

STC800

STC800 TRUCK CRANE 80 TONS LIFTING CAPACITY

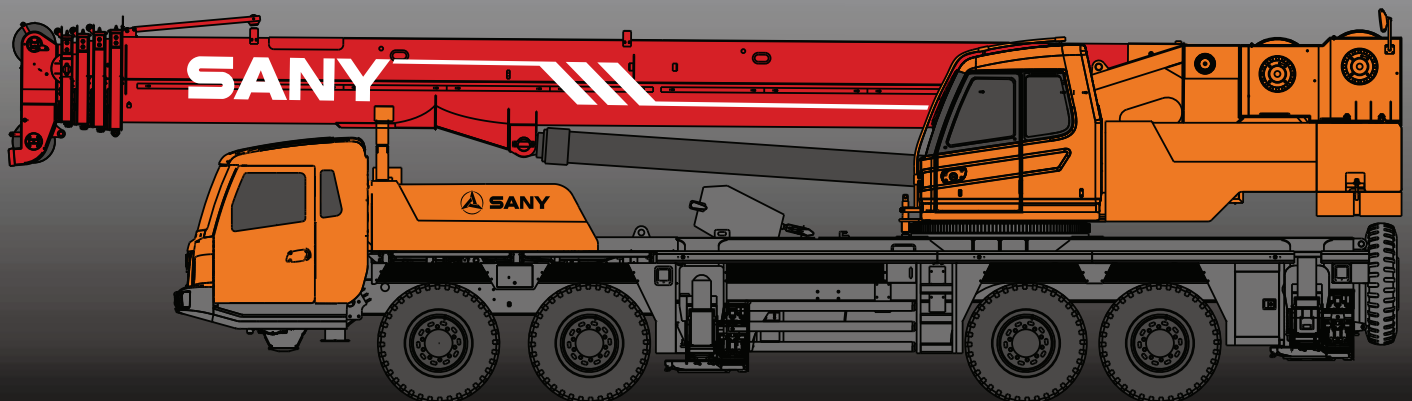
MAX. CAPACITY (Outriggers) - 80 Tonnes at
3m Radius (75% Rating) 360° Slew

BOOM - 5 SECTION U shaped 11.8m - 45.0m

MAX. ROAD SPEED - 50 km/h

CARRIER - 8x4 Drive

COUNTERWEIGHT - 6.5T



SANY

Quality Changes the World

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 |
| 15 | 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

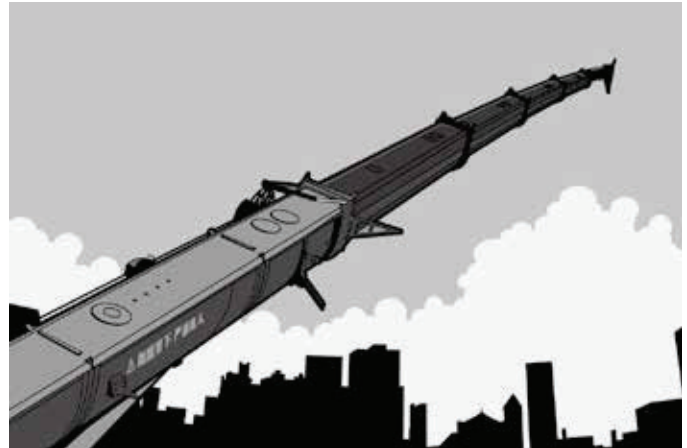


Electrical system



Excellent and stable chassis performance / chassis system

Double-axle drive is used, providing good 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.



Ultra long, super strong and highly sensitive load lifting capacity

Five-section boom of high strength steel structure and optimized U-shaped 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

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.



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 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.
- 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: 975L.



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.
- Automatic outrigger system: Electrically controlled outrigger with automatic leveling and fault diagnosis warning function is adopted, which is flexible and fast to operate.
- With fully security protection system, main and auxiliary winches are equipped with over-rollback 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: $-2^{\circ} \sim 80^{\circ}$.



Telescopic system

- Five-section boom is applied with basic boom length of 11.8m, full-extended boom length of 45m, jib length of 16m and fully extended boom lifting height of 45m respectively. Max. lifting height is 61m 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 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.

Superstructure



Hoisting system

- With high efficiency of winch, larger gear ratio and stable operation.
- Closed winch brake and winch balance valve effectively prevent imbalance of the hook.
- With load sensitive function, the main valve winch is highly effective and energy-saving.
- Two main hooks: 800kg and 320kg, the Max. lifting weight are 80t and 30t, one auxiliary hook: 140kg, Max lifting weight is 5t. Wire rope of main winch: left-handed wire rope: 20-35W×7-1960-U-SZGB8918 L245m. Wire rope of auxiliary winch: left-handed wire rope: 20-35W×7-1960-U-SZGB8918 L145m.



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 4500kg, fl exible counterweight is 6500kg.

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, with axle and wheel differentials and wheel differential. 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: 264kw/2100r/min
- Environment-protection: Emission complies with EuroIII standard
- Capacity of fuel tank: 380L

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**

- 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 system is applied for axle 1, with unloading valve installed in the steering gear.

**Drive/Steer**

- 8 x 4

**Outriggers**

- Four-point supporting of the H-shaped outriggers ensures easy operation and strong stability with Max. span up to 6.1m×7.6m. They are made of fine-grain high-strength steel sheet with full hydraulic transverse telescopic outriggers adopted for first and second outriggers and with automatic horizontal adjustment applied for outriggers through a vertical cylinder.

**Tyres**

- 12*12.00R24-20PR

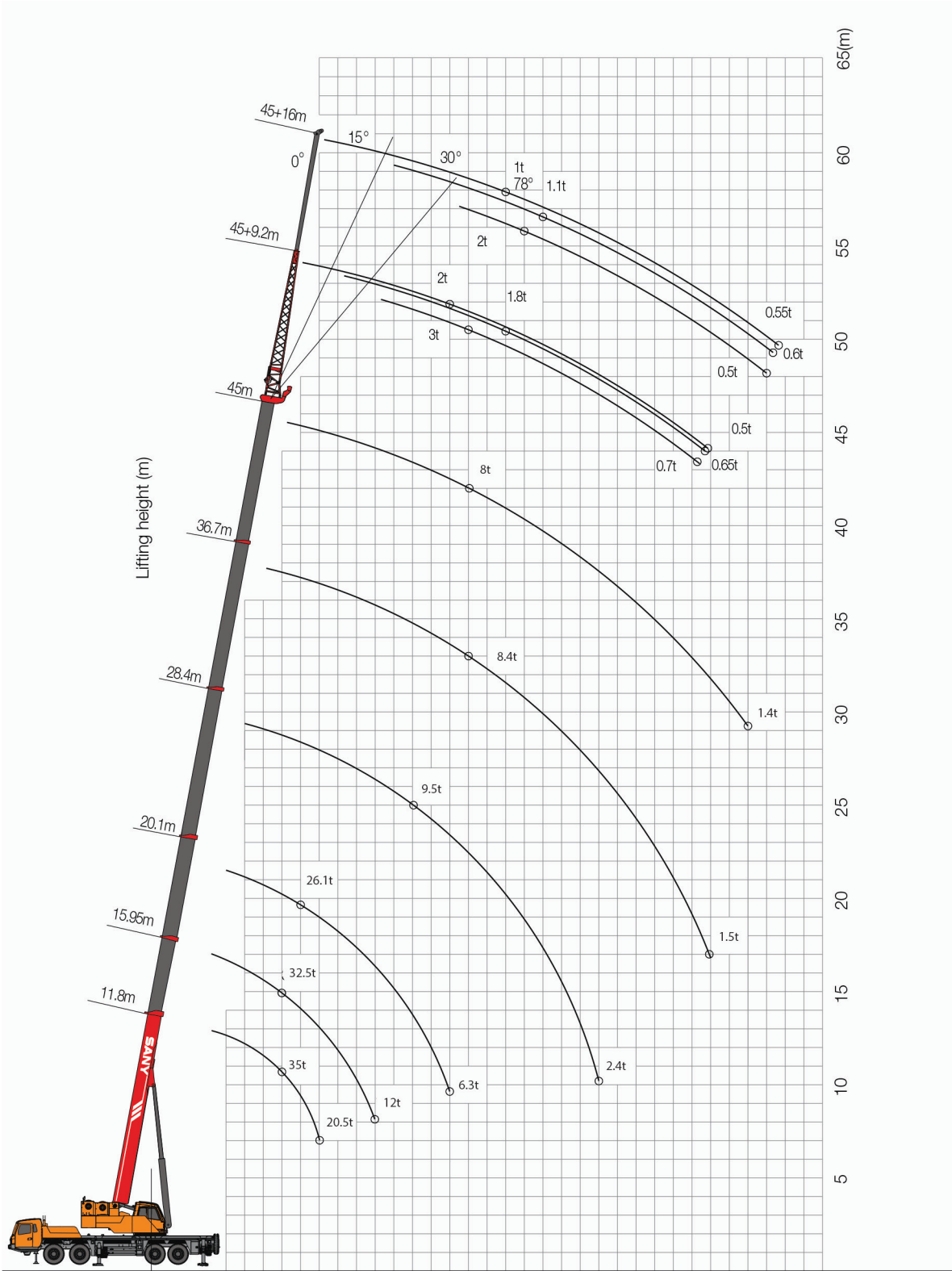
**Electrical system**

- 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.

STC800 TRUCK CRANE
PRODUCT SPECIFICATIONS

| Type | Item | Parameter | |
|---|--|---------------------------------|-------------|
| Capacity | Max. lifting capacity | 80t | |
| Dimensions | Overall length | 14100 mm | |
| | Overall width | 2750 mm | |
| | Overall height | 3850 mm | |
| | Axle distance | Axle-1,2 | 1520 mm |
| Axle-2,3 | | 4400 mm | |
| Axle-3,4 | | 1350 mm | |
| Weight | Overall weight | 46000 kg | |
| | Axle load | Axle load-1,2 | 20000 kg |
| | | Axle load-3,4 | 26000 kg |
| | Rated power | 264 kW/2100 rpm | |
| Rated torque | 1500 N.m/1500 rpm | | |
| Traveling | Max.traveling speed | 50 km/h | |
| | Turning radius | Min.turning radius | 12 m |
| | | Min.turning radius of boom head | 15.6 m |
| | Wheel formula | 8 × 4 | |
| | Min.ground clearance | 230 mm | |
| | Approach angle | 20 ° | |
| | Departure angle | 12 ° | |
| | Max.gradeability | 37% | |
| Fuel consumption per 100km | ≤ 55 L | | |
| Main Performance Data | Temperature range | - 30 °C ~ +60 °C | |
| | Min.rated range | 3 m | |
| | Tail slewing radius of swingtable | 4.116 m | |
| | Boom section | 5 | |
| | Boom shape | U-shaped | |
| | Max.lifting moment | Base boom | 2560.2 kN·m |
| | | Full-extend boom | 1254.4 kN·m |
| | | Full-extend boom+jib | 414.9 kN·m |
| | Boom length | Base boom | 11.8 m |
| | | Full-extend boom | 45.0 m |
| Full-extend boom+jib | | 61 m | |
| Outrigger span (Longitudinal×Transversal) | 6.1 × 7.6 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 | 120 / 130 s | |
| | Full lifting/descending time of boom | 80 / 80 s | |
| | Slewing speed | 2.0 r/min | |
| Aircondition | Aircondition in up cab | Cooling and Heating | |
| | Aircondition in low cab | Cooling and Heating | |

STC800 Working Ranges



Unit:kg

Prerequisites:

- ① Boom operating conditions(fully extended boom length),min.length is 11.8m and max.length is 45m
- ② The span of outriggers is 6.1m×7.6m
- ③ 360°rotation is applied
- ④ Counterweight is 6.5T

| Working range(m) | Main boom | | | | | | | | | Working range(m) |
|---------------------------------|-----------|--------|-------|-------|-------|-------|-------|------|------|------------------|
| | 11.8m | 15.95m | 20.1m | | 28.4m | | 36.7m | | 45m | |
| 3 | 80000 | 54000 | 43000 | 30000 | | | | | | 3 |
| 3.5 | 71000 | 54000 | 43000 | 29000 | | | | | | 3.5 |
| 4 | 63000 | 51000 | 43000 | 27000 | 30000 | 16000 | | | | 4 |
| 4.5 | 56000 | 48000 | 40900 | 25000 | 30000 | 16000 | | | | 4.5 |
| 5 | 51000 | 45000 | 38000 | 23000 | 30000 | 16000 | | | | 5 |
| 5.5 | 47500 | 42000 | 35400 | 21000 | 29000 | 15500 | | | | 5.5 |
| 6 | 43000 | 39000 | 33100 | 20000 | 27500 | 15000 | | | | 6 |
| 6.5 | 39000 | 36000 | 31100 | 18200 | 26000 | 15000 | 16000 | 9500 | | 6.5 |
| 7 | 35000 | 32500 | 28500 | 16200 | 25000 | 14000 | 16000 | 9500 | | 7 |
| 8 | 26500 | 26200 | 26100 | 13000 | 22000 | 13000 | 15000 | 9000 | 9500 | 8 |
| 9 | 20500 | 21500 | 21000 | 10000 | 20000 | 12500 | 15000 | 9000 | 9500 | 9 |
| 10 | | 17500 | 17500 | 9000 | 17000 | 11500 | 14000 | 9000 | 9000 | 10 |
| 11 | | 14300 | 14500 | 8000 | 14500 | 9600 | 13000 | 8600 | 9000 | 11 |
| 12 | | 12000 | 12300 | 7600 | 12500 | 8500 | 12500 | 8250 | 9000 | 12 |
| 13 | | | 10100 | 7200 | 11500 | 7500 | 12000 | 8000 | 9000 | 13 |
| 14 | | | 9000 | 6800 | 9500 | 7000 | 10500 | 7000 | 8500 | 14 |
| 15 | | | 7400 | 6500 | 8700 | 6500 | 9400 | 6500 | 8250 | 15 |
| 16 | | | 6300 | 6000 | 7200 | 6000 | 8400 | 5500 | 8000 | 16 |
| 18 | | | | | 5200 | 5500 | 6500 | 5200 | 6800 | 18 |
| 20 | | | | | 4100 | 5000 | 5200 | 5000 | 5500 | 20 |
| 22 | | | | | 3100 | 4200 | 4100 | 4500 | 4500 | 22 |
| 24 | | | | | 2400 | 3800 | 3200 | 4000 | 3500 | 24 |
| 26 | | | | | | | 2500 | 3500 | 2800 | 26 |
| 28 | | | | | | | 2000 | 3000 | 2200 | 28 |
| 30 | | | | | | | 1500 | 2500 | 1700 | 30 |
| 32 | | | | | | | | | 1400 | 32 |
| Number of lines | 12 | 9 | 9 | | 6 | | 5 | | 3 | Number of lines |
| Telescoping condition(%) | | | | | | | | | | |
| I | 0% | 50% | 100% | 0% | 100% | 0% | 100% | 0% | 100% | I |
| II | 0% | 0% | 0% | 33% | 33% | 66% | 66% | 100% | 100% | II |



STC800 TRUCK CRANE
LOAD CHART

Unit:Kg

Prerequisites:

- ① **Boom operating conditions(fully extended boom length +jib length),max.length is 45m+9.2m**
- ② **The span of outriggers is 6.1m×7.6m**
- ③ **360°rotation is applied**
- ④ **Counterweight is 6.5T**

| Working angle | Main boom+Jib | | |
|---------------------|---------------|------|------|
| | 0° | 15° | 30° |
| 80° | 3500 | 2400 | 2000 |
| 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° | |

Unit:Kg

Prerequisites:

- ① **Boom operating conditions(fully extended boom length +jib length),max.length is 45m+16m**
- ② **The span of outriggers is 6.1m×7.6m**
- ③ **360°rotation is applied**
- ④ **Counterweight is 6.5T**

| Working angle | Main boom+Jib | | |
|---------------------|---------------|------|------|
| | 0° | 15° | 30° |
| 80° | 2800 | 1500 | 1100 |
| 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° | |

1. All rated loads are tested to conform requirements of EN 13000 & ISO 4305, and shall not exceed 75% of the tipping load on outriggers and tyres under stability test code.

TRUCK CRANE



SPC250
Maximum Load Capacity: 25t
Telescopic Boom: 4 Sections, 10.22-31.5m



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



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



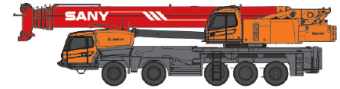
STC600
Maximum Load Capacity: 60t
Telescopic Boom: 5 Sections, 11.5-43m



STC750
Maximum Load Capacity: 75t
Telescopic Boom: 5 Sections, 11.8-45m



STC800
Maximum Load Capacity: 80t
Telescopic Boom: 5 Sections, 11.8-45m



STC1000C
Maximum Load Capacity: 100t
Telescopic Boom: 6 Sections, 13.25-60m



STC1300C
Maximum Load Capacity: 130t
Telescopic Boom: 6 Sections, 13.3-60m

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, 17.1-90m



SAC12000
Maximum Load Capacity: 120t
Telescopic Boom: 8 Sections, 18.6-102m

ROUGH-TERRAIN CRANE



SRC400
Maximum Load Capacity: 40t
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, 11.5-42.5m



SRC750
Maximum Load Capacity: 75t
Telescopic Boom: 5 Sections, 11.8-45m



Quality Changes the World

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