.6	35.1	39.6	44.4
2.5	110000*							
3.0	100000*	66000						
3.5	85000*	66000	32000					
4.0	78000*	66000	32000	30000				
4.5	72000*	63000	32000	30000				
5.0	68000	59000	32000	30000	27000			
5.5	60000	54000	32000	30000	27000			
6.0	54300	51000	32000	30000	27000			
7.0	45500	44000	32000	30000	27000	22000		
8.0	39000	38000	30000	30000	27000	21000	17000	
9.0	30000	29500	29000	27000	27000	20000	16500	13500
10.0		23500	24500	24500	25000	19000	16000	13000
11.0		19500	20500	21000	21500	17500	15000	12500
12.0		16300	17500	18000	18500	16500	14000	12000
14.0			13000	13600	14000	14000	12300	11000
16.0			10000	10600	11000	11800	10800	9700
18.0				8500	9000	9500	9500	8600
20.0				6800	7300	7800	8000	7600
22.0					5500	6000	6400	6700
24.0						4900	5300	5800
26.0						4000	4400	4700
28.0							3700	4000
30.0							3100	3400
32.0								2900
34.0								2400
36.0								
38.0								1800
I	0	4.6	4.6	4.6	4.6	4.6	4.6	4.6
II	0	0	4.5	9.0	13.5	18.0	22.5	27.3
Reeving	12	12	6	6	5	4	3	3
Hook								70t

RATED CAPACITY CHART WITH BOOM ON OUTRIGGERS FULLY EXTENDED



BOOM

360° slewing  
(UNIT: KG)




OUTRIGGERS FULLY EXTENDED

Working radius (m)	TELESCOPIC CYLINDER I FULLY RETRACTED, outriggers fully extended, 12t counterweight						
	12.5	17.0	21.5	26.0	30.5	35.0	39.8
2.5	110000*						
3.0	100000*	32000					
3.5	85000*	32000	30000				
4.0	78000*	32000	30000				
4.5	72000*	32000	30000	27000			
5.0	68000	32000	30000	27000	22000		
5.5	60000	32000	30000	27000	22000		
6.0	54300	32000	30000	27000	21000		
7.0	45500	32000	30000	27000	20000	17000	
8.0	39000	31000	30000	26000	19000	16500	14000
9.0	30000	29000	28000	24000	18000	16000	13500
10.0		24500	25000	22000	16500	15000	13000
11.0		20500	21000	20500	15200	14000	12500
12.0		17500	18000	19000	14200	13000	11500
14.0			14000	14500	12000	11000	10000
16.0			11000	11600	10500	9600	9000
18.0			8800	9500	9500	8600	8000
20.0				7900	8200	7800	7100
22.0				6500	6900	6900	6400
24.0					5800	6000	5800
26.0					4900	5200	5200
28.0						4400	4600
30.0						3800	4000
32.0							3500
34.0							3000
36.0							
38.0							
I	0	0	0	0	0	0	0
II	0	4.5	9.0	13.5	18.0	22.5	27.3
Reeving	12	12	6	5	4	3	3
Hook							70t

# LIFTING CAPACITY TABLES

RATED CAPACITY CHART WITH BOOM + 9.5M JIB ON OUTRIGGERS FULLY EXTENDED




360° slewing (UNIT: KG)

BOOM+9.5M JIB

OUTRIGGERS FULLY EXTENDED

Boom angle (°)	Outriggers fully extended, 12t counterweight		
	0°	15°	30°
80	5000	3500	2500
78	5000	3500	2500
76	5000	3300	2500
74	4800	3300	2500
72	4300	3100	2500
70	4000	3000	2400
68	3800	3000	2300
66	3600	2900	2200
64	3300	2700	2100
62	3000	2500	2050
60	2700	2400	2000
58	2500	2300	1950
56	2200	2000	1800
54	1900	1800	1700
52	1600	1550	1500
50	1400	1300	1300
48	1200	1100	
46			
Reeving	1		
Hook	6.5t		

RATED CAPACITY CHART WITH BOOM + 16M JIB ON OUTRIGGERS FULLY EXTENDED



360° slewing (UNIT: KG)

BOOM+16M JIB

OUTRIGGERS FULLY EXTENDED

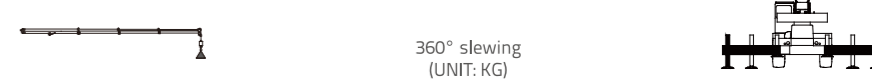
Boom angle (°)	Outriggers fully extended, 12t counterweight		
	0°	15°	30°
80	3000	2000	1500
78	3000	2000	1500
76	2800	1900	1450
74	2600	1850	1400
72	2400	1800	1350
70	2300	1700	1300
68	2100	1600	1250
66	2000	1600	1200
64	1900	1500	1200
62	1800	1500	1150
60	1700	1400	1150
58	1600	1400	1100
56	1500	1300	1100
54	1450	1250	1050
52	1350	1200	1050
50	1200	1100	1000
48			
Reeving	1		
Hook	6.5t		

# NOTES

- a) A 110t hook should be used for OMs marked with \*, and 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) The rated loads on outriggers are based on outriggers fully or intermediately extended/retracted, and the tires should be supported off ground.
- 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) 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) 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.
- 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) 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.
- n) 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 ON OUTRIGGERS INTERMEDIATELY EXTENDED



360° slewing (UNIT: KG)


BOOM

OUTRIGGERS INTERMEDIATELY EXTENDED

Working radius (m)	TELESCOPIC CYLINDER I FULLY EXTENDED, outriggers intermediately extended, 12t counterweight									
	12,5	17,1	21,7	26,2	30,7	35,2	39,7	44,2	49,0	
2.5	95000*									
3.0	85000*	66000								
3.5	78000*	66000	49000							
4.0	72000*	66000	48000							
4.5	66000	63000	46000	32000						
5.0	56000	54500	44000	32000						
5.5	45000	45000	41500	32000	30000					
6.0	37000	37500	37000	32000	30000					
7.0	27000	27000	27000	26000	27000	25500				
8.0	20800	21000	20500	21000	22000	22500	20500			
9.0	16600	16500	16300	17000	17500	18500	19000	16500		
10.0		13500	13000	14000	14600	15200	16000	15500	12400	
11.0		11000	10800	11600	12000	12800	13500	13800	12200	
12.0		9300	9000	10000	10500	11000	11500	11800	12000	
14.0			6300	7200	7700	8200	8600	8900	9200	
16.0			4400	5300	5800	6300	6600	6900	7200	
18.0				3900	4400	4800	5100	5400	5700	
20.0				2800	3300	3700	4000	4200	4500	
22.0				1900	2500	2800	3200	3300	3600	
24.0					1800	2100	2500	2600	2800	
26.0						1500	1800	2000	2300	
28.0							1400	1600	1800	
30.0								1200	1400	
32.0										
I	0	4,6	9,2	9,2	9,2	9,2	9,2	9,2	9,2	
II	0	0	0	4,5	9,0	13,5	18,0	22,5	27,3	
Reeving	12	10	8	6	5	4	4	3	3	
Hook	70t									

# LIFTING CAPACITY TABLES

RATED CAPACITY CHART WITH BOOM ON OUTRIGGERS INTERMEDIATELY EXTENDED




360° slewing (UNIT: KG)

BOOM

OUTRIGGERS INTERMEDIATELY EXTENDED

Working radius (m)	TELESCOPIC CYLINDER   INTERMEDIATELY EXTENDED, outriggers intermediately extended, 12t counterweight							
	12,5	17,1	21,6	26,1	30,6	35,1	39,6	44,4
2.5	95000*							
3.0	85000*	66000						
3.5	78000*	66000	32000					
4.0	72000*	66000	32000	30000				
4.5	66000	63000	32000	30000				
5.0	56000	54500	32000	30000	27000			
5.5	45000	45000	32000	30000	27000			
6.0	37000	37500	32000	30000	27000			
7.0	27000	27000	27000	27000	27000	22000		
8.0	20800	21000	21500	22000	22500	20500	17000	
9.0	16600	16500	17500	18000	18000	19000	17000	13500
10.0		13500	14500	15000	15000	16000	16000	13000
11.0		11000	12000	12500	12800	13000	14000	12500
12.0		9300	10200	11000	11000	11200	12000	11500
14.0			7500	8000	8500	8500	9000	9600
16.0			5600	6200	6500	6800	7000	7600
18.0			4200	4800	5200	5500	5600	6000
20.0				3600	4000	4500	4600	4800
22.0				2800	3100	3500	3700	4000
24.0					2500	2800	3000	3200
26.0					1900	2200	2400	2600
28.0						1800	1900	2100
30.0						1300	1500	1700
32.0								1300
34.0								
36.0								
38.0								
I	0	4,6	4,6	4,6	4,6	4,6	4,6	4,6
II	0	0	4,5	9,0	13,5	18,0	22,5	27,3
Reeving	12	12	6	6	5	4	3	3
Hook	70t							

RATED CAPACITY CHART WITH BOOM ON OUTRIGGERS INTERMEDIATELY EXTENDED



360° slewing (UNIT: KG)

BOOM

OUTRIGGERS INTERMEDIATELY EXTENDED

Working radius (m)	TELESCOPIC CYLINDER   FULLY RETRACTED, outriggers intermediately extended, 12t counterweight							
	12,5	17,0	21,5	26,0	30,5	35,0	39,8	
2.5	95000*							
3.0	85000*	32000						
3.5	78000*	32000	30000					
4.0	72000*	32000	30000	27000				
4.5	66000	32000	30000	27000				
5.0	56000	32000	30000	27000	22000			
5.5	45000	32000	30000	27000	22000			
6.0	37000	32000	30000	27000	21000	17000		
7.0	27000	28500	29500	26000	20000	17000		
8.0	20800	23000	23500	24000	18600	17000	14000	
9.0	16600	18500	18500	19500	17500	16000	13500	
10.0		15000	15600	16300	16000	14600	12800	
11.0		12500	13200	13800	14000	13500	12000	
12.0		10500	11300	12000	12000	12500	11200	
14.0			8600	9200	9200	9800	9800	
16.0			6600	7200	7500	7800	8000	
18.0				5800	6000	6000	6500	
20.0				4600	4800	5000	5200	
22.0					4000	4200	4300	
24.0					3200	3500	3600	
26.0					2500	2900	3000	
28.0						2400	2500	
30.0						1800	2100	
32.0							1700	
34.0							1300	
36.0								
38.0								
I	0	0	0	0	0	0	0	
II	0	4,5	9,0	13,5	18,0	22,5	27,3	
Reeving	12	6	6	5	4	3	3	
Hook	70t							

# NOTES

- a) A 110t hook should be used for OMs marked with \*, and 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) The rated loads on outriggers are based on outriggers fully or intermediately extended/retracted, and the tires should be supported off ground.
- 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) 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) 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.
- 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) 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.
- n) Load ratings are dependent upon the crane being maintained according to the Operator's Manual and Maintenance Manual.

# LIFTING CAPACITY TABLES

RATED CAPACITY CHART ON TIRES

Boom length(m)	12.5		17.0		21.5		26.0		
	Load radius(m)	360°	Travel over front	360°	Travel over front	360°	Travel over front	360°	Travel over front
4.0		15000	14500	15000	14000				
4.5		13000	13000	13000	12400	12500	12800	12500	12800
5.0		10600	11500	11500	11100	11500	11200	11500	11200
5.5		8900	10300	9600	10000	10100	10000	10300	10000
6		7500	9400	8200	9100	8700	8800	8900	8800
7		5400	7700	6200	7300	6600	7700	6800	7700
8		4000	6200	4700	5700	5100	5900	5300	5900
9		2900	4300	3600	4500	4000	4600	4200	4600
10				2800	3900	3200	4100	3400	4100
11				2100	3100	2500	3400	2700	3400
12				1600	2500	1900	2600	2100	2600
14					1400	1100	1700	1100	1700
16							1000		1000
18									
20									
I									
II		0		0		0		0	
Reeving		0		4,5		9		13,5	
Hook		12		10		8		8	
70t									

Note: 360° working range is applicable to crane standstill.

## 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 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 ft (61 m) in 30-minutes period and not exceeding 1 mph (1.6 km/h).

o)Consult appropriate section of the Operator's Manual for more exact description of hoist line reeving.

p)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.

q)Properly maintained wire rope is essential for safe crane operation. Consult the Operator's Manual and Maintenance Manual for proper maintenance and inspection requirements.

r)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.

s)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.

t)Load ratings are dependent upon the crane being maintained according to the Operator's Manual and Maintenance Manual.

## SPECIFICATIONS, SUPERSTRUCTURE



### BOOM AND TELESCOPING MECHANISM

The box-shaped telescopic boom consists of 5 U-type boom sections made of high-strength steel.

The telescopic boom sections are telescoped in / out via two telescopic cylinders and two sets of boom extension/retraction ropes. Each telescopic cylinder is equipped with a plug-in balance valve.

The boom head is equipped with 6 pulleys, which is convenient for changing wire rope reeving without removing the wedges. A rooster sheave is optional.

Min. boom length (with telescopic sections completely retracted): 12500mm.

Max. boom length (with telescopic sections completely extended): 49000mm.

Min. telescoping out time: 115 s.



### JIB

It consists of two lattice jib sections. The jib section II is secured into the jib section I, and the whole jib is stowed to one side of the boom via moveable pins during driving.

A single pulley is assembled at the jib head.

Angle: 0°, 15° and 30° .

Jib length: 9.5m, 16 m.



### DERRICKING MECHANISM

A front-mounted single derricking cylinder is installed with a derricking balance valve.

Derricking angle range: -1° - 80°.

Derricking speed: -1° - 80° /55s.



### HOIST MECHANISM

Main and auxiliary winches.

The main winch realizes lifting and lowering movements through rotations of the drum driven by the planetary reducer which is driven by the axial variable plunger pump.

The auxiliary winch is optional.

Wire rope.

High strength wire rope.

Max. hoist rope tensile force: 6500 kg.

Max. hoist rope speed: 145 m/min (At the 4th layer).

Rope diameter: Φ 20 mm.

Main winch rope length: 260 m.

Auxiliary winch rope length: 140m.

Hook block.

Rotatable main hook: 70 t, with 6 pulleys and a hook latch, secured at the chassis frame in front of slewing table.

Rotatable auxiliary hook: 6.5 t, with a hook latch, used with the rooster sheave and jib, secured at the auxiliary hook holder on the chassis frame.

## SPECIFICATIONS, SUPERSTRUCTURE



### SLEWING MECHANISM

It consists of a hydraulic motor, planetary gear reducer, pinion gear and slewing ring, etc. Via the planetary gear reducer, the hydraulic motor drives the pinion gear to rotate and makes the slewing bearing's outer ring rotate around its inner toothed ring fixed on chassis frame, realizing 360° unlimited superstructure slewing.

Hydraulically controlled usually-closed brake realizes controlled slewing function of the slewing mechanism.

Slewing speed: 0 – 1.5r/min.



### TURNTABLE

The turntable adopts a wall plate structure.



### HYDRAULIC SYSTEM

Oil pump.

The two variable pumps together supply hydraulic oil to the telescoping, derricking and hoist mechanisms. Moreover, the two pumps also supply pilot oil.

One gear pump supplies hydraulic oil to outriggers, braking system, oil radiator of chassis torque converter, and superstructure AC.

The other gear pump supplies hydraulic oil to the slewing and steering systems.

Control valve.

A quadruple multi-way directional valve which adopts downstream pressure compensation technology.

Pipeline .

An air-cooled hydraulic oil cooler driven by an electric motor is located in the return line.

The system pressure can be displayed on the instrument console. There are pressure test ports configured in hydraulic lines.

Hydraulic oil tank.

Capacity: about 1000 L.

The return oil filter can eliminate bubbles. The filtering accuracy is 12μm.

Filter.

A high-pressure filter with the filtering accuracy of 10 μ is mounted in oil-ways of outriggers, braking system, slewing system and steering system.

A low-pressure filter with the filtering accuracy of 5 μ is mounted in oil-ways of pilot oil circuits.



### CRANE CONTROLS

The superstructure movements are controlled by two hydraulic joysticks (with a cross shaft) on both sides of operator's seat (complying with ISO standard requirements).

The left joystick controls slewing and auxiliary winch movements

The right joystick controls derricking and main winch movements.

Derricking and telescoping movements can be executed simultaneously.



### CAB

There is only one cab for ZRT1100 rough terrain crane. It can be used as the operator's cab as well as the driver's cab. The cab is side-mounted and adopts left hand drive.

A hydraulic steering gear (manufacturer: EATON Ji'ning), an air conditioner for cooling, (manufacturer: Yuxin He'nan) and a heater (manufacturer: Jingwei Beijing) are installed in the crane.

Emission complies with the requirements of Europe environment protection standards.

There are two control boxes on the both sides of operator's seat. The left / right control box can be pulled up. 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.

Cab dimensions:

Length: 1810±5mm.

Width: 1050±5mm.

Height: 1710±5mm.



### 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 can also limit the working range (including working radius, boom angle, lifting height and slewing range etc.).

The following information can be displayed on the screen:

-Boom angle or moment ratio;

-Boom length or default hook weight;

-Actual working radius or slewing angle;

-Actual lifting capacity;

-Max. permissible lifting capacity;

-Jib installation angle or wire rope reeving;

-Boom status indication;

-Outrigger status or "On Tires" indication.

The following information is displayed by bar graph:

-Percentage of actual lifting capacity to the rated one or working pressure of the hydraulic system.



### OUTRIGGERS

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, half extended or completely retracted for different operating modes.

Outrigger spread (Height): 8000mm.

Outrigger spread (Width): 8000 mm (fully extended).

5600 mm (half extended).

3150 mm (fully retracted).

## SPECIFICATIONS, SPECIAL PURPOSE CHASSIS FOR ROUGH TERRAIN CRANE



### TYPE

Rear-mounted engine, left-hand drive.  
Drive mode: 4 x 2 and 4 x 4.



### CHASSIS FRAME

An Integral box-type structure welded by high-strength steel.



### ENGINE

Model  
CUMMINS B6.7.  
Type  
Four-stroke cydes, 6-cylinder diesd, direct injection, water-cooled, turbocharged diesel engine.  
Performance  
Max. output power: 194 KW / 2500 RPM.  
Max. output torque: 1152 Nm / 1500 RPM.



### DRIVE SYSTEM

Electrically controlled automatic hydraulic transmission, capable of four-wheel drive mode when the transmission drives both the front and rear axles, as well as rear-wheel drive mode when the transmission disengages from the front axle and only drives the rear axle.  
6 forwards and 3 reverse speeds, electric-hydraulic power gear shift, with an automatic locking mechanism.  
The 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 the chassis frame, with a planetary reducer and brake.  
Rear axle  
Full-floating steering and driving axle, with a planetary reducer and brake.



### BRAKE SYSTEM

Service brake  
Hydraulically controlled disc brake acting on 4 wheels .  
Parking brake  
Hydraulically released parking brake, acted on by the spring mounted on the input shaft of front axle.



### STEERING SYSTEM

Fully hydraulic power steering gear.  
The cylinder of the steering and driving axles is controlled by 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.



### SUSPENSION SYSTEM

Front axle: rigidly mounted to the chassis frame .  
Rear axle: a swing axle, connecting to the chassis frame via a hydraulic suspension cylinder.



### ELECTRIC SYSTEM

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



### FUEL TANK

Capacity: 300 L .



### TIRE

Size: 29,5-25-34PR.



### DRIVE SYSTEM

Rated capacity indicator (RCI).  
Rotating beacon and horn.  
Hoisting limiter (anti-two block, ATB).  
Lowering limiter (3rd wrap indicator).  
Balance valve.  
Hydraulic lock.  
Hydraulic safety valve.  
Slewing braking mechanism.  
Slewing lockout device.  
Boom angle indicator.  
Outrigger beam retaining pin.  
Emergency stop button.

## TECHNICAL PARAMETERS

Type	Item	Unit	Value
Working performance	Max. rated lifting capacity × working radius	kg.m	110000×2,5
	Max. load moment of the boom	kN.m	3332
	Max. load moment of the boom (fully extended)	kN.m	1658
	Max. lifting height of the boom (fully extended)	m	49.8
Dimensions	Max. lifting height of the jib	m	66.1
	Overall dimensions (L × W × H)	mm	15130×3400×3970
	Outrigger spread (Height × Width)	mm	8000×8000
	Boom length	mm	12500 ~ 49000
	Jib length	mm	9500、16000
	Boom angle	°	-1 ~ 80
Working speeds	Slewing range		360° unlimited slewing
	Max. hoist rope speed (Main winch)	m/min	145
	Min. boom telescoping out time	s	115
	Min. boom telescoping in time	s	125
	Min. boom derricking up time	s	55
	Min. boom derricking down time	s	80
Hydraulic system	Slewing speed	r/min	0 ~ 1.5
	Maximum working pressure	MPa	28
	Rate working flow	L/min	320
Gross vehicle mass	Hydraulic oil tank capacity	L	1000
	Gross weight	kg	55800
	Front weight	kg	27900
Driving	Rear weight	kg	27900
	Max. driving speed	km/h	37
	Wheelbase	mm	4250
	Treads (Front / Rear)	mm	2632
	Max. gradeability	%	68

## MAINPARTSTABLE

Type	Item	Unit	Main configuration
Power system	Engine make & model		Cummins B6.7
	Fuel type		Diesel
	Intake system		Turbo-charged, air to air, inter-cooling
	Cooling system		Water-cooling
	Engine rated power	KW/r/min	194KW/2500rpm (US Cummins)
	Engine rated torque	N.m/r/min	1152N.m/1500rpm
	Fuel tank capacity		300 L
Drive system	Transmission drive mode		4×2, 4×4
	Model or brand of transmission		ZF
	Transmission gear stage		6 forward and 3 reverse speeds
Travel system	Suspension		Rigid(front) / MERITOR / Flexible (rear)
	Model or brand of axles		Hande/Meritor/ Kessler
	Steering mode		2-wheel steering (front wheels) 2-wheel steering (rear wheels) 4-wheel steering Crab steering
	Tire size		29.5-25-34PR
	Tire number		4
Hydraulic system	Model or brand of main valve		ZOOMLION
	Gear pump		Jiangsu Henli, Liyuan, HIGH-TECH
	Balance valve / hydraulic lock		NEM, Zoomlion Hydraulic
	Slewing motor		HIGH-TECH
Electrical system	Rated capacity indicator		HIRSCHMANN
	Controller		HIRSCHMANN
Emission			Euro V