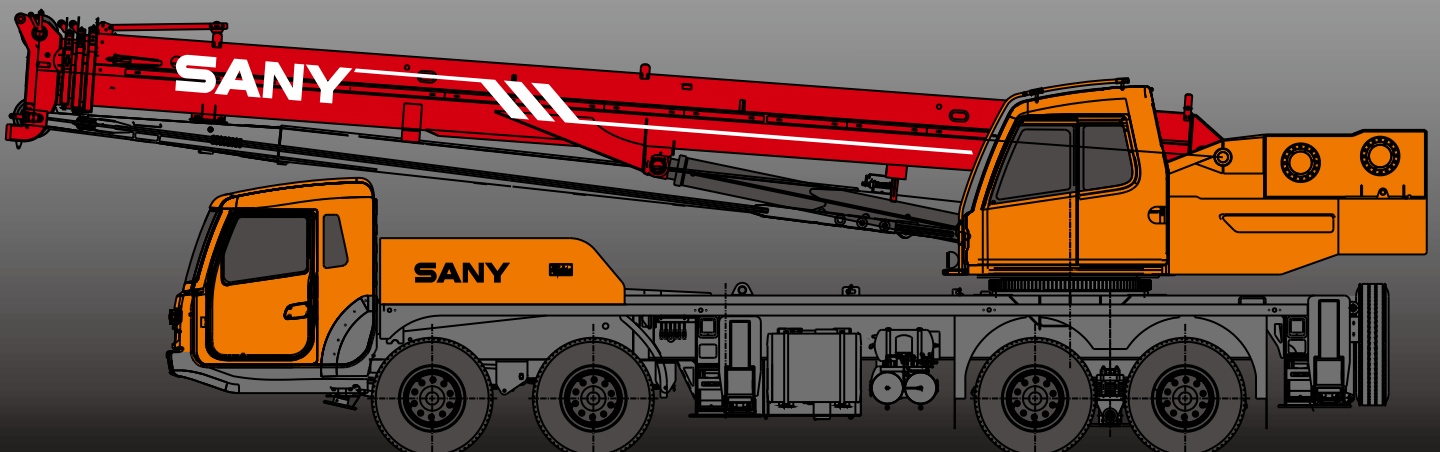


STC300

STC300 TRUCK CRANE
30 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

CONTENT

- 04 Icon
- 05 Selling Points
- 06 Introduction
- 09 Dimension
- 10 Technical Parameter
- 11 Operation Condition
- 12 Load Chart
- 14 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 and stable chassis performance / chassis system

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

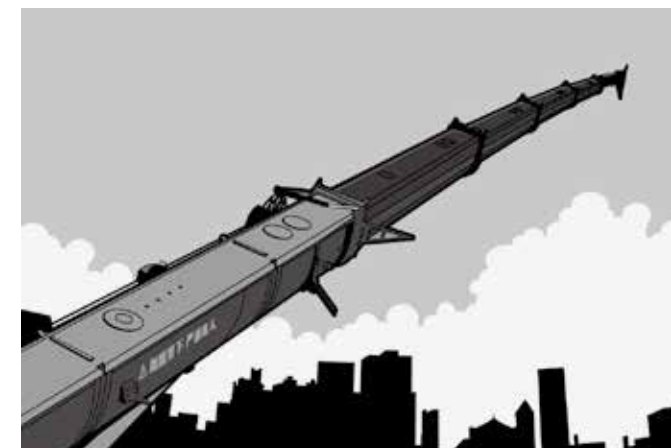
Engine has the multimode power output function, which reduces power consumption.

The use of tipping over early-warning technology provides high stability and safety of the overall operation.



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

Triple gear pump, load feedback and constant power control are applied to provide strong lifting capacity and good micro-mobility. Unique steering buffer design is applied to ensure stable braking operation.



Ultra long, super strong and highly sensitive load lifting capacity


Four-section boom of high strength steel structure and optimized U-shaped cross section reduces weight significantly with higher safety rates. Jib mounting angles are 5°, 17° 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 real time. 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	<ul style="list-style-type: none">■ It is made of 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.
---	--

 Hydraulic system	<ul style="list-style-type: none">■ 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 125m/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: 384L.
--	---


 Control system	<ul style="list-style-type: none">■ 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 over-roll 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	<ul style="list-style-type: none">■ Power lowering system provides uniformity and safety & smooth lowering speed.■ Luffing angle: -2°~ 80°.
--	--


 Telescopic system	<ul style="list-style-type: none">■ Four-section boom is applied with basic boom length of 10.65m, full-extended boom length of 33.5m, jib length of 14.6m and lifting height of fully extended boom length of 34m respectively. Max. lifting height is 49m including jib. 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	<ul style="list-style-type: none">■ 360° rotation can be achieved with Max. slewing speed of 2.5r/min, providing stable and reliable operation of the system. Variable plunger hydraulic motor, 3 level planetary reducer , spring disc braking lock and single-row ball slewing ring are adopted for strong bearing capacity, good stability, high safety and good micro-mobility .
--	--


Superstructure


 Hoisting system	<ul style="list-style-type: none">■ Highly efficient and energy-saving variable speed adjustment can be achieved by plunger motor. 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: 360kg, one auxiliary hook: 90kg. Wire rope of main winch: left-handed wire rope: 16-35W×7-1960USS 175m.Wire rope of auxiliary winch: left-handed wire rope: 16-35W×7-1960USS 105m.
--	---


 Safety system	<ul style="list-style-type: none">■ 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 ±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 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 and press sensor to indicate the working condition of whole crane in real-time, giving an alarm and cutting off the dangerous action automatically.
--	---


 Counterweight	<ul style="list-style-type: none">■ Counterweight is 2800kg, no flexible counterweight.
--	---

Chassis

 Driving cab	<ul style="list-style-type: none">■ 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 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	<ul style="list-style-type: none">■ 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	<ul style="list-style-type: none">■ 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	<ul style="list-style-type: none">■ Type: Inline six-cylinder, water cooled, supercharged and inter-cooling diesel engine■ Rated power: 213kw/2100r/min■ Environment-protection: Emission complies with EuroIII 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 gradability 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

- 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 and are equipped with disk brakes.
- Parking brake: Force driven by accumulator is applied on the second to sixth axle. For emergency brake, accumulator is used not only for cutting-off brake but also for emergency brake.
- Auxiliary brake consists of engine brake and exhaust brake. Engine is equipped with dual brake, transmission is equipped with hydrodynamic retarder brake and forth axle is equipped with eddy current retarder brake to ensure safe and reliable traveling.



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.



Steering system

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



Outriggers

- Four /Five-point supporting of the H-shaped outriggers ensures easy operation and strong stability with Max. span up to 5.3m×6.2m. 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.



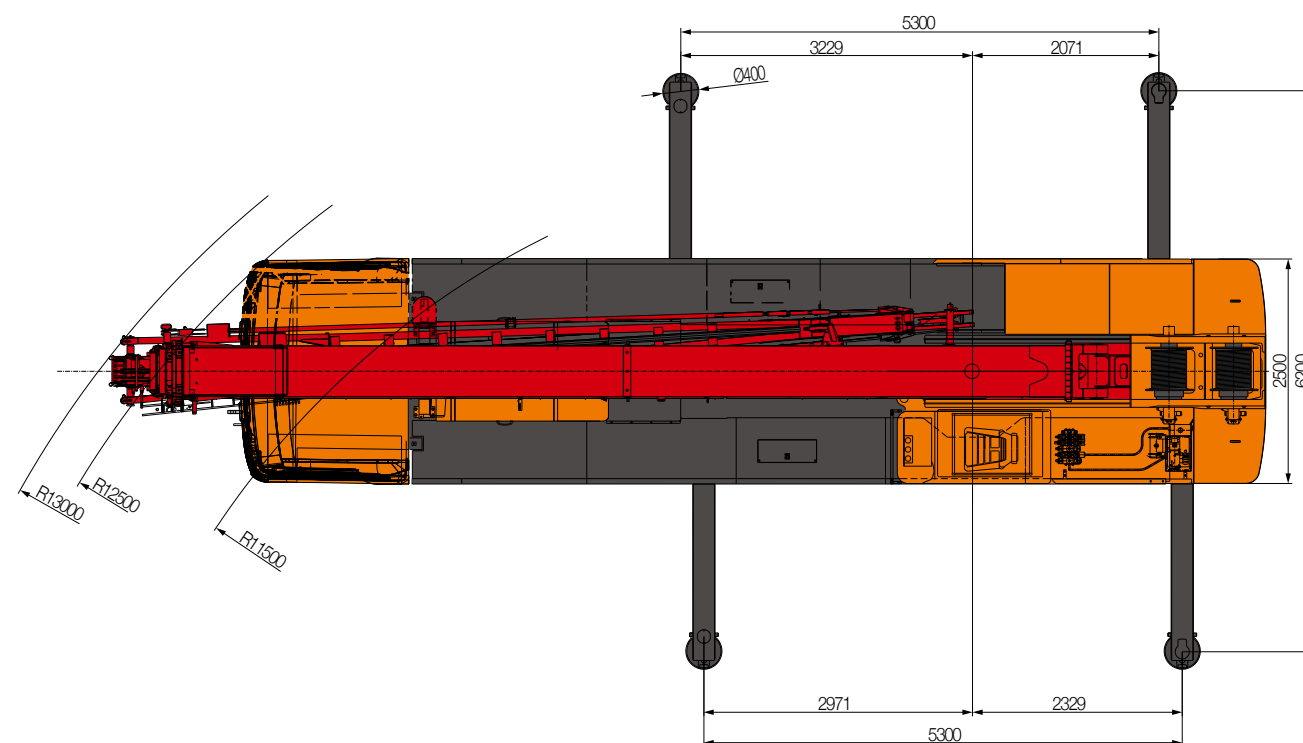
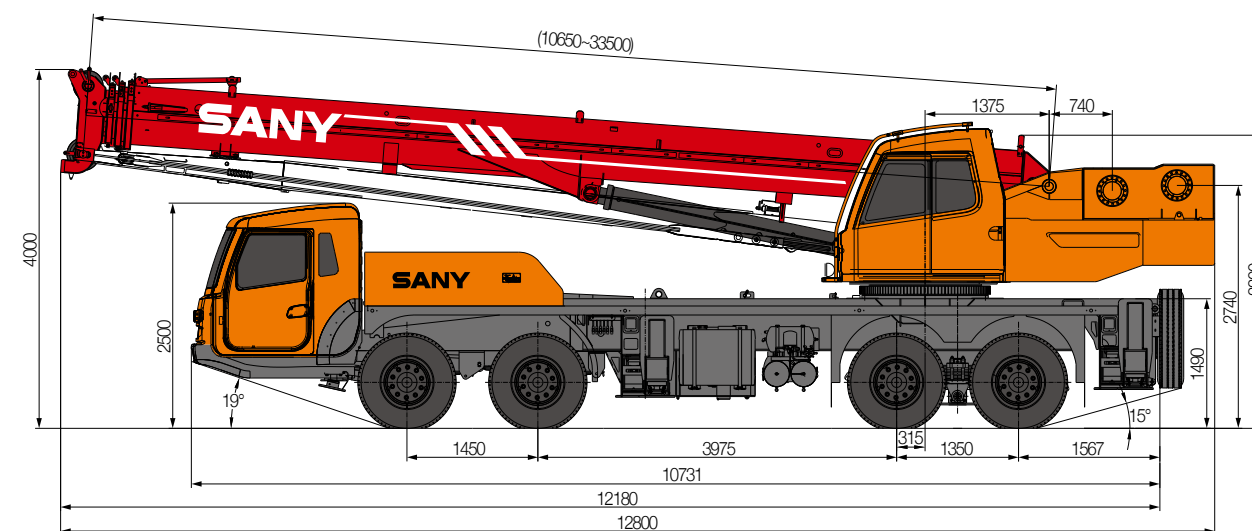
Tyres

- 12*11.00-20 -18PR



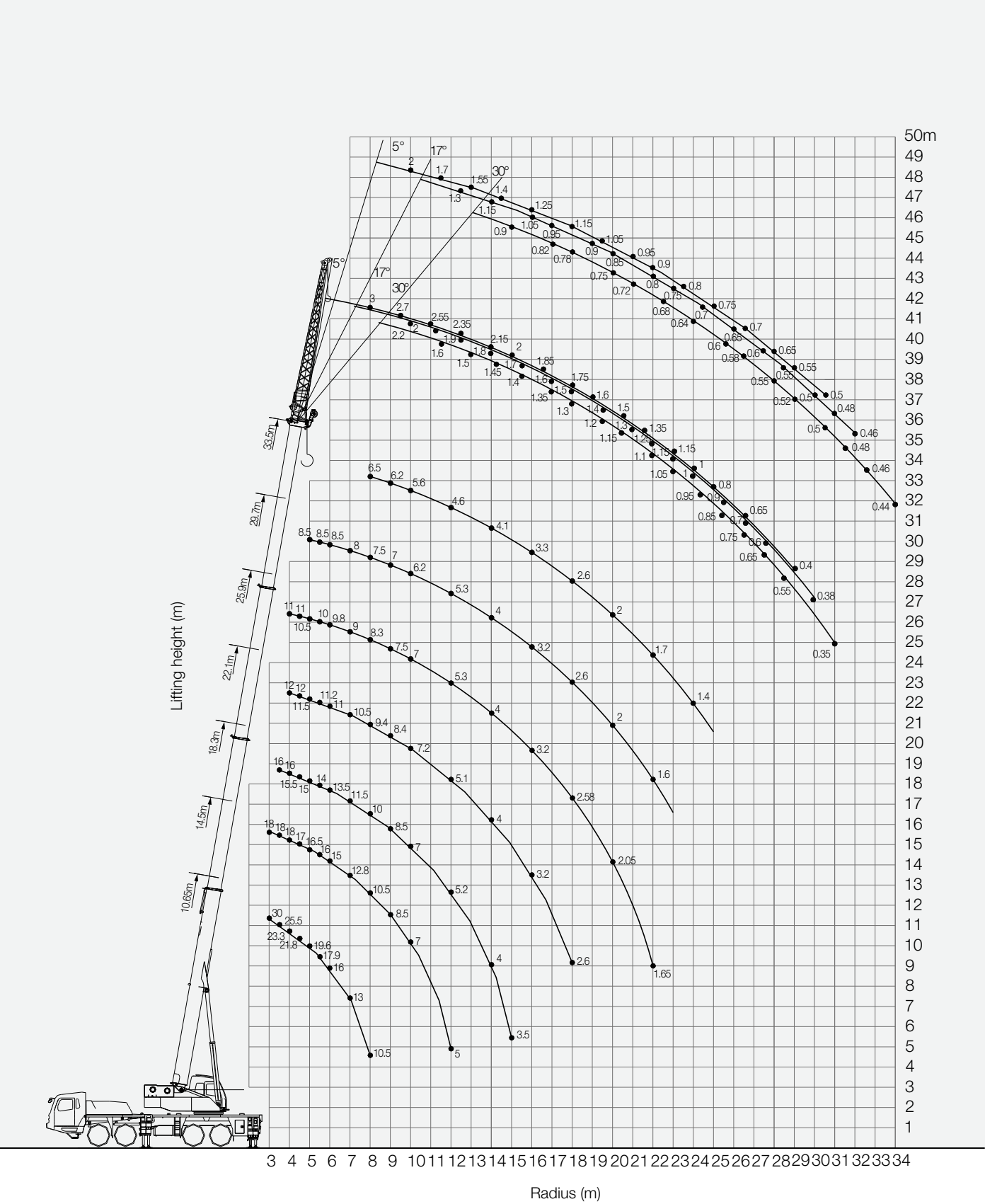
Electrical system

- 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.



Type	Item		Parameter
Capacity	Max. lifting capacity		30 t
Dimensions	Overall length		12800mm
	Overall width		2500mm
	Overall height		4000mm
	Axle distance		1450mm\3975mm\1350mm
Weight	Overall weight		30000kg
	Axle load	Axle 1,2	11500kg
		Axle 3,4	18500kg
Traveling	Rated power		213KW/2100(r/min)
	Rated torque		1050N·m/(1200~1400)(r/min)
	Max.traveling speed		80km/h
	Turning radius	Min.turning radius	11.5m
	Min.ground clearance		220mm
	Approach angle		19°
	Departure angle		15°
	Max.gradeability		35%
	Fuel consumption per		40L
Main performance parameters	Min.rated range		3m
	Tail slewing radius of swingtable		3.4m
	Boom section		4
	Boom shape		U-shaped
	Max.lifting moment	Base boom	980kN·m
		Full-extend boom	560kN·m
		Full-extend boom+jib	314kN·m
	Boom length	Base boom	10.65m
		Full-extend boom	33.5m
		Full-extend boom+jib	48.1m
	Outrigger span (Longitudinal×Transversal)		5.3m×6.2m
Working speed	Max.single rope lifting speed of main winch (no load)		125m/min
	Max.single rope lifting speed of auxiliary winch (no load)		125m/min
	Full extension/retraction time of boom		68s/56s
	Full lifting/descending time of boom		72s/60s
	Slewing speed		(0~2.5)r/min
Air condition	Superstructure		Cooling
	Chassis		Cooling and heating

STC300 Working Ranges



Unit:Kg

- Prerequisites:
- ① Fully-extended boom 10.65m-33.5m
 - ② Outrigger span: 5.3m×6.2m
 - ③ 360°rotation is applied
 - ④ Over side and rear
 - ⑤ 360°rotation is applied

Working range(m)	Main boom length(m)							Working range(m)
	10.65	14.4	18.3	22.1	25.9	29.7	33.5	
3	30000	18000	16000					3
3.5	25500	18000	16000	12000				3.5
4	23300	18000	16000	12000	11000			4
4.5	21800	17000	15500	12000	11000			4.5
5	19600	16500	15000	11500	10500	8500		5
5.5	17900	16000	13350	11200	10000	8500	7000	5.5
6	16000	15000	14000	11000	9800	8500	7000	6
7	13000	12800	11500	10500	9000	8000	7000	7
8	10500	10500	10000	9400	8300	7500	6500	8
9		8500	8500	8400	7500	7000	6200	9
10		7000	7000	7200	7000	6200	5600	10
12		5000	5200	5100	5300	5300	4600	12
14			4000	4000	4000	4000	4100	14
16			3000	3200	3200	3200	3300	16
18				2600	2580	2600	2600	18
20				2000	2050	2000	2000	20
22					1650	1600	1700	22
24						1250	1400	24
26						900	1100	26
28							750	28
30							550	30
Number of lines	8	6	6	4	3	3	3	Number of lines

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 (320kg of main hook and 90kg of auxiliary hook)and hangers;
5. Rated lifting capacity with pulley at boom tip shall not exceed 3500kg;
6. If actual boom length and range are between two values specified in the table, larger value will determine the lifting capacity.

Unit:Kg

- Prerequisites:
- ① Boom + jib (33.5m+14.6m)
 - ② Outrigger span: 5.3m×6.2m
 - ③ Counterweight is 2.8t
 - ④ 360° rotation is applied

Boom angle (°)	Boom+Jib					
	33.5m+9m			33.5m+14.6m		
	Jib offset angle (°)					
	5°	17°	30°	5°	17°	30°
78°	3000	2200	1600	2000	1300	900
76°	2700	2000	1500	1700	1150	820
74°	2550	1900	1450	1550	1050	780
72°	2350	1800	1400	1400	950	750
70°	2150	1700	1350	1250	900	720
68°	2000	1600	1300	1150	850	680
66°	1850	1500	1200	1050	800	640
64°	1750	1400	1150	950	750	600
62°	1600	1300	1100	900	700	580
60°	1500	1250	1050	800	650	550
58°	1350	1150	950	750	600	520
56°	1150	1000	850	700	550	500
54°	1000	900	750	650	500	480
52°	800	700	650	550	480	460
50°	650	600	550	500	460	440
45°	400	380	350			

STC300 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, 11.3-43.2m



STC750
Maximum Load Capacity: 75t
Telescopic Boom: 5 Sections, 11.6-43m



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



SAC1800
Maximum Load Capacity: 180t
Telescopic Boom: 6 Sections, 13.5-62m



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, 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



SRC550H
Maximum Load Capacity: 55t
Telescopic Boom: 5 Sections, 11.5-43m



SRC750
Maximum Load Capacity: 75t
Telescopic Boom: 5 Sections, 11.6-43m



SRC1200
Maximum Load Capacity: 120t
Telescopic Boom: 5 Sections, 13-43m



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: 2015.08

Distributed By: