

# XE4000 液压铲

## XE4000 HYDRAULIC EXCAVATOR



- 铲斗容量 Bucket capacity ( m<sup>3</sup> ) : 20~22
- 操作重量 Operating weight ( kg ) : 384000
- 额定功率 Rated Power ( kW/rpm ) : 1491/1800



## More energy conservation and environmental protection

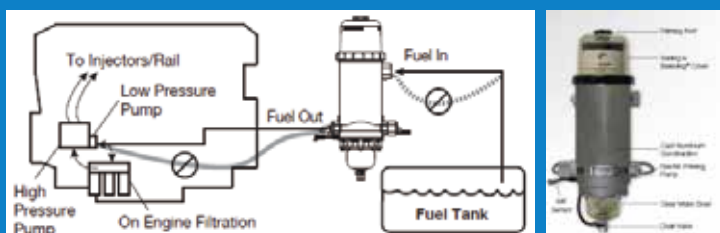
康明斯全电控发动机，涡轮增压技术，具有先进模块化共轨燃油系统（MCRS），超高的喷射压力，动力充足，燃油经济性高，满足各种矿山施工工况；采用CENTRY电子燃油控制系统，可根据来自电子油门和其它设备专用输入信号控制发动机转速和燃油压力，来实现最佳燃油效率；Quantum系统监控发动机各项工作状态，延长使用寿命，降低使用成本。

Cummins full electric-controlled engine, with turbocharged technology and advanced modular common rail fuel system (MCRS) equipped, provides ultra-high injection pressure and plenty of power to improve fuel economy and meet various kinds of working conditions of mine construction. Quantum system monitors each working state of engine, which can prolong the engine's service life and reduce the use cost.



## More reliable and durable

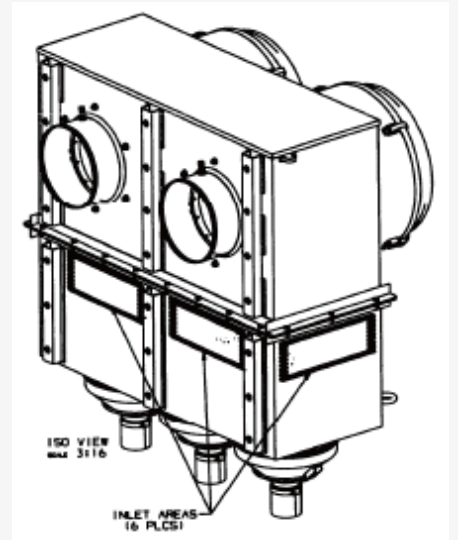
Adopt multi-stage fuel filter system, the filter efficiency can reach up to 99% and it can effectively filter the impurities and moisture in fuel to prolong the engine life. Multi-stage fuel filter is arranged in parallel, which can reduce fuel inlet resistance and meet oil inlet requirements of engine. Equip transparent water cup and water level alarm to remind the user to do water drainage in regular time.



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- 采用LTA低温后冷却系统，保证了进气温度和发动机缸体寿命。  
Adopt LTA low temperature after cooling system to guarantee the air intake temperature and service life of engine cylinder body.
- 低温启动系统，可选装液体加热器，解决高寒地区的发动机难启动问题。  
Liquid heater is optional for low temperature start system to solve the problem that engine is difficult to start in ultra-cold area.
- 空气滤清器配套唐纳森公司SSG系列矿用重灰度滤清器，可有效防止粉尘进入，以适应多灰尘环境作业。  
Air filter has supporting parts of Donaldson SSG series mining heavy-gray filter, which can effectively prevent dust entering so as to adapt to dusty environment operation.
- 采用国际性能最稳定的控制器，传感器等各类电气元器件，保证机器可靠安全的运行。  
Adopt the controller, sensor and various kinds of electrical elements with most stable performance to guarantee the safe and reliable operation of machine.
- 液压系统采用高压过滤器，减少系统中油污，提高液压元件使用寿命；在泵、马达泄油口处设置油污传感器及压力传感器，实现液压元件的预防性维护，降低泵、马达等因杂质进入而损坏的风险。  
Hydraulic system adopt high pressure filter to reduce the oil pollution in system and thus improve service life of hydraulic elements. Oil contamination sensor and pressure sensor are installed at the outlet of pump and motor to realize preventive maintenance of hydraulic components and reduce the risk of damage caused by impurities entering pump and motor.
- 四轮一带全部为国际知名品牌，极佳的强度和耐用性，具有连续滚道、自动导向结构的整体式铸造履带板，能够实现向支重轮提供连续支撑并防止横向跑偏，降低滚道表面接触应力，避免早期金属流动，保证了行走系统的高可靠性和耐久性。  
All the four wheels are well-known international brands with excellent strength and durability. The integral casting track board with continuous raceway and automatic guiding structure can provide continuous support to the supporting wheels and prevent lateral deviation, reduce the contact stress on the raceway surface, avoid early metal flow and ensure the high availability of the walking system. Reliability and durability.

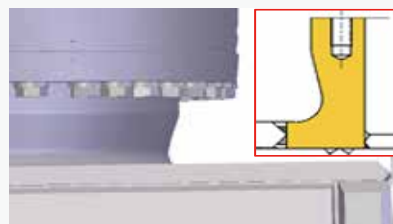
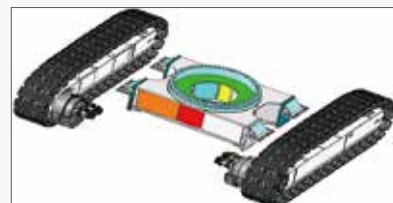


履带导向块



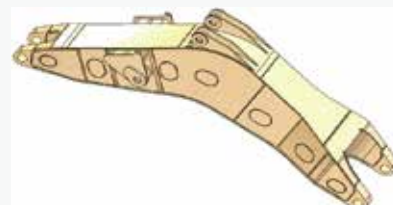
- 满足矿山工况的组式重载底盘，联接部位均采用高强度钢，最大限度保障底盘的可靠性；最优匹配的轮系布局有效确保运行可靠性，同时实现挖掘时整机的稳定性及驾驶员舒适感；回转支承座采用合金钢锻造工艺，同时横截面设计成半径斜切式，使得受力分布更均匀，减少了应力集中的部位，提高了抗疲劳强度。

The combined heavy-duty chassis is made of high strength steel, which meets the working conditions of the mine and ensures the reliability of the chassis to the greatest extent; the optimum matching gear train layout effectively ensures the reliability of the operation, while realizing the stability of the whole machine and driver's comfort during excavation; the rotary bearing is forged with alloy steel, and the cross section is also adopted. Designed as radius oblique cut type, the force distribution is more uniform, the stress concentration is reduced, and the fatigue strength is improved.



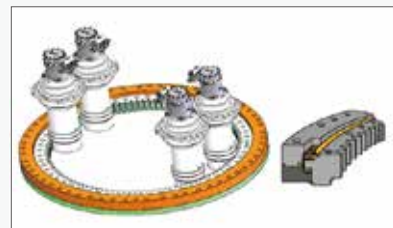
- 满足矿山施工的重载型工作装置，关键部位采用高强度耐磨铸钢和特殊的高强度钢材，重载销轴采用全封闭浮动式销轴及自动润滑系统，满足矿山苛刻环境，标配的重载型铲斗配置世界知名公司的合金铸造耐磨岩石型斗齿系统，穿透力强，耐磨性好，更换便捷。

With heavy-duty working device meeting working conditions of mine, key parts adopting high-strength wear-resistant casting steel and special high-strength steel and pins adopting full closed floating type pins and automatic lubrication system, it can meet harsh mine environment. Standard heavy-duty bucket is configured with world famous alloy casting wear-resistant rock teeth system, providing strong penetration, good wear-resistant and quick change.



- 回转支承采用大规格三排滚柱式回转支承，轴向和径向承载能力更强，使用寿命长，维护成本低；同时两套回转装置彼此径直对等安装，回转装置受力均衡，可靠性更高。

Rotary bearing adopts large-scale three-row roller slewing bearing, which has stronger axial and radial bearing capacity, longer service life and lower maintenance cost. At the same time, two sets of rotary devices are installed directly and equally with each other, so the force of the rotary device is balanced and the reliability is higher.



## More efficient return

- 采用世界知名品牌的液压元件和可靠的电控正流量系统，延长了整车使用寿命，提升了工作效率。

Using hydraulic components from world-renowned brands and reliable electronic control positive flow system, the service life of whole machine can be prolonged and working efficiency will be improved.

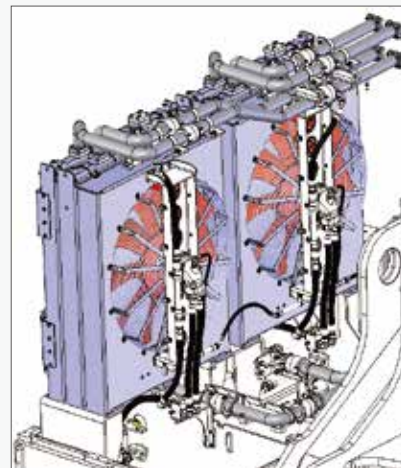
- 具有先进阀外的再生、合流系统，使其具有更大的再生流量、合流流量，极大地降低了能耗，提高了能源利用率。

With advanced out-of-valve regeneration and confluence system, the generation flow and confluence flow is larger, which has greatly reduced the energy consumption and improved energy utilization.



- 先进独立温控冷却系统，发动机、液压油冷却都采用独立的液压回路控制，电控变量液压泵根据冷却对象的实际温度实时自动调节冷却功率，使发动机、液压油处于理想的工作温度，实现节能环保。

Advanced independent temperature control cooling system, engine and hydraulic oil cooling are controlled by independent hydraulic circuit. Electrically controlled variable hydraulic pump can automatically adjust cooling power in real time according to the actual temperature of the cooling object, so that the engine and hydraulic oil are in ideal working temperature and realize energy saving and environmental protection.



- Hydraulic chassis tension system with pressure feedback control greatly reduces the impact of road surface in mining area and improves the operation comfort. When the built-in pressure feedback loop detects that the impact force is greater than the set limit, it automatically stops walking, protects the whole chassis system and effectively prolongs the life of chassis structural parts.

- Effective open-type rotary system, using advanced control, using a small number of pumps 100% of the power source, to provide the right turning moment, greatly reduce the number of main pumps, reduce the cost of use.

## More intelligent management and control



Adopt brand new intelligent control system developed independently to achieve accurate power match between power system and hydraulic system, the work is more efficient and energy efficient.



- 徐工矿机GPS智能云控制系统，与公司CRM、400、DMS系统链接，集GPS定位功能、远程管理和远程诊断功能。能够承载挖掘机地理位置信息，挖机现场工作参数和报警信息数据上传，实现车辆出入库管理、远程管理、远程诊断、远程控制。

XCMG Excavator GPS intelligent cloud control system, which is linked with company' s CRM, 400 and DMS system, integrates GPS positioning function, remote management and remote diagnosis function into one. With information about excavator' s location, working parameters of excavator on site and alarm information uploading, entry and out warehouse management, remote management, remote diagnosis and remote control can be achieved.



- 设备关键系统配置了多种信号采集设备，实时检测设备，对工况进行监控，出现异常时会发出报警，便于故障诊断和远程监测。  
Key system of equipment is configured with various kinds of signal acquisition devices to test the equipment in real time and monitor the working conditions, and if there is something abnormal, it will send out alarm, which is convenient for fault diagnosis and remote monitoring.
- 配备全新自主开发的M2IS-OBD车载诊断设备及软件系统。可实现整机的多路数据实时监测与高速存储、故障在线诊断与数据离线解析、设备行为分析及历史事件回放等功能，大幅提升故障诊断效率。  
Equipped with new self-developed M2IS-OBD on-board diagnostic equipment and software system. It can realize the functions of real-time multi-channel data monitoring and high-speed storage, on-line fault diagnosis and off-line data analysis, equipment behavior analysis and historical event playback, and greatly improve the efficiency of fault diagnosis.

## More safe and comfortable



Special cab featured with ultra large space, full field of view, double seats and FOPS function is safe and reliable. Operation arrangement is reasonable and reliable. Compact layout can save much space. Cooling and heating air conditioning system with large power is fully automatic. Shock absorber with multipoint supporting can effectively reduce vibration and noise, providing operator with comfortable and capacious working environment and reduce the operation fatigue of operators.



- 大屏幕显示器，多点视频监控，消除视野盲区，施工更加安全。  
Large screen display and multipoint video monitor can eliminate blind area and make the construction safer.
- 配备Muster II 自动灭火系统，动力舱、泵室等全方位保护，保证设备使用安全。  
Adopt Muster II fire suppression system to protect the power compartment and pump room in full directions, which can thus guarantee the safe operation.



## Convenient maintenance

- 全互通通道设计，各部件之间均有通道相连，维护保养触手可及；同时将检查比较困难的回转减速机机油游标尺引到走台处，机油检查非常方便。  
The overhaul channels are interconnected, and the oil vernier of rotary reducer, which is difficult to inspect, is arranged on the platform. The oil inspection is very convenient and fast.



- 整机采用全自动单线式集中润滑系统，能精确控制每个润滑点的润滑脂量和润滑间隔，确保有效润滑；另外配备有半自动润滑装置，一旦自动润滑故障，可提供应急润滑保障性加注，省时、可靠。

The whole machine adopts full automatic single-line centralized lubrication system to control grease amount and lubrication interval of each lubrication point accurately and ensure effective lubrication. Equipped with semi-automatic lubrication device, once the automatic lubrication failure, can provide emergency lubrication support filling, to ensure reliable and efficient.

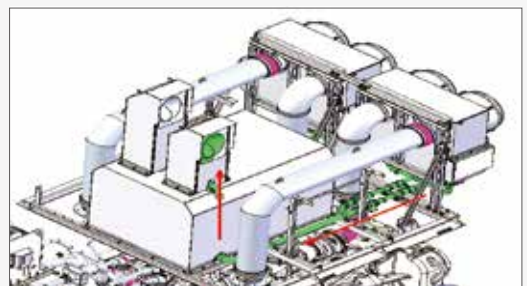


- 采用快速加注系统，实现了整车的地面集中保养，提升保养效率，降低保养劳动强度。

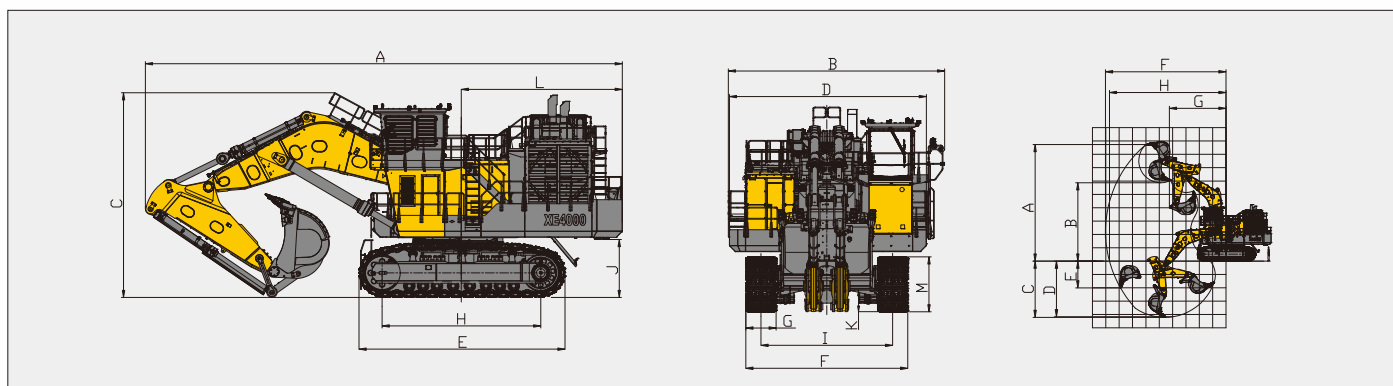
Adopt fast-fill system to achieve centralized maintenance of whole machine on ground, improve the maintenance efficiency and reduce maintenance labor intensity.

- 标配排气引射，利用排气气流，将空滤处灰尘从排气管中排出，灰尘免清理，同时可有效延长空滤更换周期。

Standard exhaust ejection system, using exhaust gas flow, the dust in the air filter can be discharged from the exhaust pipe, and the dust can not be cleaned up, effectively prolonging the service life of the air filter.







## 主要参数/Main Specifications

型号 Model	单位 UOM	参数 Parameters
操作重量 Operation Weight	Kg	384000
铲斗容量 Bucket Capacity	m³	20-22
<b>发动机 Engine</b>		
发动机型号 Model	/	QSK60C
直喷 Direct injection	/	✓
4冲程 Four strokes	/	✓
水冷 Water cooling	/	✓
涡轮增压 Turbo-charging	/	✓
低温中冷 LTA	/	✓
缸数 No. of cylinders	/	16
额定输出功率/转速 Output power	kw/rpm	1491/1800
最大扭矩/转速 Torque/Speed	N.m	8906/1500
排量 Displacement	L	60
<b>主要性能 Main performance</b>		
行驶速度(高/低) Travel speed (H/L)	km/h	2.3/1.6
回转速度 Rotating speed	r/min	3.2
爬坡能力 Gradeability	°	30
接地比压 Ground pressure	kPa	200
铲斗挖掘力 Bucket digging force	kN	1057
斗杆挖掘力 Arm crowd force	kN	961
<b>液压系统 Hydraulic system</b>		
主泵 Main pump	/	8个柱塞泵 Plunger pumps
主泵额定流量 Rated flow of main pump	L/min	8 × 549
主安全阀压力 Pressure of prime valve	MPa	29.4
行走系统压力 Pressure of travel system	MPa	29.4
回转系统压力 Pressure of swing system	MPa	29.4
先导系统压力 Pressure of pilot system	MPa	4.4
<b>油类容量 Oil capacity</b>		
燃油箱容量 Fuel tank capacity	L	7450
液压油箱容量 Hydraulic tank capacity	L	2050
发动机油容量 Engine oil capacity	L	267

型号 Model	单位 UOM	参数 Parameters
<b>外形尺寸 Outline dimension</b>		
A 总长 Overall length	mm	20000
B 总宽 Overall width	mm	9070
C 总高 Overall height	mm	8590
D 转台宽度 Width of platform	mm	8260
E 履带长度 Length of crawler	mm	8700
F 底盘总宽 Overall width of chassis	mm	6770
G 标准履带板宽度 Width of crawler	mm	1270
H 履带轴距 Track length on ground	mm	6660
I 轨距 Crawler gauge	mm	5500
J 配重离地间隙 Clearance under counterweight	mm	2430
K 最低离地间隙 Min. ground clearance	mm	910
L 尾部回转半径 Min. tail swing radius	mm	7175
M 履带高度 Height of crawler	mm	2305
<b>作业范围 Working scope</b>		
A 最大挖掘高度 Max. digging height	mm	17470
B 最大卸载高度 Max. dumping height	mm	11740
C 最大挖掘深度 Max. digging depth	mm	8430
D 8英尺水平面挖掘深度 8-inch horizontal plane digging depth	mm	8355
E 最大垂直挖掘深度 Max. vertical wall digging depth	mm	4015
F 最大挖掘半径 Max. digging reach	mm	18050
G 最小回转半径 Min. swing radius	mm	8480
<b>标配 Standard</b>		
动臂长度 Length of boom	mm	9600
斗杆长度 Length of arm	mm	4500
铲斗容量 Bucket capacity	m³	22
<b>选配 Option</b>		
正铲铲斗容量 Face shovel capacity	m³	22 (加强 Strength)

材料和规格可随时改变，恕不另行通知  
Materials and specifications may be changed at any time without prior notice



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