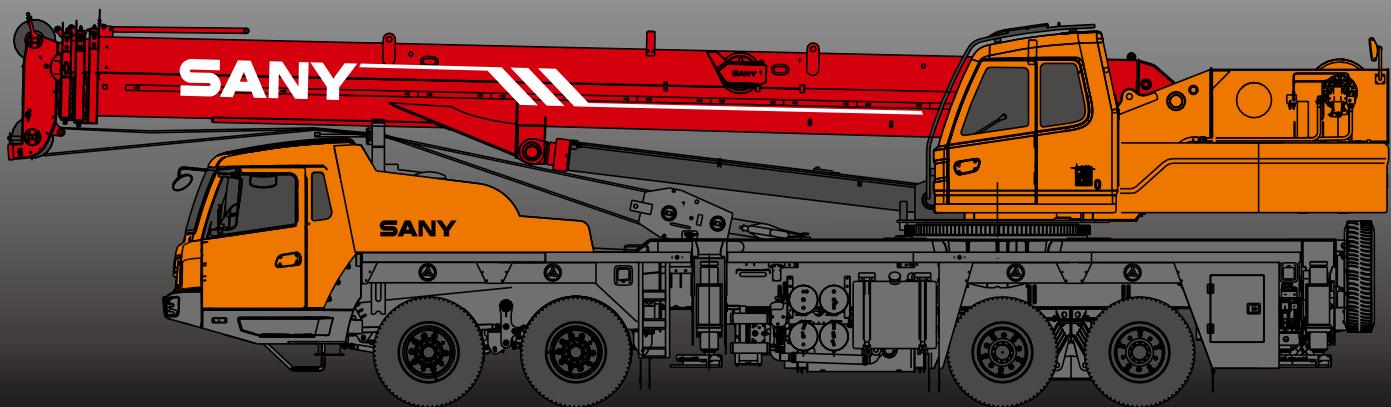


STC450C

STC450C TRUCK CRANE
45 TONS LIFTING CAPACITY

Quality Changes the World



SANY

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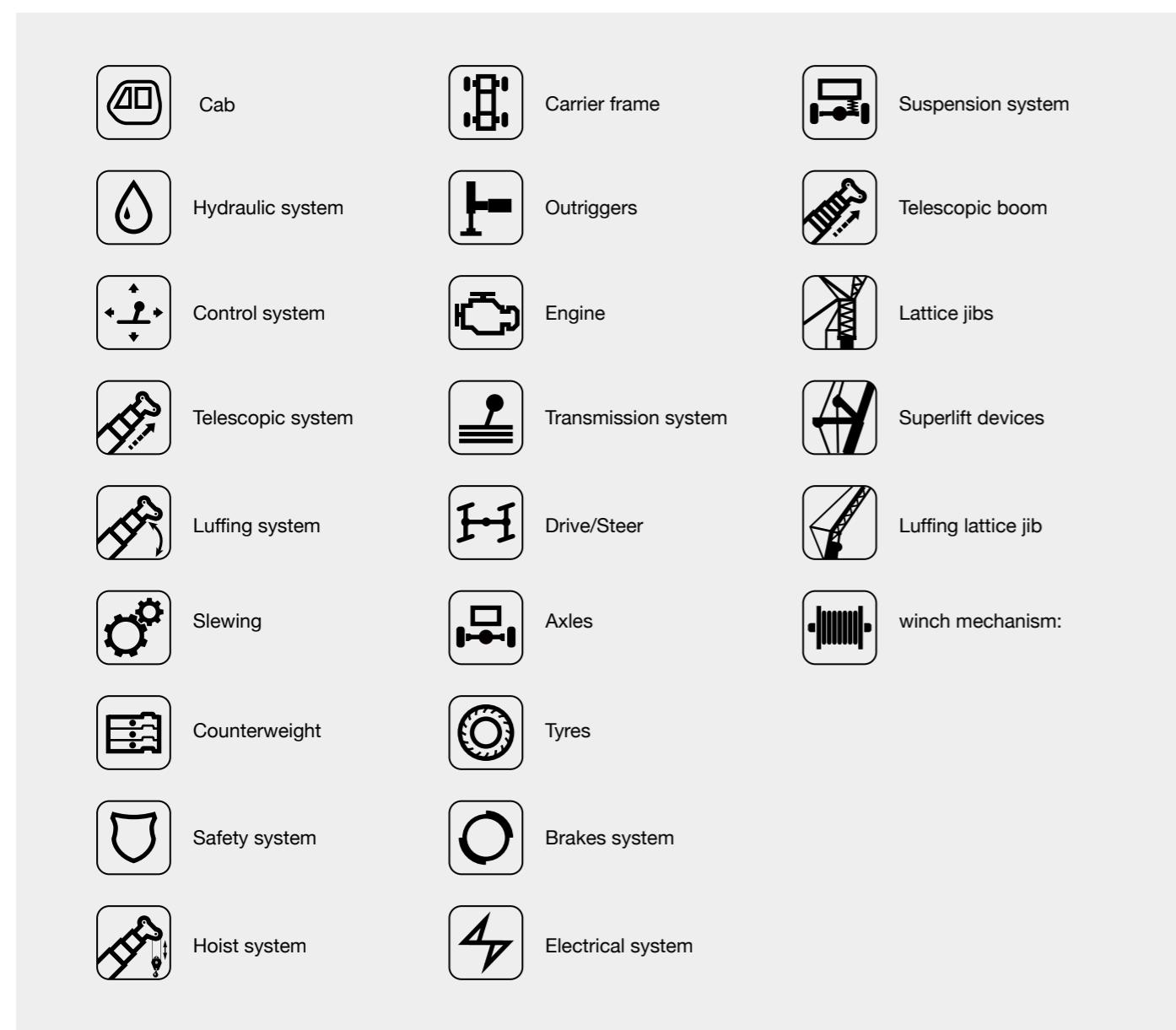
SANY Automobile Hoisting Machinery is one of the core business unit of Sany Heavy Industry, mainly engaged in the research and development of high end, mid to large tonnage crane series, including mobile crane, crawler crane, tower crane and loader crane. It has two industrial parks in Ningxiang and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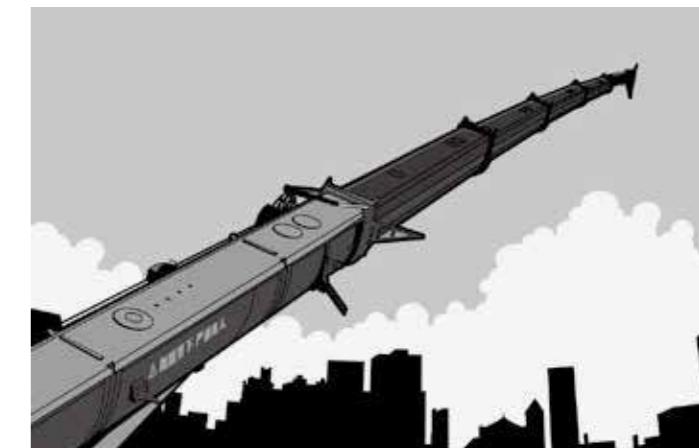
Excellent and stable chassis performance / chassis system

The original 45 tonnage crane of 2.5 width with compact structure, improving trafficability significantly. 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

Four-section boom of high strength steel structure and optimized U-shaped cross section reduces weight significantly with higher safety rates.



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 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 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 115m/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, hydraulic action, chassis (for major safety failure), engine and gearbox 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**

- Four-section boom is applied with basic boom length of 11.25m, full-extended boom length of 34.5m and lifting height of fully extended boom length of 35 m. 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**

- 360° rotation can be achieved with Max. slewing speed of 2.0r/min. Hydraulic controlled proportional speed adjustment is applied to provide stable and reliable operation of the system. Unique rotary buffer design ensures more stable braking.

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 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

- 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

- The 1st and 2nd front axles adopt plate spring suspension systems and the 3rd and 4th rear axles adopt rubber suspension system. With 100,000 fatigue tests and optimization of performance parameters of the front and rear suspension, the strength and comfort are ensured.

Steering system

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

Outriggers

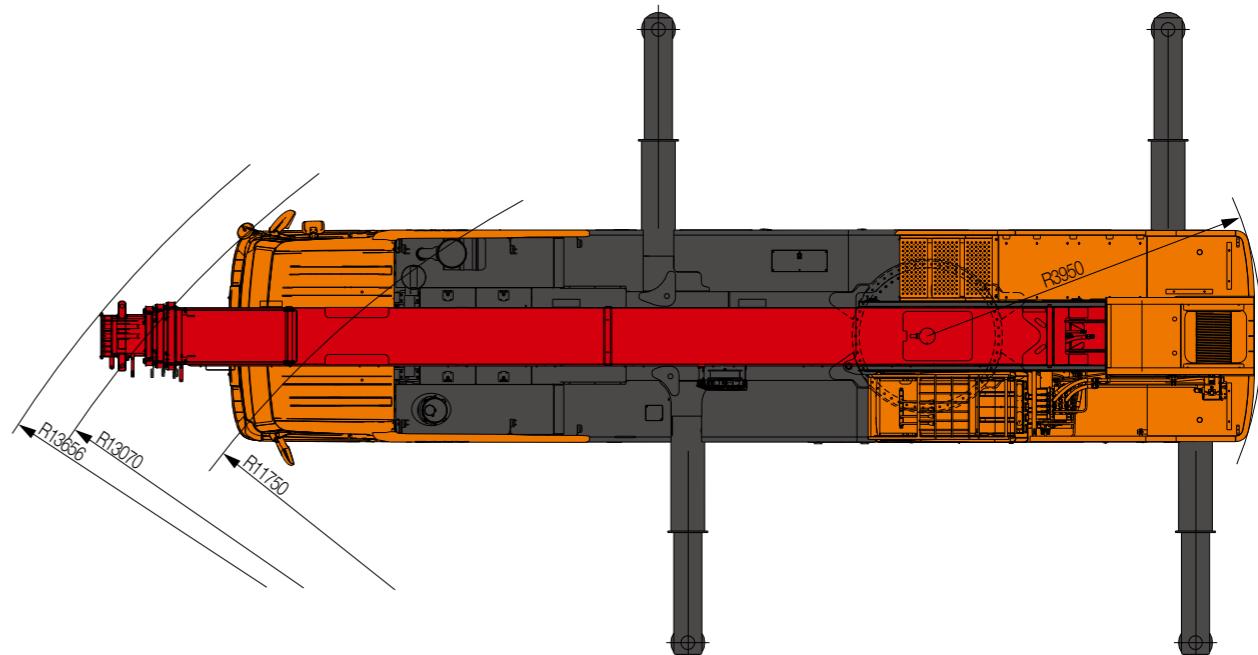
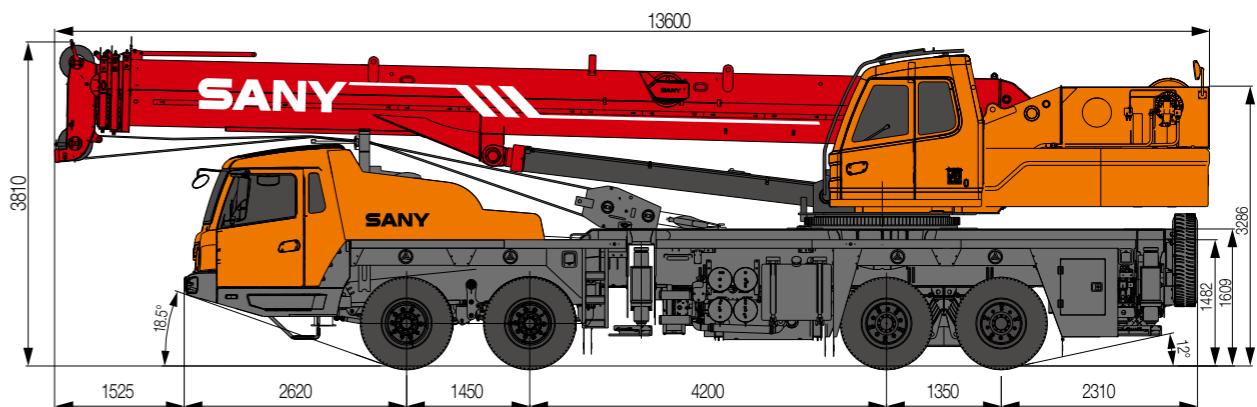
- Four-point supporting of the H-shaped outriggers ensures easy operation and strong stability with max. span up to 6m×7.2m. They are made of fine-grain high-strength steel sheet with horizontal single-cylinder rope line telescoping for first and second outriggers. Vertical cylinder of outrigger adopts bi- directional hydraulic locks to improve safety.

Tyres

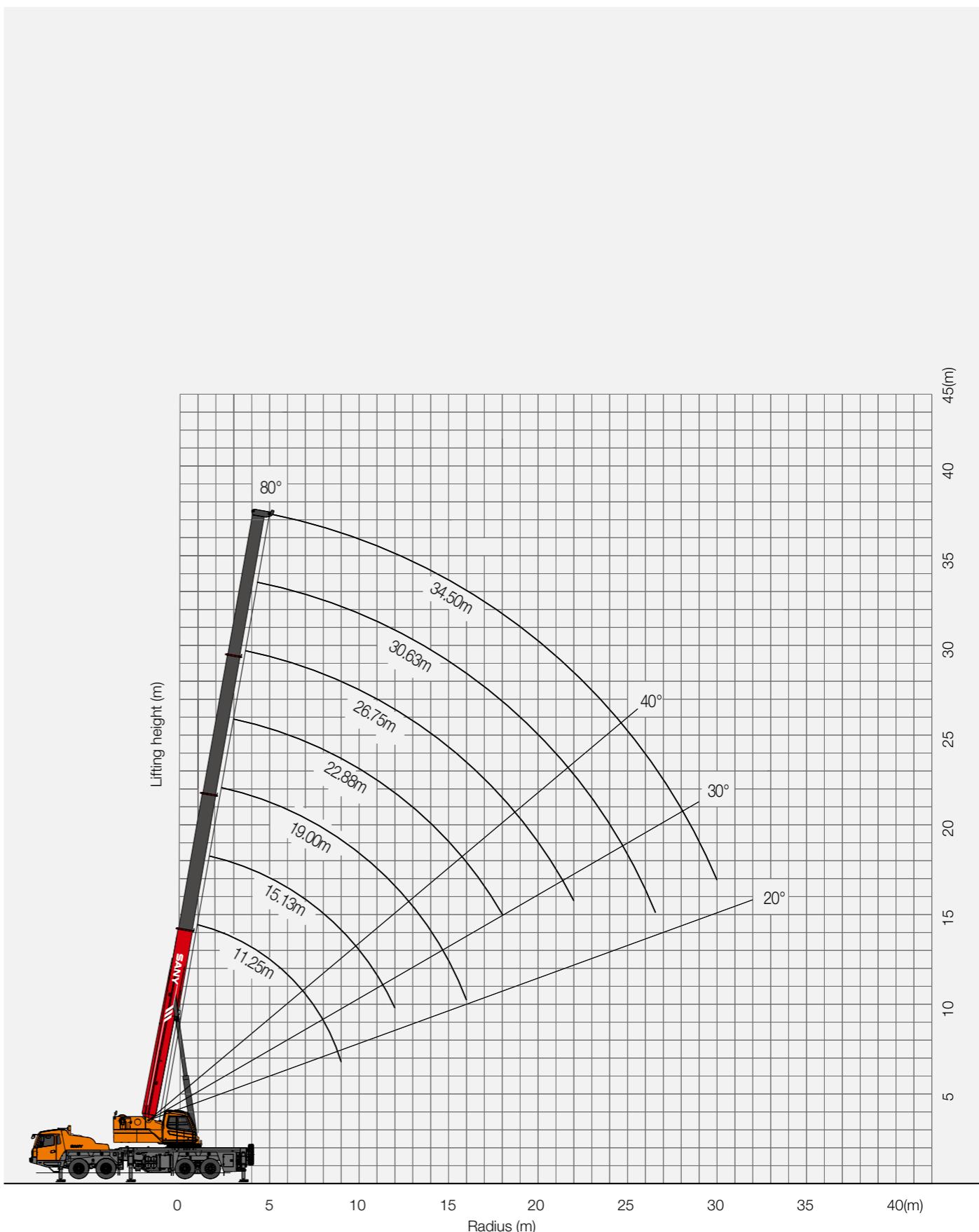
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Electrical system

- 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 | 45 t |
| Dimensions | Overall length | 13600 mm |
| | Overall width | 2500 mm |
| | Overall height | 3810 mm |
| | Axle distance | Axle-1,2 Axe-2,3 Axe-3,4 |
| | | 1450 mm 4200 mm 1350 mm |
| Weight | Overall weight | 37000 kg |
| | Axle load | Axle load-1,2 Axle load-3,4 |
| | | 13000 kg 24000 kg |
| | Rated power | 213 kW/ 2100 rpm |
| Traveling | Rated torque | 1050 N.m/ 1200rpm |
| | Max.traveling speed | 70 km/h |
| | Turning radius | Min.turning radius Min.turning radius of boom head |
| | | 11.75 m 16.75 m |
| | Wheel formula | 8 x 4 |
| | Min.ground clearance | 220 mm |
| | approach angle | 18.5 ° |
| | Departure angle | 12 ° |
| | Max.gradeability | 38% |
| Main Performance Data | Fuel consumption per 100km | - |
| | Temperature range | - 20 ° ~ + 40 ° |
| | Min.rated range | 3 m |
| | Tail slewing radius of swingtable | 3.95 m |
| | Boom section | 4 |
| | boom shape | U-shaped |
| | Max.lifting moment | Base boom Full-extend boom |
| | | 1660 kN·m 850 kN·m |
| | Boom length | Base boom Full-extend boom |
| | | 11.25 m 34.5 m |
| Working speed | Outrigger span (Longitudinal×Transversal) | 6 x 7.2 m |
| | Max.single rope lifting speed of main winch (no load) | 115 m/min |
| | Full extension/retraction time of boom | 115 / 115 s |
| | Full lifting/descending time of boom | 70 / 75 s |
| Aircondition | Slewing speed | 0~2.0 r/min |
| | Aircondition | Aircondition in low cab Heating/Cooling |

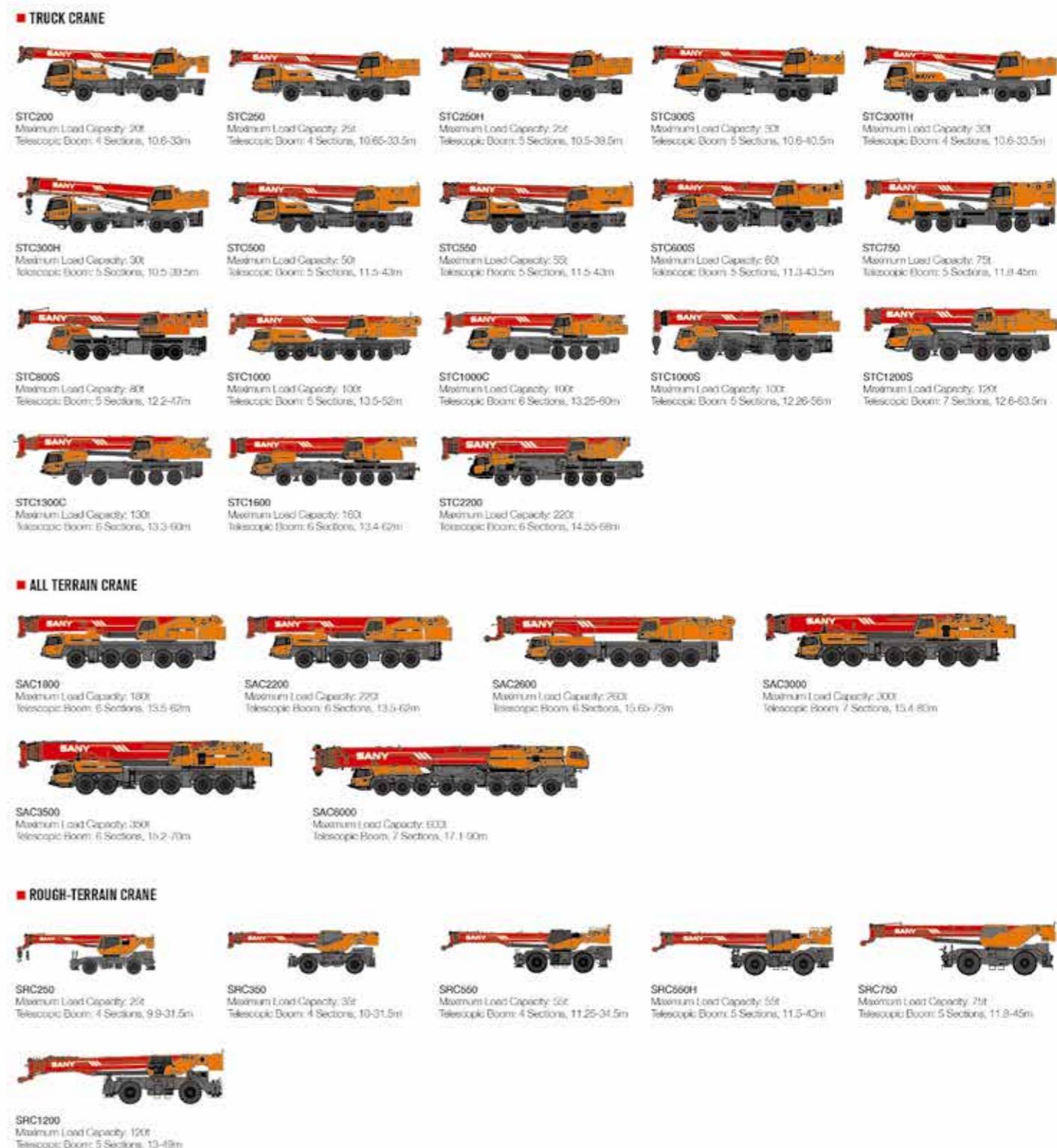
STC450C Working Ranges


**STC450C TRUCK CRANE
LOAD CHART**

| Working Radius(m) | Fully-extended outriggers, over side and rear | | | | | | | | | | | | Working Radius(m) |
|---------------------------------|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-----------------|-------------------|
| | 11.25m | 15.13m | 15.13m | 19.00m | 19.00m | 22.88m | 22.88m | 26.75m | 26.75m | 30.63m | 34.50m | | |
| 3.0 | 45000 | 35000 | 17000 | 28600 | 15500 | | | | | | | | 3.0 |
| 3.5 | 43000 | 35000 | 16500 | 28600 | 15500 | | | | | | | | 3.5 |
| 4.0 | 39000 | 32000 | 15000 | 27500 | 15000 | 17000 | 12350 | | | | | | 4.0 |
| 4.5 | 36700 | 29000 | 14000 | 26000 | 13700 | 17000 | 12350 | 16300 | 10500 | | | | 4.5 |
| 5.0 | 34000 | 26500 | 12800 | 24000 | 13000 | 17000 | 12350 | 16300 | 10500 | | | | 5.0 |
| 5.5 | 30000 | 24000 | 11500 | 22500 | 12500 | 17000 | 11500 | 16000 | 10500 | 12350 | | | 5.5 |
| 6.0 | 27800 | 22500 | 11000 | 21300 | 11700 | 17000 | 11000 | 15300 | 9500 | 12350 | 10500 | | 6.0 |
| 6.5 | 24500 | 21000 | 10200 | 18500 | 11000 | 16500 | 10500 | 14600 | 9000 | 12350 | 10500 | | 6.5 |
| 7.0 | 21500 | 19000 | 8500 | 16500 | 10500 | 15500 | 10000 | 13600 | 8500 | 12350 | 10500 | | 7.0 |
| 7.5 | 19000 | 17500 | 7700 | 15500 | 9000 | 14500 | 9700 | 13000 | 8200 | 12000 | 10000 | | 7.5 |
| 8.0 | 17500 | 16500 | 7000 | 14200 | 8000 | 13000 | 9300 | 12500 | 7800 | 11500 | 9500 | | 8.0 |
| 9.0 | 15500 | 15000 | 6500 | 12000 | 7300 | 11500 | 8000 | 11000 | 7200 | 11000 | 9000 | | 9.0 |
| 10.0 | | 12000 | 5800 | 10500 | 6800 | 10200 | 7700 | 10400 | 6700 | 10200 | 8500 | | 10.0 |
| 11.0 | | 9900 | 5000 | 9500 | 6400 | 9000 | 7300 | 9500 | 6300 | 9300 | 7900 | | 11.0 |
| 12.0 | | 8200 | 4000 | 8000 | 5800 | 8000 | 6800 | 8300 | 5800 | 7500 | 7200 | | 12.0 |
| 14.0 | | | | 5500 | 5000 | 6000 | 5800 | 6400 | 5300 | 6500 | 6000 | | 14.0 |
| 16.0 | | | | 3700 | 3700 | 4500 | 4500 | 4600 | 4600 | 4900 | 5000 | | 16.0 |
| 18.0 | | | | | | 3400 | 3400 | 3700 | 3700 | 3800 | 4200 | | 18.0 |
| 20.0 | | | | | | 2200 | 2200 | 3000 | 3000 | 3200 | 3200 | | 20.0 |
| 22.0 | | | | | | | | 2200 | 2200 | 2700 | 2500 | | 22.0 |
| 24.0 | | | | | | | | | 2200 | 2200 | | | 24.0 |
| 26.0 | | | | | | | | | 1500 | 1800 | | | 26.0 |
| 28.0 | | | | | | | | | | | 1400 | | 28.0 |
| 30.0 | | | | | | | | | | | 1000 | | 30.0 |
| Number of lines | 10 | 8 | 4 | 7 | 4 | 4 | 3 | 4 | 3 | 3 | 3 | Number of lines | |
| Telescoping Condition(%) | | | | | | | | | | | | | |

- Radius shown in the table are the actual radius when working.
- Rated lifting capacities in the stability area comply with ISO 4305.
- The total rated lifting load in the table includes the weight of hook block (main hook is 550kg) and slings.
- When the 5th outrigger is in use, it is suitable for 360 operation.
- When actual boom length and working radius are between two values, determine lifting capacity according to the bigger boom and radius.

Unit:Kg



Notes



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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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