

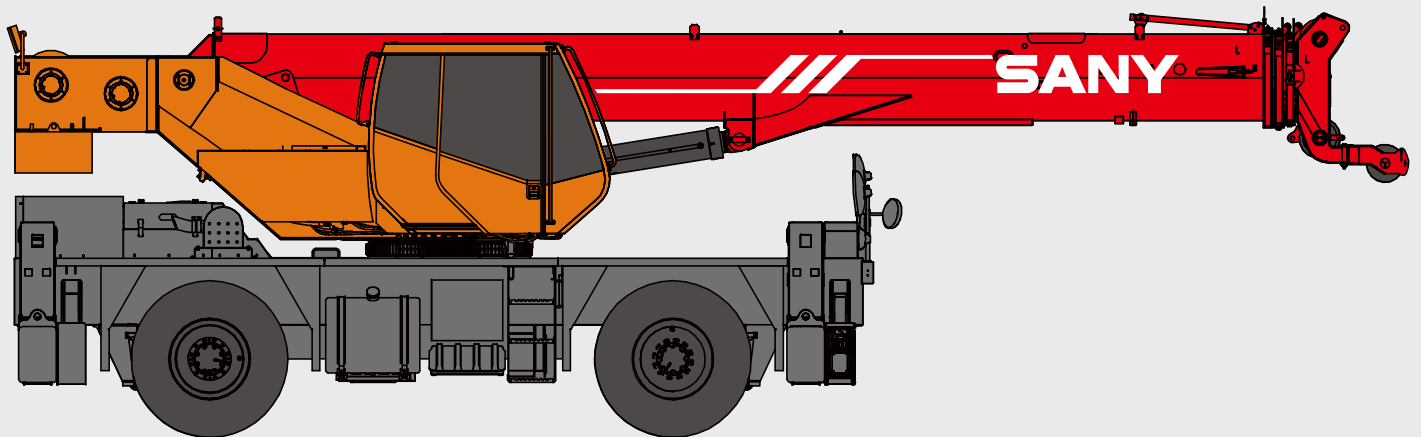
QUALITY CHANGES THE WORLD

**PRODUCT
SPECIFICATIONS**



SRC300CR

**SANY ROUGH-TERRAIN CRANE
30T LIFTING CAPACITY**



Main boom length: 9.9~31.5 m
Max lifting torque: 968 KN.m
Max gradability: 65%

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SANY ROUGH-TERRAIN CRANE SRC300CR / 30T LIFTING CAPACITY

Basic performance

- Key structural parts are optimized in design, and the lifting performance is at the leading position in the product industry with the same tonnage.
- Maximum length of boom is 9.9 m and the full extension length of boom is 31.5 m, which are at the leading position in the industry.
- Fully optimized lifting boom of structural steel with U-shape section and high strength is used in five sections, so that the lifting boom has a more uniform force and a lighter weight. The installation angles of jib of 5°, 25° and 45° facilitate the switching of working condition and improvement of operation efficiency.
- Four-wheel drive can adopt 4 steering modes, with a good maneuvering performance. The minimum turning radius of four wheels of no more than 5.8 m promotes the passing ability and comfort in complex road conditions.

High quality

- The stable and high-quality main oil pump, main valve, winch motor, slewing motor, balance valve and other key hydraulic elements are used, and the system has high reliability; moreover, it has excellent operation and control performance based on accurate parameter matching.
- With integrated slewing buffer valve, the slewing system has free trackslip function to realize steady rotary start and control, showing outstanding micro-mobility.
- With the bus instrument of integrated intelligent control electrical system, drivers can grasp running parameters and realize easy driving at any time; moreover, it has engine fault prompt function, bringing in easy and rapid maintenance and troubleshooting.
- With safety glass and corrosion resistant steel plate, soften interior, super-large internal space, panoramic skylight, adjustable seats and other humanization design, air conditioner and electric wiper, it is more comfortable and relaxing for operation in control cabin.

Energy conservation and environmental protection

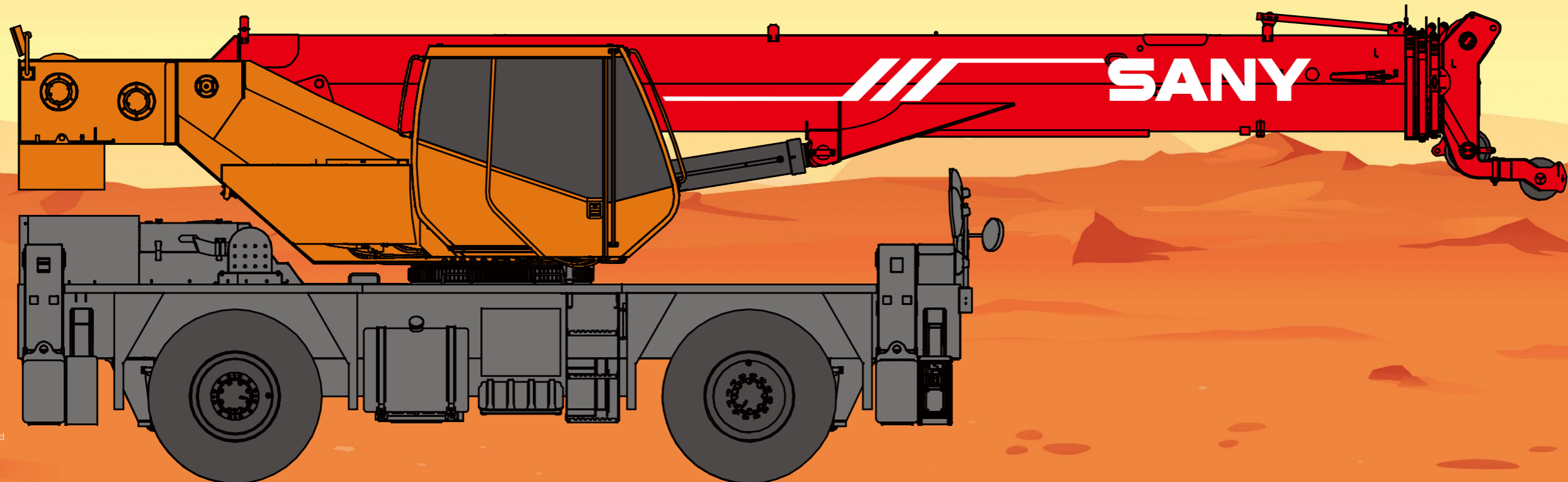
- The load and constant power of hydraulic system are respectively fed back and controlled, and dual variable speed governing pumps and motors are adopted to realize economic energy conservation.

Safety and reliability

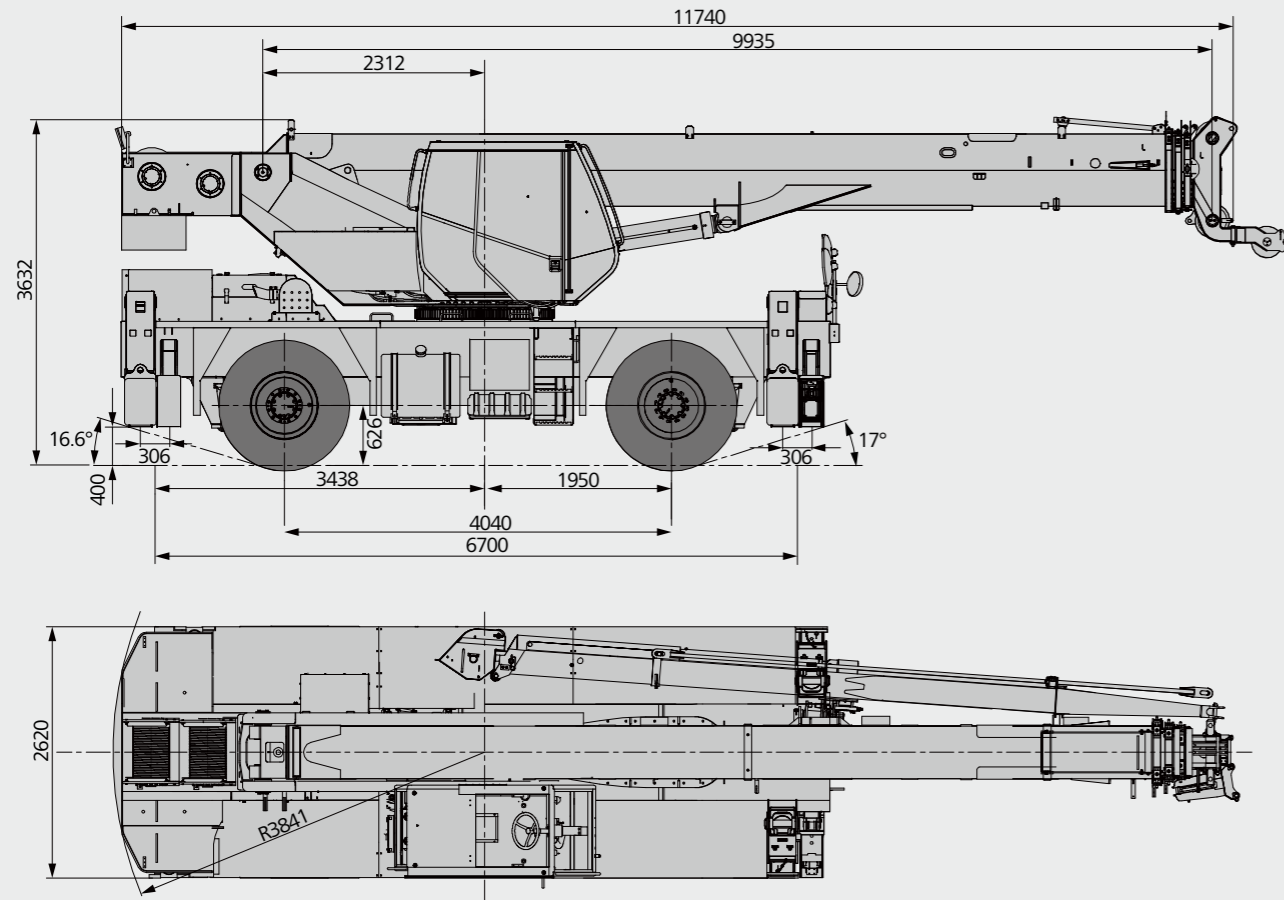
- A moment limiter calculation system based on gravity model is established, and the rated loading accuracy is 0-10% through online no-load calibration to protect suspending and loading operation in all dimensions; during overload operation, the system will alarm and prompt automatically to provide safety guarantee for control and operation.
- Hydraulic balance valve, overflow valve, two-way hydraulic lock and other elements are provided for hydraulic system to realize stability and reliability.
- Three-circle protectors are equipped for main and auxiliary winches, and height limiters are equipped at the ends of boom and jib to avoid overfall and overwind of wire rope.
- Length, angle and pressure sensors are arranged to display the crane status in real time, so as to automatically stop dangerous operation and perform buzzer alarm.

GCP system

- The first remote monitoring and management system for equipment at home has a powerful acquisition function for equipment operation condition and operation parameters, and can diagnose and manage remote faults.
- Customers can master the operation of equipment as well as the query and ordering of accessories at home.



Overall Dimensions



Technical Specification

CATEGORY	ITEM	UNIT	VALUE	
DIMENSION PARAMETER	Full length of the whole crane	mm	11740	
	Full width of the whole crane	mm	2620	
	Full height of the whole crane	mm	3632	
	Wheel base	mm	4040	
	Wheel track	mm	2170	
WEIGHT PARAMETER	Gross mass of the whole crane	kg	28000	
	Load	Front axle load	kg	14000
		Rear axle load	kg	14000
POWER PARAMETERS	Engine model	-	Dongfeng Cummins ISDe 270	
	Maximum power of engine	kw/rpm	198/2500	
	Maximum output torque of engine	N.m/rpm	970/1400	
RUNNING PARAMETER	Maximum running speed	Km/h	46	
	Approach angle/departure angle	°	18/17	
	Maximum gradient	%	65	
OPERATING SPEED	Maximum speed of single rope of main and auxiliary winches (no load)	m/min	125	
	Full extension/retraction time of lifting boom	s	50/40	
	Full rising/falling time of lifting boom	s	30/50	
	Slewing speed	r/min	3.2	
MAIN PERFORMANCE PARAMETERS	Maximum total rated lifting capacity	t	30	
	Maximum lifting moment	Basic boom	kN.m	968
		Longest boom	kN.m	605
	Outrigger span (transverse × longitudinal)	m	6.7×6.5	
	Boom length	Basic boom	m	9.9
		Longest boom + jib	m	31.5+12.5
Jib setting angle	°	5,25,45		

Technical Parameters

Standard Equipment

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

Crane Introduction

Temperature: -20°C to +46°C

Road condition: Operations can be performed under poor road conditions in desert, oil field, gobi, etc.

Carrier

Frame

- The frame is a double-girder structure welded with steel plate of high strength, with strong bearing capacity.

Chassis engine

- Model: Dongfeng CUMMIS ISDe 270;
- Type: straight-six cylinders, water cooling, supercharging and inter-cooling and diesel engine;
- Rated power: 198 kw/2500 r/min;
- Environmental protection: The emission conforms to the national III standard;
- Effective volume of fuel tank: 300 L.

Gearbox

- Gearbox: Automatic gearbox has 6 forward gears and 3 backward gears with a wide speed ratio range, which can meet the requirements of climbing at low speed and driving at high speed.

Axle

- The chassis is designed with two flexible axles. Driven by the front and rear axles, it shows good dynamic performance.

Axle suspension

- The front axle adopts rigid connection while the rear axle is arranged with locking pivot type swing suspension that has oil cylinder.

Tyre

- Off-the-highway tires of large diameter are used, with great ground clearance and high off-road performance. The model of tire is 17.5R25.

Braking system

- The dual -circuit braking system is used. When a circuit is in fault, the other one can work normally, which improves the safety and reliability of braking system.

Hydraulic system of chassis

- The stable and high-quality main oil pump, main valve, winch motor, slewing motor, balance valve and other key hydraulic elements are used, and the system has high reliability; moreover, it has excellent operation and control performance based on accurate parameter matching. The main valve has flow compensation and load feedback control functions to easily realize stable control of a single action and combined action in all conditions.

Hydraulic outrigger

- X-shaped telescopic outrigger is used. It is supported at 4 points, with longitudinal and transversal span of 6.7 m × 6.5 m.

Control system

- Busbar instrument: with the bus instrument of integrated intelligent control electrical system, drivers can grasp running parameters and realize easy driving at any time; moreover, it has engine fault prompt function, bringing in easy and rapid maintenance and troubleshooting.
- All-around safety protection system is provided. Three-circle protectors and height limiters are equipped for main and auxiliary winches to avoid overfall and overwind of steel wire rope, prevent rollover and protect limit angle.
- Moment limiter: high intelligent moment limiter is used to protect suspending and loading operation in all dimensions and ensure accurate, steady and comfortable operation.

Crane Introduction

superstructure

Control room

- With independently researched and developed ergonomics design of SANY, sliding door, safety glass, corrosion resistant steel plate, soften interior, super-large internal space, panoramic skylight, 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 of main console with operation and display system and provides open-and-shut data of all conditions during hoisting.

Boom system

- Boom: There are four booms, including basic boom of 9.9 m and fully extended boom of 31.5 m; they are made of welded structural steel with high strength, with U-shape section.
- Jib: There are two jibs of 7.7 m and 12.5 m respectively at the setting angle of 5°, 25° and 45°.
- Telescoping mechanism: It is subject to dual-cylinder rope row type telescopic mode, with the full extension/retraction time of 50/40 S only. The telescoping mechanism is simple, efficient, safe and reliable.

Slewing bearing

- The slewing bearing made by SANY is used. The high reliability of SANY is inherited.

Slewing table structure

- It is designed independently by SANY, with more optimized structure, and made of fine-grained high-strength steel.

Superstructure hydraulic system

- With load-sensitive variable plunger pump, it can adjust the displacement of oil pump in real time to realize the flow control with high accuracy and reduce the energy loss greatly.
- Electric control variable motor is used for winch, so high operation efficiency is ensured; the maximum speed of single rope of main and auxiliary winch reaches 125 m/min.
- With integrated slewing buffer valve, the slewing system has free trackslip function to realize steady rotary start and control, showing outstanding micro-mobility.

Lifting mechanism

- With double-variable speed governing pump and motor, high efficiency and energy conservation can be realized. Winch balance valve is perfectly integrated with the unique anti-slip technology, thus weight can be lifted and dropped steadily. The anti-rotating steel wire rope of high strength is provided to realize accurate lifting and positioning. The steel wire ropes of main and auxiliary winches have the same diameter of 16 mm and the length of 175 m and 105 m respectively.

Derricking mechanism

- With double-variable speed governing pump and motor, high efficiency and energy conservation can be realized. Winch balance valve is perfectly integrated with the unique anti-slip technology, thus weight can be lifted and dropped steadily. The anti-rotating steel wire rope of high strength is provided to realize accurate lifting and positioning. The steel wire ropes of main and auxiliary winches have the same diameter of 16 mm and the length of 175 m and 105 m respectively.

Slewing mechanism

- With 360° rotating, the maximum slewing speed is 3.2 r/min. The hydraulic proportional speed controller is used to realize stable movement and reliable system. The unique slewing buffer design is adopted for more stable braking work.

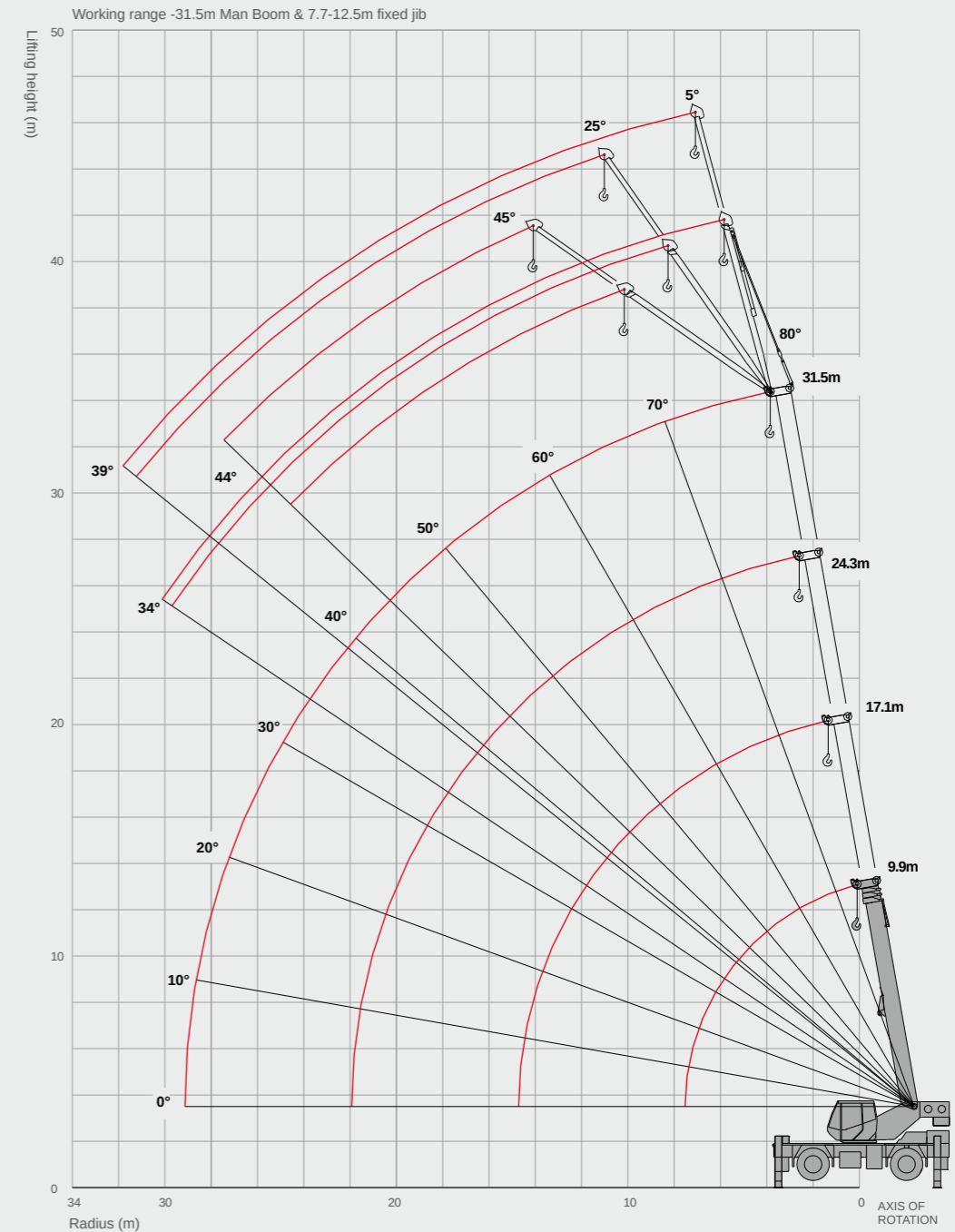
Safety device

- 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.
- Three-circle protector is equipped for main and auxiliary winches to avoid overfall of wire rope.
- Height limiter is equipped at the ends of boom and jib to avoid overwind of wire rope.
- Length, angle and pressure sensors are arranged to display the crane status in real time, so as to automatically stop dangerous operation and perform buzzer alarm.

Counterweight

- The fixed counterweight is 1,000 kg.

Operating Range



Load Chart-Telescopic Boom



Unit: t

Radius (m)	9.9	17.1	24.3	31.5	Radius (m)
3	30.00				3
3.5	25.00	19.00			3.5
4	23.00	19.00			4
4.5	21.20	18.00			4.5
5	19.40	16.70	12.50		5
5.5	17.80	15.60	11.75		5.5
6	16.30	14.60	11.10		6
6.5	15.20	13.80	10.50	7.00	6.5
7	13.70	13.00	10.00	7.00	7
8		11.00	9.00	7.00	8
9		8.90	8.20	6.30	9
10		7.40	7.60	5.30	10
11		6.10	6.70	5.80	11
12		5.20	5.70	5.15	12
13		4.40	5.00	4.70	13
14		3.70	4.30	4.30	14
15			3.70	4.00	15
16			3.30	3.60	16
17			2.90	3.20	17
18			2.50	2.80	18
19			2.20	2.50	19
20			2.00	2.30	20
21			1.80	2.00	21
22				1.80	22
24				1.45	24
26				1.20	26
28				1.00	28
Part of line	8	6	4	3	Part of line

Load Chart-Jib



Unit: t

Telescopic boom + jib length							
Boom angle	31.5m+7.7m			31.5m+12.5m			Boom angle
	Jib setting angle						
	5°	25°	45°	5°	25°	45°	
80	3.00	2.10	1.60	2.00	1.20	0.80	80
76	3.00	2.10	1.60	2.00	1.20	0.80	76
72	3.00	2.10	1.60	1.75	1.10	0.80	72
70	2.80	2.10	1.60	1.65	1.05	0.80	70
65	2.35	1.80	1.50	1.40	0.95	0.78	65
60	2.00	1.55	1.35	1.20	0.90	0.75	60
55	1.45	1.35	1.20	1.05	0.85	0.74	55
50	1.05	1.00	0.95	0.85	0.75	0.70	50
45	0.75	0.70	0.65	0.60	0.55	0.50	45
40	0.55	0.50		0.40	0.40		40
35	0.35	0.32					35
Min angle	34°	34°	44°	39°	39°	44°	Min angle

Notes:

1. Rated lifting capacities shown in the table are based on the condition that the crane is set on firm ground horizontally. These above bold lines are based on crane strength and those below, it is stability;
2. Radius shown in the table are the actual radius when working;
3. Rated lifting capacities in the stability area comply with ISO 4305;
4. The total rated lifting load in the table includes the weight of hook block (main hook is 320kg) and slings;
5. Date of the tabulation are suitable for 360 operation;
6. When actual boom length and working radius are between two values, determine lifting capacity according to the bigger boom and radius.



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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.

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