SANY®

PRODUCT
SPECIFICATIONS

SRC900T

90 METRIC TON
Rough Terrain Crane

QUALITY CHANGES THE WORLD

- Max. Lifting Capacity: 90t
- Max. Boom Length: 47m
- Max. Grade ability: 75%

MORE THAN
HEAVY LIFTING

V1.4

SRC900T
ROUGH TERRAIN CRANE

Strong structure

The U-shape boom is designed with increased capacity, enhanced stability, and decreased weight.

Simple and convenient jib mounting to increase the efficiency

Jib swingout process only needs ONE operator.
Only need 15mins to unfold and retract the jib with an experienced operator, which saves a half time than before.
Optimized structure of new design assists the jib mounting and operation.

Intelligent control

Newly-developed T-box, specially designed for fleet management, is used for collecting data and controlling parameter download. With the GSP features and Irootech cloud communication.

Remote control of counterweight and jib

New Generation Operator's cab

- The new design of windshield ensures safety and comfortable operation.
- Full-vision operator's cab with wider interior room.
  three stages of seat adjusting.
- New generation of smart control system.

Tiltable Cab

The cab can be tilted from 0°to 20°during operation for more comfortable control.

Extra-wide aluminum alloy access deck and ladder Rotatable footstep.

Smart control and advanced display

The 10.1" touch screen inserted with optical sensor can automatically adjust the lightness of screen.
It has the function of screen mirroring with smart phone. (Requires Android 8.0 and later) and connect to camera to monitor the operation.

Technical Specificaiton

Category	Item		Unit	Value
Capacity	Max. lifting capacity		t	90
Weight	Gross weight		kg	54600
Power	Engine model		-	Cummins QSB6.7
	Max. engine power		kW/rpm	194/2400
	Max. engine torque		N·m/rpm	990/1500
Dimensions	Overall length		mm	14680
	Overall width		mm	3340
	Overall height		mm	3810
Travel	Max.travel speed		km/h	35
	Steering radius	Min.steering radius	m	7.2
		Min.steering radius of boom tip	m	12.8
	Wheel formula			4×4, 4×2
	Min.ground clearance		mm	530
	Approach angle		°	20
	Departure angle		°	19
	Max.gradeability		%	75
Main performance	Working temperature range		℃	-25~+40
	Min.rated lifting radius		m	2.5
	Tail slewing radius		m	4.45
	Boom sections (Qty.)		-	5
	Boom shape		-	U shape
	Max.lifting moment	Basic boom	kN·m	3000
		Full-extension boom	kN·m	1360
		Max.combination of boom + jib	kN·m	544
	Boom length	Basic boom	m	12.2
		Full-extension boom	m	47
		Max.combination of boom + jib	m	65
	Max.lifting height	Basic boom	m	15.4
		Full-extension boom	m	48.7
		Max.combination of boom + jib	m	65.6
	Outrigger span (Longitudinal×Transverse)		m	7.52×7.4
	Jib offset		°	0, 20, 40
Airconditioner	In operator's cab		-	Heating & cooling

Axle Load

Axle	1	2	Gross weight
Axle load /kg	27200	27400	54600

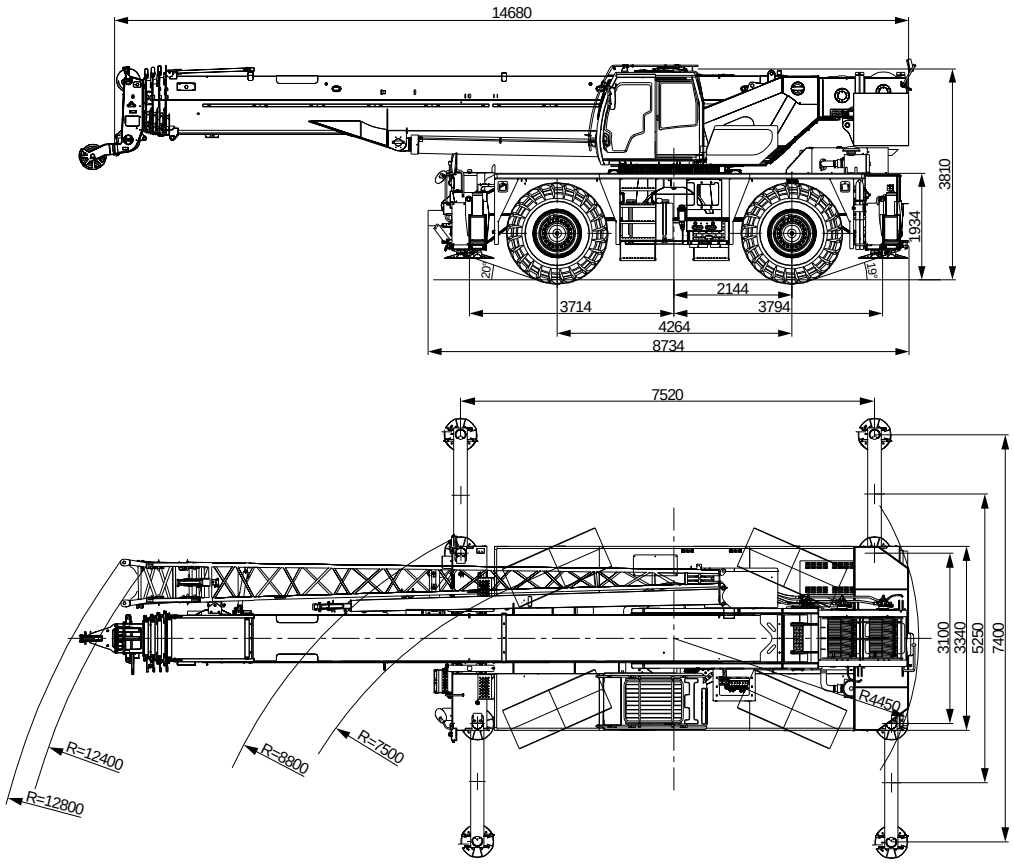
Hook

Load/t	Number of sheaves	Rope rate	Hook weight /kg
70	6	12	720
8	-	1	160

Operations

Item		Max.single rope lifting speed (empty load)	Rope diameter /length	Max. single line pull
Main winch		150 m/min	Φ20mm/250m	8.3t
Auxiliary winch		150 m/min	Φ20mm/145m	8.3t
Slewing speed		1.8r/min		
Full luffing up/ down time of boom		90s/95s		
Full extension/ retraction time of boom		120s/125s		
Outrigger jack	Retraction	40s		
	Extension	35s		
Outrigger beam	Retraction	30s		
	Extension	25s		

Overall Dimensions



Optional equipment

Conditions	Option A	Option B	Option C
Desert	Desert air filter	Air inlet shutoff	Inflator
Oil field	Anti sparkling device	Chassis water heater	-
Extreme cold	Arctic package		
Other	Reversing camera	Winch monitor	Boom tip camera

Transport Dimensions

Unit: mm

Items		Weight (kg)	Load on front axle (kg)	Load on rear axle (kg)
Main machine		42970	30230	12740
Counterweight		9500	-3289	+12789
Fixed jib		1150	+2070	-920
Boom tip		100	+265	-165
Main hook	90t(Optional)	800	+1475	-675
	70t	720	+1270	-550
	60t(Optional)	620	+1110	-490
Auxiliary hook	8t	160	+205	-45

Crane Introduction

Carrier

Operator's cab

- 0-20° tiltable, the self-developed new operator's cab of ergonomic design realizes safety and comfort.
- The operator can open the windshield in the cab and it is equipped with sliding door with better seal, electrical pedal, adjustable steering wheel integrating driving and controlling, large rear-view mirror, soft seat with headrest, HVAC, stereo radio, and all other instruments and meters.

Carrier frame

- Designed and manufactured by Sany, the inverted trapezoidal type structure is expanded in height and length, with its rigidity increased by 15%, featuring enhanced bearing capacity.

Engine

- Model: Cummins inline six-cylinder diesel with watercooler and inter cooler.
- Emission standard: EU Stage Ⅲ A.
- Fuel reservoir capacity: 350L.

Transmission

- Torque converter/gearbox: automatic transmission, with 6 forward gears and 6reversing gears. Large speed ratio range, adaptable to slope climbing and high-speed traveling.

Transmission shaft

- Optimized layout, higher torque output via 8.5C flange connecting transmission shaft.

Axle

- Kessler. Both the front and rear axles are drive axles and can steer. Two-stage reducer gear and more compact axle bags contribute to better travel flexibility.

Suspension system

- Hydro-pneumatic suspension with hydraulic lock. Ride comfort and vehicle lateral stability are ensured regardless of any rough terrains.

Steering

- 4 steering modes: front-wheels steer, rear-wheels steer, 4x4 and crab steer.
- All axles are steered hydraulically.

Tires

- Four tires sized 29.5-25, strong bearing capacity and durability.

Wheel formula

- 4×4; 4×2.

Brake

- All wheels are hydraulic braking with double circuit split system.
- Service brake is double circuit braking system, the hydraulic disc brakes function on all wheels, which is of better braking ability and agility.
- Parking brake works on front axle disc hydraulically.

Electrical system

- 24V DC power supply. The power of chassis can be cut off manually. Vehicle illumination available. Its own strong logic realizes self-diagnosis, integrated display and self-protection.

Superstructure

Boom & telescoping system

- Bending resistant structure welded by high tensile steel plate.The main boom is of U-shape cross section from 12.2m to 47m. Telescoping is realized by double cylinders with rope arranger to realize different length combinations.

Hoist

- Normally closed hoist brake with the hoist balance valve to prevent the stall of falling hook.

Luffing system

- Passive luffing down, reducing energy cost yet raising stability. Luffing angle: -2°~80.5°.

Hydraulics

- Utilize high quality oil pump, motor and valves to ensure the stability and reliability of hydraulic system.
- The luffing, telecoping and hoist winch systems adopt open systems.

Slewing

- Hydraulic axial piston motor driven through planetary slewing speed reducer. Continuous 360° full circle slewing on ball bearing.
- Electric proportional speed control ensures the stable motion and reliable system.

Control system

- The international top controls, displays and sensors all meet the industrial safety standard of Europe and USA to ensure afe, stable and effective operation.
- Data display system: The full set of sensors ensures prompt information feedback and real-time monitor of the crane working condition.
- HMI: The human-machine interface is well-designed to provide abundant and clear information. The operator can set the crane accroding to their operating routine and the working conditions.

Outrigger

- H-type layout, four point support, easy to operate, outrigger beam hydraulically telescoping, jack telescoping protected by two-way pilot controlled valve.

Counterweight

- 9.5t self-disassembly fixed counterweight with lifting device. CW assembly and disassembly controlled remotely.

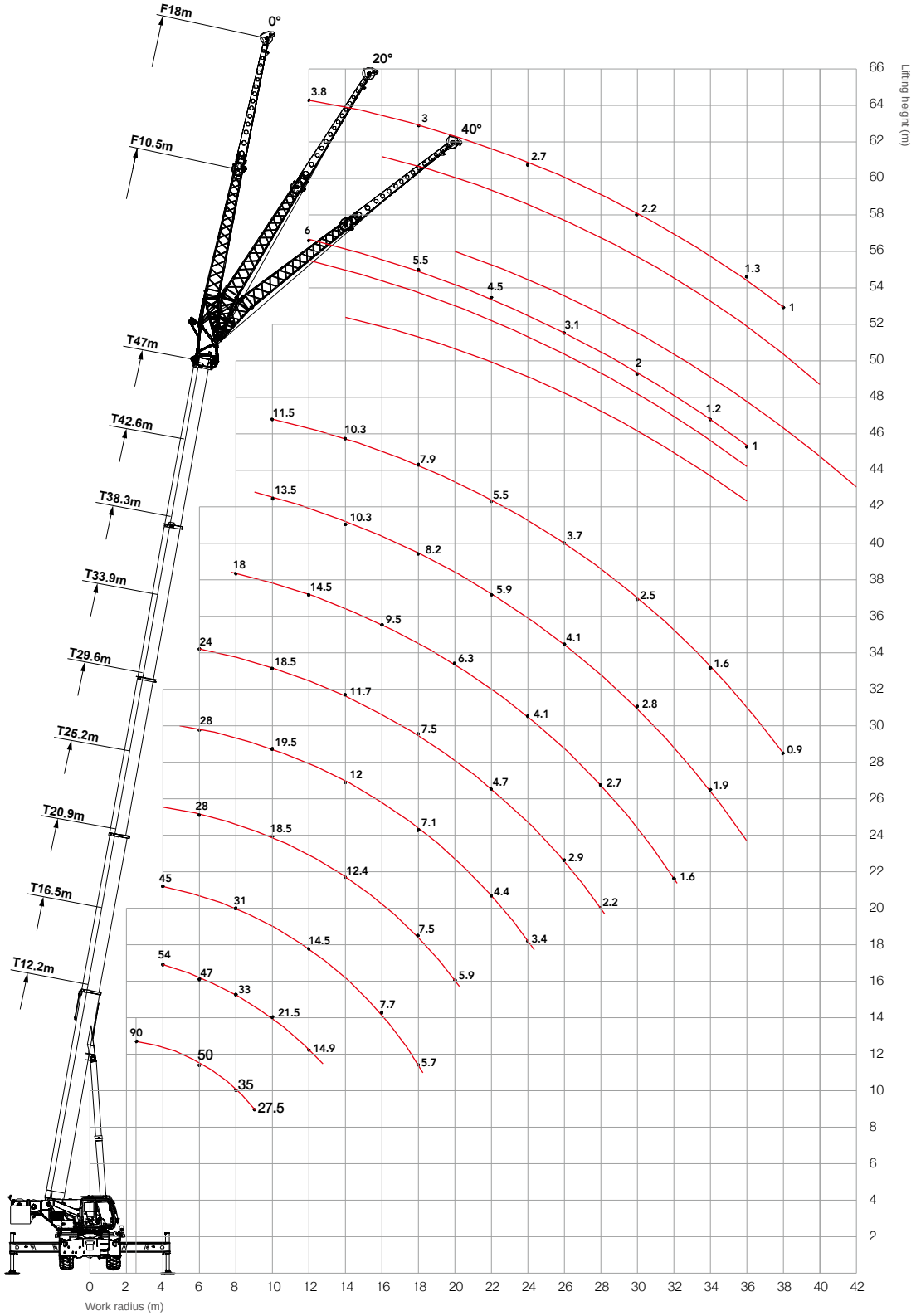
Safety equipment

- The load moment indicator accuracy is kept within ±3%.
- Three-circle protector at main winch and auxiliary winch, preventing wire rope from over-hoist down.
- Height limit switch at head of boom and fixed jib, preventing wire rope from over-hoist up.
- Anemometer at boom and jib head to ensure work at permissible wind speed.
- Motion of risks are cut off automatically with buzzer warning.

Optional equipment at extra fees

- Winch camera
- Boom tip camera
- reverse camera
- 90t hook
- 60t hook
- Anti-sparkling device
- Outrigger pad
- Other equipment available upon request

Working Range



Load Chart–Telescopic Boom

Unit: metric ton

Boom length(m) / Radius(m)	12.2	16.5	20.9	20.9	25.2	25.2	29.6	29.6	29.6	33.9	33.9	38.3	38.3	42.6	47.0	Boom length(m) / Radius(m)
2.5	90.0															2.5
3.0	83.0	55.0														3.0
3.5	75.0	55.0		28.0												3.5
4.0	68.0	54.0	45.0	28.0												4.0
4.5	63.0	53.0	45.0	28.0		25.0										4.5
5.0	58.0	52.0	43.0	27.0	28.0	25.0	28.0									5.0
5.5	53.0	50.0	41.0	26.0	28.0	24.0	28.0	24.0	19.0							5.5
6.0	50.0	47.0	39.0	25.0	28.0	23.0	28.0	24.0	19.0	24.0						6.0
6.5	46.0	43.0	37.0	24.0	27.0	22.0	27.0	23.0	19.0	23.0	18.0					6.5
7.0	42.0	39.5	35.0	23.0	25.0	21.0	25.5	22.0	18.0	22.0	18.0	18.0	15.0			7.0
8.0	35.0	33.0	31.0	22.0	23.0	19.0	23.0	21.0	17.0	21.0	18.0	18.0	15.0			8.0
9.0	27.5	27.0	26.0	21.0	20.5	18.0	21.0	19.5	17.0	20.0	17.0	17.0	14.0	14.0		9.0
10.0		21.5	22.0	20.0	18.5	17.0	19.5	18.0	16.0	18.5	17.0	17.0	13.0	13.5	11.5	10.0
11.0		17.7	17.3	19.0	17.5	16.3	17.5	17.0	15.5	17.0	16.0	15.5	12.0	12.5	11.5	11.0
12.0		14.9	14.5	17.3	15.5	15.5	15.3	15.0	14.5	15.0	15.0	14.5	11.0	11.5	11.5	12.0
14.0		10.8	10.5	13.1	12.4	13.0	12.0	12.0	12.7	11.7	11.5	11.5	9.5	10.3	10.3	14.0
16.0			7.7	10.2	9.6	10.6	9.2	9.9	10.8	9.5	9.7	9.5	8.5	9.3	9.1	16.0
18.0			5.7	8.1	7.5	8.5	7.1	7.8	8.8	7.5	8.2	7.8	7.7	8.2	7.9	18.0
20.0					5.9	6.9	5.6	6.3	7.2	5.9	6.6	6.3	7.0	7.1	6.7	20.0
22.0					4.7	5.7	4.4	5.1	6.0	4.7	5.4	5.1	6.3	5.9	5.5	22.0
24.0							3.4	4.1	5.0	3.7	4.4	4.1	5.3	4.9	4.5	24.0
26.0							2.6	3.3	4.2	2.9	3.6	3.3	4.5	4.1	3.7	26.0
28.0										2.2	2.9	2.7	3.8	3.4	3.1	28.0
30.0										1.7	2.3	2.1	3.2	2.8	2.5	30.0
32.0												1.6	2.7	2.3	2.0	32.0
34.0												1.2	2.3	1.9	1.6	34.0
36.0														1.5	1.2	36.0
38.0														1.2	0.9	38.0
Telescoping status (%)																
2nd boom	0	50	100	0	50	0	100	50	0	100	50	100	0	50	100	2nd boom
3rd boom	0	0	0	33	33	50	33	50	67	50	67	67	100	100	100	3rd boom
4th boom	0	0	0	33	33	50	33	50	67	50	67	67	100	100	100	4th boom
5th boom	0	0	0	33	33	50	33	50	67	50	67	67	100	100	100	5th boom
Rope rate	12	10	8	6	6	6	6	5	5	5	4	4	3	3	3	Rope rate

Load Chart–Telescopic Boom

Unit: metric ton

Boom length(m) / Radius(m)	12.2	16.5	20.9	20.9	25.2	25.2	29.6	29.6	29.6	33.9	33.9	38.3	38.3	42.6	47.0	Boom length(m) / Radius(m)
2.5	81.0															2.5
3.0	75.0	55.0														3.0
3.5	65.0	55.0		28.0												3.5
4.0	60.0	54.0	45.0	28.0												4.0
4.5	54.6	53.0	45.0	28.0		25.0										4.5
5.0	45.2	44.0	43.0	27.0	28.0	25.0	28.0									5.0
5.5	36.5	35.5	35.2	26.0	28.0	24.0	28.0	24.0	19.0							5.5
6.0	30.3	29.5	29.1	25.0	28.0	23.0	28.0	24.0	19.0	24.0						6.0
6.5	25.7	25.0	24.6	24.0	27.0	22.0	26.3	23.0	19.0	23.0	18.0					6.5
7.0	22.2	21.5	21.1	23.0	23.2	21.0	22.8	22.0	18.0	22.0	18.0	18.0	15.0			7.0
8.0	17.1	16.5	16.1	18.7	18.0	19.0	17.7	18.5	17.0	18.2	18.0	18.0	15.0			8.0
9.0	13.6	13.0	12.7	15.1	14.5	15.5	14.1	15.0	15.8	14.6	15.3	15.0	14.0	14.0		9.0
10.0		10.5	10.2	12.5	12.0	12.9	11.6	12.4	13.2	12.0	12.7	12.4	13.0	13.2	11.5	10.0
11.0		8.6	8.3	10.5	10.0	10.9	9.6	10.4	11.2	10.0	10.7	10.4	11.6	11.2	10.8	11.0
12.0		7.1	6.8	9.0	8.5	9.3	8.1	8.8	9.6	8.4	9.1	8.8	10.0	9.5	9.2	12.0
14.0		4.9	4.6	6.7	6.2	7.0	5.9	6.5	7.3	6.2	6.8	6.5	7.7	7.2	6.9	14.0
16.0			3.1	5.1	4.6	5.4	4.3	4.9	5.6	4.6	5.2	4.9	6.0	5.6	5.3	16.0
18.0			1.9	3.9	3.4	4.2	3.1	3.7	4.4	3.4	4.0	3.7	4.7	4.4	4.1	18.0
20.0					2.5	3.3	2.2	2.8	3.5	2.5	3.1	2.8	3.8	3.5	3.2	20.0
22.0					1.8	2.6	1.5	2.1	2.8	1.8	2.4	2.1	3.1	2.8	2.5	22.0
24.0								1.6	2.2	1.3	1.8	1.5	2.5	2.2	1.9	24.0
26.0									1.7		1.3		2.0	1.7	1.4	26.0
28.0													1.6	1.3		28.0
Telescoping status (%)																
2nd boom	0	50	100	0	50	0	100	50	0	100	50	100	0	50	100	2nd boom
3rd boom	0	0	0	33	33	50	33	50	67	50	67	67	100	100	100	3rd boom
4th boom	0	0	0	33	33	50	33	50	67	50	67	67	100	100	100	4th boom
5th boom	0	0	0	33	33	50	33	50	67	50	67	67	100	100	100	5th boom
Rope rate	12	10	8	6	6	6	6	5	5	5	4	4	3	3	3	Rope rate

Load Chart–Telescopic Boom

Unit: metric ton

Boom length(m) / Radius(m)	12.2	16.5	20.9	20.9	25.2	25.2	29.6	29.6	29.6	33.9	33.9	38.3	38.3	42.6	47.0	Boom length(m) / Radius(m)
2.5	65.0															2.5
3.0	51.0	50.5														3.0
3.5	37.0	36.2		28.0												3.5
4.0	28.7	28.0	27.7	28.0												4.0
4.5	23.0	22.4	22.1	24.6		25.0										4.5
5.0	19.0	18.4	18.1	20.5	19.8	21.0	19.7									5.0
5.5	16.0	15.4	15.1	17.4	16.8	18.0	16.6	17.5	18.3							5.5
6.0	13.7	13.1	12.8	15.0	14.5	15.5	14.2	15.0	15.8	14.7						6.0
6.5	11.8	11.3	11.0	13.1	12.6	13.6	12.3	13.0	13.9	12.8	13.5					6.5
7.0	10.3	9.8	9.5	11.5	11.1	12.0	10.7	11.5	12.3	11.2	11.9	11.5	12.7			7.0
8.0	8.0	7.5	7.2	9.2	8.7	9.6	8.4	9.1	9.9	8.8	9.5	9.1	10.3			8.0
9.0	6.3	5.8	5.5	7.4	7.0	7.8	6.6	7.4	8.1	7.1	7.7	7.4	8.5	8.1		9.0
10.0		4.5	4.2	6.1	5.7	6.4	5.3	6.0	6.7	5.7	6.3	6.0	7.1	6.7	6.4	10.0
11.0		3.5	3.2	5.1	4.6	5.4	4.3	5.0	5.7	4.7	5.3	5.0	6.0	5.7	5.4	11.0
12.0		2.7	2.4	4.2	3.8	4.5	3.5	4.1	4.8	3.8	4.4	4.1	5.1	4.8	4.5	12.0
14.0		1.4	1.2	2.9	2.5	3.2	2.2	2.8	3.5	2.5	3.1	2.8	3.8	3.5	3.2	14.0
16.0				2.0	1.6	2.3	1.3	1.9	2.5	1.6	2.2	1.9	2.8	2.5	2.2	16.0
18.0				1.3		1.6		1.2	1.8		1.5	1.2	2.1	1.8	1.5	18.0
20.0									1.2				1.5	1.2		20.0
Telescoping status (%)																
2nd boom	0	50	100	0	50	0	100	50	0	100	50	100	0	50	100	2nd boom
3rd boom	0	0	0	33	33	50	33	50	67	50	67	67	100	100	100	3rd boom
4th boom	0	0	0	33	33	50	33	50	67	50	67	67	100	100	100	4th boom
5th boom	0	0	0	33	33	50	33	50	67	50	67	67	100	100	100	5th boom
Rope rate	12	10	8	6	6	6	6	5	5	5	4	4	3	3	3	Rope rate

Load Chart–Jib

Unit: metric ton

Radius (m)	47.0m+10.5m						47.0m+18.0m						Radius (m)
	0°		20°		40°		0°		20°		40°		
	Boom angle (°)	Load (t)	Boom angle (°)	Load (t)	Boom angle (°)	Load (t)	Boom angle (°)	Load (t)	Boom angle (°)	Load (t)	Boom angle (°)	Load (t)	
12	76.6	6.0	80.1	5.0			78.2	3.8					12
14	74.5	6.0	78.0	4.8	80.9	4.4	76.3	3.5					14
16	72.4	5.8	75.9	4.6	78.8	4.3	74.5	3.2	79.8	2.6			16
18	70.3	5.5	73.8	4.3	76.6	4.2	72.7	3.0	78.0	2.6			18
20	68.2	5.0	71.6	4.1	74.3	4.1	70.8	2.9	76.1	2.5	80.6	2.1	20
22	66.0	4.5	69.4	3.8	72.1	3.9	68.9	2.8	74.2	2.4	78.6	2.1	22
24	63.8	3.7	67.2	3.6	69.8	3.7	67.0	2.7	72.2	2.3	76.6	2.1	24
26	61.5	3.1	64.9	3.2	67.4	3.3	65.1	2.6	70.3	2.2	74.5	2.0	26
28	59.2	2.5	62.5	2.8	65.0	2.9	63.1	2.4	68.3	2.1	72.4	1.9	28
30	56.8	2.0	60.1	2.3	62.5	2.5	61.1	2.2	66.2	2.0	70.3	1.8	30
32	54.4	1.6	57.6	1.8	59.9	2.1	59.0	1.9	64.1	1.9	68.1	1.7	32
34	51.9	1.2	55.1	1.4	57.2	1.6	56.9	1.6	62.0	1.7	65.9	1.6	34
36	49.2	1.0	52.4	1.1	54.5	1.2	54.8	1.3	59.8	1.6	63.6	1.5	36
38							52.6	1.0	57.6	1.4	61.2	1.4	38
40									55.3	1.1	58.7	1.3	40
42											56.1	1.1	42
Rope rate	1												Rope rate

Load Chart–Telescopic Boom, Pick and Carry

Unit: metric ton

Load Over Front						
Radius(m)	12.2	16.5	20.9	25.2	29.6	Radius(m)
4.0	20.1					4.0
4.5	18.0					4.5
5.0	16.1	16.1				5.0
5.5	14.5	14.6				5.5
6.0	13.1	13.3	14.0			6.0
6.5	11.9	12.2	12.8			6.5
7.0	10.8	11.2	11.7	11.0	10.0	7.0
8.0	9.0	9.4	10.0	9.9	10.0	8.0
9.0	7.5	8.0	8.5	8.6	8.7	9.0
10.0		6.7	7.1	7.5	7.7	10.0
11.0		5.6	6.0	6.5	6.8	11.0
12.0		4.7	5.1	5.8	6.2	12.0
14.0			3.7	4.5	4.8	14.0
16.0			2.8	3.7	3.8	16.0
18.0			2.1	2.7	2.8	18.0
20.0				1.9	2.1	20.0
22.0				1.2	1.4	22.0
Min. boom angle at empty load	0°	0°	30°	36°	43°	Min. boom angle at empty load
Telescoping status (%)						
2nd boom	0	0	0	0	0	2nd boom
3rd boom	0	17	33	50	67	3rd boom
4th boom	0	17	33	50	67	4th boom
5th boom	0	17	33	50	67	5th boom
Rope rate	6	4	4	3	3	Rope rate

Load Chart–Telescopic Boom, On Tires Stationary

Unit: metric ton

Load Over Front						
Radius(m)	12.2	16.5	20.9	25.2	29.6	Radius(m)
4.0	22.1					4.0
4.5	19.8					4.5
5.0	17.7	16.9				5.0
5.5	16.0	15.4				5.5
6.0	14.4	14.1	14.9			6.0
6.5	13.1	12.9	13.5			6.5
7.0	11.9	11.9	12.4	12.0	10.0	7.0
8.0	9.9	9.7	10.6	10.5	10.0	8.0
9.0	8.3	8.3	9.0	9.0	9.1	9.0
10.0		7.0	7.6	7.8	8.1	10.0
11.0		5.9	6.5	6.7	7.1	11.0
12.0		5.0	5.5	6.0	6.5	12.0
14.0			4.0	4.7	5.0	14.0
16.0			3.0	3.8	4.0	16.0
18.0			2.2	2.8	3.0	18.0
20.0				2.0	2.3	20.0
22.0				1.3	1.6	22.0
24.0					1.1	24.0
Min. boom angle at empty load	0°	0°	30°	36°	41°	Min. boom angle at empty load
Telescoping status (%)						
2nd boom	0	0	0	0	0	2nd boom
3rd boom	0	17	33	50	67	3rd boom
4th boom	0	17	33	50	67	4th boom
5th boom	0	17	33	50	67	5th boom
Rope rate	6	4	4	3	3	Rope rate

Load Chart–Telescopic Boom, On Tires Stationary

Unit: metric ton

360° Slewing						
Radius(m)	12.2	16.5	20.9	25.2	29.6	Radius(m)
4.0	15.5					4.0
4.5	12.9					4.5
5.0	10.4	10.7				5.0
5.5	8.9	9.1				5.5
6.0	7.6	7.9	8.2			6.0
6.5	6.3	6.9	7.1	7.3		6.5
7.0	5.5	6.0	6.3	6.4	6.5	7.0
8.0	4.1	4.6	4.9	5.1	5.2	8.0
9.0	3.0	3.6	3.9	4.1	4.2	9.0
10.0		2.8	3.1	3.3	3.4	10.0
11.0		2.1	2.4	2.6	2.7	11.0
12.0		1.5	1.8	2.0	2.1	12.0
14.0				1.2	1.3	14.0
Min. boom angle at empty load	0°	30°	46°	48°	51°	Min. boom angle at empty load
Telescoping status (%)						
2nd boom	0	0	0	0	0	2nd boom
3rd boom	0	17	33	50	67	3rd boom
4th boom	0	17	33	50	67	4th boom
5th boom	0	17	33	50	67	5th boom
Rope rate	6	4	4	3	3	Rope rate

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