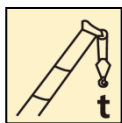


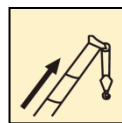
QY12KC汽车起重机 / Truck Crane

技术规格书

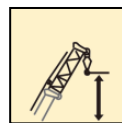
Technical specifications



12 t



30.5 m



30.9 m



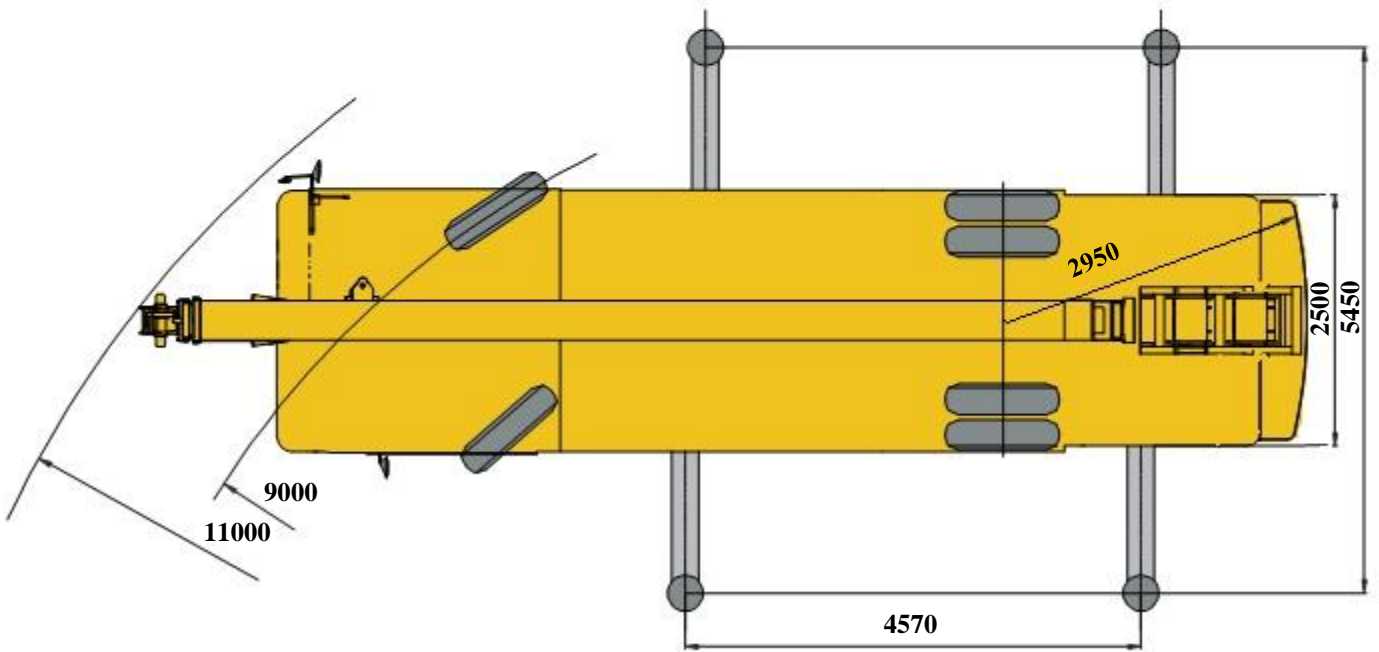
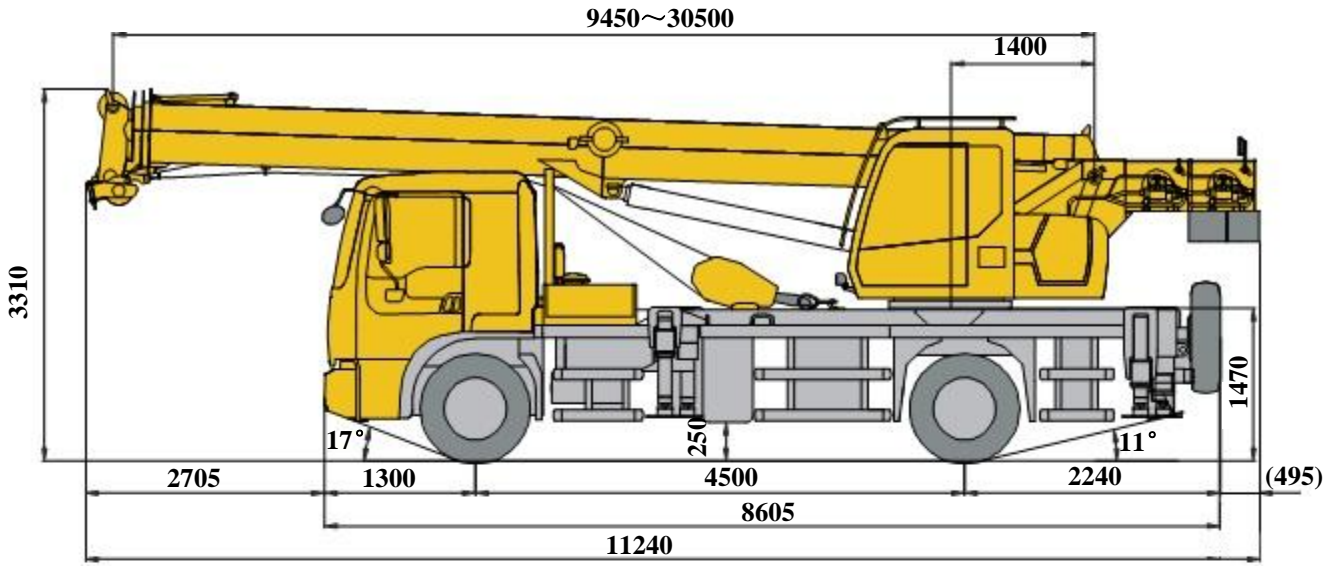
2020年6月 第1版

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尺寸参数 Dimensions



技术规格


Technical specifications


	底盘	配置
通用底盘	与东风联合开发两桥通用汽车底盘，平头驾驶室，配置大速比八档变速箱。	
副车架	徐工设计、制造，抗扭箱型结构，高强度钢材焊接。支腿箱体位于1桥和2桥之间以及车架后端，具有前后牵引钩。	●
支腿	H型水平支腿结构，4点支撑，全液压操纵，操纵控制台安装在底盘两侧，控制台装水平仪用于调平起重机。支腿的支脚用球铰装置收存垂直支腿下。支腿设计用于抬起整个起重机身以使起重机在各种工况条件更好地作业。 支脚盘尺寸：直径350mm 最大起重量时支腿反力：189KN	●
发动机	YC4E160-56，直列4缸4气门水冷电控发动机；玉柴制造，额定功率： 118kw/2600rpm，最大扭矩600Nm/ (1300-1600) rpm，国V排放标准。 燃油箱容积：160L。	●
变速箱	陕齿8JS85E-C机械式变速箱，手动远距离软轴操纵；8个前进档，2个倒档，工作稳定、可靠。	●
驾驶室	D912排半平头驾驶室，全新外形造型及仪表内饰，仪表板液晶屏显示。造型上：型面分割协调匀称，特征明显，现代感强。凹凸的型面造型增强驾驶室的层次。犀利的前大灯与进气格栅提升了驾驶室稳重，大气，动感的气质。装备三挡电动刮水器、收音机风窗洗涤器。带冷暖空调。	●
车桥	两桥底盘，2桥驱动，1桥转向，高强度承载桥， 引进国外先进技术设计，名牌厂家制造，性能可靠。 第一桥：单胎，转向不驱动； 第二桥：双胎，驱动不转向；	●
轮胎	9.00R20子午胎	●

制动	行车制动：脚踏板操纵的双回路气压制动。第一回路作用于一轴车轮上，第二回路作用于二轴车轮上。 驻车制动：放气制动，作用于二轴上，通过轴上的弹簧储能气室起作用。 辅助制动：发动机排气制动。	●
转向	1桥机械转向+液压助力	●
电气系统	24V直流电源，负极搭铁，串联12V蓄电池2个，底盘照明系统按中国道路交通标准，包括前大灯，前后雾灯，倒车灯等；发电机输出电压 $28\pm 0.3V$ ，输出电流70A。	●

技术规格

Technical specifications

	上车	配置
结构	徐工设计、制造，高强度钢材制造。	●
液压系统	采用定量泵阀控开中心机械操纵式液压系统，起升采用定量马达，回转采用低速大扭矩柱塞马达，同时主阀集成并新增自由滑转和回转缓冲功能，阀杆采用复合节流设计微动区间设计微动更精准，回转瞬间系统压力波动小，更平顺；起升采用双泵合流，起升效率高；标配液压油散热器。	●
操纵方式	机械操纵。	●
起升机构	由液压马达驱动，内置式行星齿轮减速机和常闭式制动器，双折线卷筒，抗旋转钢丝绳。	●
回转机构	单排四点接触球外齿式回转支承，由液压马达驱动，内置行星齿轮减速器和常闭式制动器，可连续回转360°，具有动力控制或自由滑转的功能，可无级调速。	●
变幅机构	单变幅油缸，带有自补偿功能的电比例控制平衡阀。	●
操纵室	按人机工程学设计，外开式车门，可调式座椅。 装有安全玻璃和顶部保护栏。前窗装有遮阳板。标配风扇。 单冷空调	● ● ○
安全装置	液压平衡阀	●
	液压溢流阀	●
	液压双向锁	●
	力矩限制器	●
	操纵杆弹簧式回中系统	●
	三圈保护器	●
	臂头设置高度限位	●
	自由滑转	●
配重	固定式平衡重1.05t。	●

	臂架系统	配置
主臂	伸缩臂采用抗扭曲设计，采用高强度结构钢制造，四节八边形截面主臂，采用单缸绳排伸缩方式。 主臂长度：9.45m~30.5m	●
臂端单滑轮	单滑轮,安装在主臂顶端用于单股钢丝绳起重作业，起重性能与主臂相同，但最大起重量不超过2100kg。	●


产品各部件明细如上所述，具体部件明细请参照产品报价单

符号说明：

- —— 表示标准配置；
- —— 表示选装配置。


技术规格


Technical specifications

	Chassis	Configur ation
Special chassis	The jointly-developed two-axle chassis is adopted. The driver's cab is full-dimension. Large ratio 8-gear transmission is adopted for Dongfeng special chassis	
Sub-frame	Designed and manufactured by XCMG, anti-torsion box structure, made of imported high strength steel. Outrigger boxes are separately located between 1st and 2nd axles and at the rear of the frame. Front and rear towing eyes are available.	●
Outriggers	H-type outrigger beam structure with 4-point supported and fully hydraulic controlled. There is an outrigger control panel installed at each side of chassis, with level gauge to level crane. Each outrigger float is stowed under each jack by using a ball joint device. The outrigger is designed to support the whole body of crane to let the crane work better under different conditions. Float dimension: diameter 350mm Reaction force of outrigger at max. lifting load.....189KN	●
Engine	YC4E160-56, in-line, 4-cylinder, water cooled, electric control diesel engine, made by Yuchai Diesel Engine, with rated power of 118kw/2600rpm and max. torque of 600Nm1300-1600 rpm, compliant to China V emission standard. Fuel tank capacity: 160L.	●
Transmission	Mechanical transmission 8JS85E-C, made by Shaanxi Fast Gear Co., Ltd., manual flexible shaft control, 8-forward speed and 1-reverse speed with a synchronizer.	●
Driver's cab	Dongfeng Huashen: D912/ full-dimension driver's cab with sleeper has brand new outline and interior decorations and instrument panel with liquid crystal display. Newly designed cab appearance includes artistic headlamps and air-inlet grille. 3-gear electric wiper, radio and windshield washer are also available. Heater and air conditioner are adopted.	●
Axles	Two high strength load-bearing axles with reliable performance, axle 2 for driving and axle 1 for steering, made by famous makers through adoption of foreign advanced technology, with reliable performance. 1st axle: single tire, for steering; 2nd axle: double-tire, for driving.	●
Tires	9.00R20	●
Braking	Service braking: foot pedal operated double-circuit air pressure brake. 1st circuit acts on the wheels of 1st axle, 2nd circuit acts on the wheels of 2nd axles; Parking brake: air-release brake, acting on 2nd axle, it works through the spring energy storage air chamber on the axle. Auxiliary brake: engine exhaust brake.	●
Steering	1st axle mechanical steering plus hydraulic booster	●
Electrical system	24V DC, negative ground, 2 batteries of 12V. There is a perfect illuminating system complying with Chinese road traffic standard, including daytime running lamps, front and rear fog lamps and reversing lamp, etc. Generator output voltage is 28±0.3V, output electric current is 70A.	●

技术规格

Technical specifications

 Frame	Superstructure	Configuration
Frame	Designed and manufactured by XCMG, made of high strength steel.	●
Hydraulic system	Mechanical and valve controlled hydraulic system with fixed displacement pump is adopted. Winch adopts fixed displacement motor. Low-speed large torque slewing system is adopted. Main valve also has the function of free sliding and slewing buffering. Multi-throttle design is adopted for valve rod with better inching control. Pressure fluctuation of slewing system is flat during the operation and slewing control is smooth. Double-pump confluence technology is applied for winch system, high lifting efficiency and standard hydraulic radiator.	●
Operating mode	Mechanical control	●
Winch system	Driven by a hydraulic motor, with built-in planetary gear reducer and constant closed brake fitted. Drum with Lebus-type grooving and rotation-resistant wire rope.	●
Slewing system	A single-row, four-point contact-ball external slewing bearing is driven by hydraulic motor, with built-in planetary gear reducer and constant-closed brake equipped, and may continuously slew 360°. Power control and free slewing function as well as stepless speed regulation are available.	●
Elevating system	Single cylinder with self-compensation electric-proportional balanced valve.	●
Operator's cab	Operator's cab is designed according to ergonomics with outward-open door and adjustable seat. It is equipped with safe glass and roof protective grille. Windshield is equipped with sun visor. Fan is standard. Air conditioner Heater Heater and air conditioner	● ● ○ ○ ○
Safety devices	Hydraulic balance valve Hydraulic relief valve Double-way hydraulic valve Load moment limiter; Spring centering system for control levers Lowering limiter Anti-two block at boom head Free slewing,	● ● ● ● ● ● ● ●
Fixed counterweight	The weight of fixed counterweight is 1.05t.	●

 Boom	Boom system	Configuration
Boom	Octagon boom is made of high strength steel, with special anti-deformation design. Single cylinder plus ropes is used to telescope the boom. Boom length: 9.45m ~ 30.5m	●
Single top	Installed at the boom top, used for single line operation. Its lifting performance is the same as that for boom, but the max. lifting load could not exceed 2100kg.	●

Product parts list is as mentioned above. Please refer to the product quotation for specific parts.

Symbol explanation:

- —it means the standard configuration;
- —it means the optional configuration.

重量 Weight






车桥 Axle	1	2	总重量 Total weight
t	5.3	10.6	15.9








吊钩 Hook	倍率 No. of lines	吊钩重量 Weight kg	吊钩尺寸 Dimensions mm	备注 Remarks
12t	6	145	1002×410×242	单钩 Single hook , 标配 Standard
2.1t	1	60	518×236×236	单钩 Single hook , 标配 Standard

作业速度 Working speeds



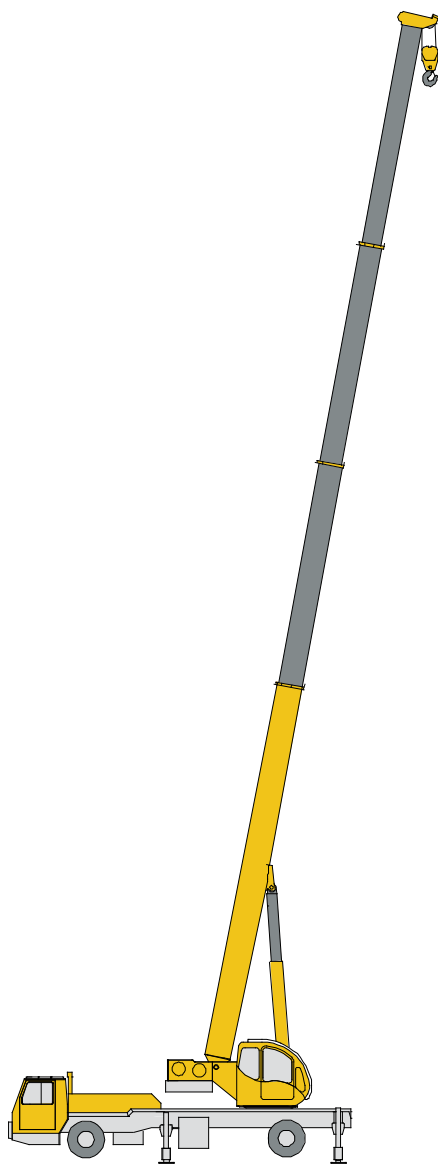
		
9.00R20	2 ~ 88	35%



作业机构 Drive	作业速度 Working speed	最大单绳拉力 Max. single line pull	钢丝绳直径/长度 Rope diameter/ length
	0-130 m/min, 单绳, 第四层 m/min, single line, 4th layer	21kN	12 mm/140 m
	0-130 m/min, 单绳, 第四层 m/min, single line, 4th layer	21kN	12 mm/71 m
	0-3 r/min		
	从-2°抬起至80°约45s Approx. 45s for boom elevation from -2° to 80°		
	从9.45m伸出至30.5m约80s Approx. 80s for boom extension from 9.45m to 30.5m		

臂架组合方案

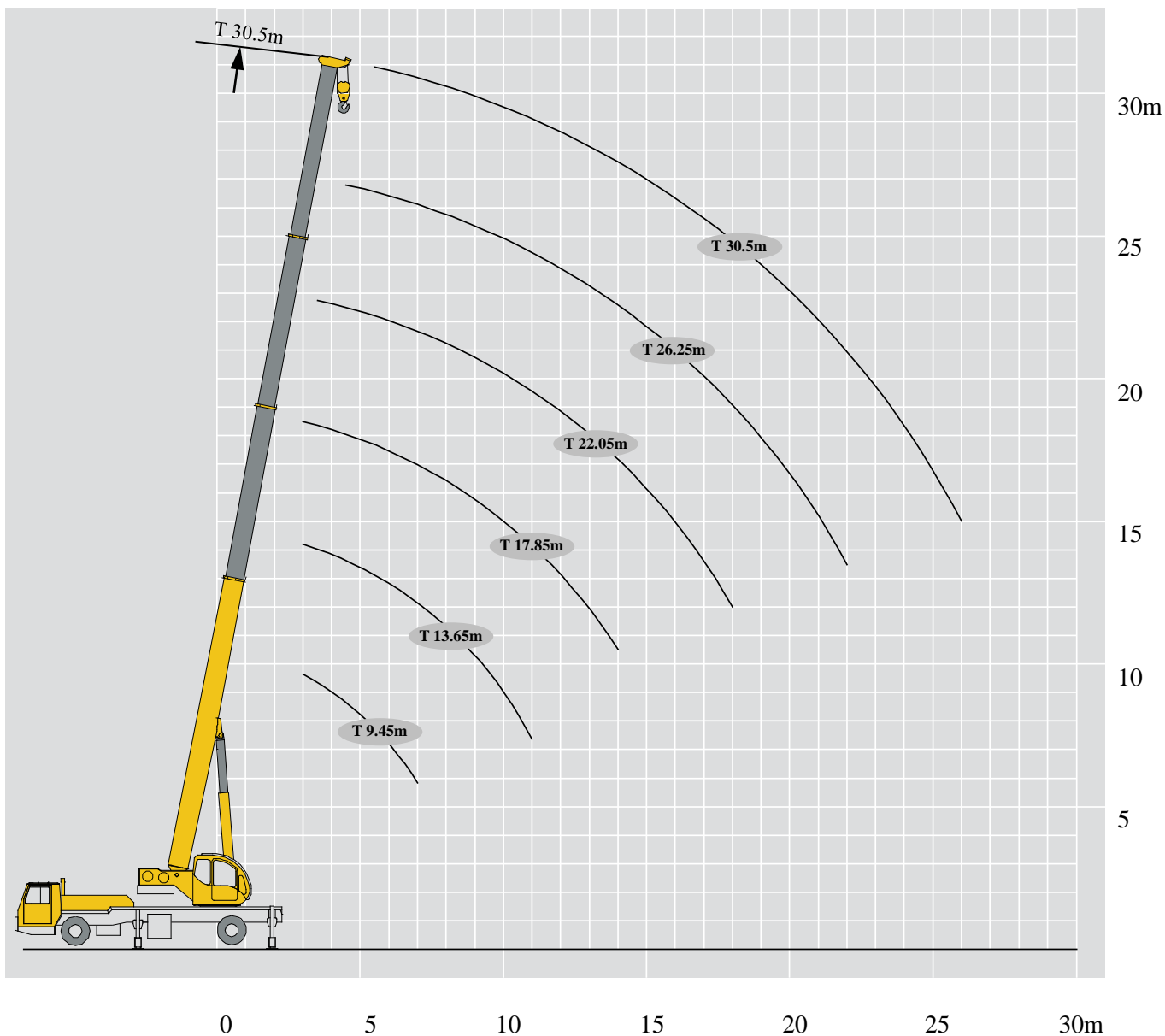
Boom / Jib combinations



主臂

Telescopic boom


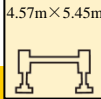
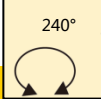
T : 9.45~30.5m



起重性能表

Lifting capacities

T 9.45~30.5m



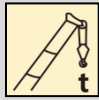












	9.45 m	13.65 m	17.85 m	22.05 m	26.25 m	30.5 m	
3	12000	9550	8950				3
3.5	12000	9550	8750	7300			3.5
4	10000	9500	8550	7150			4
4.5	10000	9500	8300	6500	5500		4.5
5	9400	9000	8000	6100	5200		5
5.5	8400	8400	7800	5750	4900	4000	5.5
6	7100	7300	7300	5400	4650	3800	6
6.5	6400	6500	6700	5100	4400	3600	6.5
7	5600	5750	5900	4850	4100	3450	7
8		4700	4800	4300	3600	3050	8
9		3700	3800	3800	3400	2800	9
10		3100	3200	3250	3100	2600	10
11		2500	2700	2750	2700	2500	11
12			2300	2300	2400	2300	12
14			1700	1700	1750	1750	14
16				1300	1300	1350	16
18				1000	980	1050	18
20					800	850	20
22					600	650	22
24						450	24
26						350	26

符号标识

Description of symbols

常规标识

General symbols

	上车 Superstructure		底盘 Chassis
	起重能力 lifting capacity		车桥 Axle
	吊臂长度 Boom length		行驶速度 Driving speed
	工作幅度 Radius		爬坡能力 Gradability
	吊臂仰角 Boom position		轮胎 Tyres
	固定副臂长度 Fixed jib length		支腿 Outriggers
	吊钩 Hook block		240°回转 (侧后方作业) 240° rotation (Over side or over rear operation)
	卷扬 Winch		

主要技术参数表

Transportation plan

类别 Category	项目 Item	单位 Unit	参数 Parameter	
尺寸参数 Dimensions	外形尺寸 (长×宽×高) Outline size (lengthch×width×height)	mm	11240×2500×3310	
	轴距 Wheel base	mm	4500	
	轮距 (前/后) Track (Front/ Rear)	mm	1940/1820	
	前悬/后悬 Front/ Rear overhang	mm	1300/2240	
	前伸/后伸 Front/ Rear extension	mm	2705/495	
重量参数 Weight	最大允许总质量 Max. permissible total weight	kg	15900	
	轴荷	一轴 1st axle	kg	5300
		二轴 2nd axle	kg	10600
动力参数 Power	发动机型号 Engine model	—	YC4E160-56	
	额定功率/转速 Engine rated power/rpm	kW/(r/min)	118/2300	
	最大净功率/转速 Max. net power/rpm	kW/(r/min)	113/2300	
	最大输出扭矩/转速 Engine rated torque/rpm	N.m/(r/min)	600/1200-1600	
行驶参数 Travel	最高车速 Max. travel speed	km/h	88	
	最低稳定车速 Min. travel speed	km/h	2~3	
	最小转弯直径 Min. turning diameter	m	≤17	
	臂头最小转弯直径 Min. turning diameter at boom tip	m	≤21	
	最小离地间隙 Min. ground clearance	mm	250	
	接近角 Approach angle	°	17	
	离去角 Departure angle	°	11	
	制动距离 (制动初速度为30km/h) Braking distance (at 30 km/h)	m	≤10	
	最大爬坡能力 Max. grade ability	%	≥35	
	百公里油耗 Fuel consumption per 100 km	L	20	
噪音 Noise	加速行驶机外噪声 Exterior noise level	dB(A)	≤84	
	驾驶员耳旁噪声 Noise level at seated position	dB(A)	≤90	

主要技术参数表

Transportation plan

类别 Category	项目 Item		单位 Unit	参数 Parameter	
主要性能参数 Main performance	最大额定总起重量 Max. total rated lifting capacity		t	12	
	最小额定工作幅度 Min. rated working radius		m	3	
	转台尾部回转半径 Turning radius at turntable tail		mm	2950	
	最大起重力矩 Max. load moment	基本臂 Base boom	kN.m	470	
		最长主臂 Fully-extended boom	kN.m	276	
	支腿跨距 Outrigger span	纵向 Longitudinal	m	4.47	
		横向 Lateral	m	5.45	
	起升高度 Hoist height	基本臂 Base boom	m	9.5	
		最长主臂 Fully-extended boom	m	30.9	
	起重臂长度 Boom length	基本臂 Base boom	m	9.45	
最长主臂 Fully-extended boom		m	30.5		
工作速度参数 Working speed	起重臂起臂时间 Boom raising time		s	≤38	
	起重臂全伸时间 Boom fully extended time		s	≤58	
	最大回转速度 Max. slewing speed		r/min	3	
	支腿收放时间 Outrigger extending and retracting time	水平支腿 Outrigger beam	收 Retracting	s	≤15
			放 Extending	s	≤20
		垂直支腿 Outrigger jack	收 Retracting	s	≤20
			放 Extending	s	≤25
	起升速度 (单绳,第四层, 空载) Hoisting speed (single line, 4th layer, no load)	主起升机构 Main winch	m/min	≥130	
副起升机构		m/min	≥130		
噪声 Noise	机外辐射 Exterior noise level		dB (A)	≤122	
	司机位置处 Noise level at seated position		dB (A)	≤90	

注意事项

Notes

1. 表中额定总起重量值，是在平整的坚固地面上本起重机能够保证的最大总起重量，包括吊钩和吊具的重量，所以为了估算重物重量，必须减去上述的装置重量。
2. 表中的工作幅度为起吊重物离地时起重物到起重机回转轴线的水平距离，是包括起重臂变形量在内的实际值，因而起吊前应考虑起重臂变形量。
3. 只允许在5级(瞬时风速14.1m/s，风压125N/m²)风以下进行作业。
4. 吊重前操作者必须对物体的重量和工作范围了解后选择合适的作业工况，严禁超出表中的数值。幅度及臂长在相邻两个数值之间时，应依据两个数值中较小值确定起重作业。
5. 应按主臂仰角范围作业，即使是空载，也不应使主臂仰角处于范围外，谨防整机倾翻。
6. 表中的主臂长度应要按照每节臂的伸缩要求进行伸出。

1. The total rated loads given in the rated load charts are the maximum lifting capacity when the crane is set up on firm and level ground, which includes the weight of the hook block and slings. The weight of above-mentioned devices should be deducted to correctly calculate the load weight.
2. The working radius shown in the rated load charts is the radius when the load is lifted off the ground, and it is the actual value including loaded boom deflection.
3. A lifting operation is permissible only when the wind force is below grade 5 (instantaneous wind speed is 14.1 m/s, wind pressure is 125 N/m²).
4. Before beginning lifting operation, the operator should know the weight of the load to be lifted and its working range, and then select proper working conditions. Never operate the crane beyond the limit shown in the chart. Use the lower value from the chart when the boom length or working radius is between the range of values.
5. Observe the boom angle limit. Never operate the crane with the boom angle beyond the recommended limit even if a load is not being carried. Otherwise, the crane will tip.
6. The boom length given in the rated load charts should accord with the telescoping code of boom sections .