



数控蓝宝石滚磨机

WSK022 CNC Sapphire Tumbling Mill



技术参数 Specifications and Technical Parameters

加工工件参数 Workpiece parameters
 砂轮架速度 Linear speed of grinding wheel
 适用砂轮直径 Applicable diameter of grinding wheel

主要参数 Main parameters	
中心高 Central height	125mm
砂轮架速度 Linear speed of grinding wheel	30m/s (max)
适用砂轮直径 Size of diamond grinding wheel	Φ30(1)~Φ127mm
头架可回转角 Headstock angle	±5°
尾架顶行程 Top travel of tailstock (max)	150mm (max)
砂轮架电机功率 Motor power of grinding carriage	1.3kW
头架电机功率 Motor power of headstock	0.75kW
头架主轴转速 Spindle speed of headstock spindle	0-800r/min (变频调速)
头架回转精度 Rotary accuracy of headstock	±0.001mm
数控轴 Axis	X轴: 砂轮架进给 X axis: grinding carriage feed Z轴: 工作台进给 Z axis: worktable feed

电源供给及配套设施 Power supply and matched facility
 供电电压 Power supply and voltage: 交流AC 380V 50Hz
 相对湿度 Relative humidity: 小于 85%
 环境温度 Environment temperature: 0-35℃
 振动源 Vibration source: 周缘光驱源

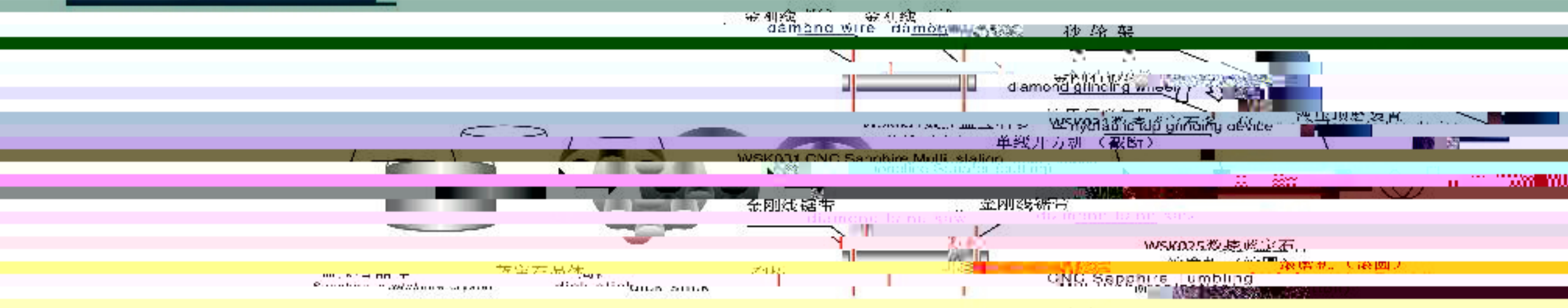
磨削精度 Grinding accuracy: ±0.001mm
 圆度 Roundness: ≤0.08mm
 纵截面内尺寸一致性 Dimensional uniformity within longitudinal section: 0.1mm
 表面粗糙度 Surface roughness: Ra 0.5um

机床用途与性能特征

- 本机床用于太阳能电池行业，单晶硅棒及蓝宝石晶棒等材料，可磨经切方后2寸~8寸棒料外圆（磨2寸圆棒无需更换金刚石砂轮）。
- 头架、尾架采用特制液压夹紧方式磨削。
- 采用进口二轴联动数控系统，内置PLC，触摸屏液晶显示。
- 工作台纵向移动及砂轮架横向移动采用伺服电机，实现无级拖动。
- 机床床身为高弹性、高刚性的铸铁整体铸造，采用高刚度结构，有良好的吸振和热平衡性能。
- 工件长度变化在100mm中，可不移动尾架，只需调整顶紧力。
- 顶紧力可任意调整。
- 磨削加工晶棒时可实现一次装夹完成粗磨、半精磨、精磨，到尺寸出山。
- 电器电柜与床身刚性连接，避免多次拆卸维护，保证电气连接可靠。

Main Applications and Structural Features

- This equipment is applied in the PV industry, processing monocrystalline silicon rods and sapphire rods. The diameter of circle of 2~8 inch rods can be ground without need to change diamond grinding wheel.
- Headstock and tailstock apply special hydraulic top clamp type grinding.
- Applies imported two-axis linkage CNC system, within PLC touch screen liquid crystal display.
- Worktable longitudinal movement and grinding wheel transverse movement adopt servo motor ball screw drive.
- Casing is casted by high strength, low stress cast iron, with high rigidity and good performance of shock absorption and heat balance.
- Length change of work piece shall be within 100mm, the tailstock can be fixed, hydraulic top force of it can be whatever adjusted.
- While grinding crystal rods, a single set-up automatic grinding circulation can complete rough grinding, semi-finishing grinding to finish.
- Electric cabinet connects with body, avoiding repeated disassembly, ensuring reliable connection.



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