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# XGC80T 伸缩臂履带起重机

TELESCOPIC CRAWLER CRANE



地址(Add): 中国江苏省徐州市金山桥经济开发区桃山路19号 邮编(Postal Code): 221004  
No.19 Taoshan Road, Economic development zone of jinshanqiao,Xuzhou,Jiangsu Province,China  
统一服务热线(Unified service hotline): 86 400-110-9999

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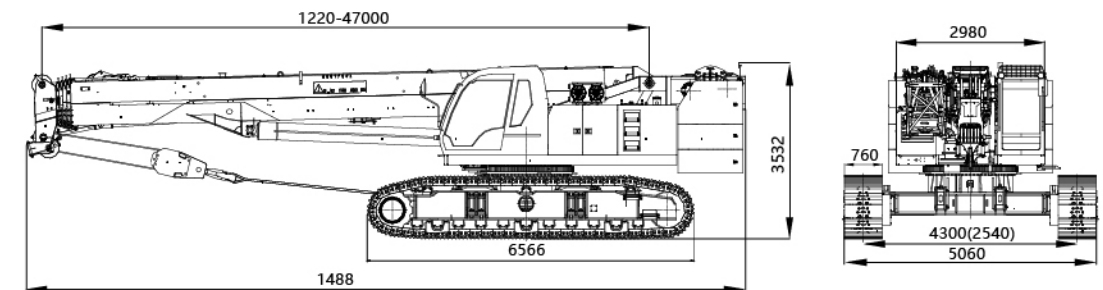
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### 主要技术参数

### The Main Technical Parameters

类别Type	项目Items	单位Unit	参数Data	
尺寸参数 Dimension	整机全长 Overall length	mm	14448	
	整机全宽(伸/缩) Overall width (extension/retraction)	mm	5060/3400	
	整机全高 Overall height	mm	3532	
	主、从动轮中心距 Central distance from drive roller to driven roller	mm	5525	
	履带板宽 Track shoe width	mm	760	
重量参数 Weight	行驶状态总质量 Total mass in travel state	kg	79985	
行驶参数 Travel	空载行驶速度 Max. travel speed with no load	km/h	2.5	
	满载行驶速度 Max. travel speed with full load	km/h	1.5	
	最小离地间隙 Min. ground clearance	mm	472	
	最大爬坡能力 Max. grade-ability	%	40	
	接地比压 Ground pressure	MPa	0.093	
动力参数 Power	发动机型号 Engine model	-	潍柴 WP7.270	
	发动机额定功率 Engine rated output power	KW	199	
	发动机额定转速 Engine rated rotation speed	r/min	2000	
	发动机排放标准 Engine emission standard	-	非道路三阶段	
容积参数 Capacity	液压油箱容积 Hydraulic oil tank	L	1000	
	燃油箱容积 Fuel tank	L	550	
主要性能参数 Main performance	最大额定总起重量 Max. rated lifting capacity	t	80	
	最小额定幅度 Min. rated working radius	m	2.8	
	最大起重力矩 Max. load moment	基本臂 Base boom	kN·m	2764
		最长主臂 Max. length boom	m	1443
	起升高度 Lifting height	基本臂 Base boom	m	11.6
		最长主臂 Max. length boom	m	46
		最长主臂 + 副臂 Max. length boom + Jib	m	62.1
	起重臂长度 Boom length	基本臂 Base boom	m	12.2
		最长主臂 Max. length boom	m	47
		最长主臂 + 副臂 Max. length boom + Jib	m	64.5
副臂安装角 Jib offset angle	°	0°、15°、30°		
工作速度 Working speed	主臂起臂时间 Boom raising time	s	60	
	主臂全伸时间 Boom full extension time	s	110	
	最大回转速度 Max. slewing speed	r/min	2.0	
	起升速度(空载四层) Hoisting speed( no load at the 4th layer)	主起升机构 Main winch system	m/min	140
		副起升机构 Auxiliary winch system	m/min	90

本印刷品所包含的数据，会随着产品的不断升级而改变，请以实际产品为准  
Pictures and data in this catalog will change with the update and modification of products, so please take the actual vehicle as reference.



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## 详细介绍 Brief Introduction

### 上车 / Crane Superstructure

#### 发动机/Engine

潍柴WP7.270发动机  
额定功率/转速: 199kW/2000rpm  
燃油箱: 有效容积550L。

Weifang Diesel WP7.270,  
rated power / speed: 199kW/2000rpm.  
Fuel tank: effective capacity 550L.

#### 起升机构/Hoist Gear

起升机构描述:  
空载起升速度: 0 ~ 140m/min  
钢丝绳直径/长度:  
主卷钢丝绳: 20mm/240m  
副卷钢丝绳: 20mm/150m  
额定单绳拉力: 7.1t

Hoist winch description:  
Hoisting speed with no load: 0 ~ 140m / min.  
Wire rope diameter / length:  
Main winch rope: 20mm/240m.  
Auxiliary winch rope: 20mm/150m.  
Rated single line pull: 7.1t.

#### 变幅机构/Luffing Gear

变幅机构描述: 单缸前支变幅  
主臂起升时间≤60S

Luffing winch description: single cylinder front support luffing  
Boom raising time≤60S

#### 液压系统/Hydraulic Gear

液压先导控制, 控制精准, 机动性好, 调速范围广。起重作业伸缩、变幅及起升液压系统与行驶作业液压系统共用一恒功率双泵, 回转系统和先导系统分别单独的齿轮泵供油。

The hydraulic system adopts electronic-proportional valve control, featuring precise control, excellent fine movement and wide speed range. The hydraulic system of telescoping, luffing, hoisting and travel operation shares the same double pump; swing system adopts closed type pump; and the pilot system gets oil supply from gear pump of displacement.

#### 回转机构/Slewing Unit

回转机构布置于转台右前端, 由马达驱动。  
行星减速机与回转支承齿轮外啮合进行回转, 具有自动滑转功能, 可调整臂架起重作用线与重物同铅直线, 保证作业安全。行星齿轮减速机具备常闭、片式制动器工作可靠维修方便。  
回转支承: 采用单排四点接触球式回转支承, 承载能力强, 保证上车360°回转作业安全、平稳。  
回转速度: 0 ~ 2.0r/min

Slewing gear is on the left of the behind of turntable and driven by motor.  
The planetary reducer is meshed with slewing bearing outer gear, hydraulic buffering, with free swing function to ensure operation safety. There is constant closed, disk-type brake for reliable operation and easy for maintenance.  
Slewing gear: 4-row column outer slewing gear, with strong bearing capacity, ensuring superstructure 360 ° swing operation safe and reliable.  
Swing speed: 0 ~ 2.0r/min

#### 电气控制系统/Electric Control System

采用ECU控制器, 脚油门, 手油门, 通过CAN实现对发动机转速的高效控制。  
系统采用供电方式为DC 24V, 负极搭铁单线制。采用PLC可编程控制器作为控制系统的核心, 系统由发动机控制、安全控制、先导控制、力矩限制器控制、辅助功能控制等几部分组成。通过显示器实时监测发动机水温、机油压力, 当超过安全临界值时, 蜂鸣器自动报警; 同时, 通过力矩器对当前工况的分析, 当吊重量、仰角或幅度任意一值超出安全范围时, 三色报警灯和蜂鸣器会发出“声光报警”并通过程序控制, 限制危险动作的进行。

Use of ECU controller, foot accelerator, hand accelerator, efficient control of the engine speed by CAN. The system uses DC 24V for power supply, negative ground and single cable system. PLC programmable controller is used as the core of the control system, the system consists of several parts such as engine control, safety control, pilot control, load moment limiter control, auxiliary function control. Real-time monitoring through the display of engine temperature, oil pressure, buzzer warning when the load exceeds the safety limit; at the same time, analysis of current conditions such as lifting load weight, boom elevation angler or radius through load moment limiter, if any values exceed safe limits, a three-color warning light and buzzer will give “sound and light warning”, and control and restriction of hazardous actions by program control.

### 下车 / Crane Carrier

下车包括车架、履带行走装置。车架和履带架采用插入式连接, 销轴固定。

Crane carrier comprises car-body, crawler track and travel gear.  
Car-body and crawler are using the piug-in connection.

#### 履带伸缩/Track Frame Extension/Retraction

通过履带伸缩油缸实现履带梁的扩张与收缩。方便转场及狭窄环境通过。

Retraction is achieved by track frame telescopic cylinder, facilitate site transition and narrow environment through.

#### 行走装置/Travel Device

有行走马达、减速机、驱动轮来实现整机的直线行走及转弯。空载行驶速度为0 ~ 2.5 km/h, 带载行驶速度为0 ~ 1.5 km/h。

It realizes crane straight travel and steer through travel motor, reducer and drive roller. Travel with no load speed: 0 ~ 2.5km/h; Travel with load speed: 0 ~ 1.5 km/h

#### 吊钩/Hook Block

名称	75t 吊钩	55t 吊钩	7t 吊钩
重量 (Kg)	700	470	150
数量	1	1	1

Name	75t hook block	55t hook block	7t hook block
Weight(kg)	700	470	150
Qty.	1	1	1

#### 平衡重/Counterweight

平衡重由上车平衡重与中央平衡重两部分组成。  
上车平衡重重量为21.5t; 中央平衡重由1块1.1t组成。

Counterweight system consists of superstructure and undercarriage counterweight. The superstructure counterweight total 21.5t; the undercarriage counterweight consists of two 1.1t counterweight slabs. The undercarriage counterweight must be installed during operation, and the superstructure counterweight is installed according acity and boom length.

### 安全装置 / Safety Devices

安全装置包括急停开关、先导控制开关、力矩限制器、起升高度限制器、水平仪、回转锁止装置、三圈保护器等。

Safety devices comprise: emergency stop switch、pilot control switch、load moment limiter、hoist limit switch、level meter、slewing locking device、rope-end limiter, etc.

#### 紧急停止/Emergency Stop Switch

按下急停开关, 发动机熄火, 整车动作停止。

Press the emergency stop switch to stop the engine, and to stop all the machine movements.

#### 先导控制开关/Pilot Control Switch

按下开关后, 起重作业电气系统才能正常操作。

Press the switch, the electric system for lifting operation starts to a normal work.

#### 力矩限制器/LMI

当吊重量大于额定起重量, 吊臂仰角超出额定范围时, 或幅度超出额定范围时, 力矩器会发出信号, 限制危险动作的继续进行。

The LMI will send our alarm signal to prevent dangerous movement when the lifting capacity exceeds the rated capacity, boom angle exceeds rated area or radius exceeds rated area.

#### 起升高度限位器/Hoist Limit Switch

由主、副臂端部限位开关和重锤构成, 当吊钩中心起升至距吊臂滑轮中心约710mm时, 起升动作自动停止。

It consists of boom and jib end limit switch and the weight, which will automatically stop the hoisting movement when hook block center is raised 710mm to boom sheave center.

#### 水平仪/Level Meter

转台内部、回转支承上方装有水平仪, 监控地面是否满足作业要求。

A level meter is set inside the turntable and on the top of swing, to monitor the ground surface for operation requirements.

#### 回转锁止装置/Slewing Locking Device

保证运输时转台有效锁止, 防止其自由滑转。

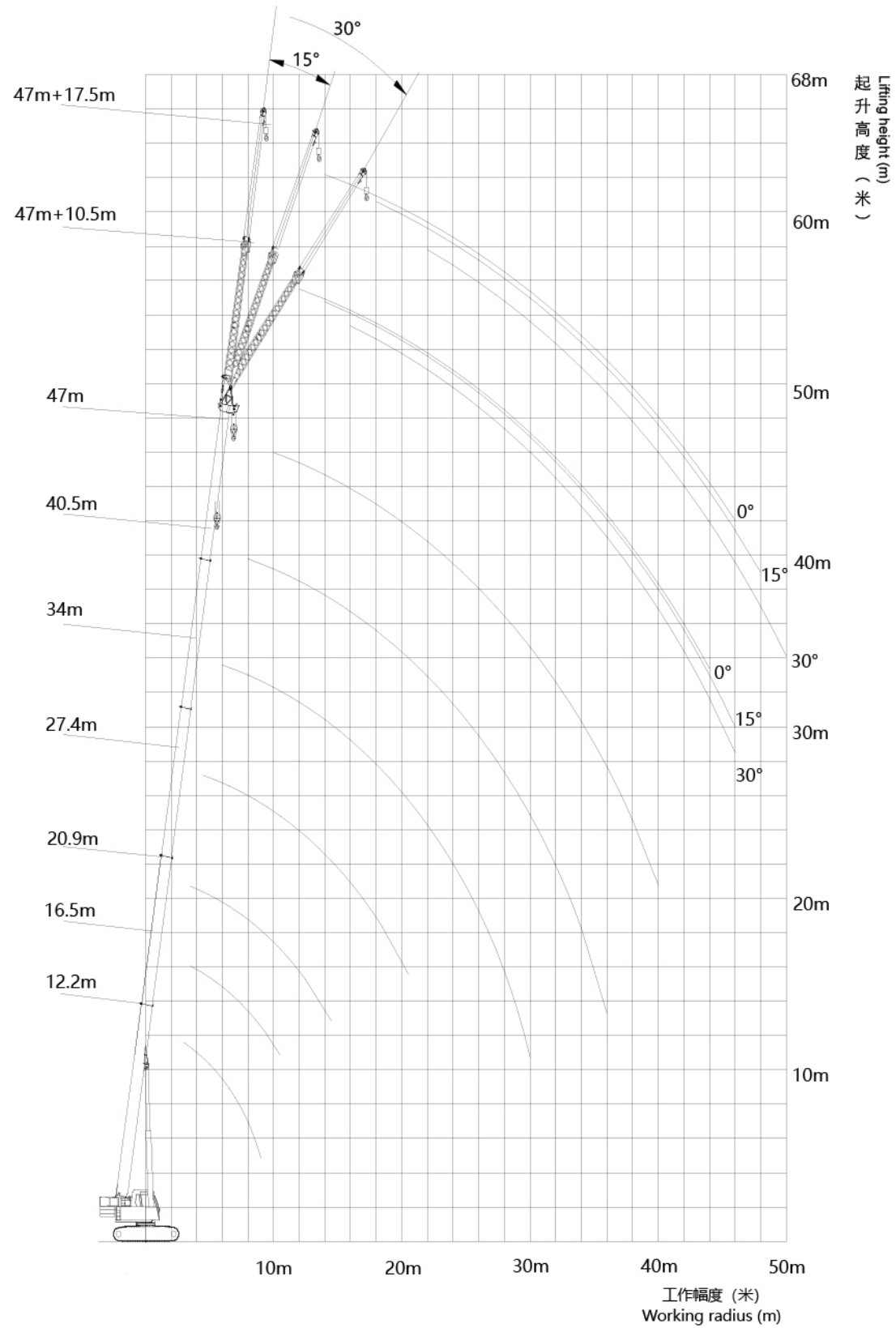
The device is used to lock the turntable during transport to avoid free swing.

#### 三圈保护器/Rope-end Limiter

当吊钩下降至卷扬钢丝绳剩余三至五圈时, 落钩自动停止。

The device is used to stop hook block lowering when the hook block lowering down and only three to five turns of wire rope left on the winch drum.

作业范围图  
Working Area



主臂起重性能表  
Boom Lifting Load Chart

主臂工况, 履带全伸, 21.5t上车平衡重, 静止吊载  
Boom working condition, crawler fully extends, 21.5t counterweight, static lifting

幅度/臂长 Radius/Boom length (m)	12.2	16.5	20.9	27.4	34	40.5	47
2.8	80						
4	68	61	42				
5	56.4	55	42				
6	40.5	46.7	39	27.5			
7	31.1	34.8	34.5	27.5	22		
8	24.8	27.3	27	26	21	17	
9	20.4	22.1	21.9	23.8	20	15.8	
10		18.4	18.1	19.9	19	15.2	11.5
12		15.5	15.3	16.9	14.2	14.7	10.5
14		11.3	11.2	12.7	11.1	11.5	10
16			8.5	9.8	8.8	9.2	9.5
18			6.4	7.8	7.1	7.5	7.8
20				6.2	5.8	6.2	6.5
22				5	4.8	5.2	5.4
24				4	3.9	4.3	4.6
26					3.2	3.6	3.9
28					2.6	3	3.2
30					2.1	2.5	2.7
32						2	2.3
34						1.6	1.9
36						1.3	1.5
38							1.2
倍率	12	10	7	5	4	3	3
最大仰角	68.7	73.4	74.8	77.3	78.1	79.5	79.3
最小仰角	25.4	42.8	40.1	37.3	21.6	22.7	35.3

**主臂起重性能表**  
**Boom Lifting Load Chart**

主臂工况,履带全伸,15.5t上车平衡重,静止吊载  
Boom working condition,crawler fully extends,15.5t counterweight,static lifting

幅度/臂长 Radius/Boom length (m)	12.2	16.5	20.9	27.4	34	40.5	47
2.8	80						
4	68	61	42				
5	47	55	42				
6	33.4	38.7	39	27.5			
7	25.5	28.6	34.5	27.5	22		
8	20.2	22.2	27	23.2	21	17	
9	16.5	17.9	21.9	18.8	17.8	15.8	
10		14.7	18.1	15.6	15	15.2	11.5
12		12.3	15.3	13.1	11	11.5	10.5
14		8.7	11.2	9.7	8.4	8.8	9.1
16			8.5	7.3	6.6	7	7.3
18			6.4	5.6	5.2	5.6	5.8
20				4.3	4.1	4.5	4.8
22				3.3	3.3	3.6	3.9
24				2.5	2.6	2.9	3.2
26					2	2.3	2.6
28					1.5	1.8	2.1
30					1.1	1.4	1.7
32						1	1.3
倍率	12	10	7	5	4	3	3
最大仰角	68.7	73.4	74.8	77.3	78.1	79.5	79.3
最小仰角	25.4	42.8	40.1	37.3	21.6	36.2	47.6

主臂工况,履带全伸,8.5t上车平衡重,静止吊载  
Boom working condition,crawler fully extends,8.5t counterweight,static lifting

幅度/臂长 Radius/Boom length (m)	12.2	16.5	20.9	27.4	34	40.5	47
2.8	80						
4	60.5	61	42				
5	37.5	46	42				
6	26.4	30.6	30.3	27.5			
7	19.9	22.4	22.1	27.5	21.4		
8	15.6	17.2	16.9	26	17	17	
9	12.6	13.6	13.4	23.8	13.9	14.3	
10		11	10.8	19.9	11.5	12	11.5
12		9	8.8	16.9	8.3	8.7	9
14		6.1	6	12.7	6.2	6.6	6.9
16			4.1	9.8	4.6	5	5.3
18			2.7	7.8	3.5	3.9	4.1
20				6.2	2.6	3	3.2
22				5	1.9	2.3	2.5
24				4	1.3	1.7	1.9
26						1.2	1.5
28							1
倍率	12	10	7	5	4	3	3
最大仰角	68.7	73.4	77.7	77.3	78.1	79.5	79.3
最小仰角	68.7	29.6	29.2	37.3	43.2	49.8	54.3

**主臂起重性能表**  
**Boom Lifting Load Chart**

主臂工况, 履带全伸, 0t上车平衡重, 静止吊载  
Boom working condition, crawler fully extends, 0t counterweight, static lifting

幅度/臂长 Radius/Boom length (m)	12.2	16.5	20.9	27.4	34	40.5	47
2.8	80						
4	46	61	34.1				
5	28	34.5	34.1				
6	19.4	22.6	22.3	23.9			
7	14.4	16.2	15.9	17.3	15.8		
8	11	12.1	11.9	13.1	12.4	12.9	
9	8.6	9.4	9.1	10.3	9.9	10.4	
10		7.3	7.1	8.2	8.1	8.6	8.9
12		5.8	5.6	6.7	5.6	6	6.3
14		3.6	3.4	4.5	3.9	4.3	4.6
16			2	2.9	2.7	3.1	3.4
18				1.9	1.8	2.2	2.4
20				1	1.1	1.5	1.7
22							1.2
倍率	12	10	6	4	3	3	3
最大仰角	68.7	73.4	77.7	77.3	78.1	79.5	79.3
最小仰角	25.4	29.6	40.1	44.3	52.9	60.8	63.3

主臂工况, 履带全伸, 21.5t上车平衡重, 带载行驶  
Boom working condition, crawler fully extends, 21.5t counterweight, travel with a load

幅度/臂长 Radius/Boom length (m)	12.2	16.5	20.9	27.4
3	52.5			
4	47.6	42.7		
5	35.21	38.5	29.4	
6	25.2	29.12	27.3	19.2
7	19.32	21.63	21.49	19.2
8	15.47	17.01	16.8	17.64
9	12.74	13.79	13.65	14.35
10		11.41	11.27	11.97
12		9.66	9.52	10.22
14		6.9	7	7.63
16			5.32	5.95
18			3.9	4.69
20				3.71
22				3.01
倍率	9	7	5	4
最大仰角	68.7	73.4	74.8	77.3
最小仰角	25.4	42.8	40.1	37.3

**臂端单滑轮起重性能表**  
**Boom Single Pulley Lifting Load Chart**

臂端单滑轮工况，履带全伸，21.5t上车平衡重，静止吊载  
 Boom single pulley working condition, crawler fully extends, 21.5t counterweight, static lifting

幅度/臂长 Radius/Boom length (m)	12.2	16.5	20.9	27.4	34	40.5	47
3	6.5						
4	6.5	6.5	6.5				
5	6.5	6.5	6.5				
6	6.5	6.5	6.5	6.5			
7	6.5	6.5	6.5	6.5	6.5		
8	6.5	6.5	6.5	6.5	6.5	6.5	
9	6.5	6.5	6.5	6.5	6.5	6.5	
10		6.5	6.5	6.5	6.5	6.5	6.5
12		6.5	6.5	6.5	6.5	6.5	6.5
14		6.5	6.5	6.5	6.5	6.5	6.5
16			6.5	6.5	6.5	6.5	6.5
18			6.4	6.5	6.5	6.5	6.5
20				6.2	5.8	6.2	6.5
22				5	4.8	5.2	5.4
24				4	3.9	4.3	4.6
26					3.2	3.6	3.9
28					2.6	3	3.2
30					2.1	2.5	2.7
32						2	2.3
34						1.6	1.9
36						1.3	1.5
38							1.2
倍率	1	1	1	1	1	1	1
最大仰角	68.7	73.4	77.7	77.3	78.1	79.5	79.3
最小仰角	25.4	29.6	29.2	28.6	21.6	22.7	35.3

**副臂起重性能表**  
**Jib Lifting Load Chart**

副臂工况，履带全伸，21.5t上车平衡重，静止吊载  
 Jib working condition, crawler fully extends, 21.5t counterweight, static lifting

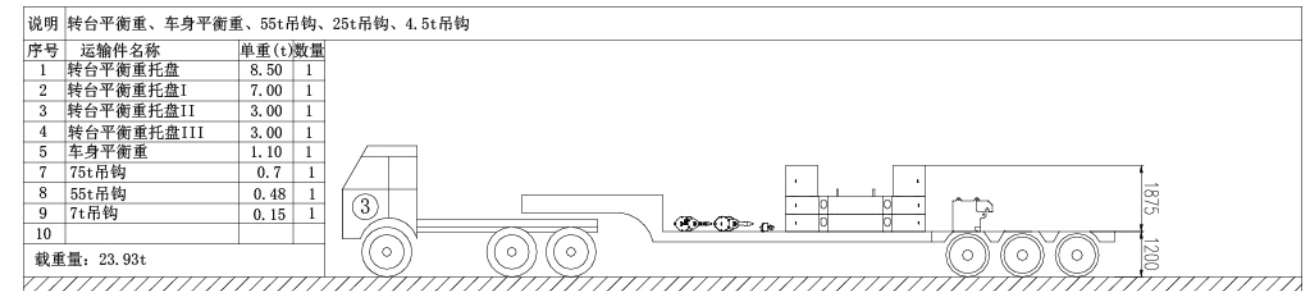
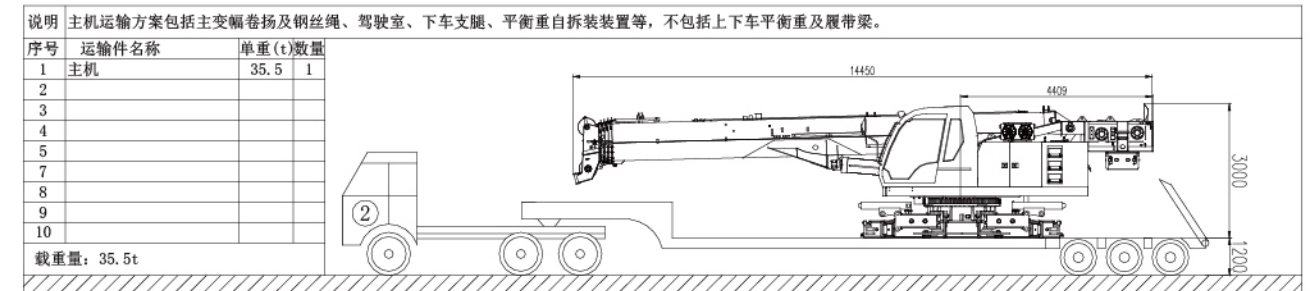
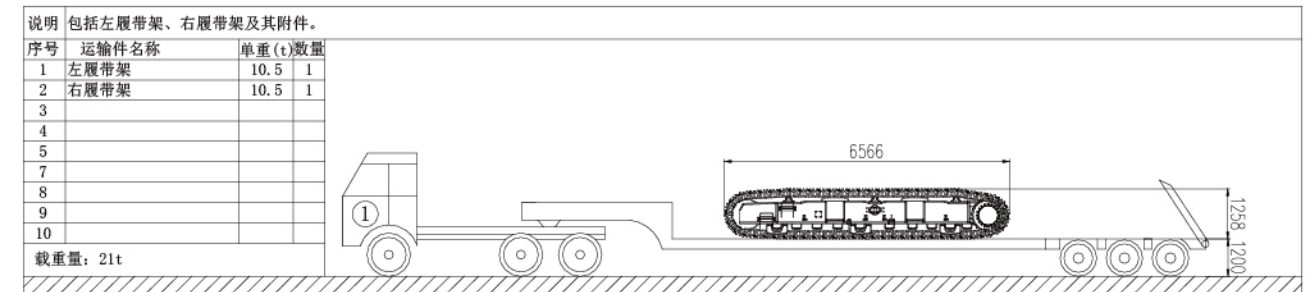
臂长 Boom length	主臂长度47米 Boom length 47m					
	副臂长度10.5米 Jib length 10.5m					
幅度 Radius (m)	0°		15°		30°	
	起重量(t) Lifting load(t)	起升高度(m) Lifting height(m)	起重量(t) Lifting load(t)	起升高度(m) Lifting height(m)	起重量(t) Lifting load(t)	起升高度(m) Lifting height(m)
11	5.50	55.8				
12	4.94	55.5	4.05	55.2		
14	4.69	54.9	3.95	54.7	3.73	53.9
16	4.54	54.2	3.95	54	3.59	53.3
18	4.54	53.5	3.86	53.3	3.32	52.5
20	4.44	52.7	3.64	52.5	3.14	51.7
22	4.13	51.7	3.41	51.5	2.95	50.8
24	3.83	50.7	3.18	50.5	2.82	49.7
26	3.57	49.6	3.00	49.4	2.73	48.6
28	3.27	48.4	2.86	48.2	2.59	47.3
30	2.8	47.1	2.68	46.8	2.50	46
32	2.4	45.6	2.59	45.4	2.41	44.5
34	2	44	2.2	43.8	2.3	42.8
36	1.7	42.3	1.8	42	1.9	41
38	1.4	40.4	1.5	40.1	1.6	39
40	1.1	38.3	1.2	38	1.3	36.8
42	0.9	36	1	35.6	1.1	34.4
44	0.7	33.3	0.8	32.9	0.8	31.6
46			0.6	29.9	0.6	28.5

## 副臂起重性能表 Jib Lifting Load Chart

副臂工况,履带全伸, 21.5t上车平衡重, 静止吊载  
Jib working condition, crawler fully extends, 21.5t counterweight, static lifting

臂长 Boom length		主臂长度47米 Boom length 47m					
副臂长 Jib length		副臂长度17.5米 Jib length 17.5m					
幅度 Radius (m)	0°		15°		30°		
	起重量(t) Lifting load(t)	起升高度(m) Lifting height(m)	起重量(t) Lifting load(t)	起升高度(m) Lifting height(m)	起重量(t) Lifting load(t)	起升高度(m) Lifting height(m)	
14	3.3	62.1					
16	2.9	61.5	2.4	61.1			
18	2.7	60.9	2.2	60.6		53.9	
20	2.45	60.2	2.1	59.8	1.7	53.3	
22	2.20	59.4	1.95	59	1.6	52.5	
24	2.05	58.5	1.85	58.1	1.55	51.7	
26	1.9	57.5	1.75	57.1	1.5	50.8	
28	1.75	56.5	1.65	56.1	1.45	49.7	
30	1.7	55.3	1.55	56.1	1.4	48.6	
32	1.6	54.1	1.55	53.7	1.35	47.3	
34	1.45	52.8	1.4	52.3	1.3	46	
36	1.35	51.3	1.35	50.9	1.25	44.5	
38	1.3	49.7	1.3	49.3	1.2	42.8	
40	1.25	48	1.25	47.6	1.15	41	
42	1.1	46.2	1.2	45.7	1.15	39	
44	0.9	44.2	1.1	43.6	1.1	36.8	
46	0.7	42	0.9	41.4	1	34.4	
48			0.7	38.9	0.8	31.6	
50					0.6	28.5	

## 整机运输方案 Transport Planning



### 备注:

- 图中尺寸均为设计尺寸, 由于制造误差, 可能稍有不同。
- 运输时主机和履带架前后应该加垫木, 防止在运输过程中发生滑动。
- 以上零部件运输尺寸为示意图, 未按比例绘制, 不包含包装。
- 图示高度尺寸, 含板车高度 (1m) 和枕木高度 (150mm)。

### Note:

- The dimension in the diagram is design dimension which will be slightly different according to manufacturing error.
- Place wood block in front and behind track frame to prevent slide during transport.
- The transport dimension is sketch map, not drawn in proportion, and the dimension on the diagram is design value without package.