

WSK031

数控蓝宝石多工位单线开方机

WSK031 CNC Sapphire Multi Station Monoline Squarer



机床用途与性能特征

- 本设备为蓝宝石单线开方机，主要用于LED蓝宝石晶体的切割，是新能源的主要配套设备；
- 采用国外进口数控系统，集成度高，操作方便；
- 设备布局合理，机械强度高而且热稳定性好；整体外观采用全封闭不锈钢设计；
- 摇摆单元优化了金刚线切割蓝宝石的性能，缩短了切割时间，并提高了晶锭的端面质量；减少滑轮数量的设计，更有效地降低线耗、滑轮等损耗；
- 设备采用三工位，可同时切割不同的蓝宝石晶体，并能独立控制每个工位，切割速度也可不同；
- 采用一套收放线系统，三个工位公用，节省空间，同时也能使用多线切的旧线；
- 优化张力控制系统，利用高张力切割，保证了切割的质量和效率；
- 采用三工位旋转工作台，多方位调节晶向，单一平面布线等方案；
- 采用整体式设计，配备切割用水箱，外观美观且内部整洁。

Main Applications and Structural Features

- This Equipment is diamond monoline squarer, applied in processing LED sapphire ingots, which is the main equipment for new energy industry.
- Apply automatic imported CNC control system, integrate with human-computer interface, easy to operate.
- Reasonable layout, high mechanical strength and perfect thermal stability. Overall appearance applies full closed stainless steel design.
- Swing unit optimizes performance of slicing sapphire, shortening time, and improving end face quality of ingots, reducing quantity of pulleys, which decreases consumables such as wire and pulleys.
- Apply three-station, slicing different sapphire ingots simultaneously, or control each station separately, speed of slicing can also be different.
- Apply one set of retractable cable that drives 3 stations, save 50% wire, and be able to use old wire used in multi-line as well.
- Optimize tension of control system, by high-tension slicing, ensuring quality and efficiency of processing sapphire.
- Apply three-station rotary worktable, adjust crystal orientation on multi-aspect. Single plane wiring program.
- Apply overall design, matched with water tank for slicing, identical appearance and clean inside.

技术规格参数 Specifications and Technical Parameters

加工工件参数 Workpiece parameters

工件规格 Specifications	Φ500x500mmx3件
工件重量 Weight	< 250Kgx3件

主要参数 Main parameters

金刚线直径 Diameter of diamond wire	Φ0.23~0.5mm
工位数量 NO. of station	根据导轮槽距而定
工件台速 Speed of worktable	25度/秒
加速度 Acceleration	(max)
线速度 Line speed	20m/s(max)
摇摆角度 Swing angle	+23°
摇摆速度 Swing speed	25度/秒
工件晶向 Workpiece crystal orientation	360° + 90°
切割方向 Slicing orientation	前进或后退切割/双向互换切割 forward or backward cut / two-way exchange cutting
电源供给及配套设施 Power supply and matched facility	
电源要求 Requirement of power	电压 voltage: 380V, 频率 frequency: 50Hz
冷却水流入温度 Cooling water	10℃-20℃
周围环境温度 Environment temperature	15℃-25℃

设备局部图 local picture

