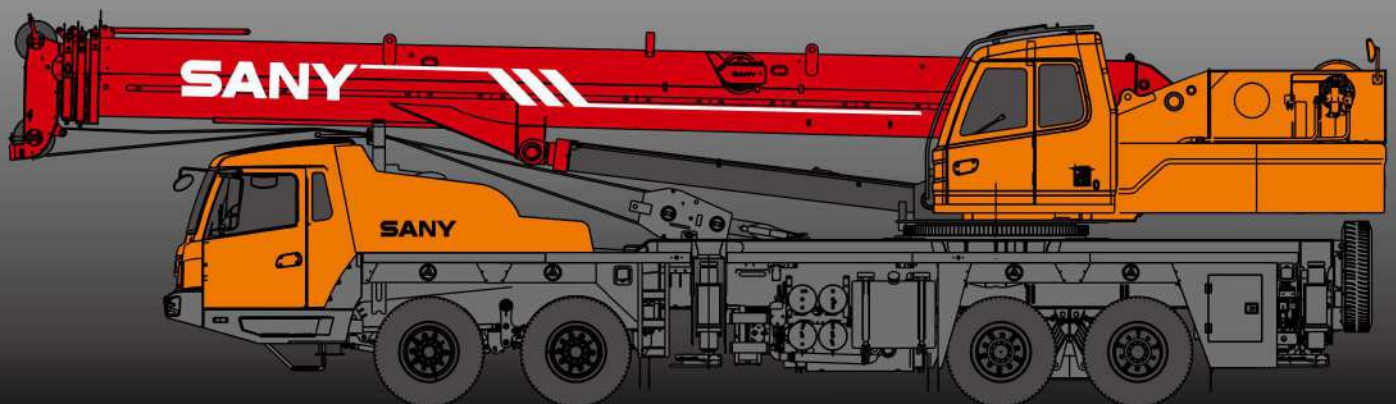


STC500C

STC500C TRUCK CRANE
50 TONS LIFTING CAPACITY

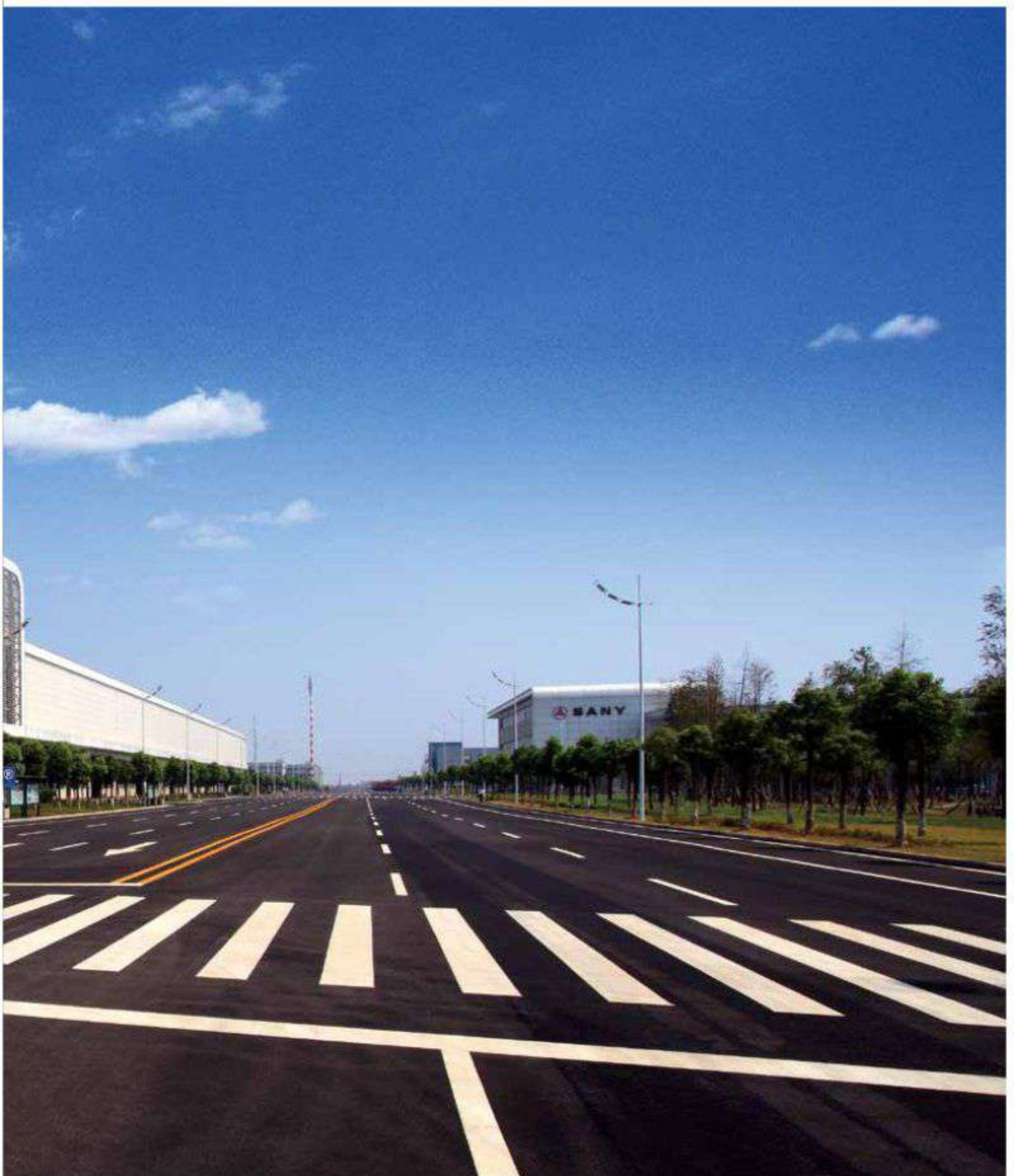
Quality Changes the World



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 TRUCK CRANE

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Cab



Hydraulic system



Control system



Telescopic system



Luffing system



Slewing



Counterweight



Safety system



Hoist system



Carrier frame



Outriggers



Engine



Transmission system



Drive/Steer



Axles



Tyres



Brakes system



Electrical system



Suspension system



Telescopic boom



Lattice jibs



Superlift devices



Luffing lattice jib



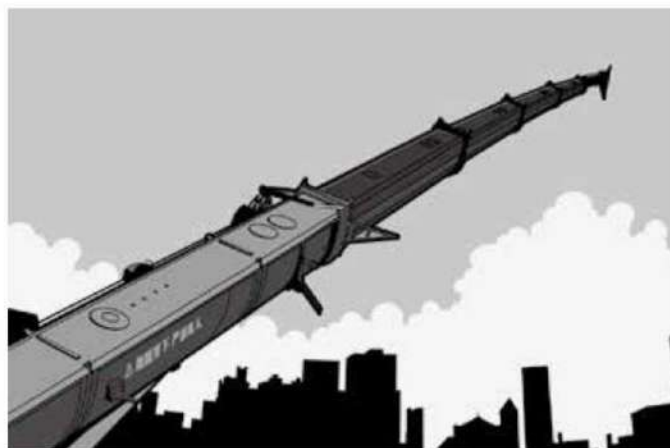
winch mechanism:



Excellent and stable chassis performance / chassis system

The original 50 tonnage crane of 2.5 width with compact structure, improving trafficability significantly. Double-axle drive is used, providing good trafficability and comfortableness under complex road condition with reliable traveling performance.

Engine has the multimode power output function, which reduces power consumption. The use of tipping over early-warning technology provides high stability and safety of the overall operation.



Ultra long, super strong and highly sensitive load lifting capacity

Five-section boom of high strength steel structure and optimized U-shaped cross section reduces weight significantly with higher safety rates.



Highly efficient, stable, energy-saving, and adjustable hydraulic system

Hydraulic system load feedback and constant power control is applied to provide strong lifting capacity and good micromobility. Unique steering buffer design is adopted to ensure stable braking operation.



Safe, stable, advanced, and intelligent electric control system

Self-developed controller SYMC specially for engineering machinery is configured. The adoption of CAN-bus full-digital network control technology ensures stable control signal, simple harness, and high reliability. Timely feedback of data information can achieve the monitoring of the overall working status in realtime;

the load moment limiter equipped with the comprehensive intelligent protection system is used with accuracy within 3% to provide a comprehensive logic and interlock control, thus ensuring more safe and reliable operation.

Superstructure

 Cab

- It is made of anti-corrosion steel plate with ergonomic design such as full-coverage soft interior, panoramic sunroof and, adjustable seats etc., and humanized design providing more comfortable and relaxing operation experience. The display of load moment limiter integrates main console and operation display system, which clearly show the data of all operating superstructure conditions for lifting operation.

 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.
- Main valve has flow compensation and load feedback control function, enabling stable and convenient control of single action and combined action under different operation conditions.
- Winch adopts the electronically controlled variable motor to ensure high operation efficiency. Max. single line speeds of main and auxiliary winches is up to 120m/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: 840L.

 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. The engine fault warning function is applied to ensure convenient and fast troubleshooting.
- With fully security protection system, main and auxiliary winches are equipped with overroll out 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 high intelligent load moment limiter system can comprehensively protect lifting operation, ensuring accurate, stable and comfort operation.
- The fault diagnosis system can detect superstructure electricity, hydraulic action, chassis (for major safety failure), engine and gearbox for fault to ensure reliable operation of the crane.

 Luffing system

- Dead-weight luffing provides more stable luffing operation at low energy loss.
- Luffing angle: $-2^{\circ} \sim 80^{\circ}$.

 Telescopic system

- Five-section boom is applied with basic boom length of 11.3m, full-extended boom length of 43.5m and lifting height of fully extended boom length of 44m. It is made of fine grain high-strength steel with U-shaped cross section and with telescopic operation controlled independent by dual-cylinder rope.

 Slewing system

- 360° rotation can be achieved with Max. slewing speed of 2.0r/min. Hydraulic controlled proportional speed adjustment is applied to provide stable and reliable operation of the system. Unique rotary buffer design ensures more stable braking.

Superstructure



Hoisting 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. Closed winch brake and winch balance valve effectively prevent imbalance of the hook.
- One main hook: 550Kg, and the Max. lifting capacity is 50t. Wire rope of main winch: lefthanded wire rope 18-35Wx7-1960USZ 220m.



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 up to $\pm 3\%$ 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 stable and reliable operation of the hydraulic system.
- Winches are equipped with over roll-out limiter to prevent over rolling-out of wire rope.
- Boom ends are equipped with height limiters to prevent over-hoisting of wire rope.
- Length and Angle sensor and pressure sensor are equipped to indicate the working condition of whole crane in real-time, giving an alarm and cutting off the dangerous action automatically.



Counterweight

- Counterweight is 4500kg, no flexible counterweight.

Chassis



Cab

- Cab is made of new steel structure self-developed by SANY, featuring excellent shock absorption and tightness, which is configured with swing-out doors at both sides,
- pneumatically suspended right-hand driver's seat and passenger seat, adjustable steering wheel, large rearview mirror, comfort driver chair having a headrest, anti-fog fan, air conditioner, stereo radio, and complete control instruments and meters, providing more
- comfortable, safe, and humanized operation experience.



Carrier frame

- Designed and manufactured by SANY, anti-torsion box structure is welded by fine-grain high-strength steel plate, to provide strong load bearing capacity.



Axles

- Axles 3 and 4 are drive axles and axles 1 and 2 are steering axles. The use of welding process for axle housing provides stronger load bearing capacity.



Engine

- Type: Inline six-cylinder, water cooled, supercharged and inter-cooling diesel engine.
- Rated power: 220kw/2300r/min.
- Environment-protection: Emission complies with Euro III standard.
- Capacity of fuel tank: 300L.

Chassis



Transmission system

- Gearbox: Manual gearbox is adopted with 9-gear and large speed ratio range applied, 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. For most optimized transmission, face-tooth coupling transmission shaft is used with large transmission torque .



Brakes system

- Air servo brakes are used for all wheels with dual-circuit brake system applied, engine is equipped with an exhaust brake.
- Brakes system includes traveling brake, parking brake, emergency brake and auxiliary brake.
- Traveling brake: All wheels use the air servo brakes and dual-circuit brake system.
- Parking brake: Force driven by accumulator is applied on the third to fourth axle.
- For emergency brake, accumulator is used not only for cutting-off brake but also for emergency brake.
- Auxiliary brake is exhaust brake with brake safety ensured while travelling downhill.



Suspension system

- The 1st and 2nd front axles adopt plate spring suspension systems and the 3rd and 4th rear axles adopt rubber suspension system. With 100,000 fatigue tests and optimization of performance parameters of the front and rear suspension, the strength and comfort are ensured.



Steering system

- Hydraulic power mechanical steering systems are applied for axles 1 and 2 with unloading valve installed in the steering gear.



Outriggers

- Four-point supporting of the H-shaped outriggers ensures easy operation and strong stability with max. span up to 6m×7.2m. They are made of fine-grain high-strength steel sheet with horizontal single-cylinder rope line telescoping for first and second outriggers. Vertical cylinder of outrigger adopts bi- directional hydraulic locks to improve safety.



Tyres

- 11.00R20



Electrical system

- With 2*12V maintenance-free batteries, the crane power can be cut off manually via a mechanical master power switch. The use of CAN-bus control system can achieve information interaction between superstructure and undercarriage.



STC500C TRUCK CRANE
TECHNICAL PARAMETER

Type	Item		Parameter
Capacity	Max. lifting capacity		50 t
Dimension	Overall length		13700 mm
	Overall width		2500 mm
	Overall height		3800 mm
	Axle distance	Axle-1,2	1450 mm
		Axle-2,3	4200 mm
		Axle-3,4	1350 mm
Weight	Overall weight		39300 kg
	Axle load	Axle load-1,2	15000 kg
		Axle load-3,4	24300 kg
Engine	Rated power		220 kW/ 2300 rpm
	Rated torque		1200 N.m/ 1000-1500 rpm
Traveling parameter	Max.traveling speed		48 km/h
	Turning radius	Min.turning radius	12 m
	Wheel formula		8 × 4
	Min.ground clearance		220 mm
	Approach angle		18.5 °
	Departure angle		12 °
	Max.gradeability		38%
	Fuel consumption per 100km		-
Main Performance Data	Temperature range		- 20 ° ~ + 40 °
	Tail slewing radius of swingtable		3.9 m
	Boom section		5
	Boom shape		U-shaped
	Max.lifting moment	Base boom	1660 kN·m
		Full-extend boom	815 kN·m
	Boom length	Base boom	11.3 m
		Full-extend boom	43.5 m
	Outrigger span (Longitudinal×Transversal)		6 × 7.2 m
Working speed	Max.single rope lifting speed of main winch (no load)		120 m/min
	Full extension/retraction time of boom		140 / 125 s
	Full lifting/descending time of boom		70 / 78 s
	Slewing speed		0~2.0 r/min
Air condition	Chassis		Heating/Cooling

STC500C TRUCK CRANE
LOAD CHART

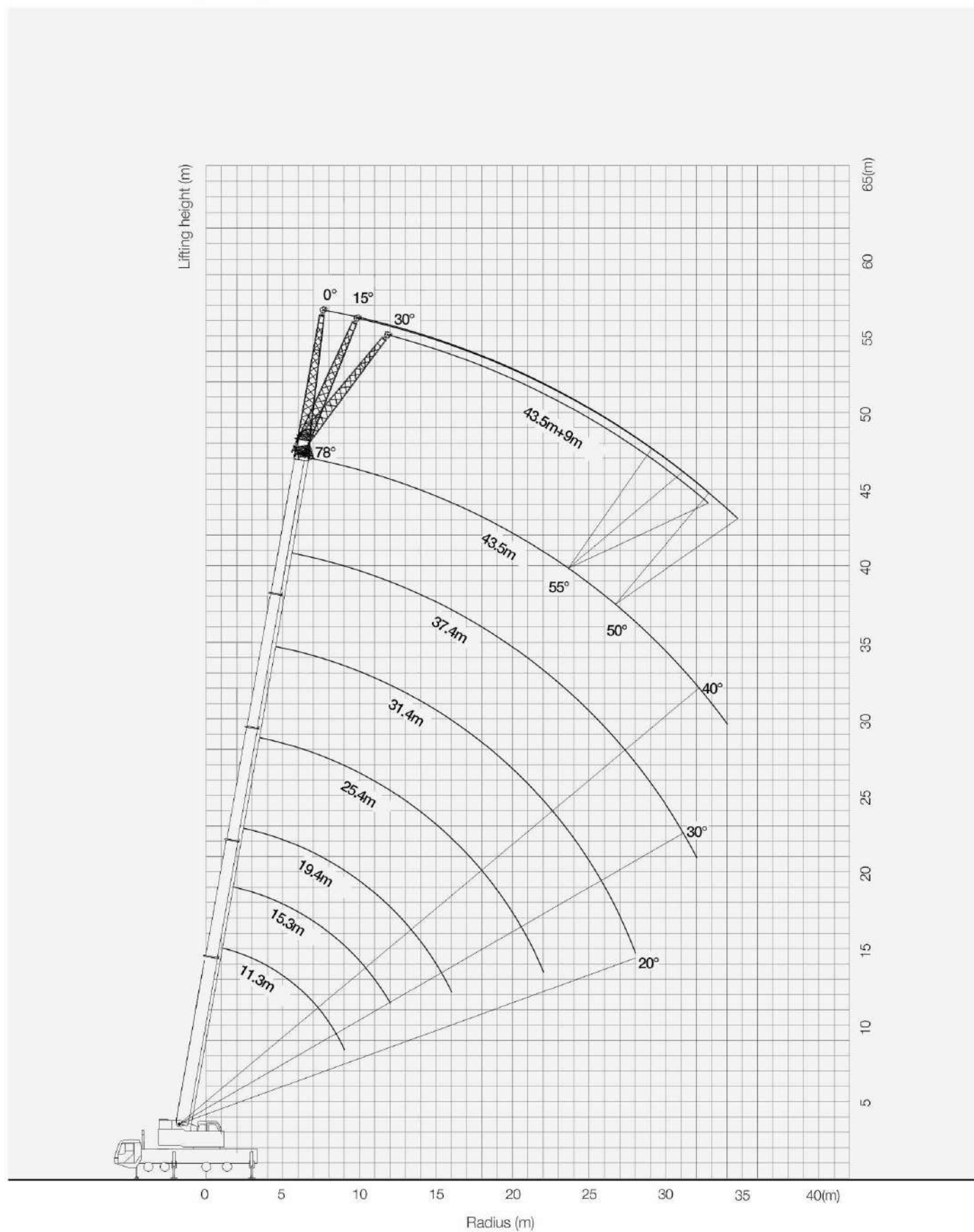
Unit:Kg

Prerequisites

- ① Boom operating conditions(fully extended boom length),min. length is 11m and max.length is 43m
- ② The span of outriggers is 6m×7.2m
- ③ 360° rotation is applied
- ④ Counterweight is 4500kg
- ⑤ The rated load indicated in the table is the value computed by taking 75% of the tip over load when the wind speed is below 9.8m/s.

Working Radius(m)	Fully-extended outriggers, over side and rear											Working Radius(m)
	11.3	15.3	17.3	19.4	23.4	25.4	29.4	31.4	35.4	37.4	43.5	
3	50000	36000	20000			□	□	□	□	□	□	3
3.5	45000	36000	20000	28600	15500	□	□	□	□	□	□	3.5
4	40000	36000	19900	27500	15000			□	□	□	□	4
4.5	37000	33000	19800	27500	14500	22000	12300			□	□	4.5
5	34000	31000	19700	26000	14300	20000	12300			□	□	5
6	28000	26000	18800	23000	14000	18000	11000	15000	9500		□	6
7	23000	22500	17500	19800	13200	16500	10500	14500	8500	11500		7
8	19000	18000	15200	16000	12500	15000	9500	13000	7800	10500		8
9	16000	14500	14000	13600	11800	14000	9200	12300	7400	10000	7600	9
10		11800	12000	11600	11000	11600	8600	11200	7300	9000	7500	10
12		8000	8700	8000	9200	8200	7200	9600	6500	8000	6800	12
14			6200	5400	7700	5900	6500	7300	6000	6800	5800	14
16	□			3800	5500	4500	5400	5500	5500	5600	5200	16
18	□	□	□	□	4300	3400	4700	4300	4500	4300	4500	18
20	□	□	□	□	3300	2500	3900	3200	3700	3400	3500	20
22	□	□	□	□	□	1400	3000	2300	3000	2600	2800	22
24	□	□	□	□	□	□	2500	1700	2500	2000	2100	24
26	□	□	□	□	□	□		1000	2100	1500	1700	26
28	□	□	□	□	□	□	□	□	1700	1000	1200	28
30	□	□	□	□	□	□	□	□	1200	600	800	30
32											500	32
Cylinder 1	10	8	4	7	4	5	3	4	3	3	3	Cylinder 1
Cylinder 2	0%	50%	0%	100%	0%	100%	0%	100%	0%	100%	100%	Cylinder 2
Number of lines	0%	0%	25%	0%	50%	25%	75%	50%	100%	75%	100%	Number of lines

STC500C Working Ranges



Unit:Kg

Load chart for jib

The rated load indicated in the table is the value computed by taking 75% of the tip over load when the wind speed is below 9.8m/s.

Boom angle (°)	Fully-extended outriggers, over side and rear			Boom angle (°)
	43.5m+9m			
	Compensation angle0°	Compensation angle 15°	Compensation angle 30°	
78	2800	2400	1800	78
75	2500	2200	1750	75
72	2150	1800	1500	72
70	1900	1570	1350	70
65	1450	1240	1000	65
60	1080	1000	750	60
55	800	700	500	55
50	580	500		50
Min. boom angle	50°			Min. boom angle

1. Radius shown in the table are the actual radius when working.
2. Rated lifting capacities in the stability area comply with ISO 4305.
3. The total rated lifting load in the table included the weight of hook block (main hook is 550kg) and slings.
4. When the 5th outrigger is in use, it is suitable for 360 operation.
5. When actual boom length and working radius are between two values, determine lifting capacity according to the bigger boom and radius.

STC500C TRUCK 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, 11.3-43.5m



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, 12.25-56m



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



STC1300C
Maximum Load Capacity: 130t
Telescopic Boom: 6 Sections, 13.3-69m



STC1600
Maximum Load Capacity: 160t
Telescopic Boom: 6 Sections, 13.4-69m



STC2200
Maximum Load Capacity: 220t
Telescopic Boom: 6 Sections, 14.25-68m

ALL TERRAIN CRANE



SAC1800
Maximum Load Capacity: 180t
Telescopic Boom: 6 Sections, 15.5-62m



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



SAC2600
Maximum Load Capacity: 260t
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, 16.2-70m



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



SRC600H
Maximum Load Capacity: 55t
Telescopic Boom: 5 Sections, 11.5-43m



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



SRC1200
Maximum Load Capacity: 120t
Telescopic Boom: 5 Sections, 13-48m



SANY INDIA NETWORK



- Manufacturing Unit**
- Corporate Office
 - Regional Office (4)
 - Dealer HO (25)
 - Machine Stock Yard
 - 3S Facility (110 Nos.)

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