XCR70_S 越野轮胎起重机 / Rough Terrain Crane

技术规格书
Technical specifications

70t

45m

57.9m

目录
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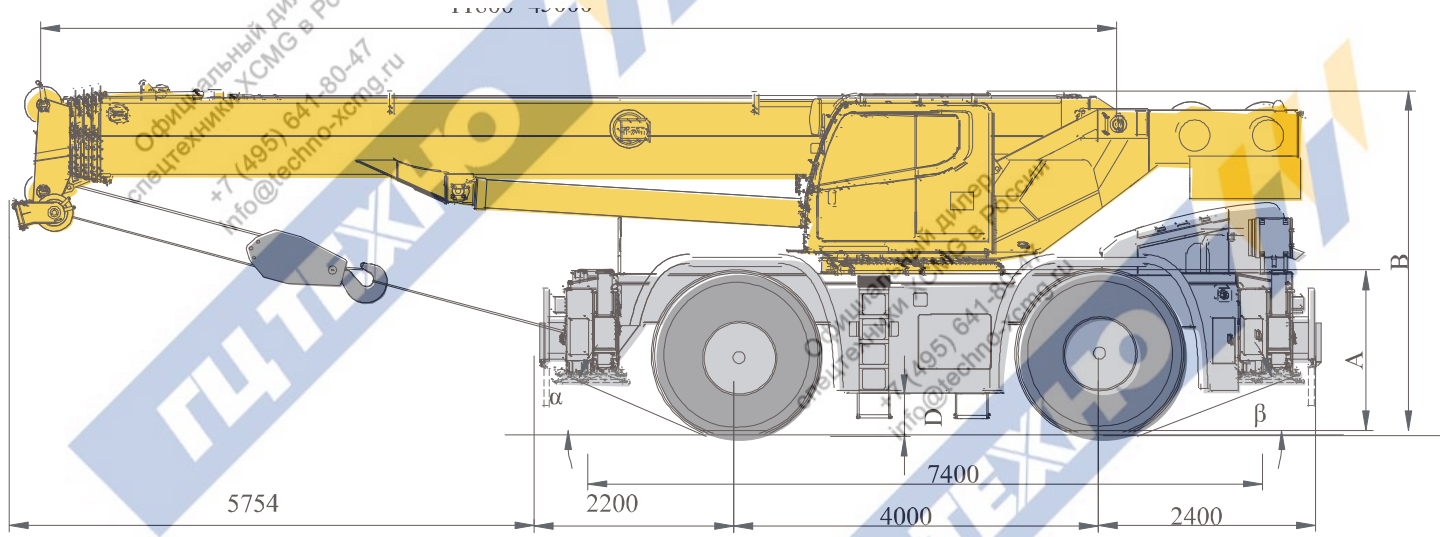
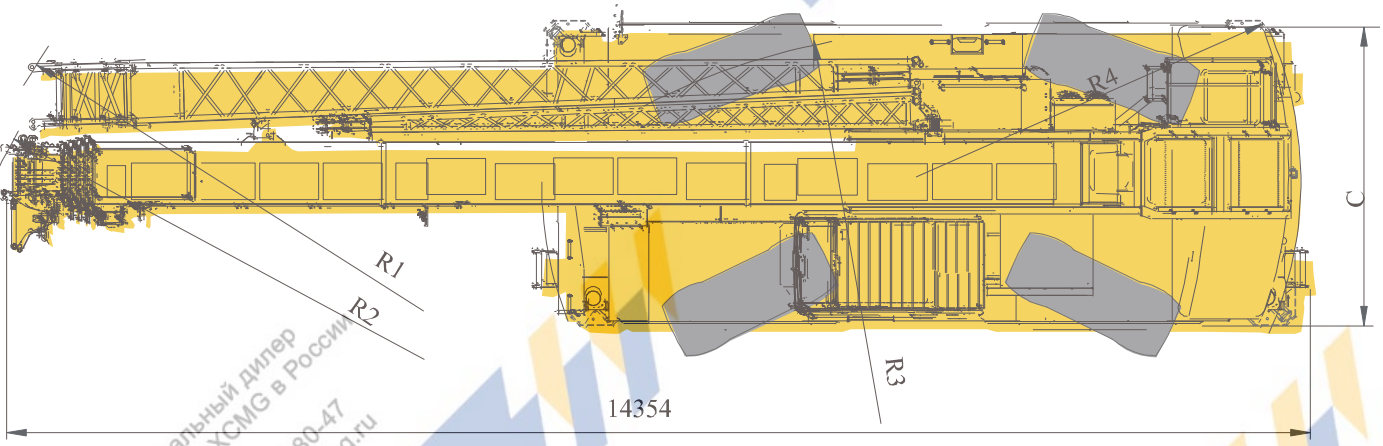
尺寸参数
Dimensions





	α	β	A	B	C	D	R1	R2	R3	R4
29.5R25	23°	21°	1766	3750	3290	475	11445	11247	6500	4200

技术规格
Technical specifications

		
Boom	1 basic boom and 4-telescoping sections, U-shape cross section welding structure. Double cylinder plus ropes telescoping mechanism. 6 pulleys on boom head are standard. Boom length: 11.8 m ~ 45 m.	●
Jib	Two-section lattice structure. Three offset angles of 0°, 15° and 30° are available. It is stowed along the side of the boom. Jib length: 9.2 m~16 m.	○
Frame	Made of high strength fine grained steel, welded torsion-resistant frame type construction with large cross-section, high load-bearing capacity.	●
Outrigger	4 outriggers, H-shaped arrangement, which are controlled by electrical and hydraulic and located at both sides of chassis frame.	●
Engine	SC9DK260.1G3, in line, six-cylinder water-cooled compression ignition diesel engine, manufactured by Shangchai, with rated power of 192/2000(kW/(r/min)), max. torque of 1110/(1200-1600)(N.m/(r/min)), off-road EU Stage IIIA emission standard compliant Fuel tank capacity: approx. 305 L	●
Transmission	6WG210, automatic transmission from ZF Germany, with 6 forward and 3 reverse gears	●
Axles	Both front and rear axles are for driving and steering, and the axles have features of great load bearing capacity	●
Suspensions	Front axle is rigidly connected with frame; rear axle is equipped with swing hydraulic suspensions, which have cushioning function when driving on roads; the rear suspension cylinder may be locked to rigid state so as to meet the requirement for travel with a load suspended, increasing operation stability.	●
Tires	4 specialized off-road, large bearing capacity. Tire specifications: 29.5R25.	●
Steering	Front axle independent steering, tight turning radius steering, crab walk steering and rear axle independent steering modes are available. The steering angle can be self-adjusted when changing mode.	●
Brakes	Service brake: double-circuit hydraulic disc brake, acting on all wheels. Automatically braking and alarm are available when the pressure in braking system is too low. Parking brake: spring-loaded brake, acting on front axles, hydraulic-released independent disc brake.	●
Hydraulic system	A dual-variable displacement pump, used for hoisting, elevating and telescoping operations, and a gear pump, used for slewing, outrigger, steering and braking operations; a load sensitive proportional multi-way change valve is used as main valve; an independent hydraulic oil radiator. Tank capacity: approx. 1120 L.	●
Operating mode	Hydraulic controlled pilot operation system is equipped with two levers controlling the main movements of the crane.	●
Electrical System	24 V DC, two sets of 12 V battery in series.	●
Main and auxiliary winch system	The system is driven by a hydraulic motor through a planetary gear reducer, with a normally closed brake and a balance valve equipped.	●
Slewing system	Single-row four-point ball contact slewing ring, driven by a hydraulic motor through planetary gear reducer, and with a normally closed brake fitted.	●
Operator's cab	Tiltable cab, with sliding door and adjustable seat equipped. It is equipped with safe glass and roof protective grille. Sun shade is available for windshield and roof window. Heater and air conditioner, radio, 12 V and 24 V DC outlets are standard.	●
Safety devices	Hydraulic balance valve, hydraulic relief valve, hydraulic double-way valve and LMI. Lowering limiter is equipped in winch to prevent rope over-releasing. Anti-two block is fitted on the boom head to prevent rope over-winding. virtual wall. Emergency lowering device . High voltage electrical equipment non-contract intelligent warning System . Low-temperature protection device .	●
Counterweight	6.3 t	●
	9 t. Two counterweight configurations of 0 t and 9 t are available. (If the optional 9 t slab is selected, the 6.3 t standard slab will not be supplied.)	○
Hook Block	55 t hook block，5 t hook block	●

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	24.210	22.470	46.680（选配9t平衡重 Optional 9t counterweight）
	25.260	18.720	43.980（标配6.3t平衡重 Optional 6.3t counterweight）

吊钩 Hook	倍率 No. of lines	吊钩重量 Weight (kg)	备注 Remarks
55t	10	502	单钩 Single hook
5t	1	158	单钩 Single hook

作业速度
Working speeds

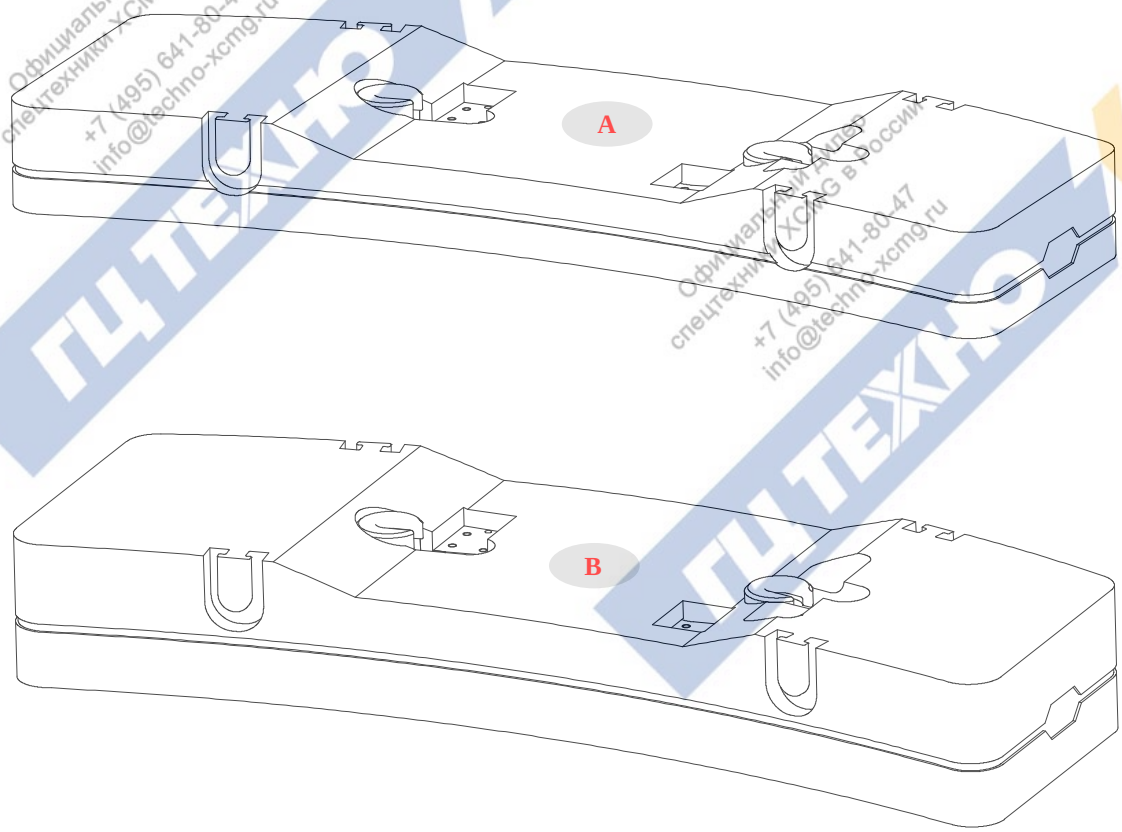
29.5 R 25

40

70%

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
1	0-150 m/min，空载，第四层 m/min, no load, 4th layer	61kN	20mm/215m
2	0-100 m/min，空载，第四层 m/min, no load, 4th layer	61kN	20mm/140m
360°	0-2r/min		
	从-1.5°抬起至80°约50s Approx. 50s for boom elevation from -1.5° to 80°		
	从11.8m伸出至45m约90s Approx. 90s for boom extension from 11.8m to 45m		

平衡重
Counterweight

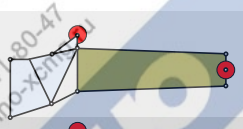


平衡重 Counterweight	A	B（选配optional）
尺寸（长×宽×高） mm Size（L×W×H） mm	3200×1250×330	3200×1250×450
重量 t Weight t	6.3	9

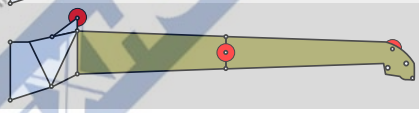
工况模式 Working mode	0t	6.3t	9t（选配 optional）
组合形式 Combinations	——	A	B

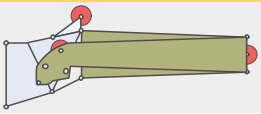
臂架组合方案
Boom / Jib combinations

副臂 – 9.2m
Jib – 9.2m

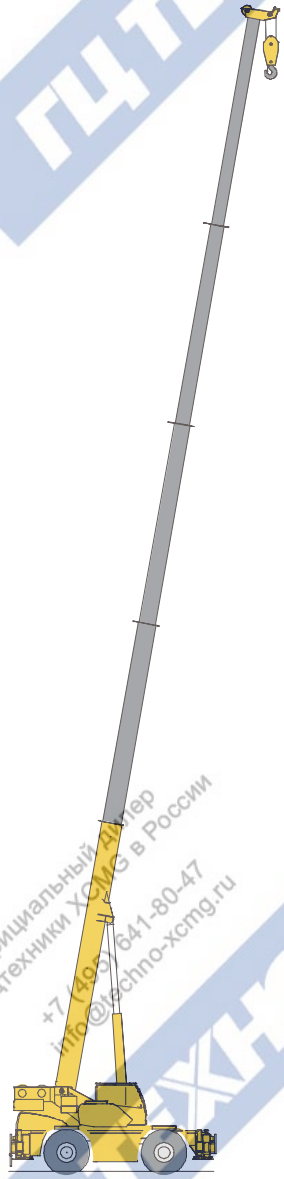


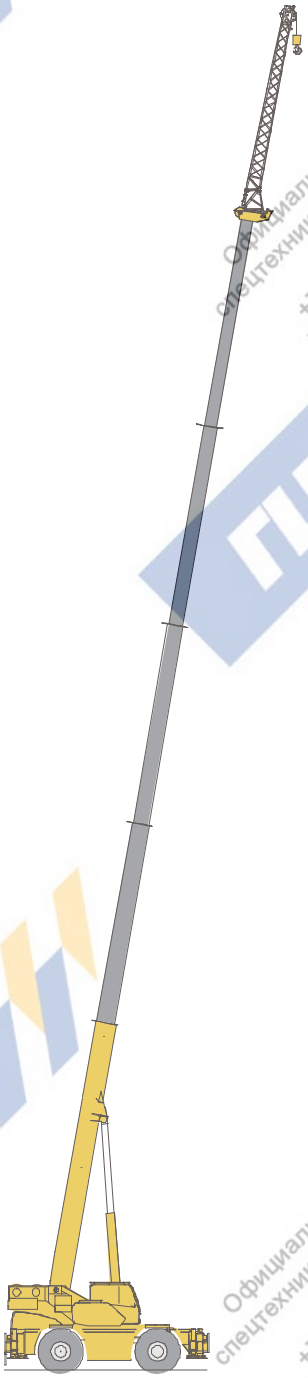
副臂 - 16m
Jib – 16m

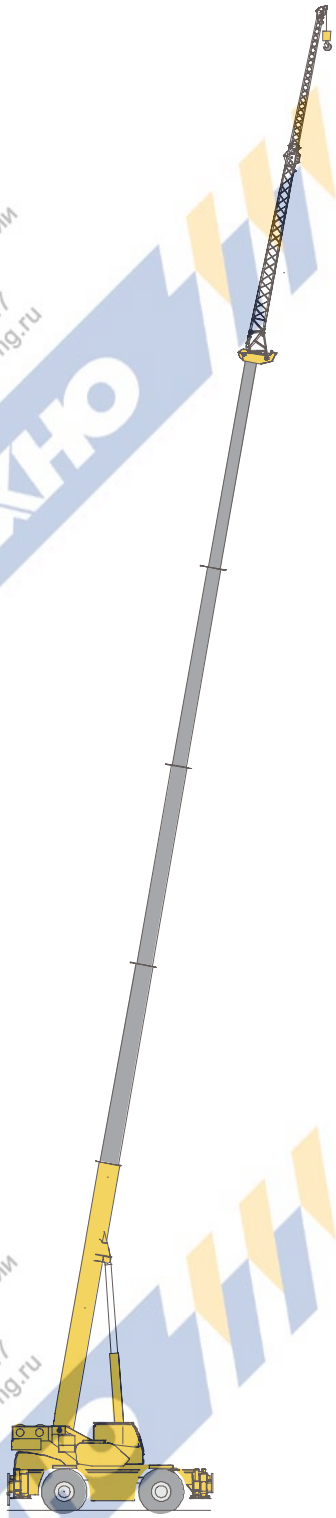


部件 Component	结构形式 Structure	尺寸（长×宽×高） mm Size（L×W×H） mm	重量 kg （Weight kg）
一节、二节副臂总成+连接架 First and second jib section assembly + Connecting bracket		折叠（Folded）：9784×950×1263	932

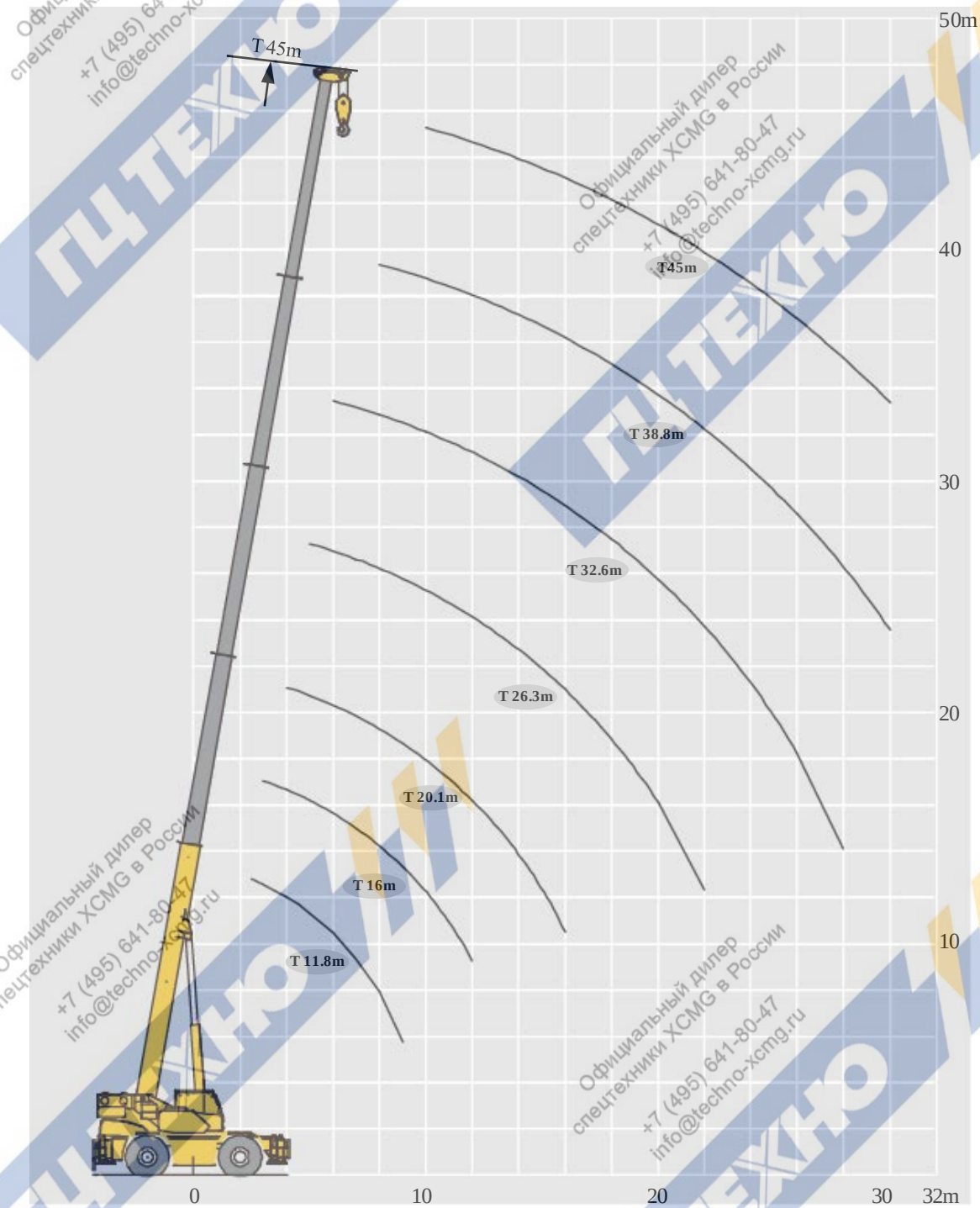
臂架组合方案
Boom / Jib combinations







主臂 Telescopic boom	主臂 + 一节副臂 Telescopic boom + First jib section	主臂 + 两节副臂 Telescopic boom + First and second jib sections
11.8~45m	45m+9.2m	45m+16 m



起重性能表
Lifting capacities

T 11.8~45m

m	11.8m	16.0m	20.1m	26.3m	32.6m	38.8m	45m	18.0m	24.3m	30.5m	36.7m	22.2m	28.4m	34.6m	40.9m	m
2.5	70*															2.5
3	60	42.5						27.5								3
3.5	55	43.5						28.0								3.5
4	48	45	37					28.5	20.0			27.0				4
4.5	44	43	37					28.5	20.0			27.0				4.5
5	38	38	31	27				28.5	20.0			27.0	21.0			5
6	31	31	30	25.4	19			28.5	20.0	12.5		27.0	21.0			6
7	25	25	25	23.9	17.8			25.0	20.0	13.4		25.0	21.0	12.5		7
8	21	21	21	21.8	17.4	12		21.0	20.0	13.4		21	21.0	13.3		8
9	18.3	18.1	17.7	19	17	11.5		18.6	19.8	13.4		18.5	20.2	13.3		9
10		14.5	14.2	15.4	16.5	11.2	9.3	16.3	17	12.4	5.0	15.7	16.5	13.3		10
12		9.9	9.6	10.7	11.3	10.2	8.8	11.5	12.2	10.8	5.0	11	11.7	11.9		12
14			6.8	7.8	8.4	8.8	8.5	8.6	9.2	9.6	8.5	8.1	8.7	9.1	6.5	14
16			4.7	5.9	6.4	6.8	7.1		7.2	7.6	7.5	6.1	6.7	7.1	7.4	16
18				4.4	5	5.4	5.7		5.7	6.1	6.3	4.7	5.3	5.7	5.9	18
20				3.3	3.9	4.3	4.6		4.6	5	5.2		4.2	4.6	4.8	20
22				2.5	3.1	3.4	3.7			4.1	4.3		3.3	3.7	4	22
24					2.2	2.6	3			3.4	3.6		2.5	3	3.3	24
26					1.6	2	2.3			2.9	3			2.3	2.6	26
28					1.1	1.5	1.8				2.5			1.8	2.1	28
30						1.1	1.4				1.9			1.3	1.6	30
二节臂 2nd	0	50%	100%	100%	100%	100%	100%	0%	0%	0%	0%	50%	50%	50%	50%	二节臂 2nd
三节臂 3rd	0	0	0	25%	50%	75%	100%	25%	50%	75%	100%	25%	50%	75%	100%	三节臂 3rd
四节臂 4th	0	0	0	25%	50%	75%	100%	25%	50%	75%	100%	25%	50%	75%	100%	四节臂 4th
五节臂 5th	0	0	0	25%	50%	75%	100%	25%	50%	75%	100%	25%	50%	75%	100%	五节臂 5th

*70t需使用臂端单滑轮与主臂滑轮组合，13倍率。

The lifting load with a * followed is available only when the boom sheave block is used together with the single top, with 13 parts of line.

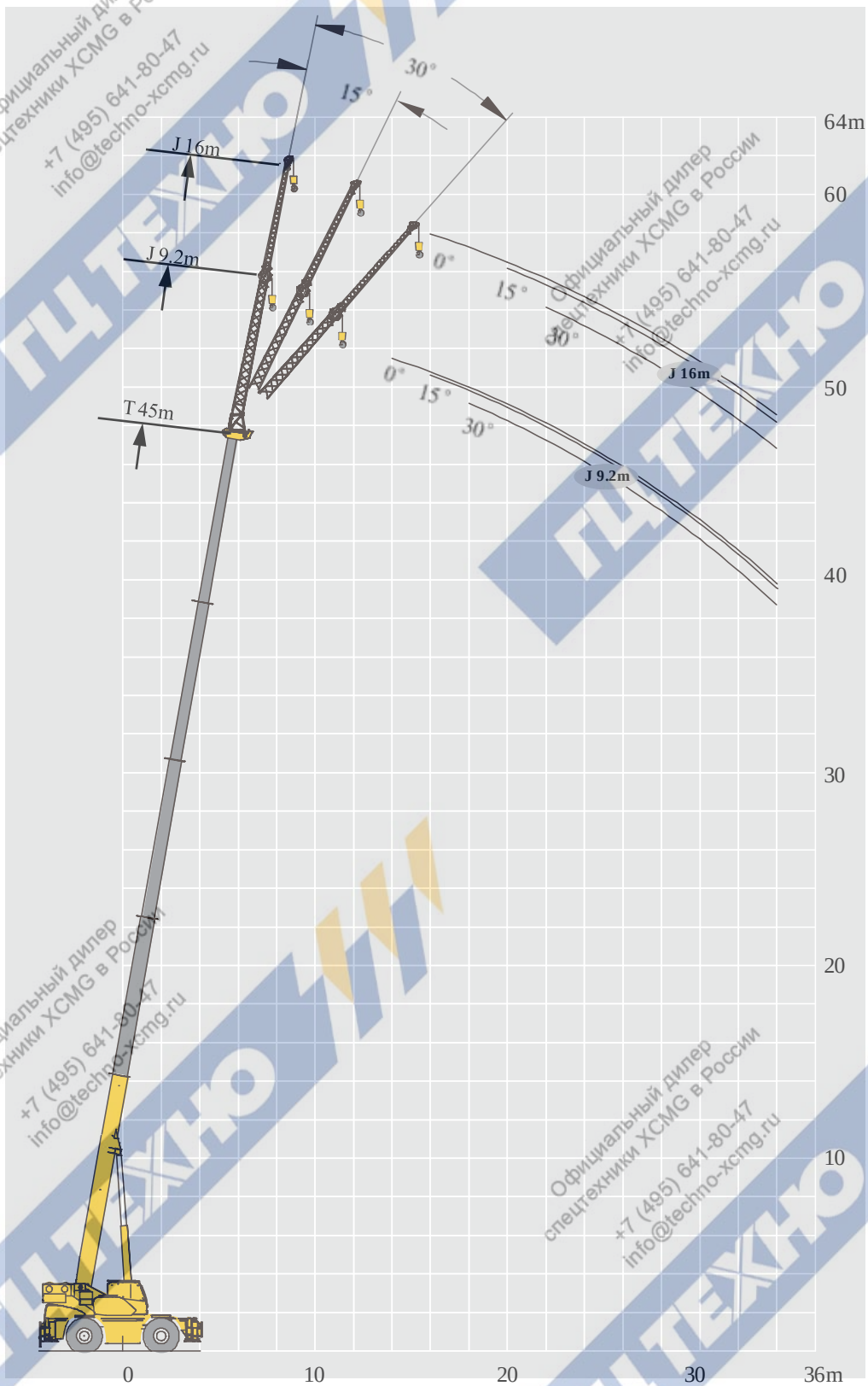
起重性能表
Lifting capacities

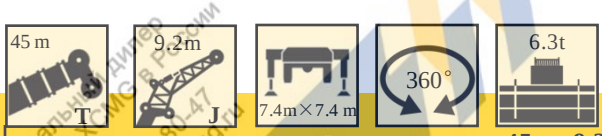
T 11.8~45m

m	11.8m	16.0m	20.1m	26.3m	32.6m	38.8m	45m	18.0m	24.3m	30.5m	36.7m	22.2m	28.4m	34.6m	40.9m	m
2.5	70*															2.5
3	60	42.5						27.5								3
3.5	55	43.5						28.0								3.5
4	50	45	37					28.5	20.0			27.0				4
4.5	46	43	37					28.5	20.0			27.0				4.5
5	40	40	33.5	27				28.5	20.0			27.0	21.0			5
6	33.5	33.3	31.5	25.4	19			28.5	20.0	12.5		27.0	21.0			6
7	27.5	27.5	27.4	23.9	17.8			27.5	20.0	13.4		27.0	21.0	12.5		7
8	23.5	23.5	23	21.8	17.4	12		23.5	20.0	13.4		24.0	21.0	13.3		8
9	20	20	20	19	17	11.5		20.0	19.8	13.4		20.0	20.7	13.3		9
10		16.5	16.2	17	16.5	11.2	9.3	18.3	18.5	12.4	5.0	17.7	16.9	13.3		10
12		11.4	11.1	12.2	13.2	10.2	8.8	13	13.7	10.8	5.0	12.5	12	11.9		12
14			8	9.1	9.7	9.7	8.5	9.8	10.4	9.6	8.5	9.3	9	10.4	6.5	14
16			5.9	6.9	7.5	7.9	7.8		8.2	8.6	7.5	7.2	7	8.2	8.0	16
18				5.3	5.9	6.3	6.6		6.6	7	6.7	5.6	5.5	6.6	6.8	18
20				4.2	4.7	5.1	5.4		5.4	5.8	6.0		4.3	5.4	5.6	20
22				3.2	3.8	4.1	4.4			4.8	5		3.5	4.4	4.7	22
24					3	3.4	3.6			4.1	4.2		2.8	3.7	3.9	24
26					2.2	2.8	3			3.4	3.6			3	3.3	26
28					1.7	2.2	2.5				3.1			2.5	2.7	28
30						1.7	2				2.6			2.1	2.2	30
32						1.3	1.5								1.9	32
二节臂 2nd	0	50%	100%	100%	100%	100%	100%	0%	0%	0%	0%	50%	50%	50%	50%	二节臂 2nd
三节臂 3rd	0	0	0	25%	50%	75%	100%	25%	50%	75%	100%	25%	50%	75%	100%	三节臂 3rd
四节臂 4th	0	0	0	25%	50%	75%	100%	25%	50%	75%	100%	25%	50%	75%	100%	四节臂 4th
五节臂 5th	0	0	0	25%	50%	75%	100%	25%	50%	75%	100%	25%	50%	75%	100%	五节臂 5th

*70t需使用臂端单滑轮与主臂滑轮组合，13倍率。

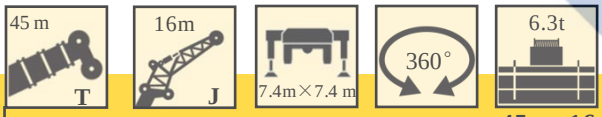
The lifting load with a * followed is available only when the boom sheave block is used together with the single top, with 13 parts of line.





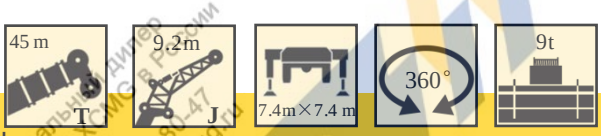
45 m+9.2m

m	0°	15°	30°	m
14	4.8			14
16	4.7	3.1		16
18	4.5	3	2.4	18
20	3.9	3	2.3	20
22	3.6	2.7	2.2	22
24	2.8	2.6	2.1	24
26	2.2	2.5	2	26
28	1.7	1.9	1.9	28
30	1.3	1.5	1.7	30



45 m+16m

m	0°	15°	30°	m
16	2.9			16
18	2.8			18
20	2.6	1.9		20
22	2.5	1.8	1.3	22
24	2.3	1.6	1.3	24
26	2.1	1.5	1.2	26
28	1.9	1.4	1.2	28
30	1.7	1.3	1.2	30



m	45 m+9.2m 0°	15°	30°	m
14	4.8			14
16	4.7	3.1		16
18	4.5	3	2.4	18
20	3.9	3	2.3	20
22	3.8	2.7	2.2	22
24	3.5	2.6	2.1	24
26	2.8	2.5	2	26
28	2.2	2.3	1.9	28
30	1.8	2	1.8	30
32	1.4	1.6	1.7	32
34	1	1.2	1.3	34

m	45 m+16m 0°	15°	30°	m
16	2.9			16
18	2.8			18
20	2.6	1.9		20
22	2.5	1.8	1.3	22
24	2.3	1.6	1.3	24
26	2.1	1.5	1.2	26
28	1.9	1.4	1.2	28
30	1.8	1.3	1.2	30
32	1.7	1.2	1.1	32
34	1.4	1.2	1.1	34

符号标识
Description of symbols

常规标识
Symbol glossary

	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
Table of main technical parameters

类别 Category	项目 Item	单位 Unit	参数 Parameter		允差范围 Allowance
尺寸参数 Dimensions	外形尺寸（长×宽×高） Outline size （length×width×height）	mm	14354×3290×3750		±1%
	轴距 Wheelbase	mm	4000		±1%
	轮距（前/后） Track（Front/ Rear）	mm	2520/2520		±1%
	前悬/后悬 Front/ Rear overhang	mm	2200/2400		±1%
	前伸/后伸 Front/ Rear extension	mm	5754/0		±1%
重量参数 Weight	最大允许总质量 Total vehicle mass in travel configuration	kg	43980（6.3t平衡重） (6.3t counterweight)	46680（9t平衡重） (9t counterweight)	±3%
	轴荷 Axle load 一轴 1st axle	kg	25230	24210	±3%
	轴荷 Axle load 二轴 2nd axle	kg	18720	22470	±3%
动力参数 Power	发动机型号 Engine model	——	SC9DK260.1G3		—
	额定功率/转速 Engine rated power/rpm	kW/(r/min)	192/2000		—
	最大输出扭矩/转速 Engine rated torque/rpm	N.m/(r/min)	1110/（1200~1600）		—
行驶参数 Travel	最高车速 Max. travel speed	km/h	≥40		—
	最低稳定车速 Min. travel speed	km/h	1.8		—
	最小转弯直径 Min. turning diameter	m	≤13		—
	最小离地间隙 Min. ground clearance	mm	475		±1%
	接近角 Approach angle	°	23		±1°
	离去角 Departure angle	°	21		±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	%	≥70		—

主要技术参数表
Table of main technical parameters

类别 Category	项目 Item			单位 Unit	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. total rated lifting capacity			t	70	±5%
	最小额定工作幅度 Min. rated working radius			m	2.5	±1%
	转台尾部回转半经 Turning radius at turntable tail	平衡重处 Counterweight		mm	4200	±1%
	最大起重力矩 Max. load moment	基本臂 Base boom		kN.m	2028.6	±5%
		最长主臂 Fully-extended boom		kN.m	1223	±5%
	支腿跨距 Outrigger span	纵向 Longitudinal		m	7.4	±1%
		横向 Lateral		m	7.4	±1%
	起升高度 Hoist height	基本臂 Base boom		m	12.8	±1%
		最长主臂 Fully-extended boom		m	45.3	±1%
		最长主臂+副臂 Fully-extended boom + Jib		m	57.9	±1%
	起重臂长度 Boom length	基本臂 Base boom		m	11.8	±1%
		最长主臂 Fully-extended boom		m	45	±1%
		最长主臂+副臂 Fully-extended boom + Jib		m	61	±1%
	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	≤50	—
	起重臂全伸时间 Boom fully extending time			s	≤90	—
	最大回转速度 Max. slewing speed			r/min	≥2	—
	支腿收放时间Outrigger extending and retracting time	水平支腿 Outrigger beam	收 Retracting	s	≤20	—
			放 Extending	s	≤35	—
		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	≥150	—
		副起升机构 Auxiliary winch		m/min	≥100	—

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 from the rated lifting load.
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. Take boom deflection into consideration before beginning a lifting operation.
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 should be extended according to the telescoping code shown by digits, which means the percentage of boom sections extended.