WSK022

数控蓝宝石滚磨机

WSK022 CNC Sapphire Tumbling Mill



技术规格参数 Specifications and Technical Parameters

加工工件参数Work piece parameters	
适用磨削直径Applicable grinding diameter	Φ3～Φ12mm
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)/≤max
金刚石砂轮尺寸Size of diamond grinding wheel	Φ203×(15～38)×Φ127mm
头架可回转角度Rotary angle of headstock	±8°
尾架顶尖行程Top travel of tailstock(max)	25mm(max)
特制尾架主轴Special tailstock spindle	配液压顶紧Fitted with hydraulic top clamp
砂轮架电机功率Motor power of grinding carriage	3kw
头架电机功率Motor power of headstock	0.75kw
头架主轴短锥Headstock short taper die	莫氏4#Morse 4#
头架回转精度Rotary accuracy of headstock	在300mm范围内≤0.004mm
数控轴Axis	轴向重复Axial channeling moves≤0.005mm 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less than75%
环境温度Environment temp. temperature	5～30℃35
振源Vibration source	后置红外振源08
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

机床用途与主要结构特征

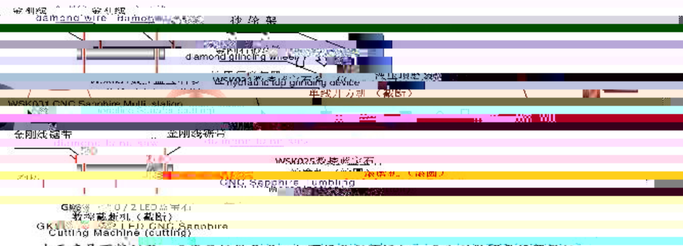
- 本机床用于蓝宝石单晶硅棒材料，可磨经切方后的外圆（磨2寸圆棒无需更换金刚石砂轮）。
- 头架、尾架采用特制成型顶紧夹具方式磨削。
- 采用进口二轴联动数控控制系统，伺服电机，数字显示。
- 工作台纵向移动及砂轮架横向移动采用伺服电机，滚珠丝杠传动拖动。
- 机床床身为高强度、低应力铸铁整体铸造，采用筋形刚度结构，有良好的减振和热平衡性能。
- 工件长度变化在100mm内，可不移动尾架，其液压顶紧力可任意调整。
- 磨削加工具棒时实现一次装夹自动循环粗磨（粗磨、半精磨、精磨、到尺寸退出）。
- 电器电柜与床身刚性连接，避免多次拆卸麻烦，保证电气连接可靠。

Main Applications and Structural Features

- This equipment is applied in the PV industry, processing monocrystalline silicon, sapphire bar and other materials, which can grind the cylinder of 2-6 inch bar after cutting. The bar no need to change diamond grinding wheel (2 inch).
- Headstock, tailstock applies special [illegible] top clamp type grinding.
- Applies imported two-axis linkage CNC system, within with PLC touch screen panel.
- Worktable longitudinal movement and grind wheel transverse apply servo motor ball screw.
- Casing is cast by high strength, low stress cast iron, with high stiffness structure and good performance of shock absorption, part heat balance.
- Length change of work piece shall be within 100mm, tailstock can by fixed, hydraulic top force of jig can be whatever adjusted.
- While grinding crystal bar, [illegible] set up automatic grinding circulation can complete (fast forward, coarse grinding, finish grinding to exist).
- Electric cabinet connects with body, avoiding repeated disassembly, ensuring reliable connection.

加工现场process site

衬底加工流程图 Substrate Processing Flow Chart



由于产品不断创新，本资料仅供参考，如有修改恕不通知，本公司保留最终解释权。
As products are improving gradually the above information is only for reference, any modification without notification,we company reserves the final explanation rights.