

WSK022

数控蓝宝石研磨机

WSK022 CNC Sapphire Tumbling Mill



机床用途/主要应用范围

- 本机床用于磨削太阳能行业、单晶硅棒及蓝宝石晶棒等材料，可磨削切方后2寸~8寸棒料的外圆（磨2寸圆棒无需更换金刚石砂轮）。
- 头架、尾架采用特制液压紧夹头方式磨削。
- 采用进口二轴联动数控系统，内置DI、CNC功能并带显示屏。
- 工作台纵向移动及砂轮架横向移动采用伺服电机，实现丝杠拖拽。
- 机床床身为高强度、高刚性的铸铁整体铸造，采用高刚度结构，有良好的吸振和热稳定性。
- 工件长度变化在100mm中，可不移位装夹，且可任意调整压顶紧力可任意调整。
- 磨削加工晶棒时实现一次装夹完成粗磨、半精磨、精磨、到尺寸退出。
- 电器电柜与床身刚性连接，避免灰尘刮屑飞溅，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, sapphire rods, etc.
- The headstock and tailstock apply special hydraulic top clamp type grinding.
- Applies imported two-axis linkage CNC system, within with PLC touch screen control.
- Worktable longitudinal movement and grinding wheel transverse feed servo motor ball screw drive.
- Casing is casting in cast-iron with high strength, low stress, cast iron, with shock absorption and good performance of smoke absorption and heat balance.
- Length change of work piece shall be within 100mm, and work can be fixed, hydraulic top force of it can be whatever adjusted.
- While grinding crystal bar, when a single set up, automatic grinding circulation can conduct from coarse grinding to fine grinding to finish.
- Electric cabinet connects with body, avoiding repeated disassembly, ensuring reliable connection.

设备规格/Specifications and Technical Parameters

加工工件参数/Workpiece parameters

适用磨削直径/Applicable diameter

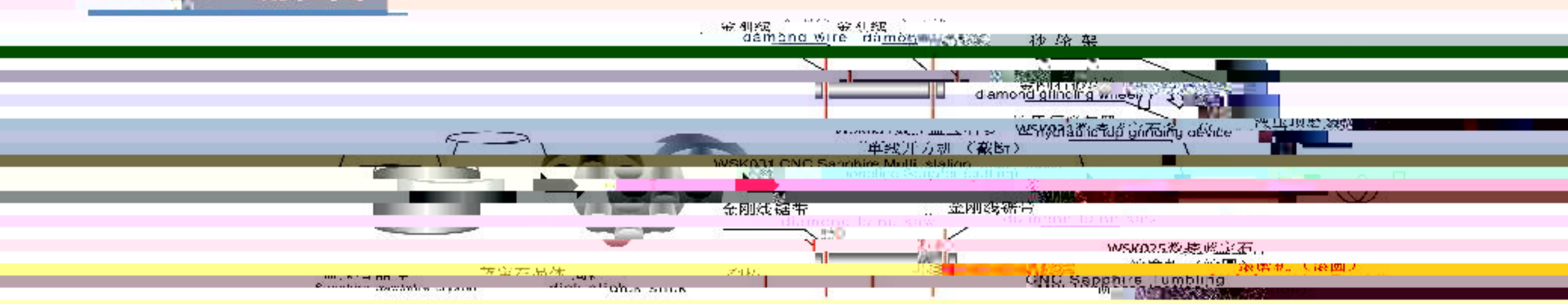
主要参数/Main parameters

中心高/Central height	125mm
砂轮线速度/Linear speed of grinding wheel	35m/s (max)
金刚石砂轮尺寸/Size of diamond grinding wheel	Φ300×150×Φ127mm
头架可回转角/Retracting angle of headstock	±30°
尾架最大行程/Top travel of tailstock (max)	125mm (max)
特制液压头架/With hydraulic top clamp	
砂轮架电机功率/Motor power of grinding wheel	3kW
头架电机功率/Motor power of headstock	0.75kW
头架主轴转速/Headstock spindle speed	100-4000rpm (stepless speed regulation)
头架回转精度/Rev. accuracy of headstock	回转精度/Rev. accuracy <0.001mm
数控轴/Axis	轴/Axis: 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 related facilities	
供电电压/Power supply and voltage	交流AC 380V 50Hz
相对湿度/Relative humidity	小于Less than 75%
环境温度/Environment temperature	15℃~35℃
振源/Vibration source	磨床自身振源
磨削精度/Grinding accuracy	
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



加工现场/Processing site

磨削工件/Grinding workpiece



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