

# 非标焊接机非接触热板机热熔焊接机

产品名称	非标焊接机非接触热板机热熔焊接机
公司名称	台州市黄岩力荣自动化设备有限公司
价格	.00/台
规格参数	型号:LR-800 品牌:力荣 动力形式:超声波
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## 产品详情

型号	LR-800	品牌	力荣
动力形式	超声波	控制方式	数控
频段	中频	驱动形式	气动
作用原理	脉冲	升降控制	电动
焊接原理	对焊	作用对象	塑料
电流	直流	重量	1000 ( kg )
产品别名	热熔机		

### 热板焊接机使用说明

hot-plate welding machine instructions

### 目录table of contents

- 一：机器用途及主要技术参数applications & main technical parameters
- 二：机器机构machine construction
- 三：机器安装与接线machine installation & connection
- 四：机器操作与调整machine operation & adjustment
- 五：机器维护与保养machine maintenance & service
- 六：机器的故障排除machine troubleshooting

## 七：电气图electrical diagram

### 一：机器用途及主要技术参数applications & main technical parameters

用途：applications：

主要运用于热可塑性塑料的融化与粘结（热封），：汽车车灯的面罩与灯体的焊接。

mainly apply to the melt and bond (heat seal) of the thermoplastic material, eg:the welding of the auto lamp housing and body.

主要技术参数：main technical parameters：

电源：ac380v/50hzpower：ac380v/50hz工作气压：0.6—0.7mpaworking air pressure：0.6—0.7mpa机器外形尺寸：1720\*1260\*2100（除气缸外）

machine outside measurements:1720\*1260\*2100(not include theair cylinder)

加热控制：采用温控仪控制，热电偶测温，闭环控制，控制精度高。（分6组加温，，上模1和下模为主要加温。其他上模2-3和下模2-3为辅助加温，主要用途模具异形温度不准进行补充使用）

heating control：operated by the temperature controller, measure the temperature

by the thermocouple, closed-loop control, with high control accuracy.(divide into 6

groups to heating: upper mold 1 and lower mold are primary heating,other upper

mold 2-3 and lower mold 2-3 are secondary heating.consider as the supplemental

application when the mold abnormal and the temperature is inaccurate.

电气系统控制：plc+触摸屏

electric control system：plc+ touch screen

热模缓冲：采用双气缸，液压减速使热模退位更加平稳（缓冲阻力可根据模具重量调节）（专利审批中）

hot-mold buffer: adopt the double cylinders,hydraulicdeceleration make the

hot-mold exit more steady ( buffer resistance can be adjusted according to the mold weight)(under the patent examination)

上吸气：采用吸气泵，产生负压，并自动检测压力大小启动电动机（要选择真空泵开启）使用过程中需用脚踏开关打开。每次如此（此方法可以保持真空吸力）方可控制面罩变形提高产品合格率。

upper air inspired: generate the subatmospheric pressure by the getter

pump, automatically detecting the pressure and opening the electric

motor (should choose the vacuum air pump on), keep the foot (pedal) switch

on in using. should repeat the operations every time (in order to keep the pull

of vacuum) to avoid the lamp cover deformation and increase the pass rate.

时间设定. 上下模具热熔时间均可延时设定（跟具产品设定）（0——99秒）热熔-固化设定时间（0——99秒）

time fixed: could set the hot melting time (0-99 s) - curing (0-99 s) for upper

mold and lower mold (according to the different products)

其他功能可根据产品要求选择使用或不使用

other functions are optional.

行程开关使用方法. the use method of travel switch

行程开关使用电磁式。热模使用3个。（1）.热模气缸尾部{注明，热模原点}在自动运行开关前，此点一定要亮（才可自动运行）如果不亮或自动运行不了，热模已经退到位的情况下。请把{热模原点}移到会亮的状态。（2）.热模中部{注明，退模位置}此行程开关起提前合模的做用。一般方置气缸中部或中部向前50——150mm（具体位置与上下模退模位置来定）（3）.热模前部{注明，热模信号}此行程开关起热模到位，起动上下模具热熔使用。如果热模已经到位上下模不动，请把{热模信号}移到会亮的状态。（4）.上下模行程开关使用方法。上模使用4个点。从上往下第【1】{注明，上模原点}此行程开关，在自动运行开关前，此点一定要亮（才可自动运行）此点不热模不会退位。下模使用4个点。从下往上第【1】{注明。下模原点}上下原点使用功能一致。（5）.从上往下第【2】{注明，热熔退位}此行程开关设定，在自动运行时上模退位到热模能自如退位的位置，不可过低，否则热模会挂到上模模具。此点还起到上模下降减速功能。和下模【2】功能一致。（6）从上往下第【3】{注明，上模热熔}此行程开关设定起热熔机计时。上模具在下降到产品接触到热模高度以上（经过就可以。单一定要高于模具已接触高度否则热熔时间不计时）（7）

the travel switch adopt electromagnetic system. the hot mold uses 3 travel switch. (1) tail of hot mold air cylinder {marked as hot mold initial point}. the point must be on before the automatic operation. if the point not come on or fail to automatic operation, but the hot mold is ready to exit, please move the {hot mold initial point} to on position. (2) the middle of hot mold {marked as mold exit position}, the travel switch acted as the mold clamping switch. generally placed in the middle of the cylinder or forward 50-150 mm from the middle position (the specific position should be up to the exit position of the upper & lower mold). (3) the front of the hot mold {marked as hot mold signal}. this travel switch move the hot mold to its position, and start the hot melting of the upper & lower mold. if the hot mold on its position, but the upper & lower mold don't move, please move the {hot mold signal} to on

position.(4) use method of the upper & lower mold travel switch.the upper mold use 4 points.the no. 【1】 goes from the top to the bottom{marked as upper mold initial point},the point must be on before the automatic operation.the lower mold use 4 points.the no. 【1】 goes from the bottom to the top{marked as lower mold initial point},same function with upper mold initial point.(5)the no. 【2】 .goes from the top to the bottom{marked as hot melting exit}.the travel switch could be set.when automatic operation,the upper mold could travel to the position where the hot mold could freely exit,couldn't be too low,or else the hot mold will hang on the upper mold.this point also could decelerate the upper mold fall down.same function with lower mold 【2】 .(6) the no. 【3】 goes from the top to the bottom{marked as upper mold hot melting}.this travel switch could control the hot melting time.the upper mold fall to the position where the product could touch the hot mold height(pass is ok,but the position shouldn't be higher than the mold,or else the hot melting time can't be counted.

## 二：机器机构machine construction

主要由以下部分主成：机座（床身，上下模座，水平热模板，导轨等）附图1，流量控制（电磁阀，调压阀，压力控制器等），加热控制（温控仪，加热管等），电气控制（plc,触摸屏等）等

the machine consisted of: machine base(lathe body, upper-lower die, horizontal hot-mold plate, guide rail etc.),see figure 1; streamflow control(solenoid valve, pressure regulator valve, pressure controller etc.), heating control(temperature controller, heating pipe etc.), electric control(plc, touch screen etc.) etc.

其中，床身采用铸铁工艺加工，具有结构稳定，变形量小，定位准确等优点；水平热板模采用采用双气缸，液压缓冲，减少床身振动；压力控制器：负压产生时，达到设定值自动停止吸气；plc+触摸屏：结构简单，维护方便等优点。

the lathe body is made from casting iron technology, with advantages such as stable structure, small deflection, and accurate positioning; horizontal hot-mold plate adopt the double-cylinder, hydraulic buffer, to reduce the vibration of the lathe body; pressure controller: automatic stop at the setting value if there has the subatmospheric pressure; plc+touch screen: simple structure, easy maintenance.

## 三：机器安装与接线machine installation & connection

设备安装前，先检查运输途中外表面油漆是否刮伤，设备是否有损伤等，安装过程中，调整设备水平，并加防振垫铁，四角固定。

before the installation, please check whether the surface paint is scratched or not, does the equipment is damaged or not during the transportation.when installing, adjust the equipment, put on the anti-vibration parallel , and fix the four corners.

电源稳定，接地正常及气源压力稳定。

power supply stable , earthing normal, and source pressure stable.

## 四：机器操作与调整machine operation & adjustment

打开系统电源开关和上下热膜加热，设定温控仪的温度为产品工艺要求值；根据模具的高度调节原点位置（原点指示灯亮），上下模缓冲位置，即可进行自动运行。位置的到位信号可以通过手动运行控制。

open the system power supply and heating upper & lower hot mold, set the temperature controller on the basis of the product process requirements; adjust the origin position (origin position led on), upper & lower hot mold position according to the mold height, so operating automatically. signal coverage can be controlled by manual operation.

具体操作：special operations:

点击触摸屏选择手动运行界面：附图2，点击相关的操作来检查信号到位情况；

click the touch screen and choose the manual operation:see figure2,and click the related operation to check the signal coverage.

确认后，选择自动运行界面：附图3，调节相关的工艺：附图4，等到热膜温度到达，就可以进行自动运行。

click the ok, choose automatically operation: see figure 3,adjust the related technologies:see figure 4,when the hot-film temperature ok, it can automatically operate.

设备出现故障，按急停按钮，并检查故障出现原因，再继续运行。

if there has equipment fault, click the emergency stop button, and find the source of trouble, then continue.

注意：不了解设备结构性能和操作，请勿开机。

warning: do not power on if you don't understand the equipment structure and operation!

## 五：机器维护与保养machinemaintenance & service

定期给机器个运动部件导轨加润滑油脂，建议每天检查一次，不足时加油脂。regularly add the lubricant grease on the the guide rail of machinemoving components, suggest checking everyday定期清理气动三大件，油水分离器中的油水，油雾器中补充适量机油，油面不超过最高油位，不低于最低油位。

regularly clean the pneumatic components, clean the grease in the water-oil separator,

supplement some engine oil to the oil fogger. the oil lever should not be above the

highest oil level and also should not be below the lowest oil level.

定期检查个气动管路，接头是否出现破损，泄露或者堵塞情况。regularly check the pneumatic line, make sure there has no breakage, leakage or blockage.定期检查电磁阀，磁性开关是否正常。

regularly check the electromagnetic valve, whether the magnet switch normal or not.

热板焊表面每天必须清理干净，不允许有杂质和塑料焊渣，碳化物等相关物质。

must clean the welding plate surface every day, don't keep impurity and plastic welding slag, carbide from the surface of the welding plate.

注意：warning:

1.发现设备有严重漏气或者不正常运行，请先停机检查，故障处理后再开机。

if the equipment seriously leak the steam or abnormally working, please stop the machine immediately to check and remove the faults, then continue.

2.根据各个公司，内部不同的设备维护，保养管理规定，对设备机械，气动，电气控制系统，定期进行安全维护和保养工作，建议每半个月进行一次。

regularly maintain the mechanical-, pneumatic- and electrical control system, suggest do the maintenance at every two weeks.

3.真空泵不可无油，建议每周不充一次。

the vacuum air pump can't be out of the fuel, suggest fuel up every week.

六：机器的故障排除 machine troubleshooting

机器在运行过程中，有可能出现功能性故障，一般情况下，先切断电源总开关，检查机箱内空气开关是否跳闸。

in case of functional fault during the running, generally, cut off the power, and check whether the air switch tripping or not.

如热熔过程出现故障，可根据屏幕显示及配电柜内plc信号指示灯输入和输出信号是否正常，也可以通过屏幕i/o端口查询：附图5。

in case of fault during the hot-melting, please check the screen display and the plc indicator input-output signal in electric closet is normal or not, also can check the screen i/o port chamfer: see figure 5.

七：电气图 electrical diagram

参见附录6. see the appendix 6.

注意：动作过程出现中断运行，一般都是信号没有到位引起。

warning: there may arise interrupt run during the operating, which generally result from the lacking of the signal coverage.

# 航空插头接线图 (16芯)

aeronautic plug wiring diagram (16 cores)

正	负	正	负	正	负	蓝	红
1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16
正	负	正	负	正	负	蓝	红

正 : positive

负 : negative

蓝 : blue

红 : red