MK1320 CNC External Cylindrical Grinding Machine



# MK1320 数控外圆磨床



## 机床用途与性能特征

- 采用广州数控或国内知名品牌系统, 8.4"液晶显示。 外圆砂轮进给和工作台移动,均采用交流伺服电机通过 滚珠丝杆驱动。砂轮进给采用直线滚动导轨以保证进给 灵敏,刚性好。
- 机床配置自动定时定量润滑,确保导轨、丝杆的润滑。
- 床身为整体式结构,内部筋板呈箱型布置,并且采用高 强度低合金孕育铸铁铸造,并已合理的时效处理,具有 很高的整体刚度和强度,满足了高效、高精度设备对基 础件的要求。
- 砂轮架主轴系统采用动压轴承,砂轮主轴始终保持很高 的回转精度、刚性和工作稳定性。且通过滚珠丝杆驱动 砂轮架进给。砂轮架导轨采用直线滚动钢导轨。
- 工作台采用双层结构,便于机床精度的调整,旋转上工 作台面可磨削锥形面零件。
- 工作台移动机构采用交流伺服电机直接驱动滚珠丝杆 副,控制工作台移动。工作台导轨为贴塑滑动导轨。
- 冷却系统配置独立冷却水箱,进一步保证磨削质量。
- 根据连续生产的特点,配置半封闭防护,防止冷却液飞 溅,确保环境整洁和操作人员身体健康。
- 机床电柜与机床防护装置为一体式,密封性能良好。

## **Application & Performance Feature**

- apply Guangzhou CNC system or internal famous brand, 8.4" LCD. External cylindrical grinding wheel feed and worktable movement is chosen AC servo motor driven by ball screw. Grinding wheel feed ap plies linear rolling guide to ensure feed sensitivity.
- automatic timing and quantitative lubrication is configured, ensuring lubrication of guide and lead screw.
- body is integrally structure; inner gusset is boxy arrangement, apply ing high strength and low alloy meenanite cast iron. After aging trea tment, the gusset owns high strength and whole rigidity, which meet s the high-effective, high precision requirement for basic parts.
- grinding carriage spindle system applies hydrodynamic bearing; wh eel spindle always keeps high rotary accuracy, high rigidity, and hig h stability. Grinding carriage feed is driven by rolling screw.
- Worktable uses dual structure, easy to adjust accuracy. Rotate upp er working table, conical parts can be grinded.
- Moving unit of worktable applies AC servo motor to drive rolling scre w, controlling worktable. Worktable guide is plastic sliding guide.
- Cooling system equipped with separate coolant box, ensuring grind ing quality.
- According to continuous working feature, equipped semi-closed pr otection, to prevent coolant splashing and ensure clean and healthy environment.
- electric cabinet and protection device is integrally with good sealability.



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技术规格参数 Technical specification parameter

磨削直径范围 Grinding diameter scale	Φ8~ Φ200mm
测量直径范围 Measure diameter scale	Φ8~ Φ80mm
顶尖间距离 Distance between centre	400/500/750mm
中心高 Center height	125mm
最大工件重量 Max. work piece weight	50kg
工作台最大回转角度 Max rotary angle of worktable	-5°~+9°/-3°~+9°/-3°~+7°
工作台移动速度 Moving speed of worktable	0.1–4m/min
头尾架顶尖锥度 Centre tape of head & tail stock	No.3
头架卡盘直径 Cartridge diameter of headstock	125mm
尾架套筒移动量 Bushing movement of tailstock	25mm
最大砂轮尺寸 Max wheel size	Φ400× (40) × Φ203mm
砂轮线速度 Linear speed of wheel	35m/s
砂轮架最小进给量 Min. feed of wheel carriage	0.0005mm
工作台最小移动量 Min. movement of worktable	0.001mm
砂轮电机功率 Motor power of grinding wheel	3kw
电器总容量 Overall capacity of electronics	10.5kw

#### 特殊定货附件 Special order accessories

1、	砂轮平衡架 Equalizer bar of wheel	1套set
2、	磁性分离冷却水箱 Magnetic separation cooling box	1套set
з,	外径量仪(意大利马波斯或中原) Outside diameter measure instrument (Italy Marposs or Zhongyuan)	1套set
4、	头架准停装置 A stop device for headstock	1套set
5、	端面量仪(意大利马波斯或中原) End–surface measure instrument	1套set

Work-piece sketch map

6、量仪液压控制站 1套set Measure instrument hydraulic controlling station

加工工件示意图

### 机床主要附件 Main accessories of machine

1、冷却水箱 Cooling box	1套set
2、顶尖 Centre	1套set
3、砂轮修正器 Emery wheel dresser	1套set
4、垫铁 Sizing block	1套set
5、开式中心架 Open style center frame	1套set
6、松卸螺帽 Loosening nut	1件piece

机床工作精度(标准试件)	Working accuracy of machine (standard test–piece)
1、圆 度 Roundness	0.0015mm
2、圆柱度Cylindricit	y 0.003mm
3、表面粗糙度 Surfac	e roughness Ra0.32 µ m

4、外径尺寸分散度(量仪控制直径一致性) Outside diameter dimension dispersion 0.003mm/千件 (measure instrument controls diameter)

