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XGC55T伸缩臂履带起重机

XGC25T Telescopic Crawler Crane

徐工集团工程机械股份有限公司

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XGC55T 伸缩臂履带起重机

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

详细介绍
 Brief Introduction

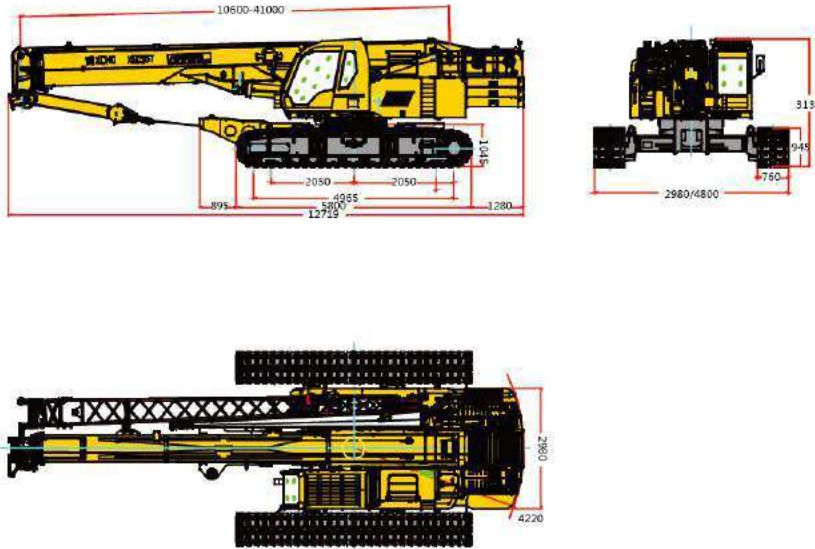
XGC55T

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类别Category	项目Items	单位Unit	参数Data
尺寸参数 Dimension	整机全长 Overall length	mm	12719
	整机全宽(伸 / 缩)Overall width (extension/retraction)	mm	4800/2980
	整机全高 Overall height	mm	3138
	主、从动轮中心距 Central distance from drive roller to driven roller	mm	4965
	履带板宽 Track shoe width	mm	760
重量参数 Weight	行驶状态总质量 Total mass in travel state	kg	61223
行驶参数 Travel	空载行驶速度 Max. travel speed with no load	km/h	3.0
	满载行驶速度 Max. travel speed with full load	km/h	1.5
	最小离地间隙 Min. ground clearance	mm	304
	最大爬坡能力 Max. grade-ability	%	45
	接地比压 Ground pressure	MPa	0.068
动力参数 Power	耳旁噪声 Noise at ear in the cab	dB(A)	80
	发动机型号 Engine model	-	QSB6.7
	发动机额定功率 Engine rated output power	kW	164
	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 EU Stage IIIA
容积参数 Capacity	液压油箱容积 Hydraulic oil tank	L	900
	燃油箱容积 Fuel tank	L	550
主要性能参数 Main performance	最大额定总起重量 Max. rated lifting capacity	t	55
	最小额定幅度 Min. rated working radius	m	3
	最大起重力矩 Max. load moment	kN·m	2116.8
	基本臂 Base boom		
	最长主臂 Max. length boom	kN·m	1027
	基本臂 Base boom	m	10.9
	最长主臂 Max. length boom	m	41.4
	最长主臂 + 副臂 Max. length boom + Jib	m	55
	起重臂长度 Boom length	m	10.6
	基本臂 Base boom	m	41
工作速度 Working speed	最长主臂 + 副臂 Max. length boom + Jib	m	57
	副臂安装角 Jib offset angle	°	0°、15°、30°
	主臂起臂时间 Boom raising time	s	60
	主臂全伸时间 Boom full extension time	s	110
	最大回转速度 Max. slewing speed	r/min	2.0
	起升速度(空载四层) Hoisting speed(no load at the 4th layer)	m/min	140
	主起升机构 Main winch 副起升机构 Auxiliary winch	m/min	140

本印刷品所包含的数据，会随着产品的不断升级而改变，请以实际产品为准
 Pictures and data in this catalog will change with the update and modification of products, so please take the actual vehicle as reference.



上 车

发动机

配置东风康明斯QSB6.7-C220发动机（EU StageIIIA），
 额定功率/转速：164kW/2200rpm。
 空滤器采用曼胡默尔空滤器，可靠稳定的除尘效果保证主机平稳长时间运行。
 燃油箱：有效容积550L。

起升机构

起升机构描述：
 空载起升速度：0～140m/min。
 钢丝绳直径/长度：
 主卷钢丝绳：18mm/220m。
 副卷钢丝绳：18mm/125m。
 额定单绳拉力:5.2t。

变幅机构

变幅机构描述：单缸前支变幅
 主臂起臂时间≤60S

回转机构

回转机构布置于转台右前端，由马达驱动。
 行星减速机，与回转支承外啮合齿轮进行回转，液压缓冲，具有自由滑
 转功能，保证作业安全。行星齿轮减速机具备常闭、片式制动器，工作
 可靠维修方便。
 回转支承：采用单排四点接触球式回转支承，承载能力强，保证上车
 360°回转作业安全、平稳。
 回转速度：0～2.0r/min

电气控制系统

采用 ECU 控制器，脚油门，手油门，通过 CAN 实现对发动机转速的高效控
 制。
 系统采用供电方式为 DC 24V，负极搭铁单线制。采用 PLC 可编程控制器
 作为控制系统的核心，系统由发动机控制、安全控制、先导控制、力矩限制器
 控制、辅助功能控制等几部分组成。通过显示器实时监测发动机水温、机油
 压力，当超过安全临界值时，蜂鸣器自动报警；同时，通过力限器对当前工
 况的分析，当吊重量、仰角或幅度任意一值超出安全范围时，三色报警灯和
 蜂鸣器会发出“声光报警”并通过程序控制，限制危险动作的进行。

液压系统

电比例阀控制，控制精准，微动性好，调速范围广。起重作业伸缩、变幅及
 起升液压系统与行驶作业液压系统共用一恒功率带负载敏感的 A8V107 双
 泵，回转系统由排量为 63ml/r 的齿轮泵供油，辅助系统由排量为 50ml/r 的
 齿轮泵供油。
 采用成熟可靠的液压元件，先进、高效的液压传动控制技术。操作简单，维
 修维护方便。与电气系统相配合，保证主机安全稳定。

Crane Superstructure

Engine

Dongfeng Cummins QSB6.7-C220 engine (EU Stage IIIA) rated power /
 speed: 164kW/ 2200rpm., Mann Hummel air filter, reliable and stable
 dust-proof ensure the machine smooth and long time running. Fuel tank:
 effective capacity 550L.

Hoist winch

Hoist winch description:
 Hoisting speed with no load: 0 ~ 140m / min.
 Wire rope diameter / length:
 Main winch rope: 18mm / 220m.
 Auxiliary winch rope: 18mm / 125m.
 Rated single line pull: 5.2t.

Luffing winch

Luffing winch description: single cylinder front support luffing
 Boom lifting time ≤60S.

Slewing unit

Slewing unit is arranged at turntable right front, driven by the motor, with
 planetary gear reducer, external engaged by slewing ring for rotation, with
 hydraulic buffer and free-swing function, adjust the boom lifting active line
 with the lead line in the straight line, to ensure safe operation. Planetary
 gear reducer has a constant closed disc brake for reliable work and easy
 maintenance.
 Slewing ring: it is single-row 4-point-contact ball type slewing ring, with
 strong load bearing capacity, to ensure the superstructure 360 ° slewing
 operation, safe and stable.
 Slewing speed: 0 ~ 2.0r /min.

Electric control system

Use of ECU controller, foot accelerator, hand accelerator, efficient control
 of the engine speed by CAN. The system uses DC 24V for power supply,
 negative ground and single cable system. PLC programmable controller is
 used as the core of the control system, the system consists of several
 parts such as engine control, safety control, pilot control, load moment
 limiter control, auxiliary function control. Real-time monitoring through the
 display of engine temperature, oil pressure, buzzer warning when the load
 exceeds the safety limit; at the same time, analysis of current conditions
 such as lifting load weight, boom elevation angle or radius through load
 moment limiter, if any values exceed safe limits, a three-color warning
 light and buzzer will give "sound and light warning", and control and
 restriction of hazardous actions by program control.

Hydraulic system

Electronic proportional valve control, precision control, good fine motion,
 and wide speed range, the hydraulic system for lifting operations of
 telescoping, luffing and lifting, and the travel hydraulic system share one
 constant power and load sensitive A8V107 twin-pump, slewing system
 and pilot system is supplied oil by displacement 63ml/r gear pump,
 auxiliary system supplied oil by displacement 50ml/r gear pump.
 Hydraulic components use mature and reliable hydraulic units, advanced
 and high efficient hydraulic drive control technology, simple operation,
 easy maintenance and repair, combined with electrical system to ensure
 the machine safety and stability.

详细介绍
Brief Introduction

下车

下车包括车架、履带架、行走装置。车架和履带架采用插入式连接，拉板限位。

履带伸缩

将下车行走切换阀，切换到收梁状态，通过履带伸缩油缸实现履带梁的扩张与收缩。方便转场及狭窄环境通过。

行走装置

由行走马达、减速机、驱动轮来实现整机的直线行走及转弯。空载行驶速度为0~3.0 km/h，带载行驶速度为0~1.5 km/h。

吊钩

名称	55t吊钩	25t吊钩	4.5t吊钩
重量（Kg）	520	315	93
数量	1	1	1
备注	标配	标配	标配

平衡重

由上车平衡重与下车压重两部分组成，其中上车平衡重由1块6t、2块5.5t平衡重组成；下车压重由1块1.9t、1块2.7t、1件托架(0.62t)组成。起重機施工时下车压重为必装件，上车平衡重可根据具体吊重量及臂长进行选装。见下表：
上车平衡重装配组合：

序号	平衡重重量(t)	平衡重组合方式
1	0	0（平衡重不安装）
2	6	6
3	11.5	6+5.5
4	17	6+5.5+5.5

安全装置

安全装置包括急停开关、先导控制开关、力矩限制器、起升高度限制器、水平仪、回转锁止装置、三圈保护器等。

紧急停止

按下急停开关，发动机熄火，整车动作停止。

先导控制开关

按下开关后，起重作业电气系统才能正常操作。

力矩限制器

当吊重量大于额定起重量，吊臂仰角超出额定范围时，或幅度超出额定范围时，力限器会发出信号，限制危险动作的继续进行。

Crane Undercarriage

Crane carrier comprises car-body,crawler track and travel gear.Car-body and crawler are using the plug-in connection.

Track frame extension/retraction

Exchange undercarriage travel valve to track frame retraction, track frame extension/ retraction is achieved by track frame telescopic cylinder, facilitate site transition and narrow environment through.

Travel unit

By travel motor, speed reducer, drive sprocket to achieve the machine walk in straight –line or turn around, with no-load travel speed 0~3.0km/h, with a load travel speed 0~1.5 km/h.

Hook block

Name	55t hook block	25t hook block	4.5t hook block
Weight (Kg)	520	315	93
Qty.	1	1	1
Remark	standard	standard	standard

Counterweight

Counterweight is the two parts of superstructure counterweight and undercarriage ballast, in which superstructure counterweight has 1 slab of 6t, 2 slabs of each 5.5t; undercarriage ballast has 1 slab of 1.9t, 1 slab of 2.7t, and 1 tray (0.62t), the undercarriage ballast is necessary installation part for lifting operation, and the superstructure counter- weight is option according to the specified lifting load and boom length, as shown in the table below:
The superstructure counterweight assembly:

No.	Countweighter (t)	Combination
1	0	0 (no assembly)
2	6	6
3	11.5	6+5.5
4	17	6+5.5+5.5

Safety Devices

Safety devices comprise:emergency stop switch、pilot control switch、load moment limiter、hoist limit switch、level meter、slewing locking device、rope-end limiter ,etc.

Emergency stop switch

Press the emergency stop switch to stop the engine, and to stop all the machine movements.

Pilot control switch

Press the switch, the electric system for lifting operation starts to a normal work.

Load moment limiter

When lifting load exceeds the total rated lifting capacity, and boom angle exceeds the rated limit, the load moment limiter will send a warning signal, and cut off crane movement to dangerous direction.

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XGC55T

起升高度限位器

由主、副臂端部限位开关和重锤构成，当吊钩中心起升至距吊臂滑轮中心约710mm时，起升动作自动停止。

水平仪

机棚前方装有水平仪，监控地面是否满足作业要求。

回转锁止装置

保证运输时转台有效锁止，防止其自由滑转。

三圈保护器

当吊钩下降至卷扬钢丝绳剩余三至五圈时，落钩自动停止。

Hoist limit switch

It consists of boom and jib end limit switch and the weight, which will automatically stop the hoisting movement when hook block center is raised 710mm to boom sheave center.

Level meter

A level meter is set on the front of engine hood,to monitor the ground surfacefor operation requirements.

Slewing locking device

The device is used to lock the turntable during transport to avoid free swing.

Rope-end limiter

The device is used to stop hook block lowering when the hook block lowering down and only three to five turns of wire rope left on the winch drum.

起重工况性能表
Lifting Performance Table

主臂工况，履带全伸，静止吊载（不行走）
Boom condition, crawler track full extension, standstill lifting (no travel)

主臂性能,履带全伸，不行走，上车配重17t, 360° 作业 Boom condition, Crawler track full extension, No travel, Counterweight 17t, for 360° operation							
幅度	10.6	14.4	18.2	23.9	29.6	35.3	41
3	55						
3.5	50	44	43				
4	50	44	43	34			
4.5	48	44	43	34			
5	41.2	40.9	40.8	34	20		
6	29.8	29.6	29.5	30.6	20		
7	23	22.8	22.7	23.7	20	15	
8		18.3	18.2	19.2	19.7	15	10
9		15.1	15	15.9	16.4	14	10
10		12.7	12.6	13.4	14	14	10
12			9.2	10	10.5	10.9	10
14			6.9	7.7	8.2	8.5	8.8
16				6.1	6.6	6.9	7.1
18				4.9	5.3	5.6	5.9
20					4.4	4.7	4.9
22					3.6	3.9	4.1
24					3	3.3	3.5
26						2.7	2.9
28						2.3	2.5
30						1.9	2.1
32							1.8
34							1.5

起重工况性能表
Lifting Performance Table

主臂工况，履带全伸，带载行驶，上车配重17t
Boom condition, crawler track full extension, travel with a load, superstructure counterweight 17t

Table with 5 columns: Radius, 10.6, 14.4, 18.2, 23.9. Rows show lifting capacity for different boom radii from 3 to 20 meters.

副臂工况，履带全伸，静止吊载（不行走），上车配重17t
Jib condition, crawler track full extension, standstill lifting (no travel), superstructure counterweight 17t.

Table with 7 columns: Radius, Boom 41m + Jib 9.5m, Jib offset angle (0°, 15°, 30°), Boom 41m + Jib 16m. Rows show lifting capacity for various configurations from 11 to 42 meters.

说明:
1、上述表格中R和L分别代表幅度和臂长，单位为m。
2、表中给定数值是在地面坚实、平整的状态下，起重机的额定起重量。表中工作幅度为吊载后的实际幅度。
3、主臂臂长≤23.9m时，整机可带载行走，其余主臂工况以及副臂工况不允许带载和空载行走。
4、带载行驶时要求履带必须为全伸状态。
5、吊钩共三种，55t（主臂工况）、25t（主臂工况）、4.5t（副臂工况），各吊钩重量如下表：

Table with 4 columns: Hook weight, 55t, 25t, 4.5t. Rows show weight in Kg for different hook types.

6、上述表格中的数据是上、下车平衡重全部安装时，整机的起重性能。

Note:
1. R and L in the above tables respectively indicate the radius and the boom length, the unit is meter (m).
2. The values given in the tables are the rated lifting capacity for the crane set up on the solid and level ground. The radius in the table is the actual radius of the boom with a lifting load.
3. The crane can travel with a load with boom length ≤ 23.9m, the other boom and jib conditions do not allow travel with a load and travel with no-load.
4. Fully extended crawler track must be required for travel with a load.
5. Total three kinds of hook block, 55t hook block (for boom), 25t hook block (for boom), 4.5t hook block (for jib), the weight of each hook block is in the following table:

Table with 4 columns: Hook block, 55t, 25t, 4.5t. Rows show weight in kg for different hook types.

6. The value in the above tables are the total rated lifting capacity for the whole machine with all the superstructure and undercarriage counterweight.

起重工况性能表
Lifting Performance Table

副臂端滑轮工况,履带全伸，静止吊载（不行走），上车配重17t
Boom single top condition, crawler track full extension, standstill lifting (no travel), superstructure counterweight 17t.

Table with 8 columns: Radius, 10.6, 14.4, 18.2, 23.9, 29.6, 35.3, 41. Rows show lifting capacity for different boom radii from 3 to 34 meters.

臂端滑轮工况,履带全伸，带载行走，上车配重17t
Boom single top condition, crawler track full extension, standstill lifting (no travel), superstructure counterweight 17t.

Table with 5 columns: Radius, 10.6, 14.4, 18.2, 23.9. Rows show lifting capacity for different boom radii from 3 to 20 meters.

运输方案
Transport Planning

