



# SCC19800TM

## Crawler Crane

Quality Changes the World



**Max. lifting moment: 19800t·m**  
**Max. boom length: 108m**  
**Max. luffing jib combination: 108m+114m**

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.



**Crawler Crane Series**  
**SCC19800TM**

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## **SCC19800TM SANY CRAWLER CRANE**

QUALITY CHANGES THE WORLD

### Main Characteristics

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## Product Specification



### Appearance

- The industrial modeling of the cab is designed by Porsche. It has a smooth, elegant and novel appearance, which is a significant breakthrough when compared with traditional engineering machinery and has excellent brand identification. The cab has a sliding door structure, which is suitable for the crawler crane and convenient for the operator. It is adopted with fully-sealed steel frame structure with a large area of high strength toughened glass installed on the front, side and top, transmitting more light. The interior space of the cab is spacious and bright, with a broader sight view.

### Comfort

- It is adopted with shock absorption, noise reduction, suspended, multi-mode and multi-stage adjustable seat, thus providing the operator with the most comfortable driving experience. The famous USA RedDot air conditioner is adopted, ensuring more reasonable air outlet and efficient cooling. It takes no more than 20 min to cool the cab from 55°C to 27.5°C. The left and right consoles are equipped with control handles, control buttons, ignition locks and other elements. The seats, control handles and control buttons are arranged according to ergonomic design, fully considering the driver's operation demands and habits. The control box can be adjusted to the most suitable position with the seat to ensure more comfortable operation. The cab can tilt up to 15° according to the work demands, and can also rotate to the front part of the rotating bed for the convenience of transport.

### Carbody

- The hydraulic cylinder driving power pin is connected with the crawler frame for easy assembly and disassembly. The high-strength steel welded frame structure is adopted. Larger carbody design significantly improves the stability of the overall crane. The carbody counterweight is 90t, 45t each at front and back.

### Crawler assembly

- Crawler frames: each crawler frame is equipped with independent traveling driving devices. The planetary gear reducer is driven by the hydraulic traveling motor, and independent traveling is realized through the transmission of the driving gear. The driving system has two speed positions, namely high speed and low speed: The low speed can provide sufficient traction force to realize 100% travel with load; the high speed can provide higher speed to improve the transit efficiency. The traveling drive can also realize stepless speed change.
- Track shoe: It is made of materials with high strength and high wear resistance through advanced casting process. After being installed on the equipment, its tension can be adjusted through the hydraulic cylinder, and the shim position can be adjusted to achieve the ideal tension.

### One-key leveling of outriggers

- With the machine gravity calculated in real time, the outrigger balance is detected by the cylinder pressure sensor, the outriggers can be adjusted to level state by one key to reduce assembly time and improve efficiency.



## Product Specification

### Engine

- Mercedes-Benz: (Euro Tier III), optional Euro Tier IV.
- Rated power: 2×315 kW.
- Rated speed: 1800 rpm.
- Maximum output torque: 2100 N·m.
- Speed at the maximum output torque: 1300 rpm.

### Load hoist winch mechanism

- The planetary gear box driven by hydraulic motor of variable displacement is used to control the main load hoist I and main load hoist II to lift and lower the load. It provides good inching performance, and also ensures quick powered lifting of main load hoist winches.
- The maximum number of parts of line is 62. The multilayer winding of rope-folding drum ensures no rope disorder. The gear box is featured in low noise, high efficiency, long service life and easy access to oil change.

Main load hoist winches W1-1 and W1-2	Speed of rope in the outermost working layer	0~140m/min
	Diameter of wire rope	32mm
	Rope length	1800m
	Rated single line pull	23.5t
Auxiliary load hoist winch W2	Speed of rope in the outermost working layer	140m/min
	Diameter of wire rope	28mm
	Rope length	600m
	Rated single line pull	17.2t

### Boom hoist winch mechanism

- Components: Boom luffing mechanism, jib luffing mechanism, superlift luffing mechanism.
- All luffing winches adopt fold-line drums, which are driven by hydraulic motor through the planetary gear box and can realize a number of compound actions and good inching performance.

Boom luffing mechanism W3	Speed of rope in the outermost working layer	65×2m/min
	Diameter of wire rope	32mm
Jib luffing mechanism W4	Speed of rope in the outermost working layer	0~130m/min
	Diameter of wire rope	32mm
Superlift luffing mechanism W5	Speed of rope in the outermost working layer	140m/min
	Diameter of wire rope	32mm

### Slewing mechanism

- The slewing hydraulic system adopts double motor to drive the spur gear through the planetary gear box, which can realize 360° rotation, slewing speed of 0~0.9 rpm, stepless speed regulation, no backlash at starting or stopping, stable operation and free slipping function at neutral position. Slewing ring: It is adopted with three-row roller type slewing bearing with external gears. The main unit can be separated from the lower structure through the adaptor ring.

## Product Specification



- The operating equipment is made of high-strength steel tubes and high-strength steel plates, and the rolled welded pulleys are adopted on the boom head and hook.

### Boom

- The boom is a spatial lattice structure of welded tubes with equal section areas of inserts and tapered sections for two ends. The boom top and root are strengthened with steel plates, which is easier for load transfer.
- The boom length is 111m, 30m (basic boom)~108m (with superlift), 3m boom insert used in non boom configuration.
- Compositions: Boom base 10.5m, 1 transition section of 12 m, 1 connecting tip of 1.5m, 1 insert of 3m, 2 inserts of 6m, and 6 inserts of 12m boom top pulley block.
- The extension jib is installed on the boom top.

### Fixed jib

- The fixed jib is a spatial lattice structure of welded tubes with equal section areas of inserts and tapered sections for two ends. The jib top and root are strengthened with steel plates, which is easier for load transfer.
- The length of the fixed jib is 12m.
- Compositions: Jib base 6m×1, jib top 6m×1.

### Luffing jib

- The luffing jib is a spatial lattice structure of welded tubes with equal section areas of inserts and tapered sections for two ends. The jib top and root are strengthened with steel plates, which is easier for load transfer.
- The length of the luffing jib is 30m~114m.
- Compositions: Jib base 10.5m×1, boom insert (H8D)12m×1, tapered section 6m×1, insert 6m×2, insert 12m×6, jib top 1.5m×1.
- The extension jib is installed on the jib top.

### Superlift device

- The superlift mast is a spatial lattice structure of welded tubes with equal section areas of inserts and tapered sections for two ends. The mast base and top are strengthened with steel plates, which is easier for load transfer.
- The length of the superlift mast is 42m.
- Compositions: Superlift base 12m×1, insert 6m×1, insert 12m×1, top 12m×1.

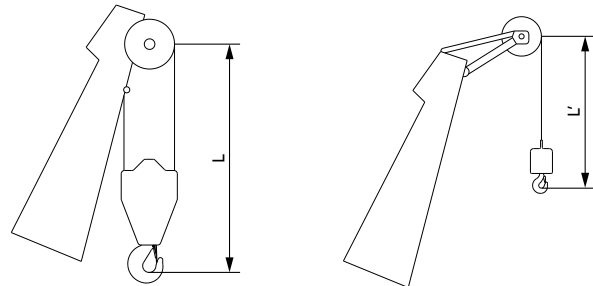
### Hook

- There are 4 types of hook available. The specific parameters are as follows:

Hook	Maximum lifting capacity	Quantity	Number of pulleys	Unit weight (t)
1250t hook (decomposable)	1250t	1	2×14	30.6
800t hook (dual pulley block)	800t	1	2×11	22.3
250t hook (dual pulley block)	250t	1	2×3	11.9
25t ball hook (no pulley)	25t	1	0	1.7

Note: The 1250t hook can be decomposed into 650t hook.

### Hook limitation height



Hook	L
1250t	10.38m
800t	8.4m
250t	7.26m

Hook	L'
25t	6.3m



## Product Specification

### Additional device

- Lower structure jack cylinders.
- Portable power pack.

### Counterweight

- The counterweight includes the carbody counterweight, rear counterweight, superlift counterweight, and the specific parameters are as follows:

Name	Quantity	Length (m)	Width (m)	Height (m)	Unit weight (t)
Carbody counterweight	6	2.40	2.85	0.484	10
Carbody counterweight tray	2	3.00	3.666	1.465	15
Rear counterweight	22	2.40	2.85	0.484	10
Rear counterweight tray	2	3.35	2.86	2.96	15
Superlift counterweight	52	2.40	2.85	0.484	10
Superlift counterweight tray	1	10.124	3.00	1.014	30

### Hydraulic system

- Hydraulic system includes load hoist hydraulic system, traveling hydraulic system, slewing hydraulic system, boom hoist hydraulic system, servo hydraulic system, back-stop hydraulic system, cooling system, auxiliary hydraulic system. The main hydraulic components are original parts imported.
- Characteristics: The load hoisting, traveling, boom hoist and slewing hydraulic systems are of closed loop type, featuring energy saving, high efficiency, quick response, low heat radiation and long service life.
- The servo system adopts electrical proportional control components to facilitate the accurate and intelligent control.
- The back-stop hydraulic system adopts balance valve of external control and unloading, and it is mounted on the cylinder to make sure it is safe and reliable.
- The cooling system is characterized by higher power and quicker cooling.

### Working weight

- The working weight is about 777t, including superstructure, lower structure, rear counterweight, carbody counterweight, 30m base boom and 1250t hook.

### Ground pressure

- The average ground bearing pressure of the crane with base boom is 0.14 MPa.

### Gradeability

- The gradeability of the crane with base boom is 20%.

## Safety Devices



### Load moment indicator

- The proprietary load moment limiter independently developed by Sany is adopted, which forms a network with other controllers through CAN bus line, so as to realize safe and reliable control. The load moment limiter can automatically detect the hoisting weight of the crane and the angle of the boom, and display the rated load capacity, actual load, working radius, and the allowable height of the hook.
- The load moment limiter system consists of a large-screen color display, a host computer, angle sensors, tension sensors, pressure sensors and other components.

### Over-hoist protection of the main and auxiliary hooks

- It is used to prevent the over-hoist of the hook. When the lifting hook is raised to a certain height, the limit switch will start working, and hook will be automatically cut off from moving up by the control system. Meanwhile, the display and the buzzer will give alarms. At this moment, only hook lowering is allowed to prevent over-hoist action.

### Over-release protection device of the main and auxiliary hook

- It is used to prevent the wire rope over-release. When the wire rope is released to the last three wraps, the limit switch will start working, and the releasing of rope will be automatically stopped by the control system. Meanwhile, the display and the buzzer will give alarms. At this moment, only rope retraction is allowed to prevent over release action.

### Boom angle limit

- When the elevation angle of the boom exceeds 85° or jib angle exceeds 75°, corresponding limit switch will be triggered, and the control system will automatically cut off the boom hoisting. Meanwhile, the display and the buzzer will give alarm. At this moment, boom/jib luffing winch won't hoist but it can still lower down.
- When the boom down angle is less than 30° or jib down angle is less than 15°, the control system will automatically cut off the boom/jib from further lowering. Meanwhile, the display and the buzzer will give alarms. At this moment, boom/jib luffing winch won't be able to lower. This protection is automatically controlled by Load Moment Limiter.

### Back-stop device

- The boom and the superlift mast are respectively equipped with a pair of back-stop cylinders. The high pressure of the cylinder shall be overcome when the boom tilts backwards, and high pressure oil will be supplemented automatically when the boom swings forwards to increase the tension and prevent the boom vibration and shaking back.
- The jib rear mast is equipped with a pair of back-stop cylinders, while the jib front mast is equipped with a pair of pneumatic cylinders to prevent the mast from the backward inclination and tension of the jib luffing wire rope.

### Brake of hoisting mechanism

- All hoisting brakes are spring loaded normally closed disc brakes, which are featured with large braking force, maintenance-free, safe and reliable use, and long service life.

### Closed circuit monitoring system

- It can be used to monitor the winding conditions of wire ropes of each hoisting mechanism, the conditions of superlift weight, and conditions around the equipment.
- Video recorder can store video as long as 76 hours.
- Machine operation can be recorded.

### Failure auto-diagnosis system

- Failure code can help troubleshooting easily.



## Safety Devices



### Black box

- It is able to record the operation data and machine movement, and analyze the remaining running conditions and service life of machine based on the actual performance.

### Pharos

- It is mounted on the top of the boom/jib and alerts in air during night.

### Anemometer

- It is mounted on the top of the boom/jib to monitor the wind speed in real time and display relative data on the monitor.

### Electronic level indicator

- It displays the tilting angle of the crane on the monitor in real time and protects the safe operation of the crane.

### Lightning protection device

- It includes the lightning protection device and the surge protection device, which can effectively protect the electric system elements and workers from lightning.

### Hook latch

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

### Swing and travel visual-audio alarm

- When the machine is swinging or traveling, the horn will send out alarm per certain frequency, and warning indicator light flashes, to warn the people around the machine. This can be turned off in the control system.

### Function lock

- The operation will be locked by pulling up the function locking lever on the right side of the seat inside the driver's cab or when the operator left the seat, after which no operating handles will be working so that improper operation caused by the body collision when getting on and off the crane can be avoided.

### Regulation of engine power ultimate load and stalling protection

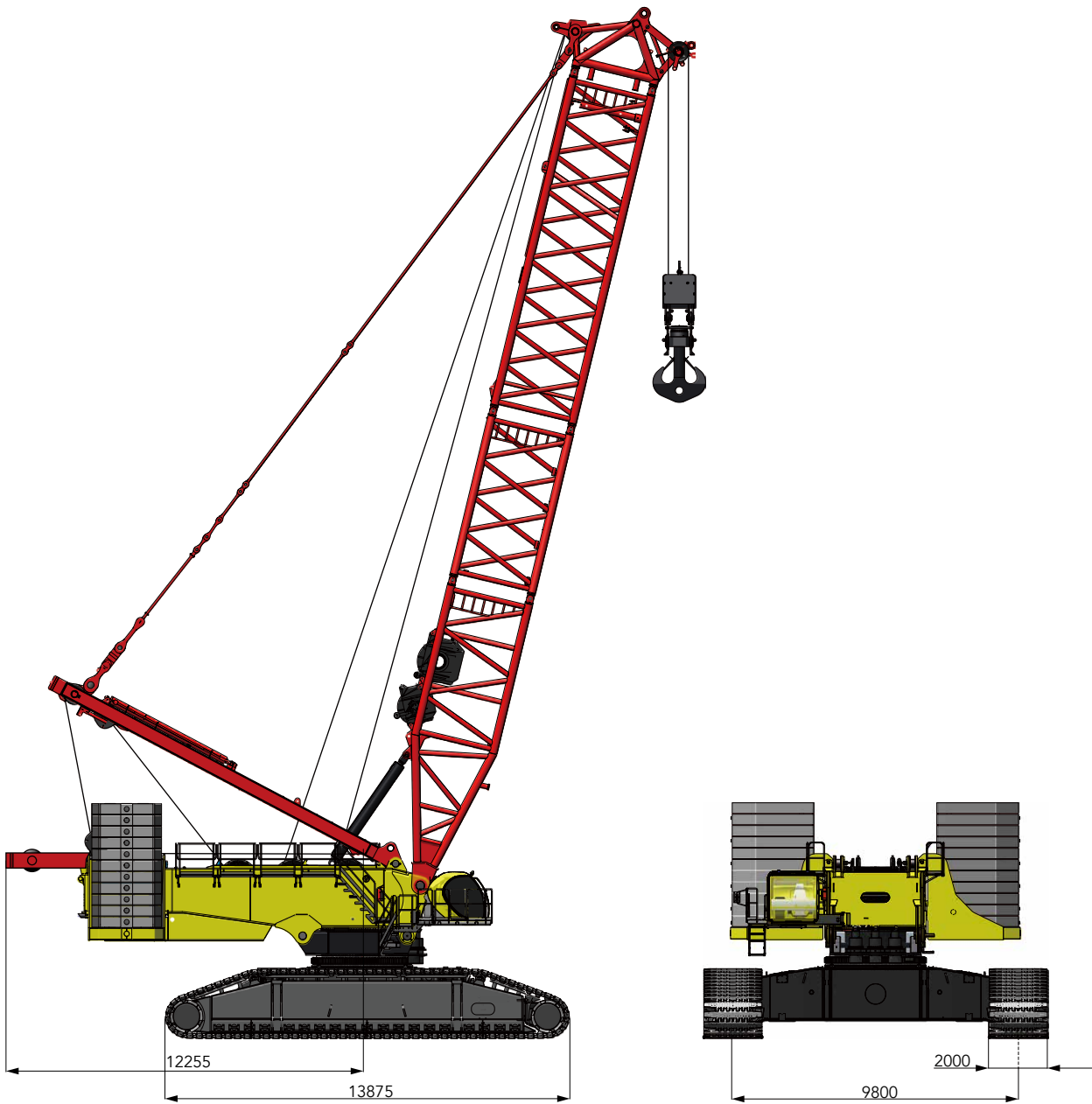
- The controller can monitor the engine power so as to prevent stalling.

### Remote monitoring system

- It monitors and analyzes the operation data so as to realize remote diagnosis of faults and timely solution.

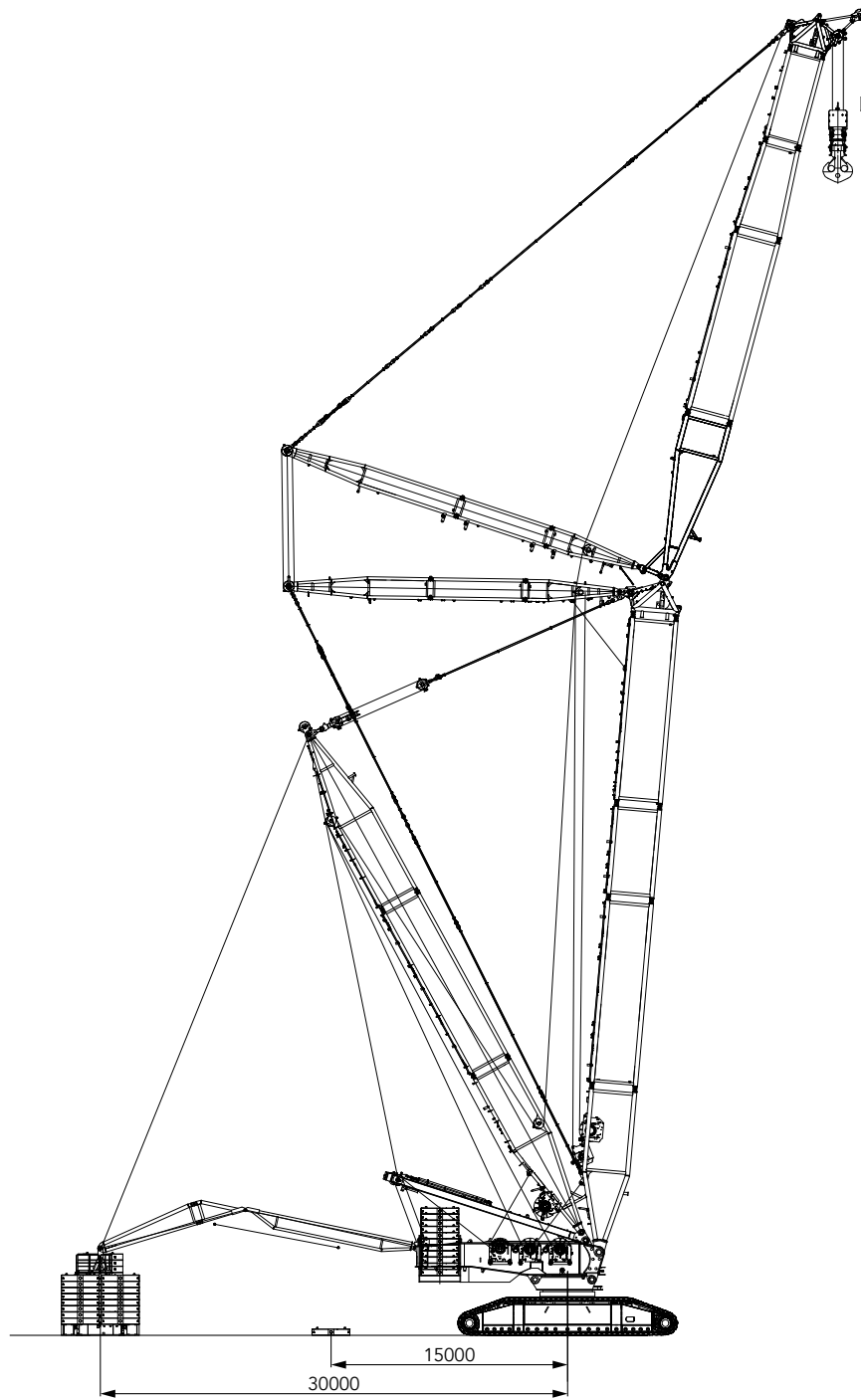
### Proactive safety control technology

- Swing speed can be automatically reduced based on boom length to make it safer.
- Flexible safety protection reduces the speed when the mechanism approaches to the safety limit position, which ensures reliability.
- Real-time monitor of hydraulic oil temperature allows limits on the action speed based on oil temperature, which protect the hydraulic components effectively.
- The protection can be set on man-machine interface as customer needs.

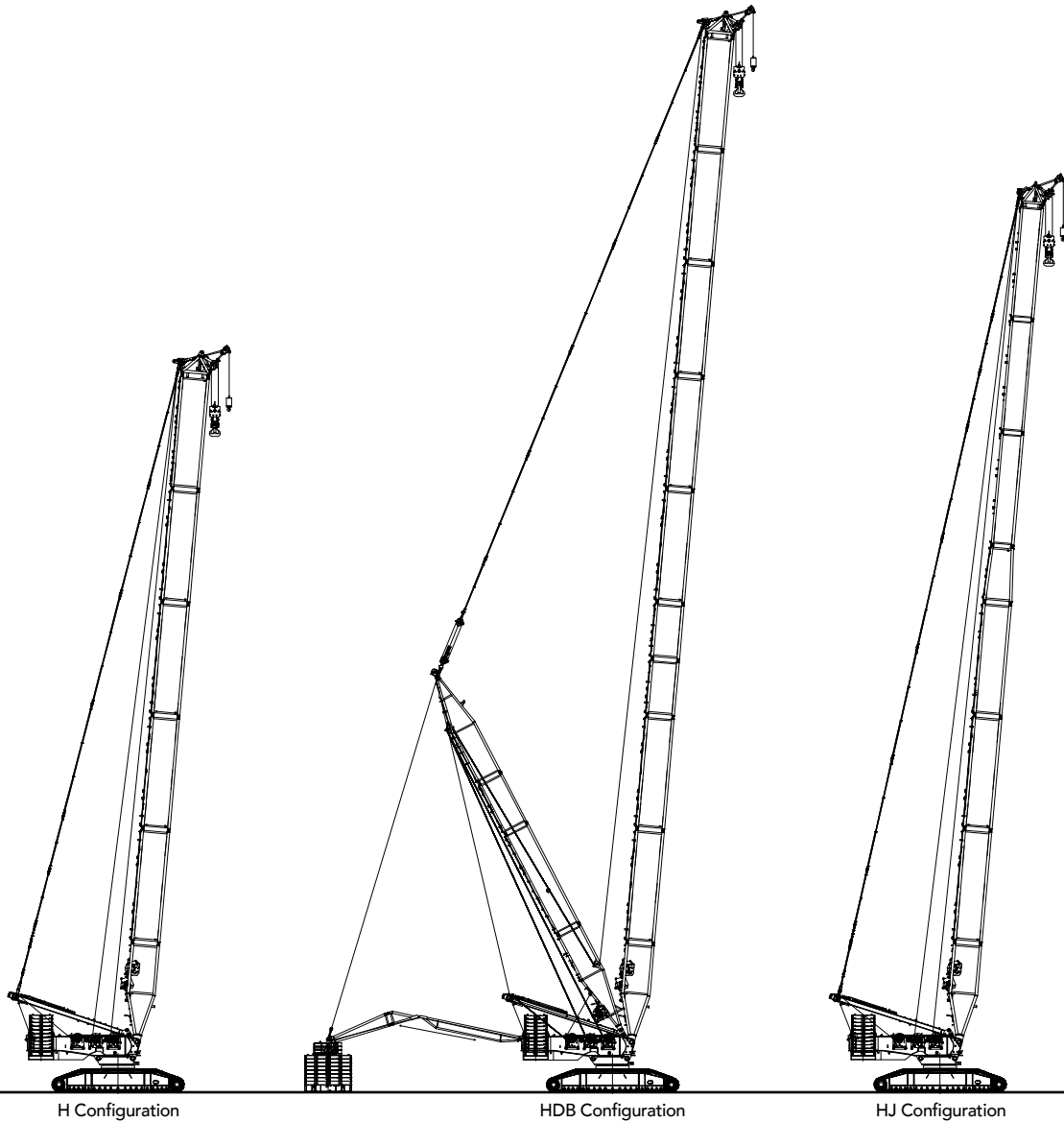
**Outline Dimension**

Unit: mm

**Outline Dimension**



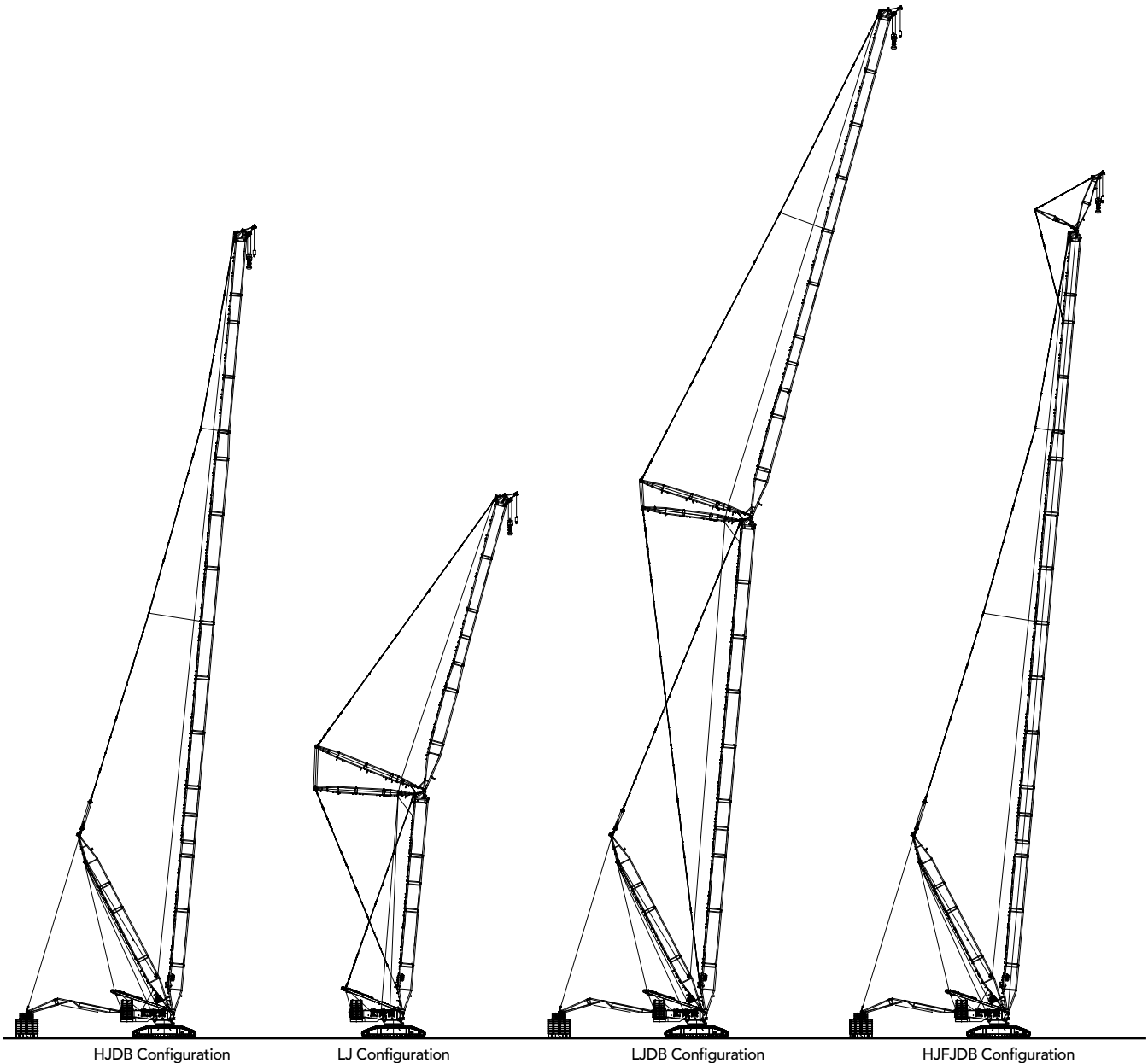
## Combination



Configuration	Boom combination	Boom length
H	Boom	30m~72m
HDB	Boom + Superlift mast + Superlift counterweight	42m~108m
HJ	Mixed boom	48m~90m

Note: The schematics above are reference for loading only.

## Combination



Configuration	Boom combination	Boom length
HJDB	Mixed boom + Superlift mast + Superlift counterweight	84m~171m
LJ	Boom + Luffing jib	(42m~48m) + (36m~66m)
LJDB	Boom + Luffing jib + Superlift mast + Superlift counterweight	(48m~108m) + (36m~114m)
HJFJDB	mixed boom + Fixed jib + Superlift mast + Superlift counterweight	(102m~171m) +12m

Note: The schematics above are reference for loading only.



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**Reminder:**

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