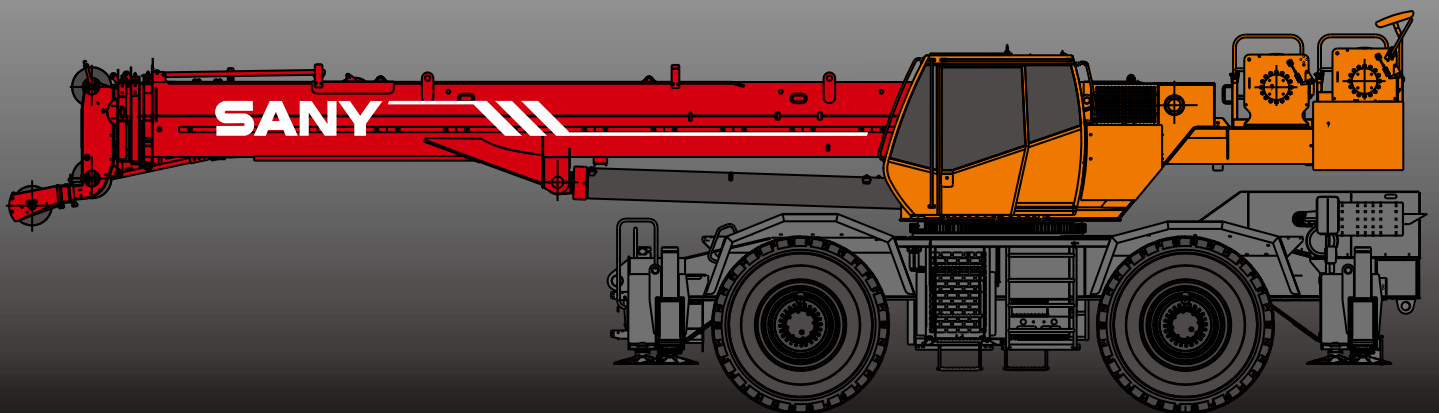


SRC550

SRC550 ROUGH-TERRAIN CRANE
55 TONS LIFTING CAPACITY

Quality Changes the World



SANY

■ SANY Automobile Hoisting Machinery is one of the core business unit of Sany Heavy Industry, mainly engaged in the research and development of high end, mid to large tonnage crane series, including mobile crane, crawler crane, tower crane and loader crane. It has two industrial parks in Ningxiang and Huzhou, since entering the market, the products of Sany Automobile Hoisting Machinery have received worldwide recognition with advanced technology, lean manufacturing, high reliability and excellent service.





SANY ROUGH-TERRAIN CRANE

CONTENT

04	Icon
05	Selling points
06	Introduction
09	Dimension
11	Technical Parameter
12	Operation Condition
13	Load Chart
18	Wheel Crane Family Map



Cab



Carrier frame



Suspension system



Hydraulic system



Outriggers



Telescopic boom



Control system



Engine



Lattice jibs



Telescopic system



Transmission system



Superlift devices



Luffing system



Drive/Steer



Luffing lattice jib



Slewing



Axles



winch mechanism:



Counterweight



Tyres



Safety system



Brakes system



Hoist system

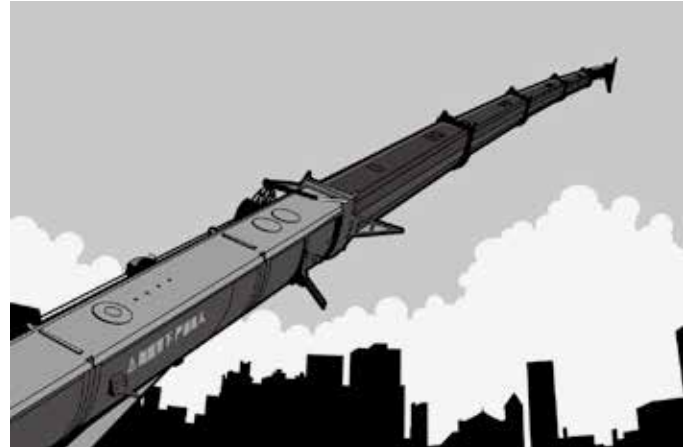


Electrical system



Excellent traveling capacity and high-performance chassis system

Four-wheel drive is applied with four steering modes to provide good mobility. Trafficability and comfortableness of the complex road condition is improved thanks to its Min. turning radius of no more than 6.7m.



Ultra long and super strong boom system

Four-section boom of high strength steel structure and optimized U-shaped section, reducing weight and improving safety significantly. Jib mounting angles are 0°, 15°, and 30° which ensure fast and convenient change-over between different operating conditions so as to improve working efficiency of the machine.



Highly efficient and unique hydraulic system

Hydraulic system load feedback and constant power control is applied to provide strong lifting capacity and good micro-mobility. Unique steering buffer design guarantees smooth braking operation.



Safe and reliable control system

Self-developed controller SYMC specially for engineering machinery is configured. The application of CAN-bus fully digital network control technology ensures stable control signal, simple harness and high reliability. It can feedback the data information and monitor the working condition of whole crane in real-time. Load moment limiter configured with comprehensive intelligent protection system is adopted with precision within 10%.The adoption of comprehensive logic and interlock control system ensures more safe and reliable operation.

Introduction

 Cab

- The self-made cab adopts ergonomic design with sliding door, safety glass, anti-corrosion steel, soft interior decoration, large interior space, panoramic sunroof and adjustable seats, air conditioner and electric window wiper etc. to provide easier and more comfortable operation. Meticulously designed industrial style and novel appearance are applied for cab. Load moment limiter display is configured to achieve the combination of main console and operating display system, making all operating condition data of lighting operation clear at a glance.

 Hydraulic system

- High-quality key hydraulic components such as main oil pump, rotary pump, main valve, winch motor, and balancing parts etc. are adopted to achieve stable and reliable operation of the hydraulic system. Superior operation performance is guaranteed by accurate parameter matching.
- Through the adoption of load sensitive variable displacement piston pump, pump displacement can be adjusted in real-time, achieving high-precision flow control with no energy loss during operation;
- Main valve has flow compensation and load feedback control function. It significantly enhances control stability for single action and combined action under different operation conditions.
- Winch adopts electronically controlled variable motor to ensure high operation efficiency. Max. single line speed of main and auxiliary winches is up to 150m/min;
- Slewing system is equipped with the integrated slewing buffer valve with free slipping function to ensure more stable starting and control of the slewing operation and excellent micro-mobility.
- Hydraulic oil tank capacity: 743L

 Control system

- CAN-bus instrument: CAN-bus instrument with a combined intelligent control electrical system is used for easy reading of the traveling parameters at any time. Engine fault warning function enables convenient and fast maintenance.
- With full security protection system, main and auxiliary winches are equipped with over-rollback limiter and height limiters to prevent over-rolling out and over-hoisting of steel rope, including tip-over and limit angle protection.
- Load moment limiter: The adoption of highly intelligent load moment limiter system can comprehensively protect lifting operation, ensuring accurate, stable and comfort operation.

 Telescopic system

- Four-section boom is applied with basic boom length of 11.25m, full-extended boom length of 34.5m, jib length of 16.4m and lifting height of fully extended boom length of 35.8m respectively. Max. lifting height is 52.1m including jib. It is made of fine grain high-strength steel with U-shaped cross section and with telescopic operation controlled independently by double cylinder rope.

 Luffing system

- Dead-weight luffing provides more stable luffing operation at low energy loss. Dual-action single piston hydraulic pressure cylinder with safety valve is adopted. Luffing angle range is -2° — 80° .

Introduction



Slewing system

- 360° rotation can be achieved with Max. slewing speed of 2.6r/min. Hydraulic controlled proportional speed adjustment is applied, providing stable and reliable operation of the system. Unique slewing buffer design ensures more stable braking operation.



Counterweight

- The total weight of fixed counterweight is 4500kg, no flexible counterweight.



Safety system

- Load moment limiter: Load moment limiter calculation system based on lifting load mechanical model is established using an analytical mechanics method, with rated lifting accuracy within 10% through on-line non-load calibration, providing full protection to lifting operation. In case of overload operation, system will automatically issue an alarm, to provide safety protection for manipulation.
- Hydraulic system is configured with the balance valve, overflow valve, and two-way hydraulic lock etc. components, thus achieving the stable and reliable operation of the hydraulic system;
- Main and auxiliary winches are equipped with over roll-out limiter to prevent over rolling-out of wire rope.
- Boom and jib ends are equipped with height limiters respectively to prevent over-hoisting of wire rope.
- Boom head is equipped with anemometer, press sensor, to indicate the working condition of whole crane in real-time, giving an alarm and cutting off the dangerous action automatically.



Hoist system

- The adoption of pump and motor double variable speed control ensures high efficiency and excellent energy saving functionality. With perfect combination of winch balance valve and unique anti-slip technology, heavy load can lift and lower smoothly. High strength, anti-swirl steel wire is equipped for high-precision hoisting positioning.
- Equipped with one 360kg main hook and one 160kg auxiliary hook, and Main and auxiliary hook steel rope diameters are 19mm, the rope length is 235m and 165m respectively.



Carrier frame

- Carrier frame is of box-type structure that is welded with high-strength steel plate, featuring high lifting capacity.

Introduction



Outriggers

- H-type outrigger structure and 4-point support is adopted, with Max. span up to 7.2×7.2m, featuring easy operation and high stability. Fine grain high strength steel material is adopted and dual-direction hydraulic lock is used for the protection of vertical span cylinder.



Engine

- Type: Inline six-cylinder, water cooled, supercharged and inter-cooling diesel engine
- Rated power: 198kw/2500r/min
- Environment-protection: Emission complies with StatelIstandard
- Capacity of fuel tank: 300L



Transmission system

- Transmission case: Automatic transmission case. There are six forward gears and six backward gears in gearbox. The speed ratio range is large which meets the requirements of low gradeability speed and high traveling speed.
- Transmission shaft: With optimized arrangement of the transmission shaft, the transmission is stable and reliable.



Drive/Steer

- 4×4, 4×2 drive way and full hydraulic power steering system, with front wheel steering, rear wheel steering, four-wheel steering, and crab traveling modes.



Axles

- Axles can be flexibly controlled, with two-axle designed for chassis. Front and rear axles drive are applied to ensure good power performance.



Tyres

- Tyres type: 4*29.5R25 ET6A



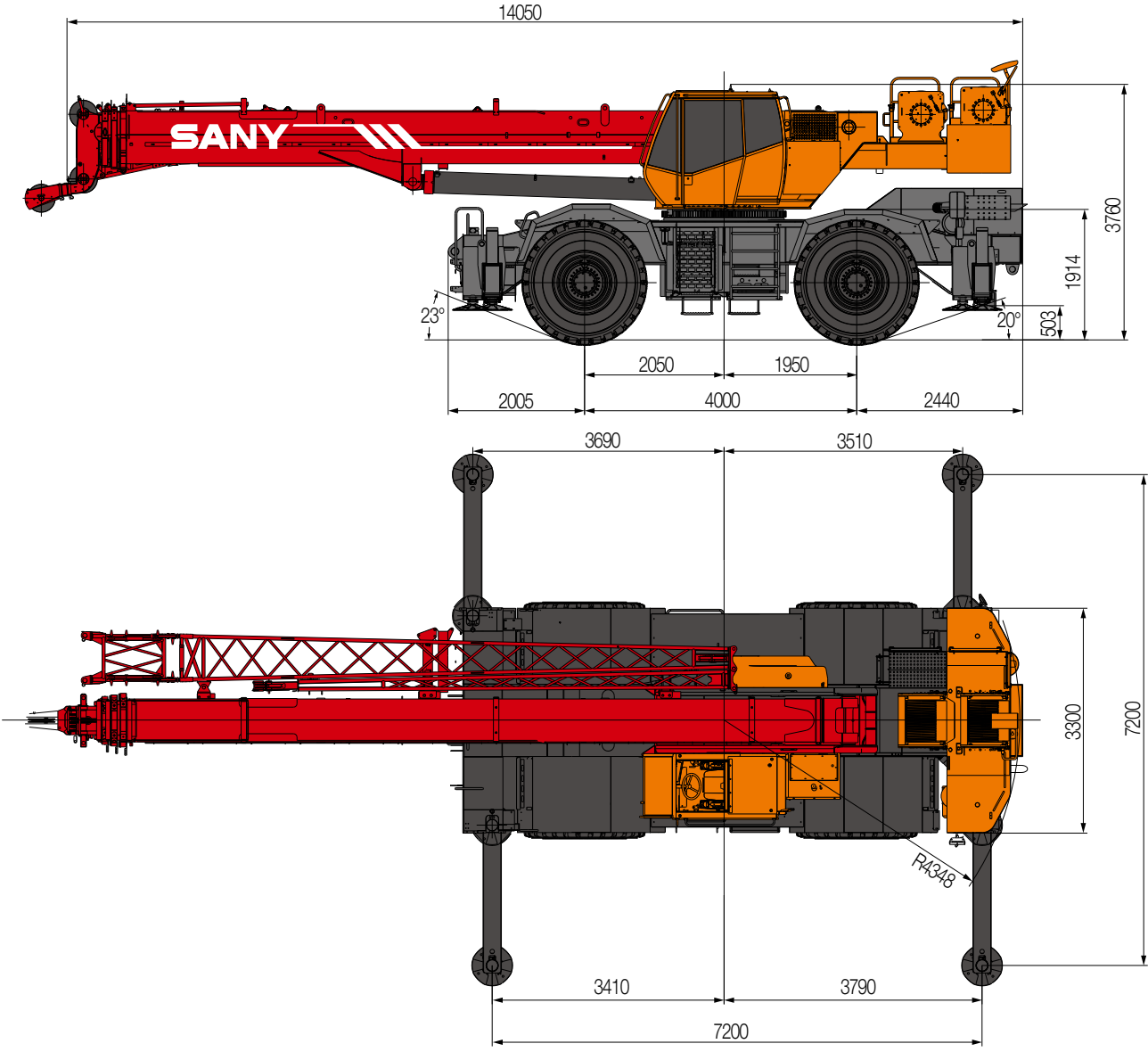
Brakes system

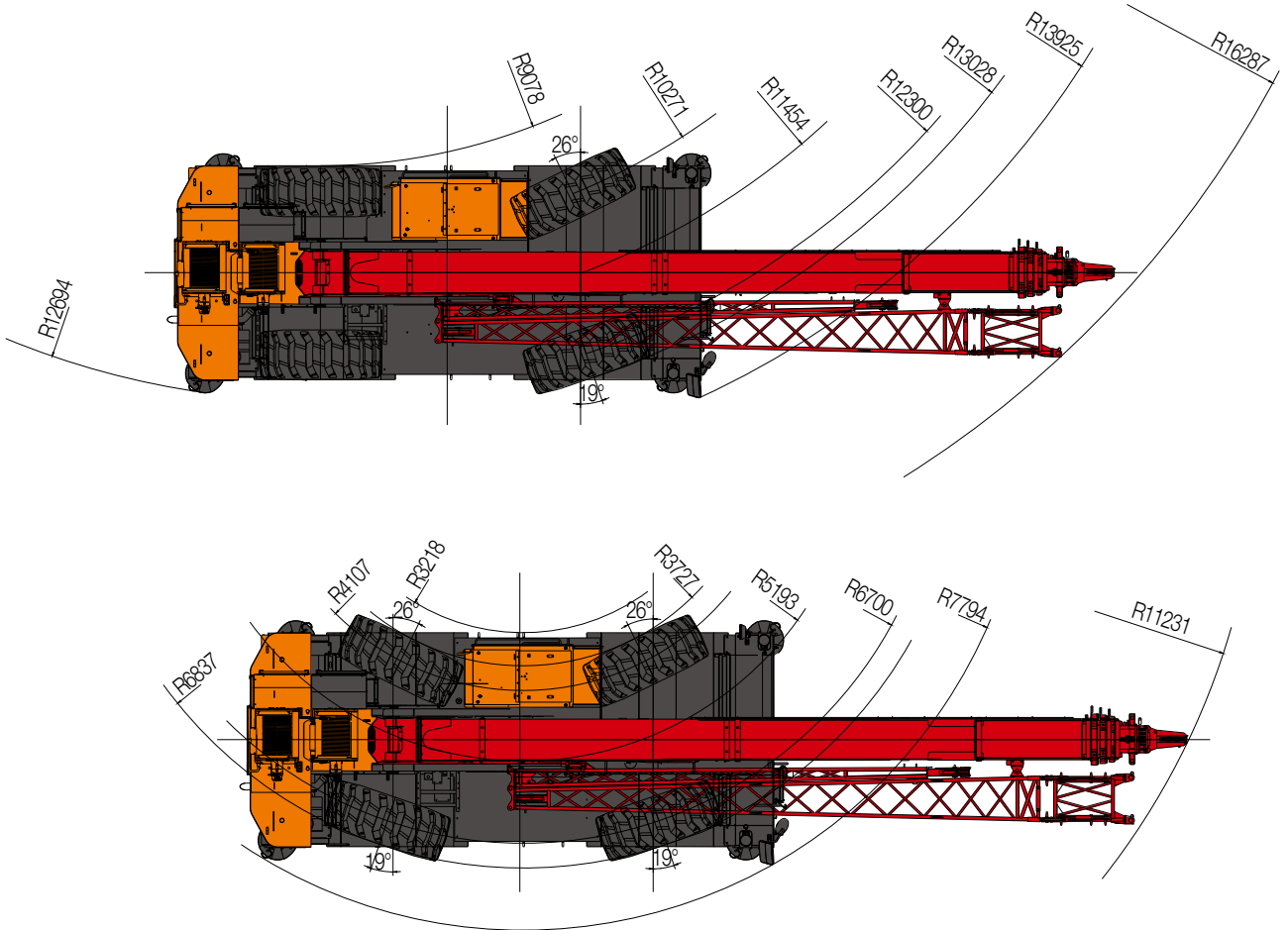
- Double-circuit braking system is adopted, if one circuit fails, the other circuit can ensure normal operation, thus improving the safety and reliability of brake system.



Electrical system

- With 24V free maintenance battery and mechanical power main switch, power of the whole machine can be cut off manually.



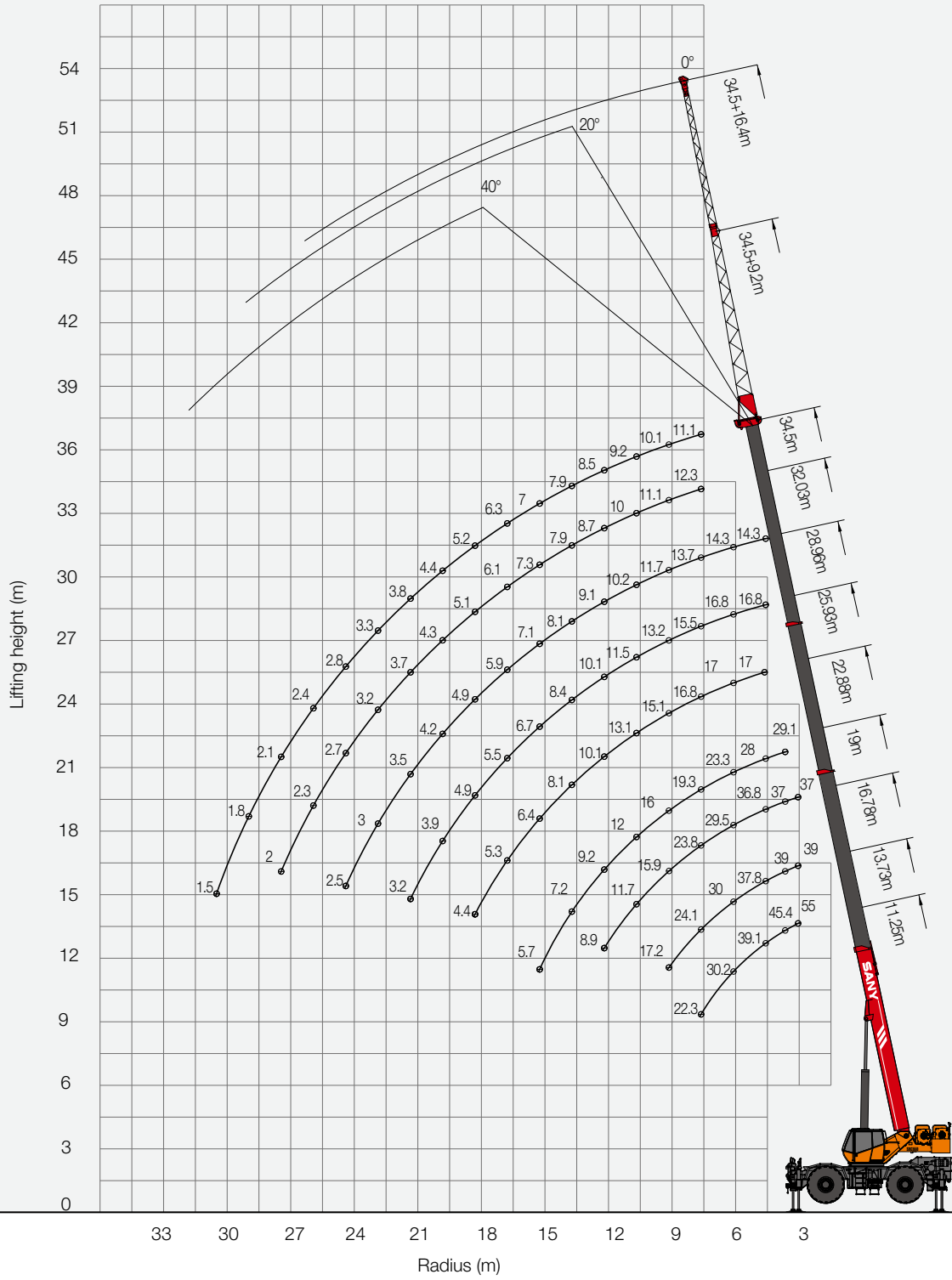


Type	Item	Parameter		
Capacity	Max. lifting capacity	55 t		
Dimensions	Overall length	14050 mm		
	Overall width	3300 mm		
	Overall height	3760 mm		
	Axle distance	4000 mm		
Weight	Overall weight	43000 kg		
	Axle load	Front axle load	23700 kg	
		Rear axle load	19300 kg	
Engine	Rated power	198 kW/ 2500 rpm		
	Rated torque	970 N.m/ 1500 rpm		
Traveling	Max.traveling speed	40 km/h		
	Turning radius	Min.turning radius	12.3/6.7 m	
	Wheel formula		4× 4	
	Min.ground clearance		350 mm	
	Approach angle		23 °	
	Departure angle		20 °	
	Max.gradeability		75%	
	Fuel consumption per 100km		≤ 60 L	
Main Performance Data	Temperature range		- 20 ° ~ + 46 °	
	Min.rated range		3 m	
	Tail slewing radius of swingtable		4.35 m	
	Boom section		4	
	Boom shape		U-shaped	
	Max.lifting moment	Base boom		1810 kN·m
		Full-extend boom		1110 kN·m
		Full-extend boom+jib		340 kN·m
	Boom length	Base boom		11.25 m
		Full-extend boom		34.5 m
		Full-extend boom+jib		50.9 m
Outrigger span (Longitudinal×Transversal)		7.2 × 7.2 m		
Jib offset		0 °, 15 °, 30 °		
Working speed	Max.single rope lifting speed of main winch (no load)		150 m/min	
	Max.single rope lifting speed of auxiliary winch (no load)		150 m/min	
	Full extension / retraction time of boom		110 / 120 s	
	Full lifting / descending time of boom		55 /75 s	
	Slewing speed		2.6 r/min	
Air condition	Superstructure / Chassis		Cooling/Heating & Cooling	

Notes:

- 1.Never travel the crane over 16km within 30min.
- 2.Stopping the crane for 20min after every 30min traveling can prevent the tires from being overheated.

SRC550 Working Ranges



Prerequisites:

- ① **Boom operating conditions(fully extended boom length),min. length is 11.25m and max.length is 34.5m**
- ② **The span of outriggers is 7.2m×7.2m**
- ③ **360°rotation is applied**
- ④ **Counterweight is 4.5T**

Working range(m)	Main boom									Working range(m)
	11.25m	13.725m	16.775m	19m	22.875m	25.925m	28.975m	32.025m	34.5m	
3.05	55000	39090	37060							3.05
3.66	45480	39090	37060	29150						3.66
4.58	39150	37890	36850	28050	17050	16850	14310			4.58
6.10	30240	30050	29550	23350	17050	16850	14310			6.10
7.63	22300	24150	23800	19350	16850	15500	13780	12350	11100	7.63
9.15		17240	15980	16050	15190	13250	11790	11150	10160	9.15
10.68			11720	12030	13140	11570	10240	10120	9250	10.68
12.20			8970	9200	10160	10100	9180	8750	8550	12.20
13.73				7220	8120	8440	8150	7950	7900	13.73
15.25				5770	6420	6750	7160	7320	7000	15.25
16.78					5320	5590	5900	6110	6310	16.78
18.30					4400	4900	4960	5160	5240	18.30
19.83						3910	4200	4390	4480	19.83
21.35						3290	3570	3760	3840	21.35
22.88							3030	3220	3310	22.88
24.40							2580	2760	2860	24.40
25.93								2370	2470	25.93
27.45								2030	2120	27.45
28.98									1820	28.98
30.50									1560	30.50
Min.elevation angle(°)	/	/	/	/	/	/	/	/	/	Min.elevation angle(°)
Number of parts of line	10	8	8	6	6	6	4	3	3	Number of parts of line

1. Values listed in the table refer to rated lifting capacity measured at flat and solid ground under the lever state of the crane.
2. Value above heavy line shall be determined by strength of the crane and under this line shall be determined by stability of the crane.
3. Rated load values determined by stability shall comply with ISO 4305.
4. Rated lifting capacity listed in the table included weights of lifting hooks (660kg of main hook and 160kg of auxiliary hook)and hangers.
5. Rated lifting capacity with pulley at boom tip shall not exceed 6900kg.
6. If actual boom length and range are between two values specified in the table, larger value will determine the lifting capacity.
7. When traveling with cargo on the crane, the permitted fastest speed is 4km/h. Never travel the crane with cargo over 60m within any 30 minutes.
8. All items mentioned above apply to the charts below which will not be repeated.

SRC550 ROUGH-TERRAIN CRANE
LOAD CHART

Prerequisites:

- ① **Boom operating conditions(fully extended boom length),min. length is 11.25m and max.length is 34.5m**
- ② **The span of outriggers is 7.2m×5m**
- ③ **360°rotation is applied**
- ④ **Counterweight is 4.5T**

Working range(m)	Main boom									Working range(m)
	11.25m	13.725m	16.775m	19m	22.875m	25.925m	28.975m	32.025m	34.5m	
3.05	49650	39090	37060							3.05
3.66	45050	39090	37060	29150						3.66
4.58	33790	37890	36850	28050	17050	16850	14310			4.58
6.10	18800	19390	19660	19880	17050	16850	14310			6.10
7.63	12390	12780	12920	12840	13390	14570	13780	12350	11100	7.63
9.15		9190	9100	9020	9550	10130	10760	11150	10160	9.15
10.68			6710	6630	7140	7640	7730	8040	8090	10.68
12.20			5060	4990	5490	5930	6050	6320	6390	12.20
13.73				3790	4280	4690	4820	5070	5140	13.73
15.25				2880	3360	3740	3890	4120	4200	15.25
16.78					2640	2990	3150	3370	3450	16.78
18.30					2060	2390	2560	2760	2850	18.30
19.83					1580	1900	2070	2270	2360	19.83
21.35						1480	1660	1850	1940	21.35
22.88							1310	1490	1590	22.88
24.40							1010	1190	1290	24.40
25.93								920	1020	25.93
27.45								690	790	27.45
28.98									590	28.98
Min.elevation angle(°)	/	/	/	/	/	/	/	17°	24°	Min.elevation angle(°)
Number of parts of line	10	8	8	6	6	6	4	3	3	Number of parts of line

Prerequisites:

- ① **Boom operating conditions(fully extended boom length),min. length is 11.25m and max.length is 34.5m**
- ② **The outriggers are not extended**
- ③ **360°rotation is applied**
- ④ **Counterweight is 4.5T**

Working range(m)	Main boom									Working range(m)
	11.25m	13.725m	16.775m	19m	22.875m	25.925m	28.975m	32.025m	34.5m	
3.05	33550	31800	28300							3.05
3.66	26160	24370	24040	20590						3.66
4.58	17920	17700	15290	16910	16700	14550	12650			4.58
6.10	10670	10590	9700	10330	10480	9800	9080			6.10
7.63	7050	6950	6320	6710	6970	7560	7600	8250	8230	7.63
9.15		4760	4300	4540	4870	5370	5450	5970	5990	9.15
10.68			2960	3100	3480	3910	4030	4450	4500	10.68
12.20			1990	2070	2480	2870	3010	3370	3430	12.20
13.73				1300	1640	2080	2240	2560	2440	13.73
15.25				690	1150	1480	1650	1930	2010	15.25
16.78					640	990	1170	1420	1510	16.78
18.30							790	1010	1110	18.30
19.83								660	770	19.83
Min.elevation angle(°)	/	/	/	19°	31°	37°	42°	46°	49°	Min.elevation angle(°)
Number of parts of line	8	8	6	4	4	4	4	3	3	Number of parts of line

SRC550 ROUGH-TERRAIN CRANE
LOAD CHART
Prerequisites:

- ① **Boom operating conditions(boom length),min. length is 11.25m and max.length is 22.875m**
- ② **With tyre static lifting load, over front only**
- ③ **Counterweight is 4.5T**

Working range(m)	Main boom					Working range(m)
	11.25m	13.725m	16.775m	19m	22.875m	
3.05	20600	19500	13500			3.05
3.66	19800	18760	13500			3.66
4.58	17500	16500	13500	9550	7950	4.58
6.10	14200	13500	11850	9550	7950	6.10
7.63	9600	9500	9300	8600	7950	7.63
9.15		6700	6600	7000	6900	9.15
10.68			4850	5450	5010	10.68
12.20			3600	4260	4000	12.20
13.73				3250	3050	13.73
15.25				2400	2350	15.25
16.78					1500	16.78
18.30					1100	18.30
Min.elevation angle(°)	/	/	/	/	/	Min.elevation angle(°)
Number of parts of line	6	6	6	6	6	Number of parts of line

Prerequisites:

- ① **Boom operating conditions(boom length),min. length is 11.25m and max.length is 22.875m**
- ② **With tyre static lifting load, 360°rotation is applied**
- ③ **Counterweight is 4.5T**

Working range(m)	Main boom					Working range(m)
	11.25m	13.725m	16.775m	19m	22.875m	
3.05	20600	18000	13500			3.05
3.66	17960	17700	12000			3.66
4.58	12290	12000	7800	9550		4.58
6.10	7230	7050	5200	7250	7550	6.10
7.63	4430	4250	3600	4750	4750	7.63
9.15		2500	2400	3150	3030	9.15
10.68			1200	2050	1810	10.68
12.20				1270	920	12.20
13.73				650	530	13.73
15.25						15.25
16.78						16.78
18.30						18.30
Min.elevation angle(°)	/	/	15°	33°	41°	Min.elevation angle(°)
Number of parts of line	6	6	6	6	6	Number of parts of line

Prerequisites:

- ① Boom operating conditions(boom length),min. length is 11.25m and max.length is 22.875m
- ② Travel with load, over front only
- ③ Counterweight is 4.5T

Working range(m)	Main boom					Working range(m)
	11.25m	13.725m	16.775m	19m	22.875m	
3.05	19720	17070	13920			3.05
3.66	19720	17070	13920			3.66
4.58	17220	17070	13920	9060	7400	4.58
6.10	13750	13600	12780	8930	7400	6.10
7.63	9200	9050	8650	8300	7400	7.63
9.15		6450	6320	6630	6660	9.15
10.68			4650	4910	5050	10.68
12.20			3450	3470	3650	12.20
13.73				2370	2500	13.73
15.25				1550	1850	15.25
16.78					1550	16.78
18.30					1050	18.30
Number of parts of line	6	6	6	6	6	Number of parts of line

Prerequisites:

- ① Boom + jib operating conditions(fully extended boom length+jib length),max.length is 34.5m+9m/16.4m
- ② The span of outriggers is 7.2m×7.2m
- ③ 360°rotation is applied
- ④ Counterweight is 4.5T

Working angle(°)	Main boom						Working angle(°)
	34.5+9.2m			34.5+16.4m			
	0°	15°	30°	0°	15°	30°	
78	3900	2500	1800	2600	1500	900	78
77	3500	2300	1700	2500	1400	900	77
75	3200	2200	1600	2400	1300	850	75
73	2900	2000	1500	2100	1200	750	73
71	2700	1800	1400	1900	1100	750	71
68	2400	1700	1250	1600	1000	700	68
66	2200	1500	1150	1400	950	680	66
63	1900	1400	1000	1200	850	650	63
61	1600	1200	850	1000	750	580	61
58	1200	950	650	700	600	500	58
56	750	650	500	550			56
Min.elevation angle(°)	51°			53°			Min.elevation angle(°)

SRC550 ROUGH-TERRAIN CRANE WHEEL CRANE FAMILY MAP

TRUCK CRANE



STC200
Maximum Load Capacity: 20t
Telescopic Boom: 4 Sections, 10.6-33m



STC250
Maximum Load Capacity: 25t
Telescopic Boom: 4 Sections, 10.65-33.5m



STC250H
Maximum Load Capacity: 25t
Telescopic Boom: 5 Sections, 10.5-39.5m



STC300S
Maximum Load Capacity: 30t
Telescopic Boom: 5 Sections, 10.6-40.5m



STC300TH
Maximum Load Capacity: 30t
Telescopic Boom: 4 Sections, 10.6-33.5m



STC300H
Maximum Load Capacity: 30t
Telescopic Boom: 5 Sections, 10.5-39.5m



STC500
Maximum Load Capacity: 50t
Telescopic Boom: 5 Sections, 11.5-43m



STC550
Maximum Load Capacity: 55t
Telescopic Boom: 5 Sections, 11.5-43m



STC600S
Maximum Load Capacity: 60t
Telescopic Boom: 5 Sections, 11.3-43.2m



STC750
Maximum Load Capacity: 75t
Telescopic Boom: 5 Sections, 11.8-45m



STC800S
Maximum Load Capacity: 80t
Telescopic Boom: 5 Sections, 12.2-47m



STC1000
Maximum Load Capacity: 100t
Telescopic Boom: 5 Sections, 13.5-52m



STC1000C
Maximum Load Capacity: 100t
Telescopic Boom: 6 Sections, 13.25-60m



STC1000S
Maximum Load Capacity: 100t
Telescopic Boom: 5 Sections, 12.26-56m



STC1200S
Maximum Load Capacity: 120t
Telescopic Boom: 7 Sections, 12.6-63.5m



STC1300C
Maximum Load Capacity: 130t
Telescopic Boom: 6 Sections, 13.3-60m



STC1600
Maximum Load Capacity: 160t
Telescopic Boom: 6 Sections, 13.4-62m



STC2200
Maximum Load Capacity: 220t
Telescopic Boom: 6 Sections, 14.55-68m

ALL TERRAIN CRANE



SAC1000
Maximum Load Capacity: 100t
Telescopic Boom: 6 Sections, 13.5-62m



SAC2200
Maximum Load Capacity: 220t
Telescopic Boom: 6 Sections, 13.5-62m



SAC2500
Maximum Load Capacity: 250t
Telescopic Boom: 6 Sections, 15.65-73m



SAC3000
Maximum Load Capacity: 300t
Telescopic Boom: 7 Sections, 15.4-80m



SAC3500
Maximum Load Capacity: 350t
Telescopic Boom: 6 Sections, 15.2-70m



SAC6000
Maximum Load Capacity: 600t
Telescopic Boom: 7 Sections, 17.1-90m

ROUGH-TERRAIN CRANE



SRC250
Maximum Load Capacity: 25t
Telescopic Boom: 4 Sections, 9.9-31.5m



SRC350
Maximum Load Capacity: 35t
Telescopic Boom: 4 Sections, 10-31.5m



SRC550
Maximum Load Capacity: 55t
Telescopic Boom: 4 Sections, 11.25-34.5m



SRC650H
Maximum Load Capacity: 55t
Telescopic Boom: 5 Sections, 11.5-40m



SRC750
Maximum Load Capacity: 75t
Telescopic Boom: 5 Sections, 11.8-45m



SRC1200
Maximum Load Capacity: 120t
Telescopic Boom: 5 Sections, 13-49m



Quality Changes the World

SANY AUTOMOBILE HOISTING MACHINERY

Address: SANY Industrial Park, Jinzhou Development Zone,
Changsha, Hunan, China.
Service Hotline: 4006098318
Email: crd@sany.com.cn
For more information, please visit: www.sanygroup.com

For our consistent improvement in technology, specifications may change without notice.
The machines illustrated may show optional equipment which can be supplied at additional cost.

Version: 2016.1

Distributed By: