SCC600HD

Base Construction Crawler Crane

Quality Changes the World

Tamping energy: 350t.m
Max. boom length: 28m

The parameters, pictures and standard/optional equipment are only for reference in this brochure, the actual machine is based on the effective price list and contract.

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Base Construction Crawler Crane

SCC600HD

A

SCC600HD
BASE CONSTRUCTION CRAWLER CRANE
350T·M TAMPING ENERGY

QUALITY CHANGES THE WORLD

Major Specifications

> 03

Product Specification

Engine

- Model: Cummins QSL8.9-C325;
- Type: 4 stroke, water-cooled, vertical in-line 6, direct injection,turbo-charger, intercooler;
- Displacement: 8.9L;
- Rated power: 242kW/2100rpm;
- Max. Torque: 1385N·m/1500rpm ;
- Cooling System: Water-cooled;
- Starter: 24V-6.0kW;
- Radiator: fin type core in aluminum;
- Air cleaner: Dry type with replaceable paper element;
- Throttle: Grip type hand throttle, electrically controlled;
- Fuel filter: Replaceable paper element;
- Batteries: Two 12V×180Ah capacity batteries, connected in series;
- Fuel tank capacity: 400L.

Hydraulic System

- One DANFOSS main pump;
- Control: Open-circuit system with full-flow hydraulic control system;
- Cooling: Multi-stage cooling to make sure hydraulic system maintains optimum temperature at heavy load;
- Max. pressure of system: 32 Mpa;
- Swing system: 20 MPa;
- Control system: 5 MPa;
- Hydraulic Tank Capacity: 460L.

Electrical System

- SANY SYIC-II integrated control system is adopted with high integration, precise operation and reliable quality;
- Control system consists of power system, engine, main control system, LMI system, assisting system and monitoring system;
- CAN BUS is used for data communication between controller, monitor (of LMI and Remote Controller Terminal) and the engine;
- Monitor: the working parameters and status are shown on the monitor, such as the engine speed, fuel volume, engine oil pressure, servo pressure, wind speed, engine working hours,lifting conditions and boom angle.

Boom Hoist System

- It is powered by a hydraulic motor through reducer.

Boom Hoist Winch	Drum Pitch Diameter	290mm
	Rope speed on the outermost layer	0-80m/min
	Wire rope diameter	16mm
	Wire rope working length	142m

Load Hoist System

- The main load hoist system are equipped with free fall winches of larger single fall, adopting new free fall control system, and reducer of single line pull up to 25t are available.

Main Hoist Winch	Drum Pitch Diameter	648mm
	Rope speed on the third layer	0-115m/min
	Wire rope diameter	28mm
	Wire rope working length	72m
	Rated single line pull	132.3kN

Product Specification

Swing Mechanism

- Swing unit is powered by hydraulic motor driving reducer to swing 360° rotation;
- Swing parking brakes: A normally-closed, embedded, wet spring loaded brake; braking through spring force, oil pressure released;
- Swing bearing: Single-row ball bearing;
- Swing lock: Lock devices on four position are designed to prevent swing backlash during traveling or transport. The rotating bed can be locked at front manually. After work or during transport, the rotating bed can be locked at two directions;
- Swing Speed: 0-2.0rpm.

Upperworks

- Welded frame structure with no torsion. All components are located in optimum and easier for maintenance and service. Engine noise is low;
- Counterweight: 19.0 t.

Cab and Control

- Full vision safety glass with rear-view mirror is designed;
- Armrest control panel can be adjusted with the operator's seat and provide comfortable experience, which is more ergonomically;
- Cab configuration: 5.7-inch touch screen.

Lowerworks

- Crawler drive: Independent drive is built into each crawler side frame, driven by hydraulic motor in reducer to realize straight walking and turning;
- Crawler telescoping: telescoping cylinder is used to expand and retract crawlers;
- Track tension: Jack is used to push guide wheel and shims are added to adjust the tension;
- Track rollers: maintenance-free roller;
- Track pad: 760 mm wide;
- Max. gradeability: 30%.

Weight

- Include upper and lower machine, 19t rear counterweight, and basic boom, hook, and other accessories;
- Whole machine weight with basic boom: 57.2t;
- Ground pressure: 0.075MPa.

Boom

- Boom: welded lattice structure of high-strength tubes;
- Pendant cable: quick-connecting hitches for pendant cables to facilitate assembly.

Boom Length

Boom	Longest boom	28m
	Standard boom length of SDDC	19m
	Standard boom length of Dynamic Compaction	25m

Safety Device

Assembly/Work Mode Switch
- In Assembly Mode, the auxiliary actions are enabled to facilitate crane assembly;
- In Work Mode, the auxiliary actions are disabled.

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

Function Lock
- If the function lock lever is not in work position, all the otherhandles won't work, which prevents any mis-operation caused byaccidental collision.

Swing Lock
- Swing Lock can lock the machine at four positions, front and back, left and right.

Boom Limit Device
- When the boom elevation angle is over 80°, the buzzer sounds and boom action cut off. The protection is controlled by travel switch.

Back-stop Device
- Its major components are nesting tubes and spring, in order to buffer the boom backlash and prevent further tipping back.

Boom Angle Indicator
- Pendulum angle indicator is fixed on the side of boom base close to the cab, so as to provide convenience to the operator.

Hook Latch
- The lifting hook is installed with a baffle plate to prevent wire rope from falling off.

Monitoring System
- Remote Monitoring system is a standardized offering to provide functions like GPS locating, GPRS data transfer, machine status inquiry and statistics, operating data monitoring and analysis, remote diagnosis of failures.

Lightning Protection Device
- It is offered as an optional feature, which includes the grounding device that can effectively protect the electric system elements and workers from lightning.

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

Illuminating Light
- The machine is equipped with, short-beam light in front of machine, front angle adjustable far-beam, lamps in operator's cab, lighting devices for night operation, so as to increase the visibility during work.

Rearview Mirror
- It is installed on the right of the operator's cab and front of for monitoring the rear part of the machine.

Anemometer
- It is mounted on the top of boom/jib to monitor the wind speed and send the data back to be displayed on the monitor in the cab.

Cab protective cover
- Metal protection is installed at the front, roof and inside of cab to protect the operator and machine from the splashes during the construction.

B

SCC600HD
BASE CONSTRUCTION CRAWLER CRANE
350T·M TAMPING ENERGY

QUALITY CHANGES THE WORLD

Technical Parameters

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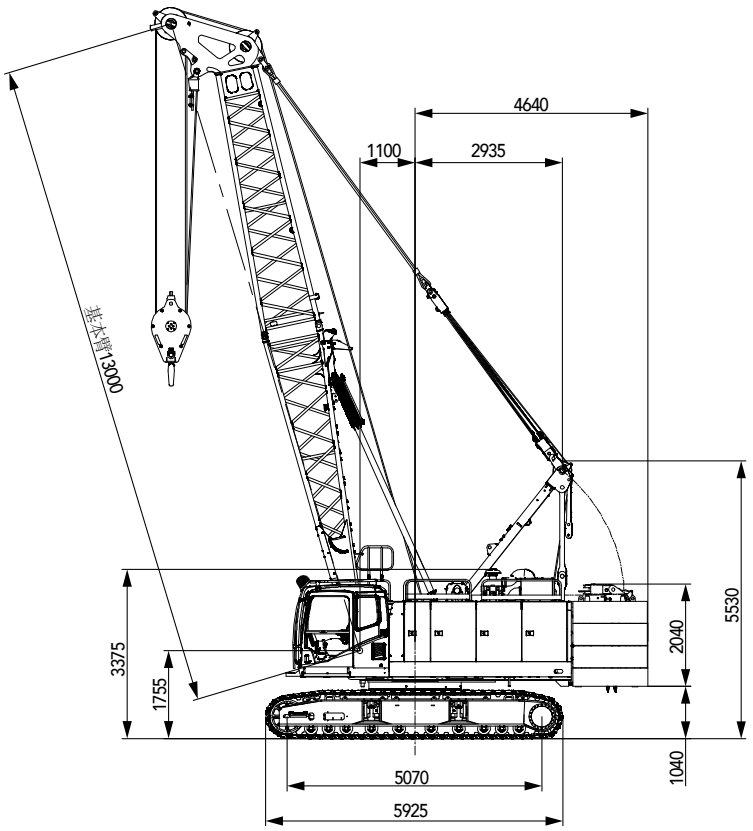
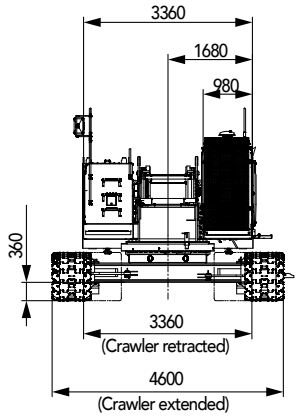
Major Performance & Specifications

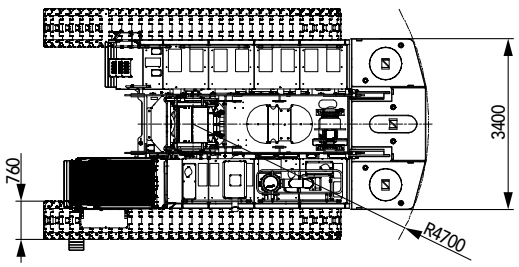
Major Performance & Specifications of SCC600HD			
Performance Indicators		Unit	Parameter
Boom Configuration	Tamping energy	t·m	350(no gantry) /800(with gantry)
	Allowed single rope tamping energy of hook-on type	t·m	150
	Allowed tamping hammer weight	t	17.5(no gantry) /40(with gantry)
	Boom length	m	19~25(3m insert is optional)
	Boom luffing angle	°	60~80
Speed	Rope speed of main/aux. load hoist winch (3rd layer)	m/min	115
	Rope speed of boom hoist winch (work layer)	m/min	80
	Swing speed	rpm	2.0
	Travel speed	km/h	0~1.2
Wire rope	Main hoist wire rope: diameter × length	mm	28
	Rated single line pull of main load hoist wire rope	kN	132.3(13.5t)
Engine	Model	-	QSL8.9-C325
	Rated power/revolution speed	kW/ rpm	242/2100
Transport	Weight of machine with basic boom	t	57.2
	Rear counterweight	t	19.0
	Transport weight of basic machine (with crawler frames and boom base)	t	35.5
	Transport weight of basic machine (without crawler frames and boom base)	t	20.0
	Machine transport dimension (with crawlers and boom base) L×W×H	mm	12050×3360×3375
	Machine transport dimension (without crawlers and boom base) L×W×H	mm	6940×3360×3010
Other specifications	Average ground pressure (basic boom)	MPa	0.075
	Gradeability	%	30

Unit: mm

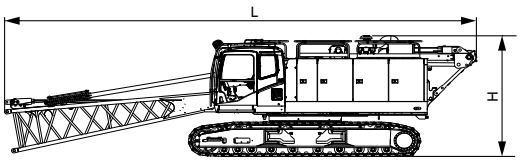
Outline Dimension



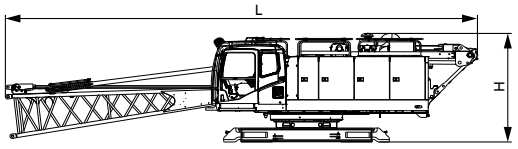




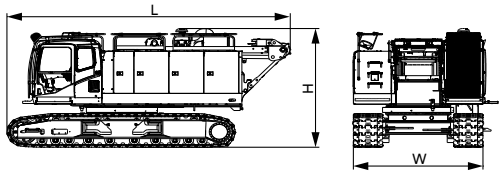
Transport Dimension



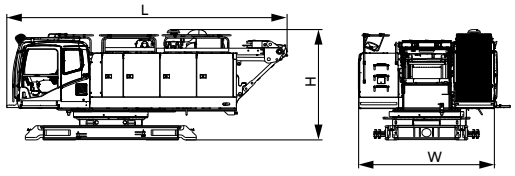
Basic Machine 1 (with boom base and crawlers)	×1
Length (L)	12.05m
Width (W)	3.36m
Height (H)	3.38m
Weight	35.5t



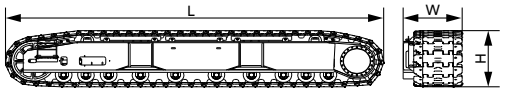
Basic Machine 2 (with boom base)	×1
Length (L)	12.05m
Width (W)	3.36m
Height (H)	3.01m
Weight	21.7t



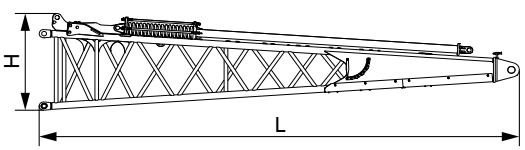
Basic Machine 3 (with crawlers)	×1
Length (L)	7.35m
Width (W)	3.36m
Height (H)	3.38m
Weight	33.8t



Basic Machine 4	×1
Length (L)	6.94m
Width (W)	3.36m
Height (H)	3.01m
Weight	20.0t

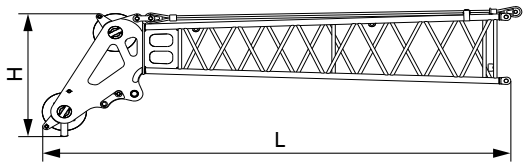


Crawlers	×2
Length (L)	5.93m
Width (W)	0.93m
Height (H)	0.96m
Weight	6.9t

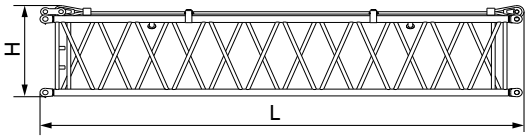


Boom Base	×1
Length (L)	6.68m
Width (W)	1.62m
Height (H)	1.47m
Weight	1.71t

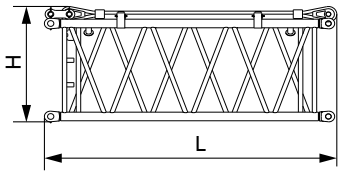
Transport Dimension



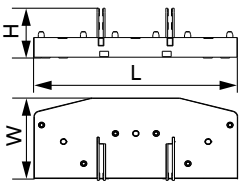
Boom Top	×1
Length (L)	6.89m
Width (W)	1.41m
Height (H)	2.24m
Weight	1.93t



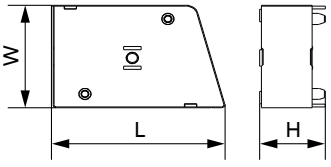
6m Boom Insert	×2
Length (L)	6.16m
Width (W)	1.43m
Height (H)	1.37m
Weight	0.9t



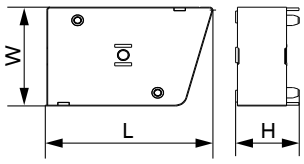
3m Boom Insert	×1
Length (L)	3.16m
Width (W)	1.43m
Height (H)	1.37m
Weight	0.56t



Counterweight Tray	×1
Length (L)	3.40m
Width (W)	1.50m
Height (H)	0.92m
Weight	5.2t

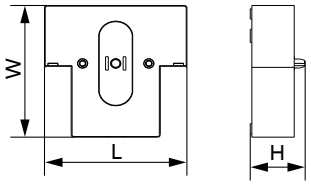


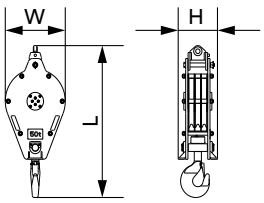
Left Counterweight Block	×3
Length (L)	1.50m
Width (W)	0.96m
Height (H)	0.57m
Weight	1.5t

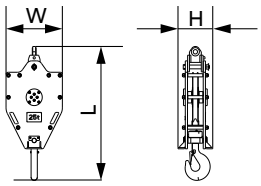


Right Counterweight Block	×3
Length (L)	1.50m
Width (W)	0.96m
Height (H)	0.57m
Weight	1.5t

Transport Dimension







Carbody Counterweight	×2
Length (L)	1.47m
Width (W)	1.48m
Height (H)	0.57m
Weight	2.3t

50t Hook	×1
Length (L)	1.89m
Width (W)	0.80m
Height (H)	0.56m
Weight	1.33t

25t hook	×1
Length (L)	1.77m
Width (W)	0.77m
Height (H)	0.48m
Weight	0.58t

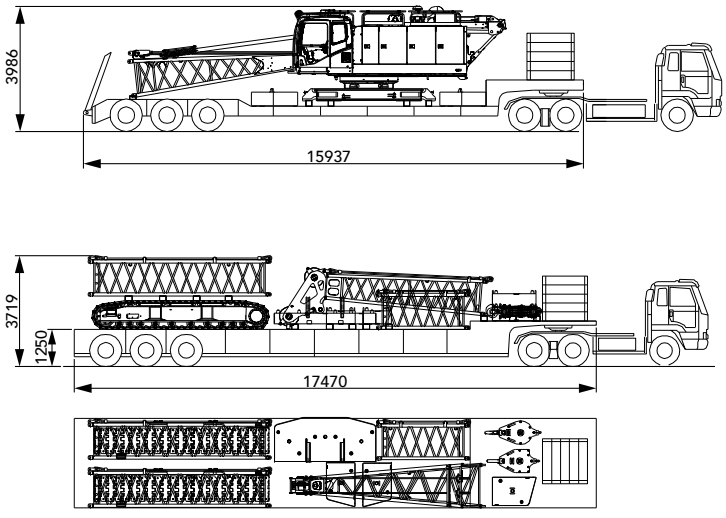
Note:
1. The transport dimensions of each part in the table are schematic, not proportional to the real parts. The dimensions are designed value without package considered.
2. The Weight is designed value that the actual manufactured part may deviate a little.

Transport Dimension

Transport Plan 1

Trailer 1	▪ Width:3.36m
Part(s)	▪ Basic Machine(with boom base and withoutcrawlers) ▪ Carbody counterweight × 2 ▪ Right counterweight ×3
Weight	▪ 29.3t

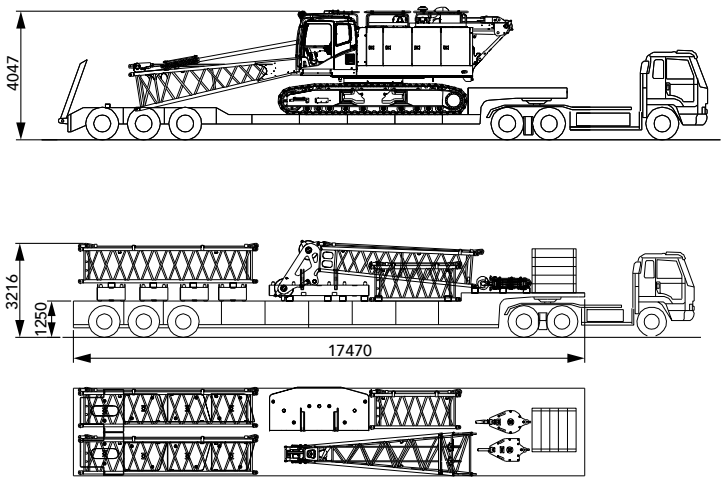
Trailer 2	▪ Width:3.36m
Part(s)	▪ 6m boom ×2 ▪ 3m boom ×1 ▪ Boom top x1 ▪ Left Crawler x1 ▪ Right Crawler x1 ▪ 25t hook ×1 ▪ 50t hook ×1 ▪ Counterweight tray ×1 ▪ Left counterweight ×3 ▪ Right counterweight ×1
Weight	▪ 31.2t



Transport Plan 2

Trailer 1	▪ Width:3.36m
Part(s)	▪ Basic Machine(with boom base and crawlers)
Weight	▪ 35.5t

Trailer 2	▪ Width:3.36m
Part(s)	▪ 9m boom ×2 ▪ 3m boom ×1 ▪ Boom top x1 ▪ 25t hook ×1 ▪ 50t hook ×1 ▪ Counterweight tray ×1 ▪ Left counterweight ×3 ▪ Right counterweight ×3 ▪ Carbody counterweight × 2
Weight	▪ 25t



Note:
1. The machine and parts in transport should be secured on the trailer with wire rope or slings, and also pads in between to protect parts from shock or abrasion.
2. During boom transport, do not tie the boom with wire rope or other hard slings, recommend to use soft band, so as to avoid damage on the boom.
3. The transport plan listed here is only for reference. The actual transport plan needs to be adjusted based on the actual transport vehicle and local regulations.
4. The parts listed here is standard offering. The transport dimension and weight may be slightly different due to actual configurations with optional offering.

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SCC600HD
BASE CONSTRUCTION CRAWLER CRANE
350T·M TAMPING ENERGY

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Configurations

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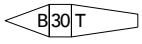
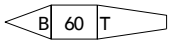
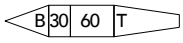
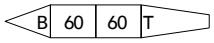
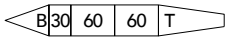
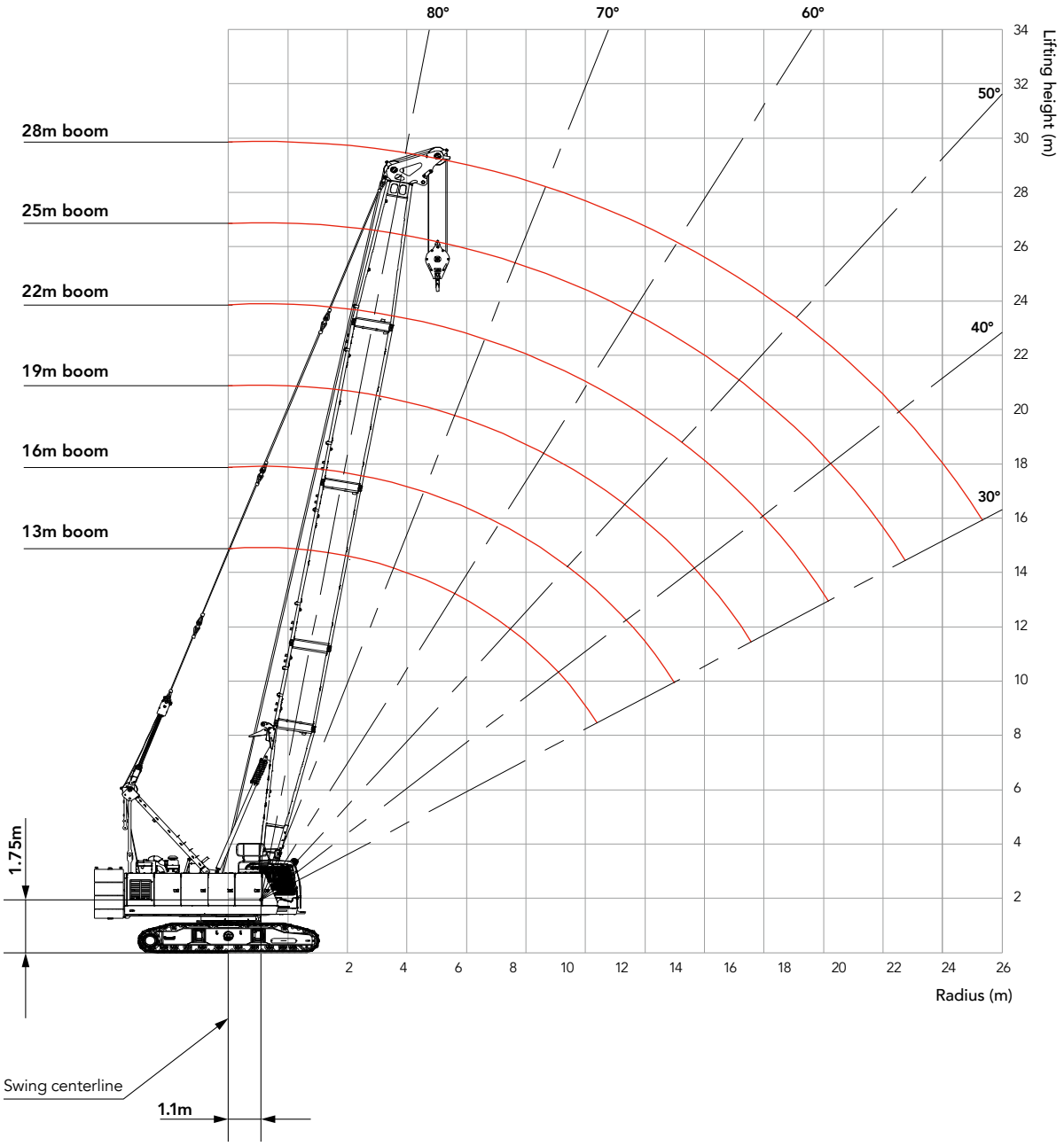
Boom/jib arrangements

Boom length	Boom arrangements
13	
16	
19	
22	
25	
28	

Symbol	length	Remark
	6.5m	Boom base
	6.5m	Boom top
	3m	3m insert
	6m	6m insert

Note:
The standard offering for SDDC is 19m boom, no hook. The standard offering for dynamic compaction is 25m boom with 50t hook.

Work Radius of H Configuration



H Information

- Ratings according to Chinese GB3811.
- Working radius is the horizontal distance from centerline of rotation to a vertical line through the center of gravity load.
- The weight of hook, slings and other riggings shall be deducted from the ratings to get the actual capacity.
- The ratings are calculated when the load is freely suspended without considering the effect of wind load, ground condition, levelness, 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.
- All ratings are calculated when the machine is parking on firm and level ground with less than 1% gradient, and the load is lifted slowly and steadily.
- Boom inserts and pendant straps matching table are listed in the operation manual.
- Gantry must be in raised position for all work conditions.
- Boom backstops are required for all boom lengths.
- The boom should be erected over the front of the crawlers, not from side.
- Crawler frames must be fully extended for all crane operations.
- **Rated load values have taken into the 1.5 absorption coefficient, not include the wind load and inertia load, impact load or other additional load. During displacement tamping the absorption coefficient is larger than 1.5, the load chart needs to be adjusted based on actual conditions.**
- **During dynamic compaction, the hammer should not be larger than 17.5t without gantry.**
- The following is the relationship between wire rope parts line and maximum rated load and hook weight.

Hook specification	Hook weight (t)	Rated load(t)
25t	0.6	17.5(2 parts of line)
50t	1.3	40(3 parts of line)

Note:
The machine damage due to overload or incorrect operation is not covered by warranty.

Counterweight assembly
19.0t counterweight

<table>
<tr><td>NO.2</td><td></td><td>NO.3</td></tr>
<tr><td>NO.2</td><td>NO.4</td><td>NO.3</td></tr>
<tr><td>NO.2</td><td>NO.4</td><td>NO.3</td></tr>
<tr><td colspan="3">NO.1</td></tr>
</table>

counterweight

Unit: t

Load Charts for H

SCC600HD Crawler Crane – Dynamic Compaction

Rear Counterweight 19t

R/BL(m)	16				19				22				25				R/BL(m)
	Boom angle (°)	Front/Back (t)	Left/Right (t)	Height (m)	Boom angle (°)	Front/Back (t)	Left/Right (t)	Height (m)	Boom angle (°)	Front/Back (t)	Left/Right (t)	Height (m)	Boom angle (°)	Front/Back (t)	Left/Right (t)	Height (m)	
6	74.8	28.2	27.0	16.9	77.5	28.1	27.0	20.1									6
6.5	72.9	24.8	23.9	16.7	76.0	24.8	23.8	19.9	77.7	24.7	23.7	23.0					6.5
7	70.9	22.2	21.4	16.5	74.4	22.1	21.3	19.8	76.3	22.0	21.2	22.9	78.0	21.9	21.1	26.0	7
7.5	69.0	20.0	19.3	16.3	72.8	19.9	19.2	19.6	75.0	19.8	19.1	22.7	76.8	19.7	19.0	25.8	7.5
8	67.0	18.2	17.5	16.1	71.2	18.1	17.5	19.4	73.6	18.0	17.4	22.6	75.6	17.9	17.3	25.7	8
8.5	65.0	16.6	16.1	15.8	69.6	16.6	16.0	19.2	72.2	16.5	15.9	22.4	74.4	16.4	15.8	25.5	8.5
9	62.9	15.3	14.8	15.5	68.0	15.3	14.8	19.0	70.8	15.1	14.6	22.2	73.2	15.0	14.5	25.4	9
9.5	60.8	14.2	13.7	15.2	66.4	14.1	13.7	18.7	69.4	14.0	13.5	22.0	72.0	13.9	13.4	25.2	9.5
10					64.7	13.1	12.7	18.5	68.0	13.0	12.6	21.7	70.8	12.9	12.5	25.0	10
11					61.2	11.5	11.1	17.9	65.1	11.3	11.0	21.3	68.3	11.2	10.9	24.6	11
12									62.1	10.0	9.7	20.7	65.8	9.9	9.6	24.1	12
13													63.2	8.8	8.5	23.6	13
14													60.5	7.9	7.6	23.0	14

Note:
1.The direction aligned with track frames is front/back.
2.The direction perpendicular to the track frames is left/right.
3.The direction of tension wheel of crawler is front.

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