



XE470D 履带挖掘机技术规格书

(此规格书仅适用于挖掘机产品的技术推荐)

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XE470DCrawler Excavator Technical Specification

This specification only applies to technical recommendations for excavator products

May 1, 2020 first version

因技术设计的不断进步，我们无法将产品变更有效的通知到阁下，敬请谅解

徐工集团挖掘机械事业部

XCMG EXCAVATOR MACHINERY BUSINESS DEPARTMENT

XE470D 履带挖掘机主要技术参数表

XE470D Crawler Hydraulic Excavator Technical Specification

型号 Model		单位 Unit	XE470D
操作重量 Operating weight		Kg	46900
铲斗容量 Bucket capacity		m ³	2.2—2.5
发动机 Engine	发动机型号 Model	/	Cummins QSM11
	直喷 Direct injection	/	×
	4 冲程 Four strokes	/	√
	水冷 Water cooling	/	√
	涡轮增压 Turbo-charging	/	√
	空空中冷 Air to air intercooler	/	√
	缸数 No. of cylinders	/	6
	额定功率/转速 Rated power/speed	kw/rpm	250/2000
	最大扭矩/转速 Maximum torque/speed	N. m	1790/1400
	排量 Displacement	L	11
主要性能 Main performance	行驶速度(高/低) Travel speed (H/L)	km/h	5.4/3.2
	回转速度 Swing speed	r/min	9.0.
	爬坡能力 Gradeability	°	≤35
	接地比压 Ground pressure	kPa	83
	铲斗挖掘力 Bucket digging force	kN	287
	斗杆挖掘力 Arm digging force	kN	221
	最大牵引力 Maximum tractive force	kN	338
液压系统 Hydraulic system	主泵 Main pump	/	2个柱塞泵 Two piston pumps
	主泵额定流量 Rated flow of main pump	L/min	2×360
	主安全阀压力 Main safety valve pressure	MPa	31.4/34.3
	行走系统压力 Travel system pressure	MPa	34.3
	回转系统压力 Swing system pressure	MPa	28.4
	先导系统压力 Pilot system pressure	MPa	3.9
油类容量 Oil Capacity	燃油箱容量 Fuel tank capacity	L	725
	液压油箱容量 Hydraulic tank capacity	L	430
	发动机油容量 Engine oil capacity	L	38
外形尺寸 Appearance size	A 总长 Overall length	mm	11670
	B 总宽 Overall width	mm	3582
	C 总高 Overall height	mm	3890
	D 转台宽度 Width of platform	mm	2995
	E 履带长度 Track length	mm	5353

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	F 底盘总宽 Overall width of chassis	mm	3582
	G 标准履带板宽度 Track shoe width	mm	600
	H 履带轴距 Wheel base of crawler	mm	4292
	I 轨距 Track gauge	mm	2750
	J 配重离地间隙 Counterweight clearance	mm	1324
	K 最低离地间隙 Min. ground clearance	mm	519
	L 尾部回转半径 Min. tail swing radius	mm	3665
	M 履带高度 Track height	mm	1198
作业范围 Working scope	A 最大挖掘高度 Max. digging height	mm	9855
	B 最大卸载高度 Max. dumping height	mm	6890
	C 最大挖掘深度 Max. digging depth	mm	7000
	D 8英尺水平面挖掘深度 Maximum depth cut for 2240mm(8 ft) level bottom	mm	6900
	E 最大垂直挖掘深度 Max. vertical wall digging depth	mm	4500
	F 最大挖掘半径 Max. digging radius	mm	10855
	G 最小回转半径 Min. swing radius	mm	4580
标配 Standard	动臂长度 Length of boom	mm	6670
	斗杆长度 Length of arm	mm	2900
	铲斗斗容 Bucket capacity	m ³	2.5
选配 Optional	动臂长度 Length of boom	mm	7060
	斗杆长度 Length of arm	mm	3380
	铲斗斗容 Bucket capacity	m ³	2.2(岩石斗 Rock bucket) 2.5(加强斗 Strengthen bucket)

XE470D 履带挖掘机主要部件配置表

XE470D Crawler Excavator Main Parts Lists

序号 No.	部件名称 Part Name	生产厂家 Manufacturer	备注 Remarks
1	发动机 Engine	美国康明斯 American Cummins	
2	主泵 Main Pump	日本川崎 Japan Kawasaki	
3	主阀 Main Valve	日本川崎/徐工 Japan Kawasaki/XCMG	
4	行走马达 Travel Motor	韩国斗山 Korea Doosan	

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		纳博 Nabotsk	
5	回转马达 Swing Motor	日本川崎 Japan Kawasaki	
6	空调 AC	烟台电装 Yantai Denso	
7	四轮一带 Sprocket, idler, carrier roller, track roller and track	徐工 XCMG	

XE470D 履带挖掘机亮点

XE470D Crawler Excavator Highlights

XE470D 液压挖掘机是徐工集团挖掘机事业部全力推出的大型挖掘机主导机型之一。该产品集成了徐工集团多年从事挖掘机产品研究开发获得的宝贵经验，并采用了先进的设计和制造手段，同时产品秉承“高效率、高安全性、低碳环保”的设计理念，具有完美的矿山作业能力。

XE470D hydraulic excavator is one of the leading models of large excavators launched by XCMG excavator department. The product integrates the valuable experience gained by XCMG from years of research and development of excavator products, and adopts advanced design and manufacturing methods. Meanwhile, the product adheres to the design concept of "high efficiency, high safety, low carbon and environmental protection", and has perfect mine operation ability.

整机主要性能特点如下：

The main performance characteristics of the machine are as follows:

一、高端配置性能卓越

I. Excellent performance of high-end configuration

1.1 动力系统

1.1 Power system

动力系统采用美国原装进口康明斯 (Cummins QSM11) 直喷、4 冲程、水冷、涡轮增压、空空中冷、六缸发动机，具有高可靠性、高适应性及动力强劲、低耗环保等特点，满足欧 III 排放标准，是专门针对工程机械作业工况精心设计制造的产品。

Power system adopts the imported Cummins engine (Cummins QSM11),

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featuring direct injection, four stroke, water-cooling, turbo, air-air intercooler, six cylinder engine, which can achieve high reliability, high adaptability and strong power, low energy consumption and environmental protection. It can meet the euro III emission standards, and is a dedicatedly designed product for engineering machinery operation conditions.

发动机安装系统采用平面四点支承弹性联接方式，有效克服动力系统与车架之间的共振，降低了驾驶室内部噪音。

The engine installation system adopts a planar four-point support elastic connection, which can effectively overcome the resonance between the power system and the frame and reduce the noise inside the cab.

进气系统采用三级过滤模式，即使在粉尘较多的环境下，也能有效保证进气质量，使发动机更能有效运行，同时配置美国进口唐纳森空气滤清器，其内外滤芯均采用 Ultra-Web® 滤材，过滤效果提高至 99.99%，使用寿命提高 2 倍。

Air intake system adopts the model of three-stage filtration, even in the environment with heavy dust, it can effectively ensure the quality of air intake, make the engine run more effectively, and meanwhile configure the Donaldson air filter imported from the US, with its internal element and external element adopting Web Ultra-Web® filter material, the filtering effect is increased by 99.99% and the service life will be increased by 2 times.

1.2 液压系统

1.2 Hydraulic system

液压系统采用日本原装进口液压元件和成熟可靠的负流量控制系统，通过双泵合流，增加了多路阀提供给各动作油缸的流量分配，从而使机器保持强大的挖掘能力和优异的作业效率。

The hydraulic system adopts the hydraulic components imported from Japan and the mature and reliable negative flow control system. Through the double pump confluence, it increases the flow distribution to various action cylinders provided by multi-way valves, so that the machine can maintain strong digging force and excellent operating efficiency.

复合系统、大臂优先、小臂优先、回转优先和大小臂液压油流量再生系统，保证了机器的最佳作业性能。

Compound system, boom priority, arm priority, rotary first and boom and arm hydraulic oil flow regeneration system, ensure the best performance of the machine.

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通过优化设计液压管路，改善回油压力损失及系统背压，有效降低了能量损耗，确保了机器动作平稳快速。

By optimizing the design of the hydraulic pipeline, the oil return pressure loss and the system back pressure are improved, and the energy loss is effectively reduced to ensure the smooth and rapid operation of the machine.

1.3 电控系统

1.3 Electronic control system

电控系统采用具有徐工自主研发核心技术的新型 ESS 微电脑功率控制系统，使机器在不同的作业状态下始终保持最佳的作业效率和燃油经济性。

The electronic control system adopts the new ESS microcomputer power control system independently developed by XCMG to maintain the best operating efficiency and fuel economy under different operating conditions.

采用 CAN 总线通讯实现相应控制功能，对作业环境、作业工况和作业载荷能有效适应，做到会识别、会思考、会判断、会决策、会执行。

CAN bus communication is adopted to realize the corresponding control function, which can effectively adapt to the operating environment, working conditions and loads, and can identify, think, judge, make decisions and execute.

选用进口保险丝盒及保险，外观造型美观，安装位置触手可及。同时保险丝功能细化，更容易查询故障原因，性能更稳定，安全性更高，有效降低电路故障，提升了作业效率。

Choose imported fuse box and insurance, which is beautiful and accessible. At the same time, with refined function, it is easier to find the cause of failure. With stable performance and higher safety, it effectively reduces circuit failure and improves operating efficiency.

新一代自主研发的控制器，革新功率匹配模式，优化泵与发动机的匹配，充分利用发动机功率，提高作业效率的同时有效降低了油耗。

A new generation of self-developed controller innovates power matching mode, optimizes the match between pump and engine, makes full use of engine power, improves operating efficiency and meanwhile effectively reduces fuel consumption.

一、 高品质驾驶享受

Enjoy high-quality driving

2.1 驾驶室

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Cab

宽敞的驾驶室和符合人机工程学设计理念的控制装置，为操作人员提供极佳视野，保证最大舒适性和可控性。

Spacious cab and ergonomic design concept of the control device will provide operators with excellent vision and ensure maximum comfort and controllability

采用栅栏式前窗护网和FOPS顶部护罩使操作者的人身安全得到更好保障，同时配置有行走报警灯，提高了机器周边工作环境的安全性。

The fence-type front window protection net and FOPS top protection cover are adopted to better guarantee the operator's personal safety. At the same time, the travel alarm light is equipped to improve the safety of the working environment around the machine.

2.2 减震器

Shock absorber

采用四点支承进口硅油减震器，有效降低驾驶室的振动和噪音，最大程度上减轻操作时的疲劳感，为操作者长时间作业提供充分的支撑保证。

Adopt imported silicone oil shock absorber with four-point support, it can effectively reduce the vibration and noise of the cab, reduce the sense of fatigue during operation maximally, and thus provide sufficient support for the operator to work for a long time.

2.3 座椅

Seat

座椅底盘上装有弹簧气缸减震装置，能有效降低不良震动，同时配置改良的头枕和加宽的靠背，彰显“以人为本”的设计理念，使操作更舒适，提高了工作效率。

Seat base is equipped with spring cylinder shock absorber, which can effectively reduce bad vibration. With improved head rest and wider backrest, it highlights the "people-oriented" design concept, makes the operation more comfortable, and improves the work efficiency.

2.4 监控器

Monitor

多功能彩色液晶显示器为操作者提供综合易读的机器信息，全面监控发动机和液压系统的工作状态，可查询机器的各种运行及故障诊断信息。

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The multi-function color LCD provides the operator with comprehensive and readable machine information, fully monitors the working state of engine and hydraulic system. You can also check the operating and troubleshooting information of the machine.

功能开关集中布置在控制面板上，通过点触式按钮，轻松选择。

The function switch is centrally arranged on the control panel, which can be easily selected by touch button.

2.5 配重

Counterweight

标配增重型配重，提高了机器的安定性，减小了驾驶员长期驾驶的疲劳感，同时配重上方安置了后视镜，增大了驾驶员的视野，使机器运行更安全。

The standard weighted counterweight will improve the stability of the machine, reduce the driver's fatigue caused by long-time driving, and at the same time, the rearview mirror is installed above the counterweight, which widens the driver's view and makes the machine run more safely.

二、坚固高效持久耐用

II. Strong, efficient and durable

3.1 主平台

Turntable

主平台采用加强钢板焊接的箱体结构，保证上部机器强度需求。

The turntable adopts box structure welded by reinforced steel to ensure the strength requirements of the superstructure.

左右裙架采用 D 型结构钢设计，可以有效防止撞击变形。

The left and right skirt frames are designed with D-type structural steel, which can effectively prevent impact deformation.

重新设计匹配的回转支承，强度大幅增强，即使在重载作业时，也可稳定地回转。

The pairing slewing support has been redesigned so that it can rotate stably even under heavy load.

3.2 底盘

Chassis

坚固的下部行走体可以满足重载挖掘和采矿需要，其耐用性、可靠性和机动性更高，配置的强化型四轮一带，性能优良，质量更加可靠，使用寿命提高

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25%，全面降低使用维护成本。

The robust undercarriage can meet the requirements of heavy load digging and mining, its durability, reliability and mobility is higher. Equipped with reinforced four rollers and one track, it can achieve excellent performance and more reliable quality, increase service life by 25%, and reduce the overall cost of use and maintenance.

强化行走架和 X 型梁结构，提高横截面的强度，分散机体的应力，可胜任更坚硬的工作。

Strengthen the structure of travel frame and x-beam, improve the strength of cross section, disperse the stress of the body, and be qualified for harder work.

3.3 加强型前端工作装置

Enhanced front end working device

精心设计的加强型前端工作装置，对关键部位进行强化设计，提高了重载作业时的可靠性。

Elaborately designed reinforcing front-end working equipment strengthens the design of key parts and improves the reliability of heavy-duty operation.

H 型大臂和小臂关键部位均采用一体式铸造结构，受力均匀，使用寿命更长。

The key parts of H-type boom and arm all adopt one-piece casting structure, it has uniform force and longer service life.

大容量岩石铲斗采用双圆弧设计结构，减小了挖掘时的阻力，同时采用美国著名公司爱斯科专利生产的斗齿，穿透力更强，耐磨性更好，使用寿命提高一倍以上。

The large-capacity rock bucket adopts double circular arc structure, which reduces the resistance during excavation. At the same time, adopt the patented bucket tooth produced by the famous American company ESCO, it has stronger penetrability, better abrasion resistance and double the service life.

工作装置连接部位采用日本进口强化树脂垫片，降低了连接部位的磨损和噪音，所用材料为可再回收利用，安全环保。

The connecting parts of the working equipment adopts reinforced resin gasket imported from Japan, which reduces the wear and noise of the connecting parts. The material used is recyclable, safe and environmental protection.

采用更大直径的油缸、硬管、胶管等管路，增加液压油流量，提供更强大
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的挖掘力。

Adopt larger-diameter cylinder, hard tube, rubber hose and other pipelines to increase the hydraulic oil flow and provide more powerful digging force.

三、便捷的维修保养

III. Convenient maintenance

机油滤清器、先导滤清器、燃油滤清器、油水分离器，空气滤清器设置于可在地面接进行检查更换的地方，触手可及，保养方便，同时节省维修时间，提高工作效率。

Oil filter, pilot filter, fuel filter, oil and water separator, air filter can be installed where it is accessible on the ground to check and replace, it is easy to maintain, save maintenance time, and improve work efficiency.

发动机护罩采用上翻式结构设计，开启角度大，方便发动机及散热器检修。

Engine cover is designed with upturn structure, with large opening angle, which is convenient for engine and radiator maintenance.

散热器外部设置防护网，有效防止飞絮等杂物吸入，拆卸方便，清洗更容易。

A protective net is installed outside the radiator to effectively prevent debris such as flying catkins from being inhaled, which is convenient to disassemble and easier to clean.

散热器和油冷却器平行排列，便于对散热器和油冷却器的清洁和拆卸。

The radiator and oil cooler are arranged in parallel to facilitate the cleaning and disassembly of the radiator and oil cooler.

发动机油底壳装有排放接头，使得维护保养作业更加容易。

The engine oil sump is fitted with drain connections to make maintenance easier.

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