

# STC300C-RC

SANY Truck Crane  
30 Tons Lifting Capacity



Maximum rated lifting capacity: 30 t  
Maximum lifting torque: 1120 KN.m  
The length of full extend main boom+jib: 43 m  
Engine rated power: 213 Kw /2100 rpm

■ Right hand drive

## Excellent performance

- The crane is equipped with U shaped high-tensile structural steel boom with four sections. The full extension of the main boom is 34.5m, and adding the length of flying jib, the length is 42.5m. The maximum lifting height is 43m, and the maximum lifting moment is 1120kN-m, which ranks the first in the industry.
- The maximum driving speed is 80km/h, and the maximum gradeability is 40%. The hydraulic power steering adopted features simple structure and easy steering.
- It is adopted with the hydraulic system with load feedback proportional multi-way valve independently developed by Sany.
- It is adopted with the patented engineering machinery controller independently developed by Sany and built-in PHILIPS 32-bit CPU, with high control accuracy and high reliability. With comprehensive lifting moment protection, height limiter and alarm functions, it can provide reliable safety protection for the operation.
- The reversing radar frees the driver from the trouble to watch backward during parking and reversing, and eliminate the defects of dead angle and dim vision, improving the safety of the driver.
- The winch camera frees the operator from the trouble due to rope climbing and disordering, and eliminates the defects of dead angle of operation and dim vision, improving the safety of the operator.

## Good quality

- With newly developed controlled hydraulic system, the rotary start and braking process is more stable and the micro-movement is more excellent.
- It is adopted with international advanced distributed integrated bus data communication network, allowing processing of large amounts of data, fast speed and high stability.
- It can adapt to all kinds of bad road conditions, thus ensuring more excellent trafficability and more comfortable driving.
- With streamlined full-width cab, it provides wider vision and more comfortable operation.
- The extensive application of advanced manufacturing technologies ensures the excellent performance of the product.



## High safety and reliability

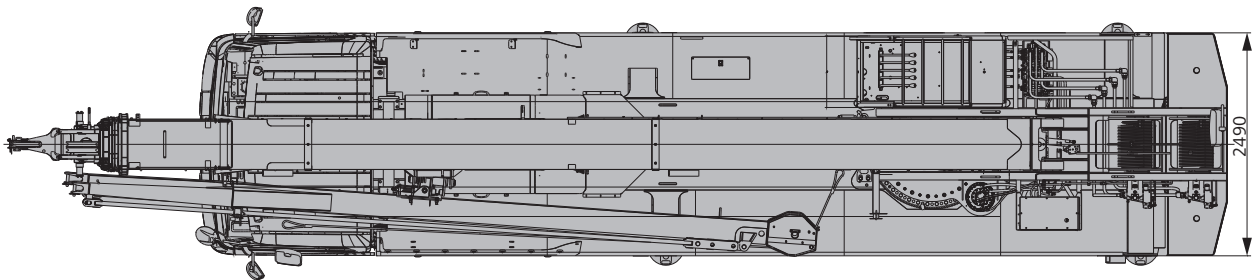
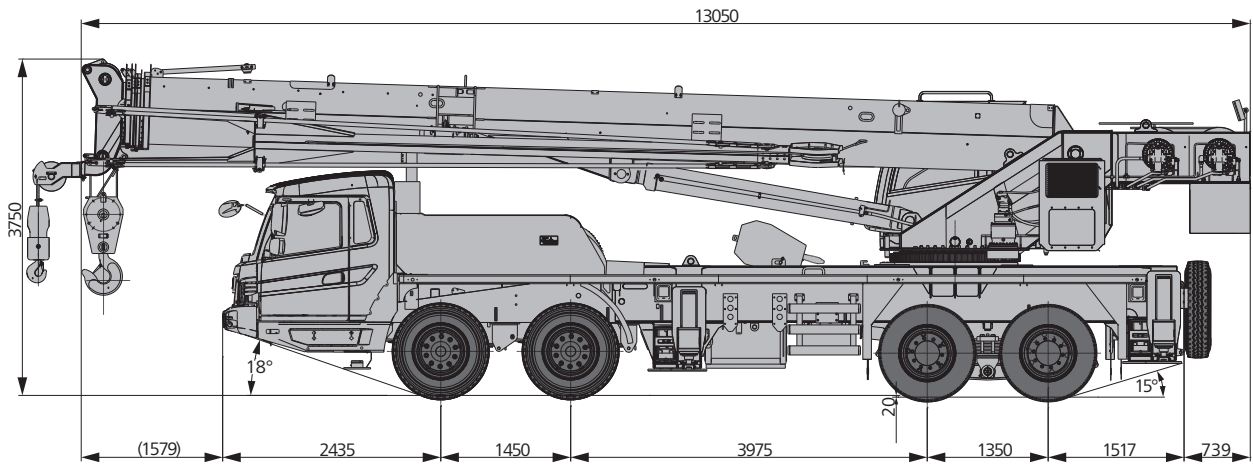
- It is equipped with voice alarm system to prevent misoperation and ensure the safety of operation and personnel.
- The load moment limiter system with high precision, high stability and high intellectualization is applied to provide a full protection for lifting operations;
- Sensors are widely equipped to timely feedback data, realize real-time monitoring and enable the operator to know the working status of the whole vehicle at any time.

## GCP system

- The remote monitoring and management system can monitor equipment operating condition, collect operation parameter, and implement remote fault diagnosis and management.
- Customers can master the operating conditions of the crane, and inquire and order parts at home.



## Overall Dimensions



## Technical Parameters

Type	Item	Parameter		
Dimensions	Overall length	13050 mm		
	Overall width	2500 mm		
	Overall height	3750 mm		
	Axle distance	1450 mm \ 3975 mm \ 1350 mm		
	Wheel distance	Front wheel Intermediate and rear wheels	2039 mm 1865 mm	
Weight	Gross weight	30000 kg		
	Load	Front axle	10500 kg	
		Rear axle	19500 kg	
Engine	Engine type	Dongfeng Cummins China III ISLe29030		
	Max. power	213Kw/2100 rpm		
	Max. torque	1050 N.m/1100~1400 rpm		
Traveling	Max.traveling speed	80 km/h		
	Turning radius	Min. turning radius	12 m	
	Min. ground clearance		260 mm	
	Approach angle		18 °	
	Departure angle		15 °	
	Braking distance(at 30km/h)		10 m	
	Max gradeability		40%	
	Fuel consumption per 100km		32 L	
Main performance data	Max.lifting capacity		30 t	
	Min.rated range		3 m	
	Max. lifting moment	Base boom		1120 kN.m
		Full-extend boom		612 kN.m
	Outrigger span (transverse × longitudinal)		6.2 m×5.3 m	
	Lifting height	Base boom		11.3 m
		Full-extend boom		35 m
		Full-extend boom+jib		43 m
	Boom length	Base boom		10.85 m
		Full-extend boom		34.5 m
Full-extend boom+jib			42.5 m	
Jib offset		5°, 15°, 30°		
Working speed	Max. single rope lifting speed of main winch (no load)		125 m/min	
	Max. single rope lifting speed of aux. winch (no load)		125 m/min	
	Full extension/retraction time of boom		70 s/56 s	
	Full lifting/descending time of boom		72 s/60 s	
	Slewing speed		0~2.5 r/min	
	Full extension/retraction time of horizontal outrigger		35 s/30 s	
	Full extension/retraction time of vertical outrigger		35 s/30 s	

## Crane Introduction

### Cab

- The cab enjoys a novel modeling and designed on the ergonomic principle with safety glass, corrosion-resistant steel plate, fully covered softening interior, superlarge interior space, panoramic skylight, adjustable seat and other user-friendly designs equipped, which, together with the air conditioning and electric wiper, makes operating more comfortable and easier. The load moment limiter display is configured to integrate the main control desk and the operation display system, so that all working condition data of hoisting operation can be clearly seen.

### Hydraulic system

- Stable and high-quality key hydraulic parts like main hydraulic pump, main valve, winch motor, slewing motor and balance valve are applied, ensuring high system reliability; Through accurate matching of parameters, the main valve performs excellently in flow compensation and load feedback control, able to realize the stable control of single action and combined action under various working conditions easily.

### Control system

- Bus instrument: The bus instrument is integrated with an intelligently controlled integral electrical system, so that operating parameters can be controlled at any time, ensuring superior ride comfort; and meanwhile, the engine fault prompt function is provided to facilitate servicing and troubleshooting;
- Load moment limiter: Intelligent load moment limiter system is applied to ensure safe loading and precise, stable and comfortable operation;
- The innovative GCP platform specially designed for engineering machinery enables to control the movement track and working condition of vehicles at home, and it can also timely remind you for parts maintenance, effectively extending the service life of equipment.

### Telescopic system

- There are in total four sections. The length of base boom is 10.85m, the length of fully extended boom is 34.5m, the length of jib is 8m, the lifting height of the fully extended boom is 35m, and the maximum lifting height of the boom with jib is 43m. It is U-shaped, made of high strength welded structural steel, and adopts single cylinder plus rope stretching.

### Luffing system

- The gravity drop system is adopted to reduce energy consumption and improve the smoothness of the drop operation.
- Luffing angle: - 2° ~ 80°.

### Slewing system

- The 360° slewing is available, and the maximum slewing speed is 2.5r/min, ensuring stable movement, reliable system and stable brake.

### Counterweight

- Fixed counterweights 3000 kg , without movable counterweights.

### Safety system

- Load moment limiter: By using analytical mechanics method, the load moment limiter calculation system based on the gravity model is developed to ensure the precision of rated lifting weight is up to  $\pm 3\%$  through online no-load calibration, and provide all-round protection for lifting operation. When the crane is overloaded, the system will automatically give an alarm, providing security for the operation;
- The hydraulic system is equipped with hydraulic balance valve, overflow valve, bidirectional hydraulic lock and other components to achieve a stable and reliable hydraulic system;
- The main winch is provided with a three-wrap rope protector to prevent the steel wire rope from over rolling-out;
- The main boom and jib are equipped with height limiter to prevent the wire rope from over-hoisting;
- The length / angle sensor and pressure sensor are equipped to show real-time operation status, automatically stop dangerous action, and make buzzer alarm.

### Hoisting system

- 1 main hook: 360kg, 1 auxiliary hook: 99kg. Main winch wire rope: 16-35W×7-1960USZ, non-rotating, GB8918-L175m; aux. winch wire rope: 16-35W×7-1960USZ, non-rotating, GB8918-L 105m.

Lifting capacity(t)	Number of pulleys	Number of ropes	Weight(kg)
30	4	8	360
-	-	1	99

## Crane Introduction

### Chassis

#### Driving cab

- The driving cab applies the all-steel materials and rubber seal structure which is independently developed by Sany following ergonomic principle, and has excellent shock absorption and sealing performance. The cab is equipped with outward opening doors on both sides, seats with pneumatic suspension, three-point seat belt, adjustable steering wheel, wide-angle rearview mirror, comfortable driver seat with headrest, anti-fogging fan, HVAC, stereo radio, complete control instruments and meters, which is more comfortable, safe and user-friendly.

#### Carrier frame

- Designed and manufactured by Sany, the chassis uses the anti-torsion box structure welded from fine grained high-strength steel plates, greatly improving its load bearing capacity .

#### Outriggers

- The H-type outrigger is supported by 4 points, which is easy to operate and of strong stability. It is made of fine grained high strength steel plates, and features full-hydraulic lateral extension/retraction.

#### Engine

- Type: In-line, 6-cylinder, water-cooled, turbocharged & intercooled diesel engine.
- Rated power: See the parameter list.
- Environmental friendliness: Emissions meet the China III standards.
- Effective fuel tank capacity: 300L.

#### Transmission system

- Transmission: 9-speed manual transmission with large speed ratio range is applied, which can meet the requirements of low-speed climbing and high-speed driving.
- Transmission shaft: The transmission shaft is optimized in layout to provide stable and reliable transmission.
- The force transmission is optimized by the provision of end face flange-coupling transmission shaft, enabling a higher transmission torque.

#### Drive/Steer

- 6 x 4.

#### Axles

- The second and third axles are driving axles and the first is steering axle, and the bogie reducer is built in the third and fourth axles. The application of axle housing welding process enables high bearing capacity.

#### Suspension system

- The suspension applied on all the axles consists of leaf springs which have passed the fatigue test of more than 100000 cycles and gotten performance parameters optimized for both front and rear leaf springs, improving the riding safety without prejudice to the strength.

#### Tyres

- 13 (number of tyres) - tyre specification: 12.00R22.5, radial tyre, with high bearing capacity and high durability.

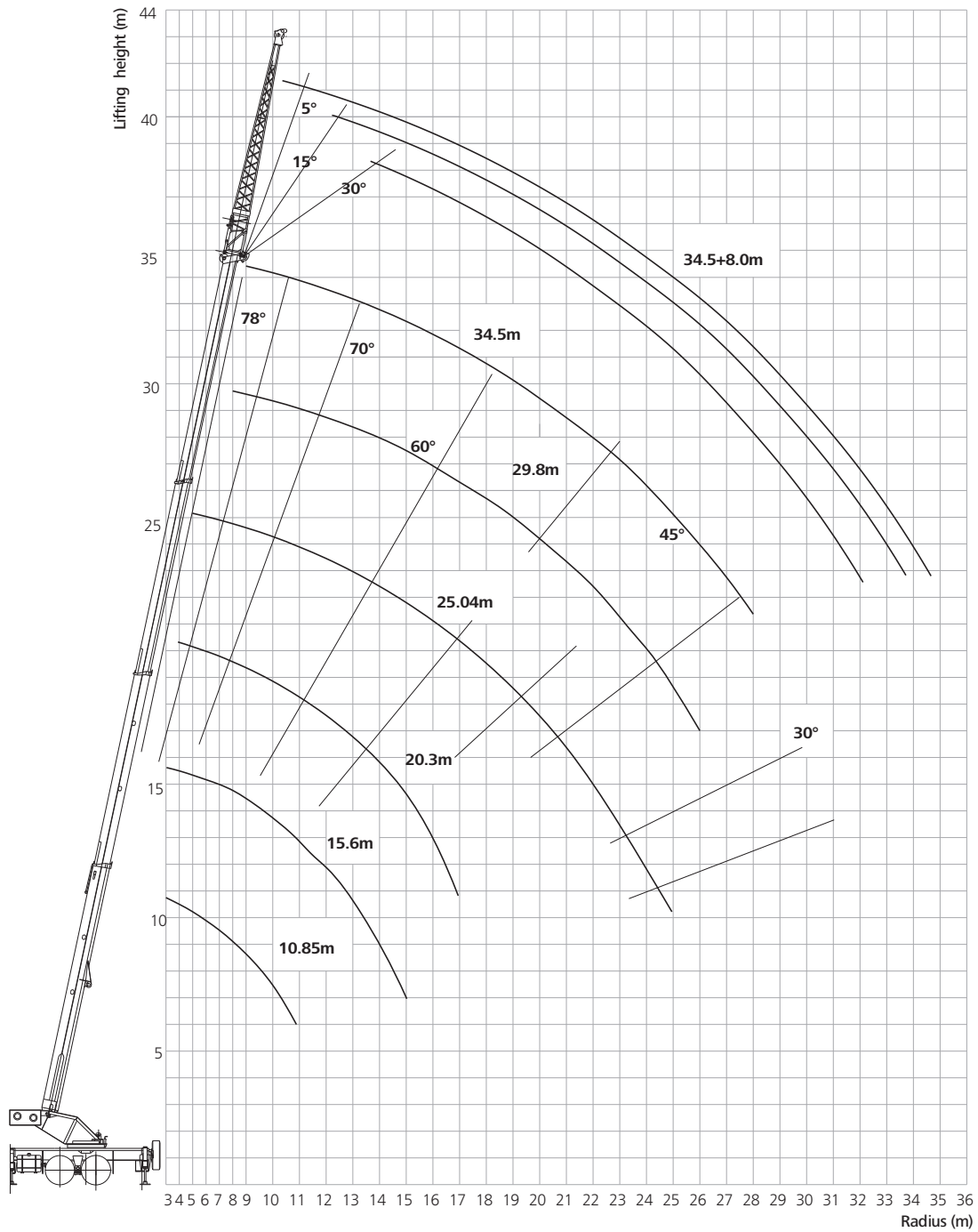
#### Brakes system

- Air servo brakes are equipped for all wheels and constitute a double-circuit brakes system, and the engine is configured with exhaust braking.

#### Electrical system

- The 2 × 12V maintenance free batteries are equipped, and the mechanical power supply main switch enables the manual cut-off of the vehicle power supply.

# Boom Operating Range





## Load Chart - Telescopic Boom

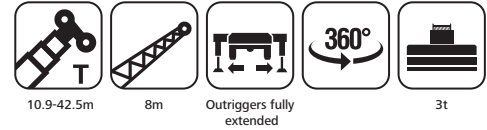
Unit: t



Radius	10.85	15.6	20.3	25.04	29.8	34.5	Radius
3000	30	19					3000
3500	30	19	18.3				3500
4000	28	19	18.3				4000
4500	25.4	19	17.8	12.3			4500
5000	22.3	19	17.3	12.3			5000
5500	20.2	19	16.2	12.3	9.3		5500
6000	18.2	17.8	15.2	11.8	9.3		6000
7000	14	14	12.7	10.4	9.3	7.7	7000
8000	11	11	11	9.2	8.4	7.2	8000
9000		8.7	8.7	8.4	7.7	6.7	9000
10000		7.3	7.3	7.4	7	6.2	10000
12000		5.2	5.3	5.4	5.5	5.2	12000
14000			4.1	4.1	4.2	4.2	14000
16000			3	3.2	3.3	3.3	16000
18000				2.6	2.6	2.7	18000
20000				2	2.1	2.1	20000
22000				1.5	1.6	1.7	22000
24000					1.2	1.3	24000
26000					0.9	0.95	26000
28000						0.75	28000
30000						0.6	30000
Number of lines	8	6	6	4	3	3	Number of lines

## Load Chart - Fixed Jib

Unit: t



Jib length	8 m			Jib length
Main boom angle	Jib offset angle			Main boom angle
	5°	15°	30°	
78°	2500	2200	1600	78°
75°	2400	2100	1500	75°
72°	2300	1900	1400	72°
70°	2200	1700	1400	70°
65°	1700	1500	1300	65°
60°	1300	1200	1000	60°
55°	900	900	700	55°
50°	600	500	400	50°

### Note:

- The given value in the table is the rated lifting weight of the crane in the condition of leveling and solid ground. The value on heavy line is determined by the intensity of the crane, and the value below the heavy line is determined by the stability of crane.
- The working range in the table refers to the actual range after loading.
- The rated load determined by stability rating values follows ISO 4305.
- The rated lifting weight in the table includes lifting hook and lifting tackle weight (main lifting hook weight 320kg, auxiliary lifting hook weight 90kg).
- With the fifth outrigger unfolded, value in the table is suitable for the comprehensive (360 °) operation.
- The rated lifting weight shall not exceed 4500kg when the boom pointed pulley is used. If the auxiliary boom is in the expansion state, the rated lifting weight of the main boom should be reduced by 500kg.
- If the actual boom length and the amplitude are between two values, the rated lifting weight determined by the longer boom length and the larger amplitude shall be taken for the lifting operation.





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— Authorised Dealer —

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For safe and reliable operation of the diesel engines, please fill Grade IV machines with Grade IV diesel and urea solution conforming to related national standards. Please refer to the operating instructions and related standards for details.

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