

# 冲床快速换模系统

# 使用说明书



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# 1 快速换模系统简介

多样少量，人工成本慢慢升高，追求品质的稳定，是现在的企业面对的问题。注塑机、压铸机快速换模系统应现代化生产的需要，提供企业解决换模的困扰；降低换模时间；减少换模伤害；降低劳动成本，使企业达成快速产销、使企业适应激烈的市场竞争。目前在冲床、油压机、塑料射出机、压铸机上应用极普遍，确实带给业界宝贵财富，深爱业界好评。快速换模系统渐渐成为设备上必要的标准配件。

## The Quick Die Change System

The Quick Die Change System saves time and boosts efficiency in stamping operations involving small volumes and large ranges of products, high production costs and strong demand for quality. This system reduces the time needed to change dies while minimizing the risk of damage caused to the dies. It helps to ensure processing quality and better competition in today's markets. This system has wide applications in presses, plastic injection machines and aluminum stamping machines and has won wide acclamation for the efficiency it brings to operations, the Quick Die Change System has quickly become an indispensable accessory for factories of all sizes to achieve the high levels of productivity required in today's industry.

# 2 产品功能特性

本公司冲床快速换模系统由移模臂、举模器、夹模器、气动泵组合及油压、电路控制系统组成，提供完整系统解决方案，是快速换模系统专业制造厂，并提供完善售后服务，以使系统充分发挥其应有效益。本公司产品特性如下：

- 可依模座、设备大小，选择需要的夹模器尺寸相配，适用性大；
- 气动多回路控制，提供安全、多种操控模式；
- 气压转油压驱动，节省能源；
- 体积小，安装容易，节省空间。

## Major functions and capabilities

The Quick Die Change System basically consists of die arm, die lifter, die clamp, driven pump. We are specialist in manufacturing in this field and offer total system solutions to die-changing problems. We also fully provide after-sales service to ensure that the system will be used to maximum advantage. The Quick Die Change System offers the following specialties among others:

- User can select the correct size die clamp in accordance with the die set and size of other equipments.
- Pneumatic pump utilizes multiple circuit controls to allow a variety operation.
- Hydraulic drive is used to minimize power consumption.
- This unit is compact in size and very easy to install.

## 3 安全事项

使用电力应依规定之电压。

### Safety

Use only with specified power sources to ensure proper operation.

## 4 手册使用限制

本手册为快速换模系统使用者操作与保养之指引,非为维修与拆装说明之用,系统不能正常运作时若依 P19~20 简易故障排除说明处理后,尚无法恢复正常,请与本公司联络,切勿自行拆卸。

### Restrictions on use of this manual

This manual is designed to aid the operator in how to use and maintain the Quick Die Change System. It is not intended as a guide for repair of the system. If a problem arises with the product, first attempt to resolve the difficulty using the specification in P19~20 command. If this fails to solve the problem, contact our office for advice. Do not attempt to take the system apart for inspection.

## 5 产品图示

快速换模系统元件组成。

### Product Diagrams

Components and assemblies in the Quick Die Change System.

#### 5-1 移模臂

功能：辅助上/下模具。

#### Die Arm

Function: Raise and lower the die.



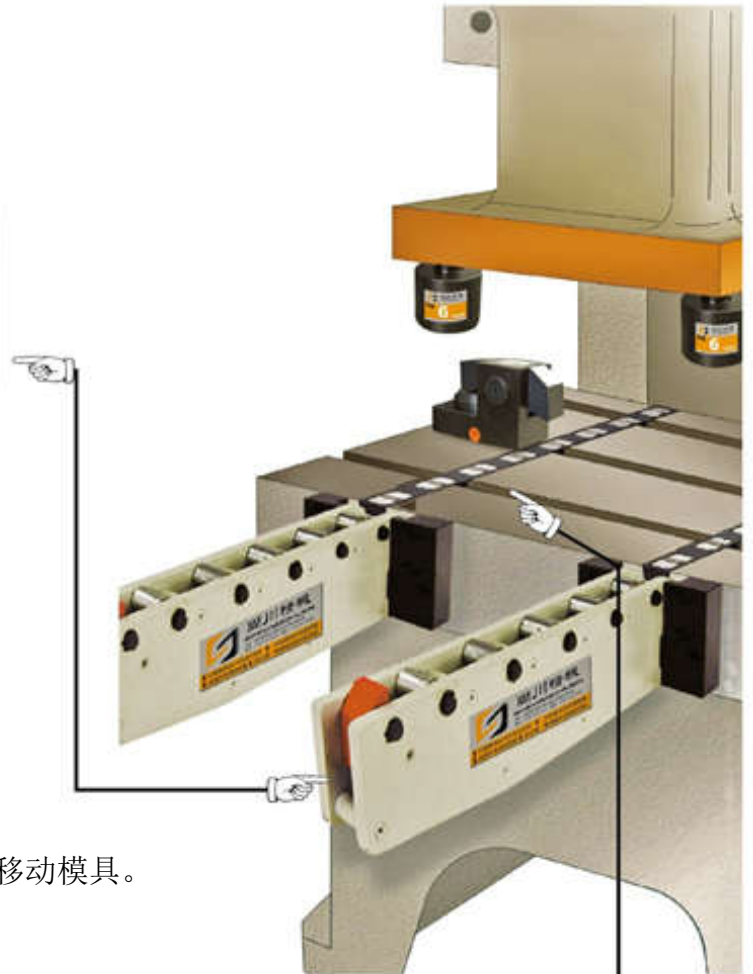
RC 型 Model RC



RD 型 Model RD



RE~RF 型 Model RE~RF



#### 5-2 举模器

功能：上/下模具时，将模具升起，方便移动模具。

#### Lifting Rollers

Function: Raise the die for easy lifting or lowering.



DR/DU 弹簧式 DR/DU Spring-operated type



DL 油压滚轮式 DL Hydraulic type

DB 油压滚珠式 DB Hydraulic type

### 5-3 夹模器 (TX/TY 型)

功能：夹紧模具。

### Die Clamper(Model: TX/TY)

Function: Hold the die securely & firmly in place.



### 5-4 气动泵组合

功能：动力源提供，气压转油压压力。

### Power Unit

Function: Source of Power, pneumatic pressure is converted to hydraulic pressure for controls.



### 5-5 操作箱

功能：快速换模系统控制操作。

### Control Panel

Function: Controls all operations of the Quick Die Change System.





## 6 系统操作流程说明

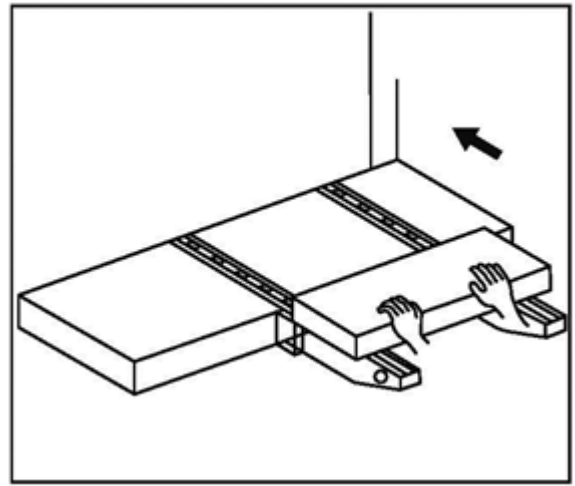
# Procedures for operating the System

### 上模具 Installing the die

● 操作说明 Operation

- 1-1 移模臂定位  
Put die arm in place
- 1-2 模具置放在移模臂  
Place die on die arm
- 1-3 升起举模器  
Raise lifter rollers

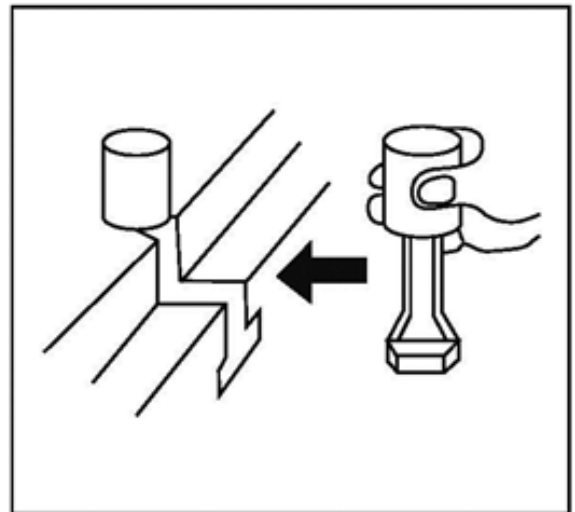
● 图示 Diagram



● 操作说明 Operation

- 2-1 模具推入台盘  
Push die into position
- 2-2 举模器降下  
Lower lifter rollers
- 2-3 移模臂收起  
Retract die arm
- 2-4 靠上夹模器，夹模  
Move the die clamp for clamping the die

● 图示 Diagram



## 6 系统操作流程说明

# Procedures for operating the System

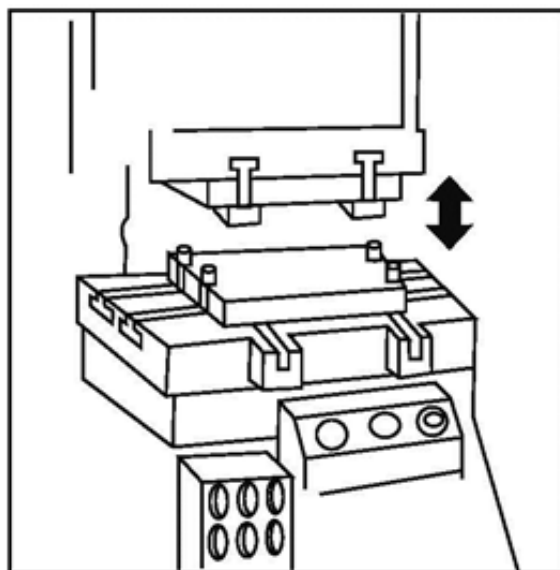
### 作业 Operation

● 操作说明 Operation

● 图示 Diagram

3-1 开始作业

Start operation



● 操作说明 Operation

● 图示 Diagram

4-1 作业结束，等待换新模具

Operation completed, Change die



## 6 系统操作流程说明

# Procedures for operating the System

### 模具卸下 Removing the die

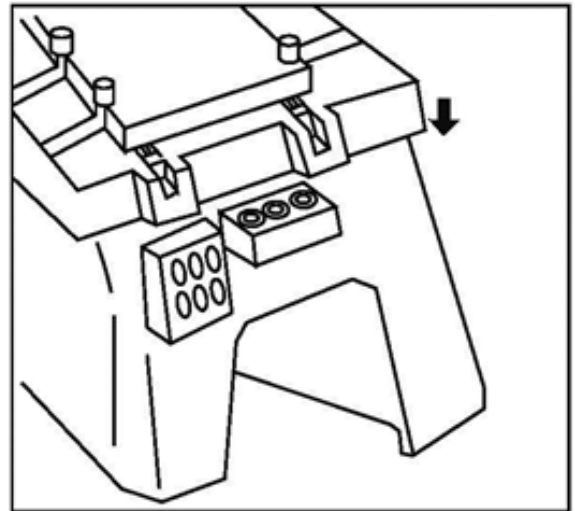
● 操作说明 Operation

5-1 冲床置于下死点

Set the press at bottom

Base setting point

● 图示 Diagram



● 操作说明 Operation

6-1 松开夹模器并移开

Loosen die clamp,

Remove die

(冲床置于上死点)

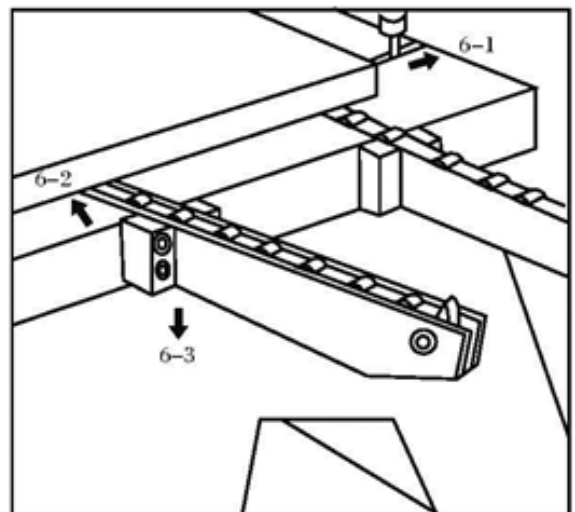
6-2 升起举模器

Raise lifter rollers

6-3 移模臂定位

Moving die arm into position

● 图示 Diagram



## 6 系统操作流程说明

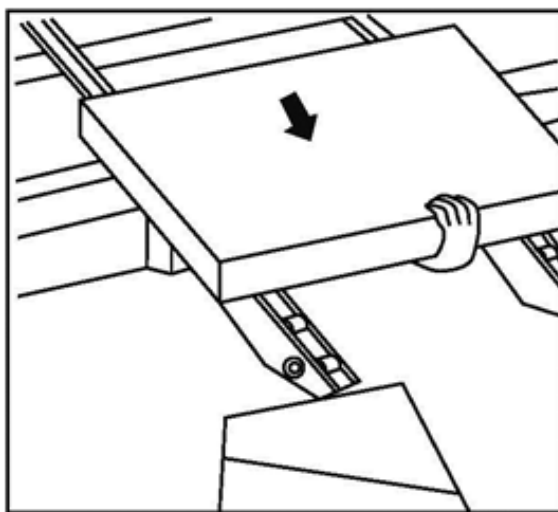
# Procedures for operating the System

### 模具卸下 Removing the die

● 操作说明 Operation

- 7-1 模具推出到移模臂上  
Push die onto die arm backing

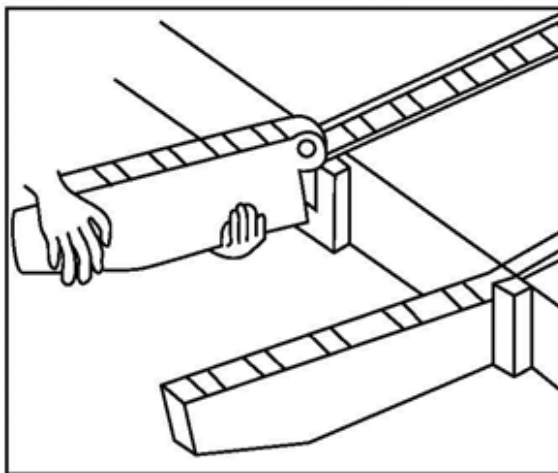
● 图示 Diagram



● 操作说明 Operation

- 8-1 模具移开  
Remove die
- 8-2 举模器降下，移模臂收起  
Lower lifter rollers, remove die arm

● 图示 Diagram



# 7 操作注意事项

## Operator notes

作业说明 Phase of Operation	注意事项 Notes
<p style="text-align: center;"><b>操作前</b></p> <p style="text-align: center;">Before operation</p>	<p>使用本系统夹模器前，请先确认模具上\下底板厚度，是否在本产品可作业安全范围内（太厚无法夹住，太薄则夹不紧）。</p> <p>Before using this system’s clamps,first confirm thatthe upper and lower thickness of the die base are within the safe operating limits for the machine(if it is too thick, the clamp can not be clamped ,if it is too thin the die will not be held tightly).</p>
<p style="text-align: center;"><b>操作时</b></p> <p style="text-align: center;">During operation</p>	<p>1、松开夹模器之前，需先将冲床置于下死点，即 6 点位置（当机台上有夹“模具”时）。</p> <p>Before loosening the clamp,lower the press to bottom base line at the position of six o’clock (when the plate register ‘die’).</p> <p>2、夹模前，请检视所有夹模器是否皆已就位。</p> <p>Before clamping the die ,check to make sure that the die clamp is in the proper position.</p> <p>3、冲床开始作业前，操作箱之“换模确认”开关务必置于“切”的位置（请特别注意）。</p> <p>Before operating the press,the “confirm die change”switch should be at off (Please pay special attention to this point).</p>
<p style="text-align: center;"><b>换模时</b></p> <p style="text-align: center;">During die clamping</p>	<p>1、操作冲床前，请先使夹模器（上\下模）作动，夹紧模具。</p> <p>Before operating the press,check &amp; set the upper and lower clamp to confirm that the die is firmly clamped.</p> <p>2、注意油压力是否足够，有无漏油。（FP6308U-210-250kg/cm<sup>2</sup>）</p> <p>Ensurethat hydraulic pressure is enough and there are no leakage(FP6308U-210-250kg/cm<sup>2</sup>)</p> <p>3、空压来源是否足够。（5kg/cm<sup>2</sup> 以上）</p> <p>Is air pressure sufficient?(At least 5kg/cm<sup>2</sup>)</p>
<p>注意：若长时间（2 小时以上）不使用本系统时，请将上\下模夹模器开关置于夹模位置，以防电磁阀烧毁。</p> <p>Note:when the system is not being used for a period (two hours or longer),the up/down switch of the clamp should be set at ‘clamp’ to prevent overheating of the magnetic valve.</p>	

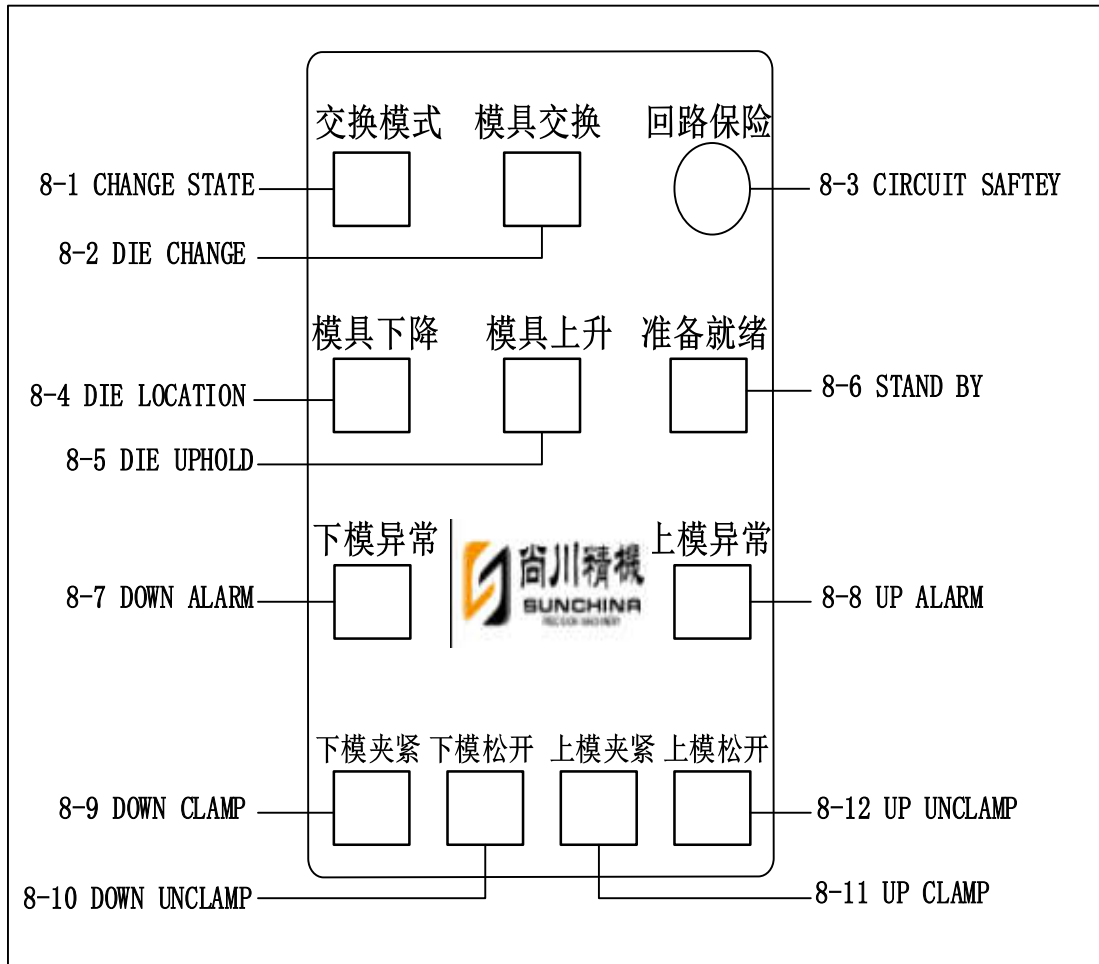
# 8 操作箱控制键说明

## Layout of the control panel

### 8-1 简单式操作控制箱

#### The simple control panel

- 操作控制箱为本快速换模系统状态能显示，与功能操作接口，上半部（8-1~8-6）为显示与自动操作功能，下半部（8-7~8-11）为手动操作功能按键。（电路图及接线图见附录）
- The control panel offers an interface to monitor and control operation of the Quick Die Change System. The upper half of the screen (line 8-1~8-6) displays automatic functions while the lower half (line 8-7~8-11) is used for operator-controlled functions. (Circuit diagram and wiring diagram in Appendix)



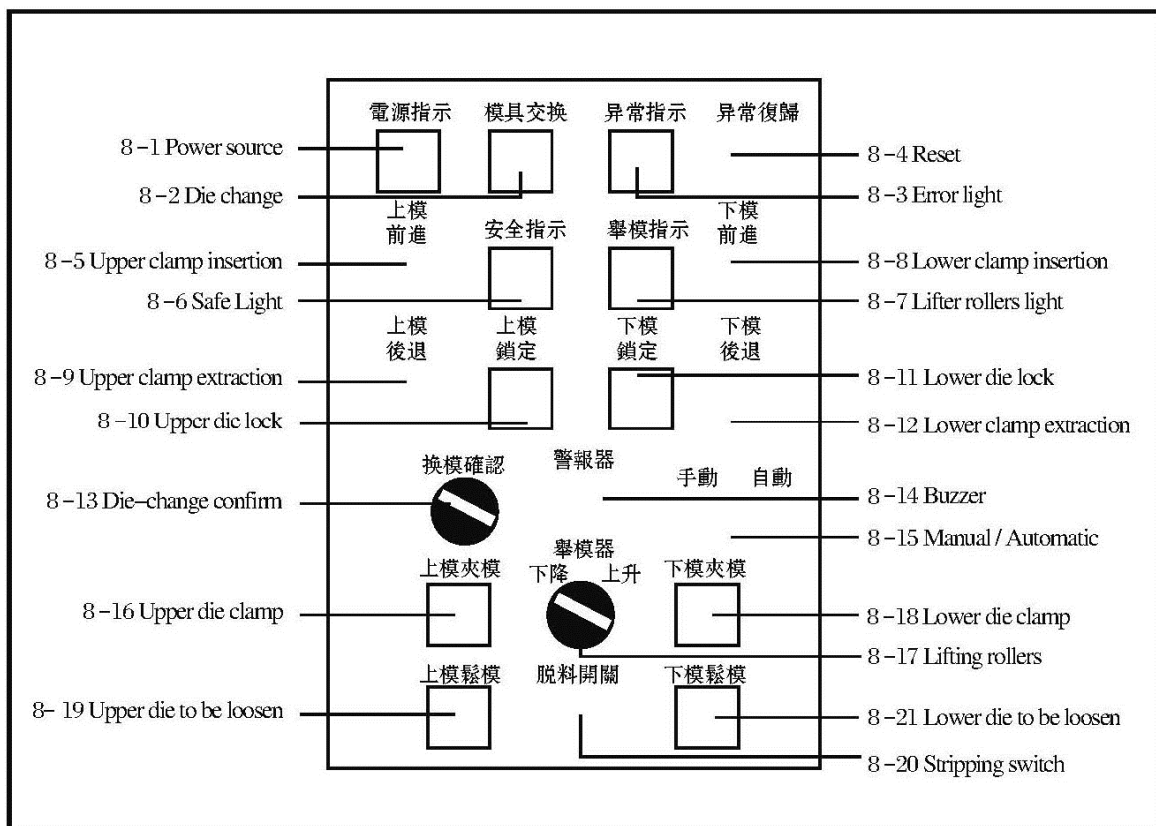
<b>控制键与功能</b> <b>Control button</b>	<b>使用时</b> <b>When used</b>	<b>说明</b> <b>Notes</b>
8-1-1 交换模式 Change state	(自动显示) (Auto function)	交换模确认为”入“时，灯亮，本系统与冲床联机脱离，可进行模具交换作业。 Light comes on when ‘die change confirm’ is at “in”, Light functions independently of press operating system for die changing. 当换模确认为”切“时，灯灭，本系统与冲床联机，无法进行模具交换作业。 When the ‘die change confirm’ is “out”,the die change system is tied to thepress operating system .Die cannot be changed,andlights for fixed and moving die locks will shine.
8-1-2 模具交换 Die change	要交换模具时 When die is to be changed	交换模确认为”入“时，本系统与冲床联机脱离，可进行模具交换作业。 when ‘die change confirm’ is at “in”, functions independently of press operating system for die changing. 当换模确认为”切“时，本系统与冲床联机，无法进行模具交换作业。 When the ‘die change confirm’ is “out”,the die change system is tied to thepress operating system .Die cannot be changed.
8-1-3 回路保险 Circuit safety		对回路进行保护。 To protect the circuit.
8-1-4 模具下降 Die location	交换模具后 After die be changed	按此 KEY，举模器下降，灯亮。 Pressing this key, the lifter rollers will down,and a light goes on.
8-1-5 模具上升 Die uphold	要交换模具时 When die is to be changed	按此 KEY，夹模器夹紧活动模后，灯亮。 Pressing this key, the lifter rollers will rise ,and a light goes on.
8-1-6 准备就绪 Stand by	(自动显示) (Auto function)	非换模状态且夹模器无异常下，灯亮，机床可以正常运行；换模状态下，灯灭，可进行换模操作。 The non - change mode state and the clamping device is not abnormal, and a light goes on., the machine tool can be normal operation; in the mode, the operation of the die can be performed.

控制键与功能 Control button	使用时 When used	说明 Notes
8-1-7 下模异常 Down alarm	(自动显示) (Auto function)	当置换模确认至”切”位置时，下夹模器未保持夹模状态，则异常指示灯亮起，警报器亦会同时响起。 When the ‘die change confirm’ is “out” and lower die clamp is not secure,the Error light will come on and buzzer also sounds.
8-1-8 上模异常 Up alarm	(自动显示) (Auto function)	当置换模确认至”切”位置时，上夹模器未保持夹模状态，则异常指示灯亮起，警报器亦会同时响起。 When the ‘die change confirm’ is “out” and upper die clamp is not secure,the Error light will come on and buzzer also sounds.
8-1-9 下模夹紧 Down clamp	下模定位，要夹紧活动测模具时 When lower clamp is to be clamped tightly When lower clamp is to be lowered	在换模状态下，按此 KEY，夹模器夹紧下模后，灯亮。 In the state of change die, press this key,tightens the lower die ,and a light goes on.
8-1-10 下模松开 Down unclamp	要交换模具时 When die is to be changed	在换模状态下，按此 KEY，下夹模器松开，灯亮。 In the state of change die, press this key, lower die is loosen,and a light goes on.
8-1-11 上模夹紧 Up clamp	上模定位，要夹紧上模时 When upper clamp is to be clamped tightly When upper clamp is to be lowered	在换模状态下，按此 KEY，夹模器夹紧上模后，灯亮。 In the state of change die, press this key,tightens the upper die ,and a light goes on.
8-1-12 上模松开 Up unclamp	要交换模具时 When die is to be changed	在换模状态下，按此 KEY，上夹模器松开，灯亮。 In the state of change die, press this key, upper die is loosen,and a light goes on.

## 8-2 分体式操作控制箱

### The split type control panel

- 操作控制箱为本快速换模系统状态能显示，与功能操作接口，上半部（8-1~8-12）为显示与自动操作功能，下半部（8-13~8-21）为手动操作功能按键。（电路图及接线图见附录）
- The control panel offers an interface to monitor and control operation of the Quick Die Change System. The upper half of the screen (line 8-1~8-12) displays automatic functions while the lower half (line 8-13~8-21) is used for operator-controlled functions.
- “\*” denotes optional accessories. If the accessory has not been installed, the button will not function. (Circuit diagram and wiring diagram in Appendix)





<b>控制键与功能</b> <b>Control button</b>	<b>使用时</b> <b>When used</b>	<b>说明</b> <b>Notes</b>
8-2-1 电源指示 Power source	自动提示 Power available light shines when power on	总电源开关 ON 时，即灯亮（表示系统可运作）。 Light is on ,when button is pushed “on”.
8-2-2 模具交换 Die change	（自动显示） （Auto function）	交换模确认为”入“时，灯亮，本系统与冲床联机脱离，可进行模具交换作业。 Light comes on when ‘die change confirm’ is at “in”, Light functions independently of press operating system for die changing. 当换模确认为”切“时，灯灭，本系统与冲床联机，无法进行模具交换作业。 When the ‘die change confirm’ is “out”, the die change system is tied to the press operating system .Die cannot be changed,and lights for upper and lower die locks will shine.
8-2-3 异常指示 Error light	（自动显示） （Auto function）	当上\下模夹模器任一键未保持夹模状态，即置换模确认至”切”位置时，则异常指示灯亮起，警报器亦会同时响起。 When the ‘die change confirm’ is “out” and either die clamp is not secure,the Error light will come on and buzzer also sounds.
8-2-4 异常复归 Reset	（任何异常） （In case of problems）	排除异常后，压此键复归。 Press this button to reset after correcting the problem.
8-2-5 上模前进 Upper clamp insertion 自动进上夹模器按键 Key for auto insertion of lower clamp	上模定位，要夹紧上模具时 When upper clamp is to be clamped tightly 当上模定位，要降低上模时 When upper clamp is to be lowered	附自动推拉缸的 Q.D.C.S，按此 KEY 则上模夹模器前进。 If Q.D.C.S has an automatic push-pull piston, press thekey toinsert the upper clamp.
8-2-6 安全指示 Safe light 显示是否做冲制作业 Indicates okay to operate press	（自动警报） （Auto function）	当上模夹模与下模夹模 KEY 灯皆亮时，此灯亦亮起，表示可进行正常冲制作业。 When the upper and lower die lock lights are on,the safe light shines to show that the press can be operated.

<b>控制键与功能</b> <b>Control button</b>	<b>使用时</b> <b>When used</b>	<b>说明</b> <b>Notes</b>
8-2-7 举模指示 Lifter rollers light 指示举模器 DOWN/UP 状态 Indicates up or down position of die	(自动显示) (Auto function)	当举模器在 UP 位置, 灯亮。 当举模器在 DOWN 位置, 灯灭。 Light comes on when the lifter rollers is up,and goes off . When the lifter rollers is down.
8-2-8 下模前进 Lower clamp insertion 自动进下模器按键 Key for auto insertion Of lower clamp	下模定位, 要夹紧下模具时 When lower clamp is to be clamped tightly 下模降低时 When lower clamp is to be lowered	附自动推拉缸之 Q.D.C.S, 按此 KEY 则下模夹模器前进。 If Q.D.C.S has an automatic push-pull piston, press thekey toinsert the lower clamp.
8-2-9 上模后退 Upper clamp extraction 自动进下模器按键 Key for auto insertion Of lower clamp	上模具要卸下, 上夹模器要退开时 When upper clamp is to be clamped tightly 上模升高时 When upper clamp is to be raised	附自动推拉缸之 Q.D.C.S, 按此 KEY 则上模夹模器后退。 If Q.D.C.S has an automatic push-pull piston, press thekey toextract the upper clamp.
8-2-10 上模锁定 Upper die lock 锁定上夹模器, 使上夹模器不能运作 Lock upper clamp to make sure upper die will not move	冲制作业进行中安全锁定 Safety lock during Operation of the press	按此 KEY 时, 灯亮, 则下夹模器无法再进行松/夹模动作指令。 Light comes on when this KEY is pressed .Tighten and loosen commands no longer function.
8-2-11 下模锁定 Lower die lock 锁定下夹模器, 使下夹模器不能运作 Lock lower clamp to make sure lower die will not move	冲制作业进行中安全锁定 Safety lock during Operation of the press	按此 KEY 时, 灯亮, 则下夹模器无法再进行松/夹模动作指令。 Light comes on when this KEY is pressed .Tighten and loosen commands no longer function.

<b>控制键与功能</b> <b>Control button</b>	<b>使用时</b> <b>When used</b>	<b>说明</b> <b>Notes</b>
8-2-12 下模后退 Lower clamp extraction 自动进下模器按键 Key for auto insertion of lower clamp	下模具要卸下，下夹模器要退开时 When lower clamp is to be clamped tightly When lower clamp is to be raised.	附自动推拉缸之 Q.D.C.S，按此 KEY 则下模夹模器后退。 If Q.D.C.S has an automatic push-pull piston, press the key to extraction the lower clamp.
8-2-13 换模确认 (切/入) Die-change Confirm(out/in) 换模切换开关 Die-change switch	要交换模具时 When die is to be changed	1 置于“切”时，本系统与冲床联机，除上/下模锁定 KEY 之外，所有按键全部失去功效（表示不能换模）。 When this key is at “out”,the die change system is linked to the press and no keys except the up/down lock key are operable.(The die cannot be changed). 2 置于“切”时，本系统与冲床联机脱离，所有 KEY 皆可操作。（表示可以进行换模作业）。 When this key is at ‘in’,the die change system is cut off from the press and keys can be operated.(The die can be changed).
8-2-14 警报器 Buzzer 异常警示声 Indicates improper Operation or status	(自动显示) (Auto function)	当异常指示灯亮时，警报器即响起，异常指示灯灭时，警报器自动停止警报响。 When the error light comes on ,the buzzer sounds;When the light goes out ,the buzzer will stop.
8-2-15 手动/自动 Manual/automatic		附有自动推拉缸之 Q.D.C.S 置于 KEY 于手动时，上/下夹模器前进，后退与松紧夹模皆分开动作。置于自动位置时，按上或下夹模 KEY，则上/下夹模自动前进至定位，开始夹模。按上/下模式松模，则夹模器自动松模后，退回至定位。 Q.D.C.S has an automatic push-pull piston.When the key is at manual,the upper and lower dies can be inserted or extracted and the die is loosen as separate operations.When the key is at automatic and the upper or lower die clamp key is pressed ,the corresponding die will be inserted to its proper position and clamping will begin.When the upper or lower die loosen key is pressed,the die clamp will automatically loosen and return to its position.

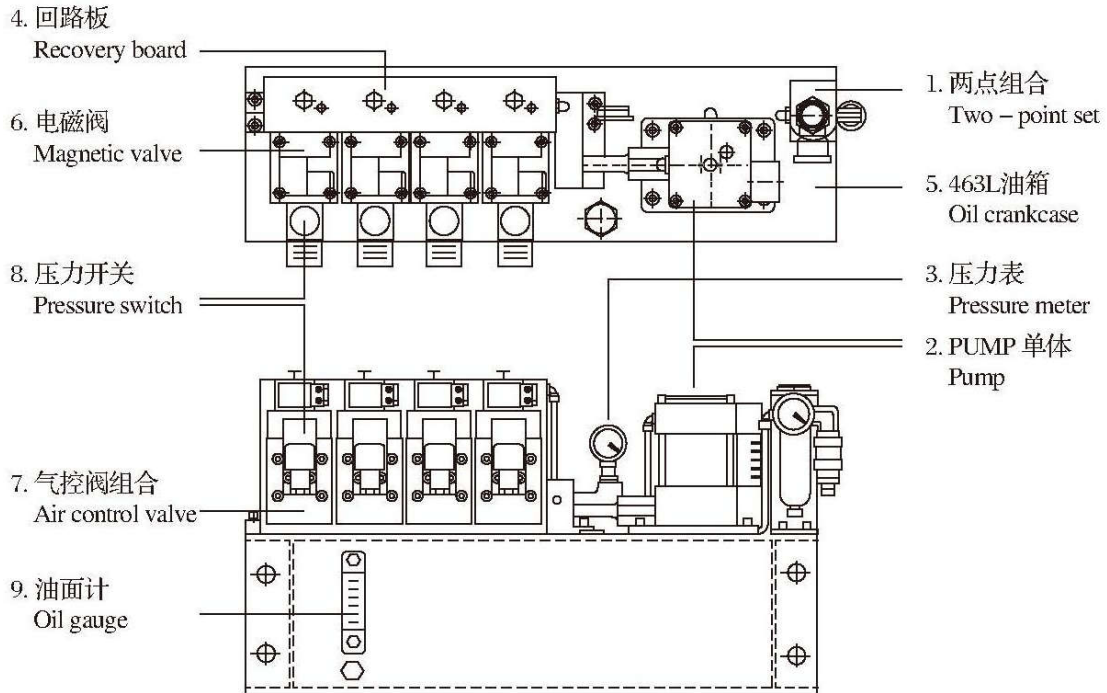
<b>控制键与功能</b> <b>Control button</b>	<b>使用时</b> <b>When used</b>	<b>说明</b> <b>Notes</b>
8-2-16 上模夹模 Upper die clamp 控制上夹模器夹紧模 具 Controls clamping of the upper die	上模具定位后,要夹紧 时 To tighten upper die after it is in position	按此 KEY, 夹模器夹紧上模后, 灯亮。 Pressing this key,tightens the upper die ,and a light goes on.
8-2-17 举模器 (下降-上升) Lifting rollers (DOWN/UP) 切换开关 Down-up switch for lifter rollers	要移出或移入模具时 When die is to be extracted/inserted	当举模器 KEY 被置于 UP 位置时, 则此灯亮起, 举模 器升起 (可方便移入或移出模具)。 When the lifter rollers key is in the up position and the light is on,the lifter rollers will rise.
8-2-18 下模夹模 Lower die clamp 控制上夹模器夹紧模 具 Controls clamping of the lower die	下模具定位后,要夹紧 时 To tighten lower die after it is in position	按此 KEY, 夹模器夹紧上模后, 灯亮。 Pressing this key to tightens the lower die ,and light goes on.
8-2-19 上模松模 Upper die to be loosen 控制上夹模器松开模 具 Control of loosening upper die	要交换模具时 When upper die to be changed	按此 KEY, 上模夹模器松开后, 灯亮。 When key is pressed,upper die is loosen and light goes on.
8-2-20 脱料开关 Stripping switch	ON-OFF	此开关用于印刷电路板油压冲孔脱料系统 ON-OFF 用。 This switch is used for the power source on circuit boards and material extractors in hydraulic drills.
8-2-21 下模松模 Lower die to be loosen 控制下夹模器松开模 具 Control of loosening lower die	要交换模具时 When upper die to be changed	按此 KEY, 下模夹模器松开后, 灯亮。 When key is pressed ,lower die is loosen and light goes on.

# 9 日常点检部位说明

## Regular inspection

请与作业前先点检指定部位，可确保系统的正常运作。

Always check the indicator panel for any irregular before operating the system.



点检部位与图示 Assembly	点检项目 Required inspection
1. 两点组合 Two-point set	1. 滑动开关是否已开 If the sliding switch is pushed "on" 2. 空压表压力是否足够，若不足可有调压阀调整之 Is air pressure sufficient? If not, and just pressure using the regulator 3. 自动排水是否正常，内部有无囤积过多水分 Is automatic water system functioning normally, and is there too much water 4. 软管部分有无破裂，折死 Check for punctures or leakage in air hoses
2. PUMP 单体 Pump	1. 有无补压（打不停）现象 Dose pump run continuously without shutting off 2. 软管部分有无破裂，折死 Check for punctures or leakage in air hoses.
3. 压力表 Pressure meter	1. 是否太低或太高，高低可有二点组合之调压阀调整之 Is the pressure too high or too low? Level can be adjusted by the two-point set

## 9 日常点检部位说明

### Regular inspection

点检部位与图示 Assembly	点检项目 Required inspection
4.回路板 Recovery board	1.内部若有空气时，需将空气排出 If there is any inside,it can be released by opening the air valve
5.油箱 Oil crankcase	1.请保持外表清洁，适时擦拭之 Wipe the external occasionally to keep it clean
6.电磁阀 Magnetic valve	1.接头有无松动，电线有无破皮情形 Check for loose connections or wires turn off
7.气控阀 Air control switch	1.有无漏油现象，螺丝有无松动 Check for oil leakage and ensure all bolts are tight heck
8.压力开关 Pressure switch	1.接头有无松动 Check for loose connections 2.有无漏油现象 Check for oil leakage 3.电线部分有无破皮现象 Check for loose or bare wiring
9.油面镜 Oil gauge	1.油量保持在上/下限（H/L）之间，勿低于下限 Keep the oil level within the indicated high and low limits 2.请适时添加中国石油 VG32-68 或同等级油料 Add R-32 or equivalent fluid as needed
10.夹模器 Clamp(TX/TY)	1.高压软管与接头部分是否接合密封，有无漏油 Are high pressure hoses and connections joint tightly?Any oil leakage? 2.夹模器有无漏油 Check for oil leakage in the die clamp assembly 3.夹模器是否已作动 Check if the clamp motivated

11. 举模器 Lifting rollers	1. 高压软管与接头部分是否接合密封，有无漏油 Are high pressure hoses and connections joint tightly? Any oil leakage? 2. 举模器有无漏油 Check for oil leakage in the die clamp assembly 3. 滚轮是否可正常转动 Dose roller wheel turn freely? 4. 举模器是否已升起 Do lifter rollers rise up?
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## 10 系统保养说明

### Routine maintenance

保养部位 Part serviced	保养周期 Frequency	保养方法 Method used	保养工具 Tools used	备注 Notes
二点组合 Two-point Assembly	1 周 weekly	目视内部有无囤积过多水分 Check if there is excess moisture inside visually.	关掉滑动开关，旋开承水杯下方之排水钮排水 Open sliding switch, turn on the valve at bottom of collector to drain water	
泵浦单体 Pump	1 周 weekly	听看看有无打不停现象 Listen to check if the pump operating continuously.	依简易故障排除 (Q3) 处理 Follow "Q3" in trouble shooting guide	
泵浦及油箱外表 Pump and oil Pan covers	1 周 weekly	擦拭、保持清洁 Wipe to keep clean	用纸或布擦拭 Clean with cloth or paper towel	
电磁阀 Magnetic cap	1 个月 Monthly	接头有无松动，锁紧 Ensure tight closure, adjust if needed	十字起子 Phillips screwdriver	
压力开关 Pressure switch	1 个月 Monthly	接头有无松动，锁紧 Ensure tight closure, adjust if needed	十字起子 Phillips screwdriver	
夹模器 (TY/TX) Mold Clamp (TY/TX)	1 个月 Monthly	高压软管与接头部分有无漏油，锁紧或更换软管 Check for oil leakages in high-pressure hose and connector. Tighten connector or replace hose if needed.	M14 开口扳手 M14 open wrench	接头紧锁力量不宜过大，轻微加压即可 Please don't over strengthen when tighten, a little pressure is .



油面计 Oil gauge	1 个月 Monthly	保持在 H/L 上下限之间，不足时添加 Keep oil level between H and L marked on windows by adding oil as needed.	VG-32-68 润滑油及漏斗 VG-32-68 oil and funnel	
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## 11 简易故障排除

### Troubleshooting

Q1.操作箱无讯号？

No display in the control panel?

答：检视总电源是否在 ON 位置。

Ensure that power switch is in the “on” position.

Q2.操作箱讯号正常，但无法操作？

Control panel display is normal but system can not operate?

答：请检查二点组合中之滑动开关是否已开。

Ensure that the sliding switch between the two-point set is on.

Q3.泵浦打不停（没有漏油时）

Pump runs continuously?(and no signs of leaking fluid)

答：检视油面计中油量是否太低，若是油量正常则旋松空气排泄螺钉

排出内之空气后，紧锁之。

Check fluid level indicator to see if fluid is too low.If level is normal,turn the release valve to let out some of the air in the pressure line.

Q4.夹模器无法夹紧模具？

Clamp dose not hold die firmly?

答：请检查模具底板厚度是否在夹模器可作业尺寸范围内（有可能是底板厚度太薄）

Ensure that the thickness of the die base is within the specifications for the clamp.(Die base may be too thin)

若是以上方法皆无法排除故障时，请先通知本公司前往处理。

If the above actions do not take care of any problem with the system, call our offices for further assistance.

## 11 简易故障排除

### Troubleshooting

Q5. 上夹模器正常，下夹模器无法动作？

Clamp does not hold die firmly

答：先关掉举模器开关（off），则下模器可恢复正常。

Turn off die lifter, and then lower die clamp will return to normal operation.

Q6. 举模器无法升起时？

Die lifter does not rise

答：请先松开下模夹模器（下模松模 key），则举模器恢复正常。

Loosen lower die clamp, and then die lifter will return to normal operation

Q7. 空气压力不足，油压力量太低？

Air pressure is insufficient and hydraulic pressure too low?

答：请先检查贵厂空压机有启动，空压有无输送，送达。若一切正常

则检查二点组合上方之调压阀调节之。

（调节前请先检查 PU 管有无破裂漏风或折死现象）。

Check to see if the air compressor is turned on and air lines are free and clear. If there are no problem with the air supply, inspect the air pressure regulator on top of the two-point set and adjust the pressure as needed. (Check to see if PU hose has any puncture or leakage before adjusted.)

若是以上方法皆无法排除故障时，请先通知本公司前往处理。

If the above actions do not take care of any problem with the system, call our offices for further assistance.

## 12 附录

### Appendix

#### 12-1 简单式操作控制箱电路图与接线图

#### The circuit diagram and wiring diagram of the simple control panel

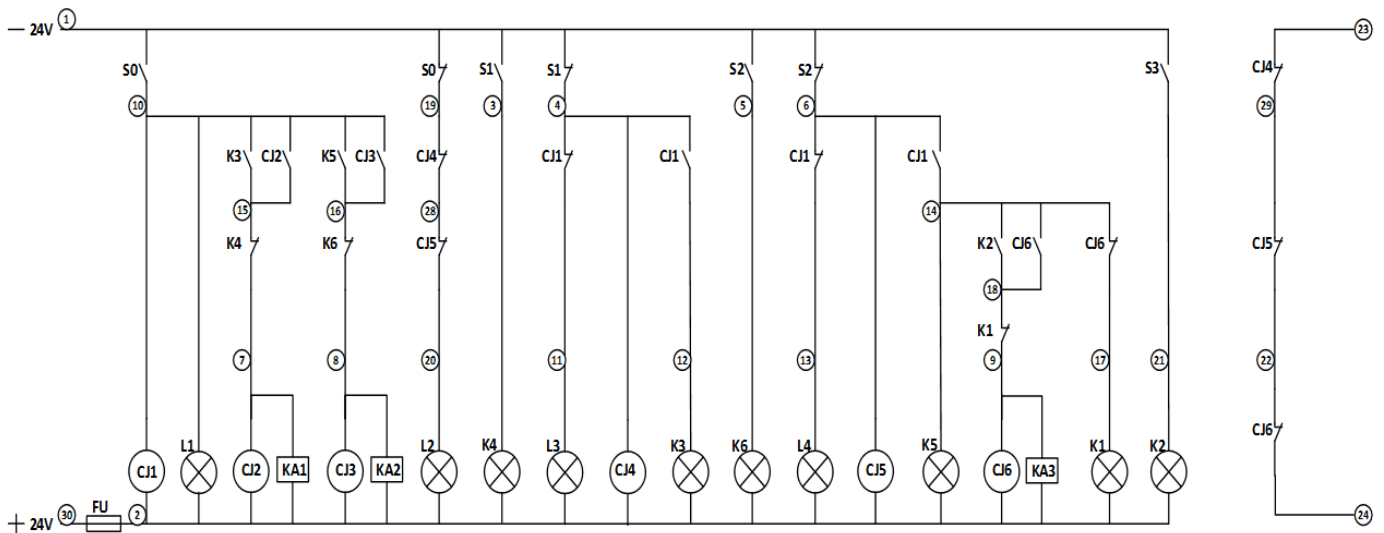
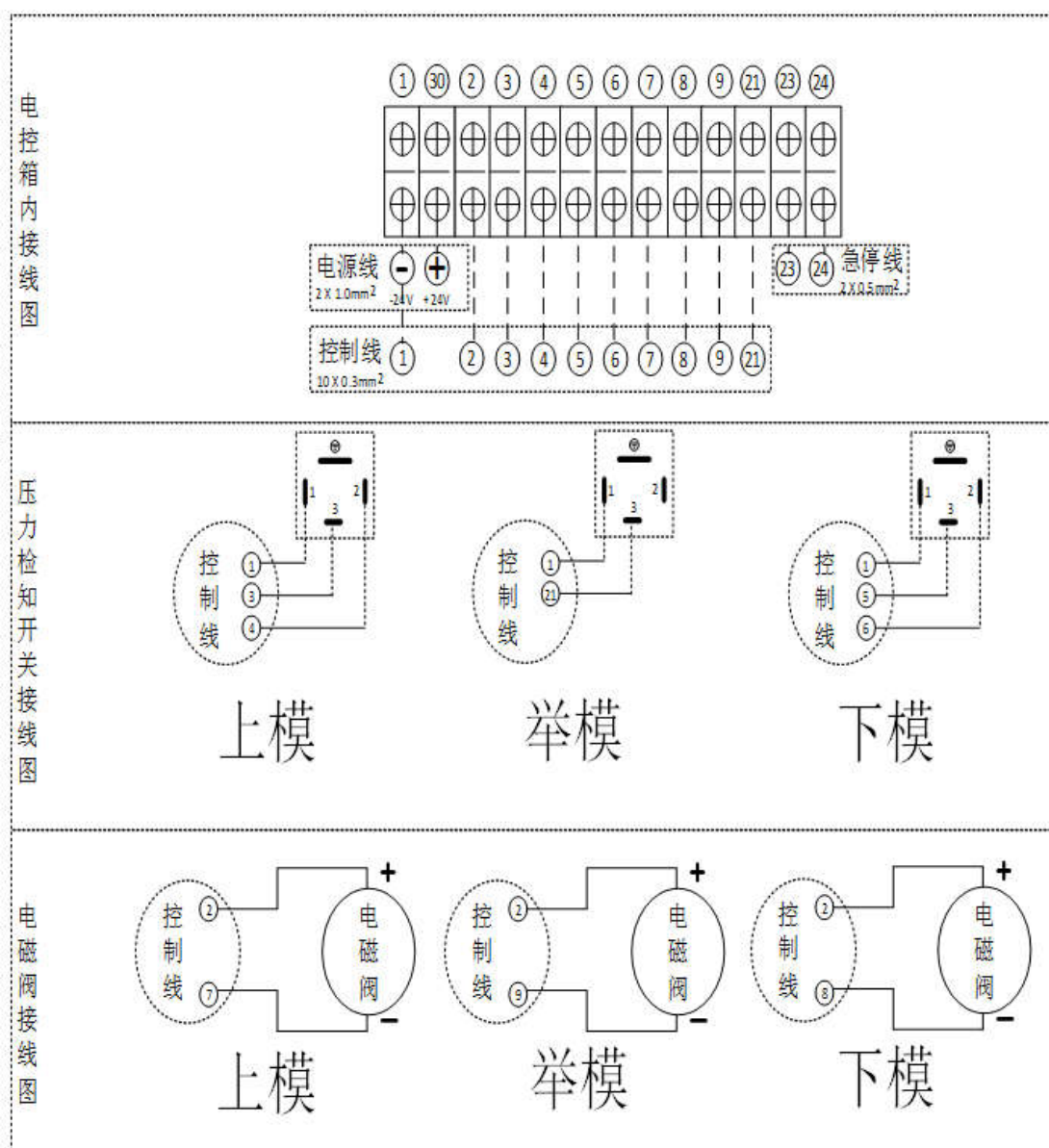


表 1		表 2		表 3		表 4		表 5		表 6	
元件名	对应符号	元件名	对应符号	元件名	对应符号	元件名	对应符号	元件名	对应符号	元件名	对应符号
模具交换开关	S0	模具下降带灯按钮	K1	下模松开带灯按钮	K5	上模异常指示灯	L3	上模松开继电器	CJ2	举模滑轨继电器	CJ6
上夹模压力开关	S1	模具上升带灯按钮	K2	下模夹紧带灯按钮	K6	下模异常指示灯	L4	下模松开继电器	CJ3	上模松开电磁阀	KA1
下夹模压力开关	S2	上模松开带灯按钮	K3	交换模式指示灯	L1	回路保护	FU	上模异常继电器	CJ4	下模松开电磁阀	KA2
举模器压力开关	S3	上模夹紧带灯按钮	K4	准备就绪指示灯	L2	模具交换继电器	CJ1	下模异常继电器	CJ5	举模器举模电磁阀	KA3

电路图



接线图

## 12-2 分体式操作控制箱电路图与接线图

### The circuit diagram and wiring diagram of the split type control panel

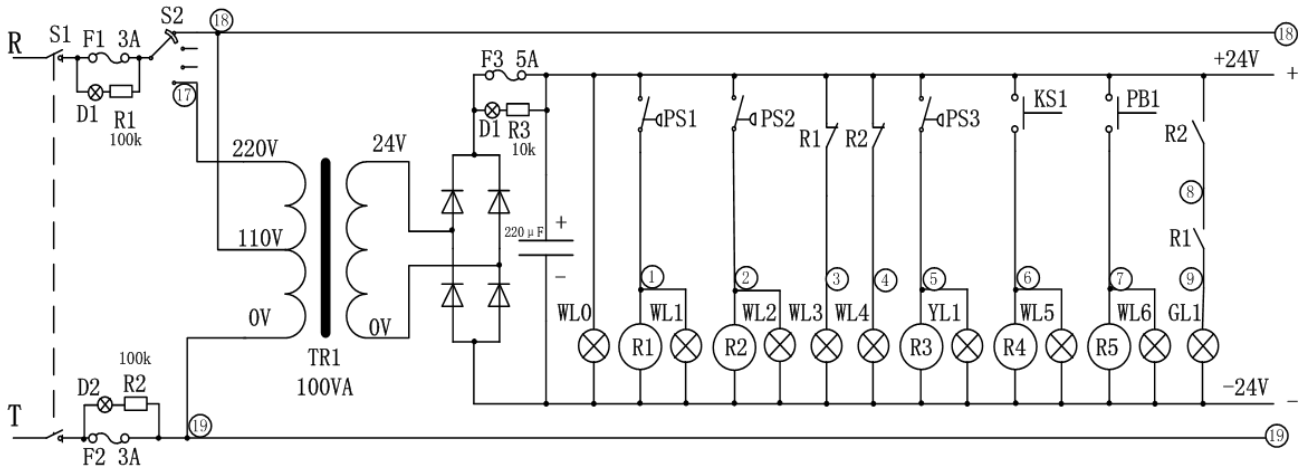


表 1		表 2		表 3		表 4	
元件名称	元件符号	元件名称	元件符号	元件名称	元件符号	元件名称	元件符号
电源开关	S1	起模压力开关	PS3	下模送指示灯	WL4	下模压力继电器	R2
短路选择器	S2	模具交换开关	KS1	起模指示灯	YL1	起模压力继电器	R3
保险丝	F1、F2、F3	上模锁定开关	PB1	模具交换指示灯	WL5	模具交换继电器	R4
电阻	R1、R2、R3	电源指示灯	WL0	上模锁定指示灯	WL6	上模锁定继电器	R5
变压器	TR1	上模夹指示灯	WL1	安全指示灯	GL1		
上模压力开关	PS1	下模夹指示灯	WL2	过流指示灯	D1、D2、D3		
下模压力开关	PS2	上模松指示灯	WL3	上模压力继电器	R1		

电路图一

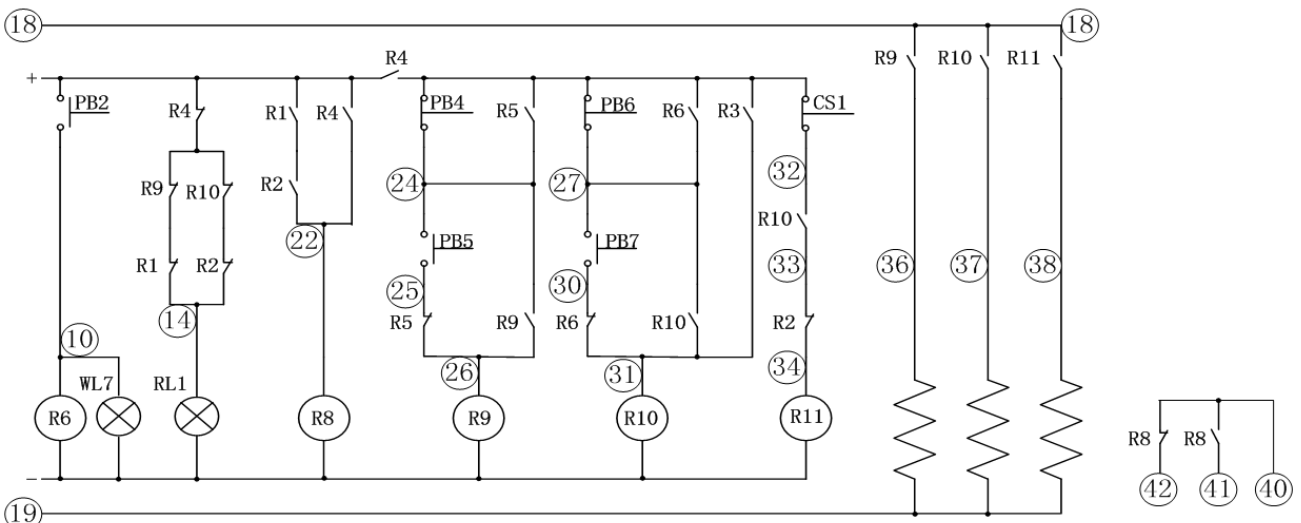
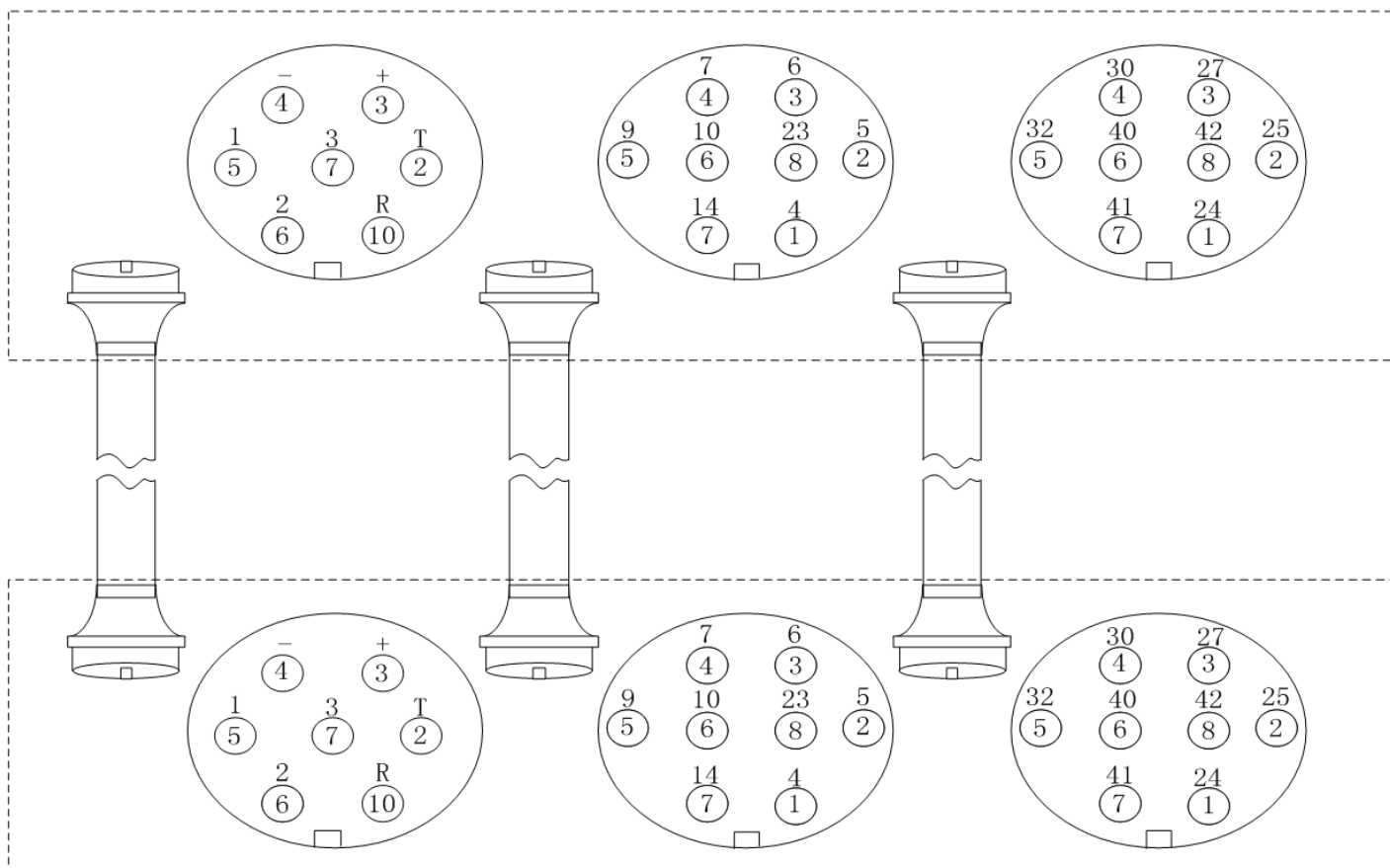


表 5		表 6		表 7	
元件名称	元件符号	元件名称	元件符号	元件名称	元件符号
下模锁定继电器	R6	下模锁定指示灯	WL7	下模松开关	PB6
连线继电器	R8	异常指示灯	RL1	下模夹开关	PB7
上模松继电器	R9	下模锁定开关	PB2	起模升降开关	CS1

电路图二



接线图