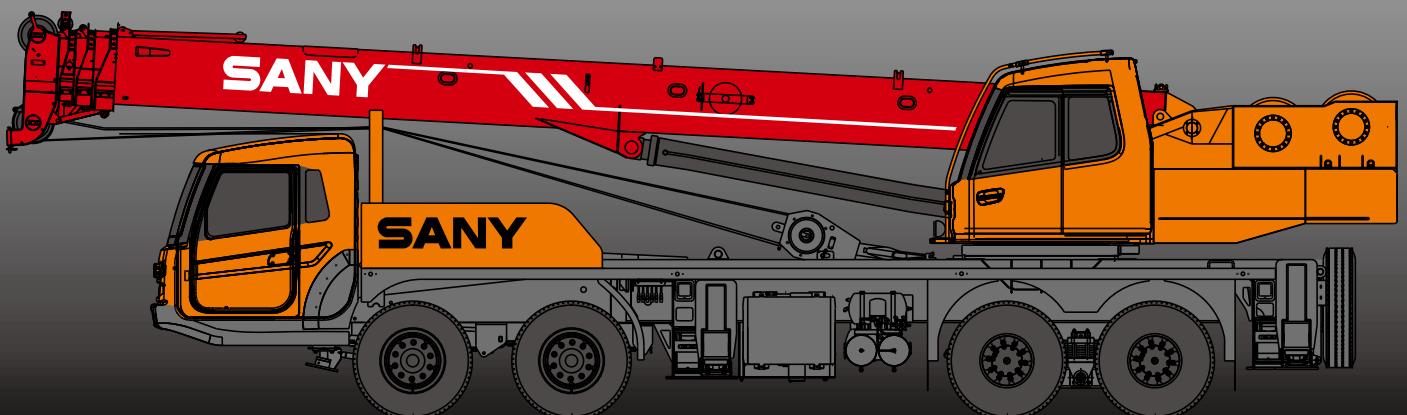


STC300TH

STC300TH 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

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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.

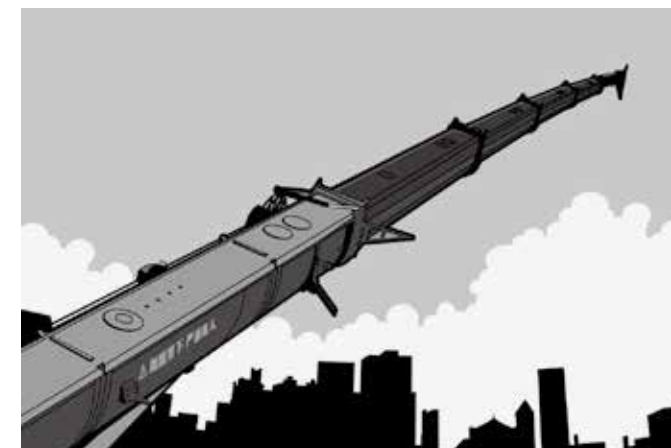
Engine has the multimode power output function, which reduces power consumption.

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 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 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	■ It is made of anti-corrosion steel plate and safety glass 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.
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 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 variable plunger 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.
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 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 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.
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 Luffing system	■ Power lowering system provides uniformity and safety, smooth lowering speed. ■ Luffing angle: -2°~80°.
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 Telescopic system	■ Four-section boom is applied with basic boom length of 10.65m, full-extended boom length of 33.5m, jib length of 8.0m and fully extended boom lifting height of 34m respectively. Max. lifting height is 42m including jib. It is made of fine grain high-strength steel with U-shaped cross section and with telescopic operation controlled independent by dual-cylinderrope.
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 Slewing system	■ 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 .
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Superstructure

 Hoisting system	■ 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 be lifted and lowered 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×7-1960USZ 175m.Wire rope of auxiliary winch: left-handed wire rope: 16-35W×7-1960USZ 105m.
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 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 ±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. ■ 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. ■ Equipped with length sensor, angle sensor and press sensor to indicate the working condition of whole crane in real-time, giving an alarm and cutting off the dangerous action automatically.
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 Counterweight	■ Counterweight is 2800kg, no flexible counterweight.
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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.
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 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.
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 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.
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 Engine	■ 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
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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 full hydraulic transverse telescopic outriggers adopted for first and second outriggers. Vertical cylinder of outrigger adopts bi-directional hydraulic locks to improve safety.



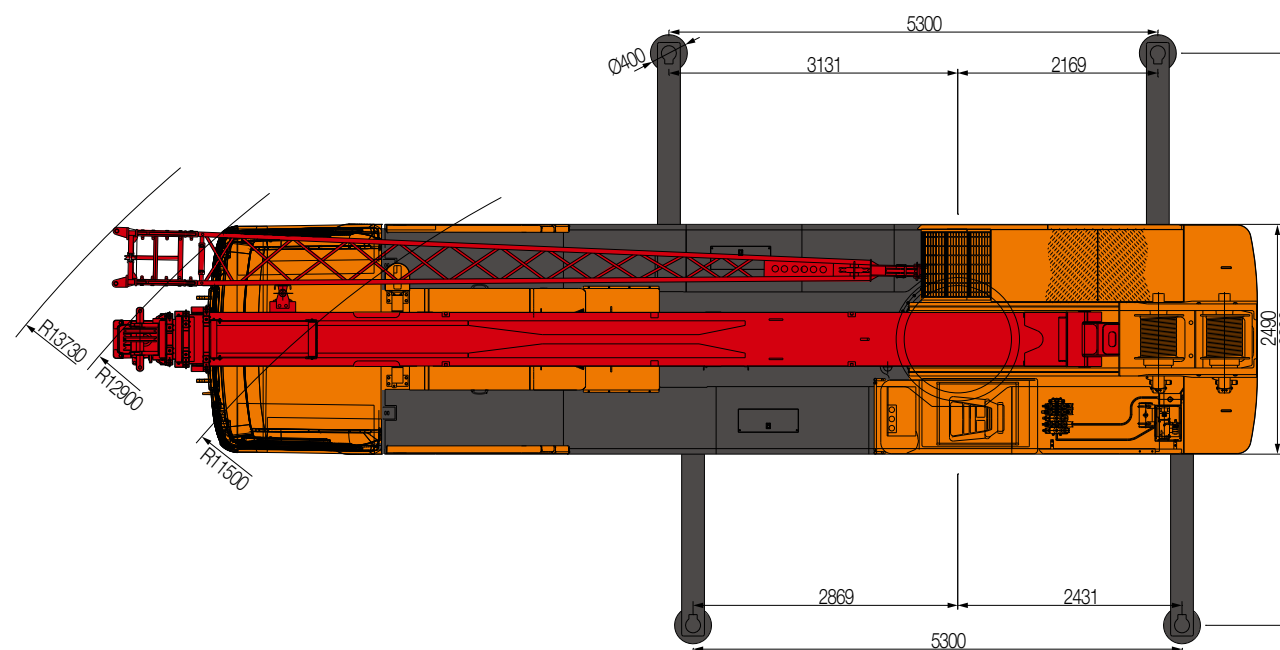
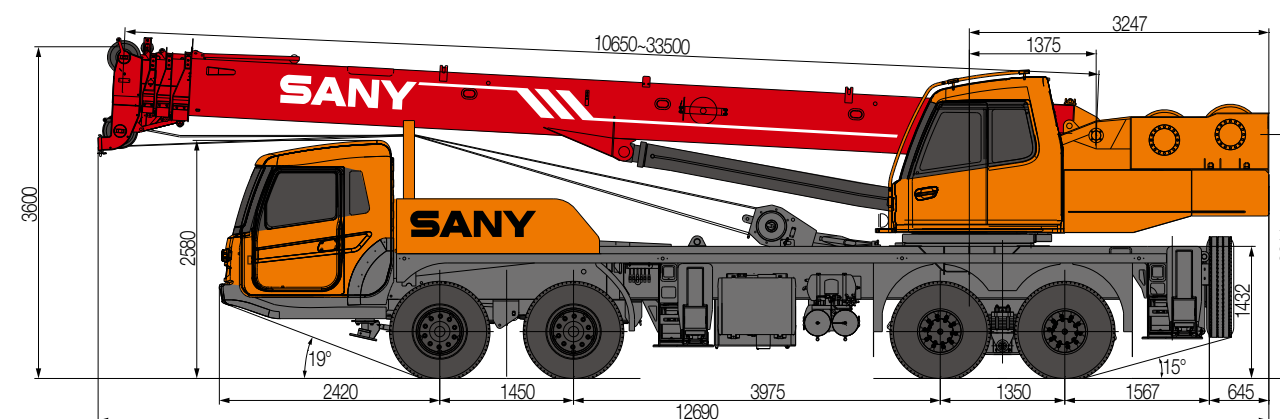
Tyres

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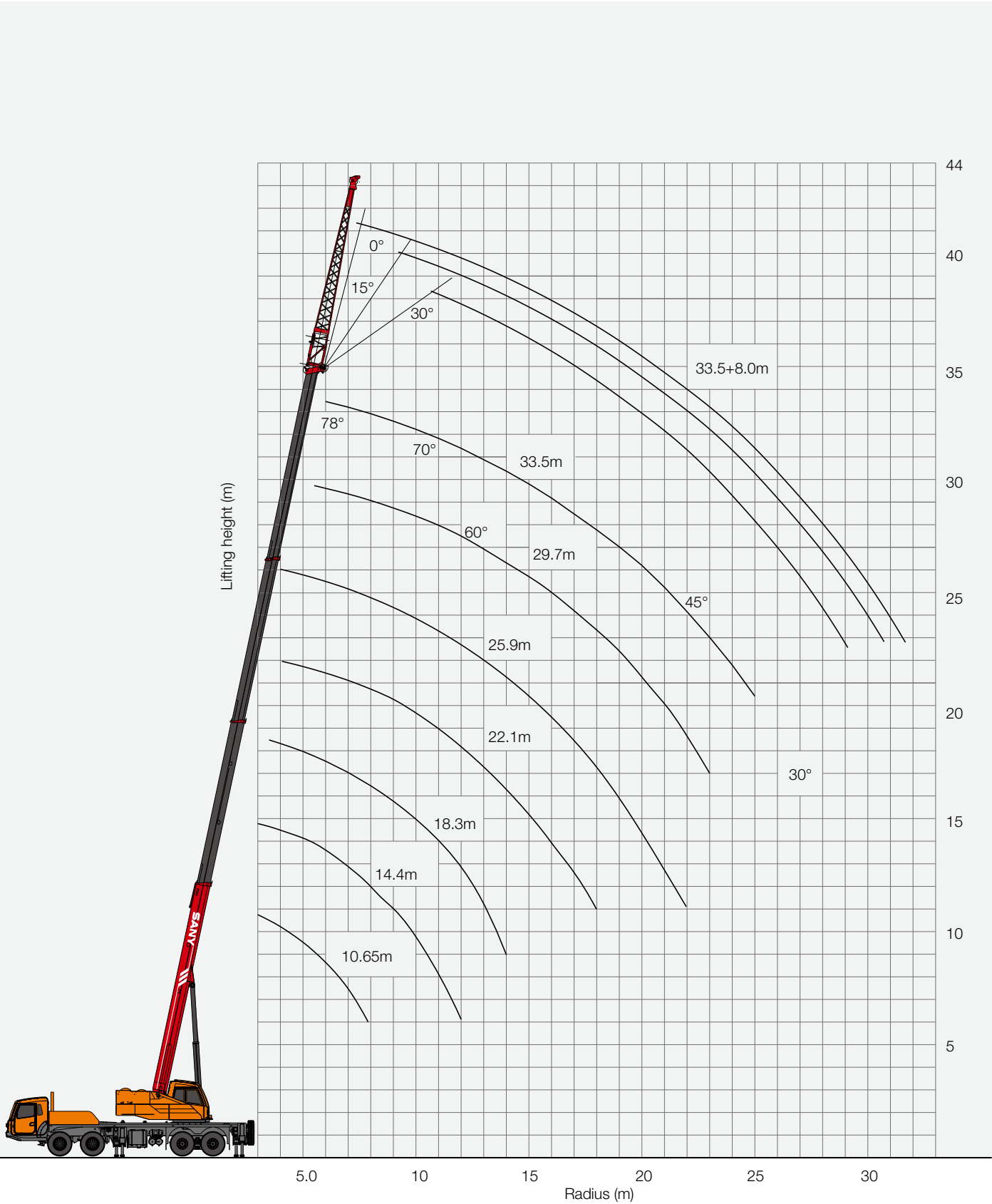
Electrical system

- 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		30t
Dimensions	Overall length		12690mm
	Overall width		2500mm
	Overall height		3600mm
	Axle distance	Axle-1, 2	1450mm
		Axle-2, 3	3975mm
Axle-3, 4		1350mm	
Weight	Overall weight		30000kg
	Axle load	Axle load-1, 2	11500kg
		Axle load-3, 4	18500kg
	Rated power		213kW/2100rpm
	Rated torque		1050N.m/1200 ~ 1400rpm
Traveling	Max.traveling speed		80km/h
	Turning radius	Min.turning radius	11.5m
		Min.turning radius of boom head	13.5m
	Wheel formula		8×4
	Min.ground clearance		250mm
	Approach angle		19°
	Departure angle		14.5°
	Max.gradeability		35%
	Fuel consumption per 100km		≤40L
Main Performance Data	Temperature range		－ 20 °C ~ +40 °C
	Min.rated range		3 m
	Tail slewing radius of swingtable		3.37m
	Boom section		4
	Boom shape		U-shaped
	Max.lifting moment	Base boom	985kN·m
		Full-extend boom	576kN·m
		Full-extend boom+jib	341kN·m
	Boom length	Base boom	10.65m
		Full-extend boom	33.5m
		Full-extend boom+jib	41.5m
	Outrigger span (Longitudinal×Transversal)		5.3×6.2m
Jib offset		0°,15°,30 °	
Working speed	Max.single rope lifting speed of main winch (no load)		125m/min
	Max.single rope lifting speed of auxilliary winch (no load)		118m/min
	Full extension/retraction time of boom		68/56s
	Full lifting/descending time of boom		72/60s
	Slewing speed		2.5r/min
Aircondition	Aircondition in up cab		Heating/Cooling
	Aircondition in low cab		Heating/Cooling

STC300TH Working Ranges



Unit:Kg

- Prerequisites:
- ① Boom operating conditions(fully extended boom length),min.length is 10.65m and max.length is 33.5m

② The span of outriggers is 5.3m×6.2m

③ 360°rotation is applied

④ Counterweight is 2.8T

Working range(m)	Main boom							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 gound under the lever state of the crane;
Value above heavy line shall be determined by strength of the crane and under this line shall be determined by stability of the crane.
2. The above parameters are based on full-extending state of outriggers, which must be complied with for lifting at side and rear. Lifting with non-extended outrigger is forbidden.
3. Value above heavy line shall be determined by strength of the crane and under this line shall be determined by stability of the crane.
4. Rated lifting capacity listed in the table including weights of lifting hooks (360kg of main hook and 90kg of auxiliary hook)and hangers.
5. Range value in the table is actual horizontal distance from center of lifted hook to center of rotation.
6. when actual boom length and working range are between those two values,larger values shall be applied to determine lifting capacity.
7. Lifting capacit of single pulley at the end of boom is same with that under 33.5m boom operating condition,with max.value ≤ 3.5t.
8. If jib is equipped at end of boom,lifting capacity of main hook is the value that lifting capacity specified in table is reduced by 550kg for all operating conditions.

Unit:Kg

- Prerequisites:
- ① Boom operating conditions(fully extended boom length +jib length), max.length is 33.5m+8m

② The span of outriggers is 5.3m×6.2m

③ 360°rotation is applied

④ Counterweight is 2.8T

Main boom angle	Main boom+Jib		
	0°	15°	30°
78	2800	2350	1700
75	2800	2200	1600
72	2750	2050	1500
70	2600	1900	1450
65	2150	1650	1350
60	1800	1450	1250
55	1300	1200	1150
50	950	850	800

STC300TH 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, 10.8-40.5m



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, 11.8-43m



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, 12.25-56m



STC1300C
Maximum Load Capacity: 130t
Telescopic Boom: 5 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



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, 17.1-100m

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, 11.8-45m



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



Quality Changes the World

SANY AUTOMOBILE HOISTING MACHINERY

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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.

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