SANY®

SCC550TB

SANY Telescopic Crawler Crane
55 Tons Lifting Capacity

Quality Changes the World

Max. Lifting Capacity: 187 t·m

Max. Crane Boom length: 42 m

Max. Fixed Jib Combination: 42 m + 13 m

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Telescopic Crawler Crane
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Main Characteristics

Upperworks

Engine
- Model: Turbo charged and charge air cooling system;
- Displacement: 5.9L;
- Rated Power: 154kW/2200rpm;
- Max. Torque: 870Nm/1400rpm;
- Emission Standard: China Tier III;
- Fuel Tank: 400L;
- The engine can be selected based on customer needs and emission standards (Tier II, Tier III, Tier IV).

Electrical Control System
- Integrated Load Moment Limiter control system with standardized data logger;
- Real-time inquiry of electronic load chart;
- Self-diagnosis of failures and inquiry system;
- Sensors are protected from lightning damage;
- Water-proof and dust-proof of machine reached IP 65.

Hydraulic System
- Hydraulic system consists of electrically-controlled piston pump with variable displacement; LS/LUDV main valve; electrically-controlled handle and piston motor of variable displacement;
- Working pressure: 330Bar as the maximum;
- Filters: 10u filter for oil-return circuit and 10u filter for high pressure pipes;
- Hydraulic tank volume: 840L;
- Safety control: main valve with safety control valve, which can stop hydraulic system working when winch or boom movement is limited, making sure the operation safety.

Main and Auxiliary Hoisting
- Rope speed: 140m/min;
- Rope diameter: Φ18mm;
- Rated single line pull: 5.1t;
- Main hoist wire rope length: 220m;
- Auxiliary hoist wire rope length: 130m;
- Anti-twist wire rope and drum is specially designed to prevent rope disorder.

Boom Hoisting
- Boom luffing angle: -2°~80°;
- Self-weight boom lower system is adopted to reduce the energy consumption and improve boom lowering stability. Hydraulic cylinder is adopted with safety balance valve.

Swing Mechanism
- Swing speed: 0-2.1rpm;
- Swing system: independently driven hydraulic system with integrated swing safety valve, provided with gentle parking at neutral position and free swing function;
- Swing lock: the pin locking device makes sure the upperworks can be locked after work or during transport, which is reliable and convenient;
- Swing ring: single-row ball rolling swing ring;
- Electrically-controlled speed adjustment to ensure the stable movement and reliable performance.

Cab
- Large glass window allows wider view for operator;
- Low- and high-beam lights and rear-view mirror are installed on the cab;
- A/C, heater and radio are equipped in the cab;
- Control handles, electrical switches, emergency stop and ignition key are mounted on the left and right arm-rest box;
- Suspended seat, which is multi-layer adjustable, is equipped with unload switch.

Counterweight
- Assembled counterweight blocks are easy to assemble and disassembly. Self-assembly function is provided to simplify transport.

Lowerworks

Travel system
- Independent driving devices are designed for left and right track frames, driving machine to travel straight and turn by motor through gearbox, drive wheel;
- Gradeability: 45%.

Travel brake
- Embedded, wet-type, spring-loaded and normally-closed brake is adopted for travel system to brake with spring force and release through oil pressure.

Track telescoping
- Track frame can extend and retract through cylinders.

Track tensioning
- Hydraulic jack drives the guide wheel to tension the crawler and the shims are used to secure the crawler.

Track pads
- Track pads are made of casting steel of high-strength alloy. The width is 760mm.

Travel speed
- 0-2.1 km/h, with low and high speed options.

Operating Equipment

Boom
- Five sections are made of high-strength structure steel with fully improved U-shape section area to reduce the weight. The basic boom is 11.3m and the maximum length is 42m;
- The telescopic mechanism adopts dual cylinders and rope crowd to ensure a simple, efficient, safe and reliable operation.

Fixed Jib
- Two sections of jib, one is 7.4m and one is 5.6m;
- The assembly angle is 0°, 15°, and 30°;
- The configurations can be switched easily to improve working efficiency.

Boom Tip Sheave
- Welded structure connects to the boom by pin, so as to allow auxiliary hook to work.

Hook

S/N	Capacity (t)	Sheave Block	Weight (t)	Quantity
1	60	6	0.6	1
2	5	1	0.1	1

Safety Device

Integrated Control System (LML)
- The standard calibration-free integrated control system (LML) is designed to ensure work safety and efficiency;
- Load moment calculation system based on load mechanic modeling is built, which can ensure 5% accuracy of rated load and protect the load operation in an inclusive manner. It can automatically detect the load weight, work radius, and boom angle and make judgment to cut down the movement towards dangerous direction. The black box function can record load operation data.

Safety Device for Main and Aux. Hoist
- Three-wrap protection and over-hoist switch of main and aux. hoist winches are installed.

Function Lock
- When the function lock lever is not in working position, none of the operations can be actuated, so as to avoid any unintended operation caused by accidental collision during access to or leaving the cab.

Swing Lock
- Electrical lock is equipped to prevent any mis-operation of control handles and ensure the safety;
- Mechanical lock is provided as the pin lock to secure the upperworks at the positions facing straight forward or backward.

Hook Latch
- Each lifting hook is equipped with baffle to prevent the wire rope from falling off.

Remote Monitor
- Standard remote monitoring is provided on the machine, which can realize GPS tracking, GPRS data transmission, machine status inquiry, statistics, operation data monitor and analysis.

Indicator Light
- The Load Indicator Light has three colors, which are green, yellow and red;
- During traveling and swing, the swing indicator flashes.

Seat Interlock Protection
- When the operator is off-seat, all control handles don't work, so as to prevent some mis-operations.

Illumination Light
- The low-and high-beam adjustable lights, illumination light on top of the cab ceiling and boom/jib illumination light are provided to increase visibility in dark areas.

Rear-View Mirror
- The mirrors are installed on the front of cab, at the hand rail of right platform and at the winch.

Level Indicator
- The electronic level indicator detects the inclination of upperworks and present on the monitor.

CCTV Monitoring System
- Two cameras and lights are installed on the rear of rotating bed to show the areas around machine tail and winch.

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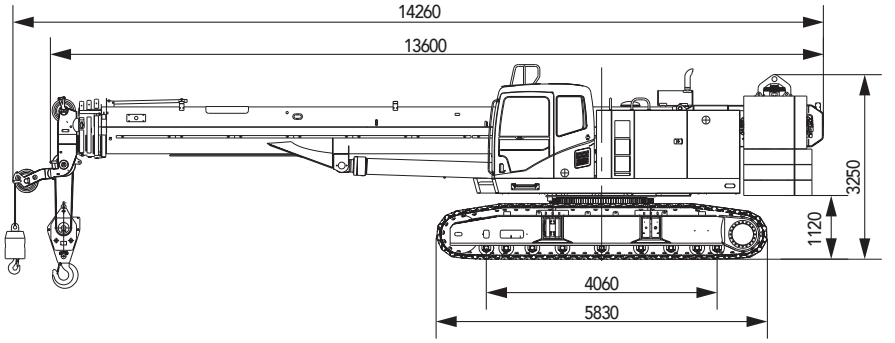
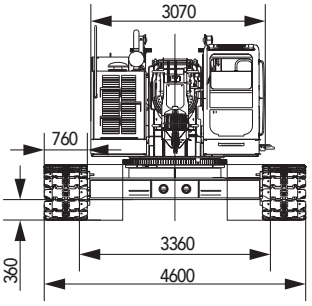
Technical Parameters

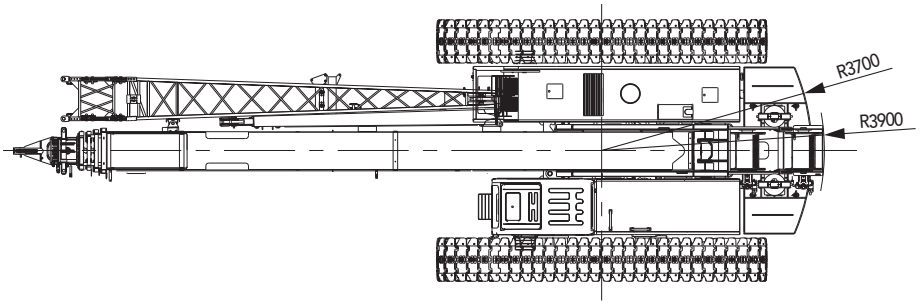
Major Specifications

Major Specifications of SCC550TB Telescopic Boom Crawler Crane			
Specification		Unit	Parameter
Boom configuration	Max. rated load capacity	t	55
	Boom length	m	11.3~42
	Boom angle	°	-2°~80°
	Max. rated lifting moment	t·m	187
Jib configuration	Longest boom + longest jib	m	42+13
	Boom and jib angle	°	0°、15°、30°
Working Speed	Winch rope speed of main and aux. winch (outmost layer at empty load)	m/min	0~140
	Duration of boom up/down	s	60/60
	Duration of full boom extension/retraction	s	100/90
	Swing speed	rpm	0~2.1
	Travel speed	km/h	0~2.1
Engine	China Tier III	kW	154
Transport	Machine weight	t	59.5
	Transport weight of largest single part	t	37（without jib and aux. winch）
	Transport dimension（Length × Width × Height）	mm	14000×3360×3250
Other Parameters	Average ground pressure	MPa	0.09
	Min. swing radius	mm	3900 (without aux. winch 3700)

Outline Dimension







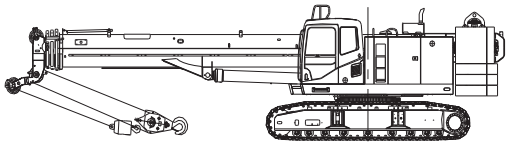
Transport Dimension

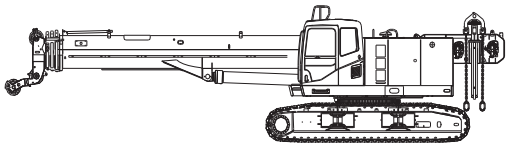
Note:

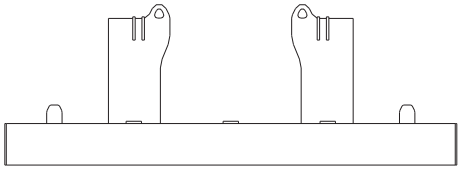
① . The transport dimensions of each part in the table are schematic, not proportional to the real parts. The dimensions are designed value without package considered.

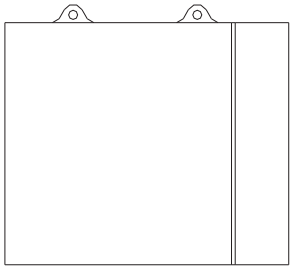
② . Weight is designed value that the actual manufactured part may deviate a little. The total counterweight is 20t.

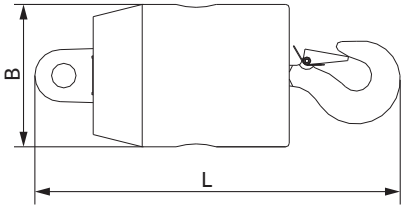
③ . The dimensions and weight of each part may change due to product upgrading. The final values are subject to the new product.

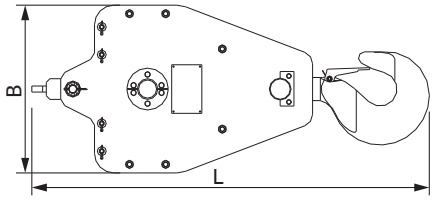












Whole Machine	×1
Length (L)	14.0m
Width (W)	3.36m
Height (H)	3.25m
Weight	59.5t

Basic machine (with jib)	×1
Length (L)	14.0m
Width (W)	3.36m
Height (H)	3.25m
Weight	38.8t

Counterweight Tray	×1
Length (L)	2.94m
Width (W)	1.18m
Height (H)	1.04m
Weight	5.0t

Rear Counterweight	×2
Length (L)	2.94m
Width (W)	1.18m
Height (H)	0.40m
Weight	4.2t

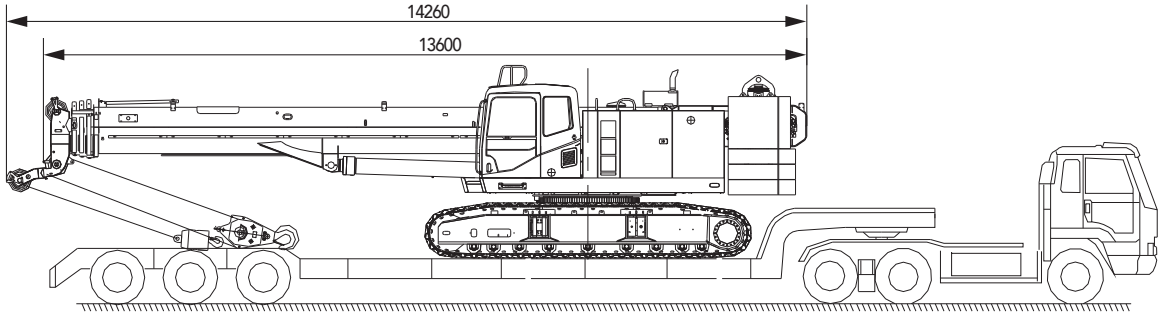
Rear Counterweight	×2
Length (L)	1.10m
Width (W)	0.72m
Height (H)	1.00m
Weight (Including jib luffing winch)	3.3t

5t Hook	×1
Length (L)	0.67m
Width (W)	0.25m
Height (H)	0.25m
Weight	0.1t

60t Hook	×1
Length (L)	1.65m
Width (W)	0.69m
Height (H)	0.39m
Weight	0.6t

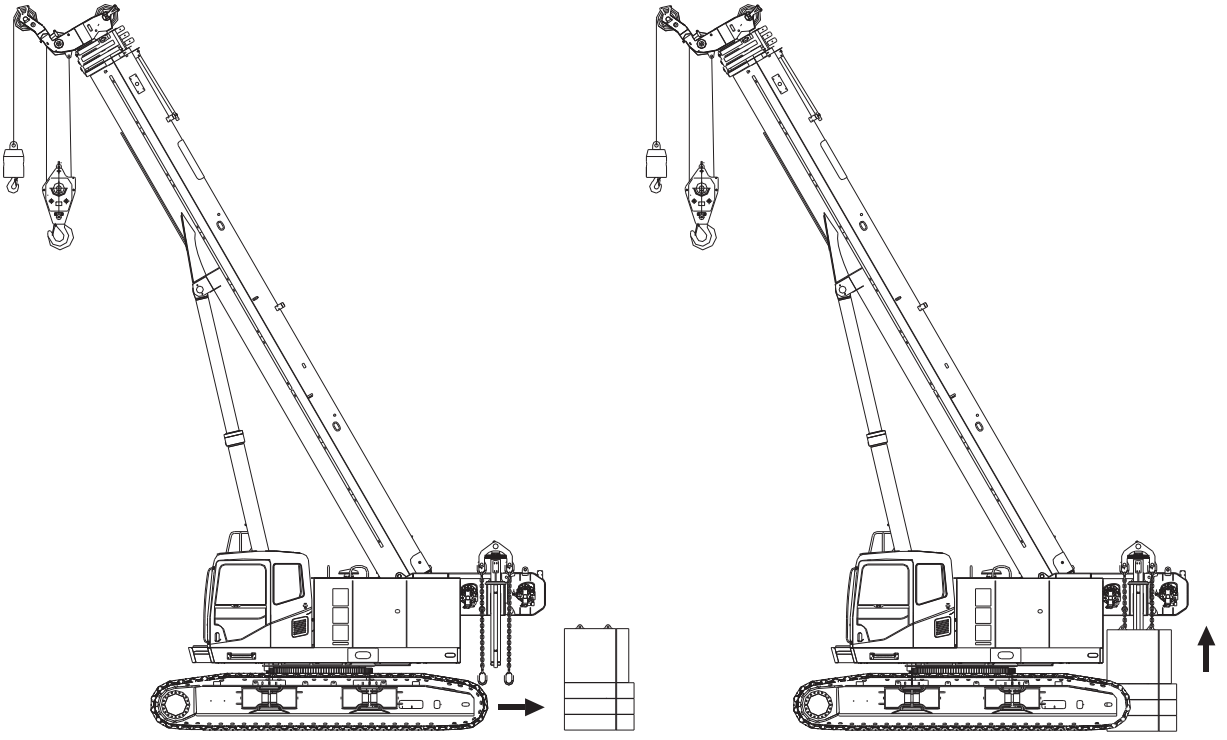
Transport Plan

- The full-up machine weighs 59.5t;
- Outline dimension (L x W x H) is 14260× 3360×3250



Self-Assembly

- If the machine has to be transported without counterweight, the rear counterweight can be self-disassembled through cylinder, which is convenient and efficient, saving the demands for assisting crane.



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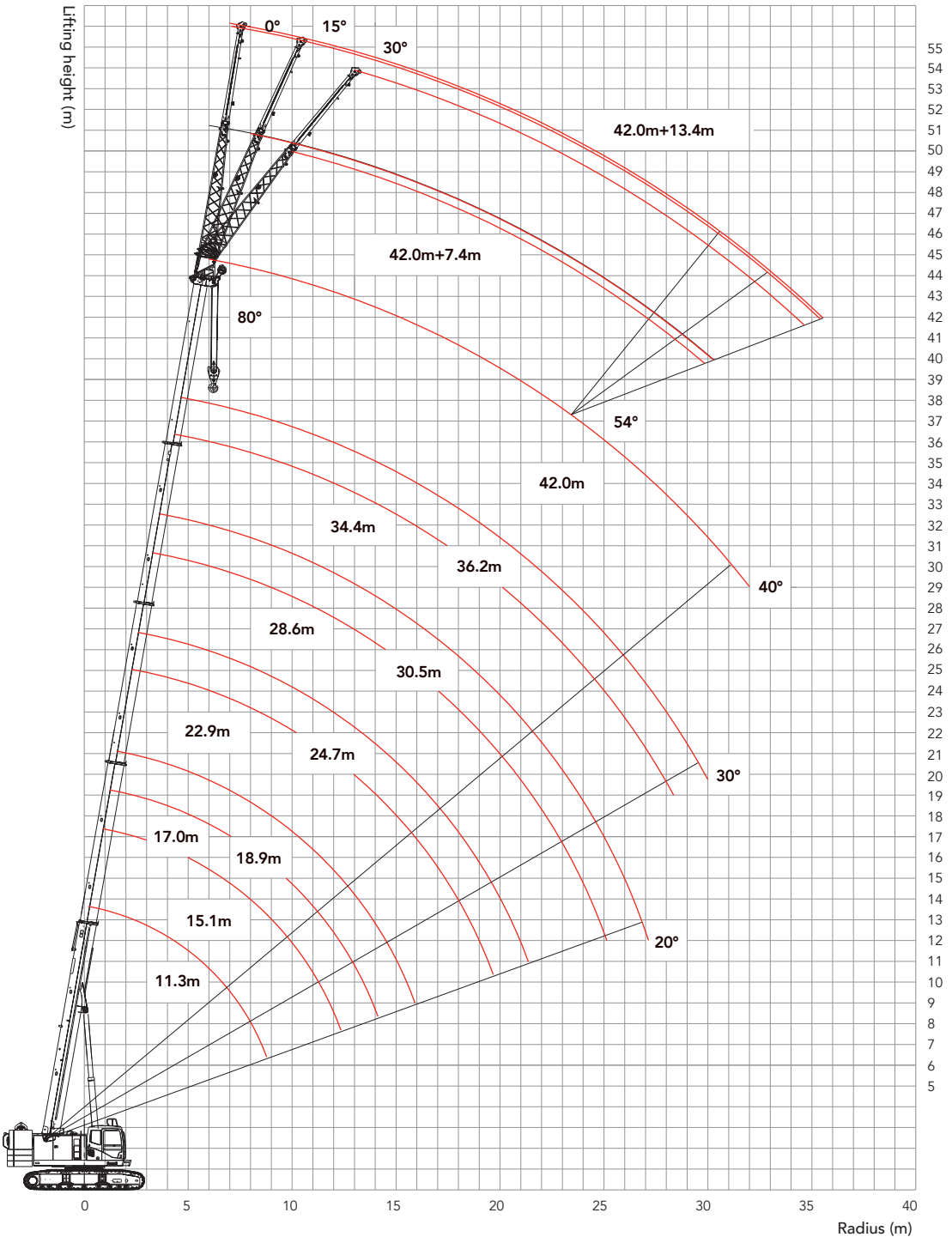
Cofigurations

> 13

Working Radius



Unit: t

Boom Load Chart

SCC550TB Telescopic Boom Crawler Crane - Load Chart of Boom

Radius (m)	11.3	15.1	17	18.9	20.8	22.9	24.7	26.6	28.6	30.5	32.4	34.4	36.2	38.2	42	Radius (m)
3.0	55.0															3.0
3.5	50.0	35.0	21.0	33.0												3.5
4.0	45.0	34.0	20.0	33.0	22.5											4.0
4.5	41.0	32.0	18.5	31.5	21.0	15.5	24.5									4.5
5.0	37.5	30.0	17.0	29.5	20.0	15.0	22.5	16.5								5.0
5.5	32.5	28.0	15.5	27.5	19.0	14.0	21.0	15.5								5.5
6.0	28.5	26.0	14.5	25.1	17.5	13.5	20.0	15.0	12.0	16.5						6.0
6.5	25.0	23.0	13.5	22.5	16.5	12.5	19.5	14.5	11.5	15.5	12.5					6.5
7.0	22.0	21.6	13.0	20.3	16.0	12.0	18.5	13.6	11.0	15.0	12.0	9.0	13.0			7.0
7.5	19.6	19.2	12.5	18.4	15.0	11.0	17.5	12.8	10.5	14.5	11.5	9.0	12.5			7.5
8.0	17.7	17.2	12.0	16.9	14.5	10.5	16.5	12.2	10.0	14.0	11.0	8.5	12.0	9.0		8.0
9.0	14.5	14.1	11.5	13.9	11.5	10.0	14.3	11.0	9.0	12.5	10.0	8.0	11.0	8.5	8.6	9.0
10.0		11.8	10.0	11.6	10.5	9.2	12.3	10.0	8.2	12.0	9.2	7.5	10.0	8.0	8.6	10.0
11.0		10.0	9.0	9.8	9.5	8.8	10.7	9.6	7.6	10.7	8.5	7.0	9.3	7.5	8.0	11.0
12.0		8.5	8.2	8.3	8.5	8.2	9.4	9.2	7.2	9.5	8.0	6.6	8.8	7.0	7.5	12.0
14.0			7.5	6.0	7.3	7.6	7.0	7.8	6.7	7.5	7.5	6.1	7.6	6.5	6.5	14.0
16.0				4.3	5.7	6.6	5.3	6.2	6.2	5.9	6.5	5.6	6.1	6.0	5.8	16.0
18.0						5.4	4.0	5.0	5.7	4.6	5.3	5.1	5.0	5.5	5.1	18.0
20.0							3.0	4.0	4.7	3.6	4.3	4.6	4.0	4.6	4.2	20.0
22.0								3.2	3.9	2.8	3.5	4.1	3.2	3.8	3.5	22.0
24.0									3.3	2.2	2.9	3.5	2.5	3.1	2.8	24.0
26.0										1.6	2.3	2.9	2.0	2.6	2.3	26.0
28.0											1.8	2.4	1.5	2.1	1.8	28.0
30.0												2.0	1.1	1.7	1.4	30.0
32.0														1.3	1.1	32.0
Parts of Line	12	10	6	8	6	4	6	4	4	4	4	3	4	3	3	Parts of Line
Min. Angle													20°	20°	20°	Min. Angle
Telescoping Status（%）																
Telescoping Cylinder	Ⅰ Ⅱ	Ⅰ	Ⅱ	Ⅰ	Ⅰ Ⅱ	Ⅱ	Ⅰ	Ⅰ Ⅱ	Ⅱ	Ⅰ	Ⅰ Ⅱ	Ⅱ	Ⅰ	Ⅰ Ⅱ	Ⅰ Ⅱ	Telescoping Cylinder
Section 2	0	50	0	100	50	0	100	50	0	100	50	0	100	50	100	Section 2
Section 3	0	0	25	0	25	50	25	50	75	50	75	100	75	100	100	Section 3
Section 4	0	0	25	0	25	50	25	50	75	50	75	100	75	100	100	Section 4
Section 5	0	0	25	0	25	50	25	50	75	50	75	100	75	100	100	Section 5

Unit: t

Jib Load Chart

SCC550TB Telescopic Crawler Crane - Load Chart of Jib							
Boom working angle	42+7.4m Jib			42+13m Jib			Boom working angle
	0°	15°	30°	0°	15°	30°	
78°	3.5	2.4	2.0	2.4	1.5	1.0	78°
77°	3.2	2.3	1.9	2.4	1.4	1.0	77°
75°	3.0	2.2	1.8	2.3	1.3	1.0	75°
73°	2.7	2.0	1.7	2.0	1.2	0.9	73°
71°	2.5	1.8	1.6	1.8	1.1	0.9	71°
68°	2.2	1.7	1.4	1.5	1.0	0.8	68°
66°	2.0	1.5	1.3	1.3	1.0	0.8	66°
63°	1.8	1.4	1.1	1.1	0.9	0.7	63°
61°	1.5	1.2	1.0	1.0	0.8	0.7	61°
58°	1.1	1.0	0.8	0.7	0.6	0.6	58°
56°	0.7	0.7	0.6	0.5			56°
Min. protection angle	54°						Min. protection angle

※ Note: Rated Capacity of Crane

1. The track frames of crane must be extended during load lifting;
2. The rated capacity listed in the table are valid when the machine parks on firm ground less than 1° , and the load is lifted slowly and steadily;
3. The rated capacity values listed in the table are calculated at 75% of tipping capacity of wind speed less than 9.8m.s;
4. The values listed in the load chart are valid for 360° swing;
5. The rated lifting capacity is not over 0.4t when the boom tip pulley is applied. If the jib is mounted, the rated lifting capacity of boom must be reduced by 2.3t;
6. The values listed in the table include the weight of hook and riggings. The main hook is 0.6t and aux. hook is 0.1t. The actual capacity shall have the weight of hook, rigging and wire rope deducted from the rated capacity values.

Notes

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— Gent information —

Reminder:
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.

Any change in the technical parameters and configuration due to advancement in technology may occur without prior notice. The machine in the figures may include auxiliary equipment.
This brochure is for reference only, and goods in kind shall prevail.

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