

SINGLE-WIRE CUTTING MACHINE

单线切割机YJ-XQD1205A

超硬材料单线截断/切片专机
截断/切片稳定高效 运行低噪平稳

Special Machine for Single-wire Truncation and Slicing of Superhard Materials .
Make the Truncation/Slicing Stable and Efficient Run with Low Noise and Smoothly



硬脆材料晶棒
Brittle semiconductor ingot



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设备特点

- 采用伺服电机控制，能在有效设置范围内以任意速度工作，停止、加减速；运行过程平稳，无抖动，保证极高的加工精度。
- 采用低阻尼线轨，保证加压精度；采用气囊加压，提高加压的平稳性，最大加压力1500KG。
- 自主研发的高精度下盘传动系统，研磨盘具备实时温度检测和温度闭环控制，保证加工过程温度稳定。
- 进口电涡流测厚传感器：电涡流测厚传感器，分辨率：0.04MM；
- 零件加工精度：实现零件加工在线测厚精度 < 1MM；
- 高加压精度、在线测厚系统和人性化的操作界面；
- 先进的控制系统：通过气动回路进行断电保护，可实现断电不断气。

MAIN TECHNICAL FEATURES

- Adopting servo motor control, it can operate at any speed within the effective setting range, with stop, acceleration, and deceleration functions. The operation process is smooth, without jitter, ensuring extremely high machining accuracy.
- Equipped with low-damping linear guides to ensure pressing accuracy, and pneumatic cushioning for improved pressing stability, with a maximum pressing force of 1500 kg.
- Features a self-developed high-precision lower platen drive system. The grinding disc incorporates real-time temperature monitoring and closed-loop temperature control to ensure stable processing temperatures.
- Imported eddy current thickness sensor with a resolution of 0.04 μm.
- Part machining accuracy: Achieves online thickness measurement accuracy of <1 μm for machined parts.
- High pressing accuracy, online thickness measurement system, and user-friendly operation interface.
- Advanced control system: Equipped with a pneumatic circuit for power-off protection, enabling air supply continuity during power outages.

主要技术参数 MAIN TECHNICAL SPECIFICATIONS

项目/Items	规格/Specs
最大切割尺寸/Maximum cutting size	φ300×600 mm（最大可截断工件尺寸）φ300×100mm（工件摇摆切片尺寸，选配）
储线量/Storage capacity	20Km（φ0.25金刚线）
线径/Diamond wire diameter	φ0.25 ~ φ0.8mm
切割速度/Cutting speed	Max 1800m/min
切削进给速度/Feed rate	0.01~100mm/min
摇摆方式/Rocking mode	钢线摇摆（长度≤600）工件摇摆（长度≤100，选配）
晶体摇摆速度/Crystal rocking speed	0~300°/min（速率可调）
金刚线张力/Diamond thread tension	Max 90N
切削液容积/Volume of Cutting fluid	100L
设备尺寸/Equipment size	2337×2283×2322mm(包含悬臂)
机器重量/Mechanical weight	约5500Kg