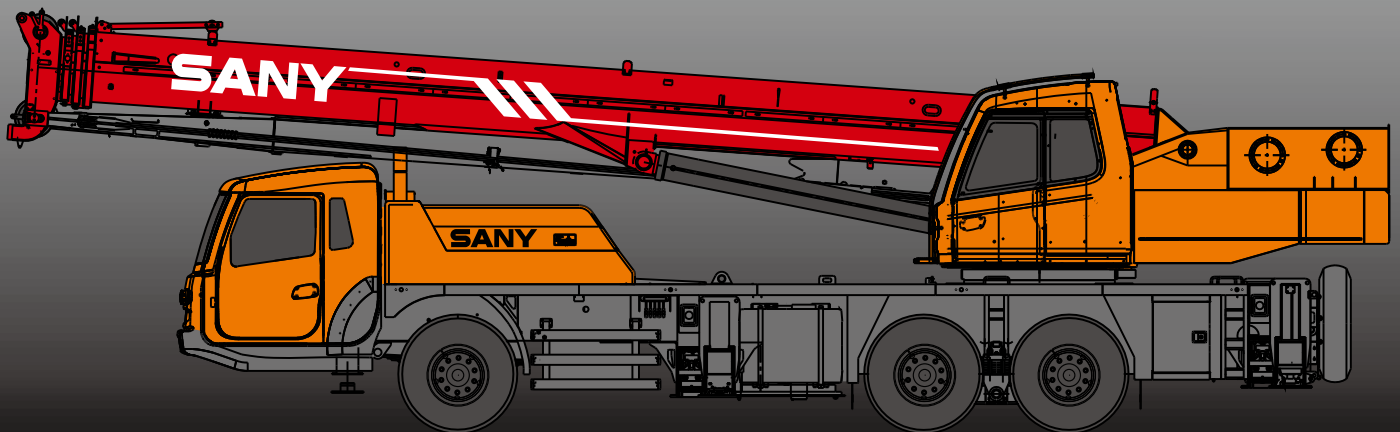


# STC250

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

## 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 tafficability and comfortableness under complex road condition with reliable traveling performance.

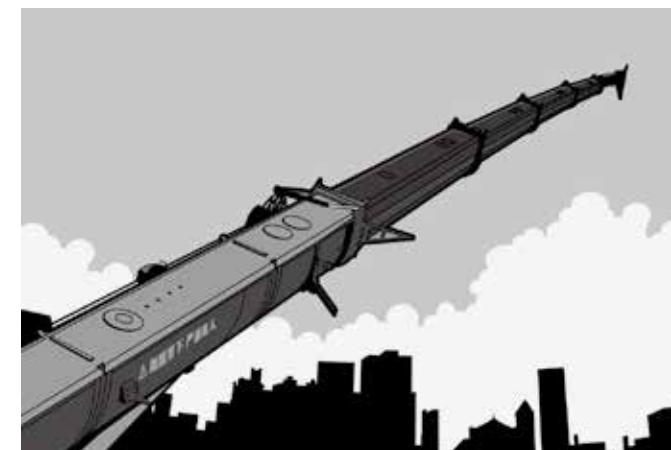
Engine has the multimode power output function, which reduces power consumption.

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**
- 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.


-  **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, to ensure 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**
- Dead-weight luffing provides more stable luffing operation at low energy loss.
  - 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 lifting height of fully extended boom length 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 single- cylinder rope.

## Superstructure









-  **Slewing system**
- 360° rotation can be achieved with Max. slewing speed of 2r/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.

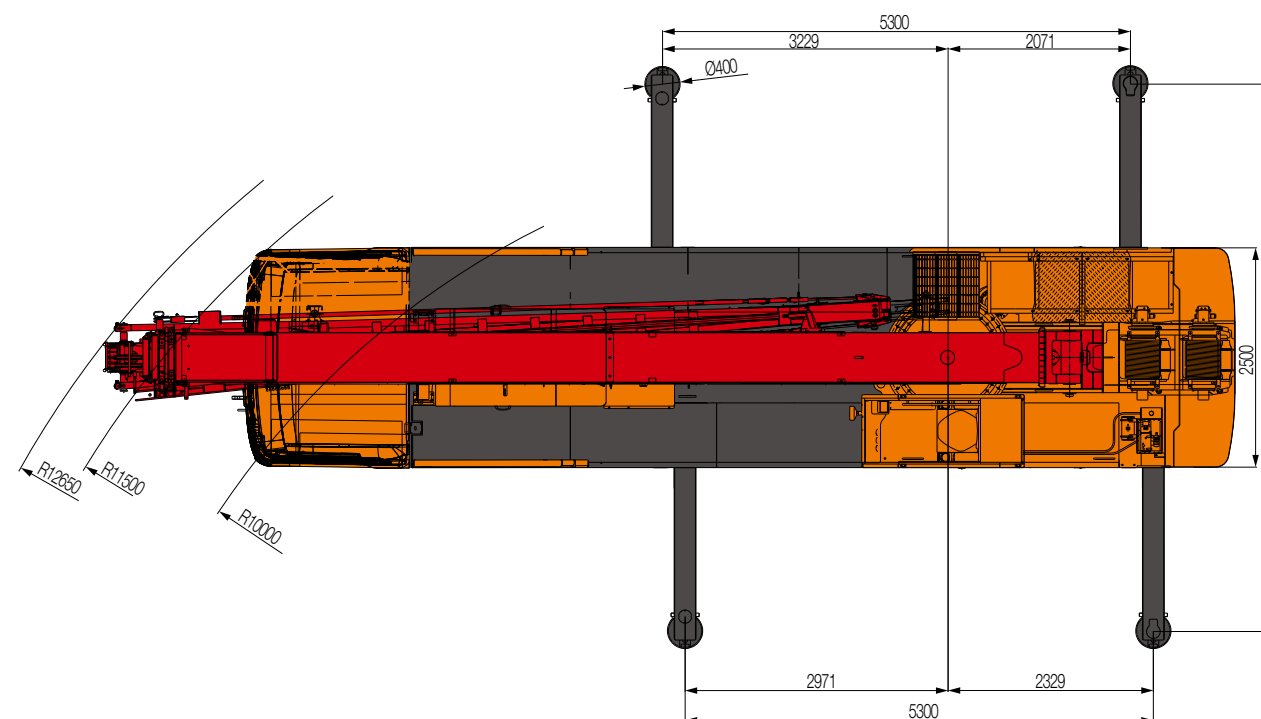
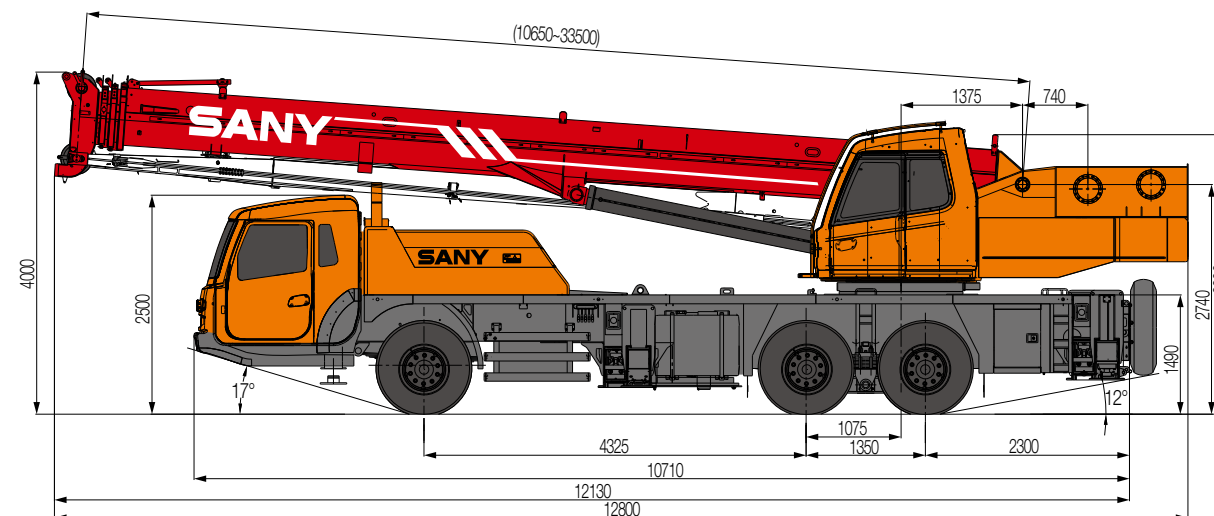
-  **Hoisting system**
- The winch adopts the high-pressure automatic variable plunger motor, enabling automatic switch-over between low load high speed mode and high load low speed mode, and ensuring highly efficient operation and stable lifting and lowering of the load.
  - One main hook: 320Kg, one auxiliary hook: 90Kg. Wire rope of main winch: left-handed wire rope 16-35W×7-1960USS, with length of 175m. Wire rope of auxiliary winch: left-handed wire rope 16-35W×7-1960USS, 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.
  - 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**
- Counterweight is 3800kg, no flexible counterweight.

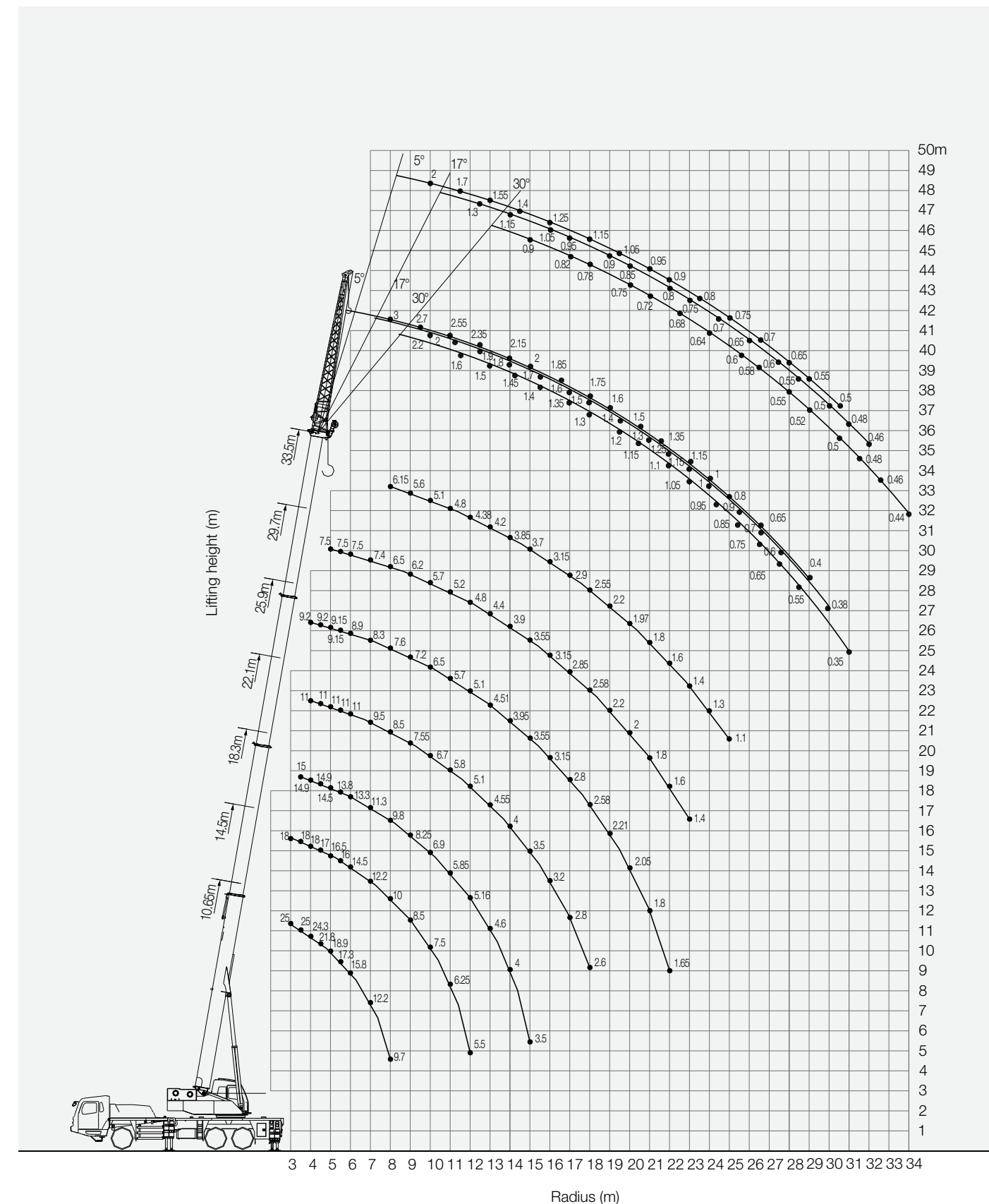
## Chassis

-  **Driving 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 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 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: In-line six-cylinder, water cooled, supercharged and inter-cooling diesel engine
  - Rated power: 213kW(340ps)/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, face-tooth coupling transmission shaft 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 ridding.
-  **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 all hydraulic transverse telescopic.
-  **Tyres**
- 11\*11.00-20,11.00R20;
  - 11 (number of tyres) - type: 11.00-20,11.00R20; bias tires are used, featuring with large bearing capacity and durable use.
-  **Electrical system**
- With 2\*12V maintenance-free batteries, the crane power can be cut off manually via a mechanical master power switch.



| Type                                      | Item                                                       | Parameter                           |         |
|-------------------------------------------|------------------------------------------------------------|-------------------------------------|---------|
| Capacity                                  | Max. lifting capacity                                      | 25t                                 |         |
| Dimensions                                | Overall length                                             | 12800mm                             |         |
|                                           | Overall width                                              | 2500mm                              |         |
|                                           | Overall height                                             | 4000mm                              |         |
|                                           | Axle distance                                              | 4325mm/1350mm                       |         |
| Weight                                    | Overall weight                                             | 30000kg                             |         |
|                                           | Axle load                                                  | Axle 1: 6500kg<br>Axle 2,3: 23500kg |         |
| Engine                                    | Rated power                                                | 213kW/2100(r/min)                   |         |
|                                           | Rated torque                                               | 1050N.m/(1200~1400)rpm              |         |
| Traveling                                 | Max.traveling speed                                        | 80Km/h                              |         |
|                                           | Turning radius                                             | Min.turning radius: 10m             |         |
|                                           | Min.ground clearance                                       | 220mm                               |         |
|                                           | Approach angle                                             | 17°                                 |         |
|                                           | Departure angle                                            | 12°                                 |         |
|                                           | Max.gradeability                                           | 38%                                 |         |
|                                           | Fuel consumption per                                       | 37L                                 |         |
| Main performance parameters               | 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                | 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)      | 120m/min                            |         |
|                                           | Max.single rope lifting speed of auxiliary winch (no load) | 120m/min                            |         |
|                                           | Full extension/retraction time of boom                     | 70s/50s                             |         |
|                                           | Full lifting/descending time of boom                       | 70s/55s                             |         |
|                                           | Slewing speed                                              | (0~2.0) r/min                       |         |
| Air condition                             | Superstructure                                             | Cooling                             |         |
|                                           | Chassis                                                    | Cooling and heating                 |         |

STC250 Working Ranges



Unit:Kg

## Prerequisites :

- ① Boom operation condition(full telescopic boom length/full telescopic boom+jib)  
10.65 m the shortest 33.5 m the longest
- ② Outriggers length 6.2 m
- ③ 360° rotation
- ④ weight of counterweight 3.8 T

| 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



















Load Chart  
(33.5m boom + 9/14.6m jib, outrigger fully-extended, 3.8t counterweight, 360°rotation)

| 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  |             |      |     |



# STC250 TRUCK CRANE WHEEL CRANE FAMILY MAP

## TRUCK CRANE

|                                                                                                                                                                      |                                                                                                                                                                       |                                                                                                                                                                        |                                                                                                                                                                         |                                                                                                                                                                           |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <br>STC200<br>Maximum Load Capacity: 20t<br>Telescopic Boom: 4 Sections, 10.6-33m    | <br>STC250<br>Maximum Load Capacity: 25t<br>Telescopic Boom: 4 Sections, 10.65-33.5m | <br>STC250H<br>Maximum Load Capacity: 25t<br>Telescopic Boom: 5 Sections, 10.5-39.5m  | <br>STC300S<br>Maximum Load Capacity: 30t<br>Telescopic Boom: 5 Sections, 10.6-40.5m  | <br>STC300TH<br>Maximum Load Capacity: 30t<br>Telescopic Boom: 4 Sections, 10.6-33.5m  |
| <br>STC300H<br>Maximum Load Capacity: 30t<br>Telescopic Boom: 5 Sections, 10.5-39.5m | <br>STC500<br>Maximum Load Capacity: 50t<br>Telescopic Boom: 5 Sections, 11.5-43m    | <br>STC550<br>Maximum Load Capacity: 55t<br>Telescopic Boom: 5 Sections, 11.5-43m     | <br>STC600S<br>Maximum Load Capacity: 60t<br>Telescopic Boom: 5 Sections, 11.3-43.5m  | <br>STC750<br>Maximum Load Capacity: 75t<br>Telescopic Boom: 5 Sections, 11.8-43m      |
| <br>STC800S<br>Maximum Load Capacity: 80t<br>Telescopic Boom: 5 Sections, 12.2-47m   | <br>STC1000<br>Maximum Load Capacity: 100t<br>Telescopic Boom: 5 Sections, 13.5-52m  | <br>STC1000C<br>Maximum Load Capacity: 100t<br>Telescopic Boom: 6 Sections, 13.25-60m | <br>STC1000S<br>Maximum Load Capacity: 100t<br>Telescopic Boom: 5 Sections, 12.25-59m | <br>STC1200S<br>Maximum Load Capacity: 120t<br>Telescopic Boom: 7 Sections, 12.6-63.5m |
| <br>STC1300C<br>Maximum Load Capacity: 130t<br>Telescopic Boom: 8 Sections, 13.3-60m | <br>STC1600<br>Maximum Load Capacity: 160t<br>Telescopic Boom: 6 Sections, 13.4-62m  | <br>STC2200<br>Maximum Load Capacity: 220t<br>Telescopic Boom: 6 Sections, 14.55-68m  |                                                                                                                                                                         |                                                                                                                                                                           |

## ALL TERRAIN CRANE

|                                                                                                                                                                       |                                                                                                                                                                        |                                                                                                                                                                         |                                                                                                                                                                         |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <br>SAC1800<br>Maximum Load Capacity: 180t<br>Telescopic Boom: 8 Sections, 13.5-62m | <br>SAC2200<br>Maximum Load Capacity: 220t<br>Telescopic Boom: 6 Sections, 13.5-62m | <br>SAC2600<br>Maximum Load Capacity: 260t<br>Telescopic Boom: 6 Sections, 15.05-73m | <br>SAC3000<br>Maximum Load Capacity: 300t<br>Telescopic Boom: 7 Sections, 15.4-80m |
| <br>SAC3500<br>Maximum Load Capacity: 350t<br>Telescopic Boom: 6 Sections, 15.2-70m | <br>SAC6000<br>Maximum Load Capacity: 600t<br>Telescopic Boom: 7 Sections, 17.1-90m |                                                                                                                                                                         |                                                                                                                                                                         |

## ROUGH-TERRAIN CRANE

|                                                                                                                                                                      |                                                                                                                                                                      |                                                                                                                                                                         |                                                                                                                                                                        |                                                                                                                                                                        |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <br>SRC250<br>Maximum Load Capacity: 25t<br>Telescopic Boom: 4 Sections, 9.9-31.5m | <br>SRC350<br>Maximum Load Capacity: 35t<br>Telescopic Boom: 4 Sections, 10-31.5m | <br>SRC550<br>Maximum Load Capacity: 55t<br>Telescopic Boom: 4 Sections, 11.25-34.5m | <br>SRC550H<br>Maximum Load Capacity: 55t<br>Telescopic Boom: 5 Sections, 11.5-43m | <br>SRC750<br>Maximum Load Capacity: 75t<br>Telescopic Boom: 5 Sections, 11.6-45m |
| <br>SRC1200<br>Maximum Load Capacity: 120t<br>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](mailto:crd@sany.com.cn)  
For more information, please visit: [www.sanygroup.com](http://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: 2016.1

Distributed By: