ZOOMLION

ZOOMLION ZCC7200 CRAWLER CRANE

TECHNICAL SPECIFICATIONS

ZCC7200/27Y

Zoomlion Heavy Industry Science & Technology Co.,Ltd.

June 2021

Zoomlion ZCC7200 Crawler Crane

Technical Specifications

ZCC7200/27Y

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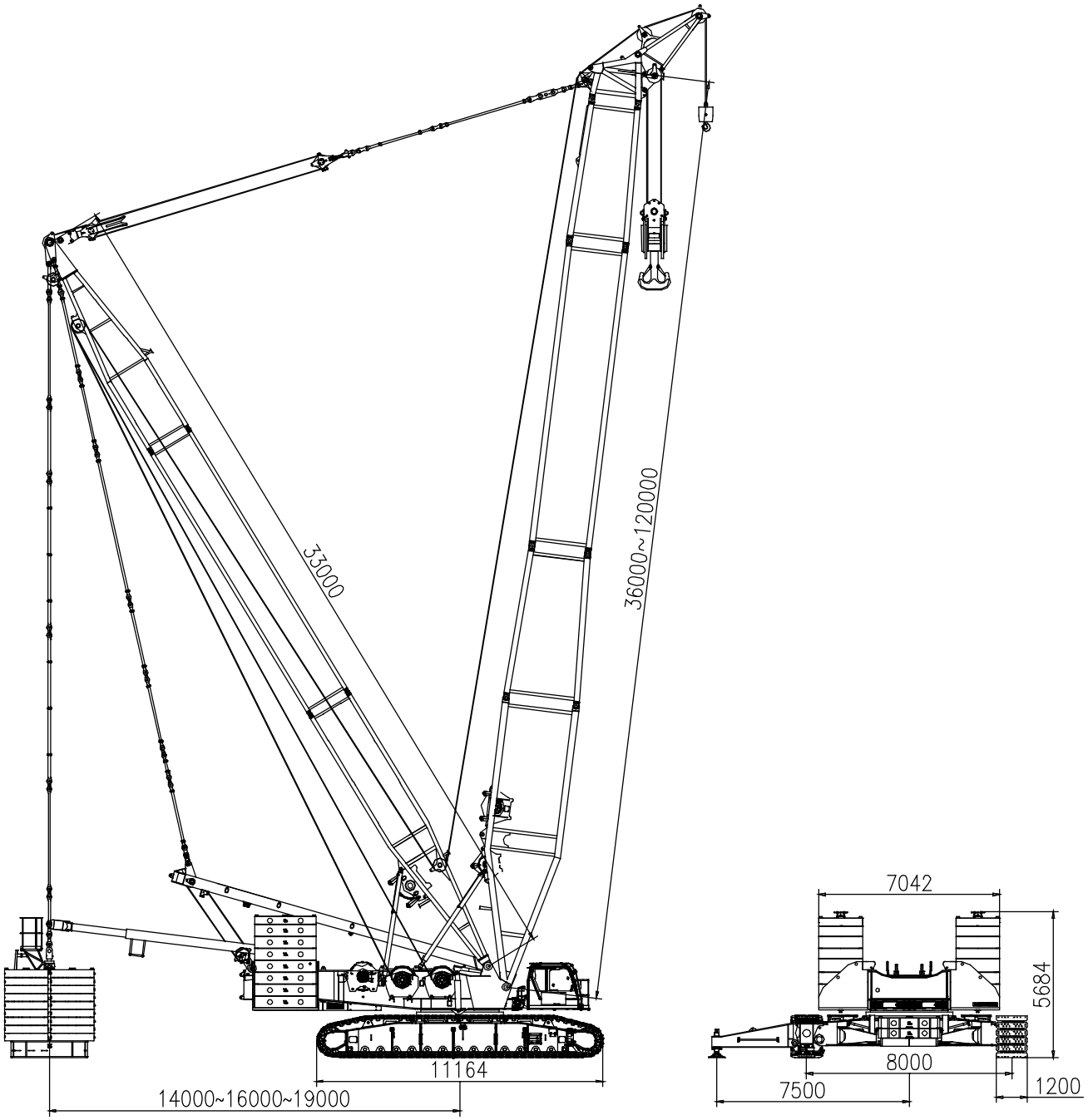
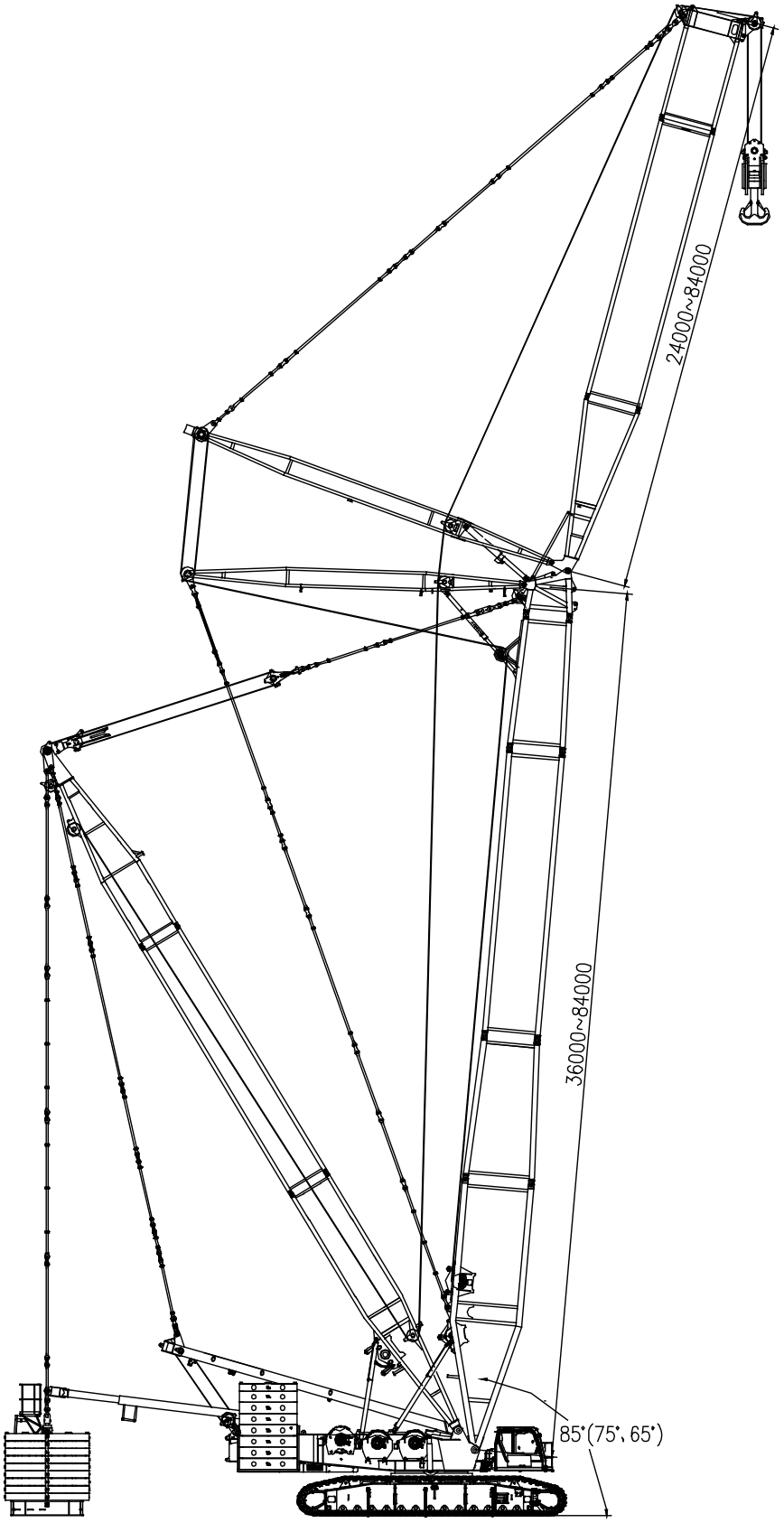
1. Overall dimensions and main technical parameters

1.1 Overall dimensions of the operating mode SDB



1.2 Overall dimensions of the operating mode SWDB



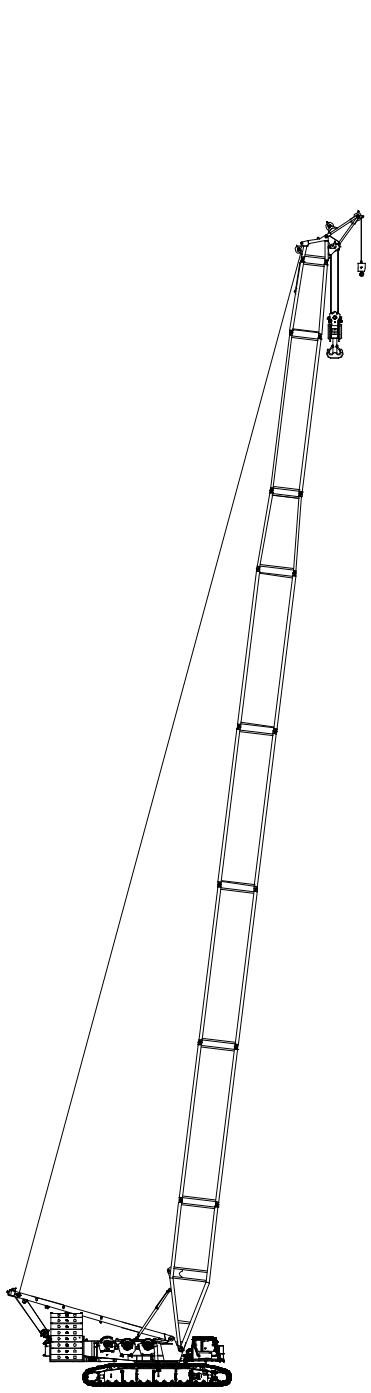
1.3 Main technical parameters

Items			Units	Values	Notes
Max. lifting moment			t×m	7200	
Max. lifting capacity of main boom operating mode		S	t×m	600×6	
		SDB	t×m	600×10	
Length of heavy main boom		S	m	24～84	
		SDB	m	36～120	
Length of light main boom		SL	m	66～102	
		SLDB	m	90～138	
Length of luffing jib			m	24～84	
Max. lifting capacity of luffing jib		SW	t×m	225×14	
		SWDB	t×m	280×18	
Longest main boom + longest luffing jib		SW	m	60＋72	
		SWDB	m	84＋84	
Operating mode for wind turbine		SLHS	m	（84～114）+8	84+8: 188 t 114+8:105t
		SLHSDB	m	（90～147）+8	90+8: 190 t 147+8: 85t
Single rope speed	Primary hoisting winch		m/min	0～135	
	Tip boom hoisting winch		m/min	0～109	
	Main boom derricking winch		m/min	0～2×52	
	Jib derricking winch		m/min	0～123	
	Derrick boom derricking winch		m/min	0～143	
Slewing speed			rpm	0～1.0	
Traveling speed			Km/h	0～0.8	
Dead weight with basic main boom			t	430	
Max. gradeability with basic main boom			%	30	
Average ground pressure with main boom			MPa	0.143	
Dimensions of basic machine in transport (length × width × height)			mm	13325×3400×3275	Without A-frame
Max. transport weight of a single component			t	57.5	Without A-frame
Engine	Rated power / rotational speed		kW/rpm	429/1800	
	Max. output torque / rotational		Nm/rpm	2644/1400	
	Exhaust emission standard			EU Stage V	
Track gauge × crawler contact length × crawler width			mm	8000×9800×1200	

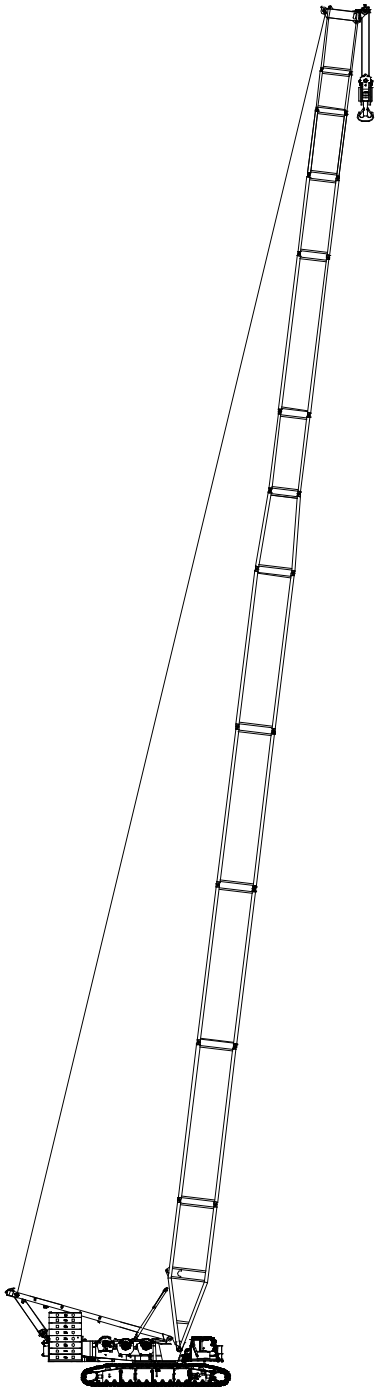
1.4 Description on boom combination

There are two kinds of operating modes, the one without derrick boom and suspended ballast, and the one with derrick boom and suspended ballast. The boom is a trussed structure of high-strength pipes, and anchoring rods are made of high-strength plates.

Operating modes without derrick boom and suspended ballast

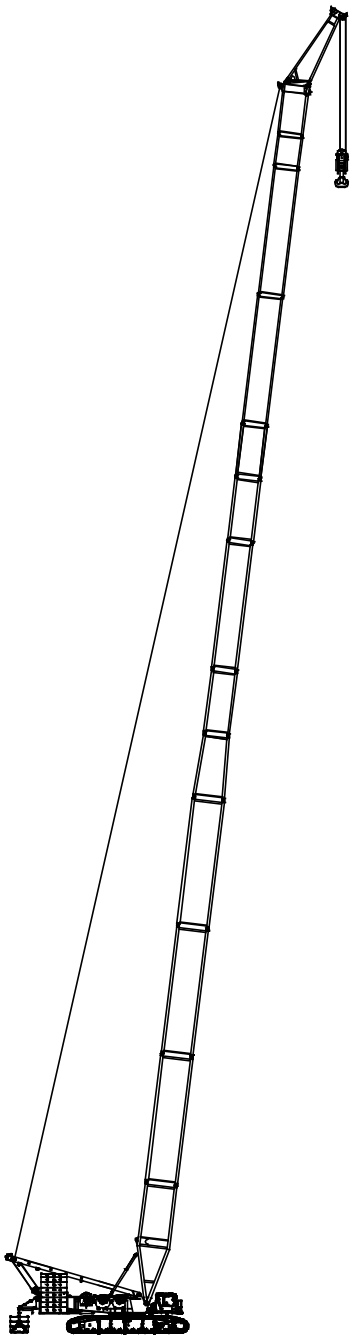


S

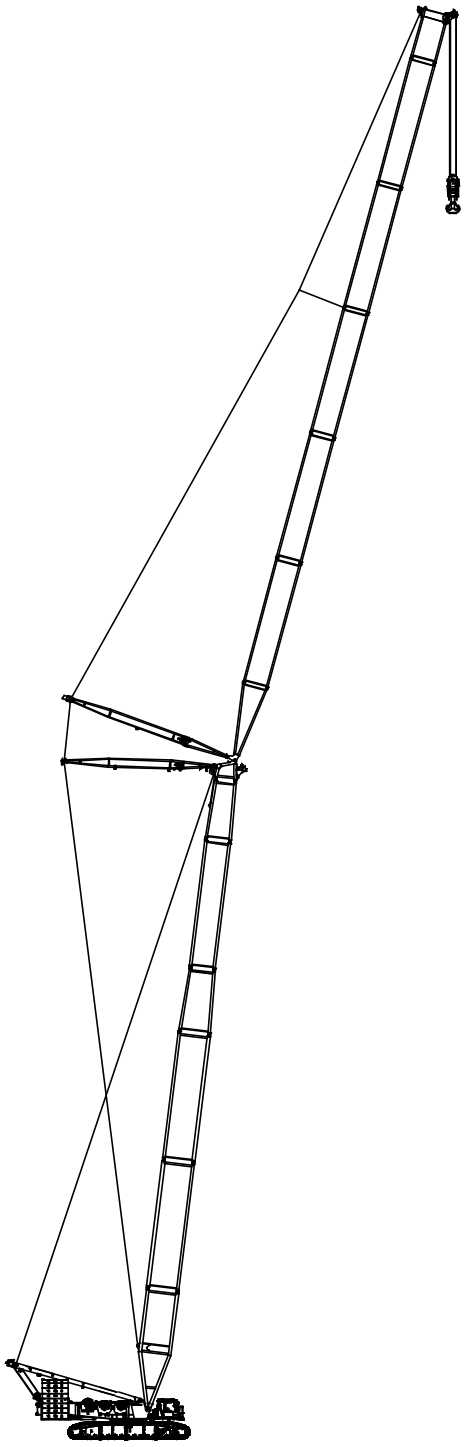


SL

Code	Operating mode	Boom combination
S	Heavy main boom	S=24～84m
SL	Light main boom	S=66～102 m



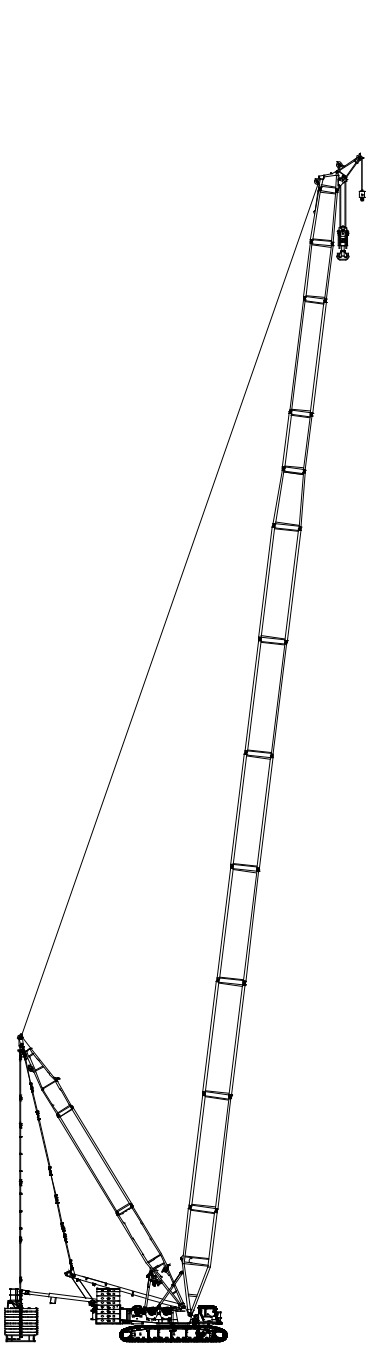
SLHS



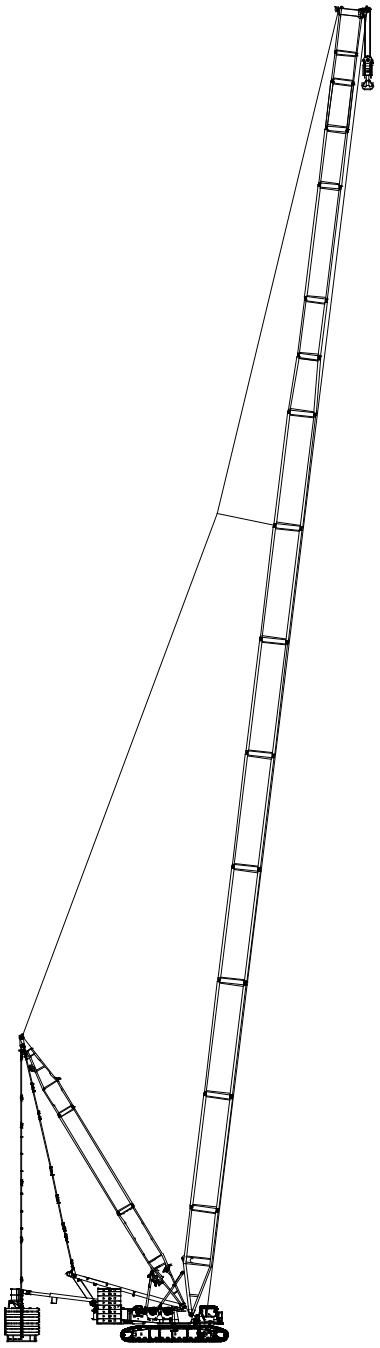
SW

Code	Operating mode	Boom combination
SLHS	Jib on light main boom for wind turbine	SL=84～114m(SLHS-1) HS=8m SL=84～102m(SLHS-2) HS=8m
SW	Luffing jib on heavy main boom	S=30～60m W=24～72m

Operating modes with derrick boom and suspended ballast

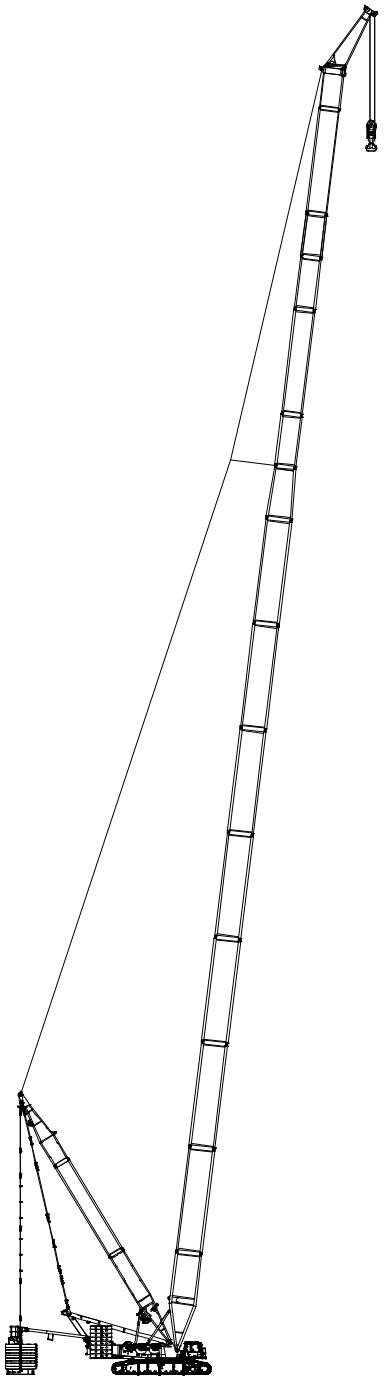


SDB

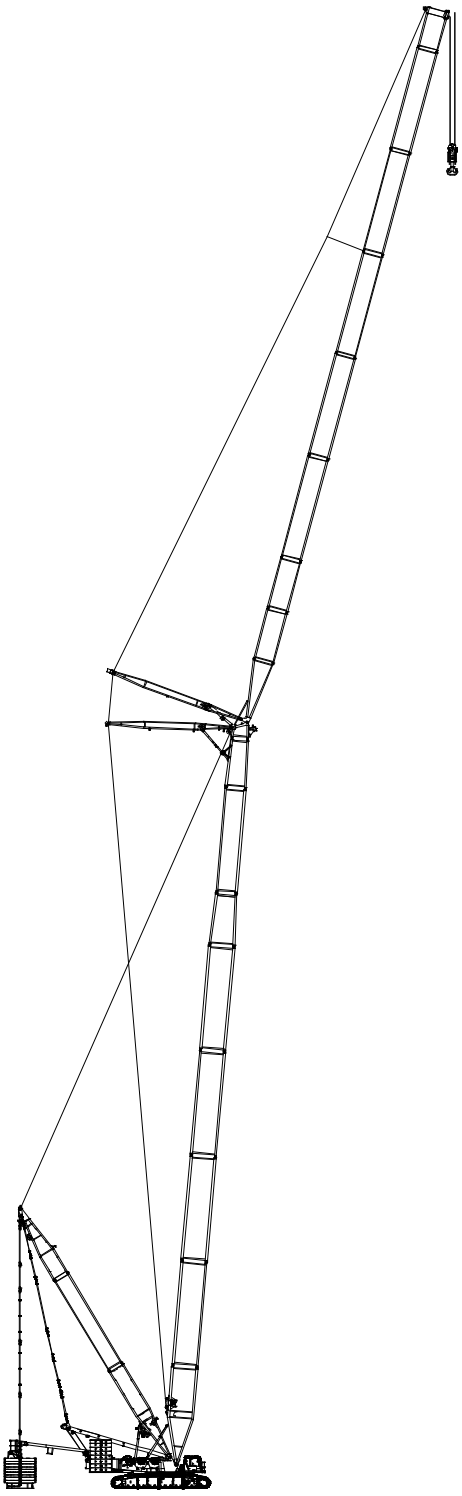


SLDB

Code	Operating mode	Boom combination
SDB	Heavy main boom with derrick boom and suspended ballast	S=36～120 m
SLDB	Light main boom with derrick boom and suspended ballast	SL=90～138 m



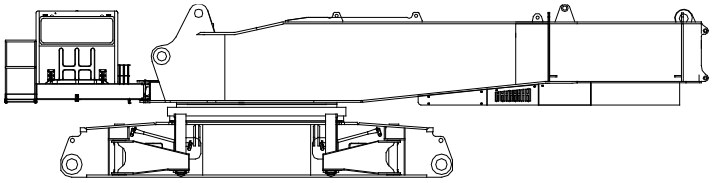
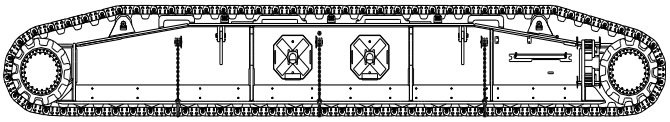
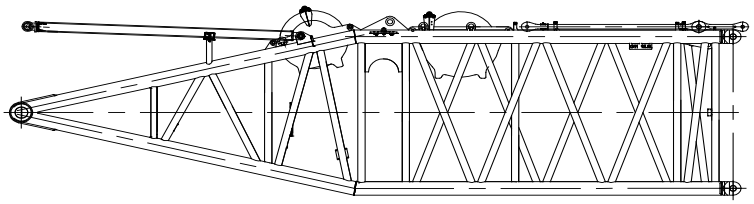
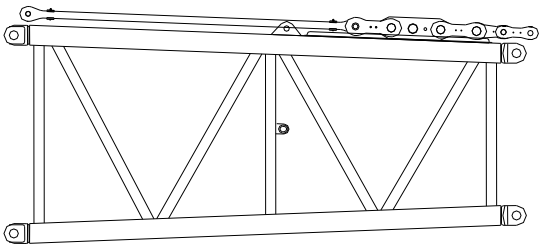
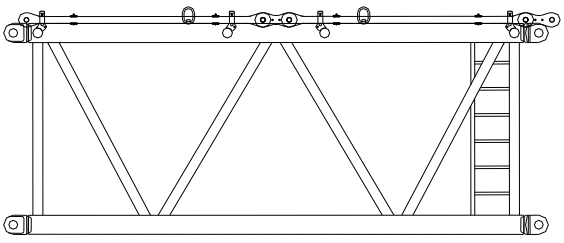
SLHSDB

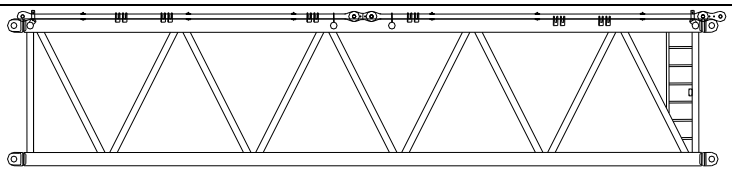
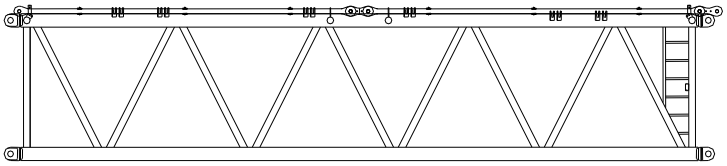
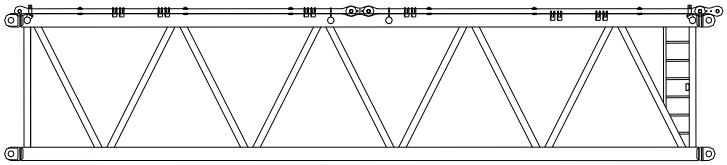
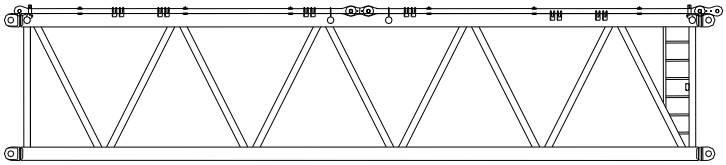
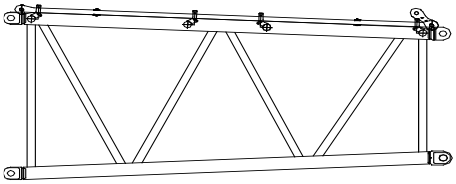
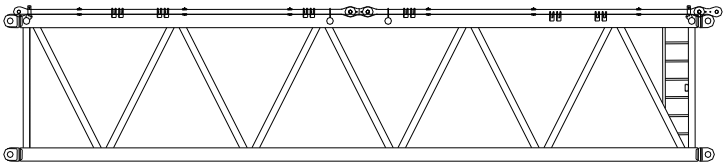


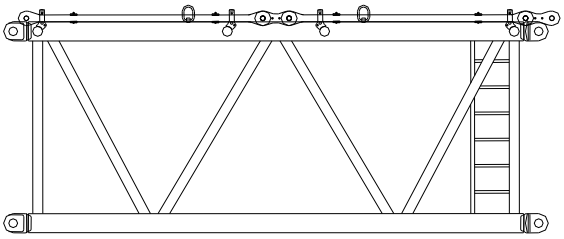
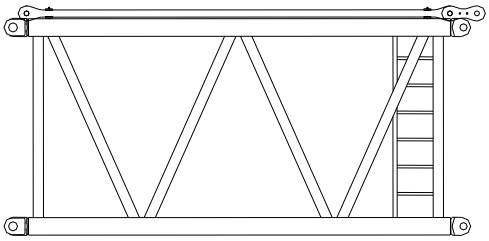
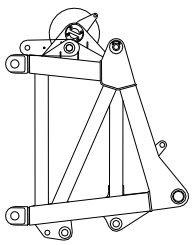
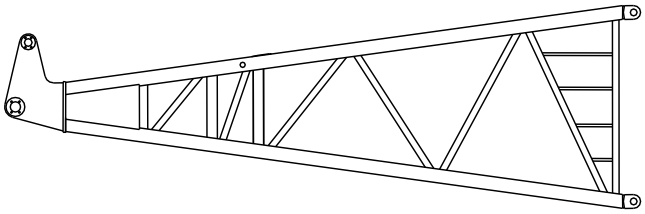
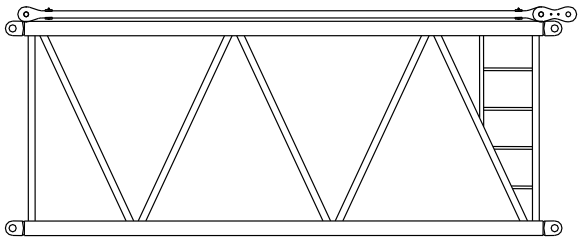
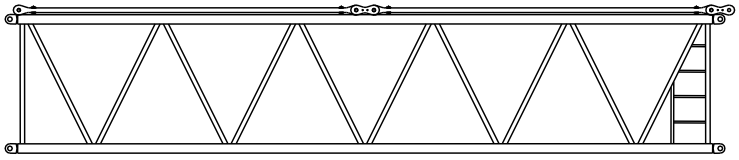
SWDB

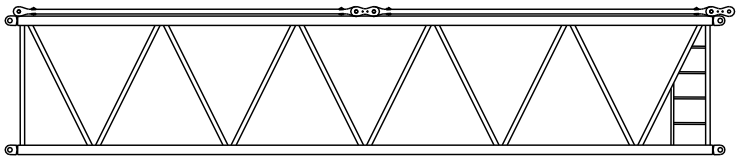
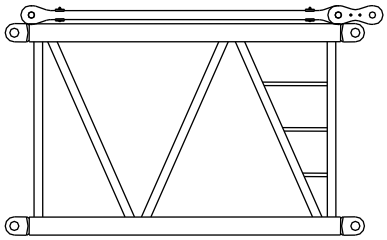
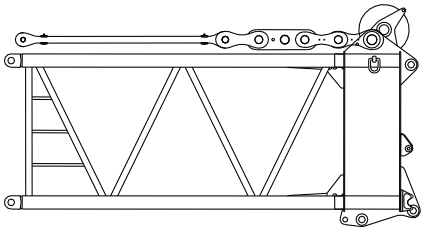
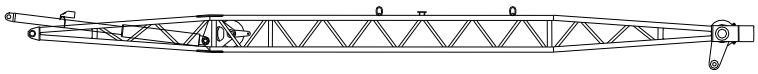
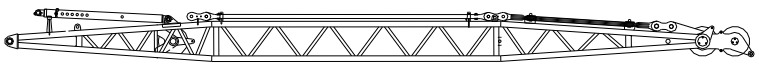
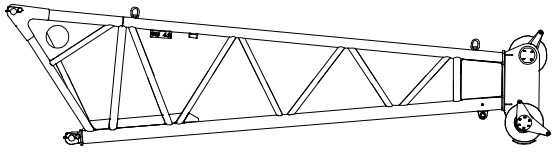
Code	Operating mode	Boom combination
SLHSDB	Light main boom with derrick boom and suspended ballast (for wind turbine)	SL=90～147m HS=8 m
SWDB	Luffing jib on heavy main boom with derrick boom and suspended ballast	S=36～84 m W=24～84m

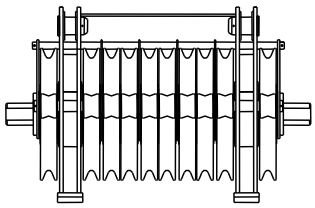
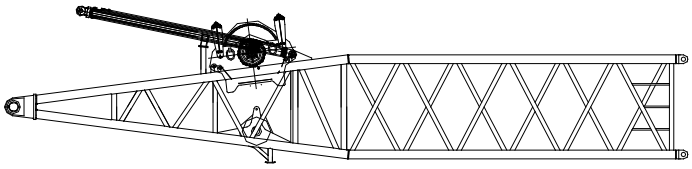
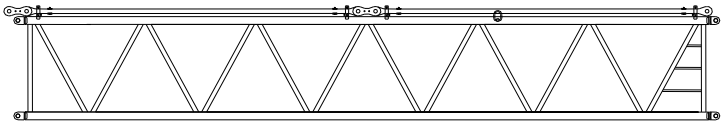
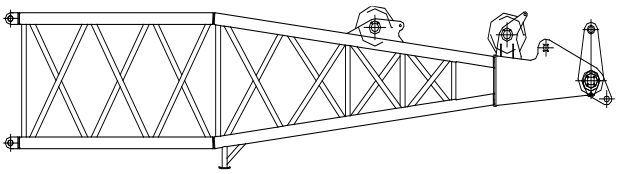
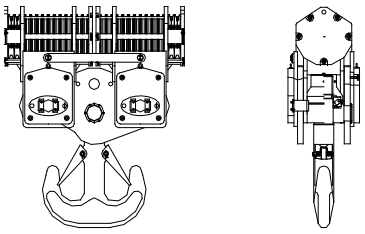
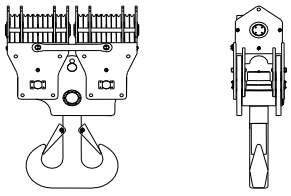
1.5 Overall dimensions and weights of major components in transport

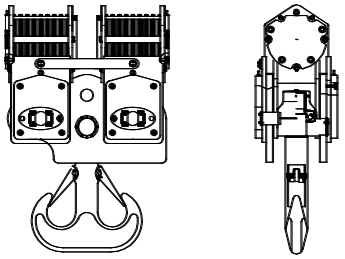
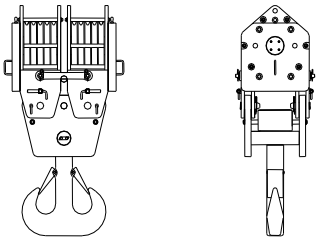
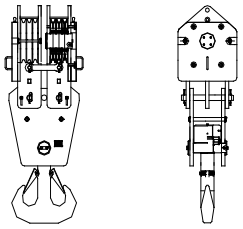
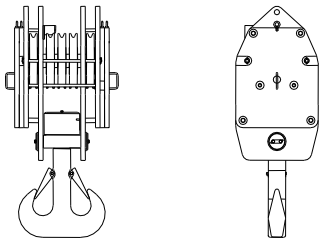
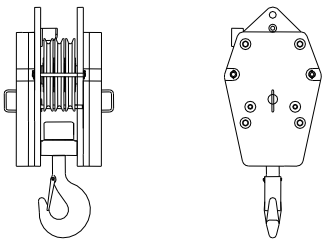
Components in transport	Items	Values
	Slewing table assy.	×1
	Length	13325mm
	Width	3400mm
	Height	3275 mm
	Weight	57.5t
	Crawler assy.	×2
	Length	11180 mm
	Width	1520 mm
	Height	1645 mm
	Weight	34.5 t
	Main boom pivot section	×1
	Length	11635mm
	Width	3040mm
	Height	3427mm
	Weight	17.8t
With luffing jib derricking winch and tip boom hoisting winch and main boom tilting-back cylinder		
	Main boom head	×1
	Length	5820 mm
	Width	2920 mm
	Height	2640mm
	Weight	4.3 t
	Main boom intermediate section (6m)	×1
	Length	6220 mm
	Width	2920 mm
	Height	2560 mm
	Weight	3.9 t
	Strengthened main boom reducing section A (12m)	×1

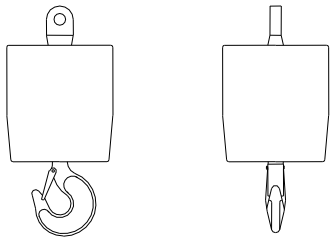
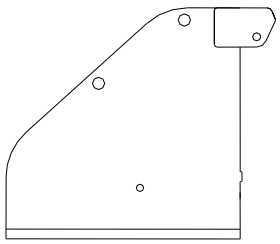
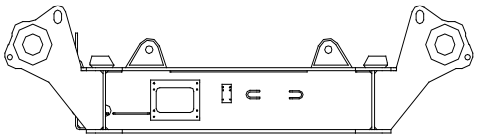
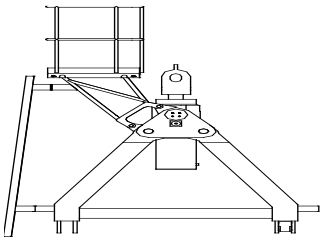
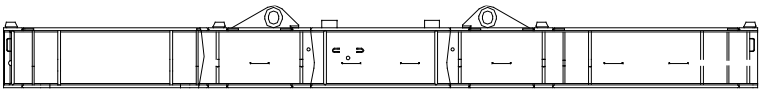
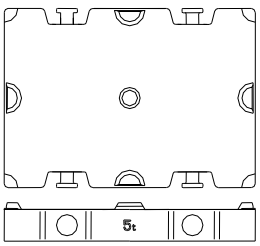
	Length	12245 mm
	Width	3550 mm
	Height	3320 mm
	Weight	8.5 t
	Strengthened main boom intermediate section A (12m)	×2
	Length	12245 mm
	Width	3550 mm
	Height	3320 mm
	Weight	8.6 t
	Strengthened main boom reducing section B (12m)	×1
	Length	12245 mm
	Width	3550 mm
	Height	3320 mm
	Weight	8t
	Strengthened main boom intermediate section B (12m)	×3
	Length	12245 mm
	Width	3550 mm
	Height	3320 mm
	Weight	8.1t
	Main boom reducing section B	×1
	Length	6232 mm
	Width	2920 mm
	Height	3100 mm
	Weight	4.1 t
	Main boom intermediate section A (12m)	×1
	Length	12220 mm
	Width	2920 mm
	Height	2560 mm
	Weight	7.1 t

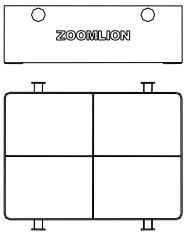
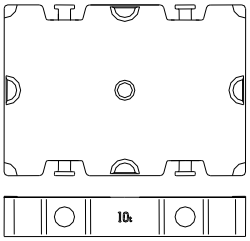
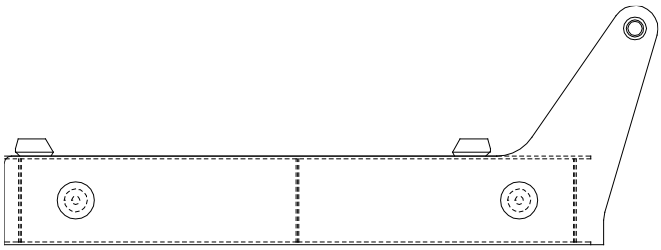
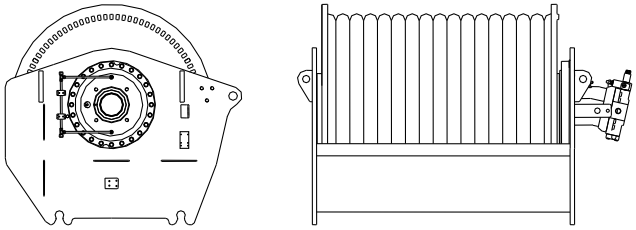
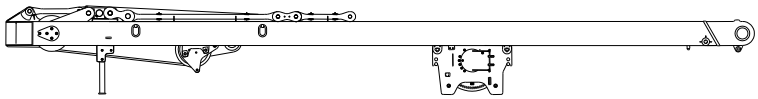
	Main boom intermediate section B (6m)	×1
	Length	6220 mm
	Width	2920 mm
	Height	2560 mm
	Weight	3.7 t
	Reducing section	×1
	Length	5470 mm
	Width	2900 mm
	Height	2550 mm
	Weight	2.7 t
	Main boom head adaptor	×1
	Length	2180 mm
	Width	2675mm
	Height	2690 mm
	Weight	3.53 t
	Luffing jib pivot section	×1
	Length	7405 mm
	Width	2860 mm
	Height	2360 mm
	Weight	3.2 t
	Strengthened luffing jib intermediate section (6m)	×2
	Length	6160 mm
	Width	2860 mm
	Height	2510 mm
	Weight	2.36 t
	Strengthened luffing jib intermediate section (12m)	×2
	Length	12160 mm
	Width	2860 mm
	Height	2510 mm
	Weight	4.25 t

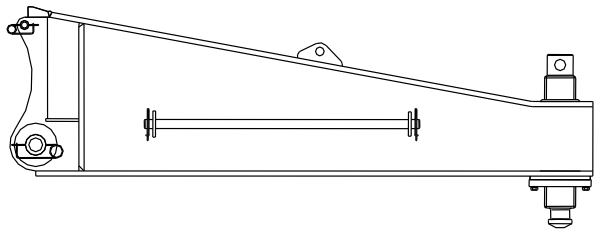
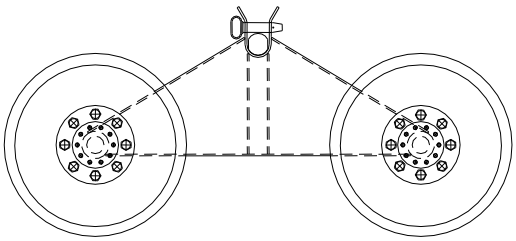
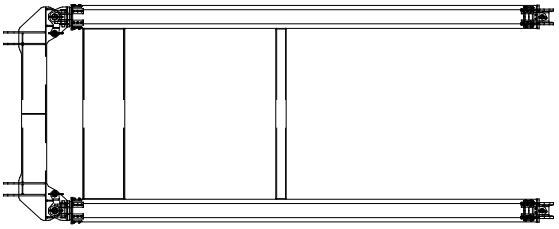
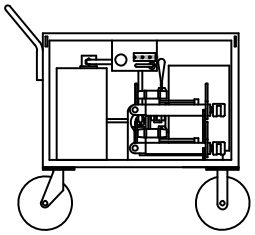
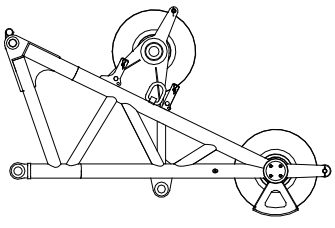
	Luffing jib intermediate section (12m)	×3
	Length	12160 mm
	Width	2860 mm
	Height	2510 mm
	Weight	3.86t
	Strengthened luffing jib intermediate section (3m)	×1
	Length	3160 mm
	Width	2860 mm
	Height	2510 mm
	Weight	1.5 t
	Luffing jib head	×1
	Length	4965 mm
	Width	3120 mm
	Height	2620 mm
	Weight	4.2 t
	WA-frame 1	×1
	Length	16820 mm
	Width	2530 mm
	Height	900 mm
	Weight	5.34 t
	WA-frame 2	×1
	Length	15145 mm
	Width	2530 mm
	Height	1045 mm
	Weight	5.5 t
	Tip boom for turbine	×1
	Length	8440 mm
	Width	1790 mm
	Height	2160 mm
	Weight	4.1 t

	Pulley block for lifting	×2
	Length	1385 mm
	Width	1165 mm
	Height	885 mm
	Weight	1.05 t
	Derrick boom pivot section	×1
	Length	12240 mm
	Width	2740 mm
	Height	2810 mm
	Weight	11.2t
With derrick boom derricking mechanism and derrick boom tilting-back cylinder		
	Derrick boom intermediate section (12m)	×1
	Length	12160 mm
	Width	2460 mm
	Height	2000 mm
	Weight	4.5 t
	Derrick boom head	×1
	Length	9405 mm
	Width	2590mm
	Height	2230 mm
	Weight	6.3t
	Load hook for 650t	×1
	Length	2481mm
	Width	986mm
	Height	3039 mm
	Weight	11t
	Load hook for 500t	×1
	Length	2180 mm
	Width	910 mm
	Height	3460 mm
	Weight	9.6 t

	Load hook for 400t	×1
	Length	1982mm
	Width	926mm
	Height	2957mm
	Weight	9.3t
	Load hook for 200t	×1
	Length	1570mm
	Width	986mm
	Height	2803mm
	Weight	6.5 t
	Load hook for 160t (double pulley block)	×1
	Length	1135mm
	Width	860mm
	Height	3031mm
	Weight	4.2 t
	Load hook for 160t	×1
	Length	1235 mm
	Width	900 mm
	Height	2520 mm
	Weight	4.5 t
	Load hook for 50t	×1
	Length	900 mm
	Width	800 mm
	Height	1900 mm
	Weight	2.7 t
	Load hook for 16t	×1
	Length	530 mm
	Width	530 mm
	Height	1140 mm

	Weight	0.9 t
	Rear counterweight frame	×2
	Length	2200 mm
	Width	2625 mm
	Height	1890 mm
	Weight	5.2 t
	Detachable base	×1
	Length	3150 mm
	Width	2610mm
	Height	665 mm
	Weight	1.2t
	Bracket	×2
	Length	4195 mm
	Width	2749mm
	Height	700 mm
	Weight	1.7t
With ballast lifting cylinder + ladder, handrail and platform		
	Suspended ballast base	×1
	Length	8100 mm
	Width	3000 mm
	Height	880 mm
	Weight	9.5 t
With part of anchoring rods for suspended ballast		
	Counterweight plate of 5t	×39
	Length	2400 mm
	Width	1700 mm
	Height	365 mm
	Weight	5 t

	Counterweight plate of 10t	×4
	Length	2400 mm
	Width	2100 mm
	Height	455 mm
	Weight	10 t
	Counterweight plate of 10t	×19
	Length	2400 mm
	Width	1700 mm
	Height	455 mm
	Weight	10 t
	Central ballast frame	×2
	Length	2410 mm
	Width	2285 mm
	Height	835 mm
	Weight	6.5t
	Primary hoisting winch	×2
	Length	1920 mm
	Width	1275 mm
	Height	1235 mm
	Weight	5.4 t
		With hoisting wire rope
	A-frame + main boom derricking mechanism	×1
	Length	13131 mm
	Width	3345 mm
	Height	1475 mm
	Weight	12.2 t
		With main boom derricking rope, pulley block and self-mounting cylinder

	Folding bracket	×2
	Length	3385 mm
	Width	510 mm
	Height	1275 mm
	Weight	2.1 t
	Tyre	×1
	Length	2315 mm
	Width	2340 mm
	Height	1055 mm
	Weight	0.75 t
	Pushing mechanism for suspended ballast	×1
	Length	8500
	Width	3500
	Height	1100
	Weight	7.8t
	Remove the guardrail for transport	
	Hydraulic pump set	×1
	Length	1400 mm
	Width	800 mm
	Height	1100 mm
	Weight	0.4 t
	Tip boom	×1
	Length	2452 mm
	Width	905 mm
	Height	1365 mm
	Weight	0.55t

2. Technical instruction

2.1 Boom system

Boom system consists of main boom, luffing jib, A-frame, WA-frame, jib head for wind turbine, derrick boom and anchoring rods, etc. Lattice structure is made of high-strength steel tube; door-shaped structure is made of high-strength steel board; anchoring rod is made of high-strength board.

Main boom

Main boom is a spatial lattice structure made of high-strength steel tubes with a uniform cross-section at the center and variable cross-sections at both ends.

Main boom length of operating mode S: 24~84m

Main boom length of operating mode SDB: 36~120m

Luffing jib

Luffing jib is a spatial lattice structure made of high-strength steel tubes with a uniform cross-section at the center and variable cross-sections at both ends.

Luffing jib length: 24~84 m

Light boom

Light boom consists of a main boom and a luffing jib, which are connected through a reducing section. The reducing section is spatial lattice structure with a variable cross-section made of high-strength steel tubes.

Length of light boom (standard): 66~102m

Length of light boom (with derrick boom and suspended ballast): 90~138m

Derrick boom

Derrick boom is a spatial lattice structure made of high-strength steel tubes with a uniform cross-section at the center and variable cross-sections at both ends.

A-frame

It is a door-shaped box structure made of high-strength steel plate.

WA-frame 1 and WA-frame 2

Boom section of WA-frame 1 and 2 is a spatial lattice structure made of high-strength steel tubes with variable cross-sections.

Jib head for turbine

It is a spatial lattice structure made of high-strength steel tubes.

Length of jib head for turbine: 8m

Pushing mechanism for suspended ballast

The pushing mechanism is a door-shaped box structure made of high-strength steel plates.

The radius of suspended ballast is realized through the extension and retraction of the cylinder.

2.2 Mechanisms

2.2.1 Hoisting mechanism

The hoisting mechanism, consisting of a variable displacement axial piston hydraulic motor, a balance valve, a reducer, a normally-closed brake and wire rope, can be controlled independently.

Primary hoisting mechanism (x2)	Diameter of wire rope	28mm
	Length of wire rope	860m
	Max. single line pull	17.2t
Tip boom hoisting winch	Diameter of wire rope	28mm
	Length of wire rope	350m
	Max. single line pull	14.3t

A synchronous controller is used to guarantee that the primary and the auxiliary hoisting mechanisms work simultaneously with the maximum single rope speed of 135m/min.

Tip boom hoisting winch is optional (max. single rope speed of 109m/min).

2.2.2 Derricking mechanism

Derricking mechanisms (including luffing jib derricking mechanism and derrick boom derricking mechanism) consist of a variable displacement axial piston hydraulic motor, a balance valve, a reducer, a normally-closed brake and wire rope.

The main boom derricking mechanism consists of a constant displacement axial piston hydraulic motor, a balance valve, a reducer, a normally-closed brake and wire rope.

Main boom derricking winch	Diameter of wire rope	28mm
	Length of wire rope	680m
	Max. single line pull	18.5t
Luffing jib derricking winch	Diameter of wire rope	28mm
	Length of wire rope	650m
	Max. single line pull	18.5t
Derrick boom derricking winch	Diameter of wire rope	28mm
	Length of wire rope	860m
	Max. single line pull	18.5t

Max. single rope speed of main boom derricking winch: 2×52m/min;

Max. single rope speed of luffing jib derricking winch: 123m/min;

Max. single rope speed of derrick boom derricking winch: 143m/min

2.2.3 Slewing mechanism

The slewing mechanism is a double-driven and double slewing mechanism, consisting of a constant displacement hydraulic motor, a gear reducer, a brake, a small gear and a slewing bearing.

The operation of controllable slewing helps to reduce impact and makes starting and braking more stable.

A three-row roller-type external gearing slewing bearing and a slewing reducer are used by the mechanism to guarantee its strong load bearing capacity, high precision, and stable and precise slewing movement.

The slewing mechanism is able to make movements through the stepless speed regulation from 0 to 1r/min.

2.2.4 Traveling mechanism

The traveling mechanism is a quadruple-driven mechanism with four reducers. Traveling of the two tracks are controlled by the two joysticks. It is able to make such movements as traveling in straight line, steering with one track, differentiate steering, pivot steering and traveling with load with high maneuverability and flexibility.

Traveling speed: 0~0.8 km/h;

Max. gradeability with the basic boom on: 20%;

Crawler tensioning: Tensioning cylinder is controlled by an independent pump station, which is convenient and reliable.

2.2.5 A-frame erecting mechanism

The A-frame erecting mechanism is composed of three parts, A-frame, A-frame erecting cylinder, and auxiliary hydraulic system. This mechanism is used for self-assembly and dismantling (or during transferring). Erect A-frame from the horizontal position to over 90° for the convenience of connecting anchoring rods and assembling boom sections and tracks.

2.2.6 Cab’s swiveling and pitching mechanism

Operate the swiveling cylinder to swivel the cab from the lateral side of the slewing table for 90° to the front end of the slewing table, thus reducing the width of the whole crane for the convenience of transport.

The cab can be pitched up or down through the pitching cylinder. The cab can be pitched up for 20° to broaden operator’s view.

2.2.7 Outrigger erecting and track self-assembling and dismantling mechanism

The mechanism consists of such parts as undercarriage outrigger, outrigger cylinder, outrigger valve, track bolting pin, etc. The cylinder erecting mechanism is the main bearing part for track self-assembling and dismantling. The crawler self-assembling and dismantling mechanism lifts track assy. through A-frame and A-frame erecting mechanism and connects the chassis with the track assy. through bolting pins. The track assy. can be assembled or disassembled automatically through this mechanism without the help of

other auxiliary lifting equipment so as to improve working efficiency, reduce labor intensity and avoid risk of manual operation.

2.3 Systems

2.3.1 Hydraulic system

The hydraulic system is composed of such parts as main pump, hydraulic motor, auxiliary valve, hydraulic oil tank, cooler, etc., including the hoisting hydraulic system, the derricking hydraulic system, the slewing hydraulic system, the traveling hydraulic system, the hydraulic system for tilting-back support, the hydraulic system for suspended ballast hoisting, the cooling hydraulic system, the auxiliary hydraulic system, etc. Major components such as pump, motor and main return valve are energy-efficient and reliable with long service life.

The major hydraulic system is an open and closed pump-controlled system, which is efficient, energy-saving, reliable and maneuverable. Stable starting, braking and reversing with no impact; quick response, low calorific value, and long service life. Electric proportional control elements help to realize accurate and intelligent control. Various kinds of alarms for pressure and filter element clogging largely improve the security and reliability of the hydraulic system.

Volume of hydraulic oil tank: 1200L;

Oil filter: oil return filter, fine filter for control oil circuit, filter for oil drainage.

Cooler: aluminum radiator, driven fan of hydraulic motor.

2.3.2 Electrical system

Direct current of 24V, negative ground; two storage batteries of 200AH

Electrical devices of the whole machine mainly includes power supply, starting and shutoff device of the engine, indicator light, alarm, illuminating device, fan, windscreen wiper, horn, hoisting high limiter, hydraulic oil cooling fan, digital display, PLC controller, encoder, bus operating joystick, foot pedal, load moment limiter, preheating device of the engine, safety devices, etc. These devices guarantee the safe operation and the good working environment for the crane. Engine, PLC controller, load moment limiter, digital display, encoder and bus operating joystick are effectively connected together through the CAN bussing technology. It has the function of fault detecting and self-diagnosis. It is also equipped with a GPS/GPRS and a remote fault diagnosis system.

2.3.3 Power system

- The engine is an electronic fuel injection diesel engine with CAN bus interface;
- Rated output power: 390kw/2100rpm
- Max. output torque: 2300Nm/1400rpm
- Emission standard: Chinese national stage III (non-road)
- The large volume of the fuel oil tank (700L) provides long enough working hours of the engine.

2.3.4 Centralized display system

The large touch LCD of 10.4 inches displays both Chinese and English. It displays all kinds of signals collected by the PLC controller, including engine speed, water temperature, engine oil pressure, fuel oil level, hydraulic pump pressure, major motor pressure, working condition of the basic machine, wind speed on boom head, dynamic gravity center of the crane, dynamic display of working speed, etc. It carries out real-time monitoring on the working condition of the crane and sends out a yellow or a red alarm when the working condition of the crane is abnormal.

2.3.5 Safety monitoring and management system

It monitors winches for hoisting, main boom derricking, luffing jib derricking and derrick boom derricking, lifting condition of hook, suspended ballast and the surroundings of the working sire. The system has the function of storing monitoring data.

2.3.6 Centralized lubrication system

Three sets of centralized lubrication systems (one set for superstructure and two for undercarriage) are convenient for maintenance and reduce abrasion between components.

2.4 Safety devices

The crane is equipped with mechanical, electronic and hydraulic safety devices and alarming devices, which guarantee the safe operation of the crane.

2.4.1 Load moment limiter

Load moment limiter consists of a moment displayer and a digital LCD. When the load moment reaches 90% of the rated load moment, the warning light is on and the buzzer sends out an alarm. The operation of the crane stops automatically when it reaches the rated load moment so as to avoid accidents caused by overload.

The digital LCD displays data as follows:

- Load moment ratio
- Elevation angle of main boom
- Main boom length
- Working radius
- Actual lifting capacity
- Permissible lifting capacity
- Max. permitted hoisting height
- Tension and percentage ratio
- Suspended ballast and percentage ratio

2.4.2 Overflow valves of the hydraulic system

Overflow valves fitted in the hydraulic system can restrain abnormal high pressure in the oil circuit, thus protecting such hydraulic elements as hydraulic oil pump and hydraulic motor against damage and preventing the hydraulic system from being overloaded.

2.4.3 Hoisting height limiter

Devices like limit switch and limit weight installed on boom head are used to prevent over-hoisting of load hook. Limit switch sends out a signal if the load hook is hoisted to a certain height, and the electrical system will cut off the hoisting automatically. A sound-light alarm will be sent out through the buzzer and the display in operator's cab to avoid over-hoisting of the hook.

2.4.4 Angle indicator

It is fitted at the lower rear end of the boom pivot section (i.e. on the right side of the operator's cab). The operator can clearly see the boom angle from the cab.

2.4.5 Derricking limiter

The derricking limiter, controlled by a load moment limiter and a limit switch, is able to detect the limit elevation angle of the boom, cut off derricking automatically, and send out a sound-light alarm.

2.4.6 Mousing

It closes off the hook to prevent a load from slipping off.

2.4.7 Anemometer

An electronic device can be used to indicate the actual wind speed at boom head to the crane operator.

2.4.8 Protective device for over-lowering

A device ensuring that three windings of wire rope on the drum is maintained at all times during operation. When there are only three windings of wire rope left on the drum, the lowering limit switch will be triggered, the buzzer will sound, and the lowering of the hook will be switched off automatically.

2.4.9 Boom tilting-back support device

The nationally patented design of the tilting-back support cylinder guarantees safe and stable operation with more reliable tilting-back buffering.

2.4.10 Emergency stop button

Press the button to shut down the engine and cut off all movements in an emergency.

2.4.11 Tricolor warning light

The warning light, by showing red, yellow and green colors, can indicate loading status. The green color means the load ratio is less than 90%, the yellow color means the load ratio is between 90% and 100%, and the red color means that the load ratio has exceeded 100% and the crane is overloaded.

2.4.12 Anti-lightning-strike device

The optional grounding network reduces the probability of being struck by lightning. Key components and elements are protected by anti-lightning-strike modules, which reduce direct damages caused by lightning strike.

2.4.13 GPS monitoring system

It has such functions as global positioning, GPRS data transmission, inquiry and statistics of equipment status, remote fault diagnosis, etc.

2.5 Operator's cab

The operator's cab is 1550mm in width. It is an all-steel structured cab with tempered glass around. The top and front windows are laminated glasses. The cab is equipped with sun visors, an adjustable seat, movable armrest boxed separated from the seat, electrical control joysticks, a load moment displayer, a digital displayer, a remote control box of various switches, an air conditioner, LED light, a power indicator, a cigarette lighter, a fire extinguisher, etc. The floor of the ground in the cab is paved with anti-flaming, non-conductive and non-slippery rubber plates. The cab is also equipped with wipers and LED nighttime work light at the outside and CE qualified guardrails on the roof.

The cab can be pitched up for 20° to get a broader vision. The noise inside the cab is lower than 85db. The optimized ergonomic design provides safe and comfort operation.

2.6 Load hooks

All rotatable load hooks are equipped with a mousing

- Load hook for 650t: 24 pulleys
- Load hook for 500t: 20 pulleys
- Load hook for 400t: 16 pulleys
- Load hook for 200t (100t×2): 8 pulleys
- Load hook for 160t (twin hooks): 6 pulleys
- Load hook for 160t: 5 pulleys
- Load hook for 50t: 3 pulleys
- Load hook for 16t: cylinder hook

2.7 Counterweight and ballast

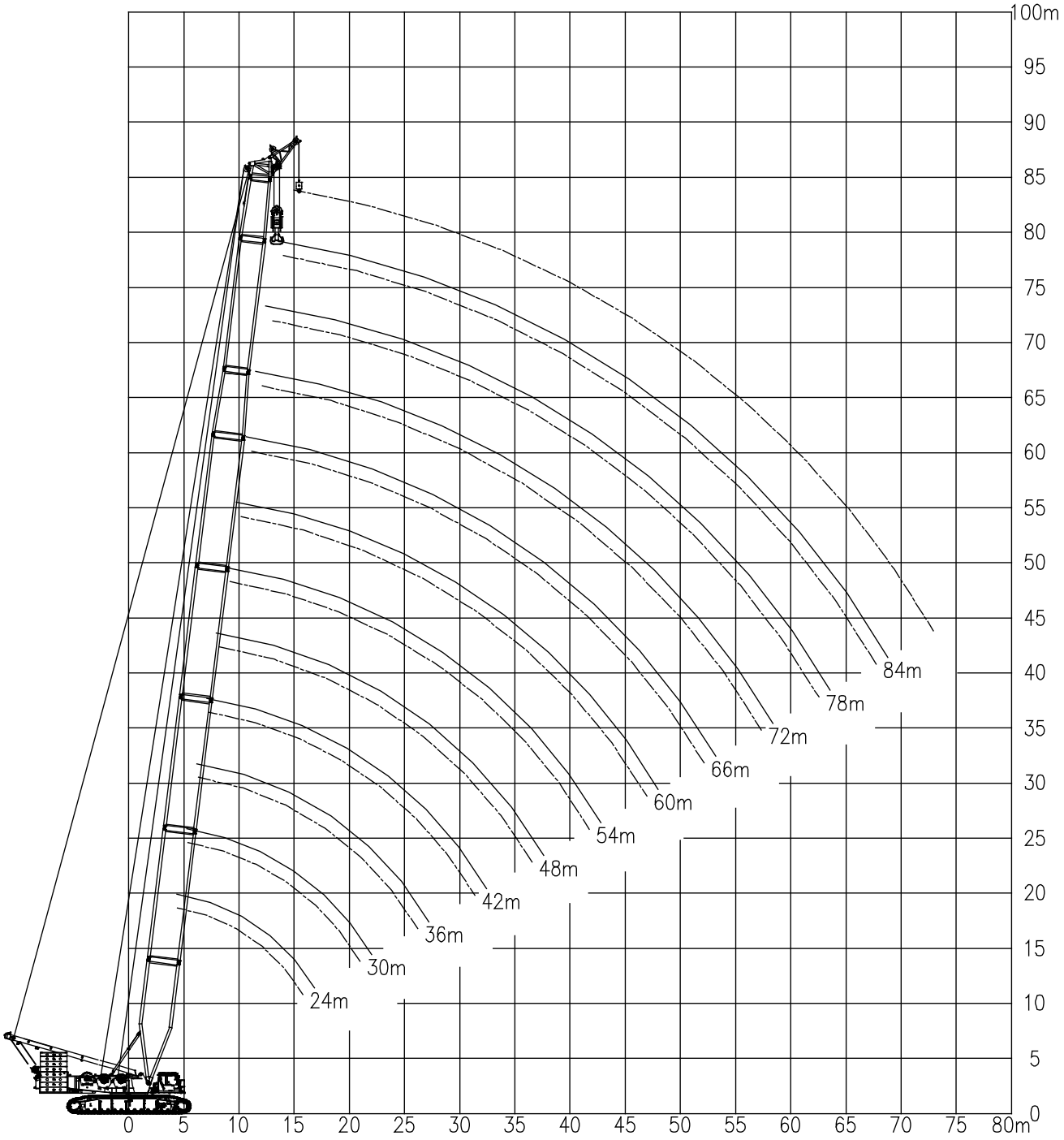
- Central ballast: four ballast plates of 10t and two ballast frames; 53t in total.
- Rear counterweight: 18 standard counterweight plates of 10t, two standard counterweight plates of 5t, and two counterweight frames; 200t in total.
- Suspended ballast: it consists of standard ballast plates, ballast base and detachable base and weighs 250t in total. Suspended ballast plates can be purchased as needed.
- Appended counterweight: it consists of an appended counterweight base and counterweight plates of 30t; 35t in total. It is optional for wind turbine operating mode.

2.8 Engine cold-start device

It guarantees that the crane functions normally in a cold environment.

3. Lifting performance

3.1 Lifting height curves of operating mode S

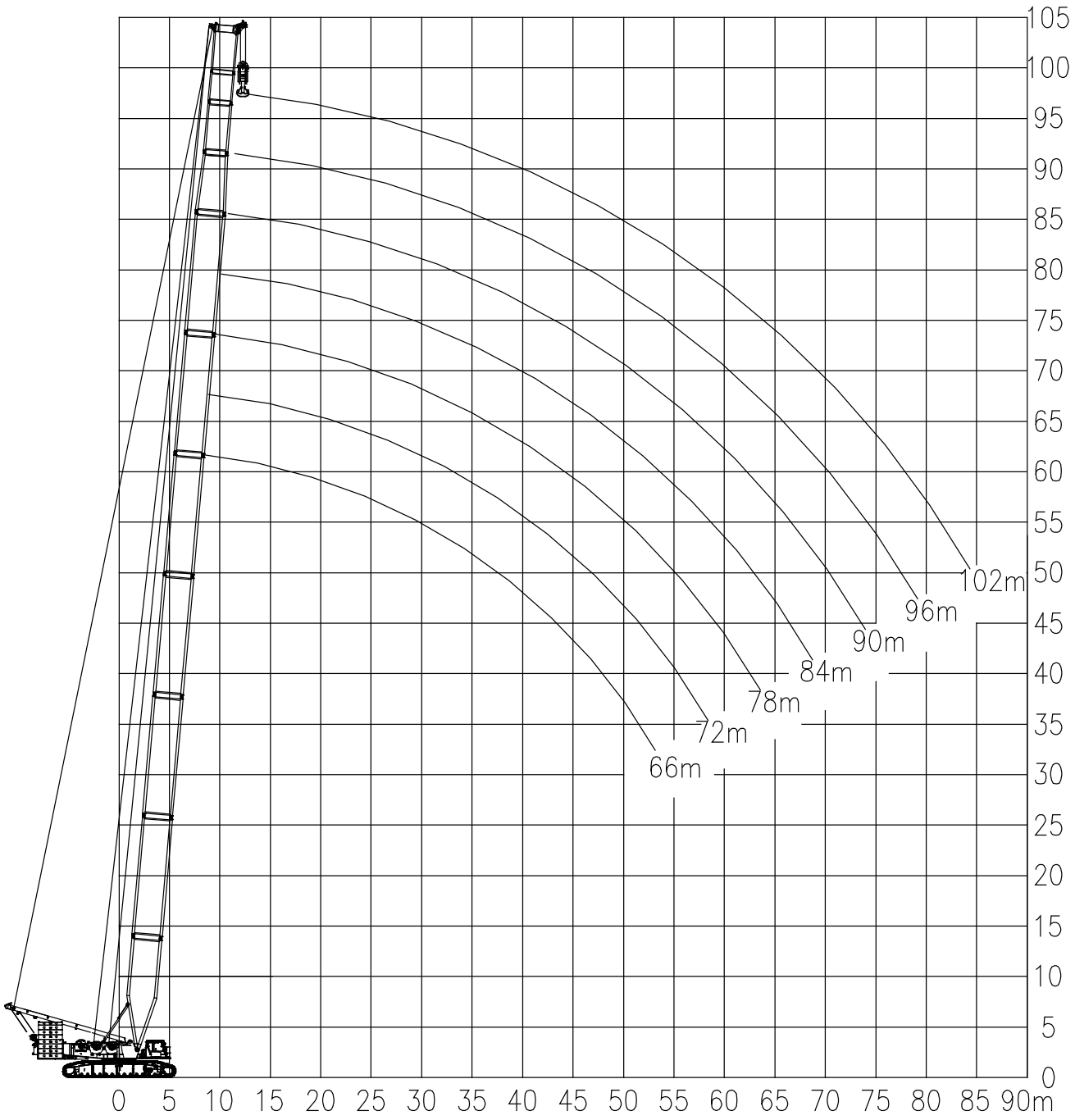


Lifting capacity chart of operating mode S

Rear counterweight: 200t; Central ballast: 53t

Boom length	24	30	36	42	48	54	60	66	72	78	84
Reeving / Radius	2×20	2×20	2×19	2×18	2×16	2×14	2×12	2×11	2×10	2×9	2×8
6	600	600									
7	600	574	531	494							
8	516	480	449	421	396						
9	439	412	388	367	347	330	313				
10	381	361	342	325	309	294	281	268	256		
11	326	320	305	291	277	265	254	243	232	223	213
12	283	284	275	263	251	241	232	222	213	204	196
14	224	224	224	220	211	203	196	189	181	174	167
16	184	184	184	184	181	175	169	163	157	151	145
18	155	155	155	155	154	153	148	143	137	132	127
20	133	134	134	133	132	132	131	126	122	117	113
22	117	117	117	117	115	115	114	113	109	105	101
24		104	104	103	102	101	101	99.6	97.5	94.2	90.4
26		92.3	92.4	91.9	90.8	90	89.4	88.4	87.1	85.1	81.5
28		83	83.2	82.7	81.5	80.7	80	79.1	77.7	76.7	73.9
30			75.3	74.8	73.7	72.9	72.1	71.2	69.8	68.7	67.2
32			68.5	68.1	66.9	66.1	65.4	64.4	62.9	61.9	60.5
34				62.2	61.1	60.3	59.5	58.5	57	55.9	54.5
36				57.1	55.9	55.1	54.4	53.3	51.9	50.7	49.3
38				52.5	51.4	50.6	49.8	48.8	47.3	46.2	44.7
40					47.3	46.5	45.7	44.7	43.2	42.1	40.6
44					40.3	39.6	38.8	37.8	36.3	35.1	33.7
48						33.8	33.1	32.1	30.6	29.4	27.9
52							28.3	27.3	25.8	24.7	23.2
56								23.3	21.8	20.6	19.1
60									18.3	17.1	15.6
64									15.2	14.1	12.6
68										11.4	9.9
72											7.5
Wind speed (m/s)	14.1				12.7				11.3		

3.2 Lifting height curves of operating mode SL



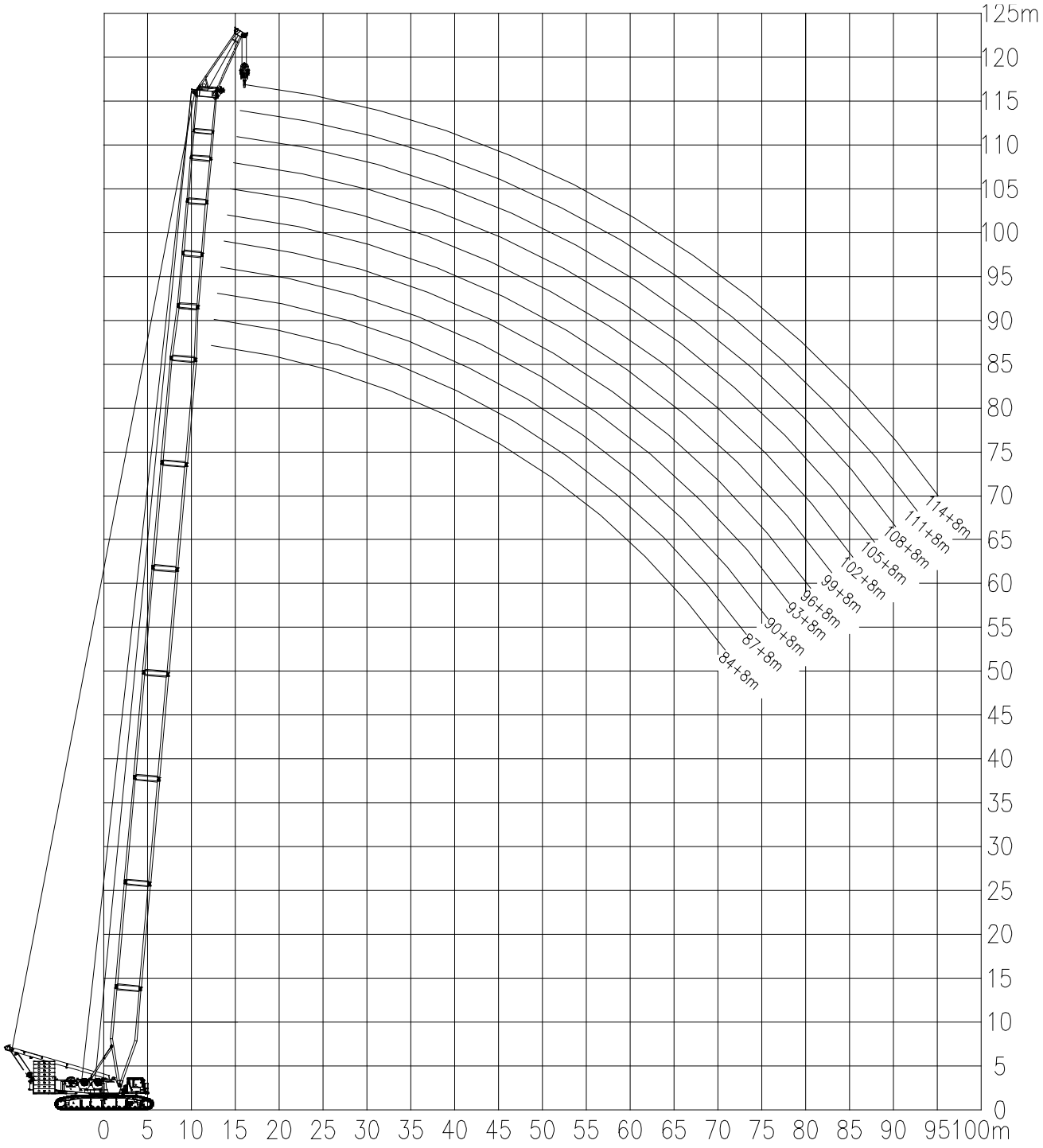
Lifting capacity chart of operating mode SL

Rear counterweight: 200t; Central ballast: 53t

Boom length	66	72	78	84	90	96	102
Reeving / Radius	2×10	2×9	2×8	2×8	2×7	2×7	2×6
10	271	259					
11	246	236	226	217			
12	226	217	208	200	192	186	
14	192	186	178	172	166	160	154
16	162	159	155	150	145	140	135
18	140	137	134	131	129	124	120
20	121	120	117	115	113	110	107
22	106	105	104	101	99.6	97.3	95.2
24	93.5	92.6	91.2	90.4	88.6	86.7	84.6
26	83.4	82.4	81.1	80.2	79.5	77.8	75.9
28	74.9	73.9	72.5	71.6	71	69.9	68.4
30	67.8	66.8	65.4	64.4	63.8	62.7	61.7
32	61.6	60.7	59.2	58.2	57.5	56.4	55.4
34	56.3	55.3	53.9	52.9	52.2	51.1	50
36	51.7	50.6	49.2	48.2	47.5	46.4	45.3
38	47.5	46.5	45.1	44	43.3	42.2	41.1
40	43.9	42.8	41.4	40.4	39.6	38.5	37.4
44	37.6	36.6	35.1	34	33.4	32.2	31.1
48	32.5	31.5	30	28.9	28.2	27	25.9
52	28.2	27.2	25.7	24.6	23.9	22.8	21.6
56	24.6	23.6	22.1	21	20.2	19.1	17.9
60		20.4	19	17.9	17.1	16	14.8
64		17.7	16.2	15.1	14.4	13.2	12.1
68			13.8	12.7	12	10.8	9.7
72				10.6	9.9	8.7	7.6
76					8	6.8	5.7
80					6.3	5.1	4
Wind speed	12.7	11.3				8.9	

(m/s)			

3.3 Lifting height curves of operating mode SLHS



Lifting capacity chart of operating mode SLHS-1

Rear counterweight: 180t; Central ballast: 53t; Appended counterweight: 35t

Boom length	84+8	87+8	90+8	93+8	96+8	99+8	102+8	105+8	108+8	111+8	114+8
Reeving / Radius	2×8	2×7	2×7	2×7	2×6	2×6	2×6	2×6	2×6	2×6	2×5
14	188	184	182								
15	176	172	170	166	165	160	158				
16	165	161	160	156	155	151	150	140	130	115	
17	155	152	150	147	145	142	142	138	128	113	105
18	146	143	142	139	137	134	134	133	126	111	103
19	138	135	134	131	130	127	126	125	124	110	102
20	131	128	127	124	123	120	120	119	118	108	99.8
22	118	115	115	112	111	108	108	107	107	104	96.6
24	107	105	104	102	101	98.4	98	97.6	97.2	95.7	93.3
26	98	95.5	95.3	92.4	92.2	89.6	89.3	89.1	88.9	87.4	87.2
28	89.3	87.4	87.3	84.6	84.5	81.7	81.7	81.6	81.4	80.1	79.9
30	80.7	79.5	80.1	77.6	77.6	75	75	75.1	74.9	73.7	73.5
32	73.3	72.2	72.7	71.1	71.6	69	69.1	69.1	69.1	67.9	68.1
34	66.8	65.7	66.2	64.7	65.3	63.7	63.7	63.8	63.9	62.8	62.9
36	61.3	60.1	60.6	59	59.6	58	58.6	59.2	59.3	58.2	58.3
38	56.3	55	55.6	54	54.6	53.1	53.6	54.2	54.6	54	54.2
40	51.8	50.6	51.2	49.6	50.1	48.6	49.2	49.7	50.2	49.8	50.2
44	44.3	43.1	43.6	42	42.6	41	41.5	42.1	42.6	42.2	42.6
48	38.1	36.9	37.5	35.8	36.3	34.8	35.3	35.9	36.4	35.9	36.4
52	33	31.8	32.3	30.6	31.2	29.6	30.1	30.7	31.2	30.8	31.3
56	28.7	27.3	27.9	26.2	26.8	25.2	25.7	26.3	26.8	26.4	26.9
60	24.9	23.6	24.2	22.4	23.1	21.4	22	22.5	23	22.6	23
64	21.6	20.3	20.9	19.2	19.8	18.2	18.7	19.2	19.7	19.3	19.8
68	18.7	17.4	18	16.3	16.9	15.2	15.8	16.4	16.8	16.5	16.9
72	16.2	14.9	15.5	13.8	14.4	12.7	13.2	13.8	14.3	13.9	14.4
76	13.9	12.6	13.2	11.5	12.1	10.4	11	11.5	12	11.6	12.1
80	11.9	10.6	11.2	9.4	10	8.4	9	9.5	10	9.6	10.1
84		8.7	9.3	7.6	8.2	6.5	7.1	7.6	8.1	7.8	8.2
88				5.9	6.5	4.9	5.4	6	6.5	6.1	6.6
Wind speed (m/s)	11.3			8.9							

Lifting capacity chart of operating mode SLHS-2

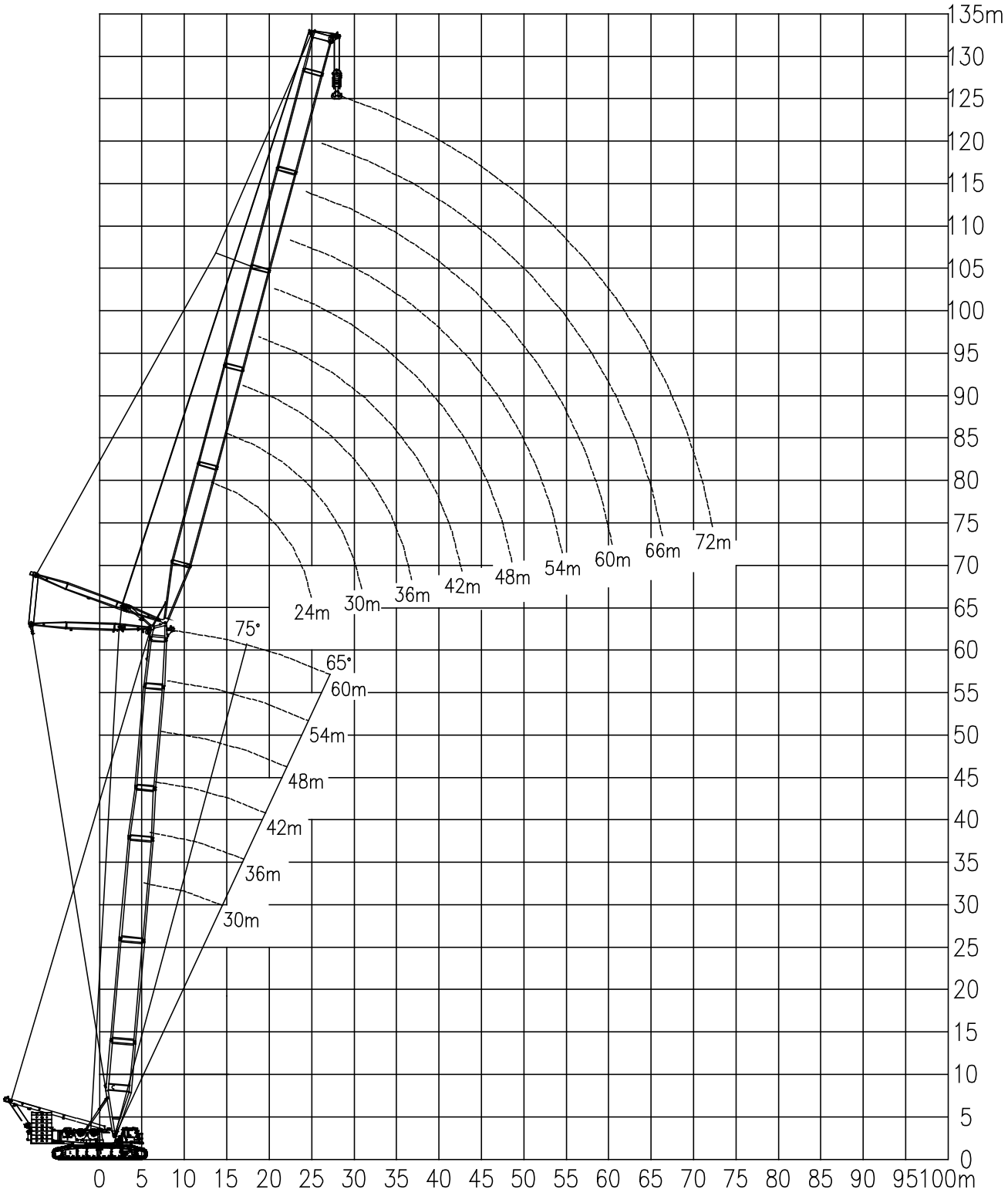
Rear counterweight: 180t; Central ballast: 53t

Boom length	84+8	87+8	90+8	93+8	96+8	99+8	102+8
Reeving / Radius	2×8	2×7	2×7	2×7	2×6	2×6	2×6
14	169	165	163				
15	158	155	153	149	148	144	143
16	148	145	143	140	139	135	134
17	139	136	135	131	130	127	126
18	131	128	127	124	123	120	119
19	124	121	120	117	116	113	112
20	117	114	113	110	110	107	106
22	105	103	102	99.1	98.7	96	95.5
24	95.3	92.9	92.6	89.7	89.6	86.7	86.6
26	86.7	84.3	84.2	81.5	81.2	78.7	78.5
28	79.2	77	77	74.3	74.3	71.6	71.6
30	72.7	70.6	70.6	67.9	68	65.4	65.6
32	66.4	64.9	65	62.4	62.6	60.1	60.2
34	60.4	59.3	59.7	57.4	57.6	55.2	55.3
36	55.2	54	54.6	52.9	53.2	50.7	50.9
38	50.6	49.3	49.9	48.3	48.9	46.8	47.1
40	46.5	45.2	45.8	44.2	44.7	43.2	43.4
44	39.5	38.2	38.8	37.2	37.7	36.2	36.7
48	33.8	32.5	33.1	31.4	31.9	30.4	30.9
52	29	27.7	28.2	26.6	27.2	25.6	26.1
56	24.9	23.6	24.2	22.5	23.1	21.5	22
60	21.4	20.2	20.7	19	19.6	18	18.5
64	18.4	17.1	17.7	15.9	16.5	14.9	15.5
68	15.7	14.4	15	13.3	13.8	12.2	12.8
72	13.4	12.1	12.6	10.9	11.5	9.9	10.4
76	11.2	10	10.5	8.8	9.4	7.7	8.3
80	9.3	8	8.6	6.9	7.5	5.8	6.4
84		6.3	6.9	5.1	5.8	4.1	4.7
88				3.6	4.2	2.5	3.1
Wind speed (m/s)	11.3			8.9			

Notes:

1. For boom length from 102+8m~114+8m, the load hook cannot be lifted off the ground when the main boom is erected with an angle of smaller than 30°.
2. Luffing jib rear anchoring rods cannot be placed on the main boom. Otherwise the lifting performance would be reduced and boom erecting would be influenced.
3. For operating mode SLHS-1, booms of lengths ≥93+8m should be erected with the help of side auxiliary outriggers.
4. For operating mode SLHS-2, boom should be erected with the help of side auxiliary outriggers. Booms of lengths ≥96+8m should be erected after the appended counterweight of 15t is assembled.

3.4 Lifting height curves of operating mode SW



Lifting capacity chart of operating mode SW (85°)

Rear counterweight: 200t; Central ballast: 53t

Boom length	30								
Reeving / Radius	24	30	36	42	48	54	60	66	72
14	225								
16	196	189	183						
18	172	168	163	158					
20	149	149	146	142	138				
22	132	131	131	129	125	122			
24	117	117	117	116	115	112	109	106	
26	106	106	105	105	104	103	100	97.8	95.2
28	95.9	96.3	95.7	95.2	94.6	94	92.9	90.5	88.2
30		88.1	87.5	87.1	86.5	85.9	85.2	84.2	82
32		81	80.5	80.1	79.5	78.9	78.3	77.7	76.5
34		74.7	74.4	74.1	73.5	72.9	72.2	71.6	71
36			69.1	68.8	68.2	67.6	67	66.4	65.7
38			64.3	64.1	63.5	63	62.3	61.7	61
40			59.9	59.9	59.4	58.8	58.2	57.6	56.9
44				52.6	52.2	51.8	51.1	50.5	49.8
48					46.4	45.9	45.3	44.7	44
52					41.3	41	40.5	39.9	39.2
56						36.8	36.3	35.8	35.1
60							32.7	32.3	31.6
64								29.1	28.5
68								26.4	25.8
72									23.4
Wind speed (m/s)	12.7		11.3						8.9

Lifting capacity chart of operating mode SW (85°)

Rear counterweight: 200t; Central ballast: 53t

Boom length	36								
Reeving / Radius	24	30	36	42	48	54	60	66	72
14	216								
16	189	182							
18	167	162	157	152					
20	149	146	142	138	134				
22	131	131	129	125	122	118			
24	117	117	116	115	111	108	105		
26	105	105	105	104	103	100	97.5	94.9	92.4
28	95.8	96.1	95.4	94.9	94.3	92.9	90.5	88	85.7
30		87.9	87.2	86.8	86.2	85.5	84.2	81.9	79.7
32		80.8	80.3	79.8	79.2	78.6	77.9	76.5	74.4
34		74.6	74.2	73.8	73.2	72.6	71.9	71.3	69.7
36			68.8	68.5	67.9	67.3	66.7	66	65.3
38			64.1	63.8	63.3	62.7	62	61.4	60.7
40			59.8	59.7	59.1	58.6	57.9	57.3	56.6
44				52.5	52	51.5	50.9	50.3	49.6
48					46.2	45.7	45.1	44.5	43.8
52					41.2	40.9	40.3	39.7	39
56						36.7	36.1	35.6	34.9
60							32.6	32.1	31.4
64							29.4	29	28.4
68								26.2	25.7
72									23.2
Wind speed (m/s)	12.7	11.3						8.9	

Lifting capacity chart of operating mode SW (85°)

Rear counterweight: 200t; Central ballast: 53t

Boom length	42								
Reeving / Radius	24	30	36	42	48	54	60	66	72
14	207								
16	182	176							
18	162	157	152						
20	146	141	137	133					
22	131	129	125	121	118	114			
24	117	117	114	111	108	105	102		
26	105	105	104	102	100	97.3	94.7	92.1	
28	95.6	95.7	95	94.4	92.7	90.3	87.8	85.4	83.1
30		87.6	86.9	86.4	85.8	84	81.7	79.5	77.3
32		80.5	79.9	79.5	78.9	78.2	76.4	74.3	72.3
34		74.4	73.9	73.5	72.9	72.2	71.5	69.7	67.7
36			68.6	68.2	67.6	67	66.3	65.4	63.6
38			63.9	63.6	63	62.4	61.7	61.1	59.9
40			59.6	59.4	58.9	58.3	57.6	56.9	56.2
44				52.3	51.8	51.3	50.6	50	49.3
48					46	45.5	44.8	44.2	43.5
52					41	40.7	40	39.5	38.8
56						36.5	35.9	35.4	34.7
60							32.4	31.9	31.2
64							29.2	28.8	28.2
68								26.1	25.5
72									23.1
76									20.9
Wind speed (m/s)	11.3						8.9		

Lifting capacity chart of operating mode SW (85°)

Rear counterweight: 200t; Central ballast: 53t

Boom length	48								
Reeving / Radius	24	30	36	42	48	54	60	66	72
16	175	169							
18	156	151	146						
20	141	136	132	128					
22	128	124	121	117	114				
24	116	114	111	108	105	102	99		
26	105	105	102	99.6	96.8	94.1	91.5	89.1	
28	95.2	95.3	94.5	92.4	89.9	87.3	85	82.6	80.3
30	86.8	87.2	86.5	85.9	83.8	81.4	79.2	76.9	74.9
32		80.2	79.6	79	78.3	76.2	74	71.9	70
34		74.1	73.5	73.1	72.5	71.5	69.4	67.5	65.6
36		68.5	68.3	67.8	67.2	66.6	65.3	63.5	61.6
38			63.6	63.2	62.6	62	61.3	59.8	58.1
40			59.3	59.1	58.5	57.9	57.2	56.4	54.8
44				52	51.5	50.9	50.3	49.6	48.9
48					45.7	45.2	44.5	43.9	43.2
52					40.8	40.4	39.8	39.2	38.5
56						36.3	35.7	35.1	34.4
60							32.2	31.6	31
64							29	28.6	27.9
68								25.9	25.3
72									22.9
76									20.7
Wind speed (m/s)	11.3					8.9			

Lifting capacity chart of operating mode SW (85°)

Rear counterweight: 200t; Central ballast: 53t

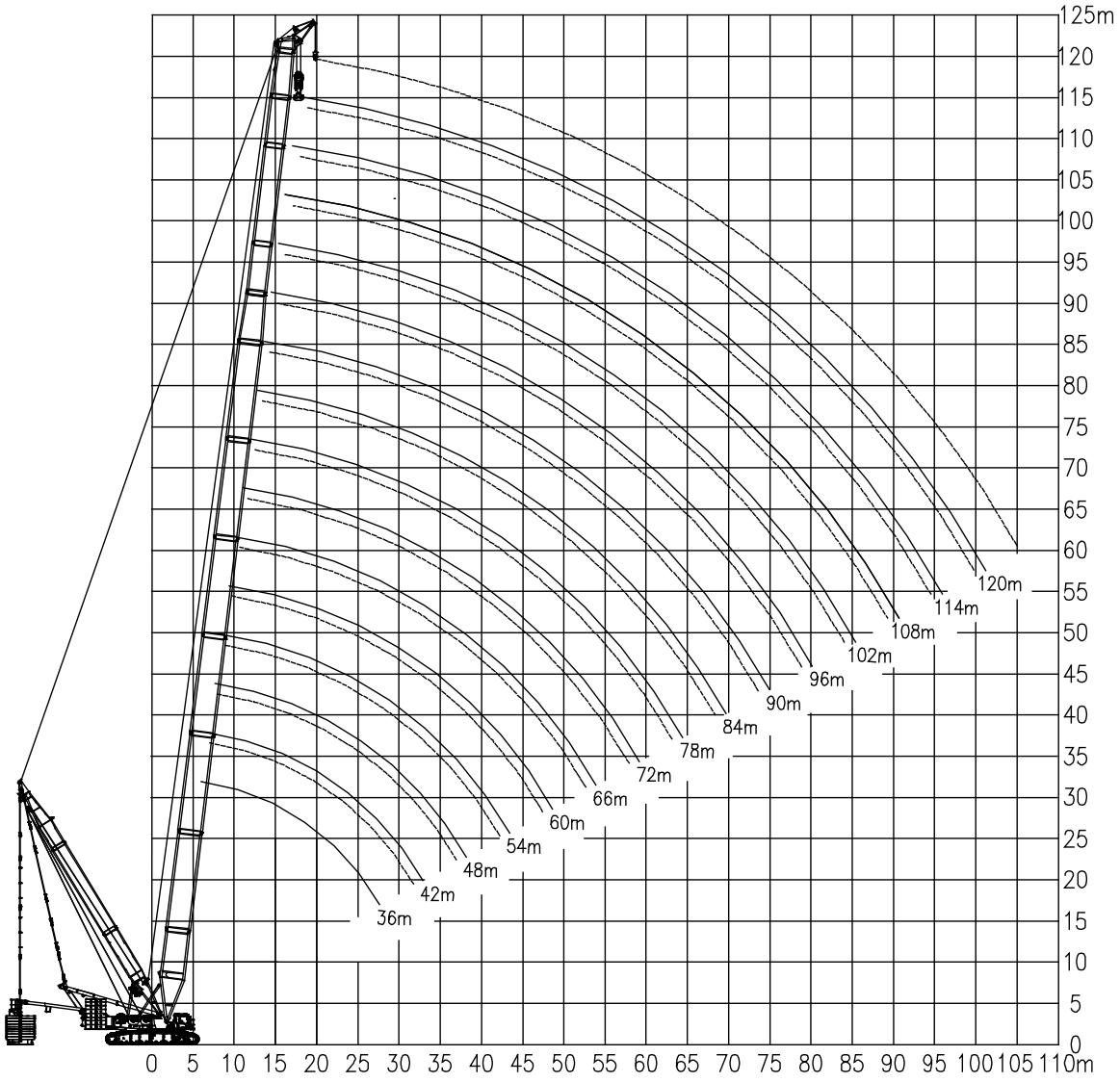
Boom length	54								
Reeving / Radius	24	30	36	42	48	54	60	66	72
16	168								
18	150	146							
20	136	132	128	124					
22	124	120	117	113	110				
24	114	110	107	104	101	98.5			
26	104	102	99.2	96.4	93.8	91.1	88.5	86	
28	94.8	94.8	92.1	89.5	87.1	84.6	82.2	80	77.7
30	86.5	86.7	85.9	83.4	81.2	78.9	76.7	74.5	72.4
32		79.8	79.1	78.2	76.1	73.8	71.7	69.7	67.7
34		73.7	73.1	72.6	71.4	69.3	67.3	65.3	63.5
36		68.3	67.9	67.4	66.8	65.2	63.4	61.5	59.6
38			63.2	62.8	62.2	61.5	59.7	57.9	56.2
40			59	58.7	58.1	57.5	56.4	54.7	53
44				51.7	51.2	50.6	49.9	49.1	47.5
48				45.7	45.4	44.9	44.2	43.6	42.8
52					40.5	40.1	39.5	38.8	38.1
56						36	35.4	34.8	34.1
60							31.9	31.4	30.7
64							28.8	28.3	27.7
68								25.6	25
72									22.7
76									20.5
Wind speed (m/s)	11.3				8.9				

Lifting capacity chart of operating mode SW (85°)

Rear counterweight: 200t; Central ballast: 53t

Boom length	60								
Reeving / Radius	24	30	36	42	48	54	60	66	72
16	161								
18	145	140							
20	131	127	123						
22	120	116	113	109	106				
24	110	107	104	101	98	95.2			
26	102	99	96.1	93.3	90.8	88.1	85.7		
28	94.3	92.2	89.3	86.8	84.3	81.9	79.6	77.3	75.1
30	86.1	86.1	83.3	80.9	78.7	76.5	74.2	72	70
32		79.3	78.1	75.9	73.7	71.5	69.4	67.4	65.4
34		73.3	72.7	71.3	69.2	67.2	65.2	63.3	61.3
36		67.9	67.5	67	65.2	63.3	61.3	59.5	57.6
38			62.8	62.4	61.6	59.7	57.9	56.1	54.4
40			58.7	58.3	57.7	56.4	54.7	53	51.4
44				51.3	50.8	50.2	49.2	47.5	45.9
48				45.5	45.1	44.5	43.9	42.9	41.4
52					40.3	39.8	39.1	38.5	37.5
56						35.7	35.1	34.5	33.8
60						32.1	31.7	31.1	30.4
64							28.6	28.1	27.4
68								25.4	24.8
72								23	22.4
76									20.3
Wind speed (m/s)	11.3			8.9					

3.5 Lifting height curves of operating mode SDB



Lifting capacity chart of operating mode SDB

Rear counterweight: 160t; Central ballast: 53t; Suspended ballast: 0~250t;

Suspended ballast radius: 19m

Boom length	36	42	48	54	60	66	72	78
Reeving / Radius	2×20	2×19	2×16	2×14	2×13	2×11	2×10	2×9
7	600	564						
8	600	564	506					
9	600	564	506	447	417			
10	600	564	506	447	417	357	326	
11	582	564	506	447	417	357	326	295
12	582	564	506	447	417	357	326	295
14	514	514	506	447	417	357	326	295
16	450	450	450	447	417	357	326	295
18	400	400	400	400	400	357	326	295
20	360	360	360	360	360	357	326	295
22	327	327	326	326	325	325	323	295
24	296	296	294	293	293	292	291	290
26	269	269	267	267	266	265	264	263
28	247	246	244	244	243	242	241	240
30	226	227	225	224	224	223	221	220
32	204	210	208	207	207	206	204	203
34		195	193	193	192	191	189	188
36		182	180	180	179	178	176	175
38		170	169	168	168	166	165	163
40			158	158	157	156	154	153
44			141	140	139	138	136	135
48				125	125	123	122	120
52					112	111	109	108
56						100	99	97.7
60							89.8	88.6
64							81.8	80.6
68								73.5
Wind speed (m/s)	14.1	12.7					11.3	

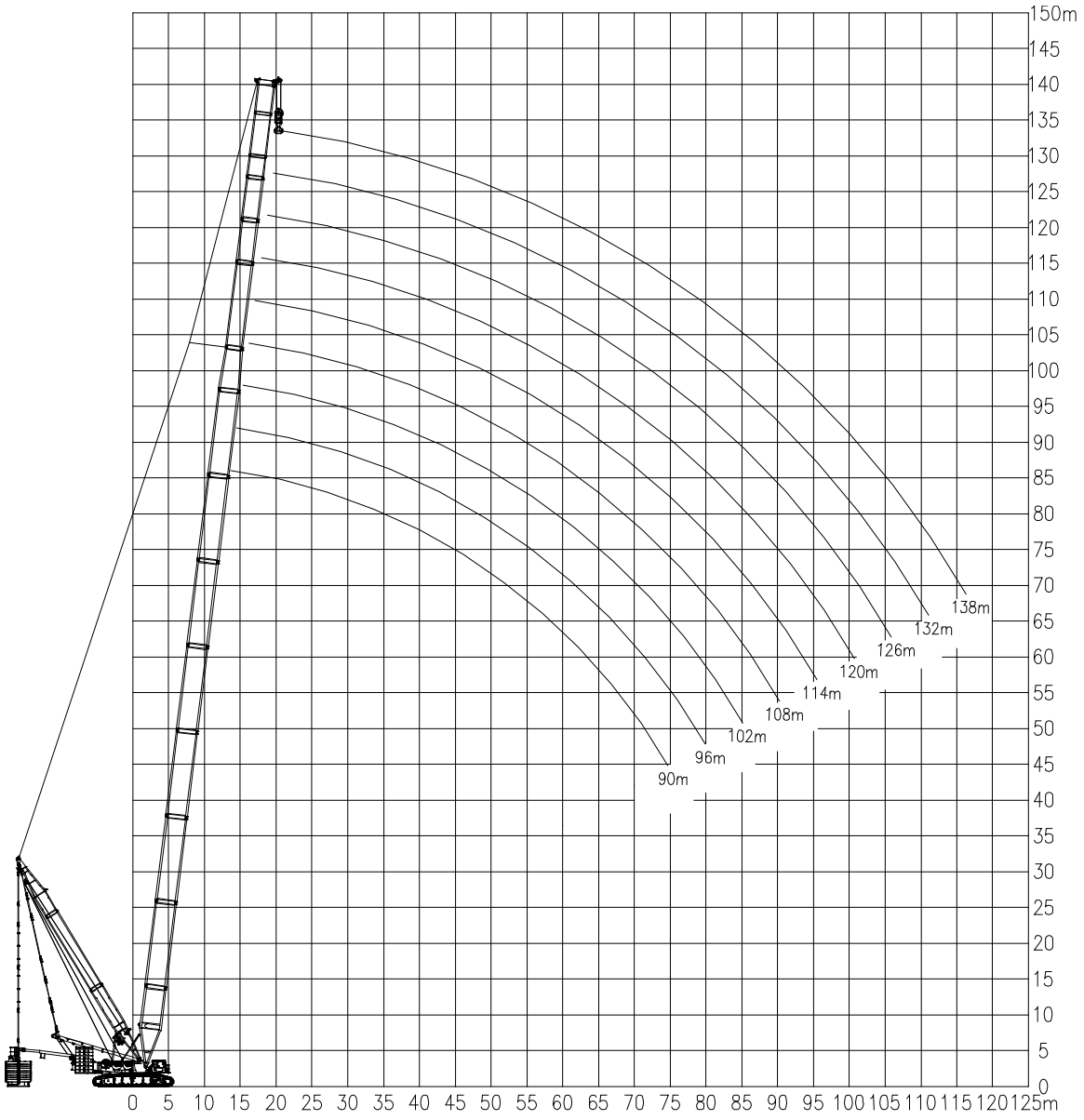
Lifting capacity chart of operating mode SDB

Rear counterweight: 160t; Central ballast: 53t; Suspended ballast: 0~250t;

Suspended ballast radius: 19m

Boom length	84	90	96	102	108	114	120
Reeving / Radius	2×8	2×7	2×7	2×6	2×6	2×6	2×5
11	263						
12	263	231	231				
14	263	231	231	199	189	167	149
16	263	231	231	199	189	167	149
18	263	231	231	199	189	167	149
20	263	231	231	199	189	167	149
22	263	231	231	199	189	167	149
24	263	231	231	199	189	167	149
26	261	231	231	199	189	167	148
28	238	231	231	199	189	167	147
30	218	217	215	199	188	167	147
32	201	200	198	196	186	167	146
34	186	185	183	181	180	166	145
36	173	172	170	168	167	165	144
38	161	160	159	157	155	153	144
40	151	150	148	146	145	143	141
44	133	132	130	128	127	125	123
48	118	117	116	114	112	110	109
52	106	105	103	101	100	98	96.4
56	95.7	94.3	92.9	91.1	89.5	87.5	85.9
60	86.6	85.2	83.8	82	80.4	78.4	76.9
64	78.7	77.2	75.9	74.1	72.5	70.5	69
68	71.7	70.2	68.9	67.1	65.5	63.6	62
72	65.4	64	62.7	60.9	59.4	57.4	55.9
76		58.5	57.2	55.4	53.9	51.9	50.4
80		53.5	52.2	50.4	48.9	47	45.5
84			47.7	46	44.4	42.5	41
88				41.9	40.4	38.5	37
92					36.6	34.8	33.3
96					33.2	31.4	29.9
100						28.2	26.8
104							23.9
Wind speed (m/s)	11.3		8.9				

3.6 Lifting height curves of operating mode SLDB



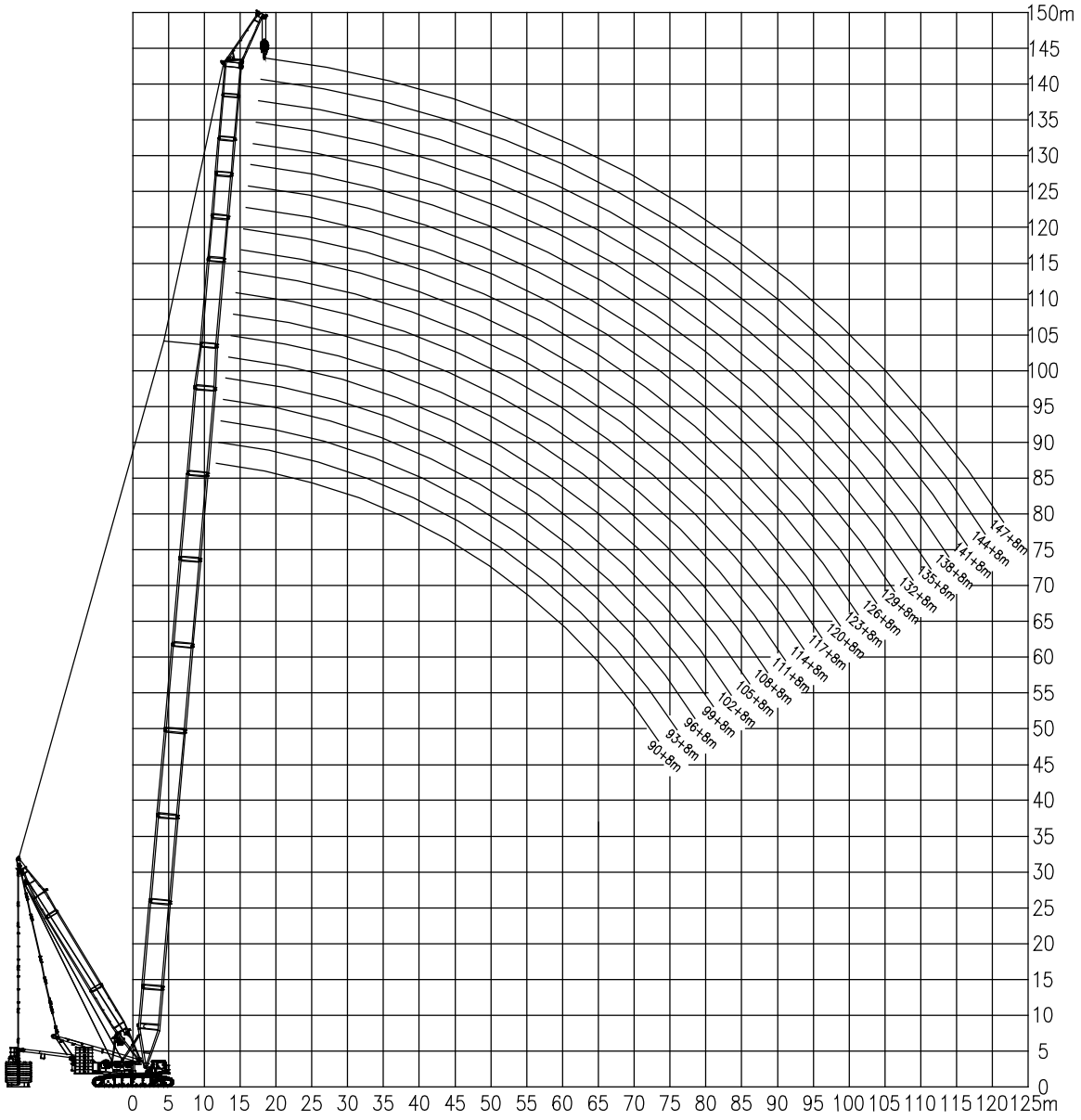
Lifting capacity chart of operating mode SLDB

Rear counterweight: 160t; Central ballast: 53t; Suspended ballast: 0~250t;

Suspended ballast radius: 19m

Boom length	90	96	102	108	114	120	126	132	138
Reeving / Radius	2×8	2×7	2×6	2×6	2×6	2×5	2×5	2×4	2×4
12	263	232							
14	263	232	231	200	189	167			
16	263	232	231	200	189	167	152	136	123
18	263	232	231	200	189	167	152	136	123
20	263	232	231	200	189	167	152	136	123
22	263	232	231	200	189	167	152	136	123
24	263	232	231	200	189	167	152	136	122
26	263	232	231	200	188	167	152	136	122
28	242	232	231	200	188	166	151	136	122
30	222	221	219	200	187	165	151	136	122
32	204	203	202	200	186	165	150	135	121
34	189	188	186	186	184	164	150	134	120
36	175	174	173	172	171	163	149	134	120
38	163	162	161	160	159	158	148	133	119
40	153	152	150	150	148	147	147	132	118
44	135	134	133	132	130	129	129	128	117
48	120	119	118	117	116	115	114	113	112
52	108	107	106	105	103	102	102	101	99.6
56	97.8	96.8	95.6	94.5	93.2	92	91.4	90.2	89.1
60	89	87.9	86.7	85.6	84.3	83.1	82.5	81.3	80.2
64	81.3	80.2	79	77.9	76.6	75.4	74.7	73.5	72.5
68	74.5	73.5	72.2	71.1	69.8	68.6	68	66.8	65.7
72	68.5	67.5	66.2	65.1	63.8	62.6	62	60.8	59.7
76	63.2	62.2	60.9	59.8	58.5	57.3	56.7	55.4	54.4
80	58.4	57.4	56.2	55	53.7	52.6	51.9	50.7	49.6
84		53.1	51.8	50.7	49.4	48.3	47.6	46.4	45.3
88			47.9	46.8	45.5	44.4	43.7	42.5	41.4
92				43.3	42	40.8	40.1	38.9	37.9
96				40	38.7	37.5	36.9	35.7	34.6
100					35.7	34.6	33.9	32.7	31.6
104						31.8	31.1	29.9	28.9
108							28.6	27.4	26.3
112								25	24
116								22.8	21.8
120									19.7
Wind speed	11.3 m/s		8.9 m/s						

3.7 Lifting height curves of operating mode SLHSDB



Lifting capacity chart of operating mode SLDB

Rear counterweight: 160t; Central ballast: 53t; Suspended ballast: 0~250t;

Suspended ballast radius: 19m

Boom length	90+8	93+8	96+8	99+8	102+8	105+8	108+8	111+8	114+8	117+8
Reeving / Radius	2×7	2×7	2×7	2×7	2×6	2×6	2×6	2×6	2×6	2×5
14	190									
15	190	190	190	190	190	190	180	167		
16	190	190	190	190	190	190	180	167	162	155
17	190	190	190	190	190	190	180	167	162	155
18	190	190	190	190	190	190	180	167	162	155
19	190	190	190	190	190	190	180	167	162	155
20	185	184	183	182	181	180	180	167	162	155
22	185	184	183	182	181	180	180	167	162	155
24	185	184	183	182	181	180	179	167	162	155
26	185	180	183	182	181	179	179	167	162	154
28	185	180	183	182	181	179	178	167	161	153
30	185	180	183	182	181	178	178	167	160	153
32	185	180	183	182	181	177	177	166	159	152
34	181	175	181	179	178	176	176	165	159	151
36	176	174	175	174	165	164	173	165	158	150
38	164	162	163	162	162	161	161	160	157	150
40	153	153	152	151	151	150	150	149	149	148
44	136	135	134	134	133	133	132	131	131	130
48	121	120	119	119	119	118	118	116	116	115
52	109	108	107	107	106	106	105	104	104	103
56	98.2	97.4	97.1	96.2	95.9	95.1	94.8	93.8	93.5	92.5
60	89.2	88.5	88.2	87.3	86.9	86.1	85.8	84.9	84.6	83.5
64	81.5	80.7	80.4	79.5	79.2	78.4	78.1	77.1	76.8	75.8
68	74.7	74	73.6	72.7	72.4	71.6	71.3	70.4	70	68.9
72	68.8	68	67.6	66.7	66.4	65.6	65.3	64.3	64	62.9
76	63.4	62.6	62.3	61.4	61.1	60.3	59.9	59	58.7	57.6
80	58.6	57.9	57.5	56.6	56.3	55.5	55.2	54.2	53.9	52.8
84	54.3	53.5	53.2	52.3	52	51.2	50.8	49.9	49.6	48.4
88		49.6	49.3	48.4	48	47.2	46.9	46	45.7	44.5
92			45.7	44.8	44.5	43.7	43.4	42.4	42.1	40.9
96					41.2	40.4	40.1	39.1	38.8	37.7
100								36.1	35.8	34.7
104								33.4	33	31.9
108									30.5	29.3
Wind speed (m/s)	8.9 m/s									

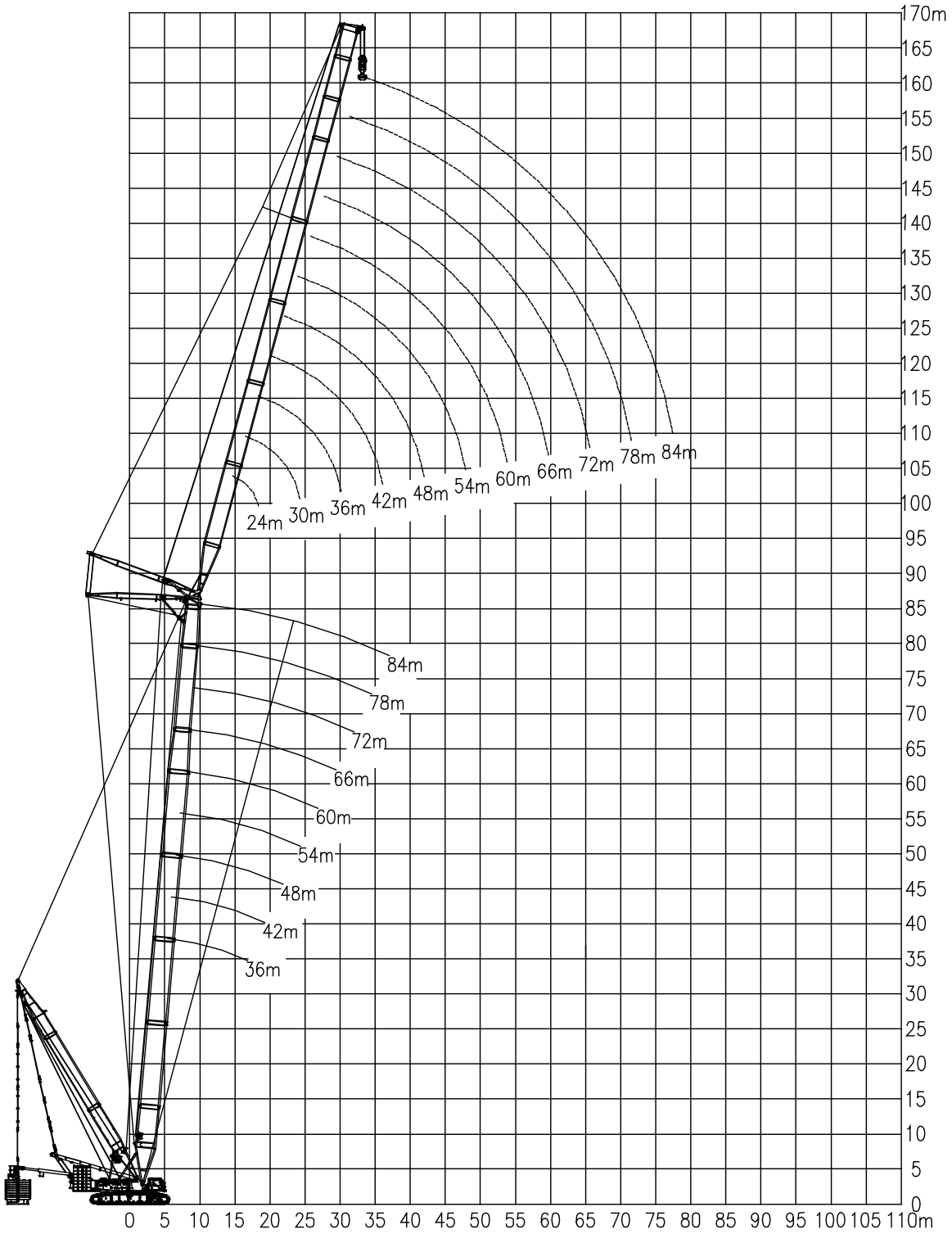
Lifting capacity chart of operating mode SLDB

Rear counterweight: 160t; Central ballast: 53t; Suspended ballast: 0~250t;

Suspended ballast radius: 19m

Boom length	120+8	123+8	126+8	129+8	132+8	135+8	138+8	141+8	144+8	147+8
Reeving / Radius	2×5	2×5	2×5	2×5	2×5	2×4	2×4	2×4	2×4	2×4
17	150	142	134	128	123					
18	150	142	134	128	123	118				
19	150	142	134	128	123	117	108	100	91	85
20	150	142	134	128	123	117	108	100	90.9	84.8
22	150	142	134	128	123	117	108	99.7	90.4	84.4
24	149	142	133	127	123	116	107	99.1	90.1	84.1
26	149	142	133	127	123	116	107	98.6	90	83.4
28	148	141	132	126	123	115	106	97.9	89.4	82.8
30	147	140	132	126	123	115	106	97.3	88.8	82.2
32	147	140	131	125	123	114	105	97	88.2	81.6
34	146	139	130	125	123	114	105	96.5	87.4	81
36	145	139	130	124	122	113	104	95.6	86.7	81
38	144	138	129	123	122	113	103	94.9	85.9	80.4
40	144	137	128	123	120	113	102	94	85.3	79.7
44	130	130	126	120	118	111	101	92.6	83.9	78.3
48	115	115	115	114	113	110	99.2	91	82.4	76.8
52	103	103	102	101	101	100	97.3	89.5	80.8	75.3
56	92.4	92	91.7	90.9	90.5	89.8	89.5	87.8	79.4	73.9
60	83.4	83.1	82.7	81.9	81.6	80.8	80.5	80.3	77.7	72.5
64	75.6	75.3	75	74.2	73.8	73.1	72.7	72.5	72.2	71
68	68.8	68.5	68.2	67.4	67	66.2	65.9	65.7	65.3	65.6
72	62.8	62.5	62.1	61.3	61	60.2	59.8	59.7	59.3	59.6
76	57.5	57.1	56.8	56	55.6	54.9	54.5	54.3	53.9	54.2
80	52.7	52.3	52	51.2	50.8	50.1	49.7	49.5	49.1	49.4
84	48.4	48	47.7	46.9	46.5	45.7	45.4	45.2	44.8	45
88	44.4	44.1	43.8	42.9	42.6	41.8	41.4	41.2	40.9	41.1
92	40.9	40.5	40.2	39.4	39	38.2	37.9	37.7	37.3	37.5
96	37.6	37.3	36.9	36.1	35.7	35	34.6	34.4	34	34.3
100	34.6	34.3	33.9	33.1	32.7	32	31.6	31.4	31	31.3
104	31.8	31.5	31.2	30.3	30	29.2	28.8	28.6	28.2	28.5
108	29.3	28.9	28.6	27.8	27.4	26.7	26.3	26.1	25.7	25.9
112	26.9	26.5	26.2	25.4	25	24.3	23.9	23.7	23.3	23.6
116			24	23.2	22.8	22.1	21.7	21.5	21.1	21.4
120				21.1	20.7	20	19.6	19.4	19	19.3
Wind speed	8.9 m/s									

3.8 Lifting height curves of operating mode SWDB



Lifting capacity chart of operating mode SWDB (85°)

Rear counterweight: 160t; Central ballast: 53t; Suspended ballast: 0~250t;

Suspended ballast radius: 19m

Boom length	36										
Reeving / Radius	24	30	36	42	48	54	60	66	72	78	84
14	280										
16	280	263									
18	280	254	232								
20	245	245	223	207	193						
22	215	221	216	200	187	170					
24	192	197	194	191	181	169	143				
26	173	177	174	172	169	165	142	122	102		
28	152	160	158	156	154	152	141	122	102	87.9	
30		147	145	143	141	139	137	122	102	87.5	75.6
32		135	133	132	130	128	126	121	101	87.1	75.2
34		119	124	122	120	118	117	115	101	86.7	74.8
36			115	113	112	110	109	107	100	86.3	74.3
38			107	106	105	103	102	100	98.9	85.8	73.9
40				99.5	98.3	96.7	95.4	94.1	92.7	85.4	73.4
44				86.3	87.2	85.8	84.6	83.4	82.1	80.8	72.4
48					78.1	76.9	75.7	74.6	73.4	72.2	67.8
52						69.4	68.4	67.4	66.2	65.1	61.3
56						59.8	62.1	61.2	60.1	59.1	55.6
60							55.4	55.9	54.9	53.9	50.5
64								51.2	50.3	49.4	45.9
68								44.3	46.4	45.5	41.7
72									41.3	42	38
76										38.4	34.7
80										33.4	31.7
84											28.9
Wind speed (m/s)	12.7		11.3						8.9		

Lifting capacity chart of operating mode SWDB (85°)

Rear counterweight: 160t; Central ballast: 53t; Suspended ballast: 0~250t;

Suspended ballast radius: 19m

Boom length	42										
Reeving / Radius	24	30	36	42	48	54	60	66	72	78	84
14	280										
16	280	265									
18	280	255	233								
20	255	247	225	209							
22	223	231	217	202	187	158					
24	198	205	203	196	182	157	134				
26	178	184	182	179	176	155	132	114			
28	162	166	165	162	160	154	131	112	95.4	82.2	
30		152	150	148	146	144	130	111	95.3	82.1	71
32		140	138	136	134	132	128	110	95.2	81.9	70.8
34		125	128	126	124	122	121	109	95.1	81.6	70.5
36			118	117	116	114	112	108	94.9	81.4	70.2
38			110	109	108	106	105	103	94.7	81.1	69.9
40			100	102	101	99.7	98.2	97	94.5	80.9	69.6
44				89.5	89.6	88.2	86.9	85.8	84.5	80.2	68.9
48					80.1	78.9	77.8	76.7	75.5	74.3	68.2
52					68.1	71.2	70.1	69.2	68	66.9	62.1
56						61.9	63.7	62.8	61.7	60.6	56.4
60							57.2	57.3	56.3	55.3	51.2
64								52.5	51.6	50.6	46.5
68								45.9	47.5	46.6	42.2
72									42.7	43	38.6
76										39.5	35.1
80										34.6	32.1
84											29.3
Wind speed (m/s)	11.3						8.9				

Lifting capacity chart of operating mode SWDB (85°)

Rear counterweight: 160t; Central ballast: 53t; Suspended ballast: 0~250t;

Suspended ballast radius: 19m

Boom length	48										
Reeving / Radius	24	30	36	42	48	54	60	66	72	78	84
16	280	266									
18	280	257	235								
20	266	248	226	210							
22	231	240	219	203	188						
24	204	212	210	197	182	160	132				
26	183	190	188	186	177	158	131	113			
28	166	172	170	168	166	157	130	112	94.7		
30		157	155	153	151	149	129	110	94.6	81.4	70.5
32		144	142	140	139	136	127	109	94.5	81.2	70.3
34		130	131	129	128	126	124	108	94.3	81	70
36			122	120	119	117	115	107	94.2	80.8	69.7
38			113	112	111	109	108	106	93.9	80.5	69.4
40			104	105	104	102	101	99.5	93.7	80.2	69.1
44				92.4	91.7	90.3	89.1	87.9	86.6	79.6	68.4
48					81.9	80.7	79.5	78.5	77.3	76.1	67.7
52					70.5	72.7	71.6	70.7	69.5	68.4	62.9
56						63.8	65	64.1	63	62	57
60							58.7	58.4	57.4	56.4	51.9
64							50.3	53.6	52.6	51.7	47.1
68								47.2	48.4	47.5	42.8
72									43.7	43.8	38.9
76										40.4	35.6
80										35.6	32.4
84											29.7
Wind speed (m/s)	11.3					8.9					

Lifting capacity chart of operating mode SWDB (85°)

Rear counterweight: 160t; Central ballast: 53t; Suspended ballast: 0~250t;

Suspended ballast radius: 19m

Boom length	54										
Reeving / Radius	24	30	36	42	48	54	60	66	72	78	84
16	280										
18	280	259									
20	277	250	228	205							
22	240	242	220	203	172						
24	211	219	213	197	171	146					
26	189	195	195	192	169	144	122	104			
28	171	177	176	173	167	143	121	103	88		
30		161	160	158	156	141	120	102	87.1	76	
32		148	146	144	143	140	119	101	86.3	76	65.9
34		135	135	133	131	130	117	100	85.4	75.9	65.7
36			125	123	122	120	116	99.1	84.5	75.8	65.6
38			116	115	113	112	110	98.1	83.7	75.6	65.4
40			108	107	106	104	103	97.1	82.9	75.5	65.2
44				94.7	93.7	92.3	91	89.9	82	75.1	64.7
48					83.5	82.3	81.2	80.1	78.9	74.6	64.2
52					72.7	74	73	72	70.9	69.8	62.9
56						65.5	66.1	65.3	64.2	63.1	57
60							60.1	59.5	58.4	57.5	51.9
64							51.8	54.4	53.5	52.6	47.1
68								48.4	49.2	48.3	42.8
72									44.8	44.5	39.1
76									38.9	41.2	35.6
80										36.5	32.4
84											29.7
Wind speed (m/s)	11.3				8.9						

Lifting capacity chart of operating mode SWDB (85°)

Rear counterweight: 160t; Central ballast: 53t; Suspended ballast: 0~250t;

Suspended ballast radius: 19m

Boom length	60										
Reeving / Radius	24	30	36	42	48	54	60	66	72	78	84
16	280										
18	275	260									
20	264	251	221								
22	249	243	219	187	155						
24	218	226	214	185	154	132					
26	194	202	201	183	152	131	112				
28	175	182	181	179	151	130	111	96.3	81.6		
30	159	165	165	162	149	128	110	95.3	80.8	70.8	
32		151	150	148	147	127	109	94.4	80	70.1	61.6
34		140	138	136	135	126	107	93.4	79.2	69.4	61.6
36		124	128	126	125	123	106	92.5	78.4	68.7	61.5
38			119	117	116	114	105	91.6	77.6	68	61.4
40			111	109	108	107	104	90.7	76.8	67.4	61.3
44				96.5	95.6	94.1	93	89.8	76.1	66.7	60.9
48					85.1	83.8	82.7	81.7	75.3	66	60.6
52					74.8	75.3	74.3	73.3	72.2	65.4	60.2
56						67.1	67.3	66.4	65.3	64.2	57.9
60							61.2	60.4	59.4	58.4	52.4
64							53.2	55.3	54.3	53.4	47.7
68								49.5	49.9	49	43.5
72									45.7	45.1	39.4
76									40	41.4	36.1
80										37.3	32.8
84											30
88											27.5
Wind speed (m/s)	11.3			8.9							

Lifting capacity chart of operating mode SWDB (85°)

Rear counterweight: 160t; Central ballast: 53t; Suspended ballast: 0~250t;

Suspended ballast radius: 19m

Boom length	66										
Reeving / Radius	24	30	36	42	48	54	60	66	72	78	84
16	259										
18	249	231									
20	240	230	197								
22	231	222	195	166							
24	223	215	193	164	141	120					
26	200	208	189	163	139	118	102				
28	180	187	180	161	138	117	101	88.5			
30	164	170	169	159	136	116	100	87.6	75.7	65.8	
32		155	154	153	135	115	99.3	86.7	74.9	65.1	57.4
34		143	142	140	134	114	98.3	85.8	74.2	64.5	56.8
36		129	131	129	128	113	97.4	85	73.4	63.8	56.3
38			121	120	119	112	96.4	84.1	72.7	63.2	55.7
40			113	112	111	109	95.4	83.3	72	62.5	55.2
44				98.5	97.4	96.1	94.5	82.4	71.3	61.9	54.6
48				83.3	86.6	85.4	84.2	81.6	70.5	61.3	54.1
52					76.7	76.6	75.6	74.6	69.8	60.7	53.5
56						68.7	68.3	67.4	66.3	60.1	53
60							62.1	61.3	60.3	59.3	52.5
64							54.5	56.1	55.1	54.2	48.2
68								50.6	50.6	49.7	44
72									46.5	45.6	40
76									40.9	41.9	36.5
80										38.1	33.1
84											30.3
88											27.7
Wind speed (m/s)	11.3		8.9								

Lifting capacity chart of operating mode SWDB (85°)

Rear counterweight: 160t; Central ballast: 53t; Suspended ballast: 0~250t;

Suspended ballast radius: 19m

Boom length	72										
Reeving / Radius	24	30	36	42	48	54	60	66	72	78	84
18	231										
20	223	216	188								
22	215	208	186	160							
24	208	200	185	158	136						
26	200	193	181	156	134	116	99.2				
28	185	184	172	155	133	115	98.2	85.9			
30	168	174	163	152	131	114	97.3	85	73.7		
32		159	153	145	130	113	96.3	84.2	72.9	64.2	
34		146	145	137	129	112	95.3	83.3	72.2	63.6	56.1
36		133	134	129	123	111	94.4	82.5	71.5	62.9	56
38			124	123	117	110	93.4	81.7	70.8	62.3	56
40			116	114	110	105	92.5	80.9	70	61.7	55.9
44				100	99.4	95.4	91.6	80.1	69.3	61.1	55.8
48				85.9	88.2	85.6	83.2	79.3	68.7	60.4	55.5
52					78.6	77.9	75.3	73.4	68	59.8	55.2
56						69	68.1	66.9	64.9	59.2	54.9
60						60	61.8	60.9	59.6	57.8	53.8
64							55.8	55.5	54.6	53.4	49
68								50.4	50.4	49.3	44.5
72								44.7	46	46.1	40.5
76									41.8	42.2	36.8
80										38.8	33.7
84											30.7
88											28.1
Wind speed (m/s)	11.3	8.9									

Lifting capacity chart of operating mode SWDB (85°)

Rear counterweight: 160t; Central ballast: 53t; Suspended ballast: 0~250t;

Suspended ballast radius: 19m

Boom length	78										
Reeving / Radius	24	30	36	42	48	54	60	66	72	78	84
18	210										
20	202	194									
22	194	187	166	142							
24	188	180	166	140	121						
26	181	174	165	139	120	105					
28	174	168	155	137	119	104	90.5	78.4			
30	167	156	147	136	118	103	89.6	77.6	67.7		
32	154	147	139	131	116	102	88.7	76.9	67	59.3	
34		137	130	124	115	101	87.8	76.1	66.4	58.7	51.9
36		128	123	117	112	99.9	86.9	75.3	65.7	58.1	51.4
38			115	111	106	98.9	86.1	74.6	65	57.5	50.9
40			108	105	100	96.6	85.2	73.8	64.4	56.9	50.4
44				93	90.5	87.3	83.2	73.1	63.7	56.4	49.9
48				82.8	81.1	79.1	76.4	72.4	63.1	55.8	49.4
52					72.6	71.3	69.6	67.3	62.5	55.2	48.9
56						64.6	62.8	61.8	59.6	54.7	48.4
60						57.4	57.5	56.1	54.6	53.2	47.9
64							51.6	51.7	50.3	49	47.4
68								46.9	46.7	45.4	44
72								42.2	42.5	42.2	41
76									38.7	38.7	37.4
80										36.1	34
84										33.4	31.1
88											28.4
Wind speed (m/s)	8.9										

Lifting capacity chart of operating mode SWDB (85°)

Rear counterweight: 160t; Central ballast: 53t; Suspended ballast: 0~250t;

Suspended ballast radius: 19m

Boom length	84										
Reeving / Radius	24	30	36	42	48	54	60	66	72	78	84
18	196										
20	188	182									
22	181	175	159								
24	174	169	159	136	117						
26	166	162	156	135	116	101					
28	159	155	150	134	114	100	87.7				
30	153	149	141	132	113	99.5	86.8	76.4	65.8		
32	146	140	133	126	112	98.5	85.9	75.6	65.2	57.7	
34		132	126	120	111	97.5	85.1	74.9	64.5	57.1	50.6
36		122	119	114	108	96.6	84.2	74.1	63.9	56.6	50.1
38		115	111	107	103	95.6	83.4	73.4	63.2	56	49.6
40			104	101	97.1	93.3	82.5	72.6	62.6	55.4	49.1
44			92.9	89.5	87.6	84.3	80.4	71.9	62	54.9	48.6
48				80.1	77.9	75.9	73.8	70.5	61.4	54.3	48.2
52					70.5	68.6	66.9	65.2	60.8	53.8	47.7
56						62.1	60.8	59.4	57.7	53.3	47.2
60						55.5	55.5	54.3	52.9	51.5	46.7
64							49.9	49.9	48.7	47.5	45.8
68								45.2	45	43.9	42.8
72								40.9	41.2	41	39.6
76									37.4	37.8	37.2
80										35	33.8
84										32.5	30.9
88											28.3
Wind speed (m/s)	8.9										

Description of lifting capacity charts

1. Rated lifting capacities (t) listed in above tables refer to the maximum lifting capacity of the crane, operating on a solid and even (no sinking during operation) ground with a gradient of smaller than 1%, with specified boom length and radius, which must be strictly followed during operation. Besides, lifting capacities must be limited or reduced according to various unfavorable conditions (such as soft or uneven ground, levelness, wind speed, lateral load, swinging, cooperative lifting of multiple cranes, etc.). If the condition permits, crane operation should be performed on a foundation with better conditions so as to ensure a higher safety factor for lifting.
2. Please do follow the operating instructions.
3. Radius in lifting capacity chart refers to the horizontal distance between the vertical line and the slewing center. It is an actual value that includes the deformation of boom.
4. It is strictly prohibited to operate the crane with lifting capacities that are not listed in charts
5. Rated lifting capacity includes weights of load hook, slings and wire rope between the boom head and the hook. The density of the hoisting rope is 4.12kg/m. The weight of wire rope can be calculated according to its reeving and the hoisting height.

Data in technical specifications will change with the improvement of product. Actual condition shall prevail.