

STC800

STC800 TRUCK CRANE
80 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 CRAN

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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.



Super-strong, super-long and sensitive 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.





Safe, stable, advanced and intelligent electric control system


Self-developed controller SYMG 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 3 m/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: 98 L.


-  **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 reliable to operate.
 - With fully security protection system, main and auxiliary winches are equipped with over-rolling 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 IO monitoring system can monitoring the input and output situation of the superstructure electricity system and can detect hydraulic system, chassis (for major safety failure), engine and gearbox for fault to ensure reliable operation of the crane.


-  **Luffing system**
- Head-weight luffing provides more stable luffing operation at low energy loss.
 - Luffing angle: $-2^{\circ} \sim 8^{\circ}$.

-  **Telescopic system**
- Five-section boom is applied with basic boom length of 38m, full-extended boom length of 45m, jib length of 6m and fully extended boom lifting height of 46.4m respectively. Max. lifting height is 62.2m 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 0.8r/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**
- 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: 7.8 t, one auxiliary hook: 3540 kg. Wire rope of main winch: wire rope 2 -35W 7- 96 US 245m. Wire rope of auxiliary winch: wire rope 2 -35W 7- 96 US 45m.


-  **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 $\pm 5\%$ 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-rolling 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 to detect whether the high altitude wind speed is within the allowable working range.
 - 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 4000 kg, no detachable 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.

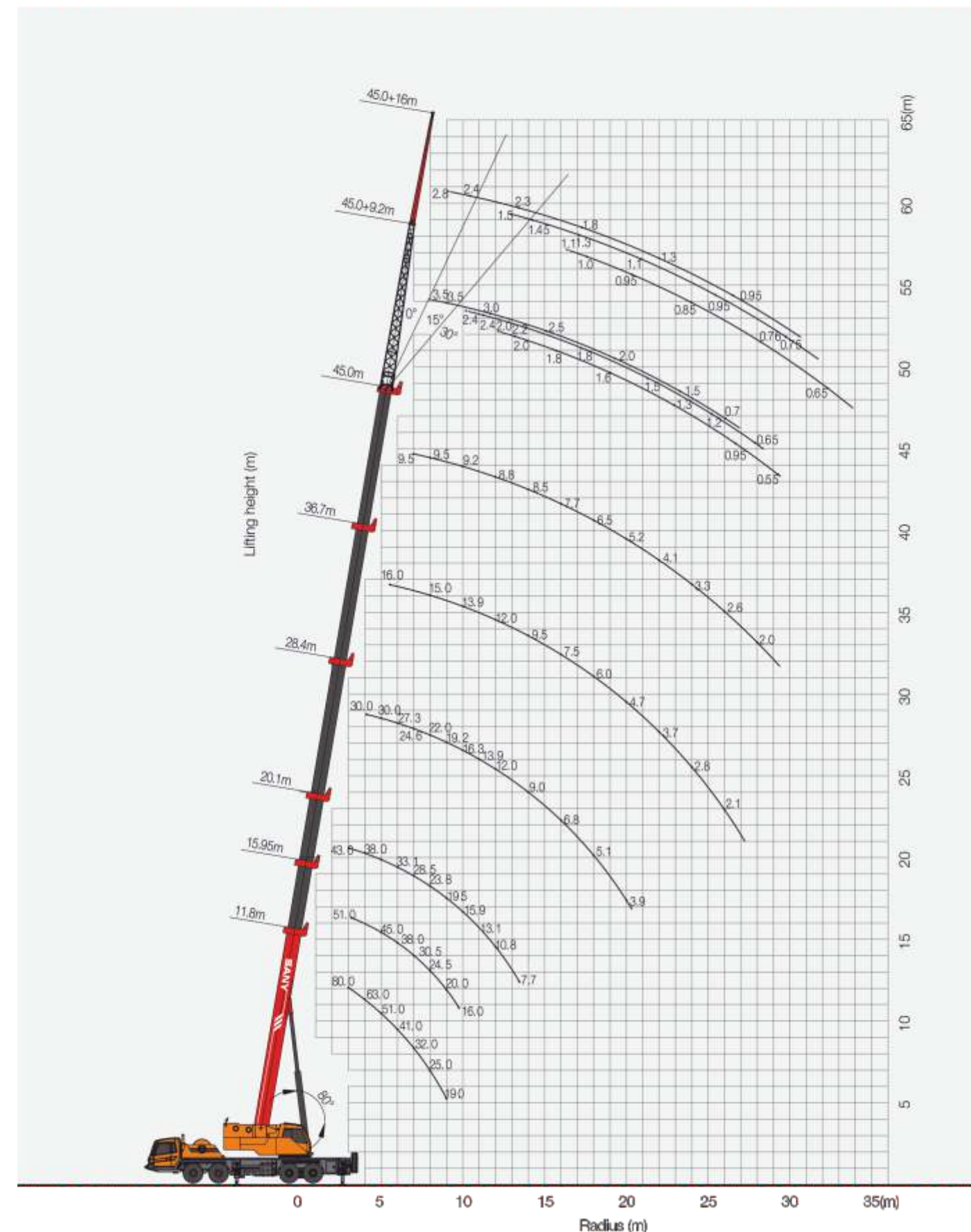
-  **Carrier frame**
- Designed and manufactured by SANY, anti-torsion box structure is welded by fine-grain high-strength steel plate to provide strong load bearing capacity.

-  **Axles**
- Axles 3 and 4 are drive axles and axles 1 and 2 are steering axles, axle and wheel differentials are installed in axle 3 and wheel differential is installed in axle 4. 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: 275kw/2300 r/min
 - Environment-protection: Emission complies with Euro III standard
 - Capacity of fuel tank: 350 L

Type	Item	Parameter	
Capacity	Max. lifting capacity	80 t	
Dimensions	Overall length	141000 mm	
	Overall width	2750 mm	
	Overall height	3850 mm	
	Axle distance	Axle-1*2: 1520 mm Axle-2*3: 4400 mm Axle-3*4: 1355 mm	
Weight	Overall weight	45800 kg	
	Axle load	Axle load-1*2: 17500 kg Axle load-3*4: 28300 kg	
	Rated power	275 kW/ 2100 rpm	
	Rated torque	1500 N·m/1300-1500 rpm	
Traveling	Max.traveling speed	80 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	290 mm	
	Approach angle	19 °	
	Departure angle	12 °	
	Max.gradeability	35%	
	Fuel consumption per 100km	∅ 9: P	
	Main Performance Data	Temperature range	' 64 w É /84 w
Min.rated range		3 m	
Tail slewing radius of swingtable		4.1 m	
Boom section		5	
Boom shape		U-shaped	
Max.lifting moment		Base boom	2550 kN·m
		Full-extend boom	1232 kN·m
		Jypp1ijxirh fssq/nmf	7:7 oREq
Boom length		Base boom	11.8 m
		Full-extend boom	45 m
	Jypp1ijxirh fssq/nmf	:5 q	
Syxvmkkiv wter ,Psrkmxyhmrep-Xverwzivwep-		:25 - :2: q	
Nmf s□wix		0 °*15 °,30 °	
Working speed	Qe 2wmrkpi vsti pmjxmrk wtiih sj qemr {mrgl ,rs pseh-	130 m/min	
	Qe 2wmrkpi vsti pmjxmrk wtiih sj ey mpmev) {mrgl ,rs pseh-	130 m/min	
	Full extension/retraction time of boom	120/100 s	
	Full lifting/descending time of boom	:4 3 <4 w	
	Slewing speed	1.8 r/min	
Aircondition	Aircondition in up cab	Cooling	
	Aircondition in low cab	Cooling/Heating	

STC800 Working Ranges



Unit:Kg

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

Working range(m)	Main boom						Working range(m)
	11.8	15.95	20.1	28.4	36.7	45	
3	80000	51000	ξ	ξ	ξ	ξ	3
3.5	71000	51000	43000	ξ	ξ	ξ	3.5
4	7444	51000	43000	ξ	ξ	ξ	4
4.5	9:444	48000	40500	30000	ξ	ξ	4.5
5	51000	45000	38000	30000	ξ	ξ	5
5.5	8:444	42000	35400	28500	ξ	ξ	5.5
:	41000	38000	33100	27300	ξ	ξ	:
:29	7:444	34000	31000	6:444	5:444	ξ	:29
7	32000	30500	28500	68:44	5:444	ξ	7
8	25000	24500	23800	22000	15000	9500	8
9	19000	20000	19500	19200	14500	9500	9
10	ξ	5:444	15900	5:744	13900	9200	10
11	ξ	13000	13100	13900	13000	9000	11
12	ξ	10500	10800	12000	12000	8800	12
14	ξ	ξ	7700	9000	9500	8500	14
5:	ξ	ξ	5500	:<44	7500	7700	5:
18	ξ	ξ	3800	5100	:444	:944	18
20	ξ	ξ	ξ	3900	4700	5200	20
22	ξ	ξ	ξ	2900	3700	4100	22
24	ξ	ξ	ξ	2100	2800	3300	24
6:	ξ	ξ	ξ	1500	2100	6:44	6:
28	ξ	ξ	ξ	ξ	5:44	2000	28
30	ξ	ξ	ξ	ξ	1200	5:44	30
32	ξ	ξ	ξ	ξ	800	1200	32
34	ξ	ξ	ξ	ξ	500	900	34
7:	ξ	ξ	ξ	ξ	ξ	:44	7:
Number of lines	12	9	9	:	5	3	Number of lines
Telescoping condition(%)							
Elevation angle of main boom	6:247•É:2<•	762.5•É:926=•	6=2.5•É:<285•	6:24•É:=2;•	7524•É:=2;8•	86268•É:=2;6•	Elevation angle of main boom
2nd boom	0%	50%	100%	100%	100%	100%	2nd boom
3rd boom	0%	0%	0%	33%	::)	100%	3rd boom
4th boom	0%	0%	0%	33%	::)	100%	4th boom
Top boom	0%	0%	0%	33%	::)	100%	Top boom

1. Zepylw pmwxih mr xli xelpi vijiv xs vexih pmjxmrk getegmx} qlewiyih ex %œx erh wsrpmh ksyrh yrhiv xli piziv wxexi sj xli gveriz
 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. Vexih pmjxmrk getegmx} pmwxih mr xli xelpi mrgpyihh {mktkw sj pmjxmrk lssow ;5<ok sj qemr lssow erh 798ok sj eyjpmpev} lssow-erh lerkivw2
 5. Vexih pmjxmrk getegmx} {mxd typpi} ex fssq xmt wlepp rsx ilgih 8444ok erh xliir wyfwwvegkw,6744ok-xs kemr vexih pmjxmrk getegmx} mj xli fssq mw ywih xs pmjx ejxiv xli mrvxepexmsr sj nmf2
- :2 M] egxyep fssq pirkd erh verki evi fix{tir x{s zepylw wtigm,ih mr xli xelpi0 pevkiv zepyl {mpp hixivqmr xli pmjxmrk getegmx}2

Unit:Kg

Prerequisites:
 ▮ Boom operating conditions(fully extended boom length +jib length),max.length is 45m+9.2m
 ▮ The span of outriggers is 6.1m×7.6m
 ▮ 360°rotation is applied
 ▮ Counterweight is 4T

Main boom 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
:<•	2200	1700	1400
::•	2000	1500	1300
:7•	1800	1400	1100
:5•	1500	1200	950
58°	1100	950	750
9•	700	:94	550
Qmr2ipizexmsr erkpi,-		55°	

Unit:Kg

Prerequisites:
 ▮ Boom operating conditions(fully extended boom length +jib length),max.length is 45m+16m
 ▮ The span of outriggers is 6.1m×7.6m
 ▮ 360°rotation is applied
 ▮ Counterweight is 4T

Main boom 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
:<•	1500	1000	800
::•	1300	950	:;4
:7•	1100	850	720
:5•	950	750	:94
58°	:94	:44	550
9•	500	ξ	ξ
Qmr2ipizexmsr erkpi,-		55°	