

QY70K-I 汽车起重机 / Truck Crane

技术规格书

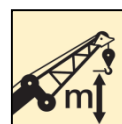
Basic technical specification



70t



44.5m



59.4m

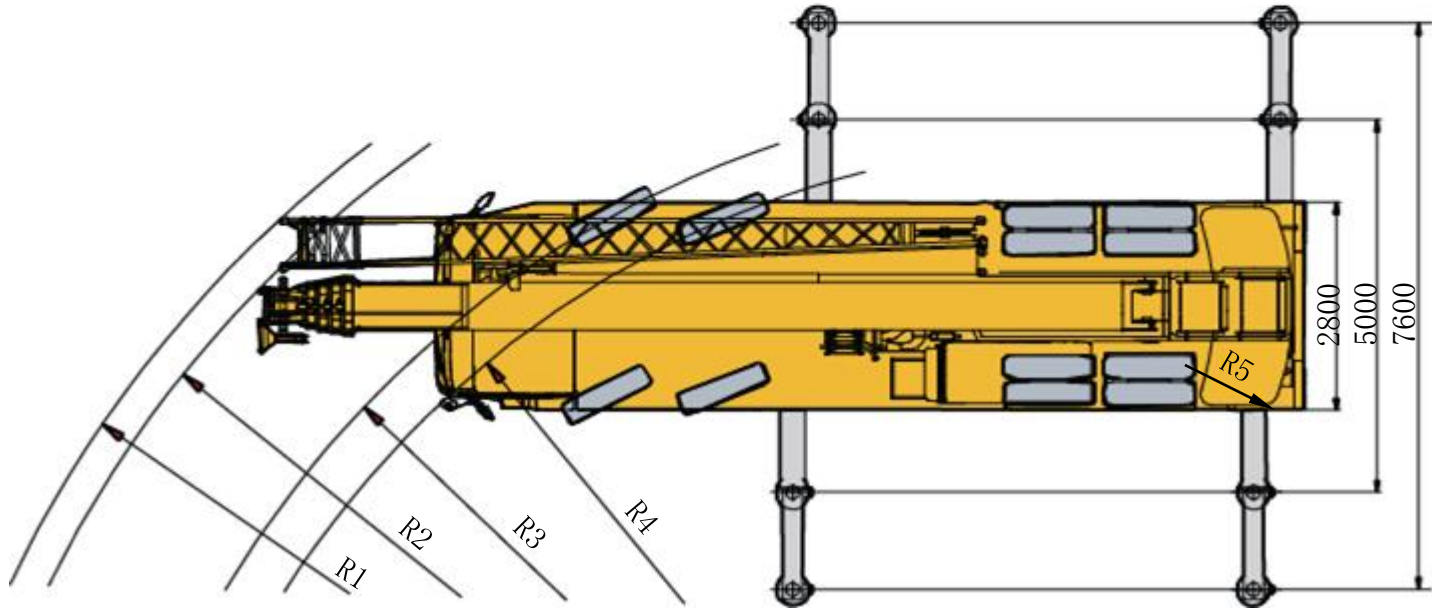
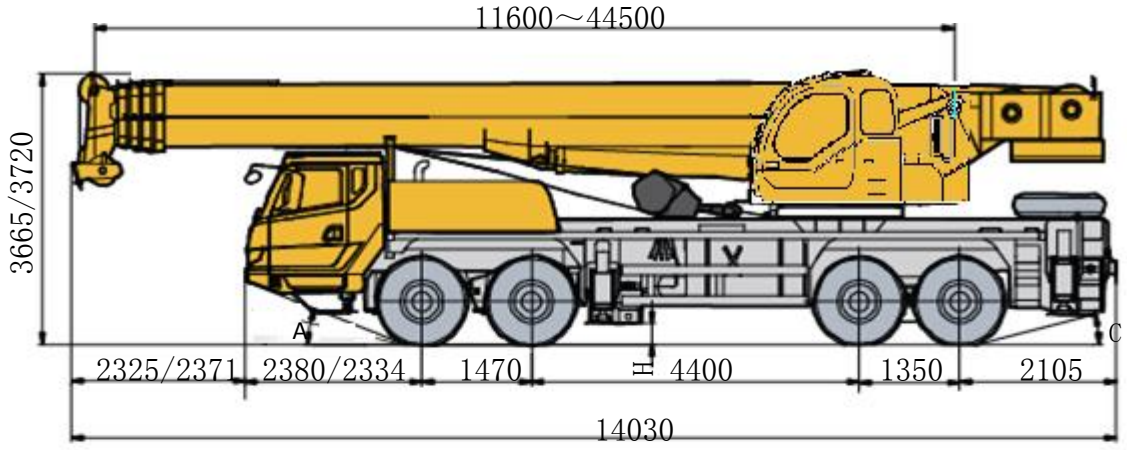


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尺寸参数 Dimensions



	A	C	H	R1	R2	R3	R4	R5
12.00R24-18PR	21°	14°	280	15125	14800	12000	11100	3550

技术规格

Technical specifications



底盘

车架	徐工设计、制造，受力结构优化设计，防扭转箱型结构，高强度钢材制造。支腿箱体位于3桥和4桥之间以及车架后端，具有前后牵引挂钩。
支腿	4支腿，H形布置，采用双级水平支腿，水平伸缩和垂直伸缩由液压控制，底盘两侧装有电控操纵控制台，控制台板装有水平仪、照明灯和调速按钮，支腿油缸均设有单向阀，且垂直支腿带有双向液压锁。 支脚盘尺寸：φ450mm 最大起重量时支腿反力：633KN
发动机	WD615.338，直列六缸水冷电控柴油发动机，中国重汽集团杭州发动机有限公司制造，额定功率276kW/2200rpm，最大扭矩1500Nm/1100-1600rpm，国III排放标准。 燃油箱容积：350L。
变速箱	9JS150T-B，陕西法士特齿轮有限责任公司，9个前进档，1个倒档，带缓速制动。
车桥	高强度桥，引进国外先进技术，名牌厂家制造，性能可靠。
悬挂	前桥采用钢板弹簧。中后桥采用橡胶弹簧悬架加V型推力杆结构，增加底盘行驶稳定性，减少轮胎的磨损。
轮胎	12.00R24，×12 备胎12.00R24，×1
制动	行车制动：双回路气压制动，第一回路作用于一、二轴车轮上，第二回路作用于三、四轴车轮上。 驻车制动：放气制动，作用于二、三、四轴上，通过各轴上的弹簧储能气室起作用。 辅助制动：发动机排气制动，安全可靠，延长制动摩擦片使用寿命。
转向	1、2桥机械转向+液压助力。
驾驶室	全宽豪华驾驶室，标配收放音机，可调式座椅、方向盘，大视野后视镜，门窗升降器，标配暖风、空调。
电气系统	直流24伏特，串联12伏特的电池组2个。 发电机：28.5±0.3伏特，70安培。



上车

结构	徐工设计、制造，高强度钢材制造。
液压系统	液压泵：底盘发动机驱动四联泵，变量泵用于起升、变幅、伸缩。 控制阀：先导液压油控制的负荷敏感式比例多路换向阀，带有抗冲击阀、防气蚀阀。 油路：风冷式液压油冷却器，有效降低系统油温 滤油器：进、回油滤油器
操纵方式	无级调速。先导液比例操纵，由左右2个操纵手柄控制 由液压泵和比例阀进行液压先导式控制起重机的全部动作。
主起升机构	液压控制调速，装有绳槽卷筒，由液压马达通过行星齿轮减速器驱动，内置常闭式制动器并带有平衡阀。 具有轻载高速、重载低速的特点。
回转机构	外齿式回转支承，由液压马达驱动行星齿轮回转机构减速器驱动，可连续回转360°。 设有脚踏板操作的回转制动器。 具有动力控制或自由滑转的功能，可无级调速。
变幅机构	单支双作用前置液压变幅油缸，带有平衡阀。
操纵室	整体式操纵室，装有无视野死角的前景窗，安全玻璃，控制仪表，操纵杆安装在座椅两侧的扶手上。 配备冷暖空调。
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，防止钢丝绳过放；臂头设置高度限位，防止钢丝绳过卷

技术规格

Technical specifications



臂架系统

主臂 由1节基本臂和4节伸缩臂组成，采用抗扭曲设计，高强度结构钢制造。主臂长度：11.6m ~ 44.5m。

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4.0t。

固定副臂 两节副臂，一节桁架式副臂，工作长度8.5m，二节箱型副臂，两节臂全伸工作长度15m，安装角度0°、15°、30°。

选装配置

中长钩 35吨中长钩；

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

技术规格

Technical specifications



Chassis

Frame	Designed and manufactured by XCMG, with all covered walking surface, anti-torsion box structure and optimal load-bearing structure design, made of imported high strength steel.
Outrigger	Four outriggers are arranged in H shape longitudinally, with outrigger beams and jacks hydraulically controlled by control levers. Control levers are located on both sides of the chassis, with a luminous level gauge equipped. Check valve is fitted in each outrigger cylinder, and double-way valve is fitted in jack cylinder. Outrigger float dimension : $\phi 450\text{mm}$ Max. outrigger reaction force : 633KN
Engine	WD615.338, in-line six-cylinder water-cooled EFI diesel engine, manufactured by China National Heavy Duty Truck Group HANGZHOU Engine sales co.LTD, rated power 276kW /2200rpm, max. standatorque 1500Nm / 1100-1600rpm, the national III emission rds. Fuel tank capacity : 350L
Gearbox	Electric controlled transmission imported from SHANXI FAST GEAR Co., Ltd, with mechanism control, equipped with retarded brake, with 9 forward gears and 1 reverse gears available
Alxes	High strength axle with reliable performance, adopted oversea advanced technology and produced by famous company.
Suspension	Front suspension: leaf spring. Middle and rear axles: rubber spring suspension and V-type upper thrust lever, which will improve chassis driving stability and reduce tire wear.
Tires	12.00R24 , $\times 12$ Reserve:12.00R24 , $\times 1$
Brakes	Service brake.....pedal operated double-circuit air pressure brake. The first circuit acts on wheels of axles 1 and 2; the second circuit acts on wheels of axles 3 and 4. Parking brake.....air-release brake, acting on axles2, 3 and 4 by the spring energy storing air chamber on each axle. Auxiliary brakeengine exhaust brake, which is safe and reliable, and will prolong the service life of brake lining.
Steering	Mechanical steering system with hydraulic boosting device.
Driver's cab	Full-dimension luxurious driver's cab. Radio, adjustable seat, steering wheel, large-view rear mirrors and manually operated lifters for door windows are equipped. Heater, air-conditioner are standard.
Electric power system	DC 24 V, two 12 V battery group in series. 28.5 \pm 0.3V70 ampere generator.



Superstructure

Frame	Designed and manufactured by XCMG; Full-covered walking platform, made of high-strength steel
Hydraulic system	Hydraulic pump:quadruple pump is driven by chassis engine , variable-displacement pump used for hoisting, elevating and telescoping system. Control valve:load sensitive proportional multi-way change valve controlled by pilot hydraulic oil, impact-resistant valve and anti-cavitation corrosionvalve are equipped. Oil circuit:air-cooled hydraulic oil cooler, which may effectively reduce the temperature of oil in the system Oil filters:suction filter and return filter
Operating mode	Stepless speed regulation is available. All the movements of the crane is controlled by hydraulic pump, proportional valve and pilot hydraulic-proportional control system, controlled by two control levers at left and right.
Main winch system	Hydraulic controlled speed regulation, groove drum is equipped, driven by hydraulic motor through planetary gear reducer, and built-in normally closed brake and counterbalance valve are available. Hoisting system has features of high speed with light load and low speed with heavy load.
Slewing system	External tooth slewing ring. Slewing system is driven by hydraulic motor, with planetary gear reducer,for 360° continuous rotation, stepless slewing speed regulation is available. Functions such as power control or free sliding are equipped, and foot pedal is fitted to control slewing brake.
Elevating system	Single-supported double acting front-mounted hydraulic elevating cylinder, with balance valve equipped.
Operator's cab	The cab is located at the left side of turntable, equipped with no dead vision front glass, safe glass, two operating levers beside the seat,. Heater and air conditioner are available.
Safety devices	Hydraulic balance valve; Hydraulic over-flow valve; Hydraulic double-way valve; Load Moment Indicator(LMI); Lever spring-back middle position system; Lowering limiter avoids wire rope over-releasing; Anti-two block at boom head avoids wire rope over-winding;

技术规格

Technical specifications



Boom system

Boom

1-section base boom and 4-section telescopic boom, with anti-twist design and high-strength steel structure.

Main boom length.....11.6m ~ 44.5m

Single top

Single top is installed on the top of main boom, for single wire rope hoist.

Its lifting performance is the same as main boom , but its max. lifting load not exceeding 4000kg.

Jib

2-section , 1st section jib is lattice welding structure and length 8.5m, 2nd section jib is box welding structure. The max. length of jib is 15m, 0°, 15° and 30° offset angles are available.

Additional equipment

Hook block 35 ton hook block

Product parts details As mentioned above, please refer to the product quotation for specific parts.

重量 Weight






车桥 Axle	1	2	3	4	总重量 Total weight
t	8.5	8.5	13	13	43.0








吊钩 Hook	倍率 No. of lines	吊钩重量 Weight kg	备注 Remarks
70t	12	616	单钩 Single hook , 标配 Standard
35t	6	370	单钩 Single hook , 选配 Optional
4.0t	1	100	单钩 Single hook , 标配 Standard

作业速度 Working speeds

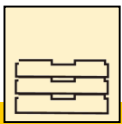
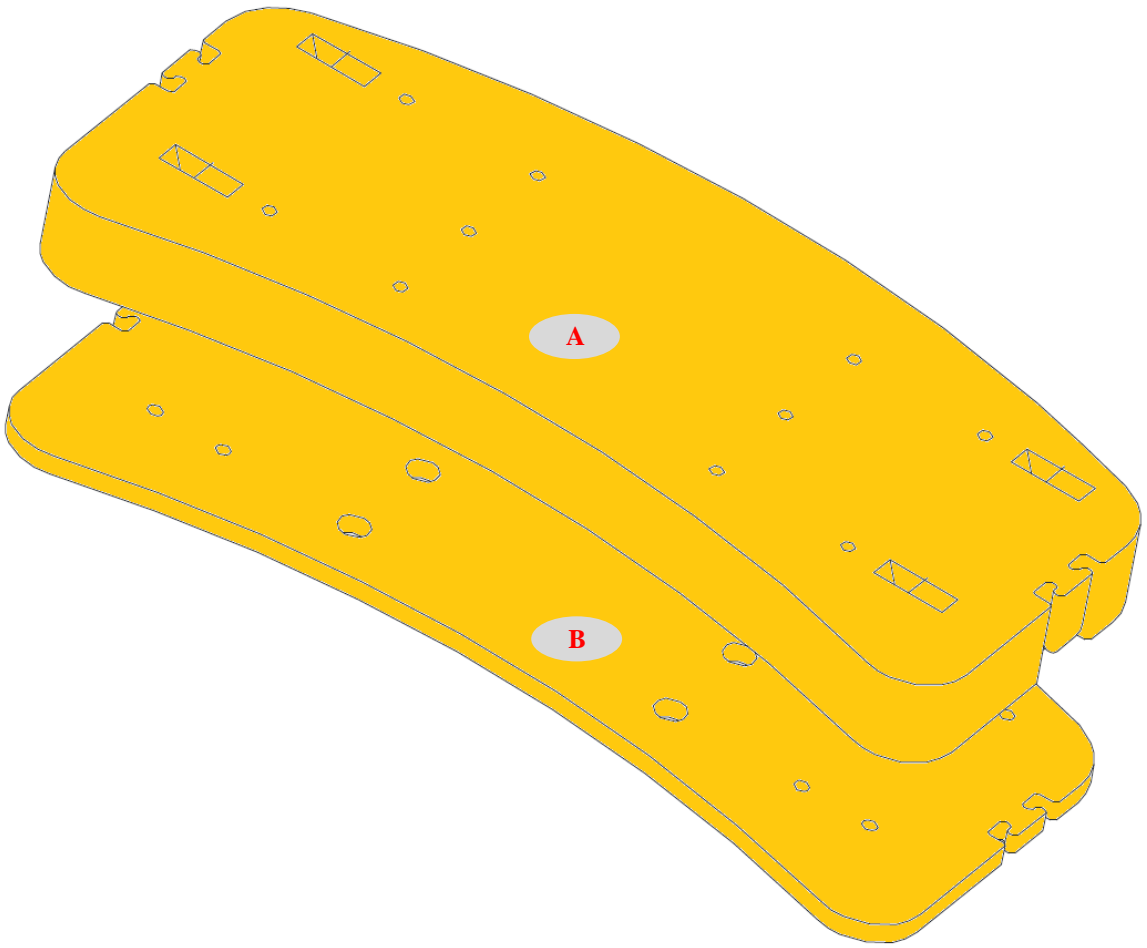


		
12.00 R 24	1 ~ 80	42%



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	5.9t	20 mm/205 m
	0-108 m/min, 单绳, 第四层 m/min, single line, 4th layer	4.0t	18 mm/130 m
	0-2r/min		
	从-2°抬起至80°约60s Approx. 60s for boom elevation from -2° to 80°		
	从11.6m伸出至44.5m约150s Approx. 150s for boom extension from 11.6m to 44.5m		

平衡重 Counterweight



平衡重 Counterweight	A	B
尺寸 (长×宽×高) m Size (L×W×H) m	2.65×1.24×0.03	2.65×1.24×0.01
重量 t Weight t	4	1

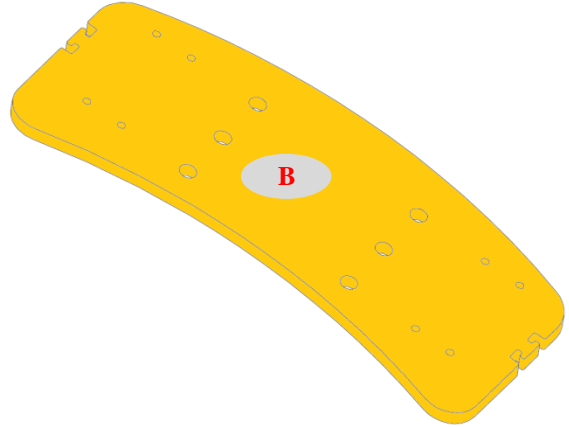
工况模式 Working mode	5t	4t
组合形式 Combinations	A+B	A

运输部件尺寸

Transportation components dimension

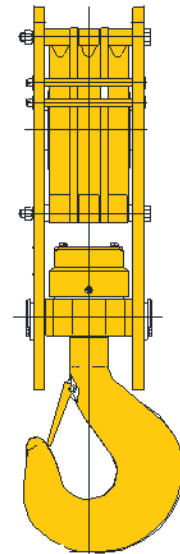
平衡重:1t
Counterweight 1t

平衡重B : 1t
2.65×1.24×0.01
单位(Unit) : m



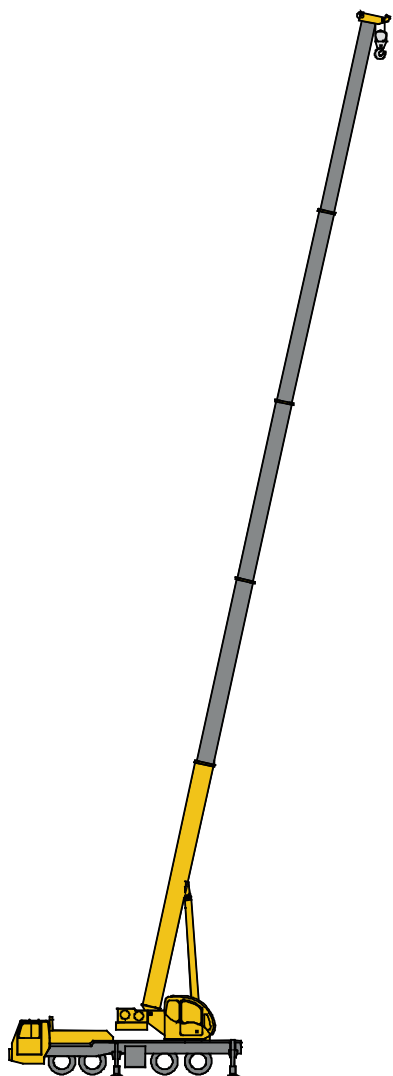
35吨中长钩 370kg
35 ton hook block 370 kg

35吨吊钩
1.427×0.570×0.318
单位(Unit) : m



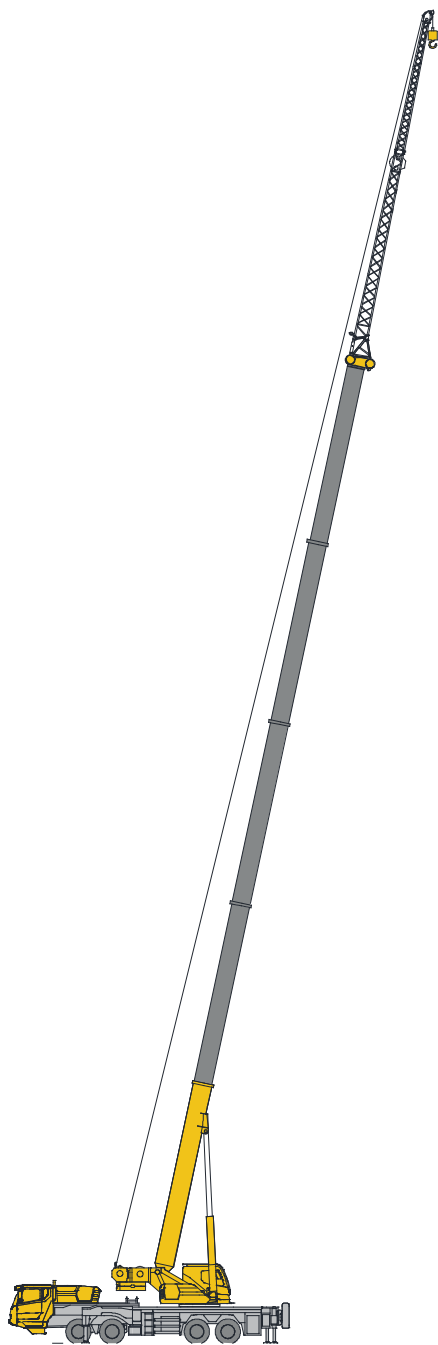
臂架组合方案

Boom / Jib combinations



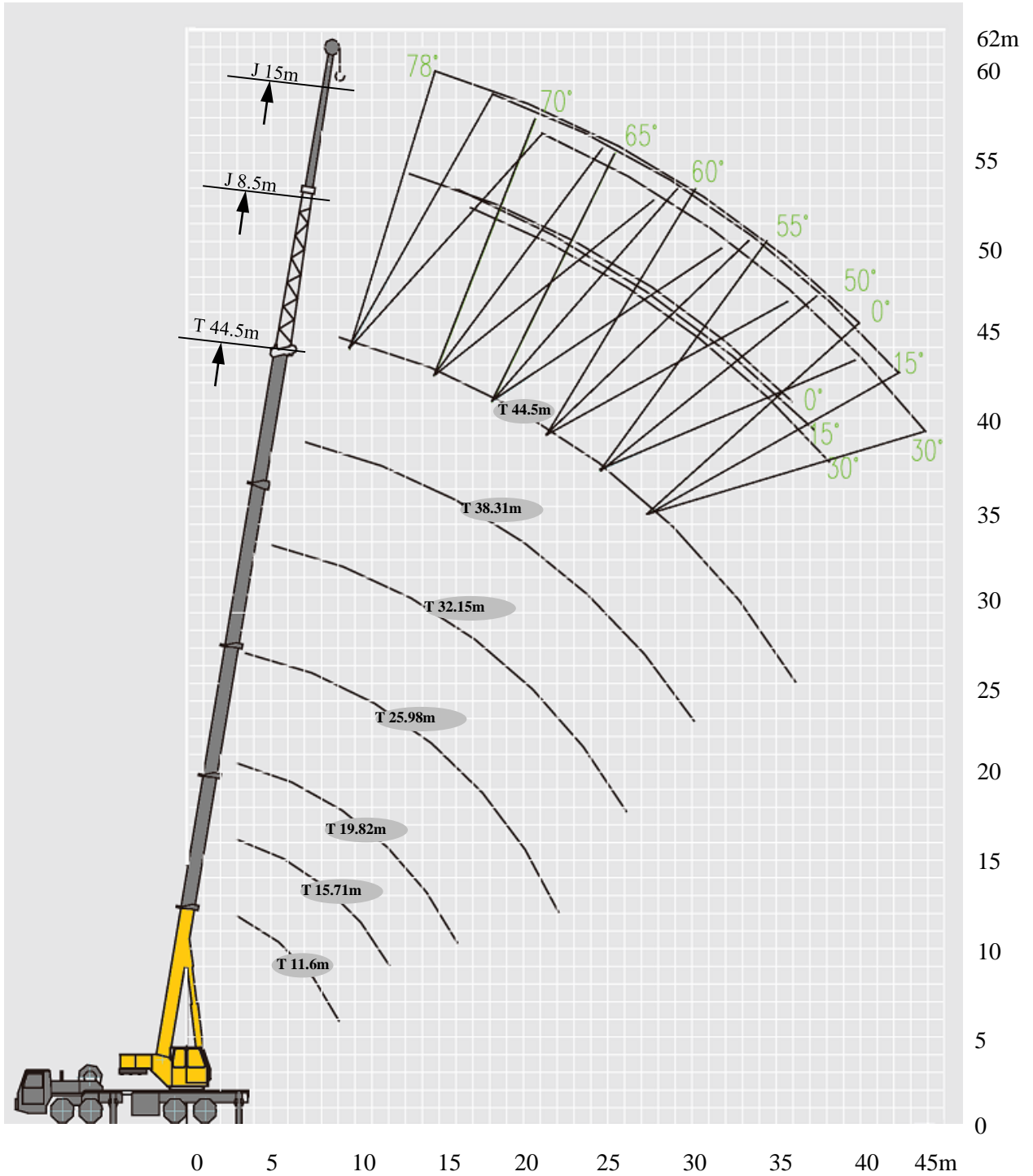
主臂
Telescopic boom

T : 11.6~44.5m



副臂
Jib

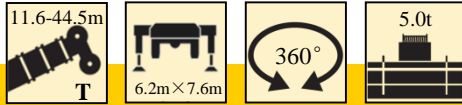
T : 44.5m
J : 8.5~15 m



起重性能表

Lifting capacities

T 11.6~44.5m

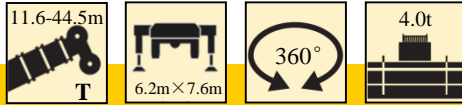


↔ m	11.6m	15.71m	19.82m	25.98m	32.15m	38.31m	44.5m	↔ m
3	70000							3
3.5	63500							3.5
4	54500	47500	40600					4
5	47000	42600	38500	27600				5
6	38500	37000	34200	25500				6
7	30000	29000	28800	23500	18200			7
8	23500	23000	23000	21500	17500	14100		8
9	18600	18500	18300	19000	16000	14100		9
10		15000	15000	16000	14500	13200	9900	10
12		10300	10300	11300	12000	11200	9100	12
14			7300	8300	9000	9500	8100	14
16			5200	6300	6900	7300	7200	16
18				4700	5400	5800	5950	18
20				3600	4200	4600	4600	20
22				2700	3300	3700	3800	22
24					2600	3000	3100	24
26					2000	2400	2500	26
28						1900	2000	28
30						1400	1600	30
32						1100	1300	32
34							1000	34
36							700	36

起重性能表

Lifting capacities

T 11.6~44.5m

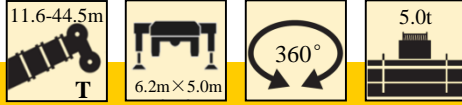


m	Lifting Capacity (kg)							m
	11.6m	15.71m	19.82m	25.98m	32.15m	38.31m	44.5m	
3	70000							3
3.5	63500							3.5
4	54500	47500	40600					4
5	47000	42600	38500	27600				5
6	38500	37000	34200	25500				6
7	29500	28800	28500	23500	18200			7
8	22500	22300	22300	21500	17500	14100		8
9	17800	17700	17600	18700	16000	14100		9
10		14400	14300	15500	14500	13200	9900	10
12		9700	9600	10800	11500	11200	9100	12
14			6800	7800	8500	9000	8100	14
16			4800	5800	6500	6900	7200	16
18				4400	5000	5400	5700	18
20				3300	3900	4300	4600	20
22				2400	3000	3400	3700	22
24					2300	2700	3000	24
26					1700	2100	2400	26
28						1600	1900	28
30						1200	1500	30
32						900	1200	32
34							800	34
36							600	36

起重性能表

Lifting capacities

T 11.6~44.5m

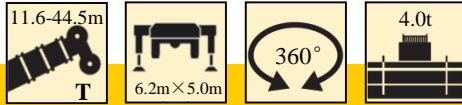


↔ m	11.6m	15.71m	19.82m	25.98m	32.15m	38.31m	44.5m	↔ m
3	70000							3
3.5	63500							3.5
4	54500	47500	40600					4
5	33600	33400	33400	27600				5
6	22600	22400	22300	23800				6
7	16500	16300	16200	17500	18200			7
8	12600	12400	12300	13500	14300	14100		8
9	9800	9700	9600	10700	11400	11900		9
10		7700	7600	8700	9400	9800	9900	10
12		5000	4900	5900	6500	7000	7300	12
14			3100	4100	4700	5100	5400	14
16			1900	2800	3400	3800	4100	16
18				1900	2400	2800	3100	18
20				1100	1700	2100	2300	20
22				500	1100	1500	1700	22
24					600	1000	1200	24
26						600	800	26
28							500	28

起重性能表

Lifting capacities

T 11.6~44.5m



↔ m	11.6m	15.71m	19.82m	25.98m	32.15m	38.31m	44.5m	↔ m
3	70000							3
3.5	63500							3.5
4	54500	47500	40600					4
5	31900	31700	31600	27600				5
6	21400	21200	21100	22600				6
7	15500	15300	15300	16600	17400			7
8	11800	11600	11500	12700	13500	14000		8
9	9200	9000	8900	10100	10800	11300		9
10		7100	7000	8100	8800	9300	9600	10
12		4500	4400	5500	6100	6500	6900	12
14			2800	3700	4300	4700	5100	14
16			1500	2500	3100	3500	3800	16
18				1600	2200	2500	2800	18
20				900	1400	1800	2100	20
22					900	1200	1500	22
24						800	1100	24
26							700	26

起重性能表

Lifting capacities

T 44.5m

	44.5m T		8.5-15m J		6.2m×7.6m		360°		5t				
	8.5 m						15m						
	0°		15°		30°		0°		15°			30°	
78	4000	2700	2400	2500	1400	1100	78						
75	3600	2500	2300	2100	1250	1040	75						
72	3200	2300	2200	1800	1150	990	72						
70	2900	2200	2100	1700	1100	950	70						
65	2400	2000	1900	1400	950	880	65						
60	2000	1800	1700	1200	850	830	60						
55	1300	1200	1100	800	700	600	55						
50	800	650	600	500	400	350	50						

	44.5m T		8.5-15m J		6.2m×7.6m		360°		4t				
	8.5 m						15m						
	0°		15°		30°		0°		15°			30°	
78	4000	2700	2400	2500	1400	1100	78						
75	3600	2500	2300	2100	1250	1040	75						
72	3200	2300	2200	1800	1150	990	72						
70	2900	2200	2100	1700	1100	950	70						
65	2400	2000	1900	1400	950	880	65						
60	1800	1700	1600	1200	850	800	60						
55	1100	1100	1000	700	650	550	55						
50	700	600	600	300	300	300	50						

起重性能表

Lifting capacities

T 44.5m

	44.5m T		8.5-15m J		6.2m×5.0m		360°		5t				
	8.5 m						15m						
	0°		15°		30°		0°		15°			30°	
78	4000	2700	2400	2500	1400	1100	78						
75	3600	2500	2300	2100	1250	1040	75						
72	2700	2300	2200	1800	1150	990	72						
70	2100	1900	1800	1600	1100	950	70						
65	1100	1000	1000	700	600	500	65						
60	500	400	400	200			60						



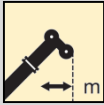











	44.5m T		8.5-15m J		6.2m×5.0m		360°		4t				
	8.5 m						15m						
	0°		15°		30°		0°		15°			30°	
78	4000	2700	2400	2500	1400	1100	78						
75	3500	2500	2300	2100	1250	1040	75						
72	2400	2200	2000	1800	1150	990	72						
70	1900	1700	1600	1350	1100	900	70						
65	900	900	800	550	500	400	65						
60	350	320	300				60						

符号标识

Description of symbols



常规标识

General symbols

	支腿 Outriggers		车桥 Axle
	工作幅度 Radius		行驶速度 Driving speed
	吊臂仰角 Boom angle		爬坡能力 Grade ability
	吊臂长度 Boom length		轮胎 Tires
	吊钩 Hook block		平衡重 Counterweight
	360°全回转 360° rotation		上车 Superstructure
	卷扬 Winch		底盘 Chassis

起重作业标识

Crane specific symbols

	主臂 Boom		副臂 Jib

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	14030×2800×3665/3720	
	轴距 Wheel base	mm	1470+4400+1350	
	轮距(前/后) Track (Front/ Rear)	mm	2304/2304/2075/2075	
	前悬/后悬 Front/ Rear overhang	mm	2380/2105或2334/2105	
	前伸/后伸 Front/ Rear extension	mm	2325/0或2371/0	
重量参数 Weight	最大允许总质量	kg	43000	
	轴荷	一轴、二轴 1st and 2nd axle	kg	17000
		三轴、四轴 3rd and 4th axle	kg	26000
动力参数 Power	发动机型号 Engine model	—	WD615.338 国III	
	额定功率/转速 Engine rated power/rpm	kW/(r/min)	276/2200	
	最大净功率/转速 Max. net power/rpm	kW/(r/min)	274/2200	
	最大输出扭矩/转速 Engine rated torque/rpm	N.m/(r/min)	1500/1100-1600	
行驶参数 Travel	最高车速 Max. travel speed	km/h	80	
	最低稳定车速 Min. travel speed	km/h	2~3	
	最小转弯直径 Min. turning diameter	m	24	
	臂头最小转弯直径 Min. turning diameter at boom tip	m	30.25	
	最小离地间隙 Min. ground clearance	mm	327	
	接近角 Approach angle	°	21	
	离去角 Departure angle	°	14	
	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	%	40	
	百公里油耗 Fuel consumption per 100 km	L	45	
噪音 Noise	加速行驶机外噪声 Exterior noise level	dB(A)	≤88	
	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	70	
	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	3550	
	最大起重力矩 Max. load moment	基本臂 Base boom		kN.m	2303
		最长主臂 Fully-extended boom		kN.m	1129
		最长主臂+副臂 Fully-extended boom + Jib		kN.m	580.2
	支腿跨距 Outrigger span	纵向 Longitudinal		m	6.2
		横向 Lateral		m	7.6
	起升高度 Hoist height	基本臂 Base boom		m	11.8
		最长主臂 Fully-extended boom		m	44.2
		最长主臂+副臂 Fully-extended boom + Jib		m	59.4
	起重臂长度 Boom length	基本臂 Base boom		m	11.6
		最长主臂 Fully-extended boom		m	44.5
		最长主臂+副臂 Fully-extended boom + Jib		m	59.5
副臂安装角 Jib offset angle			°	0、15、30	
工作速度参数 Working speed	起重臂起臂时间 Boom raising time		s	≤60	
	起重臂全伸时间 Boom fully extended time		s	≤150	
	最大回转速度 Max. slewing speed		r/min	≥2.0	
	支腿收放时间 Outrigger extending and retracting time	水平支腿 Outrigger beam	收 Retracting	s	≤20
			放 Extending	s	≤30
		垂直支腿 Outrigger jack	收 Retracting	s	≤30
			放 Extending	s	≤35
	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 Auxiliary winch		m/min	≥108		
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 .



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