

## 玻璃连线倒角机 Automatic Glass Corner Grinding Machine (Conveyor)



### Application:



**设备框架: Monoblock Design**

整个机架一体式焊接而成，经过退火及时效处理，很好保证设备变形；喷漆为底漆+面漆，整机高速运行过程中，设备无抖动（手触碰机架）；

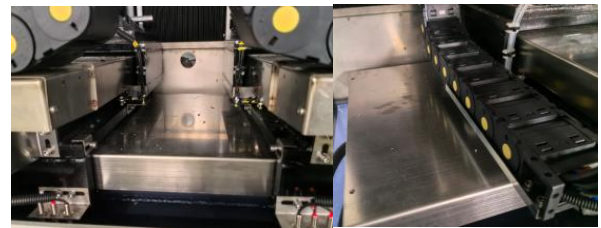
The entire frame is welded in one piece, after annealing and timely treatment, it is good to ensure the deformation of the equipment; Spray paint for primer + topcoat. During the high-speed operation of the whole machine, the equipment has no shake (hand touching the frame);



**设备防水: Machine waterproof**

X、Y、Z 轴外部均采用不锈钢罩，底部配备不锈钢水箱，两侧安装防水罩。

The exterior of the X/Y/Z axis is covered with stainless steel covers; Equipped with stainless steel water tank at the bottom and waterproof covers on both sides.



**电气安全: Electrical safety**

采用西门子低压电气，和国际知名电气品牌，保证使用寿命及故障率低；主轴单独配备变频器，有效保护电机及节能；

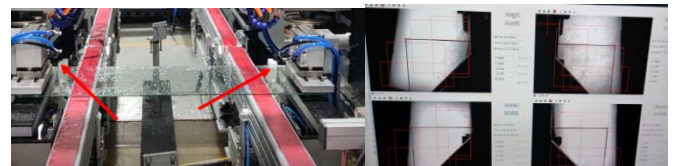
Siemens low-voltage electrical and international well-known electrical brands are used to ensure low service life and failure rate, and the spindle is equipped with a frequency converter separately to effectively protect the motor and save energy.



**定位方式:机械定位+CCD 拍照定位**

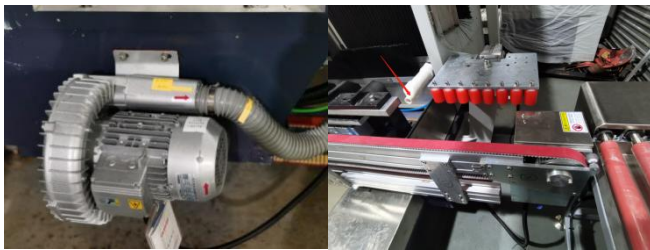
除了机械定位外，增加 CCD 拍照定位，更好地保证倒角的精度；

In addition to mechanical positioning, CCD Camera positioning is added to better ensure the accuracy of Corner Grinding.



**玻璃角吹水 Glass corner blowing:**

每个机头配备一个风机吹角，吹得干净不易漏角；  
 Each head is equipped with a fan blowing angle, which is clean and not easy to leak;



**循环水箱 Circulating water tank:**

自有水箱，配备两套水泵供水系统（每套配两个主轴），可以保证倒角前水已供到水管；  
 Own water tank, equipped with two sets of pump water supply system (each set with two spindles), can ensure that the water has been supplied to the water pipe before chamfering;



**速度及拍照 Speed & Take Photos:**

对于倒大角（R30mm-R60），切角比较多，仍然可以拍照倒角；相对倒角速度比较快；  
 For the corner (R30mm-R60), there are more chamfering corners, and the chamfer can still be photographed, and the relative chamfering speed is relatively fast;



**钣金 Sheet metal:**

自有钣金和机加工（龙门铣床，激光切割机，剪板机，数控机床等等），保证机械精度高且每个钣金机加部位有激光编号，后期维护只需编号即可找到物料单号及图纸；  
 Own sheet metal and machining (gantry milling machine, laser cutting machine, shearing machine, CNC machine tool, etc.) to ensure high mechanical accuracy and each sheet metal machining part has a laser number, and the material order number and drawings can be found only by numbering in the later maintenance;

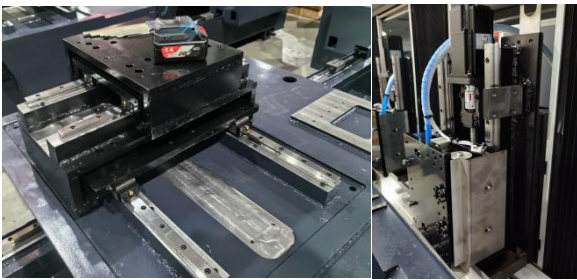


## 技术特点 Technical Feature

### 各轴联动: Axis Movement

每个工位由 X 轴、Y 轴和 Z 轴 3 轴控制组成; 并配有  
 两个滚珠丝杠和直线导轨;

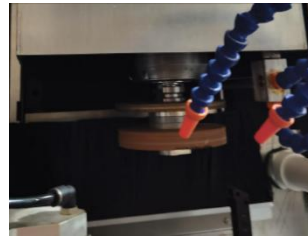
Each station is controlled by 3 axes: X-axis,  
 Y-axis and Z-axis; and equipped with two ball  
 screws and linear guides;



### 设备刀具 (选项): Cones Spindle (Options)

刀柄电主轴/BT30, 主轴带冷却功能;

Tool holder motor spindle/BT30, spindle with  
 cooling function;



### 自动润滑系统: Auto Lubrication System

整机配备自动润滑系统, 确保加油点压力保持恒定, 有  
 效保证丝杠导轨和滑块的润滑;

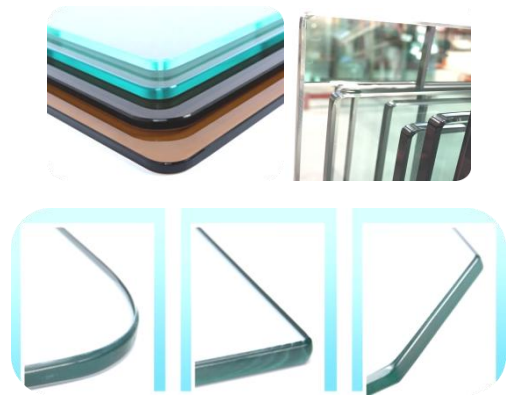
The whole machine is equipped with an  
 automatic lubrication system to ensure that the  
 pressure at the refueling point remains constant  
 and lubrication of the lead screw guide rail and  
 slider;



### 机器可加工: Machine Machinability

玻璃安全角, 斜角, 圆角等等;

Glass safety corner, glass corner C edge, glass  
 round corner ect.



**操作界面: Windows Operation Interface**

软件由本公司自行研发, 由一台工业电脑控制所有机头, PLC 控制传送部分,

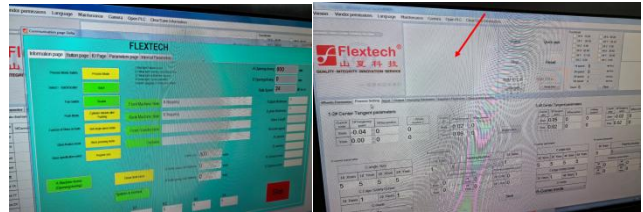
The software is developed by the company itself, all the machine heads are controlled by an industrial computer, and the transmission part is controlled by PLC, and the adjustment is relatively simple.



**自动诊断: Automatic Diagnosis**

所有电子零件, 如各轴马达、编码器、驱动卡等发生故障时, 软件将立刻提示其状态, 协助操作人员迅速判读并快速排除故障。

In case any electronic parts such as shaftmotor, encoder, drive card, etc., broken-down, the software will indicate out, and assist operators to quickly interpret and troubleshoot faults.



**调机操作方便: Easy Operatation**

调机比较简单; 旋转电柜, 配合手轮, 一人即可很方便地设定参数及更换磨轮;

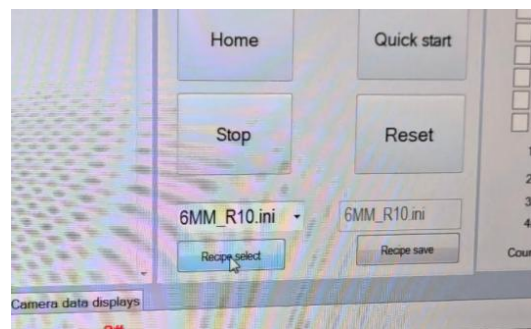
Easy machine operation; Rotating electric cabinet can easily set the parameters and replace the grinding wheel by one person by using the handwheel;



**参数记录: Parameter Record**

不同厚度的磨轮参数可保存和调用, 节省切换厚度时要多次调机的时间;

The grinding wheel parameters of different thicknesses can be saved and recalled, saving the time of multiple adjustments when switching thicknesses;



## 型号规格 Technical Specification

型号 Model	CG44-1-2515
主轴数量 Spindle Qty	四头四工位/ 4 Spindles 4 Stations
加工尺寸 Workable size (mm)	Max: 2500*1500 Min: 250*550
玻璃厚度 Glass Thickness	3-19mm
倒角范围 Radius	R1-R30mm/C1-C10 选配 Option: ≤R60/ ≤R150
定位方式 Positioning	CCD Camera
加工精度 Accuracy	±0.05mm
传输方式 Transfer Mode	皮带传输 Conveyor
皮带宽度 Belts Width	5CM
装机功率 Install Power	25KW
刀柄主轴(选项) Cones Spindle BT30(Option)	不包含 Not Including
设备重量 Machine Weight	5500Kg
外形尺寸 Overwhole Dimension(mm)	5300*4700*2150mm
电压 Power Supply	380V-415V(+/-10%)/50HZ/60HZ
用水量 Water	1m <sup>3</sup> /H
压缩空气 Compressed Air	1m <sup>3</sup> /Min / 6 Bar-Max 7Bar
环境 (温度/湿度) Environment(Temperature/Humidity)	+5°C to +45°C, Maximum 80% non Condensing

## 主要零部件品牌 Vendor List

No.	物料名称	Description	品牌	BRAND
1	伺服电机	Servo Motor	台达	DELTA
2	伺服驱动器	Servo Driver	台达	DELTA
3	变频器	Inveter	尼德科	NIDEC
4	直线导轨	Linear guide	上银/CSK	HIWIN/CSK
5	丝杆	Screw	上银/PMI	HIWIN/PMI
6	加工主轴	Spindle	山夏	FLEXTECH
7	交流接触器	AC contactor	西门子	SIEMENS
8	中间继电器	Middle relay	欧姆龙	OMRON
9	工控机	Industry PC	研为	YANWEI
10	主令开关	Master Switch	明纬	MINGWEI
11	限位开关	Limit Switch	奥托尼克斯	AUTONICS
12	保险丝和保险丝座	Fuse & Fuse Holder	凯昆	KACON
13	气缸	Air Cylinder	亚德客	AIRTAC
14	气源处理件	Filter-Reduction Unit	亚德客	AIRTAC
15	终端接线板	Cable Terminal	霍尼韦尔	Honeywell
16	工业镜头	Industry CCTV	海康	HIKVISION
17	摄像控制	Camera control	海康	HIKVISION
18	可编程逻辑控制器	PLC	台达	DELTA
19	控制卡	Control Card	雷赛	Leadshine
20	控制系统	Control system	PC+NC 山夏	PC+NC Flextech

## 配件清单 Spare Parts List

No.	备件名称 Object/Part No	数量 Qty
1	随机工具箱 Random Tools Box	1
2	说明书及电路图 Specification and Circuit Diagram	1
3	金刚轮/直边 8MM,100目+180目,直径150mm,各四个; 抛光轮 25mm,直径150mm,8个 Diamond wheel,Pencil edge, 8mm, 100mesh+180mesh,diameter 150mm Each 4 sets; Polishing Wheel 25mm,diameter150mm,4 sets	1
4	欧姆龙微动开关 Omron micro switch D5B-1513	1
5	接近开关 Proximity switch 820	1
6	接近开关 Proximity switch 821	1
7	前后皮带各一条 (Front and Back transfer belts, each one set)	1
8	光源 Light Source	1
9	内六角扳手 Hexagon socket wrench 1.5---10MM	1
10	开口扳手 Open end wrench 36--41mm	1
11	开口扳手 Open end wrench 24--27mm	1
12	一字批 One-word batch 3*75	1
13	十字批 Cross batch 3*75	1
14	一字批 One-word batch 6*125MM	1
15	十字批 Cross batch 6*125MM	1
16	垫片 Gaskets CH.93	12
17	压块 Press Block 304-D5-H12	6
18	螺丝 Screw M10*30 反牙	8
19	螺丝 Screw M10*30 正牙	8