SUNWARD

SWQUY系列
桁架臂履带起重机
SWQUY Series Crawler Crane
55A/55B/85/160

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安全保护装置 Safety Device

● 起重钩的防过卷装置 Lifting hook over-hoist prevention device

当吊钩提升到一定的高度时，防过卷装置的重锤被托起，则微动动开关由弹簧复位，开关节点断开，控制继电器动作使蜂鸣器报警，报警指示灯闪亮，同时，控制器锁定起重钩的提升，起升钩提升动作自动停止。

When the hook lifts up to a certain height and the plumb be touched, the limit switch should be disengaged by the reposition spring, and then the switch cuts off the control circuit. The control relay makes the buzzer alarm and the indicator lights up. At the same time, the rise of the hook will stop automatically as the controller locks up.

● 臂架的防后倾装置 Boom backstop device

臂架上限角度由力矩限制器和主臂上限位开关检测控制及主臂根节臂的防后倾杆装置。

The boom upper limit angle is controlled by moment limiter and boom upper limit switch. The back-stop lever device is installed on boom root section.

● 起重工况时 Lifting working condition

当主臂大于上限位角度80°时，力矩限制器声光连续报警，并输出信号，同时主臂上限位开关回路被切断，主臂停止升臂。

When the boom upper limit switch angle is more than 80°, the moment limiter will continuously alarm with sound and light and send out the signal. At the same time, the boom upper limit switch circuit is cut off, the boom stops rising.

● 负载率指示灯 Load rate indicator

为了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三色负载率指示灯，同时配备了司机与吊装人员联系用的对讲机。

In order to facilitate the on-site personnel to understand the mechanical load conditions, the three-color load rate indicator same with the traffic signal has been applied, and at the same time equipped with walkie-talkie for contact between the driver and the hoisting personnel.

● 卷筒、回转制动器及其锁定装置 Drums, slewing brake and its locking devices

本起重机设有：主、副卷筒制动器、变幅卷筒制动器和回转制动器。
SWQUY55B、SWQUY85主副卷扬具有空钩快放功能。

Brakes: Brakes on main and auxiliary drums, brakes on luffing drums, slewing brakes.

本起重机设有：变幅卷筒棘爪锁定装置和回转锁定装置。

Brakes: Locking devices: luffing drums pawls locking devices and slewing locking devices.

力矩限制器 Moment limiter

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。

当额定起重力矩0%≤起重力矩＜额定起重力矩的90%时，力矩限制器显示屏上，力矩百分比条码绿色点亮，限制器无报警声音。

当额定起重力矩90%≤起重力矩＜额定起重力矩的100%时，力矩限制器显示屏上，力矩百分比条码黄色报警，同时限制器发出声音，断续报警。

当额定起重力矩100%≤起重力矩＜额定起重力矩的105%时，力矩限制器显示屏上，力矩百分比条码红色报警，同时限制器发出声音，连续报警。

当额定起重力矩≥额定起重力矩的105%时，力矩限制器显示屏上，力矩百分比条码红色报警，限制器发出声音，连续报警，同时输出信号，主、副钩停止提升，臂架停止增幅动作。

The limiter monitors the real-time operation of crane. Press the key to set the parameters of various working conditions.

· When the actual lifting torque is more than or equals to 0% of the rated value and is less than 90% of the rated value, the screen shows moment proportional bar in green, and no warning alarm from the limiter.

· When the actual lifting torque is more than or equals to 90% of the rated value and is less than 100% of the rated value, the screen shows moment proportional bar in yellow, and the limiter gives out a continuous warning alarm.

· When the actual lifting torque is more than or equals to 100% of the rated value and is less than 105% of the rated value, the screen shows moment proportional bar in red, and the limiter gives out a continuous warning alarm.

· When the actual lifting torque is more than 105% of the rated value, the screen shows moment proportional bar in red. The limiter gives out a continuous warning alarm and output control signal at the same time to stop the hoisting of main hook/auxiliary hook and boom luffing.

风速仪 Anemometer

臂架上限角度由力矩限制器和主臂上限位开关检测控制及主臂根节臂的防后倾杆装置。

The anemometer mounted on boom head is used for testing wind speed and show on moment limiter.

拉力传感器、角度传感器 Tension sensor, angle sensor

拉绳上设有拉力传感器，用于检测拉力。

Tension sensor mounted on the pulling rope is used for detecting the tension force.

主臂根部装有角度传感器，用于检测主臂的角度。

Angle sensor mounted on main boom root is used for detecting the angle of main boom.

水平仪 Level

该装置用于检测机体与水平地面的角度，保证机器的工作地面符合要求。

It is used for detecting the angle between machine body and level ground surface to make sure that the working ground meets the requirements.

角度盘 Angle scale

主臂根部设有机械式角度盘，用来显示臂架的当前角度。

Mechanical angle scale is mounted on main boom root to show current boom angle.

卷筒过放保护装置 Over-releasing protection device of drums

主、副卷筒分别安装了三圈保护器装置，用来避免卷筒放绳时产生过放现象。

Three wraps protector devices are mounted separately on main drum and auxiliary drum to avoid over-releasing of drum ropes.

结构介绍 Structure

转台结构与布局 Turntable structure

转台受力主体是两箱型梁结构，中间有横梁，为加强刚度，在回转中心布置有加强板。在满足受力情况的条件下，考虑尽量减小焊接变形等因素。

SWQUY55A、SWQUY55B转台外形尺寸长宽高6644mm×3280mm×2117mm。自重在30吨以内。

SWQUY85转台外形尺寸长宽高7230x3380x2100。

The main force body of turntable is two box type beam structure with beam in the middle. Reinforcing plates are mounted on the slewing center to strengthen the rigidity. The outline dimensions of turntable are 6644mm×3280mm×2117mm for length, width and height. The own weight is less than 30 ton.

转台上布置有2个起升机构及一个主变幅机构，卷扬为内置式，马达、减速器等机构布置与卷扬内。发动机及附件、燃油箱、液压油箱、司机室、各种泵阀组、辅助装置等布置在转台两侧，并由覆盖件罩住。

Two lifting mechanism and one main luffing mechanism are mounted on the turntable. The winch is built-in type. The motor and reducers are mounted in the winch. Engine and its accessories, fuel tank, hydraulic oil tank, cab, various pumps and valve blocks, auxiliary devices are mounted on both sides of the turntable and hooded with coverings.

司机室置于转台前左侧位置。

Cab placed at the front left side of the turntable.

SWQUY55A配重置于转台最后端，重约18吨，由2块组成，SWQUY55B配重置于转台最后端，重约19吨，由3块组成。

SWQUY85配重置于转台最后端，重25.2吨，由4块组成。

Counterweight placed at the end of turntable, weights about 18 ton, and consists of two counterweight blocks.

转台的部件尽量布置在后方，保证转台重心位置和整机的稳定性。

The components of turntable are arranged in the rear as much as possible to ensure the position of turntable gravity center and the stability of whole machine.

车架结构 Frame structure

车架连接转台和履带架，是由钢板焊接而成的箱型结构，横向最大尺寸由两侧履带架的间距决定，纵向最大尺寸由运输状态的车辆本体最大外形尺寸及回转支承尺寸决定。车架主体部分采用箱型结构，内衬圆弧加强板，回转支承处增加必要的筋板，有效地传递载荷和保证整体刚度与强度。

The box type structure of frame which is welded by steel plates connects the turntable and the track frame. The maximum transverse size is calculated by the spacing of both sides track frame, and the maximum vertical size is calculated by the maximum outline dimensions of vehicle body in transport status and the size of slewing bearing. The main body of frame uses box type structure, lined in with arc reinforcing plates and added necessary rib plates at slewing bearing to effectively transfer loads and ensure the overall rigidity and strength.

液压系统 Hydraulic system

本产品的液压系统采用负荷传感恒功率控制系统，主泵为负荷传感泵。通过负荷传感恒功率技术实现对发动机、泵组、换向阀以及执行机构之间的功率调节、流量调节、速度控制的功能。采用贵州力源的液压主泵，主泵为HPR型负荷传感变量柱塞泵。主阀选用江北宇洲的产品，主阀阀后补偿，并具有欠流量时的自适应控制，可实现在欠流量状态时按比例分配流量。回转系统采用开式系统，并配有自由滑转功能，使整机操作更平稳、可靠。

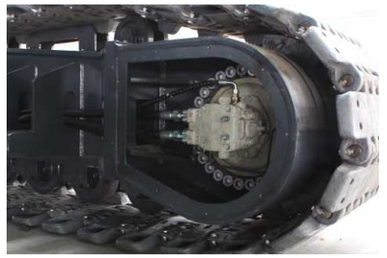
The hydraulic system of this crane uses load sensing constant power control. Main pump is the load sensing pump. The power adjusting, flow adjusting and speed controlling of engine, pump set, reversing valve and executing mechanisms is realized by the load sensing constant power technology. Main hydraulic pump from Guizhou Liyuan is HPR type load sensing variable piston pump. Main valve from Ningbo Jiangbei yuzhou compensates from behind and adaptively controls when lacking of flow. It can proportionally distribute flow when lacking. The slewing system is an open system with free slipping function to make the operations of whole machine more smooth and reliable.

桁架履臂带起重机主要技术特点
Main Technical Characteristics

先进性 Advanced

电控系统采用CAN总线技术进行通讯，配备可视系统，系统精确度高、安全，微动性能好；

The electric control system uses CAN bus technology to carry out communication and it is equipped with visible system, which has high accuracy, safety and good inching performance.



可靠性 Reliable

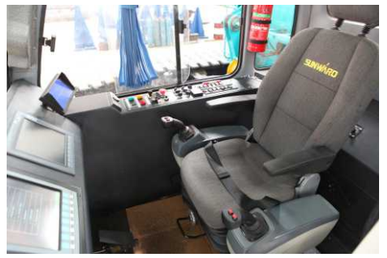
该机液压系统主要液压元件采用德国力士乐等进口产品，性能优越，可靠性高；

The main hydraulic components of the hydraulic system in this machine use imported products such as German REXROTH, they have excellent performance and high reliability.

环保性 Environmental protective

发动机功率利用率较高，排放符合国Ⅲ排放标准要求，环保节能；

The engine has high power utilization ratio, the emission conforms to the requirements of class 3 of national emission standard, therefore it is environmental protection and energy saving.



舒适性 Comfortable

驾驶室视野宽敞，俯仰角度为20°。配有冷暖空调，操作灵活、舒适，符合人体工学原理。

The operator cabin has wide field of view, the derricking angle is 20°. It is equipped with cooling and heating air conditioner, flexible and comfortable to operate and conforms to ergonomic principles.

SWQUY55A/SWQUY55B/SWQUY85/SWQUY160

桁架履臂带起重机系列产品型谱参数表
SWQUY Crawler Crane Series Type Spectrum Parameters

性能参数 Rerformance Parameter			单位 Unit	数值 Value			
				SWQUY55A	SWQUY55B	SWQUY85	SWQUY160
最大额定起重量 Max. rated lifting capacity			t	55	55	85	160
最大额定起升力矩 Max. rated lifting moment			t.m	200	200	344	861
主臂工况 Working condition of main boom	主臂长度 Main boom length		m	13-52	13-52	13-58	18-84
	主臂变幅角 Main boom luffing angle		°	30-80	30-80	30-80	30-82
固定副臂工况 Working condition of fixed jib	最长主臂+对应最长副臂 Longest main boom + Longest corresponding jib		m	43+15	43+15	49+18	69+30
	主臂与副臂夹角 Included angle between main boom and jib		°	10/30	10/30	15\30	10/30
塔式副臂工况 Working condition of the tower-type jib	最长主臂+对应最长副臂 Longest main boom + Longest corresponding jib		m	–	–	–	57+51
	主臂与塔式副臂夹角 Included angle between main boom and tower-type jib		°	–	–	–	65/75/85
工作速度 Working speed	钢丝绳速度 Wire cable speed	起升 Lifting	m/min	134(第一层) (First layer)	110	115	0-137(第一层) (First layer)
		下降 Dropping	m/min	134(第一层) (First layer)	110	115	0-137(第一层) (First layer)
		变幅，起重臂上升 Luffing, boom rising	m/min	60	60	65	37
		变幅，起重臂下降 Luffing, boom louering	m/min	60	60	65	37
	回转速度 Swing speed		r/min	2	1.6	1.7	1.5
	行走速度 Travelling speed		km/h	1.2/2.2	1.2	1.2	0.6/1.2
爬坡能力（带基本臂，司机室置于后方） Grade ability (with basic boom, the operator cabin is at reat side)			%	40	40	30	30
发动机 Engine	SWQUY55A 康明斯Cummins QSB6.7-C190	额定输出功率 Nominal output power	kW	康明斯 Cummins	潍柴 Weichai	潍柴 Weichai	潍柴 Weichai
		额定转速 Nominal rotation speed	r/min	QSB6.7-C190	WP6G190E26	WP7G300	WP10.336
	SWQUY160 潍柴Weichai WP10.336	额定输出功率 Nominal output power	kW	142	140	220	247
		额定转速 Nominal rotation speed	r/min	2200	1900	2300	2100
整机质量（带基本臂）Total weight (with basic boom)			t	49	49	80	169
接地比压（带基本臂）Ground pressure (with basic boom)			Mpa	0.065	0.07	0.085	0.093
配置质量 Counter weight mass			t	18	19	25.2	64.5

SWQUY55A

主臂起重量和起升高度参数表
Lifting Capacity And Lifting Height Parameters Table

工作幅度(m) Working radius	主臂长度(m) Boom length													
	13	16	19	22	25	28	31	34	37	40	43	46	49	52
3.5	55													
4	50	40.1												
5	37.2	35.8	34.5	30.6										
6	28.6	28	27.2	26.5	25.5									
7	22.8	22.8	22.4	22	21	20.4	19.5							
8	18.8	18.8	18.7	18.7	17.9	17.5	16.9	15.8	15.8					
9	16.1	15.9	15.9	15.9	15.5	15.1	14.7	14.2	13.8	13.4	12			
10	14	14	13.8	14	13.6	13.4	13	12.6	12.2	11.8	11.4	11	8.1	
12	11	10.8	10.8	10.8	10.6	10.6	10.4	10.1	9.7	9.5	9.1	8.9	8.1	8.1
14			8.9	8.9	8.7	8.5	8.5	8.3	7.9	7.7	7.5	7.1	6.9	6.7
16			7.5	7.5	7.3	7.1	7.1	6.9	6.7	6.5	6.3	6	5.8	5.6
18				6.3	6.2	6.2	6	5.8	5.8	5.6	5.4	5.2	4.8	4.8
20				5.6	5.4	5.2	5.2	5	5	4.8	4.6	4.4	4	4
22					4.6	4.6	4.4	4.4	4.2	4.2	4	3.8	3.4	3.4
24						4	4	3.8	3.6	3.6	3.4	3.2	2.8	2.8
26							3.4	3.2	3.2	3.2	3	2.8	2.4	2.4
28								2.8	2.8	2.8	2.6	2.4	2.1	2.1
30								2.6	2.4	2.4	2.2	2.2	1.9	1.7
32									2.2	2.1	2.1	1.9	1.5	1.5
34										1.9	1.9	1.7	1.3	1.3
36											1.5	1.5	1.1	0.9
38											1.3	1.3	0.7	0.7
40												1.1	0.7	0.5
42														0.5
44														0.3

注：
1.表中给定数值是在地面坚实，整机状态下，起重机的额定起重量。表中工作幅度是指吊载后的实际幅度。
2.主臂带载行走时，起重量为额定起重量的70%；其它工况不允许在带载作业。
3.整机应水平，工作坡度应不大于5%。行走速度不大于最低速度。
4.表中额定起重量包括吊钩重量，主钩重730kg，副钩重260kg。若副臂处于展开状态，主臂起吊重量还应减去610kg。
5.当主钩在臂头部时，使用副臂吊载的额定起重量应减去480kg。使用臂尖滑轮吊载的各臂段的额定起重量应减去730kg，但最大起重量为3200kg。
6.当实际臂长和工作幅度在两数值之间时，应按较大臂长和幅度值确定起重量。
7.表中最低栏列出空载时各种臂长工况下的主臂最小仰角，严禁将起重臂变幅到所对应的最小仰角以下。
8.爬坡时主臂趴下，置于最小角度。

Notes:
1. Rated lifting weight values shown in the tables are based on firm and hard ground .Working radius is the actual amplitude after lifting. Working radius of jib is the value got in the situation that boom is fully extended (40m) and jib is outspread to operate
2. The permitted lifting weight is 70% of the rated value when main boom travel with load. Travelling with load in other operation conditions are not permitted
3. The whole machine should be horizontal when loaded. The working grade is no more than 5%. Travel speed not greater than minimum speed.
4. The rated lifting weight in the table includes the weight of hook: main hook weights 730kg, auxiliary hook weights 260kg. If the jib is outspread, the lifting weight of boom should be reduced by 730kg.
5. If main hook located on boom head, the rated lifting weight should be reduced by 480kg when using jib to lift. The rated lifting weight of each boom section should be reduced by 730kg when using boom head sheave to lift, but the max. lifting weight is 3,200kg
6. When actual boom length and working radius are between two values, define the lifting weight according to the longer boom length and bigger working radius.
7. The bottom of the tables above listed the min. boom elevation angle of all boom length when idle loaded. Luff boom to one value which is less than the corresponding min. elevation angle is prohibited.
8. Boom should be retracted when grading and be set in min. angle.

SWQUY55B

主臂起重量和起升高度参数表
Lifting Capacity And Lifting Height Parameters Table

工作幅度(m) Working radius	主臂长度(m) Boom length													
	13	16	19	22	25	28	31	34	37	40	43	46	49	52
3.5	55													
4	50	40.1												
5	37.2	35.8	34.5	30.6										
6	28.6	28	27.2	26.5	25.5									
7	22.8	22.8	22.4	22	21	20.4	19.5							
8	18.8	18.8	18.7	18.7	17.9	17.5	16.9	15.8	15.8					
9	16.1	15.9	15.9	15.9	15.5	15.1	14.7	14.2	13.8	13.4	12			
10	14	14	13.8	14	13.6	13.4	13	12.6	12.2	11.8	11.4	11	8.1	
12	11	10.8	10.8	10.8	10.6	10.6	10.4	10.1	9.7	9.5	9.1	8.9	8.1	8.1
14			8.9	8.9	8.7	8.5	8.5	8.3	7.9	7.7	7.5	7.1	6.9	6.7
16			7.5	7.5	7.3	7.1	7.1	6.9	6.7	6.5	6.3	6	5.8	5.6
18				6.3	6.2	6.2	6	5.8	5.8	5.6	5.4	5.2	4.8	4.8
20				5.6	5.4	5.2	5.2	5	5	4.8	4.6	4.4	4	4
22					4.6	4.6	4.4	4.4	4.2	4.2	4	3.8	3.4	3.4
24						4	4	3.8	3.6	3.6	3.4	3.2	2.8	2.8
26							3.4	3.2	3.2	3.2	3	2.8	2.4	2.4
28								2.8	2.8	2.8	2.6	2.4	2.1	2.1
30								2.6	2.4	2.4	2.2	2.2	1.9	1.7
32									2.2	2.1	2.1	1.9	1.5	1.5
34										1.9	1.9	1.7	1.3	1.3
36											1.5	1.5	1.1	0.9
38											1.3	1.3	0.7	0.7
40												1.1	0.7	0.5
42														0.5
44														0.3

注：
1.表中给定数值是在地面坚实，整机状态下，起重机的额定起重量。表中工作幅度是指吊载后的实际幅度。
2.主臂带载行走时，起重量为额定起重量的70%；其它工况不允许在带载作业。
3.整机应水平，工作坡度应不大于5%。行走速度不大于最低速度。
4.表中额定起重量包括吊钩重量，主钩重960kg，副钩重260kg。若副臂处于展开状态，主臂起吊重量还应减去610kg。
5.当主钩在臂头部时，使用副臂吊载的额定起重量应减去480kg。使用臂尖滑轮吊载的各臂段的额定起重量应减去730kg，但最大起重量为3200kg。
6.当实际臂长和工作幅度在两数值之间时，应按较大臂长和幅度值确定起重量。
7.表中最低栏列出空载时各种臂长工况下的主臂最小仰角，严禁将起重臂变幅到所对应的最小仰角以下。
8.爬坡时主臂趴下，置于最小角度。

Notes:
1. Rated lifting weight values shown in the tables are based on firm and hard ground .Working radius is the actual amplitude after lifting. Working radius of jib is the value got in the situation that boom is fully extended (40m) and jib is outspread to operate
2. The permitted lifting weight is 70% of the rated value when main boom travel with load. Travelling with load in other operation conditions are not permitted
3. The whole machine should be horizontal when loaded. The working grade is no more than 5%. Travel speed not greater than minimum speed.
4. The rated lifting weight in the table includes the weight of hook: main hook weights 730kg, auxiliary hook weights 260kg. If the jib is outspread, the lifting weight of boom should be reduced by 730kg.
5. If main hook located on boom head, the rated lifting weight should be reduced by 480kg when using jib to lift. The rated lifting weight of each boom section should be reduced by 730kg when using boom head sheave to lift, but the max. lifting weight is 3,200kg
6. When actual boom length and working radius are between two values, define the lifting weight according to the longer boom length and bigger working radius.
7. The bottom of the tables above listed the min. boom elevation angle of all boom length when idle loaded. Luff boom to one value which is less than the corresponding min. elevation angle is prohibited.
8. Boom should be retracted when grading and be set in min. angle.

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主臂起重量和起升高度参数表
Lifting Capacity And Lifting Height Parameters Table

工作幅度(m) Working radius	主臂长度(m) Boom length															
	13	16	19	22	25	28	31	34	37	40	43	46	49	52	55	58
4	85.00															
4.3	80.00															
4.5	76.30	74.00														
5	64.80	64.50	62.20													
5.5	60.50	60.30	60.15	58.50												
6	53.00	52.60	52.50	52.30	52.00											
6.5	46.78	46.50	46.30	46.15	46.00											
7	41.83	41.65	41.58	41.45	41.36	41.15	40.50									
7.5	37.81	37.51	37.53	37.33	37.25	37.16	37.00	36.70								
8	34.46	34.26	34.17	34.06	33.98	33.89	33.60	33.40	33.10							
8.5	31.64	31.43	31.34	31.23	31.13	31.04	30.80	30.60	30.40	30.00						
9	29.23	29.01	29.22	28.80	28.70	28.61	28.45	28.40	28.00	27.70	27.30					
10	25.33	25.10	25.26	24.88	24.76	24.66	24.50	24.44	24.20	24.00	23.80	23.50	22.50			
11	22.32	22.30	22.19	21.83	21.71	21.60	21.44	21.37	21.20	21.10	20.86	20.62	20.45	19.20	18.50	
12	19.92	19.86	19.74	19.61	19.27	19.17	19.00	18.92	18.76	18.63	18.45	18.26	18.09	17.85	17.55	15.10
13		17.88	17.75	17.61	17.29	17.18	17.01	16.92	16.76	16.65	16.45	16.25	16.08	15.84	15.56	14.60
14		16.24	16.09	15.95	15.80	15.52	15.35	15.26	15.10	15.00	14.78	14.58	14.41	14.16	13.94	13.75
15		14.86	14.70	14.55	14.39	14.12	13.96	13.86	13.69	13.62	13.36	13.14	12.96	12.74	12.55	12.36
16			13.51	13.35	13.19	13.06	12.76	12.66	12.49	12.41	12.15	11.95	11.78	11.53	11.36	11.20
18			11.60	11.42	11.24	11.11	10.82	10.71	10.54	10.46	10.20	10.00	9.82	9.62	9.46	9.22
20				9.94	9.74	9.60	9.42	9.20	9.03	8.94	8.65	8.47	8.30	8.10	7.95	7.74
22					8.55	8.39	8.21	8.00	7.82	7.73	7.46	7.26	7.08	6.90	6.70	6.50
24						7.42	7.23	7.02	6.84	6.75	6.47	6.27	6.10	5.92	5.78	5.60
26							6.42	6.21	6.03	5.93	5.65	5.46	5.30	5.06	4.88	4.70
28							5.75	5.52	5.34	5.24	4.96	4.75	4.56	4.39	4.28	4.12
30								4.95	4.76	4.65	4.36	4.10	4.07	3.90	3.78	3.62
32									4.26	4.14	3.78	3.55	3.46	3.29	3.20	3.04
34										3.70	3.30	3.20	3.09	2.93	2.84	2.68
36										3.32	2.86	2.78	2.69	2.54	2.43	2.28
38											2.59	2.50	2.40	2.24	2.16	1.99

注：
1.表中给定数值是在地面坚实，整机状态下，起重机的额定起重量。表中工作幅度是指吊载后的实际幅度。
2.主臂带载行走时，起重量为额定起重量的70%；其它工况不允许在带载作业。
3.整机应水平，工作坡度应不大于5%。行走速度不大于最低速度。
4.表中额定起重量包括吊钩重量，主钩重1300kg，副钩重280kg。若副臂处于展开状态，主臂起吊重量还应减去1000kg。
5.当主钩在臂头部时，使用副臂吊载的额定起重量应减去900kg。使用臂尖滑轮吊载的各臂段的额定起重量应减去1300kg，但最大起重量为7500kg。
6.当实际臂长和工作幅度在两数值之间时，应按较大臂长和幅度值确定起重量。
7.表中最低栏列出空载时各种臂长工况下的主臂最小仰角，严禁将起重臂变幅到所对应的最小仰角以下。
8.爬坡时主臂趴下，置于最小角度。

Notes:
1. Rated lifting weight values shown in the tables are based on firm and hard ground .Working radius is the actual amplitude after lifting. Working radius of jib is the value got in the situation that boom is fully extended (40m) and jib is outspread to operate
2. The permitted lifting weight is 70% of the rated value when main boom travel with load. Travelling with load in other operation conditions are not permitted
3. The whole machine should be horizontal when loaded. The working grade is no more than 5%. Travel speed not greater than minimum speed.
4. The rated lifting weight in the table includes the weight of hook: main hook weights 1300kg, auxiliary hook weights 280kg. If the jib is outspread, the lifting weight of boom should be reduced by 1000kg.
5. If main hook located on boom head, the rated lifting weight should be reduced by 900kg when using jib to lift. The rated lifting weight of each boom section should be reduced by 1300kg when using boom head sheave to lift, but the max. lifting weight is 7,500kg
6. When actual boom length and working radius are between two values, define the lifting weight according to the longer boom length and bigger working radius.
7. The bottom of the tables above listed the min. boom elevation angle of all boom length when idle loaded. Luff boom to one value which is less than the corresponding min. elevation angle is prohibited.
8. Boom should be retracted when grading and be set in min. angle.

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主臂起重量和起升高度参数表
Lifting Capacity And Lifting Height Parameters Table

主臂工况载荷表 Load table of main boom working condition

工作幅度(m) Working radius	主臂长度(m) Main boom length										
	18	21	24	27	30	33	36	39	42	45	48
5	160	160									
6	143.2	140.5	137.7	135.1							
7	120.9	118.8	116.6	114.8	112.6	110.5	108.5				
8	104.5	102.9	101.2	99.6	97.9	96.3	94.6	93	91.5		
9	91.8	90.5	89.1	87.9	86.5	85.1	83.7	82.7	81	79.6	78.4
10	81.8	80.7	79.6	78.5	77.3	76.2	74.9	73.8	72.6	71.5	70.2
12	63.2	63.2	63.2	63.2	63	62.7	61.6	60.9	59.9	59	58
14	51	51	51	51	50.9	50.7	50.7	50.5	50.4	49.8	49
16	42.4	42.6	42.6	42.6	42.4	42.3	42.1	42.1	42	41.6	41.5
18		36.3	36.3	36.3	36.2	36	35.9	35.9	35.7	35.4	35.2
20			31.5	31.5	31.5	31.3	31.2	31	30.9	30.7	30.5
22			27.7	27.7	27.6	27.6	27.4	27.3	27.1	27	26.6
24				24.6	24.6	24.5	24.3	24.1	24	23.8	23.7
26					22	22	21.8	21.6	21.5	21.3	21.2
28						19.8	19.6	19.5	19.3	19.1	19
30							17.7	17.7	17.6	17.3	17.1
32							16.2	16.2	15.9	15.7	15.5
34								14.8	14.6	14.5	14.1
36									13.4	13.2	13
38										12.1	12
40										11.2	11
42											10.1
44											
46											
48											
50											
52											
54											
56											
58											
60											
62											
64											
66											
68											
70											
注：Note	车身压重20t Body weights 20t										

主臂工况载荷表 Load table of main boom working condition

工作幅度(m) Working radius	主臂长度(m) Main boom length											
	51	54	57	60	63	66	69	72	75	78	81	84
5												
6												
7												
8												
9	78.2											
10	70.1	69	62.5									
12	57.9	57.1	56.2	53.1	47.3	42.5	36.9	33				
14	49	48.4	47.6	47	45.9	39.8	35.8	32	27	24.2	21.9	20.1
16	41.5	40.9	40.2	39.6	39.1	38.5	34.5	30.8	26.3	23.3	20.8	18.8
18	35.1	34.9	34.6	34.1	33.7	33	33.3	29.8	25.3	22.4	19.8	17.5
20	30.4	30.2	29.9	29.8	29.3	28.8	29.9	27.3	24.4	21.6	19.1	16.8
22	26.5	26.3	26.2	26	25.9	25.4	26.3	25.9	23.6	20.8	18.3	16
24	23.5	23.4	23	22.9	22.7	22.6	23.4	23	22.6	20	17.5	15.2
26	21	20.7	20.5	20.4	20.2	19.9	20.9	20.5	20.1	19.2	16.9	14.5
28	18.8	18.7	18.4	18.2	18	17.9	18.7	18.4	18	17.6	16.1	12.5
30	17	16.8	16.6	16.3	16.2	16	16.8	16.5	16.2	15.9	15.5	12
32	15.4	15.2	15.1	14.8	14.6	14.5	15.1	14.9	14.6	14.3	14	11.6
34	14	13.8	13.7	13.4	13.2	13	13.7	13.5	13.4	12.9	12.6	11
36	12.9	12.6	12.4	12.3	12.1	11.8	12.4	12.3	12	11.6	11.3	10.5
38	11.8	11.5	11.3	11.2	11	10.7	11.3	11	10.9	10.5	10.2	9.9
40	10.9	10.5	10.4	10.2	10.1	9.8	10.2	10.1	9.9	9.6	9.3	9
42	9.9	9.8	9.6	9.3	9.1	9	9.5	9.1	9	8.8	8.4	8
44	9.1	9	8.8	8.5	8.4	8.2	8.5	8.4	8.2	7.9	7.6	7.3
46		8.2	8	7.9	7.7	7.4	7.9	7.6	7.4	7.3	7	6.5
48		7.6	7.4	7.3	7	6.8	7.1	7	6.8	6.5	6.2	5.9
50			6.8	6.6	6.5	6.2	6.6	6.3	6.2	5.9	5.5	5.2
52				6	5.9	5.7	6	5.7	5.5	5.4	5.1	4.8
54					5.4	5.2	5.5	5.2	5.1	4.8	4.5	4.1
56						4.8	4.9	4.8	4.6	4.3	4	3.7
58						4.3	4.5	4.3	4.1	3.8	3.5	3.2
60							4.1	3.8	3.7	3.5	3.2	2.9
62								3.5	3.4	3	2.7	2.4
64									2.9	2.7	2.4	2.1
66									2.6	2.4	2.1	1.8
68										2.1	1.8	1.5
70											1.5	1.2
注：Note	车身压重20t Body weights 20t											