

XC975-EV 电动装载机主要技术参数表

Technical Parameters of XC975-EV Electric Loader

项目 Item		单位 Unit	参数 Parameter
主参数 Main parameters	额定斗容量 Bucket capacity	m ³	4.0
	额定载重量 Rated load	kg	7000
行走电机 Traveling motor	额定功率 Rated power	kW	200
液压电机 Hydraulic motor	额定功率 Rated power	kW	70
电池组 Battery pack	总电量 Quantity of electricity	kWh	423
	电压平台 Voltage platform	V	618
	品牌 Brand	/	宁德时代 CATL
续航时间 Endurance	一般工况 General conditions	h	6-8
	重载工况 Heavy-duty	h	5-6
主要性能 Main performance	整机工作质量 Operating weight	kg	23160±300
	倾翻载荷（全转向） Tipping load (full steering)	kg	≥14000
	卸载高度 Unloading height	mm	3370
	卸载距离 Unloading distance	mm	1267
	轴距 Wheelbase	mm	3450
	轮距 Tread	mm	2420
	最大牵引力 Max. traction	kN	184
	最大掘起力 Max. breakout force	kN	182±5
	轮胎中心（转弯半径）	mm	6115

	Turning radius (tire center)		
	动臂提升时间 Boom lift time	s	≤5
	三项和时间 Total cycle time	s	≤10
	最大爬坡度 Max gradeability	°	27
	转向角 Steering angle	°	38±1
噪音 Noise	司机耳旁 Near the driver's ear	dB(A)	≤70
	辐射噪音 Radiation noise	dB(A)	≤100
行驶速度 Travel speed	前进 I/II 档 1 st F gear	km/h	18/34.5
	后退 I/II 档 1 st R gear	km/h	18/34.5
外形尺寸 Overall dimensions	整机长度 Overall length without bucket	mm	9150
	整机高度 Height to cab	mm	3505
	铲斗宽度 Bucket width	mm	3300

XC975-EV 电动装载机性能特点与配置说明

Configuration Description of XC975-EV Electric Loader

XC975-EV 电动装载机是徐工新款 7 吨级纯电动装载机。整机采用徐工自主研发的控制系统，大幅提升控制性能。独创的串式双电机无变速箱驱动形式，优化功率匹配，使整机拥有更大的扭矩输出及更快的响应速度，大幅提高工作效率。采用磷酸铁锂电池，支持双枪快充。主要特点如下：

XC975-EV electric loader is XCMG's new 7-ton pure electric loader. The whole machine adopts the control system independently developed by XCMG to greatly improve the control performance. The original series dual motor gearbox-free drive form optimizes power matching, so that the whole machine has greater torque

output and faster response speed, greatly improving work efficiency. Lithium iron phosphate battery, support double gun fast charge. The main features are as follows:

(一) 动力系统 Power system

1. 行走电机 Traveling motor

采用串式双电机的行走驱动技术，整机行走系统采用两个电机分别驱动前后驱动桥，两个电机之间采用传动轴相连，两个电机的动力进行耦合传递，满足全工况使用需求。整机带有 FNR 前后换挡操作功能，换挡方便快捷。电机根据油门开度实时调整转速，实现整机的无极变速。

Using a series of double motor walking drive technology, the whole machine walking system uses two motors to drive the front and rear drive axle, the two motors are connected by a drive shaft, and the power of the two motors is coupled and transmitted to meet the needs of all working conditions. The whole machine has FNR front and rear shift operation function, convenient and fast shift. The motor adjusts the speed in real time according to the throttle opening to realize the infinite speed change of the whole machine.

2. 驱动桥 Drive axle

采用徐工自制加强型驱动桥，桥壳优化设计，壳体横断面加大，承重能力及抗弯曲能力提高 10%。轮边采用四个行星轮结构，承载均匀，可承受更大载荷，更适应重载工况。驱动桥安装增加定位销，分担螺栓承受的冲击载荷，提升螺栓的可靠性。采用三段重载式传动轴，可靠性领先。采用 750/65R25/L-3 超宽子午胎，轮胎接地面积大，整机稳定性好，具有良好的越野性能和通过性能，适应在崎岖不平的路面上行驶和作业。

XCMG self-made enhanced drive axle, axle housing optimization design, the shell cross-section increased, load-bearing capacity and bending resistance increased by 10%. The wheel side adopts four planetary wheel structure, bearing uniform load, can withstand greater load, more suitable for heavy load conditions. A positioning pin is added to the drive axle to share the impact load borne by the bolt and improve the reliability of the bolt. The use of three-sections heavy duty transmission shaft, leading reliability. 750/65R25/L-3 ultra-wide radial tire, tire ground area is large, the whole machine stability is good, has good off-road performance and passing performance, suitable for driving and working on the bumpy road surface.

(二) 液压系统 Hydraulic system

采用双泵合流定量液压系统，转向、工作装置全先导控制，操作精准、轻便。

配置 FNR 操纵手柄，换挡方便，并带有一键提升液压电机转速按钮，提升液压系统的响应性，提高作业效率。流量放大转向系统，转向轻便、灵活。采用国际标准的密封形式，有效解决泄露问题。

Adopt dual pump confluence quantitative hydraulic system, steering, working device full pilot control, accurate and lightweight operation. Equipped with FNR control handle, easy to shift, and with a button to raise the speed of the hydraulic motor, improve the response of the hydraulic system, improve the efficiency of work. Flow amplification steering system, light and flexible steering. Adopt international standard sealing form, effectively solve the leakage problem.

(三) 电气系统 Electric system

整机配套 423kWh 磷酸铁锂电池，支持双枪快充，充电时间最短仅需 80 分钟（配套 300kW 充电桩），电池热管理系统由 BMS 智能控制，安全可靠。配置液晶触摸屏，实时显示电量、电机及控制器温度、电机转速、电池温度、气压等参数。The whole machine is equipped with 423kWh lithium iron phosphate (LFP) battery, supporting double gun fast charging, the charging time is only 80 minutes (supporting 300kW charging pile), the battery thermal management system is intelligent controlled by BMS, safe and reliable. Equipped with LCD touch screen, real-time display of electricity, motor and controller temperature, motor speed, battery temperature, pressure and other parameters.

采用全密封插接件，防尘防水性能明显提高；配备集成式封闭式保险丝盒，检查维护更方便高效。

The use of fully sealed connectors, dustproof and waterproof performance is significantly improved; Equipped with integrated closed fuse box, inspection and maintenance is more convenient and efficient.

(四) 驾驶室和操纵系统 Cab and control system

驾驶室采用微增压技术，内部宽敞，视野开阔；高性能减震双滑道座椅配合多方位可调转向柱可以满足不同驾驶员的使用要求；采用随动操纵箱，配置冷暖空调、收音机，储物格、茶杯座、手机充电口等一应俱全，降噪、防尘、隔热，营造舒适、健康、安全的驾驶环境。

The cab adopts micro-pressurization technology, the interior is spacious and the vision is wide; High performance cushioned double slide seat with multi-directional adjustable steering column can meet the requirements of different drivers; With the following control box, equipped with heating and cooling air conditioning, radio, storage compartment, cup holder, mobile phone charging port, etc., noise reduction, dust prevention, heat insulation, to create a comfortable, healthy and

safe driving environment.

(五) 车架 Frame

前后车架重载超强设计，钢板厚，强度高，承载能力强。布置合理，结构简明，减少了压型和不规则焊缝，强化了重要承力部位，能承受各种工况下的扭力及冲击载荷。

关键结构件均采用有限元分析，减少应力集中，消除局部薄弱，确保满足各类恶劣工况。

加大了铰接中心上下铰接销的距离，分散了铰接处的作用力，可降低了铰接销的应力，并提高轴承使用寿命。

下铰接销处采用双圆锥滚子轴承，增大了承载能力，提高了行驶稳定性。

前车架刚性好，为动臂及油缸提供了一个坚实的安装座，可吸收强烈的扭力、冲击力和装载作业力。

加大配重，提升作业稳定性高。增加燃油箱护板，防止恶劣工况下燃油箱的变形或破损。

Front and rear frame heavy load super design, thick steel plate, high strength, strong bearing capacity. The layout is reasonable, the structure is simple, the pressure type and irregular weld are reduced, the important bearing parts are strengthened, and the torque and impact load can be borne under various working conditions.

The key structural parts are analyzed by finite element method to reduce stress concentration, eliminate local weaknesses, and ensure that all kinds of harsh working conditions are met.

The distance between the upper and lower hinged pins in the hinged center is increased, the force at the hinged joint is dispersed, the stress of the hinged pin is reduced, and the service life of the bearing is increased.

The double tapered roller bearing is adopted at the lower hinged pin, which increases the bearing capacity and improves the driving stability.

The front frame is rigid and provides a solid mounting seat for the boom and cylinder, which can absorb strong torque, impact force and loading karma.

Increase the counterweight, improve the operation stability. The fuel tank guard plate is added to prevent the deformation or damage of the fuel tank under harsh conditions.

(六) 工作装置及铲斗 Working device and bucket

工作装置经最优化设计，采用单摇臂、短拉杆、卧置动臂缸的 Z 型反转六

连杆结构，卸载冲击小，具有优越的作业性能和作业效率。

The working device is optimized and adopts the Z-type reverse six-link structure of single rocker arm, short tie rod and horizontal boom cylinder, which has low unloading impact and superior working performance and efficiency.

主要铰点采用两级防尘结构，可有效防尘并保护润滑脂免受污染，对铰接销及轴套提供了可靠的保护。

The main hinge points adopt a two-stage dust proof structure, which can effectively dust and protect the grease from contamination, and provide reliable protection for the hinged pins and shaft bushings.

铲斗主要易磨损部位采用耐磨板制造，铲斗使用寿命长。

销轴润滑方式采用从法兰处注油，取消销轴润滑油孔，销轴强度提高。

The main wear-resistant parts of the bucket are made of wear-resistant plates, and the bucket has a long service life.

The pin lubrication method uses oil injection from the flange, cancels the pin lubricating oil hole, and improves the pin strength.

（七）制动系统 Braking system

行车制动采用气顶油、钳盘式四轮制动系统，可发挥强大的制动力，同时又可减轻每个制动活塞的负担，提高耐久性。配置多功能组合阀，带油水分离功能；制动加力缸采用进口密封件，有效解决漏气、漏油问题。驻车制动采用气控手制动，安全可靠。

Service brake adopts gas cap oil and clamp disc four-wheel brake system, which can exert powerful braking force, reduce the burden of each brake piston and improve durability. Equipped with multi-function combination valve, with oil-water separation function; The brake booster cylinder adopts imported seals to effectively solve the problem of air leakage and oil leakage. The parking brake adopts air-controlled hand brake, which is safe and reliable.

（八）可维修性 Maintainability

采用电动后翻式机罩，开启角度可达 65°，机罩开启后，多合一控制器、电池 BMS、水冷机组以及电池、PDU 保险等均处于方便维修位置。

The electric back flip hood is adopted, and the opening angle can reach 65°.

After the hood is opened, the all-in-one controller, battery BMS, water cooling unit, battery, PDU fuse, etc. are in a convenient maintenance position.

（九）多用途 Versatility

XC975-EV 电动装载机可选配高卸、侧卸、夹钳、2.5~5.0m³ 不同斗容铲斗和不同作业机具，满足不同的作业需求。

XC975-EV electric loader can be equipped with high unloading, side unloading, clamp, 2.5-5.0m³ Buckets with different bucket capacities and different work tools, meet different work requirements

XC975-EV 电动装载机主要部件配置表

Main Components of XC975-EV Electric Loader

序号 S No	名称 Name	规格型号 Specs & model	生产厂家 Manufacturer
1	行走电机 Traveling motor	M180F/TZ380XSWT180F	鑫国动力/微特利 Xinguo Power/Weiteli
2	液压电机 Hydraulic motor	M100B3/TZ270XSXG70A	鑫国动力/微特利 Xinguo Power/Weiteli
3	电池箱 Battery pack	L228C11	宁德时代 CATL
4	驱动桥 Dry Drive axle	DA1210IX DA2210	徐工传动 XCMG
5	轮胎 Tire	750/65R25★★ L-3	风神/徐轮 Fengshen/Xulun
6	液 压 泵 Hydraulic pump	CP112230100230016200R	济南液压泵有限责任公司 Jinan Hydraulic Pump Co., Ltd
7	分配阀 Distribution valve	D32 (20.5MPa)	浙江高宇液压机电有限公司 Zhejiang Gaoyu Hydraulic Electromechanical Co., Ltd
8	转向器 Steering gear	BZZ-100	济宁伊顿液压有限公司 Jining Eaton Hydraulic Co., Ltd./Danfoss Power System (Jining) Co., Ltd