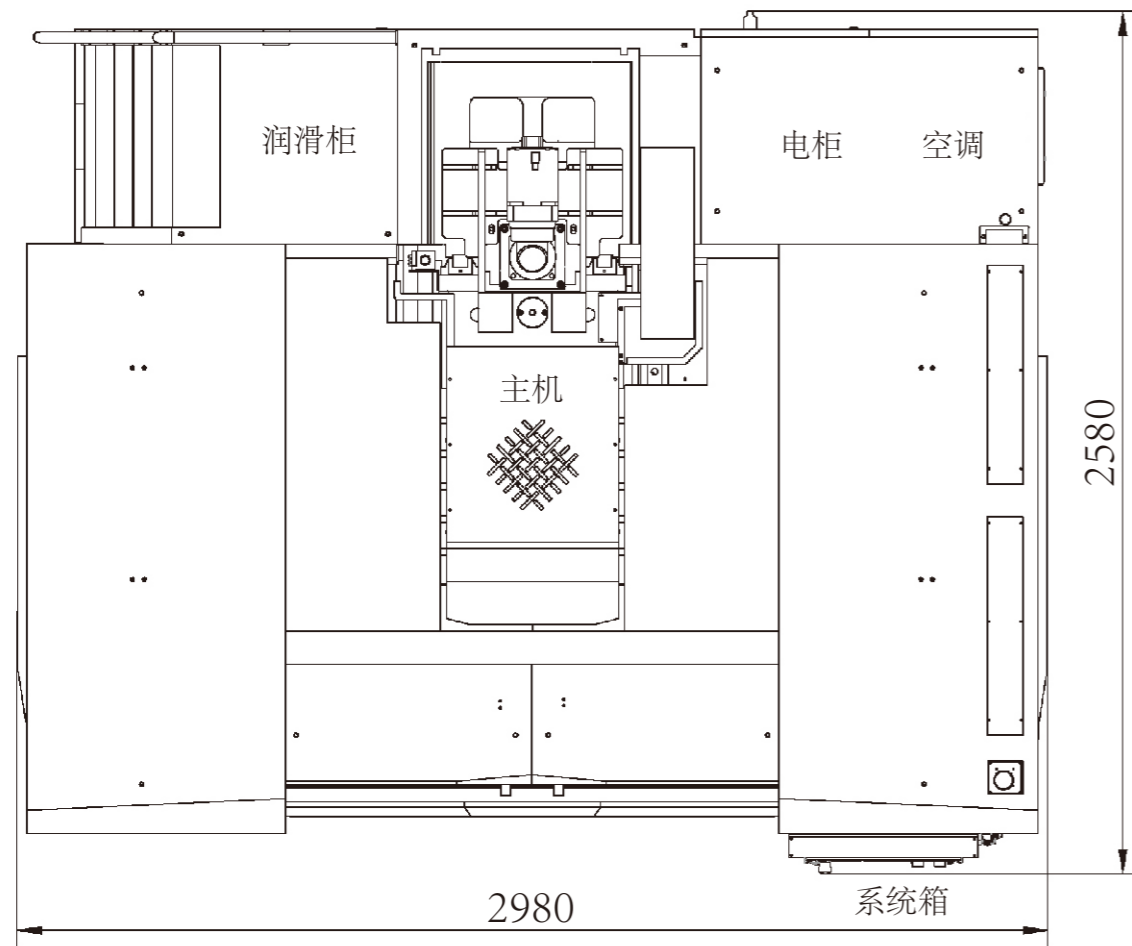


高速台式1260型搅拌摩擦焊设备平面布局图

Layout Plan Of 1260 Style Friction Stir Welding Machine



高速台式1260型搅拌摩擦焊接机床

High-speed T-style Of 1260 FSW Machine



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with technical development, the explanation, diagram and specifications are subject to change without further notice. actual machine dimensions should be taken as authentic.

北京世佳博科技集团有限公司

Beijing Sooncable Technology Group Co., Ltd

电话: +86-10-83293231

网址: www.sooncable.com

邮箱: sales@sooncable.com

北京: 北京市丰台区丰科路6号院3号楼11层

河北: 河北省廊坊市固安工业园南区兴旺东街

江苏: 江苏省昆山市陆家镇杨家路78号C幢1层

重庆: 重庆北碚区联东U谷国际企业港D8幢

广东: 广东省东莞企石镇兆丰路9号3号楼1层



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高速台式 1260 型搅拌摩擦焊接机床

秉承“做品牌，用好料”的焊接机床制造初衷，为客户提供高精度、高寿命、高可靠性的搅拌摩擦焊接机床。高度台式1260型搅拌摩擦焊接机床

基于世佳博“精密搅拌摩擦焊接机床”理念研发的高端焊接机型。机床设有5轴，具备五轴四联动运动属性，可实现任意平面二维曲线搅拌摩擦焊接功能。设备 配 备 2T/3T载 荷 及6,000/4,000RPM焊接机头，可实现铝合

金单面6/8/10mm焊接。设备具备X轴12,000mm/min快速移动速度，同时，配备基于西门子828D并经世佳博二次开发的搅拌摩擦焊接专用控制

系统，具有超高的控制可靠性和丰富的扩展功能。

主要特点

- 机床为立式结构,焊接机头在立柱上沿 Z 轴上下移动,工作台在底座上沿 X/Y方向移动,B/C轴集成在焊接机头(B轴绕Y轴方向移动, C轴绕Z轴转动);

- 机床整体结构经过有限元分析优化,依照机床行业规范及制造标准并结合搅拌摩擦焊接工艺特点,进行搅拌摩擦焊机机床独特设计及制造。设备主体结构均为高强度优质铸造件,经多次热处理和时效处理,具有超高的刚性、稳定性和良好的抗震性能;

- 机床为5轴数控,可实现“五轴四联动”焊接功能;各运动轴均由西门子原装进口独立交流伺服电机驱动,可实现高运行稳定性;

- 配备2T/3T载荷6,000/4,000RPM主轴可实现一键启动及直线焊缝最快3m/min 电机机壳/驱动壳体1.2m/min;

- 实行“交钥匙”工程服务。在机床交付的同时,提供目标产品全套工艺资料,确保机床交付与产品生产无缝对接;

- 机床拥有功能强大的可选及升级配置,轻松提升焊接机床用性能并最大化投入产出比;可实现无人化及数字化智能焊接加工；

- 机床外防护采用全新工业设计理念,在满足工业安全要求的前提下,以“变形金刚”为设计原型,结合现代工业人机能学特征,展现出蓬勃原动力。

关键件配置

名称	品牌	品牌属地
● 铸造精密床身	● 世佳博	● 加工中心精度
● 主轴电机	● 西门子	● 高端西门子配置
● 四轴伺服电机	● 西门子	● 高端西门子配置
● 焊接主轴	● 世佳博	● 台湾定制
● 减速机	● 精 锐	● 台湾
● C3级滚珠丝杠	● THK	● 日本
● P级滚柱导轨	● THK	● 日本
● 电气	● 施耐德	● 法国

High-speed T-Style of 1260 FSW Machine

Beijing Sooncable Technology Development Com.,Ltd (Sooncable) make up our mind to manufacture high precision, high reliable and high cost performance FSW machine for our clients. High-speed T Style of FSW Machine is an advanced one designed on the idea of Sooncable making precise FSW Machine. It has 5-axis and can achieve 4 axes simultaneously controlled for constanttangential velocityduring 2-D welding process with stepless speed regulation. High-speed Gantry-Style of 1260 FSW Machine is equipped with2T (6,000RPM)/3T (4,000RPM) welding spindle and possesses the capacity of Al-alloy for one side within 6/8/10mm. The rapid moving speed of X Axis is up to 12,000mm/min, Besides, customized development on Siemens 828D based on the FSW process is done by Sooncable for more reliable running and plenty of FSW operation.

Main Features

- The FSW Machine is vertical structure, its welding head moves up and down Z direction on the column, the worktable moves along X/Y direction on the base, and the B/ C axis is integrated in the welding head(the B axismoves around Y axis, the C axis rotates around Z axis).

- The overall structure of the machine is optimized by finite element analysis. Main parts of the machine are iron castings with very high strength caused by several tempering and aging treatments. The whole machine is rigid and stable enough with superior performances on anti-interference, anti-shock and damping capacity. The precision of the FSW machine is as high as that of numerical control machine.

- The FSW Machine has 5-axis and can achieve 4 axes coordinated welding control. Each motion axis is driven by an Siemens AC Servo Motor for nice stability of continuous long term running.

- Equipped with 2T/3T(6,000/4,000RPM)welding spindle accurate constant pressure control system realize one key start linear weld 3m min and the motor casing drive casing 1.2m/min.

- Technical trainings and welding trials based on FSW process is also served as key part of “Turn-key” project along with the machine delivery.

- Great optional configurationrealizing automatically welding, thus increasing annual work efficiency.

- The machine reflects the design concept of Transformers, combining the characteristics of ergonomics in modernindustry, also the development trend of manufacturing industrial, i.e. environment-friendly automatic, flexible, high efficient and function composite.

Key Attachments

Description	Outsourcing component
● Lathe bed	● Customized, China
● Main axis motor	● Siemens, Germany
● Servo motor	● Siemens, Germany
● Main axle	● Customized, Taiwan
● Reducers	● Apex, Taiwan
● Ball screws	● THK
● Roller guide rail	● THK
● Electric control	● Schneider, France

主要技术参数

项 目	Description	Unit	SCB-TS1260-2D-2T/3T	
床身材质	Bed material	/	HT300	
机床结构	Machine tool structure	/	两线一硬（Z轴硬轨）	
工作台尺寸	Work-piece size	mm	1,200×600	
各轴最大行程	Each axial travel	mm	1,100×600×600	
Z向焊接空间	Max. welding space	mm	600	
主轴顶锻力	Max. Z-axis down forth	T	2	3
最大铝合金焊接厚度	Max. welding thickness	mm	8	8/10
最大铜合金焊接厚度	Max. welding thickness	mm	/	3
焊接主轴最高转速	Max. spindle speed	r/min	4,000/6,000	4,000
X/Y/Z轴快移速度	X axial Y axial Z axial	mm/min	12,000 / 12,000 /4,000	
X/Y/Z轴定位精度	X axial Y axial Z axial	mm/300mm	0.008 / 0.008 / 0.008	
X/Y/Z重复定位精度	X axial Y axial Z axial	mm	0.01	
T型槽工作尺寸	T-groove specification	mm	18×5×100	
搅拌头夹持柄直径	Holder diameter of Tool	mm	20	
刀柄规格	Handle specificationsT	—	BT50	
数控系统	Control System	—	828D	
主轴倾角	Spindle inclination	°	±5	
C轴行程(选配)	C axis travel	°	N×360	
机床主电机功率	Main motor power	kw	12	12/22
机床电力总负荷	Total power	kw	30	30/42
机床尺寸	Machine size	mm	2,980×2,580×3,400	
机床重量	Total weight	kg	8,600	

标准配置及功能

功能

- 电控系统空调系统
- 搅拌头寿命监控系统
- 焊接过程参数记录系统
- 安全门锁装置
- 断针检测系统

可选配置及功能

功能

- 自动门
- 点触式对刀
- DNC管理系统
- 急速气冷系统
- 二维码扫描系统
- 恒压力控制系统
- 焊接机头自适应平衡系统

功能描述

- 电控系统恒温恒湿
- 拌头寿命实时监测
- 焊接过程参数记录及调取
- 操作门与设备联动
- 焊前判定搅拌针是否断裂

功能描述

- 自动开启及关闭操作门
- 实现一键对刀功能
- 焊接数据DNC并网及智能控制
- 5分钟内气雾温度可达3°
- 生成数据库文件并存储
- 焊接过程恒压力控制
- 焊接匙孔消除

Main Specifications

Optional Attachments

Function

- Air Condition for ECC
- Life Monitoring System
- Parameters Recording System
- Safety door lock device
- Broken needle detection

Optional Attachments

Function

- Automatic-door
- Point contact tool setting
- DNC function System
- Rapid air cooling Device
- QR code scanning system
- Constant Force Control system
- Spindle Responsive System

Description

- Temperature controlling of ECC
- Monitoring lifetime of FSW tool
- Recording & copying manually
- Door and equipment linkage
- Fracture judgment of tool needle

Description

- Door opens and closes automatically
- Press the key to complete tool setting
- Monitoring, controlling on line
- Mist TEMP can reach 3 ° in 5mins
- Generate and store database files
- Constant down force output
- Eliminate FSW keyhole