



SCC900HD

Base Construction Crawler Crane 90 Tons Lifting Capacity

Quality Changes the World



Max. lifting capacity: 90t
Max. boom length: 55m

The parameters and diagrams in the brochure is only for reference, which is subject to further update in real machine.

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Base Construction Crawler Crane SCC900HD

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SCC900HD
BASE CONSTRUCTION CRAWLER CRANE
90 TONS LIFTING CAPACITY

QUALITY CHANGES THE WORLD

Major Specifications

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Product Specification



Engine

- Model: Cummins QSL9-C325;
- Type: 4 stroke, water-cooled, vertical in-line 6, direct injection, turbo-charger, intercooler;
- Displacement: 8.9L;
- Rated power: 242kW/2100rpm;
- Max. Torque: 1424N·m/1500rpm ;
- Cooling System: Water-cooled;
- Starter: 24V-7.8kW;
- 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;
- Emission standard: meet China Off-way Tier III emission standard;
- Fuel tank capacity: 400L

Hydraulic System

- Two Kawasaki piston pump in series;
- 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: 450L.

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.

Load Hoist System

- The main and aux. 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 3rd layer	0-120m/min
	Wire rope diameter	28mm
	Wire rope working length	200m
	Max. single line pull	25t
	Rated single line pull	13.5t
Aux. Hoist Winch	Drum Pitch Diameter	648mm
	Rope speed on the 3rd layer	0-120m/min
	Wire rope diameter	28mm
	Wire rope working length	130m
	Max. single line pull	25t
	Rated single line pull	13.5t



Product Specification

Boom Hoist System

- It is powered by a hydraulic motor through reducer.

Boom Hoist Winch	Drum Pitch Diameter	420mm
	Rope speed on the outermost layer	0-59m/min
	Wire rope diameter	20mm
	Wire rope working length	140m

Swing Mechanism

- Swing unit is powered by hydraulic motor driving reducer to swing 360° rotation;
- Swing parking brake: normally-closed, embedded, wet, spring-loaded disc brake; braking with spring force and release with oil pressure;
- Swing bearing: Single-row ball bearing;
- Swing lock: Lock devices on four position are designed to prevent swing backlash during traveling or transport. EPAD switch is used to control locking/unlocking of swing pin cylinder.
- Swing Speed: 0-4rpm.

Upperworks

- Torsion-free precision machined high-strength welded structure. All components are located in optimum and easier for maintenance and service. Engine noise is low;
- Counterweight: 30.3 ton.

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: 10.4-inch touch screen, programmable smart buttons and handles with vibration available, and man-machine interaction interface perfectly improved.

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;
- Shoe: 850 mm wide each crawler;
- Max. gradeability: 30 %.

Weight

- Include upper and lower machine, 30.3t rear counterweight, 6.4t undercarriage weight, and basic boom, hook, and other accessories;
- Basic Boom Weight: 90t;
- Ground pressure: 0.085MPa.

Boom

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

Boom Length

Boom	Shortest	Longest
	13m	55m

Safety Device



Assembly/Work Mode Switch

- In Assembly Mode, the over-hoist protection, boom limit, LMI are all off work to facilitate crane assembly;
- In Work Mode, all safety devices activated to protect the operation.

Emergency Stop

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

Load Moment Indicator (LMI)

- It is an independent computerized safety control system. LML can automatically detect the load weight, work radius and boom angle, and present on the display the rated load, actual load, work radius and boom angle. In normal operation, the LML can make a judgment and cut off automatically if the crane moves towards dangerous direction. It can also perform as a black box to record the lifting information.

Over-hoist Protection of the Main/ Auxiliary Hooks

- It comprises of limit switch and weight on boom top, which prevents the hook lift up too much. When the hook lifts up to the limit height, the limit switch is activated, buzzer on the left control panel sends alarm, and failure indicator light starts to flash, the hook hoisting action is cut off automatically.

Over-release Protection Device of the Main/Auxiliary Winch

- It comprises of activator in the drum and proximity switch to prevent over release of wire rope. When the rope is paid out close to the last three wraps, the limit switch acts, and the system sends alarm through buzzer and shows the alarm on the instrument panel, automatically cutting off the winch action.

Function Lock

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

Boom Hoist Drum Lock

- The boom hoist winch is electrically locked. Press the EPAD winch locking switch before operation, so as to prevent any accidental hitting, making sure the winch parked safely at non-working time.

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. This protection is two-stage control ensured by both LMI system and 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.



Safety Device

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.

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 reaches 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 siren.

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

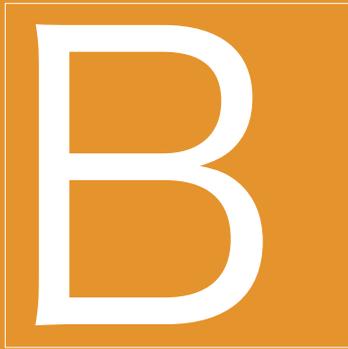
- Set on the left front of the cab and on the handrail at the front of right sheet metal, so as to monitor the rear part of machine.

Pharos

- It is mounted on the top of boom/jib, and displayed on the monitor in the cab.

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.

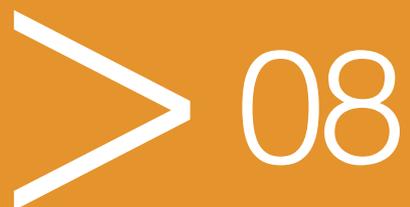


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90 TONS LIFTING CAPACITY

QUALITY CHANGES THE WORLD

Technical Parameters

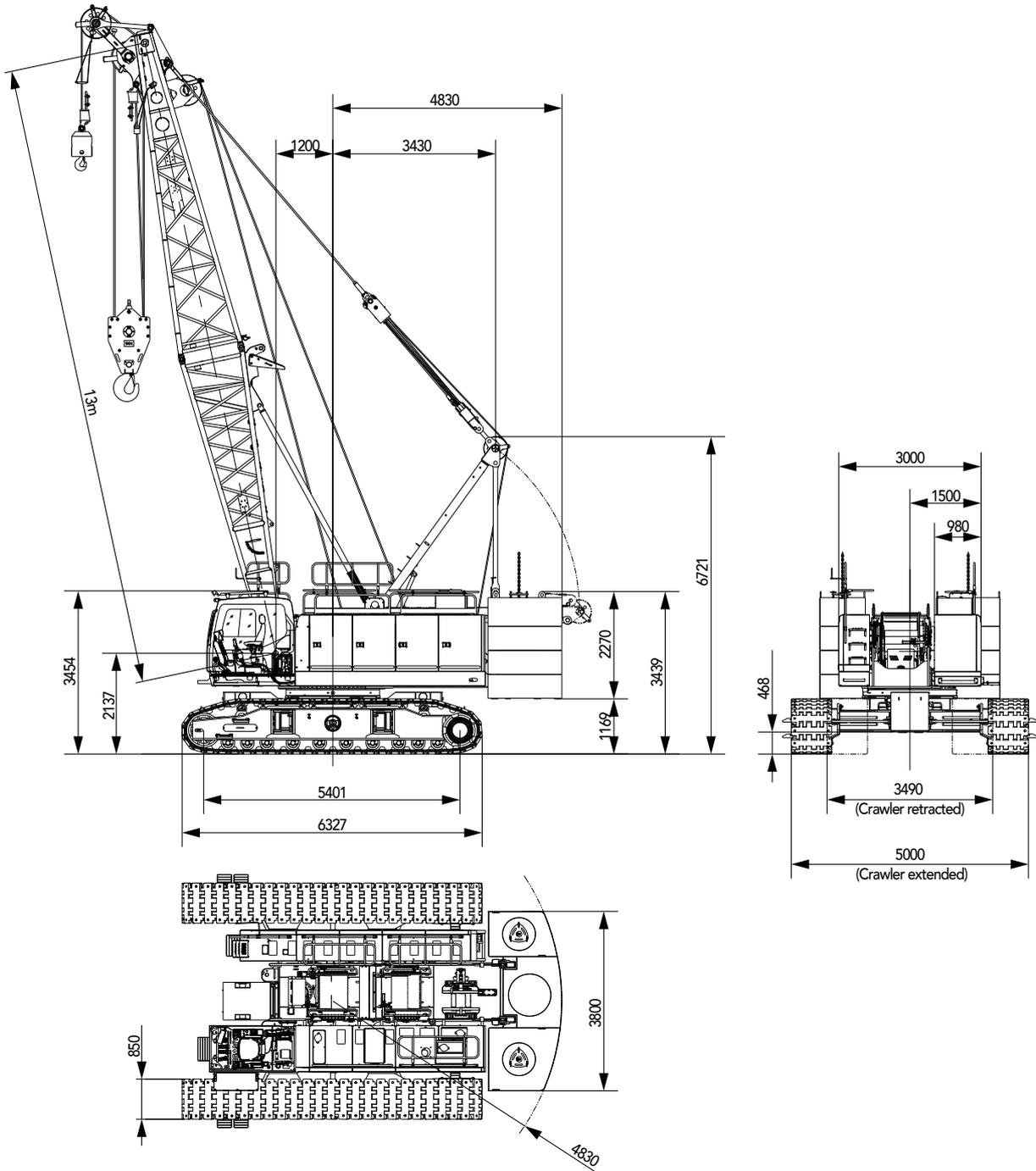
- Page 09 Major Performance & Specifications
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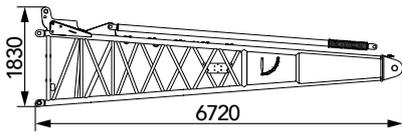
Major Performance & Specifications

Major Performance & Specifications of SCC900HD			
Performance Indicators		Unit	Parameter
Boom Configuration	Max. rated lifting capacity	t	90
	Max. lifting moment	t·m	365
	Boom length	m	13~55
	Boom luffing angle	°	30~80
Speed	Rope speed of main/aux. load hoist winch (3rd layer)	m/min	120
	Rope speed of boom hoist winch (3rd layer)	m/min	59
	Swing speed	rpm	4
	Travel speed	km/h	1.8/0.9
Wire rope	Main and aux. hoist wire rope: diameter × length	mm	28
	Single line pull of main/aux. load hoist wire rope	t	13.5
Engine	Model	-	QSL9-C325
	Rated power/revolution speed	kW/ rpm	242/2100
Transport	Weight of machine with basic boom	t	90
	Rear counterweight	t	30.3
	Undercarriage counterweight	t	3.2×2
	Transport weight of basic machine (with crawler frames and boom base)	t	48.1
	Transport weight of basic machine (without crawlers and boom base)	t	28.5
	Machine transport dimension (with crawlers and boom base) L×W×H	mm	13250×3490×3405
Machine transport dimension (without crawlers and boom base) L×W×H	mm	8300×3000×2960	
Other specifications	Average ground pressure (basic boom)	MPa	0.085
	Gradeability	%	30

Outline Dimension

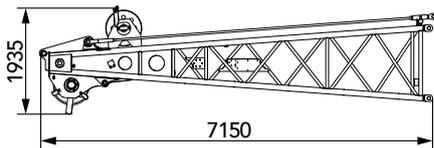


Transport Dimension



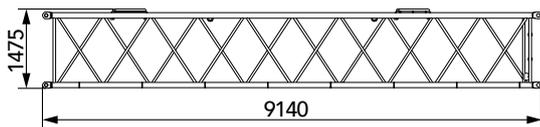
Boom base ×1

Length (L)	6720mm
Width (W)	1780mm
Height (H)	1830mm
Weight	1840kg



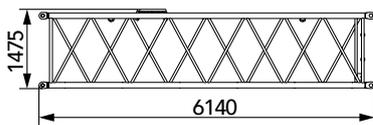
Boom top ×1

Length (L)	7150mm
Width (W)	1490mm
Height (H)	1935mm
Weight	1785kg



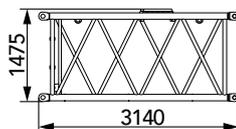
9m boom ×3

Length (L)	9140mm
Width (W)	1510mm
Height (H)	1475mm
Weight	1015kg



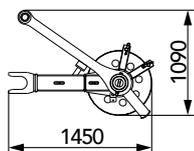
6m boom ×2

Length (L)	6140mm
Width (W)	1510mm
Height (H)	1475mm
Weight	750kg



3m boom ×1

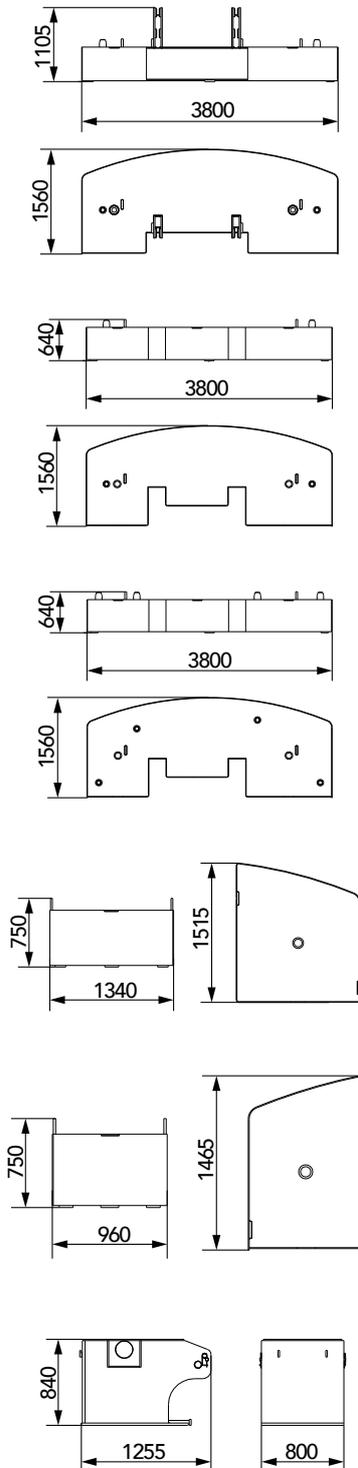
Length (L)	3140mm
Width (W)	1510mm
Height (H)	1475mm
Weight	485kg



Extension jib ×1

Length (L)	1450mm
Width (W)	855mm
Height (H)	1090mm
Weight	345kg

Transport Dimension



Counterweight tray ×1

Length (L)	3800mm
Width (W)	1560mm
Height (H)	1105mm
Weight	8315kg

Counterweight block I ×1

Length (L)	3800mm
Width (W)	1560mm
Height (H)	640mm
Weight	7950kg

Counterweight block II ×1

Length (L)	3800mm
Width (W)	1560mm
Height (H)	640mm
Weight	7955kg

Left counterweight ×1

Length (L)	1340mm
Width (W)	1515mm
Height (H)	750mm
Weight	3605kg

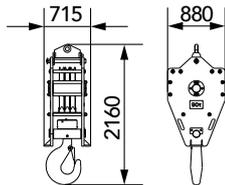
Right counterweight ×1

Length (L)	960mm
Width (W)	1465mm
Height (H)	750mm
Weight	2530kg

Carbody counterweight ×2

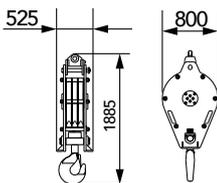
Length (L)	1255mm
Width (W)	800mm
Height (H)	840mm
Weight	3200kg

Transport Dimension



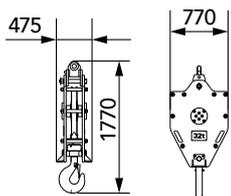
90T Hook ×1

Length (L)	2160mm
Width (W)	880mm
Height (H)	715mm
Weight	1275kg



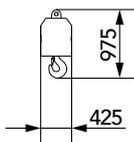
50T Hook ×1

Length (L)	1885mm
Width (W)	800mm
Height (H)	525mm
Weight	780kg



32T Hook ×1

Length (L)	1770mm
Width (W)	770mm
Height (H)	475mm
Weight	575kg



13.5T Hook ×1

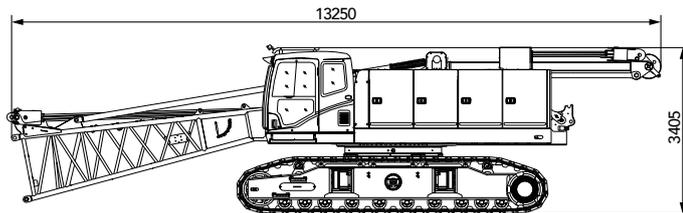
Length (L)	975mm
Width (W)	425mm
Height (H)	425mm
Weight	445kg

Note: Parts transport dimensions are sketches not proportional to the actual parts. The dimensions and weights are designed values without package, which are subject to fabrication tolerance.

Transport Plan

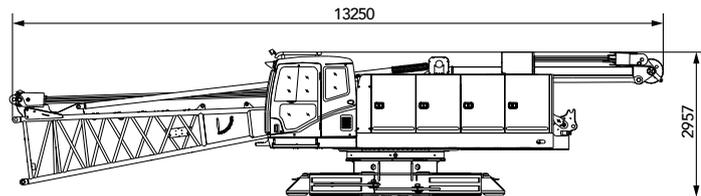
Basic machine 1

- | | |
|---------|---|
| Part(s) | <ul style="list-style-type: none"> ▪ Boom base ▪ Crawlers |
| Weight | <ul style="list-style-type: none"> ▪ 48100kg |



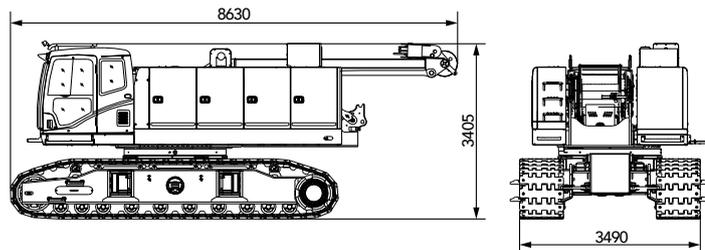
Basic machine 2

- | | |
|---------|---|
| Part(s) | <ul style="list-style-type: none"> ▪ Boom base |
| Weight | <ul style="list-style-type: none"> ▪ 28500kg |



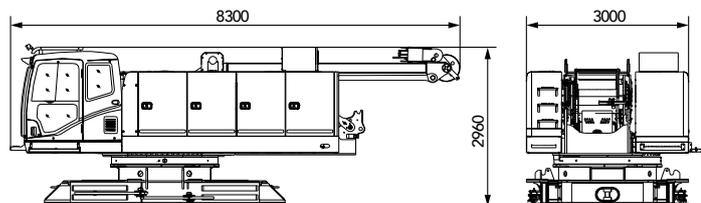
Basic machine 3

- | | |
|---------|--|
| Part(s) | <ul style="list-style-type: none"> ▪ Crawlers |
| Weight | <ul style="list-style-type: none"> ▪ 46500kg |



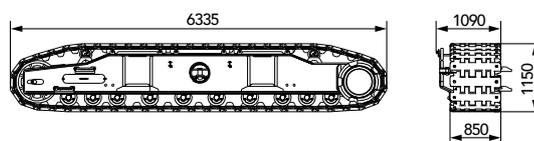
Basic machine 4

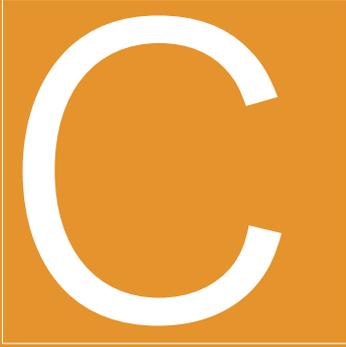
- | | |
|--------|---|
| Weight | <ul style="list-style-type: none"> ▪ 26500kg |
|--------|---|



Crawlers

- | | |
|--------|--|
| Weight | <ul style="list-style-type: none"> ▪ 9890kg |
|--------|--|





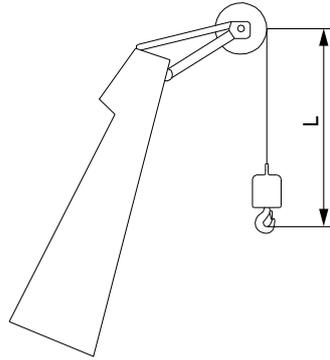
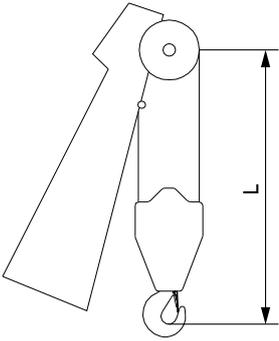
SCC900HD BASE CONSTRUCTION CRAWLER CRANE 90 TONS LIFTING CAPACITY

QUALITY CHANGES THE WORLD

Cofigurations

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Height limit of hook

Hook	L
90t Hook	4.6m
50t Hook	4.4m
32t Hook	4.3m

Hook	L
13.5t ball hook	3.7m

Boom/jib arrangements

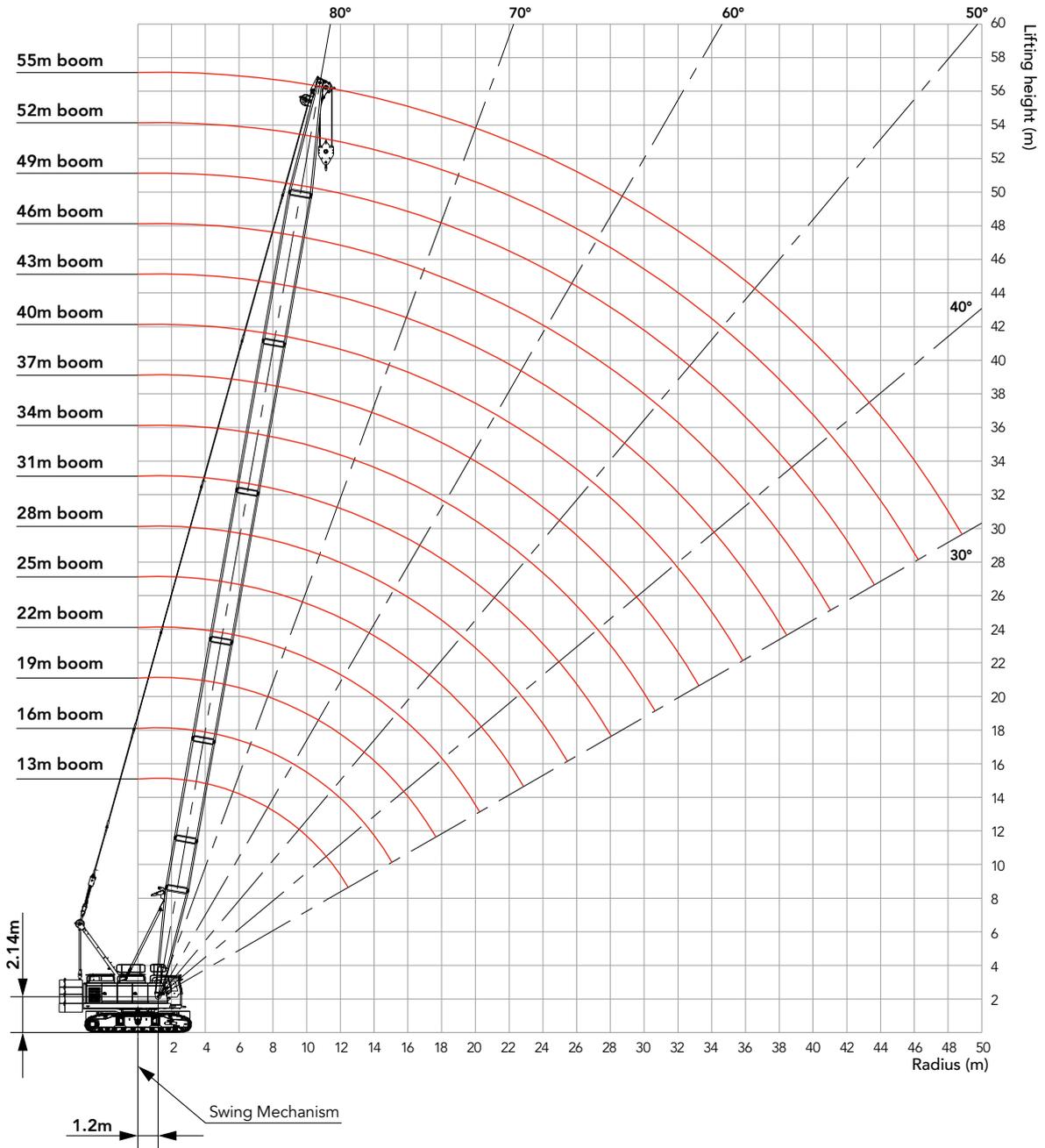
Boom length	Boom/jib arrangements
13	※
16	※
19	※
22	※
25	 ※
28	 ※
31	 ※
34	※

Boom length	Boom/jib arrangements
37	※
40	 ※
43	※
46	 ※
49	※
52	※
55	※

Symbol	length	Remark
	6.5m	Boom base
	6.5m	Boom top
	3m	3m insert
	6m	6m insert
	9m	9m insert

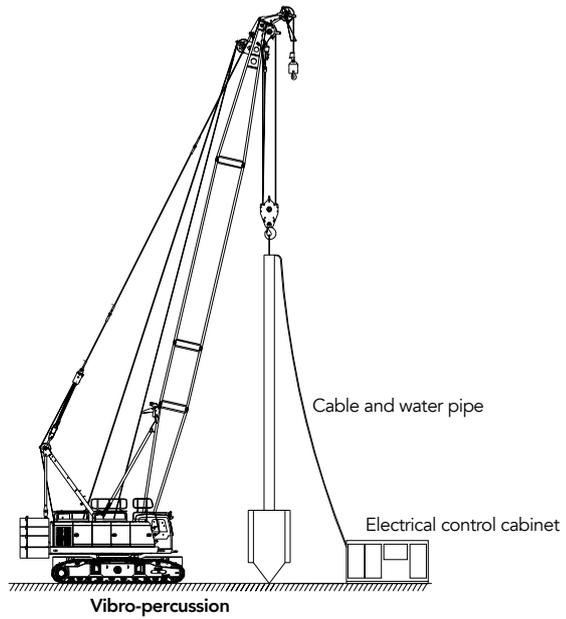
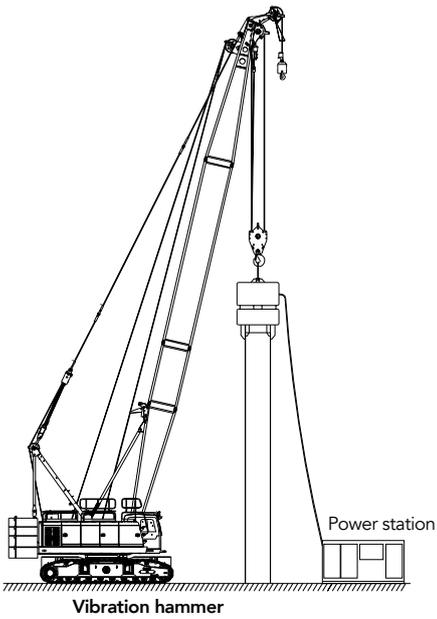
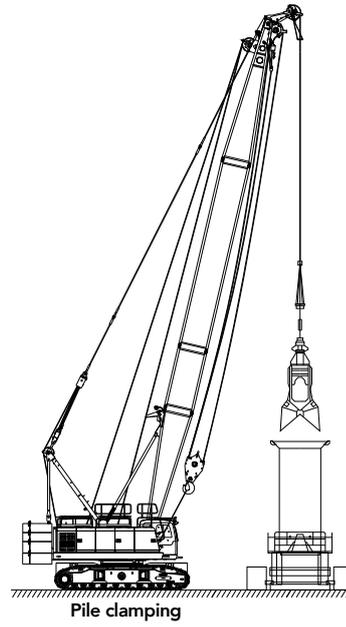
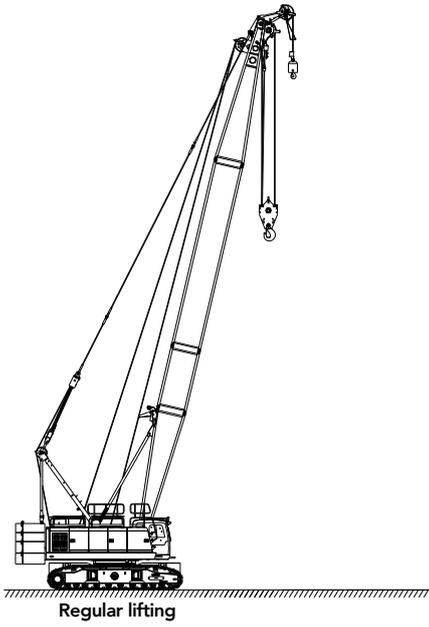
※ Means the most flexible combination, which can be modified to form shorter boom/jib arrangements

Work Radius of H Configuration



Work Operation

Applicable to lifting, pile clamping, vibration hammer, vibropercussion and clamshell, satisfying multiple purposes.



H Information

- Ratings according to 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.

Reference information

Main load hoist

Parts of line	1	2	3
Max. load moment (kN)	132.3	264.6	396.9
Max. load (t)	13.5	27	40.5

Parts of line	4	5	6
Max. load moment (kN)	529.2	661.5	793.8
Max. load (t)	54	67.5	81

Parts of line	7
Max. load moment (kN)	882
Max. load (t)	90

Aux. load hoist

Parts of line	1
Max. load moment (kN)	132.3
Max. load (t)	13.5

Hook weight

Hook block	90t	50t	32t	13.5t
Weight (t)	1.28	0.78	0.58	0.45

Operation of this crane in excess of rated loads or disregard of instruction is denied of warranty.

Counterweight assembly

30.3t counterweight

NO.4		NO.5
NO.3		
NO.2		
NO.1		

counterweight

Unit: t

Load Charts for H

SCC900HD Crawler Crane – H Configuration 1/2									
Rear counterweight 30.3t, Undercarriage counterweight 6.4t									
R/BL (m)	13	16	19	22	25	28	31	34	R/BL (m)
4	90								4
5	73	72							5
6	59.5	58.9	58.5	59	58.7				6
7	47.2	47	46.5	46.2	46.2	46.3	46.3		7
8	39	38.6	38.8	38	37.7	38.1	38	37.5	8
9	33	33	32.6	32.8	32.1	32.2	32.1	32	9
10	28.5	28.6	28.3	28.3	27.8	27.8	27.8	27.5	10
11	25	25.1	24.9	24.9	24.5	24.5	24.4	24.3	11
12	22.3	22.4	22.3	22.1	21.8	21.8	21.7	21.7	12
14		18.1	18.2	18.1	17.8	17.7	17.7	17.6	14
16			15.3	15.2	15	14.9	14.8	14.7	16
18			13.2	13.1	12.8	12.7	12.6	12.5	18
20				11.4	11.1	11	11	10.8	20
22					9.8	9.7	9.6	9.5	22
24					8.7	8.6	8.5	8.3	24
26						7.6	7.6	7.4	26
28							6.8	6.6	28
30								6	30
32									32
34									34
36									36
38									38
40									40
44									44
48									48

Load Chart for H

SCC900HD Crawler Crane – H Configuration 2/2								
Rear counterweight 30.3t, Undercarriage counterweight 6.4t								
R/BL (m)	37	40	43	46	49	52	55	R/BL (m)
4								4
5								5
6								6
7								7
8								8
9	32	31						9
10	27.6	27.5	27					10
11	24.2	24.1	23.5	23.5	23.2			11
12	21.5	21.4	21	21	21	20.5		12
14	17.5	17	17	17	17	16.8	16.5	14
16	14.6	14.1	14.2	14	14.1	13.8	13.7	16
18	12.4	12	12	12	11.9	11.5	11.5	18
20	10.7	10.4	10.3	10	10.2	10	9.8	20
22	9.4	9	9	8.8	8.9	8.6	8.5	22
24	8.2	7.9	8	7.8	7.7	7.5	7.4	24
26	7.3	7	7	7	6.7	6.5	6.4	26
28	6.5	6.3	6	6	6	5.9	5.7	28
30	5.9	5.6	5.5	5.3	5.3	5.2	5	30
32	5.3	5	5	4.7	4.7	4.5	4.4	32
34		4.5	4.5	4.3	4.2	4	3.8	34
36		4.1	4	3.9	3.7	3.6	3.5	36
38		3.7	3.5	3.6	3.4	3.4	3	38
40				3	2.9	2.8	2.6	40
44						2.2	2	44
48							1.5	48

Clamshell Information

- Working radius is the horizontal distance from centerline of rotation to a vertical line through the center of gravity load.
- 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.
- Rated capacity is less than 66% of minimum tipping load.
- The clamshell is not allowed to use on the boom length and radius not shown on the load chart.
- Boom inserts and pendant straps matching table are listed in the operation manual.
- Gantry must be in raised position for all 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.
- The weight of clamshell, lock, slings and other riggings shall be deducted from the ratings to get the actual capacity.
- Weight of clamshell and material shall not exceed rated load.
- Select the proper clamshell based on material to be handled.
- Capacity of bucket (m³)×material density (t/m³)+bucket weight(t)=rated capacity.
- The bucket weight shall be decreased according to the operation cycle and bucket lowering height.
- Rated capacity is determined by stability and boom strength. Multi-functions with lifting combined with swing must avoid sudden acceleration/deceleration.
- Do not release clamshell during swing or at angled position.

Reference :

Main load hoist:

Parts of line	1
Max. load moment (kN)	98
Max. load (t)	10

Operation of this crane in excess of rated loads or disregard of instruction is denied of warranty.

Counterweight assembly

24.2t counterweight

NO.3
NO.2
NO.1

counterweight

Load Chart for Clamshell

SCC900HD Crawler Crane – Clamshell						
R/BL (m)	Rear Counterweight 24.2t					R/BL (m)
	13	16	19	22	25	
4	10					4
5	10	10	10			5
6	10	10	10	10	10	6
7	10	10	10	10	10	7
8	10	10	10	10	10	8
9	10	10	10	10	10	9
10	10	10	10	10	10	10
11	10	10	10	10	10	11
12	10	10	10	10	10	12
14		10	10	10	10	14
16			8.4	8.3	8.2	16
18				7.1	7	18
20				6.1	6	20
22					5.4	22



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— Agent information —

Due to updated technology, the technical parameters and configurations are subject to change without prior notice. The machine in the picture may include additional equipment. This album is for reference only, subject to the object.
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