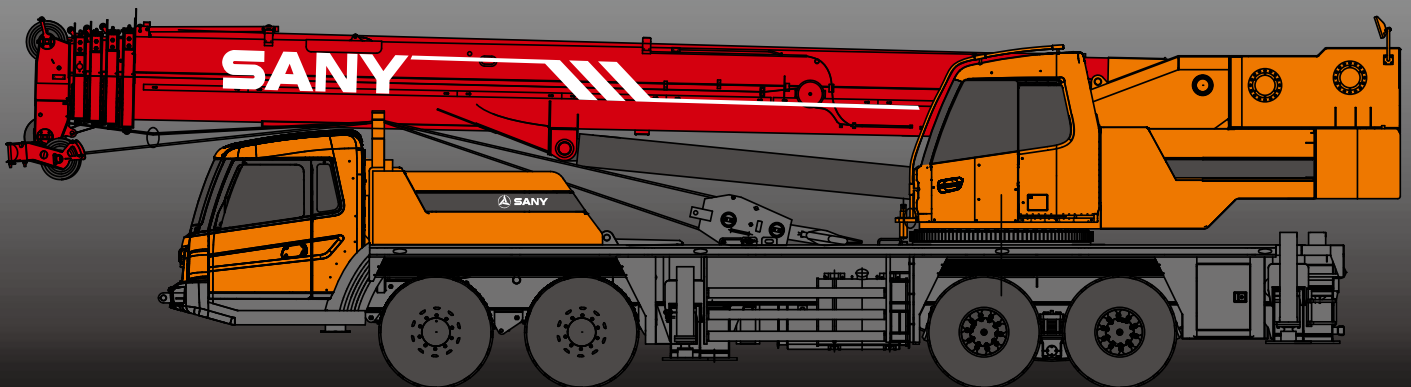


STC550

STC550 TRUCK CRANE
55 TONS LIFTING CAPACITY

Quality Changes the World



SANY

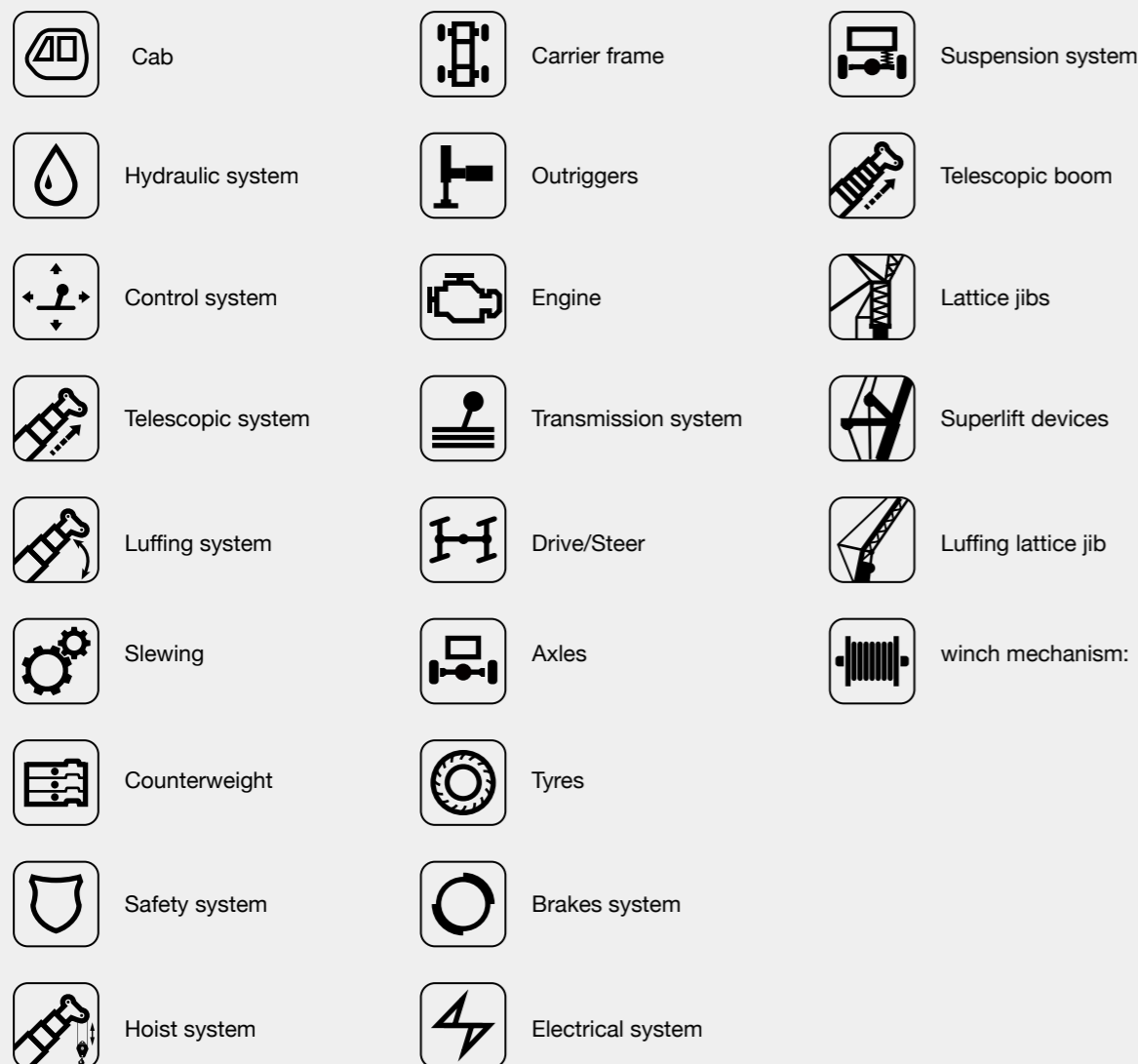
■ SANY Automobile Hoisting Machinery is one of the core business unit of Sany Heavy Industry, mainly engaged in the research and development of high end, mid to large tonnage crane series, including mobile crane, crawler crane, tower crane and loader crane. It has two industrial parks in Ningxiang and 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



Excellent and stable chassis performance / chassis system

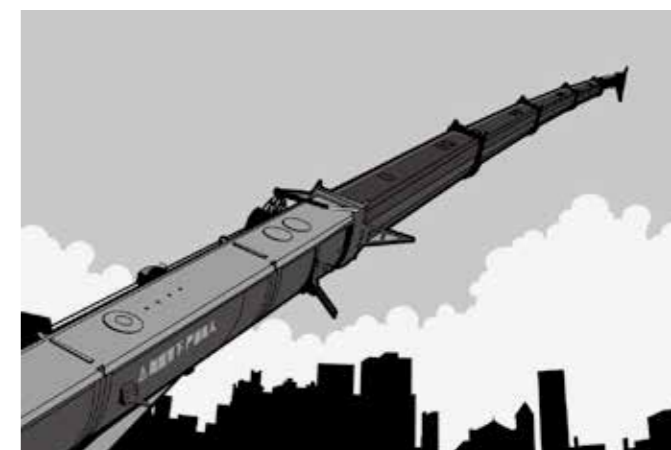
Double-axle drive is used, providing good trafficability and comfortableness under complex road condition with reliable traveling performance.

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

Hydraulic system load feedback and constant power control is applied to provide strong lifting capacity and good micro-mobility. Unique steering buffer design is adopted to ensure stable braking operation.



Ultra long, super strong and highly sensitive load lifting capacity


Five-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 ±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.

-  **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.
 - 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.
 - 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 130m/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: 840L.


-  **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, chassis (for major safety failure) and engine for fault to ensure reliable operation of the crane.


-  **Luffing system**
- Dead-weight luffing provides more stable luffing operation at low energy loss.
 - Luffing angle: -2°~ 80°.


-  **Telescopic system**
- Five-section boom is applied with basic boom length of 11.5m, full-extended boom length of 43m, jib length of 16m and fully extended boom lifting height of 43.2m respectively. Max. lifting height is 59.2m 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 2r/min., providing stable and reliable operation of the system. Unique rotary buffer design ensures more stable braking.


Superstructure


-  **Hoisting system**
- The adoption of pump and motor double variable speed control ensures high efficiency and excellent energy saving functionality. 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: 610kg or 555kg, one auxiliary hook: 90Kg, and the max. lifting height are 55t and 5t. Wire rope of main winch: left-handed wire rope 18-35W×7-1960USZ 220m. Wire rope of auxiliary winch: left-handed wire rope 18-35W×7-1960USZ 130m.


-  **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.


-  **Counterweight**
- Counterweight is 3500kg, 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 3 and 4 are drive axles and axles 1 and 2 are steering axles. 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: 250kw/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 gradeability speed and traveling at high 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

- Air servo brakes are used for all wheels with dual-circuit brake system applied, engine is equipped with an exhaust brake.
- 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.
- Parking brake: Force driven by accumulator is applied on the third to fourth axle.
- For emergency brake, accumulator is used not only for cutting-off brake but also for emergency brake.
- Auxiliary brake is exhaust brake with brake safety ensured while travelling downhill.



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-point supporting of the H-shaped outriggers ensures easy operation and strong stability with Max. span up to 6x7.2m. 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.



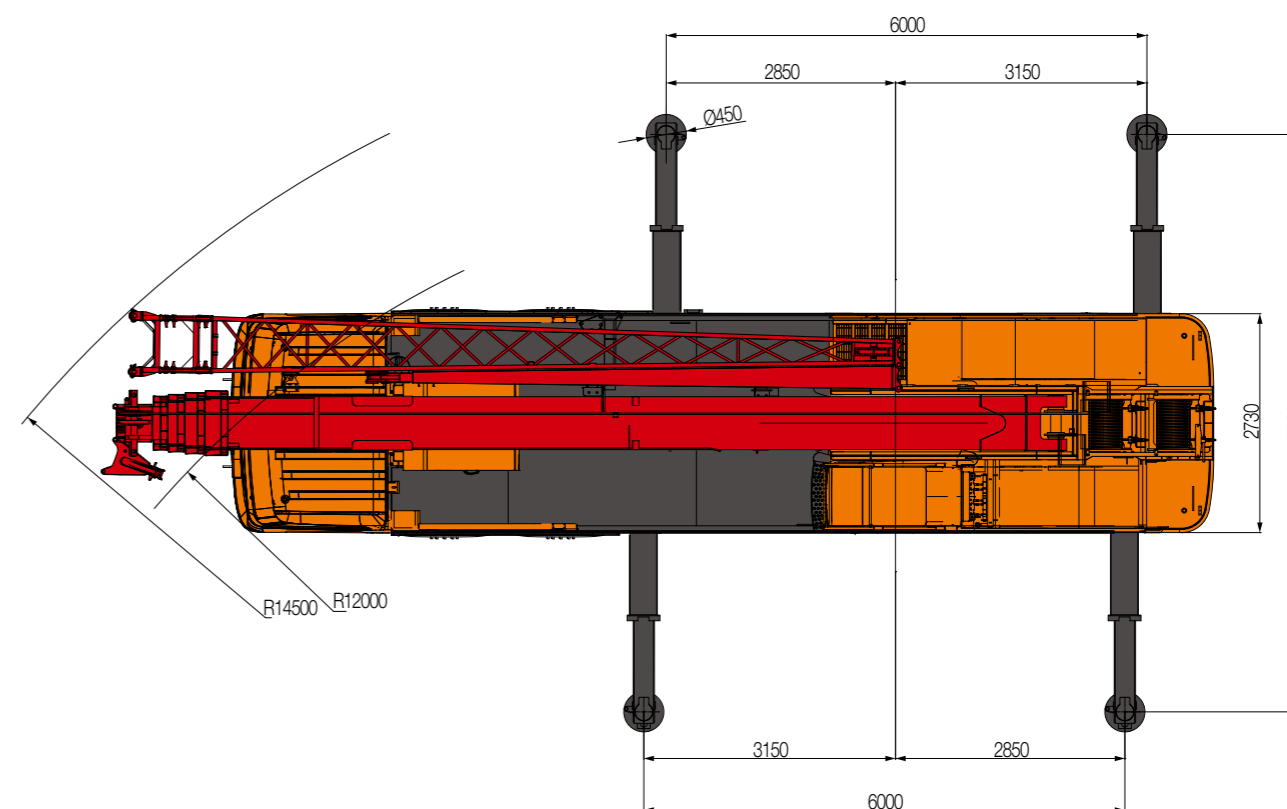
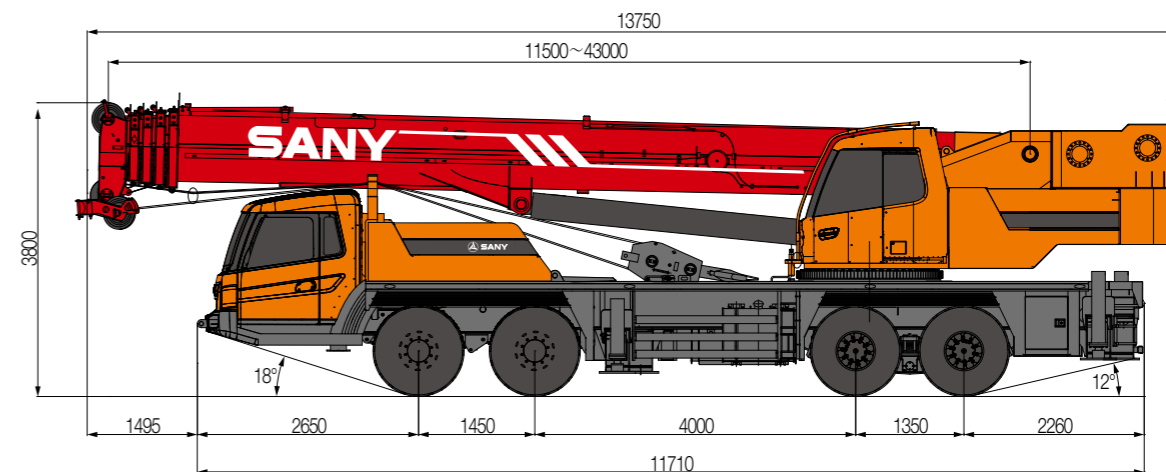
Tyres

- 12.00R20-20PRx12.



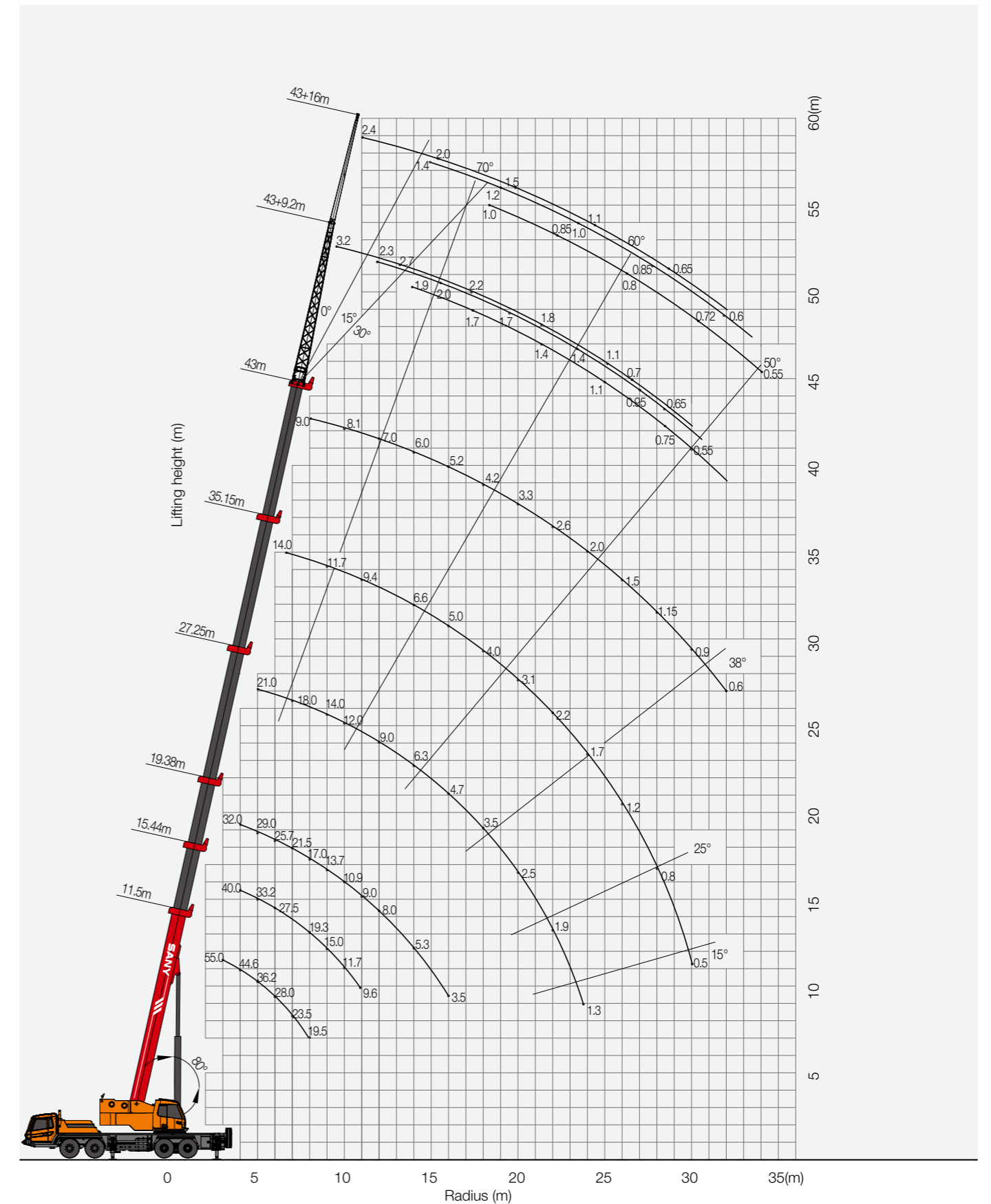
Electrical system

- 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 | 55 t | |
| Dimensions | Overall length | 13750 mm | |
| | Overall width | 2750 mm | |
| | Overall height | 3800 mm | |
| | Axle distance | Axle-1,2: 1450 mm Axle-2,3: 4000 mm Axle-3,4: 1350 mm | |
| Weight | Overall weight | 42000 kg | |
| | Axle load | Axle load-1,2: 16000 kg Axle load-3,4: 26000 kg | |
| | Rated power | 250 kW/ 2100 rpm | |
| | Rated torque | 1425 N.m/ 1200 rpm | |
| Traveling | Max.traveling speed | 85 km/h | |
| | Turning radius | Min.turning radius | 12 m |
| | | Min.turning radius of boom head | 14.5 m |
| | Wheel formula | 8 × 4 | |
| | Min.ground clearance | 295 mm | |
| | Approach angle | 18 ° | |
| | Departure angle | 12 ° | |
| | Max.gradeability | 40% | |
| Fuel consumption per 100km | ≤ 45 L | | |
| Main Performance Data | Temperature range | - 20 °C ~ +45 °C | |
| | Min.rated range | 3 m | |
| | Tail slewing radius of swingtable | 4 m | |
| | Boom section | 5 | |
| | Boom shape | U-shaped | |
| | Max.lifting moment | Base boom | 1774 kN·m |
| | | Full-extend boom | 840.8 kN·m |
| | | Full-extend boom+jib | 318 kN·m |
| | Boom length | Base boom | 11.5 m |
| | | Full-extend boom | 43 m |
| Full-extend boom+jib | | 59 m | |
| Outrigger span (Longitudinal×Transversal) | 6 × 7.2 m | | |
| Jib offset | 0 °, 15 °, 30 ° | | |
| Working speed | Max.single rope lifting speed of main winch (no load) | 130 m/min | |
| | Max.single rope lifting speed of auxiliary winch (no load) | 130 m/min | |
| | Full extension/retraction time of boom | 100 / 120 s | |
| | Full lifting/descending time of boom | 80 / 80 s | |
| | Slewing speed | 0 ~ 2.0 r/min | |
| Aircondition | Aircondition in up cab | Heating/Cooling | |
| | Aircondition in low cab | Heating/Cooling | |

STC550 Working Ranges



Unit:Kg

Prerequisites:

- ① Boom operating conditions(fully extended boom length),min. length is 11.5m and max.length is 43m
- ② The span of outriggers is 6m×7.2m
- ③ 360°rotation is applied
- ④ Counterweight is 3.5T

| Working range(m) | Main boom | | | | | | | | | | | Working range(m) |
|--------------------------|-----------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|------------------|
| | 11.5 | 15.44 | 19.38 | 19.38 | 27.25 | 27.25 | 35.15 | 35.15 | 39 | 39 | 43 | |
| 3 | 55000 | 40000 | 32000 | 21500 | | | | | | | | 3 |
| 3.5 | 50000 | 40000 | 32000 | 21500 | | | | | | | | 3.5 |
| 4 | 44600 | 40000 | 32000 | 21500 | | | | | | | | 4 |
| 4.5 | 40000 | 36000 | 31000 | 21500 | 21000 | 15000 | | | | | | 4.5 |
| 5 | 36200 | 33200 | 29000 | 20000 | 21000 | 15000 | | | | | | 5 |
| 5.5 | 32000 | 30000 | 27500 | 19000 | 21000 | 14500 | | | | | | 5.5 |
| 6 | 28000 | 27500 | 25700 | 18100 | 21000 | 13700 | 14000 | 9000 | | | | 6 |
| 6.5 | 25800 | 25500 | 23900 | 17500 | 19500 | 12800 | 14000 | 9000 | | | | 6.5 |
| 7 | 23500 | 23200 | 21500 | 17000 | 18000 | 12100 | 14000 | 9000 | 11500 | 9000 | | 7 |
| 7.5 | 21400 | 21200 | 18600 | 16200 | 16800 | 11500 | 13500 | 8500 | 11500 | 9000 | | 7.5 |
| 8 | 19500 | 19300 | 17000 | 15600 | 15800 | 11000 | 12700 | 8500 | 11000 | 9000 | 9000 | 8 |
| 9 | 15300 | 15000 | 13700 | 13800 | 14000 | 10000 | 11700 | 7800 | 10500 | 8500 | 8500 | 9 |
| 10 | | 11700 | 10900 | 12000 | 12000 | 9000 | 10700 | 7100 | 10000 | 8000 | 8100 | 10 |
| 11 | | 9600 | 9000 | 10600 | 9900 | 8200 | 9400 | 6400 | 9000 | 7500 | 7800 | 11 |
| 12 | | 8000 | 8000 | 8700 | 9000 | 7500 | 8500 | 5800 | 8000 | 7000 | 7000 | 12 |
| 14 | | | 5300 | 6400 | 6300 | 6100 | 6600 | 5000 | 6300 | 5900 | 6000 | 14 |
| 16 | | | 3500 | 4600 | 4700 | 5000 | 5000 | 4400 | 5000 | 5000 | 5200 | 16 |
| 18 | | | | | 3500 | 4100 | 4000 | 3800 | 4000 | 4000 | 4200 | 18 |
| 20 | | | | | 2500 | 3000 | 3100 | 3200 | 3200 | 3500 | 3300 | 20 |
| 22 | | | | | 1900 | 2300 | 2200 | 2700 | 2400 | 2800 | 2600 | 22 |
| 24 | | | | | 1300 | 1800 | 1700 | 2400 | 1800 | 2100 | 2000 | 24 |
| 26 | | | | | | | 1200 | 1900 | 1300 | 1650 | 1500 | 26 |
| 28 | | | | | | | 800 | 1500 | 900 | 1300 | 1150 | 28 |
| 30 | | | | | | | 500 | 1000 | 600 | 900 | 900 | 30 |
| 32 | | | | | | | | 800 | | 600 | 600 | 32 |
| 34 | | | | | | | | | | 400 | | 34 |
| Number of lines | 12 | 10 | 8 | 8 | 6 | 6 | 4 | 4 | 4 | 4 | 3 | Number of lines |
| Telescoping condition(%) | | | | | | | | | | | | |
| Modes | I,II | I | I | II | I | II | I | II | I | II | I,II | Modes |
| 2nd boom | 0 | 50 | 100 | 0 | 100 | 0 | 100 | 0 | 100 | 50 | 100 | 2nd boom |
| 3rd boom | 0 | 0 | 0 | 33 | 33 | 66 | 66 | 100 | 83.3 | 100 | 100 | 3rd boom |
| 4th boom | 0 | 0 | 0 | 33 | 33 | 66 | 66 | 100 | 83.3 | 100 | 100 | 4th boom |
| Top boom | 0 | 0 | 0 | 33 | 33 | 66 | 66 | 100 | 83.3 | 100 | 100 | Top boom |

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 includes weights of lifting hooks (610kg or 555kg of main hook and 90kg of auxiliary hook)and hangers.
5. Rated lifting capacity with pulley at boom tip shall not exceed 4000kg and then subtracts(230kg)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.

Unit:Kg

Prerequisites:

- ① Boom operating conditions(fully extended boom length +jib length),max.length is 43m+16m
- ② The span of outriggers is 6m×7.2m
- ③ 360°rotation is applied
- ④ Counterweight is 3.5T

| Main boom angle | Main boom+Jib | | |
|---------------------|---------------|------|------|
| | 0° | 15° | 30° |
| 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° | | |

Unit:Kg



















Prerequisites:

- ① Boom operating conditions(fully extended boom length +jib length),max.length is 43m+9.2m
- ② The span of outriggers is 6m×7.2m
- ③ 360°rotation is applied
- ④ Counterweight is 3.5T

| Main boom angle | Main boom+Jib | | |
|---------------------|---------------|------|------|
| | 0° | 15° | 30° |
| 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° | | |

STC550 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, 11.3-43m |  STC600S Maximum Load Capacity: 60t Telescopic Boom: 5 Sections, 11.3-43.5m |  STC750 Maximum Load Capacity: 75t Telescopic Boom: 5 Sections, 11.8-49m |
|  STC800S Maximum Load Capacity: 80t Telescopic Boom: 5 Sections, 12.2-47m |  STC1000 Maximum Load Capacity: 100t Telescopic Boom: 5 Sections, 13.5-50m |  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: 5 Sections, 13.3-69m |  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, 15.5-62m |  SAC2200 Maximum Load Capacity: 220t Telescopic Boom: 6 Sections, 15.5-62m |  SAC2600 Maximum Load Capacity: 260t Telescopic Boom: 6 Sections, 15.66-73m |  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 |  SRC660 Maximum Load Capacity: 66t 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, 13-48m | | | | |



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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