SANY®

Quality Changes the World

SRC400C

SANY Rough-Terrain Crane
40 Tons Lifting Capacity

Main boom length: 10~31.5 m
Max lifting torque: 1175 KN.m
Max gradability: 105%(at stall)

Excellent lifting performance

- The full extension length of the main boom is 31.5 m, and the height from the ground is 33.9 m, showing a leading position in the industry;
- The maximum load moment of basic boom is 1175 kN.m, and that of the full extension boom is 755 kN.m, showing strong loading capacity;
- With four U-type main booms, and single cylinder and rope extension mechanism, it is stable and efficient;
- With the installation angle for jibs as 0°, 15° and 30°, it is convenient for condition switching and provides high operation efficiency.

Mobile and flexible carrier

- With four-wheel drive, the maximum traveling speed is 37 km/h, and the maximum gradient is 105%(at stall), showing excellent dynamic performance.
- With 4 steering modes such as front wheel steering, rear wheel steering, four wheel steering and crab steering, it is good in maneuvering characteristics.

Efficient and energy-saving system

- Load feedback, constant-power control piston pump and electric proportional control multi-valve system ensure the control precision and energy efficiency.
- The dual-pump converging/dividing technology achieves the composite brake cylinder, ensuring the smooth operation and efficient inching.

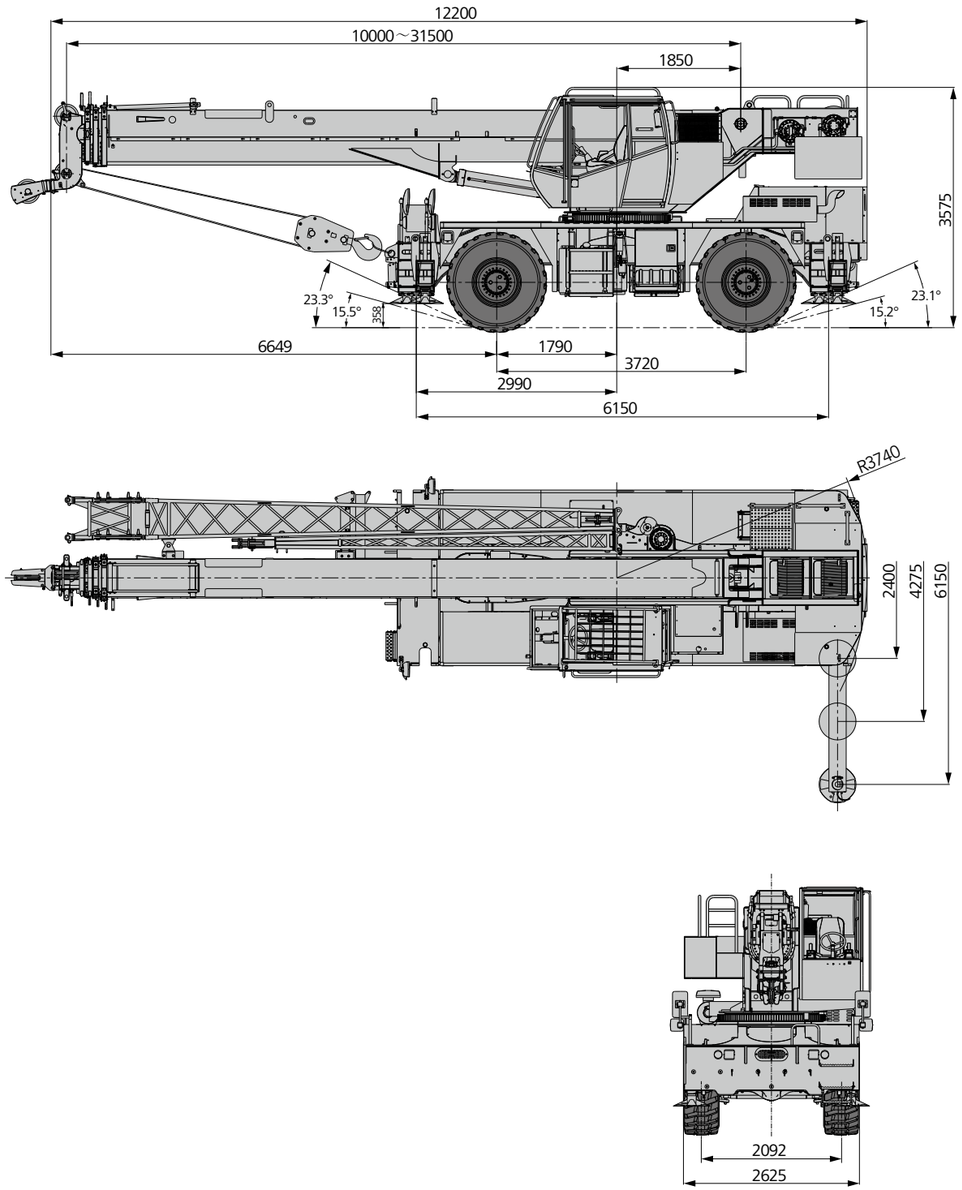
Safe control system

- With independently researched and developed SYMC controller and CAN busbar technology, signals are stable.
- With intelligent protection toque limiter with the accuracy within 0-10%, suspending and loading operation is protected omnidirectionally.
- With comprehensive logic and interlock control and cutting off dangerous action automatically, safe and reliable operation is realized.

Comfortable manipulation experience

- With integrated intelligent control busbar instrument, drivers can grasp running and driving parameters at ease.
- With spacious ladder stand and barrier-free table, etc., maintenance and use are easy.
- With electric control handle, panoramic glass sunroof, adjustable seats and other humanization design, it is relaxing and comfortable for operation.

Overall Dimensions



Technical Parameters

Classification	Item		Unit	Parameter
Dimension Parameter	Overall length		mm	12200
	Overall width		mm	2625
	Overall height		mm	3575
Weight parameters	Overall weight		kg	30900
	Load	Front axle load	kg	15300
		Rear axle load	kg	15600
Power parameters	Engine model		DF Cummins QSB6.7 119kw Tier 3	
	Rated power of engine		Kw/r/min	119/2500
	Rated torque of engine		N.m/r/min	730/1500
Traveling parameters	Maximum traveling speed (no load)		Km/h	37
	Minimum turning radius (4 wheels)		m	12.2/6.2
	Approach angle		°	≥23.3
	Departure angle		°	≥23.1
	Max.grade ability (at stall)		%	105
	Fuel consumption per hundred kilometers		l	≤52
Working speed parameters	Max.single rope lifting speed of main winch (no load)		m/min	130
	Max.single rope lifting speed of auxiliary winch (no load)		m/min	130
	Full extension/retraction time of boom		s	36/43
	Full lifting/descending time of boom		s	50/60
	Slewing speed		r/min	0-2.8
Main performance parameters	Max. rated lifting capacity		t	40
	Tail slewing radius of swingtable		m	3.74
	Max. Lifting torque	Base boom	kN.m	1175
		Full-extended boom	kN.m	755
	Outrigger span (transverse × longitudinal)		m	6.15 × 6.15
	Crane boom length	Basic boom	M	10
		Maximum main crane boom	m	31.5
		Maximum main crane boom + jib	m	45.2

Technical Parameters

Axle Load

Shaft	Front axle	Rear axle	Total weight
Axial load/t	15.3	15.6	30.9
Note	main and auxiliary hooks are not provided.		

Lifting hook and multiplying power

Rated load/t	Quantity of pulley	Multiplying power	Weight of lifting hook/kg
40	4	8	320
5	-	1	85

Standard Equipment

Number	Name	Number	Name
1	Engine	14	Telescope balance vlave
2	Gear box	15	Swing buffer valve
3	Front axle assembly	16	Telescope cylinder
4	Rear axle assembly	17	Luffing cylinder
5	Torque converter radiator	18	Cab
6	Tire	19	Air condition system
7	Piston pump	20	Swing bearing
8	Gear pump	21	Swing reducer
9	Main valve	22	Hoisting reducer
10	Hositing motor	23	Main hook
11	Swing motor	24	Auxiliary hook
12	Luffing balance vlave	25	Motion controller
13	Hoisting balance vlave		

Crane Introduction

Operator's Cab

- With independently researched and developed ergonomics design of Sany, frame type steel structure body and sliding door design, safety glass and corrosion resistant steel plate, full-covered soften interior, superlarge internal space, panoramic glass sunroof, adjustable seats and other humanization design, air conditioner and electric wiper, it is more comfortable and relaxing for operation; moment limiter display screen is equipped, which realizes organic combination between console and operation and display system and provides open-and-shut data of all conditions during hoisting.

Hydraulic system

- Reliable pumps, main valves, motors, balance valves and other key hydraulic elements of high quality are used for the hydraulic system, and the system has high reliability; moreover, it has excellent operation and control performance based on accurate parameter matching.
- With load sensitive variable plunger pump, it can adjust displacement of oil pumps based on self-adaption and realize flow control with high accuracy to realize accurate action control and reduce the energy loss greatly;
- With electric proportion control main valve used and flow compensation and load feedback functions, it can realize stable and accurate control of single action and combined actions easily in all conditions;
- Electric control variable motor is used for winch, so high operation efficiency is ensured; the maximum speed of single rope of auxiliary winch reaches 130 m/min.
- With integrated rotary buffer valve used, it has free trackslip function to realize steady rotary start and control, showing outstanding micro-moving performance.
- The capacity of hydraulic oil tank is 530 L.

Control system

- Import electric control operation handle and busbar connection are used for electric control operation system, so it shows good operation and control, high reliability and easy maintenance and diagnosis.
- Busbar instrument: with the busbar instrument of integrated intelligent control electrical system, drivers can grasp the running and driving parameters at ease at any time; moreover, it has engine fault prompt function, bringing in easy and rapid maintenance and troubleshooting.
- All-around safety protection system, and wire rope safety device and height limiting stopper are equipped for main and auxiliary winch to avoid overfall and overwind of wire rope; rollover protection and limit angle protection are provided;
- Moment limiter: high intelligent moment limiter is used to protect suspending and loading operation in all dimensions and ensure accurate, steady and comfortable operation;
- Fault diagnosis system is used to test faults of lifting electrical, hydraulic action, chassis (for major safety accident), engine, transmission and other faults to further ensure reliable operation of the crane.

Telescopic boom

- There are 4 booms, the basic boom is 10 m, the full extension boom is 31.5 m, the jib is 13.7 m, the full extension height from the ground of main boom is 33.9 m, and the maximum height from the ground with jib is 47.4 m. It is made of high strength welding structure steel, with U section and is in single cylinder rope extension mode.

Luffing system

- Double-acting single piston pole hydraulic cylinder, with safety balance valve is used. With dynamic falling system, the balance valve has flow compensation function, which solves greatly problems of slow falling with large angle and uneven falling speed.
- Luffing angle: -2°-78°.

Slewing

- With 360° rotating, the maximum rotation speed is 2.8 r/min. Speed is governed through electric proportion control mode, showing stable action and reliable system. With unique rotary buffer design, it can realize steady start and stop, with outstanding operation and control performance.

Counterweight

- The fixed counterweight is 4,000 kg.

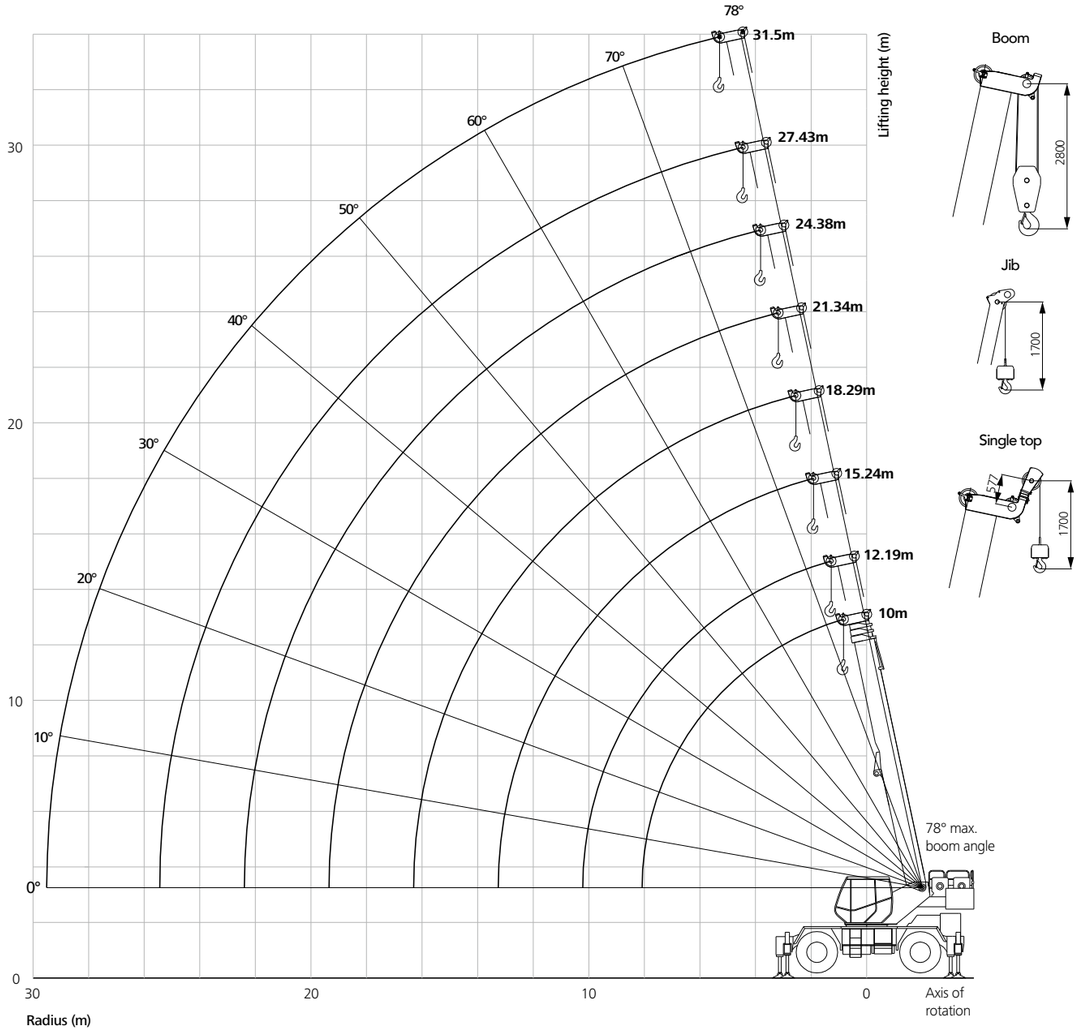
Safety device

- Moment limiter: a moment limiter calculation system based on Gravity model is established with the method of analysis mechanics, and the rated loading accuracy is 0-10% through online no-load calibration to protect suspending and loading operation in all dimensions; during overload operation, the system will alarm and prompt automatically to provide safety guarantee for control and operation.
- Hydraulic balance valve, overflow valve, two-way hydraulic lock and other elements are provided for hydraulic system to realize stable and reliable hydraulic system.
- Wire rope safety device is equipped for main and auxiliary winch to avoid overfall of wire rope
- Height limiting stopper is equipped for main and auxiliary winch to avoid overwind of wire rope.

Crane Introduction

Hoisting	▪ With pump and motor double variable speed governing, the speed has wide governing range, which is efficient and energy-saving. ▪ Winch balance valve is perfectly integrated with the unique anti-slip technology, thus weight can be lifted and dropped steadily. ▪ Anti-rotation wire rope of high strength is equipped, bringing in accurate lofting location. ▪ Normally-closed winch brake and winch balance valve are provided to avoid weight loss during hook-falling. ▪ 1 main hook: 320 kg; 1 auxiliary hook: 160 kg. ▪ Wire rope of main winch: diameter and length of wire rope: 16 mm and 165 m; ▪ Wire rope of auxiliary winch: diameter and length of wire rope: 16 mm and 135 m;
Frame	▪ The frame is welded with steel plate materials of high strength, with strong bearing capacity.
Outrigger	▪ It is of H-shaped outrigger and 4-point support, with the longitudinal and transverse span of 6.15 m × 6.15 m. ▪ Fine grain steel plate material of high strength is used, and biliateral hydraulic locks are used for cylinders with vertical outrigger for safety protection.
Engine	▪ Type: straight-six cylinders, water cooling, inter-cooling, diesel engine ▪ Rated power: 119 w/2,500 r/min ▪ Environmental protection: the emission conforms to EU Stage IIIA standard. ▪ Effective volume of fuel tank: 300 L.
Transmission	▪ Torque converter/transmission: automatic transmission, 6-gear, large gear range, can meet the requirements for climbing on low speed site and also high speed running. ▪ Transmission axis: with optimized layout of transmission axis, the transmission of transmission axis is steady and reliable.
Drive/steering	▪ It is designed with 4 × 4 drive, full-hydraulic power steering, and four modes such as front wheel steering, rear wheel steering, four-wheel steering and crab.
Axle	▪ With the design of two axles, front and rear axle, it shows good dynamic performance.
Tyre	▪ Off-the-highway tires of big diameter are used, with large ground clearance, and the off-road performance is strong. Model of tires: 20.5R25.
Brake system	▪ Duel circuit brake systems are used. When a circuit is in fault, the other one can work normally, which improves the safety and reliability of the brake system. ▪ Dual circuit brake systems are used for running brake, and independent circuit is used for brake for front and rear axles. All wheels are equipped with disk brake. ▪ Disk brake on front axle flange is used for parking brake.
Electric system	▪ 2*12V maintenance-free battery with mechanical battery main switch is equipped, thus power of the whole crane can be cut off manually.
Optional equipment at extra fees	▪ Low temperature kit for operation in -40°C+46°C conditions.

Boom Operating Range



Load Chart - Telescopic Boom

Unit: t

Radius (m)	ON OUTRIGGERS FULLY EXTENDED 6.15m SPREAD 360° ROTATION								Radius (m)
	10	12.19	15.24	18.29	21.34	24.38	27.43	31.5	
2.5	40								2.5
3	35	23	22						3
3.5	31.5	23	22	21.5					3.5
4	29.2	23	22	20.6					4
4.5	26.2	22	22	20.2	18.5				4.5
5	23.8	20.5	20.3	19	17.5				5
5.5	21.8	19.5	18.5	17.6	16.2				5.5
6	19	17.5	17	16.2	15	14.2	13.2		6
6.5	17.3	16	15.6	15.2	14.2	13.5	12.3		6.5
7	15.8	14.7	14.4	14.2	13.5	12.7	11.5	9	7
7.5	14.3	13.5	13.4	13.3	12.7	12	10.8	8.6	7.5
8		12.6	12.5	12.4	12	11.4	10.2	8.4	8
9		11	10.8	10.7	10.6	10.2	9.2	8	9
10			8.8	9.35	9.45	9.25	8.3	7.5	10
12			6.7	7.15	7.3	7.25	6.6	6.4	12
14				5.3	5.5	5.55	5.6	5.5	14
16				4.05	4.25	4.3	4.4	4.5	16
18					3.3	3.35	3.4	3.45	18
20						2.6	2.65	2.7	20
22							2.15	2.2	22
24							1.65	1.7	24
26								1.35	26
28								1.05	28
The minimum angle (°) at no loading	0								The minimum angle (°) at no loading
The lifting capacity at 0°(the angle of boom)	11.3	8.2	5.1	3.4	2.3	1.6	1	0.5	The lifting capacity at 0°(the angle of boom)
Number of parts of line	8	6	6	4	4	4	4	3	Number of parts of line

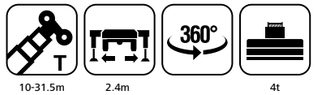
Load Chart - Telescopic Boom

Unit: t

Radius (m)	ON OUTRIGGERS HALF EXTENDED 4.275m SPREAD 360° ROTATION								Radius (m)
	10	12.19	15.24	18.29	21.34	24.38	27.43	31.5	
2.5	40								2.5
3	35	23	22						3
3.5	31.5	23	22	21					3.5
4	27	21.8	20.8	19.8					4
4.5	22	20.2	19.2	18.2	18				4.5
5	19.6	18	17.5	16.8	16.6				5
5.5	16.9	16	15.7	15.6	15.5				5.5
6	14.2	14.3	14.2	14.1	14	13.8	10.5		6
6.5	12.2	12.5	12.6	12.8	12.9	12.8	10		6.5
7	10.6	11	11.3	11.5	11.7	11.8	9.5	8.6	7
7.5	9.2	9.6	9.9	10.2	10.4	10.5	9	8.6	7.5
8		8.3	8.9	9.15	9.3	9.4	8.5	8.25	8
9		6.7	7.1	7.3	7.5	7.6	7.45	7.4	9
10			5.8	6.05	6.2	6.3	6.35	6.4	10
12			3.85	4.15	4.3	4.4	4.5	4.6	12
14				2.95	3.1	3.2	3.25	3.35	14
16				2.1	2.25	2.3	2.4	2.5	16
18					1.6	1.7	1.75	1.85	18
20						1.2	1.3	1.35	20
22						0.8	0.9	0.95	22
The minimum boom angle (°) at no loading	0						27	38	The minimum boom angle (°) at no loading
The lifting capacity with boom angle 0°	7	4.5	2.7	1.6	0.9	0.5	0	0	The lifting capacity with boom angle 0°
Number of parts of line	8	6	6	4	4	4	4	3	Number of parts of line

Load Chart - Telescopic Boom

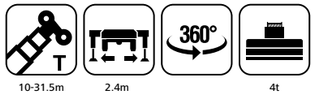
Unit: t



Radius (m)	ON OUTRIGGERS FULLY RETRACTED 2.4m SPREAD 360° ROTATION								Radius (m)
	10	12.19	15.24	18.29	21.34	24.38	27.43	31.5	
2.5	25								2.5
3	23	22.6	22						3
3.5	17.3	17.7	18	17					3.5
4	13.5	14	14.5	14.7					4
4.5	10.3	11	11.5	11.8	12				4.5
5	8.8	9.5	9.9	10.1	10.2				5
5.5	7.6	8.1	8.4	8.6	8.7				5.5
6	6.5	6.9	7	7.2	7.4	7.45	7.5		6
6.5	4.8	5.8	6.1	6.3	6.45	6.6	6.7		6.5
7	4.3	5.2	5.3	5.5	5.7	5.85	5.9	5.95	7
7.5	3.75	4.5	4.75	4.8	4.9	5.05	5.1	5.15	7.5
8		3.65	4	4.2	4.35	4.5	4.55	4.65	8
9		2.7	3.05	3.25	3.4	3.5	3.6	3.65	9
10			2.35	2.55	2.7	2.8	2.9	2.95	10
12			1.35	1.5	1.6	1.75	1.8	1.9	12
14				0.9	1	1.1	1.15	1.2	14
The minimum boom angle (°) at no loading		0		28	40	47	52	57	The minimum boom angle (°) at no loading
The lifting capacity with boom angle 0°	2.7	1.45	0.55						The lifting capacity with boom angle 0°
Number of parts of line	6	6	6	4	4	4	4	3	Number of parts of line

Load Chart - Telescopic Boom

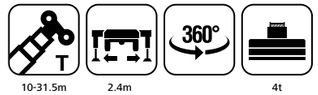
Unit: t



Radius (m)	Travel with load(≤4km/h), over front only				Radius (m)
	10	12.19	15.24	18.29	
3	12.4	12.3			3
3.5	11.1	11			3.5
4	9.9	9.85			4
4.5	9	8.9	8.8		4.5
5	8	8.1	8.2		5
5.5	7.2	7.4	7.6		5.5
6	6.4	6.6	6.75	6.8	6
6.5	5.8	6.05	6.2	6.25	6.5
7	5.25	5.55	5.7	5.75	7
7.5	4.75	5.05	5.2	5.25	7.5
8		4.6	4.8	4.85	8
9		3.9	4.05	4.1	9
10			3.45	3.55	10
12			2.45	2.55	12
14				1.85	14
16				1.2	16
The minimum boom angle (°) at no loading	0	0	0	0	The minimum boom angle (°) at no loading
Number of parts of line	4	4	4	4	Number of parts of line

Load Chart - Telescopic Boom

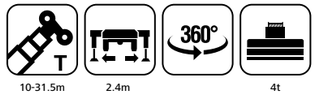
Unit: t



Radius (m)	On tire stationary ,360°rotation is applied				Radius (m)
	10	12.19	15.24	18.29	
3	11	11	10.5		3
3.5	9.7	9.7	9.7		3.5
4	8.35	8.6	8.7		4
4.5	7.2	7.35	7.5	6.3	4.5
5	6.2	6.3	6.5	5.8	5
5.5	5.25	5.35	5.6	5.3	5.5
6	4.25	4.45	4.65	4.7	6
6.5	3.55	3.85	4.05	4.1	6.5
7	2.95	3.3	3.55	3.6	7
7.5	2.35	2.75	3.05	3.1	7.5
8		2.3	2.65	2.7	8
9		1.8	1.9	2.05	9
10			1.35	1.6	10
12			0.85	0.9	12
The minimum boom angle (°) at no loading	0	0	24	40	The minimum boom angle (°) at no loading
Number of parts of line	4	4	4	4	Number of parts of line

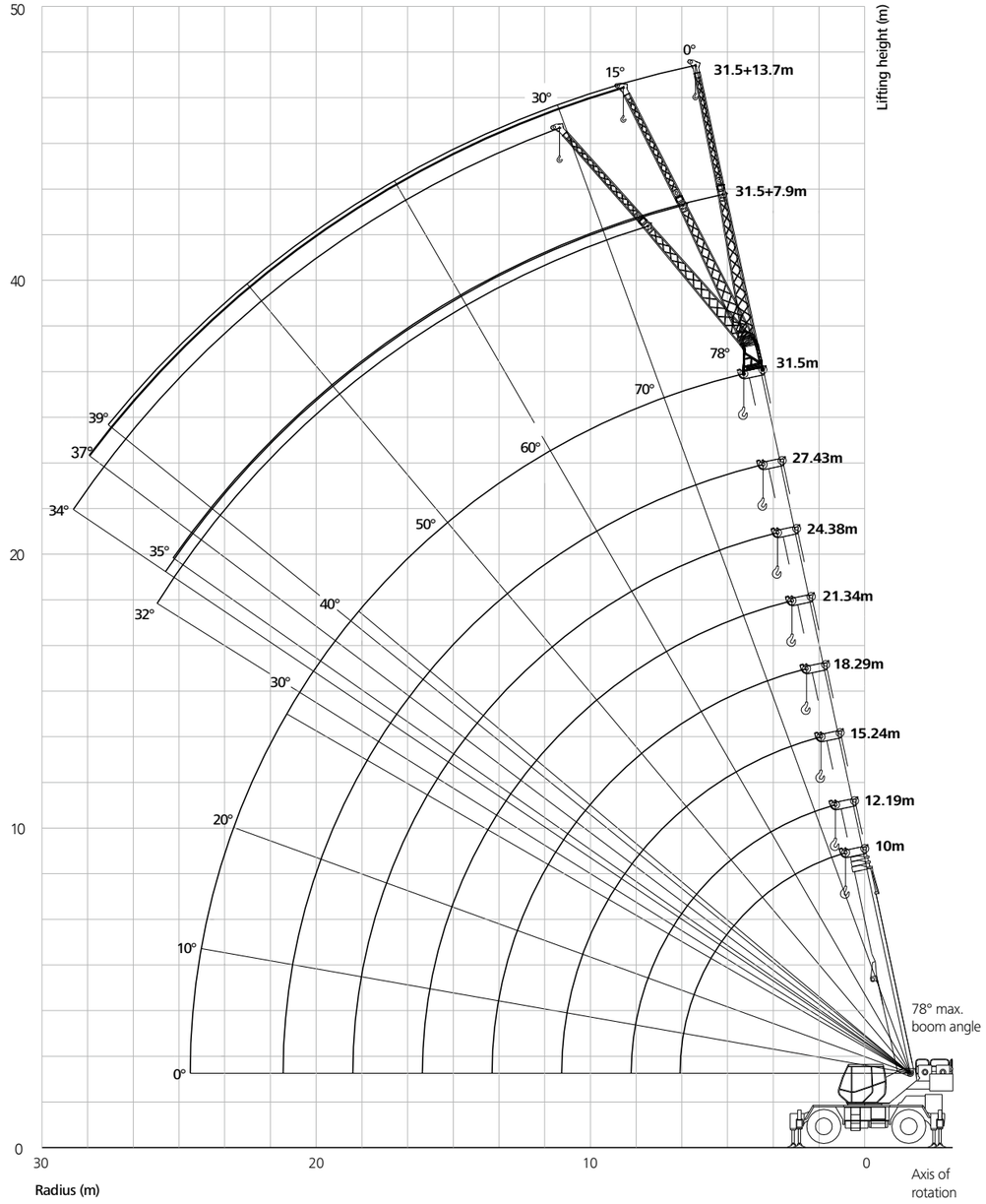
Load Chart - Telescopic Boom

Unit: t



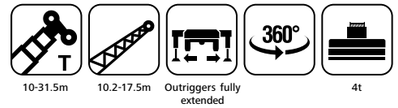
Radius (m)	On tire stationary, over front only				Radius (m)
	10	12.19	15.24	18.29	
3	14	14.3	14.5		3
3.5	12.2	12.3	12.5		3.5
4	10.8	11	11.2		4
4.5	9.8	9.9	10	10.2	4.5
5	8.7	9	9.1	9.2	5
5.5	7.8	8.2	8.3	8.4	5.5
6	7	7.4	7.7	7.8	6
6.5	6.4	6.7	7.2	7.3	6.5
7	5.6	6.1	6.5	6.6	7
7.5	4.8	5.6	5.9	6	7.5
8		4.9	5.2	5.4	8
9		4	4.3	4.4	9
10			3.5	3.6	10
12			2.5	2.6	12
14				1.9	14
16				1.3	16
The minimum boom angle (°) at no loading	0	0	0	0	The minimum boom angle (°) at no loading
Number of parts of line	4	4	4	4	Number of parts of line

Jib Operating Range



Load Chart - Fixed Jib

Unit: t



Boom angle	ON OUTRIGGERS FULLY EXTENDED 6.15m SPREAD 360° ROTATION												Boom angle
	Main boom 31.5 m + Jib 7.9 m						Main boom 31.5 m + Jib 13.7 m						
	0°		15°		30°		0°		15°		30°		
	main boom operating elevation (°)	Lifting capacity	main boom operating elevation (°)	Lifting capacity	main boom operating elevation (°)	Lifting capacity	main boom operating elevation (°)	Lifting capacity	main boom operating elevation (°)	Lifting capacity	main boom operating elevation (°)	Lifting capacity	
78	3.8	7.6	2.9	9.3	2.2	10.8	2.1	8.7	1.6	12.1	1.2	14.8	78
76	3.7	9	2.75	10.7	2.15	12.1	2.05	10.3	1.55	13.7	1.15	16.4	76
74	3.6	10.4	2.65	12	2.05	13.4	2	11.9	1.5	15.2	1.1	17.8	74
72	3.4	11.8	2.55	13.3	2	14.7	1.95	13.5	1.45	16.7	1.1	19.2	72
70	3.2	13.2	2.45	14.6	1.95	16	1.9	15.1	1.4	18.2	1.1	20.6	70
68	3.05	14.5	2.35	15.9	1.9	17.2	1.8	16.6	1.35	19.7	1.05	22	68
66	2.9	15.8	2.25	17.2	1.8	18.4	1.7	18.1	1.3	21.1	1	23.3	66
64	2.7	17.1	2.15	18.4	1.75	19.6	1.6	19.6	1.25	22.5	1	24.6	64
62	2.55	18.3	2.05	19.5	1.7	20.8	1.5	21.1	1.2	23.9	0.95	25.9	62
60	2.4	19.4	1.95	20.6	1.65	21.9	1.45	22.5	1.15	25.2	0.95	27.1	60
58	2.25	20.5	1.8	21.7	1.6	23.1	1.4	23.9	1.1	26.4	0.95	28.3	58
56	2	21.6	1.7	22.8	1.5	24.1	1.3	25.1	1.05	27.6	0.95	29.5	56
54	1.8	22.7	1.6	23.8	1.4	25.1	1.2	26.3	1	28.8	0.9	30.6	54
52	1.6	23.7	1.45	24.8	1.3	26	1.1	27.5	0.95	29.9	0.9	31.5	52
50	1.45	24.7	1.3	25.8	1.2	26.9	1	28.7	0.9	31	0.85	32.5	50
Min.elevation angle(°)	32		34		35		34		37		39		Min.elevation angle(°)

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—Authorised Dealer—

Reminder:
For safe and reliable operation of the diesel engines, please fill Grade IV machines with Grade IV diesel and urea solution conforming to related national standards. Please refer to the operating instructions and related standards for details.

Any change in the technical parameters and configuration due to advancement in technology may occur without prior notice. The machine in the figures may include auxiliary equipment. This brochure is for reference only, and goods in kind shall prevail.

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