

WSK070边缘倒角机



设备概述

本机用于自动研磨半导体材料4/6/8寸（硅片、碳化硅片、蓝宝石片）的边缘（外周粗精磨、OF粗精磨、NOTCH粗精磨）。设备主要由上料系统、测试系统，传送系统，左右研磨室，清洗甩干室组成。设备基座为整体铸造，机械强度高而且热稳定性良好。

1. 设备采用左右两个工位研磨方式，可以任意选择使用，左右各配备一套外周砂轮轴和notch砂轮轴以及陶瓷吸附加工平台
2. 设备具备自动检测和校正功能，增加研磨精度
3. 设备具备开关自动厚研磨和固定厚度研磨功能
4. 设备具备单点或8点面幅补正功能，其控制范围在10um以内
5. 设备具备高精度研削其直径，notch深度，notch角度，OF长度，OF的R1 R2，notch的R1 R2，notch底部半径等的单独补正功能，控制范围在10um以内，且表面粗糙度控制在0.2um以内
6. 设备具备各种recipe的匹配和编辑（多阶段研削），以适应各种产品规格
7. 设备具备辅助自动补正功能（需要单独收集数据设置）
8. 设备具有碎片报警，吸附报警，尺寸超标报警停机等功能
9. 设备具备不良品单独分类功能
10. 设备具备操作人员的操作登记和记录功能
11. 设备具有砂轮管理、稼动管理，通信管理功能
12. 设备配备砂轮和研磨试的独立冷却系统，电柜配备独立冷却系统保证电器部分正常工作
13. 设计具有三色灯和蜂鸣功能
14. 控制系统为西门子系统，整合个人计算机、数据存储与数据传输并连接至计算机；计算机具有多种接口，可提供远程操作；操作系统为中文视窗应用软件，视窗界面更直观。可以对接后台生产设备等管理系统

Equipment Overview

This machine is used to automatically grind the edges (peripheral rough and fine grinding, of rough and fine grinding, notch rough and fine grinding) of 4/6/8 inch semiconductor materials (silicon wafer, silicon carbide wafer, sapphire wafer). The equipment is mainly composed of feeding system, testing system, transmission system, left and right grinding rooms, cleaning and drying rooms. The equipment base is integrally cast, with high mechanical strength and good thermal stability.

1. The equipment adopts the grinding mode of left and right stations, which can be used arbitrarily. The left and right sides are equipped with a set of peripheral sand wheel axes, notch grinding wheel axes and ceramic adsorption processing platform
2. The equipment has the function of automatic detection and correction to increase the grinding accuracy
3. The equipment has the functions of on-off automatic thickness grinding and fixed thickness grinding
4. The equipment has single point or 8-point surface amplitude correction function, and its control range is within 10um
5. The equipment has the independent correction function of high-precision grinding of its diameter, notch depth, notch angle, of length, of R1 R2, notch R1 R2, notch bottom radius, etc., and the control range is within 10um, and the surface roughness is controlled within 0.2um
6. The equipment has the matching and editing of various recipes (multi-stage grinding) to adapt to various product specifications
7. The equipment has the auxiliary automatic correction function (it needs to collect data separately)
8. The equipment has the functions of debris alarm, adsorption alarm, over size alarm and shutdown
9. The equipment has the function of separate classification of defective products
10. The equipment has the operation registration and recording functions of operators
11. The equipment has the functions of grinding wheel management, vibration management and communication management
12. The equipment is equipped with an independent cooling system for grinding wheel and grinding test, and the electric cabinet is equipped with an independent cooling system to ensure the normal operation of electrical parts
13. It is designed with tricolor light and buzzer function
14. The control system is Siemens system, which integrates personal computer, data storage and data transmission and connects to the computer. The computer has a variety of interfaces, which can provide remote operation; The operating system is Chinese window application software, and the window interface is more intuitive. It can be connected to the background production equipment and other management systems

WSK070边缘倒角机

WSK070边缘倒角机规格参数

Specification of WSK070 Edge chamfering machine

设备参数 Equipment Parameters

工件 workpiece	
工装 work clothes	2/4/6/8寸晶圆 厚度: 0.4mm-1mm 4 个工位, 1个样片工位
研磨速度 Grinding speed	
外周速率 Peripheral rate	0.01-20mm/sec
OF速率 Of rate	0.01-20mm/sec
Notch Notch	0.1-2.0mm/sec
外周砂轮 Peripheral grinding wheel	
主轴转速 Spindle speed	0-10000rpm
直径 diameter	200±2mm
notch砂轮 Notch grinding wheel	
主轴转速 Spindle speed	0-80000rpm
直径 diameter	1.8mm-2.4mm
洗净、甩干 Wash and dry	
甩干转速 Drying speed	500-2000rpm
甩干时间 Drying time	
吹气时间 Blowing time	
厚度测量 Thickness measurement	精度±2um
各轴精度 Accuracy of each axis	X、Y、Z轴: 2um θ轴: 0.001°
研削台平面度 Flatness of grinding table	10um/360°
显示屏 display	12"西门子触控屏
断电保护机制 Power failure protection mechanism	具备
冷却方式 Cooling mode	水冷主轴, 研磨冷却系统
机器重量 Machine weight	约3吨
机台尺寸 (长、宽、高) Machine size (length, width, height)	3米、2米、2米
语言设置 Language settings	中文

厂务参数 Factory parameters

电源要求 Power requirements	
电压 Voltage	380V±10%
频率 frequency	50Hz
设备功率 Equipment power	
最大功率容量 Maximum power capacity	12KW
压缩空气 compressed air	
平均耗气量 Average gas consumption	6m³/h
最大耗气量 Maximum air consumption	10m³/h
设备冷却水 Equipment cooling water	
用水量 water consumption	2500kg/h, 最大用水量5000kg/h
水温 water temperature	温12~17°C恒温
地基要求 Foundation requirements	
地基满足 Foundation meets	足C25/30 (300mm厚)
地面水平 Ground level	平±5mm/3m
二次冷却水 Secondary cooling water	研磨冷却4M纯水
工程移动需要最小尺寸 (长、宽、高) Minimum size (length, width, height) required for project movement	5.5米、3.5米、3.5米