

MI32 W series shrink machine is our company newly launched a series of models . Facing the problem that it's inconvenient to add lubricating oil to the annular head our technicians add the self filling oil cup and oil groove , with which oil can be filled automatically. The resin gasket between die base can protect the machine from debris dropping. Considering to crimp the non standard bend we enlarge the opening and passing ability. Moreover, integrated hydraulic system keeps the operation stronger and more stable. The new developed operation system makes the crimping more efficient and accurate.

We will do our best to create satisfaction with the brand!

Notice:

Don't operate the machine before adding hydraulic oil !!



Technical data

Model	MI 32W
Motor	3KW
Voltage	380V/50Hz/3ph
Systematic pressure	30MPa
Opening	≥28mm
Opening without dies	Ø122mm
Capacity of oil pump	14.5L/min
Hydraulic oil	Winter: YB N32(HM32) Summer: YB N46(HM46)
Oil tank	45L
L*W*H	730×560×1350 mm
Crimp range	Ø6 — Ø51 mm

Diagram



1. Deflation valve

2. Self filling cup

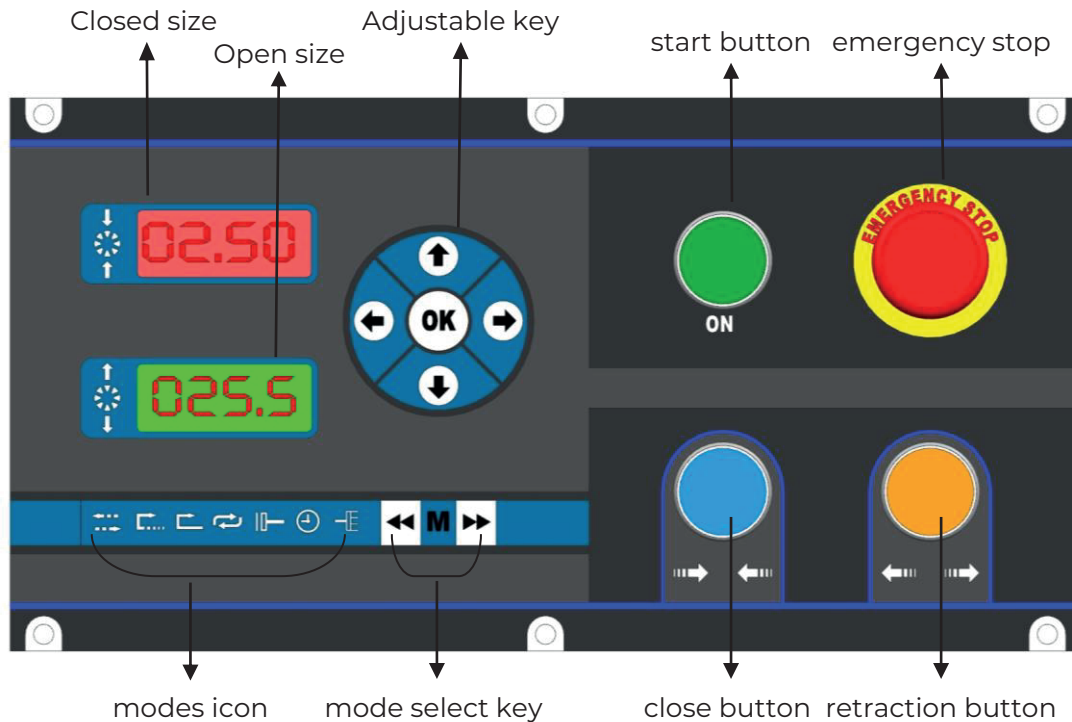
3. Motor

4. Operation panel

Notice:
Picture for reference only, please subject to product

Instructions for use and maintenance

1. Operation panel



Function Instruction:

- Closed size: to display the closed diameter of die mouth
- Open size: to display the open diameter of die mouth
- Adjust key: to adjust and select the dimension for close or open
- Start button: to start the device
- Emergency stop: to stop the device for emergency
- Modes icon: to display all the modes of the machine
- Mode select key: mode selection
- Close button: to close the die mouth
- Retraction button: to open the die mouth

Modes instruction:



Manual mode: run the machine manually.



Return automatically mode: close the die mouth manually, when reaching the reset size, it will open automatically without pressing the retraction button.



Semi-automatic mode: when clicking the close button, the machine will run to finish a crimp-retract cycle and then stop.



Automatic mode when: clicking the close button, the machine will run in crimp-retract cycles and won't stop unless click the retraction button or emergency stop button.



Trigger switch mode: when the fitting touches it to start the trigger switch, the machine will work one cycle.

Note: this is extension mode, it will work when you choose to install a trigger switch.



Time delay mode: under this mode, the closed or open data means the time that you want to delay, you can set them by adjustable key. The icon is light continuously when the delay time is set, or it won't light.



Quick change mode: under this mode, the closed size and open size are preset, operator can change dies by quick change tool fast and safely.

2. Operation

2.1 Machine storage: Open the package, and place the machine in the ventilation and dry house where temperature is above 10C°.

2.2 Hydraulic fluid filling: Open the back door, and screw oil filler plug, add the hydraulic fluid slowly (refer to technical data I). Keep the oil level is above 3/4 of the scale.

2.3 Electrical wire connection: The machine is equipped with three phase three wire system, 380 V*50HZ (A.C.). The diameter of wires must $\geq 2.5\text{mm}^2$, and the body must be grounded firmly. Please follow the signs to wire, it is recommended to consult to professional electrician.

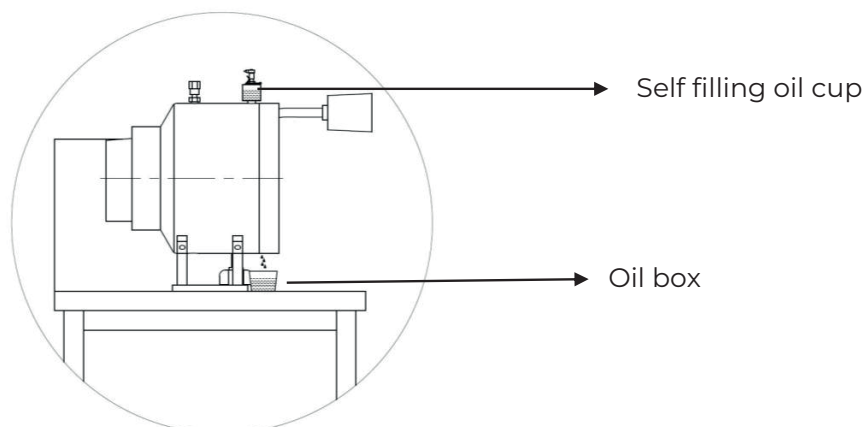
2.4 Plunger pump rotation sense: After the power is correct connected, close the power switch. Cancel the emergency stop, and press the "start button" to start the motor, simultaneously check the motor rotation direction from the motor shaft head whether it is clockwise (see rotation sign). Machine won't work unless the rotation sense is right. The way of adjusting the direction: turn off the power, and change any two live wires.

2.5 Systematic pressure: Hydraulic pressure has been debugged before the machine leaves the factory. Do not alter it to avoid the overload.

2.6 Lubricate the die base: Before operating the machine, lubricate the die base with lithium grease so that the working surface is smooth.

Notice:

Please put the oil box under the machine head to collect the redundant lubricant and particulate impurities. (See figure below)



2.7 Dies selection: Users can choose the dies accordingly . The number on the die surface is related to the dimension of the inner die bore (See figure below)

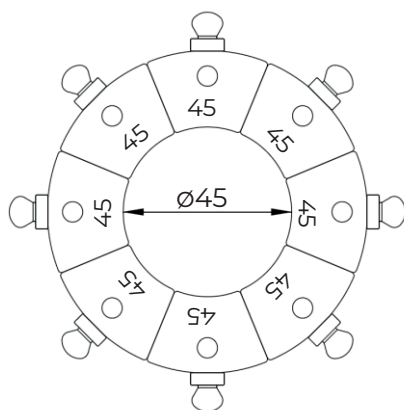
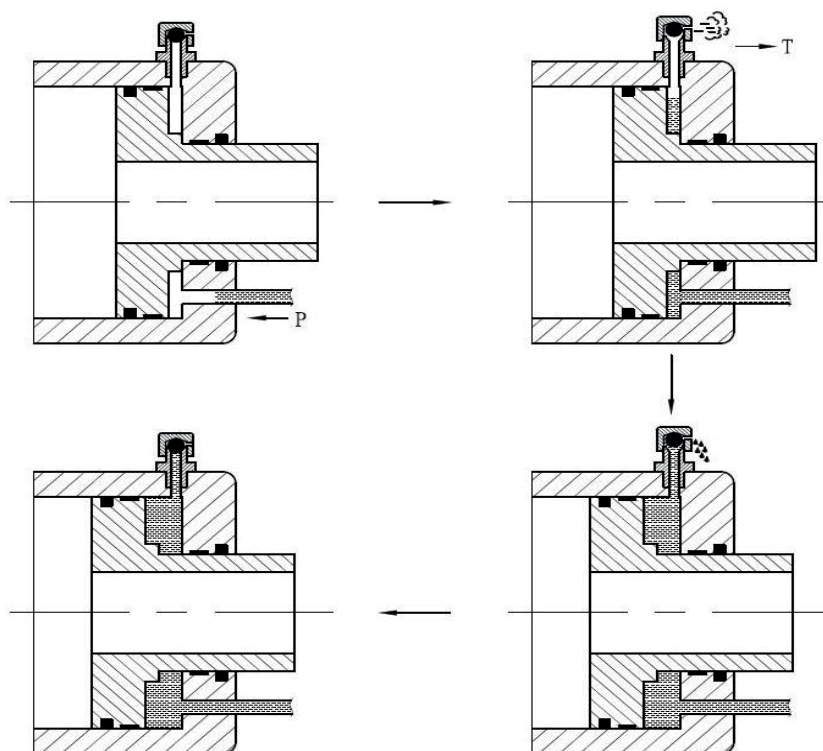


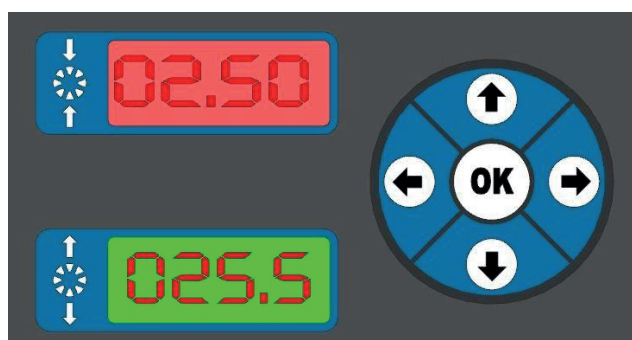
Figure 7-1

2.8 Exclude the air: There i s some air when first operate the machine, the head may shake when working. Please do as follows:

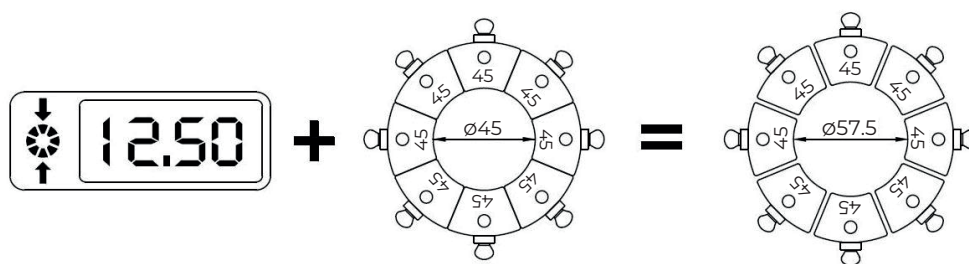


- ① press open button until the die base are totally open.
- ② loosen the plug (air valve) on the machine head (it is behind of self oiling cup).
- ③ press the close button and fill fluid until the fluid over flows from the air valve.
- ④ tighten the air valve.
- ⑤ repeat the previous jobs of ①-④ , until the air is excluded totally and the shaking disappear.

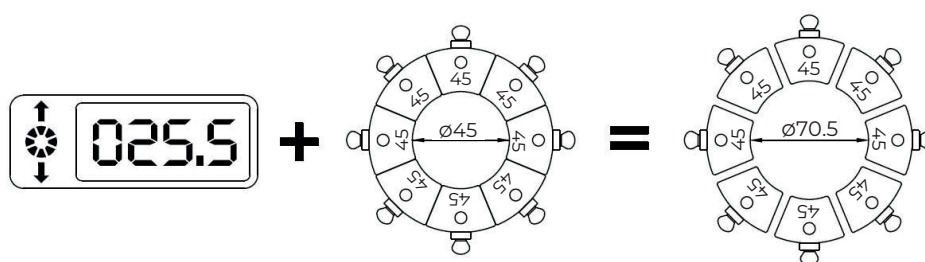
2.9 Size adjustment: The navigation keys on panel are designed to set the sizes of close and retraction , please do as follows:



- ① Press the "OK" button, the upper number (close) begins to twinkle, press again, the lower number (retraction) twinkles.
 - ② The left and right arrow keys can change the twinkling numbers.
 - ③ The up and down arrow keys can switch the twinkling numbers from 0 to 9 one by one.
 - ④ After setting up, press the close or retraction button to confirm the input digital.
- The number of close or retraction is cumulative one , you can get the final size by adding the dies number, referring to the following sketch:

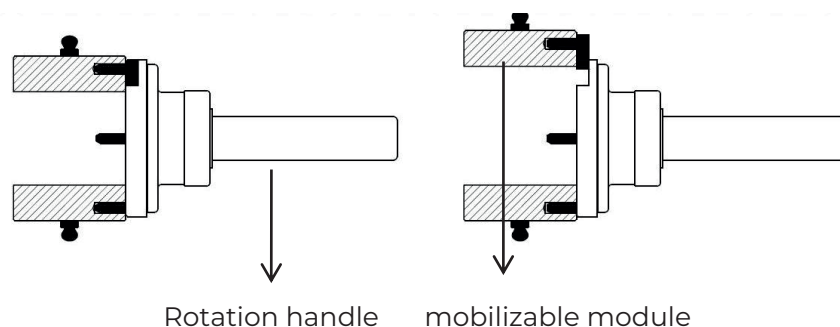


Displayed number of close + number on dies = diameter to be crimped



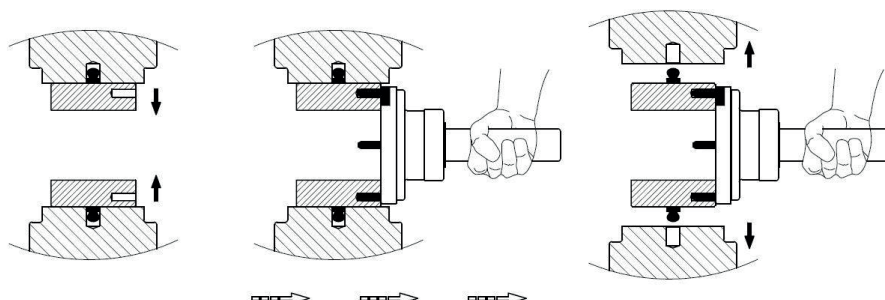
Displayed number of retraction + number on dies = diameter of opening

2.10 Dies installation: Dies can be installed as a whole with the quick change tool, see the following pictures.



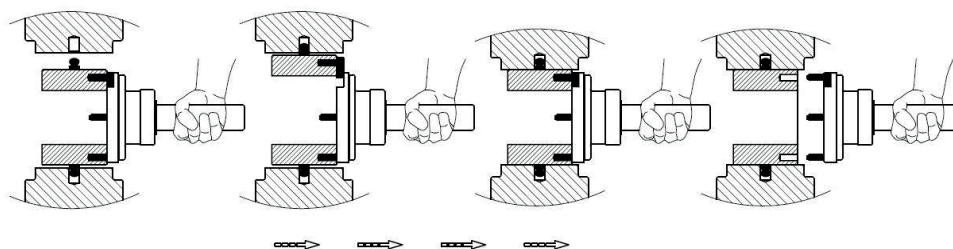
The mobilizable module can stretch or retract by turning the handle with which you can change dies as a whole efficiently and safely.

Remove the dies as follow:



- (1) Select the "Quick change" mode, and close the die mouth completely;
- (2) Align the pins on the tool to the holes on dies;
- (3) Open the mouth, and take out the tool with dies.

Install the dies as follow:



- (1) Open the mouth to the size under which the quick change tool can be put in (notice: the opening has been preset at the factory)
- (2) Rotate the rotation handle so that the mobilizable module stretch to the installing holes
- (3) Close the mouth completely
- (4) Take out the tool, the dies are installed completely

2.11 Crimp hose:

- ① Cancel the scram press the start button to start the motor
- ② Set the crimping size
- ③ Select the manual mode
- ④ Put in the fitting then press the close button to crimp
- ⑤ Press the retraction button, and take out the fitting
- ⑥ Check the assembly.

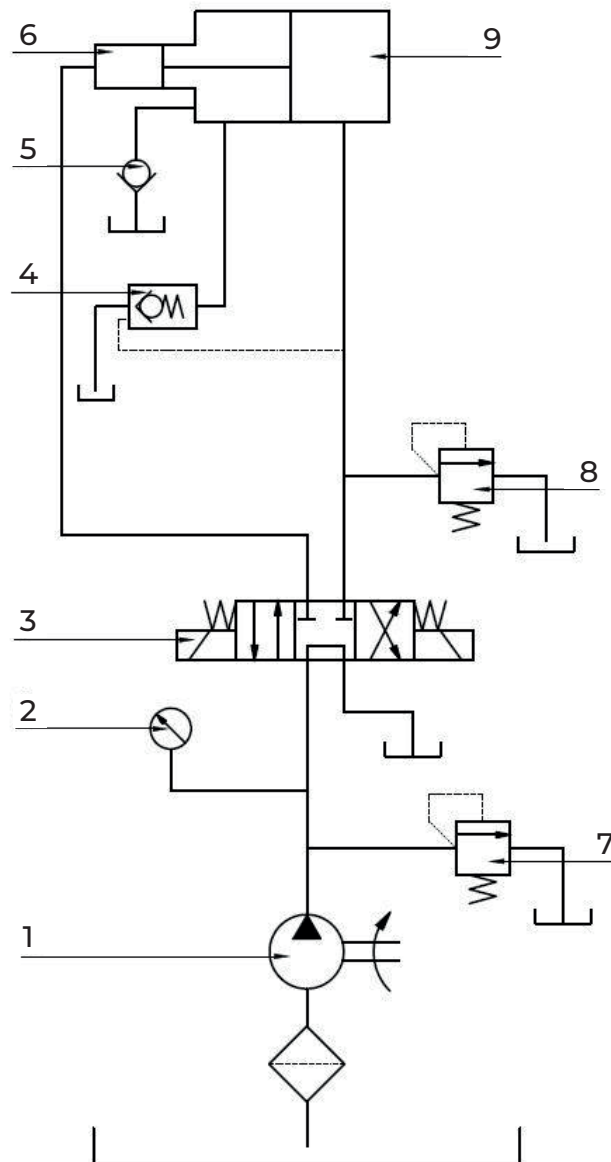
Notice:

In the case of skilled operators and conditions allows , users can crimp hose in bulk under the mode of semi-automatic

3. Maitenance

- 3.1 High strength screw around the machine head should be regularly tightened, requiring at least once a quarter, tightening torque to 120 ± 20 Nm.
- 3.2 Please shorten the maintenance period (≤ 30 workdays) on the condition of full loaded operation (working pressure ≥ 28 MPa).
- 3.3 The working surface of the machine should keep clean and lubricated with enough grease.
- 3.4 Clean the resin gasket regularly, and change new ones in time.
- 3.5 Check the fittings, if loose, please change in time.
- 3.6 Clean oil filter and internal tank regularly and filter the oil once six months.
- 3.7 Please dont operate the machine if the high strength screw loses, and do not change them unauthorized.

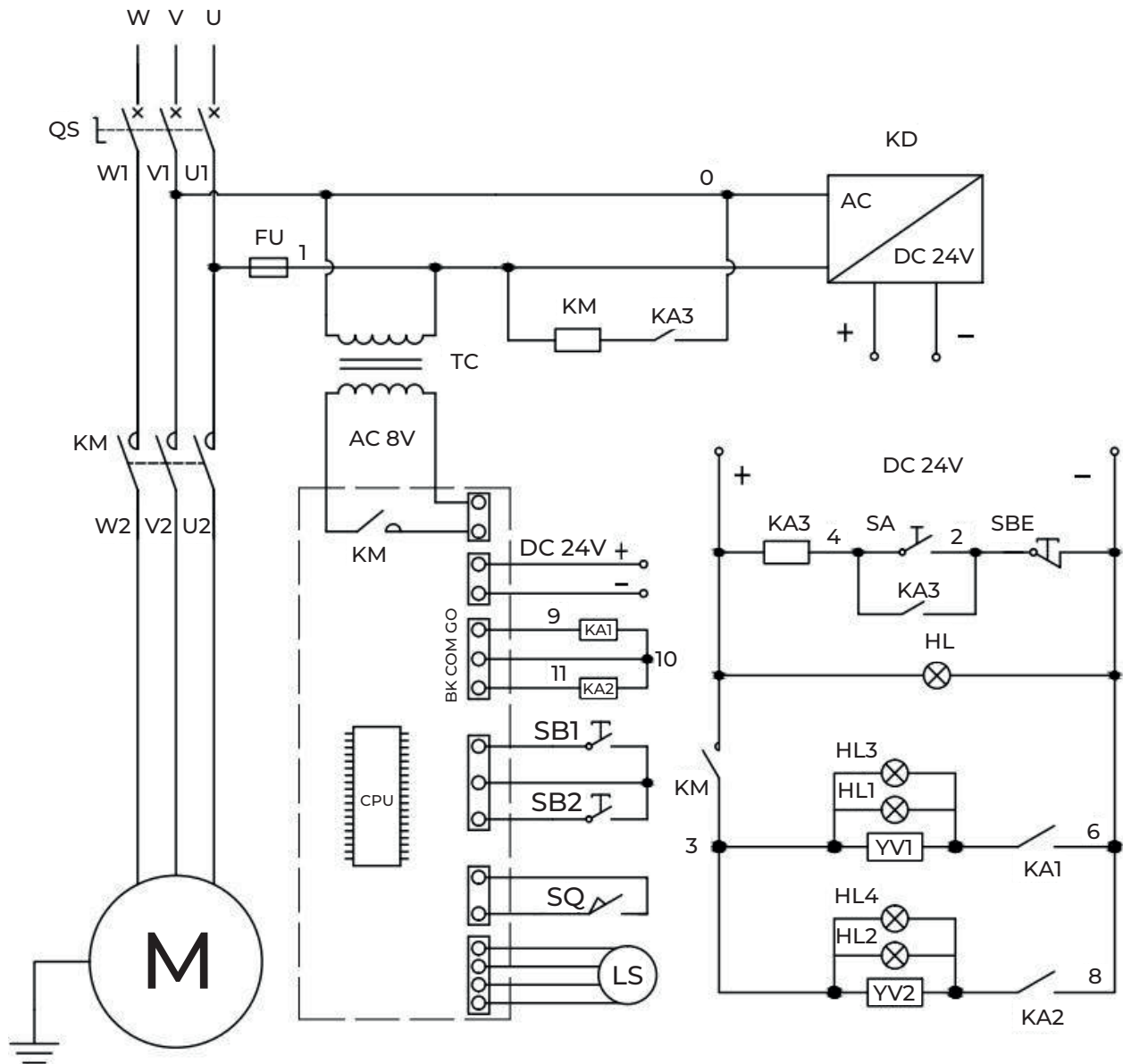
Elements diagram of hydraulic pressure



Explain:

1. oil tank	2. oil filter pressure gauge	3. oil pump
4. solenoid directional valve	5. low pressure relief valve	6. high pressure relief valve
7. pilot-controlled check valve	8. working cylinder	

Circuit diagram



Explain:

QS: power switch	KM: A.C. contactor	FU: fuse	KD: switching power supply
HL: power indicator	SA: start button	SBE: emergency stop	TC: miniature transformer
SB1: crimp button	SB2: open button	KA1/KA2: miniature relay	YV1/YV2: solenoid valve

Troubleshooting

Fault	Cause	Rectify
The hydrocylinder doesn't work after the machine operated	1. Oil shortage in the tank	1. Fill enough hydraulic oil to the tank
	2. The motor rotation direction is different from the pump's direction	2. Adjust the motor rotation direction
There is no pressure in system	1. The hydraulic plunger pump is damaged	1. Change a new plunger pump
	2. Oil shortage and air came in	2. Add enough hydraulic oil
	3. Malfunction of relief valve	3. Clean the relief valve or change a new one
The noise of system is too loud	1. The oil pump ingests foreign matter	1. Clean the pump
	2. Oil starvation in the tank	2. Add enough hydraulic oil
	3. Power phase shortage	3. Connect prescriptive power
Crimping forward and backward cannot convert	1. The electromagnet of reversing valve is broken	1. Change a new electromagnet
	2. The spool of reversing valve is broken	2. Change a new spool
	3. The hydraulic control valve is locked	3. Clean the core of control valve
The running of die base is non-synchronous	1. Serious lack of oil between the die base	1. Add oil to clean the die base, then idle away the machine
	2. Fatigue break of spring	2. Change new springs
	3. The hydraulic oil is too thick	3. Change or filter the oil
The sensor doesn't work	1. Virtual connection of wire	1. Connect the wire again
	2. The sensor is damaged	2. Change a new sensor
Power trips	The electric power source is wrong	Check the electric power source

Attention

- The device is designed for hydraulic hose assembly crimping if your working condition is different , please timely communication with the company related personnel We disclaim all responsibility for operating under conditions of uncertainty, and thus for equipment and other aspects caused by damage and damage.
- When the device is in the non working state, the mouth should be open, in order to avoid the internal spring compression fatigue.
- Please choose semi automatic operation mode in the reasonable conditions permit It is not recommended to choose it unless the operator is familiar with the working.
- The dies are not suitable for pressing division line, for special requirements, please customize the dies.
- It is strictly prohibited to operate the device in the absence of high strength screws around the flange. Do not replace the high strength screws without permission, if needed please consult to us or the company designated by the manufacturer.
- It is strictly prohibited to close the machine mouth completely in the absence of the mold, resulting in damage to the equipment for illegal operations, the company does not assume any loss.
- In extreme circumstances such as extreme cold or high temperature, please choose the appropriate hydraulic oil, so that the equipment is more efficient to work.
- Electrical fault don't secretly maintenance, it should be requested by professional personnel or under the guidance of the relevant personnel of the company to deal.