

# WSK053D数控双工作台单晶硅金刚线剖方机



## 设备用途与性能特征

- 本设备为金刚线单线剖方机，主要用于太阳能行业硅材料的切割；适用于单晶硅棒料截断后的开方工作，开方后尺寸 $210 \times 210 \times (150 \sim 900)$  是单晶硅棒料开方加工的主要配套设备。
- 采用CNC控制技术的一体化PC机，人机界面采用了触摸屏；
- 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，外表美观、废料出料清洗方便；
- 优化张力控制系统，利用高张力切割，保证切割的质量及效率；设计模块化，耗线少、耗材少、更高效。
- 收放线机构设计成可分离式，即卷线线盘在需要换线时可直接在收放线机构上拆下，换上新的卷线线盘，拆换方便，省时省力，对金刚线不造成任何损伤。
- 切割方法采用工件水平移动，双导轨单丝杆移动进给，控制精度高。切割头采用固定形式，金刚线无需进给补偿，张力更稳定。
- 机床废料下料处三面可打开，清洗，日常维护简单方便。
- 每刀切割时间一般约为10-20分钟，具体视硅块的质量和长度而定。

## Application and features

- Diamond wire saw squarer machine is mainly used for cutting silicon material in PV industry, which applied for squaring after cutting monocrystalline bar, dimension after squaring  $210 \times 210 \times (150 \sim 900)$ , the equipment is a matched equipment of processing silicon bar.
- Applies integrated PC machine of CNC control technology, human-computer interface applies touch screen.
- Rational layout, high mechanical strength and excellent thermal stability. The overall appearance applies full-closed stainless steel design, ensuring perfect appearance and convenient cleaning.
- Optimise tension control system, utilize high-tension cutting, ensuring cutting quality and efficiency.
- Design modularization, less line consumption, less consumables, higher efficiency. Retractable mechanism is designed detachable, that means coil wire can be disassembled directly from retractable mechanism when changing wire. Save time and labor, no damage for diamond wire.
- Cutting method applies workpiece horizontal movement, double guideway monofilament rod movement feed, which owns high control accuracy. Cutting head applies fixed form, diamond wire no need feed compensation, more stable tension.
- Blanking place of machine can be opened from three sides, easy and convenient cleaning and daily maintenance.
- Each cutting time is approximate 10-20 minutes, according to weight and length of silicon block.

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## WSK053D数控双工作台单晶硅金刚线剖方机规格参数

Specification of WSK053D CNC Double Worktable Monocrystalline Silicon Diamond wire Saw Machine

### 加工工件参数 work piece parameter

规格 specification	直径 diameter $\Phi$ 230~300
长度 length	150-900mm

### 主要参数 main parameter

钢线芯线径 core wire diameter	0.25-0.5mm
切割行程 cutting stroke	最大max 1200mm
切割速度cutting speed	0.01-100mm/min (可设定)
快速移动 fast move	0.1-4m/min

### 配套设施 matched facility

压缩空气接口compressed air interface	$\Phi$ 10mm, 60L/min, 0.4~0.6MPa
冷却水接口 cooling water interface	15L/min
环境温度 Environmental temperature	0℃-35℃

### 能源供给 power supply

电源连接 power connection	380V,50HZ
最大功率 max . power	51KW

### 外形尺寸 outline size

机床外形尺寸 (长×宽×高) equipment size (L*W*H)	6016×2495×2510mm
机床重量 weight	≈10500kg

### 设备示意图 sketch

