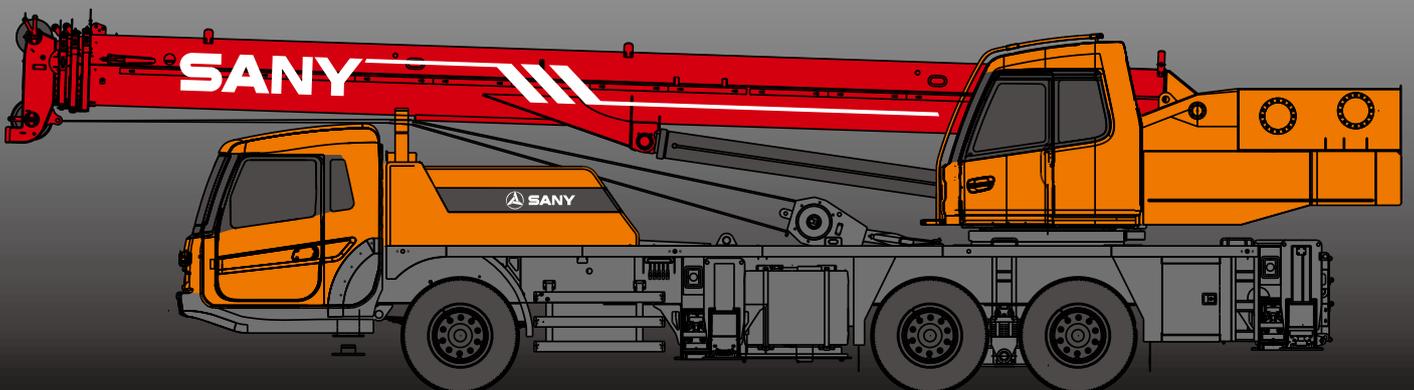


# STC250

STC250 TRUCK CRANE  
25 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



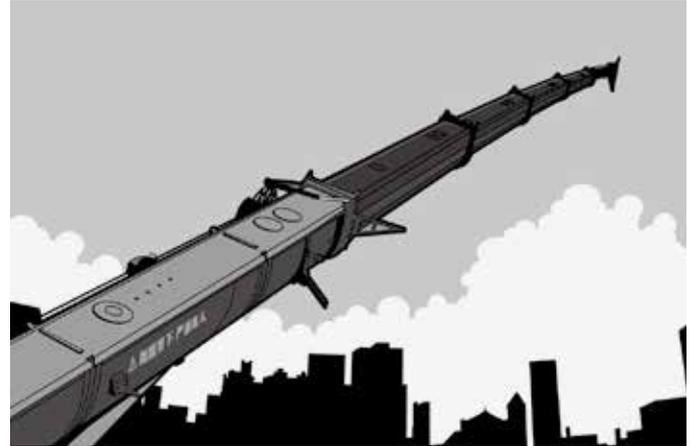
Electrical system



### 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.



### 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.



### 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.



### 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 safety glass and 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, load feedback control function, enabling stable and convenient control of single action and combined action under different operation conditions
- Winch adopts the variable motor to ensure high operation efficiency. Max. single line speeds of main and auxiliary winches is up to 120m/min which ensures the lifting efficiency take the lead in industry.
- The use of new slewing system ensures more stable starting and control of the slewing operation and excellent micro-mobility.
- Hydraulic oil tank capacity: 480L

### 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, ensuring convenient and fast troubleshooting.
- Load moment limiter: The adoption of high intelligent load moment limiter system can comprehensively protect lifting operation, ensuring accurate, stable and comfort operation.
- 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.

### Luffing system

- Dynamic luffing system with controllable speed provides more stable luffing operation. Luffing angle:  $-2^{\circ}\sim 80^{\circ}$ .

### Telescopic system

- Four-section boom is applied with basic boom length of 10.65m, fully extended boom length of 33.5m, jib length of 8m 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 independently by dual-cylinder rope.

## Superstructure



### Slewing system

- 360° rotation can be achieved with Max. slewing speed of 2.0r/min., providing stable and reliable operation of the system. Single-row ball slewing ring is applied for strong bearing capacity, good stability, high safety and good micro-mobility.



### Hoisting system

- The winch adopts the electronic control variable plunger motor, enabling convenient switch-over between low load high speed mode and high load low speed mode, and ensuring highly efficient operation and stable lifting and lowering of the load.
- One main hook: 320Kg, one auxiliary hook: 90Kg. Wire rope of main winch: left-handed wire rope 16-35W×7-1960, with length of 175m. Wire rope of auxiliary winch: left-handed wire rope 16-35W×7-1960, with length of 105m.



### 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 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.
- 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.



### Counterweight

- Counterweight is 3800kg, 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 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 2 and 3 are drive axles and axles 1 is steering axles, axle and wheel differentials are installed in axles 2 and 3. 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: 213kW/2100( r/min)
- Environment-protection: Emission complies with EuroIII standard
- Capacity of fuel tank: 300L



### Transmission system

- Gearbox: Manual / Automatic 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, plate flange is used with large transmission torque.



### Brakes system

- Brakes system includes traveling brake and parking brake.
- All wheels use the air servo brakes and dual-circuit brake system, engine is equipped with an exhaust brake.



### 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 riding.



### Steering system

- Hydraulic power mechanical steering systems are applied for axles 1 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 5.3m×6.2m. They are made of fine-grain high-strength steel sheet, movable outriggers are full hydraulic transverse telescopic.



### Tyres

- 11 (number of tyres) – spec.: 11.00-20 ; diagonal tires are adopted, which features with large load bearing capacity and durability.



### Electrical system

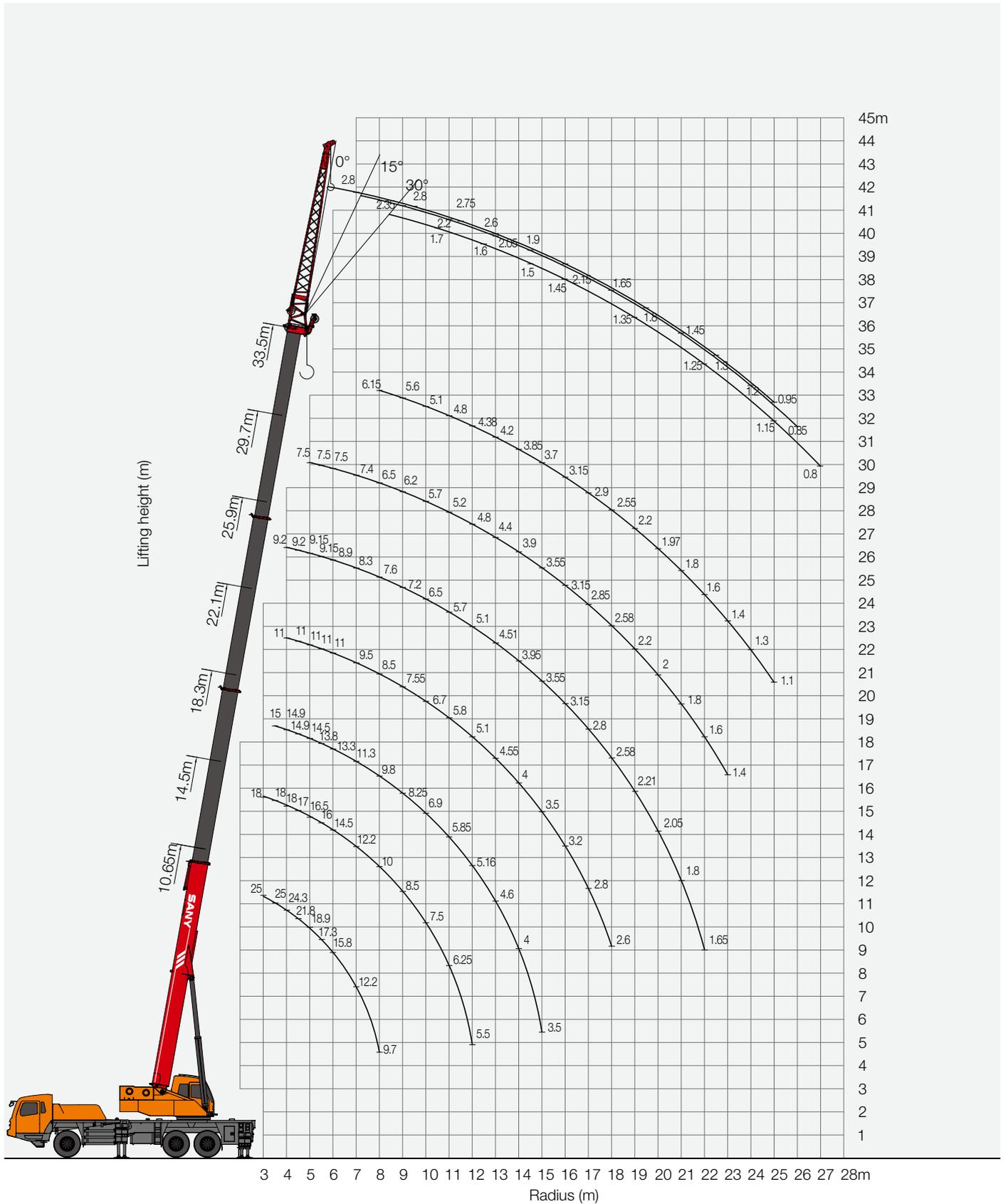
- With 2\*12V maintenance-free batteries, the crane power can be cut off manually via a mechanical master power switch.



**STC250 TRUCK CRANE**  
**TECHNICAL PARAMETER**

Type	Item	Parameter	
Capacity	Max. lifting capacity	25t	
Dimensions	Overall length	12750mm	
	Overall width	2500mm	
	Overall height	3550mm	
	Axle distance	Axle-1,2	4325mm
Axle-2,3		1350mm	
Weight	Overall weight	30000kg	
	Axle load	Axle load-1	6500kg
		Axle load-2,3	23500kg
Engine	Rated power	213kW/ 2100 rpm	
	Rated torque	1050N.m/ (1200 ~ 1400) rpm	
Traveling	Max.traveling speed	80km/h	
	Turning radius	Min.turning radius	10m
		Min.turning radius of boom head	12m
	Wheel formula	6 × 4	
	Min.ground clearance	220mm	
	Approach angle	17 °	
	Departure angle	12 °	
	Max.gradeability	38%	
Fuel consumption per 100km	≤ 37 L		
Main Performance Data	Temperature range	- 30 °C ~ + 60 °C	
	Min.rated range	3m	
	Tail slewing radius of swingtable	3.37m	
	Boom section	4	
	Boom shape	U-shaped	
	Max.lifting moment	Base boom	962kN·m
		Full-extend boom	544kN·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)	≥ 120m/min	
	Max.single rope lifting speed of auxiliary winch (no load)	≥ 120m/min	
	Full extension/retraction time of boom	70 / 50s	
	Full lifting/descending time of boom	70 / 55s	
	Slewing speed	(0~2)r/min	
Air condition	Superstructure	Cooling and Heating	
	Chassis	Cooling and Heating	

STC250 Working Ranges



**Prerequisites :**

- ① Boom operating condition(fully extended boom length),min.length is 10.65 and.max.length is 33.5m
- ② The span of outrigger is 5.3×6.2m
- ③ 360°rotation is applied
- ④ Counterweight is 3.8T

Working range(m)	Main boom							Working range(m)
	10.65	14.5	18.3	22.1	25.9	29.7	33.5	
3	25000	18000						3
3.5	25000	18000	15000					3.5
4	24300	18000	14900	11000	9200			4
4.5	21820	17000	14900	11000	9200			4.5
5	18900	16500	14500	11000	9150	7500		5
5.5	17350	16000	13800	11000	9150	7500		5.5
6	15800	14500	13300	11000	8900	7500		6
7	12200	12200	11300	9500	8300	7400		7
8	9700	10000	9800	8500	7600	6500	6150	8
9		8500	8250	7550	7200	6200	5600	9
10		7500	6900	6700	6500	5700	5100	10
11		6250	5850	5800	5700	5200	4800	11
12		5500	5160	5100	5100	4800	4380	12
13			4600	4550	4510	4400	4200	13
14			4000	4000	3950	3900	3850	14
15			3500	3500	3550	3550	3700	15
16				3200	3150	3150	3150	16
17				2800	2800	2850	2900	17
18				2600	2580	2580	2550	18
19					2210	2200	2200	19
20					2050	2000	1970	20
21					1800	1800	1800	21
22					1650	1600	1600	22
23						1400	1400	23
24							1300	24
25							1100	25
Number of lines	8	8	6	4	4	4	3	Number of lines
Telescoping condition(%)								
I	100%	100%	100%	100%	100%	100%	100%	I
II	0	17%	34%	50%	67%	84%	100%	II
III	0	17%	34%	50%	67%	84%	100%	III
IV	0	17%	34%	50%	67%	84%	100%	IV

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 operating condition( fully extended boom length + jib length),max. length is 33.5m+8m
- ② The span of outriggers is 5.3×6.2m
- ③ 360°rotation is applied
- ④ Counterweight is 3.8T

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

## STC250 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, 11.8-45m



**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 Booms: 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





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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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