

WSK022

数控蓝宝石滚磨机

WSK022 CNC Sapphire Tumbling Mill



机床用途及主要性能

- 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，可磨经切方后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、尾架采用特制液压夹紧方式磨削。
- 采用进口二轴联动数控系统，内置DI、CNC、位置反馈显示。
- 工作台纵向移动及砂轮架横向移动采用伺服电机，实现丝杠拖动。
- 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，可不移动尾架，通过调整液压顶紧力可任意调整。
- 磨削加工是棒料时，可一次装夹自动完成粗磨、半精磨、精磨，到尺寸退刀。
- 电器柜与床身刚性连接，避免灰尘刮损线路，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 bars, etc.
- circle of 2~8 inch bar and grinding. (Grinding 2 inch bar no need to change diamond grinding wheel)
- Headstock, tailstock applies special hydraulic top clamp type grinding.
- Applies imported two-axis linkage CNC system, within with DI, CNC, position feedback display.
- Worktable longitudinal movement and grinding wheel transverse feed by servo motor ball screw drive.
- Casing is casted by high strength, low stress cast iron, with high stiffness, strength and energy performance of shock absorption and heat balance.
- Length change of work piece shall be within 100mm, no need to move by fixed, hydraulic top force of it can be whatever adjusted.
- While grinding crystal bar, a single set-up automatic grinding circulation can continuously run forward, coarse grinding, finish grinding to finish.
- Electric cabinet connects with body, avoiding repeated disassembly, ensuring reliable connection.

新能源系列设备

无锡上机数控股份有限公司

NEW ENERGY SERIES OF EQUIPMENTS SHANGJIAU CNC MACHINERY PARTNERS OF NEW ENERGY

设备规格参数表 Equipment Specifications and Related Technical Parameters

加工工件参数 Workpiece parameters

适用磨削直径 Applicable diameter

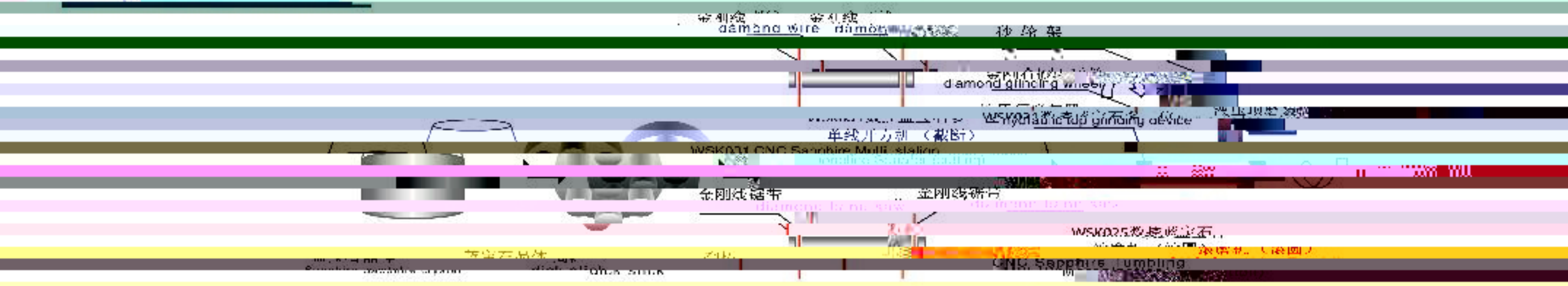
主要参数 Main parameters

中心高 Central height	125mm
砂轮线速度 Linear speed of grinding wheel	30m/s (max)
金刚石砂轮架尺寸 size of diamond grinding wheel	Φ300×180×25 (Φ127mm)
头架可回转角 Headstock angle	±30°
尾架顶紧行程 Top travel of tailstock	250mm (max)
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 Spindle speed of headstock	100~1500 (支持无级调速)
头架回转精度 Rev. accuracy of headstock	AC伺服电机, 分辨率0.01mm, 定位精度±0.01mm
数控轴 Axis	X轴: 砂轮架进给 X axis: grinding wheel 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配套设施	交流AC 380V 50Hz
供电电压 Power supply and voltage	交流AC 380V 50Hz
相对湿度 Relative humidity	≤75% (无结露)
环境温度 Environment temperature	15~35℃
振源 Vibration source	地基固有频率10~15Hz
磨削精度 Grinding accuracy	±0.01mm
圆度 Roundness	≤0.008mm
纵截面内尺寸一致性 Dimensional uniformity within longitudinal section	0.1mm
表面粗糙度 Surface roughness	Ra≤0.5μm



加工流程 Processing flow

Substrate Process and Flow Chart



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