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# QUY80/QUY80A/QUY80E 履带起重机

QUY80/QUY80A/QUY80E CRAWLER CRANE

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QUY80  
QUY80A  
QUY80E  
CRAWLER CRANE

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Pictures and data in this catalog will change with the update and modification of products, so please take the actual vehicle as reference.

## 徐工集团 工程机械股份有限公司建设机械分公司

XCMG, CONSTRUCTION MACHINERY CO., LTD. BUILDING MACHINERY CO.

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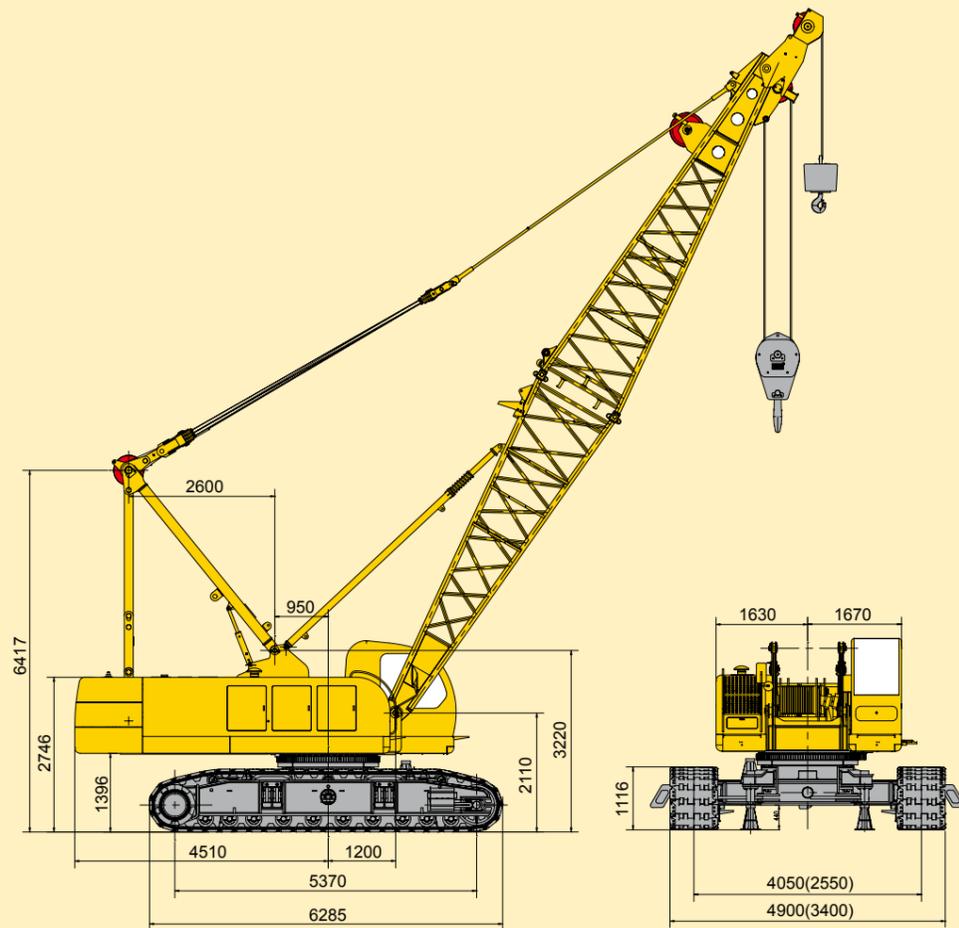
# 技术性能参数/整机基本尺寸 Technical Specification/Overall Dimension

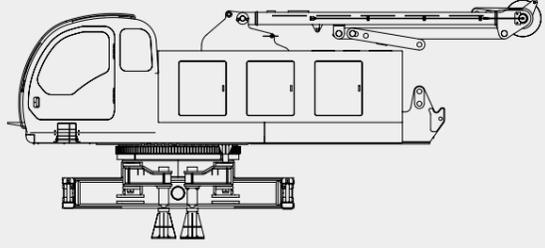
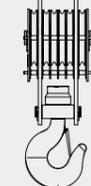
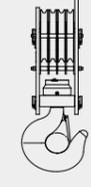
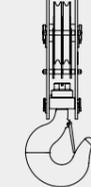
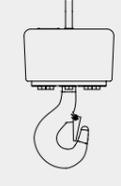
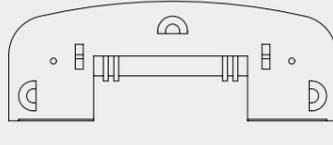
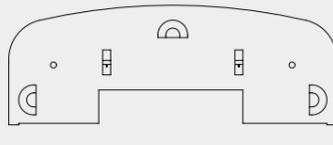
# 主要零部件 Main Parts

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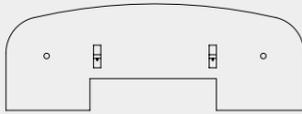
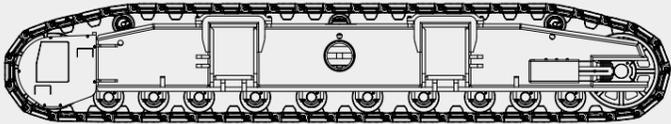
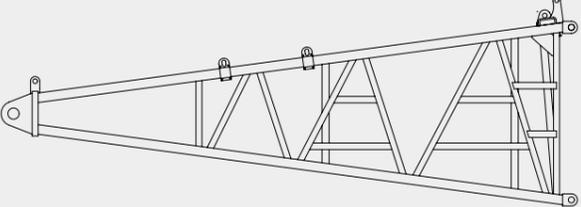
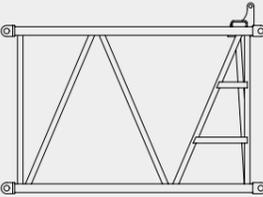
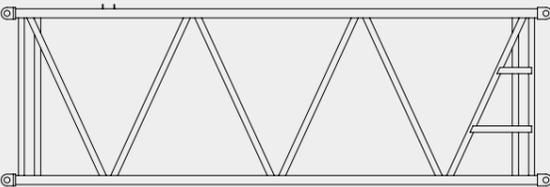
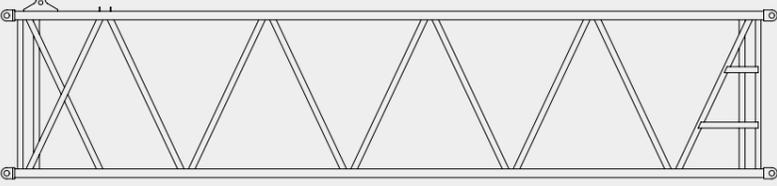
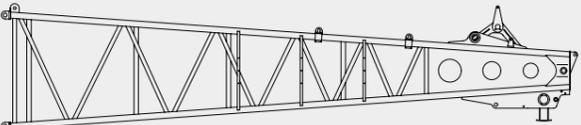
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项目 Items	单位 Unit	数值 Data	
基本型主臂 Basic boom	t	80	
最大额定起重量 Max. rated lifting capacity	固定副臂 Fixed jib	t	6.5
	臂端单滑轮 Boom single top	t	7.5
最大起重力矩 Max. load moment	t.m	344	
主臂长度 Boom length	m	13~58	
主臂变幅角度 Boom elevating angle	°	30~80	
固定副臂长度 Fixed jib length	m	9~18	
起升机构最大单绳速度 (空载、第五层) Winch mechanism max. single line speed (no load, at 5th layer)	m/min	120	
主臂变幅机构最大单绳速度 (第一层) Boom elevating mechanism max. single line speed (at 1st layer)	m/min	57	
最大回转速度 Max. slewing speed	m/min	2	
最高行驶速度 Max. traveling speed	km/h	1.2	
爬坡度 Grade ability	%	30	
平均接地比压 Average ground pressure	MPa	0.087	
发动机功率 Engine power	kW	200(QUY80E183)	
整机质量(主吊钩, 13米臂) Mass of the vehicle as a whole (including main hook block and 13m boom)	t	78	
运输状态单件最大质量 Max. mass of single unit in travel configuration	t	28	
运输状态单件最大尺寸 (长×宽×高) Max. dimension of single unit in travel configuration (L×W×H)	m	6.5×3.4×3.5	

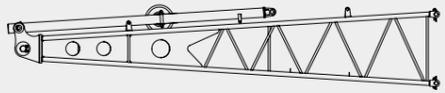
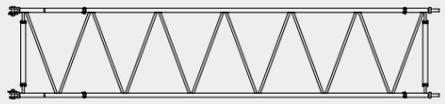
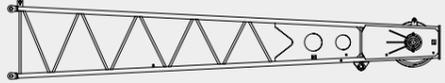


	<b>主机</b> Main Unit × 1 <table border="1"> <tr><td>长L</td><td>7800mm</td></tr> <tr><td>宽W</td><td>3400mm</td></tr> <tr><td>高H</td><td>3350mm</td></tr> <tr><td>重量 Weight</td><td>28000kg</td></tr> </table>	长L	7800mm	宽W	3400mm	高H	3350mm	重量 Weight	28000kg
长L	7800mm								
宽W	3400mm								
高H	3350mm								
重量 Weight	28000kg								
	<b>80t吊钩</b> Capacity Hook Block × 1 <table border="1"> <tr><td>长L</td><td>1800mm</td></tr> <tr><td>宽W</td><td>800mm</td></tr> <tr><td>高H</td><td>700mm</td></tr> <tr><td>重量 Weight</td><td>950kg</td></tr> </table>	长L	1800mm	宽W	800mm	高H	700mm	重量 Weight	950kg
长L	1800mm								
宽W	800mm								
高H	700mm								
重量 Weight	950kg								
	<b>50t吊钩</b> Capacity Hook Block × 1 <table border="1"> <tr><td>长L</td><td>1720mm</td></tr> <tr><td>宽W</td><td>800mm</td></tr> <tr><td>高H</td><td>600mm</td></tr> <tr><td>重量 Weight</td><td>750kg</td></tr> </table>	长L	1720mm	宽W	800mm	高H	600mm	重量 Weight	750kg
长L	1720mm								
宽W	800mm								
高H	600mm								
重量 Weight	750kg								
	<b>26t吊钩</b> Capacity Hook Block × 1 <table border="1"> <tr><td>长L</td><td>1650mm</td></tr> <tr><td>宽W</td><td>800mm</td></tr> <tr><td>高H</td><td>600mm</td></tr> <tr><td>重量 Weight</td><td>450kg</td></tr> </table>	长L	1650mm	宽W	800mm	高H	600mm	重量 Weight	450kg
长L	1650mm								
宽W	800mm								
高H	600mm								
重量 Weight	450kg								
	<b>8t吊钩</b> Capacity Hook Block × 1 <table border="1"> <tr><td>长L</td><td>700mm</td></tr> <tr><td>宽W</td><td>400mm</td></tr> <tr><td>高H</td><td>400mm</td></tr> <tr><td>重量 Weight</td><td>250kg</td></tr> </table>	长L	700mm	宽W	400mm	高H	400mm	重量 Weight	250kg
长L	700mm								
宽W	400mm								
高H	400mm								
重量 Weight	250kg								
	<b>上车1号配重</b> Superstructure counterweight I × 1 <table border="1"> <tr><td>长L</td><td>3300mm</td></tr> <tr><td>宽W</td><td>1200mm</td></tr> <tr><td>高H</td><td>460mm</td></tr> <tr><td>重量 Weight</td><td>9100kg</td></tr> </table>	长L	3300mm	宽W	1200mm	高H	460mm	重量 Weight	9100kg
长L	3300mm								
宽W	1200mm								
高H	460mm								
重量 Weight	9100kg								
	<b>上车2号配重</b> Superstructure counterweight II × 1 <table border="1"> <tr><td>长L</td><td>3300mm</td></tr> <tr><td>宽W</td><td>1200mm</td></tr> <tr><td>高H</td><td>430mm</td></tr> <tr><td>重量 Weight</td><td>9000kg</td></tr> </table>	长L	3300mm	宽W	1200mm	高H	430mm	重量 Weight	9000kg
长L	3300mm								
宽W	1200mm								
高H	430mm								
重量 Weight	9000kg								

# 主要零部件 Main Parts

	<b>上车3号配重</b> Superstructure counterweight III × 1 长L 3300mm 宽W 1200mm 高H 440mm 重量 Weight 8900kg
	<b>履带架</b> Track Frame × 2 长L 6300mm 宽W 1100mm 高H 1100mm 重量 Weight 9500kg
	<b>6.5米主臂底节臂</b> Boom Butt × 1 长L 6705mm 宽W 1630mm 高H 2000mm 重量 Weight 1200kg
	<b>主臂3米节</b> Boom Insert × 1 长L 3130mm 宽W 1630mm 高H 1780mm 重量 Weight 400kg
	<b>主臂6米节</b> Boom Insert × 1 长L 6130mm 宽W 1630mm 高H 1780mm 重量 Weight 700kg
	<b>主臂9米节</b> Boom Insert × 4 长L 9130mm 宽W 1630mm 高H 1780mm 重量 Weight 1000kg
	<b>6.5米主臂顶节臂</b> Boom top × 1 长L 6975mm 宽W 1630mm 高H 1780mm 重量 Weight 1500kg

# 主要零部件 Main Parts

	<b>4.5米固定副臂底节臂</b> Fixed Jib Butt × 1 长L 4700mm 宽W 900mm 高H 900mm 重量 Weight 420kg
	<b>4.5米固定副臂中间节</b> Fixed Jib Insert × 4 长L 4610mm 宽W 900mm 高H 900mm 重量 Weight 350kg
	<b>4.5米固定副臂顶节臂</b> Fixed Jib top × 1 长L 4960mm 宽W 900mm 高H 900mm 重量 Weight 280kg

## 说明 Notes

- 以上零部件运输形状为示意图，所标尺寸为设计值，不包括包装。  
The above part figures are only sketch maps, which are not drawn on actual sizes. The dimensions shown are design values and don't include package.
- 重量为设计值，由于制造误差，可能稍有不同。  
The weight is design value, may have slight difference due to error in manufacture.

# 详细介绍 Detailed Introduction

## 上 车

### 发动机

**QUY80:** 采用沃尔沃原装进口TAD722VE六缸、水冷、增压、中冷电喷发动机，额定功率200kW，额定转速为2100rpm，最大输出扭矩1050N•m。排放符合欧洲工程机械第二阶段排放标准。

**QUY80A:** 采用上柴SC9D272G2六缸、水冷、增压、中冷电喷发动机，额定功率200kW，额定转速为1800rpm，最大输出扭矩1050N•m。排放符合国II排放标准。

**QUY80E:** 采用进口康明斯QSC六缸、水冷、增压、中冷电喷发动机，额定功率183kW，额定转速为2000rpm，最大输出扭矩1268N•m。排放符合欧洲工程机械第三阶段排放标准。

### 控制系统

智能化计算机集成式可编程控制系统，是该产品的关键核心技术，采用PLC可编程控制器，并与常规电气相结合，完成系统的逻辑控制与液比例控制功能，实现起重机的自动控制，大大提高起重机的作业安全性、可靠性和作业效率。本机的操作可以通过电脑的大屏幕显示出来，很方便的实现了人机对话。

### 液压系统

采用液比例控制，开闭式回路相结合，恒功率变量泵系统。  
液压系统组成：起升系统，变幅系统，回转系统，行走系统，辅助安装系统。  
特点：起升系统、变幅系统、行走系统采用开式系统，主泵为恒功率变量泵，液压先导控制变量，具有功率限制，压力切断功能，可以满足多个执行元件动作要求。回转系统采用闭式系统，响应快，控制精准，起制动、换向平稳，无冲击。可以满足频繁换向，微动操作。

### 起升机构

**QUY80 QUY80E:** 主、副起升型号相同，单独驱动；片式常闭制动器，力士乐内藏式减速机。主、副起升机构与转台采用销轴连接，便于组装。驱动马达、平衡阀均为德国进口。最大速度可达120m/min，具有优良的微速性能，起升机构还具有换油方便、低噪音、高效率、长寿命等特性。

**QUY80A:** 主、副起升型号相同，单独驱动；片式常闭制动器，泰安福神减速机。主、副起升机构与转台采用销轴连接，便于组装。贵州力源马达。最大速度可达120m/min，具有优良的微速性能，起升机构还具有换油方便、低噪音、高效率、长寿命等特性。

### 变幅机构

**QUY80 QUY80E:** 变幅机构为独立驱动 采用内藏式减速机（力士乐公司），片式常闭制动器。卷筒设有棘轮锁止装置，以实现机械制动，安全可靠。驱动马达、平衡阀、为德国进口。

**QUY80A:** 变幅机构为独立驱动，采用泰安福神减速机，片式常闭制动器。卷筒设有棘轮锁止装置，以实现机械制动，安全可靠。贵州力源马达。

### 回转机构

**QUY80 QUY80E:** 回转机构布置在转台左侧，行星减速机（力士乐公司）与回转支承外啮合。液压缓冲，具有自由滑转机能。行星齿轮减速机，可控常闭、片式制动器，工作可靠，维修方便。

**QUY80A:** 回转机构布置在转台左侧，泰安福神减速机与回转支承外啮合。液压缓冲，具有自由滑转机能。行星齿轮减速机，可控常闭、片式制动器，工作可靠，维修方便。

## Crane Superstructure

### Engine

**QUY80:** It is a VOLVO original 6-cylinder, water cooled, supercharging intercooled and electric jet TAD722VE engine with rated output power 200kW, rated speed 2100 rpm and maximum output torque 1050N.m. Its emission complies with the Euro II standard

**QUY80A:** It is a 6-cylinder in-line, water cooled, supercharging intercooled and electric jet SC9D272G2 engine from Shanghai Diesel, with rated output power of 200kW, rated speed of 1800 rpm and maximum output torque of 1050N.m. Its emission complies with the China II emission standard.

**QUY80E:** It is a Cummins original 6-cylinder, water cooled, supercharging and intercooled electric jet QSC engine with rated output power 183kW, rated speed 2000 rpm and maximum output torque 1268N.m. Its emission complies with the Euro III standard

### Control System

Intelligent computer integrated programmable control system is the key technology of the crane. PLC programmable controller is used, in combination with conventional electrics, to realize the logic and the hydraulic proportional control functions of the system, and to improve safety, reliability and efficiency of the crane operation. Crane operation can be shown by a larger computer display, which is convenient for man-machine interaction.

### Hydraulic System

It takes hydraulic proportional control, close/open type circuit, constant power and variable displacement pump system.  
Hydraulic system: winch system, elevating system, slewing system, propel system, auxiliary assembly system.  
Features: winch, elevating and propel systems use open type system; main pump is a constant power and variable displacement pump, wherein, variable displacement is controlled by hydraulic pilot, with the function of power limit and pressure cut-off. Main pump may satisfy the requirement of multiple actuator movement. Slewing system takes close type system, with the advantages of quick response, accurate control, stable starting, braking and direction changing, no impact, can satisfy the operation of frequent direction changing and fine motion.

### Winch System

The main and auxiliary winch systems of QUY80 and QUY80E have the same model and are driven independently. This model takes disc type constant closed brake and Rexroth built-in speed reducer. The main/auxiliary winches are connected with turntable by pin shafts, easy for assembly. The driving motor and balance valve are both Germany imported. The maximum speed is 120m/min, with good fine speed performance. The winch system also features easy oil replacement, low noise, high efficiency and long service life. The main and auxiliary winch systems of QUY80A have the same model and are driven independently. This model takes disc type constant closed brake and Taian Fu Shen built-in speed reducer. The main/auxiliary winches are connected with turntable by pin shafts, easy for assembly. The driving motor is from Guizhou LiYuan company. The maximum speed is 120m/min, with good fine speed performance. The winch system also features easy oil replacement, low noise, high efficiency and long service life.

### Elevating System

QUY80/QUY80E: Boom elevating is driven separately and has built-in speed reducer (Rexroth), and disc-type constant closed brake; winch drum has a ratchet locking device to realize safely and reliably mechanical braking. Driving motor and balance valve are both imported from Germany.  
QUY80A: Boom elevating is driven separately and has built-in speed reducer (Taian Fu Shen), and disc-type constant closed brake; winch drum has a ratchet locking device to realize safely and reliably mechanical braking. Driving motor is from Guizhou LiYuan company.

### Slewing System

QUY80/QUY80E: Slewing system is arranged at the left of the turntable. The planetary reducer (Rexroth) is internal meshed with the slewing ring. It has the function of hydraulic buffering and free sliding. Controllable constant-closed disc brake of the planetary reducer works reliably and is easy for maintenance.  
QUY80A: Slewing system is arranged at the left of the turntable. The planetary reducer (Taian Fu Shen) is internal meshed with the slewing ring. It has the function of hydraulic buffering and free sliding. Controllable constant-closed disc brake of the planetary reducer works reliably and is easy for maintenance.

# 详细介绍 Detailed Introduction

### 回转支承

采用徐州罗特艾德公司的回转支承，质量稳定可靠。

### 上车配重

上车1号配重：1，共1块；

上车2号配重：1，共1块；

上车3号配重：1，共1块；

### 操纵室

操纵室采用钢制框架结构，正面配置有整体式夹层玻璃，其余玻璃均为钢化玻璃。装有可调式座椅、按人机工程学布置的全套操纵仪表和控制装置，配置风道式冷暖空调、音响、灭火装置、闭路监视系统等，宽敞舒适。

### 转台

转台采用箱型与单腹板混合的结构，该结构整体稳定性好。转台是联系上下车的关键承载结构件。转台通过回转支承与下车进行连接。驾驶室、起升机构、变幅机构、发动机、人字架、桅杆、臂架及配重等分别与转台在不同部位进行连接。

## 下 车

下车包括车架、履带架、行走机构。车架和履带架采用插入式连接，履带架具有伸缩功能。

### 车架

车架采用高强度板、箱形结构，中间设置横隔板，加强其抗扭刚度，结构简单，承载能力强，刚性好。

### 履带架

包括履带梁和四轮一带。履带梁采用箱形结构，和车架连接部位局部加强，中间设置横隔板。两个履带架对称布置，装有宽度为0.85m的履带板。

### 行走机构

**QUY80 QUY80E:** 履带行走驱动采用德国进口的内藏式行星齿轮减速机，液压释放行走制动器，每个减速机由德国进口的轴向柱塞马达驱动，可同步操作，也可单独操纵，以实现直行和转弯。

**QUY80A:** 履带行走驱动采用泰安福神减速机，液压释放行走制动器，上海液压厂马达，可同步操作，也可单独操纵，以实现直行和转弯。

### 行走速度

变量泵可以实现无级变速，最高速度1.2公里/小时。

### Slewing Bearing

It takes the slewing bearing made by Xuzhou Rothe Erde, with stable and reliable quality.

### Superstructure Counterweight

Superstructure Counterweight I: 1slab  
Superstructure Counterweight II: 1 slab  
Superstructure Counterweight III: 1 slab

### Operator's Cabin

Operator's cabin is steel frame structure. Its front windshield is provided with overall sandwich glass, other glass is all hardened glass. Equipped with adjustable seat, a set of ergonomic designed instruments and control devices, air-conditioner, CD player, fire extinguisher and so on, the cabin is comfortable.

### Turntable

Turntable is a mixed structure of box type and single web plate, with good overall stability. Turntable is a key structural part linking crane superstructure with and crane carrier for load bearing. It connects with the carrier through slewing bearing. Operator's cabin, winch system, elevating system, engine, gantry, mast, boom and counterweight etc. respectively connect with the turntable at different positions.

## Lower structure

Lower structure comprises car-body, track frame, and propel unit. Car-body and track frame take insert-type connection. Track frame has the function of telescoping.

### Car-body

Car-body uses high strength steel box-shape structure. With cross panel installed in the middle to strengthen its stiffness against torsion, it features simple structure, high loading capacity and well rigidity.

### Track Frame

Track frame consists of track beam, drive sprocket, idler wheel, upper roller, lower roller and track. Crawler beam takes box-shape structure. Its connection position with frame is strengthened partially, and cross panel is installed in the middle of it. Two track frames are symmetrically arranged, with track blocks of 0.76m width.

### Propel Unit

QUY80/QUY80E: Propel unit has Germany imported built-in planetary gear reducer and hydraulic release service brake; can be operated synchronously or independently to realize straight traveling and turning around. Each reducer is driven by German imported axial piston motor.  
QUY80A: Propel unit has Taian Fu Shen built-in planetary gear reducer and hydraulic release service brake, can be operated synchronously or independently to realize straight traveling and turning around. Motor is from Shanghai Hydraulic Company.

### Traveling Speed

Variable displacement pump can realize infinite variable speed whose maximum value is 1.2 km/h.

# 详细介绍 Detailed Introduction

## 作业装置

起重臂包括主臂、固定副臂。结构型式为中间等截面，两端变截面的四弦杆空间桁架结构，主弦杆采用进口高强度管材，腹杆采用国产优质管材。

### 主臂

主臂为中间等截面、两端变截面的空间桁架式结构，钢管焊接，臂架顶部与根部用钢板加强，以利于传递载荷。主臂配置臂端单滑轮机构，主臂长度为13~58m。  
组成：底节臂6.5m、中间节臂3m×1、中间节臂6m×1、中间节臂9m×4、顶节臂6.5m。

### 固定副臂

固定副臂为中间等截面、两端变截面的空间桁架式结构，钢管焊接，臂架顶部与根部用钢板加强，以利于传递载荷。  
固定副臂可在主臂长37~52米范围内进行作业，其作业长度为9~18m，含10°及30°两种安装角。  
固定副臂通过支架及固定副臂前、后拉索与主臂连为一体，随着主臂变幅机构的起与落来达到固定副臂的工作幅度。固定副臂支架结构为A形双臂箱形结构，抗轴压稳定性好，该支架长度为4m。  
组成：底节臂4.5m、中间节臂4.5m×2、顶节臂4.5m。

### 人字架

人字架是重要结构件之一，前足采用箱形双臂结构，后足采用可折叠式拉板，前足装有油缸，用于起落人字架。

### 吊钩

标准配置：80t吊钩、50t吊钩、26t吊钩、8t吊钩

## 安全装置

安全装置包括力矩限制器、转台回转锁销装置、起重臂防后翻装置、起升高度限位装置、风速仪、水平仪、液压系统的溢流阀、平衡阀、双向液压锁、回转警告、行走警告、紧急停车开关（QUY80 QUY80A）、摄像头（QUY80E）等。

### 力矩限制器

检测功能：力矩限制器能自动检测出起重臂的角度、起重载荷，  
显示功能：实时的显示当前实际载荷，工作半径，起重臂角度。  
警示功能：如果检测到实际载荷超过额定载荷，起重臂超过极限角度，力矩限制器发出报警并限制当前动作。

### 主、副提升过卷装置

当主、副卷扬起升到一定高度时候，仪表板上的过卷保护指示灯亮，同时力矩限制器停止起升动作。

## Lifting Operation Parts

Lifting boom comprises main boom and fixed jib, both of which are lattice structure of four tubular chords with intermediate equal section and two end variable section, wherein, main boom chord use imported high strength tube and web rod use domestic high quality tube.

### Boom

Main boom is the lattice structure of intermediate equal section and two end variable section and welded by steel tubes. Boom top and boom foot are reinforced by steel plates for load transfer and boom is equipped with single top, boom length: 13m~58m.  
Construction: boom butt 6.5m, boom insert 3m×1, boom insert 6m×1, boom insert 9m×4, boom top 6.5m.

### Fixed Jib

Fixed jib is the lattice structure of intermediate equal section and two end variable section and welded by steel tubes. Jib top and jib foot are reinforced by steel plates for load transfer.  
Fixed jib can be operated within the range of boom length 37~52m, and lifting operation length is 9~18m, with two offset angles of 10° and 30°.  
Fixed jib is connected with boom by supporting strut and front and rear guy cables, and reach its working radius with raising and lowering of boom elevating system.  
Construction: jib butt 4.5m, jib insert 4.5m×2, jib top 4.5m.

### Gantry

Gantry is one of the important structural parts, its front part is box-type structure of twin tubular chord and equipped with oil cylinder for lifting and lowering gantry and the rear part is folded pendant.

### Hook Block

Standard configuration: 80t capacity hook block, 50t capacity hook block, 26t capacity hook block and 8t capacity hook block.

## Safety Devices

Safety devices comprise: load moment limiter, turntable lock pin, boom backstop, height limiter, anemometer, level gauge, hydraulic overflow valve, balance valve, two-way hydraulic lock, slewing warning, travel warning, emergency stop switch (QUY80, QUY80A), monitor (QUY80E), etc.

### Load Moment Limiter

Detection function: automatically detect boom angle and lifting load.  
Display function: real time display current actual load, working radius and boom angle.  
Warning function: automatically send out warning signal and stop crane operation when detecting actual load exceeding rated load and boom out of limit angle.

### Main/Auxiliary Winch Over-Wind Protection Device

When main/auxiliary winch hoists up to a certain lifting height, an over-wind warning lamp on instrument panel lights on, at the same time, load moment limiter stops crane operation.

# 详细介绍 Detailed Introduction

### 主、副提升过放装置

此保护功能由安装在卷筒内部接近开关检测到卷筒上的钢丝绳剩下三卷时候，仪表板上的指示灯亮，同时力矩限制器自动停止起升落动作。

### 棘爪锁止装置

该功能用于锁定变幅卷扬，起重臂降落的时候必须打开该装置，否则不能降落，用于保护臂架在非工作时安全停放。

### 起重臂角度限制

主起重臂仰角在80°时，起重臂被停止起升，由力矩限制器和行程开关双级控制。主起重臂在仰角小于30°时停止起重臂落，由力矩限制器控制。

### 声光报警器

在履带起重机移动或做回转动作的时候灯闪烁并且发出声音报警。

### 力限器三色报警灯

由三种颜色组成，负载在90%以下时“绿灯”亮，表示起重机在安全区域运行，负载在90%-100%的时候“黄灯”亮，表示起重机在已接近额定载荷范围，负载在100%-105%以上时“红灯”和“黄灯”同时亮，表示起重机已经超载，在危险区域，控制系统自动切断起重机向危险的方向运行。

### 照明灯

装置在转台前方、臂架上和操纵室内，用于夜间工作提供照明。

### 示高灯

安装在臂架顶部，作为高空警示。

### 风速仪

实时检测当前风速，传送到操纵室的监视器上，提醒司机操作的安全性。

### Main/Auxiliary Winch Over-Release Protection Device

When access switch in winch drum detects only three turns of wire rope left on the drum, an over-release warning lamp on instrument panel lights on, at the same time, load moment limiter stops crane operation.

### Winch Ratchet Locking Device

Winch drum has a ratchet locking device which must be turned on when lowering boom, otherwise boom cannot be lowered. The device is used to stow the boom for safety.

### Boom Angle Limit

When boom angle is more than 80°, load moment limiter and hoist limit switch stop boom rising. When boom angle is less than 30°, load moment limiter stops boom lowering.

### Audio/Video Warning

When crawler crane is moving and slewing, there is light and sound for warning.

### LMI Tricolor Warning Lamp

The lamp comprises 3 colors, when crane loading is below 90% of total rated lifting load, "Green Lamp" lights on to indicate that crane is running in safety; when crane loading is in 90%~100% of total rated lifting load, "Yellow Lamp" lights on to indicate that crane is close to total rated lifting load; when crane loading is above 100%~105% of total rated lifting load, both "Red Lamp" and "Yellow Lamp" light on to indicate that crane is overloaded; In dangerous area, control system can automatically cut off crane movement to dangerous direction.

### Illumination Lamp

There are illumination lamps at the front of turntable, on boom and inside operator's cabin for night operation.

### Height Mark Lamp

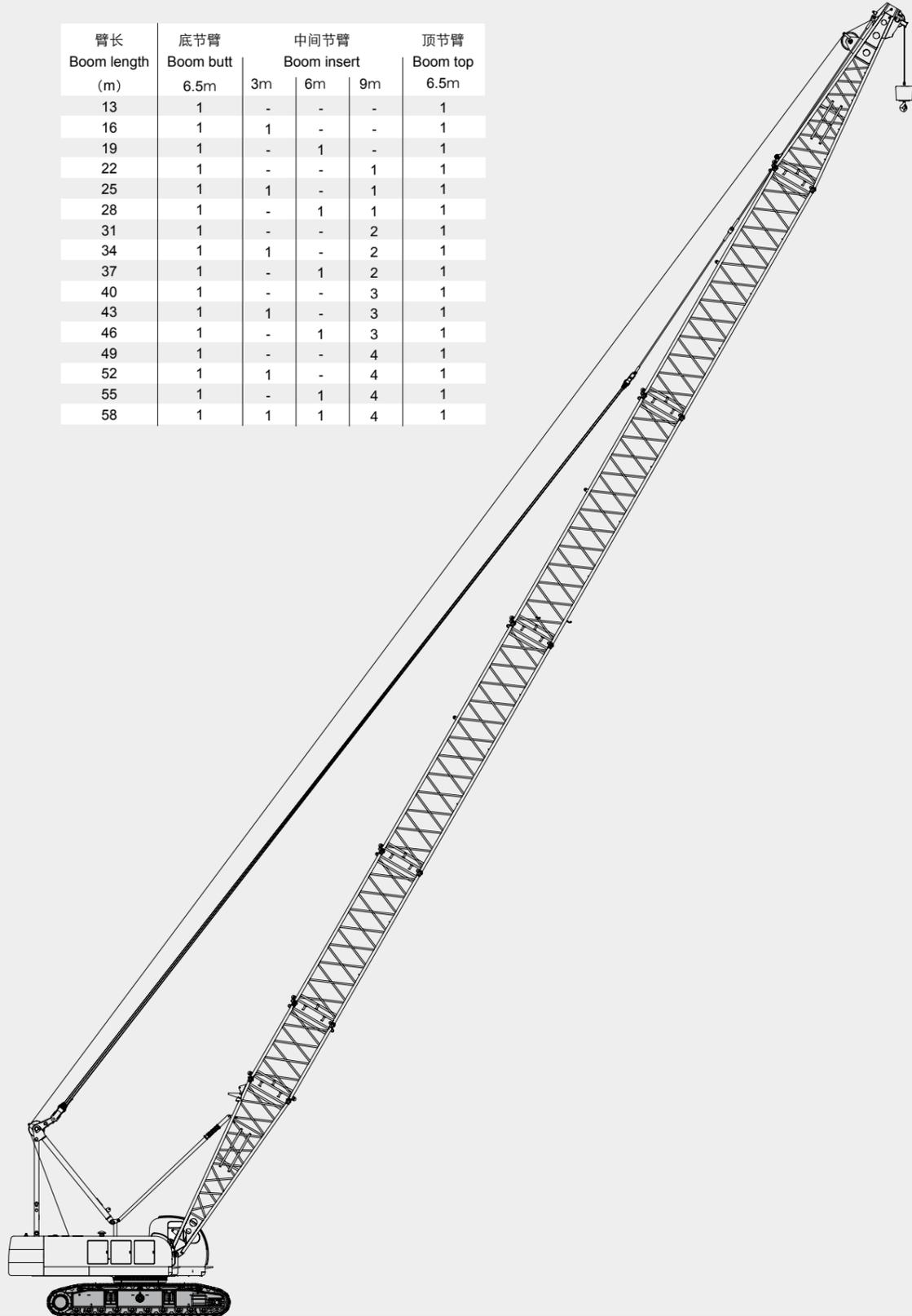
Boom tip has a height mark lamp for high level operation warning.

### Anemometer

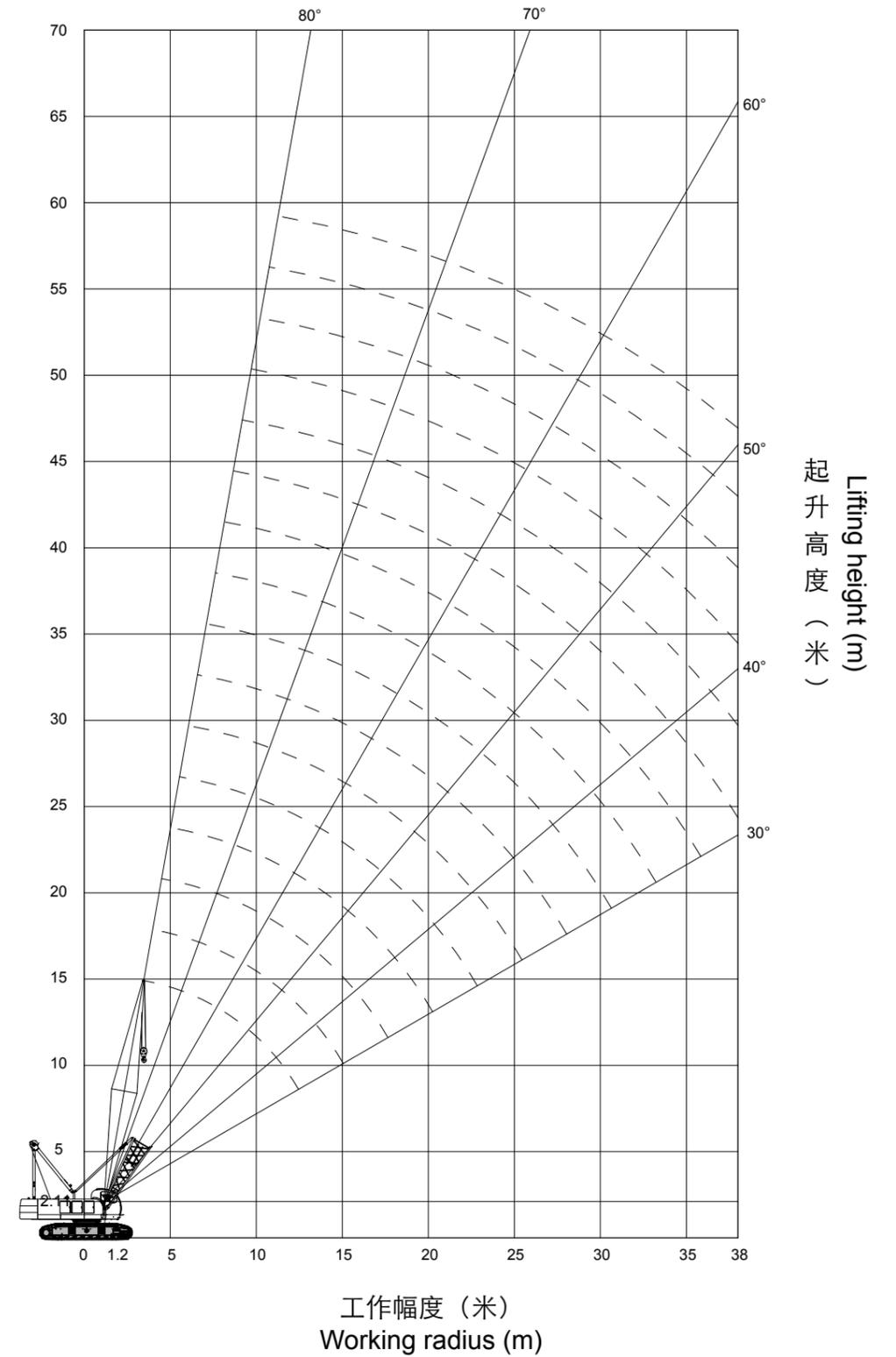
Anemometer at boom head can detect current wind speed and send wind signal to a monitor in operator's cabin to alert operator for safety.

# 主臂臂节组合/主臂工况 Boom Combinations/Boom Working Condition

臂长 Boom length (m)	底节臂 Boom butt		中间节臂 Boom insert			顶节臂 Boom top 6.5m
	6.5m	3m	6m	9m		
13	1	-	-	-	1	
16	1	1	-	-	1	
19	1	-	1	-	1	
22	1	-	-	1	1	
25	1	1	-	1	1	
28	1	-	1	1	1	
31	1	-	-	2	1	
34	1	1	-	2	1	
37	1	-	1	2	1	
40	1	-	-	3	1	
43	1	1	-	3	1	
46	1	-	1	3	1	
49	1	-	-	4	1	
52	1	1	-	4	1	
55	1	-	1	4	1	
58	1	1	1	4	1	



# 主臂作业范围 Boom Working Area



# 主臂工况载荷表 Boom Working Condition and Lifting Load Chart

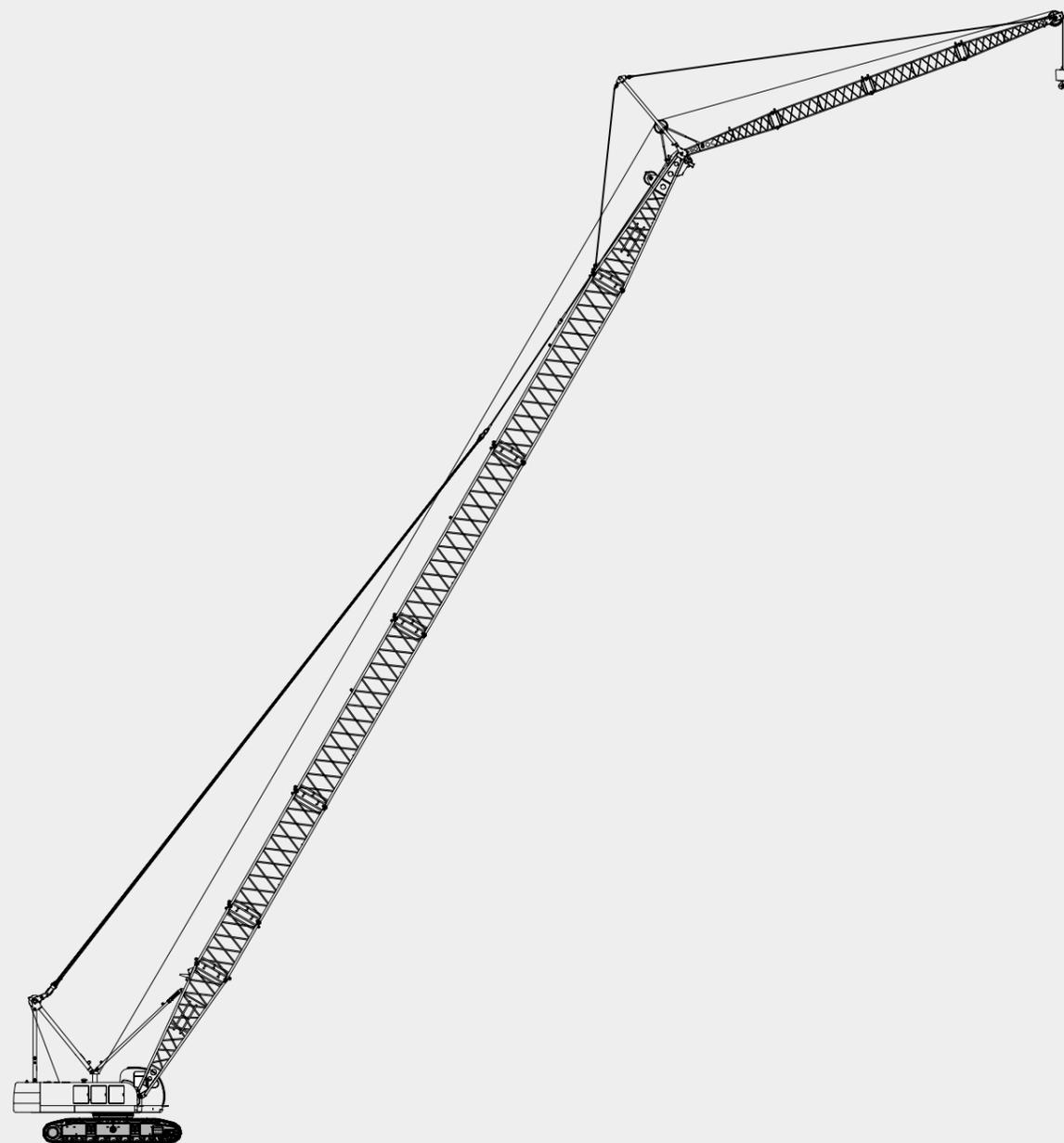
幅度Radius (m)	臂长 Boom length (m)							
	13	16	19	22	25	28	31	34
4	80.00							
4.3	80.00							
4.5	76.00	73.90						
5	64.50	64.39	61.01/5.15					
5.5	60.22	60.08	59.95	54.79/5.77				
6	52.37	52.22	52.09	51.97	47.31/6.40			
6.5	46.30	46.14	46.00	45.88	45.72			
7	41.46	41.29	41.15	41.02	40.86	40.70		
7.5	37.51	37.34	37.20	37.07	36.00	36.73	36.58/7.65	
8	34.23	34.06	33.91	33.78	33.60	33.44	33.29	33.11
8.5	31.46	31.29	31.14	31.00	30.83	30.66	30.50	30.33
9	29.10	28.92	28.76	28.63	28.45	28.28	28.12	27.94
10	25.26	25.07	24.92	24.78	24.59	24.42	24.26	24.08
11	22.28	22.09	21.93	21.79	21.60	21.43	21.27	21.08
12	19.90	19.71	19.55	19.41	19.22	19.04	18.88	18.69
13		17.77	17.60	17.46	17.27	17.09	16.92	16.73
14		16.15	15.99	15.87	15.65	15.47	15.30	15.11
15		13.34	14.62	14.47	14.27	14.09	13.93	13.73
16			13.44	13.29	13.10	12.29	12.75	12.55
18			10.75/17.60	11.39	11.19	11.01	10.54	10.64
20				9.91	9.71	9.53	9.36	9.16
22					8.53	8.34	8.17	7.97
24						7.38	7.20	7.00
26							6.40	6.20
28							5.72	5.51
30								4.93

# 主臂工况载荷表 Boom Working Condition and Lifting Load Chart

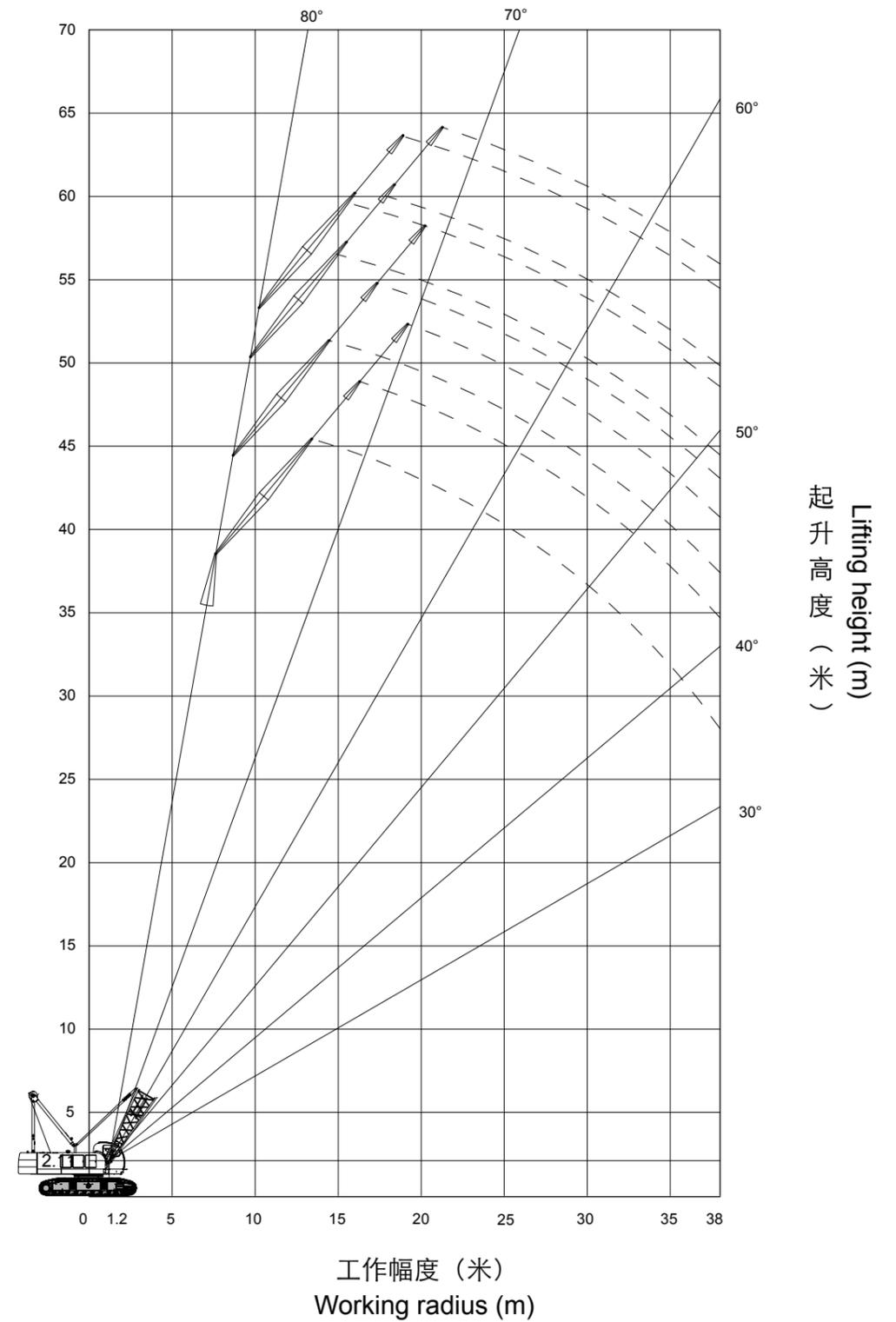
幅度Radius (m)	臂长 Boom length (m)							
	37	40	43	46	49	52	55	58
8.5	30.15							
9	27.77	27.50						
10	23.90	23.73						
11	20.90	20.73	20.55	20.36	20.19			
12	18.51	18.33	18.15	17.96	17.79	17.60	17.41	
13	16.55	16.37	16.19	16.00	15.82	15.63	15.45	14.50
14	14.92	14.74	14.55	14.37	14.19	14.00	13.81	13.62
15	13.55	13.36	13.18	12.99	12.81	12.62	12.43	12.23
16	12.37	12.18	12.00	11.81	11.63	11.43	11.24	11.04
18	10.45	10.27	10.08	9.89	9.71	9.51	9.32	9.12
20	8.97	8.78	8.59	8.40	8.22	8.02	7.83	7.63
22	7.78	7.60	7.40	7.21	7.03	6.83	6.63	6.43
24	6.81	6.63	6.43	6.24	6.05	5.85	5.71	5.55
26	6.00	5.82	5.62	5.43	5.24	4.98	4.84	4.68
28	5.32	5.13	4.94	4.71	4.51	4.36	4.26	4.10
30	4.73	4.55	4.31	4.06	4.02	3.86	3.76	3.60
32	4.23	4.00	3.74	3.50	3.41	3.26	3.17	3.02
34		3.50	3.25	3.14	3.05	2.90	2.81	2.66
36			2.82	2.73	2.65	2.50	2.41	2.26
38			2.55	2.46	2.37	2.23	2.14	1.99

# 固定副臂臂节组合/副臂工况 Fixed Jib Combinations/Jib Working Condition

副臂长度 Jib length (m)	中间节 Jib insert	主臂长度 Boom length (m)	主副臂夹角 Boom and jib angles (°)
9	-	37~52	10°, 30°
13.5	1	37~52	10°, 30°
18	2	37~49	10°, 30°



# 固定副臂作业范围 Fixed Jib Working range



# 固定副臂工况载荷表 Fixed Jib Working Condition and Lifting Load Chart

主臂长度 Boom length (m)	主臂37米 Boom length 37m						主臂40米 Boom length 40m					
	9		13.5		18		9		13.5		18	
	副臂安装角 Jib offset angle (°)											
幅度 Radius (m)	10	30	10	30	10	30	10	30	10	30	10	30
15	6.50	6.50	6.50		6.00		6.50	6.50	6.50			
16	6.50	6.50	6.50	6.50	6.00		6.50	6.50	6.50			
17	6.50	6.50	6.50	6.50	6.00		6.50	6.50	6.50	6.50	6.00	
18	6.50	6.50	6.50	6.50	6.00		6.50	6.50	6.50	6.50	6.00	
19	6.50	6.50	6.50	6.50	6.00	5.00	6.50	6.50	6.50	6.50	6.00	
20	6.50	6.50	6.50	6.50	6.00	5.00	6.50	6.50	6.50	6.50	6.00	5.00
22	6.50	6.50	6.50	6.50	6.00	5.00	6.50	6.50	6.50	6.50	6.00	5.00
24	6.30	6.00	6.30	6.00	6.00	5.00	6.30	6.00	6.30	6.00	6.00	5.00
26	5.60	5.50	5.50	5.50	5.50	5.00	5.60	5.50	5.50	5.00	6.00	5.00
28	5.00	5.00	5.00	4.80	4.80	4.80	4.90	4.90	4.90	4.80	6.00	4.60
30		4.60	4.50	4.40	4.40	4.40	4.50	4.50	4.50	4.30	5.50	4.10
32			4.20	4.00	4.00	4.00			4.20	3.80	4.80	3.70
34				3.70	3.60	3.50				3.50	4.30	3.30
36						3.20					3.80	3.00
38											3.50	2.80

# 固定副臂工况载荷表 Fixed Jib Working Condition and Lifting Load Chart

主臂长度 Boom length (m)	主臂43米 Boom length 43m						主臂46米 Boom length 46m					
	9		13.5		18		9		13.5		18	
	副臂安装角 Jib offset angle (°)											
幅度 Radius (m)	10	30	10	30	10	30	10	30	10	30	10	30
15	6.50	6.50	6.50				6.50	6.50	6.50			
16	6.50	6.50	6.50		5.50		6.50	6.50	6.50		5.00	
17	6.50	6.50	6.50		5.50		6.50	6.50	6.50		5.00	
18	6.50	6.50	6.50	6.50	5.50		6.50	6.50	6.50	5.00	5.00	
19	6.50	6.50	6.50	6.50	5.50		6.50	6.50	6.50	5.00	5.00	
20	6.50	6.50	6.50	6.50	5.50	5.00	6.50	6.50	6.50	5.00	5.00	
22	6.50	6.50	6.50	6.50	5.50	5.00	6.50	6.50	6.50	5.00	5.00	3.80
24	6.30	6.00	6.20	6.00	5.50	5.00	6.00	6.00	6.00	5.00	5.00	3.80
26	5.60	5.50	5.50	5.40	5.40	5.00	5.20	5.20	5.20	5.00	5.00	3.80
28	4.90	4.80	4.90	4.80	4.80	4.50	4.60	4.60	4.60	4.60	4.60	3.80
30	4.50	4.30	4.50	4.20	4.20	4.00	4.10	4.10	4.10	4.10	4.10	3.80
32		3.80	4.10	3.80	3.80	3.60	3.60	3.60	3.60	3.60	3.60	3.60
34			3.80	3.40	3.40	3.20		3.20	3.20	3.20	3.20	3.20
36				3.00	3.00	2.90			2.90	2.90	2.90	2.90
38						2.60				2.60	2.60	2.60
40						2.40						2.40
42												2.20

# 固定副臂工况载荷表

## Fixed Jib Working Condition and Lifting Load Chart

主臂长度 Boom length (m)	主臂49米 Boom length 49m						主臂52米 Boom length 52m			
	9		13.5		18		9		13.5	
	副臂安装角 Jib offset angle(°)									
幅度 Radius (m)	10	30	10	30	10	30	10	30	10	30
15	6.50		6.50				6.00			
16	6.50	6.50	6.50				6.00	5.50	5.50	
17	6.50	6.50	6.50				6.00	5.50	5.50	
18	6.50	6.50	6.50			4.00	6.00	5.50	5.50	
19	6.50	6.50	6.50	5.00	4.00		6.00	5.50	5.50	5.00
20	6.50	6.50	6.50	5.00	4.00		6.00	5.50	5.50	5.00
22	6.50	6.50	6.50	5.00	4.00	3.50	6.00	5.50	5.50	5.00
24	6.00	6.00	6.00	5.00	4.00	3.50	5.50	5.50	5.50	5.00
26	5.20	5.20	5.20	5.00	4.00	3.50	5.00	5.00	5.00	5.00
28	4.60	4.60	4.60	4.60	4.00	3.50	4.50	4.50	4.50	4.40
30	4.10	4.10	4.10	4.10	4.00	3.50	4.00	4.00	4.00	3.90
32	3.60	3.60	3.60	3.60	3.60	3.20	3.50	3.50	3.50	3.50
34	3.20	3.20	3.20	3.20	3.20	2.90	3.00	3.00	3.00	2.90
36		2.90	2.90	2.90	2.90	2.60	2.60	2.60	2.40	2.40
38			2.60	2.60	2.60	2.40			2.20	2.20
40				2.40	2.40	2.20				2.00
42						2.00				
43						1.80				

### 载荷表说明：

- 表中额定起重量，指在给定的臂架长度、工作幅度条件下，重物自由悬挂，在坚实、平坦地面作业所能保证的最大起重量。作业者须视各种不良条件（如地面松软或不平、风力、侧面负荷、摆动作用、多台起重机合力起吊）限制或降低起重机的起重量；
- 表中额定起重量包括吊钩、钢丝绳、和其它所有吊具的重量；
- 表中没有列出额定值的空白区，不允许将起重机用于该区所对应的起重作业；
- 表中起重量为带上车全配重和下车全配重的起重量；
- 使用主臂可以配置臂端单滑轮机构，臂端单滑轮机构的起重量为性能表中相应的额定起重量减去臂端单滑轮机构、8t吊钩和吊具的重量；
- 臂端单滑轮机构的最大起重量（包括吊钩、吊具和起升钢丝绳）不准超过7.5t，性能表中的额定起重量小于7.5t时按性能表起吊。

### Notes on Lifting Load Chart:

- The total rated lifting loads shown in above tables are the max. lifting capacity based on the conditions that crane set up on firm and level ground with given boom length, radius and load, crane operator shall limit or reduce lifting loads according to variable working conditions (soft or uneven ground, wind, side load, slewing action, lifting with one more cranes).
- The total rated lifting loads include the weight of hook block, wire rope and other slings.
- The blank area in above tables means crane operation is not allowed in these areas.
- The total rated lifting loads are the lifting capacity for crane with superstructure counterweight and carrier counterweight.
- Boom can be equipped with a single top, whose lifting load is the total rated lifting loads in above table decrease the weight of single sheave, 8t capacity hook block and slings.
- The max. rated lifting load for single top is 7.5t (include the weight of hook block, slings and hoist wire rope), if rated lifting load in above tables is less than 7.5t, load lifting should be in accordance with the table.