SANY®

SCC800TB

SANY Telescopic Crawler Crane
80 Tons Lifting Capacity

Quality Changes the World

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Main Features

Operator's Cab

Operator's cab

- Fully-enclosed steel frame structure is adopted, and the front, side, and the top of the cab are installed with large highstrength
- tempered glass, which admits sufficient light. The operator's cab is bright with ample space, providing wider view and isolates noise in a better way. Multimode and multilevel adjustable suspension seat is mounted with minimum vibration and noise, bringing the most comfortable driving experience for the operator. Air conditioning and heater are designed to ensure the perfect temperature for operator. Better manmachine interactive interface are realized through integrated 14-inch touch screen, programmable key switch and vibrating handle. On the left console mounted swing control handle, control buttons, emergent stop, radio and A/C panel; on the right console mounted three independent one-axis handles controlling winches, and two one-axis travel handles, as well as ignition, engine throttle and winch speed buttons. The total layout is more human-friendly and compliant to operators habits.

Closed Circuit Monitoring System

- The screen can mostly present four pictures on one page, showing the wire rope reeving on each winch, surroundings behind counterweight and environment around the machine.

Upper Works

Engine

- Isuzu 6HK1 (EU Tier III A emission standard) 6 cylinders, direct injection, turbocharger & air-air intercooler;
- Displacement: 7.79L;
- Rated power: 212Kw;
- Rated rotational speed, 2000rpm;
- Maximum output torque, 1080N·m ;
- Speed at the maximum output torque, 1500rpm;
- Dry air filter system has a whirlwind type prefilter, safety filter and resistance indicator;
- Fuel tank capacity; 400L.

Electrical control system

- The CAN bus technology is used between the integrated LMI control system and the data recorder for communication;
- The monitor can display engine speed, fuel level, oil pressure, servo pressure, wind speed, engine work time, crane hoisting load, working radius, rated load and the lifting arm angle;
- The real-time query function of electronic load chart is convenient and fast. Equipped with complete fault diagnosis and query system, reducing the troubleshooting time of equipment;
- The overall waterproof/dustproof performance reaches IP65, making the service life longer.

Hydraulic system

- Hydraulic system configuration: quick response and high reliability;
- Proportional viariable piston pump and after-compensated load sensitive main valve are designed to make fluent multifunctions;
- Patent developed swing system is developed to meet dual operation needs of truck crane and crawler crane;
- Real-time monitoring of key hydraulic parameters to guide quick maintenance;
- Powerful cooling system is used to control hydraulic oil temperature effectively and improve system endurability.

Main and auxiliary hoisting mechanism

- Axial piston variable motor is used, and the winch balance valve has anti-hook sliding function to make sure the load lifting is stable;
- Optimized drum design to make sure the multi-layer winding without messing;
- Anti-rotation high strength wire rope is used and lifting position is accurate.

Main and auxiliary hoisting mechanism	Rope speed (outer-most)	0-140m/min
	Diameter of wire rope	Φ22mm
	Main load hoist wire rope length	245m
	Auxiliary load hoist wire rope length	145m
	Rated single line pull	8.1t

Boom hoist

- Dual acting single piston rod hydraulic cylinder with safety balance valve provides a boom hoist angle of -1°to 80°, using deadweight dropping system to reduce energy consumption, and improve the stability of dropping operation.

Swing

- The swing system is equipped with the integrated rotary buffer valve, having free slip function, presenting smooth rotary start and control and excellent inching function;
- Unique swing buffer design makes braking more stable;
- Externally meshed swing drive can make 360 ° slewing at maximum speed of 2r/min;
- Swing lock pin is designed to lock the upperworks after work or in transport, easily and reliably;
- Slewing bearing: Single row ball swing ring.

Counterweight

- Compound counterweight for easy assembly and disassembly to realize self-assembly and easier transport;
- The stacking mode of tray and counterweight block is used for easier assembly, disassembly and transportat;
- Rear counterweight: Total weight 26t, capable of self-assembly function;
- Carbody counterweight: front and rear installation, 3t×2.

Lowerworks

Traveling drive
- Independent travel driving units are adopted for each side of the crawler, to realize straight walking and turning driven by travel motor through gearbox and drive wheel;
- There are two travel speeds with the fast travel reaching 2.5km/h;
- Gradeability, 40%.

Travelling brake
- Built-in, wet, spring loaded normally engaged brake, spring brake, released by oil pressure.

Crawler telescoping
- The crawlers can extend and retract via cylinders. During Work Mode, the crawlers must extend, and retract during transport with crawlers on.

Crawler Tensioning
- The jack is used to push the guide wheel and insert the shim to adjust crawler tension.

Track pad
- High strength alloy cast steel track pad ensure long service life;
- They are 850mm wide and quantity, 52 pads×2.

Outrigger
- Outrigger cylinder is offered as optional to facilitate the track frame disassembly during jobsite transfer.

Operating Equipment

Boom
- Five sections of boom: boom base of 12.2 m, the maximum boom length of 47m, adopting the fully optimized U-shaped section high strength structural steel lifting boom, which makes the hoisting boom more even-loaded and lighter.
- Using double-cylinder rope row telescoping to shorten the telescoping time, making it simpler, more efficient, safer and more reliable.

Fixed jib
- Two fixed jib sections, with length of 10.2m and 17.5m respectively, the installation angle is 0°, 15° and 30°, making configurations switchover easier and operation more efficient.
- Boom tip sheave
- Welding structure, which is connected with the boom by the pin shaft, aux. hook.

Hook

S/N	Capacity (t)	Sheave Block	Weight (t)	Quantity
1	80	5	1.05	1
2	9	1	0.35	1

- Remarks: The above operation equipment is full up configuration, with the specific configuration is subject to the order contract.

Protection Equipment

Integrated LMI control system
- Black box function records overload lifting information;
- A torque limiter computing system based on the lifting mechanical model is established, which can reach 0-10% of the rated lifting accuracy through no-load calibration, fully protecting the lifting operation; for overload operation, the system automatically alarms prompt and provides safety guarantee for the operation;
- The integrated LMI control system is calibration-free, which automatically generates alarm during overload, make smart judgment and cut off the action toward dangerous direction;
- It is mainly composed of: monitor, controller, length angle sensor and pressure sensor, etc.

Assembly/work mode control switch
- Under the assembly mode, over-hoist limit switch, crane boom limit device and load moment limiter does not work, so as to facilitate the installation of crane;
- All safety limit devices work in the work mode.

Emergency stop
- In emergent situation, this button is pressed down to cut off the power supply of whole machine and all actions stop.

Over-hoist limit switch of main and auxiliary hooks
- The height limit device is designed at the end of boom and jib tip to prevent over-hoisting of hook.

Over-release limit switch of main and auxiliary hooks
- 3-wrap protection of main and aux. hoist winches to prevent over-release of wire rope.

Function lock lever
- If the function lock level is not in work position, all the other handles won't work, which prevents any mis-operation caused by accidental collision.

Swing lock device
- Mechanical lock can lock the machine at two positions at front or back.

Hook latch
- The hook is provided with a baffle to prevent wire rope from falling off. Tri-color Load Indicator The load indication light has three colors, green, yellow and red, and the real time load status is presented on the display. When the actual load is smaller than 90% of rated load, the green light is on;
- When the actual load is larger than 90% and smaller than 100%, the yellow light is on, the alarm light flashes and sends out intermittent sirens;
- When the actual load reaches 100% of rated load, the red light on, the alarm light flashes and sends out continuous sirens;
- When the actual load is greater than 102% of rated load, the system will automatically cut off the crane operation in dangerous trend.

Audio-visual Alarm
- When the engine is working, the light flashes; when the machine is traveling or swinging, it sends out sirens.

Swing Indicator Light
- The swing indicator light flashes during traveling or swing.

Seat interlock protection
- When the operator leaves the seat, all operation will be disabled to avoid possible operation error.

Illuminating light
- The machine is equipped with the low beam light at front of the cab, illumination light at cab, and other night lights, boom lights to improve the visibility during construction.

Rearview mirror
- Set in front of the cab, handrail on the right rotating bed and the winch.

Level indicator
- Level indicator can show the inclination angle on the display.

Monitoring system
- Two cameras and lights are installed at the end of the rotating bed to display the crane end and winch on the display.

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Technical Parameters

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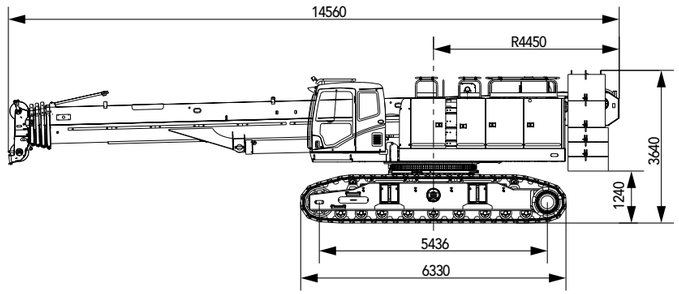
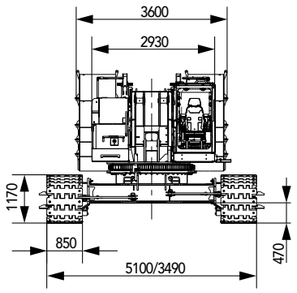
Major Specifications

Main performance specifications for SCC800TB telescopic crawler crane

Performance indicators		Unit	Parameter
Outline dimension	Machine length	mm	14560
	Machine width (retracted)	mm	5100(3490)
	Machine height	mm	3640
	Distance of centers between drive and idle wheels	mm	5436
	Track shoe width	mm	850
Boom configuration	Maximum rated load capacity	t	80
	Boom length	m	12.2~47
	Boom angle	°	-1°~80°
	Max. rated load moment	t·m	280
Jib configuration	Longest boom + longest jib	m	47+17.5
	Boom to jib angle	°	0°、15°、30°
Operation speed	Rope speed of main/aux. load hoist	m/min	0~140
	Boom full up/down duration	s	60/105
	Boom full extension/retraction duration	s	100/125
	Swing speed	rpm	0~2
	Travel without load	km/h	0~2.5
Engine	EURO III 6HK1	Kw	212/2000
Wire rope	Diameter	mm	Φ22
Transport parameter	Machine weight	t	86
	Weight of largest single piece	t	34（dismantling main and auxiliary hook）
	Transport dimensions of basic crane (dismantling crawler frame) length×width×height	mm	14560×3000×3100
Other parameters	Average ground bearing pressure (base boom)	MPa	0.09
	Min. swing radius	mm	4450

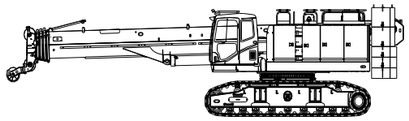
Outline Dimension

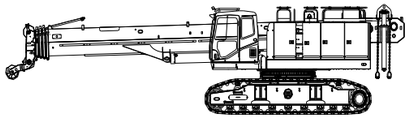


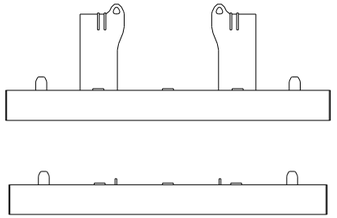


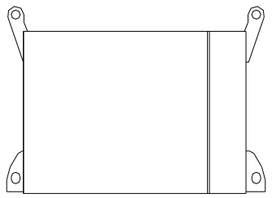
Transport Dimensions

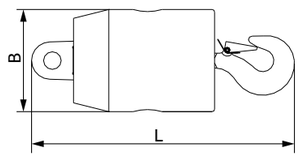
Remarks:
①. The transport dimensions of this part is schematic and not drawn to scale. The size of the part is the design value, excluding the packing;
②. The weight is the design value. Due to the manufacturing error, it may be slightly different. The gross weight of the counterweight is 26t;
③. The overall dimension and weight of the above parts may vary after product upgrading, which is subject to actual dimension.

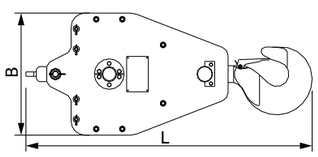












Overall crane	×1
Length (L)	14.56m
Width (W)	3.60m
Height (H)	3.64m
Weight	86t

Carbody	(with jib) ×1
Length (L)	14.56m
Width (W)	3.49m
Height (H)	3.64m
Weight	54t

Counterweight tray	×1
Length (L)	3.6m
Width (W)	0.96m
Height (H)	1.27m
Weight	6.0t

Rear counterweight	×2
Length (L)	3.60m
Width (W)	0.96m
Height (H)	0.46m
Weight	5.0t

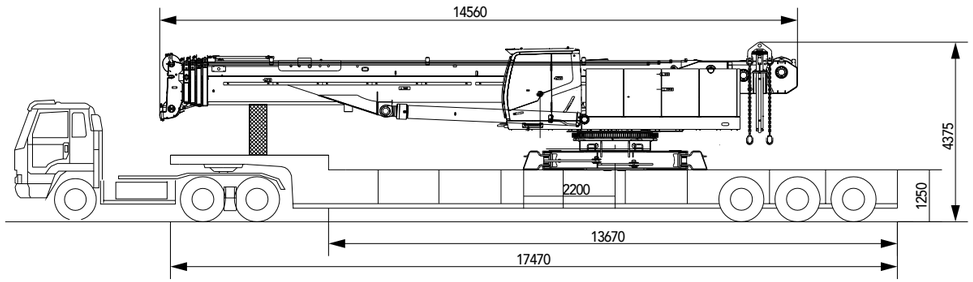
Rear counterweight	×4
Length (L)	1.01m
Width (W)	0.89m
Height (H)	0.73m
Weight	2.5t

9t hook	×1
Length (L)	0.94m
Width (W)	0.36m
Height (H)	0.36m
Weight	0.35t

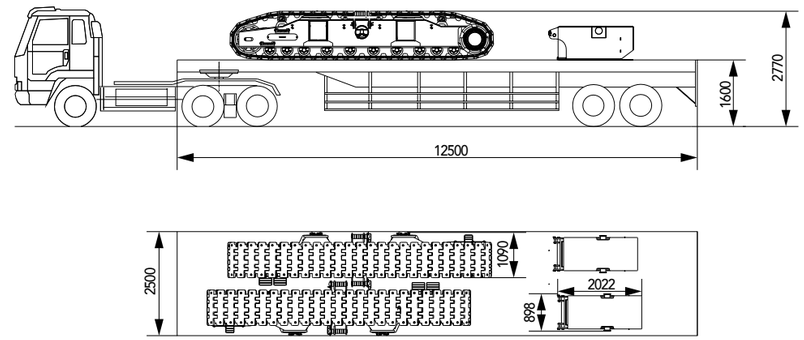
80t hook	×1
Length (L)	1.86m
Width (W)	0.69m
Height (H)	0.66m
Weight	1.03t

Transport Plan

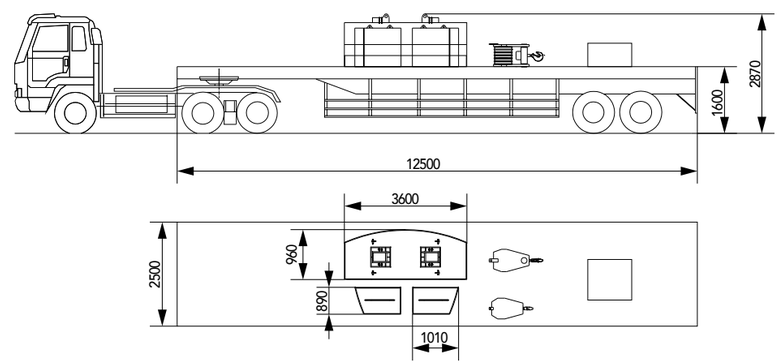
■ 34t: Basic crane



■ 25t: Crawler frams + lowerworks counterweight



■ 28t: Main hook+ auxiliary hook +accessory box+ counterweight



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Boom Combination

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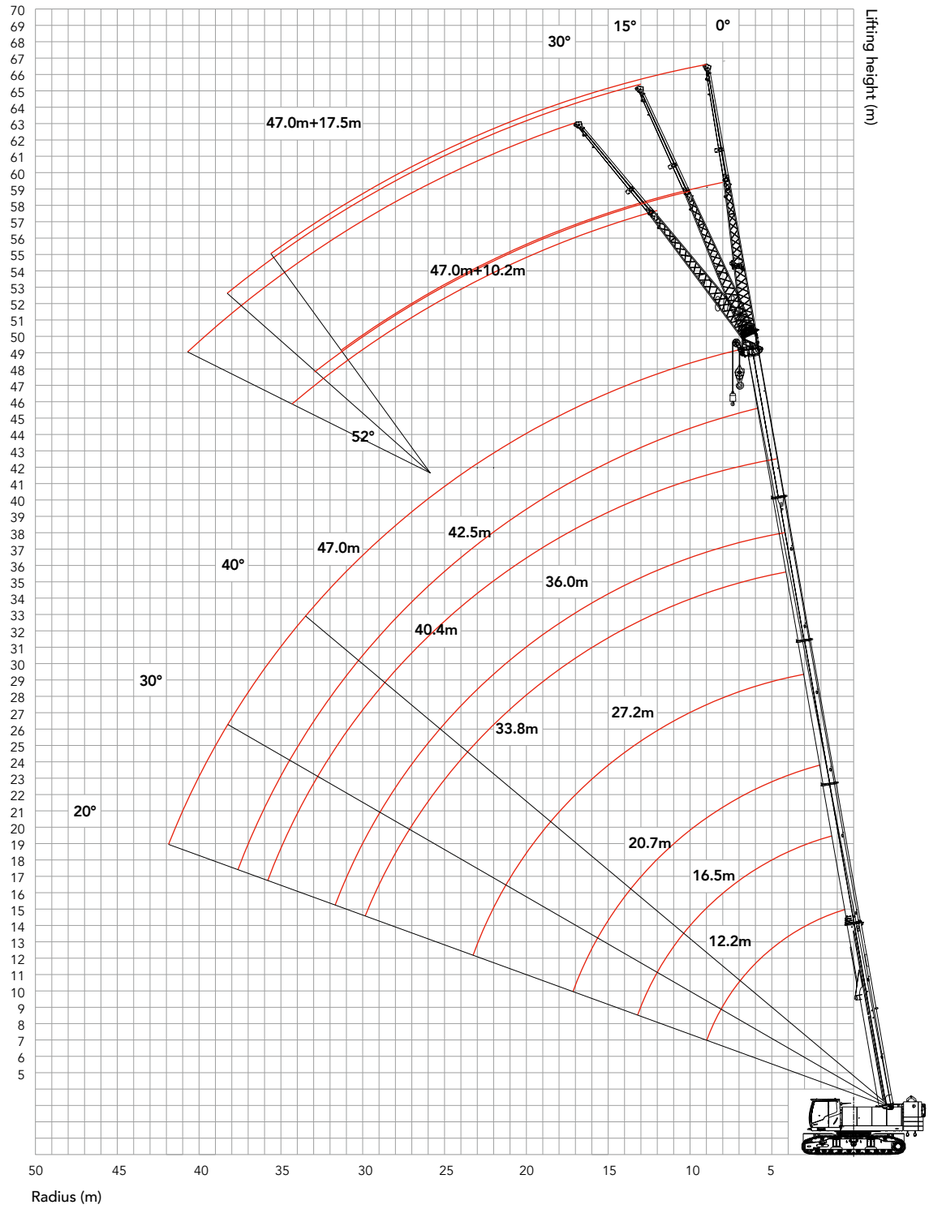
Working Radius



Unit: t

Boom Load Chart

SCC800TB telescopic crawler crane-H Load Chart								
Radius (m)	12.2	16.5	20.9	27.2	33.8	40.4	47.0	Radius (m)
3.0	80.0	65.0						3.0
3.5	75.0	63.0						3.5
4.0	68.0	61.5	44.0					4.0
4.5	65.0	60.0	43.0					4.5
5.0	58.0	55.5	42.5	30.0	26.0			5.0
5.5	54.0	50.0	39.6	30.0	25.0			5.5
6.0	50.3	47.0	39.3	30.0	24.0	20.0		6.0
7.0	40.3	40.0	34.8	28.0	22.5	18.0		7.0
8.0	32.4	32.1	30.5	26.5	21.4	17.2		8.0
9.0	26.8	26.6	26.3	24.3	20.5	16.0	11.7	9.0
10.0		22.4	22.1	21.7	19.6	15.3	11.5	10.0
11.0		19.2	18.5	19.3	16.2	13.6	10.7	11.0
12.0		16.7	15.6	17.5	15.0	14.8	10.6	12.0
14.0			11.6	13.3	12.5	11.7	10.2	14.0
16.0				10.2	10.6	10.0	9.7	16.0
18.0				8.0	8.4	8.9	8.1	18.0
20.0				6.4	6.9	7.3	7.3	20.0
22.0				5.2	5.7	6.1	6.2	22.0
24.0					4.6	5.0	5.4	24.0
26.0					3.8	4.1	4.6	26.0
28.0					3.1	3.4	3.9	28.0
30.0						2.8	3.4	30.0
32.0						2.3	2.8	32.0
34.0						1.8	2.4	34.0
36.0							1.8	36.0
Parts of line	12	11	8	6	5	4	3	Parts of line
Min. Angle						30°	30°	Min. Angle
Telescoping Status（%）								
Telescoping Cylinder	I	I	I	III	III	III	III	Telescoping Cylinder
Section 2	0	50	100	100	100	100	100	Section 2
Section 3	0	0	0	25	50	75	100	Section 3
Section 4	0	0	0	25	50	75	100	Section 4
Section 5	0	0	0	25	50	75	100	Section 5

Unit: t

Jib Load Chart

SCC800TBtelescopic crawler crane-jib load chart							
Boom operation angle	47+10.2m Jib			47+17.5m Jib			Boom operation angle
	0°	15°	30°	0°	15°	30°	
80°	5.5	3.8	3.3	3.3	2.0	1.5	80°
78°	5.2	3.8	3.2	3.0	1.9	1.3	78°
76°	4.9	3.7	2.9	2.7	1.8	1.3	76°
74°	4.2	3.5	2.7	2.3	1.7	1.2	74°
72°	3.6	3.3	2.6	2.1	1.6	1.2	72°
70°	3.9	3.1	2.4	1.9	1.5	1.1	70°
68°	3.5	2.9	2.3	1.8	1.4	1.1	68°
66°	3.1	2.7	2.2	1.7	1.3	1.0	66°
64°	2.7	2.5	2.1	1.6	1.2	1.0	64°
62°	2.3	2.3	2.0	1.5	1.1	1.0	62°
60°	2.0	2.0	1.8	1.4	1.0	0.9	60°
58°	1.8	1.7	1.4	1.2	0.9	0.9	58°
56°	1.6	1.4	1.2	1.1	0.9	0.8	56°
54°	1.2	1.1	1.0	0.9			54°
52°	0.9						52°
Min. protection angle	54°						Min. protection angle

Note:
1. The ratings in the load chart are complied with EN13000;
2. Work radius is the horizontal distance from load center to the swing center;
3. The weight of hook, slings and other riggings shall be deducted from the ratings to get the actual capacity;
4. The ratings are calculated when the load is freely suspended without considering the effect of wind load, ground condition, out-of-level, operation speed or any other negative effect on safety operation. Therefore, the operator has the responsibilities to judge the site condition, reduce the load and slow down the speed accordingly;
5. All ratings are calculated when the machine is on firm and level ground with less than 1% gradient;
6. The crawlers must extend during work.

Notes

Notes

Zhejiang SANY Equipment Co., Ltd.

SANY Industrial Park, No. 2087 Daishan Road, Wuxing District, Huzhou City, Zhejiang Province, P. R. of China Zip 313028
After-sales Service 400 887 8318
Consulting 400 887 9318

— Agent information —

www.sany.com.cn

Please scan the official WeChat account of Sany for more information.