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ZOOMLION ZCC5800 CRAWLER CRANE

TECHNICAL SPECIFICATIONS

ZCC5800/27Y

Edition 1, July 2020

Zoomlion Heavy Industry Science & Technology Co.,Ltd.

ZOOMLION ZCC5800 CRAWLER CRANE

TECHNICAL SPECIFICATIONS

ZCC5800/27Y

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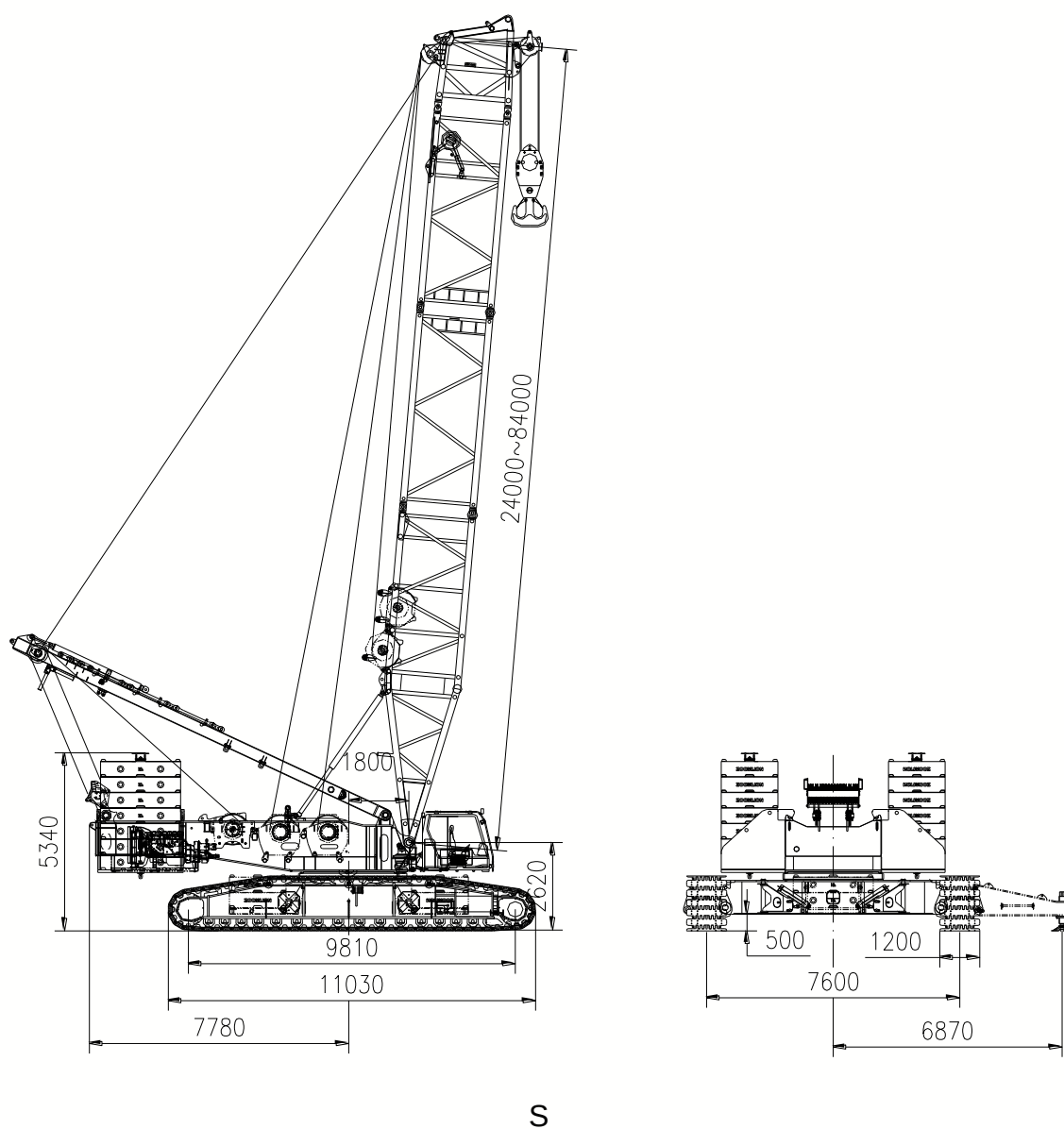
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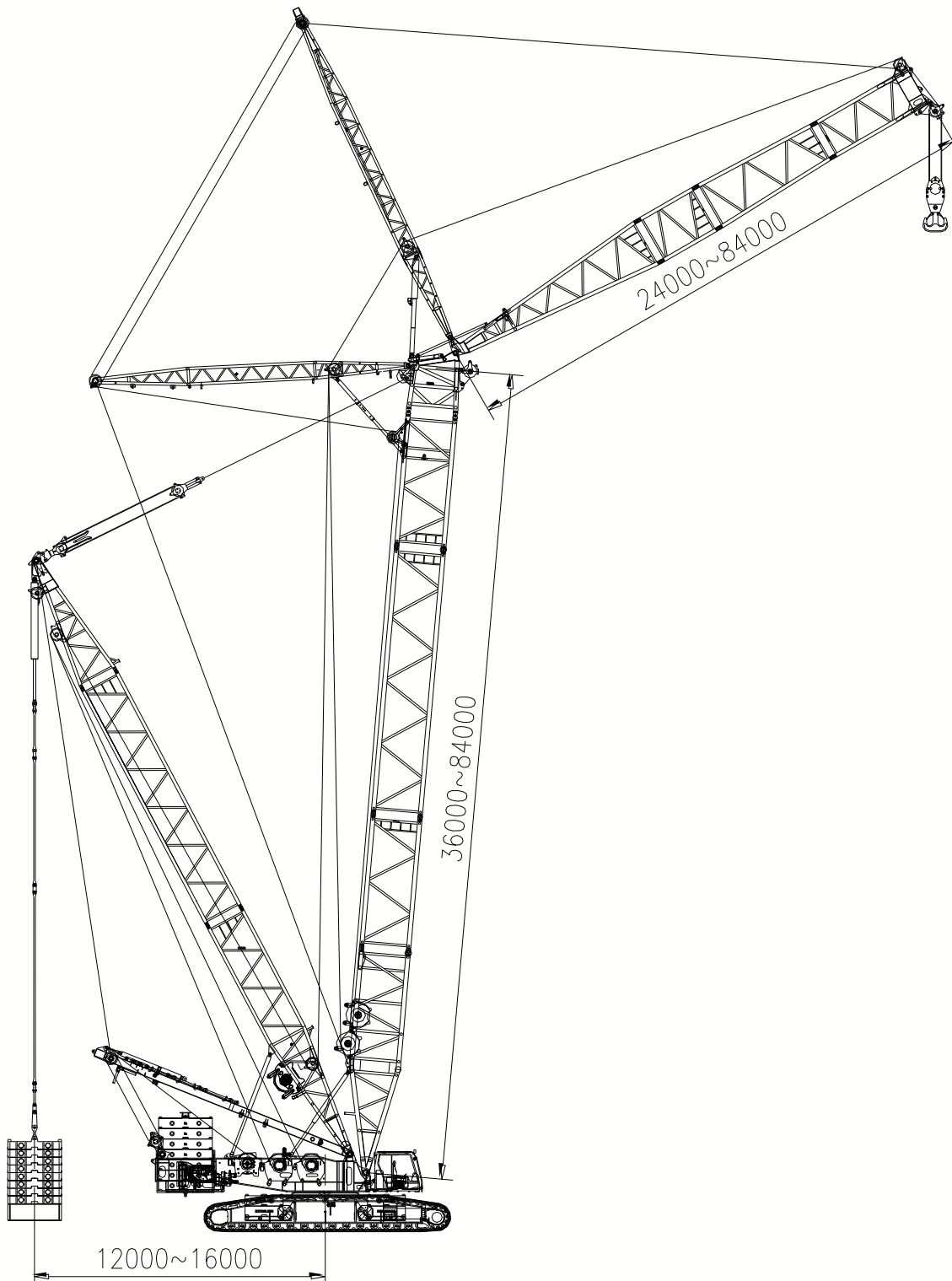
3. Lifting performance

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1. Overall description

1.1 Overall dimension of the basic machine





SWDB

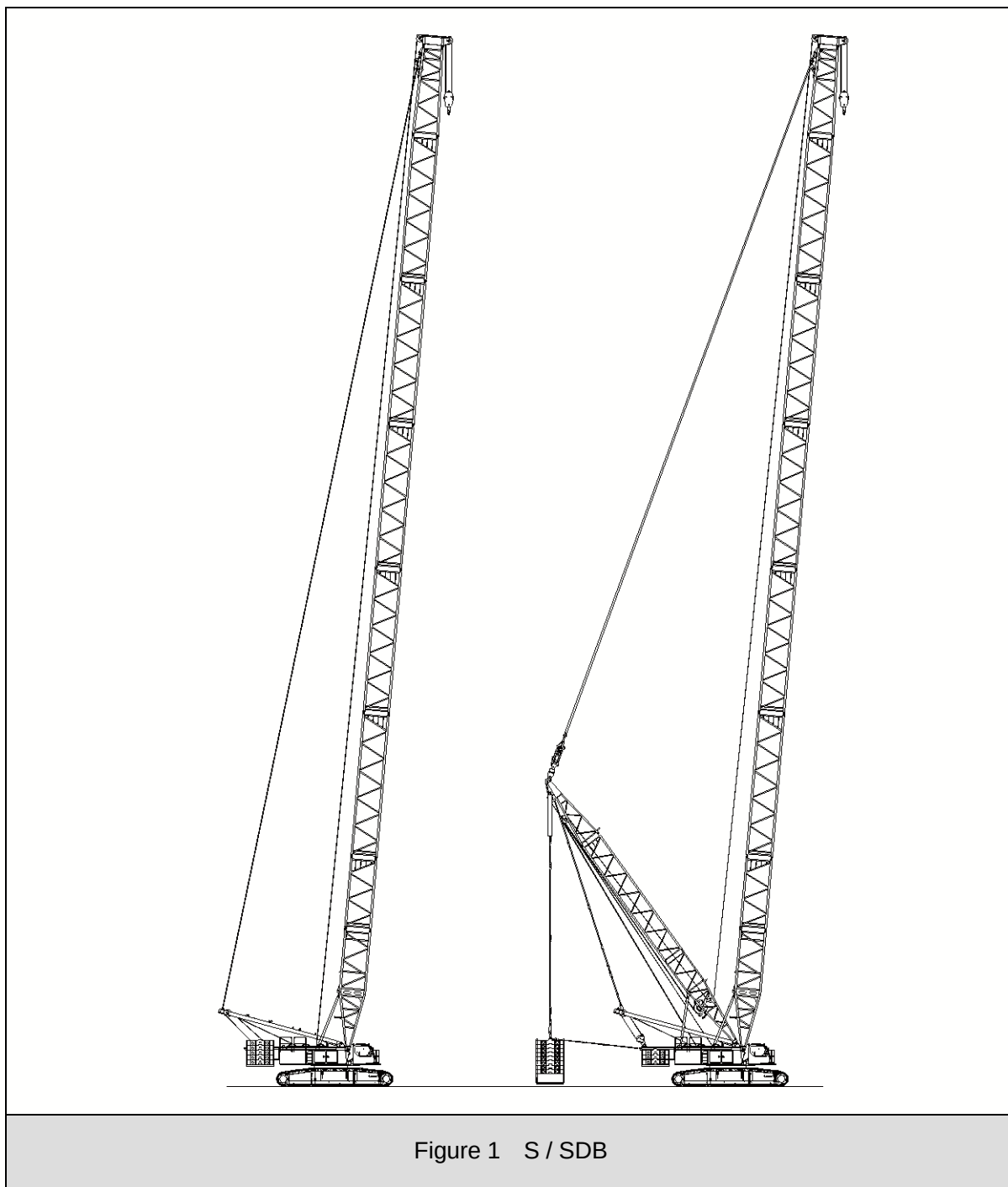
1.2 Main technical parameters

Item		Parameters
Max. lifting capacity(t) / radius(m) / boom length(m)		450/6/24(standard), 500/9/36(superlift)
Max. load moment		5800
Main boom length (m)		24~84
SL boom length (m)		72~108(standard), 78~126(superlift)
Length of SF jib (m)		9~12
Max. lifting capacity of SF jib (t)		200
Main boom length of SF operating mode (m)		24~30(standard), 36(superlift)
Luffing jib length (m)		24~72(standard), 24~84(superlift)
Max. lifting capacity of luffing jib (t)		150(standard), 235(superlift)
Main boom length of SW operating mode (m)		30~60(standard), 36~84(superlift)
Max. length of main boom + fixed jib of SW (m)		60+72(standard), 84+84(superlift)
SLHS (m)		111+8(standard), 126+8(superlift)
Max. lifting capacity of wind plant jib (t)		140
Speed of a single rope	Hoisting winch 1 (m/min)	140
	Hoisting winch 2 (m/min)	140
	Primary derricking winch (m/min)	2×50
	Superlift derricking winch (m/min)	120
	Luffing jib derricking winch (m/min)	120
	Tip boom hoisting winch (m/min)	105
Max. slewing speed (rpm)		1.0
Max. crawling speed (km/h)		0.9
Gradeability (%)		20
Ground pressure (MPa)		0.17
Total weight with main boom (t)		360
Max transport weight of a single component (t)		45 (without A-frame and winch)
Engine	Manufacturer/model	Weichai/WP12
	Rated power / rotational speed (kW/rpm)	318/1900
	Max. output torque / rotational speed (Nm/rpm)	2060/(1000~1400)
	Exhaust emission	Non-road GB III

1.3 Boom combination

1.3.1 Description on boom combinations

There are two kinds of operating modes: standard operating mode and superlift operating mode. Boom sections are made of high-strength steel tubes in trusses. Anchoring rods are made of high-strength materials.



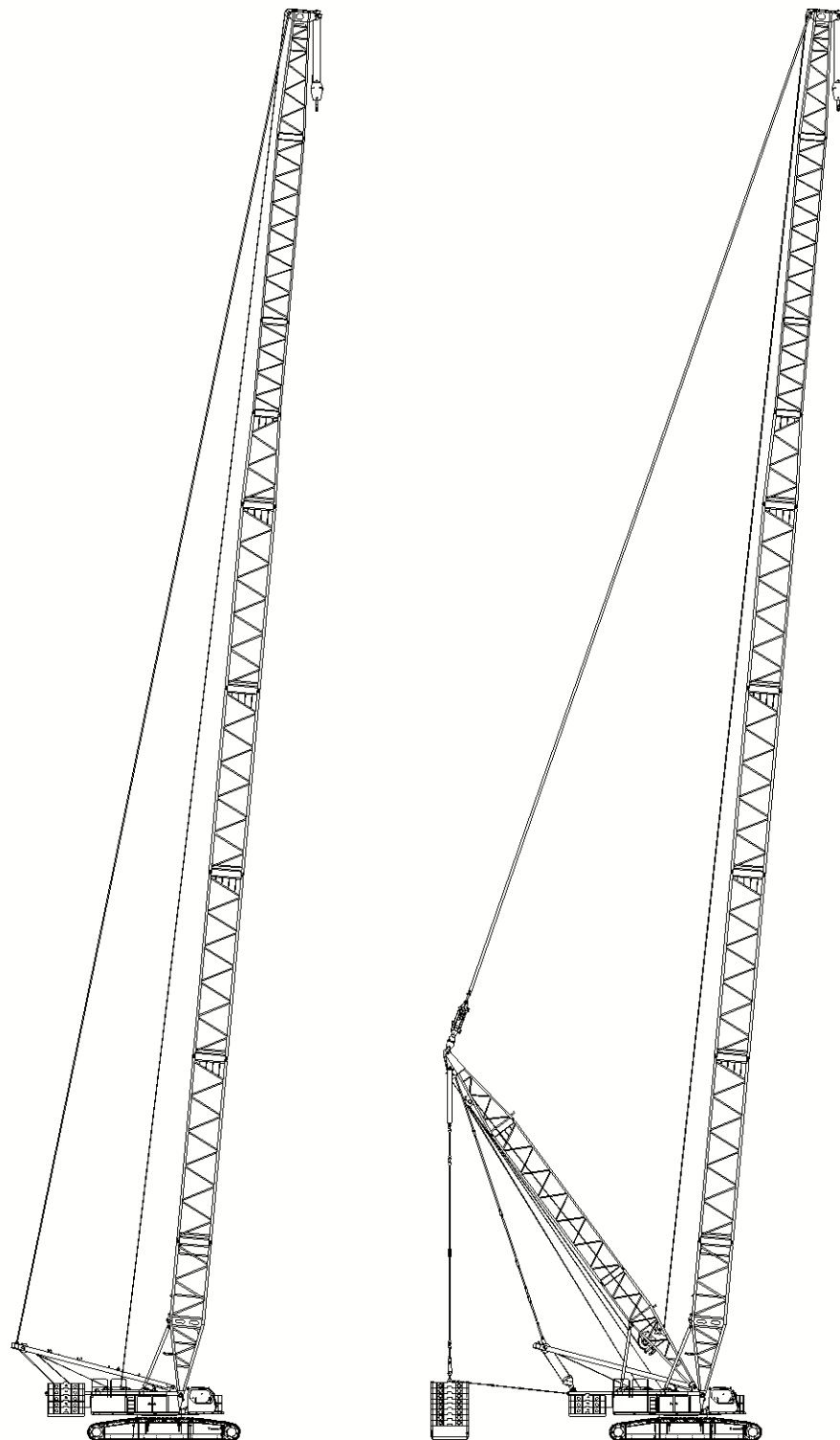


Figure 2 SL / SLDB

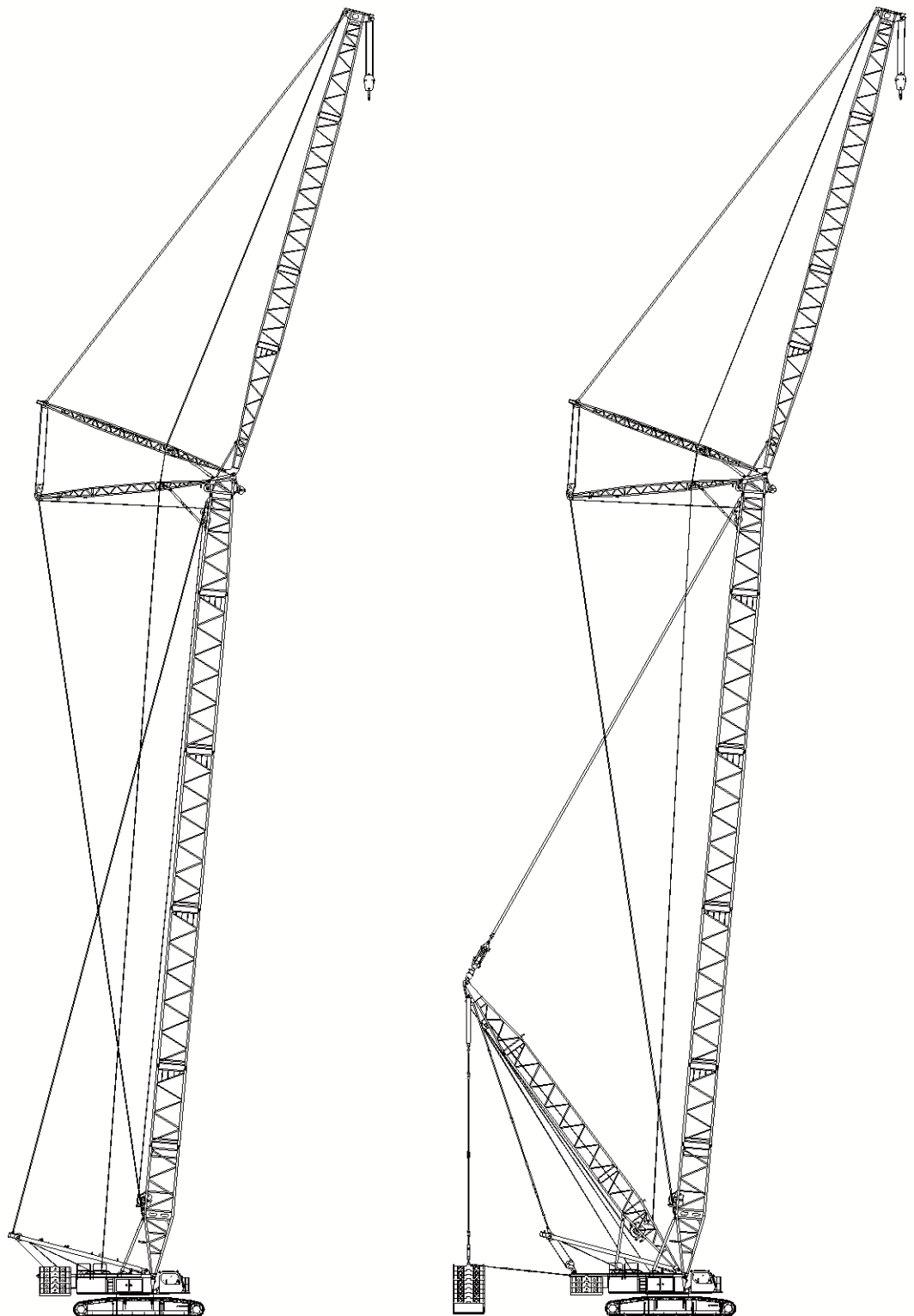


Figure 3 SW / SWDB

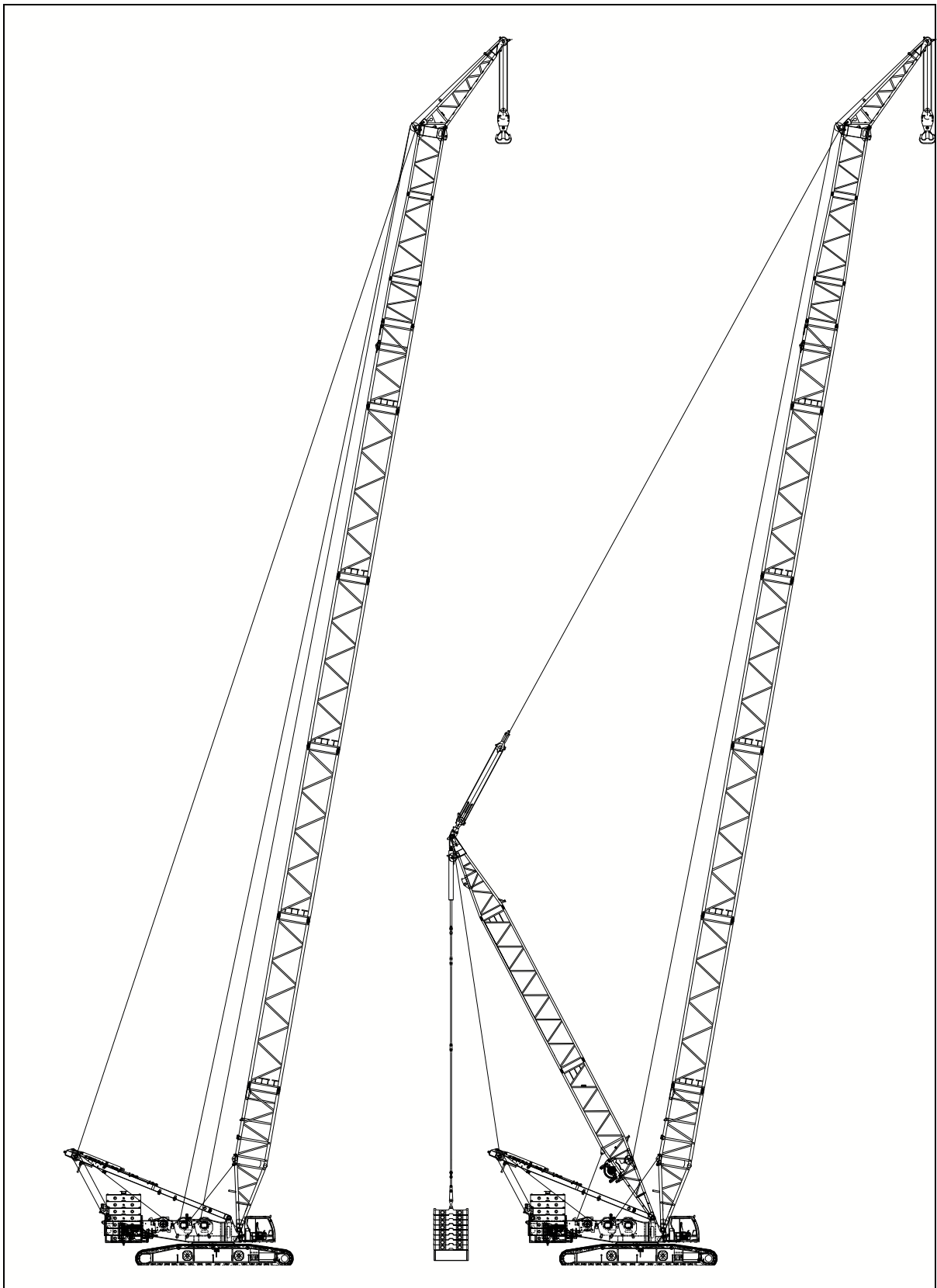


Figure 4 SLHS / SLHSDB-1

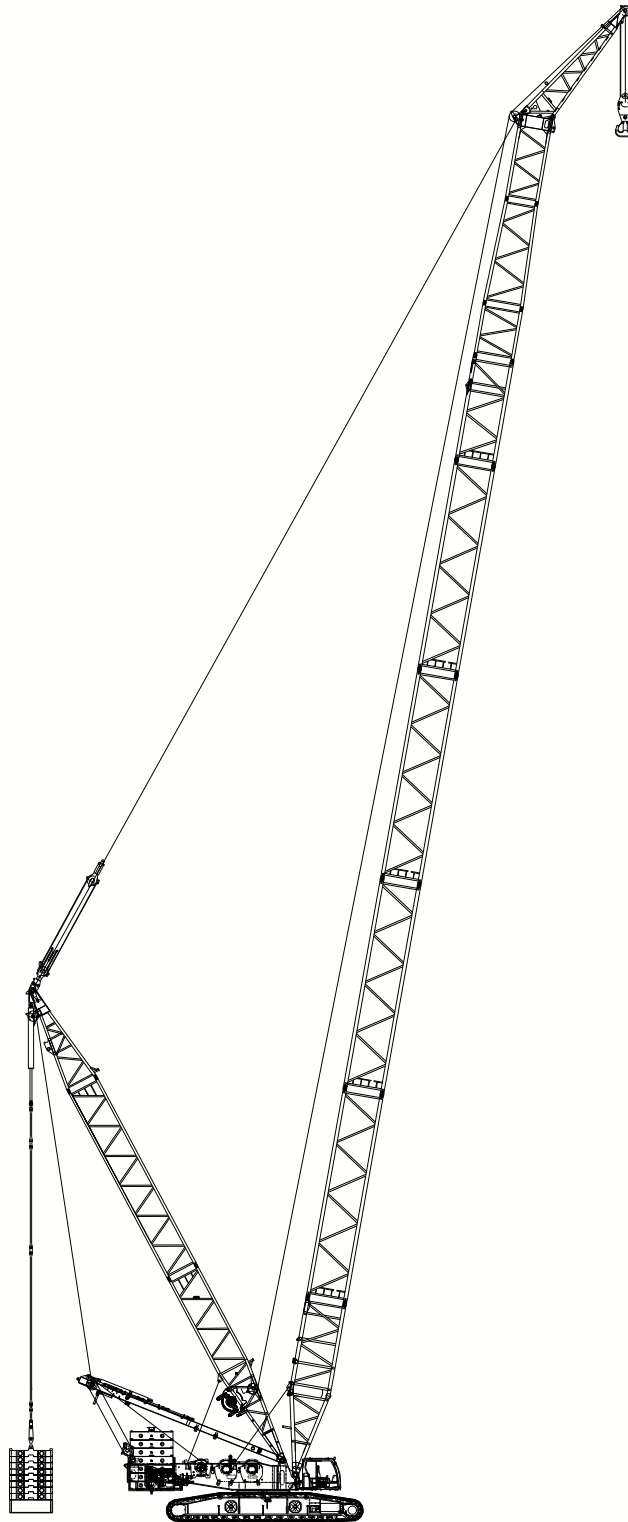


Figure 2 SLHSDB-2

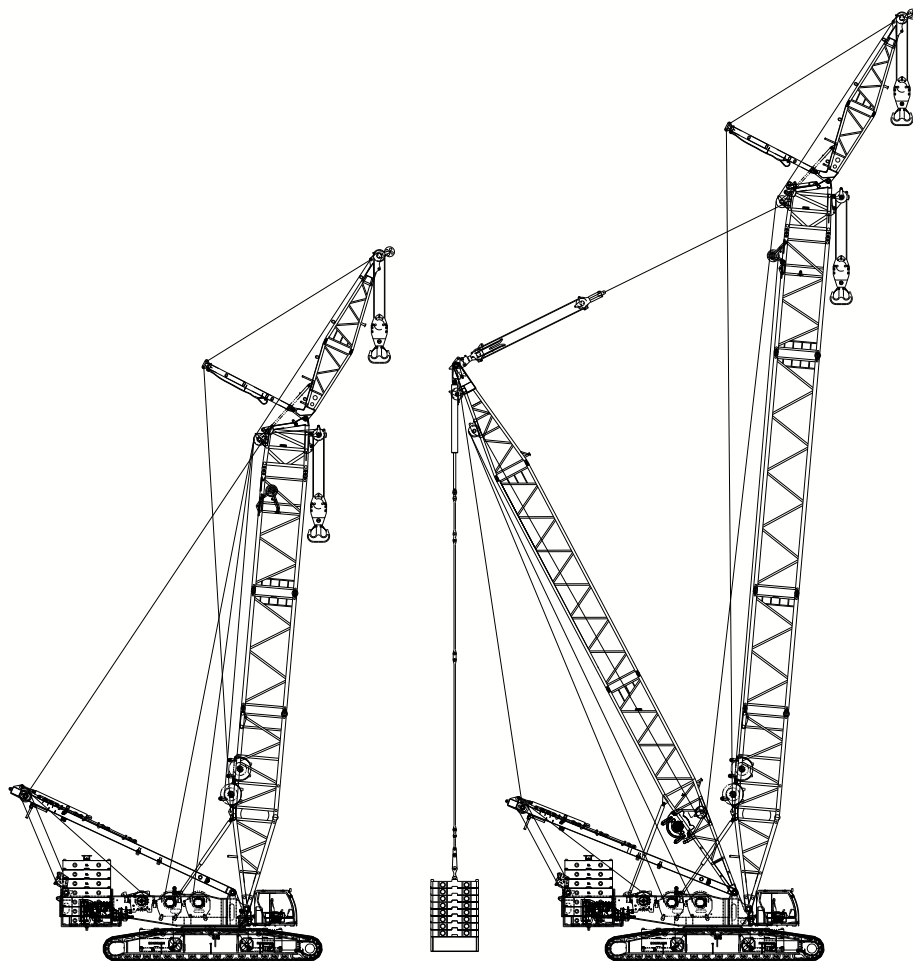
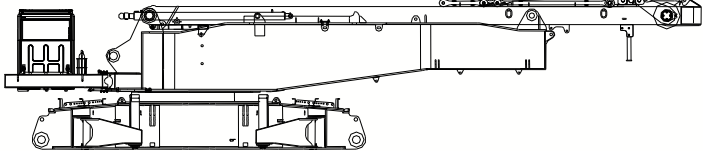
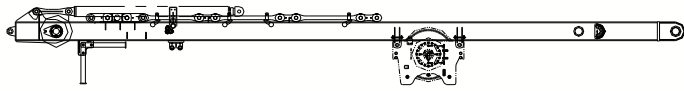
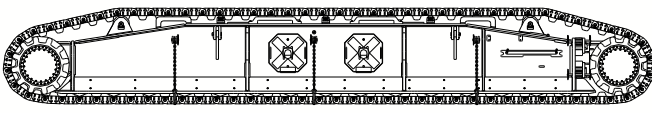
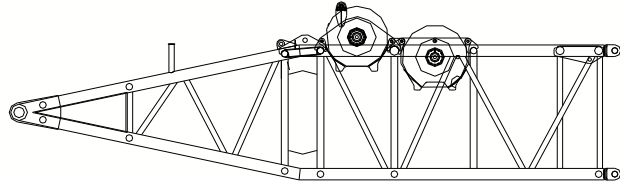
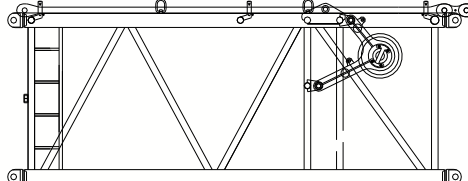


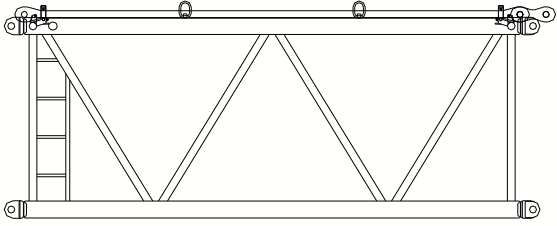
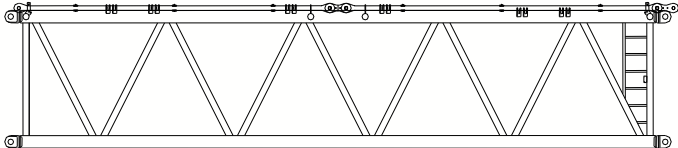
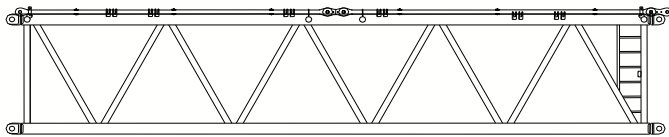
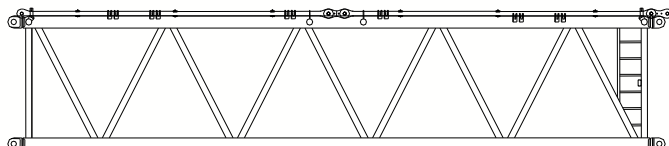
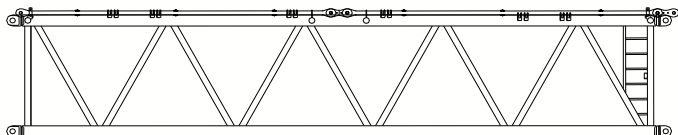
Figure 6 SFV / SFVDB

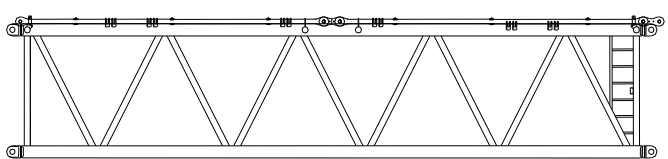
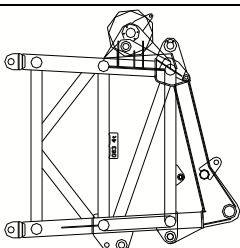
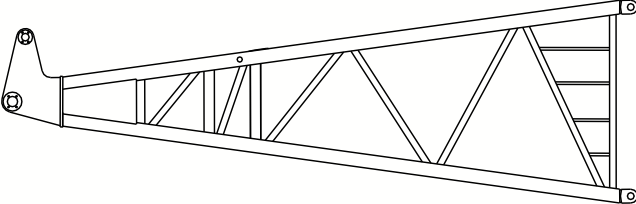
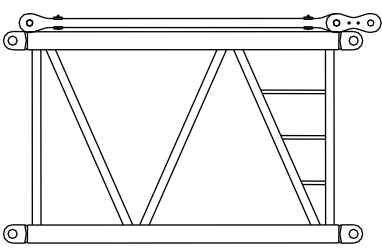
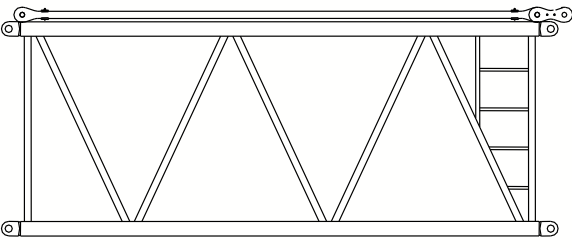
1.3.2 Table of boom combinations

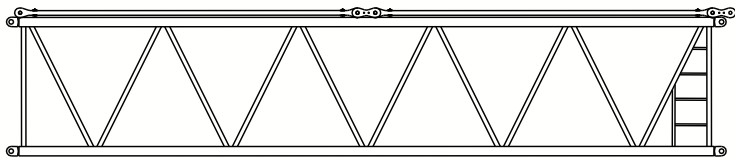
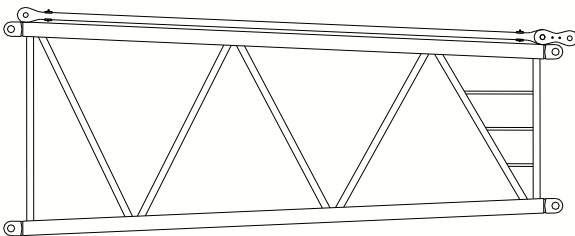
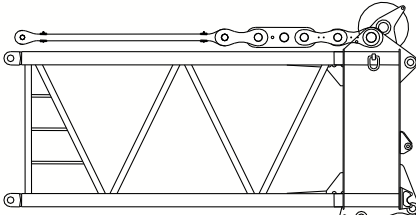
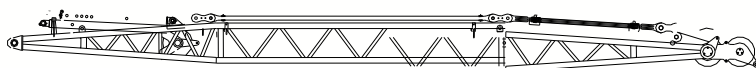
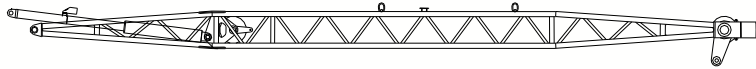
Codes	Operating modes	Boom combinations
S	Heavy main boom	S=24m~84m
SDB	Superlift heavy main boom	S=36m~84m
SL	Light main boom	SL=72m ~102m
SLDB	Superlift light main boom	SL=78m ~126m
SW	Luffing jib	S=30m~ 60m W=24m~72m
SWDB	Superlift luffing jib	S=36m~84m W=24m~84m
SLHS	Jib on light main boom for wind plant	SL=78m~111m HS=8m
SLHSDB-1	Jib on superlift light main boom (without ultra-wide boom)	SL=78m~126m HS=8m
SLHSDB-2	Jib on superlift light main boom (with ultra-wide boom)	SL=96m~126m HS=8m
SFV	Heavy fixed jib for shield tunneling machine	S=24~30m FV=9~12 m
SFVDB	Superlift heavy fixed jib for shield tunneling machine	S=36m FV=9 ~12m

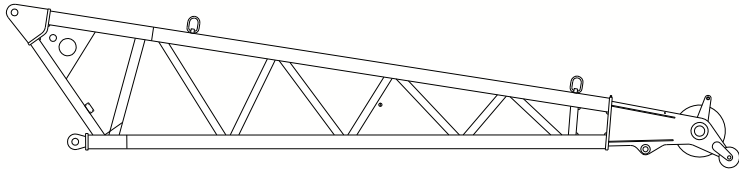
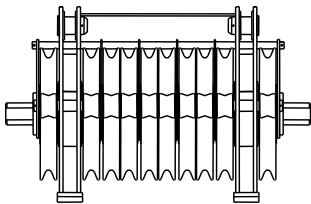
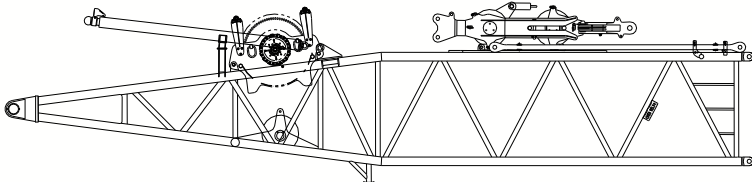
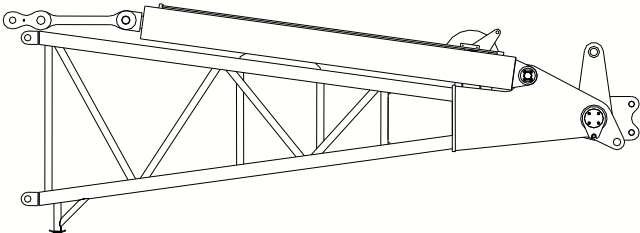
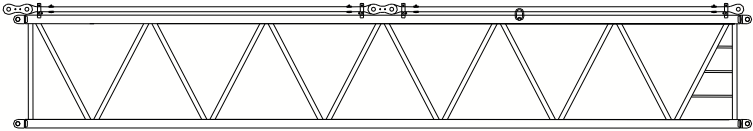
1.4 Transport dimensions and weights of major components

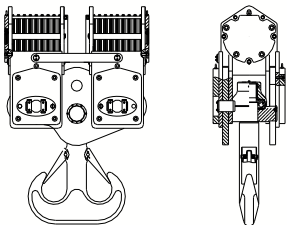
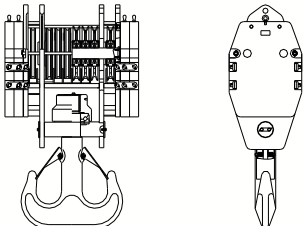
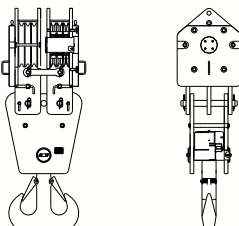
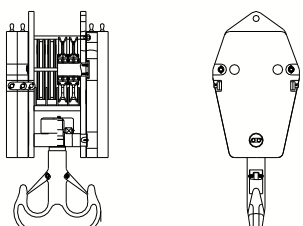
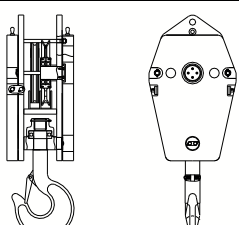
Components in transport	Items	
	Slewing table assy.	×1
	Length	15700 mm
	Width	3000 mm
	Height	3440 mm
	Weight	56.7t
The weight of H1 and H2 is not included. The slewing mechanism weighs 45t with a height in transport of 3150mm if A-frame is not attached.		
	A-frame assy.	×1
	Length	12595 mm
	Width	2200 mm
	Height	1470 mm
	Weight	11.7t
	Track carrier assy.	×2
	Length	11180 mm
	Width	1460 mm
	Height	1650mm
	Weight	33.1 t
	Main boom pivot section	×1
	Length	10265 mm
	Width	3000 mm
	Height	3050mm
	Weight	15.3 t
With luffing jib derricking mechanism and tip boom hoisting mechanism; the luffing jib derricking mechanism weighs 5.1t and the tip boom hoisting mechanism weighs 3.2t.		
	Main boom head section	×1
	Length	6360mm
	Width	3000 mm
	Height	2450 mm
	Weight	4.1 t

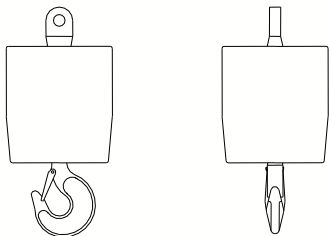
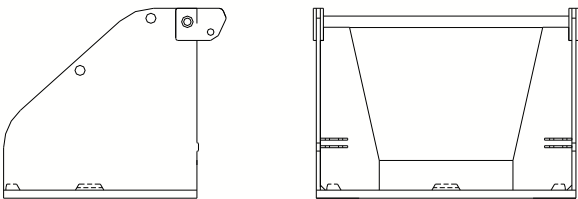
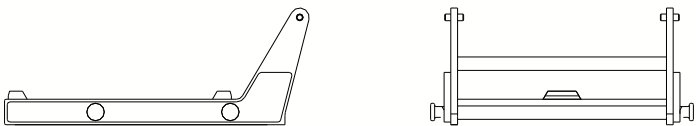
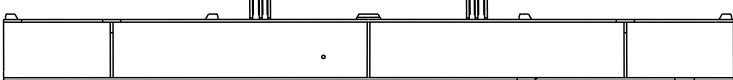
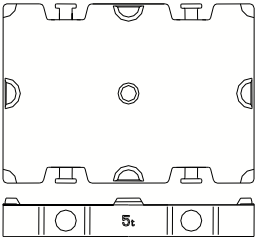
	Main boom intermediate section of 6m	× 1
	Length	6340 mm
	Width	3000mm
	Height	2450 mm
	Weight	3.0 t
	Main boom intermediate section of 12m	× 3
	Length	12340 mm
	Width	3000mm
	Height	2450 mm
	Weight	5.3 t
	Main boom intermediate section A of 12m	× 2
	Length	12340 mm
	Width	3000mm
	Height	2450 mm
	Weight	5.0 t
	Main boom intermediate section B of 12m	× 1
	Length	12340 mm
	Width	3400mm
	Height	2450 mm
	Weight	5.4 t
	Main boom reducing section C	× 2
	Length	12340 mm
	Width	3400mm
	Height	2450 mm
	Weight	5.5 t

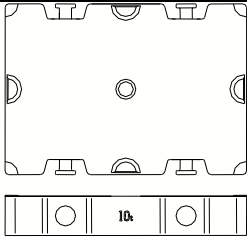
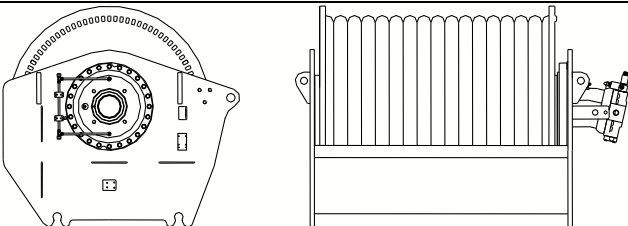
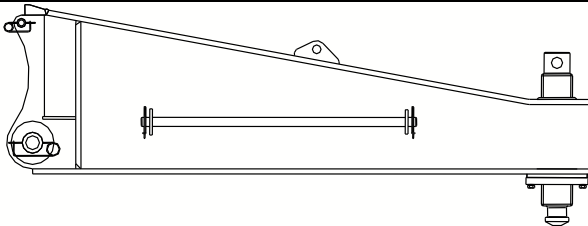
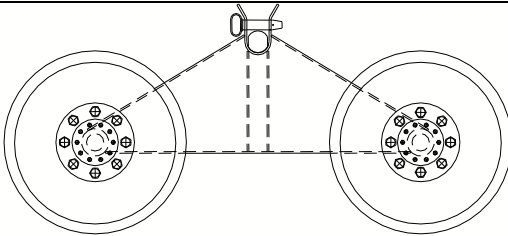
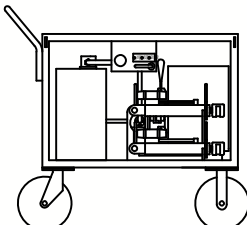
	Main boom reducing section D	× 1
	Length	12340 mm
	Width	3400mm
	Height	2450 mm
	Weight	5.4 t
	Main boom head	× 1
	Length	3000mm
	Width	2800mm
	Height	3040mm
	Weight	4.8 t
	Luffing jib pivot section	× 1
	Length	10200 mm
	Width	2760 mm
	Height	2410 mm
	Weight	3.8 t
	Luffing jib intermediate section of 3m (ultra-wide)	× 1
	Length	3300mm
	Width	2760 mm
	Height	2410 mm
	Weight	1.5t
	Luffing jib intermediate section of 6m (ultra-wide)	× 2
	Length	6300mm
	Width	2760 mm
	Height	2410 mm
	Weight	2.3 t

	Luffing jib intermediate section of 12m	× 2
	Length	12300 mm
	Width	2460 mm
	Height	2010 mm
	Weight	3.6 t
	Luffing jib reducing section	× 1
	Length	6160 mm
	Width	2760 mm
	Height	2410 mm
	Weight	2.2 t
	Luffing jib head	× 1
	Length	4965 mm
	Width	2460 mm
	Height	2620 mm
	Weight	4.0 t
	FA-frame 1	× 1
	长度	15145 mm
	宽度	2530 mm
	高度	1045 mm
	重量	5.5 t
	FA-frame 2	× 1
	Length	16820 mm
	Width	2530 mm
	Height	900 mm
	Weight	5.34 t

	Wind plant jib	× 1
	Length	8640 mm
	Width	1730 mm
	Height	1615 mm
	Weight	3.0 t
	Pulley block	× 2
	Length	1385 mm
	Width	1165 mm
	Height	885 mm
	Weight	1.05 t
	Derrick boom pivot section	× 1
	Length	12210 mm
	Width	2700 mm
	Height	2855 mm
	Weight	14.8 t
Including superlift derricking pulley block and superlift derricking mechanism		
	Derrick boom head	× 1
	Length	6570 mm
	Width	2820 mm
	Height	2410 mm
	Weight	6.0t
Including cylinder for suspended ballast		
	Derrick boom intermediate section of 12m	× 1
	Length	12140 mm
	Width	2440 mm
	Height	2000 mm
	Weight	4.2 t

	Load hook for 400t	× 1
	Length	2000 mm
	Width	930 mm
	Height	3000mm
	Weight	9.2 t
	Load hook for 200t	× 1
	Length	1480 mm
	Width	800mm
	Height	2470 mm
	Weight	5.5 t
	Load hook for 160t	× 1
	Length	1040mm
	Width	860 mm
	Height	3050 mm
	Weight	4.4 t
	Load hook for 100t	× 1
	Length	940 mm
	Width	800 mm
	Height	2010mm
	Weight	3.6 t
	Load hook for 50t	× 1
	Length	900 mm
	Width	800 mm
	Height	2010 mm
	Weight	2.2t

	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
	Central ballast frame	× 2
	Length	2260 mm
	Width	1950mm
	Height	870 mm
	Weight	1.15 t
	Suspended ballast frame	× 1
	Length	6700 mm
	Width	2400 mm
	Height	750 mm
	Weight	5t
Including some anchoring rods for suspended ballast		
	Counterweight plate of 5t	× 29
	Length	2400 mm
	Width	1700 mm
	Height	365 mm
	Weight	5 t

	Counterweight plate of 10t	× 24
	Length	2400 mm
	Width	1700 mm
	Height	455 mm
	Weight	10 t
	Primary hoisting winch	× 2
	Length	1920 mm
	Width	1275 mm
	Height	1235 mm
	Weight	5.6 t
Including wire rope for hoisting		
	Folding bracket	× 2
	Length	2500 mm
	Width	500 mm
	Height	1218 mm
	Weight	1.3 t
	Tyres	× 1
	Length	2315 mm
	Width	2340 mm
	Height	1055 mm
	Weight	0.75 t
	Hydraulic pump station	× 1
	Length	1400 mm
	Width	800 mm
	Height	1100 mm
	Weight	0.4 t

2. Technical instruction

2.1 Working mechanisms

Primary hoisting mechanism, secondary hoisting mechanism, tip boom hoisting mechanism

A hoisting mechanism is composed of a built-in axial piston variable displacement motor, a balance valve, a reducer, a normally-closed brake and a wire rope, which can be controlled independently.

Wire rope is anti-rotation and of high quality.

Primary hoisting mechanism, secondary hoisting mechanism (derricking of luffing jib) and tip boom hoisting mechanism are able to realize infinitely variable speeds from 0 to the maximum speed, largely improving the working efficiency.

Primary hoisting mechanism	Diameter of drum	650mm
	Speed of the outmost layer	140m/min
	Rope diameter	Φ28mm
	Rope length	800m
	Rated single rope tension	16t

Secondary hoisting mechanism	Diameter of drum	650mm
	Speed of the outmost layer	140m/min
	Rope diameter	Φ28mm
	Rope length	800m
	Rated single rope tension	16t

Tip boom hoisting mechanism	Diameter of drum	650mm
	Speed of the outmost layer	105m/min
	Rope diameter	Φ28mm
	Rope length	300m
	Rated single rope tension	13.6t

Derricking mechanism

A derricking mechanism is composed of a built-in axial piston variable displacement motor, a balance valve, a reducer, a normally-closed brake and a wire rope, which can be controlled independently.

Wire rope is anti-rotation and of high quality.

Derricking mechanism	Diameter of drum	2×540mm
	Speed of the outmost layer	2×50m/min
	Rope diameter	Φ28mm
	Rope length	650m
	Rated single rope tension	14t

Luffing jib derricking mechanism	Diameter of drum	650mm
	Speed of the outmost layer	120m/min
	Rope diameter	Φ28mm
	Rope length	650m
	Rated single rope tension	16t

Superlift derricking mechanism	Diameter of drum	650mm
	Speed of the outmost layer	120m/min
	Rope diameter	Φ28mm
	Rope length	860m
	Rated single rope tension	16t

Slewing mechanism

It is composed of a built-in axial piston double-variable displacement motor, a dual-gear reducer, a normally closed slewing brake, a small gear, and a slewing bearing. It realizes slewing for 360° through the slewing bearing driven by the small gear, thus realizing the slewing of superstructure.

The slewing mechanism is equipped with a controllable free swing function, which reduces the impact on the crane and ensures that braking is smooth and steady.

A closed slewing system with less impact is used to make the starting and braking more stable. The controllable free swing function make the slewing gear better fitted in operation.

Infinite slewing speed regulation: from 0 to 1.2r/min.

The slewing gear can be locked by the two mechanical locking devices in front of the slewing table, which guarantees the safety during transportation.

Crawling mechanism

The crawling mechanism is fitted with two variable displacement motors and two reducers. Each track is controlled by a lever. It is able to make such movements as crawling straight ahead/backwards, turning with a crawler, differential steering, turning on spot, crawling with a load with high maneuverability and flexibility.

Crawling speed: 0~1.0km/h.

Gradeability: 20%。

The tension degree of the track can be adjusted through a jack quickly and conveniently.

A-frame erecting mechanism

The A-frame erecting mechanism consists of A-frame, erection cylinder, auxiliary hydraulic system, etc. It is mainly used for the assembly, dismantling or transferring.

It is safer and more reliable that cylinder and balancing valve are connected through gasket-mounting.

After the A-frame is erected for over 90°, it can be used to connect anchoring rods and install boom sections, track assembly and counterweight.

Slewing and pitching mechanism of operator's cab

To reduce the width of the basic machine during transportation, the operator's cab can be swiveled for 90° from one side of the slewing table to the front, which is then fixed with a positioning pin. This is convenient for transportation.

Pitching-up and pitching-down is controlled by a cylinder. The operator's cab can be pitched up for 20° if the load is hoisted highly, broadening the vision of crane operator.

Counterweight and installation of counterweight

The mechanism is composed of counterweight frame, counterweight, bearing chain and retaining pin.

Outrigger erecting and track self-assembly/dismantling mechanism

The outrigger erecting and track self-assembly/dismantling mechanism consists of undercarriage outriggers, outrigger cylinders, undercarriage control valves, power pins, etc.

The outrigger erecting mechanism is the main load-bearing mechanism for self-assembly and dismantling of track. Track bolting cylinders are used to connect the track to the undercarriage center section. The track can be assembled /dismantled by the crane itself without help of an auxiliary crane, thus improving the working efficiency, reducing the labor intensity and guaranteeing the safe operation of crane.

2.2 Systems

Hydraulic system

The hydraulic system is composed of main pump, auxiliary valve, hydraulic motor, hydraulic oil tank, and oil cooler, etc.

It is equipped with a worldwide advanced pump-controlling system and a load-sensitive system. Main hydraulic elements are of famous brands both at home and abroad, which are energy-saving and highly reliable with a long service life.

Cooler: aluminum radiator with a hydraulic-driving fan.

Electrical system

DC 24V, negative ground, two storage batteries of 195AH

The electrical system of machine includes power source, engine start, engine shutdown, indicating light, alarm device, illumination device, fan, wiper, horn, hoisting limiter, hydraulic oil cooling fan, digital display system, PLC controller, load moment limiter, engine preheating device, safety equipment etc. which not only ensure safe operation of the crane but also provide a good working environment. CAN bus control technology applied in the crane connects engine, PLC controller, load moment limiter and digital display efficiently. It possesses the function of fault detecting and self-diagnosis.

Power system

WeiChai engine with CAN bus interface

Rated output power/ rotational speed: 318kw, 1900r/min

Maximum output torque: 2060Nm, (1000~1400)r/min

Exhaust emission standard: non-road GB III

Fuel tank has a great capacity of 700 L, which ensures long working hours of engine.

Digital display system

LCD with a large touch screen is able to display all kinds of configuration signals collected by PLC in multiple languages, including rotational speed of engine, water temperature, fuel oil pressure, hydraulic pump pressure, major motor pressure, operational condition of the basic

machine, etc. It also carries out real-time monitoring on working condition and sends out yellow or red alarm when the crane is in abnormal conditions.

Centralized lubricating system

The centralized lubricating system largely increases the service life of the crane.

2.3 Safety devices

Load moment limiter

It consists of a digital LCD screen, a host machine, a signal converter, a sensor, etc. When the lifting moment reaches 90% of the rated moment, the warning light is on and the buzzer sends out a warning. The operation will be stopped automatically when the rated moment is being approached so that accidents caused by overload can be avoided.

Data as follows can be displayed on the digital LCD screen:

Moment ratio

Elevation angle of main boom

Main boom length

Working radius

Actual load capacity of hook

Permitted lifting capacity

Permitted maximum lifting height

Overflow valves in hydraulic system

The overflow valve fitted in the hydraulic system can restrain the pressure in the oil circuit from rising irregularly, thus protecting such hydraulic elements as hydraulic oil pump and hydraulic motor against damage and preventing the hydraulic system from being overloaded.

Hoisting 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.

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.

Derricking limiter

The protective device, controlled by load moment limiter and limit switch, realizes automatic cut-off of limit derricking of boom and sends out sound-light alarm.

Main boom tilting-back support

It is a hydraulic-structured tilting-back support with inner pipe inserted into the outer pipe. It is mounted on the main boom pivot section to prevent main boom from tilting backwards with the support of hydraulic pressure.

Crane inclinometer

An electronic inclinometer is used to indicate the “leveled position” of the crane. The operator can observe the inclination of crane in the screen at all times.

Mousing

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

Protective device for over-winding and over-unwinding of rope

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 crane movement “reel off winch” will be switched off.

Anemometer

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

Emergency stop button

It shuts down the engine and cuts off the whole power supply in emergent conditions.

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.

Monitoring system

Two video cameras: respectively monitor the working conditions of crane winches and the situation behind the crane.

Display: switch between the different screens via press-key.

Remote GPS monitoring system (optional)

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

2.4 Operator's cab

It is an all-steel structured cab with tempered glass around. The top and front windows are laminated glasses. The cab is equipped with a right sun visor, an adjustable seat, a wiper, an electrical control lever, a load moment limiter, a digital display, a remote control box of various switches, an air conditioner, an electric fan, a head lamp, a cigarette lighter, a fire extinguisher, etc. The operator's cab has a broad vision and a capacious and comfortable inner space.

2.5 Load hooks

All rotatable load hooks are equipped with a mousing.

400t load hook (twin hooks): 12 pulleys

200t load hook: 8 pulleys

160t load hook (twin hooks): 6 pulleys

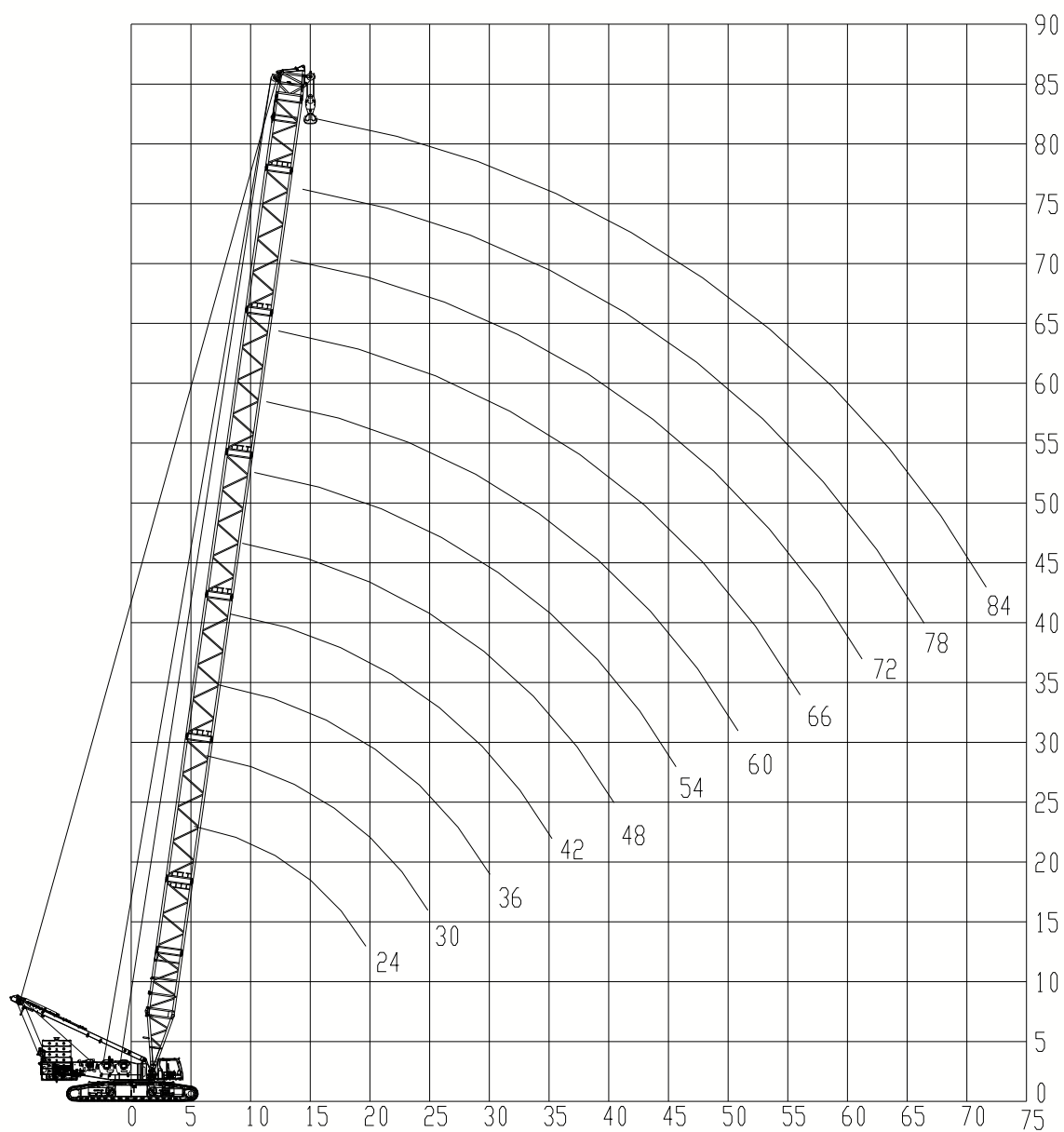
100t load hook: 4 pulleys

50t load hook: 2 pulleys

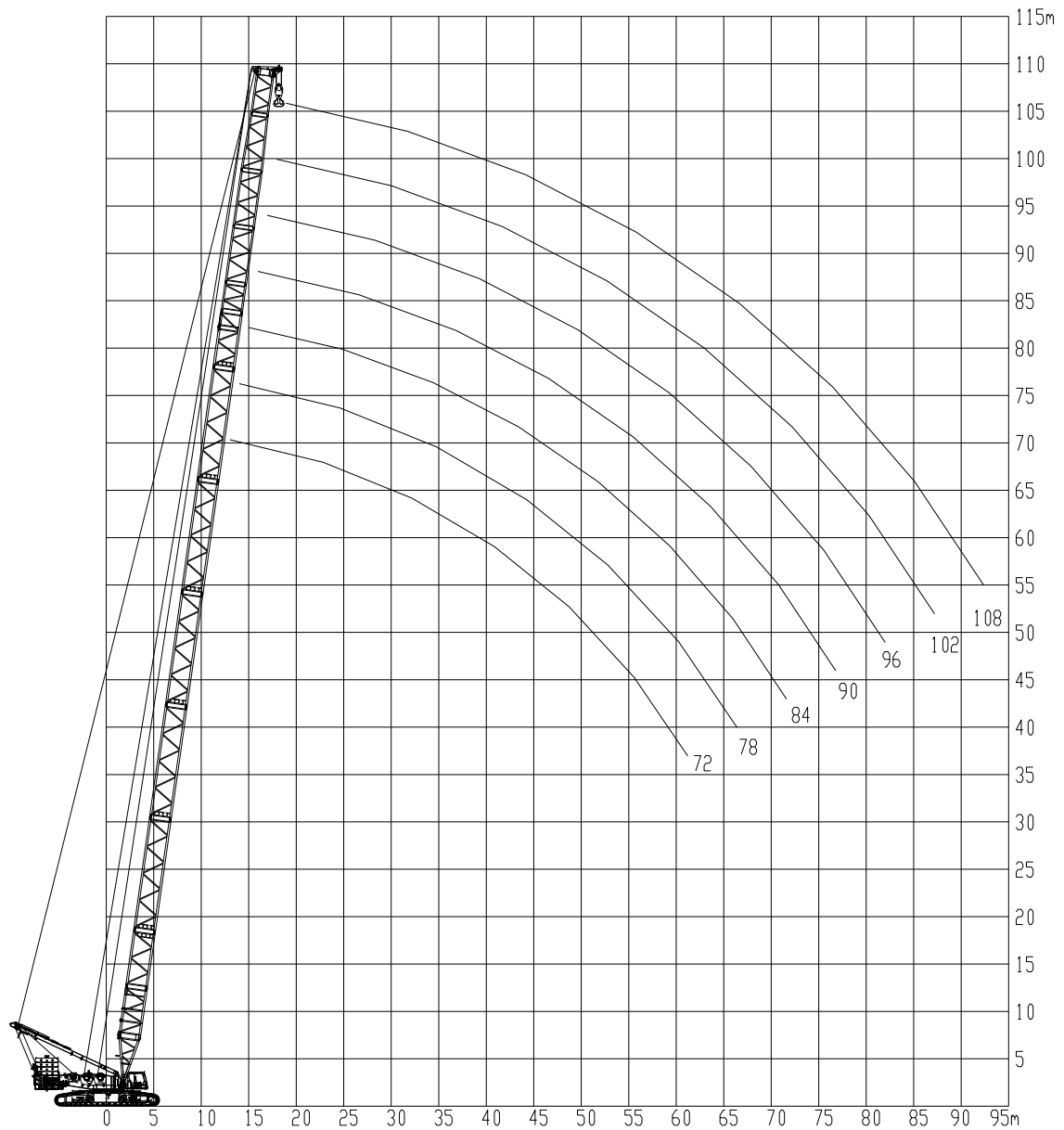
16t load hook: cylinder hook

3. Lifting performance

3.1 S



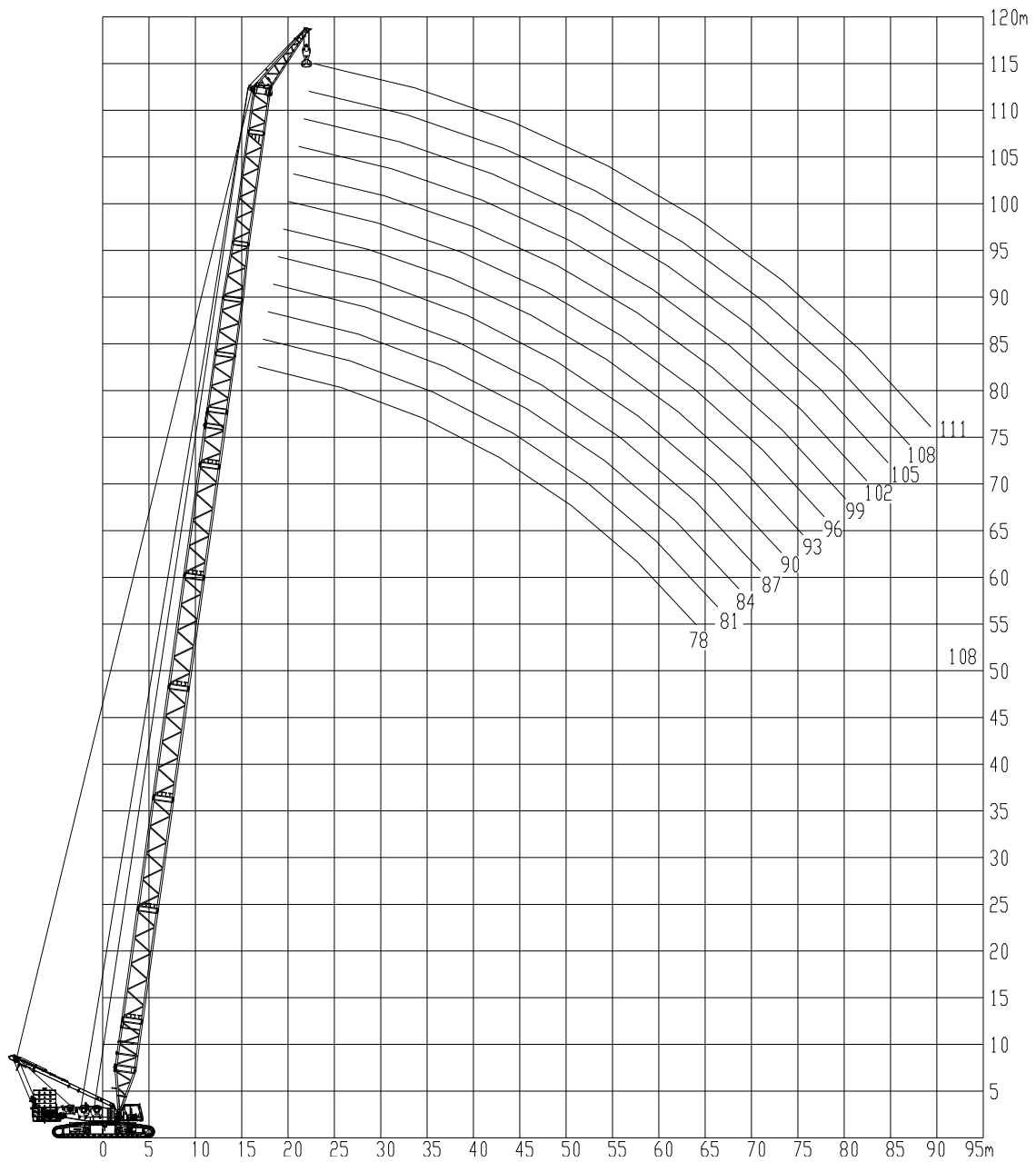
Rear counterweight: 160t Central ballast: 40t												
Radius (m)	Main boom length (m)											Radius (m)
	24	30	36	42	48	54	60	66	72	78	84	
6	450											6
7	400	375	364									7
8	349	317	314	311	297							8
9	298	278	278	275	259	246	233					9
10	257	247	247	242	230	219	209	199	190			10
11	223	223	223	217	206	197	189	181	173	166	159	11
12	202	202	200	196	187	179	172	165	158	152	146	12
14	166	167	167	163	157	151	145	140	134	129	124	14
16	136	136	136	136	134	129	124	120	116	112	108	16
18	115	115	115	114	114	113	109	105	101	98.4	94.9	18
20	98.6	99	98.8	98.5	98	97.5	96.4	93.5	90.1	87.1	84.1	20
22	86	86.5	86.2	85.9	85.4	84.8	84.2	83.4	80.5	77.9	75.1	22
24		76.4	76.2	75.9	75.3	74.7	74	73.6	72.4	70	67.4	24
26		68.1	67.9	67.6	67	66.5	65.7	65.2	64.5	63.3	60.9	26
28		61.2	61.1	60.8	60.2	59.6	58.8	58.3	57.5	56.9	55.3	28
30			55.2	54.9	54.3	53.7	53	52.5	51.7	51.1	50.2	30
32			50.2	49.9	49.3	48.7	48	47.5	46.6	46	45.1	32
34				45.6	45	44.4	43.6	43.1	42.3	41.6	40.8	34
36				41.8	41.2	40.6	39.8	39.3	38.4	37.8	36.9	36
38				38.4	37.9	37.3	36.5	35.9	35.1	34.4	33.5	38
40					34.9	34.3	33.5	32.9	32.1	31.4	30.5	40
44					29.7	29.2	28.4	27.9	27	26.3	25.4	44
48						25	24.2	23.7	22.8	22.2	21.2	48
52							20.7	20.2	19.3	18.7	17.7	52
56								17.2	16.3	15.7	14.8	56
60									13.8	13.2	12.2	60
64									11.6	10.9	10	64
68										9	8.1	68
72											6.3	72

3.2 SL

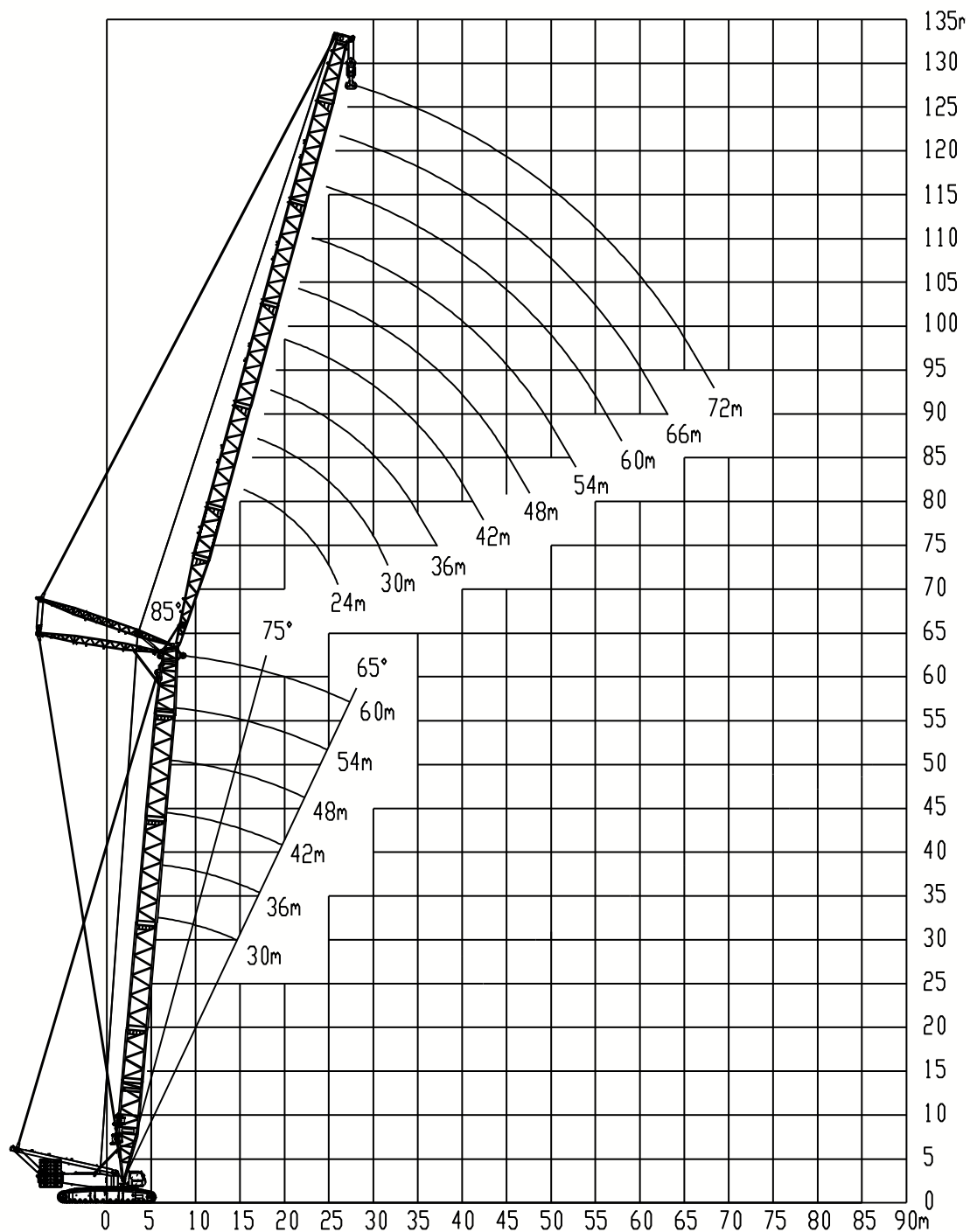
Rear counterweight: 160t Central ballast: 40t

Radius (m)	Light main boom length (m)						Radius (m)
	78	84	90	96	102	108	
10	180						10
11	167	161					11
12	153	147	142	136			12
14	131	126	122	117	113	101	14
16	112	109	106	102	98.8	95.6	16
18	95.8	93.8	91.8	89.8	87	84.3	18
20	83.4	81.6	79.8	78	76.4	74.6	20
22	73.5	71.7	70.2	68.5	66.9	65.4	22
24	64.9	63.7	62.2	60.6	59.3	58	24
26	57.3	56.5	55.6	54.1	52.7	51.5	26
28	51	50.1	49.5	48.5	47.3	46.1	28
30	45.7	44.9	44.2	43.3	42.5	41.4	30
32	41.1	40.3	39.6	38.8	38.1	37.3	32
34	37.2	36.3	35.6	34.7	34.2	33.5	34
36	33.8	32.9	32.1	31.2	30.7	30	36
38	30.7	29.8	29.1	28.2	27.6	26.9	38
40	28	27.1	26.3	25.5	24.8	24.2	40
44	23.4	22.5	21.7	20.8	20.1	19.5	44
48	19.6	18.7	18	17	16.3	15.7	48
52	16.5	15.5	14.8	13.9	13.2	12.5	52
56	13.8	12.8	12.1	11.1	10.5	9.8	56
60	11.5	10.6	9.8	8.9	8.2	7.5	60
64	9.5	8.6	7.8	6.8	6.2	5.5	64
68	7.7	6.8	6	5.1	4.4	3.7	68
72		5.2	4.5	3.5	2.8		72

3.3 SLHS



Wind plant jib: 8m Rear counterweight: 160t Central ballast: 40t												
Radius (m)	Light main boom length (m)											Radius (m)
	78	81	84	87	90	93	96	99	102	105	108	
14	136	134	132	129								14
15	127	125	123	121	119	117	110	103				15
16	119	117	115	113	111	109	107	102	100	98	95	16
17	111	110	108	106	104	102	101	99.6	96.8	94.5	91.2	17
18	105	103	101	100	98.4	96.8	95.2	93.8	92	88.9	86.7	18
19	99.1	97.4	95.8	94.5	92.6	91.3	89.7	88.5	86.9	84.7	81.2	19
20	93.6	92	90.6	89.1	87.5	86.3	84.7	83.8	82.2	81.1	77.9	20
22	84	82.7	81.4	80.1	78.7	77.5	76.1	75.1	73.8	72.8	71.5	22
24	76	74.7	73.4	72.4	71.1	69.9	68.7	67.8	66.5	65.7	64.5	24
26	69.1	67.8	66.7	65.8	64.5	63.6	62.3	61.4	60.4	59.6	58.4	26
28	63.1	61.9	60.8	60	58.9	57.9	56.8	55.9	54.9	54.1	53	28
30	57.2	56.8	55.7	54.9	53.8	52.9	51.8	51.2	50.1	49.4	48.4	30
32	51.7	51.4	51	50.4	49.4	48.5	47.4	46.9	45.8	45.2	44.3	32
34	47.1	46.7	46.2	46	45.4	44.6	43.6	43	42.1	41.4	40.5	34
36	43	42.6	42.2	41.9	41.5	41	40.1	39.6	38.6	37.9	37.2	36
38	39.4	38.9	38.5	38.3	37.8	37.5	36.9	36.5	35.5	35	34	38
40	36.2	35.7	35.3	35.1	34.6	34.2	33.7	33.6	32.7	32.2	31.3	40
44	30.7	30.2	29.8	29.6	29.1	28.7	28.2	28.1	27.6	27.3	26.4	44
48	26.2	25.8	25.3	25.1	24.6	24.2	23.7	23.6	23.1	22.9	22.4	48
52	22.4	22	21.5	21.3	20.8	20.4	19.9	19.8	19.3	19.1	18.7	52
56	19.3	18.8	18.4	18.2	17.7	17.3	16.7	16.6	16.1	15.9	15.4	56
60	16.6	16.1	15.6	15.4	14.9	14.5	14	13.9	13.3	13.2	12.6	60
64	14.2	13.7	13.2	13	12.5	12.1	11.6	11.4	10.9	10.7	10.3	64
68	12.1	11.6	11.2	11	10.5	10	9.5	9.4	8.9	8.6	8.2	68
72	10.2	9.8	9.3	9.1	8.6	8.2	7.6	7.5	7	6.8	6.3	72
76	8.5	8.1	7.6	7.4	6.9	6.5	6	5.9	5.4	5.1	4.7	76
80			6.1	5.9	5.4	5	4.5	4.4	3.8	3.6	3.2	80

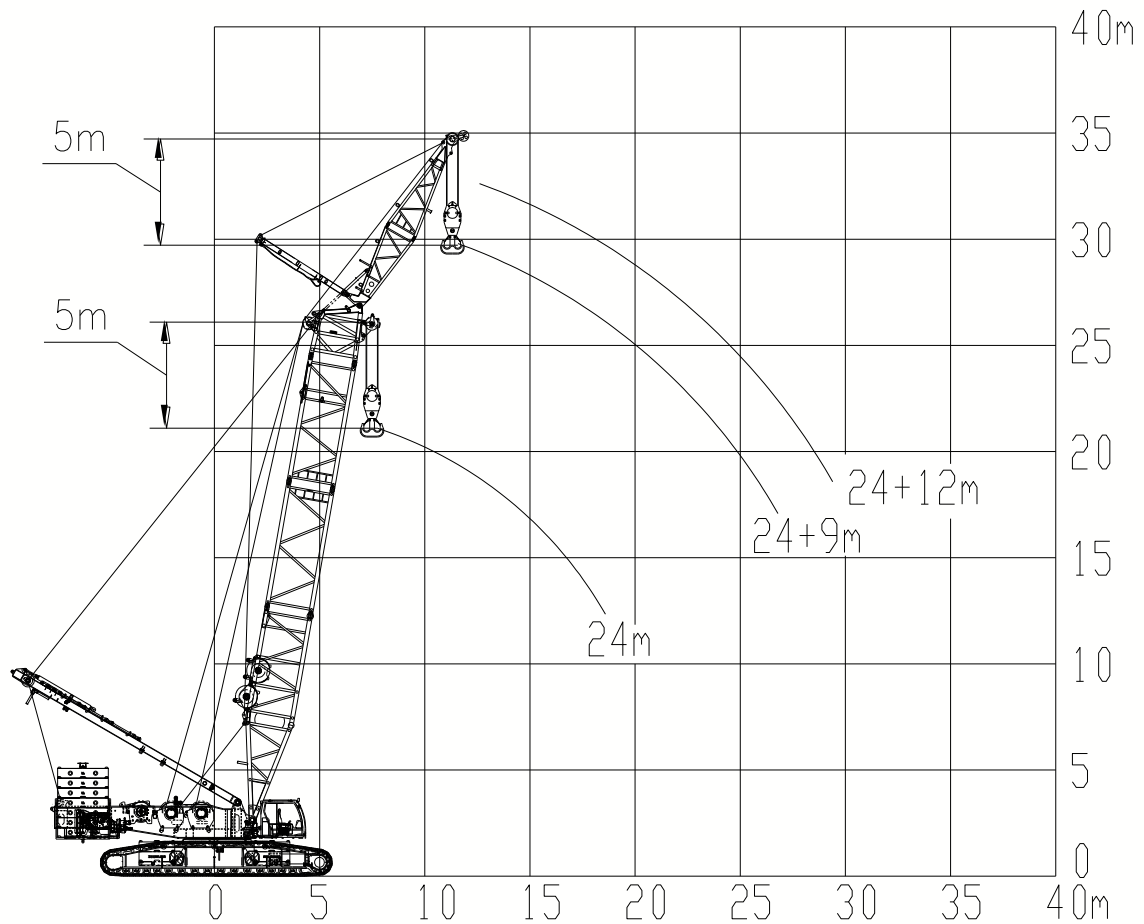
3.4 SW

Rear counterweight: 160t Central ballast: 40t Main boom length: 30m												
Radius (m)	Luffing jib length (m)											Radius (m)
	24	30	36	42	48	54	60	66	72			
14	150											14
16	139	134	129									16
18	123	118	114	111								18
20	108	106	102	99.7	96.4							20
22	95.2	94.7	92.7	90.3	87.2	85						22
24	84.7	84.3	83.7	82.4	79.6	77.5	74.9	72.9				24
26	76.1	75.7	75.2	75	73.1	71.2	68.7	66.9	64.6			26
28	68.8	68.6	68.1	67.9	67.1	65.6	63.4	61.7	59.5			28
30		62.5	62	61.9	61.1	60.8	58.7	57.1	55			30
32		57.3	56.9	56.7	56	55.7	54.5	53.1	51.1			32
34		52.6	52.4	52.3	51.5	51.2	50.4	49.5	47.6			34
36			48.4	48.3	47.6	47.3	46.5	46.1	44.4			36
38			44.9	44.9	44.2	43.9	43.1	42.7	41.6			38
40			41.6	41.8	41.1	40.8	40	39.6	38.8			40
44				36.4	35.8	35.6	34.8	34.4	33.6			44
48					31.5	31.3	30.5	30.1	29.3			48
52					27.7	27.7	26.9	26.5	25.8			52
56						24.5	23.8	23.5	22.7			56
60							21.2	20.9	20.1			60
64								18.6	17.8			64
68								16.5	15.8			68
72									14			72
76												76

Rear counterweight: 160t Central ballast: 40t Main boom length: 42m												
Radius (m)	Luffing jib length (m)											Radius (m)
	24	30	36	42	48	54	60	66	72			
14	147											14
16	129	124										16
18	114	110	106									18
20	102	99.1	95.6	93								20
22	93	89.8	86.8	84.3	81.4	79.4						22
24	84.2	82.1	79.2	77.2	74.5	72.5	69.9					24
26	75.7	75.2	72.8	71	68.5	66.7	64.3	62.5				26
28	68.5	68.1	67.3	65.6	63.3	61.6	59.4	57.8	55.6			28
30		62.1	61.5	60.9	58.7	57.1	55	53.5	51.5			30
32		56.9	56.4	56.2	54.7	53.2	51.2	49.7	47.8			32
34		52.4	51.9	51.8	51	49.7	47.7	46.4	44.5			34
36			48	47.9	47.1	46.6	44.6	43.4	41.6			36
38			44.5	44.5	43.7	43.4	41.9	40.6	38.9			38
40			41.4	41.4	40.7	40.4	39.3	38.1	36.4			40
44				36.1	35.5	35.2	34.3	33.8	32.2			44
48					31.2	30.9	30.1	29.7	28.6			48
52					27.5	27.4	26.6	26.2	25.4			52
56						24.3	23.5	23.2	22.4			56
60							20.9	20.6	19.8			60
64							18.6	18.3	17.5			64
68								16.3	15.6			68
72									13.8			72
76									12.1			76

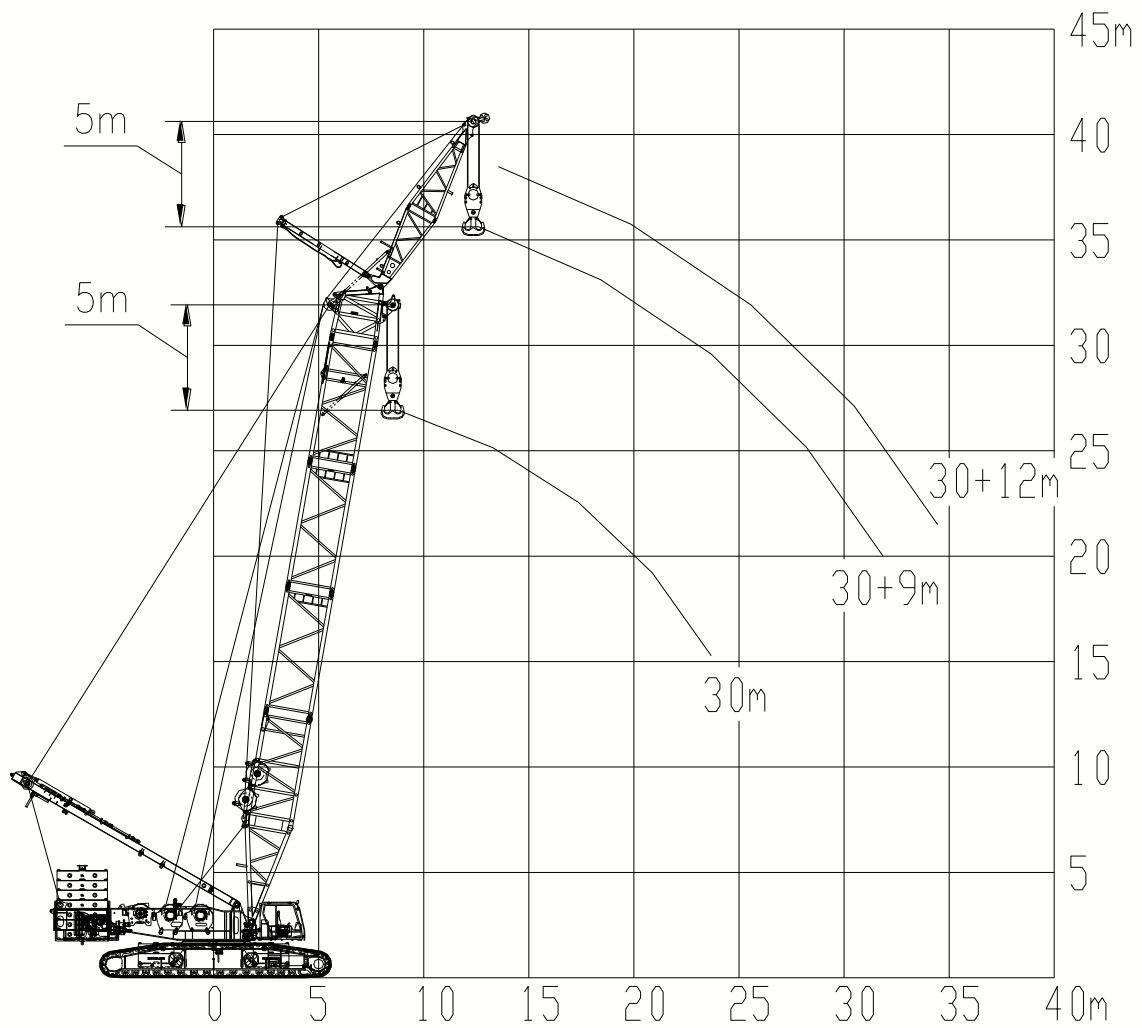
Rear counterweight: 160t Central ballast: 40t Main boom length: 54m												
Radius (m)	Luffing jib length (m)											Radius (m)
	24	30	36	42	48	54	60	66	72			
16	118											16
18	106	102										18
20	95.4	91.9	88.8	86.3								20
22	86.8	83.6	80.7	78.4	75.7							22
24	79.5	76.6	73.8	71.9	69.3	67.3						24
26	73.3	70.5	68	66.3	63.9	62.1	59.7	58				26
28	67.8	65.4	62.9	61.3	59	57.5	55.1	53.6	51.5			28
30	61.8	60.8	58.5	57	54.8	53.3	51.2	49.7	47.7			30
32		56.3	54.6	53.2	51.1	49.7	47.6	46.2	44.3			32
34		51.8	51.1	49.7	47.7	46.4	44.4	43.1	41.2			34
36		47.8	47.4	46.7	44.8	43.5	41.6	40.3	38.5			36
38			44	43.9	42	40.9	39	37.8	36			38
40			40.9	40.8	39.6	38.4	36.6	35.5	33.8			40
44				35.7	35	34.2	32.5	31.5	29.8			44
48				31.3	30.7	30.4	29	28	26.4			48
52					27.1	26.9	26	25	23.5			52
56						23.9	23.1	22.5	21			56
60							20.5	20.2	18.8			60
64							18.2	17.9	16.8			64
68								15.9	15.1			68
72									13.4			72
76									11.8			76

Rear counterweight: 160t Central ballast: 40t Main boom length: 60m												
Radius (m)	Luffing jib length (m)											Radius (m)
	24	30	36	42	48	54	60	66	72			
16	114											16
18	101	97.9										18
20	91.8	88.5	85.3									20
22	83.6	80.6	77.7	75.5	72.8							22
24	76.6	73.8	71.1	69.3	66.7	64.8						24
26	70.7	68.1	65.6	63.9	61.4	59.7	57.3					26
28	65.6	63.1	60.8	59.2	56.8	55.3	53.1	51.5	49.4			28
30	61.1	58.7	56.5	55	52.8	51.4	49.2	47.7	45.7			30
32		54.8	52.7	51.3	49.2	47.9	45.8	44.4	42.4			32
34		51.4	49.3	48	46	44.7	42.7	41.4	39.5			34
36		47.6	46.3	45	43.1	41.9	40	38.8	36.9			36
38			43.6	42.4	40.6	39.4	37.5	36.3	34.6			38
40			40.6	39.9	38.2	37	35.2	34.1	32.4			40
44				35.4	34	33	31.3	30.2	28.6			44
48				31	30.4	29.6	27.9	26.9	25.3			48
52					26.9	26.6	25	24	22.5			52
56						23.7	22.5	21.5	20.1			56
60						21	20.3	19.4	17.9			60
64							18	17.4	16			64
68								15.7	14.3			68
72								13.9	12.8			72
76									11.4			76

3.5 SFV

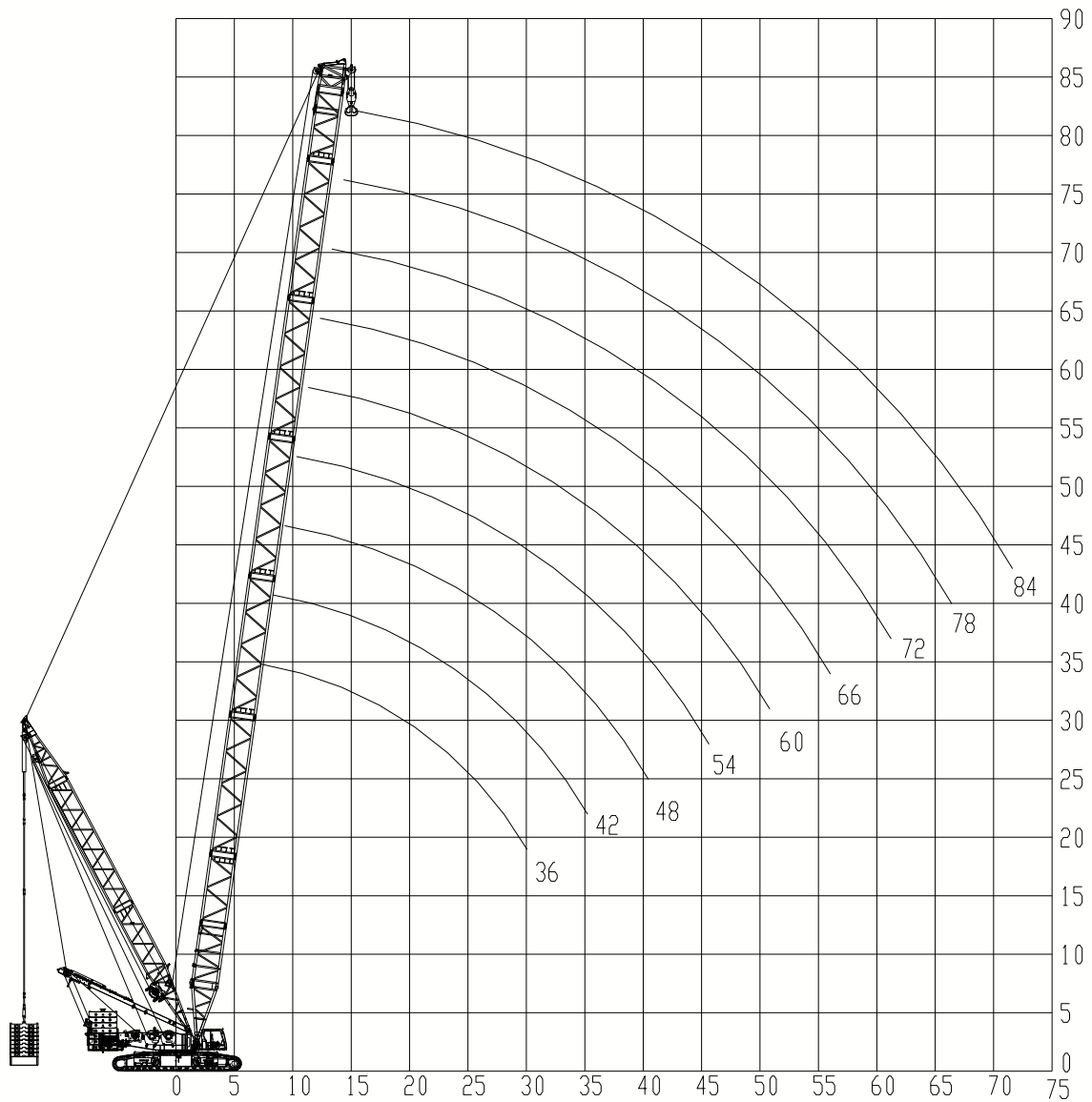
Rear counterweight: 160t Central ballast: 40t Main boom + jib: 24m + 9m						
Main boom angle	Radius of hook 1	Turning over	Radius of hook 2	Capacity of hook 1	Turning over	Capacity of hook 2
81.17	7.0	8.9	10.8	359.0	279.1	199.2
80.78	7.2	9.1	11.0	351.7	275.4	199.0
78.99	7.9	9.9	12.0	318.1	253.6	189.0
78.72	8.0	10.1	12.2	313.0	250.2	187.4
76.24	9.0	11.3	13.5	272.0	222.5	173.1
75.35	9.4	11.7	14.0	261.7	214.9	168.0
73.72	10.0	12.4	14.9	243.0	198.7	154.4
71.62	10.8	13.4	16.0	222.4	179.7	137.0
71.17	11.0	13.6	16.2	218.0	176.2	134.4
68.56	12.0	14.8	17.6	197.0	158.2	119.5
67.77	12.3	15.2	18.0	191.0	153.0	115.0
63.77	13.8	16.9	20.0	161.3	129.7	98.2
63.18	14.0	17.1	20.3	157.0	126.7	96.3
59.57	15.3	18.6	22.0	137.8	111.6	85.3
57.47	16.0	19.5	23.0	127.0	103.7	80.3
55.14	16.8	20.4	24.0	118.4	96.7	75.0
51.31	18.0	21.8	25.6	105.0	86.6	68.1
50.37	18.3	22.1	26.0	102.7	84.6	66.5
45.14	19.8	23.9	28.0	90.8	75.2	59.5
44.48	20.0	24.1	28.2	89.4	74.1	58.8
39.22	21.4	25.7	30.0	80.8	67.1	53.4
36.52	22.0	26.4	30.8	76.8	64.0	51.3
32.12	22.9	27.5	32.0	70.9	59.5	48.2

Rear counterweight: 160t Central ballast: 40t Main boom + jib: 24m + 12m						
Main boom angle	Radius of hook 1	Turning over	Radius of hook 2	Capacity of hook 1	Turning over	Capacity of hook 2
81.2	7.0	10.0	13.0	340.0	243.4	146.9
79.5	7.7	10.8	14.0	321.9	230.9	140.0
78.7	8.0	11.2	14.5	313.0	225.2	137.4
76.2	9.0	12.5	15.9	272.0	200.7	129.4
76.1	9.0	12.5	16.0	270.5	199.8	129.0
73.7	10.0	13.7	17.4	241.0	180.5	120.1
72.6	10.4	14.2	18.0	230.2	173.1	116.0
71.2	11.0	14.9	18.8	216.0	162.7	109.3
69.0	11.8	15.9	20.0	200.3	149.9	99.6
68.6	12.0	16.1	20.2	197.0	147.5	98.0
65.3	13.2	17.6	22.0	171.1	128.9	86.7
63.2	14.0	18.5	23.1	155.0	118.0	81.1
61.3	14.7	19.3	24.0	145.2	110.7	76.3
57.5	16.0	20.9	25.9	125.0	96.7	68.3
57.2	16.1	21.0	26.0	124.1	95.9	67.8
52.8	17.5	22.8	28.0	108.8	84.8	60.7
51.3	18.0	23.3	28.6	104.0	81.4	58.8
47.9	19.0	24.5	30.0	95.7	75.2	54.6
44.5	20.0	25.7	31.3	87.7	69.4	51.2
42.5	20.5	26.3	32.0	84.4	66.9	49.4
36.5	22.0	28.0	33.9	75.1	60.0	45.0
36.2	22.1	28.0	34.0	74.7	59.7	44.8



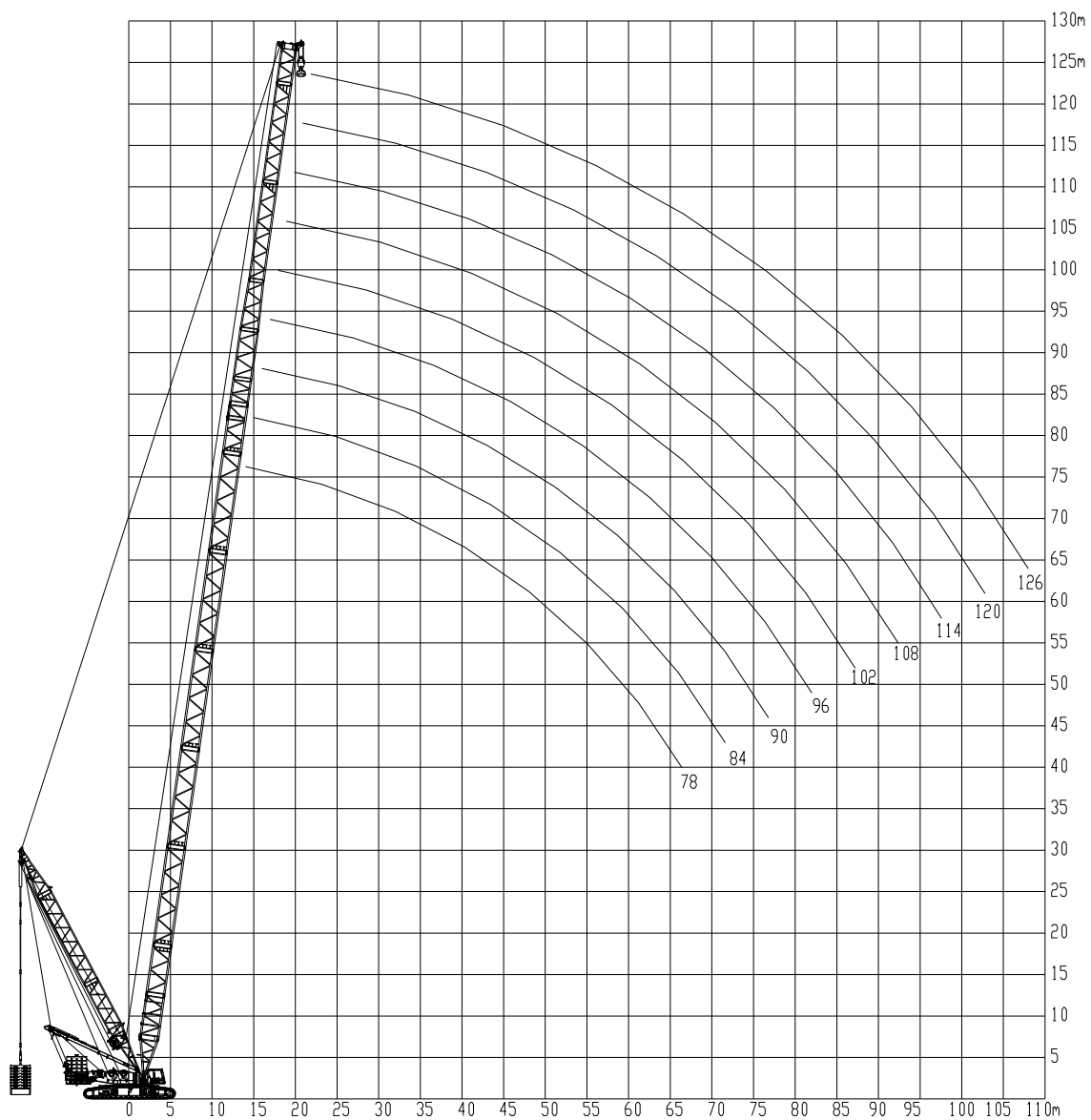
Rear counterweight: 160t Central ballast: 40t Main boom + jib: 30m + 9m						
Main boom angle	Radius of hook 1	Turning over	Radius of hook 2	Capacity of hook 1	Turning over	Capacity of hook 2
81.02	8.0	9.9	11.9	303.0	250.6	198.2
80.84	8.1	10.0	12.0	300.3	249.1	198.0
79.06	9.0	11.1	13.2	272.0	226.2	180.3
77.81	9.6	11.8	14.0	253.6	210.8	168.0
77.09	10.0	12.2	14.5	243.0	201.7	160.5
75.09	11.0	13.4	15.8	218.0	178.9	139.9
74.72	11.2	13.6	16.0	214.0	175.0	136.0
73.08	12.0	14.5	17.0	197.0	160.8	124.5
71.56	12.7	15.4	18.0	182.5	148.2	114.0
68.97	14.0	16.8	19.6	158.0	129.5	101.1
68.32	14.3	17.2	20.0	153.4	125.6	97.9
64.99	15.9	18.9	22.0	129.9	107.4	84.9
64.72	16.0	19.1	22.2	128.0	106.0	84.1
61.53	17.4	20.7	24.0	112.1	93.3	74.6
60.29	18.0	21.3	24.7	106.0	88.8	71.7
57.93	19.0	22.5	26.0	97.9	82.1	66.2
55.64	20.0	23.6	27.2	90.3	76.1	61.9
54.13	20.6	24.3	28.0	86.4	72.7	59.1
50.67	22.0	25.9	29.7	77.7	65.8	53.9
50.10	22.2	26.1	30.0	76.6	64.8	53.1
45.76	23.8	27.9	32.0	68.5	58.2	47.9
45.28	24.0	28.1	32.2	67.6	57.5	47.4
40.97	25.5	29.7	34.0	61.6	52.5	43.4
39.26	26.0	30.3	34.7	59.3	50.7	42.1
35.54	27.1	31.6	36.0	55.5	47.5	39.5
32.21	28.0	32.5	37.1	52.4	44.9	37.4

Rear counterweight: 160t Central ballast: 40t Main boom + jib: 30m + 12m						
Main boom angle	Radius of hook 1	Turning over	Radius of hook 2	Capacity of hook 1	Turning over	Capacity of hook 2
81.23	7.9	10.9	14.0	299.0	223.5	148.0
81.02	8.0	11.1	14.2	299.0	223.0	147.1
79.06	9.0	12.3	15.5	272.0	205.5	138.9
78.36	9.4	12.7	16.0	261.0	198.5	136.0
77.09	10.0	13.4	16.9	241.0	184.1	127.3
75.43	10.8	14.4	18.0	220.2	168.1	116.0
75.09	11.0	14.6	18.2	216.0	165.0	114.1
73.08	12.0	15.8	19.6	197.0	149.9	102.7
72.44	12.3	16.2	20.0	190.6	144.9	99.2
69.38	13.8	17.9	22.0	160.1	123.1	86.2
68.97	14.0	18.1	22.3	156.0	120.4	84.8
66.22	15.3	19.7	24.0	136.5	106.1	75.8
64.72	16.0	20.5	24.9	126.0	98.9	71.9
62.95	16.8	21.4	26.0	117.5	92.4	67.3
60.29	18.0	22.8	27.6	105.0	83.4	61.7
59.54	18.3	23.2	28.0	102.3	81.2	60.2
55.96	19.9	24.9	30.0	89.8	71.9	54.1
55.64	20.0	25.1	30.2	88.7	71.2	53.6
52.16	21.4	26.7	32.0	79.9	64.4	48.9
50.67	22.0	27.4	32.8	76.2	61.7	47.2
48.09	23.0	28.5	34.0	71.2	57.8	44.4
45.28	24.0	29.6	35.3	66.1	54.0	41.9
43.64	24.6	30.3	36.0	63.8	52.1	40.5
39.26	26.0	31.9	37.8	57.9	47.6	37.3
38.63	26.2	32.1	38.0	57.2	47.1	36.9
32.74	27.9	33.9	40.0	51.5	42.6	33.7
32.21	28.0	34.1	40.2	51.0	42.2	33.4

3.6 SDB

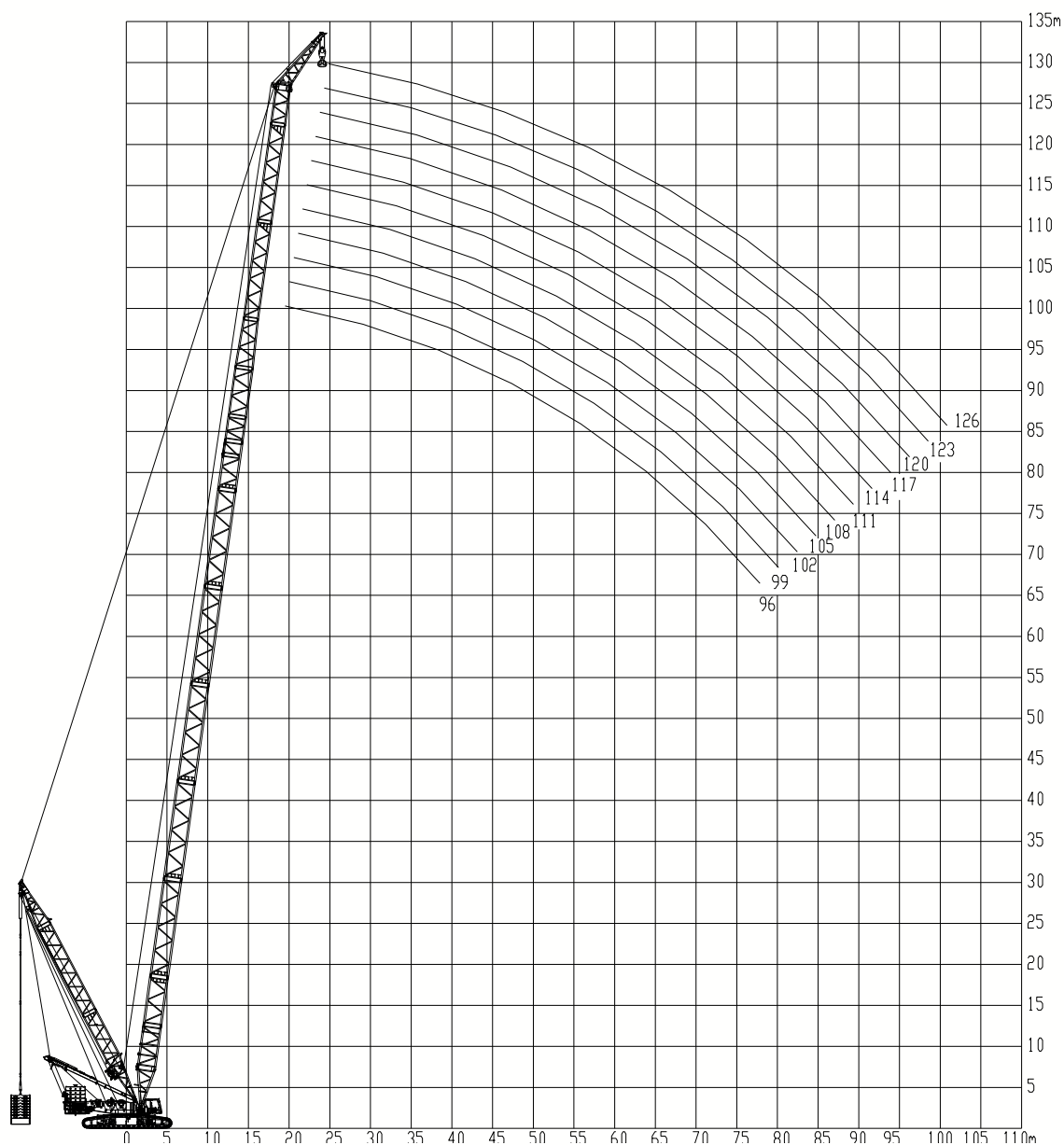
Derrick boom: 30m Radius of suspended ballast: 16m Rear counterweight: 130t Central ballast: 40t Suspended ballast: 230t										
Radius (m)	Main boom length (m)									Radius (m)
	36	42	48	54	60	66	72	78	84	
9	500.0									9
10	450.0	400.0	400.0	392.0	350.0					10
11	400.0	400.0	400.0	392.0	350.0	308.5	272.0			11
12	400.0	400.0	400.0	392.0	350.0	308.5	272.0	241.0		12
14	400.0	400.0	396.0	392.0	349.0	308.5	271.0	240.0	212.0	14
16	362.5	351.8	350.7	348.7	346.7	308.5	271.0	240.0	212.0	16
18	311.6	310.5	309.5	307.5	305.5	304.5	270.0	240.0	212.0	18
20	278.4	277.4	276.4	275.4	273.4	272.4	264.0	238.0	212.0	20
22	251.3	250.2	249.2	248.2	247.2	246.2	244.2	236.0	211.0	22
24	229.1	228.1	227.1	226.1	225.1	224.1	222.1	215.0	210.0	24
26	210.0	209.0	208.0	207.0	206.0	205.0	204.0	203.0	196.0	26
28	193.0	192.0	192.0	191.0	189.9	188.9	187.9	186.9	184.9	28
30	177.9	176.9	175.9	175.9	174.9	173.9	172.9	172.9	171.9	30
32	163.8	163.8	162.8	161.8	161.8	160.8	159.8	159.8	158.8	32
34		151.8	150.8	150.8	149.7	149.7	148.7	147.7	146.7	34
36		141.7	140.7	140.7	139.7	138.7	138.7	137.7	136.7	36
38		132.7	131.7	131.7	130.7	130.7	129.6	128.6	127.6	38
40			123.6	123.6	122.6	122.6	121.6	120.6	119.6	40
44			109.5	109.5	108.5	108.5	107.5	107.5	106.5	44
48				98.1	97.5	97.2	96.5	96.0	95.2	48
52					88.0	87.7	87.0	86.6	85.8	52
56						79.7	79.0	78.6	77.8	56
60							72.1	71.8	71.0	60
64							66.1	65.7	65.0	64
68								60.4	59.7	68
72									55.1	72

3.7 SLDB



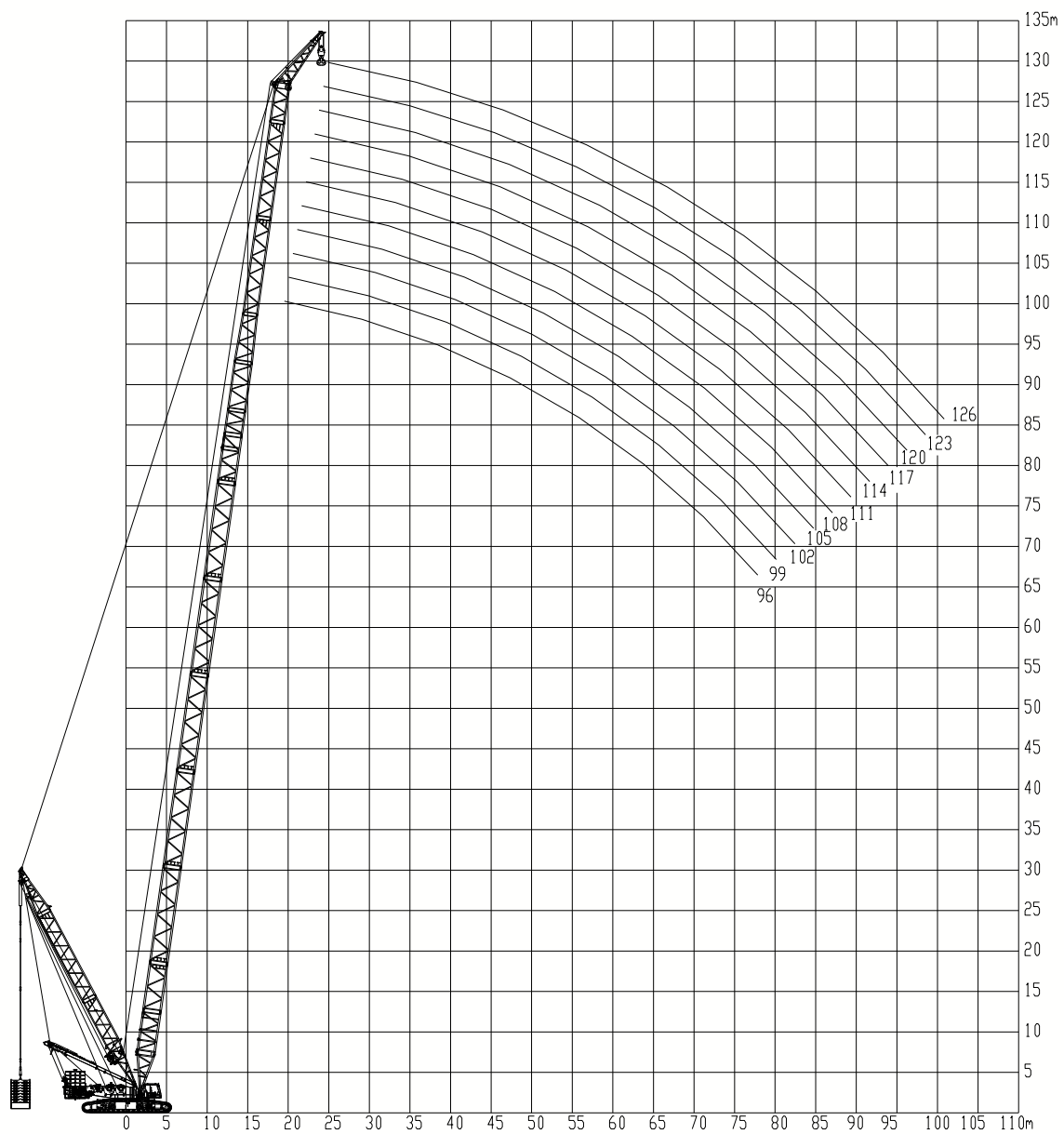
Derrick boom: 30m Radius of suspended ballast: 16m Rear counterweight: 130t Central ballast: 40t Suspended ballast: 230t										
Radius (m)	Main boom length (m)									Radius (m)
	78	84	90	96	102	108	114	120	126	
10	231.0									10
11	231.0	209.0								11
12	231.0	209.0	185.0	162.0						12
14	231.0	209.0	185.0	162.0	140.0	121.0	104.0	91.9		14
16	231.0	208.0	185.0	162.0	140.0	121.0	104.0	91.9	77.9	16
18	231.0	206.0	185.0	162.0	140.0	121.0	104.0	91.6	77.9	18
20	230.0	206.0	185.0	162.0	139.0	121.0	104.0	91.4	77.6	20
22	228.0	206.0	184.0	162.0	139.0	121.0	103.0	91.1	77.3	22
24	219.0	204.0	182.0	161.0	139.0	120.0	103.0	90.6	77.0	24
26	201.0	199.0	182.0	161.0	138.0	119.0	103.0	90.2	76.6	26
28	184.0	184.0	182.0	160.0	138.0	119.0	102.0	89.6	76.1	28
30	170.0	170.0	169.0	159.0	137.0	118.0	101.0	89.1	75.6	30
32	158.0	158.0	157.0	156.0	136.0	117.0	101.0	88.4	75.0	32
34	148.0	147.0	146.0	146.0	135.0	117.0	100.0	87.9	73.5	34
36	139.0	138.0	138.0	136.0	132.0	116.0	99.5	87.1	70.7	36
38	130.0	129.0	129.0	128.0	127.0	115.0	98.8	85.1	68.3	38
40	123.0	122.0	121.0	121.0	120.0	114.0	98.0	83.1	65.8	40
44	110.0	109.0	108.0	107.0	107.0	106.0	96.5	77.9	61.8	44
48	98.8	98.0	97.6	96.8	96.3	95.6	92.3	73.5	57.8	48
52	89.6	89.1	88.4	87.6	87.1	86.4	86.4	69.5	54.6	52
56	81.9	81.1	80.7	79.9	79.2	78.7	78.7	66.3	51.4	56
60	74.8	74.0	73.4	72.6	72.1	71.5	71.5	63.0	48.6	60
64	68.5	67.7	67.1	66.3	65.8	65.2	65.3	59.8	46.2	64
68	63.0	62.2	61.6	60.8	60.2	59.7	59.8	57.4	44.2	68

3.8 SLHSDB-1

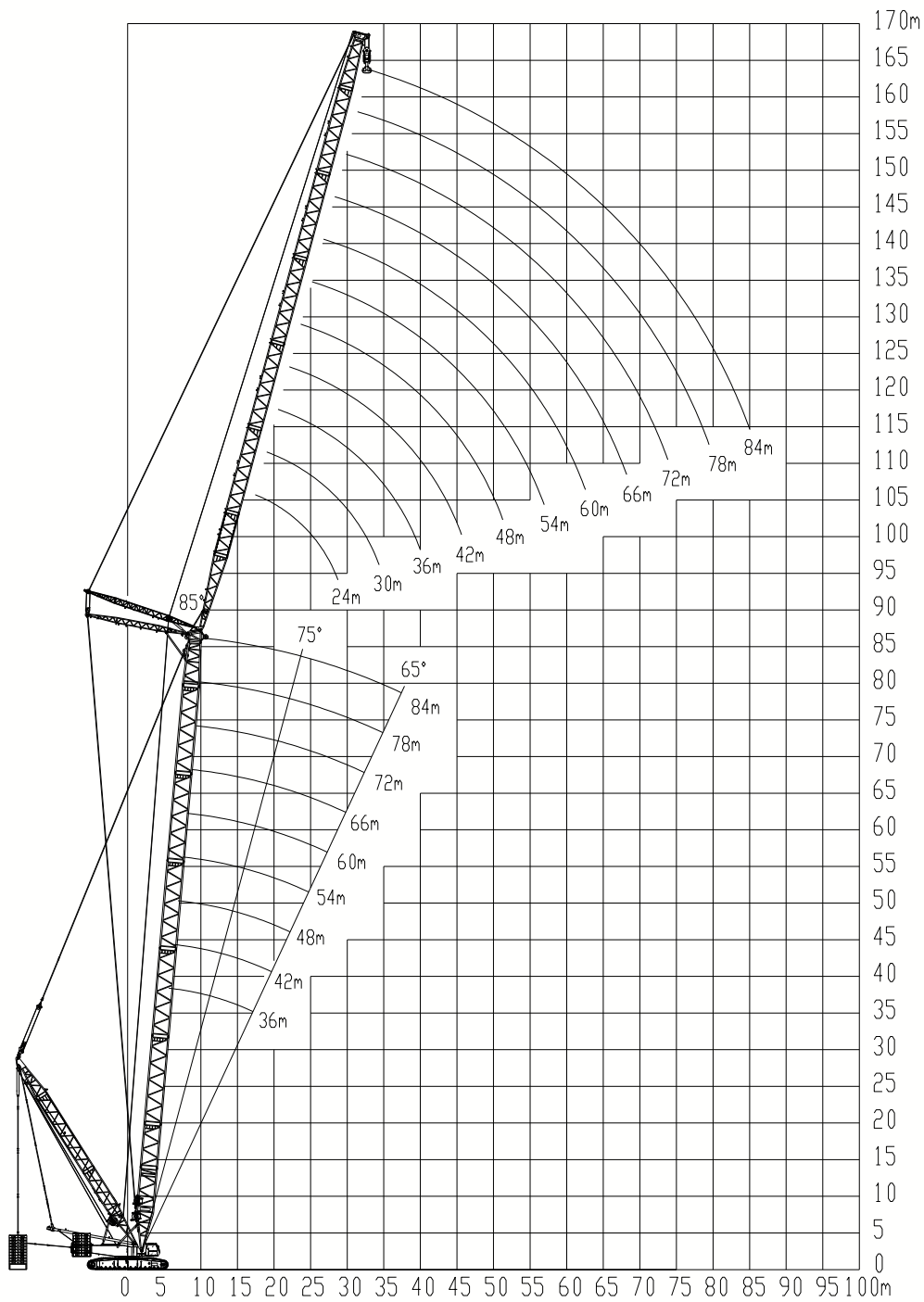


Suspended ballast: 200t Radius of suspended ballast: 16m Rear counterweight: 140t Central ballast: 40t												
Radius (m)	Light main boom length (m)											Radius (m)
	96	99	102	105	108	111	114	117	120	123	126	
17	130	125										17
18	129	125	117	108	105	93.2						18
19	129	125	116	108	103	92.6	87.2	82.1	77.1			19
20	129	124	116	108	101	91.7	86.9	81.8	76.9	69.3	65.1	20
22	129	124	116	108	101	90.7	86.6	81.4	76.5	68.8	64.7	22
24	125	123	115	107	100	89.1	86.2	81.1	76.0	68.1	64.3	24
26	118	119	115	106	99.9	87.5	85.6	80.5	75.5	65.9	63.3	26
28	116	117	114	106	99.3	86.0	85.0	79.9	74.9	64.9	61.8	28
30	114	115	111	105	98.7	84.4	84.4	79.3	74.4	63.3	60.8	30
32	112	111	106	102	98.0	83.4	83.4	78.7	73.7	61.8	59.2	32
34	109	106	102	98.4	95.2	81.8	82.4	78.1	73.1	60.2	57.6	34
36	105	102	98.4	94.2	91.7	80.8	80.8	76.7	72.4	58.8	56.4	36
38	101	98.4	95.8	90.7	88.5	79.3	79.9	75.7	71.0	57.6	55.1	38
40	97.4	94.2	91.7	87.5	85.0	78.3	77.7	75.1	69.1	56.0	53.9	40
44	90.7	87.5	85.0	81.8	79.3	75.7	72.6	70.0	65.5	54.1	51.5	44
48	84.4	82.4	79.9	75.7	74.2	70.0	67.5	65.9	62.4	51.5	49.4	48
52	78.0	76.7	74.2	71.0	69.1	65.9	63.3	61.4	59.2	50.0	46.8	52
56	70.3	70.2	69.7	66.9	64.9	61.8	59.2	57.6	55.7	48.0	44.6	56
60	63.6	63.6	63.1	62.4	60.8	58.2	55.7	54.1	52.5	46.4	42.7	60
64	57.9	57.8	57.3	57.2	56.7	54.7	52.5	50.9	49.4	44.3	40.7	64
68	52.9	52.8	52.3	52.1	51.7	51.5	49.4	48.0	46.4	41.7	38.9	68
72	48.4	48.3	47.9	47.7	47.2	47.7	46.8	45.5	43.9	39.1	37.2	72
76	44.5	44.4	43.9	43.7	43.3	43.7	43.3	42.7	41.3	37.0	35.6	76

3.9 SLHSDB-2



Suspended ballast: 200t Radius of suspended ballast: 16m Rear counterweight: 140t Central ballast: 40t												
Radius (m)	Light main boom length (m)											Radius (m)
	96	99	102	105	108	111	114	117	120	123	126	
17	140	140										17
18	140	140	132	125	120	115						18
19	135	130	126	122	118	113	110	105	100			19
20	131	128	124	120	115	111	108	103	97	92.3	90.2	20
22	125	124	123	117	113	111	105	98.4	94.5	89.8	86.8	22
24	120	120	120	117	113	109	103	97.8	92	86.4	83.2	24
26	118	119	119	116	111	108	102	97.1	91.3	84.7	79.6	26
28	116	117	117	116	111	107	102	96.4	90.7	84.2	79.1	28
30	114	115	115	111	109	106	101	95.8	89.9	83.4	78.4	30
32	112	113	111	106	104	102	97.4	95.1	89.3	82.8	77.7	32
34	110	111	106	102	99.9	98.4	94.2	91.7	88.5	82.2	77.1	34
36	108	105	102	98.4	95.8	94.2	90.7	88.5	85	81.4	76.3	36
38	104	101	98.4	95.2	93.2	90.7	87.5	85	82.4	79.3	75.7	38
40	99.9	97.4	95.2	91.7	89.1	87.5	84.4	82.4	79.9	76.7	74.2	40
44	92.6	90.7	87.5	85	82.4	80.8	78.3	76.7	74.2	71.6	69.1	44
48	86.6	84.4	82.4	78.3	76.7	75.7	72.6	71.6	69.1	66.9	64.9	48
52	77.5	77.2	76.7	74.2	71.6	71	68.4	66.9	64.9	62.4	60.8	52
56	69.8	69.5	69.1	68.6	67.5	66.9	64.3	62.4	60.8	58.8	56.7	56
60	63.2	62.9	62.5	62	61.5	61.3	60.2	59.2	57.3	55.1	53.5	60
64	57.4	57.2	56.7	56.2	55.8	55.5	55	54.5	54	51.5	50	64
68	52.4	52.1	51.7	51.2	50.7	50.5	50	49.4	49	48.9	47.4	68
72	47.9	47.7	47.2	46.7	46.3	46	45.5	45	44.5	44.4	43.9	72
76	44	43.7	43.3	42.7	42.3	42	41.5	41	40.5	40.4	39.9	76
80	40.4	40.2	39.7	39.2	38.7	38.5	38	37.4	37	36.9	36.3	80
84	37.2	37	36.5	36	35.5	35.3	34.8	34.2	33.8	33.6	33.1	84
88	34.3	34	33.6	33.1	32.6	32.3	31.8	31.3	30.9	30.7	30.2	88
92	31.6	31.4	30.9	30.4	30	29.7	29.2	28.7	28.2	28.1	27.6	92

3.10 SWDB

Suspended ballast: 200t Radius of suspended ballast: 16m Rear counterweight: 140t Central ballast: 40t Main boom length: 36m

Radius (m)	Luffing jib length (m)											Radius (m)
	24	30	36	42	48	54	60	66	72	78	84	
14	235											14
16	219	209										16
18	204	195	187									18
20	192	184	176	167								20
22	180	173	166	160	136							22
24	160	163	156	151	135	113						24
26	145	149	149	144	134	112	98.2	80.5				26
28	117	136	136	137	132	111	97.2	80.3	69.5			28
30		124	124	126	124	110	96.2	80.2	69.3	56.2		30
32		115	114	116	114	109	95.3	80	69.1	55.9	49	32
34		96.8	106	107	105	104	94.3	79.7	68.8	55.5	48.7	34
36			99	99.7	98.1	96.9	93.4	79.5	68.5	55.1	48.3	36
38			92.7	93.1	91.5	90.5	88.5	79.2	68.2	54.7	47.9	38
40				87.2	85.7	84.8	82.9	78.9	67.8	54.3	47.5	40
44				75.8	75.9	75.1	73.3	72.4	67.1	53.5	46.7	44
48					67.9	67.2	65.5	64.7	60.2	50.5	44	48
52						60.6	59	58.2	53.8	44.7	38.8	52
56						53.5	53.5	52.8	48.1	39.7	34.2	56
60							47.8	48.2	43.1	35.3	30	60
64								44.1	38.8	31.5	26.4	64
68								38	34.7	27.8	23.1	68
72									31.4	24.7	20.1	72
76										21.9	17.4	76
80										19.6	15	80
84											12.8	84

Suspended ballast: 200t Radius of suspended ballast: 16m Rear counterweight: 140t Central ballast: 40t Main boom length: 48m

Radius (m)	Luffing jib length (m)											Radius (m)
	24	30	36	42	48	54	60	66	72	78	84	
16	202											16
18	190	182										18
20	180	172	165									20
22	171	164	157	141	121							22
24	163	156	150	140	120	100						24
26	153	149	143	138	119	99.7	85.1					26
28	136	143	137	133	118	98.7	84.3	69.9				28
30		130	130	127	117	97.7	83.4	69.2	60.8			30
32		120	119	121	115	96.7	82.6	68.5	60.2	50.3		32
34		111	110	112	111	95.7	81.8	67.8	59.6	50.2	44	34
36			102	104	103	94.8	80.9	67.1	59	50	43.9	36
38			95.8	97.4	96.1	93.8	80.1	66.5	58.4	49.8	43.7	38
40			89.9	91.3	89.9	88.9	79.3	65.8	57.8	49.6	43.4	40
44				80.5	79.3	78.5	76.6	65.1	57.2	49.1	42.9	44
48					70.7	70	68.3	64.5	56.7	48.6	42.4	48
52					61.2	63	61.4	60.6	55.5	45.5	39.5	52
56						57	55.5	54.8	49.6	40.3	34.7	56
60							50.5	49.9	44.5	35.9	30.6	60
64							43	45.7	39.9	31.9	26.8	64
68								40.5	35.7	28.4	23.5	68
72									32.2	25.2	20.5	72
76										22.4	17.8	76
80										19.8	15.5	80
84											13.3	84

Suspended ballast: 200t Radius of suspended ballast: 16m Rear counterweight: 140t Central ballast: 40t Main boom length: 60m

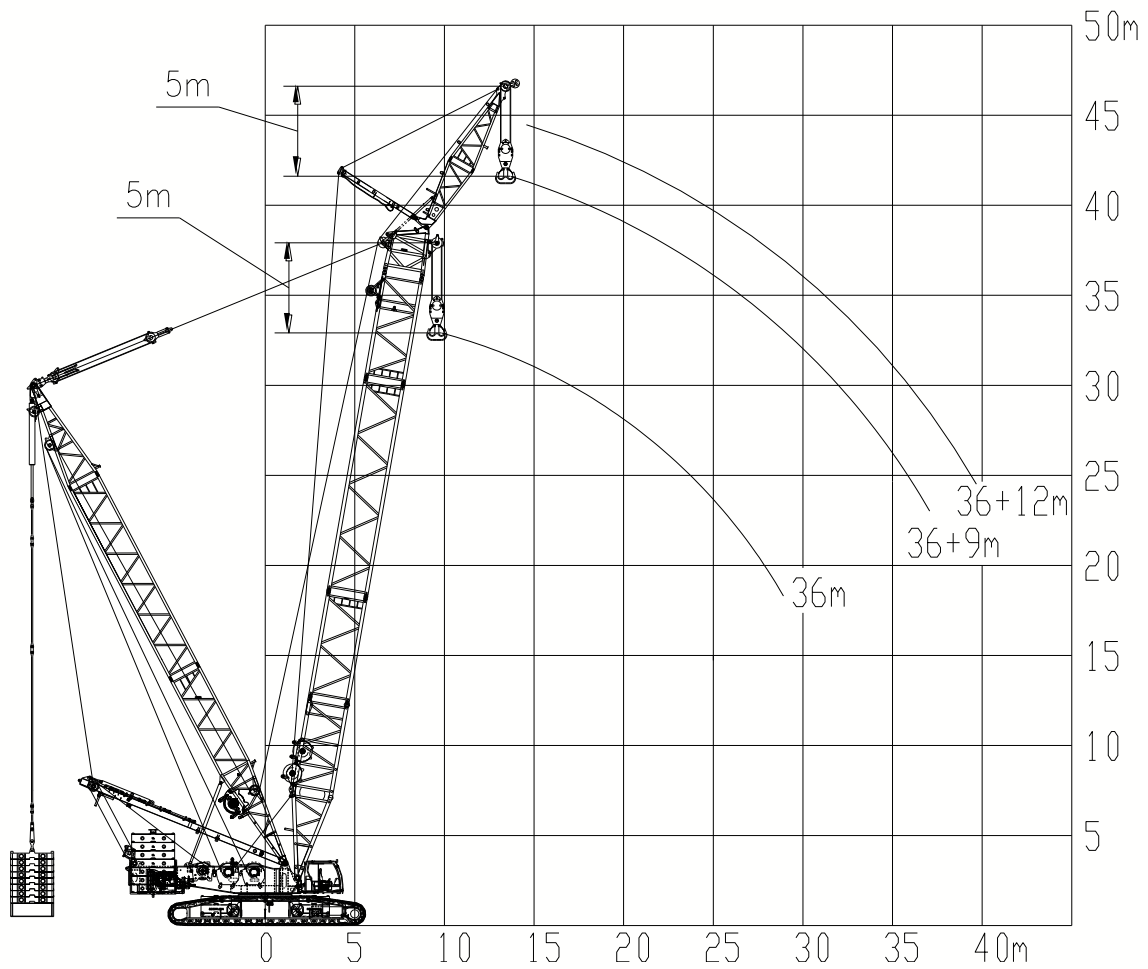
Radius (m)	Luffing jib length (m)											Radius (m)
	24	30	36	42	48	54	60	66	72	78	84	
18	166	160										18
20	159	153	140									20
22	152	146	139	120								22
24	146	140	134	118	100							24
26	140	135	129	117	99.2	84.1						26
28	135	130	124	116	98.2	83.3	73.1					28
30	125	125	119	115	97.2	82.5	72.3	61.0	53.2			30
32		120	115	111	96.2	81.6	71.6	60.4	52.6	44.4		32
34		114	111	108	95.3	80.8	70.9	59.8	52.1	43.9	39.4	34
36		103	103	101	94.3	80	70.2	59.2	51.6	43.5	39.4	36
38			95.6	94.3	91.7	79.2	69.5	58.6	51.1	43.0	39.3	38
40			88.8	87.8	86.2	78.4	68.8	58	50.5	42.6	39.2	40
44				76.1	75.7	74.1	68.1	57.4	50	42.2	38.9	44
48					66.4	65.8	64.8	56.9	49.5	41.8	38.6	48
52					57.6	58.4	58.1	56.3	49	41.3	38.3	52
56						51.3	52	51.2	48.6	40.9	35.9	56
60							46.2	46.5	45	36.9	31.6	60
64							40.9	41.7	40.3	32.8	27.8	64
68								37.6	36.2	29.3	24.3	68
72									32.6	25.9	21.3	72
76									29.4	23.1	18.5	76
80										20.5	16.0	80
84											13.8	84
88											11.8	88

Suspended ballast: 200t Radius of suspended ballast: 16m Rear counterweight: 140t Central ballast: 40t Main boom length: 72m

Radius (m)	Luffing jib length (m)											Radius (m)
	24	30	36	42	48	54	60	66	72	78	84	
18	136											18
20	130	125										20
22	124	119	109									22
24	119	114	108	94.3	82.3							24
26	113	110	105	93.4	81.5	70.4						26
28	109	105	100	92.5	80.7	69.7	60.8					28
30	105	101	96.7	91.5	79.8	69	60.1	51.7				30
32		96.7	92.8	89.8	79	68.3	59.5	51.2	45.5			32
34		93.3	89	86.7	78.3	67.6	59	50.7	45.1	38.6		34
36		86.2	84.4	82.2	77.5	67	58.4	50.2	44.6	38.2	34.1	36
38			78.4	76.9	74.7	66.3	57.8	49.7	44.2	37.8	33.8	38
40			72.8	71.9	70.2	65.6	57.2	49.2	43.8	37.4	33.4	40
44				63	62	60.6	56.6	48.7	43.3	37.1	33.1	44
48				55.2	54.5	53.9	53	48.2	42.9	36.7	32.8	48
52					48.5	47.9	47.6	46.5	42.5	36.3	32.4	52
56						42.4	42.6	42	41.3	36	32.1	56
60						37.2	38	38	37.6	35.6	31.8	60
64							33.8	34.7	34.5	33.5	28	64
68								31.4	31.1	30.2	24.6	68
72								28.5	28.3	26.8	21.5	72
76									25.8	23.8	18.8	76
80										21	16.3	80
84											14	84
88											12	88

Suspended ballast: 200t Radius of suspended ballast: 16m Rear counterweight: 140t Central ballast: 40t Main boom length: 84m

Radius (m)	Luffing jib length (m)											Radius (m)
	24	30	36	42	48	54	60	66	72	78	84	
20	106	101										20
22	101	97.4	86.9									22
24	96.7	92.8	86.5	75.8								24
26	92.4	89	85.8	75.6	65.4							26
28	88.6	85.5	82.4	75.2	64.7	56.8						28
30	84.7	81.7	78.6	74.6	64.1	56.2	50.2					30
32	80.9	78.6	75.5	72.8	63.5	55.7	49.7	43.4	38.3			32
34		75.2	72.8	69.7	62.8	55.1	49.2	43	37.9	32.9		34
36		72.1	69.7	67.1	62.2	54.6	48.7	42.5	37.5	32.6	29.2	36
38		68.6	66.7	64.6	61.6	54	48.2	42.1	37.1	32.3	28.9	38
40			62.3	61	59.2	53.5	47.7	41.7	36.8	31.9	28.6	40
44			54.9	53.6	52.6	51.3	47.2	41.3	36.4	31.6	28.4	44
48				47.6	46.7	45.9	44.9	40.9	36	31.3	28.1	48
52					41.9	41	40.4	39.4	35.7	31	27.8	52
56						37.2	36.4	35.8	35	30.7	27.5	56
60						33.4	33.2	32.4	31.9	30.4	27.2	60
64							29.4	29.8	29.1	28.5	27	64
68								27.1	26.9	26.2	25.5	68
72								24.8	24.3	24	22.3	72
76									22.2	22.1	19.4	76
80										20.4	16.9	80
84										18.8	14.6	84
88											12.5	88

3.11 SFVDB

Rear counterweight: 140t Central ballast: 40t Radius of suspended ballast: 16m Suspended ballast: 200t Main boom length: 36m Jib length: 9m						
Main boom angle	Radius of hook 1	Turning over	Radius of hook 2	Capacity of hook 1	Turning over	Capacity of hook 2
80.92	9.0	11.0	13.0	448.0	323.5	199.0
79.54	9.8	11.9	14.0	448.0	319.5	191.0
79.29	10.0	12.1	14.2	448.0	318.9	189.8
78.22	10.6	12.8	15.0	448.0	316.5	185.0
77.65	11.0	13.2	15.4	448.0	315.2	182.4
76.90	11.5	13.7	16.0	438.9	308.9	179.0
76.00	12.0	14.3	16.7	428.0	301.5	175.0
75.56	12.3	14.6	17.0	418.9	296.0	173.0
74.21	13.1	15.5	18.0	391.1	279.5	168.0
72.85	13.9	16.4	19.0	363.1	263.1	163.0
72.65	14.0	16.6	19.1	359.0	260.6	162.3
71.48	14.7	17.3	20.0	341.7	249.9	158.0
70.09	15.5	18.3	21.0	321.5	237.7	154.0
69.23	16.0	18.8	21.6	309.0	230.3	151.5
68.69	16.3	19.2	22.0	303.2	226.6	150.0
65.83	17.9	21.0	24.0	273.1	207.5	142.0
65.72	18.0	21.0	24.1	272.0	206.9	141.8
62.88	19.6	22.8	26.0	247.6	191.8	136.0
62.10	20.0	23.3	26.5	241.0	187.7	134.4
59.84	21.2	24.6	28.0	225.8	177.9	130.0
58.34	22.0	25.5	29.0	216.0	171.6	127.1
56.68	22.9	26.4	30.0	207.0	165.5	124.0
54.41	24.0	27.7	31.4	195.0	158.1	121.2
53.37	24.5	28.3	32.0	190.7	155.3	120.0
50.25	26.0	29.9	33.8	178.0	147.2	116.4
49.88	26.2	30.1	34.0	176.7	146.4	116.0
46.16	27.8	31.9	36.0	164.2	138.1	112.0
45.80	28.0	32.1	36.2	163.0	137.4	111.7

Rear counterweight: 140t Central ballast: 40t Radius of suspended ballast: 16m Suspended ballast: 200t Main boom length: 36m Jib length: 12m						
Main boom angle	Radius of hook 1	Turning over	Radius of hook 2	Capacity of hook 1	Turning over	Capacity of hook 2
80.92	9.0	12.1	15.2	420.0	284.4	148.8
79.96	9.6	12.8	16.0	420.0	282.5	145.0
79.29	10.0	13.3	16.5	420.0	281.2	142.3
78.70	10.4	13.7	17.0	420.0	280.0	140.0
77.65	11.0	14.4	17.8	420.0	278.3	136.7
77.44	11.1	14.6	18.0	420.0	278.0	136.0
76.16	11.9	15.5	19.0	420.0	276.0	132.0
76.00	12.0	15.6	19.1	420.0	275.7	131.5
74.87	12.7	16.3	20.0	399.4	263.7	128.0
73.58	13.5	17.2	21.0	375.8	249.9	124.0
72.65	14.0	17.9	21.7	359.0	240.4	121.9
72.27	14.2	18.1	22.0	353.3	237.2	121.0
69.60	15.8	19.9	24.0	314.3	214.7	115.0
69.23	16.0	20.1	24.3	309.0	211.6	114.2
66.87	17.4	21.7	26.0	283.3	196.1	109.0
65.72	18.0	22.4	26.8	271.0	189.0	106.9
64.06	18.9	23.5	28.0	256.6	180.3	104.0
62.10	20.0	24.7	29.4	240.0	170.6	101.3
61.16	20.5	25.3	30.0	233.3	166.7	100.0
58.34	22.0	26.9	31.9	214.0	155.4	96.7
58.14	22.1	27.1	32.0	212.9	154.7	96.5
54.99	23.7	28.9	34.0	196.0	144.5	93.0
54.41	24.0	29.2	34.4	193.0	142.7	92.4
51.68	25.3	30.7	36.0	182.4	136.1	89.8
50.25	26.0	31.4	36.8	177.0	132.8	88.6
48.16	27.0	32.5	38.0	169.8	128.4	87.0
45.80	28.0	33.6	39.3	162.0	123.7	85.4
44.36	28.6	34.3	40.0	158.0	121.3	84.5