



LW180KE轮式装载机技术规格书

Technical Specification for LW180KE Wheel Loader



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LW180KE装载机性能特点与配置说明

Performance configuration description of LW180KE Wheel Loader

LW180KE轮胎式装载机是徐工集团铲运机械事业部自主研发的五阶段新产品，样机选用玉柴发动机；采用铰接式车架，全液压转向；工作装置采用单摇臂反转“Z”形六连杆机构，可选多种工作装置(标准臂，高卸臂)及附属装置（快换铲斗、货叉、夹草钳、夹木钳、侧卸等）。

The LW180KE wheel loader is a euro stage V new product independently developed by the XCMG Earthmoving Machinery Division, with a prototype using a Yuchai engine. Adopting an articulated frame and fully hydraulic steering. The working device adopts a single rocker arm reverse "Z" shaped six link mechanism, with multiple working devices (standard arm, high unloading arm) and auxiliary devices (quick change bucket, fork, grass clamp, wood clamp, side unloading, etc.) are available.

一.主要性能与特点： Main performance and characteristics:

- 1) 接头采用24°锥+密封圈的双重密封形式，密封性更好，性能更加可靠；管路进行集中梳理，走向更加合理。
- 2) 欧五玉柴发动机，结构紧凑可靠；电控单体泵经济性好；整机噪音低，机油散热效果好、效率高，真正达到节能环保。
- 3) 加强型重载驱动桥，满足各种高强度、高负荷作业需要。
- 4) 工作装置经CAE分析，能够满足在重载工况下的有效铲掘，专有设计的斗型能够更省力的插入料堆。耐磨材料的使用，大大提高铲斗使用寿命。
- 5) 优化后的轻量前、后车架，强度可靠。
- 6) 全玻璃、大圆弧风格的驾驶室，美观大方、视野开阔，大空间操作舒适。
- 7) 集中式保险丝盒、油位检查、油液添加及润滑脂加注点引出，维修便利。
- 8) 可选配多种机具，适用于多种作业工况。

LW180KE装载机在借鉴K系列优点的基础上，进行欧五动力升级的新款经济型、高性价比产品，整机在可靠性、舒适性、维修性、保养性、安全性等方面进行提升：

1) The joint adopts a dual sealing form of 24 ° cone and sealing ring, which has better sealing performance and more reliable performance. Centralized sorting of pipelines for a more reasonable direction.

2) The stage V Yuchai engine has a compact and reliable structure. The electronically controlled unit pump has good economy. The whole machine has low noise, good oil cooling effect, high efficiency, and truly achieves energy conservation and environmental protection.

3) Reinforced heavy-duty drive axle, meeting the needs of various high-strength and high-load operations.

4) After CAE analysis, the working device can meet the requirements of effective excavation under heavy load conditions, and the specially designed bucket can be inserted into the material pile more effortlessly. The use of wear-resistant materials greatly improves the service life of the bucket.

5) The optimized lightweight front and rear frames have reliable strength.

6) The full glass, large arc style cab is aesthetically pleasing, with a wide view and comfortable operation in a large space.

7) Centralized fuse box, oil level inspection, oil adding and lubricating grease filling points for easy maintenance.

8) Multiple machine tools can be selected, suitable for various operating conditions.

On the basis of learning from the advantages of the K series, the LW180KE wheel loader is a new economical and cost-effective product upgraded by the Euro stage 5 power. The entire machine has been improved in terms of reliability, comfort, maintainability, maintenance, safety, and other aspects:

(一) 可靠性 Reliability

- 1.前后车架进行CAE结构优化分析，板材利用率，结构强度提高，满足各种工况。
- 2.耐磨及润滑新材料、新方法使用，使寿命大大提升。
- 3.液压钢管接头密封进行全面升级，性能更可靠。
- 4.配重采取四点固定，更加安全可靠。

1. CAE structural optimization analysis was conducted on the front and rear frames to improve the utilization rate of sheet metal and structural strength, meeting various working conditions.

2. The use of wear-resistant and lubricating new materials and methods greatly improves the lifespan.

3. The sealing of hydraulic steel pipe joints has been comprehensively upgraded for more reliable performance.

4. The counterweight is fixed at four points, making it safer and more reliable.

二. 舒适性 Comfort

- 1.驾驶室空间大、全玻璃，无视野障碍；
- 2.豪华内饰，密封性好，噪声疲劳大大降低；
- 3.遮光板、高档座椅、标配风扇，操作舒适，工作效率提升；

1. The cab has a large space, full glass, and no visual barriers.
2. Luxury interior, good sealing, greatly reducing noise fatigue.
3. Shade board, high-end seats, standard fan, comfortable operation, and improved work efficiency.

(三) 安全性 Safety

1. 油箱盖全面升级，避免脱落丢失；
 2. 水箱挡风罩全包设计，避免风扇伤人事故发生；
 3. 驾驶室内增加灭火器，防止火灾发生；
 4. 爬梯及扶手尺寸，人机原理设计，使操作人员感觉安全；
 5. 驾驶室内后视镜由平面改为球面镜，增大视野广角。
 6. 反光贴的增加，避免在光线暗的工况事故发生。
1. The fuel tank cap is fully upgraded to avoid detachment and loss.
 2. The windshield of the water tank is fully designed to avoid fan injury accidents.
 3. Add fire extinguishers in the cab to prevent fire.
 4. The dimensions of the ladder and handrail are designed based on human-machine principles, making operators feel safe.
 5. The rearview mirror inside the driver's cab has been changed from a flat mirror to a spherical mirror to increase the field of view.
 6. Add reflective stickers to avoid accidents in low light conditions.

(四) 维修保养性 Maintenance and safety

1. 核心、重要电气件（控制器、电源总开关、继电器等）安装在驾驶室内部，防尘、防水、抗震效果更好；
2. 集中式保险盒，插片式保险，检查、维修方便快捷；
3. 仪表盘上增加发动机故障诊断指示灯，便于实时监控发动机工作状态；
4. 前翻式后机罩开启角度大，发动机、水箱等完全暴露，维修更换部件方便；
5. 水箱放水阀及发动机放油口单独引出，操作省时简便；
6. 制动加力缸位置由原来一个安装在前车架一个在后车架，改为两个安装都在前车架上，便于观察制动液量及检修加力缸；
7. 空滤增加预滤，安装在机罩上部，维修方便。

1. The core and important electrical components (controllers, power main switches, relays, etc.) are installed inside the cab, providing better dustproof, waterproof, and seismic performance.

2. Centralized fuse box, plug-in fuse, convenient and fast inspection and maintenance.
3. Add an engine fault diagnosis indicator light on the dashboard to facilitate real-time monitoring of the engine's working status.
4. The front flip rear hood has a large opening angle, and the engine, water tank, etc. are completely exposed, making it easy to repair and replace components.
5. The water tank drain valve and engine oil outlet are separately led out, which saves time and is easy to operate.
6. The position of the brake booster cylinder has been changed from one installed on the front frame and one installed on the rear frame, to both installed on the front frame for easy observation of brake fluid volume and maintenance of the booster cylinder.
7. Add pre filtration to the air filter and install it on the upper part of the hood for easy maintenance.

二、主要技术参数

Main technical parameters

项目 Item		参数 Parameter		
额定斗容量 Bucket capacity m ³		1.1		
额定载重量 Rated load kg		1800		
工作质量 Operating weight kg		6200(配1.1标准斗、标准臂 (Equipped with 1.1 standard bucket and standard boom))		
标准铲斗 Standard bucket (m ³)		标准臂 Standard boom	小高卸 Small high unloading	大高卸 High unloading
卸载高度 Unloading height mm		2680	2950	3295
卸载距离 Unloading distance mm		900	1000	1510
轴距 Wheelbase mm		2300		
轮距 Tread mm		1550		
整机长度 Overall length mm		6045		
整机高度 Overall height mm		2950		
铲斗宽度 Bucket width mm		2060		
最大掘起力 Max breakout force kN		55		
最大牵引力 Max traction force kN		48		
外侧轮胎中心 (转弯半径) Outer tire center (turning radius) mm		4470		
动臂提升时间 Boom lifting time S		≤5		
三项和时间 Total cycle time S		≤9		
发动机 Engine Power kW		55.8		
发动机 Engine	型号 Model	YCF3675-S580(36A5L0)		
轮胎型号 Tire model		16/70-20		
行驶速度	前进 Forward gear	一档 1 st gear 0~10 二档 2 nd gear 0~28		

Travel speed km/h	后退 Reverse gear	一档 1 st gear 0~10 二档 2 nd gear 0~28
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注：配置：玉柴欧五+徐工箱+干式桥+先导三联+空调

Configuration: Yuchai stage V engine + XCMG transmission + Dry drive axle + pilot control+ triple connection + AC

二. LW180KE轮胎式装载机主要部件配置表

Main Components of LW180KE Wheel Loader

序号 S#	名称 Name	规格型号 Specifications	生产厂家 Manufacturer
1	柴油机 Engine	YCF3675-S580(36A5L0)	广西玉柴机器股份有限公司
2	驱动桥 Drive axle	GZQH180K GZQH180K	徐州精大车桥有限公司
3	变速箱 Transmission	2BS280(I)	徐州徐工传动科技有限公司
4	工作泵 Working pump	CBGq2063	济南液压泵有限责任公司
5	转向泵 Steering pump	CBGq2063	济南液压泵有限责任公司
6	分配阀 Distribution valve	DL20L1-02	浙江高宇液压机电有限公司
7	转向器 Steering gear	BZZ-400/FK	伊顿液压系统（济宁）有限公司