



WK-12C EXCAVATOR



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WK-12C矿用机械正铲式挖掘机为我公司研制的大型露天矿山采装设备，它汇集了我公司多年矿用挖掘机设计、工艺、制作的成功经验的同时，采用大量国内外先进技术，可适用于大型露天煤矿、铁矿及有色金属矿山的剥离和采装作业。

WK-12C挖掘机采用三维仿真和有限元分析等现代设计方法，对整机性能和工作尺寸进行合理的选择；充分发挥自身的效力，提高了挖掘机与范围宽广的各种矿用卡车、破碎站等其他设备的匹配性，更好地满足用户高效装载、降低单位生产成本的要求。

电气系统采用公用直流母线变频调速系统，控制上以PLC为核心，采用上位监控、现场总线、变频调速的三级控制系统。具有：对电网扰动小、允节能等特点；装有优化挖掘特性、自适应“提一挖”等软件；同时电铲具有故障自诊断和运行状态显示、电能计量等功能。这种系统技术先进、运行可靠、传动效率高、耗能低。

WK-12C挖掘机适用于年产量为1000万吨级以上的矿山使用，可与80~154吨级的自卸卡车或100吨的铁路自翻车配套使用。

技术特点：

- 齿轮齿条推压方式，切入性强，效率高；
- 行走机构的左右履带为独立驱动，行走减速机为行星减速机；
- 硬齿面齿轮传动，齿轮寿命长；
- 高位驱动，延长驱动系统寿命；
- 采用全盘式气动制动器；
- 交流变频驱动方式。

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WK-12C excavator is a medium size excavating equipment for open-pit mine developed by TZ. It combines the successful experiences accumulated for many years of design, processing and manufacturing of mining shovels, in the meantime absorbs lots of advanced new technology from domestic and abroad. WK-12C is suitable both for stripping and excavating on open-pit coal mine, iron mine and ferro-metal mine.

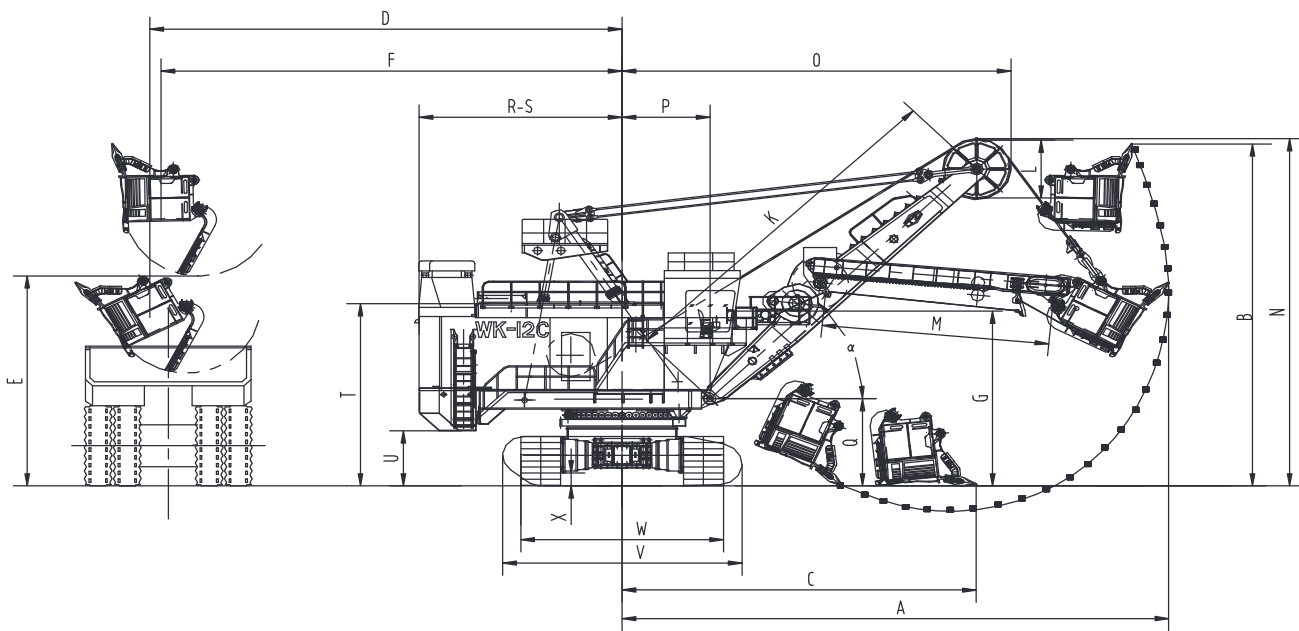
WK-12C excavator has adopted state-of-art and cutting edge technology, like three-dimension imitation, definite circle analysis and so on. It is of good performance, reasonable working dimensions and exerts its efficiency to fully play to enhance its matching ability with all sorts of haul trucks and crush stations to better satisfy end-user's requirements for higher production and lower operation cost.

Electric system adopts Rectifier to common DC Bus-bar and variable frequency speed adjustment. The electric control, taking PLC as the core, is a 3-stage system of up-position monitoring, field bus and frequency variable speed control. It is of futures of no disturbance to power grid allowing wider range of power voltage fluctuation and high power factor. The system is loaded with software to optimize the dig/cut curve and automatically optimization of hoist and dig power distribution. The system can realize self troubleshooting and running status display, electric power calculating and so on. This system has the advantages of state-of-art technology, reliable operation, high transmission efficiency and low power consumption.

WK-12C excavator is suitable for 10 million MT mining use, to match with 80-154 MT dumper or 100 MT dumping train.

Technical characteristic:

- Gear-rack crowding, powerful penetration, high efficiency;
- The propel mechanism adopts independent drive of planetary reducer;
- The transmission gears use carburizing treatment to increase the surface hardness and lifetime ;
- The Propel mechanism adopts higher position drive to improve cycle life;
- Air-release-spring-set disc brakes are applied.
- AC IGBT drive.



WORKING RANGES

单位:m

A	最大挖掘半径 Digging Radius (max)	18.90	E	最大卸载高度 Dumping Height (max)-Door Open	8.60
B	最大挖掘高度 Height of Cut (max)	13.53	F	最大卸载高度时的卸载半径 Dumping Radius at Max. Dumping Height	15.58
C	水平清道半径 Floor Level Radius	13.00	G	司机水平视线至停机面高度 Height-Ground to Operator's Eye Level	7.10
D	最大卸载半径 Dumping Radius (max)	16.25			

MAIN PERFORMANCE PARAMETERS

1	额定载荷	Nominal Payload	22	t
2	斗容范围	Dipper Capacity	10~16	m ³
3	最大提升速度	Hoist Speed (max)	1.35	m/s
4	最大推压速度	Crowd Speed (max)	0.61	m/s
5	最大行走速度	Propel Speed (max)	0.80	km/h
6	最大提升力	Max. Hoist Force	1110	kN
7	最大推压力	Max. Crowding Force	541	kN
8	履带最大牵引力	Max. Crawler Dragging Force	2565	kN
9	最大爬坡角度	Max. Gradeability (degree)	13	°
10	履带板平均接地比压 (履带板宽度=1400mm) Bearing Area-Ground Pressure (width of crawler shoes=1400mm)		253	kPa
11	工作重量	Working Weight	490	t
12	配重	Counterweight	75	t

GENERAL DIMENSIONS

单位: m

α	起重臂对停机平面的倾角 Boom Angle	45°	R	机棚尾部回转半径 Radius of Rear End	7.35
K	起重臂长度 Boom Length	13.00	S	机棚宽度 Width of Cab	6.60
L	起重臂顶部滑轮直径 Diameter of Boom Top Sheave	2.28	T	机棚顶至停机面的高度 Height-Ground to Top of Main Cab	7.22
M	斗杆有效长度 Effective Dipper Handle Length	7.95	U	配重箱底面至停机面高度 Height-Ground to Bottom of Counterweight	2.16
N	顶部滑轮上缘至停机平面高度 Clearance Height of Boom Point Sheave	13.80	V	履带部分总长度 Overall Length of Crawlers	8.40
O	顶部滑轮外缘至回转中心的距离 Clearance Radius of Boom Point Sheave	13.50	W	履带部分宽度 Overall Width of Crawlers	7.10
P	起重臂支脚中心至回转中心的距离 Centre of Rotation to Boom Foot Pin	3.00	X	履带驱动装置最低点距停机面高度 Height-Ground to Bottom of Crawler Drive Device	0.51
Q	起重臂支脚中心高度 Height-Ground to Boom Foot Pin	3.43			

ELECTRIC PARAMETERS

输入电压 Supply Voltage	3KV~11KV, 3相50Hz 或60Hz	推压电动机峰值功率 (690VAC) Crowd Motor, Peak Power	330KW
应承受的最小短路容量 Minimum Short Circuit VA	8MVA	回转电动机额定功率 (690VAC) Swing Motor, Rated Power	2X160KW
供电变压器最小容量 Supply Transformer (minimum)	1050KVA	回转电动机峰值功率 (690VAC) Swing Motor, Peak Power	2X210KW
提升电动机额定功率 (690VAC) Hoist Motor, Rated Power	2X350KW	行走电动机额定功率 (690VAC) Propel Motor, Rated Power	2X150KW
提升电动机峰值功率 (690VAC) Hoist Motor, Peak Power	2X460KW	行走电动机峰值功率 (690VAC) Propel Motor, Peak Power	2X187KW
推压电动机额定功率 (690VAC) Crowd Motor, Rated Power	250KW		

- 注：1. 本产品技术参数将随着科学技术的进步和采矿工艺的发展而不断改进和完善，恕不通知。
 2. 所有参数只适用于产品推介，不能用于对设备的工作性能进行评估。
 3. 电气参数均基于额定电压690V及环境温度50℃。
 4. 如需更多技术参数，请咨询厂家。

- Note: 1. This WK-12C is reliability and improved the performances with the progress of cutting edge technology in design and the development of mining technology. All technical specification are subject to variation without notice.
 2. The parameters are suitable for WK-12C standard application design and promotion, can't be used to evaluate the equipment performance.
 3. The electrical parameters are based on environmental temperature 50℃ and rated voltage 690V.
 4. For further information please contact our TZ office in China or consult with TZ agents at your locations.

