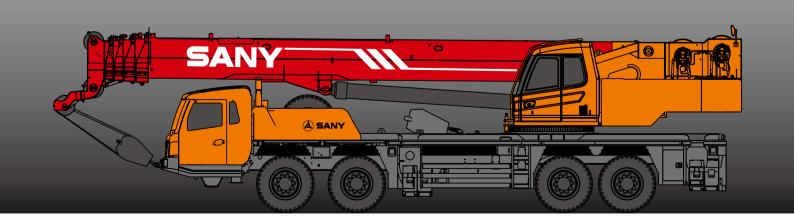


Quality Changes the World









# **SANY TRUCK CRANE**

# CONTENT

- 04 Icon
- 05 Selling Points
- 06 Introduction
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- 11 Operation Condition
- 12 Load Chart
- 14 Wheel Crane Family Map





Carrier frame



Suspension system



Hydraulic system

Control system







Telescopic boom





Lattice jibs



Telescopic system



Transmission system





Superlift devices

Luffing lattice iib

winch mechanism:



Luffing system



Drive/Steer









Counterweight





Safety system



Hoist system





Electrical system



## Excellent and stable chassis performance / chassis system

Double-axle drive is used, providing good trafficability and comfortableness under complex road condition with reliable traveling performance.

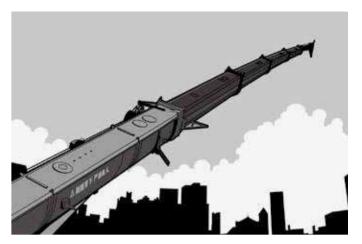
Engine has the multimode power output function, which reduces power consumption.

The use of tipping over early-warning technology provides high



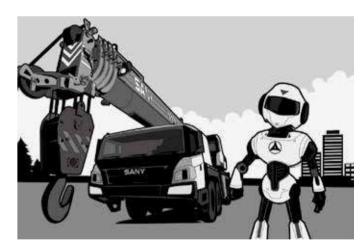
# Highly efficient, stable, energy-saving and adjustable hydraulic system

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.



### Super-strong, super-long and sensitive lifting capacity

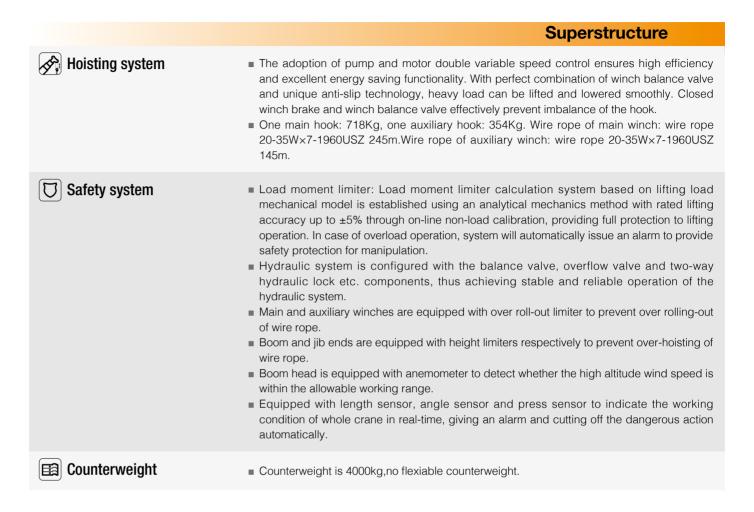
Five-section boom of high strength steel structure and optimized U-shaped section reduces weight significantly with higher safety rates. Jib mounting angles are 0°, 15° and 30°, which ensures fast and convenient change-over between different operating conditions so as to improving working efficiency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



# Safe, stable, advanced and intelligent electric control system

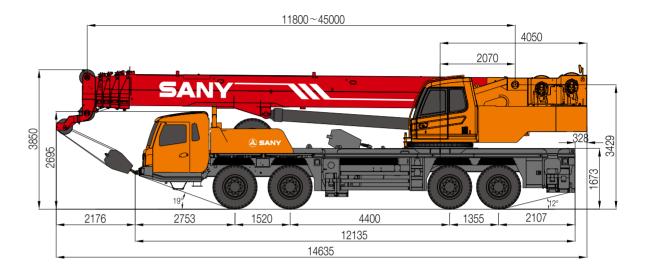
Self-developed controller SYMC specially for engineering machinery is configured. The adoption of CAN-bus full-digital network control technology ensures stable control signal, simple harness and high reliability. Timely feedback of data information can achieve the monitoring of the overall working status in realtime. The load moment limiter equipped with the comprehensive intelligent protection system is used with accuracy within 5% to provide a comprehensive logic and interlock control, thus ensuring more safe and reliable operation.

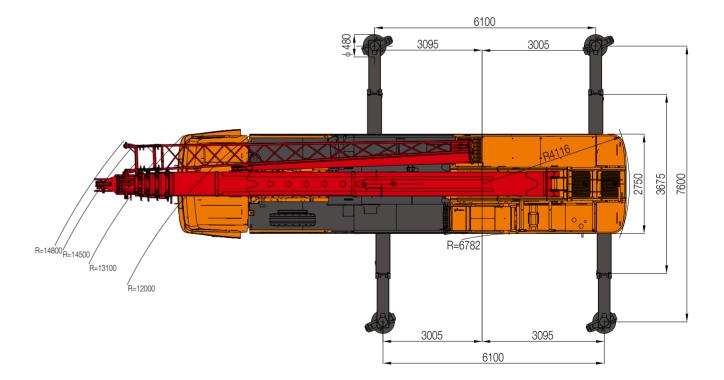
	Superstructure
@ Cab	■ It is made of safety glass and anti-corrosion steel plate with ergonomic design such as full-coverage soften interior, panoramic sunroof and adjustable seats etc., and humanized design providing more comfortable and relaxing operation experience. The display of load moment limiter integrates main console and operation display system, which clearly show the data of all operating superstructure conditions for lifting operation.
<b>♦ Hydraulic system</b>	<ul> <li>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.</li> <li>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.</li> <li>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.</li> <li>Winch adopts the electronically controlled variable motor to ensure high operation efficiency. Max. single line speeds of main and auxiliary winches is up to 130m/min.</li> <li>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.</li> <li>Hydraulic oil tank capacity: 980L.</li> </ul>
••• Control system	<ul> <li>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.</li> <li>Automatic outrigger system: Electrically controlled outrigger with automatic leveling and fault diagnosis warning function is adopted, which is flexible and flexible to operate.</li> <li>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.</li> <li>Load moment limiter: The adoption of high intelligent load moment limiter system can comprehensively protect lifting operation, ensuring accurate, stable and comfort operation.</li> <li>The IO monitoring system can monitoring the input and output situation of the superstructure electricity system and can detect hydraulic system, chassis (for major safety failure), engine and gearbox for fault to ensure reliable operation of the crane.</li> </ul>
Luffing system	<ul> <li>Dead-weight luffing provides more stable luffing operation at low energy loss.</li> <li>Luffing angle: -2°~ 80°.</li> </ul>
Telescopic system	■ Five-section boom is applied with basic boom length of 11.8m, full-extended boom length of 45m, jib length of 16m and fully extended boom lifting height of 46.4m respectively. Max. lifting height is 62.2m including jib. It is made of fine grain high-strength steel with U-shaped cross section and with telescopic operation controlled independently by dual-cylinder rope.
Slewing system	360° rotation can be achieved with Max. slewing speed of 1.8r/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.



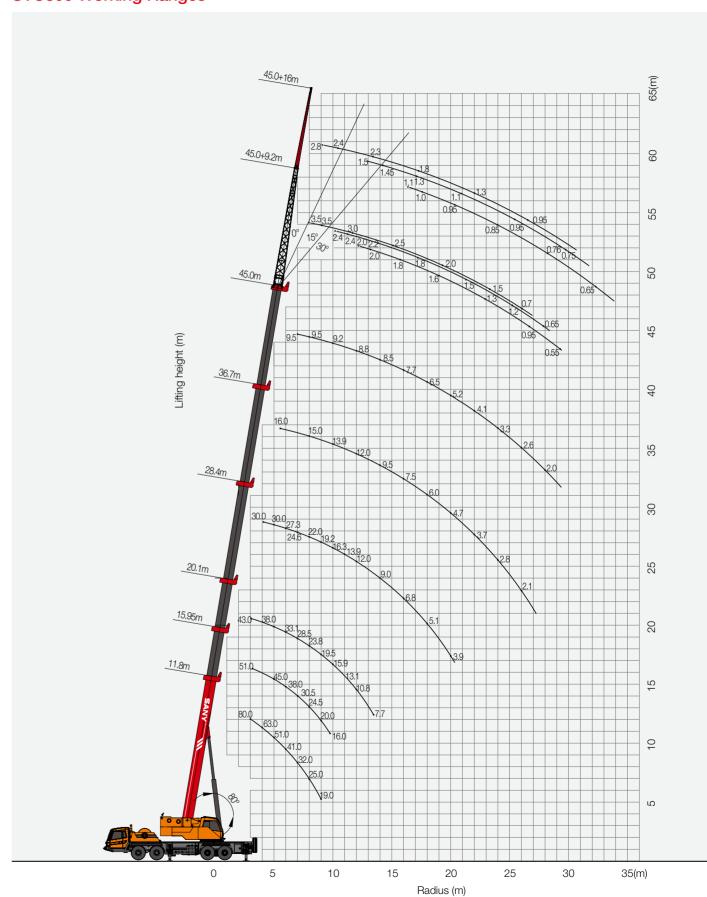
	Chassis
@ Cab	■ Cab is made of new steel structure self-developed by SANY, featuring excellent shock absorption and tightness, which is configured with swing-out doors at both sides, pneumatically suspended driver's seat and passenger's seat, adjustable steering wheel, large rearview mirror, comfortable driver's chair with 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, axle and wheel differentials are installed in axle 3 and wheel differential is installed in axle 4. The use of welding process for axle housing provides stronger load bearing capacity.
Engine Engine	<ul> <li>Type: Inline six-cylinder, water cooled, supercharged and inter-cooling diesel engine</li> <li>Rated power: 275kw/2100r/min</li> <li>Environment-protection: Emission complies with EuroIII standard</li> <li>Capacity of fuel tank: 350L</li> </ul>

	Chassis
Transmission system	<ul> <li>Gearbox: Manual gearbox with 9-gear is adopted, 9 forward gears and 1 reverse gear which is easy to operate, with large speed ratio range applied, which meets the requirements of low gradeability speed and high traveling speed.</li> <li>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.</li> </ul>
O Brakes system	<ul> <li>Air servo brakes are used for all wheels with dual-circuit brake system applied, engine is equipped with an exhaust brake.</li> <li>Brakes system includes traveling brake, parking brake, emergency brake and auxiliary brake.</li> <li>Traveling brake: All wheels use the air servo brakes and dual-circuit brake system.</li> <li>Parking brake: Force driven by accumulator is applied on the third to fourth axle.</li> <li>For emergency brake, accumulator is used not only for cutting-off brake but also for emergency brake.</li> <li>Auxiliary brake is exhaust brake with brake safety ensured while travelling downhill.</li> </ul>
Suspension system	All axles adopt the plate spring suspension systems with plate spring passed 100,000 fatigue tests and with optimization of performance parameters of the front and rear plate springs applied to ensure strength and also to provide comfort ridding.
1-1 Steering system	Hydraulic power mechanical steering system is applied for axle 1 with unloading valve installed in the steering gear.
1-1 Drive/Steer	■ 8 x 4
• Outriggers	■ Four-point supporting of the H-shaped outriggers ensures easy operation and strong stability with Max. span up to 6.1m×7.6m. They are made of fine-grain high-strength steel sheet with full hydraulic transverse telescopic outriggers adopted for first and second outriggers and with automatic horizontal adjustment applied for outriggers through a vertical cylinder.
Tyres	■ 12x12.00R24 20PR
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.





Гуре	Item		Parameter	
Capacity	Max. lifting capacity		80 t	
Dimensions -	Overall length		141000 mm	
	Overall width		2750 mm	
	Overall height	Overall height		
		Axle-1,2	1520 mm	
	Axle distance	Axle-2,3	4400 mm	
		Axle-3,4	1355 mm	
	Overall weight		45800 kg	
		Axle load-1,2	17500 kg	
Weight	Axle load	Axle load-3,4	28300 kg	
	Rated power	,	275 kW/ 2100 rpm	
	Rated torque		1500 N·m/1300-1500 rpm	
	Max.traveling speed		80 km/h	
		Min.turning radius	12 m	
	Turning radius	Min.turning radius of boom head	14.5 m	
	Wheel formula		8 × 4	
Traveling	Min.ground clearance		290 mm	
	Approach angle		19°	
	Departure angle		12 °	
	Max.gradeability		35%	
	Fuel consumption per 100km		≤ 56 L	
	Temperature range		− 20 °C ~ +40 °C	
	Min.rated range		3 m	
	Tail slewing radius of swingtable		4.1 m	
	Boom section		5	
	Boom shape		U-shaped	
Main Performance		Base boom	2550 kN·m	
Data	Max.lifting moment	Full-extend boom	1232 kN⋅m	
		Full-extend boom+jib	363 kN·m	
		Base boom	11.8 m	
	Boom length	Full-extend boom	45 m	
		Full-extend boom+jib	61 m	
	Outrigger span (Longitudinal×	Outrigger span (Longitudinal×Transversal)		
	Jib offset	0 °,15 °,30 °		
	Max.single rope lifting speed	of main winch (no load)	130 m/min	
	Max.single rope lifting speed	130 m/min		
Norking speed	Full extension/retraction time	of boom	120/100 s	
	Full lifting/descending time of boom		60 / 80 s	
	Slewing speed		1.8 r/min	
Airoandition	Aircondition in up cab		Cooling	
Aircondition	Aircondition in low cab		Cooling/Heating	



Unit:Ka

13

Unit:Kg

#### Prerequisites:

- ① Boom operating conditions(fully extended boom length),min.length is 11.8m and max.length is 45m
- 2 The span of outriggers is 6.1m×7.6m
- 3 360° rotation is applied
- 4 Counterweight is 4T

Moulting range(m)	Main boom				Madian was sa(m)		
Working range(m)	11.8	15.95	20.1	28.4	36.7	45	Working range(m)
3	80000	51000					3
3.5	71000	51000	43000				3.5
4	63000	51000	43000				4
4.5	56000	48000	40500	30000			4.5
5	51000	45000	38000	30000			5
5.5	46000	42000	35400	28500			5.5
6	41000	38000	33100	27300			6
6.5	36000	34000	31000	26000	16000		6.5
7	32000	30500	28500	24600	16000		7
8	25000	24500	23800	22000	15000	9500	8
9	19000	20000	19500	19200	14500	9500	9
10		16000	15900	16300	13900	9200	10
11		13000	13100	13900	13000	9000	11
12		10500	10800	12000	12000	8800	12
14			7700	9000	9500	8500	14
16			5500	6800	7500	7700	16
18			3800	5100	6000	6500	18
20				3900	4700	5200	20
22				2900	3700	4100	22
24				2100	2800	3300	24
26				1500	2100	2600	26
28					1600	2000	28
30					1200	1600	30
32					800	1200	32
34					500	900	34
36						600	36
Number of lines	12	9	9	6	5	3	Number of lines
Telescoping condition(%)							
Elevation angle of main boom	27.03°~69.8°	32.61°~75.29°	29.61°~78.41°	26.0°~79.79°	31.0°~79.74°	42.24°~79.72°	Elevation angle of main boom
2nd boom	0%	50%	100%	100%	100%	100%	2nd boom
3rd boom	0%	0%	0%	33%	66%	100%	3rd boom
4th boom	0%	0%	0%	33%	66%	100%	4th boom
Top boom	0%	0%	0%	33%	66%	100%	Top boom

- 1. Values listed in the table refer to rated lifting capacity measured at flat and solid gound 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 (718kg of main hook and 354kg of auxiliary hook)and hangers.
- 5. Rated lifting capacity with pulley at boom tip shall not exceed 4000kg and then substracts(2300kg)to gain rated lifting capacity if the boom is used to lift after the installation of jib.
- 6. If actual boom length and range are between two values specified in the table, larger value will determine the lifting capacity.

#### Prerequisites:

- 1) Boom operating conditions(fully extended boom length +jib length),max.length is 45m+9.2m
- 2 The span of outriggers is 6.1m×7.6m
- 3 360°rotation is applied
- 4 Counterweight is 4T

Main boom angle(°)	Main boom+Jib			
	0°	15°	30°	
80°	3500	2400	2000	
78°	3500	2400	2000	
77°	3200	2300	1900	
75°	3000	2200	1800	
73°	2700	2000	1700	
71°	2500	1800	1600	
68°	2200	1700	1400	
66°	2000	1500	1300	
63°	1800	1400	1100	
61°	1500	1200	950	
58°	1100	950	750	
56°	700	650	550	
Min.elevation angle(°)		55°		

Unit:Kg

#### Prerequisites:

- 1) Boom operating conditions(fully extended boom length +jib length),max.length is 45m+16m
- 2 The span of outriggers is 6.1m×7.6m
- 3 360° rotation is applied
- 4 Counterweight is 4T

Main boom angle(°)	Main boom+Jib			
	0°	15°	30°	
80°	2800	1500	1100	
78°	2400	1450	1000	
77°	2400	1400	1000	
75°	2300	1300	950	
73°	2000	1200	850	
71°	1800	1100	850	
68°	1500	1000	800	
66°	1300	950	760	
63°	1100	850	720	
61°	950	750	650	
58°	650	600	550	
56°	500			
Min.elevation angle(°)		55°		

#### STC800 TRUCK CRANE WHEEL CRANE FAMILY MAP

#### **TRUCK CRANE**



STC200 Maximum Load Capacity: 20t



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



STC600 Maximum Load Capacity: 60t Telescopic Boom: 5 Sections, 11.5-43m



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



Maximum Load Capacity: 25t Telescopic Boom: 4 Sections, 10.85-33.5m

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

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



Telescopic Boom: 5 Sections, 10.5-39.5m



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



Maximum Load Capacity: 80t





Maximum Load Capacity: 100; Telescopic Boom: 6 Sections, 13:25-60m



Telescopic Boom: 5 Sections, 11.8-45m



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

#### I ALL TERRAIN CRANE



Maximum Load Capacity: 180t Telescopic Boom; 6 Sections, 13.5-62m



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



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



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

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

STC550EYR

STC800EYR

Maximum Load Capacity: 801

Telescopic Boom: 5 Sections, 11.8-45m

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



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

#### I ROUGH-TERRAIN CRANE



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



Maximum Load Capacity: 551 Telescopic Boom: 4 Sections, 11.25-34.5m



SRC550H Maximum Load Capacity: 55t Telescopic Boom: 5 Sections, 11.5-42.5m



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



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