液压式履带起重机

HYDRAULIC CRAWLER CRANE

FCC80B

辽宁抚挖重工机械股份有限公司
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目录 Content

安全装置

力矩限制器

限制器对起重机作业进行实时监控,在各种工况下,通过按键设置工况参数。
当实际载重量小于额定起重量的90%时,力矩限制器主机上绿色指示灯和外载荷绿色指示灯同时亮,当实际载重量大于额定起重量的90%小于额定起重量的100%时,力矩限制器主机上蜂鸣器(断续音)鸣起、警报黄灯和外载荷黄色指示灯同时亮。当实际载重量等于或大于额定起重量的100%小于额定起重量的105%时,力矩限制器主机上蜂鸣器断续音变成连续音,并且警报红灯和外载荷红色指示灯同时亮,同时,起升及起重臂增大工作半径的操作自动停止。
当起重臂起升到上限位78° 时,力矩限制器发出信号,此信号通过继电器控制主臂上升,电磁阀切断油路后,起重臂起升操作自动停止。

起重钩限位装置

当起重钩提升到一定高度时,将重锤托起,则微动开关由弹簧复位,开关接点断开。
控制继电器动作使闪光蜂鸣器报警,同时,控制主钩或副钩上升的电磁阀通电,电磁阀所控油路被切断,继而操纵阀的出口油路被切断,这样起重钩提升动作自动停止。从而防止起重钩超限位现象的出现。

起重臂限位装置

起重臂上限限位控制有两种方式

a.限位开关控制

当起重臂仰角小于78° 时,安装在起重臂根部的限位开关接通。此时,起重臂的变幅动作正常。
当起重臂仰角等于78° 时,起重臂根部的限位开关开始动作,使其触点断开,控制继电器动作,闪光蜂鸣器和电磁阀通电,并发出警报。此时,电磁阀使变幅操纵阀的出口油路切断,从而使起重臂处于自动停止状态。

b.力矩限制器控制

当起重机实际吊载重量达到或大于额定起重量的105%,起重臂角度小于30° 时,起重臂增大工作半径的操作,将自动停止。当起重臂仰角等于78° 时,力矩限制器发出闪光蜂鸣报警信号。

防水盒装置

在司机室左侧安装了插头防水盒,用于力矩限制器角度传感器的连接插头和钩过卷限位开关的连接插头、风速仪连接插头防水用。

负载率指示灯

为便于现场人员了解机械载荷情况,采用了与交通信号相同的3色负载率指示灯。同时配备了司机与吊装指挥人员联系用的对讲机。

风速仪

A型架顶部的风速传感器装置用于检测风速,力矩限制器显示风速。

制动器和锁定装置

制动器 本起重机设有主、副卷筒制动器、变幅卷筒制动器,回转制动器。

锁定装置 本起重机设有主、副卷筒棘爪锁定装置、变幅卷筒棘爪锁定装置、回转锁定装置。

水平仪

用于检测机体与水平地面的角度,保证机器工作地面符合要求。

角度盘

主臂架根处设有机械式角度盘,用来显示臂架当前角度。

行走报警

蜂鸣器报警(手动)。

回转报警

蜂鸣器报警(手动)。

Safety Devices

Moment limiter	Safe load indicator monitors and shows all actual parameters under the actual working conditions, such as actual hoist load, boom angle. When the actual load is less than 90% of rated maximum load, the green indicator on moment limiter will light up. When the actual load is between 90% and 100% of rated maximum load, the buzzer on the moment limiter will alarm intermittently and the yellow indicator on the computer screen and working signal light outside the cabin also light up. When the actual load reaches 105% of rated maximum load, the buzzer will alarm continuously; the red indicators on the screen and outside the cabin light up. At the same time, the hoisting of load and the increase of working radius will automatically stop. When the boom rises over 78°,the moment limiter will send this signal to the relays to control the rise of boom. The rise of boom will automatically stop after the solenoid valve cuts off the oil way.
Hook limit device	When the hook lifts up to certain height and touches the plumb, the limit switch shall be disengaged by the reposition spring, and then the switch cuts off the control circuit. The limit device controls the relay action and makes the buzzer alarm. At the same time, it controls the circuit of the solenoid valve which controls the rise of main/aux. hook; the oil way controlled by solenoid valve will be cut off and the oil outlet way of control valve also will be cut off. The rise of the hook will automatically stop. So the hook will not over-hoist the load.
Boom limit device	There are two ways to control the boom upper limit a. Limit switch control when the boom angle is less than 78°,the limit switch at the boom foot stays engaged and the derricking action of boom is available. When the boom angle equals 78°,the limit switch will be disengaged and the control relay makes the buzzer alarm. The solenoid valve cuts off the oil outlet way of the derricking control valve, and then the rise of boom will automatically stop. b. Moment limiter control When the actual load reaches 105% of rated maximum load and the boom angle is less than 30°,the increase of working radius will automatically stop. When the boom angle equal 78°,the buzzer in the moment limiter will alarm.
Waterproof box:	The waterproof box installed on the left side of the cabin is used for preventing the plugs of the angle sensor on the moment limiter, of hook over-hoist limit switch and of the anemometer from water.
The three-color load indicator	The three-color load indicator is installed on the crane in order to let the personnel on site know the load. The driver and the signal personnel are equipped with the interphone for the convenience of contact.
Anemometer	Anemometer- the wind speed sensor on the top of A-frame is used for testing wind speed. The moment limiter will show wind speed.
Brakes and locking devices	Brakes: the crane has main/aux. Winch brakes, derricking brake and slew brake. Locking devices:the crane has main/aux. Winch pawls, derricking winch pawls and slew locking device.
level gauge	The device is used for testing the angle between the crane and the ground. It ensures the ground meets the requirements.
Angle scale	The angle scale installed on the boom foot is used for showing the current boom angle.
Travel alarm device	The manual buzzer alarms.
Slew alarm device	The manual buzzer alarms.

详细说明

上车结构

动力装置

型号 QSL-9进口康明斯电控柴油机

类型 水冷式，直喷，带涡轮增压器。

（中冷）

排量 8.9L

额定功率 209kw/2000rpm

最大扭矩 1356N.m/1500rpm

燃油油箱容量 485L

液压油箱容积 600L

液压系统

本起重机液压件采用德国力士乐和 日本川崎进口配套，液压系统为负荷 传感阀控系统，主泵为双变量泵，主 阀采用阀内合流M7阀，主、副提升马达为日本川崎定量系统，可实现两个 速度区域无极调速。变幅马达为定量 系统，先导系统线性控制，手控性 能好，微动性能强，液压管路排列 整齐，维修方便。

起重用钢丝绳规格

使用部位	钢丝绳规格型号	钢丝绳径	钢丝绳长度m	破断拉力
主提升用	6Fi(29)-φ26-B种	φ26mm	220	46t
副提升用	6Fi(29)-φ26-B种	φ26mm	180	46t
变幅用	6Fi(29)-φ20-C种	φ20mm	170	31t

空钩下放操作

本起重机主、副提升卷扬装置设有常闭式制动器和离合器，二者合理操作配合可大大提高生产效率。工作状况分为两种模式：自动工作模式和自由下放模式。

主、副提升卷扬装置

主、副提升卷扬装置，日本川崎进口配套，设有常闭式带式制动器和离合器，可实现空钩下放操作。
变幅装置是由柱塞马达通过行星减速机驱动。湿式片式常闭制动器。

主、副提升装置

卷筒 节圆直径 φ600mm

最大绳速 70m/min

变幅装置

卷筒 节圆直径 φ440mm

最大绳速 54 m/min

回转系统

马达通过行星减速机带动齿轮驱动，可旋转360°。回转速度3转/分钟（高速）和1.8转/分钟（低速）四个位置止动销锁定。

驾驶室

全封闭式驾驶室，视野开阔。带有空调和暖风机、带后视镜和雨刷器、立体音响等。大屏幕电子监控器和力矩限制器。格拉默全方位可调座椅，干粉灭火器等。

平衡重

有焊接配重和铸造配重两种形式，可任选其一。焊接配重是由三块单配重体组成，而铸造配重是由六块单配重体组成。总重24.6t。

下车结构

底座

采用结构钢板焊接而成，左、右履带架有伸缩功能，增强了底座的稳定性。

支重轮装置

每侧各有10个，所有的支重轮均装有铜套和浮动式密封以及耐磨润滑油。

下机架支撑油缸装置

四个液压顶升油缸连接在下机架的支撑梁上进行伸/缩动作。

履带板

每块履带板的宽度为860mm，每条履带共有52块履带板，通过销轴连接而成。履带板的张紧程度可以通过液压千斤顶进行调节，调节垫片的位置达到理想的张紧度。

履带动力

独立的液压驱动系统嵌入履带架内，每侧液压驱动系统包含了一个液压马达并通过行星减速机带动驱动轮。液压马达和减速机嵌入履带架内，不超出履带宽度。

行走速度

1.3千米/小时。（速度是随载荷的不同而变化）

最大爬坡能力：30%

作业装置

臂架主铉管采用进口高强管，臂架为中间等截面，两端变截面的空间桁架式结构，钢管焊接。连接方式采用销轴连接。

主臂 标准臂从13m－58m。

固定副臂 固定副臂与主臂有两种角度 15°、30°。

主臂和副臂组成 主臂为37m－52m的标准臂，副臂为9m－18m.

吊钩 80吨吊钩 50吨吊钩 25吨吊钩 8吨吊钩

工况符号

The symbols of the working conditions:

主臂工况
Boom

辅助臂工况
Runner

固定副臂工况
Fixed Fly Jib

Specifications

Superstructure

Power device

Model:QSL-9 the diesel engine from Cummins
Type:water-cooled, direct fuel injection with turbocharger actuator
Displacement: 8.9L
Rated power:209kw/2000rpm
Maximum torque:1356N.m/1500rpm
Fuel tank capacity:485L
Hydraulic oil tank capacity:600L

Hydraulic system

Hydraulic elements are imported from German Rexroth and Kawasaki in Japan.Hydraulic system is controlled by load-sensing valve.Main pump is double variable displacement pump.Main valve is M7.Boom hoist motor and jib hoist motor with infinitely variable are imported from Kawasaki in Japan.Fixed displacement motor is used for derricking winch.Pilot system is easy to control.Hydraulic pipes are arranged orderly and easily maintained.

The specification of Wire Rope

Application	Model	Wire Rope diameter	Length (m)	Breaking load
Main winch	6Fi(29)-φ26-B	φ26mm	220	46t
Aux.winch	6Fi(29)-φ26-B	φ26mm	180	46t
Derricking winch	6Fi(29)-φ20-C	φ20mm	170	31t

The often-closed brake and clutch are mounted on main winch and aux. winch. The efficiency will be greatly improved due to free fall of main winch and aux.winch. There are two working modes: automatic work and free fall.

Main winch and aux.winch

The often-closed brake and clutch are mounted on main winch and aux.winch.Hoist motor and reducers are imported from Kawasaki in Japan.Both main winch and aux.winch can perform free fall operation. Derricking winch is powered by plunger motor through planetary reducer.A wet-disc and often-closed brake is mounted on the derricking motor.

Main winch and aux.winch

Drum:the diameter is φ600mm

Maximum rope speed 70m/min

Derricking Winch

Drum:the diameter is φ440mm Maximum rope speed: 54 m/min

Slew System

The motor is driven by the reduction gear.through the planetary reducer
The crane can be turned by 360° .
Speed: 3r/m (high speed) and1.8r/min(low speed)
The four pins at different positions are locked.

The Cabin

The fully close cabin has large front view. The cabin has rear view mirror, wip air-conditioner and stereo. The cabin also has the monitor with large screen er, and moment limiter. The seat can be adjusted. There is a fire extinguisher in the cabin.

Counterweight

The counterweight has two kinds: welded counterweight and forged counterweight. The welded counterweight includes three blocks while the forged counterweight includes six blocks The total weight: 24.6t

Undercarriage

Lower frame

The lower frame consists of structure steel plate. The left and right crawlers have the function of extension and retraction and it increases the stability of the lower frame.

The track roller

Every side has 10 track rollers:All track rollers are equipped with bushings, seals and lubricating oil.

Jack-up cylinders

The four jack-up cylinders are connected with the support beams on the lower frame for extension and retraction action

The crawler

The width of every track shoe is 860mm.The crawler chain includes 52 track shoes. The tension state of track shoe can be adjusted by the hydraulic jack until the adjusting plate has the ideal position.

The crawler drive

The independent hydraulic driving system is within the crawler frame. Every hydraulic driving system has a hydraulic motor. The hydraulic motor and reduction gear in the crawler frame can not exceed the width of the track shoe.

Travel speed

1.3km/h,(The speed will vary with the different load)

Grade ability 30%

Working Equipments

The main steel pipe with high strength is imported. The lattice boom consists of steel pipes which are welded together. The boom sections are connected by the pins.

Boom

The standard boom is 13m-58m.

Fixed Jib

The fixed jib has two angles with the boom:15°,30°.

Boom and jib combinations

the standard boom is 37m-52m, the fixed jib is 9m-18m.

Hook blocks

80t Hook 50t Hook 25t Hook 8t Hook

臂杆组合 Boom Combination

主臂工况

最大起重量：80吨x4米
最大臂杆长度：58米

Boom

Max. Rated load:
80tx4m
Max. Boom length:
58m

主臂 Boom
13m-58m

辅助臂工况

最大起重量：8吨x22米
最大臂杆长度：58米

Runner

Max. Rated load:
8tx22m
Max. Boom length:
58m

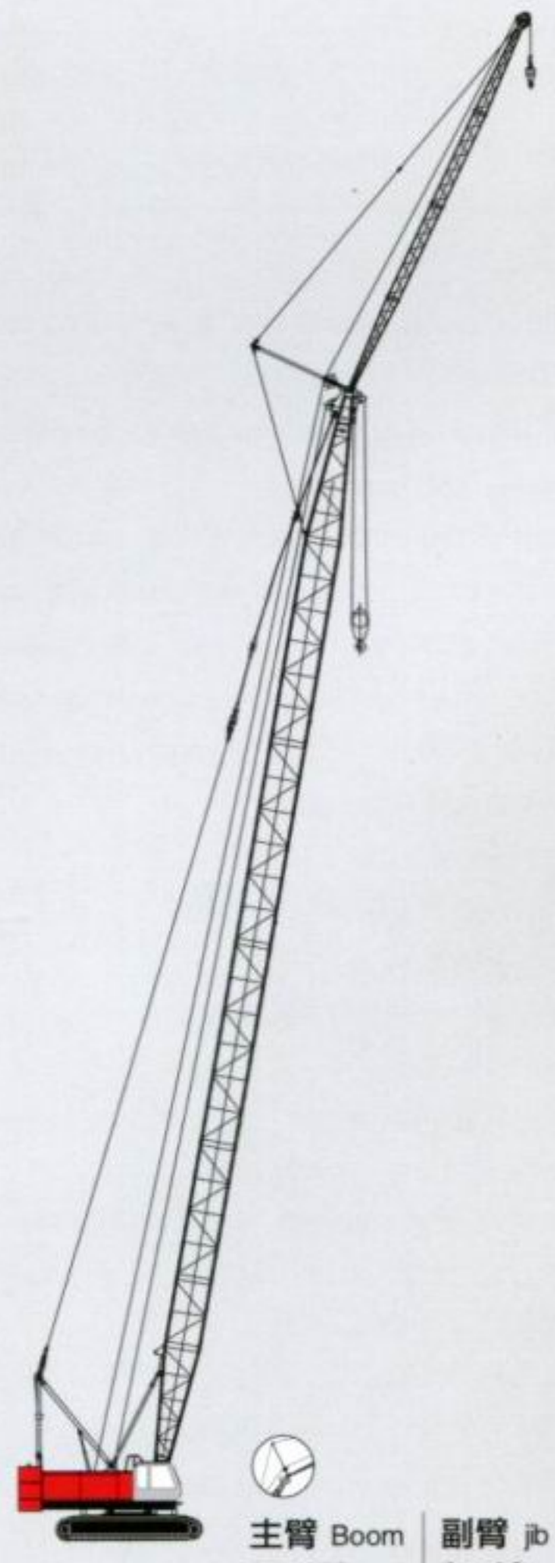
主臂 Boom
13m-58m

固定副臂工况

最大起重量：8吨x21.2米
最大组合：49米＋18米

Fixed Jib

Max. Rated load:
8tx21.2m
Max. Combination:
49m+18m



主臂 Boom
37m-52m

副臂 jib
9m-18m

主要技术参数

Technical Data

项　目			单 位	数 值
最大额定起重量			t	80
主臂长度			m	13—58
副臂长度			m	9—18
主臂＋副臂的最大长度			m	49＋18
起重臂变幅角度			°	30—80
吊钩配置			t	80/50/25/8
工作速度	钢绳速度	提升	m/min	※高速70 低速35
		下降	m/min	※高速70 低速35
		起重臂上升	m/min	※54
		起重臂下降	m/min	54
	回转速度		r/min	高速3 低速1.8
	行走速度		km/h	※1.3
主提升倍率		10	单绳拉力	8t
爬坡能力（带基本臂，司机室置于后方）			%	30
柴油机额定输出功率/转速			KW/rpm	美国康明斯QSL-9 209/2000
整机质量（带基本臂）			t	80.6
接地比压（带基本臂）			Mpa	0.0804
接地比压（带最长主臂）				0.0864
接地比压（带最长主臂+副臂）				0.0863
配重质量			t	24.6

注：带※速度是随载荷的不同而变化。

Descriptions			Unit	Value
Max. rated lifting capacity			t	80
Boom length			m	13—58
Jib length			m	9—18
Max. length of boom plus jib			m	49＋18
Boom angle			°	30—80
Hook blocks			t	80/50/25/8
Working speed	Line Speed	Hoist	m/min	※High 70 Low 35
		Lower	m/min	※High 70 Low 35
		Boom rise	m/min	※54
		Boom lower	m/min	54
	Swing		r/min	High3 Low 1.8
	Travel		km/h	※1.3
Boom hoist reeving		10	Single line pull	8t
Gradeability (with basic boom and cab in the rear)			%	30
Power output/rotating speed of the diesel engine			KW/rpm	Cummins QSL-9 209/2000
Mass of the crane (with basic boom)			t	80.6
Ground pressure	(with basic boom)		Mpa	0.0804
	(with max. main boom)			0.0864
	(with max. length of boom plus jib)			0.0863
Counterweight			t	24.6

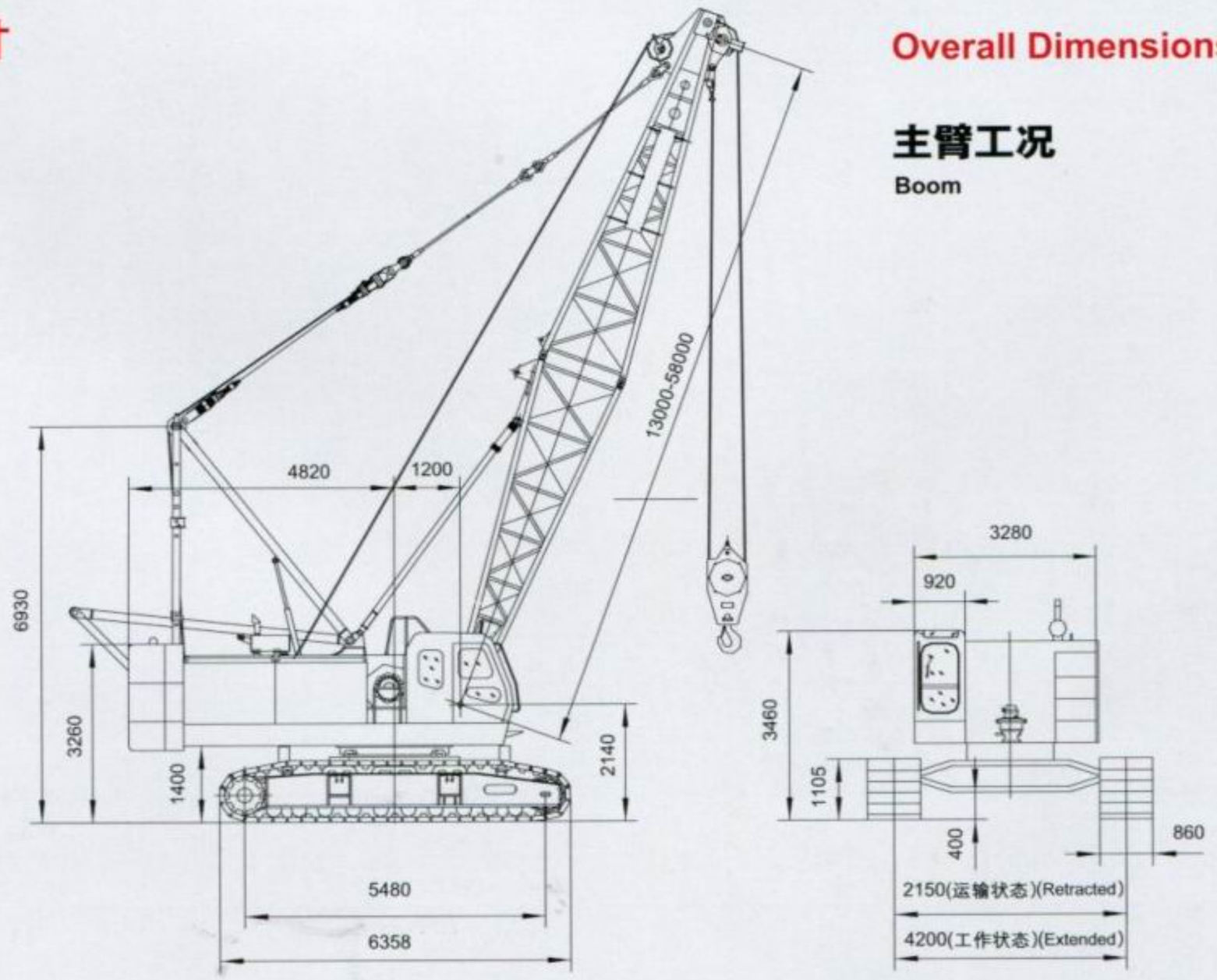
Note: Speed with *may vary with the different load.

总体尺寸

Overall Dimensions

主臂工况

Boom

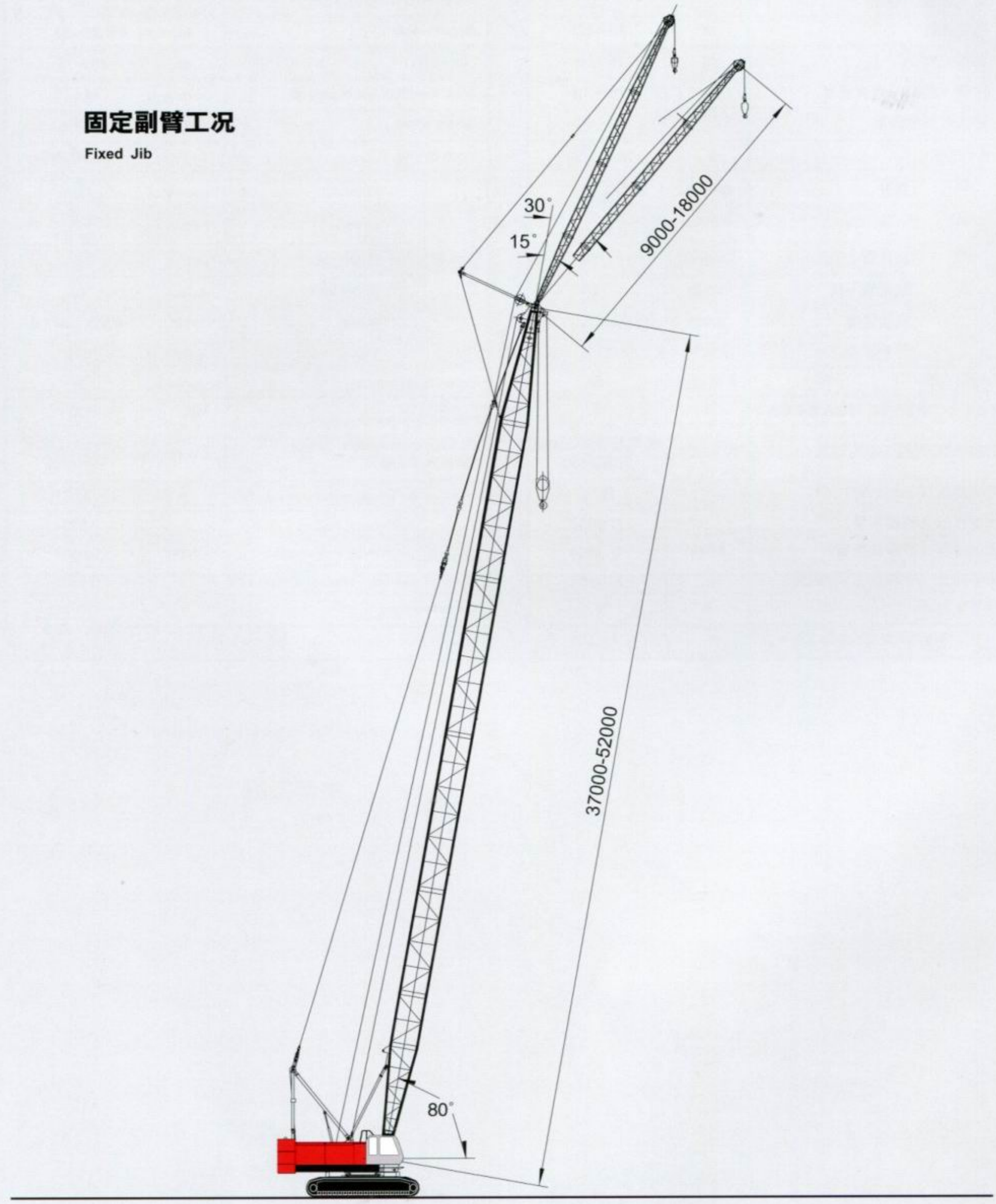


总体尺寸

Overall Dimensions

固定副臂工况

Fixed Jib



主臂和副臂组合

Boom and Fixed Jib Combinations

主臂工况臂节组合

Boom Combination

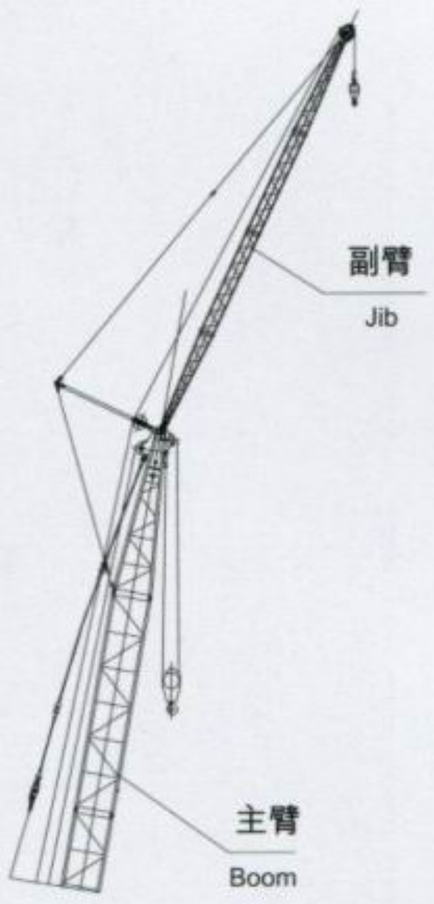
13m	B BT
16m	B 3 BT
19m	B 6 BT
22m	B 9 BT
25m	B 3 9 BT
28m	B 6 9 BT
31m	B 9 9 BT
34m	B 3 9 9 BT
37m	B 6 9 9 BT
40m	B 9 9 9 BT
43m	B 3 9 9 9 BT
46m	B 6 9 9 9 BT
49m	B 9 9 9 9 BT
52m	B 3 9 9 9 9 BT
55m	B 6 9 9 9 9 BT
58m	B 3 6 9 9 9 BT

注解

符号	臂杆长度	备注
B	6.5米	6.5米下臂节
BT	6.5米	6.5米上臂节
3	3 米	3米中间臂节
6	6 米	6米中间臂节
9	9 米	9米中间臂节

Note

Symbol	Boom length	Remarks
B	6.5m	6.5m boom foot
BT	6.5m	6.5m boom top
3	3 m	3m boom insert
6	6 m	6m boom insert
9	9 m	9m boom insert



固定副臂工况臂节组合

主臂长度	副臂长度	副臂组合
37米-52米	9米	B BT
	13.5米	B 4.5 BT
	18米	B 4.5 4.5 BT

注解

符号	副臂长度	备注
B	4.5米	4.5米下臂节
BT	4.5米	4.5米上臂节
4.5	4.5米	4.5米中间臂节

Fixed Jib Combination

Boom Length	Jib Length	Jib Combination
37m-52m	9m	B BT
	13.5m	B 4.5 BT
	18m	B 4.5 4.5 BT

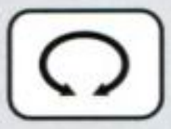
Note

Symbol	Jib length	Remarks
B	4.5m	4.5m jib foot
BT	4.5m	4.5m jib top
4.5	4.5m	4.5m jib insert

主臂工况载荷表

Load Chart (Boom)

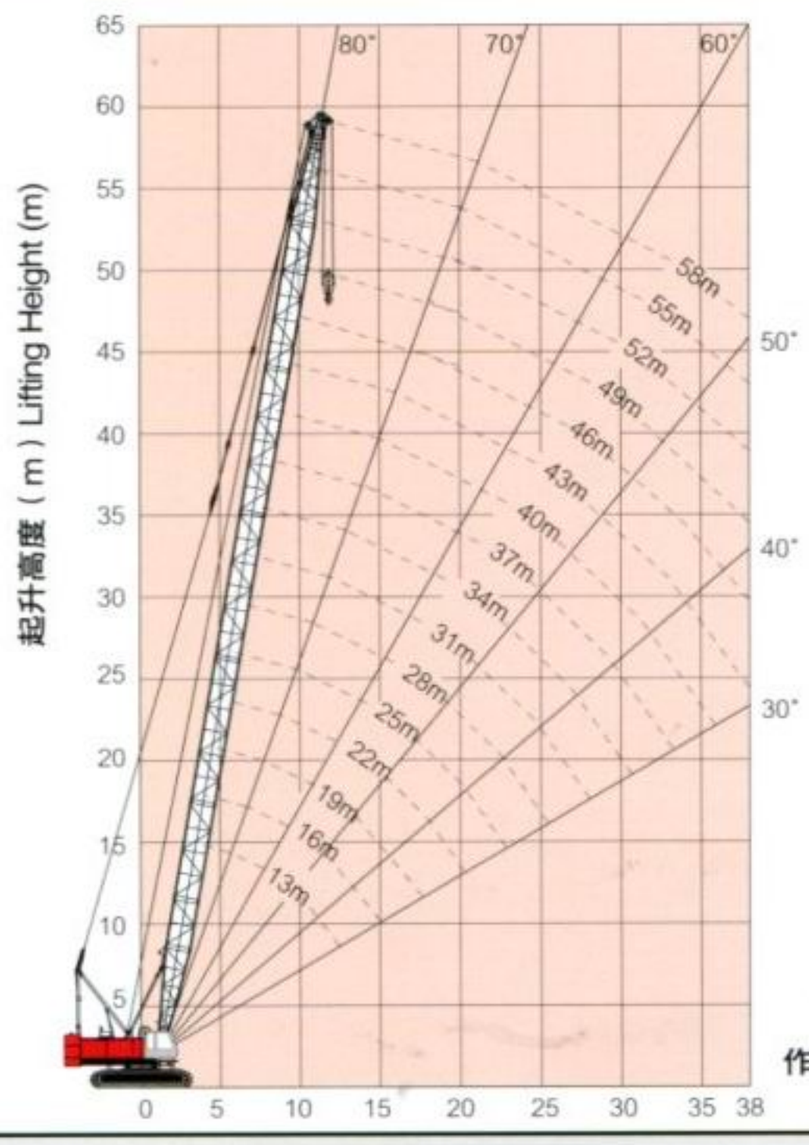
13m-58m



360°

24.6t

Boom length 臂长(m) / 作业半径(m) Working Radius	13	19	25	31	37	43	49	55	58	Boom length 臂长(m) / 作业半径(m) Working Radius
4.0	80.00									4.0
4.5	75.11	(5.15m)								4.5
5.0	65.47	61.92								5.0
5.5	55.98	55.69	(6.40m)							5.5
6.0	47.72	47.51	47.31							6.0
6.5	42.72	42.50	42.28							6.5
7.0	38.18	37.95	37.73	(7.65m)						7.0
7.5	34.49	34.26	34.03	32.89						7.5
8.0	31.44	31.20	30.97	30.80	(8.89m)					8.0
8.5	28.87	28.63	28.40	28.22	26.23					8.5
9.0	26.68	26.44	26.20	26.02	25.78	(10.14m)				9.0
10.0	23.13	22.89	22.64	22.46	22.21	21.54	(11.38m)			10.0
11.0	20.39	20.14	19.90	19.71	19.46	19.21	18.13	(12.64m)		11.0
12.0	18.21	17.96	17.71	17.52	17.26	17.01	16.82	15.38	(13.26m)	12.0
13.0	16.43	16.18	15.92	15.73	15.47	15.22	15.03	14.77	14.20	13.0
14.0	(12.46m)	14.69	14.44	14.25	13.99	13.73	13.54	13.28	13.12	14.0
15.0		13.25	12.99	12.80	12.54	12.29	12.10	11.84	11.68	15.0
16.0		12.19	11.90	11.75	11.49	11.23	11.04	10.78	10.62	16.0
18.0		10.75	10.23	10.04	9.78	9.52	9.32	9.06	8.90	18.0
20,0		(17.65m)	8.77	8.58	8.32	8.06	7.87	7.60	7.45	20,0
22.0			7.73	7.54	7.27	7.02	6.83	6.56	6.40	22.0
24.0			7.35	6.68	6.42	6.16	5.97	5.71	5.55	24.0
26.0			(22.85m)	5.79	5.54	5.28	5.10	4.84	4.68	26.0
28.0				5.21	4.96	4.70	4.51	4.26	4.10	28.0
30.0					4.46	4.20	4.02	3.76	3.60	30.0
32.0					3.84	3.59	3.41	3.17	3.02	32.0
34.0					3.61	3.23	3.05	2.81	2.66	34.0
36.0					(33.24m)	2,82	2.65	2.41	2.26	36.0
38.0						2.55	2.37	2.14	1.99	38.0



主臂
工况作业范围
Working Range
(Boom)

辅助臂工况载荷表

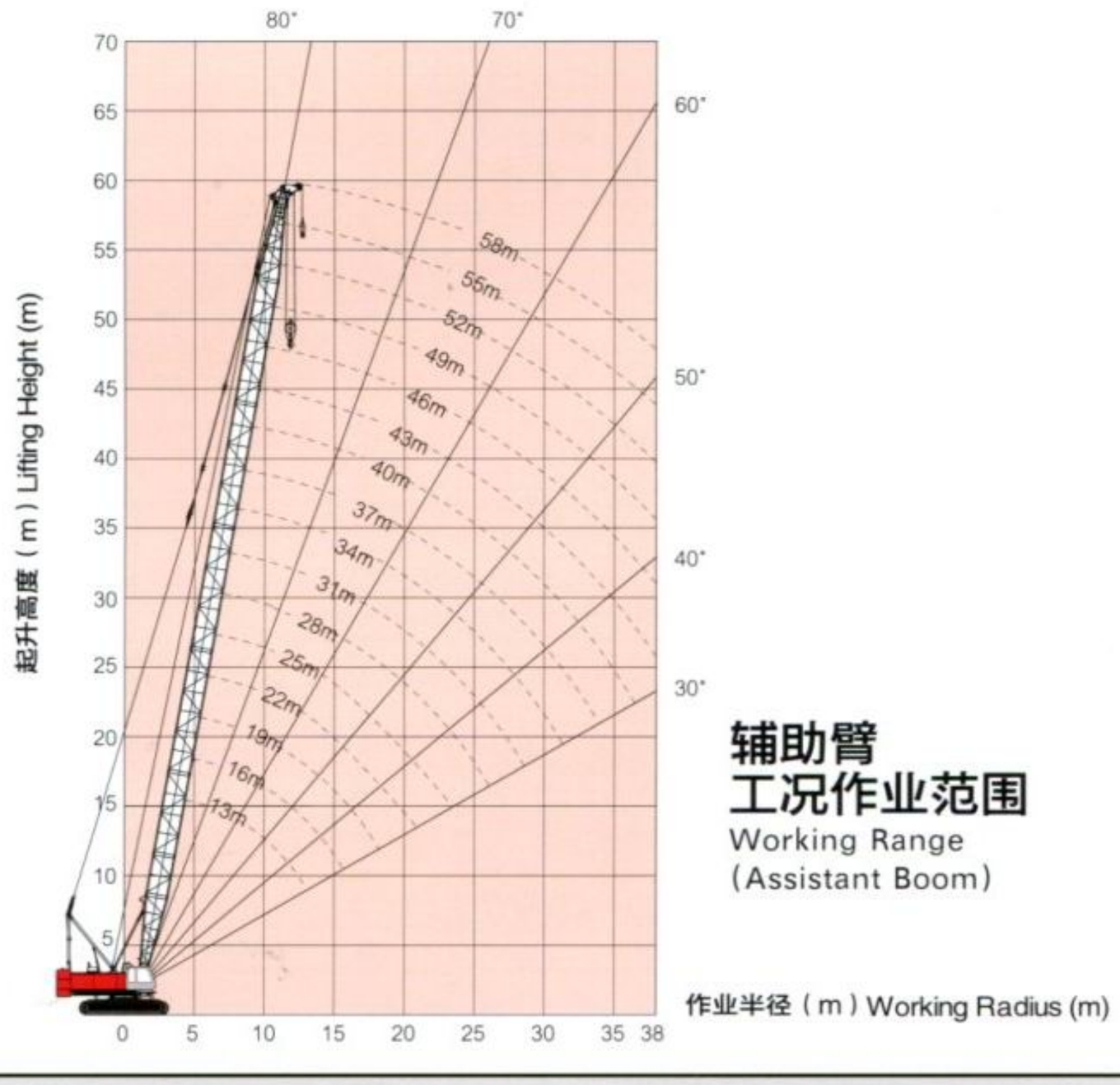
Load Chart (Assistant Boom)

13m-58m

360°

24.6t

Boom length 臂长(m) / 作业半径(m) Working Radius	13	19	25	31	37	43	49	55	58	Boom length 臂长(m) / 作业半径(m) Working Radius
4.0	8.00									4.0
4.5	8.00	(5.15m)								4.5
5.0	8.00	8.00								5.0
5.5	8.00	8.00	(6.40m)							5.5
6.0	8.00	8.00	8.00							6.0
6.5	8.00	8.00	8.00							6.5
7.0	8.00	8.00	8.00	(7.65m)						7.0
7.5	8.00	8.00	8.00	8.00						7.5
8.0	8.00	8.00	8.00	8.00	(8.89m)					8.0
8.5	8.00	8.00	8.00	8.00	8.00					8.5
9.0	8.00	8.00	8.00	8.00	8.00	(10.14m)				9.0
10.0	8.00	8.00	8.00	8.00	8.00	8.00	(11.38m)			10.0
11.0	8.00	8.00	8.00	8.00	8.00	8.00	8.00	(12.64m)		11.0
12.0	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	(13.26m)	12.0
13.0	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	13.0
14.0	(12.46m)	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	14.0
15.0		8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	15.0
16.0		8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	16.0
18.0		8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	18.0
20.0		(17.65m)	8.00	8.00	8.00	8.00	8.00	8.00	8.00	20.0
22.0			8.00	8.00	8.00	7.90	7.67	7.36	7.17	22.0
24.0			8.00	7.59	7.25	6.93	6.70	6.39	6.20	24.0
26.0			(22.85m)	6.79	6.45	6.12	5.89	5.57	5.38	26.0
28.0				6.11	5.76	5.43	5.20	4.88	4.68	28.0
30.0					5.17	4.84	4.60	4.28	4.09	30.0
32.0					4.66	4.32	4.08	3.76	3.57	32.0
34.0					4.37	3.87	3.63	3.31	3.11	34.0
36.0					(33.24m)	3.47	3.23	2.90	2.70	36.0
38.0						3.11	2.87	2.54	2.34	38.0



固定副臂工况载荷表

Load Chart (Fixed jib)

37m-52m

15° ,30°
9m-18m

360°

24.6t

m 主臂长 Boom Length		37m									
副臂长 Jib Length	9.0m			13.5m				18.0			
作业半径 Working Radius / Jib Angle 副臂夹角	15°	作业半径 Working Radius / Jib Angle 副臂夹角	30°	作业半径 Working Radius / Jib Angle 副臂夹角	15°	作业半径 Working Radius / Jib Angle 副臂夹角	30°	作业半径 Working Radius / Jib Angle 副臂夹角	15°	作业半径 Working Radius / Jib Angle 副臂夹角	30°
13.0	8.00	14.90	5.50	15.00	7.00	17.90	4.00	17.10	5.00	20.90	3.20
13.7	8.00	15.70	5.50	15.90	7.00	18.70	4.00	18.00	5.00	21.80	3.20
14.5	8.00	16.40	5.50	16.70	7.00	19.50	4.00	18.90	5.00	22.70	3.20
15.3	8.00	17.10	5.50	17.50	7.00	20.30	4.00	19.80	5.00	23.50	3.20
16.0	8.00	17.90	5.50	18.40	7.00	21.10	4.00	20.70	5.00	24.30	3.20
16.8	8.00	18.60	5.50	19.20	7.00	21.90	4.00	21.60	5.00	25.20	3.20
17.5	8.00	19.30	5.50	20.00	7.00	22.70	4.00	22.40	5.00	26.00	3.20
18.3	8.00	20.00	5.50	20.80	7.00	23.40	4.00	23.30	5.00	26.80	3.20
19.0	8.00	20.70	5.50	21.60	7.00	24.20	4.00	24.20	5.00	27.60	3.20
19.7	8.00	21.50	5.50	22.40	7.00	25.00	4.00	25.00	5.00	28.40	3.20
20.5	8.00	22.20	5.50	23.20	7.00	25.70	4.00	25.90	5.00	29.20	3.20
21.2	8.00	22.80	5.50	24.00	6.93	26.40	4.00	26.70	5.00	30.00	3.20
21.9	7.66	23.50	5.50	24.70	6.61	27.20	4.00	27.60	5.00	30.80	3.20
22.6	7.32	24.20	5.50	25.50	6.32	27.90	4.00	28.40	5.00	31.60	3.20
23.3	7.00	24.90	5.50	26.30	6.05	28.60	4.00	29.20	5.00	32.30	3.20
24.0	6.70	25.50	5.50	27.00	5.80	29.30	4.00	30.00	5.00	33.10	3.20
24.7	6.43	26.20	5.50	27.80	5.57	30.00	4.00	30.80	4.88	33.80	3.20
25.4	6.17	26.90	5.50	28.50	5.35	30.70	4.00	31.60	4.69	34.60	3.20
26.1	5.93	27.50	5.50	29.20	5.14	31.40	4.00	32.40	4.51	35.30	3.20
26.7	5.71	28.10	5.39	30.00	4.95	32.10	4.00	33.20	4.34	36.00	3.20
27.4	5.50	28.80	5.21	30.70	4.77	32.70	4.00	34.00	4.19	36.70	3.20

37m-52m

15° ,30°
9m-18m

360°

24.6t

m 主臂长 Boom Length		40m									
副臂长 Jib Length	9.0m			13.5m				18.0			
作业半径 Working Radius / Jib Angle 副臂夹角	15°	作业半径 Working Radius / Jib Angle 副臂夹角	30°	作业半径 Working Radius / Jib Angle 副臂夹角	15°	作业半径 Working Radius / Jib Angle 副臂夹角	30°	作业半径 Working Radius / Jib Angle 副臂夹角	15°	作业半径 Working Radius / Jib Angle 副臂夹角	30°
13.6	8.00	15.50	5.50	15.60	7.00	18.50	4.00	17.70	5.00	21.60	3.20
14.4	8.00	16.30	5.50	16.50	7.00	19.40	4.00	18.60	5.00	22.50	3.20
15.2	8.00	17.10	5.50	17.40	7.00	20.30	4.00	19.60	5.00	23.40	3.20
16.1	8.00	17.90	5.50	18.30	7.00	21.10	4.00	20.60	5.00	24.30	3.20
16.9	8.00	18.70	5.50	19.20	7.00	21.90	4.00	21.50	5.00	25.20	3.20
17.7	8.00	19.50	5.50	20.00	7.00	22.80	4.00	22.40	5.00	26.10	3.20
18.5	8.00	20.20	5.50	20.90	7.00	23.60	4.00	23.40	5.00	26.90	3.20
19.3	3.00	21.00	5.50	21.80	7.00	24.40	4.00	24.30	5.00	27.80	3.20
20.0	8.00	21.80	5.50	22.60	7.00	25.20	4.00	25.20	5.00	28.70	3.20
20.8	8.00	22.50	5.50	23.50	7.00	26.00	4.00	26.10	5.00	29.50	3.20
21.6	7.73	23.30	5.50	24.30	6.69	26.80	4.00	27.00	5.00	30.40	3.20
22.4	7.34	24.00	5.50	25.10	6.37	27.60	4.00	27.90	5.00	31.20	3.20
23.1	6.99	24.80	5.50	26.00	6.06	28.40	4.00	28.80	5.00	32.00	3.20
23.9	6.66	25.50	5.50	26.80	5.79	29.20	4.00	29.70	5.00	32.80	3.20
24.6	6.36	26.20	5.50	27.60	5.53	29.90	4.00	30.50	4.86	33.70	3.20
25.4	6.08	26.90	5.50	28.40	5.29	30.70	4.00	31.40	4.65	34.50	3.20
26.1	5.82	27.60	5.47	29.20	5.06	31.40	4.00	32.30	4.46	35.20	3.20
26.8	5.57	28.30	5.25	30.00	4.85	32.20	4.00	33.10	4.27	36.00	3.20
27.6	5.35	29.00	5.05	30.70	4.66	32.90	4.00	33.90	4.10	36.80	3.20
28.3	5.13	29.70	4.87	31.50	4.48	33.60	4.00	34.70	3.94	37.50	3.20
29.0	4.94	30.30	4.69	32.30	4.30	34.30	4.00	35.60	3.79	38.30	3.20

固定副臂工况载荷表

Load Chart (Fixed jib)

37m-52m

15° ,30°
9m-18m

360°

24.6t

m	主臂长 Boom Length				43.0m							
	副臂长 Jib Length	9.0m			13.5m				18.0m			
作业半径 Working Radius	Jib Angle 副臂夹角	15°	作业半径 Working Radius	Jib Angle 副臂夹角	30°	作业半径 Working Radius	Jib Angle 副臂夹角	15°	作业半径 Working Radius	Jib Angle 副臂夹角	15°	作业半径 Working Radius	Jib Angle 副臂夹角	30°
14.2		8.00	16.20		5.50	16.30		7.00	19.20		4.00	18.30		5.00	22.20		3.20
15.1		8.00	17.00		5.50	17.20		7.00	20.10		4.00	19.30		5.00	23.10		3.20
16.0		8.00	17.90		5.50	18.10		7.00	21.00		4.00	20.30		5.00	24.10		3.20
16.8		8.00	18.70		5.50	19.10		7.00	21.90		4.00	21.30		5.00	25.10		3.20
17.7		8.00	19.50		5.50	20.00		7.00	22.80		4.00	22.30		5.00	26.00		3.20
18.5		8.00	20.40		5.50	20.90		7.00	23.60		4.00	23.30		5.00	26.90		3.20
19.4		8.00	21.20		5.50	21.80		7.00	24.50		4.00	24.30		5.00	27.90		3.20
20.2		8.00	22.00		5.50	22.70		7.00	25.40		4.00	25.30		5.00	28.80		3.20
21.1		7.87	22.80		5.50	23.70		6.83	26.20		4.00	26.20		5.00	29.70		3.20
21.9		7.43	23.60		5.50	24.50		6.46	27.10		4.00	27.20		5.00	30.60		3.20
22.7		7.03	24.40		5.50	25.40		6.12	27.90		4.00	28.10		5.00	31.50		3.20
23.5		6.66	25.20		5.50	26.30		5.80	28.80		4.00	29.10		5.00	32.40		3.20
24.4		6.32	26.00		5.50	27.20		5.51	29.60		4.00	30.00		4.86	33.30		3.20
25.2		6.01	26.70		5.50	28.10		5.25	30.40		4.00	30.90		4.63	34.10		3.20
26.0		5.72	27.50		5.36	28.90		5.00	31.20		4.00	31.90		4.41	35.00		3.20
26.7		5.45	28.30		5.13	29.80		4.77	32.00		4.00	32.80		4.21	35.80		3.20
27.5		5.21	29.00		4.91	30.60		4.55	32.80		4.00	33.70		4.02	36.70		3.20
28.3		4.97	29.80		4.70	31.40		4.35	33.60		4.00	34.60		3.84	37.50		3.20
29.1		4.76	30.50		4.51	32.20		4.16	34.40		3.87	35.40		3.67	38.30		3.20
29.8		4.56	31.20		4.33	33.10		3.99	35.20		3.72	36.30		3.52	39.10		3.20
30.6		4.37	31.90		4.16	33.90		3.82	35.90		3.58	37.20		3.37	39.90		3.11

37m-52m

15° ,30°
9m-18m

360°

24.6t

m	主臂长 Boom Length				46.0m							
	副臂长 Jib Length	9.0m			13.5m				18.0m			
作业半径 Working Radius	Jib Angle 副臂夹角	15°	作业半径 Working Radius	Jib Angle 副臂夹角	30°	作业半径 Working Radius	Jib Angle 副臂夹角	15°	作业半径 Working Radius	Jib Angle 副臂夹角	15°	作业半径 Working Radius	Jib Angle 副臂夹角	30°
14.8		8.00	16.80		5.50	16.90		7.00	19.80		4.00	18.90		5.00	22.80		3.20
15.8		8.00	17.70		5.50	17.90		7.00	20.80		4.00	20.00		5.00	23.80		3.20
16.7		8.00	18.60		5.50	18.90		7.00	21.70		4.00	21.10		5.00	24.80		3.20
17.6		8.00	19.50		5.50	19.90		7.00	22.70		4.00	22.10		5.00	25.80		3.20
18.5		8.00	20.40		5.50	20.80		7.00	23.60		4.00	23.20		5.00	26.80		3.20
19.4		8.00	21.20		5.50	21.80		7.00	24.50		4.00	24.20		5.00	27.80		3.20
20.3		8.00	22.10		5.50	22.80		7.00	25.40		4.00	25.20		5.00	28.80		3.20
21.2		7.70	23.00		5.50	23.70		6.71	26.40		4.00	26.20		5.00	29.80		3.20
22.1		7.24	23.80		5.50	24.70		6.32	27.30		4.00	27.30		5.00	30.70		3.20
23.0		6.82	24.70		5.50	25.60		5.96	28.20		4.00	28.30		5.00	31.70		3.20
23.8		6.43	25.50		5.50	26.60		5.63	29.10		4.00	29.30		4.97	32.60		3.20
24.7		6.08	26.40		5.50	27.50		5.32	30.00		4.00	30.30		4.71	33.50		3.20
25.6		5.76	27.20		5.38	28.40		5.05	30.80		4.00	31.20		4.46	34.50		3.20
26.4		5.46	28.00		5.12	29.30		4.79	31.70		4.00	32.20		4.24	35.40		3.20
27.3		5.19	28.80		4.88	30.20		4.55	32.60		4.00	33.20		4.03	36.30		3.20
28.1		4.93	29.60		4.65	31.10		4.33	33.40		4.00	34.10		3.83	37.20		3.20
28.9		4.70	30.40		4.44	32.00		4.12	34.20		3.82	35.10		3.65	38.10		3.20
29.8		4.48	31.20		4.24	32.90		3.93	35.10		3.65	36.00		3.47	38.90		3.18
30.6		4.27	32.00		4.06	33.70		3.75	35.90		3.50	36.90		3.31	39.80		3.04
31.4		4.08	32.80		3.88	34.60		3.58	36.70		3.35	37.80		3.16	40.60		2.92
32.2		3.90	33.50		3.72	35.40		3.42	37.50		3.21	38.70		3.02	41.50		2.80

固定副臂工况载荷表

Load Chart (Fixed jib)

37m-52m

15° ,30°
9m-18m

360°

24.6t

m	主臂长 Boom Length	49.0m									
	副臂长 Jib Length	9.0m		13.5m				18.0			
作业半径 Working Radius / 副臂夹角 Jib Angle	15°	作业半径 Working Radius / 副臂夹角 Jib Angle	30°	作业半径 Working Radius / 副臂夹角 Jib Angle	15°	作业半径 Working Radius / 副臂夹角 Jib Angle	30°	作业半径 Working Radius / 副臂夹角 Jib Angle	15°	作业半径 Working Radius / 副臂夹角 Jib Angle	30°
15.5	8.00	17.40	5.50	17.50	7.00	20.40	4.00	19.60	5.00	23.40	3.20
16.4	8.00	18.40	5.50	18.60	7.00	21.40	4.00	20.70	5.00	24.50	3.20
17.4	8.00	19.30	5.50	19.60	7.00	22.40	4.00	21.80	5.00	25.60	3.20
18.4	8.00	20.20	5.50	20.60	7.00	23.40	4.00	22.90	5.00	26.60	3.20
19.3	8.00	21.20	5.50	21.70	7.00	24.40	4.00	24.00	5.00	27.70	3.20
20.3	8.00	22.10	5.50	22.70	7.00	25.40	4.00	25.10	5.00	28.70	3.20
21.2	7.59	23.00	5.50	23.70	6.63	26.40	4.00	26.10	5.00	29.70	3.20
22.2	7.10	23.90	5.50	24.70	6.21	27.30	4.00	27.20	5.00	30.70	3.20
23.1	6.66	24.90	5.50	25.70	5.83	28.30	4.00	28.30	5.00	31.70	3.20
24.1	6.25	25.80	5.50	26.70	5.49	29.30	4.00	29.30	4.86	32.70	3.20
25.0	5.89	26.60	5.47	27.70	5.17	30.20	4.00	30.40	4.58	33.70	3.20
25.9	5.55	27.50	5.18	28.70	4.88	31.10	4.00	31.40	4.33	34.70	3.20
26.8	5.24	28.40	4.91	29.60	4.61	32.10	4.00	32.50	4.09	35.70	3.20
27.7	4.96	29.30	4.66	30.60	4.36	33.00	4.00	33.50	3.87	36.70	3.20
28.6	4.70	30.10	4.43	31.50	4.13	33.90	3.81	34.50	3.66	37.60	3.20
29.5	4.45	31.00	4.21	32.50	3.92	34.80	3.63	35.50	3.47	38.50	3.16
30.3	4.23	31.80	4.01	33.40	3.72	35.70	3.46	36.50	3.30	39.50	3.01
31.2	4.02	32.70	3.82	34.30	3.54	36.50	3.30	37.50	3.13	40.40	2.87
32.1	3.82	33.50	3.64	35.20	3.36	37.40	3.15	38.40	2.98	41.30	2.74
32.9	3.64	34.30	3.47	36.10	3.20	38.20	3.00	39.40	2.83	42.20	2.62
33.7	3.47	35.10	3.32	37.00	3.05	39.10	2.87	40.30	2.69	43.10	2.50

37m-52m

15° ,30°
9m-18m

360°

24.6t

m	主臂长 Boom Length	52.0m									
	副臂长 Jib Length	9.0m		13.5m				18.0			
作业半径 Working Radius / 副臂夹角 Jib Angle	15°	作业半径 Working Radius / 副臂夹角 Jib Angle	30°	作业半径 Working Radius / 副臂夹角 Jib Angle	15°	作业半径 Working Radius / 副臂夹角 Jib Angle	30°	作业半径 Working Radius / 副臂夹角 Jib Angle	15°	作业半径 Working Radius / 副臂夹角 Jib Angle	30°
				18.10	7.00	21.00	4.00				
				19.20	7.00	22.10	4.00				
				20.30	7.00	23.20	4.00				
				21.40	7.00	24.20	4.00				
				22.50	7.00	25.20	4.00				
				23.60	6.56	26.30	4.00				
				24.60	6.11	27.30	4.00				
				25.70	5.71	28.30	4.00				
				26.70	5.34	29.30	4.00				
				27.80	5.00	30.30	4.00				
				28.80	4.70	31.30	4.00				
				29.80	4.42	32.30	4.00				
				30.80	4.16	33.30	3.82				
				31.90	3.92	34.20	3.61				
				32.90	3.69	35.20	3.42				
				33.80	3.49	36.10	3.24				
				34.80	3.30	37.10	3.07				
				35.80	3.12	38.00	2.91				
				36.70	2.95	38.90	2.77				
				37.70	2.79	39.80	2.63				
				38.60	2.65	40.70	2.49				

载荷表说明

Notes for Load Chart

说明

1.本起重机符合GB3811标准，同时又满足 ISO 4302、ISO 4305标准。

2.载荷表所表示的额定总载荷值为水平坚硬地面上，理想作业条件的最大允许值。

3.载荷表所示的值以吨为单位，并基于倾翻力矩75%以内的值。

4.载荷表所示的值基于平衡负载而计算，不包括如突然停止的冲击负载，地表状况，风力负荷及操作速度等影响。如在此条件下，驾驶员必须进行减载作业。同时，载荷表中的值还要扣除如吊钩，吊具等的自重。

吊钩自重：80吨钩……1.030吨，50吨钩……0.664吨，25吨钩……0.435吨，8吨钩……0.238吨。

5.在安装副臂或辅助臂时，主起重机的实际起重量是将表的 值扣下表所列中以及主钩+ 副钩的质量，但扣除后起重量不足0.8吨时不能工作。

副臂长度（m）	9	13.5	18	辅助臂
扣除质量（kg）	750	1000	1300	420

6.安装副臂时的主臂长度为37—52米。

7.起重机在吊重时履带架必须是扩张状态。

8.平衡重质量为24.6t。

9.载荷表中（）中数据为实际作业半径下的载荷。

10.起重机主臂操作允许最高风压为60N/m^2，最高风速9.8m/s。

11.侧面时的稳定值最小。

Notes

1.Ratings according to GB3811, ISO 4302 and ISO 4305.

2.All lifting capacities are for crane on firm and level ground.

3.The unit in load chart is ton. The rated lifting capacity is within 75% of tipping load.

4.The rated lifting capacity in load chart is calculated based on freely suspended loads and make no allowance for such factors as wind effect on lifted load, ground conditions, operating speed. Therefore, the driver should judge the existing conditions and reduce lifting loads and operating speed accordingly. The weight of hook and slings should also be deducted from the rated lifting capacity.

Weight of hook blocks: 80T hook block……1.030t, 50T hook block……0.664t, 25T hook block……0.435t, 8T hook block……0.238t.

5.When mounted with jib or runner, the actual lifting capacity of boom is the weight shown in the load chart deducting the weight of main hook, aux. hook and jib. However, if the actual lifting capacity is less than 0.8t, it is forbidden for the crane to work.

Jib Length(m)	9	13.5	18	Runner
Weight (kg)	750	1000	1300	420

6.When mounted with jib, boom length is 37—52m.

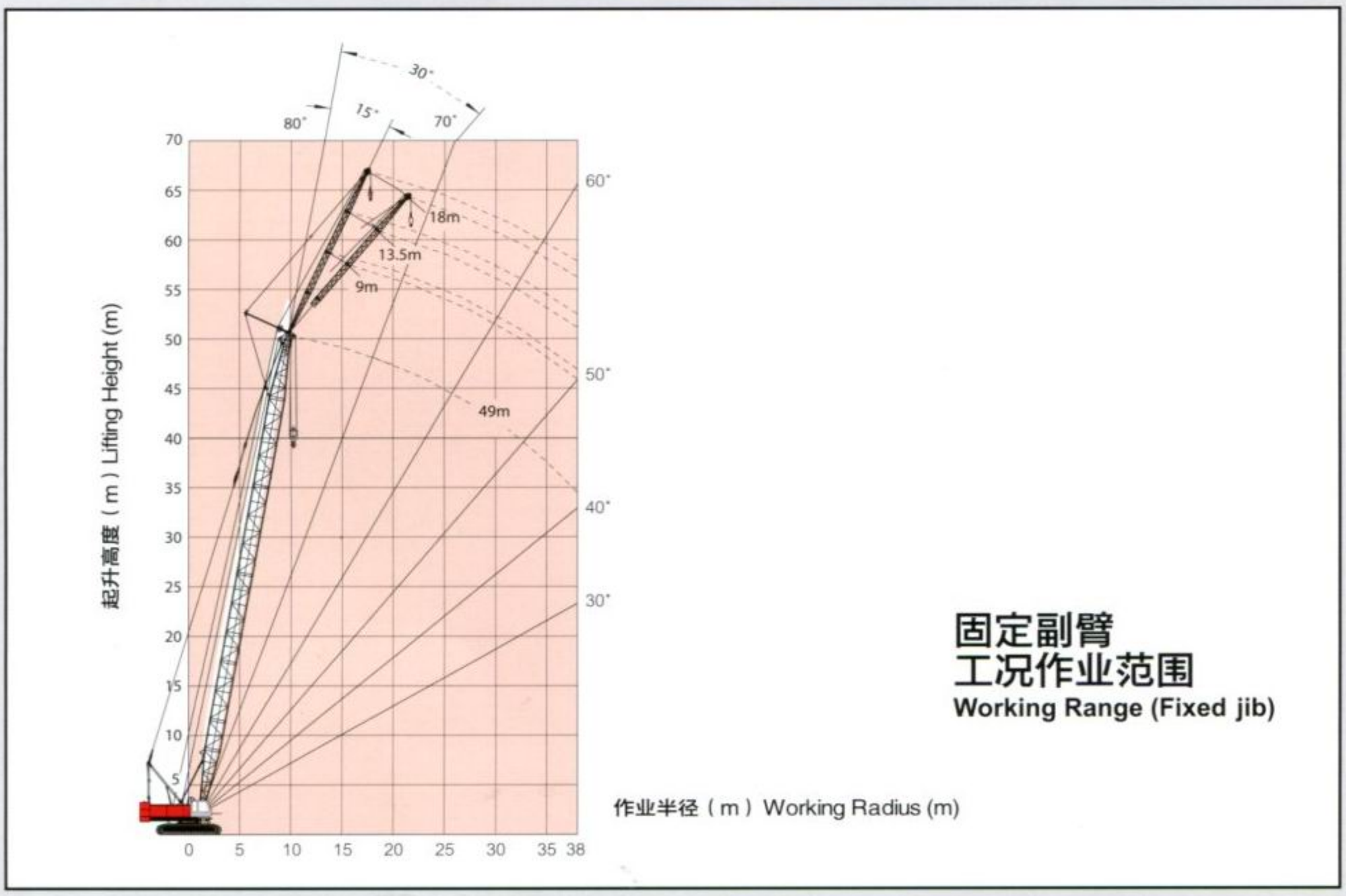
7.Track frame should be extended when the crane is working.

8.Weight of counterweight is 24.6t.

9.The data in ( ) is the load under the actual working radius.

10.The maximum allowed wind pressure is 60N/m^2; the maximum allowed wind speed is 9.8m/s.

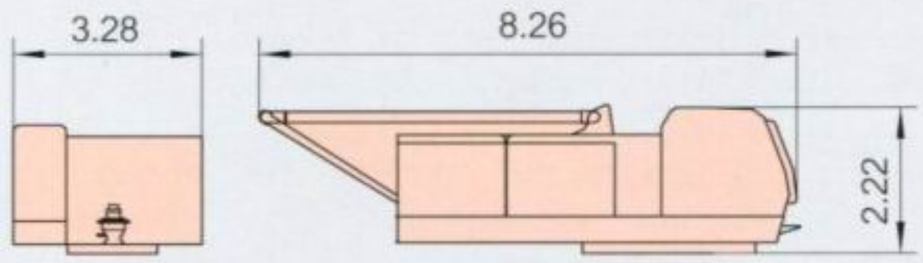
11.Least stable rated position is over the side



固定副臂
工况作业范围
Working Range (Fixed jib)

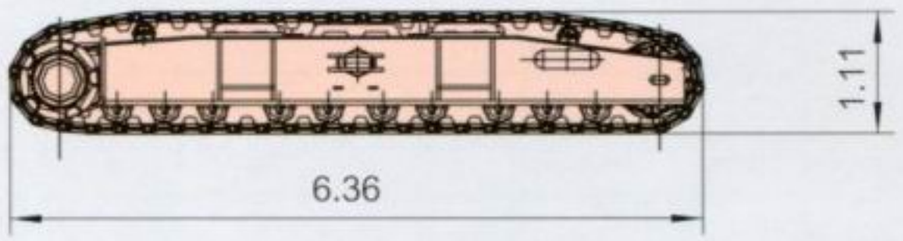
主要零部件运输尺寸 Dimensions for Transportation

尺寸单位：m Unit: m



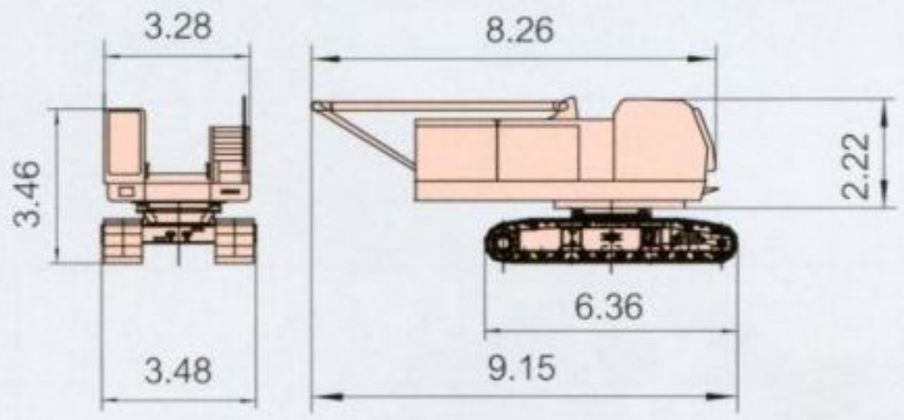
本体	x1
长	8.26m
宽	3.28m
高	2.22m
重量	18300kg

Carbody	x1
Length	8.26m
Width	3.28m
Height	2.22m
Weight	18300kg



履带总成	x2
长	6.36m
宽	1.19m
高	1.11m
重量	12000kg

Crawler Assy	x2
Length	6.36m
Width	1.19m
Height	1.11m
Weight	12000kg

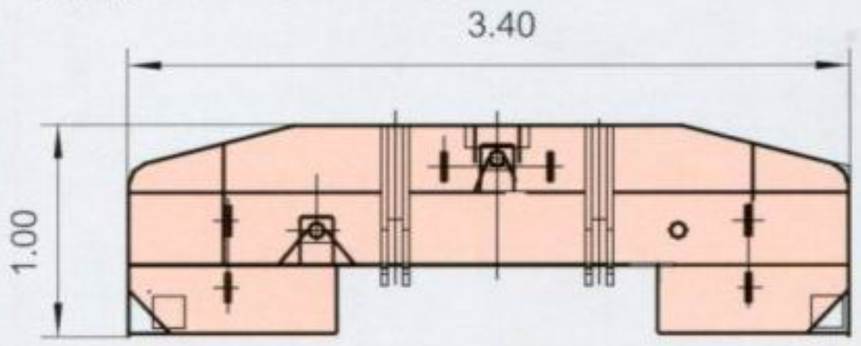


裸机	x1
长	9.15m
宽	3.48m
高	3.46m
重量	53000kg

Base machine	x1
Length	9.15m
Width	3.48m
Height	3.46m
Weight	53000kg

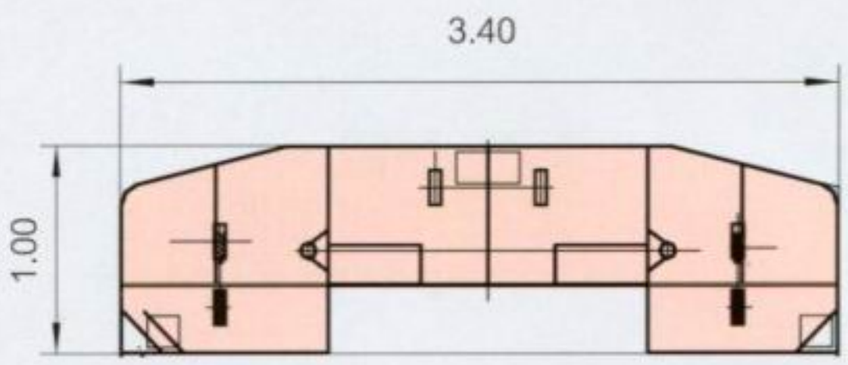
有焊件配重和铸件配重，可任选其一。
You can choose one between welded counterweight and forged counterweight.

焊接配重 Welded counterweight



配重A	x1
长	3.40m
宽	1.00m
高	0.52m
重量	7811kg

Counterweight A	x1
Length	3.40m
Width	1.00m
Height	0.52m
Weight	7811kg

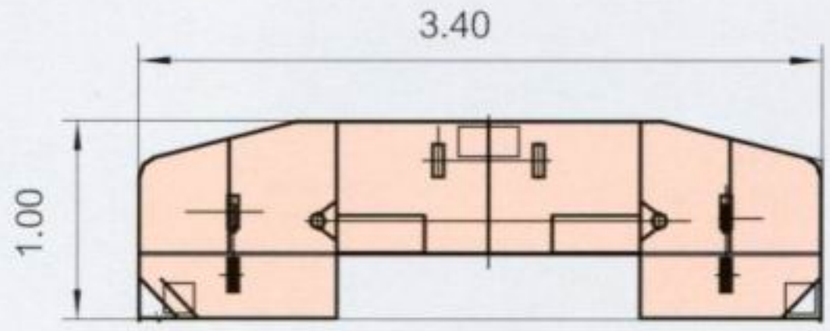


配重B	x1
长	3.40m
宽	1.00m
高	0.67m
重量	9277kg

Counterweight B	x1
Length	3.40m
Width	1.00m
Height	0.67m
Weight	9277kg

主要零部件运输尺寸 Dimensions for Transportation

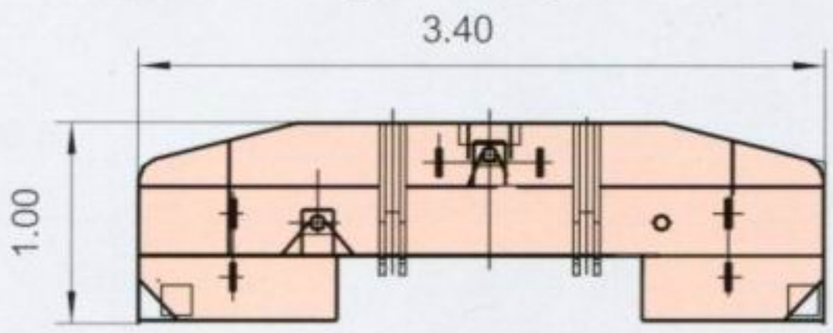
尺寸单位：m Unit: m



配重C	x1
长	3.40m
宽	1.00m
高	0.65m
重量	7530kg

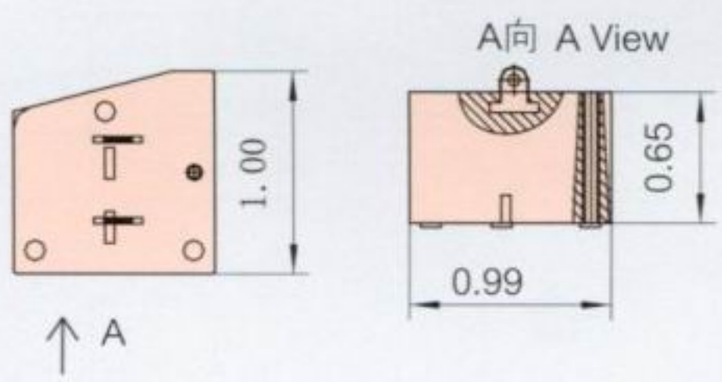
Counterweight C	x1
Length	3.40m
Width	1.00m
Height	0.65m
Weight	7530kg

铸造配重 Forged Counterweight



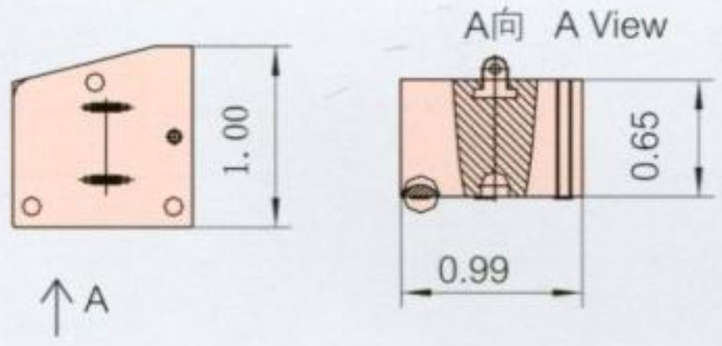
配重	x1
长	3.40m
宽	1.00m
高	0.52m
重量	7811kg

Counterweight	x1
Length	3.40m
Width	1.00m
Height	0.52m
Weight	7811kg



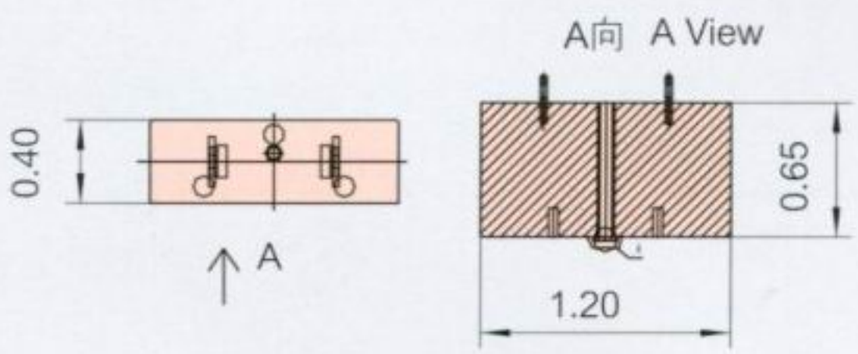
配重 I	x1
长	1.00m
宽	0.99m
高	0.65m
重量	4067kg

Counterweight I	x1
Length	1.00m
Width	0.99m
Height	0.65m
Weight	4067kg



配重 II	x1
长	1.00m
宽	0.99m
高	0.65m
重量	4055kg

Counterweight II	x1
Length	1.00m
Width	0.99m
Height	0.65m
Weight	4055kg

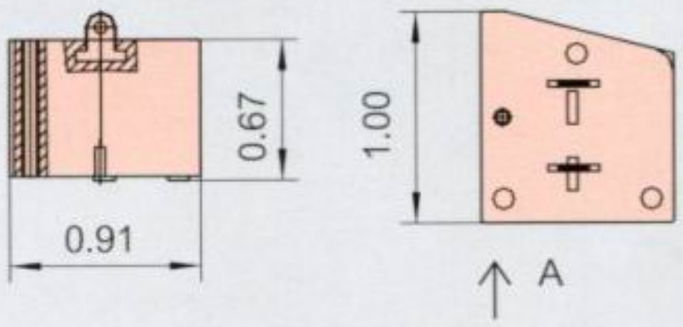


配重 III	x1
长	1.20m
宽	0.40m
高	0.65m
重量	2111kg

Counterweight III	x1
Length	1.20m
Width	0.40m
Height	0.65m
Weight	2111kg

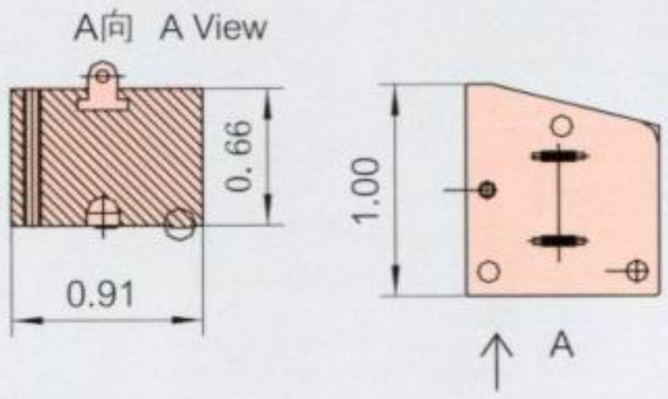
主要零部件运输尺寸 Dimensions for Transportation

尺寸单位：m Unit: m



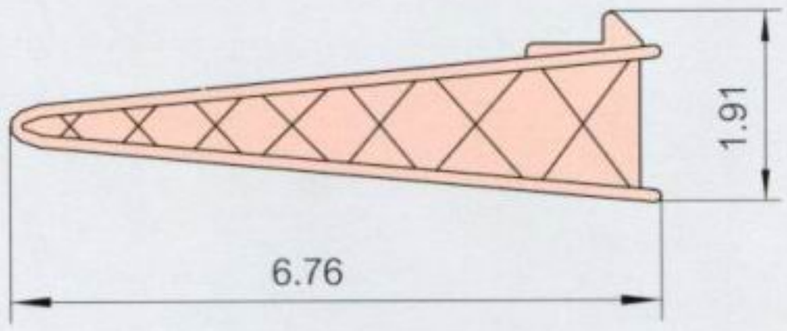
配重Ⅳ	x1
长	1.00m
宽	0.91m
高	0.67m
重量	3656kg

Counterweight Ⅳ	x1
Length	1.00m
Width	0.91m
Height	0.67m
Weight	3656kg



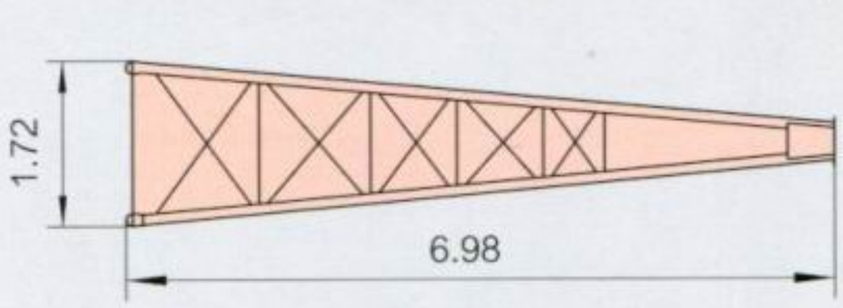
配重Ⅴ	x1
长	1.00m
宽	0.91m
高	0.66m
重量	3654kg

Counterweight Ⅴ	x1
Length	1.00m
Width	0.91m
Height	0.66m
Weight	3654kg



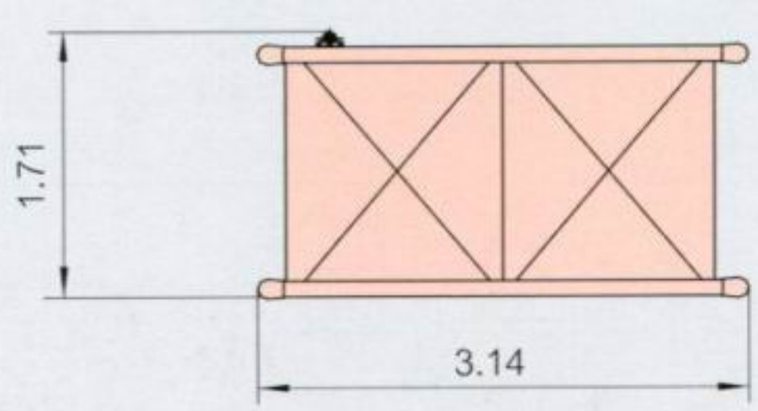
根部臂节	x1
长	6.76m
宽	1.61m
高	1.91m
重量	1800kg

Boom foot	x1
Length	6.76m
Width	1.61m
Height	1.91m
Weight	1800kg



顶部臂节	x1
长	6.98m
宽	1.61m
高	1.72m
重量	1680kg

Boom top	x1
Length	6.98m
Width	1.61m
Height	1.72m
Weight	1680kg



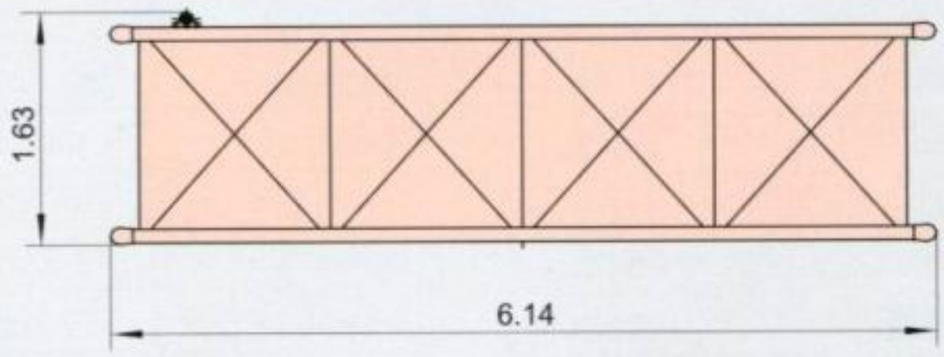
3M臂节	x1
长	3.14m
宽	1.61m
高	1.71m
重量	523kg

3m Boom insert	x1
Length	3.14m
Width	1.61m
Height	1.71m
Weight	523kg

主要零部件运输尺寸

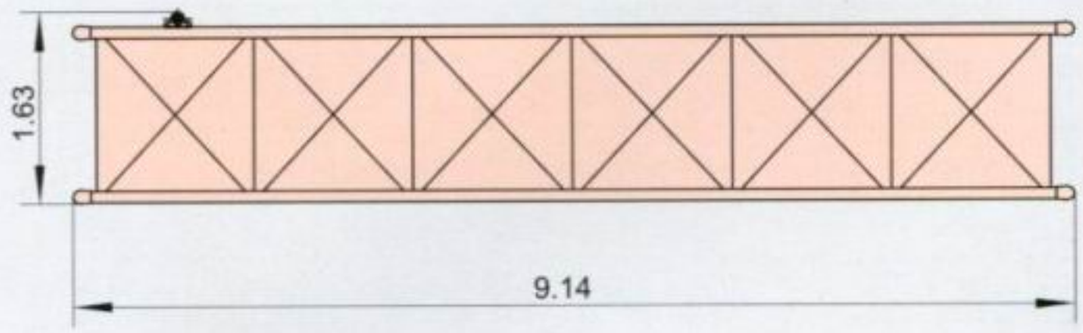
Dimensions for Transportation

尺寸单位：m　　Unit: m



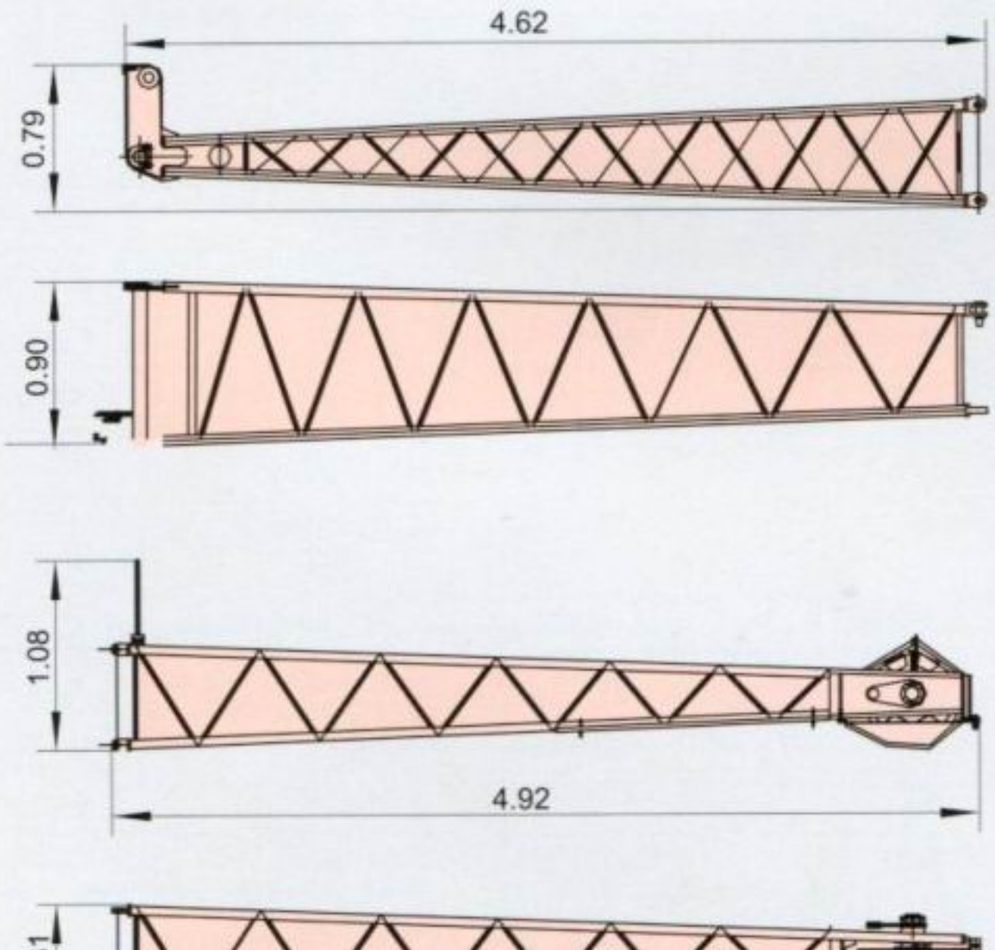
6M臂节	x1
长	6.14m
宽	1.61m
高	1.63m
重量	844kg

6m boom insert	x1
Length	6.14m
Width	1.61m
Height	1.63m
Weight	844kg



9M臂节	x4
长	9.14m
宽	1.61m
高	1.63m
重量	1150kg

9m boom insert	x4
Length	9.14m
Width	1.61m
Height	1.63m
Weight	1150kg

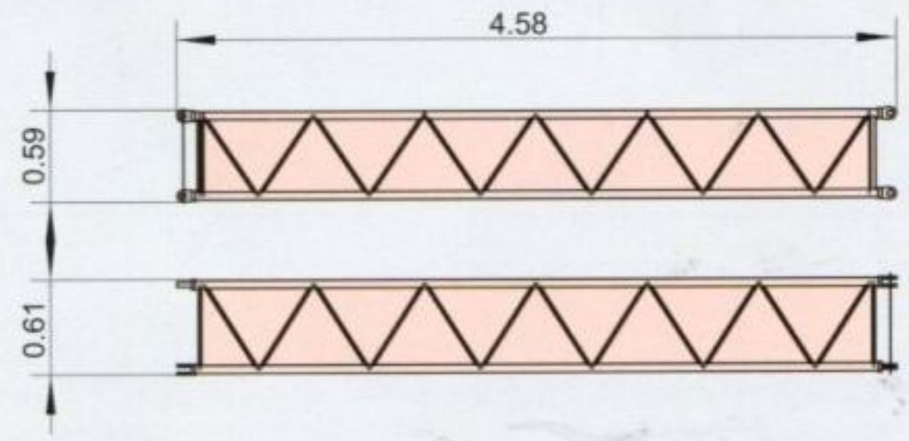


基础臂节	x1
长	4.62m
宽	0.90m
高	0.79m
重量	223kg

Jib foot	x1
Length	4.62m
Width	0.90m
Height	0.79m
Weight	223kg

顶部臂节	x1
长	4.92m
宽	0.61m
高	1.08m
重量	277kg

Jip top	x1
Length	4.92m
Width	0.61m
Height	1.08m
Weight	277kg



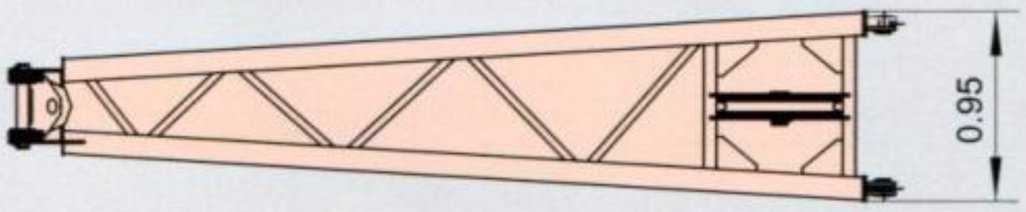
4.5M中间臂节	x2
长	4.58m
宽	0.61m
高	0.59m
重量	133kg

4.5m jib insert	x2
Length	4.58m
Width	0.61m
Height	0.59m
Weight	133kg

主要零部件运输尺寸

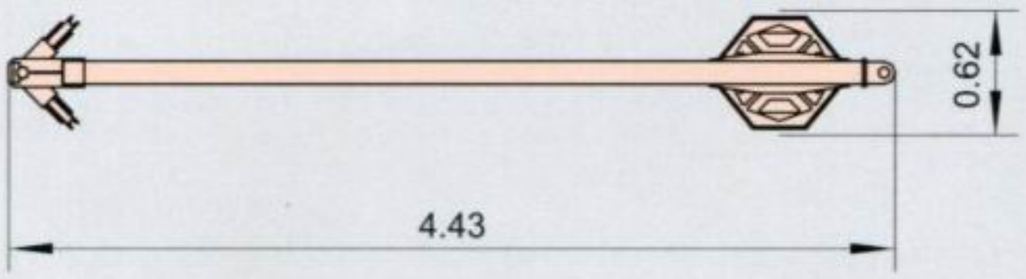
Dimensions for Transportation

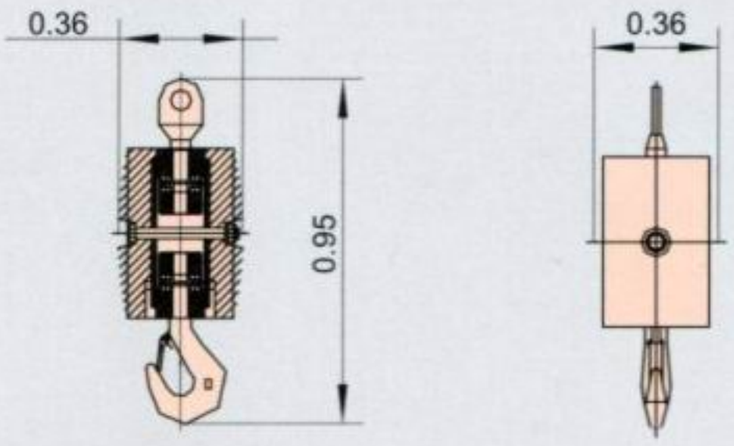
尺寸单位：m　　Unit: m



撑架	x1
长	4.43m
宽	0.95m
高	0.62m
重量	322kg

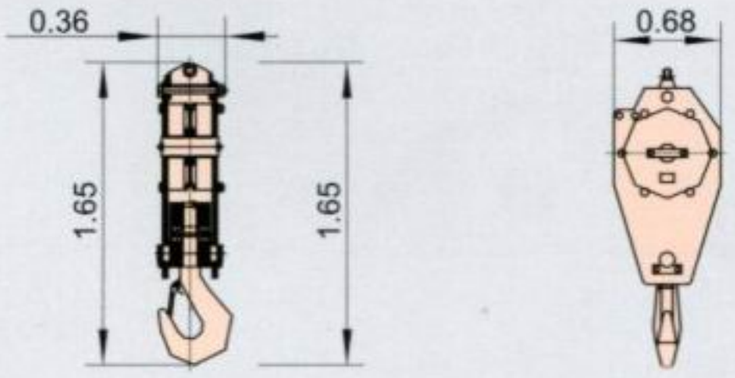
Jib mast	x1
Length	4.43m
Width	0.95m
Height	0.62m
Weight	322kg





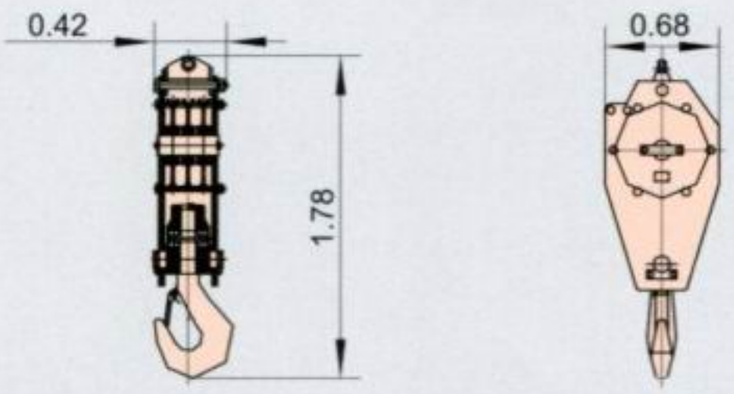
8吨钩	x1
长	0.95m
宽	0.36m
高	0.36m
重量	238kg

8t hook block	x1
Length	0.95m
Width	0.36m
Height	0.36m
Weight	238kg



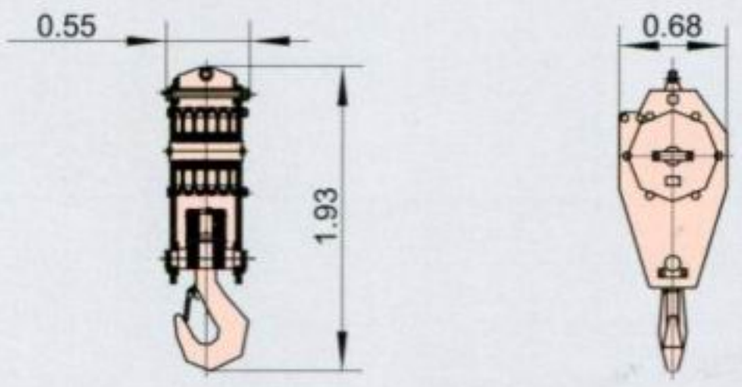
25吨钩	x1
长	1.65m
宽	0.68m
高	0.37m
重量	435kg

25t hook block	x1
Length	1.65m
Width	0.68m
Height	0.37m
Weight	435kg



50吨钩	x1
长	1.78m
宽	0.68m
高	0.42m
重量	664kg

50t hook block	x1
Length	1.78m
Width	0.68m
Height	0.42m
Weight	664kg



80吨钩	x1
长	1.93m
宽	0.68m
高	0.55m
重量	1030kg

80t hook block	x1
Length	1.93m
Width	0.68m
Height	0.55m
Weight	1030kg

样本中的主要零部件运输重量为设计值，由于制造误差，可能稍有不同。
The transportation weight of main parts in the manual is the designed value, the actual value may be a little different due to manufalture error.

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