ZOOMLION

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ZOOMLION
ROUGH TERRAIN CRANE
ZRT850V552.1

CONTENTS

PRODUCT INTRODUCTION

ZRT850V552.1 rough terrain crane is of wide tread, high stability, short wheelbase and small turning radius, which is adapted to tight work space.

It provides 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.

ZRT850V552.1 rough terrain crane consists of the superstructure and special purpose chassis, including power system, drive system, suspension system, steering system, brake system, hoist mechanism, derricking mechanism, slewing mechanism, boom system, turntable, chassis frame, outrigger, hydraulic system, electric system and cab etc.

Distinguishing characteristics:

Four steering modes:

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

Max. rated lifting capacity: 85 ton at 3 m working radius.

Max. lifting height: 65.7m.

Max. driving speed: 37 km/h.

Overall dimensions: 14490 mm×3400 mm×3880 mm.

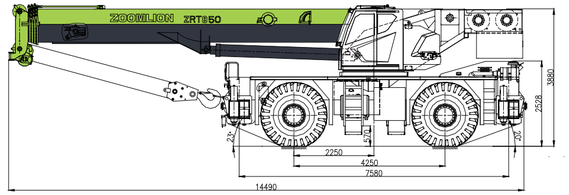
Deadweight: 53.7ton.

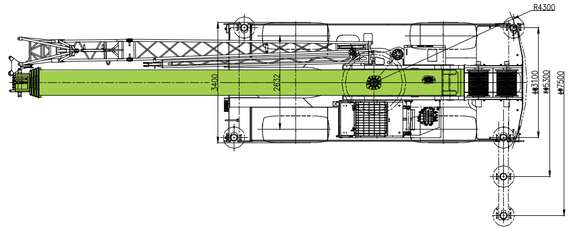
Ability to pick-and carry loads.

Ability to travel on rough terrain.

DIMENSIONS

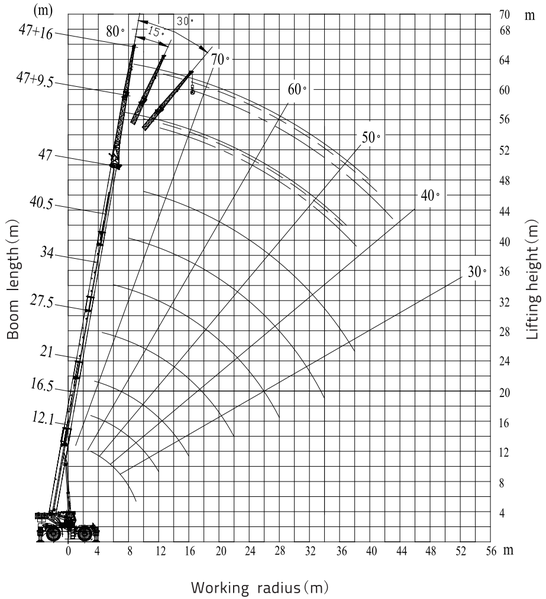
UNIT: mm





LIFT HEIGHT ON OUTRIGGERS

LIFT HEIGHT ON OUTRIGGERS FULLY EXTENDED (UNIT: METRIC METER)



LIFTING CAPACITY TABLES

RATED LOADS WITH BOOM

BOOM — 360° slewing (UNIT: KG) — OUTRIGGERS FULLY EXTENDED

Load radius (m)	Outriggers and telescoping cylinder I fully extended, 10.5 t counterweight						
	12.1	16.5	21.0	27.5	34.0	40.5	47.0
3.0	85000*	55000					
3.5	75000	55000	43500				
4.0	67500	53000	43500				
4.5	62,500	51000	43000	31000			
5.0	57000	49000	41500	31000			
5.5	52400	48000	40000	30000			
6.0	47500	46500	38000	29000	23000		
7.0	40000	39500	33800	27000	22000		
8.0	33500	33000	30000	24500	20500	16500	
9.0	26000	26000	25000	22500	19000	15500	
10.0		21400	20500	20300	17500	14500	11500
11.0		17700	17500	17800	16000	13500	11000
12.0		14700	14500	15000	14800	12500	10500
14.0			10600	11300	11800	10800	9500
16.0			7900	8600	9500	9200	8500
18.0				6700	7600	7800	7650
20.0				5200	6100	6400	6600
22.0				4000	5000	5300	5500
24.0					3900	4500	4600
26.0					3100	3500	3700
28.0					2500	2800	3200
30.0						2200	2800
32.0						1800	2300
34.0						1300	1800
36.0							1400
38.0							1100
I	0	4.4	8.9	8.9	8.9	8.9	8.9
II	0	0	0	6.5	13	19.5	26
Reeving	12	10	8	6	5	4	3
Hook	70t						

LIFTING CAPACITY TABLES

RATED LOADS WITH BOOM

BOOM — 360° slewing (UNIT: KG) — OUTRIGGERS FULLY EXTENDED

Load radius (m)	Outriggers fully extended and telescoping cylinder I intermediately extended, 10.5 t counterweight					
	12.1	16.5	23.0	29.5	36.0	42.5
3.0	85000*	55000				
3.5	75000	55000	31000			
4.0	67500	53000	31000			
4.5	62500	51000	31000			
5.0	57000	49000	31000	23000		
5.5	52400	48000	31000	23000		
6.0	47500	46500	31000	23000		
7.0	40000	39500	30000	23000	16500	
8.0	33500	33000	29000	22000	16500	12000
9.0	26000	26000	25000	21000	15500	12000
10.0		21400	22000	20000	14500	11500
11.0		17700	18000	18000	13500	11000
12.0		14700	15500	16000	12500	10500
14.0			11800	12000	10800	9300
16.0			9000	9800	9500	8100
18.0			7200	7800	8000	7300
20.0				6200	6500	6300
22.0				5200	5500	5500
24.0				4300	4500	4800
26.0					3800	4100
28.0					3000	3500
30.0					2500	3000
32.0						2500
34.0						2100
36.0						1800
I	0	4.4	4.4	4.4	4.4	4.4
II	0	0	6.5	13	19.5	26
Reeving	12	10	6	6	4	4
Hook	70t					

BOOM — 360° (UNIT: KG) — OUTRIGGERS FULLY EXTENDED

Load radius (m)	Outriggers fully extended and telescoping cylinder I fully retracted, over sides and rear, 10.5 t counterweight				
	12.1	18.6	25.1	31.6	38.1
3	85000*	31000			
3.5	75000	31000			
4.0	67500	31000	23000		
4.5	62500	31000	23000		
5.0	57000	31000	23000		
5.5	52400	31000	23000	16500	
6.0	47500	30000	23000	16500	
7.0	40000	29000	22500	16000	12500
8.0	33500	28000	21600	14500	12000
9.0	26000	24500	20000	13500	11500
10.0		22000	18500	12500	11000
11.0		19000	17000	11500	10500
12.0		16500	15800	10800	9700
14.0		12500	12500	9300	8400
16.0			10000	8200	7400
18.0			8000	7300	6600
20.0			6500	6600	5900
22.0				5800	5200
24.0				4800	4600
26.0				4000	4300
28.0					3700
30.0					3200
32.0					2800
I	0	0	0	0	0
II	0	6.5	13	19.5	26
Reeving	12	10	8	4	3
Hook	70t				

LIFTING CAPACITY TABLES

JIB RATED LOADS

BOOM + 9.5 M JIB

360°
(UNIT: KG)

OUTRIGGERS FULLY EXTENDED

BOOM ANGLE (°)	Outriggers fully extended, 10.5 t counterweight		
	0°	15°	30°
80	5500	3500	3000
78	5500	3500	3000
76	5000	3300	2800
74	4800	3300	2800
72	4300	3100	2800
70	4000	3000	2700
68	3800	3000	2600
66	3600	2900	2500
64	3300	2700	2400
62	3000	2500	2300
60	2700	2300	2100
58	2400	2100	2000
56	2000	1900	1800
54	1700	1600	1500
52	1500	1400	1200
50	1200	1100	1000
48	1100	900	800
46	900		
Reeving	1		
Hook	6.5t		

BOOM + 16 M JIB

360°
(UNIT: KG)

OUTRIGGERS FULLY EXTENDED

BOOM ANGLE (°)	Outriggers fully extended, 10.5 t counterweight		
	0°	15°	30°
80	3500	2200	1500
78	3500	2100	1500
76	3200	2000	1500
74	2800	2000	1500
72	2800	2000	1400
70	2600	1800	1400
68	2400	1600	1400
66	2100	1600	1400
64	2000	1500	1300
62	1900	1500	1300
60	1800	1400	1300
58	1700	1400	1300
56	1600	1300	1200
54	1400	1200	1100
52	1200	1000	950
50	1000	900	800
48	900		
Reeving	1		
Hook	6.5t		

NOTES

a)For the working conditions marked with asterisk over sides and rear, the crane must uses 85 t 93.6tn hook; when the load is more than 70 t 77.1tn and the reeving is 13, a special device shall 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.

a)Do not operate at longer radii than those listed on the applicable lift chart as tipping can occur without a load on the hook.

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 Load Ratings 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.

LIFTS WITH OUTRIGGER BEAMS AT MID-POSITION

RATED LOADS WITH BOOM

BOOM

360°
(UNIT: KG)

OUTRIGGERS PINNED AT MID-POSITION

Load radius (m)	Outriggers intermediately extended and telescoping cylinder I fully extended, 10.5 t counterweight						
	12.1	16.5	21	27.5	34	40.5	47.0
3.0	76000	53000					
3.5	69000	53000	43500				
4.0	61000	53000	43500				
4.5	54000	48500	42000	31000			
5.0	48000	43000	39000	31000			
5.5	41000	37000	33000	30000			
6.0	34500	32000	29000	28000	23000		
7.0	25500	25000	23000	23500	21500		
8.0	19800	19300	18200	18500	19000	16500	
9.0		15500	15000	15500	15800	15000	
10.0		12500	12000	12500	13300	13800	11500
11.0		10300	9800	10500	11300	11800	10500
12.0		8400	8100	9000	9800	10200	9500
14.0			5500	6500	7400	7600	7800
16.0			3800	4800	5400	5800	6000
18.0				3500	4100	4600	4800
20.0				2400	3000	3500	3700
22.0				1700	2400	2800	3000
24.0					1700	2000	2400
26.0						1500	1900
28.0							1400
I	0	4.4	8.9	8.9	8.9	8.9	8.9
II	0	0	0	6.5	13	19.5	26
Reeving	12	10	8	6	5	4	3
Hook	70t						

LIFTS WITH OUTRIGGER BEAMS AT MID-POSITION

RATED LOADS WITH BOOM

BOOM

360°
(UNIT: KG)

OUTRIGGERS PINNED AT MID-POSITION

Load radius (m)	Outriggers and telescoping cylinder I intermediately extended, 10.5 t counterweight					
	12,1	16,5	23	29,5	36	42,5
3.0	76000	53000				
3.5	69000	53000	31000			
4,0	61000	53000	31000			
4,5	54000	48500	31000			
5.0	48000	43000	31000	23000		
5.5	41000	37000	30800	23000		
6.0	34500	32000	28000	23000		
7.0	25500	25000	23500	22000	16500	
8.0	19800	19300	20000	18200	16000	12000
9.0		15500	16000	15700	15000	12000
10,0		12500	13200	13800	13500	11500
11.0		10300	11200	12000	12000	11000
12.0		8400	9400	10400	10500	10200
14,0			6800	7800	8000	8400
16,0			5200	6000	6300	6600
18.0			3900	4600	4800	5300
20,0				3600	3800	4300
22.0				2800	3000	3400
24,0				2100	2500	2700
26.0					1800	2100
28.0					1400	1700
30,0						1300
I	0	4,4	4,4	4,4	4,4	4,4
II	0	0	6.5	13	19.5	26
Reeving	12	10	6	6	4	3
Hook	70t					

BOOM

360°
(UNIT: KG)

OUTRIGGERS PINNED AT MID-POSITION

Load radius (m)	Outriggers intermediately extended and telescoping cylinder I fully retracted, 10.5 t counterweight				
	12,1	18,6	25,1	31,6	38,1
3.0	76000	31000			
3.5	69000	31000			
4,0	61000	31000	23000		
4,5	54000	31000	23000		
5.0	48000	31000	23000		
5.5	41000	30000	23000	16500	
6.0	34500	29500	23000	16500	
7.0	25500	25000	22500	16500	12500
8.0	19800	19500	20000	14500	12000
9.0		16500	16800	13200	11500
10,0		13500	14500	12300	11000
11.0		11800	12700	11000	10400
12.0		9800	11200	10500	9600
14,0		7600	8500	8800	8600
16,0			6500	6800	7000
18.0			5100	5400	5600
20,0			4000	4400	4600
22.0				3500	3800
24,0				2900	3000
26.0				2300	2500
28.0					2000
30,0					1600
32.0					
34.0					
I	0	0	0	0	0
II	0	6.5	13	19.5	26
Reeving	12	10	8	4	3
Hook	70t				

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.

b)Do not operate at longer radii than those listed on the applicable lift chart as tipping can occur without a load on the hook.

f)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.

g) 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.

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

i)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.

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.

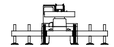
m)Load ratings are dependent upon the crane being maintained according to the Operator's Manual and Maintenance Manual.

LIFTS WITH OUTRIGGER BEAMS FULLY RETRACTED

RATED LOADS WITH BOOM

BOOM

360°
(UNIT: KG)



OUTRIGGERS FULLY RETRACTED

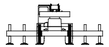
Load radius (m)	Outriggers fully retracted and telescoping cylinder I fully extended, 10.5 t counterweight						
	12,1	16,5	21	27.5	34	40.5	47.0
3,0	48000	42000					
3.5	36000	34000	30000				
4.0	30000	28000	26000	25000			
4,5	24000	22000	21000	22000			
5.0	18500	18000	18500	19000			
5.5	16000	16000	15500	16200	16000		
6.0	14000	13500	13200	14000	14500		
7.0	10800	10500	10500	11000	12000	11500	
8.0	8200	8200	8000	9000	9500	10000	
9.0		6400	6000	7200	7500	8400	8000
10.0		5000	4500	5600	6200	6500	7000
11.0		3600	3600	4500	5500	5700	6000
12.0		2500	2600	3600	4300	4800	5000
14.0			1200	2300	2800	3600	3600
16.0				1300	1800	2400	2600
18.0						1500	1800
I	0	4.4	8.9	8.9	8.9	8.9	8.9
II	0	0	0	6,5	13	19.5	26
Reeving	12	10	8	6	5	4	3
Hook	70t						

LIFTS WITH OUTRIGGER BEAMS FULLY RETRACTED

RATED LOADS WITH BOOM

BOOM

360°
(UNIT: KG)



OUTRIGGERS FULLY RETRACTED

Load radius (m)	Outriggers fully retracted and telescoping cylinder I intermediately extended, 10.5 t counterweight					
	12.1	16.5	23	29.5	36	42.5
3.0	48000	42000				
3.5	36000	34000	32000			
4.0	30000	28000	28000			
4.5	24000	22000	22500	21000		
5.0	18500	18000	20000	19500		
5.5	16000	16000	16800	17200		
6.0	14000	13500	14500	15500	14500	
7.0	10800	10500	10800	11000	11500	
8.0	8200	8200	9200	10000	10500	11000
9.0		6400	7200	8000	8800	8800
10.0		5000	6000	6500	7200	7500
11.0		3600	5200	5500	6000	6000
12.0		2500	4000	4800	5000	5000
14.0			2400	3200	3600	3800
16.0			1500	2200	2500	2800
18.0				1300	1800	2000
20.0					1200	1500
I	0	4,4	4,4	4,4	4,4	4,4
II	0	0	6.5	13	19.5	26
Reeving	12	10	6	6	4	3
Hook	70t					

BOOM

360°
(UNIT: KG)

OUTRIGGERS FULLY RETRACTED

Load radius (m)	Outriggers and telescoping cylinder I fully retracted, 10.5 t counterweight				
	12.1	18.6	25.1	31.6	38.1
3.0	48000	31000			
3.5	36000	31000	23000		
4.0	30000	29000	23000		
4.5	24000	24500	23000		
5.0	18500	20500	21000		
5.5	16000	18000	19000	16500	
6.0	14000	15000	16200	15500	
7.0	10800	11200	12300	12800	12500
8.0	8200	9200	9800	10000	10500
9.0		7600	8500	8800	9500
10.0		6500	7200	7600	7600
11.0		5500	6000	6200	6500
12.0		4800	5200	5400	5500
14.0			3800	4100	4300
16.0			2800	3200	3300
18.0			1900	2500	2500
20.0					1800
I	0	0	0	0	0
II	0	6.5	13	19.5	26
Reeving	12	10	8	4	3
Hook	70t				

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 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)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.

LIFTS ON TIRES

RATED LOAD ON TIRES
(UNIT: KG)

Boom length (m)	12.1		18.6		25.1	
Load radius (m)	360°	With boom over front	360°	With boom over front	360°	With boom over front
3.0	20000	18500	19300	18000		
3.5	17100	16000	16800	16000		
4.0	15000	14500	14500	14000	14000	14200
4.5	12300	13000	12600	12400	12000	12800
5.0	10400	11500	11000	11100	11200	11200
5.5	9100	10300	9700	10000	10500	10000
6	7800	9400	8800	9100	9300	8800
7	5800	7700	6600	7300	7600	7700
8	4300	6200	5300	5700	5800	5900
9	3300	4900	4500	4500	5000	4600
10			3400	3900	4000	4100
11			2500	3100	3300	3400
12			2000	2500	2700	2600
14				1400	1800	1700
16						1000
I	0		0		0	
II	0		6.5		13	
Reeving	12		10		8	
Hook	70t					

LIFTS ON TIRES

Boom length (ft)	40		61		82,3	
Load radius (ft)	360°	With boom over front	360°	With boom over front	360°	With boom over front
3,0	43470	40250	42020	39260		
3,5	36230	34230	35430	33880		
4,0	26510	28180	27270	26920	26200	27710
4,5	17570	20360	18930	19680	20140	19160
5,0	9910	14920	12770	13900	14290	14510
5,5	5730	9480	8690	9730	9600	9980
6			5280	7420	6390	8000
7			3180	5270	4590	5540
8				3430	2580	4030
9						2790
10						1360
11						
12						
14						
16						
I	0		0		0	
II	0		21		42,3	
Reeving	12		10		8	
Hook	77.2tn					

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)Do not operate at longer radii than those listed on the applicable lift chart as tipping can occur without a load on the hook.

f)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.

g)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.

h)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.

i)Use of jib is not permitted for pick-and-carry operations.

j)For pick-and-carry operations, the boom must be centered over the front of the crane with the slewing brake lock engaged. Use minimum boom point height and keep the load close to the ground surface. Travel must be on smooth level surface.

k)The load should be restrained from swinging.

l)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).

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

n)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.

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

p)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.

q)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.

r)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): 12100 mm.
- Max. boom length (with telescopic sections completely extended): 47000 mm.
- Min. telescoping out time: about 110 s.

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: -1° - 80°.
- Derrick speed: -1° - 80° /50s.

Hoist mechanism

- Main and auxiliary winches

The 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

Twist resistant wire ropes are used; high strength wire ropes are optional.
Max. hoist rope strength: 6500 kg.
Max. hoist rope speed: 150 m/min (At the 4th layer).
Rope diameter: 20 mm.
Main winch rope length: 260 m.
Auxiliary winch rope length: 140 m

- Hook block

Rotatable main hook: 70 t, with 6 sheaves and hook latch, secured at the chassis frame in front of turntable.
Rotatable auxiliary hook: 6.5 t with hook latch, used for the rooster sheave and jib, secured at auxiliary hook holder on the chassis frame.
Rotatable hook: 85 t (optional) , with 6 sheaves and hook latch, secured at the chassis frame in front of turntable.

Slewing mechanism

- It consists of a hydraulic motor, planetary gear reducer, pinion gear and slewing bearing etc. Slewing speed: 0 - 2r/min

Superstructure

Slewing platform

- The slewing platform adopts a wall structure.

Hydraulic system

- Capacity: about 1000 L.
- There is a return oil filter with automatic bubble elimination function and filtering performance 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 slewing 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.

Load moment limiter (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.
- 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 crane operation.
- Outrigger spread (Height): 7580 mm.
- Outrigger spread (Width): 7500 mm (fully extended).
  5300 mm (half extended).
  3100 mm (fully retracted).

TECHNICAL SPECIFICATIONS

Chassis

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

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

Engine
- CUMMINS B6.7

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

Steering system
- 2-wheel steering (front wheel).
- 2-wheel steering (rear wheel).
- 4-wheel steering and 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
  Hydraulically 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: 29.5-25-34PR.

TECHNICAL PARAMETERS

Type	Item		Value
Working performance	Max. rated lifting capacity × working radius	kg.m	85000×3
	Max. load moment of boom	kN.m	2824
	Max. load moment of boom (fully extended)	kN.m	1349
	Max. lifting height of boom (fully extended)	M	49.8
	Max. lifting height of jib	M	65.7
Dimensions	Overall dimensions (L × W × H)	Mmt	14490×3400×3880
	Outrigger spread (Height × Width)	Mm	7580×7500
	Boom length	Mm	12100 47000
	Jib length	Mm	9500 16000
	Boom angle	°	-1 80
	Slewing range		360°
Working speeds	Max. hoist rope speed (Main winch)	m/min	150
	Min. boom telescoping out time	s	110
	Min. boom telescoping in time	s	120
	Min. boom derricking up time	s	50
	Min. boom derricking down time	s	80
	Slewing speed	r/min	0 ~ 2
Hydraulic system	Maximum working pressure	MPa	29
	Rate working flow	L/min	300
	Hydraulic oil tank capacity	L	1000
Gross vehicle mass	Gross weight	Kg	53700
	Front weight	Kg	27000
	Rear weight	Kg	26700
Driving	Max. driving speed (forward/backward)	km/h	37
	Wheelbase	Mm	4250
	Treads (Front / Rear)	Mm	2632
	Max. gradeability	%	75

MAINPARTSTABLE

Type	Item		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
	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) / Flexible (rear)
	Model or brand of axles		Xuzhou Meritor Axle
	Steering mode		2-wheel steering (front wheel)/2-wheel steering (rear wheel)/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		Hengli/Avic Liyuan/High-Tech
	Balance valve / hydraulic lock		NEM/ZOOMLION
	Slewing motor		HIGH-TECH (China)
Electrical system	Load moment limiter		HIRSCHMANN
Emission			Euro V