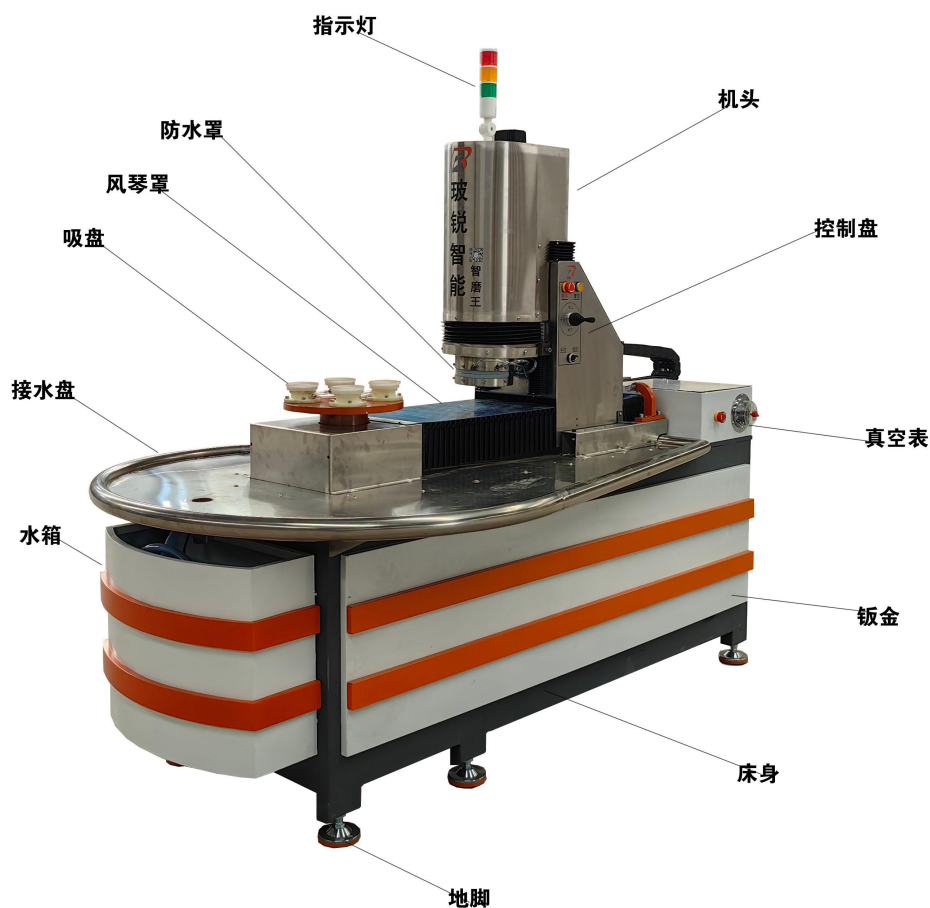


智磨王 —— 异形平板材料磨边抛光专用设备



产品概述

产品简介

智磨王是玻锐智能科技（临沂）有限公司历时 2 年自主研发的新一代异形磨边设备，专为解决传统玻璃加工中心售价高昂、操作复杂、异形加工需人工绘图定位等行业痛点而生。整机售价仅为市面低端玻璃加工中心的 1/4，性价比优势显著。

设备搭载自研 MCU AI 视觉寻边算法系统，通过光学探头实时采集工件轮廓数据，伺服系统精准控制加工轨迹，支持任意异形板材全自动跟随磨边。工件在有效行程内可



随意摆放，无需人工校准对位，真正实现“傻瓜式”操作——工人仅需上下料，踩踏脚踏开关即可自动完成加工，零基础人员快速上手。

高度集成一体化设计，内置真空发生系统、冷却水箱、润滑油箱、真空吸盘等全套组件，客户拆箱后接电通水即可投产。标配台达伺服电机，运动控制平稳，加工精度达 $\pm 0.3\text{mm}$ ，保障成品质量稳定。

适配玻璃、岩板、陶瓷、不锈钢板、铁板等各类硬质脆性平板材料，广泛应用于电动三轮车玻璃、农机 / 汽车挡风玻璃、电器视窗、家居装饰、卫浴镜等领域。更换配套耗材即可切换加工品类，一机多用，是中小玻璃加工厂降本增效的理想之选。

研发背景

目前市场现有玻璃加工中心、玻璃直边机、玻璃双边磨、玻璃四边磨、玻璃异形磨等设备普遍存在诸多短板：售价高昂、操作复杂，加工异形玻璃时需人工绘图定位；即便专用异形磨边设备，加工成品仍易出现瑕疵。

玻锐智能科技（临沂）有限公司历时 2 年，从软件算法、硬件结构、实际应用场景全方位自主研发，推出本款智磨王异形磨边设备。

- **性价比突出：**整机售价低廉，仅为市面低端玻璃加工中心价格的 1/4；
- **操作极简：**工件放置台面，踩踏脚踏开关即可自动加工，完成后取下成品，上手无门槛；
- **安装便捷：**集成一体化设计，客户拆箱后仅需接电、通水，完成基础调试即可投产；
- **加工适配广：**适配各类平板材质，涵盖玻璃、岩板、陶瓷、不锈钢板、铁板等硬质脆性材料，更换配套耗材即可切换加工品类。

产品特点与核心优势

自研 MCU AI 视觉寻边算法系统

设备搭载自主研发 AI 图形检测算法，通过光学探头实时采集工件轮廓数据，反馈至伺服系统精准控制加工运动轨迹，支持任意异形板材全自动跟随磨边。

无需精准定位

在设备有效加工行程内，工件可随意摆放，无需人工校准对位。



傻瓜式简易操作

设备调试完成后，工人仅重复上下料工序即可作业，零基础人员快速上手。

高度集成一体化机身

内置真空发生系统、冷却水箱、润滑油箱、真空吸盘等全套组件，无需额外配套辅机。

台达伺服驱动动力系统

标配台达伺服电机，运动控制平稳，保障成品加工精度与表面质量稳定。

主要用途及适用加工材料

电动三轮车玻璃、农机 / 汽车挡风玻璃、电器视窗玻璃、家居装饰玻璃、卫浴镜、岩板、瓷砖、陶瓷板材、平板不锈钢 / 铁板及各类硬质脆性板材。

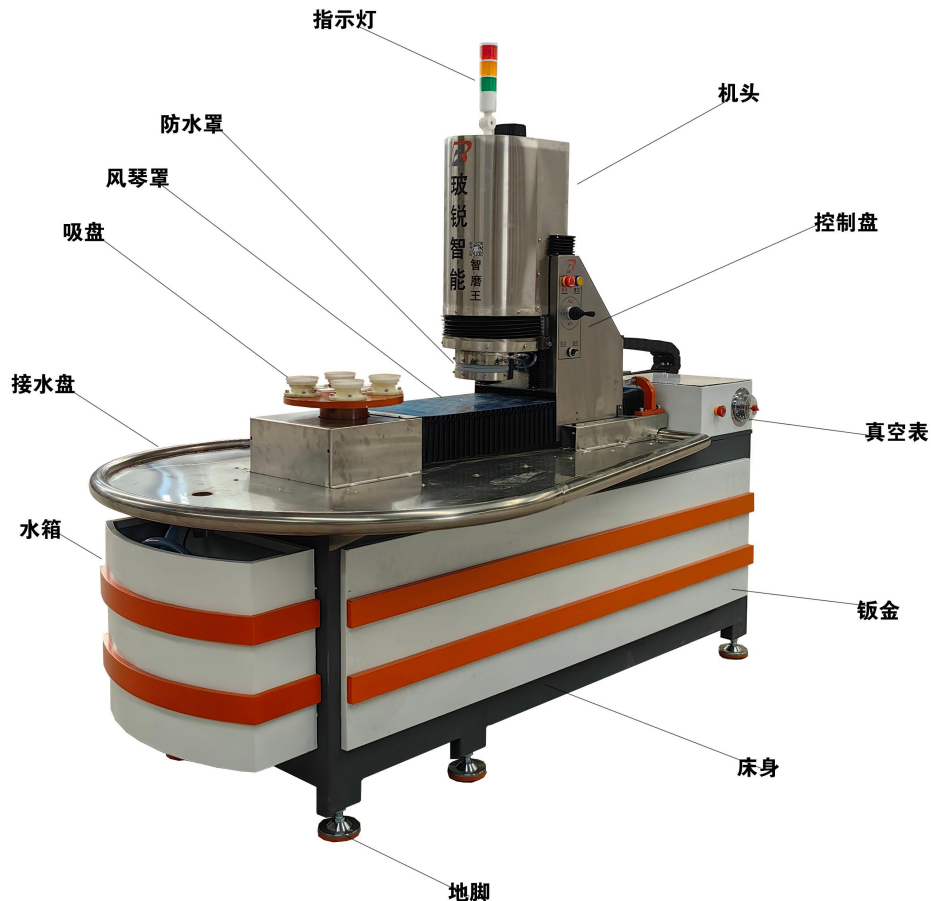
整机设备参数表

项目	型号 BR-ZMW1000	型号 BR-ZMW2000
整机长度	2200mm	2800mm
整机宽度	1300mm	1900mm
整机高度	1800mm	
最小加工直径	φ150mm	φ150mm
最大加工直径	φ1000mm	φ2000mm
单次磨削余量	0.2-1mm	
加工精度	±0.3mm	
直角倒 R 角范围	R8-R15	
加工行进速度	4-6m/min	

适用板材厚度	2-12mm
磨轮装配数量	2 个
控制系统	自研 MCU AI 寻边系统
整机总功率	5KW
供电规格	380V/50Hz
磨头主轴转速	2800r/min
设备自重	800KG
润滑方式	电动自动注油
工件固定方式	真空吸附
吸盘材质	尼龙
磨轮冷却方式	水冷循环
台达伺服电机配置	750W+450W
步进电机配置	2 台
磨头电机功率	1.5KW
床身主材	50×100mm 矩形方管
工作台面板	12mm 锰钢板
真空泵配置	750W
冷却水泵配置	370W
防锈工艺	整机钣金与结构件采用不锈钢材质



SmartGrind King – Special Edge Grinding & Polishing Machine for Special-Shaped Flat Panels



Product Overview

Product Introduction

SmartGrind King is a new-generation special-shaped edge grinding machine independently developed by Borui Intelligent Technology (Linyi) Co., Ltd. over a period of two years. It is designed to address common industry pain points of traditional glass machining centers, including exorbitant prices, complicated operation, and manual drawing and positioning required for special-shaped processing.

The machine is priced at only one quarter of low-end glass machining centers available on the market, delivering outstanding cost performance.



Equipped with self-developed MCU AI vision edge-finding algorithm system, the machine collects real-time workpiece contour data via optical probes, while servo systems accurately control processing trajectories to support fully automatic follow-up edge grinding of any special-shaped panels. Workpieces can be placed randomly within the effective travel range without manual calibration and alignment, realizing truly foolproof operation. Workers only need to load and unload materials and step on the foot switch to trigger automatic processing, enabling zero-basis operators to get proficient quickly.

Adopting a highly integrated all-in-one design, the unit comes with built-in complete assemblies including vacuum generator system, cooling water tank, lubricating oil tank and vacuum suction cups. Customers can put it into production simply by connecting power and water after unpacking. Standardly fitted with Delta servo motors, it delivers smooth motion control with a processing accuracy of $\pm 0.3\text{mm}$ to guarantee stable finished product quality.

Compatible with various hard and brittle flat materials such as glass, sintered stone, ceramics, stainless steel plates and iron plates, it is widely used for electric tricycle glass, agricultural machinery/automotive windshields, electrical appliance window panels, home decorative glass, bathroom mirrors and more. Operators can switch processing materials by replacing matching consumables. As a multi-functional all-in-one machine, it serves as an ideal cost-cutting and efficiency-boosting solution for small and medium-sized glass processing factories.

R&D Background

Existing equipment on the market, including glass machining centers, straight edge grinders, double-edge grinders, four-edge grinders and dedicated special-shaped glass grinders, generally suffer from multiple drawbacks: high selling prices, cumbersome operation, and mandatory manual drawing and positioning for special-shaped glass processing. Even dedicated special-shaped edge grinders tend to produce defective finished products easily.

After two years of all-round independent R&D covering software algorithms, hardware structures and practical application scenarios, Borui Intelligent Technology (Linyi) Co., Ltd. launched the SmartGrind King special-shaped edge grinding machine.



Outstanding cost performance: Low overall machine price, merely 1/4 the cost of mainstream low-end glass machining centers;

Ultra-simple operation: Place the workpiece on the worktable, step on the foot switch for automatic processing, then remove finished products - no technical threshold for operators;

Easy installation: Integrated all-in-one structure; customers only need to connect power and water and complete basic commissioning for production after unpacking;

Wide processing compatibility: Supports diverse flat hard brittle materials including glass, sintered stone, ceramic tiles, ceramic panels, flat stainless steel and iron sheets; switchable processing types via replacement of supporting consumables.

Product Features & Core Advantages

Self-developed MCU AI Vision Edge-Finding Algorithm System

Fitted with proprietary AI graphic detection algorithm, the machine captures real-time contour data of workpieces through optical probes and transmits data to servo systems to precisely control processing movement tracks, realizing automatic follow-up edge grinding for arbitrarily shaped panels.

No Precise Positioning Required

Workpieces can be placed randomly within the effective processing travel without manual calibration and alignment.

Foolproof & User-Friendly Operation

After initial machine commissioning, workers only perform repetitive loading and unloading work, allowing beginners to master operation rapidly.

Highly Integrated All-in-One Body

Built-in full set of auxiliary components: vacuum generator system, cooling water tank, lubricating oil tank and vacuum suction cups; no additional auxiliary machines required.

Delta Servo Drive Power System

Standard Delta servo motors ensure stable motion control, consistent processing precision and uniform surface finish of finished workpieces.

Main Applications & Processable Materials



Electric tricycle glass, agricultural machinery & automotive windshields, electrical appliance window glass, home decorative glass, bathroom mirrors, sintered stone, ceramic tiles, ceramic panels, flat stainless steel sheets, iron sheets and all types of hard brittle flat panels.

Complete Machine Technical Parameter Sheet

Item	Model BR-ZMW1000	Model BR-ZMW2000
Overall Length	2200mm	2800mm
Overall Width	1300mm	1900mm
Overall Height	1800mm	
Minimum Machining Diameter	φ150mm	φ150mm
Maximum Machining Diameter	φ1000mm	φ2000mm
Single Grinding Allowance	0.2–1mm	
Machining Accuracy	±0.3mm	
Right Angle Rounding Range	R8–R15	
Machining Travel Speed	4–6m/min	
Applicable Plate Thickness	2–12mm	
Grinding Wheel Assembly Quantity	2 pcs	
Control System	Self-developed MCU AI Edge Finding System	
Total Machine Power	5KW	
Power Supply Specification	380V/50Hz	
Grinding Head Spindle Speed	2800r/min	
Equipment Self-weight	800KG	
Lubrication Method	Electric Automatic Oil Injection	
Workpiece Fixing Method	Vacuum Adsorption	
Suction Cup Material	Nylon	
Grinding Wheel Cooling Method	Water Cooling Circulation	
Delta Servo Motor Configuration	750W+450W	

Stepper Motor Configuration	2 pcs
Grinding Head Motor Power	1.5KW
Machine Body Main Material	50×100mm Rectangular Square Tube
Worktable Panel	12mm Manganese Steel Plate
Vacuum Pump Configuration	750W
Cooling Water Pump Configuration	370W
Rust Prevention Process	Whole machine sheet metal and structural parts are made of stainless steel