

RT40E 越野轮胎起重机（电控）亮点简介

Highlights of RT40E Rough Terrain Crane (Electric control system)

1. 中德合作开发，引领行业技术潮流。极致化理念打造极致化精品，同等边界条件下：起重臂最长、起重作业性能最强、动力性能最高。

Developed jointly by Chinese and German engineers, it leads the industry technology tendency. With advanced design concept introduced, perfect product is built with the longest boom, highest lifting capacity and power performance compared with products in the same class.

2. 三种起重作业模式，优越的支腿支撑作业功能，毫不逊色于汽车起重机固定场地的作业性能；特有的轮胎支承作业性能，在狭小场地无法打开支腿时，可轻松完成汽车重机无法胜任的工作；超强的带载行驶性能，快速实现吊装、转移。特别适用油田、仓库、货场、林矿、码头、物流基地等场所的起重运输作业。

Three operating modes: superior performance of operation on outriggers, which is not less than that for truck crane in a stationary site; unique performance of operation on tires makes it easy to complete the job what truck crane could not finish when it is difficult to deploy outriggers in a confined site; powerful pick and carry capacity makes fast operation of lifting and transferring load. It is suitable for lifting and transferring operation in oil patch, storage, goods yard, dock and logistic base, etc.

3. 两种驱动方式，正、反向行驶功能，适用场地作业和场地间的快速转移；四种转向模式，最小转弯半径仅为 5.7m，在狭窄空间里提供无与伦比的机动灵活性。专用的越野花纹轮胎、超强的动力系统，保证了良好的越野性能，适应于各种恶劣场地。

Two driving modes: forward and reverse driving function contributes to fast transferring within a site or from a site to another; four steering modes combined with min. turning radius of 5.7m offers unmatched maneuverability in a confined space. Specialized off-road tires and super power system ensure favorable off-road capacity, suitable for applications in various adverse sites.

4. 东风康明斯电控发动机（非道路 三阶段）、ZF 自动变速箱的极致化匹配为车辆提供卓越的动力性能；专业配套开发的液压系统，保证了良好的使用性和可

靠性；成熟、批量配套的 CAN 总线控制系统、故障诊断和安全报警装置，实时保证作业的安全高效。

DCEC electronically controlled engine (off-road EU Stage IIIA), ZF automatic transmission are matched optimally, contributing to distinguished power performance; The hydraulic system of professional development for the product has good applicability and reliability; CAN bus control system, fault diagnostic system and warning devices ensure safe and efficient operation.

5. 专用软件开发的数字化样机，模拟实际工况的专业化分析，上万次的样机起重作业试验、全面的系统测试、4000 公里的底盘行驶试验。千锤百练，可靠安全。

Digital prototype developed with dedicated software is reliable and safe, which has been proved by the specialized analysis via the simulation of actual working conditions, It is proved to be safe and reliable by thousands of lifting operation tests, comprehensive system tests and 4000 km driving test.

6. 驾驶、操纵作业室一体化设计，外观简洁、动感。全天候大圆弧玻璃视角开阔，推拉门结构形式节省空间、方便操作，人机工程设计的内部空间，宽敞舒适。可调式减震悬浮高靠背座椅，根据您的需求调整各个的合适位置，减轻作业疲劳强度。配置冷暖空调，大屏幕真彩显示器与主操纵台有机结合，操作便捷，作业参数、工况一目了然。

Cab of integrated design is simple and artistic. It is all-weather and streamlined and has a wide field of view, as well as spacious and comfortable due to ergonomic inner design. Damping suspension seat with high backrest may be adjusted according to operator' s body, and can reduce operator fatigue and optimize productivity. Air conditioner and heater are equipped in the cab. Large screen color display combined with main control panel makes operation convenient and easy, and the operating parameters and working conditions may be seen at a glance.

7. 摆动式、可刚性锁止的液压悬架技术。公路行驶时可悬架可通过摆动机构、悬架油缸实现减震功能，缓冲路面冲击，提高行驶的平稳性。带载行驶时可将后悬架油缸锁止至刚性状态，以满足带载行驶要求。轮胎支撑作业时，当转台旋

转超过 $\pm 3^\circ$ 时，悬架系统能够自动切换至刚性状态，最大限度提供安全保障。

Swing, rigidly lockable hydraulic suspension technology: the shock absorption function of rear suspension may be performed through the swing mechanism and suspension cylinder when driving on roads, consequently road shock is buffered and travel smoothness is improved; the rear suspension cylinder may be locked to rigid state so as to meet the requirement for travel with a load suspended; during operation of crane on tires, when the turntable is turned over $\pm 3^\circ$, suspension system may automatically switch over to rigid state, operation safety is ensured.

8. 转向系统采用车轮转动方向自动切换技术。当转台转动角度超过 90° 行车时，控制系统通过安装在转台上的位置检测装置发出信号控制转向器与前轴转向油缸之间的液压换向阀，从而实现车辆反方向行驶时，方向盘转动方向与行驶方向一致。

Switch over of wheel turning direction: when the vehicle is driving while the turntable is turned over 90° , the control system will send a signal through the position detection device fitted on the turntable for controlling the hydraulic change valve between the steering wheel and the change cylinder of front axle. And then the vehicle drives in reverse direction, and the rotating direction of the steering wheel is the same as that for forward driving.

9. 低压自动制动技术。全液压双回路盘式制动器，当系统压力低于设定值时，能够实现自动制动功能，最大限度保障行车安全；

Automatic low pressure brake technology: with full hydraulic double circuit disc brake fitted, the brake is engaged automatically when the pressure in braking system is lower than the setting, thus driving safety is insured.

RT40E 越野轮胎起重机技术规格

Specifications of RT40E

越野轮胎起重机型号：RT40E

Model: RT40E

最大额定起重量：2.5 米幅度 40 吨

Max. rated lifting capacity: 40t at radius of 2.5m

一、技术介绍 I . Introduction

1.1 发动机 Engine

制造商：东风康明斯 Manufacturer: DCEC

型号：QSB6.7-C190 Model: QSB6.7-C190

功率：142kW/2200r/min; Power: 142kW/2200r/min

型式：直列六缸、水冷却、增压中冷、压燃式柴油发动机

Type: six-cylinder, in line, water cooled, supercharging intercooler, compression ignition diesel engine

环保性：非道路 三阶段

Environmental protection compliance: off-road U.S.EPA Tier 3/EU Stage IIIA

燃油箱容量：约 300L。 Fuel tank capacity: approx. 300L

1.2 变速箱 Transmission

制造商：德国 ZF; Manufacturer: ZF, Germany

型式：自动变速箱; Type: automatic transmission

型号：6WG160; Model: 6WG160

具有 5 个前进档和 3 个倒退档。

5-forward and 3-reverse speed.

1.3 车桥及悬架 Axle and Suspension

前后桥均为美驰/凯斯兰公司开发的专用的转向驱动桥，承载能力大，可靠性高，维护简便。

Both front axle and rear axle developed by Meritor/ Kessler for RTs are driven, they have heavy load-bearing capacity and high reliability, and are easy to maintain.

前桥与车架之间刚性连接；后桥采用刚性锁死的摆动式液压悬架。公路行驶时后悬架可通过摆动机构、悬架油缸实现减震功能，缓冲路面冲击；吊重行驶时可后悬架

油缸锁止至刚性状态，满足吊重行驶要求。

Front axle is connected with frame rigidly; swing, rigidly lockable hydraulic suspension is used for rear axle. The shock absorption function of rear suspension may be performed through the swing mechanism and suspension cylinder when driving on roads, consequently road shock is buffered and travel smoothness is improved; the rear suspension cylinder may be locked to rigid state so as to meet the requirement for travel with a load suspended.

1.4、轮胎 Tire

20.5R25 的子午线轮胎，承载能力大，适合越野轮胎起重机的各种使用工况要求。

Radial ply tire, 20.5R25, heavy load-bearing capacity, compliant with the working condition requirements of rough terrain crane.

1.5、转向 Steering

并联式全液压多模式转向，具有前桥独立转向、小转弯转向、蟹行转向和后桥独立转向功能。

Paralleled full hydraulic multi-mode steering makes independent front axle steering mode, small turning radius mode, crab walk mode and independent rear axle steering mode available.

车轮转角自动切换功能：当转台转动角度超过 90° 行车时，控制系统发出信号控制转向器与前轴转向油缸之间的液压换向阀，从而实现车辆反方向行驶时，方向盘转动方向与行驶方向一致，符合驾驶员的操作习惯。

Switch over of wheel turning direction: when the vehicle is driving while the turntable is turned over 90°, the control system will send a signal for controlling the hydraulic change valve between the steering wheel and the change cylinder of front axle. And then the vehicle drives in reverse direction, and the rotating direction of the steering wheel is the same as that for forward driving, which fits operator's operating habit.

1.6、制动 Brake

行车制动：双回路全液压盘式制动，作用于所有车轮；并且当系统压力过低时，具有自动制动功能。

Service brake: double-circuit full-hydraulic disc brake, acting on all wheels; when the pressure in braking system is too low, automatically braking function works.

驻车制动：弹簧加载，液压解除的独立盘式制动器，作用于前桥。

Parking brake: spring-loaded brake, hydraulic-released independent disc brake, acting on front axles;

1.7、结构件 Structural members

转台、车架采用细晶粒高强度钢焊接而成，抗扭转大截面框架结构，承载能力强。支腿箱体位于车架两端，具有前后牵引装置。

Turntable and frame are made of fine grained high strength steel, with anti-torsion large cross-section frame structure, has heavy load-bearing capacity.

Outrigger boxes are located at both sides of chassis frame. Front and rear towing brackets are available.

设计过程中运用有限元分析计算对核心结构进行优化，使用了先进的零阶设计优化方法和先进的优化工具如最优梯度法、乘子计算法、拓扑优化技术等高级有限元优化分析方法，

During design, core structure is optimized through finite element analysis and calculation, advanced Zero-order optimum design method and advanced optimization tool are employed, such as optimum gradient method, multiplier calculations and topological optimization technology.

1.8、液压系统 Hydraulic system

液压系统包括起重作业液压系统和行驶作业液压系统。起重作业液压系统由起升液压系统、变幅液压系统、伸缩液压系统及回转液压系统四部分组成；行驶作业液压系统由支腿液压系统、脱桥控制液压系统三部分组成。

The hydraulic system consists of lifting operation hydraulic system and driving operation hydraulic system. The hydraulic system for lifting operation includes four parts, i.e. winch, elevating, telescoping and slewing hydraulic system. The hydraulic system for driving operation comprises three parts, i.e. outrigger, suspension, axle disconnection system.

起重作业部分采用电控液压先导操纵系统，操纵手柄移动的角度与输入电流成正比，主操纵阀的阀芯开口位移与先导阀输入电流也成正比，主操纵阀的阀芯位移与马达、油缸等执行元件的运动速度也成正比，整机具有良好的微动性。起升具有轻载高速、重载低速的特点；变幅采用重力下放，节能性好；回转微动性好、旋转平稳。

Electro-proportional control is used for the hydraulic system of lifting operation. The moving angle of the control lever is in direct proportion to the input current, and the valve spindle displacement of main control valve is directly proportional to the input current of the pilot valve, as well as the moving speed of actuator such as motor and oil cylinder. Thus fine inching control is available in the whole machine. Winch system has features of high speed with light load and low speed with heavy load. Free fall is adopted in the elevating system, energy saving. Fine inching control and smooth operation are available in the slewing system.

行驶作业液压系统采用电控操纵方式。支腿采用 4 点支撑，电控液压操纵，水平支腿为一级伸缩方式；悬挂液压系统可以通过整车控制系统实现弹性、刚性两种状态的自动切换控制。

Electric control method is adopted for the hydraulic system of driving operation. Four-point supported outriggers, electrical control and hydraulic operating, one-stage telescoping manner is used for outrigger beams; elastic and rigid suspension state are changed automatically through control system for suspension.

液压油箱容量：约 500 升。

Oil tank capacity: about: 500L

液压系统设置有专用的散热器，功率大，能有效降低系统油温。

Special large power radiator fitted in the hydraulic system may effectively reduce the temperature of oil in the system.

1.9、电气系统 Electric system

电气系统分为起重作业电气系统和行驶作业电气系统。起重作业电气系统包括力矩限制器系统、电比例安全控制系统、起重作业照明系统、辅助动作系统以及卷扬监视等系统；行驶作业电气系统包括支腿伸缩控制系统、变速操纵控制系统、两驱四驱切换控制系统、制动控制系统、转向控制系统以及行驶照明控制等系统。控制系统根据预设的程序和驾驶员的操作输入信号能够实现各种功能控制。

The electric system consists of lifting operation electric system and driving operation electric system. The electric system for lifting operation includes load moment limiter system, electric-proportional safety control system, lighting system for lifting operation, control system of assistance movement and winch monitoring system. The electric system for

driving operation comprises outrigger control system, travel speed control system, and four-wheel drive & two-wheel drive control system, as well as braking system, steering system and lighting system for driving operation. All function controls are realized by the control system according to the pre-setting programs and signals input by operator.

电气系统采用 24V DC，2 个蓄电池，负极搭铁。

Electric system is supplied by 24V DC from 2 batteries, with negative ground.

1.10、回转支承 Slewing ring

回转支撑采用单排四点接触球式，可 360°连续全回转，回转支承滚柱轨道密封可防水防尘。

Single-row four-point ball contact slewing ring, it can slew 360° continuously, roller raceway seal is water proof and dust proof.

回转机构采用液压马达驱动，内置行星齿轮减速，内置常闭式制动器。回转速度可无级调速。

Slewing system is driven by a hydraulic motor, with built-in planetary gear reducer and normally closed brake fitted. Slewing speed may be regulated infinitely.

1.11、主/副起升机构 Main/auxiliary hoist system

液压马达驱动，内置行星齿轮减速机和常闭式制动器，抗缠绕钢丝绳。主、副起升机构单独运转。

Driven by a hydraulic motor, with built-in planetary gear reducer, normally closed brake and anti-winding wire rope equipped. Main and auxiliary hoist systems can be operated separately.

主起升机构，钢丝绳直径 $\phi 18\text{mm}$ ，长度 160m。

Main hoist system: diameter of wire rope is 18mm, and rope length is 160m;

副起升机构，钢丝绳直径 $\phi 18\text{mm}$ ，长度 115m。

Auxiliary hoist system: diameter of wire rope is 18mm, and rope length is 115m.

1.12、变幅机构 Elevating system

1 根装有平衡阀的单作用油缸

One double-acting oil cylinder with a balance valve equipped.

变幅角度： $-1.5^\circ \sim 80^\circ$ Elevating angle: $-1.5^\circ \sim 80^\circ$

1.13、主起重臂 Boom

由 1 节基本臂和 3 节伸缩臂组成，采用抗扭曲设计，高强度结构钢制造，吊臂截

面为十二边形，起重作业稳定性好。单缸双绳排伸缩机构，同步伸缩。臂头标配 5 个滑轮。

It consists of one base boom and three-telescoping section, is made of high strength structural steel, with dodecagon cross section. Anti-torsion design is adopted. Good stability in the lifting operation is available. Single-cylinder plus ropes telescoping mechanism is for synchronous telescoping. Five pulleys on boom head are standard.

1.14、操纵室 Operator' s cab

驾驶、操纵作业室一体化设计，外观简洁、动感。全天候大圆弧玻璃视角开阔；人机工程设计的内部空间，宽敞舒适。配置冷暖空调。

Cab of integrated design is simple and artistic. It is all-weather and streamlined and has a wide field of view, as well as spacious and comfortable due to ergonomic inner design. Air conditioner and heater are equipped in the cab.

1.15、安全装置 Safety devices

液压系统配置液压平衡阀、液压溢流阀、液压双向锁等装置，保证系统稳定安全。

Hydraulic balance valve, hydraulic relief valve, double-way hydraulic valve, etc are fitted in the hydraulic system so as to ensure the system stable and safe.

赫思曼力限器系统，采用先进的微处理器技术，其功耗小、功能强、灵敏度高、操作简便。大屏幕的液晶显示器，以中文和图形方式显示力矩百分比、实际起重量、额定起重量、幅度、吊臂长度、角度、最大起升高度、工矿代码、倍率、限制角度、信息代码等起重作业参数。具有完整的预先报警、超载停止作业功能。系统还具有超载记忆功能（黑匣子）和故障自诊断功能。

Hirschmann Load moment limiter system with advanced micro-processing technology employed, has features of less power consumption, powerful function and high sensitivity, and is easy to operate. LCD with large screen will show the lifting operation data, such as moment percentage, actual lifting capacity, rated lifting capacity, working radius, boom length, boom angle, max. lifting height, working condition code, parts of line, limited angle, information code, etc. by means of Chinese and graphical symbol. It has complete forewarning and overloading cutout function, as well as overloading memory (black box) and fault self-diagnosis function.

卷扬设置三圈保护器，防止钢丝绳过放。

Lowering limiter is equipped in winch to prevent rope over-releasing.

臂头设置高度限位，防止钢丝绳过卷。

Anti-two block is fitted on the boom head to prevent rope over-winding.

1.16、配重 Counterweight

固定式配重。Fixed counterweight.

1.17、副起重臂 Jib

高强度钢焊接，桁架式结构副臂加箱形结构，第一节长度为 8.5m，两节总长度为 15m；安装角度 0°、15°、30°；行驶时可附在主臂侧面。

Made of high strength steel, one section is lattice and another is box structure, the 1st jib section is 8.5m long, total length is 15 m, three offset angles of 0°, 15° and 30°.

It may be stowed along the side of boom when the crane is driving on a road.

1.18、吊钩 Hook block

序号 No.	起重量 (t) Hook capacity	滑轮组 Sheave block	重量 (kg) Weight of hook block	数量 Qty	备注 Remark
1	40	5	425	1	单钩 Single
2	4	0	93	1	单钩 Single

1.19 随机备件及工具 Supplied spare parts and tools

配备一套随机工具和易损件。

A set of supplied spare parts and tools is provided.

1.20、颜色 Colour

主体色调：工程黄色。

Main colour: engineering yellow.

二、越野轮胎起重机主要配套件明细表

Rough Terrain Crane Main Parts List

(以产品实物为准、可根据用户需求选择不同配置)

(Take real parts as standard, various options are available)

序号 No.	名称 Name	企业名称 Suppliers
1	发动机 Engine	东风康明斯 DCEC
2	变速箱 Transmission	德国 ZF ZF, Germany
3	车桥 Axle	德国 Kessler /徐州美驰 Kessler, Germany / Xuzhou Meritor
4	操纵室 Operator's cab	湖北齐星 Hubei qixing
5	变幅油缸 Elevating cylinder	成都成缸液压设备制造有限公司/徐工液压件有限公司 Chengdu Hydraulic Cylinder Co., Ltd. /Xuzhou Hydraulic Parts Co., Ltd. XCMG
6	伸缩油缸 Telescoping cylinder	成都成缸液压设备制造有限公司/徐工液压件有限公司 Chengdu Hydraulic Cylinder Co., Ltd. /Xuzhou Hydraulic Parts Co., Ltd. XCMG
7	水平油缸 Extension cylinder	张家口长宇工程机械液压油缸有限公司/徐工液压件有限公司 Zhangjiakou Changyu Construction Machinery Hydraulic Cylinder Co., Ltd. /Xuzhou Hydraulic Parts Co., Ltd. XCMG
8	垂直油缸 Jack cylinder	张家口长宇工程机械液压油缸有限公司/徐工液压件有限公司 Zhangjiakou Changyu Construction Machinery Hydraulic Cylinder Co., Ltd. /Xuzhou Hydraulic Parts Co., Ltd. XCMG
9	力矩限制器 Load moment limiter	徐州赫思曼电子有限公司 Xuzhou Hirschmann Electronics Co., Ltd.
10	回转支承 Slewing ring	徐州罗特艾德回转支承有限公司 Xuzhou Rothe Erde Slewing Bearing Co., Ltd.
11	主阀 Main valve	浙江圣邦科技有限公司 Zhejiang shengbang Technology Co., Ltd.
12	回转马达 Slewing motor	/中航力源液压股份有限公司/北京华德液压工业集团有限责任公司 Zhonghang Liyuan Hydraulic Limited by Share Ltd / Beijing Huade Hydraulic Industry Refco Group Ltd
13	主、副起升马达 Main and auxiliary winch motors	中航力源液压股份有限公司/北京华德液压工业集团有限责任公司 Zhonghang Liyuan Hydraulic Limited by Share Ltd / Beijing Huade Hydraulic Industry Refco Group Ltd
14	主卷扬减速机 Main winch reducer	泰安泰山福神齿轮箱有限责任公司/浙江圣邦科技有限公司/青岛海力达齿轮箱有限公司 Tai'an Taishan Fushen gear box Co., Ltd. / Zhejiang shengbang Technology Co., Ltd. / Qingdao hailida gear box Co Ltd
15	副卷扬减速机 Auxiliary winch reducer	泰安泰山福神齿轮箱有限责任公司/浙江圣邦科技有限公司/青岛海力达齿轮箱有限公司 Tai'an Taishan Fushen gear box Co., Ltd. / Zhejiang shengbang Technology Co., Ltd. / Qingdao hailida gear box Co Ltd

三、RT40E 越野轮胎起重机性能参数（遵从于技术改进）

III. RT40E Rough Terrain Crane Specifications (Subject to technology improvement)

1、行驶状态主要技术参数表

1. Main technical data in travel configuration

类别 Category	项目 Item		参数 Parameter	允差范围 Allowance	
尺寸参数 Dimension	整机全长 Overall length		mm	11952	±1%
	整机全宽 Overall width		mm	2980	-1%~0
	整机全高 Overall height		mm	3450	-1%~0
	轴距 Wheel base		mm	3700	±1%
	轮距(前/后) Track (front/rear)		mm	2440	±1%
	前悬/后悬 Front/rear overhang		mm	1900/2151	±1%
	前伸/后伸 Front/rear extension		mm	4201/0	±1%
重量参数 Weight	整备质量 Kerb mass		kg	30300	±3%
	轴荷 Axle load	一轴 1st Axle	kg	15100	±3%
		二轴 2nd Axle	kg	15200	±3%
行驶参数 Travel	最高行驶速度 Max. travel speed		km/h	25	≥
	最小转弯半径 Min. turning radius		m	5.7 (四轮), 9.6 (两轮) 5.7 (4 wheels), 9.6 (2 wheels)	±3%
	最小离地间隙 Min. ground clearance		mm	400	±1%
	接近角 Approach angle		°	23	±1°
	离去角 Departure angle		°	20	±1°
	制动距离(制动初速度为 24km/h) Braking distance (at 24 km/h)		m	9	≤
	最大爬坡能力 Max. grade-ability		%	55	≥
动力参数 Power	发动机型号 Engine model			QSB6.7-C190	/
	发动机额定功率 Rated engine power		kW	142	/
	发动机额定转速 Engine rated rotation speed		r/min	2200	/
	发动机排放标准 Engine emission standard			非道路三阶段 off-road EU Stage IIIA	/
	驱动型式 Driving type			4×2, 4×4	/
	轮胎规格 Tire specifications			20.5R25	/
	轮胎数 Number of tires			4	/

2、起重机作业状态主要技术参数表

2. Main technical data for lifting operation

类别 Category	项目 Item		参数 Parameter	允差范围 Allowance		
主要性能参数 Main performance	最大额定总起重量 Max. rated lifting capacity		t	40	±5%	
	最小额定幅度 Min. rated working radius		m	2.5	±1%	
	转台尾部回转半径（平衡重） Slewing radius at turntable tail (at counterweight)		mm	3885	±1%	
	最大起重力矩 Max. load moment	基本臂 Base boom	kN·m	1445.5	±5%	
		最长主臂 Fully-extended boom	kN·m	835	±5%	
	支腿距离 Outrigger span	纵向 Longitudinal	m	6.9	±1%	
		横向(全伸/半伸) Lateral(fully/half extended)	m	6.9/5.8	±1%	
	起升高度 Lifting height	基本臂 Base boom	m	9.7	±1%	
		最长主臂 Fully-extended boom	m	31.7	±1%	
		最长主臂+副臂 Fully-extended boom + Jib	m	45.1	±1%	
	起重臂长度 Boom length	基本臂 Base boom	m	10.1	±1%	
		最长主臂 Fully-extended boom	m	32	±1%	
		最长主臂+副臂 Fully-extended boom + Jib	m	47	±1%	
副臂安装角 Jib offset angle		°	0, 15, 30	±1°		
工作速度 Working speed	主臂起臂时间 Time for boom raising		s	65	≤	
	主臂全伸时间 Time for boom extending fully		s	85	≤	
	最大回转速度 Max. slewing speed		r/min	2.5	≥	
	支腿收放时间 Outrigger extending/ retracting time	水平支腿 Outrigger beam	同时放 Simultaneously extending	s	25	≤
			同时收 Simultaneously retracting	s	15	≤
		垂直支腿 Outrigger jack	同时放 Simultaneously extending	s	30	≤
			同时收 Simultaneously retracting	s	15	≤
	起升速度 (空载四层) Hoisting speed (at 4th layer, no load)	主起升机构 Main winch		m/min	120	≥
副起升机构 Auxiliary winch		m/min	120	≥		

3、起重性能表

3. Load Charts

表 3-1 支腿支承作业主臂额定起重量表 (t)

Table 3-1 Rated lifting load for boom with the crane on outriggers(t)

4 吨平衡重, 支腿全伸, 360°作业 With 4t of counterweight, on fully-extended outriggers, 360°operation of the boom						
R/L	10.1	14.5	18.9	23.2	27.6	32
2.5	40					
3	35					
4	32	24	21			
5	29.5	23	20.6	16		
6	22	22.5	18.6	14	12.5	
7	14.6	20.5	17	13	11.6	9.7
8		15.5	15.6	12.5	10.7	9.1
9		12.2	12.6	11.6	10	8.5
10		10	10.4	10.6	9.3	8
12			7.4	7.6	7.7	7.1
14			5.6	5.8	5.9	6
16				4.5	4.5	4.5
18				3.6	3.6	3.8
20					3	3
22					2.5	2.5
24					2	2
26						1.7
28						1.4
吊钩 Hook capacity (weight)	40t(425kg)					
倍率 Parts of line	10	7	6	5	4	3
最大仰角 Max. boom angle (°)	29	36.7	34.6	33.3	22	23
最小仰角 Min. boom angle (°)	64	68.9	74.7	75.8	76.6	77.2
二节臂 2nd section	0	20%	40%	60%	80%	100%
三节臂 3rd section	0	20%	40%	60%	80%	100%
四节臂 4rd section	0	20%	40%	60%	80%	100%

表 3-2 支腿支承作业主臂额定起重量表 (t)

Table 3-2 Rated lifting load for boom with the crane on outriggers(t)

支腿半伸, 360° 作业 on half-extended outriggers, 360°operation of the boom						
R/L	10.1	14.5	18.9	23.2	27.6	32
2.5	40					
3	35					
4	32	24	21			
5	29.5	23	20.6	16		
6	20.1	21.1	18.6	14	12.5	
7	14.5	15.3	15.7	13	11.6	9.7
8		11.8	12.2	12.4	10.7	9.1
9		9.5	9.8	10	10.2	8.5
10		7.8	8.1	8.3	8.5	8
12			5.8	6	6.2	6.3
14			4.4	4.6	4.7	4.8
16				3.5	3.6	3.7
18				2.8	2.9	3
20					2.3	2.4
22					1.9	1.9
24					1.5	1.6
26						1.3
吊钩 Hook capacity (weight)	40t(425kg)					
倍率 Parts of line	10	7	6	5	4	3
最大仰角 Max. boom angle (°)	29	36.7	34.6	33.3	22	32
最小仰角 Min. boom angle (°)	64	68.9	74.7	75.8	76.6	77.2
二节臂 2nd section	0	20%	40%	60%	80%	100%
三节臂 3rd section	0	20%	40%	60%	80%	100%
四节臂 4rd section	0	20%	40%	60%	80%	100%

表 3-3 轮胎支承作业额定起重量表（不行驶）（t）

Table 3-3 Rated lifting load for boom with the crane on tires, stationary(t)

轮胎支承, 360° 作业 on tires, stationary				
R/L	10.1	14.5	18.9	23.2
3	12			
4	11	11.5	12	
5	7.6	8.2	8.5	8.7
6	5.5	6	6.3	6.5
7	4	4.6	4.9	5
8		3.6	3.8	4
9		2.8	3.1	3.2
10		2.2	2.5	2.6
12			1.6	1.8
14			1	1.2
吊钩 Hook capacity (weight)	40t(425kg)			
倍率 Parts of line	4	4	4	3
最大仰角 Max. boom angle (°)	29	36.7	34.6	49.6
最小仰角 Min. boom angle (°)	64	68.9	74.7	75.8
二节臂 2nd section	0	20%	40%	60%
三节臂 3rd section	0	20%	40%	60%
四节臂 4rd section	0	20%	40%	60%

表 3-4 轮胎支承作业额定起重量表（行驶速度≤2km/h）（t）

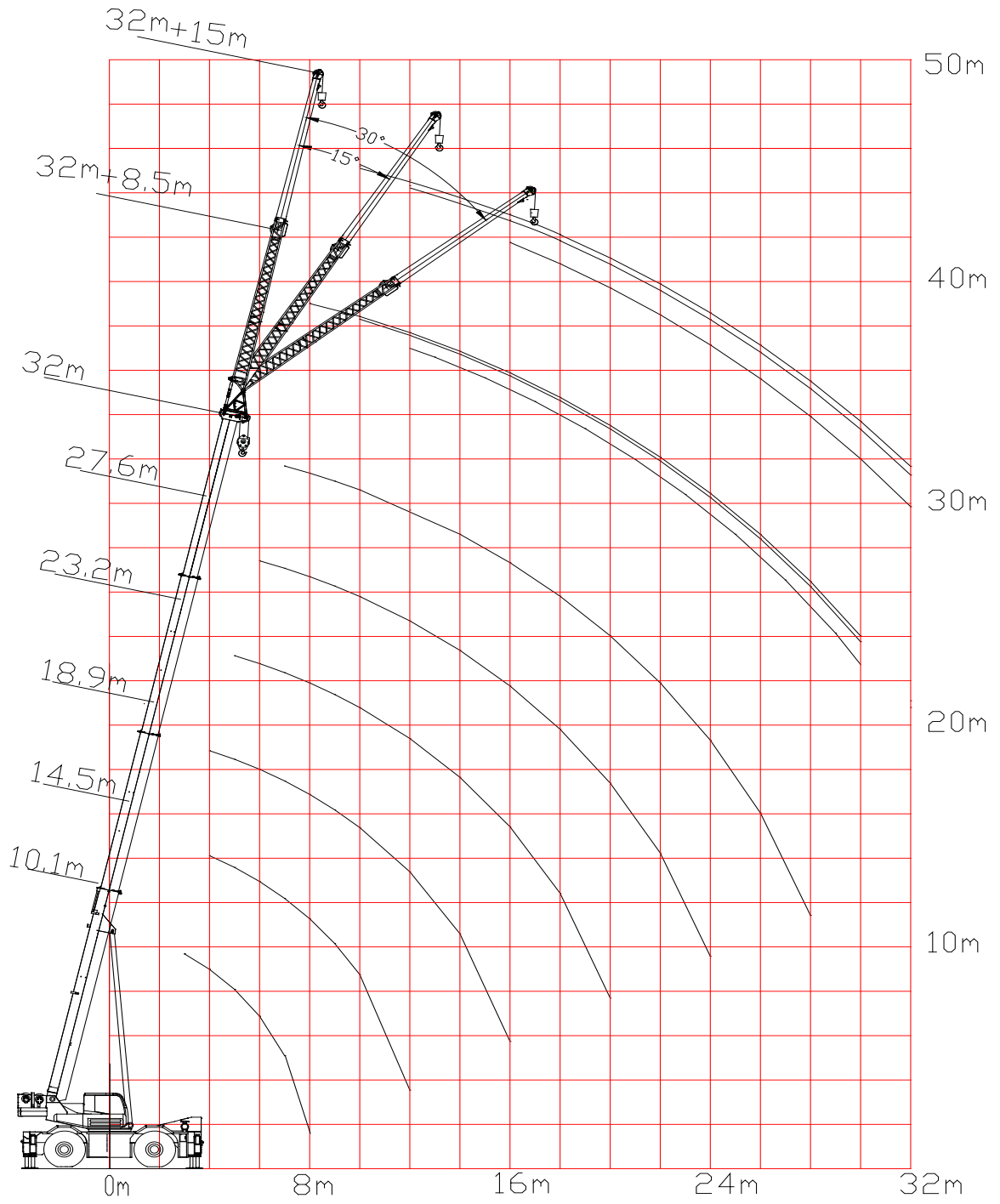
Table 3-4 Rated lifting load for boom with the crane on tires (t)

带载行驶, 正前方、车速小于 2km/h on tires, boom over front, travel speed ≤2km/h				
	10.1	14.5	18.9	23.2
4	9.8	10	10.5	
5	6.7	7.3	7.6	7.8
6	4.8	5.3	5.6	5.8
7	3.6	4.1	4.3	4.5
8		3.2	3.4	3.5
9		2.5	2.7	2.9
10		2	2.2	2.3
12			1.4	1.6
14			0.9	1
吊钩 Hook capacity (weight)	40t(425kg)			
倍率 Parts of line	4	4	4	3
最大仰角 Max. boom angle (°)	29	36.7	34.6	49.6
最小仰角 Min. boom angle (°)	57.1	68.9	74.7	75.8
二节臂 2nd section	0	20%	40%	60%
三节臂 3rd section	0	20%	40%	60%
四节臂 4rd section	0	20%	40%	60%

表 3-5 支腿支承作业副臂额定起重量表 (t)

Table 3-5 Rated lifting load for Jib with the crane on outriggers(t)

支腿全伸、配重 4t												
工作 幅度	32m 主臂+8.5m 副臂						32m 主臂+15m 副臂					
	副臂安装角											
	0°		15°		30°		0°		15°		30°	
	起重 量	起升 高度	起重 量	起升 高度	起重 量	起升 高度	起重 量	起升 高度	起重 量	起升 高度	起重 量	起升 高度
8	4.0	39										
9	3.9	38.7										
10	3.8	38.4	3.3	38.3			2.3	45.1				
12	3.7	37.7	3.2	37.5	2.6	37.3	2.1	44.5	1.6	44.3		
14	3.5	36.8	2.9	36.7	2.5	36.5	1.9	43.8	1.4	43.6		
16	3.7	35.8	2.8	35.7	2.4	35.6	1.8	43	1.4	42.7	1.2	41.7
18	2.9	34.7	2.6	34.6	2.3	34.5	1.7	42.1	1.3	41.8	1.1	40.8
20	2.3	33.5	2.5	33.3	2.3	33.3	1.5	41	1.2	40.7	1.1	39.7
22	1.8	32	2.0	31.9	2.1	31.9	1.4	39.8	1.2	39.6	1.0	38.5
24	1.5	30.4	1.6	30.2	1.8	30.4	1.3	38.5	1.1	38.2	1.0	37.1
26	1.1	28.6	1.2	28.4	1.5	28.6	1.3	37.1	1.1	36.8	1.0	35.6
28	0.9	26.4	1.0	26.2	1.1	26.5	1.1	35.5	1.0	35.1	0.9	33.9
30	0.6	24	0.7	23.7	0.9	24.1	0.9	33.7	0.7	33.3	0.9	32
32							0.7	31.6	0.5	31.2	0.6	29.8
主臂 仰角	40.9° ~79°		43.3° ~78.7°		47.2° ~79.6°		47° ~78.6°		51.2° ~80°		54.5° ~79.5°	
吊钩 重量	4t (93kg)											



起升高度曲线

Lifting height curves